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## Contents

<b>Keynumbers and Keywords</b>	<b>2</b>
<b>References</b>	<b>317</b>

## Keynumbers and Keywords

## A=1

<sup>1</sup> n	20060B05	NUCLEAR REACTIONS <sup>2</sup> H( <sup>26</sup> Ne, <sup>26</sup> Ne'), ( <sup>26</sup> Ne, <sup>25</sup> Ne), ( <sup>26</sup> Ne, <sup>27</sup> Ne), ( <sup>26</sup> Ne, <sup>26</sup> Na), ( <sup>26</sup> Ne, <sup>27</sup> Na), E=9.7 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin. <sup>25,26,27</sup> Ne, <sup>26,27</sup> Na deduced levels, J, $\pi$ . Exogam array, Vamos spectrometer, comparison with previous results and model predictions. JOUR PRVCA 74 064305
	2007AC01	NUCLEAR REACTIONS <sup>1</sup> H, <sup>4</sup> He(polarized e, e), E=3 GeV; measured parity-violating asymmetry. <sup>1</sup> n, <sup>1</sup> H; deduced strange form factors. JOUR PRLTA 98 032301
	2007AI01	NUCLEAR REACTIONS <sup>1,2</sup> H(polarized e <sup>+</sup> , e <sup>+</sup> X), E=27.6 GeV; measured polarization observables. <sup>1</sup> n, <sup>1,2</sup> H; deduced spin structure functions. Polarized targets. JOUR PRVDA 75 012007
	2007AL22	NUCLEAR REACTIONS <sup>1,2</sup> H(polarized e, e'), (polarized e, e'p), (polarized e, e'n), (polarized e, e' $\pi$ ), E=850 MeV; measured particle spectra, asymmetries. <sup>1</sup> n, <sup>1</sup> H; deduced electric and magnetic form factors. Polarized targets. JOUR ZAANE 31 588
	2007AN08	NUCLEAR REACTIONS <sup>3</sup> He(polarized e, e'), E=0.778, 1.727 GeV; measured quasielastic transverse asymmetry. <sup>1</sup> n deduced magnetic form factor. Polarized target, nonrelativistic Faddeev calculation. JOUR PRVCA 75 034003
	2007AN11	NUCLEAR REACTIONS <sup>1</sup> H, <sup>4</sup> He(polarized e, e), E not given; measured parity-violating electroweak asymmetry. <sup>1</sup> n, <sup>1</sup> H; deduced strange quark contributions to the nucleon electromagnetic form factors. JOUR ZAANE 31 597
	2007BE38	NUCLEAR REACTIONS <sup>3</sup> He( $\gamma$ , 2pn), ( $\gamma$ , 2p), ( $\gamma$ , pd); <sup>4</sup> He( $\gamma$ , pt), ( $\gamma$ , 2d), E=0.35-1.5 GeV; measured $\sigma(E, \theta)$ . Comparison with model predictions. JOUR NUPAB 790 167c
	2007FR07	NUCLEAR REACTIONS <sup>2</sup> H, <sup>6</sup> Li(polarized $\mu$ , $\mu'$ ), E at 160 GeV / c; measured scattering asymmetries. <sup>1</sup> n, <sup>1</sup> H; deduced spin structure. JOUR ZAANE 31 620
	2007MA60	NUCLEAR REACTIONS <sup>2</sup> H(polarized p, 2p), E=190 MeV; measured $\sigma(\theta)$ , vector analyzing powers. Comparison with calculations using 3N forces. JOUR NUPAB 790 426c
	2007SA39	NUCLEAR REACTIONS <sup>2</sup> H(p, p), (p, 2p), E=13 MeV; measured E <sub>p</sub> , pp-coin, $\sigma(\theta)$ ; calculated $\sigma(\theta)$ . Watson-Migdal-Faddeev model. JOUR NUPAB 790 348c
	2007SE11	NUCLEAR REACTIONS <sup>1</sup> H(polarized d, 2p), E=270 MeV; measured vector and tensor analyzing powers. Comparison with Faddeev calculations. JOUR NUPAB 790 450c
	2007SEZZ	RADIOACTIVITY <sup>1</sup> n( $\beta^-$ ); measured T <sub>1/2</sub> . Gravitationally trapped ultracold neutrons. PREPRINT nucl-ex/0702009,2/6/2007
	2007TR01	NUCLEAR REACTIONS <sup>1</sup> H( <sup>20</sup> Ne, <sup>20</sup> Na), E=22.3 MeV / nucleon; <sup>2</sup> H( <sup>20</sup> Ne, <sup>21</sup> Na), E=22.3 MeV / nucleon; <sup>1</sup> H( <sup>21</sup> Ne, <sup>21</sup> Na), E=43 MeV / nucleon; measured particle spectra, yields. JOUR NIMAE 572 580
	2007TU02	NUCLEAR REACTIONS <sup>2</sup> H(p, 2p), E=5 MeV; measured cross sections. Analyzed data using the Trojan Horse Method to deduce off-energy shell effects on p-p scattering. JOUR PRLTA 98 252502

KEYNUMBERS AND KEYWORDS

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A=1 (*continued*)

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| 2007TU04                | NUCLEAR REACTIONS ${}^2\text{H}(p, 2p)$ , $E=5, 6$ MeV; measured $E_p$ , $I_p$ , $\sigma(E, \theta)$ . Plane wave impulse approximation, Trojan horse method. JOUR NUPAB 787 337c  |
| 2007TY02                | NUCLEAR REACTIONS ${}^1\text{H}(e, e'\pi^+)$ , $(e, e'X)$ , $E=27.6$ GeV; measured pion, pion pair, and $\rho^0$ $\sigma(Q^2)$ . JOUR ZAANE 31 451   |
| ${}^1\text{H}$ 2006JE09 | NUCLEAR REACTIONS ${}^2\text{H}({}^9\text{Li}, {}^{10}\text{Li})$ , $E=2.36$ MeV / nucleon; measured proton spectra, $\sigma(\theta)$ . ${}^{10}\text{Li}$ deduced spectroscopic factors. Comparison with optical model calculations, post-accelerated radioactive beam. JOUR PYLBB 642 449  |
| 20060B05                | NUCLEAR REACTIONS ${}^2\text{H}({}^{26}\text{Ne}, {}^{26}\text{Ne}')$ , $({}^{26}\text{Ne}, {}^{25}\text{Ne})$ , $({}^{26}\text{Ne}, {}^{27}\text{Ne})$ , $({}^{26}\text{Ne}, {}^{26}\text{Na})$ , $({}^{26}\text{Ne}, {}^{27}\text{Na})$ , $E=9.7$ MeV / nucleon; measured $E_\gamma$ , $I_\gamma$ , (particle) $\gamma$ -coin. ${}^{25,26,27}\text{Ne}$ , ${}^{26,27}\text{Na}$ deduced levels, $J$ , $\pi$ . Exogam array, Vamos spectrometer, comparison with previous results and model predictions. JOUR PRVCA 74 064305 |
| 2006SAZQ                | NUCLEAR REACTIONS ${}^1\text{H}({}^6\text{He}, {}^6\text{He})$ , $E=71$ MeV / nucleon; measured $\sigma(\theta)$ , $A_y(\theta)$ . Polarized target. REPT CNS-REP-69,P27,Sakaguchi   |
| 2006ST27                | NUCLEAR REACTIONS ${}^1\text{H}(\text{polarized } e, e'\pi^0)$ , $E=855$ MeV; measured electron and proton spectra, $\sigma(E, \theta)$ ; deduced magnetic dipole amplitude, pionic contribution. Comparison with model predictions. JOUR ZAANE 30 471   |
| 2007AC01                | NUCLEAR REACTIONS ${}^1\text{H}$ , ${}^4\text{He}(\text{polarized } e, e)$ , $E=3$ GeV; measured parity-violating asymmetry. ${}^1\text{n}$ , ${}^1\text{H}$ ; deduced strange form factors. JOUR PRLTA 98 032301  |
| 2007AI01                | NUCLEAR REACTIONS ${}^{1,2}\text{H}(\text{polarized } e^+, e^+X)$ , $E=27.6$ GeV; measured polarization observables. ${}^1\text{n}$ , ${}^{1,2}\text{H}$ ; deduced spin structure functions. Polarized targets. JOUR PRVDA 75 012007   |
| 2007AL22                | NUCLEAR REACTIONS ${}^{1,2}\text{H}(\text{polarized } e, e')$ , (polarized $e, e'p$ ), (polarized $e, e'n$ ), (polarized $e, e'\pi$ ), $E=850$ MeV; measured particle spectra, asymmetries. ${}^1\text{n}$ , ${}^1\text{H}$ ; deduced electric and magnetic form factors. Polarized targets. JOUR ZAANE 31 588   |
| 2007AN11                | NUCLEAR REACTIONS ${}^1\text{H}$ , ${}^4\text{He}(\text{polarized } e, e)$ , $E$ not given; measured parity-violating electroweak asymmetry. ${}^1\text{n}$ , ${}^1\text{H}$ ; deduced strange quark contributions to the nucleon electromagnetic form factors. JOUR ZAANE 31 597  |
| 2007BU05                | NUCLEAR REACTIONS ${}^1\text{H}(\text{polarized } p, p)$ , $E(\text{cm})=200$ GeV; measured double spin asymmetries. Comparison with theory, polarised target. JOUR PYLBB 647 98   |
| 2007CA35                | NUCLEAR REACTIONS ${}^1\text{H}({}^{36}\text{Si}, {}^{36}\text{Si}')$ , $E < 140$ MeV / nucleon; ${}^1\text{H}({}^{38}\text{Si}, {}^{38}\text{Si}')$ , $E < 140$ MeV / nucleon; ${}^1\text{H}({}^{40}\text{Si}, {}^{40}\text{Si}')$ , $E < 140$ MeV / nucleon; measured $E_\gamma$ , $I_\gamma$ , (particle) $\gamma$ -coinc, inelastic proton scattering cross sections. ${}^{36,38,40}\text{Si}$ deduced quadrupole deformation parameters. JOUR PYLBB 652 169   |
| 2007CH50                | NUCLEAR REACTIONS ${}^1\text{H}(e, e')$ , $(e^+, e^+')$ , $E(\text{cm})=318$ MeV; measured $D^*$ production $\sigma(Q^2)$ . Comparison with other data and next-to-leading-order QCD calculations. JOUR PYLBB 649 111  |
| 2007CR01                | NUCLEAR REACTIONS ${}^1\text{H}(\text{polarized } e, e'p)$ , $E=\text{high}$ ; measured asymmetries. ${}^1\text{H}$ deduced electric to magnetic form factor ratios. Polarized target. JOUR PRLTA 98 052301  |

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KEYNUMBERS AND KEYWORDS

**A=1 (continued)**

- 2007DA14 NUCLEAR REACTIONS  $^1\text{H}(\gamma, \gamma')$ ,  $E=2.34, 3.48, 4.62, 5.75$  GeV  
bremsstrahlung; measured Compton scattering  $\sigma, \sigma(\theta)$ . JOUR PRLTA  
98 152001
- 2007EL02 NUCLEAR REACTIONS  $^2\text{H}(^{22}\text{O}, ^{23}\text{O})$ ,  $E=34$  MeV / nucleon;  
measured excitation energy spectrum.  $^{23}\text{O}$  deduced resonance energies,  
neutron shell features. JOUR PRLTA 98 102502
- 2007ELZZ NUCLEAR REACTIONS  $^2\text{H}(^{22}\text{O}, ^{23}\text{O})$ ,  $E=34$  MeV / nucleon;  
measured excitation energy spectrum.  $^{23}\text{O}$  deduced resonance energies,  
neutron shell features. REPT RIKEN-NC-NP-4, Elekes
- 2007FE08 NUCLEAR REACTIONS  $^1\text{H}(e, e'\pi^+\pi^-)$ ,  $E=1.5$  GeV; measured cross  
sections for small photon virtualities using the CLAS detector at  
TJNAF. JOUR BRSP 71 314
- 2007FR07 NUCLEAR REACTIONS  $^2\text{H}, ^6\text{Li}(\text{polarized } \mu, \mu')$ ,  $E$  at 160 GeV / c;  
measured scattering asymmetries.  $^1\text{n}, ^1\text{H}$ ; deduced spin structure.  
JOUR ZAANE 31 620
- 2007GI08 NUCLEAR REACTIONS  $^1\text{H}(^8\text{He}, ^8\text{He}), (^8\text{He}, d), (^8\text{He}, t)$ ,  $E=15.7,$   
 $61.3$  MeV / nucleon; analyzed  $\sigma(\theta)$ . Coupled reaction channel  
calculations, DWBA analysis.  $^2\text{H}(^{26}\text{Ne}, p)$ ,  $E=9.7$  MeV / nucleon;  
measured fragment yield,  $E\gamma, I\gamma, (\text{particle})\gamma\text{-coin}$ .  $^{27}\text{Ne}$  deduced levels,  
 $J, \pi$ . Exogam array, Vamos spectrometer. JOUR NUPAB 787 423c
- 2007JA07 NUCLEAR REACTIONS  $^1\text{H}(\text{polarized } e, e'\gamma)$ ,  $E=854.6$  MeV;  
measured  $E\gamma, \text{re}^1\text{H}$  deduced generalized polarizabilities. JOUR  
ZAANE 31 610
- 2007JIZZ NUCLEAR REACTIONS  $^2\text{H}(\text{polarized } \gamma, n)$ ,  $E=2$  GeV; measured  
angular dependence of recoil proton polarization. Comparison with  
model predictions. PREPRINT nucl-ex/0702002, 2/2/2007
- 2007KA38 NUCLEAR REACTIONS  $^2\text{H}(\text{polarized } p, p)$ ,  $E=108, 120, 135, 150,$   
 $170, 190$  MeV; measured  $\sigma(E, \theta)$ , analyzing powers.  $^1\text{H}(\text{polarized } d, d)$ ,  
 $E=180$  MeV; measured  $\sigma(\theta)$ , analyzing powers.  $^1\text{H}(\text{polarized } d, np)$ ,  
 $E=130$  MeV; measured  $\sigma(E, \theta)$ . Comparison with calculations.  
Faddeev model using 2N and 3N potentials. JOUR NUPAB 790 69c
- 2007KE02 NUCLEAR REACTIONS  $^1\text{H}(\text{polarized } e, e'\pi^0)$ ,  $E=4531$  MeV;  
measured  $\sigma(E, \theta)$ , recoil polarization, response functions; deduced  
multipole amplitudes. JOUR PRVCA 75 025201
- 2007MA23 NUCLEAR REACTIONS  $^1\text{H}(\text{polarized } d, d)$ ,  $E=130, 180$  MeV;  
measured vector and tensor analyzing powers. JOUR ZAANE 31 383
- 2007PA26 NUCLEAR REACTIONS  $^1\text{H}(p, p')$ ,  $E=1.30, 1.36, 1.45$  GeV; measured  
 $E_p, I_p$ , three-pion production  $\sigma$ ,  $pp$  missing mass distributions.  
Comparison with other data and statistical model calculations. JOUR  
PYLBB 649 122
- 2007R024 NUCLEAR REACTIONS  $^1\text{H}(\text{polarized } e, e')$ ,  $E=362, 687$  MeV;  
measured proton elastic form factor ratio. JOUR PRLTA 99 202002
- 2007SA14 NUCLEAR REACTIONS  $^1\text{H}(n, n'\gamma)$ ,  $E=175-275$  MeV; measured  $E_p,$   
 $E_n, \sigma(\theta(n), \theta(p), \theta(\gamma))$ . Comparison with relativistic soft-photon and  
nonrelativistic models. JOUR PRVCA 75 031001
- 2007SA38 NUCLEAR REACTIONS  $^1\text{H}(d, d)$ ,  $E(\text{cm})=135$  MeV / nucleon;  
analyzed  $\sigma(\theta)$ .  $^1\text{H}(\text{polarized } d, \gamma)$ ,  $E(\text{cm})=135$  MeV / nucleon;  
measured analyzing powers. Comparison with calculations. Faddeev  
model using 2N and 3N potentials. JOUR NUPAB 790 122c

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KEYNUMBERS AND KEYWORDS

**A=1** (*continued*)

- 2007SAZZ NUCLEAR REACTIONS  $^1\text{H}(n, n'\gamma)$ ,  $E=175\text{-}275$  MeV; measured  $E_n$ ,  $E_p$ ,  $\sigma(\theta_p, \theta_n, \theta_\gamma)$ . Comparison with model predictions. PREPRINT nucl-ex/0701009,01/05/2007
- 2007SEZZ RADIOACTIVITY  $^1\text{n}(\beta^-)$ ; measured  $T_{1/2}$ . Gravitationally trapped ultracold neutrons. PREPRINT nucl-ex/0702009,2/6/2007
- 2007SU02 NUCLEAR REACTIONS  $^{12}\text{C}(\text{polarized } d, \alpha)$ ,  $E=140, 270$  MeV; measured  $E\alpha$ ,  $\sigma(\theta)$ ; deduced beam polarization.  $^1\text{H}(\text{polarized } d, d)$ ,  $E=140, 270$ ; measured analyzing powers. JOUR NIMAE 572 745
- 2007SU23 NUCLEAR REACTIONS  $^1\text{H}(\text{polarized } \gamma, \pi^0)$ ,  $E=1.5\text{-}2.4$  GeV; measured missing mass spectra,  $\sigma(E, \theta)$ , beam asymmetry. JOUR PYLBB 657 32
- 2007TE09 NUCLEAR REACTIONS  $^1\text{H}(^{13}\text{N}, ^{13}\text{N})$ ,  $E(\text{cm})=0.4\text{-}3.3$  MeV; measured elastic scattering  $\sigma(\theta)$  and fitted with R-matrix calculation.  $^{14}\text{O}$  deduced levels, widths,  $J$ ,  $\pi$ , spectroscopic factor. JOUR PYLBB 650 129
- 2007VA03 NUCLEAR REACTIONS  $^1\text{H}(\gamma, \pi^0)$ ,  $E=0.3\text{-}3$  GeV; measured  $\sigma(E, \theta)$ ,  $\sigma$ ; deduced resonance features. Comparison with previous results. JOUR ZAANE 31 61
- 2007WE03 NUCLEAR REACTIONS  $^1\text{H}(\text{polarized } e, e)$ ,  $E$  at  $5.755$  GeV /  $c$ ; measured asymmetries.  $^1\text{H}$  deduced spin structure functions in resonance region. JOUR PRLTA 98 132003

**A=2**

- $^2\text{n}$  20060B05 NUCLEAR REACTIONS  $^2\text{H}(^{26}\text{Ne}, ^{26}\text{Ne}')$ ,  $(^{26}\text{Ne}, ^{25}\text{Ne})$ ,  $(^{26}\text{Ne}, ^{27}\text{Ne})$ ,  $(^{26}\text{Ne}, ^{26}\text{Na})$ ,  $(^{26}\text{Ne}, ^{27}\text{Na})$ ,  $E=9.7$  MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$ , (particle) $\gamma$ -coin.  $^{25,26,27}\text{Ne}$ ,  $^{26,27}\text{Na}$  deduced levels,  $J$ ,  $\pi$ . Exogam array, Vamos spectrometer, comparison with previous results and model predictions. JOUR PRVCA 74 064305
- 2007SIZY NUCLEAR REACTIONS  $^4\text{He}(^6\text{He}, 2\alpha)$ ,  $E=25$  MeV / nucleon; measured  $E\alpha$ ,  $E_n$ , and two neutron momentum distributions. CONF Khanty-Mansiysk (Exotic Nuclei) Proc, P43
- $^2\text{H}$  2006MAZV NUCLEAR REACTIONS  $^2\text{H}(\text{polarized } n, n)$ ,  $E=250$  MeV; measured  $\sigma(\theta)$ ; deduced three-nucleon force effects. REPT CNS-REP-69,P17,Maeda
- 20060B05 NUCLEAR REACTIONS  $^2\text{H}(^{26}\text{Ne}, ^{26}\text{Ne}')$ ,  $(^{26}\text{Ne}, ^{25}\text{Ne})$ ,  $(^{26}\text{Ne}, ^{27}\text{Ne})$ ,  $(^{26}\text{Ne}, ^{26}\text{Na})$ ,  $(^{26}\text{Ne}, ^{27}\text{Na})$ ,  $E=9.7$  MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$ , (particle) $\gamma$ -coin.  $^{25,26,27}\text{Ne}$ ,  $^{26,27}\text{Na}$  deduced levels,  $J$ ,  $\pi$ . Exogam array, Vamos spectrometer, comparison with previous results and model predictions. JOUR PRVCA 74 064305
- 2006PR22 NUCLEAR REACTIONS  $^2\text{H}(\text{polarized } p, p)$ ,  $E=135, 200$  MeV; measured  $\sigma(\theta)$ , analyzing powers, spin correlation coefficients; deduced no three-nucleon force effect. Polarized target, comparison with Faddeev calculations. JOUR PRVCA 74 064003
- 2007AI01 NUCLEAR REACTIONS  $^1,2\text{H}(\text{polarized } e^+, e^+X)$ ,  $E=27.6$  GeV; measured polarization observables.  $^1\text{n}$ ,  $^1,2\text{H}$ ; deduced spin structure functions. Polarized targets. JOUR PRVDA 75 012007

**A=2 (continued)**

- 2007AL20 NUCLEAR REACTIONS  $^2\text{H}$ ,  $^6\text{Li}$ (polarized  $\mu^+$ ,  $\mu^+\text{X}$ ), E at 160 GeV / c; measured longitudinal spin asymmetry.  $^2\text{H}$  deduced spin structure function. Comparison with previous results. JOUR PYLBB 647 8
- 2007AL21 NUCLEAR REACTIONS  $^2\text{H}$ ,  $^6\text{Li}$ (polarized  $\mu^+$ ,  $\mu^+\text{X}$ ), E at 160 GeV / c; measured longitudinal spin asymmetry.  $^2\text{H}$  deduced spin structure function. Comparison with previous results. JOUR PYLBB 647 330
- 2007AL22 NUCLEAR REACTIONS  $^1,2\text{H}$ (polarized e, e'), (polarized e, e'p), (polarized e, e'n), (polarized e, e'\pi), E=850 MeV; measured particle spectra, asymmetries.  $^1\text{n}$ ,  $^1\text{H}$ ; deduced electric and magnetic form factors. Polarized targets. JOUR ZAANE 31 588
- 2007AM03 NUCLEAR REACTIONS  $^1\text{H}$ (polarized d, p), E=90 MeV / nucleon; measured cross section, vector and tensor analyzing powers, induced polarization, vector and tensor spin transfer coefficients. JOUR PRVCA 75 041001
- 2007DE31 NUCLEAR REACTIONS  $^2\text{H}$ (p, p), E=1.9-3.0 MeV; measured elastic scattering  $\sigma$  at backward angles. JOUR NIMBE 261 405
- 2007FR07 NUCLEAR REACTIONS  $^2\text{H}$ ,  $^6\text{Li}$ (polarized  $\mu$ ,  $\mu'$ ), E at 160 GeV / c; measured scattering asymmetries.  $^1\text{n}$ ,  $^1\text{H}$ ; deduced spin structure. JOUR ZAANE 31 620
- 2007ILZZ NUCLEAR REACTIONS  $^2\text{H}(\gamma, \pi^0)$ , E  $\approx$  600-800 MeV; measured  $\sigma(\theta)$ ; deduced resonance features. PREPRINT  
nucl-ex/0703006,3/5/2007
- 2007KA38 NUCLEAR REACTIONS  $^2\text{H}$ (polarized p, p), E=108, 120, 135, 150, 170, 190 MeV; measured  $\sigma(E, \theta)$ , analyzing powers.  $^1\text{H}$ (polarized d, d), E=180 MeV; measured  $\sigma(\theta)$ , analyzing powers.  $^1\text{H}$ (polarized d, np), E=130 MeV; measured  $\sigma(E, \theta)$ . Comparison with calculations. Faddeev model using 2N and 3N potentials. JOUR NUPAB 790 69c
- 2007K036 NUCLEAR REACTIONS  $^2\text{H}$ ,  $^6\text{Li}$ (polarized  $\mu$ ,  $\mu'$ ), E=160 GeV; measured scattering asymmetry.  $^2\text{H}$ ; deduced spin dependent structure function. JOUR ZAANE 31 606
- 2007MA46 NUCLEAR REACTIONS  $^2\text{H}$ (n, n), E=248 MeV; measured En,  $\sigma$  and vector analyzing power. JOUR PRVCA 76 014004
- 2007MA61 NUCLEAR REACTIONS  $^2\text{H}$ (polarized n, n), E=250 MeV; measured  $\sigma(\theta)$ , vector analyzing powers. Comparison with Faddeev calculations using 3N forces and other data. JOUR NUPAB 790 430c
- 2007MI15 NUCLEAR REACTIONS  $^2\text{H}$ (d, d), E=231.8 MeV; measured  $\sigma$ , angular distributions and analyzing powers. Compared results to calculations. JOUR PRVCA 75 054001
- 2007MI31 NUCLEAR REACTIONS  $^2\text{H}$ (d, pn), E=270 MeV; measured combined proton, neutron energy spectrum at  $0^\circ$ ; deduced three and four-body breakup. Plane wave impulse approximation. JOUR NUPAB 790 442c
- 2007SA39 NUCLEAR REACTIONS  $^2\text{H}$ (p, p), (p, 2p), E=13 MeV; measured Ep, pp-coin,  $\sigma(\theta)$ ; calculated  $\sigma(\theta)$ . Watson-Migdal-Faddeev model. JOUR NUPAB 790 348c



**A=3**

- <sup>3</sup>H      20060B05      NUCLEAR REACTIONS <sup>2</sup>H(<sup>26</sup>Ne, <sup>26</sup>Ne'), (<sup>26</sup>Ne, <sup>25</sup>Ne), (<sup>26</sup>Ne, <sup>27</sup>Ne), (<sup>26</sup>Ne, <sup>26</sup>Na), (<sup>26</sup>Ne, <sup>27</sup>Na), E=9.7 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin. <sup>25,26,27</sup>Ne, <sup>26,27</sup>Na deduced levels, J,  $\pi$ . Exogam array, Vamos spectrometer, comparison with previous results and model predictions. JOUR PRVCA 74 064305
- 2007AF02      NUCLEAR REACTIONS <sup>12</sup>C( $\gamma$ , p2 $\alpha$ ), ( $\gamma$ , n2 $\alpha$ ), E< 150 MeV; measured cross sections and angular distributions. JOUR PANUE 70 839
- 2007HU06      NUCLEAR REACTIONS <sup>2</sup>H(d, n), (d, p), E=low; measured fusion rates, screening effects for reaction in metals. JOUR NIMBE 256 599
- 2007LY01      NUCLEAR REACTIONS <sup>4</sup>He(polarized  $\gamma$ , p), (polarized  $\gamma$ , n), E=40, 60, 80 MeV; measured  $\sigma(\theta)$ , azimuthal asymmetry; deduced multipole strengths, meson exchange current contributions. JOUR NUPAB 781 306
- 2007MI25      NUCLEAR REACTIONS <sup>4</sup>He(<sup>22</sup>O, <sup>23</sup>F $\gamma$ ), (<sup>23</sup>F, <sup>23</sup>F $\gamma$ ), (<sup>24</sup>F, <sup>23</sup>F $\gamma$ ), (<sup>25</sup>Ne, <sup>23</sup>F $\gamma$ ), E $\approx$ 35 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin; deduced reaction  $\sigma$ . <sup>4</sup>He(<sup>22</sup>O, <sup>23</sup>F $\gamma$ ), E=35 MeV / nucleon; measured  $\sigma(\theta)$ . <sup>23</sup>F deduced levels, J,  $\pi$ , configurations. Comparison with DWBA and shell model predictions. JOUR NUPAB 787 569c
- 2007NAZW      NUCLEAR REACTIONS <sup>4</sup>He( $\gamma$ , X), E < 50 MeV; <sup>12</sup>C( $\alpha$ ,  $\gamma$ ), E(cm)=1.4-1.6 MeV; <sup>2</sup>H, <sup>62</sup>Ni(n,  $\gamma$ ), E= low; measured cross sections. CONF Tokai-mura (Nuclear Data) Proc,PIII.01,Nagai
- 2007WA37      NUCLEAR REACTIONS <sup>2</sup>H(d, p), E=10-20 keV; measured thick target proton yields for deuteriated Sm target at low temperatures. Sm deduced electron screening potential. JOUR JPGPE 34 2255
- 2007WA38      NUCLEAR REACTIONS <sup>2</sup>H(d, p), E=10-20 keV; measured thick target yields, cross sections, and S-factor, on deuterons implanted in cooled Sm metal target. JOUR CPLEE 24 3103
- <sup>3</sup>He      2006AN37      NUCLEAR REACTIONS <sup>4</sup>He( $\pi^+$ ,  $\pi^+$ ), ( $\pi^+$ ,  $\pi^+$ '), ( $\pi^+$ ,  $\pi^+$ n), ( $\pi^+$ ,  $\pi^0$ p), ( $\pi^-$ ,  $\pi^-$ ), ( $\pi^-$ ,  $\pi^-$ '), ( $\pi^-$ ,  $\pi^-$ n), E at 218 MeV / c; measured  $\sigma(\theta)$ , branching ratios. JOUR NIFBA 121 771
- 2007AD02      NUCLEAR REACTIONS <sup>2</sup>H(p, X)<sup>3</sup>He, E at 1.58-1.66 GeV / c; measured  $\eta$ -meson production associated  $\sigma$ ,  $\sigma(E, \theta)$ ; deduced final state interaction effects. JOUR PRVCA 75 014004
- 2007AF02      NUCLEAR REACTIONS <sup>12</sup>C( $\gamma$ , p2 $\alpha$ ), ( $\gamma$ , n2 $\alpha$ ), E< 150 MeV; measured cross sections and angular distributions. JOUR PANUE 70 839
- 2007AN08      NUCLEAR REACTIONS <sup>3</sup>He(polarized e, e'), E=0.778, 1.727 GeV; measured quasielastic transverse asymmetry. <sup>1</sup>n deduced magnetic form factor. Polarized target, nonrelativistic Fadeev calculation. JOUR PRVCA 75 034003
- 2007BE03      NUCLEAR REACTIONS <sup>2</sup>H(p, K<sup>+</sup>K<sup>-</sup>), E  $\approx$  threshold; measured prompt and  $\phi$ -meson production associated kaon pair spectra,  $\sigma(E, \theta)$ . JOUR PRVCA 75 015204
- 2007ESZZ      NUCLEAR MOMENTS <sup>3</sup>He; measured precession frequency in magnetic field; deduced dressed-spin effects. Application to neutron dipole moment measurement discussed. PREPRINT  
nucl-ex/0703029,3/19/2007

KEYNUMBERS AND KEYWORDS

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**A=3 (continued)**

- 2007HU06 NUCLEAR REACTIONS  $^2\text{H}(\text{d}, \text{n})$ ,  $(\text{d}, \text{p})$ ,  $E=\text{low}$ ; measured fusion rates, screening effects for reaction in metals. JOUR NIMBE 256 599
- 2007JA11 NUCLEAR REACTIONS  $^2\text{H}(\text{d}, \text{n})$ ,  $E=270$  MeV; measured tensor and vector analyzing powers including angular dependence. Compared results to model calculations. JOUR ZAANE 33 39
- 2007JAZZ NUCLEAR REACTIONS  $^2\text{H}(\text{d}, \text{n})$ ,  $E=270$  MeV; measured angular dependence of the vector and tensor analyzing powers. Compared results to model calculations. PREPRINT arXiv.0706.3568v1 [nucl-ex]
- 2007KI02 NUCLEAR REACTIONS  $^3\text{H}(\text{p}, \text{n})$ ,  $E=1.6\text{-}3.2$  MeV; measured En.  $^{12}\text{C}$ ,  $^{28}\text{Si}(\text{n}, \text{X})$ ,  $E=1.410, 1.479, 2.077, 2.501$  MeV; measured total  $\sigma$ . JOUR JRNCD 271 541
- 2007LI04 NUCLEAR REACTIONS  $^2\text{H}(\text{d}, \text{n})$ ,  $E$  not given; measured neutron spectra, yields. Cluster fusion Induced by femtosecond laser pulse. JOUR CPLEE 24 494
- 2007LY01 NUCLEAR REACTIONS  $^4\text{He}(\text{polarized } \gamma, \text{p})$ ,  $(\text{polarized } \gamma, \text{n})$ ,  $E=40, 60, 80$  MeV; measured  $\sigma(\theta)$ , azimuthal asymmetry; deduced multipole strengths, meson exchange current contributions. JOUR NUPAB 781 306
- 2007ME11 NUCLEAR REACTIONS  $^1\text{H}(\text{d}, \text{X})^3\text{He}$ ,  $E$  not given; measured  $\sigma$  and asymmetry factor for  $\eta$  production. Searched for  $\eta^3\text{He}$  quasibound state. JOUR PRLTA 98 242301
- 2007ME16 NUCLEAR REACTIONS  $^2\text{H}(\text{p}, \gamma)$ ,  $E=190$  MeV; measured  $\sigma(\theta)$ .  $^1\text{H}(\text{polarized d}, \gamma)$ ,  $E=55, 66.5, 90$  MeV / nucleon; measured  $E\gamma$ , (particle) $\gamma$ -coin, vector and tensor analyzing powers. Comparison with model predictions, Faddeev calculations using 3N forces. JOUR NUPAB 790 434c
- 2007NI03 NUCLEAR REACTIONS  $^4\text{He}(\gamma, \text{n})$ ,  $E=23\text{-}70$  MeV; measured  $\sigma(\theta)$ ; deduced transition coefficients, angle-integrated  $\sigma$ . Tagged photons. JOUR PRVCA 75 014007
- 2007RY02 NUCLEAR REACTIONS  $^4\text{He}(\gamma, \pi^- \text{p})$ ,  $E\gamma=1.6\text{-}4.5$  GeV;  $^{12}\text{C}(\text{p}, 2\text{p})$ ,  $E\text{p}=1$  GeV; measured  $\sigma$ , compared to model calculations. JOUR ZAANE 31 585
- 2007SA38 NUCLEAR REACTIONS  $^1\text{H}(\text{d}, \text{d})$ ,  $E(\text{cm})=135$  MeV / nucleon; analyzed  $\sigma(\theta)$ .  $^1\text{H}(\text{polarized d}, \gamma)$ ,  $E(\text{cm})=135$  MeV / nucleon; measured analyzing powers. Comparison with calculations. Faddeev model using 2N and 3N potentials. JOUR NUPAB 790 122c
- 2007SC31 NUCLEAR REACTIONS  $^2\text{H}(\text{p}, \text{X})^3\text{He}$ ,  $E=1360, 1450$  MeV; measured missing mass spectra; deduced possible  $\omega$  production. JOUR NUPAB 790 319c
- 2007TA23 NUCLEAR REACTIONS  $^1\text{H}(\text{polarized d}, \gamma)$ ,  $E=137$  MeV; measured tensor analyzing powers. Comparison with meson exchange current calculations and other data. JOUR NUPAB 790 446c

**A=4**

- $^4\text{n}$  2007FOZY NUCLEAR REACTIONS  $^2\text{H}(^8\text{He}, \text{p})$ ,  $(^8\text{He}, \alpha)$ ,  $(^8\text{He}, ^6\text{Li})$ ,  $E=15.3$  MeV / nucleon; measured charged particle energies and yields. CONF Khanty-Mansiysk (Exotic Nuclei) Proc, P3



KEYNUMBERS AND KEYWORDS

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**A=4 (continued)**

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| $^4\text{H}$  | 2007NA18 | NUCLEAR REACTIONS $^4\text{He}(^7\text{Li}, ^7\text{Be})$ , $E=455$ MeV; measured $\sigma$ and angular distributions. deduced E1 photodisintegration cross section. JOUR PRVCA 76 021305  |
| $^4\text{He}$ | 2006AN37 | NUCLEAR REACTIONS $^4\text{He}(\pi^+, \pi^+)$ , $(\pi^+, \pi^+')$ , $(\pi^+, \pi^+n)$ , $(\pi^+, \pi^0p)$ , $(\pi^-, \pi^-)$ , $(\pi^-, \pi^-')$ , $(\pi^-, \pi^-n)$ , $E$ at 218 MeV / c; measured $\sigma(\theta)$ , branching ratios. JOUR NIFBA 121 771   |
|               | 2006YA21 | NUCLEAR REACTIONS $^6\text{Li}(\text{polarized } d, \alpha)$ , (polarized $d, p$ ), $E=90$ keV; measured $E_p$ , $E_\alpha$ , vector and tensor analyzing powers; deduced resonance contributions. JOUR PRVCA 74 064606   |
|               | 2007AC01 | NUCLEAR REACTIONS $^1\text{H}$ , $^4\text{He}(\text{polarized } e, e)$ , $E=3$ GeV; measured parity-violating asymmetry. $^1\text{n}$ , $^1\text{H}$ ; deduced strange form factors. JOUR PRLTA 98 032301   |
|               | 2007AN11 | NUCLEAR REACTIONS $^1\text{H}$ , $^4\text{He}(\text{polarized } e, e)$ , $E$ not given; measured parity-violating electroweak asymmetry. $^1\text{n}$ , $^1\text{H}$ ; deduced strange quark contributions to the nucleon electromagnetic form factors. JOUR ZAANE 31 597   |
|               | 2007BA61 | NUCLEAR REACTIONS $^4\text{He}(^{14}\text{O}, \alpha^{10}\text{C})$ , $(^{14}\text{O}, 2p^{12}\text{C})$ , $(^{14}\text{O}, p^{13}\text{N})$ , $E=60$ MeV / nucleon; measured $E_\gamma$ , $I_\gamma$ , (particle) $\gamma$ -coin, excitation energy spectra, $\sigma(\theta)$ . $^{14}\text{O}$ deduced monopole and dipole strength distributions. Comparison with DWBA calculations. JOUR NUPAB 788 188c   |
|               | 2007MC06 | RADIOACTIVITY $^8\text{Be}(\alpha)$ [ from $^{92}\text{Mo}(^{114}\text{Cd}, X)$ , $E=50$ MeV / nucleon]; measured $E_\alpha$ , $I_\alpha$ , relative $\alpha$ energies as a function of decay angle. Deduced evidence for tidal effect. Compared results to model calculations. JOUR PRLTA 99 132701  |
|               | 2007MI25 | NUCLEAR REACTIONS $^4\text{He}(^{22}\text{O}, ^{23}\text{F}\gamma)$ , $(^{23}\text{F}, ^{23}\text{F}\gamma)$ , $(^{24}\text{F}, ^{23}\text{F}\gamma)$ , $(^{25}\text{Ne}, ^{23}\text{F}\gamma)$ , $E \approx 35$ MeV / nucleon; measured $E_\gamma$ , $I_\gamma$ , $\gamma\gamma$ -coin; deduced reaction $\sigma$ . $^4\text{He}(^{22}\text{O}, ^{23}\text{F}\gamma)$ , $E=35$ MeV / nucleon; measured $\sigma(\theta)$ . $^{23}\text{F}$ deduced levels, $J, \pi$ , configurations. Comparison with DWBA and shell model predictions. JOUR NUPAB 787 569c |
|               | 2007OS03 | NUCLEAR REACTIONS $^9\text{Be}(^{13}\text{C}, \alpha^{14}\text{C})$ , $E=89.45$ MeV; measured particle energies and coincidences. $^8\text{Be}$ deduced levels. JOUR UKPJA 52 525   |
|               | 2007PA36 | NUCLEAR REACTIONS $^4\text{He}(K^-, \pi^-)$ , $E$ at 750 MeV; measured lifetime and mesonic and nonmesonic hypernuclear decay rates. JOUR PRVCA 76 035501   |
|               | 2007PAZZ | NUCLEAR REACTIONS $^4\text{He}(K^-, \pi^-)$ , $E$ at 750 MeV / c; measured lifetime, mesonic and non-mesonic decay rates for $^4_\Lambda\text{He}$ hypernucleus. PREPRINT arXiv:0705.3311v1 [nucl-ex]   |
|               | 2007SH39 | NUCLEAR REACTIONS $^3\text{He}(\text{polarized } p, \pi^+)$ , $E(\text{cm})=200, 300, 400$ MeV; measured differential cross sections, spin correlation parameters, excitation energy. Grand Raiden spectrometer, polarized $^3\text{He}$ target, elastic backward scattering. JOUR PRVCA 76 044003  |

**A=5**

- <sup>5</sup>He      2007BH06      NUCLEAR REACTIONS <sup>5</sup>He, <sup>12</sup>C( $\pi^+$ , K<sup>+</sup>), E at 1.05 GeV / c; measured E<sub>p</sub>, E<sub>n</sub> and angular distributions in hypernuclei decay and discussed quenching effect. Comparison with intra-nuclear cascade calculations. JOUR ZAANE 33 259
- 2007MI25      NUCLEAR REACTIONS <sup>4</sup>He(<sup>22</sup>O, <sup>23</sup>F $\gamma$ ), (<sup>23</sup>F, <sup>23</sup>F $\gamma$ ), (<sup>24</sup>F, <sup>23</sup>F $\gamma$ ), (<sup>25</sup>Ne, <sup>23</sup>F $\gamma$ ), E $\approx$ 35 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin; deduced reaction  $\sigma$ . <sup>4</sup>He(<sup>22</sup>O, <sup>23</sup>F $\gamma$ ), E=35 MeV / nucleon; measured  $\sigma(\theta)$ . <sup>23</sup>F deduced levels, J,  $\pi$ , configurations. Comparison with DWBA and shell model predictions. JOUR NUPAB 787 569c

**A=6**

- <sup>6</sup>H      2007F005      NUCLEAR REACTIONS <sup>6,7</sup>Li, <sup>9</sup>Be, <sup>12</sup>C( $\pi^+$ ,  $\pi^-$ ), ( $\pi^-$ ,  $\pi^+$ ), E=120-270 MeV; measured double differential inclusive pion double charge exchange cross sections. Compared results to model calculations. JOUR PRVCA 75 064605
- 2007FOZY      NUCLEAR REACTIONS <sup>2</sup>H(<sup>8</sup>He, p), (<sup>8</sup>He,  $\alpha$ ), (<sup>8</sup>He, <sup>6</sup>Li), E=15.3 MeV / nucleon; measured charged particle energies and yields. CONF Khanty-Mansiysk (Exotic Nuclei) Proc, P3
- 2007FOZZ      NUCLEAR REACTIONS <sup>6,7</sup>Li, <sup>9</sup>Be, <sup>12</sup>C( $\pi^+$ ,  $\pi^-$ ), ( $\pi^-$ ,  $\pi^+$ ), E=120, 180, 240 MeV; measured  $\sigma(E, \theta)$ . Comparison with model predictions. PREPRINT nucl-ex/0701002,01/03/2007
- 2007GU24      NUCLEAR REACTIONS <sup>9</sup>Be( $\pi^-$ , pd), ( $\pi^-$ , 2p), E at rest; <sup>11</sup>B, <sup>12</sup>C( $\pi^-$ , p $\alpha$ ), E at rest; <sup>11</sup>B, <sup>12</sup>C( $\pi^-$ , p<sup>3</sup>He), E at rest; measured missing mass spectra. <sup>6,7</sup>H deduced possible resonance energies, widths. JOUR ZAANE 32 261
- <sup>6</sup>He      2007BE19      NUCLEAR REACTIONS <sup>27</sup>Al(<sup>6</sup>He, <sup>6</sup>He), E=9.5, 11.0, 12.0, 13.4 MeV; measured  $\sigma$ ,  $\sigma(\theta)$ . <sup>6</sup>He deduced radius, deformation parameters. <sup>27</sup>Al(<sup>6</sup>Li, <sup>6</sup>Li), (<sup>7</sup>Li, <sup>7</sup>Li), (<sup>9</sup>Be, <sup>9</sup>Be), (<sup>16</sup>O, <sup>16</sup>O), E $\approx$ 7-45 MeV; analysed total  $\sigma$ . <sup>6,7</sup>Li, <sup>9</sup>Be, <sup>16</sup>O deduced deformation parameters. Sao Paulo potential. JOUR PYLBB 647 30
- 2007GI08      NUCLEAR REACTIONS <sup>1</sup>H(<sup>8</sup>He, <sup>8</sup>He), (<sup>8</sup>He, d), (<sup>8</sup>He, t), E=15.7, 61.3 MeV / nucleon; analyzed  $\sigma(\theta)$ . Coupled reaction channel calculations, DWBA analysis. <sup>2</sup>H(<sup>26</sup>Ne, p), E=9.7 MeV / nucleon; measured fragment yield, E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin. <sup>27</sup>Ne deduced levels, J,  $\pi$ . Exogam array, Vamos spectrometer. JOUR NUPAB 787 423c
- 2007HA13      NUCLEAR REACTIONS <sup>6</sup>Li( $\gamma$ ,  $\pi^+$ ), E=170-220 MeV; measured pion spectra,  $\sigma(E, \theta)$ . Comparison with model predictions, previous results. JOUR PRVCA 75 044311
- 2007K023      NUCLEAR REACTIONS <sup>209</sup>Bi(<sup>6</sup>He, 2n $\alpha$ ), E=22.5 MeV; measured E<sub>n</sub>, E $\alpha$ , n $\alpha$ -coin,  $\sigma(\theta)$ ; deduced reaction mechanism features. <sup>6</sup>He level deduced B(E2). JOUR PRVCA 75 031302
- <sup>6</sup>Li      2005RIZU      NUCLEAR REACTIONS <sup>2</sup>H(<sup>8</sup>He, 4n), (<sup>8</sup>He, 3n), (<sup>8</sup>He, 2n), E=15.8 MeV / nucleon; measured E<sub>n</sub>, nn-, (recoil)n-coin; deduced possible tetra-neutron cluster. REPT IPNO-T-05-15, Rich

## A=6 (continued)

- 2007BE19 NUCLEAR REACTIONS  $^{27}\text{Al}(^6\text{He}, ^6\text{He})$ ,  $E=9.5, 11.0, 12.0, 13.4$  MeV; measured  $\sigma, \sigma(\theta)$ .  $^6\text{He}$  deduced radius, deformation parameters.  $^{27}\text{Al}(^6\text{Li}, ^6\text{Li})$ ,  $(^7\text{Li}, ^7\text{Li})$ ,  $(^9\text{Be}, ^9\text{Be})$ ,  $(^{16}\text{O}, ^{16}\text{O})$ ,  $E\approx 7-45$  MeV; analysed total  $\sigma$ .  $^{6,7}\text{Li}, ^9\text{Be}, ^{16}\text{O}$  deduced deformation parameters. Sao Paulo potential. JOUR PYLBB 647 30
- 2007FR07 NUCLEAR REACTIONS  $^2\text{H}, ^6\text{Li}(\text{polarized } \mu, \mu')$ ,  $E$  at 160 GeV /  $c$ ; measured scattering asymmetries.  $^1\text{n}, ^1\text{H}$ ; deduced spin structure. JOUR ZAANE 31 620
- 2007K036 NUCLEAR REACTIONS  $^2\text{H}, ^6\text{Li}(\text{polarized } \mu, \mu')$ ,  $E=160$  GeV; measured scattering asymmetry.  $^2\text{H}$ ; deduced spin dependent structure function. JOUR ZAANE 31 606
- 2007MA72 NUCLEAR REACTIONS  $^6\text{Li}, ^{12}\text{C}(\pi^+, \text{K}^+)$ ,  $E$  at 1.05 GeV /  $c$ ; measured excitation energy and pion spectra,  $E_p, E_d, E_n$  from hypernucleus decay; deduced decay asymmetry parameter. JOUR ZAANE 33 255
- 2007MI25 NUCLEAR REACTIONS  $^4\text{He}(^{22}\text{O}, ^{23}\text{F}\gamma)$ ,  $(^{23}\text{F}, ^{23}\text{F}\gamma)$ ,  $(^{24}\text{F}, ^{23}\text{F}\gamma)$ ,  $(^{25}\text{Ne}, ^{23}\text{F}\gamma)$ ,  $E\approx 35$  MeV / nucleon; measured  $E_\gamma, I_\gamma, \gamma\gamma\text{-coin}$ ; deduced reaction  $\sigma$ .  $^4\text{He}(^{22}\text{O}, ^{23}\text{F}\gamma)$ ,  $E=35$  MeV / nucleon; measured  $\sigma(\theta)$ .  $^{23}\text{F}$  deduced levels,  $J, \pi$ , configurations. Comparison with DWBA and shell model predictions. JOUR NUPAB 787 569c
- 2007N013 NUCLEAR REACTIONS  $^9\text{Be}(^{40}\text{Ar}, \text{X})^6\text{Li} / ^7\text{Li} / ^8\text{Li} / ^9\text{Li} / ^7\text{Be} / ^8\text{Be} / ^9\text{Be} / ^{10}\text{Be} / ^{11}\text{Be} / ^{12}\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{B} / ^{13}\text{B} / ^{14}\text{B} / ^{15}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{15}\text{C} / ^{16}\text{C} / ^{17}\text{C} / ^{18}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{N} / ^{17}\text{N} / ^{18}\text{N} / ^{19}\text{N} / ^{20}\text{N} / ^{21}\text{N} / ^{15}\text{O} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O} / ^{19}\text{O} / ^{20}\text{O} / ^{21}\text{O} / ^{22}\text{O} / ^{23}\text{O} / ^{24}\text{O} / ^{17}\text{F} / ^{18}\text{F} / ^{19}\text{F} / ^{20}\text{F} / ^{21}\text{F} / ^{22}\text{F} / ^{23}\text{F} / ^{24}\text{F} / ^{25}\text{F} / ^{26}\text{F} / ^{27}\text{F} / ^{19}\text{Ne} / ^{20}\text{Ne} / ^{21}\text{Ne} / ^{22}\text{Ne} / ^{23}\text{Ne} / ^{24}\text{Ne} / ^{25}\text{Ne} / ^{26}\text{Ne} / ^{27}\text{Ne} / ^{28}\text{Ne} / ^{29}\text{Ne} / ^{21}\text{Na} / ^{22}\text{Na} / ^{23}\text{Na} / ^{24}\text{Na} / ^{25}\text{Na} / ^{26}\text{Na} / ^{27}\text{Na} / ^{28}\text{Na} / ^{29}\text{Na} / ^{30}\text{Na} / ^{31}\text{Na} / ^{32}\text{Na} / ^{23}\text{Mg} / ^{24}\text{Mg} / ^{25}\text{Mg} / ^{26}\text{Mg} / ^{27}\text{Mg} / ^{28}\text{Mg} / ^{29}\text{Mg} / ^{30}\text{Mg} / ^{31}\text{Mg} / ^{32}\text{Mg} / ^{33}\text{Mg} / ^{34}\text{Mg} / ^{25}\text{Al} / ^{26}\text{Al} / ^{27}\text{Al} / ^{28}\text{Al} / ^{29}\text{Al} / ^{30}\text{Al} / ^{31}\text{Al} / ^{32}\text{Al} / ^{33}\text{Al} / ^{34}\text{Al} / ^{35}\text{Al} / ^{36}\text{Al} / ^{27}\text{Si} / ^{28}\text{Si} / ^{29}\text{Si} / ^{30}\text{Si} / ^{31}\text{Si} / ^{32}\text{Si} / ^{33}\text{Si} / ^{34}\text{Si} / ^{35}\text{Si} / ^{36}\text{Si} / ^{37}\text{Si} / ^{38}\text{Si} / ^{29}\text{P} / ^{30}\text{P} / ^{31}\text{P} / ^{32}\text{P} / ^{33}\text{P} / ^{34}\text{P} / ^{35}\text{P} / ^{36}\text{P} / ^{37}\text{P} / ^{38}\text{P} / ^{39}\text{P} / ^{33}\text{S} / ^{34}\text{S} / ^{35}\text{S} / ^{36}\text{S} / ^{37}\text{S} / ^{38}\text{S} / ^{36}\text{Cl} / ^{37}\text{Cl} / ^{38}\text{Cl} / ^{39}\text{Cl} / ^{39}\text{Ar},  $E=100$  MeV / nucleon;  $^{181}\text{Ta}(^{40}\text{Ar}, \text{X})^6\text{Li} / ^7\text{Li} / ^8\text{Li} / ^9\text{Be} / ^{10}\text{Be} / ^{11}\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{B} / ^{13}\text{B} / ^{14}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{15}\text{C} / ^{16}\text{C} / ^{17}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{N} / ^{17}\text{N} / ^{18}\text{N} / ^{19}\text{N} / ^{15}\text{O} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O} / ^{19}\text{O} / ^{20}\text{O} / ^{21}\text{O} / ^{17}\text{F} / ^{18}\text{F} / ^{19}\text{F} / ^{20}\text{F} / ^{21}\text{F} / ^{22}\text{F} / ^{23}\text{F} / ^{24}\text{F} / ^{19}\text{Ne} / ^{20}\text{Ne} / ^{21}\text{Ne} / ^{22}\text{Ne} / ^{23}\text{Ne} / ^{24}\text{Ne} / ^{25}\text{Ne} / ^{26}\text{Ne} / ^{27}\text{Ne} / ^{21}\text{Na} / ^{22}\text{Na} / ^{23}\text{Na} / ^{24}\text{Na} / ^{25}\text{Na} / ^{26}\text{Na} / ^{27}\text{Na} / ^{28}\text{Na} / ^{29}\text{Na} / ^{23}\text{Mg} / ^{24}\text{Mg} / ^{25}\text{Mg} / ^{26}\text{Mg} / ^{27}\text{Mg} / ^{28}\text{Mg} / ^{29}\text{Mg} / ^{30}\text{Mg} / ^{31}\text{Mg} / ^{24} / ^{25}\text{Al} / ^{26}\text{Al} / ^{27}\text{Al} / ^{28}\text{Al} / ^{29}\text{Al} / ^{30}\text{Al} / ^{31}\text{Al} / ^{32}\text{Al} / ^{33}\text{Al} / ^{34}\text{Al} / ^{26}\text{Si} / ^{27}\text{Si} / ^{28}\text{Si} / ^{29}\text{Si} / ^{30}\text{Si} / ^{31}\text{Si} / ^{32}\text{Si} / ^{33}\text{Si} / ^{34}\text{Si} / ^{29}\text{P} / ^{30}\text{P} / ^{31}\text{P} / ^{32}\text{P} / ^{33}\text{P} / ^{34}\text{P} / ^{35}\text{P} / ^{36}\text{P} / ^{30}\text{S} / ^{31}\text{S} / ^{32}\text{S} / ^{33}\text{S} / ^{34}\text{S} / ^{35}\text{S} / ^{36}\text{S} / ^{37}\text{S} / ^{33}\text{Cl} / ^{34}\text{Cl} / ^{35}\text{Cl} / ^{36}\text{Cl} / ^{37}\text{Cl} / ^{35}\text{Ar} / ^{36}\text{Ar} / ^{37}\text{Ar} / ^{38}\text{Ar} / ^{39}\text{Ar} / ^{37}\text{K} / ^{38}\text{K} / ^{39}\text{K} / ^{40}\text{K}$ ,  $E=100$  MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$

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KEYNUMBERS AND KEYWORDS

**A=6 (continued)**

- <sup>6</sup>B      2007F005      NUCLEAR REACTIONS <sup>6,7</sup>Li, <sup>9</sup>Be, <sup>12</sup>C( $\pi^+$ ,  $\pi^-$ ), ( $\pi^-$ ,  $\pi^+$ ), E=120-270 MeV; measured double differential inclusive pion double charge exchange cross sections. Compared results to model calculations. JOUR PRVCA 75 064605
- 2007FOZZ      NUCLEAR REACTIONS <sup>6,7</sup>Li, <sup>9</sup>Be, <sup>12</sup>C( $\pi^+$ ,  $\pi^-$ ), ( $\pi^-$ ,  $\pi^+$ ), E=120, 180, 240 MeV; measured  $\sigma(E, \theta)$ . Comparison with model predictions. PREPRINT nucl-ex/0701002,01/03/2007

**A=7**

- <sup>7</sup>H      2007CA28      NUCLEAR REACTIONS <sup>12</sup>C(<sup>8</sup>He, p), E=154 MeV / nucleon; measured particle energies and excitation energy distributions. <sup>7</sup>H deduced resonance energies. JOUR PRLTA 99 062502
- 2007CAZZ      NUCLEAR REACTIONS <sup>12</sup>C(<sup>8</sup>He, <sup>7</sup>H), E=15.4 MeV / nucleon; measured particle spectra. <sup>7</sup>H deduced resonance energy, width. PREPRINT nucl-ex/0702021,2/9/2007
- 2007F005      NUCLEAR REACTIONS <sup>6,7</sup>Li, <sup>9</sup>Be, <sup>12</sup>C( $\pi^+$ ,  $\pi^-$ ), ( $\pi^-$ ,  $\pi^+$ ), E=120-270 MeV; measured double differential inclusive pion double charge exchange cross sections. Compared results to model calculations. JOUR PRVCA 75 064605
- 2007FOZZ      NUCLEAR REACTIONS <sup>6,7</sup>Li, <sup>9</sup>Be, <sup>12</sup>C( $\pi^+$ ,  $\pi^-$ ), ( $\pi^-$ ,  $\pi^+$ ), E=120, 180, 240 MeV; measured  $\sigma(E, \theta)$ . Comparison with model predictions. PREPRINT nucl-ex/0701002,01/03/2007
- 2007GOZY      NUCLEAR REACTIONS <sup>2</sup>H(<sup>8</sup>He, p), (<sup>8</sup>He, <sup>3</sup>He), E not given; measured cross sections. CONF Khanty-Mansiysk (Exotic Nuclei) Proc, P32
- 2007GU24      NUCLEAR REACTIONS <sup>9</sup>Be( $\pi^-$ , pd), ( $\pi^-$ , 2p), E at rest; <sup>11</sup>B, <sup>12</sup>C( $\pi^-$ , p $\alpha$ ), E at rest; <sup>11</sup>B, <sup>12</sup>C( $\pi^-$ , p<sup>3</sup>He), E at rest; measured missing mass spectra. <sup>6,7</sup>H deduced possible resonance energies, widths. JOUR ZAANE 32 261
- <sup>7</sup>He      2007GI08      NUCLEAR REACTIONS <sup>1</sup>H(<sup>8</sup>He, <sup>8</sup>He), (<sup>8</sup>He, d), (<sup>8</sup>He, t), E=15.7, 61.3 MeV / nucleon; analyzed  $\sigma(\theta)$ . Coupled reaction channel calculations, DWBA analysis. <sup>2</sup>H(<sup>26</sup>Ne, p), E=9.7 MeV / nucleon; measured fragment yield, E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin. <sup>27</sup>Ne deduced levels, J,  $\pi$ . Exogam array, Vamos spectrometer. JOUR NUPAB 787 423c
- 2007GU24      NUCLEAR REACTIONS <sup>9</sup>Be( $\pi^-$ , pd), ( $\pi^-$ , 2p), E at rest; <sup>11</sup>B, <sup>12</sup>C( $\pi^-$ , p $\alpha$ ), E at rest; <sup>11</sup>B, <sup>12</sup>C( $\pi^-$ , p<sup>3</sup>He), E at rest; measured missing mass spectra. <sup>6,7</sup>H deduced possible resonance energies, widths. JOUR ZAANE 32 261
- 2007TA25      NUCLEAR REACTIONS <sup>7</sup>Li, <sup>12</sup>C, <sup>28</sup>Si(e, e'K<sup>+</sup>), E not given; measured missing mass spectra. <sup>7</sup>He, <sup>12</sup>B, <sup>28</sup>Al deduced hypernucleus levels. JOUR NUPAB 790 679c
- <sup>7</sup>Li      2005RIZU      NUCLEAR REACTIONS <sup>2</sup>H(<sup>8</sup>He, 4n), (<sup>8</sup>He, 3n), (<sup>8</sup>He, 2n), E=15.8 MeV / nucleon; measured En, nn-, (recoil)n-coin; deduced possible tetra-neutron cluster. REPT IPNO-T-05-15, Rich
- 2006YA21      NUCLEAR REACTIONS <sup>6</sup>Li(polarized d,  $\alpha$ ), (polarized d, p), E=90 keV; measured Ep, E $\alpha$ , vector and tensor analyzing powers; deduced resonance contributions. JOUR PRVCA 74 064606

## A=7 (continued)

- 2007BE19 NUCLEAR REACTIONS  $^{27}\text{Al}(^6\text{He}, ^6\text{He})$ ,  $E=9.5, 11.0, 12.0, 13.4$  MeV; measured  $\sigma, \sigma(\theta)$ .  $^6\text{He}$  deduced radius, deformation parameters.  $^{27}\text{Al}(^6\text{Li}, ^6\text{Li})$ ,  $(^7\text{Li}, ^7\text{Li})$ ,  $(^9\text{Be}, ^9\text{Be})$ ,  $(^{16}\text{O}, ^{16}\text{O})$ ,  $E\approx 7-45$  MeV; analysed total  $\sigma$ .  $^6, ^7\text{Li}$ ,  $^9\text{Be}$ ,  $^{16}\text{O}$  deduced deformation parameters. Sao Paulo potential. JOUR PYLBB 647 30
- 2007HA06 NUCLEAR REACTIONS  $^{10}\text{B}(n, \alpha)$ ,  $E=0.1-2000$  keV; measured  $E\alpha$ ,  $\sigma(E)$ , branching ratio for emission to ground, first excited state. JOUR NSENA 156 103
- 2007NI02 RADIOACTIVITY  $^7\text{Be}(\text{EC})$ ; measured  $T_{1/2}$  for source in various host materials; deduced no environmental dependence. JOUR PRVCA 75 012801
- 2007N013 NUCLEAR REACTIONS  $^9\text{Be}(^{40}\text{Ar}, X)^6\text{Li} / ^7\text{Li} / ^8\text{Li} / ^9\text{Li} / ^7\text{Be} / ^8\text{Be} / ^9\text{Be} / ^{10}\text{Be} / ^{11}\text{Be} / ^{12}\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{B} / ^{13}\text{B} / ^{14}\text{B} / ^{15}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{15}\text{C} / ^{16}\text{C} / ^{17}\text{C} / ^{18}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{N} / ^{17}\text{N} / ^{18}\text{N} / ^{19}\text{N} / ^{20}\text{N} / ^{21}\text{N} / ^{15}\text{O} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O} / ^{19}\text{O} / ^{20}\text{O} / ^{21}\text{O} / ^{22}\text{O} / ^{23}\text{O} / ^{24}\text{O} / ^{17}\text{F} / ^{18}\text{F} / ^{19}\text{F} / ^{20}\text{F} / ^{21}\text{F} / ^{22}\text{F} / ^{23}\text{F} / ^{24}\text{F} / ^{25}\text{F} / ^{26}\text{F} / ^{27}\text{F} / ^{19}\text{Ne} / ^{20}\text{Ne} / ^{21}\text{Ne} / ^{22}\text{Ne} / ^{23}\text{Ne} / ^{24}\text{Ne} / ^{25}\text{Ne} / ^{26}\text{Ne} / ^{27}\text{Ne} / ^{28}\text{Ne} / ^{29}\text{Ne} / ^{21}\text{Na} / ^{22}\text{Na} / ^{23}\text{Na} / ^{24}\text{Na} / ^{25}\text{Na} / ^{26}\text{Na} / ^{27}\text{Na} / ^{28}\text{Na} / ^{29}\text{Na} / ^{30}\text{Na} / ^{31}\text{Na} / ^{32}\text{Na} / ^{23}\text{Mg} / ^{24}\text{Mg} / ^{25}\text{Mg} / ^{26}\text{Mg} / ^{27}\text{Mg} / ^{28}\text{Mg} / ^{29}\text{Mg} / ^{30}\text{Mg} / ^{31}\text{Mg} / ^{32}\text{Mg} / ^{33}\text{Mg} / ^{34}\text{Mg} / ^{25}\text{Al} / ^{26}\text{Al} / ^{27}\text{Al} / ^{28}\text{Al} / ^{29}\text{Al} / ^{30}\text{Al} / ^{31}\text{Al} / ^{32}\text{Al} / ^{33}\text{Al} / ^{34}\text{Al} / ^{35}\text{Al} / ^{36}\text{Al} / ^{27}\text{Si} / ^{28}\text{Si} / ^{29}\text{Si} / ^{30}\text{Si} / ^{31}\text{Si} / ^{32}\text{Si} / ^{33}\text{Si} / ^{34}\text{Si} / ^{35}\text{Si} / ^{36}\text{Si} / ^{37}\text{Si} / ^{38}\text{Si} / ^{29}\text{P} / ^{30}\text{P} / ^{31}\text{P} / ^{32}\text{P} / ^{33}\text{P} / ^{34}\text{P} / ^{35}\text{P} / ^{36}\text{P} / ^{37}\text{P} / ^{38}\text{P} / ^{39}\text{P} / ^{33}\text{S} / ^{34}\text{S} / ^{35}\text{S} / ^{36}\text{S} / ^{37}\text{S} / ^{38}\text{S} / ^{36}\text{Cl} / ^{37}\text{Cl} / ^{38}\text{Cl} / ^{39}\text{Cl} / ^{39}\text{Ar}$ ,  $E=100$  MeV / nucleon;  $^{181}\text{Ta}(^{40}\text{Ar}, X)^6\text{Li} / ^7\text{Li} / ^8\text{Li} / ^9\text{Be} / ^{10}\text{Be} / ^{11}\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{B} / ^{13}\text{B} / ^{14}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{15}\text{C} / ^{16}\text{C} / ^{17}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{N} / ^{17}\text{N} / ^{18}\text{N} / ^{19}\text{N} / ^{15}\text{O} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O} / ^{19}\text{O} / ^{20}\text{O} / ^{21}\text{O} / ^{17}\text{F} / ^{18}\text{F} / ^{19}\text{F} / ^{20}\text{F} / ^{21}\text{F} / ^{22}\text{F} / ^{23}\text{F} / ^{24}\text{F} / ^{19}\text{Ne} / ^{20}\text{Ne} / ^{21}\text{Ne} / ^{22}\text{Ne} / ^{23}\text{Ne} / ^{24}\text{Ne} / ^{25}\text{Ne} / ^{26}\text{Ne} / ^{27}\text{Ne} / ^{21}\text{Na} / ^{22}\text{Na} / ^{23}\text{Na} / ^{24}\text{Na} / ^{25}\text{Na} / ^{26}\text{Na} / ^{27}\text{Na} / ^{28}\text{Na} / ^{29}\text{Na} / ^{23}\text{Mg} / ^{24}\text{Mg} / ^{25}\text{Mg} / ^{26}\text{Mg} / ^{27}\text{Mg} / ^{28}\text{Mg} / ^{29}\text{Mg} / ^{30}\text{Mg} / ^{31}\text{Mg} / ^{24} / ^{25}\text{Al} / ^{26}\text{Al} / ^{27}\text{Al} / ^{28}\text{Al} / ^{29}\text{Al} / ^{30}\text{Al} / ^{31}\text{Al} / ^{32}\text{Al} / ^{33}\text{Al} / ^{34}\text{Al} / ^{26}\text{Si} / ^{27}\text{Si} / ^{28}\text{Si} / ^{29}\text{Si} / ^{30}\text{Si} / ^{31}\text{Si} / ^{32}\text{Si} / ^{33}\text{Si} / ^{34}\text{Si} / ^{29}\text{P} / ^{30}\text{P} / ^{31}\text{P} / ^{32}\text{P} / ^{33}\text{P} / ^{34}\text{P} / ^{35}\text{P} / ^{36}\text{P} / ^{30}\text{S} / ^{31}\text{S} / ^{32}\text{S} / ^{33}\text{S} / ^{34}\text{S} / ^{35}\text{S} / ^{36}\text{S} / ^{37}\text{S} / ^{33}\text{Cl} / ^{34}\text{Cl} / ^{35}\text{Cl} / ^{36}\text{Cl} / ^{37}\text{Cl} / ^{35}\text{Ar} / ^{36}\text{Ar} / ^{37}\text{Ar} / ^{38}\text{Ar} / ^{39}\text{Ar} / ^{37}\text{K} / ^{38}\text{K} / ^{39}\text{K} / ^{40}\text{K}$ ,  $E=100$  MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007OH02 RADIOACTIVITY  $^7\text{Be}(\text{EC})$ ; measured decay rate in  $\text{C}_{60}$  at liquid helium temperature. Compared results to model calculations. JOUR PRLTA 98 252501
- 2007RU04 NUCLEAR REACTIONS  $^7\text{Li}(^{18}\text{O}, ^{18}\text{O})$ ,  $(^{18}\text{O}, ^{18}\text{O}')$ ,  $E=114$  MeV; measured elastic and inelastic  $\sigma(\theta)$ ; deduced potential parameters, scattering mechanism features.  $^{18}\text{O}$  deduced deformation parameters. Optical model and coupled-reaction-channels analysis. JOUR NUPAB 785 293

**A=7 (continued)**

- 2007RU13 NUCLEAR REACTIONS  ${}^7\text{Li}({}^{10}\text{B}, {}^{10}\text{B})$ , E=51 MeV; measured elastic scattering  $\sigma$  and angular distributions.  ${}^{10}\text{B}({}^7\text{Li}, {}^7\text{Li})$ , E=24, 39 MeV;  ${}^{11}\text{B}({}^7\text{Li}, {}^7\text{Li})$ , E=34 MeV; analyzed elastic scattering  $\sigma$  using optical model and coupled channel method. JOUR ZAANE 33 317
- ${}^7\text{Be}$  2006AMZX NUCLEAR REACTIONS  ${}^1\text{H}({}^7\text{Be}, \text{p})$ , E=7.69 MeV / nucleon; measured  $E_p$ ,  $E_\gamma$ ,  $p\gamma$ -coin. REPT CNS-REP-69,P31,Amadio
- 2006YAZT NUCLEAR REACTIONS  ${}^1\text{H}({}^7\text{Be}, \text{p})$ , E=53.8 MeV; measured  $E_p$ ; deduced excitation function.  ${}^8\text{B}$  deduced resonance energy. REPT CNS-REP-69,P14,Yamaguchi
- 2007AG08 NUCLEAR REACTIONS  ${}^7\text{Li}(\text{K}^+, \text{K}^0)$ , E at rest; measured  $\pi^+$ ,  $\pi^-$  invariant mass spectra; deduced threshold  $\sigma$  upper limit. JOUR PYLBB 649 25
- 2007C017 NUCLEAR REACTIONS  ${}^3\text{He}(\alpha, \gamma)$ , E=220, 250, 400 keV; measured  $E_\gamma$ ,  $I_\gamma$ . Deduced cross section and S-factor. JOUR PRVCA 75 065803
- 2007C0ZZ NUCLEAR REACTIONS  ${}^3\text{He}(\alpha, \gamma)$ , E(cm)=86, 106, 170 keV; measured  $E_\gamma$ ,  $I_\gamma$  and cross section. Deduced s-factor. PREPRINT arXiv:0705.2151v1 [nucl-ex]
- 2007F010 NUCLEAR REACTIONS  ${}^{27}\text{Al}({}^{12}\text{C}, \text{X}){}^7\text{Be} / {}^9\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{O} / {}^{19}\text{F} / {}^{22}\text{Ne} / {}^{23}\text{Na} / {}^{24}\text{Mg} / {}^{26}\text{Mg} / {}^{26}\text{Al} / {}^{27}\text{Al} / \text{Si}$ , E=156 MeV;  ${}^{12}\text{C}({}^{27}\text{Al}, \text{X}){}^7\text{Be} / {}^9\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{O} / {}^{19}\text{F} / {}^{22}\text{Ne} / {}^{23}\text{Na} / {}^{24}\text{Mg} / {}^{26}\text{Mg} / \text{Si}$ , E=348 MeV; measured intermediate mass fragment spectra,  $\sigma(\theta, E)$  from fusion and fragmentation. Comparison with Boltzmann Master Equations theory. JOUR NUPAB 797 1
- 2007GY01 NUCLEAR REACTIONS  ${}^3\text{He}(\alpha, \gamma)$ , E=250, 300, 350, 400 keV; measured  $E_\gamma$ ,  $I_\gamma$ ,  $\sigma$ ; deduced astrophysical S-factor. JOUR PRVCA 75 035805
- 2007KA33 NUCLEAR REACTIONS N, O, Ar(p, X) ${}^7\text{Be} / {}^{11}\text{C} / {}^{13}\text{N} / {}^{15}\text{O} / {}^{18}\text{F} / {}^{22}\text{Na} / {}^{24}\text{Na} / {}^{27}\text{Mg} / {}^{29}\text{Al} / {}^{38}\text{S} / {}^{38}\text{Cl} / {}^{39}\text{Cl}$ , E=12 GeV; measured radionuclide yields. JOUR JRNCD 273 507
- 2007LA25 NUCLEAR REACTIONS  ${}^2\text{H}({}^{10}\text{B}, n\alpha)$ , E=27 MeV; measured  $E_\alpha$ ,  $I_\alpha$ ,  $\sigma$ ; deduced astrophysical S-factor. Trojan horse method, three-body process. JOUR NUPAB 787 309c
- 2007NI02 RADIOACTIVITY  ${}^7\text{Be}(\text{EC})$ ; measured  $T_{1/2}$  for source in various host materials; deduced no environmental dependence. JOUR PRVCA 75 012801



## A=7 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}, E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$
- 2007O02 RADIOACTIVITY  ${}^7\text{Be}(\text{EC})$ ; measured decay rate in  $\text{C}_{60}$  at liquid helium temperature. Compared results to model calculations. JOUR PRLTA 98 252501
- 2007SI19 NUCLEAR REACTIONS  $\text{C}(\text{n}, \text{X}){}^7\text{Be}$ ,  $\text{Si}(\text{n}, \text{X}){}^{22,24}\text{Na}$ ,  ${}^{27}\text{Al}(\text{n}, \text{X})$ ,  ${}^{197}\text{Au}(\text{n}, \text{X}){}^{194,196}\text{Au}$ , E=70-160 MeV; measured  $E_\gamma$ ,  $I_\gamma$  following stacked foil activation. Deduced cross sections. JOUR NIMBE 261 993
- 2007TI03 NUCLEAR REACTIONS  $\text{Pb}$ ,  ${}^{208}\text{Pb}$ ,  ${}^{209}\text{Bi}(\text{p}, \text{X}){}^7\text{Be} / {}^{24}\text{Na} / {}^{59}\text{Fe} / {}^{86}\text{Rb} / {}^{101\text{m}}\text{Rh} / {}^{173}\text{Lu} / {}^{190}\text{Ir} / {}^{192}\text{Ir} / {}^{196}\text{Au} / {}^{199}\text{Tl} / {}^{200}\text{Tl} / {}^{203}\text{Pb}$ , E=0.04-2.6 GeV; measured excitation functions. Comparison with model predictions and previous data. JOUR PRAMC 68 289
- ${}^7\text{B}$  2007F005 NUCLEAR REACTIONS  ${}^{6,7}\text{Li}$ ,  ${}^9\text{Be}$ ,  ${}^{12}\text{C}(\pi^+, \pi^-)$ ,  $(\pi^-, \pi^+)$ , E=120-270 MeV; measured double differential inclusive pion double charge exchange cross sections. Compared results to model calculations. JOUR PRVCA 75 064605
- 2007F0ZZ NUCLEAR REACTIONS  ${}^{6,7}\text{Li}$ ,  ${}^9\text{Be}$ ,  ${}^{12}\text{C}(\pi^+, \pi^-)$ ,  $(\pi^-, \pi^+)$ , E=120, 180, 240 MeV; measured  $\sigma(E, \theta)$ . Comparison with model predictions. PREPRINT nucl-ex/0701002,01/03/2007

## A=8

- <sup>8</sup>He      2007G024      NUCLEAR REACTIONS <sup>2</sup>H(<sup>8</sup>He, p), E=25 MeV / nucleon; measured particle energy and missing mass spectra. <sup>8</sup>He deduced levels, J,  $\pi$ . JOUR PRVCA 76 021605
- 2007GU24      NUCLEAR REACTIONS <sup>9</sup>Be( $\pi^-$ , pd), ( $\pi^-$ , 2p), E at rest; <sup>11</sup>B, <sup>12</sup>C( $\pi^-$ , p $\alpha$ ), E at rest; <sup>11</sup>B, <sup>12</sup>C( $\pi^-$ , p<sup>3</sup>He), E at rest; measured missing mass spectra. <sup>6,7</sup>H deduced possible resonance energies, widths. JOUR ZAANE 32 261
- <sup>8</sup>Li      2005RIZU      NUCLEAR REACTIONS <sup>2</sup>H(<sup>8</sup>He, 4n), (<sup>8</sup>He, 3n), (<sup>8</sup>He, 2n), E=15.8 MeV / nucleon; measured En, nn-, (recoil)n-coin; deduced possible tetra-neutron cluster. REPT IPNO-T-05-15, Rich
- 2007GUZY      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>8</sup>Li, <sup>7</sup>Li), (<sup>8</sup>Li, <sup>8</sup>Li), (<sup>8</sup>Li, <sup>9</sup>Li), E=27 MeV; measured  $\sigma(\theta)$ ; deduced spectroscopic factors. <sup>7,8</sup>Li(n,  $\gamma$ ), E  $\approx$  0-1.2 MeV; calculated  $\sigma$ . PREPRINT nucl-ex/0701046,01/23/2007
- 2007N013      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007PA39      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>6</sup>He, <sup>7</sup>Li), E=25 MeV / nucleon; measured particle energies, yields, inclusive  $\sigma$  and angular distributions. JOUR CPLEE 24 2785
- 2007VI11      NUCLEAR REACTIONS <sup>12</sup>C(<sup>48</sup>Ca, X)<sup>8</sup>Li / <sup>9</sup>Li / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>29</sup>Al / <sup>37</sup>K / <sup>47</sup>K, E=60 MeV / nucleon; measured yield. JOUR NUPAB 787 126c

KEYNUMBERS AND KEYWORDS

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A=8 (*continued*)

- <sup>8</sup>Be      2006SA49      NUCLEAR REACTIONS <sup>7</sup>Li(polarized d, n), E=80, 130, 160 keV; measured  $\sigma(E, \theta)$ , analyzing powers; deduced transition matrix elements. Finite-range DWBA calculations, coupled reaction channels calculations. JOUR PRVCA 74 064611
- 2006TAZW      NUCLEAR REACTIONS <sup>9</sup>Be(n, 2n), E=14 MeV; measured En, nn-coin,  $\sigma(\theta, \phi)$ . REPT JAEA-Conf 2006-009,P95,Takaki
- 2007GU13      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>8</sup>Li, <sup>8</sup>Li), <sup>9</sup>Be(<sup>8</sup>Li, <sup>7</sup>Li), <sup>9</sup>Be(<sup>8</sup>Li, <sup>9</sup>Li), E=27 MeV; measured  $\sigma$  and angular distributions. Deduced spectroscopic factors, compared results to optical model calculations. JOUR PRVCA 75 054602
- 2007GUZY      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>8</sup>Li, <sup>7</sup>Li), (<sup>8</sup>Li, <sup>8</sup>Li), (<sup>8</sup>Li, <sup>9</sup>Li), E=27 MeV; measured  $\sigma(\theta)$ ; deduced spectroscopic factors. <sup>7,8</sup>Li(n,  $\gamma$ ), E  $\approx$  0-1.2 MeV; calculated  $\sigma$ . PREPRINT nucl-ex/0701046,01/23/2007
- 2007K070      NUCLEAR REACTIONS <sup>10</sup>B(d,  $\alpha$ ), E=900-2000 keV; measured  $\sigma$  and angular distributions. JOUR NIMBE 263 369
- 2007MC06      RADIOACTIVITY <sup>8</sup>Be( $\alpha$ ) [ from <sup>92</sup>Mo(<sup>114</sup>Cd, X), E=50 MeV / nucleon]; measured E $\alpha$ , I $\alpha$ , relative  $\alpha$  energies as a function of decay angle. Deduced evidence for tidal effect. Compared results to model calculations. JOUR PRLTA 99 132701
- 2007N013      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007OS03      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>13</sup>C,  $\alpha$ <sup>14</sup>C), E=89.45 MeV; measured particle energies and coincidences. <sup>8</sup>Be deduced levels. JOUR UKPJA 52 525

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KEYNUMBERS AND KEYWORDS

**A=8 (continued)**

- <sup>8</sup>B      2006YAZT      NUCLEAR REACTIONS <sup>1</sup>H(<sup>7</sup>Be, p), E=53.8 MeV; measured E<sub>p</sub>; deduced excitation function. <sup>8</sup>B deduced resonance energy. REPT CNS-REP-69,P14,Yamaguchi
- 2007R001      NUCLEAR REACTIONS <sup>1</sup>H(<sup>8</sup>B, p), E(cm)=0.5-3.2 MeV; measured E<sub>p</sub>, σ(θ), excitation function. <sup>9</sup>C deduced resonance energies, widths, J, π. Thick target, R-matrix analysis, continuum shell model calculations. JOUR PRVCA 75 014603
- 2007YAZY      NUCLEAR REACTIONS <sup>1</sup>H(<sup>7</sup>Be, γ), E=53.8 MeV; measured excitation function. CONF Geneva(NIC-IX) 049

**A=9**

- <sup>9</sup>He      2007F005      NUCLEAR REACTIONS <sup>6,7</sup>Li, <sup>9</sup>Be, <sup>12</sup>C(π<sup>+</sup>, π<sup>-</sup>), (π<sup>-</sup>, π<sup>+</sup>), E=120-270 MeV; measured double differential inclusive pion double charge exchange cross sections. Compared results to model calculations. JOUR PRVCA 75 064605
- 2007F0ZY      NUCLEAR REACTIONS <sup>2</sup>H(<sup>8</sup>He, p), (<sup>8</sup>He, α), (<sup>8</sup>He, <sup>6</sup>Li), E=15.3 MeV / nucleon; measured charged particle energies and yields. CONF Khanty-Mansiysk (Exotic Nuclei) Proc, P3
- 2007F0ZZ      NUCLEAR REACTIONS <sup>6,7</sup>Li, <sup>9</sup>Be, <sup>12</sup>C(π<sup>+</sup>, π<sup>-</sup>), (π<sup>-</sup>, π<sup>+</sup>), E=120, 180, 240 MeV; measured σ(E, θ). Comparison with model predictions. PREPRINT nucl-ex/0701002,01/03/2007
- 2007G024      NUCLEAR REACTIONS <sup>2</sup>H(<sup>8</sup>He, p), E=25 MeV / nucleon; measured particle energy and missing mass spectra. <sup>8</sup>He deduced levels, J, π. JOUR PRVCA 76 021605
- 2007G0ZY      NUCLEAR REACTIONS <sup>2</sup>H(<sup>8</sup>He, p), (<sup>8</sup>He, <sup>3</sup>He), E not given; measured cross sections. CONF Khanty-Mansiysk (Exotic Nuclei) Proc, P32
- <sup>9</sup>Li      2007GUZY      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>8</sup>Li, <sup>7</sup>Li), (<sup>8</sup>Li, <sup>8</sup>Li), (<sup>8</sup>Li, <sup>9</sup>Li), E=27 MeV; measured σ(θ); deduced spectroscopic factors. <sup>7,8</sup>Li(n, γ), E ≈ 0-1.2 MeV; calculated σ. PREPRINT nucl-ex/0701046,01/23/2007
- 2007MAZY      RADIOACTIVITY <sup>9</sup>Li(β<sup>-</sup>); measured β-delayed Eα. <sup>9</sup>Be; measured breakup of the 2.43 state. CONF Geneva(NIC-IX) 135

## A=9 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}, E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$
- 2007VI11 NUCLEAR REACTIONS  ${}^{12}\text{C}({}^{48}\text{Ca}, \text{X}){}^8\text{Li} / {}^9\text{Li} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{29}\text{Al} / {}^{37}\text{K} / {}^{47}\text{K}$ , E=60 MeV / nucleon; measured yield. JOUR NUPAB 787 126c
- ${}^9\text{Be}$  2007BE19 NUCLEAR REACTIONS  ${}^{27}\text{Al}({}^6\text{He}, {}^6\text{He})$ , E=9.5, 11.0, 12.0, 13.4 MeV; measured  $\sigma$ ,  $\sigma(\theta)$ .  ${}^6\text{He}$  deduced radius, deformation parameters.  ${}^{27}\text{Al}({}^6\text{Li}, {}^6\text{Li})$ ,  $({}^7\text{Li}, {}^7\text{Li})$ ,  $({}^9\text{Be}, {}^9\text{Be})$ ,  $({}^{16}\text{O}, {}^{16}\text{O})$ , E $\approx$ 7-45 MeV; analysed total  $\sigma$ .  ${}^{6,7}\text{Li}$ ,  ${}^9\text{Be}$ ,  ${}^{16}\text{O}$  deduced deformation parameters. Sao Paulo potential. JOUR PYLBB 647 30
- 2007CH39 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{10}\text{C}, {}^{10}\text{C})$ , E=10.7 MeV / nucleon; measured  $E_p$ ,  $E_\alpha$ ,  $2p2\alpha$  decay of the excited states;  ${}^{10}\text{C}$ ; deduced level energies and intrinsic widths for particle unbound states. JOUR PRVCA 75 051304
- 2007F010 NUCLEAR REACTIONS  ${}^{27}\text{Al}({}^{12}\text{C}, \text{X}){}^7\text{Be} / {}^9\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{O} / {}^{19}\text{F} / {}^{22}\text{Ne} / {}^{23}\text{Na} / {}^{24}\text{Mg} / {}^{26}\text{Mg} / {}^{26}\text{Al} / {}^{27}\text{Al} / \text{Si}$ , E=156 MeV;  ${}^{12}\text{C}({}^{27}\text{Al}, \text{X}){}^7\text{Be} / {}^9\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{O} / {}^{19}\text{F} / {}^{22}\text{Ne} / {}^{23}\text{Na} / {}^{24}\text{Mg} / {}^{26}\text{Mg} / \text{Si}$ , E=348 MeV; measured intermediate mass fragment spectra,  $\sigma(\theta, E)$  from fusion and fragmentation. Comparison with Boltzmann Master Equations theory. JOUR NUPAB 797 1

KEYNUMBERS AND KEYWORDS

A=9 (*continued*)

- 2007GU13 NUCLEAR REACTIONS  ${}^9\text{Be}({}^8\text{Li}, {}^8\text{Li})$ ,  ${}^9\text{Be}({}^8\text{Li}, {}^7\text{Li})$ ,  ${}^9\text{Be}({}^8\text{Li}, {}^9\text{Li})$ , E=27 MeV; measured  $\sigma$  and angular distributions. Deduced spectroscopic factors, compared results to optical model calculations. JOUR PRVCA 75 054602
- 2007GUZY NUCLEAR REACTIONS  ${}^9\text{Be}({}^8\text{Li}, {}^7\text{Li})$ ,  $({}^8\text{Li}, {}^8\text{Li})$ ,  $({}^8\text{Li}, {}^9\text{Li})$ , E=27 MeV; measured  $\sigma(\theta)$ ; deduced spectroscopic factors.  ${}^7,8\text{Li}(n, \gamma)$ , E  $\approx$  0-1.2 MeV; calculated  $\sigma$ . PREPRINT nucl-ex/0701046.01/23/2007
- 2007MAZY RADIOACTIVITY  ${}^9\text{Li}(\beta^-)$ ; measured  $\beta$ -delayed  $E\alpha$ .  ${}^9\text{Be}$ ; measured breakup of the 2.43 state. CONF Geneva(NIC-IX) 135
- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, X){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, X){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007PA21 NUCLEAR REACTIONS  ${}^9\text{Be}({}^6\text{Li}, {}^6\text{Li}')$ , E=60 MeV; measured  $E\alpha$ ,  $I\alpha$ ,  $\alpha\alpha$ -coin, angular correlations following break-up.  ${}^9\text{Be}$  deduced excited state partial decay widths, branching ratios. Astrophysical implications discussed. JOUR PRVCA 75 045803
- 2007T003 NUCLEAR MOMENTS  ${}^9\text{Be}$ ; measured NMR, Knight shift in  $\text{UBe}_{13}$ ; deduced nuclear quadrupole parameters. JOUR JUPSA 76 024705
- ${}^9\text{B}$  2007AR21 NUCLEAR REACTIONS  ${}^1\text{H}({}^9\text{Be}, n)$ , E=1.2 GeV / nucleon; measured transverse momentum and pair angle distributions for the  $\alpha$  particle pair. JOUR PANUE 70 1222
- ${}^9\text{C}$  2007F005 NUCLEAR REACTIONS  ${}^{6,7}\text{Li}$ ,  ${}^9\text{Be}$ ,  ${}^{12}\text{C}(\pi^+, \pi^-)$ ,  $(\pi^-, \pi^+)$ , E=120-270 MeV; measured double differential inclusive pion double charge exchange cross sections. Compared results to model calculations. JOUR PRVCA 75 064605



**A=9 (continued)**

- 2007FOZZ NUCLEAR REACTIONS  ${}^6,7\text{Li}$ ,  ${}^9\text{Be}$ ,  ${}^{12}\text{C}(\pi^+, \pi^-)$ ,  $(\pi^-, \pi^+)$ ,  $E=120, 180, 240$  MeV; measured  $\sigma(E, \theta)$ . Comparison with model predictions. PREPRINT nucl-ex/0701002,01/03/2007
- 2007R001 NUCLEAR REACTIONS  ${}^1\text{H}({}^8\text{B}, p)$ ,  $E(\text{cm})=0.5\text{-}3.2$  MeV; measured  $E_p$ ,  $\sigma(\theta)$ , excitation function.  ${}^9\text{C}$  deduced resonance energies, widths,  $J$ ,  $\pi$ . Thick target, R-matrix analysis, continuum shell model calculations. JOUR PRVCA 75 014603
- 2007ST17 NUCLEAR REACTIONS  ${}^1\text{H}({}^{10}\text{B}, 2n)$ ,  $E=1.2$  GeV / nucleon; measured transverse momentum distribution of protons produced in the fragmentatation of  ${}^8\text{B}$ . JOUR PANUE 70 1216

**A=10**

- ${}^{10}\text{Li}$  2006JE09 NUCLEAR REACTIONS  ${}^2\text{H}({}^9\text{Li}, {}^{10}\text{Li})$ ,  $E=2.36$  MeV / nucleon; measured proton spectra,  $\sigma(\theta)$ .  ${}^{10}\text{Li}$  deduced spectroscopic factors. Comparison with optical model calculations, post-accelerated radioactive beam. JOUR PYLBB 642 449
- 2007SI24 NUCLEAR REACTIONS  $\text{C}({}^{11}\text{Li}, \text{nx})$ ,  $E=264$  MeV / nucleon;  $\text{C}({}^{14}\text{Be}, \text{nx})$ ,  $E=287$  MeV / nucleon; measured neutron energies and yields,  $\sigma$  as a function of core-neutron energy.  ${}^{11,10}\text{Li}$ ,  ${}^{13}\text{Be}$  deduced resonance parameters. JOUR NUPAB 791 267
- ${}^{10}\text{Be}$  2007B018 NUCLEAR REACTIONS  ${}^{12}\text{C}({}^{12}\text{C}, {}^{14}\text{O})$ ,  $E=211.4$  MeV; measured  $\sigma$  and angular distributions. Deduced level energies,  $J$ ,  $\pi$ . JOUR PRVCA 75 054604
- 2007B027 NUCLEAR REACTIONS  ${}^{12}\text{C}({}^{12}\text{C}, {}^{14}\text{O})$ ,  $E=211.4$  MeV; measured  $\sigma(\theta, E)$ .  ${}^{10}\text{Be}$  deduced levels,  $J$ ,  $\pi$ . Coupled channel calculations. JOUR NUPAB 787 451c
- 2007GR05 RADIOACTIVITY  ${}^{10}\text{Be}$ ,  ${}^{40}\text{K}$ ,  ${}^{87}\text{Rb}(\beta^-)$ ; measured  $E\beta$ ; deduced shape-factor functions, cutoff energy yields, maximum-point energies. Comparison with previous results. JOUR NIMAE 572 760
- 2007GU13 NUCLEAR REACTIONS  ${}^9\text{Be}({}^8\text{Li}, {}^8\text{Li})$ ,  ${}^9\text{Be}({}^8\text{Li}, {}^7\text{Li})$ ,  ${}^9\text{Be}({}^8\text{Li}, {}^9\text{Li})$ ,  $E=27$  MeV; measured  $\sigma$  and angular distributions. Deduced spectroscopic factors, compared results to optical model calculations. JOUR PRVCA 75 054602
- 2007GUZY NUCLEAR REACTIONS  ${}^9\text{Be}({}^8\text{Li}, {}^7\text{Li})$ ,  $({}^8\text{Li}, {}^8\text{Li})$ ,  $({}^8\text{Li}, {}^9\text{Li})$ ,  $E=27$  MeV; measured  $\sigma(\theta)$ ; deduced spectroscopic factors.  ${}^7,8\text{Li}(n, \gamma)$ ,  $E \approx 0\text{-}1.2$  MeV; calculated  $\sigma$ . PREPRINT nucl-ex/0701046,01/23/2007

## A=10 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007PI05 NUCLEAR REACTIONS  ${}^{12}\text{C}(\text{e}, \text{e}'\text{p})$ ,  $(\text{e}, \text{e}'2\text{p})$ , E=4.627 GeV; measured  $E_p$ , pp-coin, yield ratio vs missing momentum. JOUR NUPAB 782 207c
- 2007SHZZ NUCLEAR REACTIONS  ${}^{12}\text{C}(\text{e}, \text{e}'\text{p})$ ,  $(\text{e}, \text{e}'2\text{p})$ , E=4.627 GeV; measured  $E_p$ , pp-coin, angular correlations, missing energy spectra; deduced role of short-range correlations. PREPRINT nucl-ex/0703023,3/15/2007
- 2007S006 NUCLEAR REACTIONS  ${}^{10}\text{B}(\text{n}, \text{p})$ , E=70240 MeV; measured  $\sigma(E, \theta)$ . Comparison with zero- and finite-range DWIA predictions. JOUR PRVCA 75 034611
- ${}^{10}\text{B}$  2007F010 NUCLEAR REACTIONS  ${}^{27}\text{Al}({}^{12}\text{C}, \text{X}){}^7\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{O}$  /  ${}^{19}\text{F}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  $\text{Si}$ , E=156 MeV;  ${}^{12}\text{C}({}^{27}\text{Al}, \text{X}){}^7\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{O}$  /  ${}^{19}\text{F}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  $\text{Si}$ , E=348 MeV; measured intermediate mass fragment spectra,  $\sigma(\theta, E)$  from fusion and fragmentation. Comparison with Boltzmann Master Equations theory. JOUR NUPAB 797 1
- 2007GR05 RADIOACTIVITY  ${}^{10}\text{Be}$ ,  ${}^{40}\text{K}$ ,  ${}^{87}\text{Rb}(\beta^-)$ ; measured  $E\beta$ ; deduced shape-factor functions, cutoff energy yields, maximum-point energies. Comparison with previous results. JOUR NIMAE 572 760

KEYNUMBERS AND KEYWORDS

A=10 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}, E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$
- 2007RU13 NUCLEAR REACTIONS  ${}^7\text{Li}({}^{10}\text{B}, {}^{10}\text{B})$ , E=51 MeV; measured elastic scattering  $\sigma$  and angular distributions.  ${}^{10}\text{B}({}^7\text{Li}, {}^7\text{Li})$ , E=24, 39 MeV;  ${}^{11}\text{B}({}^7\text{Li}, {}^7\text{Li})$ , E=34 MeV; analyzed elastic scattering  $\sigma$  using optical model and coupled channel method. JOUR ZAANE 33 317
- 2007SU02 NUCLEAR REACTIONS  ${}^{12}\text{C}(\text{polarized d}, \alpha)$ , E=140, 270 MeV; measured  $E\alpha$ ,  $\sigma(\theta)$ ; deduced beam polarization.  ${}^1\text{H}(\text{polarized d}, \text{d})$ , E=140, 270; measured analyzing powers. JOUR NIMAE 572 745
- ${}^{10}\text{C}$  2007CH39 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{10}\text{C}, {}^{10}\text{C})$ , E=10.7 MeV / nucleon; measured  $E_p$ ,  $E\alpha$ ,  $2p2\alpha$  decay of the excited states;  ${}^{10}\text{C}$ ; deduced level energies and intrinsic widths for particle unbound states. JOUR PRVCA 75 051304

A=11

- ${}^{11}\text{Li}$  2006SA52 NUCLEAR MOMENTS  ${}^{11}\text{Li}$ ; measured optical isotope shift; deduced charge radius. Laser spectroscopy. JOUR HYIND 171 181
- 2007NA22 NUCLEAR REACTIONS  $\text{Pb}({}^{11}\text{Li}, 2n)$ , E=69.7 E=70 MeV / nucleon; measured  $E_n$ ,  $I_n$ ,  $E(\text{recoil})$ ,  $\sigma(E)$ .  ${}^{11}\text{Li}$  deduced  $B(E1)$  distribution. Comparison with three-body model. JOUR NUPAB 788 243c

A=11 (*continued*)

- 2007SI24 NUCLEAR REACTIONS C( $^{11}\text{Li}$ , nx), E=264 MeV / nucleon; C( $^{14}\text{Be}$ , nx), E=287 MeV / nucleon; measured neutron energies and yields,  $\sigma$  as a function of core-neutron energy.  $^{11,10}\text{Li}$ ,  $^{13}\text{Be}$  deduced resonance parameters. JOUR NUPAB 791 267
- $^{11}\text{Be}$  2007LI62 NUCLEAR REACTIONS  $^{48}\text{Ti}(^{11}\text{Be}, \text{n})$ , E=41 MeV / nucleon; measured En, In, E $\gamma$ , I $\gamma$ ,  $\sigma(\theta)$ , ( $^{10}\text{Be}$ )n-,  $\gamma$ n-coin.  $^{11}\text{Be}$  deduced spectroscopic factor, configurations. JOUR NUPAB 795 1
- 2007LIZW NUCLEAR REACTIONS  $^{48}\text{Ti}(^{11}\text{Be}, ^{10}\text{Be})$ , E=41 MeV / nucleon; measured fragment energies and yields, neutron energies, intensities, and angular distributions, and E $\gamma$ , I $\gamma$ .  $^{11}\text{Be}$  deduced breakup  $\sigma$ . PREPRINT arXiv:0709.3981v1 [nucl-ex]
- 2007N013 NUCLEAR REACTIONS  $^9\text{Be}(^{40}\text{Ar}, \text{X})^6\text{Li}$  /  $^7\text{Li}$  /  $^8\text{Li}$  /  $^9\text{Li}$  /  $^7\text{Be}$  /  $^8\text{Be}$  /  $^9\text{Be}$  /  $^{10}\text{Be}$  /  $^{11}\text{Be}$  /  $^{12}\text{Be}$  /  $^{10}\text{B}$  /  $^{11}\text{B}$  /  $^{12}\text{B}$  /  $^{13}\text{B}$  /  $^{14}\text{B}$  /  $^{15}\text{B}$  /  $^{11}\text{C}$  /  $^{12}\text{C}$  /  $^{13}\text{C}$  /  $^{14}\text{C}$  /  $^{15}\text{C}$  /  $^{16}\text{C}$  /  $^{17}\text{C}$  /  $^{18}\text{C}$  /  $^{13}\text{N}$  /  $^{14}\text{N}$  /  $^{15}\text{N}$  /  $^{16}\text{N}$  /  $^{17}\text{N}$  /  $^{18}\text{N}$  /  $^{19}\text{N}$  /  $^{20}\text{N}$  /  $^{21}\text{N}$  /  $^{15}\text{O}$  /  $^{16}\text{O}$  /  $^{17}\text{O}$  /  $^{18}\text{O}$  /  $^{19}\text{O}$  /  $^{20}\text{O}$  /  $^{21}\text{O}$  /  $^{22}\text{O}$  /  $^{23}\text{O}$  /  $^{24}\text{O}$  /  $^{17}\text{F}$  /  $^{18}\text{F}$  /  $^{19}\text{F}$  /  $^{20}\text{F}$  /  $^{21}\text{F}$  /  $^{22}\text{F}$  /  $^{23}\text{F}$  /  $^{24}\text{F}$  /  $^{25}\text{F}$  /  $^{26}\text{F}$  /  $^{27}\text{F}$  /  $^{19}\text{Ne}$  /  $^{20}\text{Ne}$  /  $^{21}\text{Ne}$  /  $^{22}\text{Ne}$  /  $^{23}\text{Ne}$  /  $^{24}\text{Ne}$  /  $^{25}\text{Ne}$  /  $^{26}\text{Ne}$  /  $^{27}\text{Ne}$  /  $^{28}\text{Ne}$  /  $^{29}\text{Ne}$  /  $^{21}\text{Na}$  /  $^{22}\text{Na}$  /  $^{23}\text{Na}$  /  $^{24}\text{Na}$  /  $^{25}\text{Na}$  /  $^{26}\text{Na}$  /  $^{27}\text{Na}$  /  $^{28}\text{Na}$  /  $^{29}\text{Na}$  /  $^{30}\text{Na}$  /  $^{31}\text{Na}$  /  $^{32}\text{Na}$  /  $^{23}\text{Mg}$  /  $^{24}\text{Mg}$  /  $^{25}\text{Mg}$  /  $^{26}\text{Mg}$  /  $^{27}\text{Mg}$  /  $^{28}\text{Mg}$  /  $^{29}\text{Mg}$  /  $^{30}\text{Mg}$  /  $^{31}\text{Mg}$  /  $^{32}\text{Mg}$  /  $^{33}\text{Mg}$  /  $^{34}\text{Mg}$  /  $^{25}\text{Al}$  /  $^{26}\text{Al}$  /  $^{27}\text{Al}$  /  $^{28}\text{Al}$  /  $^{29}\text{Al}$  /  $^{30}\text{Al}$  /  $^{31}\text{Al}$  /  $^{32}\text{Al}$  /  $^{33}\text{Al}$  /  $^{34}\text{Al}$  /  $^{35}\text{Al}$  /  $^{36}\text{Al}$  /  $^{27}\text{Si}$  /  $^{28}\text{Si}$  /  $^{29}\text{Si}$  /  $^{30}\text{Si}$  /  $^{31}\text{Si}$  /  $^{32}\text{Si}$  /  $^{33}\text{Si}$  /  $^{34}\text{Si}$  /  $^{35}\text{Si}$  /  $^{36}\text{Si}$  /  $^{37}\text{Si}$  /  $^{38}\text{Si}$  /  $^{29}\text{P}$  /  $^{30}\text{P}$  /  $^{31}\text{P}$  /  $^{32}\text{P}$  /  $^{33}\text{P}$  /  $^{34}\text{P}$  /  $^{35}\text{P}$  /  $^{36}\text{P}$  /  $^{37}\text{P}$  /  $^{38}\text{P}$  /  $^{39}\text{P}$  /  $^{33}\text{S}$  /  $^{34}\text{S}$  /  $^{35}\text{S}$  /  $^{36}\text{S}$  /  $^{37}\text{S}$  /  $^{38}\text{S}$  /  $^{36}\text{Cl}$  /  $^{37}\text{Cl}$  /  $^{38}\text{Cl}$  /  $^{39}\text{Cl}$  /  $^{39}\text{Ar}$ , E=100 MeV / nucleon;  $^{181}\text{Ta}(^{40}\text{Ar}, \text{X})^6\text{Li}$  /  $^7\text{Li}$  /  $^8\text{Li}$  /  $^9\text{Be}$  /  $^{10}\text{Be}$  /  $^{11}\text{Be}$  /  $^{10}\text{B}$  /  $^{11}\text{B}$  /  $^{12}\text{B}$  /  $^{13}\text{B}$  /  $^{14}\text{B}$  /  $^{11}\text{C}$  /  $^{12}\text{C}$  /  $^{13}\text{C}$  /  $^{14}\text{C}$  /  $^{15}\text{C}$  /  $^{16}\text{C}$  /  $^{17}\text{C}$  /  $^{13}\text{N}$  /  $^{14}\text{N}$  /  $^{15}\text{N}$  /  $^{16}\text{N}$  /  $^{17}\text{N}$  /  $^{18}\text{N}$  /  $^{19}\text{N}$  /  $^{15}\text{O}$  /  $^{16}\text{O}$  /  $^{17}\text{O}$  /  $^{18}\text{O}$  /  $^{19}\text{O}$  /  $^{20}\text{O}$  /  $^{21}\text{O}$  /  $^{17}\text{F}$  /  $^{18}\text{F}$  /  $^{19}\text{F}$  /  $^{20}\text{F}$  /  $^{21}\text{F}$  /  $^{22}\text{F}$  /  $^{23}\text{F}$  /  $^{24}\text{F}$  /  $^{19}\text{Ne}$  /  $^{20}\text{Ne}$  /  $^{21}\text{Ne}$  /  $^{22}\text{Ne}$  /  $^{23}\text{Ne}$  /  $^{24}\text{Ne}$  /  $^{25}\text{Ne}$  /  $^{26}\text{Ne}$  /  $^{27}\text{Ne}$  /  $^{21}\text{Na}$  /  $^{22}\text{Na}$  /  $^{23}\text{Na}$  /  $^{24}\text{Na}$  /  $^{25}\text{Na}$  /  $^{26}\text{Na}$  /  $^{27}\text{Na}$  /  $^{28}\text{Na}$  /  $^{29}\text{Na}$  /  $^{23}\text{Mg}$  /  $^{24}\text{Mg}$  /  $^{25}\text{Mg}$  /  $^{26}\text{Mg}$  /  $^{27}\text{Mg}$  /  $^{28}\text{Mg}$  /  $^{29}\text{Mg}$  /  $^{30}\text{Mg}$  /  $^{31}\text{Mg}$  /  $^{24}$  /  $^{25}\text{Al}$  /  $^{26}\text{Al}$  /  $^{27}\text{Al}$  /  $^{28}\text{Al}$  /  $^{29}\text{Al}$  /  $^{30}\text{Al}$  /  $^{31}\text{Al}$  /  $^{32}\text{Al}$  /  $^{33}\text{Al}$  /  $^{34}\text{Al}$  /  $^{26}\text{Si}$  /  $^{27}\text{Si}$  /  $^{28}\text{Si}$  /  $^{29}\text{Si}$  /  $^{30}\text{Si}$  /  $^{31}\text{Si}$  /  $^{32}\text{Si}$  /  $^{33}\text{Si}$  /  $^{34}\text{Si}$  /  $^{29}\text{P}$  /  $^{30}\text{P}$  /  $^{31}\text{P}$  /  $^{32}\text{P}$  /  $^{33}\text{P}$  /  $^{34}\text{P}$  /  $^{35}\text{P}$  /  $^{36}\text{P}$  /  $^{30}\text{S}$  /  $^{31}\text{S}$  /  $^{32}\text{S}$  /  $^{33}\text{S}$  /  $^{34}\text{S}$  /  $^{35}\text{S}$  /  $^{36}\text{S}$  /  $^{37}\text{S}$  /  $^{33}\text{Cl}$  /  $^{34}\text{Cl}$  /  $^{35}\text{Cl}$  /  $^{36}\text{Cl}$  /  $^{37}\text{Cl}$  /  $^{35}\text{Ar}$  /  $^{36}\text{Ar}$  /  $^{37}\text{Ar}$  /  $^{38}\text{Ar}$  /  $^{39}\text{Ar}$  /  $^{37}\text{K}$  /  $^{38}\text{K}$  /  $^{39}\text{K}$  /  $^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007SU18 NUCLEAR REACTIONS  $^{208}\text{Pb}(^{11}\text{Be}, ^{11}\text{Be}')$ , E=38.6 MeV / nucleon; measured Coulomb excitation  $\sigma$ .  $^{11}\text{Be}$  deduced B(E1) strengths; calculated  $\sigma$ . Extended continuum discretized coupled channels method. Comparison with previous data. JOUR PYLBB 650 124
- $^{11}\text{B}$  2006KH12 NUCLEAR REACTIONS  $^{14}\text{N}(\text{n}, \alpha)$ , (n, t), E=5.45-7.2 MeV; measured  $\sigma$ . JOUR AENGA 101 307
- 2006SAZP NUCLEAR REACTIONS  $^{11}\text{B}$ ,  $^{13}\text{C}(\alpha, \alpha')$ , E=400 MeV; measured E $\alpha$ ,  $\sigma(E, \theta)$ .  $^{11}\text{B}$  deduced B(E0), B(E2), cluster structure. Antisymmetrized molecular dynamics. REPT CNS-REP-69,P33,Sasamoto

A=11 (*continued*)

- 2007C001 NUCLEAR REACTIONS  $^{13}\text{C}(\text{d}, \text{p}), (\text{d}, \text{t}), (\text{d}, \alpha)$ , E=0.5-1.65 MeV; measured  $\sigma(\theta)$ . Comparison with previous results. JOUR NIMBE 254 25
- 2007DE28 NUCLEAR REACTIONS  $^{12}\text{C}(\text{d}, ^2\text{He}), (\text{d}, \text{n}^2\text{He})$ , E=171 MeV; measured En, Ep, pp-coin, pn-coin, excitation energy spectra,  $\sigma(\text{E}, \theta)$ , tensor analysing powers.  $^{11}\text{B}$  deduced giant resonance features. JOUR PYLBB 649 35
- 2007F010 NUCLEAR REACTIONS  $^{27}\text{Al}(^{12}\text{C}, \text{X})^7\text{Be} / ^9\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{O} / ^{19}\text{F} / ^{22}\text{Ne} / ^{23}\text{Na} / ^{24}\text{Mg} / ^{26}\text{Mg} / ^{26}\text{Al} / ^{27}\text{Al} / \text{Si}$ , E=156 MeV;  $^{12}\text{C}(^{27}\text{Al}, \text{X})^7\text{Be} / ^9\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{O} / ^{19}\text{F} / ^{22}\text{Ne} / ^{23}\text{Na} / ^{24}\text{Mg} / ^{26}\text{Mg} / \text{Si}$ , E=348 MeV; measured intermediate mass fragment spectra,  $\sigma(\theta, \text{E})$  from fusion and fragmentation. Comparison with Boltzmann Master Equations theory. JOUR NUPAB 797 1
- 2007FU07 NUCLEAR REACTIONS  $^{12}\text{C}(\pi^+, \text{K}^+), (\pi^+, \text{K}^+\text{p})$ , E at 1.05 GeV / c; measured  $\text{E}\gamma, \text{I}\gamma$  from  $^{12}_\Lambda\text{C}, ^{11}_\Lambda\text{B}$  decays. Deduced  $\Lambda$ -N interaction parameters. JOUR CPLEE 24 2216
- 2007K069 NUCLEAR REACTIONS  $^{10}\text{B}(\text{d}, \text{p})$ , E=900-2000 keV; measured  $\sigma$  and angular distributions. JOUR NIMBE 263 357
- 2007MA71 NUCLEAR REACTIONS  $^{12}\text{C}(\pi^+, \text{K}^+)$ , E= MeV; measured hypernuclear mass spectrum,  $\text{E}\gamma, \text{I}\gamma$ .  $^{11}\text{B}, ^{12}\text{C}$  deduced hypernuclei levels, J,  $\pi$ . Hyperball2 array. JOUR ZAANE 33 243
- 2007N013 NUCLEAR REACTIONS  $^9\text{Be}(^{40}\text{Ar}, \text{X})^6\text{Li} / ^7\text{Li} / ^8\text{Li} / ^9\text{Li} / ^7\text{Be} / ^8\text{Be} / ^9\text{Be} / ^{10}\text{Be} / ^{11}\text{Be} / ^{12}\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{B} / ^{13}\text{B} / ^{14}\text{B} / ^{15}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{15}\text{C} / ^{16}\text{C} / ^{17}\text{C} / ^{18}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{N} / ^{17}\text{N} / ^{18}\text{N} / ^{19}\text{N} / ^{20}\text{N} / ^{21}\text{N} / ^{15}\text{O} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O} / ^{19}\text{O} / ^{20}\text{O} / ^{21}\text{O} / ^{22}\text{O} / ^{23}\text{O} / ^{24}\text{O} / ^{17}\text{F} / ^{18}\text{F} / ^{19}\text{F} / ^{20}\text{F} / ^{21}\text{F} / ^{22}\text{F} / ^{23}\text{F} / ^{24}\text{F} / ^{25}\text{F} / ^{26}\text{F} / ^{27}\text{F} / ^{19}\text{Ne} / ^{20}\text{Ne} / ^{21}\text{Ne} / ^{22}\text{Ne} / ^{23}\text{Ne} / ^{24}\text{Ne} / ^{25}\text{Ne} / ^{26}\text{Ne} / ^{27}\text{Ne} / ^{28}\text{Ne} / ^{29}\text{Ne} / ^{21}\text{Na} / ^{22}\text{Na} / ^{23}\text{Na} / ^{24}\text{Na} / ^{25}\text{Na} / ^{26}\text{Na} / ^{27}\text{Na} / ^{28}\text{Na} / ^{29}\text{Na} / ^{30}\text{Na} / ^{31}\text{Na} / ^{32}\text{Na} / ^{23}\text{Mg} / ^{24}\text{Mg} / ^{25}\text{Mg} / ^{26}\text{Mg} / ^{27}\text{Mg} / ^{28}\text{Mg} / ^{29}\text{Mg} / ^{30}\text{Mg} / ^{31}\text{Mg} / ^{32}\text{Mg} / ^{33}\text{Mg} / ^{34}\text{Mg} / ^{25}\text{Al} / ^{26}\text{Al} / ^{27}\text{Al} / ^{28}\text{Al} / ^{29}\text{Al} / ^{30}\text{Al} / ^{31}\text{Al} / ^{32}\text{Al} / ^{33}\text{Al} / ^{34}\text{Al} / ^{35}\text{Al} / ^{36}\text{Al} / ^{27}\text{Si} / ^{28}\text{Si} / ^{29}\text{Si} / ^{30}\text{Si} / ^{31}\text{Si} / ^{32}\text{Si} / ^{33}\text{Si} / ^{34}\text{Si} / ^{35}\text{Si} / ^{36}\text{Si} / ^{37}\text{Si} / ^{38}\text{Si} / ^{29}\text{P} / ^{30}\text{P} / ^{31}\text{P} / ^{32}\text{P} / ^{33}\text{P} / ^{34}\text{P} / ^{35}\text{P} / ^{36}\text{P} / ^{37}\text{P} / ^{38}\text{P} / ^{39}\text{P} / ^{33}\text{S} / ^{34}\text{S} / ^{35}\text{S} / ^{36}\text{S} / ^{37}\text{S} / ^{38}\text{S} / ^{36}\text{Cl} / ^{37}\text{Cl} / ^{38}\text{Cl} / ^{39}\text{Cl} / ^{39}\text{Ar}$ , E=100 MeV / nucleon;  $^{181}\text{Ta}(^{40}\text{Ar}, \text{X})^6\text{Li} / ^7\text{Li} / ^8\text{Li} / ^9\text{Be} / ^{10}\text{Be} / ^{11}\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{B} / ^{13}\text{B} / ^{14}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{15}\text{C} / ^{16}\text{C} / ^{17}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{N} / ^{17}\text{N} / ^{18}\text{N} / ^{19}\text{N} / ^{15}\text{O} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O} / ^{19}\text{O} / ^{20}\text{O} / ^{21}\text{O} / ^{17}\text{F} / ^{18}\text{F} / ^{19}\text{F} / ^{20}\text{F} / ^{21}\text{F} / ^{22}\text{F} / ^{23}\text{F} / ^{24}\text{F} / ^{19}\text{Ne} / ^{20}\text{Ne} / ^{21}\text{Ne} / ^{22}\text{Ne} / ^{23}\text{Ne} / ^{24}\text{Ne} / ^{25}\text{Ne} / ^{26}\text{Ne} / ^{27}\text{Ne} / ^{21}\text{Na} / ^{22}\text{Na} / ^{23}\text{Na} / ^{24}\text{Na} / ^{25}\text{Na} / ^{26}\text{Na} / ^{27}\text{Na} / ^{28}\text{Na} / ^{29}\text{Na} / ^{23}\text{Mg} / ^{24}\text{Mg} / ^{25}\text{Mg} / ^{26}\text{Mg} / ^{27}\text{Mg} / ^{28}\text{Mg} / ^{29}\text{Mg} / ^{30}\text{Mg} / ^{31}\text{Mg} / ^{24} / ^{25}\text{Al} / ^{26}\text{Al} / ^{27}\text{Al} / ^{28}\text{Al} / ^{29}\text{Al} / ^{30}\text{Al} / ^{31}\text{Al} / ^{32}\text{Al} / ^{33}\text{Al} / ^{34}\text{Al} / ^{26}\text{Si} / ^{27}\text{Si} / ^{28}\text{Si} / ^{29}\text{Si} / ^{30}\text{Si} / ^{31}\text{Si} / ^{32}\text{Si} / ^{33}\text{Si} / ^{34}\text{Si} / ^{29}\text{P} / ^{30}\text{P} / ^{31}\text{P} / ^{32}\text{P} / ^{33}\text{P} / ^{34}\text{P} / ^{35}\text{P} / ^{36}\text{P} / ^{30}\text{S} / ^{31}\text{S} / ^{32}\text{S} / ^{33}\text{S} / ^{34}\text{S} / ^{35}\text{S} / ^{36}\text{S} / ^{37}\text{S} / ^{33}\text{Cl} / ^{34}\text{Cl} / ^{35}\text{Cl} / ^{36}\text{Cl} / ^{37}\text{Cl} / ^{35}\text{Ar} / ^{36}\text{Ar} / ^{37}\text{Ar} / ^{38}\text{Ar} / ^{39}\text{Ar} / ^{37}\text{K} / ^{38}\text{K} / ^{39}\text{K} / ^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605

A=11 (*continued*)

- 2007PI05 NUCLEAR REACTIONS  $^{12}\text{C}(e, e'p)$ ,  $(e, e'2p)$ ,  $E=4.627$  GeV; measured  $E_p$ , pp-coin, yield ratio vs missing momentum. JOUR NUPAB 782 207c
- 2007RU13 NUCLEAR REACTIONS  $^7\text{Li}(^{10}\text{B}, ^{10}\text{B})$ ,  $E=51$  MeV; measured elastic scattering  $\sigma$  and angular distributions.  $^{10}\text{B}(^7\text{Li}, ^7\text{Li})$ ,  $E=24, 39$  MeV;  $^{11}\text{B}(^7\text{Li}, ^7\text{Li})$ ,  $E=34$  MeV; analyzed elastic scattering  $\sigma$  using optical model and coupled channel method. JOUR ZAANE 33 317
- 2007RY02 NUCLEAR REACTIONS  $^4\text{He}(\gamma, \pi^-p)$ ,  $E_\gamma=1.6-4.5$  GeV;  $^{12}\text{C}(p, 2p)$ ,  $E_p=1$  GeV; measured  $\sigma$ , compared to model calculations. JOUR ZAANE 31 585
- 2007SHZZ NUCLEAR REACTIONS  $^{12}\text{C}(e, e'p)$ ,  $(e, e'2p)$ ,  $E=4.627$  GeV; measured  $E_p$ , pp-coin, angular correlations, missing energy spectra; deduced role of short-range correlations. PREPRINT nucl-ex/0703023,3/15/2007
- 2007ZI03 NUCLEAR REACTIONS  $^{12}\text{C}(^{17}\text{O}, ^{18}\text{F})^{11}\text{B}$ ,  $E=45$  MeV / nucleon; measured  $E_\gamma$ ,  $I_\gamma$ .  $^{18}\text{F}$  deduced  $B(E1)$ ,  $B(E2)$ . JOUR NIMAE 579 476
- $^{11}\text{C}$  2007F010 NUCLEAR REACTIONS  $^{27}\text{Al}(^{12}\text{C}, X)^7\text{Be} / ^9\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{O} / ^{19}\text{F} / ^{22}\text{Ne} / ^{23}\text{Na} / ^{24}\text{Mg} / ^{26}\text{Mg} / ^{26}\text{Al} / ^{27}\text{Al} / \text{Si}$ ,  $E=156$  MeV;  $^{12}\text{C}(^{27}\text{Al}, X)^7\text{Be} / ^9\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{O} / ^{19}\text{F} / ^{22}\text{Ne} / ^{23}\text{Na} / ^{24}\text{Mg} / ^{26}\text{Mg} / \text{Si}$ ,  $E=348$  MeV; measured intermediate mass fragment spectra,  $\sigma(\theta, E)$  from fusion and fragmentation. Comparison with Boltzmann Master Equations theory. JOUR NUPAB 797 1
- 2007GA34 NUCLEAR REACTIONS  $^9\text{Be}(^{38}\text{Si}, ^{36}\text{Mg})$ ,  $E=83$  MeV / nucleon; measured  $E_\gamma$ ,  $I_\gamma$ .  $^{36}\text{Mg}$  deduced level energy. Compared results to model calculations. JOUR PRLTA 99 072502
- 2007KA33 NUCLEAR REACTIONS  $\text{N}, \text{O}, \text{Ar}(p, X)^7\text{Be} / ^{11}\text{C} / ^{13}\text{N} / ^{15}\text{O} / ^{18}\text{F} / ^{22}\text{Na} / ^{24}\text{Na} / ^{27}\text{Mg} / ^{29}\text{Al} / ^{38}\text{S} / ^{38}\text{Cl} / ^{39}\text{Cl}$ ,  $E=12$  GeV; measured radionuclide yields. JOUR JRNCD 273 507



A=11 (continued)

2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}, E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$

A=12

${}^{12}\text{Be}$  2006SAZR NUCLEAR REACTIONS  ${}^4\text{He}({}^{12}\text{Be}, \alpha)$ , E=60 MeV / nucleon; measured  $\sigma(E, \theta)$ , particle spectra.  ${}^{12}\text{Be}$  deduced level energies, J,  $\pi$ , widths. REPT CNS-REP-69,P21,Saito

2007F005 NUCLEAR REACTIONS  ${}^{6,7}\text{Li}, {}^9\text{Be}, {}^{12}\text{C}(\pi^+, \pi^-), (\pi^-, \pi^+)$ , E=120-270 MeV; measured double differential inclusive pion double charge exchange cross sections. Compared results to model calculations. JOUR PRVCA 75 064605

2007F0ZZ NUCLEAR REACTIONS  ${}^{6,7}\text{Li}, {}^9\text{Be}, {}^{12}\text{C}(\pi^+, \pi^-), (\pi^-, \pi^+)$ , E=120, 180, 240 MeV; measured  $\sigma(E, \theta)$ . Comparison with model predictions. PREPRINT nucl-ex/0701002,01/03/2007

A=12 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007SH34 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{18}\text{O}, \text{X}){}^{12}\text{Be}$ , E=100 MeV / nucleon; measured delayed  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin.  ${}^{12}\text{Be}$  deduced isomeric state energy  $J$ ,  $\pi$ ,  $T_{1/2}$ , decay branching,  $B(E2)$ ,  $B(E0)$ . Comparison with shell model calculations. JOUR PYLBB 654 87
- 2007SHZY RADIOACTIVITY  ${}^{12}\text{Be}(\text{IT})$ ; measured  $E\gamma$ ,  $I\gamma$  and lifetimes; deduced level energy,  $B(E2)$ ,  $B(E0)$ . REPT CNS-REP-71
- ${}^{12}\text{B}$  2007DE28 NUCLEAR REACTIONS  ${}^{12}\text{C}(\text{d}, {}^2\text{He})$ ,  $(\text{d}, \text{n}^2\text{He})$ , E=171 MeV; measured  $E_n$ ,  $E_p$ , pp-coin, pn-coin, excitation energy spectra,  $\sigma(E, \theta)$ , tensor analysing powers.  ${}^{11}\text{B}$  deduced giant resonance features. JOUR PYLBB 649 35
- 2007I002 NUCLEAR REACTIONS  ${}^{12}\text{C}(\text{e}, \text{e}'\text{K}^+)$ , E=3.77 GeV; measured cross sections.  ${}^{12}\text{B}$  deduced level energies. JOUR PRLTA 99 052501
- 2007I0ZY NUCLEAR REACTIONS  ${}^{12}\text{C}(\text{e}, \text{e}'\text{K}^+)$ , E=3.77 GeV; measured cross sections for  ${}^{12}_{\Lambda}\text{C}$  hypernucleus. Comparisons to theoretical predictions. PREPRINT arXiv:0705.3332v1 [nucl-ex]

## A=12 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}, E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$
- 2007PEZY RADIOACTIVITY  ${}^{12}\text{B}(\beta^-)$ ,  ${}^{12}\text{N}(\beta^+)$ ; measured branching  $\beta$ -decay ratios. CONF Geneva(NIC-IX) 244
- 2007TA25 NUCLEAR REACTIONS  ${}^7\text{Li}$ ,  ${}^{12}\text{C}$ ,  ${}^{28}\text{Si}(e, e'\text{K}^+)$ , E not given; measured missing mass spectra.  ${}^7\text{He}$ ,  ${}^{12}\text{B}$ ,  ${}^{28}\text{Al}$  deduced hypernucleus levels. JOUR NUPAB 790 679c
- ${}^{12}\text{C}$  2006KH12 NUCLEAR REACTIONS  ${}^{14}\text{N}(n, \alpha)$ ,  $(n, t)$ , E=5.45-7.2 MeV; measured  $\sigma$ . JOUR AENGA 101 307
- 2006LE45 NUCLEAR REACTIONS  ${}^{12}\text{C}(p, p)$ ,  ${}^{12}\text{C}(p, p\gamma)$  E=7.5 MeV; measured  $\sigma$  and angular distributions for ground state and low excited states. JOUR BRSP 70 1883
- 2007AG14 NUCLEAR REACTIONS  ${}^{12}\text{C}(\text{K}^-, \pi^-)$ , E at rest; measured negative pion momentum spectrum and  $E_p$ ,  $I_p$  from decaying hypernucleus. Comparison with other data. JOUR ZAANE 33 251
- 2007ALZZ NUCLEAR REACTIONS  ${}^{10}\text{B}({}^3\text{He}, p)$ , E=2.45 MeV; measured excitation spectrum. CONF Geneva(NIC-IX) 067
- 2007BH06 NUCLEAR REACTIONS  ${}^5\text{He}$ ,  ${}^{12}\text{C}(\pi^+, \text{K}^+)$ , E at 1.05 GeV / c; measured  $E_p$ ,  $E_n$  and angular distributions in hypernuclei decay and discussed quenching effect. Comparison with intra-nuclear cascade calculations. JOUR ZAANE 33 259

**A=12 (continued)**

- 2007BL10 NUCLEAR REACTIONS  $^{12}\text{C}$ ,  $^{208}\text{Pb}(\text{n}, \text{n})$ ,  $E=96$  MeV; Fe, Pb, U( $\text{n}$ ,  $\text{pX}$ ), ( $\text{n}$ ,  $\text{dX}$ ), ( $\text{n}$ ,  $\text{tX}$ ),  $E=96$  MeV; measured  $\sigma(\theta)$ .  $^{181}\text{Ta}$ , W,  $^{197}\text{Au}$ , Pb,  $^{208}\text{Pb}(\text{n}, \text{F})$ ,  $E=20\text{-}200$  MeV; measured fission  $\sigma$ . Cu( $\text{n}$ , X) $^{56}\text{Co}$ ,  $E=50\text{-}180$  MeV; measured  $\sigma$ . JOUR PRAMC 68 269
- 2007B004 NUCLEAR REACTIONS  $^{12}\text{C}(^{68}\text{Zn}, ^{68}\text{Zn}')$ ,  $E=180, 200$  MeV; measured  $E\gamma$ ,  $I\gamma(\theta, \text{H}, \text{t})$ , (particle) $\gamma$ -coin following projectile Coulomb excitation.  $^{68}\text{Zn}$  deduced levels, J,  $\pi$ , g. Transient field technique. Comparison with model predictions. JOUR PRVCA 75 021302
- 2007C001 NUCLEAR REACTIONS  $^{13}\text{C}(\text{d}, \text{p})$ , ( $\text{d}, \text{t}$ ), ( $\text{d}, \alpha$ ),  $E=0.5\text{-}1.65$  MeV; measured  $\sigma(\theta)$ . Comparison with previous results. JOUR NIMBE 254 25
- 2007F010 NUCLEAR REACTIONS  $^{27}\text{Al}(^{12}\text{C}, \text{X})^7\text{Be} / ^9\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{O} / ^{19}\text{F} / ^{22}\text{Ne} / ^{23}\text{Na} / ^{24}\text{Mg} / ^{26}\text{Mg} / ^{26}\text{Al} / ^{27}\text{Al} / \text{Si}$ ,  $E=156$  MeV;  $^{12}\text{C}(^{27}\text{Al}, \text{X})^7\text{Be} / ^9\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{O} / ^{19}\text{F} / ^{22}\text{Ne} / ^{23}\text{Na} / ^{24}\text{Mg} / ^{26}\text{Mg} / \text{Si}$ ,  $E=348$  MeV; measured intermediate mass fragment spectra,  $\sigma(\theta, E)$  from fusion and fragmentation. Comparison with Boltzmann Master Equations theory. JOUR NUPAB 797 1
- 2007FR05 NUCLEAR REACTIONS  $^{12}\text{C}(^{12}\text{C}, 3\alpha)$ ,  $E=104, 106$  MeV; measured  $E\alpha$ ,  $\alpha\alpha$ -coin, relative velocity spectra; deduced no strong Coulomb repulsion or quantum statistics effects. JOUR JPGPE 34 789
- 2007FU07 NUCLEAR REACTIONS  $^{12}\text{C}(\pi^+, \text{K}^+)$ , ( $\pi^+, \text{K}^+\text{p}$ ),  $E$  at  $1.05$  GeV /  $c$ ; measured  $E\gamma$ ,  $I\gamma$  from  $^1_{\Lambda}\text{C}$ ,  $^1_{\Lambda}\text{B}$  decays. Deduced  $\Lambda$ -N interaction parameters. JOUR CPLEE 24 2216
- 2007GA07 NUCLEAR REACTIONS  $^{12}\text{C}(\text{d}, \text{d})$ , ( $\text{d}, \text{d}'$ ),  $E=15.3$  MeV; measured  $\sigma(\theta)$ ,  $\sigma(E, \theta)$ , spin-tensor components of density matrix; deduced reaction mechanism features. JOUR PANUE 70 273
- 2007GL01 NUCLEAR REACTIONS  $^{12,13,14}\text{C}(^{16}\text{O}, ^{16}\text{O})$ ,  $E=132$  MeV; measured  $\sigma(\theta)$ ; deduced Airy structure, optical model parameters. JOUR PANUE 70 1
- 2007MA58 NUCLEAR REACTIONS  $^{27}\text{Al}$ ,  $^{127}\text{I}$ ,  $^{206,207,208}\text{Pb}(\text{n}, \text{n}'\gamma)$ ,  $E$  not give;  $^{10}\text{B}(\alpha, \text{p}\gamma)$ ,  $E=2.27$  MeV;  $^9\text{Be}(\alpha, \text{n}\gamma)$ ,  $E=2.27$  MeV; measured yields. JOUR PRVCA 76 022801
- 2007MA71 NUCLEAR REACTIONS  $^{12}\text{C}(\pi^+, \text{K}^+)$ ,  $E=$  MeV; measured hypernuclear mass spectrum,  $E\gamma$ ,  $I\gamma$ .  $^{11}\text{B}$ ,  $^{12}\text{C}$  deduced hypernuclei levels, J,  $\pi$ . Hyperball2 array. JOUR ZAANE 33 243
- 2007MA72 NUCLEAR REACTIONS  $^6\text{Li}$ ,  $^{12}\text{C}(\pi^+, \text{K}^+)$ ,  $E$  at  $1.05$  GeV /  $c$ ; measured excitation energy and pion spectra,  $E\text{p}$ ,  $E\text{d}$ ,  $E\text{n}$  from hypernucleus decay; deduced decay asymmetry parameter. JOUR ZAANE 33 255

## A=12 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007PA33 NUCLEAR REACTIONS  ${}^{12}\text{C}({}^7\text{Li}, {}^7\text{Li})$ , E=7.5, 9, 12, 15 MeV; measured elastic  $\sigma(\theta)$ ; deduced optical model parameters.  ${}^{12}\text{C}({}^7\text{Li}, \alpha\text{X})$ , E=7.5, 9, 12, 15 MeV; measured  $E\alpha$  and  $\sigma(\theta)$ ; analyzed fusion and direct  $\sigma$ . Comparison with previous data and model calculations. JOUR NUPAB 792 187
- 2007PEZY RADIOACTIVITY  ${}^{12}\text{B}(\beta^-)$ ,  ${}^{12}\text{N}(\beta^+)$ ; measured branching  $\beta$ -decay ratios. CONF Geneva(NIC-IX) 244
- 2007PI13 NUCLEAR REACTIONS  ${}^{12}\text{C}({}^{138}\text{Ce}, {}^{138}\text{Ce}')$ , E=480 MeV; measured  $E\gamma$ ,  $I\gamma$ , angular distributions following projectile Coulomb excitation.  ${}^{138}\text{Ce}$  deduced levels, J,  $\pi$ , B(M1), B(E2), matrix elements,  $\delta$ , mixed-symmetry state. Gammasphere array. JOUR NUPAB 788 85c
- 2007SU20 NUCLEAR REACTIONS  ${}^{12}\text{C}({}^{14}\text{Be}, 2n{}^{12}\text{Be})$ , E=68.1 MeV / nucleon; measured relative energy spectra,  $E\gamma$ ,  $I\gamma$ , (residual) $\gamma$ -coin.  ${}^{14}\text{Be}$  deduced energy level, J,  $\pi$ , deformation length, configurations. Comparison with other data and shell model. JOUR PYLBB 654 160
- 2007SUZY NUCLEAR REACTIONS  ${}^{12}\text{C}({}^{14}\text{Be}, {}^{14}\text{Be}')$ , E=68 MeV / nucleon; measured particle and neutron energies, cross section and angular distributions.  ${}^{14}\text{Be}$  deduced level energies, J,  $\pi$ . REPT RIKEN-NC-NP-12, Sugimoto
- 2007TA27 NUCLEAR REACTIONS  ${}^{26}\text{Mg}$ ,  ${}^{48}\text{Ca}(\text{p}, \text{p}')$ , E=295 MeV; measured excitation energy spectrum.  ${}^{12}\text{C}(\text{p}, \text{p}')$ , E=295 MeV; calculated  $\sigma(\theta)$ . DWIA method. JOUR NUPAB 788 53c

**A=12 (continued)**

- <sup>12</sup>N      2007D0ZZ      NUCLEAR REACTIONS <sup>12</sup>C(polarized p, n), E=296 MeV; measured  $\sigma(E, \theta=0^\circ)$ , polarization transfer observables. PREPRINT arXiv:0704.0670v1 [nucl-ex]
- 2007PEZY      RADIOACTIVITY <sup>12</sup>B( $\beta^-$ ), <sup>12</sup>N( $\beta^+$ ); measured branching  $\beta$ -decay ratios. CONF Geneva(NIC-IX) 244
- 2007SK02      NUCLEAR REACTIONS <sup>1</sup>H(<sup>12</sup>N, p), E(cm)=0.8-2.7 MeV; measured  $E_p$ , excitation functions for elastic scattering. <sup>13</sup>O deduced resonance energies, J,  $\pi$ , widths. <sup>12</sup>N(p,  $\gamma$ ), E=low; calculated astrophysical reaction rates. R-matrix calculations. JOUR PRVCA 75 024607
- 2007WA40      NUCLEAR REACTIONS <sup>12</sup>C(polarized p, n), E=296 MeV; measured excitation energy spectrum,  $\sigma(\theta)$ , analyzing powers. Comparison with DWIA and RPA calculations. JOUR PYLBB 656 38
- 2007WAZY      NUCLEAR REACTIONS <sup>12</sup>C(p, n), E=296 MeV; measured cross section and polarization observables. Compared results to model calculations. PREPRINT ArXiv:0708.2813v1 [nucl-ex]
- 2007ZE06      NUCLEAR REACTIONS <sup>12,13</sup>C, <sup>18</sup>O, <sup>26</sup>Mg, <sup>58</sup>Ni, <sup>60</sup>Ni, <sup>90</sup>Zr, <sup>118</sup>Sn, <sup>208</sup>Pb(<sup>3</sup>He, t), E=420 MeV; measured triton spectra and cross sections. Deduced B(GT). JOUR PRLTA 99 202501
- 2007ZEZZ      NUCLEAR REACTIONS <sup>12,13</sup>C, <sup>18</sup>O, <sup>26</sup>Mg, <sup>58</sup>Ni, <sup>60</sup>Ni, <sup>90</sup>Zr, <sup>118</sup>Sn, <sup>208</sup>Pb(<sup>3</sup>He, t), E=420 MeV; measured triton spectra and cross sections. Deduced B(GT). PREPRINT arXiv:0707.2840v1 [nucl-ex]
- <sup>12</sup>O      2007F005      NUCLEAR REACTIONS <sup>6,7</sup>Li, <sup>9</sup>Be, <sup>12</sup>C( $\pi^+$ ,  $\pi^-$ ), ( $\pi^-$ ,  $\pi^+$ ), E=120-270 MeV; measured double differential inclusive pion double charge exchange cross sections. Compared results to model calculations. JOUR PRVCA 75 064605
- 2007F0ZZ      NUCLEAR REACTIONS <sup>6,7</sup>Li, <sup>9</sup>Be, <sup>12</sup>C( $\pi^+$ ,  $\pi^-$ ), ( $\pi^-$ ,  $\pi^+$ ), E=120, 180, 240 MeV; measured  $\sigma(E, \theta)$ . Comparison with model predictions. PREPRINT nucl-ex/0701002,01/03/2007

**A=13**

- <sup>13</sup>Be      2007SI24      NUCLEAR REACTIONS C(<sup>11</sup>Li, nx), E=264 MeV / nucleon; C(<sup>14</sup>Be, nx), E=287 MeV / nucleon; measured neutron energies and yields,  $\sigma$  as a function of core-neutron energy. <sup>11,10</sup>Li, <sup>13</sup>Be deduced resonance parameters. JOUR NUPAB 791 267
- <sup>13</sup>B      2006GE21      NUCLEAR REACTIONS <sup>11</sup>B(t, p), E=2.53-6.95 MeV; measured excitation function. <sup>14</sup>C deduced analog states features. JOUR BRSPE 70 217
- 2006GE21      RADIOACTIVITY <sup>13</sup>B( $\beta^-$ ) [from <sup>11</sup>B(t, p)]; measured  $E\beta$ ,  $E\gamma$ ,  $T_{1/2}$ . JOUR BRSPE 70 217

## A=13 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}, E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$
- ${}^{13}\text{C}$  2006GE21 RADIOACTIVITY  ${}^{13}\text{B}(\beta^-)$  [from  ${}^{11}\text{B}(t, p)$ ]; measured  $E\beta$ ,  $E\gamma$ ,  $T_{1/2}$ . JOUR BRSPPE 70 217
- 2006SAZP NUCLEAR REACTIONS  ${}^{11}\text{B}$ ,  ${}^{13}\text{C}(\alpha, \alpha')$ , E=400 MeV; measured  $E\alpha$ ,  $\sigma(E, \theta)$ .  ${}^{11}\text{B}$  deduced  $B(E0)$ ,  $B(E2)$ , cluster structure. Antisymmetrized molecular dynamics. REPT CNS-REP-69,P33,Sasamoto
- 2007F010 NUCLEAR REACTIONS  ${}^{27}\text{Al}({}^{12}\text{C}, \text{X}){}^7\text{Be} / {}^9\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{O} / {}^{19}\text{F} / {}^{22}\text{Ne} / {}^{23}\text{Na} / {}^{24}\text{Mg} / {}^{26}\text{Mg} / {}^{26}\text{Al} / {}^{27}\text{Al} / \text{Si}$ , E=156 MeV;  ${}^{12}\text{C}({}^{27}\text{Al}, \text{X}){}^7\text{Be} / {}^9\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{O} / {}^{19}\text{F} / {}^{22}\text{Ne} / {}^{23}\text{Na} / {}^{24}\text{Mg} / {}^{26}\text{Mg} / \text{Si}$ , E=348 MeV; measured intermediate mass fragment spectra,  $\sigma(\theta, E)$  from fusion and fragmentation. Comparison with Boltzmann Master Equations theory. JOUR NUPAB 797 1
- 2007GL01 NUCLEAR REACTIONS  ${}^{12,13,14}\text{C}({}^{16}\text{O}, {}^{16}\text{O})$ , E=132 MeV; measured  $\sigma(\theta)$ ; deduced Airy structure, optical model parameters. JOUR PANUE 70 1
- 2007K002 NUCLEAR REACTIONS  ${}^{12}\text{C}(d, p)$ , E=900-2000 keV; measured  $E_p$ ,  $\sigma(E, \theta)$ . JOUR NIMBE 254 10
- 2007MA58 NUCLEAR REACTIONS  ${}^{27}\text{Al}$ ,  ${}^{127}\text{I}$ ,  ${}^{206,207,208}\text{Pb}(n, n'\gamma)$ , E not give;  ${}^{10}\text{B}(\alpha, p\gamma)$ , E=2.27 MeV;  ${}^9\text{Be}(\alpha, n\gamma)$ , E=2.27 MeV; measured yields. JOUR PRVCA 76 022801



## A=13 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}, E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$
- ${}^{13}\text{N}$  2006TEZW NUCLEAR REACTIONS  ${}^1\text{H}({}^{13}\text{N}, \text{p})$ , E=48.6 MeV; measured  $E_p$ ,  $\sigma(\theta)$ .  ${}^{14}\text{O}$  deduced resonance energies, J,  $\pi$ , widths. REPT CNS-REP-69,P10,Teranishi
- 2007BE47 NUCLEAR REACTIONS  ${}^{12}\text{C}$ ,  ${}^{16}\text{O}$ ,  ${}^{24}\text{Mg}$ , Fe(p,  $\gamma$ ), e=5-25 meV;  ${}^{12}\text{C}$ ,  ${}^{16}\text{O}$ ,  ${}^{24}\text{Mg}$ , Fe( $\alpha$ ,  $\gamma$ ), E=5-40 MeV; measured  $E_\gamma$ ,  $I_\gamma$ , angular distributions, cross sections and excitation functions. Compared results to model calculations. JOUR PRVCA 76 034607
- 2007CAZZ NUCLEAR REACTIONS  ${}^{12}\text{C}({}^8\text{He}, {}^7\text{H})$ , E=15.4 MeV / nucleon; measured particle spectra.  ${}^7\text{H}$  deduced resonance energy, width. PREPRINT nucl-ex/0702021,2/9/2007
- 2007F010 NUCLEAR REACTIONS  ${}^{27}\text{Al}({}^{12}\text{C}, \text{X}){}^7\text{Be} / {}^9\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{O} / {}^{19}\text{F} / {}^{22}\text{Ne} / {}^{23}\text{Na} / {}^{24}\text{Mg} / {}^{26}\text{Mg} / {}^{26}\text{Al} / {}^{27}\text{Al} / \text{Si}$ , E=156 MeV;  ${}^{12}\text{C}({}^{27}\text{Al}, \text{X}){}^7\text{Be} / {}^9\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{O} / {}^{19}\text{F} / {}^{22}\text{Ne} / {}^{23}\text{Na} / {}^{24}\text{Mg} / {}^{26}\text{Mg} / \text{Si}$ , E=348 MeV; measured intermediate mass fragment spectra,  $\sigma(\theta, E)$  from fusion and fragmentation. Comparison with Boltzmann Master Equations theory. JOUR NUPAB 797 1
- 2007KA33 NUCLEAR REACTIONS N, O, Ar(p, X) ${}^7\text{Be} / {}^{11}\text{C} / {}^{13}\text{N} / {}^{15}\text{O} / {}^{18}\text{F} / {}^{22}\text{Na} / {}^{24}\text{Na} / {}^{27}\text{Mg} / {}^{29}\text{Al} / {}^{38}\text{S} / {}^{38}\text{Cl} / {}^{39}\text{Cl}$ , E=12 GeV; measured radionuclide yields. JOUR JRNCD 273 507

A=13 (continued)

- 2007LH01 NUCLEAR REACTIONS  $^{13}\text{C}(\text{p}, \text{n})$ , E=20, 25, 40 MeV; measured neutron energy,  $\sigma$  and angular distributions. Compared results to existing data and model calculations. JOUR NIMAE 576 371
- 2007N013 NUCLEAR REACTIONS  $^9\text{Be}({}^{40}\text{Ar}, \text{X})$   $^6\text{Li}$  /  $^7\text{Li}$  /  $^8\text{Li}$  /  $^9\text{Li}$  /  $^7\text{Be}$  /  $^8\text{Be}$  /  $^9\text{Be}$  /  $^{10}\text{Be}$  /  $^{11}\text{Be}$  /  $^{12}\text{Be}$  /  $^{10}\text{B}$  /  $^{11}\text{B}$  /  $^{12}\text{B}$  /  $^{13}\text{B}$  /  $^{14}\text{B}$  /  $^{15}\text{B}$  /  $^{11}\text{C}$  /  $^{12}\text{C}$  /  $^{13}\text{C}$  /  $^{14}\text{C}$  /  $^{15}\text{C}$  /  $^{16}\text{C}$  /  $^{17}\text{C}$  /  $^{18}\text{C}$  /  $^{13}\text{N}$  /  $^{14}\text{N}$  /  $^{15}\text{N}$  /  $^{16}\text{N}$  /  $^{17}\text{N}$  /  $^{18}\text{N}$  /  $^{19}\text{N}$  /  $^{20}\text{N}$  /  $^{21}\text{N}$  /  $^{15}\text{O}$  /  $^{16}\text{O}$  /  $^{17}\text{O}$  /  $^{18}\text{O}$  /  $^{19}\text{O}$  /  $^{20}\text{O}$  /  $^{21}\text{O}$  /  $^{22}\text{O}$  /  $^{23}\text{O}$  /  $^{24}\text{O}$  /  $^{17}\text{F}$  /  $^{18}\text{F}$  /  $^{19}\text{F}$  /  $^{20}\text{F}$  /  $^{21}\text{F}$  /  $^{22}\text{F}$  /  $^{23}\text{F}$  /  $^{24}\text{F}$  /  $^{25}\text{F}$  /  $^{26}\text{F}$  /  $^{27}\text{F}$  /  $^{19}\text{Ne}$  /  $^{20}\text{Ne}$  /  $^{21}\text{Ne}$  /  $^{22}\text{Ne}$  /  $^{23}\text{Ne}$  /  $^{24}\text{Ne}$  /  $^{25}\text{Ne}$  /  $^{26}\text{Ne}$  /  $^{27}\text{Ne}$  /  $^{28}\text{Ne}$  /  $^{29}\text{Ne}$  /  $^{21}\text{Na}$  /  $^{22}\text{Na}$  /  $^{23}\text{Na}$  /  $^{24}\text{Na}$  /  $^{25}\text{Na}$  /  $^{26}\text{Na}$  /  $^{27}\text{Na}$  /  $^{28}\text{Na}$  /  $^{29}\text{Na}$  /  $^{30}\text{Na}$  /  $^{31}\text{Na}$  /  $^{32}\text{Na}$  /  $^{23}\text{Mg}$  /  $^{24}\text{Mg}$  /  $^{25}\text{Mg}$  /  $^{26}\text{Mg}$  /  $^{27}\text{Mg}$  /  $^{28}\text{Mg}$  /  $^{29}\text{Mg}$  /  $^{30}\text{Mg}$  /  $^{31}\text{Mg}$  /  $^{32}\text{Mg}$  /  $^{33}\text{Mg}$  /  $^{34}\text{Mg}$  /  $^{25}\text{Al}$  /  $^{26}\text{Al}$  /  $^{27}\text{Al}$  /  $^{28}\text{Al}$  /  $^{29}\text{Al}$  /  $^{30}\text{Al}$  /  $^{31}\text{Al}$  /  $^{32}\text{Al}$  /  $^{33}\text{Al}$  /  $^{34}\text{Al}$  /  $^{35}\text{Al}$  /  $^{36}\text{Al}$  /  $^{27}\text{Si}$  /  $^{28}\text{Si}$  /  $^{29}\text{Si}$  /  $^{30}\text{Si}$  /  $^{31}\text{Si}$  /  $^{32}\text{Si}$  /  $^{33}\text{Si}$  /  $^{34}\text{Si}$  /  $^{35}\text{Si}$  /  $^{36}\text{Si}$  /  $^{37}\text{Si}$  /  $^{38}\text{Si}$  /  $^{29}\text{P}$  /  $^{30}\text{P}$  /  $^{31}\text{P}$  /  $^{32}\text{P}$  /  $^{33}\text{P}$  /  $^{34}\text{P}$  /  $^{35}\text{P}$  /  $^{36}\text{P}$  /  $^{37}\text{P}$  /  $^{38}\text{P}$  /  $^{39}\text{P}$  /  $^{33}\text{S}$  /  $^{34}\text{S}$  /  $^{35}\text{S}$  /  $^{36}\text{S}$  /  $^{37}\text{S}$  /  $^{38}\text{S}$  /  $^{36}\text{Cl}$  /  $^{37}\text{Cl}$  /  $^{38}\text{Cl}$  /  $^{39}\text{Cl}$  /  $^{39}\text{Ar}$ , E=100 MeV / nucleon;  $^{181}\text{Ta}({}^{40}\text{Ar}, \text{X})$   $^6\text{Li}$  /  $^7\text{Li}$  /  $^8\text{Li}$  /  $^9\text{Be}$  /  $^{10}\text{Be}$  /  $^{11}\text{Be}$  /  $^{10}\text{B}$  /  $^{11}\text{B}$  /  $^{12}\text{B}$  /  $^{13}\text{B}$  /  $^{14}\text{B}$  /  $^{11}\text{C}$  /  $^{12}\text{C}$  /  $^{13}\text{C}$  /  $^{14}\text{C}$  /  $^{15}\text{C}$  /  $^{16}\text{C}$  /  $^{17}\text{C}$  /  $^{13}\text{N}$  /  $^{14}\text{N}$  /  $^{15}\text{N}$  /  $^{16}\text{N}$  /  $^{17}\text{N}$  /  $^{18}\text{N}$  /  $^{19}\text{N}$  /  $^{15}\text{O}$  /  $^{16}\text{O}$  /  $^{17}\text{O}$  /  $^{18}\text{O}$  /  $^{19}\text{O}$  /  $^{20}\text{O}$  /  $^{21}\text{O}$  /  $^{17}\text{F}$  /  $^{18}\text{F}$  /  $^{19}\text{F}$  /  $^{20}\text{F}$  /  $^{21}\text{F}$  /  $^{22}\text{F}$  /  $^{23}\text{F}$  /  $^{24}\text{F}$  /  $^{19}\text{Ne}$  /  $^{20}\text{Ne}$  /  $^{21}\text{Ne}$  /  $^{22}\text{Ne}$  /  $^{23}\text{Ne}$  /  $^{24}\text{Ne}$  /  $^{25}\text{Ne}$  /  $^{26}\text{Ne}$  /  $^{27}\text{Ne}$  /  $^{21}\text{Na}$  /  $^{22}\text{Na}$  /  $^{23}\text{Na}$  /  $^{24}\text{Na}$  /  $^{25}\text{Na}$  /  $^{26}\text{Na}$  /  $^{27}\text{Na}$  /  $^{28}\text{Na}$  /  $^{29}\text{Na}$  /  $^{23}\text{Mg}$  /  $^{24}\text{Mg}$  /  $^{25}\text{Mg}$  /  $^{26}\text{Mg}$  /  $^{27}\text{Mg}$  /  $^{28}\text{Mg}$  /  $^{29}\text{Mg}$  /  $^{30}\text{Mg}$  /  $^{31}\text{Mg}$  /  $^{24}$  /  $^{25}\text{Al}$  /  $^{26}\text{Al}$  /  $^{27}\text{Al}$  /  $^{28}\text{Al}$  /  $^{29}\text{Al}$  /  $^{30}\text{Al}$  /  $^{31}\text{Al}$  /  $^{32}\text{Al}$  /  $^{33}\text{Al}$  /  $^{34}\text{Al}$  /  $^{26}\text{Si}$  /  $^{27}\text{Si}$  /  $^{28}\text{Si}$  /  $^{29}\text{Si}$  /  $^{30}\text{Si}$  /  $^{31}\text{Si}$  /  $^{32}\text{Si}$  /  $^{33}\text{Si}$  /  $^{34}\text{Si}$  /  $^{29}\text{P}$  /  $^{30}\text{P}$  /  $^{31}\text{P}$  /  $^{32}\text{P}$  /  $^{33}\text{P}$  /  $^{34}\text{P}$  /  $^{35}\text{P}$  /  $^{36}\text{P}$  /  $^{30}\text{S}$  /  $^{31}\text{S}$  /  $^{32}\text{S}$  /  $^{33}\text{S}$  /  $^{34}\text{S}$  /  $^{35}\text{S}$  /  $^{36}\text{S}$  /  $^{37}\text{S}$  /  $^{33}\text{Cl}$  /  $^{34}\text{Cl}$  /  $^{35}\text{Cl}$  /  $^{36}\text{Cl}$  /  $^{37}\text{Cl}$  /  $^{35}\text{Ar}$  /  $^{36}\text{Ar}$  /  $^{37}\text{Ar}$  /  $^{38}\text{Ar}$  /  $^{39}\text{Ar}$  /  $^{37}\text{K}$  /  $^{38}\text{K}$  /  $^{39}\text{K}$  /  $^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007ZE06 NUCLEAR REACTIONS  $^{12,13}\text{C}$ ,  $^{18}\text{O}$ ,  $^{26}\text{Mg}$ ,  $^{58}\text{Ni}$ ,  $^{60}\text{Ni}$ ,  $^{90}\text{Zr}$ ,  $^{118}\text{Sn}$ ,  $^{208}\text{Pb}({}^3\text{He}, \text{t})$ , E=420 MeV; measured triton spectra and cross sections. Deduced B(GT). JOUR PRLTA 99 202501
- 2007ZEZZ NUCLEAR REACTIONS  $^{12,13}\text{C}$ ,  $^{18}\text{O}$ ,  $^{26}\text{Mg}$ ,  $^{58}\text{Ni}$ ,  $^{60}\text{Ni}$ ,  $^{90}\text{Zr}$ ,  $^{118}\text{Sn}$ ,  $^{208}\text{Pb}({}^3\text{He}, \text{t})$ , E=420 MeV; measured triton spectra and cross sections. Deduced B(GT). PREPRINT arXiv:0707.2840v1 [nucl-ex]
- $^{13}\text{O}$  2007GUZW NUCLEAR REACTIONS  $^{16}\text{O}({}^3\text{He}, {}^6\text{He})^{13}\text{O}$ , E=79.9 MeV; measured momentum spectra and  $\sigma$  at 9 laboratory angles.  $^{13}\text{O}$  deduced level energies, energy between the first positive parity state and the proton threshold energy. CONF Iguazu(Nuclear Physics and Applications) Proc,P123,Guimaraes
- 2007SK02 NUCLEAR REACTIONS  $^1\text{H}({}^{12}\text{N}, \text{p})$ , E(cm)=0.8-2.7 MeV; measured  $E_p$ , excitation functions for elastic scattering.  $^{13}\text{O}$  deduced resonance energies, J,  $\pi$ , widths.  $^{12}\text{N}(\text{p}, \gamma)$ , E=low; calculated astrophysical reaction rates. R-matrix calculations. JOUR PRVCA 75 024607

A=14

<sup>14</sup> Be	2007SU20	NUCLEAR REACTIONS <sup>12</sup> C( <sup>14</sup> Be, 2n <sup>12</sup> Be), E=68.1 MeV / nucleon; measured relative energy spectra, E <sub>γ</sub> , I <sub>γ</sub> , (residual)γ-coin. <sup>14</sup> Be deduced energy level, J, π, deformation length, configurations. Comparison with other data and shell model. JOUR PYLBB 654 160
	2007SUZY	NUCLEAR REACTIONS <sup>12</sup> C( <sup>14</sup> Be, <sup>14</sup> Be'), E=68 MeV / nucleon; measured particle and neutron energies, cross section and angular distributions. <sup>14</sup> Be deduced level energies, J, π. REPT RIKEN-NC-NP-12,Sugimoto
<sup>14</sup> B	2007N013	NUCLEAR REACTIONS <sup>9</sup> Be( <sup>40</sup> Ar, X) <sup>6</sup> Li / <sup>7</sup> Li / <sup>8</sup> Li / <sup>9</sup> Li / <sup>7</sup> Be / <sup>8</sup> Be / <sup>9</sup> Be / <sup>10</sup> Be / <sup>11</sup> Be / <sup>12</sup> Be / <sup>10</sup> B / <sup>11</sup> B / <sup>12</sup> B / <sup>13</sup> B / <sup>14</sup> B / <sup>15</sup> B / <sup>11</sup> C / <sup>12</sup> C / <sup>13</sup> C / <sup>14</sup> C / <sup>15</sup> C / <sup>16</sup> C / <sup>17</sup> C / <sup>18</sup> C / <sup>13</sup> N / <sup>14</sup> N / <sup>15</sup> N / <sup>16</sup> N / <sup>17</sup> N / <sup>18</sup> N / <sup>19</sup> N / <sup>20</sup> N / <sup>21</sup> N / <sup>15</sup> O / <sup>16</sup> O / <sup>17</sup> O / <sup>18</sup> O / <sup>19</sup> O / <sup>20</sup> O / <sup>21</sup> O / <sup>22</sup> O / <sup>23</sup> O / <sup>24</sup> O / <sup>17</sup> F / <sup>18</sup> F / <sup>19</sup> F / <sup>20</sup> F / <sup>21</sup> F / <sup>22</sup> F / <sup>23</sup> F / <sup>24</sup> F / <sup>25</sup> F / <sup>26</sup> F / <sup>27</sup> F / <sup>19</sup> Ne / <sup>20</sup> Ne / <sup>21</sup> Ne / <sup>22</sup> Ne / <sup>23</sup> Ne / <sup>24</sup> Ne / <sup>25</sup> Ne / <sup>26</sup> Ne / <sup>27</sup> Ne / <sup>28</sup> Ne / <sup>29</sup> Ne / <sup>21</sup> Na / <sup>22</sup> Na / <sup>23</sup> Na / <sup>24</sup> Na / <sup>25</sup> Na / <sup>26</sup> Na / <sup>27</sup> Na / <sup>28</sup> Na / <sup>29</sup> Na / <sup>30</sup> Na / <sup>31</sup> Na / <sup>32</sup> Na / <sup>23</sup> Mg / <sup>24</sup> Mg / <sup>25</sup> Mg / <sup>26</sup> Mg / <sup>27</sup> Mg / <sup>28</sup> Mg / <sup>29</sup> Mg / <sup>30</sup> Mg / <sup>31</sup> Mg / <sup>32</sup> Mg / <sup>33</sup> Mg / <sup>34</sup> Mg / <sup>25</sup> Al / <sup>26</sup> Al / <sup>27</sup> Al / <sup>28</sup> Al / <sup>29</sup> Al / <sup>30</sup> Al / <sup>31</sup> Al / <sup>32</sup> Al / <sup>33</sup> Al / <sup>34</sup> Al / <sup>35</sup> Al / <sup>36</sup> Al / <sup>27</sup> Si / <sup>28</sup> Si / <sup>29</sup> Si / <sup>30</sup> Si / <sup>31</sup> Si / <sup>32</sup> Si / <sup>33</sup> Si / <sup>34</sup> Si / <sup>35</sup> Si / <sup>36</sup> Si / <sup>37</sup> Si / <sup>38</sup> Si / <sup>29</sup> P / <sup>30</sup> P / <sup>31</sup> P / <sup>32</sup> P / <sup>33</sup> P / <sup>34</sup> P / <sup>35</sup> P / <sup>36</sup> P / <sup>37</sup> P / <sup>38</sup> P / <sup>39</sup> P / <sup>33</sup> S / <sup>34</sup> S / <sup>35</sup> S / <sup>36</sup> S / <sup>37</sup> S / <sup>38</sup> S / <sup>36</sup> Cl / <sup>37</sup> Cl / <sup>38</sup> Cl / <sup>39</sup> Cl / <sup>39</sup> Ar, E=100 MeV / nucleon; <sup>181</sup> Ta( <sup>40</sup> Ar, X) <sup>6</sup> Li / <sup>7</sup> Li / <sup>8</sup> Li / <sup>9</sup> Be / <sup>10</sup> Be / <sup>11</sup> Be / <sup>10</sup> B / <sup>11</sup> B / <sup>12</sup> B / <sup>13</sup> B / <sup>14</sup> B / <sup>11</sup> C / <sup>12</sup> C / <sup>13</sup> C / <sup>14</sup> C / <sup>15</sup> C / <sup>16</sup> C / <sup>17</sup> C / <sup>13</sup> N / <sup>14</sup> N / <sup>15</sup> N / <sup>16</sup> N / <sup>17</sup> N / <sup>18</sup> N / <sup>19</sup> N / <sup>15</sup> O / <sup>16</sup> O / <sup>17</sup> O / <sup>18</sup> O / <sup>19</sup> O / <sup>20</sup> O / <sup>21</sup> O / <sup>17</sup> F / <sup>18</sup> F / <sup>19</sup> F / <sup>20</sup> F / <sup>21</sup> F / <sup>22</sup> F / <sup>23</sup> F / <sup>24</sup> F / <sup>19</sup> Ne / <sup>20</sup> Ne / <sup>21</sup> Ne / <sup>22</sup> Ne / <sup>23</sup> Ne / <sup>24</sup> Ne / <sup>25</sup> Ne / <sup>26</sup> Ne / <sup>27</sup> Ne / <sup>21</sup> Na / <sup>22</sup> Na / <sup>23</sup> Na / <sup>24</sup> Na / <sup>25</sup> Na / <sup>26</sup> Na / <sup>27</sup> Na / <sup>28</sup> Na / <sup>29</sup> Na / <sup>23</sup> Mg / <sup>24</sup> Mg / <sup>25</sup> Mg / <sup>26</sup> Mg / <sup>27</sup> Mg / <sup>28</sup> Mg / <sup>29</sup> Mg / <sup>30</sup> Mg / <sup>31</sup> Mg / <sup>24</sup> / <sup>25</sup> Al / <sup>26</sup> Al / <sup>27</sup> Al / <sup>28</sup> Al / <sup>29</sup> Al / <sup>30</sup> Al / <sup>31</sup> Al / <sup>32</sup> Al / <sup>33</sup> Al / <sup>34</sup> Al / <sup>26</sup> Si / <sup>27</sup> Si / <sup>28</sup> Si / <sup>29</sup> Si / <sup>30</sup> Si / <sup>31</sup> Si / <sup>32</sup> Si / <sup>33</sup> Si / <sup>34</sup> Si / <sup>29</sup> P / <sup>30</sup> P / <sup>31</sup> P / <sup>32</sup> P / <sup>33</sup> P / <sup>34</sup> P / <sup>35</sup> P / <sup>36</sup> P / <sup>30</sup> S / <sup>31</sup> S / <sup>32</sup> S / <sup>33</sup> S / <sup>34</sup> S / <sup>35</sup> S / <sup>36</sup> S / <sup>37</sup> S / <sup>33</sup> Cl / <sup>34</sup> Cl / <sup>35</sup> Cl / <sup>36</sup> Cl / <sup>37</sup> Cl / <sup>35</sup> Ar / <sup>36</sup> Ar / <sup>37</sup> Ar / <sup>38</sup> Ar / <sup>39</sup> Ar / <sup>37</sup> K / <sup>38</sup> K / <sup>39</sup> K / <sup>40</sup> K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
<sup>14</sup> C	2006GE21	NUCLEAR REACTIONS <sup>11</sup> B(t, p), E=2.53-6.95 MeV; measured excitation function. <sup>14</sup> C deduced analog states features. JOUR BRSP 70 217
	2007C001	NUCLEAR REACTIONS <sup>13</sup> C(d, p), (d, t), (d, α), E=0.5-1.65 MeV; measured σ(θ). Comparison with previous results. JOUR NIMBE 254 25
	2007GL01	NUCLEAR REACTIONS <sup>12,13,14</sup> C( <sup>16</sup> O, <sup>16</sup> O), E=132 MeV; measured σ(θ); deduced Airy structure, optical model parameters. JOUR PANUE 70 1

## A=14 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}, E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$
- 2007PR02 NUCLEAR REACTIONS  ${}^{14}\text{C}({}^{14}\text{C}, \alpha){}^{10}\text{Be}$ , E=98.2 MeV; measured charged particle spectra.  ${}^{14}\text{C}$  deduced excited states energies, J,  $\pi$ ,  $\alpha$ -decay properties. JOUR PRVCA 75 014305
- ${}^{14}\text{N}$  2007CH25 NUCLEAR REACTIONS  ${}^{14}\text{N}(\alpha, \gamma)$ , E=1620-1775 keV; measured  $E_\gamma$ ,  $I_\gamma$ ; deduced resonance parameters.  ${}^{17}\text{O}(p, \alpha)$ , E=194-204 keV; measured  $E\alpha$ ,  $\sigma(E, \theta)$ ; deduced resonance energy, strength. Astrophysical implications discussed. JOUR PRVCA 75 035810
- 2007F010 NUCLEAR REACTIONS  ${}^{27}\text{Al}({}^{12}\text{C}, \text{X}){}^7\text{Be} / {}^9\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{O} / {}^{19}\text{F} / {}^{22}\text{Ne} / {}^{23}\text{Na} / {}^{24}\text{Mg} / {}^{26}\text{Mg} / {}^{26}\text{Al} / {}^{27}\text{Al} / \text{Si}$ , E=156 MeV;  ${}^{12}\text{C}({}^{27}\text{Al}, \text{X}){}^7\text{Be} / {}^9\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{O} / {}^{19}\text{F} / {}^{22}\text{Ne} / {}^{23}\text{Na} / {}^{24}\text{Mg} / {}^{26}\text{Mg} / \text{Si}$ , E=348 MeV; measured intermediate mass fragment spectra,  $\sigma(\theta, E)$  from fusion and fragmentation. Comparison with Boltzmann Master Equations theory. JOUR NUPAB 797 1
- 2007MIZZ NUCLEAR REACTIONS  ${}^{16}\text{O}(e, e'np)$ , E=855 MeV; measured particle spectra, missing energy,  $\sigma(E, \theta)$ . Comparison with model predictions. PREPRINT nucl-ex/0701053,1/24/2007
- 2007M020 NUCLEAR REACTIONS  ${}^1\text{H}({}^{17}\text{O}, \alpha){}^{14}\text{N}$ , E=3.3 MeV; measured resonance energy and strength. Discussed astrophysical implications. JOUR PRVCA 75 065801

KEYNUMBERS AND KEYWORDS

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A=14 (continued)

- 2007NE08      NUCLEAR REACTIONS  $^{17}\text{O}(\text{p}, \alpha)$ , E=140-210 keV; measured yields and resonance strength for the 193 keV resonance. JOUR PRVCA 75 055808
- 2007N013      NUCLEAR REACTIONS  $^9\text{Be}({}^{40}\text{Ar}, \text{X})$   $^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}$ , E=100 MeV / nucleon;  $^{181}\text{Ta}({}^{40}\text{Ar}, \text{X})$   $^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- $^{14}\text{O}$       2006TEZW      NUCLEAR REACTIONS  $^1\text{H}({}^{13}\text{N}, \text{p})$ , E=48.6 MeV; measured  $E_p$ ,  $\sigma(\theta)$ .  $^{14}\text{O}$  deduced resonance energies, J,  $\pi$ , widths. REPT CNS-REP-69,P10,Teranishi
- 2007BA61      NUCLEAR REACTIONS  $^4\text{He}({}^{14}\text{O}, \alpha {}^{10}\text{C})$ ,  $({}^{14}\text{O}, 2\text{p} {}^{12}\text{C})$ ,  $({}^{14}\text{O}, \text{p} {}^{13}\text{N})$ , E=60 MeV / nucleon; measured  $E_\gamma$ ,  $I_\gamma$ , (particle) $\gamma$ -coin, excitation energy spectra,  $\sigma(\theta)$ .  $^{14}\text{O}$  deduced monopole and dipole strength distributions. Comparison with DWBA calculations. JOUR NUPAB 788 188c
- 2007TE09      NUCLEAR REACTIONS  $^1\text{H}({}^{13}\text{N}, {}^{13}\text{N})$ , E(cm)=0.4-3.3 MeV; measured elastic scattering  $\sigma(\theta)$  and fitted with R-matrix calculation.  $^{14}\text{O}$  deduced levels, widths, J,  $\pi$ , spectroscopic factor. JOUR PYLBB 650 129

## A=15

- <sup>15</sup>B      2007N013      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- <sup>15</sup>C      2007B010      NUCLEAR REACTIONS <sup>12,14</sup>C(<sup>12</sup>C, <sup>9</sup>C), E=231 MeV; measured particle spectra,  $\sigma(E, \theta)$ . <sup>15,17</sup>C deduced levels, J,  $\pi$ , configurations. JOUR ZAANE 31 279

## A=15 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}, E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$
- ${}^{15}\text{N}$  2007DE47 NUCLEAR REACTIONS  ${}^2\text{H}({}^{18}\text{F}, \text{p}), ({}^{18}\text{F}, \text{p}\alpha)$ , E(cm)=1.4 MeV; measured particle energies and yields, cross sections and angular distributions.  ${}^{19}\text{F}$ , Ne deduced level energies and decay widths. Discussed astrophysical implications. JOUR NUPAB 791 251
- 2007DEZZ NUCLEAR REACTIONS  ${}^2\text{H}({}^{18}\text{F}, \text{p}), ({}^{18}\text{F}, \text{p}\alpha)$ , E=14 MeV; measured  $E_p, E_\alpha, \sigma(\theta)$ .  ${}^{19}\text{F}$  deduced level energies, J,  $\pi$ , spectroscopic factors, analog states features. PREPRINT nucl-ex/0702034,2/16/2007
- 2007F010 NUCLEAR REACTIONS  ${}^{27}\text{Al}({}^{12}\text{C}, \text{X}){}^7\text{Be} / {}^9\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{O} / {}^{19}\text{F} / {}^{22}\text{Ne} / {}^{23}\text{Na} / {}^{24}\text{Mg} / {}^{26}\text{Mg} / {}^{26}\text{Al} / {}^{27}\text{Al} / \text{Si}$ , E=156 MeV;  ${}^{12}\text{C}({}^{27}\text{Al}, \text{X}){}^7\text{Be} / {}^9\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{O} / {}^{19}\text{F} / {}^{22}\text{Ne} / {}^{23}\text{Na} / {}^{24}\text{Mg} / {}^{26}\text{Mg} / \text{Si}$ , E=348 MeV; measured intermediate mass fragment spectra,  $\sigma(\theta, E)$  from fusion and fragmentation. Comparison with Boltzmann Master Equations theory. JOUR NUPAB 797 1
- 2007I004 NUCLEAR REACTIONS  ${}^{16}\text{O}(\text{e}, \text{e}'\text{p})$ , E=575 MeV; measured  $\sigma(E, \theta)$ , missing energy dependence. Comparison with model calculations. JOUR PYLBB 653 392
- 2007I0ZZ NUCLEAR REACTIONS  ${}^{16}\text{O}(\text{e}, \text{e}'\text{p})$ , E=575 MeV; measured missing energy spectra,  $\sigma(E, \theta)$ ; deduced role of two-body currents, short-range correlations. PREPRINT nucl-ex/0703007,3/5/2007



KEYNUMBERS AND KEYWORDS

A=15 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}, E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$
- 2007R017 NUCLEAR REACTIONS  ${}^{12}\text{N}({}^7\text{Li}, \alpha)$ , E=34 MeV; measured  $E\alpha$ , cross sections, angular distributions and analyzing powers.  ${}^{15}\text{N}$  deduced levels, J,  $\pi$ . JOUR NIMBE 261 1005
- ${}^{15}\text{O}$  2007CHZW NUCLEAR REACTIONS  ${}^{18}\text{F}(\text{p}, \alpha)$ , E(cm)=663-877 keV; measured cross section and excitation function. Deduced interference effects and astrophysical S-factor. CONF Geneva(NIC-IX) 273
- 2007DEZT NUCLEAR REACTIONS  ${}^1\text{H}({}^{18}\text{F}, \alpha)$ , E=8.6-13.8 MeV; measured  $E\alpha$  in coincidence with  ${}^{15}\text{O}$ .  ${}^{18}\text{F}(\text{p}, \alpha)$ ; deduced cross sections. CONF Geneva(NIC-IX) 005
- 2007IM02 NUCLEAR REACTIONS  ${}^{14}\text{N}(\text{p}, \gamma)$ , E not given; measured cross section at LUNA accelerator facility. JOUR PPNPD 59 193
- 2007KA33 NUCLEAR REACTIONS N, O, Ar(p, X) ${}^7\text{Be} / {}^{11}\text{C} / {}^{13}\text{N} / {}^{15}\text{O} / {}^{18}\text{F} / {}^{22}\text{Na} / {}^{24}\text{Na} / {}^{27}\text{Mg} / {}^{29}\text{Al} / {}^{38}\text{S} / {}^{38}\text{Cl} / {}^{39}\text{Cl}$ , E=12 GeV; measured radionuclide yields. JOUR JRNCD 273 507
- 2007LE26 NUCLEAR REACTIONS  ${}^1\text{H}({}^{15}\text{O}, \text{p})$ , E=120 MeV; measured excitation function.  ${}^{16}\text{F}$  deduced level widths. JOUR PRVCA 76 024314

## A=15 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007R017 NUCLEAR REACTIONS  ${}^{12}\text{N}({}^7\text{Li}, \alpha)$ , E=34 MeV; measured  $E\alpha$ , cross sections, angular distributions and analyzing powers.  ${}^{15}\text{N}$  deduced levels, J,  $\pi$ . JOUR NIMBE 261 1005
- 2007TA13 RADIOACTIVITY  ${}^{19}\text{Ne}(\alpha)$  [from  ${}^{19}\text{F}({}^3\text{He}, \text{t})$ ]; measured  $E\alpha$ ,  $I\alpha$ .  ${}^{15}\text{O}(\alpha, \gamma)$ ; deduced reaction rate at astrophysical energies. JOUR PRLTA 98 242503
- 2007TRZX NUCLEAR REACTIONS  ${}^{14}\text{N}(\text{p}, \gamma)$ , E=360, 380, 400 keV; measured  $E\gamma$ ,  $I\gamma$ . Deduced s-factor. PREPRINT ArXiv:0708.3376v1 [nucl-ex]

## A=16

- <sup>16</sup>C      2007N013      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- <sup>16</sup>N      2007FR11      RADIOACTIVITY <sup>16</sup>N( $\beta^-$ ); measured delayed  $\alpha$  spectrum. Compared results to existing data. JOUR PRVCA 75 065802
- 2007FRZY      RADIOACTIVITY <sup>16</sup>N( $\beta^-$ ) [from <sup>2</sup>H(<sup>15</sup>N, p)]; measured  $\beta$ -delayed  $\alpha$  spectra. Comparison with previous results. PREPRINT nucl-ex/0702018,2/8/2007

## A=16 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007RE17 RADIOACTIVITY  ${}^{16}\text{N}(\beta^-)$  [from  ${}^2\text{H}({}^{15}\text{N}, {}^{16}\text{N})$ , E=82 MeV]; measured  $E\alpha$ ,  $I\alpha$ , (particle) $\alpha$ -coin; deduced astrophysical S-factor. JOUR NUPAB 787 289c
- ${}^{16}\text{O}$  2006FUZW NUCLEAR REACTIONS  ${}^4\text{He}({}^{16}\text{O}, \alpha)$ , E < 32.5 MeV; measured  $E\alpha$ ,  $\sigma(\theta)$ .  ${}^{20}\text{Ne}$  deduced resonance parameters. REPT CNS-REP-69,P37,Fujikawa
- 2007BE19 NUCLEAR REACTIONS  ${}^{27}\text{Al}({}^6\text{He}, {}^6\text{He})$ , E=9.5, 11.0, 12.0, 13.4 MeV; measured  $\sigma$ ,  $\sigma(\theta)$ .  ${}^6\text{He}$  deduced radius, deformation parameters.  ${}^{27}\text{Al}({}^6\text{Li}, {}^6\text{Li})$ ,  $({}^7\text{Li}, {}^7\text{Li})$ ,  $({}^9\text{Be}, {}^9\text{Be})$ ,  $({}^{16}\text{O}, {}^{16}\text{O})$ , E $\approx$ 7-45 MeV; analysed total  $\sigma$ .  ${}^6,7\text{Li}$ ,  ${}^9\text{Be}$ ,  ${}^{16}\text{O}$  deduced deformation parameters. Sao Paulo potential. JOUR PYLBB 647 30
- 2007BE45 NUCLEAR REACTIONS  ${}^{12}\text{C}({}^6\text{Li}, \text{d})$ , E=48.2 MeV; measured  $E\text{d}$ ,  $\sigma(\theta)$  to first eleven states of  ${}^{16}\text{O}$ ; deduced level energies, widths, spectroscopic factors. DWBA analysis.  ${}^{12}\text{C}(\alpha, \gamma)$ , E(cm) $\approx$  0-3 MeV; analyzed  $\sigma$ ; deduced resonance parameters. R-Matrix calculations. Astrophysical implications discussed. JOUR NUPAB 793 178
- 2007BE47 NUCLEAR REACTIONS  ${}^{12}\text{C}$ ,  ${}^{16}\text{O}$ ,  ${}^{24}\text{Mg}$ , Fe(p,  $\gamma$ ), e=5-25 meV;  ${}^{12}\text{C}$ ,  ${}^{16}\text{O}$ ,  ${}^{24}\text{Mg}$ , Fe( $\alpha$ ,  $\gamma$ ), E=5-40 MeV; measured  $E\gamma$ ,  $I\gamma$ , angular distributions, cross sections and excitation functions. Compared results to model calculations. JOUR PRVCA 76 034607

KEYNUMBERS AND KEYWORDS

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**A=16 (continued)**

- 2007COZY NUCLEAR REACTIONS  $^{19}\text{F}(\text{p}, \gamma)$ ,  $(\text{p}, \alpha\gamma)$ ,  $E=200\text{-}800$  keV; measured yields, resonance parameters and interference terms. CONF Geneva(NIC-IX) 082
- 2007F010 NUCLEAR REACTIONS  $^{27}\text{Al}(^{12}\text{C}, \text{X})^{7}\text{Be}$  /  $^9\text{Be}$  /  $^{10}\text{B}$  /  $^{11}\text{B}$  /  $^{11}\text{C}$  /  $^{12}\text{C}$  /  $^{13}\text{C}$  /  $^{13}\text{N}$  /  $^{14}\text{N}$  /  $^{15}\text{N}$  /  $^{16}\text{O}$  /  $^{19}\text{F}$  /  $^{22}\text{Ne}$  /  $^{23}\text{Na}$  /  $^{24}\text{Mg}$  /  $^{26}\text{Mg}$  /  $^{26}\text{Al}$  /  $^{27}\text{Al}$  / Si,  $E=156$  MeV;  $^{12}\text{C}(^{27}\text{Al}, \text{X})^{7}\text{Be}$  /  $^9\text{Be}$  /  $^{10}\text{B}$  /  $^{11}\text{B}$  /  $^{11}\text{C}$  /  $^{12}\text{C}$  /  $^{13}\text{C}$  /  $^{13}\text{N}$  /  $^{14}\text{N}$  /  $^{15}\text{N}$  /  $^{16}\text{O}$  /  $^{19}\text{F}$  /  $^{22}\text{Ne}$  /  $^{23}\text{Na}$  /  $^{24}\text{Mg}$  /  $^{26}\text{Mg}$  / Si,  $E=348$  MeV; measured intermediate mass fragment spectra,  $\sigma(\theta, E)$  from fusion and fragmentation. Comparison with Boltzmann Master Equations theory. JOUR NUPAB 797 1
- 2007FR11 RADIOACTIVITY  $^{16}\text{N}(\beta^-)$ ; measured delayed  $\alpha$  spectrum. Compared results to existing data. JOUR PRVCA 75 065802
- 2007FRZY RADIOACTIVITY  $^{16}\text{N}(\beta^-)$  [from  $^2\text{H}(^{15}\text{N}, \text{p})$ ]; measured  $\beta$ -delayed  $\alpha$  spectra. Comparison with previous results. PREPRINT nucl-ex/0702018,2/8/2007
- 2007FU09 NUCLEAR REACTIONS  $^4\text{He}(^{14}\text{O}, \text{X})^{16}\text{O}$ ,  $E=32.7$  MeV; measured yields and excitation function. JOUR PRVCA 76 021603
- 2007MAZX NUCLEAR REACTIONS  $^{12}\text{C}(\alpha, \gamma)$ ,  $E(\text{cm})=1.4, 1.6$  MeV; measured  $E\gamma$ , angular distribution from direct  $\alpha$  capture. Deduced cross sections. CONF Geneva(NIC-IX) 136
- 2007NAZW NUCLEAR REACTIONS  $^4\text{He}(\gamma, \text{X})$ ,  $E < 50$  MeV;  $^{12}\text{C}(\alpha, \gamma)$ ,  $E(\text{cm})=1.4\text{-}1.6$  MeV;  $^2\text{H}$ ,  $^{62}\text{Ni}(\text{n}, \gamma)$ ,  $E=$  low; measured cross sections. CONF Tokai-mura (Nuclear Data) Proc,PIII.01,Nagai

## A=16 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007PEZZ NUCLEAR REACTIONS  ${}^{13}\text{C}({}^7\text{Li}, \text{t})$ , E=28, 34 MeV; measured  $\sigma$  and angular distributions.  ${}^{13}\text{C}(\alpha, \text{n})$ ; deduced  $S_\alpha$  factor. CONF Geneva(NIC-IX) 161
- 2007RE17 RADIOACTIVITY  ${}^{16}\text{N}(\beta^-)$  [from  ${}^2\text{H}({}^{15}\text{N}, {}^{16}\text{N})$ , E=82 MeV]; measured  $E_\alpha$ ,  $I_\alpha$ , (particle) $\alpha$ -coin; deduced astrophysical S-factor. JOUR NUPAB 787 289c
- 2007RU01 NUCLEAR REACTIONS  ${}^{16}\text{O}(\text{polarized } {}^7\text{Li}, {}^7\text{Li})$ , E=42 MeV; measured  $\sigma(\theta)$ , tensor analyzing powers.  ${}^{16}\text{O}({}^7\text{Li}, {}^7\text{Li})$ ,  $({}^7\text{Li}, {}^7\text{Li}')$ , E(cm)=6.26-34.78 MeV; analyzed data; deduced parameters.  ${}^{16}\text{O}({}^7\text{Li}, \text{t})$ , E=15-38 MeV; calculated  $\sigma(\theta)$ . Coupled reaction channels method. JOUR PRVCA 75 024612
- 2007UK01 NUCLEAR REACTIONS  ${}^{16}\text{O}(\text{K}^-, \pi^-)$ , E at 0.93 GeV / c; measured  $E_\gamma$ ,  $I_\gamma$  from decaying hypernucleus.  ${}^{16}\text{O}$  deduced hypernucleus levels, J,  $\pi$ . Hyperball array. JOUR ZAANE 33 247
- 2007ZY01 NUCLEAR REACTIONS  ${}^4\text{He}({}^{12}\text{C}, \gamma)$ , E=1.068 MeV / nucleon; measured beam and recoil charge state distributions. JOUR NIMBE 254 17
- ${}^{16}\text{F}$  2007LE26 NUCLEAR REACTIONS  ${}^1\text{H}({}^{15}\text{O}, \text{p})$ , E=120 MeV; measured excitation function.  ${}^{16}\text{F}$  deduced level widths. JOUR PRVCA 76 024314

## A=17

- <sup>17</sup>C      2007B010      NUCLEAR REACTIONS <sup>12,14</sup>C(<sup>12</sup>C, <sup>9</sup>C), E=231 MeV; measured particle spectra,  $\sigma(E, \theta)$ . <sup>15,17</sup>C deduced levels, J,  $\pi$ , configurations. JOUR ZAANE 31 279
- 2007N013      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605



KEYNUMBERS AND KEYWORDS

A=17 (continued)

- <sup>17</sup>N      2007N013      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007RI15      NUCLEAR REACTIONS Pb(p, X)<sup>17</sup>N / <sup>87</sup>Br / <sup>88</sup>Br, E=1 GeV; measured delayed neutron yields and precursor production cross sections. JOUR ZAANE 32 1
- <sup>17</sup>O      2007MU15      RADIOACTIVITY <sup>19</sup>Ne(2p) [from <sup>9</sup>Be(<sup>20</sup>Mg, <sup>19</sup>Mg), E=450 meV / nucleon]; measured Ep, Ip, (<sup>17</sup>Ne)p-coinc, angular correlations. <sup>19</sup>Ne deduced T<sub>1/2</sub>, 2p-decay Q-value. JOUR PRLTA 99 182501

## A=17 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}, E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$
- 2007PEZZ NUCLEAR REACTIONS  ${}^{13}\text{C}({}^7\text{Li}, \text{t})$ , E=28, 34 MeV; measured  $\sigma$  and angular distributions.  ${}^{13}\text{C}(\alpha, \text{n})$ ; deduced  $S_\alpha$  factor. CONF Geneva(NIC-IX) 161
- 2007ZH03 RADIOACTIVITY  ${}^{17}\text{F}(\beta^+)$ , (EC) [from  ${}^{16}\text{O}(\text{d}, \text{n})$ ]; measured  $\beta$ -NMR spectra from polarized source.  ${}^{17}\text{F}$  deduced quadrupole moment, halo features. JOUR JPGPE 34 523
- ${}^{17}\text{F}$  2007BE47 NUCLEAR REACTIONS  ${}^{12}\text{C}$ ,  ${}^{16}\text{O}$ ,  ${}^{24}\text{Mg}$ , Fe(p,  $\gamma$ ), e=5-25 meV;  ${}^{12}\text{C}$ ,  ${}^{16}\text{O}$ ,  ${}^{24}\text{Mg}$ , Fe( $\alpha$ ,  $\gamma$ ), E=5-40 MeV; measured  $E_\gamma$ ,  $I_\gamma$ , angular distributions, cross sections and excitation functions. Compared results to model calculations. JOUR PRVCA 76 034607

## A=17 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007ZH03 RADIOACTIVITY  ${}^{17}\text{F}(\beta^+)$ , (EC) [from  ${}^{16}\text{O}(\text{d}, \text{n})$ ]; measured  $\beta$ -NMR spectra from polarized source.  ${}^{17}\text{F}$  deduced quadrupole moment, halo features. JOUR JPGPE 34 523

## A=18

- <sup>18</sup>C      2007N013      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- <sup>18</sup>N      2007BU01      RADIOACTIVITY <sup>18</sup>N( $\beta^-$ ); measured  $\beta$ -delayed  $E\alpha$ ,  $\beta\alpha$ -coin. <sup>18</sup>O deduced level energies, J,  $\pi$ , widths. Astrophysical implications discussed. JOUR PRVCA 75 012804
- 2007L005      RADIOACTIVITY <sup>18</sup>N( $\beta^-$ ); measured  $\beta$ -delayed neutron spectra. <sup>18</sup>O; deduced level energies, J,  $\pi$ . Deduced B(GT), compared to shell model calculations. JOUR PRVCA 75 057302

## A=18 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}, E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$
- ${}^{18}\text{O}$  2007BU01 RADIOACTIVITY  ${}^{18}\text{N}(\beta^-)$ ; measured  $\beta$ -delayed  $E\alpha$ ,  $\beta\alpha$ -coin.  ${}^{18}\text{O}$  deduced level energies, J,  $\pi$ , widths. Astrophysical implications discussed. JOUR PRVCA 75 012804
- 2007L005 RADIOACTIVITY  ${}^{18}\text{N}(\beta^-)$ ; measured  $\beta$ -delayed neutron spectra.  ${}^{18}\text{O}$ ; deduced level energies, J,  $\pi$ . Deduced B(GT), compared to shell model calculations. JOUR PRVCA 75 057302

## A=18 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007RU04 NUCLEAR REACTIONS  ${}^7\text{Li}({}^{18}\text{O}, {}^{18}\text{O})$ ,  $({}^{18}\text{O}, {}^{18}\text{O}')$ , E=114 MeV; measured elastic and inelastic  $\sigma(\theta)$ ; deduced potential parameters, scattering mechanism features.  ${}^{18}\text{O}$  deduced deformation parameters. Optical model and coupled-reaction-channels analysis. JOUR NUPAB 785 293
- ${}^{18}\text{F}$  2007CH25 NUCLEAR REACTIONS  ${}^{14}\text{N}(\alpha, \gamma)$ , E=1620-1775 keV; measured  $E_\gamma$ ,  $I_\gamma$ ; deduced resonance parameters.  ${}^{17}\text{O}(\text{p}, \alpha)$ , E=194-204 keV; measured  $E_\alpha$ ,  $\sigma(E, \theta)$ ; deduced resonance energy, strength. Astrophysical implications discussed. JOUR PRVCA 75 035810
- 2007GR18 RADIOACTIVITY  ${}^{18}\text{Ne}(\beta^+)$ ; measured  $\beta$ -delayed  $\gamma$ -decays,  $T_{1/2}$ . JOUR PRVCA 76 025503
- 2007KA33 NUCLEAR REACTIONS N, O, Ar(p, X) ${}^7\text{Be}$  /  ${}^{11}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{18}\text{F}$  /  ${}^{22}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{27}\text{Mg}$  /  ${}^{29}\text{Al}$  /  ${}^{38}\text{S}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$ , E=12 GeV; measured radionuclide yields. JOUR JRNC 273 507
- 2007LEZY NUCLEAR REACTIONS  ${}^{18}\text{F}(\alpha, \text{p})$ , E(cm)=1.4-2.3 MeV; measured excitation function.  ${}^{21}\text{Ne}(\text{p}, \alpha)$ , E=2.5-3.5 MeV; measured cross section. CONF Geneva(NIC-IX) 131

KEYNUMBERS AND KEYWORDS

A=18 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007ZE06 NUCLEAR REACTIONS  ${}^{12,13}\text{C}$ ,  ${}^{18}\text{O}$ ,  ${}^{26}\text{Mg}$ ,  ${}^{58}\text{Ni}$ ,  ${}^{60}\text{Ni}$ ,  ${}^{90}\text{Zr}$ ,  ${}^{118}\text{Sn}$ ,  ${}^{208}\text{Pb}({}^3\text{He}, \text{t})$ , E=420 MeV; measured triton spectra and cross sections. Deduced B(GT). JOUR PRLTA 99 202501
- 2007ZEZZ NUCLEAR REACTIONS  ${}^{12,13}\text{C}$ ,  ${}^{18}\text{O}$ ,  ${}^{26}\text{Mg}$ ,  ${}^{58}\text{Ni}$ ,  ${}^{60}\text{Ni}$ ,  ${}^{90}\text{Zr}$ ,  ${}^{118}\text{Sn}$ ,  ${}^{208}\text{Pb}({}^3\text{He}, \text{t})$ , E=420 MeV; measured triton spectra and cross sections. Deduced B(GT). PREPRINT arXiv:0707.2840v1 [nucl-ex]
- 2007ZI03 NUCLEAR REACTIONS  ${}^{12}\text{C}({}^{17}\text{O}, {}^{18}\text{F}){}^{11}\text{B}$ , E=45 MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$ .  ${}^{18}\text{F}$  deduced B(E1), B(E2). JOUR NIMAE 579 476
- ${}^{18}\text{Ne}$  2006SK09 NUCLEAR REACTIONS  ${}^1\text{H}({}^{18}\text{Ne}, \text{p})$ , E=56 MeV; measured  $E_p$ ,  $\sigma(\theta)$ , elastic scattering excitation function.  ${}^{19}\text{Na}$  deduced resonance energy, J,  $\pi$ . Astrophysical implications discussed. JOUR PANUE 69 1979
- 2007GR18 RADIOACTIVITY  ${}^{18}\text{Ne}(\beta^+)$ ; measured  $\beta$ -delayed  $\gamma$ -decays,  $T_{1/2}$ . JOUR PRVCA 76 025503

A=19

- ${}^{19}\text{N}$  2007CA28 NUCLEAR REACTIONS  ${}^{12}\text{C}({}^8\text{He}, \text{p})$ , E=154 MeV / nucleon; measured particle energies and excitation energy distributions.  ${}^7\text{H}$  deduced resonance energies. JOUR PRLTA 99 062502



## A=19 (continued)

2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}, E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$

## A=19 (continued)

- <sup>19</sup>O      2007N013      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- <sup>19</sup>F      2007DE47      NUCLEAR REACTIONS <sup>2</sup>H(<sup>18</sup>F, p), (<sup>18</sup>F, pα), E(cm)=1.4 MeV; measured particle energies and yields, cross sections and angular distributions. <sup>19</sup>F, Ne deduced level energies and decay widths. Discussed astrophysical implications. JOUR NUPAB 791 251
- 2007DEZZ      NUCLEAR REACTIONS <sup>2</sup>H(<sup>18</sup>F, p), (<sup>18</sup>F, pα), E=14 MeV; measured Ep, Ea, σ(θ). <sup>19</sup>F deduced level energies, J, π, spectroscopic factors, analog states features. PREPRINT nucl-ex/0702034,2/16/2007
- 2007F010      NUCLEAR REACTIONS <sup>27</sup>Al(<sup>12</sup>C, X)<sup>7</sup>Be / <sup>9</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>O / <sup>19</sup>F / <sup>22</sup>Ne / <sup>23</sup>Na / <sup>24</sup>Mg / <sup>26</sup>Mg / <sup>26</sup>Al / <sup>27</sup>Al / Si, E=156 MeV; <sup>12</sup>C(<sup>27</sup>Al, X)<sup>7</sup>Be / <sup>9</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>O / <sup>19</sup>F / <sup>22</sup>Ne / <sup>23</sup>Na / <sup>24</sup>Mg / <sup>26</sup>Mg / Si, E=348 MeV; measured intermediate mass fragment spectra, σ(θ, E) from fusion and fragmentation. Comparison with Boltzmann Master Equations theory. JOUR NUPAB 797 1

## A=19 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- ${}^{19}\text{Ne}$  2007HOZY NUCLEAR REACTIONS  ${}^{17}\text{O}({}^3\text{He}, \text{n})$ , E=4.2 MeV; measured  $\sigma$  using the NTOF technique. CONF Geneva(NIC-IX) 119
- 2007MU15 RADIOACTIVITY  ${}^{19}\text{Ne}(2\text{p})$  [from  ${}^9\text{Be}({}^{20}\text{Mg}, {}^{19}\text{Mg})$ , E=450 meV / nucleon]; measured  $E_p$ ,  $I_p$ ,  $({}^{17}\text{Ne})\text{p}$ -coinc, angular correlations.  ${}^{19}\text{Ne}$  deduced  $T_{1/2}$ , 2p-decay Q-value. JOUR PRLTA 99 182501

A=19 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007TA13 RADIOACTIVITY  ${}^{19}\text{Ne}(\alpha)$  [from  ${}^{19}\text{F}({}^3\text{He}, \text{t})$ ]; measured  $E_\alpha$ ,  $I_\alpha$ .  ${}^{15}\text{O}(\alpha, \gamma)$ ; deduced reaction rate at astrophysical energies. JOUR PRLTA 98 242503
- 2007TAZX NUCLEAR REACTIONS  ${}^{19}\text{F}({}^3\text{He}, \text{t})$ , E=24 MeV; measured  $\alpha$ -decay branching ratio for the astrophysically important 4.03 MeV state.  ${}^{15}\text{O}(\alpha, \gamma)$ ; deduced reaction rate. CONF Geneva(NIC-IX) 023
- ${}^{19}\text{Na}$  2006SK09 NUCLEAR REACTIONS  ${}^1\text{H}({}^{18}\text{Ne}, \text{p})$ , E=56 MeV; measured  $E_p$ ,  $\sigma(\theta)$ , elastic scattering excitation function.  ${}^{19}\text{Na}$  deduced resonance energy, J,  $\pi$ . Astrophysical implications discussed. JOUR PANUE 69 1979

## A=20

<sup>20</sup>N      2007N013      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605

## A=20 (continued)

<sup>20</sup>O      2007N013      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605

## A=20 (continued)

- <sup>20</sup>F      2007N013      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007UB01      NUCLEAR REACTIONS <sup>19</sup>F(n,  $\gamma$ ), E=spectrum; measured E $\gamma$ , I $\gamma$ , Maxwellian averaged  $\sigma$ . Astrophysical implications discussed. JOUR PRVCA 75 035801
- 2007UBZZ      NUCLEAR REACTIONS <sup>19</sup>F(n,  $\gamma$ ), E=spectrum; measured yield, cross section using activation technique. CONF Geneva(NIC-IX) 186
- 2007WI09      RADIOACTIVITY <sup>20</sup>F( $\beta^-$ ); measured E $\beta$ , E $\gamma$ , E $\alpha$ . Deduced first forbidden decay branching ratios. JOUR PRVCA 76 018501
- <sup>20</sup>Ne      2006FUZW      NUCLEAR REACTIONS <sup>4</sup>He(<sup>16</sup>O,  $\alpha$ ), E < 32.5 MeV; measured E $\alpha$ ,  $\sigma(\theta)$ . <sup>20</sup>Ne deduced resonance parameters. REPT CNS-REP-69,P37,Fujikawa
- 2006TAZU      NUCLEAR REACTIONS <sup>24</sup>Mg(e, e' $\alpha$ ), E=199.31 MeV; measured energy and angular distributions; deduced strength distribution for individual multipolarities. JOUR KKYHB 39 21
- 2007BE47      NUCLEAR REACTIONS <sup>12</sup>C, <sup>16</sup>O, <sup>24</sup>Mg, Fe(p,  $\gamma$ ), e=5-25 meV; <sup>12</sup>C, <sup>16</sup>O, <sup>24</sup>Mg, Fe( $\alpha$ ,  $\gamma$ ), E=5-40 MeV; measured E $\gamma$ , I $\gamma$ , angular distributions, cross sections and excitation functions. Compared results to model calculations. JOUR PRVCA 76 034607
- 2007COZY      NUCLEAR REACTIONS <sup>19</sup>F(p,  $\gamma$ ), (p,  $\alpha\gamma$ ), E=200-800 keV; measured yields, resonance parameters and interference terms. CONF Geneva(NIC-IX) 082



## A=20 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007RU01 NUCLEAR REACTIONS  ${}^{16}\text{O}(\text{polarized } {}^7\text{Li}, {}^7\text{Li})$ , E=42 MeV; measured  $\sigma(\theta)$ , tensor analyzing powers.  ${}^{16}\text{O}({}^7\text{Li}, {}^7\text{Li})$ , ( ${}^7\text{Li}, {}^7\text{Li}'$ ), E(cm)=6.26-34.78 MeV; analyzed data; deduced parameters.  ${}^{16}\text{O}({}^7\text{Li}, \text{t})$ , E=15-38 MeV; calculated  $\sigma(\theta)$ . Coupled reaction channels method. JOUR PRVCA 75 024612
- 2007SP03 NUCLEAR REACTIONS  ${}^{12}\text{C}({}^{12}\text{C}, \text{p})$ , ( ${}^{12}\text{C}, \alpha$ ), E=2.1-4.75 MeV; measured  $E\gamma$ ,  $I\gamma$ ; deduced  $\sigma$ , astrophysical S-factors, resonance features. JOUR PRLTA 98 122501
- 2007SPZZ NUCLEAR REACTIONS  ${}^{12}\text{C}({}^{12}\text{C}, \text{p})$ , ( ${}^{12}\text{C}, \alpha$ ), E=2.10-4.75; measured  $E\gamma$ ,  $I\gamma$ ; deduced astrophysical S-factors, resonance features. PREPRINT nucl-ex/0702023,2/9/2007
- 2007WI09 RADIOACTIVITY  ${}^{20}\text{F}(\beta^-)$ ; measured  $E\beta$ ,  $E\gamma$ ,  $E\alpha$ . Deduced first forbidden decay branching ratios. JOUR PRVCA 76 018501
- ${}^{20}\text{Na}$  2007MUZZ NUCLEAR REACTIONS  ${}^{20}\text{Na}(\text{p}, \text{p})$ , E(cm)< 1.6 MeV; measured  $\sigma$ , excitation function in inverse kinematics using the resonant elastic scattering.  ${}^{21}\text{Mg}$ ; deduced level energies and proton decay widths. CONF Geneva(NIC-IX) 146
- ${}^{20}\text{Mg}$  2007GA38 NUCLEAR REACTIONS  ${}^9\text{B}({}^{22}\text{Mg}, \text{X}){}^{20}\text{Mg}$ , E=150 MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$ , (particle) $\gamma$ -coinc.  ${}^{20}\text{Mg}$  deduced level energy and mass excess. JOUR PRVCA 76 024317

## A=21

- <sup>21</sup>N      2007N013      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007SU05      RADIOACTIVITY <sup>23</sup>O, <sup>21</sup>N, <sup>24</sup>F, <sup>26</sup>Ne( $\beta^-$ ) [from Be(<sup>48</sup>Ca, X)]; measured E $\gamma$ , I $\gamma$ ,  $\beta\gamma$ -coin, T<sub>1/2</sub>. <sup>23</sup>O( $\beta^-$ n); measured  $\beta$ -delayed neutron spectra; deduced neutron emission probability. <sup>23</sup>F, <sup>26</sup>Na deduced levels, J,  $\pi$ ,  $\beta$ -feeding intensities. JOUR PRVCA 75 024305

## A=21 (continued)

- <sup>21</sup>O      2007N013      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007SU05      RADIOACTIVITY <sup>23</sup>O, <sup>21</sup>N, <sup>24</sup>F, <sup>26</sup>Ne( $\beta^-$ ) [from Be(<sup>48</sup>Ca, X)]; measured E $\gamma$ , I $\gamma$ ,  $\beta\gamma$ -coin, T<sub>1/2</sub>. <sup>23</sup>O( $\beta^-$ n); measured  $\beta$ -delayed neutron spectra; deduced neutron emission probability. <sup>23</sup>F, <sup>26</sup>Na deduced levels, J,  $\pi$ ,  $\beta$ -feeding intensities. JOUR PRVCA 75 024305

KEYNUMBERS AND KEYWORDS

A=21 (continued)

- <sup>21</sup>F      2007N013      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- <sup>21</sup>Ne      2007LEZY      NUCLEAR REACTIONS <sup>18</sup>F(α, p), E(cm)=1.4-2.3 MeV; measured excitation function. <sup>21</sup>Ne(p, α), E=2.5-3.5 MeV; measured cross section. CONF Geneva(NIC-IX) 131

## A=21 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- ${}^{21}\text{Na}$  2006FAZY NUCLEAR REACTIONS  ${}^{20}\text{Ne}(\text{p}, \gamma)$ , E=600-1400 keV; measured  $E\gamma$ ,  $I\gamma$ ; deduced  $\sigma$ , resonance strength. Comparison with previous results. REPT GSI 2006-1,P155,Falahat

## A=21 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- ${}^{21}\text{Mg}$  2007MUZZ NUCLEAR REACTIONS  ${}^{20}\text{Na}(\text{p}, \text{p})$ , E(cm)< 1.6 MeV; measured  $\sigma$ , excitation function in inverse kinematics using the resonant elastic scattering.  ${}^{21}\text{Mg}$ ; deduced level energies and proton decay widths. CONF Geneva(NIC-IX) 146

## A=22

- <sup>22</sup>O      2007N013      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- <sup>22</sup>F      2007LE28      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>14</sup>C, p), E=22 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ , (p) $\gamma$ -coinc.<sup>22</sup>F deduced levels, J,  $\pi$ . JOUR PRVCA 76 034308



## A=22 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007SU05 RADIOACTIVITY  ${}^{23}\text{O}$ ,  ${}^{21}\text{N}$ ,  ${}^{24}\text{F}$ ,  ${}^{26}\text{Ne}(\beta^-)$  [from  $\text{Be}({}^{48}\text{Ca}, \text{X})$ ]; measured  $E\gamma$ ,  $I\gamma$ ,  $\beta\gamma$ -coin,  $T_{1/2}$ .  ${}^{23}\text{O}(\beta^-n)$ ; measured  $\beta$ -delayed neutron spectra; deduced neutron emission probability.  ${}^{23}\text{F}$ ,  ${}^{26}\text{Na}$  deduced levels, J,  $\pi$ ,  $\beta$ -feeding intensities. JOUR PRVCA 75 024305
- ${}^{22}\text{Ne}$  2005NIZS NUCLEAR REACTIONS  $\text{Ni}({}^{22}\text{Ne}, {}^{22}\text{Ne}')$ , E=2.25 MeV / nucleon;  ${}^{107}\text{Ag}({}^{22}\text{Ne}, {}^{22}\text{Ne}')$ , E=2.86 MeV / nucleon;  $\text{Ni}({}^{30}\text{Mg}, {}^{30}\text{Mg}')$ , E=2.25 MeV / nucleon;  ${}^{60}\text{Ni}$ ,  ${}^{107}\text{Ag}({}^{30}\text{Mg}, {}^{30}\text{Mg}')$ , E=2.69 MeV / nucleon;  $\text{U}(p, \text{X}){}^{22}\text{Ne}$  /  ${}^{30}\text{Mg}$  /  ${}^{32}\text{Mg}$ , E=1.01-1.40 GeV; measured  $E\gamma$ ,  $I\gamma(\theta)$ , (particle) $\gamma$ -coinc, cross sections following projectile and target Coulomb excitation.  ${}^{22}\text{Ne}$ ,  ${}^{30}\text{Mg}$ ,  ${}^{32}\text{Mg}$ ,  ${}^{107}\text{Ag}$  deduced levels, B(E2), half-lives, deformations. REX-ISOLDE-CERN facility. Coupled-channel and GOSIA analyses.  ${}^{24}\text{Mg}$ ,  ${}^{26}\text{Mg}$ ,  ${}^{28}\text{Mg}$ ,  ${}^{30}\text{Mg}$ ,  ${}^{32}\text{Mg}$ ,  ${}^{34}\text{Mg}$  systematics of B(E2) values. Comparisons with shell-model calculations. THESIS O T Niedermaier, Univ Heidelberg
- 2006INZY RADIOACTIVITY  ${}^{22}\text{Na}(\text{EC})$ ; measured Auger electron spectra. REPT JINR-E6-2006-106, Inoyatov

KEYNUMBERS AND KEYWORDS

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A=22 (continued)

- 2007F010 NUCLEAR REACTIONS  $^{27}\text{Al}(^{12}\text{C}, \text{X})^7\text{Be} / ^9\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{O} / ^{19}\text{F} / ^{22}\text{Ne} / ^{23}\text{Na} / ^{24}\text{Mg} / ^{26}\text{Mg} / ^{26}\text{Al} / ^{27}\text{Al} / \text{Si}$ , E=156 MeV;  $^{12}\text{C}(^{27}\text{Al}, \text{X})^7\text{Be} / ^9\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{O} / ^{19}\text{F} / ^{22}\text{Ne} / ^{23}\text{Na} / ^{24}\text{Mg} / ^{26}\text{Mg} / \text{Si}$ , E=348 MeV; measured intermediate mass fragment spectra,  $\sigma(\theta, E)$  from fusion and fragmentation. Comparison with Boltzmann Master Equations theory. JOUR NUPAB 797 1
- 2007N013 NUCLEAR REACTIONS  $^9\text{Be}(^{40}\text{Ar}, \text{X})^6\text{Li} / ^7\text{Li} / ^8\text{Li} / ^9\text{Li} / ^7\text{Be} / ^8\text{Be} / ^9\text{Be} / ^{10}\text{Be} / ^{11}\text{Be} / ^{12}\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{B} / ^{13}\text{B} / ^{14}\text{B} / ^{15}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{15}\text{C} / ^{16}\text{C} / ^{17}\text{C} / ^{18}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{N} / ^{17}\text{N} / ^{18}\text{N} / ^{19}\text{N} / ^{20}\text{N} / ^{21}\text{N} / ^{15}\text{O} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O} / ^{19}\text{O} / ^{20}\text{O} / ^{21}\text{O} / ^{22}\text{O} / ^{23}\text{O} / ^{24}\text{O} / ^{17}\text{F} / ^{18}\text{F} / ^{19}\text{F} / ^{20}\text{F} / ^{21}\text{F} / ^{22}\text{F} / ^{23}\text{F} / ^{24}\text{F} / ^{25}\text{F} / ^{26}\text{F} / ^{27}\text{F} / ^{19}\text{Ne} / ^{20}\text{Ne} / ^{21}\text{Ne} / ^{22}\text{Ne} / ^{23}\text{Ne} / ^{24}\text{Ne} / ^{25}\text{Ne} / ^{26}\text{Ne} / ^{27}\text{Ne} / ^{28}\text{Ne} / ^{29}\text{Ne} / ^{21}\text{Na} / ^{22}\text{Na} / ^{23}\text{Na} / ^{24}\text{Na} / ^{25}\text{Na} / ^{26}\text{Na} / ^{27}\text{Na} / ^{28}\text{Na} / ^{29}\text{Na} / ^{30}\text{Na} / ^{31}\text{Na} / ^{32}\text{Na} / ^{23}\text{Mg} / ^{24}\text{Mg} / ^{25}\text{Mg} / ^{26}\text{Mg} / ^{27}\text{Mg} / ^{28}\text{Mg} / ^{29}\text{Mg} / ^{30}\text{Mg} / ^{31}\text{Mg} / ^{32}\text{Mg} / ^{33}\text{Mg} / ^{34}\text{Mg} / ^{25}\text{Al} / ^{26}\text{Al} / ^{27}\text{Al} / ^{28}\text{Al} / ^{29}\text{Al} / ^{30}\text{Al} / ^{31}\text{Al} / ^{32}\text{Al} / ^{33}\text{Al} / ^{34}\text{Al} / ^{35}\text{Al} / ^{36}\text{Al} / ^{27}\text{Si} / ^{28}\text{Si} / ^{29}\text{Si} / ^{30}\text{Si} / ^{31}\text{Si} / ^{32}\text{Si} / ^{33}\text{Si} / ^{34}\text{Si} / ^{35}\text{Si} / ^{36}\text{Si} / ^{37}\text{Si} / ^{38}\text{Si} / ^{29}\text{P} / ^{30}\text{P} / ^{31}\text{P} / ^{32}\text{P} / ^{33}\text{P} / ^{34}\text{P} / ^{35}\text{P} / ^{36}\text{P} / ^{37}\text{P} / ^{38}\text{P} / ^{39}\text{P} / ^{33}\text{S} / ^{34}\text{S} / ^{35}\text{S} / ^{36}\text{S} / ^{37}\text{S} / ^{38}\text{S} / ^{36}\text{Cl} / ^{37}\text{Cl} / ^{38}\text{Cl} / ^{39}\text{Cl} / ^{39}\text{Ar}$ , E=100 MeV / nucleon;  $^{181}\text{Ta}(^{40}\text{Ar}, \text{X})^6\text{Li} / ^7\text{Li} / ^8\text{Li} / ^9\text{Be} / ^{10}\text{Be} / ^{11}\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{B} / ^{13}\text{B} / ^{14}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{15}\text{C} / ^{16}\text{C} / ^{17}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{N} / ^{17}\text{N} / ^{18}\text{N} / ^{19}\text{N} / ^{15}\text{O} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O} / ^{19}\text{O} / ^{20}\text{O} / ^{21}\text{O} / ^{17}\text{F} / ^{18}\text{F} / ^{19}\text{F} / ^{20}\text{F} / ^{21}\text{F} / ^{22}\text{F} / ^{23}\text{F} / ^{24}\text{F} / ^{19}\text{Ne} / ^{20}\text{Ne} / ^{21}\text{Ne} / ^{22}\text{Ne} / ^{23}\text{Ne} / ^{24}\text{Ne} / ^{25}\text{Ne} / ^{26}\text{Ne} / ^{27}\text{Ne} / ^{21}\text{Na} / ^{22}\text{Na} / ^{23}\text{Na} / ^{24}\text{Na} / ^{25}\text{Na} / ^{26}\text{Na} / ^{27}\text{Na} / ^{28}\text{Na} / ^{29}\text{Na} / ^{23}\text{Mg} / ^{24}\text{Mg} / ^{25}\text{Mg} / ^{26}\text{Mg} / ^{27}\text{Mg} / ^{28}\text{Mg} / ^{29}\text{Mg} / ^{30}\text{Mg} / ^{31}\text{Mg} / ^{24} / ^{25}\text{Al} / ^{26}\text{Al} / ^{27}\text{Al} / ^{28}\text{Al} / ^{29}\text{Al} / ^{30}\text{Al} / ^{31}\text{Al} / ^{32}\text{Al} / ^{33}\text{Al} / ^{34}\text{Al} / ^{26}\text{Si} / ^{27}\text{Si} / ^{28}\text{Si} / ^{29}\text{Si} / ^{30}\text{Si} / ^{31}\text{Si} / ^{32}\text{Si} / ^{33}\text{Si} / ^{34}\text{Si} / ^{29}\text{P} / ^{30}\text{P} / ^{31}\text{P} / ^{32}\text{P} / ^{33}\text{P} / ^{34}\text{P} / ^{35}\text{P} / ^{36}\text{P} / ^{30}\text{S} / ^{31}\text{S} / ^{32}\text{S} / ^{33}\text{S} / ^{34}\text{S} / ^{35}\text{S} / ^{36}\text{S} / ^{37}\text{S} / ^{33}\text{Cl} / ^{34}\text{Cl} / ^{35}\text{Cl} / ^{36}\text{Cl} / ^{37}\text{Cl} / ^{35}\text{Ar} / ^{36}\text{Ar} / ^{37}\text{Ar} / ^{38}\text{Ar} / ^{39}\text{Ar} / ^{37}\text{K} / ^{38}\text{K} / ^{39}\text{K} / ^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- $^{22}\text{Na}$  2006INZY RADIOACTIVITY  $^{22}\text{Na}(\text{EC})$ ; measured Auger electron spectra. REPT JINR-E6-2006-106, Inoyatov
- 2007KA33 NUCLEAR REACTIONS N, O, Ar(p, X) $^7\text{Be} / ^{11}\text{C} / ^{13}\text{N} / ^{15}\text{O} / ^{18}\text{F} / ^{22}\text{Na} / ^{24}\text{Na} / ^{27}\text{Mg} / ^{29}\text{Al} / ^{38}\text{S} / ^{38}\text{Cl} / ^{39}\text{Cl}$ , E=12 GeV; measured radionuclide yields. JOUR JRNCD 273 507

KEYNUMBERS AND KEYWORDS

A=22 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- ${}^{22}\text{Mg}$  2007CLZZ ATOMIC MASSES  ${}^{22}\text{Mg}$ ; measured masses using Canadian penning trap and the Yale spectrograph.  ${}^{26}\text{Si}$ ; measured mass using the Yale spectrograph. CONF Geneva(NIC-IX) 081
- 2007GR11 NUCLEAR REACTIONS  ${}^1\text{H}({}^{21}\text{Na}, \gamma)$ , E=1.18 MeV / nucleon; measured  $E_\gamma$ ,  $I_\gamma$ , yields.  ${}^1\text{H}({}^7\text{Be}, \text{X})$ , E=4-27 MeV; measured elastic and inelastic scattering  $\sigma$ . JOUR NIMBE 261 1089
- 2007JE03 NUCLEAR REACTIONS  ${}^{12}\text{C}({}^{12}\text{C}, 2n)$ , E=50 MeV; measured  $E_\gamma$ ,  $I_\gamma$ .  ${}^{22}\text{Mg}$  deduced level energies. JOUR NIMBE 261 945

A=23

- ${}^{23}\text{N}$  2007JU03 ATOMIC MASSES  ${}^{23}\text{N}$ ,  ${}^{23,24}\text{O}$ ,  ${}^{25,26,27}\text{F}$ ,  ${}^{27,28,29,30,31}\text{Ne}$ ,  ${}^{31,32,33}\text{Na}$ ,  ${}^{34,35,36}\text{Mg}$ ,  ${}^{34,35,36,37,38,39}\text{Al}$ ,  ${}^{36,37,38,39,40,41,42}\text{Si}$ ,  ${}^{40,41,42,43,44}\text{P}$ ,  ${}^{40,43,44,45}\text{S}$ ,  ${}^{43,45,46,47}\text{Cl}$ ; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43
- ${}^{23}\text{O}$  2006SCZV NUCLEAR REACTIONS  $\text{Be}({}^{26}\text{Ne}, \text{X})$ , E=86 MeV / nucleon; measured  $E_n$ , charged particle spectra, (fragment)n-coin.  ${}^{23}\text{O}$  deduced excited state energy. PREPRINT nucl-ex/0612024,12/21/2006
- 2007EL02 NUCLEAR REACTIONS  ${}^2\text{H}({}^{22}\text{O}, {}^{23}\text{O})$ , E=34 MeV / nucleon; measured excitation energy spectrum.  ${}^{23}\text{O}$  deduced resonance energies, neutron shell features. JOUR PRLTA 98 102502

KEYNUMBERS AND KEYWORDS

A=23 (continued)

- 2007ELZZ NUCLEAR REACTIONS  $^2\text{H}(^{22}\text{O}, ^{23}\text{O})$ , E=34 MeV / nucleon; measured excitation energy spectrum.  $^{23}\text{O}$  deduced resonance energies, neutron shell features. REPT RIKEN-NC-NP-4, Elekes
- 2007FRZW NUCLEAR REACTIONS  $\text{Be}(^{26}\text{Ne}, \text{n}2\text{p})^{23}\text{O}$ , E=86 MeV / nucleon; measured decay energy spectra. PREPRINT ArXiv:0708.2706v1 [nucl-ex]
- 2007JU03 ATOMIC MASSES  $^{23}\text{N}$ ,  $^{23,24}\text{O}$ ,  $^{25,26,27}\text{F}$ ,  $^{27,28,29,30,31}\text{Ne}$ ,  $^{31,32,33}\text{Na}$ ,  $^{34,35,36}\text{Mg}$ ,  $^{34,35,36,37,38,39}\text{Al}$ ,  $^{36,37,38,39,40,41,42}\text{Si}$ ,  $^{40,41,42,43,44}\text{P}$ ,  $^{40,43,44,45}\text{S}$ ,  $^{43,45,46,47}\text{Cl}$ ; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43
- 2007N013 NUCLEAR REACTIONS  $^9\text{Be}(^{40}\text{Ar}, \text{X})^6\text{Li} / ^7\text{Li} / ^8\text{Li} / ^9\text{Li} / ^7\text{Be} / ^8\text{Be} / ^9\text{Be} / ^{10}\text{Be} / ^{11}\text{Be} / ^{12}\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{B} / ^{13}\text{B} / ^{14}\text{B} / ^{15}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{15}\text{C} / ^{16}\text{C} / ^{17}\text{C} / ^{18}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{N} / ^{17}\text{N} / ^{18}\text{N} / ^{19}\text{N} / ^{20}\text{N} / ^{21}\text{N} / ^{15}\text{O} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O} / ^{19}\text{O} / ^{20}\text{O} / ^{21}\text{O} / ^{22}\text{O} / ^{23}\text{O} / ^{24}\text{O} / ^{17}\text{F} / ^{18}\text{F} / ^{19}\text{F} / ^{20}\text{F} / ^{21}\text{F} / ^{22}\text{F} / ^{23}\text{F} / ^{24}\text{F} / ^{25}\text{F} / ^{26}\text{F} / ^{27}\text{F} / ^{19}\text{Ne} / ^{20}\text{Ne} / ^{21}\text{Ne} / ^{22}\text{Ne} / ^{23}\text{Ne} / ^{24}\text{Ne} / ^{25}\text{Ne} / ^{26}\text{Ne} / ^{27}\text{Ne} / ^{28}\text{Ne} / ^{29}\text{Ne} / ^{21}\text{Na} / ^{22}\text{Na} / ^{23}\text{Na} / ^{24}\text{Na} / ^{25}\text{Na} / ^{26}\text{Na} / ^{27}\text{Na} / ^{28}\text{Na} / ^{29}\text{Na} / ^{30}\text{Na} / ^{31}\text{Na} / ^{32}\text{Na} / ^{23}\text{Mg} / ^{24}\text{Mg} / ^{25}\text{Mg} / ^{26}\text{Mg} / ^{27}\text{Mg} / ^{28}\text{Mg} / ^{29}\text{Mg} / ^{30}\text{Mg} / ^{31}\text{Mg} / ^{32}\text{Mg} / ^{33}\text{Mg} / ^{34}\text{Mg} / ^{25}\text{Al} / ^{26}\text{Al} / ^{27}\text{Al} / ^{28}\text{Al} / ^{29}\text{Al} / ^{30}\text{Al} / ^{31}\text{Al} / ^{32}\text{Al} / ^{33}\text{Al} / ^{34}\text{Al} / ^{35}\text{Al} / ^{36}\text{Al} / ^{27}\text{Si} / ^{28}\text{Si} / ^{29}\text{Si} / ^{30}\text{Si} / ^{31}\text{Si} / ^{32}\text{Si} / ^{33}\text{Si} / ^{34}\text{Si} / ^{35}\text{Si} / ^{36}\text{Si} / ^{37}\text{Si} / ^{38}\text{Si} / ^{29}\text{P} / ^{30}\text{P} / ^{31}\text{P} / ^{32}\text{P} / ^{33}\text{P} / ^{34}\text{P} / ^{35}\text{P} / ^{36}\text{P} / ^{37}\text{P} / ^{38}\text{P} / ^{39}\text{P} / ^{33}\text{S} / ^{34}\text{S} / ^{35}\text{S} / ^{36}\text{S} / ^{37}\text{S} / ^{38}\text{S} / ^{36}\text{Cl} / ^{37}\text{Cl} / ^{38}\text{Cl} / ^{39}\text{Cl} / ^{39}\text{Ar}$ , E=100 MeV / nucleon;  $^{181}\text{Ta}(^{40}\text{Ar}, \text{X})^6\text{Li} / ^7\text{Li} / ^8\text{Li} / ^9\text{Be} / ^{10}\text{Be} / ^{11}\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{B} / ^{13}\text{B} / ^{14}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{15}\text{C} / ^{16}\text{C} / ^{17}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{N} / ^{17}\text{N} / ^{18}\text{N} / ^{19}\text{N} / ^{15}\text{O} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O} / ^{19}\text{O} / ^{20}\text{O} / ^{21}\text{O} / ^{17}\text{F} / ^{18}\text{F} / ^{19}\text{F} / ^{20}\text{F} / ^{21}\text{F} / ^{22}\text{F} / ^{23}\text{F} / ^{24}\text{F} / ^{19}\text{Ne} / ^{20}\text{Ne} / ^{21}\text{Ne} / ^{22}\text{Ne} / ^{23}\text{Ne} / ^{24}\text{Ne} / ^{25}\text{Ne} / ^{26}\text{Ne} / ^{27}\text{Ne} / ^{21}\text{Na} / ^{22}\text{Na} / ^{23}\text{Na} / ^{24}\text{Na} / ^{25}\text{Na} / ^{26}\text{Na} / ^{27}\text{Na} / ^{28}\text{Na} / ^{29}\text{Na} / ^{23}\text{Mg} / ^{24}\text{Mg} / ^{25}\text{Mg} / ^{26}\text{Mg} / ^{27}\text{Mg} / ^{28}\text{Mg} / ^{29}\text{Mg} / ^{30}\text{Mg} / ^{31}\text{Mg} / ^{24} / ^{25}\text{Al} / ^{26}\text{Al} / ^{27}\text{Al} / ^{28}\text{Al} / ^{29}\text{Al} / ^{30}\text{Al} / ^{31}\text{Al} / ^{32}\text{Al} / ^{33}\text{Al} / ^{34}\text{Al} / ^{26}\text{Si} / ^{27}\text{Si} / ^{28}\text{Si} / ^{29}\text{Si} / ^{30}\text{Si} / ^{31}\text{Si} / ^{32}\text{Si} / ^{33}\text{Si} / ^{34}\text{Si} / ^{29}\text{P} / ^{30}\text{P} / ^{31}\text{P} / ^{32}\text{P} / ^{33}\text{P} / ^{34}\text{P} / ^{35}\text{P} / ^{36}\text{P} / ^{30}\text{S} / ^{31}\text{S} / ^{32}\text{S} / ^{33}\text{S} / ^{34}\text{S} / ^{35}\text{S} / ^{36}\text{S} / ^{37}\text{S} / ^{33}\text{Cl} / ^{34}\text{Cl} / ^{35}\text{Cl} / ^{36}\text{Cl} / ^{37}\text{Cl} / ^{35}\text{Ar} / ^{36}\text{Ar} / ^{37}\text{Ar} / ^{38}\text{Ar} / ^{39}\text{Ar} / ^{37}\text{K} / ^{38}\text{K} / ^{39}\text{K} / ^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007SC32 NUCLEAR REACTIONS  $\text{Be}(^{26}\text{Ne}, \text{n}2\text{p})$ , E=86 MeV / nucleon; measured neutron decay energy spectrum, fragment-neutron-coinc.  $^{23}\text{O}$  deduced level energy, spectroscopic factor. JOUR PRLTA 99 112501
- 2007SU05 RADIOACTIVITY  $^{23}\text{O}$ ,  $^{21}\text{N}$ ,  $^{24}\text{F}$ ,  $^{26}\text{Ne}(\beta^-)$  [from  $\text{Be}(^{48}\text{Ca}, \text{X})$ ]; measured  $E_\gamma$ ,  $I_\gamma$ ,  $\beta\gamma$ -coin,  $T_{1/2}$ .  $^{23}\text{O}(\beta^- \text{n})$ ; measured  $\beta$ -delayed neutron spectra; deduced neutron emission probability.  $^{23}\text{F}$ ,  $^{26}\text{Na}$  deduced levels, J,  $\pi$ ,  $\beta$ -feeding intensities. JOUR PRVCA 75 024305
- $^{23}\text{F}$  2007KWZZ NUCLEAR REACTIONS  $^9\text{Be}$ , Ni,  $^{181}\text{Ta}(^{40}\text{Ar}, \text{X})^{23}\text{F} / ^{24}\text{F} / ^{25}\text{F} / ^{26}\text{F} / ^{27}\text{F} / ^{29}\text{F}$ , E=140 MeV / nucleon; measured yields, momentum distributions for neutron-rich Fluorine isotope production. CONF Iguazu(Nuclear Physics and Applications) Proc,P213,Kwan

**A=23 (continued)**

- 2007MI25 NUCLEAR REACTIONS  ${}^4\text{He}({}^{22}\text{O}, {}^{23}\text{F}\gamma)$ ,  $({}^{23}\text{F}, {}^{23}\text{F}\gamma)$ ,  $({}^{24}\text{F}, {}^{23}\text{F}\gamma)$ ,  $({}^{25}\text{Ne}, {}^{23}\text{F}\gamma)$ ,  $E \approx 35$  MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin; deduced reaction  $\sigma$ .  ${}^4\text{He}({}^{22}\text{O}, {}^{23}\text{F}\gamma)$ ,  $E=35$  MeV / nucleon; measured  $\sigma(\theta)$ .  ${}^{23}\text{F}$  deduced levels,  $J$ ,  $\pi$ , configurations. Comparison with DWBA and shell model predictions. JOUR NUPAB 787 569c
- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, X){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ ,  $E=100$  MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, X){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ ,  $E=100$  MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007SU05 RADIOACTIVITY  ${}^{23}\text{O}$ ,  ${}^{21}\text{N}$ ,  ${}^{24}\text{F}$ ,  ${}^{26}\text{Ne}(\beta^-)$  [from  $\text{Be}({}^{48}\text{Ca}, X)$ ]; measured  $E\gamma$ ,  $I\gamma$ ,  $\beta\gamma$ -coin,  $T_{1/2}$ .  ${}^{23}\text{O}(\beta^-n)$ ; measured  $\beta$ -delayed neutron spectra; deduced neutron emission probability.  ${}^{23}\text{F}$ ,  ${}^{26}\text{Na}$  deduced levels,  $J$ ,  $\pi$ ,  $\beta$ -feeding intensities. JOUR PRVCA 75 024305

## A=23 (continued)

- <sup>23</sup>Ne      2007N013      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- <sup>23</sup>Na      2006KA65      NUCLEAR REACTIONS <sup>22</sup>Ne(p,  $\gamma$ ), E=0.8-2.5 MeV; measured E $\gamma$ , I $\gamma$ , excitation function, angular distribution; deduced resonance structure. JOUR BRSPE 70 860
- 2007DE55      NUCLEAR REACTIONS <sup>26</sup>Al(n,  $\alpha$ ), E<100 keV; measured cross-sections. <sup>27</sup>Al deduced resonance energies, widths, areas and spins. <sup>26</sup>Al deduced galactic abundance. JOUR PRVCA 76 045804
- 2007F010      NUCLEAR REACTIONS <sup>27</sup>Al(<sup>12</sup>C, X)<sup>7</sup>Be / <sup>9</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>O / <sup>19</sup>F / <sup>22</sup>Ne / <sup>23</sup>Na / <sup>24</sup>Mg / <sup>26</sup>Mg / <sup>26</sup>Al / <sup>27</sup>Al / Si, E=156 MeV; <sup>12</sup>C(<sup>27</sup>Al, X)<sup>7</sup>Be / <sup>9</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>O / <sup>19</sup>F / <sup>22</sup>Ne / <sup>23</sup>Na / <sup>24</sup>Mg / <sup>26</sup>Mg / Si, E=348 MeV; measured intermediate mass fragment spectra,  $\sigma(\theta, E)$  from fusion and fragmentation. Comparison with Boltzmann Master Equations theory. JOUR NUPAB 797 1

## A=23 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007SP03 NUCLEAR REACTIONS  ${}^{12}\text{C}({}^{12}\text{C}, \text{p})$ ,  $({}^{12}\text{C}, \alpha)$ , E=2.1-4.75 MeV; measured  $E_\gamma$ ,  $I_\gamma$ ; deduced  $\sigma$ , astrophysical S-factors, resonance features. JOUR PRLTA 98 122501
- 2007SPZZ NUCLEAR REACTIONS  ${}^{12}\text{C}({}^{12}\text{C}, \text{p})$ ,  $({}^{12}\text{C}, \alpha)$ , E=2.10-4.75; measured  $E_\gamma$ ,  $I_\gamma$ ; deduced astrophysical S-factors, resonance features. PREPRINT nucl-ex/0702023,2/9/2007



KEYNUMBERS AND KEYWORDS

A=23 (continued)

- <sup>23</sup>Mg 2007N013 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- <sup>23</sup>Al 2007G0ZV NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>23</sup>Al, p<sup>22</sup>Mg), E=48.4 MeV / nucleon; measured particle energies, emission angles, E<sub>γ</sub>, I<sub>γ</sub>, (particle)γ-coinc. σ. <sup>22</sup>Mg(p, γ); deduced reaction rate. REPT RIKEN-NC-NP-14,Gomi

A=24

- <sup>24</sup>O 2007JU03 ATOMIC MASSES <sup>23</sup>N, <sup>23,24</sup>O, <sup>25,26,27</sup>F, <sup>27,28,29,30,31</sup>Ne, <sup>31,32,33</sup>Na, <sup>34,35,36</sup>Mg, <sup>34,35,36,37,38,39</sup>Al, <sup>36,37,38,39,40,41,42</sup>Si, <sup>40,41,42,43,44</sup>P, <sup>40,43,44,45</sup>S, <sup>43,45,46,47</sup>Cl; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43

## A=24 (continued)

- 2007N013 NUCLEAR REACTIONS  $^9\text{Be}(^{40}\text{Ar}, \text{X})^6\text{Li} / ^7\text{Li} / ^8\text{Li} / ^9\text{Li} / ^7\text{Be} / ^8\text{Be} / ^9\text{Be} / ^{10}\text{Be} / ^{11}\text{Be} / ^{12}\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{B} / ^{13}\text{B} / ^{14}\text{B} / ^{15}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{15}\text{C} / ^{16}\text{C} / ^{17}\text{C} / ^{18}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{N} / ^{17}\text{N} / ^{18}\text{N} / ^{19}\text{N} / ^{20}\text{N} / ^{21}\text{N} / ^{15}\text{O} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O} / ^{19}\text{O} / ^{20}\text{O} / ^{21}\text{O} / ^{22}\text{O} / ^{23}\text{O} / ^{24}\text{O} / ^{17}\text{F} / ^{18}\text{F} / ^{19}\text{F} / ^{20}\text{F} / ^{21}\text{F} / ^{22}\text{F} / ^{23}\text{F} / ^{24}\text{F} / ^{25}\text{F} / ^{26}\text{F} / ^{27}\text{F} / ^{19}\text{Ne} / ^{20}\text{Ne} / ^{21}\text{Ne} / ^{22}\text{Ne} / ^{23}\text{Ne} / ^{24}\text{Ne} / ^{25}\text{Ne} / ^{26}\text{Ne} / ^{27}\text{Ne} / ^{28}\text{Ne} / ^{29}\text{Ne} / ^{21}\text{Na} / ^{22}\text{Na} / ^{23}\text{Na} / ^{24}\text{Na} / ^{25}\text{Na} / ^{26}\text{Na} / ^{27}\text{Na} / ^{28}\text{Na} / ^{29}\text{Na} / ^{30}\text{Na} / ^{31}\text{Na} / ^{32}\text{Na} / ^{23}\text{Mg} / ^{24}\text{Mg} / ^{25}\text{Mg} / ^{26}\text{Mg} / ^{27}\text{Mg} / ^{28}\text{Mg} / ^{29}\text{Mg} / ^{30}\text{Mg} / ^{31}\text{Mg} / ^{32}\text{Mg} / ^{33}\text{Mg} / ^{34}\text{Mg} / ^{25}\text{Al} / ^{26}\text{Al} / ^{27}\text{Al} / ^{28}\text{Al} / ^{29}\text{Al} / ^{30}\text{Al} / ^{31}\text{Al} / ^{32}\text{Al} / ^{33}\text{Al} / ^{34}\text{Al} / ^{35}\text{Al} / ^{36}\text{Al} / ^{27}\text{Si} / ^{28}\text{Si} / ^{29}\text{Si} / ^{30}\text{Si} / ^{31}\text{Si} / ^{32}\text{Si} / ^{33}\text{Si} / ^{34}\text{Si} / ^{35}\text{Si} / ^{36}\text{Si} / ^{37}\text{Si} / ^{38}\text{Si} / ^{29}\text{P} / ^{30}\text{P} / ^{31}\text{P} / ^{32}\text{P} / ^{33}\text{P} / ^{34}\text{P} / ^{35}\text{P} / ^{36}\text{P} / ^{37}\text{P} / ^{38}\text{P} / ^{39}\text{P} / ^{33}\text{S} / ^{34}\text{S} / ^{35}\text{S} / ^{36}\text{S} / ^{37}\text{S} / ^{38}\text{S} / ^{36}\text{Cl} / ^{37}\text{Cl} / ^{38}\text{Cl} / ^{39}\text{Cl} / ^{39}\text{Ar}, E=100 MeV / nucleon;  $^{181}\text{Ta}(^{40}\text{Ar}, \text{X})^6\text{Li} / ^7\text{Li} / ^8\text{Li} / ^9\text{Be} / ^{10}\text{Be} / ^{11}\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{B} / ^{13}\text{B} / ^{14}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{15}\text{C} / ^{16}\text{C} / ^{17}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{N} / ^{17}\text{N} / ^{18}\text{N} / ^{19}\text{N} / ^{15}\text{O} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O} / ^{19}\text{O} / ^{20}\text{O} / ^{21}\text{O} / ^{17}\text{F} / ^{18}\text{F} / ^{19}\text{F} / ^{20}\text{F} / ^{21}\text{F} / ^{22}\text{F} / ^{23}\text{F} / ^{24}\text{F} / ^{19}\text{Ne} / ^{20}\text{Ne} / ^{21}\text{Ne} / ^{22}\text{Ne} / ^{23}\text{Ne} / ^{24}\text{Ne} / ^{25}\text{Ne} / ^{26}\text{Ne} / ^{27}\text{Ne} / ^{21}\text{Na} / ^{22}\text{Na} / ^{23}\text{Na} / ^{24}\text{Na} / ^{25}\text{Na} / ^{26}\text{Na} / ^{27}\text{Na} / ^{28}\text{Na} / ^{29}\text{Na} / ^{23}\text{Mg} / ^{24}\text{Mg} / ^{25}\text{Mg} / ^{26}\text{Mg} / ^{27}\text{Mg} / ^{28}\text{Mg} / ^{29}\text{Mg} / ^{30}\text{Mg} / ^{31}\text{Mg} / ^{24} / ^{25}\text{Al} / ^{26}\text{Al} / ^{27}\text{Al} / ^{28}\text{Al} / ^{29}\text{Al} / ^{30}\text{Al} / ^{31}\text{Al} / ^{32}\text{Al} / ^{33}\text{Al} / ^{34}\text{Al} / ^{26}\text{Si} / ^{27}\text{Si} / ^{28}\text{Si} / ^{29}\text{Si} / ^{30}\text{Si} / ^{31}\text{Si} / ^{32}\text{Si} / ^{33}\text{Si} / ^{34}\text{Si} / ^{29}\text{P} / ^{30}\text{P} / ^{31}\text{P} / ^{32}\text{P} / ^{33}\text{P} / ^{34}\text{P} / ^{35}\text{P} / ^{36}\text{P} / ^{30}\text{S} / ^{31}\text{S} / ^{32}\text{S} / ^{33}\text{S} / ^{34}\text{S} / ^{35}\text{S} / ^{36}\text{S} / ^{37}\text{S} / ^{33}\text{Cl} / ^{34}\text{Cl} / ^{35}\text{Cl} / ^{36}\text{Cl} / ^{37}\text{Cl} / ^{35}\text{Ar} / ^{36}\text{Ar} / ^{37}\text{Ar} / ^{38}\text{Ar} / ^{39}\text{Ar} / ^{37}\text{K} / ^{38}\text{K} / ^{39}\text{K} / ^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$
- $^{24}\text{F}$  2007KWZZ NUCLEAR REACTIONS  $^9\text{Be}, \text{Ni}, ^{181}\text{Ta}(^{40}\text{Ar}, \text{X})^{23}\text{F} / ^{24}\text{F} / ^{25}\text{F} / ^{26}\text{F} / ^{27}\text{F} / ^{29}\text{F}$ , E=140 MeV / nucleon; measured yields, momentum distributions for neutron-rich Fluorine isotope production. CONF Iguazu(Nuclear Physics and Applications) Proc,P213,Kwan

## A=24 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007SU05 RADIOACTIVITY  ${}^{23}\text{O}$ ,  ${}^{21}\text{N}$ ,  ${}^{24}\text{F}$ ,  ${}^{26}\text{Ne}(\beta^-)$  [from  $\text{Be}({}^{48}\text{Ca}, \text{X})$ ]; measured  $E\gamma$ ,  $I\gamma$ ,  $\beta\gamma$ -coin,  $T_{1/2}$ .  ${}^{23}\text{O}(\beta^-n)$ ; measured  $\beta$ -delayed neutron spectra; deduced neutron emission probability.  ${}^{23}\text{F}$ ,  ${}^{26}\text{Na}$  deduced levels, J,  $\pi$ ,  $\beta$ -feeding intensities. JOUR PRVCA 75 024305

## A=24 (continued)

- <sup>24</sup>Ne      2007N013      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007SU05      RADIOACTIVITY <sup>23</sup>O, <sup>21</sup>N, <sup>24</sup>F, <sup>26</sup>Ne( $\beta^-$ ) [from Be(<sup>48</sup>Ca, X)]; measured E $\gamma$ , I $\gamma$ ,  $\beta\gamma$ -coin, T<sub>1/2</sub>. <sup>23</sup>O( $\beta^-$ n); measured  $\beta$ -delayed neutron spectra; deduced neutron emission probability. <sup>23</sup>F, <sup>26</sup>Na deduced levels, J,  $\pi$ ,  $\beta$ -feeding intensities. JOUR PRVCA 75 024305
- <sup>24</sup>Na      2006ARZX      NUCLEAR REACTIONS <sup>27</sup>Al(n,  $\alpha$ ), E=14 MeV; <sup>144</sup>Sm, <sup>206,208</sup>Pb(n, 2n), E=14 MeV; measured isomer production  $\sigma$ . REPT JAEA-Conf 2006-009,P89,Arakita
- 2007C018      NUCLEAR REACTIONS <sup>25</sup>Mg( $\gamma$ , p), E not given; measured E $\gamma$ , I $\gamma$  from isomeric decay. JOUR NIMBE 261 822
- 2007KA33      NUCLEAR REACTIONS N, O, Ar(p, X)<sup>7</sup>Be / <sup>11</sup>C / <sup>13</sup>N / <sup>15</sup>O / <sup>18</sup>F / <sup>22</sup>Na / <sup>24</sup>Na / <sup>27</sup>Mg / <sup>29</sup>Al / <sup>38</sup>S / <sup>38</sup>Cl / <sup>39</sup>Cl, E=12 GeV; measured radionuclide yields. JOUR JRNCD 273 507

## A=24 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}, E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$
- 2007TI03 NUCLEAR REACTIONS Pb,  ${}^{208}\text{Pb}$ ,  ${}^{209}\text{Bi}(\text{p}, \text{X}){}^7\text{Be} / {}^{24}\text{Na} / {}^{59}\text{Fe} / {}^{86}\text{Rb} / {}^{101\text{m}}\text{Rh} / {}^{173}\text{Lu} / {}^{190}\text{Ir} / {}^{192}\text{Ir} / {}^{196}\text{Au} / {}^{199}\text{Tl} / {}^{200}\text{Tl} / {}^{203}\text{Pb}$ , E=0.04-2.6 GeV; measured excitation functions. Comparison with model predictions and previous data. JOUR PRAMC 68 289
- 2007ZE04 NUCLEAR REACTIONS Be( ${}^{18}\text{O}$ , tX), E=120 MeV / nucleon; Be( ${}^{16}\text{O}$ , tX), E=150 MeV / nucleon; measured triton yield vs energy, target thickness.  ${}^{24,26}\text{Mg}(\text{t}, {}^3\text{He})$ , E=115 MeV / nucleon; measured excitation energy spectrum.  ${}^{26}\text{Mg}({}^3\text{He}, \text{t})$ , E=140 MeV / nucleon; analyzed excitation energy spectrum.  ${}^{26}\text{Na}$ ,  ${}^{26}\text{Al}$  deduced Gamow-Teller strength distribution. Comparison with other results, shell model predictions. JOUR NUPAB 788 61c
- ${}^{24}\text{Mg}$  2005NIZS NUCLEAR REACTIONS Ni( ${}^{22}\text{Ne}$ ,  ${}^{22}\text{Ne}'$ ), E=2.25 MeV / nucleon;  ${}^{107}\text{Ag}({}^{22}\text{Ne}$ ,  ${}^{22}\text{Ne}'$ ), E=2.86 MeV / nucleon; Ni( ${}^{30}\text{Mg}$ ,  ${}^{30}\text{Mg}'$ ), E=2.25 MeV / nucleon;  ${}^{60}\text{Ni}$ ,  ${}^{107}\text{Ag}({}^{30}\text{Mg}$ ,  ${}^{30}\text{Mg}'$ ), E=2.69 MeV / nucleon; U(p, X) ${}^{22}\text{Ne} / {}^{30}\text{Mg} / {}^{32}\text{Mg}$ , E=1.01-1.40 GeV; measured  $E\gamma$ ,  $I\gamma(\theta)$ , (particle) $\gamma$ -coinc, cross sections following projectile and target Coulomb excitation.  ${}^{22}\text{Ne}$ ,  ${}^{30}\text{Mg}$ ,  ${}^{32}\text{Mg}$ ,  ${}^{107}\text{Ag}$  deduced levels, B(E2), half-lives, deformations. REX-ISOLDE-CERN facility. Coupled-channel and GOSIA analyses.  ${}^{24}\text{Mg}$ ,  ${}^{26}\text{Mg}$ ,  ${}^{28}\text{Mg}$ ,  ${}^{30}\text{Mg}$ ,  ${}^{32}\text{Mg}$ ,  ${}^{34}\text{Mg}$  systematics of B(E2) values. Comparisons with shell-model calculations. THESIS O T Niedermaier, Univ Heidelberg

## A=24 (continued)

- 2006VA20 NUCLEAR REACTIONS  $^{28}\text{Si}(p, p'X)^{24}\text{Mg}$ , E=1 GeV; measured  $E_\gamma$ ,  $E_p$ ,  $p\gamma$ -coin; deduced  $\sigma$ , reaction mechanism features. JOUR JTPLA 83 433
- 2007F010 NUCLEAR REACTIONS  $^{27}\text{Al}(^{12}\text{C}, X)^7\text{Be} / ^9\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{O} / ^{19}\text{F} / ^{22}\text{Ne} / ^{23}\text{Na} / ^{24}\text{Mg} / ^{26}\text{Mg} / ^{26}\text{Al} / ^{27}\text{Al} / \text{Si}$ , E=156 MeV;  $^{12}\text{C}(^{27}\text{Al}, X)^7\text{Be} / ^9\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{O} / ^{19}\text{F} / ^{22}\text{Ne} / ^{23}\text{Na} / ^{24}\text{Mg} / ^{26}\text{Mg} / \text{Si}$ , E=348 MeV; measured intermediate mass fragment spectra,  $\sigma(\theta, E)$  from fusion and fragmentation. Comparison with Boltzmann Master Equations theory. JOUR NUPAB 797 1
- 2007JE08 NUCLEAR REACTIONS  $^{12}\text{C}(^{12}\text{C}, \gamma)$ ,  $E(\text{cm})=6.0, 6.8, 7.5, 8.0$  MeV; measured  $E_\gamma$ ,  $I_\gamma$ ,  $\gamma\gamma$ , (recoil) $\gamma$ -coin; deduced multipolarities, on and off resonances. TRIUMF-ISAC DRAGON recoil spectrometer, GEANT3 array. JOUR PRVCA 76 044310
- 2007ME18 NUCLEAR REACTIONS  $^{27}\text{Al}$ ,  $^{28}\text{Si}(\mu^-, \nu)$ ,  $(\mu^-, n\nu)$ ,  $(\mu^-, 2n\nu)$ ,  $(\mu^-, 3n\nu)$ ,  $(\mu^-, p\nu)$ ,  $(\mu^-, np\nu)$ , E not given; measured  $E_\gamma$ ,  $I_\gamma$ , yields. JOUR PRVCA 76 035504
- 2007N013 NUCLEAR REACTIONS  $^9\text{Be}(^{40}\text{Ar}, X)^6\text{Li} / ^7\text{Li} / ^8\text{Li} / ^9\text{Li} / ^7\text{Be} / ^8\text{Be} / ^9\text{Be} / ^{10}\text{Be} / ^{11}\text{Be} / ^{12}\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{B} / ^{13}\text{B} / ^{14}\text{B} / ^{15}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{15}\text{C} / ^{16}\text{C} / ^{17}\text{C} / ^{18}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{N} / ^{17}\text{N} / ^{18}\text{N} / ^{19}\text{N} / ^{20}\text{N} / ^{21}\text{N} / ^{15}\text{O} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O} / ^{19}\text{O} / ^{20}\text{O} / ^{21}\text{O} / ^{22}\text{O} / ^{23}\text{O} / ^{24}\text{O} / ^{17}\text{F} / ^{18}\text{F} / ^{19}\text{F} / ^{20}\text{F} / ^{21}\text{F} / ^{22}\text{F} / ^{23}\text{F} / ^{24}\text{F} / ^{25}\text{F} / ^{26}\text{F} / ^{27}\text{F} / ^{19}\text{Ne} / ^{20}\text{Ne} / ^{21}\text{Ne} / ^{22}\text{Ne} / ^{23}\text{Ne} / ^{24}\text{Ne} / ^{25}\text{Ne} / ^{26}\text{Ne} / ^{27}\text{Ne} / ^{28}\text{Ne} / ^{29}\text{Ne} / ^{21}\text{Na} / ^{22}\text{Na} / ^{23}\text{Na} / ^{24}\text{Na} / ^{25}\text{Na} / ^{26}\text{Na} / ^{27}\text{Na} / ^{28}\text{Na} / ^{29}\text{Na} / ^{30}\text{Na} / ^{31}\text{Na} / ^{32}\text{Na} / ^{23}\text{Mg} / ^{24}\text{Mg} / ^{25}\text{Mg} / ^{26}\text{Mg} / ^{27}\text{Mg} / ^{28}\text{Mg} / ^{29}\text{Mg} / ^{30}\text{Mg} / ^{31}\text{Mg} / ^{32}\text{Mg} / ^{33}\text{Mg} / ^{34}\text{Mg} / ^{25}\text{Al} / ^{26}\text{Al} / ^{27}\text{Al} / ^{28}\text{Al} / ^{29}\text{Al} / ^{30}\text{Al} / ^{31}\text{Al} / ^{32}\text{Al} / ^{33}\text{Al} / ^{34}\text{Al} / ^{35}\text{Al} / ^{36}\text{Al} / ^{27}\text{Si} / ^{28}\text{Si} / ^{29}\text{Si} / ^{30}\text{Si} / ^{31}\text{Si} / ^{32}\text{Si} / ^{33}\text{Si} / ^{34}\text{Si} / ^{35}\text{Si} / ^{36}\text{Si} / ^{37}\text{Si} / ^{38}\text{Si} / ^{29}\text{P} / ^{30}\text{P} / ^{31}\text{P} / ^{32}\text{P} / ^{33}\text{P} / ^{34}\text{P} / ^{35}\text{P} / ^{36}\text{P} / ^{37}\text{P} / ^{38}\text{P} / ^{39}\text{P} / ^{33}\text{S} / ^{34}\text{S} / ^{35}\text{S} / ^{36}\text{S} / ^{37}\text{S} / ^{38}\text{S} / ^{36}\text{Cl} / ^{37}\text{Cl} / ^{38}\text{Cl} / ^{39}\text{Cl} / ^{39}\text{Ar}$ , E=100 MeV / nucleon;  $^{181}\text{Ta}(^{40}\text{Ar}, X)^6\text{Li} / ^7\text{Li} / ^8\text{Li} / ^9\text{Be} / ^{10}\text{Be} / ^{11}\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{B} / ^{13}\text{B} / ^{14}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{15}\text{C} / ^{16}\text{C} / ^{17}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{N} / ^{17}\text{N} / ^{18}\text{N} / ^{19}\text{N} / ^{15}\text{O} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O} / ^{19}\text{O} / ^{20}\text{O} / ^{21}\text{O} / ^{17}\text{F} / ^{18}\text{F} / ^{19}\text{F} / ^{20}\text{F} / ^{21}\text{F} / ^{22}\text{F} / ^{23}\text{F} / ^{24}\text{F} / ^{19}\text{Ne} / ^{20}\text{Ne} / ^{21}\text{Ne} / ^{22}\text{Ne} / ^{23}\text{Ne} / ^{24}\text{Ne} / ^{25}\text{Ne} / ^{26}\text{Ne} / ^{27}\text{Ne} / ^{21}\text{Na} / ^{22}\text{Na} / ^{23}\text{Na} / ^{24}\text{Na} / ^{25}\text{Na} / ^{26}\text{Na} / ^{27}\text{Na} / ^{28}\text{Na} / ^{29}\text{Na} / ^{23}\text{Mg} / ^{24}\text{Mg} / ^{25}\text{Mg} / ^{26}\text{Mg} / ^{27}\text{Mg} / ^{28}\text{Mg} / ^{29}\text{Mg} / ^{30}\text{Mg} / ^{31}\text{Mg} / ^{24} / ^{25}\text{Al} / ^{26}\text{Al} / ^{27}\text{Al} / ^{28}\text{Al} / ^{29}\text{Al} / ^{30}\text{Al} / ^{31}\text{Al} / ^{32}\text{Al} / ^{33}\text{Al} / ^{34}\text{Al} / ^{26}\text{Si} / ^{27}\text{Si} / ^{28}\text{Si} / ^{29}\text{Si} / ^{30}\text{Si} / ^{31}\text{Si} / ^{32}\text{Si} / ^{33}\text{Si} / ^{34}\text{Si} / ^{29}\text{P} / ^{30}\text{P} / ^{31}\text{P} / ^{32}\text{P} / ^{33}\text{P} / ^{34}\text{P} / ^{35}\text{P} / ^{36}\text{P} / ^{30}\text{S} / ^{31}\text{S} / ^{32}\text{S} / ^{33}\text{S} / ^{34}\text{S} / ^{35}\text{S} / ^{36}\text{S} / ^{37}\text{S} / ^{33}\text{Cl} / ^{34}\text{Cl} / ^{35}\text{Cl} / ^{36}\text{Cl} / ^{37}\text{Cl} / ^{35}\text{Ar} / ^{36}\text{Ar} / ^{37}\text{Ar} / ^{38}\text{Ar} / ^{39}\text{Ar} / ^{37}\text{K} / ^{38}\text{K} / ^{39}\text{K} / ^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007VA10 NUCLEAR REACTIONS  $^{28}\text{Si}(p, X)^{24}\text{Mg}$ , E=1 GeV; measured  $E_\gamma$ ,  $I_\gamma$ ,  $\sigma$ . JOUR PANUE 70 1160

## A=25

- <sup>25</sup>F      2007JU03      ATOMIC MASSES <sup>23</sup>N, <sup>23,24</sup>O, <sup>25,26,27</sup>F, <sup>27,28,29,30,31</sup>Ne, <sup>31,32,33</sup>Na, <sup>34,35,36</sup>Mg, <sup>34,35,36,37,38,39</sup>Al, <sup>36,37,38,39,40,41,42</sup>Si, <sup>40,41,42,43,44</sup>P, <sup>40,43,44,45</sup>S, <sup>43,45,46,47</sup>Cl; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43
- 2007KWZZ      NUCLEAR REACTIONS <sup>9</sup>Be, Ni, <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>29</sup>F, E=140 MeV / nucleon; measured yields, momentum distributions for neutron-rich Fluorine isotope production. CONF Iguazu(Nuclear Physics and Applications) Proc,P213,Kwan
- 2007N013      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- <sup>25</sup>Ne      20060B05      NUCLEAR REACTIONS <sup>2</sup>H(<sup>26</sup>Ne, <sup>26</sup>Ne'), (<sup>26</sup>Ne, <sup>25</sup>Ne), (<sup>26</sup>Ne, <sup>27</sup>Ne), (<sup>26</sup>Ne, <sup>26</sup>Na), (<sup>26</sup>Ne, <sup>27</sup>Na), E=9.7 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin. <sup>25,26,27</sup>Ne, <sup>26,27</sup>Na deduced levels, J,  $\pi$ . Exogam array, Vamos spectrometer, comparison with previous results and model predictions. JOUR PRVCA 74 064305
- 2007FE09      NUCLEAR REACTIONS <sup>2</sup>H(<sup>24</sup>Ne, x), E=10 MeV / nucleon; measured E $\gamma$ , (particle) $\gamma$ -coinc using EXOGAM. <sup>25</sup>Ne; deduced level energies, J,  $\pi$  and spectroscopic factors. JOUR PPNPD 59 389



## A=25 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- ${}^{25}\text{Na}$  2007ME18 NUCLEAR REACTIONS  ${}^{27}\text{Al}$ ,  ${}^{28}\text{Si}(\mu^-, \nu)$ ,  $(\mu^-, n\nu)$ ,  $(\mu^-, 2n\nu)$ ,  $(\mu^-, 3n\nu)$ ,  $(\mu^-, p\nu)$ ,  $(\mu^-, np\nu)$ , E not given; measured  $E\gamma$ ,  $I\gamma$ , yields. JOUR PRVCA 76 035504

KEYNUMBERS AND KEYWORDS

A=25 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007VI11 NUCLEAR REACTIONS  ${}^{12}\text{C}({}^{48}\text{Ca}, \text{X}){}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{29}\text{Al}$  /  ${}^{37}\text{K}$  /  ${}^{47}\text{K}$ , E=60 MeV / nucleon; measured yield. JOUR NUPAB 787 126c
- ${}^{25}\text{Mg}$  2007ME18 NUCLEAR REACTIONS  ${}^{27}\text{Al}$ ,  ${}^{28}\text{Si}(\mu^-, \nu)$ ,  $(\mu^-, n\nu)$ ,  $(\mu^-, 2n\nu)$ ,  $(\mu^-, 3n\nu)$ ,  $(\mu^-, p\nu)$ ,  $(\mu^-, np\nu)$ , E not given; measured  $E\gamma$ ,  $I\gamma$ , yields. JOUR PRVCA 76 035504

## A=25 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- ${}^{25}\text{Al}$  2006PEZV NUCLEAR REACTIONS  ${}^1\text{H}({}^{25}\text{Al}, \text{p})$ , E=3.43 MeV / nucleon; measured Ep. REPT CNS-REP-69,P8,Pearson
- 2007BE47 NUCLEAR REACTIONS  ${}^{12}\text{C}$ ,  ${}^{16}\text{O}$ ,  ${}^{24}\text{Mg}$ , Fe(p,  $\gamma$ ), e=5-25 meV;  ${}^{12}\text{C}$ ,  ${}^{16}\text{O}$ ,  ${}^{24}\text{Mg}$ , Fe( $\alpha$ ,  $\gamma$ ), E=5-40 MeV; measured E $\gamma$ , I $\gamma$ , angular distributions, cross sections and excitation functions. Compared results to model calculations. JOUR PRVCA 76 034607
- 2007ME18 NUCLEAR REACTIONS  ${}^{27}\text{Al}$ ,  ${}^{28}\text{Si}(\mu^-, \nu)$ ,  $(\mu^-, n\nu)$ ,  $(\mu^-, 2n\nu)$ ,  $(\mu^-, 3n\nu)$ ,  $(\mu^-, p\nu)$ ,  $(\mu^-, np\nu)$ , E not given; measured E $\gamma$ , I $\gamma$ , yields. JOUR PRVCA 76 035504

KEYNUMBERS AND KEYWORDS

A=25 (continued)

2007N013 NUCLEAR REACTIONS  $^9\text{Be}(^{40}\text{Ar}, \text{X})^6\text{Li} / ^7\text{Li} / ^8\text{Li} / ^9\text{Li} / ^7\text{Be} / ^8\text{Be} / ^9\text{Be} / ^{10}\text{Be} / ^{11}\text{Be} / ^{12}\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{B} / ^{13}\text{B} / ^{14}\text{B} / ^{15}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{15}\text{C} / ^{16}\text{C} / ^{17}\text{C} / ^{18}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{N} / ^{17}\text{N} / ^{18}\text{N} / ^{19}\text{N} / ^{20}\text{N} / ^{21}\text{N} / ^{15}\text{O} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O} / ^{19}\text{O} / ^{20}\text{O} / ^{21}\text{O} / ^{22}\text{O} / ^{23}\text{O} / ^{24}\text{O} / ^{17}\text{F} / ^{18}\text{F} / ^{19}\text{F} / ^{20}\text{F} / ^{21}\text{F} / ^{22}\text{F} / ^{23}\text{F} / ^{24}\text{F} / ^{25}\text{F} / ^{26}\text{F} / ^{27}\text{F} / ^{19}\text{Ne} / ^{20}\text{Ne} / ^{21}\text{Ne} / ^{22}\text{Ne} / ^{23}\text{Ne} / ^{24}\text{Ne} / ^{25}\text{Ne} / ^{26}\text{Ne} / ^{27}\text{Ne} / ^{28}\text{Ne} / ^{29}\text{Ne} / ^{21}\text{Na} / ^{22}\text{Na} / ^{23}\text{Na} / ^{24}\text{Na} / ^{25}\text{Na} / ^{26}\text{Na} / ^{27}\text{Na} / ^{28}\text{Na} / ^{29}\text{Na} / ^{30}\text{Na} / ^{31}\text{Na} / ^{32}\text{Na} / ^{23}\text{Mg} / ^{24}\text{Mg} / ^{25}\text{Mg} / ^{26}\text{Mg} / ^{27}\text{Mg} / ^{28}\text{Mg} / ^{29}\text{Mg} / ^{30}\text{Mg} / ^{31}\text{Mg} / ^{32}\text{Mg} / ^{33}\text{Mg} / ^{34}\text{Mg} / ^{25}\text{Al} / ^{26}\text{Al} / ^{27}\text{Al} / ^{28}\text{Al} / ^{29}\text{Al} / ^{30}\text{Al} / ^{31}\text{Al} / ^{32}\text{Al} / ^{33}\text{Al} / ^{34}\text{Al} / ^{35}\text{Al} / ^{36}\text{Al} / ^{27}\text{Si} / ^{28}\text{Si} / ^{29}\text{Si} / ^{30}\text{Si} / ^{31}\text{Si} / ^{32}\text{Si} / ^{33}\text{Si} / ^{34}\text{Si} / ^{35}\text{Si} / ^{36}\text{Si} / ^{37}\text{Si} / ^{38}\text{Si} / ^{29}\text{P} / ^{30}\text{P} / ^{31}\text{P} / ^{32}\text{P} / ^{33}\text{P} / ^{34}\text{P} / ^{35}\text{P} / ^{36}\text{P} / ^{37}\text{P} / ^{38}\text{P} / ^{39}\text{P} / ^{33}\text{S} / ^{34}\text{S} / ^{35}\text{S} / ^{36}\text{S} / ^{37}\text{S} / ^{38}\text{S} / ^{36}\text{Cl} / ^{37}\text{Cl} / ^{38}\text{Cl} / ^{39}\text{Cl} / ^{39}\text{Ar}, E=100 MeV / nucleon;  $^{181}\text{Ta}(^{40}\text{Ar}, \text{X})^6\text{Li} / ^7\text{Li} / ^8\text{Li} / ^9\text{Be} / ^{10}\text{Be} / ^{11}\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{B} / ^{13}\text{B} / ^{14}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{15}\text{C} / ^{16}\text{C} / ^{17}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{N} / ^{17}\text{N} / ^{18}\text{N} / ^{19}\text{N} / ^{15}\text{O} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O} / ^{19}\text{O} / ^{20}\text{O} / ^{21}\text{O} / ^{17}\text{F} / ^{18}\text{F} / ^{19}\text{F} / ^{20}\text{F} / ^{21}\text{F} / ^{22}\text{F} / ^{23}\text{F} / ^{24}\text{F} / ^{19}\text{Ne} / ^{20}\text{Ne} / ^{21}\text{Ne} / ^{22}\text{Ne} / ^{23}\text{Ne} / ^{24}\text{Ne} / ^{25}\text{Ne} / ^{26}\text{Ne} / ^{27}\text{Ne} / ^{21}\text{Na} / ^{22}\text{Na} / ^{23}\text{Na} / ^{24}\text{Na} / ^{25}\text{Na} / ^{26}\text{Na} / ^{27}\text{Na} / ^{28}\text{Na} / ^{29}\text{Na} / ^{23}\text{Mg} / ^{24}\text{Mg} / ^{25}\text{Mg} / ^{26}\text{Mg} / ^{27}\text{Mg} / ^{28}\text{Mg} / ^{29}\text{Mg} / ^{30}\text{Mg} / ^{31}\text{Mg} / ^{24} / ^{25}\text{Al} / ^{26}\text{Al} / ^{27}\text{Al} / ^{28}\text{Al} / ^{29}\text{Al} / ^{30}\text{Al} / ^{31}\text{Al} / ^{32}\text{Al} / ^{33}\text{Al} / ^{34}\text{Al} / ^{26}\text{Si} / ^{27}\text{Si} / ^{28}\text{Si} / ^{29}\text{Si} / ^{30}\text{Si} / ^{31}\text{Si} / ^{32}\text{Si} / ^{33}\text{Si} / ^{34}\text{Si} / ^{29}\text{P} / ^{30}\text{P} / ^{31}\text{P} / ^{32}\text{P} / ^{33}\text{P} / ^{34}\text{P} / ^{35}\text{P} / ^{36}\text{P} / ^{30}\text{S} / ^{31}\text{S} / ^{32}\text{S} / ^{33}\text{S} / ^{34}\text{S} / ^{35}\text{S} / ^{36}\text{S} / ^{37}\text{S} / ^{33}\text{Cl} / ^{34}\text{Cl} / ^{35}\text{Cl} / ^{36}\text{Cl} / ^{37}\text{Cl} / ^{35}\text{Ar} / ^{36}\text{Ar} / ^{37}\text{Ar} / ^{38}\text{Ar} / ^{39}\text{Ar} / ^{37}\text{K} / ^{38}\text{K} / ^{39}\text{K} / ^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$

A=26

$^{26}\text{F}$  2007JU03 ATOMIC MASSES  $^{23}\text{N}$ ,  $^{23,24}\text{O}$ ,  $^{25,26,27}\text{F}$ ,  $^{27,28,29,30,31}\text{Ne}$ ,  $^{31,32,33}\text{Na}$ ,  $^{34,35,36}\text{Mg}$ ,  $^{34,35,36,37,38,39}\text{Al}$ ,  $^{36,37,38,39,40,41,42}\text{Si}$ ,  $^{40,41,42,43,44}\text{P}$ ,  $^{40,43,44,45}\text{S}$ ,  $^{43,45,46,47}\text{Cl}$ ; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43

2007KWZZ NUCLEAR REACTIONS  $^9\text{Be}$ ,  $\text{Ni}$ ,  $^{181}\text{Ta}(^{40}\text{Ar}, \text{X})^{23}\text{F} / ^{24}\text{F} / ^{25}\text{F} / ^{26}\text{F} / ^{27}\text{F} / ^{29}\text{F}$ , E=140 MeV / nucleon; measured yields, momentum distributions for neutron-rich Fluorine isotope production. CONF Iguazu(Nuclear Physics and Applications) Proc,P213,Kwan

## A=26 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}, E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$
- ${}^{26}\text{Ne}$  20060B05 NUCLEAR REACTIONS  ${}^2\text{H}({}^{26}\text{Ne}, {}^{26}\text{Ne}'), ({}^{26}\text{Ne}, {}^{25}\text{Ne}), ({}^{26}\text{Ne}, {}^{27}\text{Ne}), ({}^{26}\text{Ne}, {}^{26}\text{Na}), ({}^{26}\text{Ne}, {}^{27}\text{Na}), E=9.7$  MeV / nucleon; measured  $E_\gamma, I_\gamma, (\text{particle})\gamma\text{-coin}$ .  ${}^{25,26,27}\text{Ne}, {}^{26,27}\text{Na}$  deduced levels, J,  $\pi$ . Exogam array, Vamos spectrometer, comparison with previous results and model predictions. JOUR PRVCA 74 064305
- 2007GI13 NUCLEAR REACTIONS Al, Pb( ${}^{26}\text{Ne}, \text{X}$ ), E=58 MeV / nucleon; measured  $E_\gamma, I_\gamma, E_n, I_n$ , excitation energy spectra,  $\sigma, \sigma(\theta)$ .  ${}^{26}\text{Ne}$  deduced B(E1), pygmy resonance parameters. Comparison with quasi-particle RPA calculations. JOUR NUPAB 788 153c
- 2007GIZY NUCLEAR REACTIONS Pb( ${}^{26}\text{Ne}, {}^{26}\text{Ne}'), E=54$  MeV / nucleon; measured  $E_\gamma, I_\gamma, (\text{particle})\gamma\text{-coin}, \sigma(E, \theta)$ .  ${}^{26}\text{Ne}$  deduced transition B(E2). REPT RIKEN-NC-NP-5, Gibelin

## A=26 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007SU05 RADIOACTIVITY  ${}^{23}\text{O}$ ,  ${}^{21}\text{N}$ ,  ${}^{24}\text{F}$ ,  ${}^{26}\text{Ne}(\beta^-)$  [from  $\text{Be}({}^{48}\text{Ca}, \text{X})$ ]; measured  $E\gamma$ ,  $I\gamma$ ,  $\beta\gamma$ -coin,  $T_{1/2}$ .  ${}^{23}\text{O}(\beta^-n)$ ; measured  $\beta$ -delayed neutron spectra; deduced neutron emission probability.  ${}^{23}\text{F}$ ,  ${}^{26}\text{Na}$  deduced levels, J,  $\pi$ ,  $\beta$ -feeding intensities. JOUR PRVCA 75 024305
- ${}^{26}\text{Na}$  2006OB05 NUCLEAR REACTIONS  ${}^2\text{H}({}^{26}\text{Ne}, {}^{26}\text{Ne}')$ ,  $({}^{26}\text{Ne}, {}^{25}\text{Ne})$ ,  $({}^{26}\text{Ne}, {}^{27}\text{Ne})$ ,  $({}^{26}\text{Ne}, {}^{26}\text{Na})$ ,  $({}^{26}\text{Ne}, {}^{27}\text{Na})$ , E=9.7 MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$ , (particle) $\gamma$ -coin.  ${}^{25,26,27}\text{Ne}$ ,  ${}^{26,27}\text{Na}$  deduced levels, J,  $\pi$ . Exogam array, Vamos spectrometer, comparison with previous results and model predictions. JOUR PRVCA 74 064305
- 2007ME18 NUCLEAR REACTIONS  ${}^{27}\text{Al}$ ,  ${}^{28}\text{Si}(\mu^-, \nu)$ ,  $(\mu^-, n\nu)$ ,  $(\mu^-, 2n\nu)$ ,  $(\mu^-, 3n\nu)$ ,  $(\mu^-, p\nu)$ ,  $(\mu^-, np\nu)$ , E not given; measured  $E\gamma$ ,  $I\gamma$ , yields. JOUR PRVCA 76 035504

## A=26 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}, E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$
- 2007SU05 RADIOACTIVITY  ${}^{23}\text{O}$ ,  ${}^{21}\text{N}$ ,  ${}^{24}\text{F}$ ,  ${}^{26}\text{Ne}(\beta^-)$  [from  $\text{Be}({}^{48}\text{Ca}, \text{X})$ ]; measured  $E\gamma$ ,  $I\gamma$ ,  $\beta\gamma$ -coin,  $T_{1/2}$ .  ${}^{23}\text{O}(\beta^-n)$ ; measured  $\beta$ -delayed neutron spectra; deduced neutron emission probability.  ${}^{23}\text{F}$ ,  ${}^{26}\text{Na}$  deduced levels,  $J$ ,  $\pi$ ,  $\beta$ -feeding intensities. JOUR PRVCA 75 024305
- 2007VI11 NUCLEAR REACTIONS  ${}^{12}\text{C}({}^{48}\text{Ca}, \text{X}){}^8\text{Li} / {}^9\text{Li} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{29}\text{Al} / {}^{37}\text{K} / {}^{47}\text{K}$ , E=60 MeV / nucleon; measured yield. JOUR NUPAB 787 126c
- 2007ZE04 NUCLEAR REACTIONS  $\text{Be}({}^{18}\text{O}, \text{tX})$ , E=120 MeV / nucleon;  $\text{Be}({}^{16}\text{O}, \text{tX})$ , E=150 MeV / nucleon; measured triton yield vs energy, target thickness.  ${}^{24,26}\text{Mg}(\text{t}, {}^3\text{He})$ , E=115 MeV / nucleon; measured excitation energy spectrum.  ${}^{26}\text{Mg}({}^3\text{He}, \text{t})$ , E=140 MeV / nucleon; analyzed excitation energy spectrum.  ${}^{26}\text{Na}$ ,  ${}^{26}\text{Al}$  deduced Gamow-Teller strength distribution. Comparison with other results, shell model predictions. JOUR NUPAB 788 61c

**A=26 (continued)**

- <sup>26</sup>Mg      2005NIZS      NUCLEAR REACTIONS Ni(<sup>22</sup>Ne, <sup>22</sup>Ne'), E=2.25 MeV / nucleon; <sup>107</sup>Ag(<sup>22</sup>Ne, <sup>22</sup>Ne'), E=2.86 MeV / nucleon; Ni(<sup>30</sup>Mg, <sup>30</sup>Mg'), E=2.25 MeV / nucleon; <sup>60</sup>Ni, <sup>107</sup>Ag(<sup>30</sup>Mg, <sup>30</sup>Mg'), E=2.69 MeV / nucleon; U(p, X)<sup>22</sup>Ne / <sup>30</sup>Mg / <sup>32</sup>Mg, E=1.01-1.40 GeV; measured E $\gamma$ , I $\gamma$ ( $\theta$ ), (particle) $\gamma$ -coinc, cross sections following projectile and target Coulomb excitation. <sup>22</sup>Ne, <sup>30</sup>Mg, <sup>32</sup>Mg, <sup>107</sup>Ag deduced levels, B(E2), half-lives, deformations. REX-ISOLDE-CERN facility. Coupled-channel and GOSIA analyses. <sup>24</sup>Mg, <sup>26</sup>Mg, <sup>28</sup>Mg, <sup>30</sup>Mg, <sup>32</sup>Mg, <sup>34</sup>Mg systematics of B(E2) values. Comparisons with shell-model calculations. THESIS O T Niedermaier, Univ Heidelberg
- 2007F010      NUCLEAR REACTIONS <sup>27</sup>Al(<sup>12</sup>C, X)<sup>7</sup>Be / <sup>9</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>O / <sup>19</sup>F / <sup>22</sup>Ne / <sup>23</sup>Na / <sup>24</sup>Mg / <sup>26</sup>Mg / <sup>26</sup>Al / <sup>27</sup>Al / Si, E=156 MeV; <sup>12</sup>C(<sup>27</sup>Al, X)<sup>7</sup>Be / <sup>9</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>O / <sup>19</sup>F / <sup>22</sup>Ne / <sup>23</sup>Na / <sup>24</sup>Mg / <sup>26</sup>Mg / Si, E=348 MeV; measured intermediate mass fragment spectra,  $\sigma(\theta, E)$  from fusion and fragmentation. Comparison with Boltzmann Master Equations theory. JOUR NUPAB 797 1
- 2007GRZY      NUCLEAR REACTIONS <sup>24</sup>Mg(<sup>12</sup>C, <sup>10</sup>C), E=53, 95 MeV / nucleon; measured Ep, E $\alpha$ , 2p2 $\alpha$  correlation functions for decay of the excited states. PREPRINT arXiv.0706.4414v1 [nucl-ex]
- 2007ME18      NUCLEAR REACTIONS <sup>27</sup>Al, <sup>28</sup>Si( $\mu^-$ ,  $\nu$ ), ( $\mu^-$ , n $\nu$ ), ( $\mu^-$ , 2n $\nu$ ), ( $\mu^-$ , 3n $\nu$ ), ( $\mu^-$ , p $\nu$ ), ( $\mu^-$ , np $\nu$ ), E not given; measured E $\gamma$ , I $\gamma$ , yields. JOUR PRVCA 76 035504





## A=26 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007ZE04 NUCLEAR REACTIONS  $\text{Be}({}^{18}\text{O}, \text{tX})$ , E=120 MeV / nucleon;  $\text{Be}({}^{16}\text{O}, \text{tX})$ , E=150 MeV / nucleon; measured triton yield vs energy, target thickness.  ${}^{24,26}\text{Mg}(\text{t}, {}^3\text{He})$ , E=115 MeV / nucleon; measured excitation energy spectrum.  ${}^{26}\text{Mg}({}^3\text{He}, \text{t})$ , E=140 MeV / nucleon; analyzed excitation energy spectrum.  ${}^{26}\text{Na}$ ,  ${}^{26}\text{Al}$  deduced Gamow-Teller strength distribution. Comparison with other results, shell model predictions. JOUR NUPAB 788 61c
- 2007ZE06 NUCLEAR REACTIONS  ${}^{12,13}\text{C}$ ,  ${}^{18}\text{O}$ ,  ${}^{26}\text{Mg}$ ,  ${}^{58}\text{Ni}$ ,  ${}^{60}\text{Ni}$ ,  ${}^{90}\text{Zr}$ ,  ${}^{118}\text{Sn}$ ,  ${}^{208}\text{Pb}({}^3\text{He}, \text{t})$ , E=420 MeV; measured triton spectra and cross sections. Deduced B(GT). JOUR PRLTA 99 202501
- 2007ZEZZ NUCLEAR REACTIONS  ${}^{12,13}\text{C}$ ,  ${}^{18}\text{O}$ ,  ${}^{26}\text{Mg}$ ,  ${}^{58}\text{Ni}$ ,  ${}^{60}\text{Ni}$ ,  ${}^{90}\text{Zr}$ ,  ${}^{118}\text{Sn}$ ,  ${}^{208}\text{Pb}({}^3\text{He}, \text{t})$ , E=420 MeV; measured triton spectra and cross sections. Deduced B(GT). PREPRINT arXiv:0707.2840v1 [nucl-ex]
- ${}^{26}\text{Si}$  2006KWZZ NUCLEAR REACTIONS  ${}^{28}\text{Si}(\alpha, {}^6\text{He})$ , E=120 MeV; measured  $\sigma(E, \theta)$ .  ${}^{26}\text{Si}$  deduced level energies. REPT CNS-REP-69,P3,Kwon
- 2007CLZZ ATOMIC MASSES  ${}^{22}\text{Mg}$ ; measured masses using Canadian penning trap and the Yale spectrograph.  ${}^{26}\text{Si}$ ; measured mass using the Yale spectrograph. CONF Geneva(NIC-IX) 081
- 2007KWZY NUCLEAR REACTIONS  ${}^{28}\text{Si}(\alpha, {}^6\text{He})$ , E=120 MeV; measured  $E\alpha$  and angular distributions.  ${}^{26}\text{Si}$ ; deduced levels, J,  $\pi$ . CONF Geneva(NIC-IX) 024

KEYNUMBERS AND KEYWORDS

A=26 (continued)

2007SE02 NUCLEAR REACTIONS  $^{12}\text{C}(^{16}\text{O}, 2n)$ , E=58 MeV; measured  $E_\gamma$ ,  $I_\gamma$ ,  $\gamma\gamma$ -coinc using the Gammasphere.  $^{26}\text{Si}$  deduced levels, J,  $\pi$ . Compared results to model calculations and discussed astrophysical implications. JOUR PRVCA 75 062801

A=27

$^{27}\text{F}$  2007JU03 ATOMIC MASSES  $^{23}\text{N}$ ,  $^{23,24}\text{O}$ ,  $^{25,26,27}\text{F}$ ,  $^{27,28,29,30,31}\text{Ne}$ ,  $^{31,32,33}\text{Na}$ ,  $^{34,35,36}\text{Mg}$ ,  $^{34,35,36,37,38,39}\text{Al}$ ,  $^{36,37,38,39,40,41,42}\text{Si}$ ,  $^{40,41,42,43,44}\text{P}$ ,  $^{40,43,44,45}\text{S}$ ,  $^{43,45,46,47}\text{Cl}$ ; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43

2007KWZZ NUCLEAR REACTIONS  $^9\text{Be}$ , Ni,  $^{181}\text{Ta}(^{40}\text{Ar}, X)^{23}\text{F} / ^{24}\text{F} / ^{25}\text{F} / ^{26}\text{F} / ^{27}\text{F} / ^{29}\text{F}$ , E=140 MeV / nucleon; measured yields, momentum distributions for neutron-rich Fluorine isotope production. CONF Iguazu(Nuclear Physics and Applications) Proc,P213,Kwan

2007N013 NUCLEAR REACTIONS  $^9\text{Be}(^{40}\text{Ar}, X)^6\text{Li} / ^7\text{Li} / ^8\text{Li} / ^9\text{Li} / ^7\text{Be} / ^8\text{Be} / ^9\text{Be} / ^{10}\text{Be} / ^{11}\text{Be} / ^{12}\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{B} / ^{13}\text{B} / ^{14}\text{B} / ^{15}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{15}\text{C} / ^{16}\text{C} / ^{17}\text{C} / ^{18}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{N} / ^{17}\text{N} / ^{18}\text{N} / ^{19}\text{N} / ^{20}\text{N} / ^{21}\text{N} / ^{15}\text{O} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O} / ^{19}\text{O} / ^{20}\text{O} / ^{21}\text{O} / ^{22}\text{O} / ^{23}\text{O} / ^{24}\text{O} / ^{17}\text{F} / ^{18}\text{F} / ^{19}\text{F} / ^{20}\text{F} / ^{21}\text{F} / ^{22}\text{F} / ^{23}\text{F} / ^{24}\text{F} / ^{25}\text{F} / ^{26}\text{F} / ^{27}\text{F} / ^{19}\text{Ne} / ^{20}\text{Ne} / ^{21}\text{Ne} / ^{22}\text{Ne} / ^{23}\text{Ne} / ^{24}\text{Ne} / ^{25}\text{Ne} / ^{26}\text{Ne} / ^{27}\text{Ne} / ^{28}\text{Ne} / ^{29}\text{Ne} / ^{21}\text{Na} / ^{22}\text{Na} / ^{23}\text{Na} / ^{24}\text{Na} / ^{25}\text{Na} / ^{26}\text{Na} / ^{27}\text{Na} / ^{28}\text{Na} / ^{29}\text{Na} / ^{30}\text{Na} / ^{31}\text{Na} / ^{32}\text{Na} / ^{23}\text{Mg} / ^{24}\text{Mg} / ^{25}\text{Mg} / ^{26}\text{Mg} / ^{27}\text{Mg} / ^{28}\text{Mg} / ^{29}\text{Mg} / ^{30}\text{Mg} / ^{31}\text{Mg} / ^{32}\text{Mg} / ^{33}\text{Mg} / ^{34}\text{Mg} / ^{25}\text{Al} / ^{26}\text{Al} / ^{27}\text{Al} / ^{28}\text{Al} / ^{29}\text{Al} / ^{30}\text{Al} / ^{31}\text{Al} / ^{32}\text{Al} / ^{33}\text{Al} / ^{34}\text{Al} / ^{35}\text{Al} / ^{36}\text{Al} / ^{27}\text{Si} / ^{28}\text{Si} / ^{29}\text{Si} / ^{30}\text{Si} / ^{31}\text{Si} / ^{32}\text{Si} / ^{33}\text{Si} / ^{34}\text{Si} / ^{35}\text{Si} / ^{36}\text{Si} / ^{37}\text{Si} / ^{38}\text{Si} / ^{29}\text{P} / ^{30}\text{P} / ^{31}\text{P} / ^{32}\text{P} / ^{33}\text{P} / ^{34}\text{P} / ^{35}\text{P} / ^{36}\text{P} / ^{37}\text{P} / ^{38}\text{P} / ^{39}\text{P} / ^{33}\text{S} / ^{34}\text{S} / ^{35}\text{S} / ^{36}\text{S} / ^{37}\text{S} / ^{38}\text{S} / ^{36}\text{Cl} / ^{37}\text{Cl} / ^{38}\text{Cl} / ^{39}\text{Cl} / ^{39}\text{Ar}$ , E=100 MeV / nucleon;  $^{181}\text{Ta}(^{40}\text{Ar}, X)^6\text{Li} / ^7\text{Li} / ^8\text{Li} / ^9\text{Be} / ^{10}\text{Be} / ^{11}\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{B} / ^{13}\text{B} / ^{14}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{15}\text{C} / ^{16}\text{C} / ^{17}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{N} / ^{17}\text{N} / ^{18}\text{N} / ^{19}\text{N} / ^{15}\text{O} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O} / ^{19}\text{O} / ^{20}\text{O} / ^{21}\text{O} / ^{17}\text{F} / ^{18}\text{F} / ^{19}\text{F} / ^{20}\text{F} / ^{21}\text{F} / ^{22}\text{F} / ^{23}\text{F} / ^{24}\text{F} / ^{19}\text{Ne} / ^{20}\text{Ne} / ^{21}\text{Ne} / ^{22}\text{Ne} / ^{23}\text{Ne} / ^{24}\text{Ne} / ^{25}\text{Ne} / ^{26}\text{Ne} / ^{27}\text{Ne} / ^{21}\text{Na} / ^{22}\text{Na} / ^{23}\text{Na} / ^{24}\text{Na} / ^{25}\text{Na} / ^{26}\text{Na} / ^{27}\text{Na} / ^{28}\text{Na} / ^{29}\text{Na} / ^{23}\text{Mg} / ^{24}\text{Mg} / ^{25}\text{Mg} / ^{26}\text{Mg} / ^{27}\text{Mg} / ^{28}\text{Mg} / ^{29}\text{Mg} / ^{30}\text{Mg} / ^{31}\text{Mg} / ^{24} / ^{25}\text{Al} / ^{26}\text{Al} / ^{27}\text{Al} / ^{28}\text{Al} / ^{29}\text{Al} / ^{30}\text{Al} / ^{31}\text{Al} / ^{32}\text{Al} / ^{33}\text{Al} / ^{34}\text{Al} / ^{26}\text{Si} / ^{27}\text{Si} / ^{28}\text{Si} / ^{29}\text{Si} / ^{30}\text{Si} / ^{31}\text{Si} / ^{32}\text{Si} / ^{33}\text{Si} / ^{34}\text{Si} / ^{29}\text{P} / ^{30}\text{P} / ^{31}\text{P} / ^{32}\text{P} / ^{33}\text{P} / ^{34}\text{P} / ^{35}\text{P} / ^{36}\text{P} / ^{30}\text{S} / ^{31}\text{S} / ^{32}\text{S} / ^{33}\text{S} / ^{34}\text{S} / ^{35}\text{S} / ^{36}\text{S} / ^{37}\text{S} / ^{33}\text{Cl} / ^{34}\text{Cl} / ^{35}\text{Cl} / ^{36}\text{Cl} / ^{37}\text{Cl} / ^{35}\text{Ar} / ^{36}\text{Ar} / ^{37}\text{Ar} / ^{38}\text{Ar} / ^{39}\text{Ar} / ^{37}\text{K} / ^{38}\text{K} / ^{39}\text{K} / ^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605

$^{27}\text{Ne}$  2006OB05 NUCLEAR REACTIONS  $^2\text{H}(^{26}\text{Ne}, ^{26}\text{Ne}')$ ,  $(^{26}\text{Ne}, ^{25}\text{Ne})$ ,  $(^{26}\text{Ne}, ^{27}\text{Ne})$ ,  $(^{26}\text{Ne}, ^{26}\text{Na})$ ,  $(^{26}\text{Ne}, ^{27}\text{Na})$ , E=9.7 MeV / nucleon; measured  $E_\gamma$ ,  $I_\gamma$ , (particle) $\gamma$ -coin.  $^{25,26,27}\text{Ne}$ ,  $^{26,27}\text{Na}$  deduced levels, J,  $\pi$ . Exogam array, Vamos spectrometer, comparison with previous results and model predictions. JOUR PRVCA 74 064305

## A=27 (continued)

- 2007GI08 NUCLEAR REACTIONS  $^1\text{H}(^8\text{He}, ^8\text{He})$ ,  $(^8\text{He}, \text{d})$ ,  $(^8\text{He}, \text{t})$ ,  $E=15.7$ ,  $61.3$  MeV / nucleon; analyzed  $\sigma(\theta)$ . Coupled reaction channel calculations, DWBA analysis.  $^2\text{H}(^{26}\text{Ne}, \text{p})$ ,  $E=9.7$  MeV / nucleon; measured fragment yield,  $E_\gamma$ ,  $I_\gamma$ , (particle) $\gamma$ -coin.  $^{27}\text{Ne}$  deduced levels,  $J$ ,  $\pi$ . Exogam array, Vamos spectrometer. JOUR NUPAB 787 423c
- 2007JU03 ATOMIC MASSES  $^{23}\text{N}$ ,  $^{23,24}\text{O}$ ,  $^{25,26,27}\text{F}$ ,  $^{27,28,29,30,31}\text{Ne}$ ,  $^{31,32,33}\text{Na}$ ,  $^{34,35,36}\text{Mg}$ ,  $^{34,35,36,37,38,39}\text{Al}$ ,  $^{36,37,38,39,40,41,42}\text{Si}$ ,  $^{40,41,42,43,44}\text{P}$ ,  $^{40,43,44,45}\text{S}$ ,  $^{43,45,46,47}\text{Cl}$ ; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43
- 2007N013 NUCLEAR REACTIONS  $^9\text{Be}(^{40}\text{Ar}, \text{X})^6\text{Li}$  /  $^7\text{Li}$  /  $^8\text{Li}$  /  $^9\text{Li}$  /  $^7\text{Be}$  /  $^8\text{Be}$  /  $^9\text{Be}$  /  $^{10}\text{Be}$  /  $^{11}\text{Be}$  /  $^{12}\text{Be}$  /  $^{10}\text{B}$  /  $^{11}\text{B}$  /  $^{12}\text{B}$  /  $^{13}\text{B}$  /  $^{14}\text{B}$  /  $^{15}\text{B}$  /  $^{11}\text{C}$  /  $^{12}\text{C}$  /  $^{13}\text{C}$  /  $^{14}\text{C}$  /  $^{15}\text{C}$  /  $^{16}\text{C}$  /  $^{17}\text{C}$  /  $^{18}\text{C}$  /  $^{13}\text{N}$  /  $^{14}\text{N}$  /  $^{15}\text{N}$  /  $^{16}\text{N}$  /  $^{17}\text{N}$  /  $^{18}\text{N}$  /  $^{19}\text{N}$  /  $^{20}\text{N}$  /  $^{21}\text{N}$  /  $^{15}\text{O}$  /  $^{16}\text{O}$  /  $^{17}\text{O}$  /  $^{18}\text{O}$  /  $^{19}\text{O}$  /  $^{20}\text{O}$  /  $^{21}\text{O}$  /  $^{22}\text{O}$  /  $^{23}\text{O}$  /  $^{24}\text{O}$  /  $^{17}\text{F}$  /  $^{18}\text{F}$  /  $^{19}\text{F}$  /  $^{20}\text{F}$  /  $^{21}\text{F}$  /  $^{22}\text{F}$  /  $^{23}\text{F}$  /  $^{24}\text{F}$  /  $^{25}\text{F}$  /  $^{26}\text{F}$  /  $^{27}\text{F}$  /  $^{19}\text{Ne}$  /  $^{20}\text{Ne}$  /  $^{21}\text{Ne}$  /  $^{22}\text{Ne}$  /  $^{23}\text{Ne}$  /  $^{24}\text{Ne}$  /  $^{25}\text{Ne}$  /  $^{26}\text{Ne}$  /  $^{27}\text{Ne}$  /  $^{28}\text{Ne}$  /  $^{29}\text{Ne}$  /  $^{21}\text{Na}$  /  $^{22}\text{Na}$  /  $^{23}\text{Na}$  /  $^{24}\text{Na}$  /  $^{25}\text{Na}$  /  $^{26}\text{Na}$  /  $^{27}\text{Na}$  /  $^{28}\text{Na}$  /  $^{29}\text{Na}$  /  $^{30}\text{Na}$  /  $^{31}\text{Na}$  /  $^{32}\text{Na}$  /  $^{23}\text{Mg}$  /  $^{24}\text{Mg}$  /  $^{25}\text{Mg}$  /  $^{26}\text{Mg}$  /  $^{27}\text{Mg}$  /  $^{28}\text{Mg}$  /  $^{29}\text{Mg}$  /  $^{30}\text{Mg}$  /  $^{31}\text{Mg}$  /  $^{32}\text{Mg}$  /  $^{33}\text{Mg}$  /  $^{34}\text{Mg}$  /  $^{25}\text{Al}$  /  $^{26}\text{Al}$  /  $^{27}\text{Al}$  /  $^{28}\text{Al}$  /  $^{29}\text{Al}$  /  $^{30}\text{Al}$  /  $^{31}\text{Al}$  /  $^{32}\text{Al}$  /  $^{33}\text{Al}$  /  $^{34}\text{Al}$  /  $^{35}\text{Al}$  /  $^{36}\text{Al}$  /  $^{27}\text{Si}$  /  $^{28}\text{Si}$  /  $^{29}\text{Si}$  /  $^{30}\text{Si}$  /  $^{31}\text{Si}$  /  $^{32}\text{Si}$  /  $^{33}\text{Si}$  /  $^{34}\text{Si}$  /  $^{35}\text{Si}$  /  $^{36}\text{Si}$  /  $^{37}\text{Si}$  /  $^{38}\text{Si}$  /  $^{29}\text{P}$  /  $^{30}\text{P}$  /  $^{31}\text{P}$  /  $^{32}\text{P}$  /  $^{33}\text{P}$  /  $^{34}\text{P}$  /  $^{35}\text{P}$  /  $^{36}\text{P}$  /  $^{37}\text{P}$  /  $^{38}\text{P}$  /  $^{39}\text{P}$  /  $^{33}\text{S}$  /  $^{34}\text{S}$  /  $^{35}\text{S}$  /  $^{36}\text{S}$  /  $^{37}\text{S}$  /  $^{38}\text{S}$  /  $^{36}\text{Cl}$  /  $^{37}\text{Cl}$  /  $^{38}\text{Cl}$  /  $^{39}\text{Cl}$  /  $^{39}\text{Ar}$ ,  $E=100$  MeV / nucleon;  $^{181}\text{Ta}(^{40}\text{Ar}, \text{X})^6\text{Li}$  /  $^7\text{Li}$  /  $^8\text{Li}$  /  $^9\text{Be}$  /  $^{10}\text{Be}$  /  $^{11}\text{Be}$  /  $^{10}\text{B}$  /  $^{11}\text{B}$  /  $^{12}\text{B}$  /  $^{13}\text{B}$  /  $^{14}\text{B}$  /  $^{11}\text{C}$  /  $^{12}\text{C}$  /  $^{13}\text{C}$  /  $^{14}\text{C}$  /  $^{15}\text{C}$  /  $^{16}\text{C}$  /  $^{17}\text{C}$  /  $^{13}\text{N}$  /  $^{14}\text{N}$  /  $^{15}\text{N}$  /  $^{16}\text{N}$  /  $^{17}\text{N}$  /  $^{18}\text{N}$  /  $^{19}\text{N}$  /  $^{15}\text{O}$  /  $^{16}\text{O}$  /  $^{17}\text{O}$  /  $^{18}\text{O}$  /  $^{19}\text{O}$  /  $^{20}\text{O}$  /  $^{21}\text{O}$  /  $^{17}\text{F}$  /  $^{18}\text{F}$  /  $^{19}\text{F}$  /  $^{20}\text{F}$  /  $^{21}\text{F}$  /  $^{22}\text{F}$  /  $^{23}\text{F}$  /  $^{24}\text{F}$  /  $^{19}\text{Ne}$  /  $^{20}\text{Ne}$  /  $^{21}\text{Ne}$  /  $^{22}\text{Ne}$  /  $^{23}\text{Ne}$  /  $^{24}\text{Ne}$  /  $^{25}\text{Ne}$  /  $^{26}\text{Ne}$  /  $^{27}\text{Ne}$  /  $^{21}\text{Na}$  /  $^{22}\text{Na}$  /  $^{23}\text{Na}$  /  $^{24}\text{Na}$  /  $^{25}\text{Na}$  /  $^{26}\text{Na}$  /  $^{27}\text{Na}$  /  $^{28}\text{Na}$  /  $^{29}\text{Na}$  /  $^{23}\text{Mg}$  /  $^{24}\text{Mg}$  /  $^{25}\text{Mg}$  /  $^{26}\text{Mg}$  /  $^{27}\text{Mg}$  /  $^{28}\text{Mg}$  /  $^{29}\text{Mg}$  /  $^{30}\text{Mg}$  /  $^{31}\text{Mg}$  /  $^{24}$  /  $^{25}\text{Al}$  /  $^{26}\text{Al}$  /  $^{27}\text{Al}$  /  $^{28}\text{Al}$  /  $^{29}\text{Al}$  /  $^{30}\text{Al}$  /  $^{31}\text{Al}$  /  $^{32}\text{Al}$  /  $^{33}\text{Al}$  /  $^{34}\text{Al}$  /  $^{26}\text{Si}$  /  $^{27}\text{Si}$  /  $^{28}\text{Si}$  /  $^{29}\text{Si}$  /  $^{30}\text{Si}$  /  $^{31}\text{Si}$  /  $^{32}\text{Si}$  /  $^{33}\text{Si}$  /  $^{34}\text{Si}$  /  $^{29}\text{P}$  /  $^{30}\text{P}$  /  $^{31}\text{P}$  /  $^{32}\text{P}$  /  $^{33}\text{P}$  /  $^{34}\text{P}$  /  $^{35}\text{P}$  /  $^{36}\text{P}$  /  $^{30}\text{S}$  /  $^{31}\text{S}$  /  $^{32}\text{S}$  /  $^{33}\text{S}$  /  $^{34}\text{S}$  /  $^{35}\text{S}$  /  $^{36}\text{S}$  /  $^{37}\text{S}$  /  $^{33}\text{Cl}$  /  $^{34}\text{Cl}$  /  $^{35}\text{Cl}$  /  $^{36}\text{Cl}$  /  $^{37}\text{Cl}$  /  $^{35}\text{Ar}$  /  $^{36}\text{Ar}$  /  $^{37}\text{Ar}$  /  $^{38}\text{Ar}$  /  $^{39}\text{Ar}$  /  $^{37}\text{K}$  /  $^{38}\text{K}$  /  $^{39}\text{K}$  /  $^{40}\text{K}$ ,  $E=100$  MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- $^{27}\text{Na}$  20060B05 NUCLEAR REACTIONS  $^2\text{H}(^{26}\text{Ne}, ^{26}\text{Ne}')$ ,  $(^{26}\text{Ne}, ^{25}\text{Ne})$ ,  $(^{26}\text{Ne}, ^{27}\text{Ne})$ ,  $(^{26}\text{Ne}, ^{26}\text{Na})$ ,  $(^{26}\text{Ne}, ^{27}\text{Na})$ ,  $E=9.7$  MeV / nucleon; measured  $E_\gamma$ ,  $I_\gamma$ , (particle) $\gamma$ -coin.  $^{25,26,27}\text{Ne}$ ,  $^{26,27}\text{Na}$  deduced levels,  $J$ ,  $\pi$ . Exogam array, Vamos spectrometer, comparison with previous results and model predictions. JOUR PRVCA 74 064305

## A=27 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}, E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$
- 2007VI11 NUCLEAR REACTIONS  ${}^{12}\text{C}({}^{48}\text{Ca}, \text{X}){}^8\text{Li} / {}^9\text{Li} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{29}\text{Al} / {}^{37}\text{K} / {}^{47}\text{K}$ , E=60 MeV / nucleon; measured yield. JOUR NUPAB 787 126c
- ${}^{27}\text{Mg}$  2006K055 RADIOACTIVITY  ${}^{27,29,31,33}\text{Mg}(\beta^-)$  [from U(p, X)]; measured  $\beta$ -asymmetry and hfs,  $\beta$ -NMR spectra from polarized source.  ${}^{31}\text{Mg}$  deduced ground-state J,  $\pi$ ,  $\mu$ , quadrupole moment. JOUR HYIND 171 167
- 2007KA33 NUCLEAR REACTIONS N, O, Ar(p, X) ${}^7\text{Be} / {}^{11}\text{C} / {}^{13}\text{N} / {}^{15}\text{O} / {}^{18}\text{F} / {}^{22}\text{Na} / {}^{24}\text{Na} / {}^{27}\text{Mg} / {}^{29}\text{Al} / {}^{38}\text{S} / {}^{38}\text{Cl} / {}^{39}\text{Cl}$ , E=12 GeV; measured radionuclide yields. JOUR JRNC 273 507
- 2007ME18 NUCLEAR REACTIONS  ${}^{27}\text{Al}$ ,  ${}^{28}\text{Si}(\mu^-, \nu)$ ,  $(\mu^-, n\nu)$ ,  $(\mu^-, 2n\nu)$ ,  $(\mu^-, 3n\nu)$ ,  $(\mu^-, p\nu)$ ,  $(\mu^-, np\nu)$ , E not given; measured  $E_\gamma$ ,  $I_\gamma$ , yields. JOUR PRVCA 76 035504

## A=27 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}, E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$
- ${}^{27}\text{Al}$  2006K055 RADIOACTIVITY  ${}^{27,29,31,33}\text{Mg}(\beta^-)$  [from U(p, X)]; measured  $\beta$ -asymmetry and hfs,  $\beta$ -NMR spectra from polarized source.  ${}^{31}\text{Mg}$  deduced ground-state J,  $\pi$ ,  $\mu$ , quadrupole moment. JOUR HYIND 171 167
- 2007BE19 NUCLEAR REACTIONS  ${}^{27}\text{Al}({}^6\text{He}, {}^6\text{He})$ , E=9.5, 11.0, 12.0, 13.4 MeV; measured  $\sigma$ ,  $\sigma(\theta)$ .  ${}^6\text{He}$  deduced radius, deformation parameters.  ${}^{27}\text{Al}({}^6\text{Li}, {}^6\text{Li})$ ,  $({}^7\text{Li}, {}^7\text{Li})$ ,  $({}^9\text{Be}, {}^9\text{Be})$ ,  $({}^{16}\text{O}, {}^{16}\text{O})$ , E $\approx$ 7-45 MeV; analysed total  $\sigma$ .  ${}^{6,7}\text{Li}$ ,  ${}^9\text{Be}$ ,  ${}^{16}\text{O}$  deduced deformation parameters. Sao Paulo potential. JOUR PYLBB 647 30
- 2007DE55 NUCLEAR REACTIONS  ${}^{26}\text{Al}(\text{n}, \alpha)$ , E<100 keV; measured cross-sections.  ${}^{27}\text{Al}$  deduced resonance energies, widths, areas and spins.  ${}^{26}\text{Al}$  deduced galactic abundance. JOUR PRVCA 76 045804
- 2007FE13 NUCLEAR REACTIONS  ${}^{27}\text{Al}({}^6\text{Li}, {}^6\text{Li})$ , E=7, 8, 10, 12, 18 MeV;  ${}^{27}\text{Al}({}^7\text{Li}, {}^7\text{Li})$ , E=6, 7, 8, 9, 10, 11, 12, 14, 16, 18 MeV; measured  $\sigma(\theta)$ . Optical model analysis, several potentials compared. Breakup threshold anomaly discussed. JOUR NUPAB 787 484c
- 2007FI01 NUCLEAR REACTIONS  ${}^{27}\text{Al}({}^6\text{Li}, {}^6\text{Li})$ , E=7, 8, 10, 12, 18 MeV; measured  $\sigma(\theta)$ ; deduced breakup threshold anomaly, optical model parameters. Woods-Saxon optical potential, double-folding Sao Paulo potential. JOUR PRVCA 75 017602

KEYNUMBERS AND KEYWORDS

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**A=27 (continued)**

- 2007FIZZ      NUCLEAR REACTIONS  $^{27}\text{Al}(^6\text{Li}, ^6\text{Li})$ ,  $E=7-18$  MeV;  $^{27}\text{Al}(^7\text{Li}, ^7\text{Li})$ ,  $E=6-18$  MeV; measured  $\sigma(\theta)$  near the Coulomb barrier. CONF Iguazu(Nuclear Physics and Applications) Proc,P185,Figueira
- 2007F010      NUCLEAR REACTIONS  $^{27}\text{Al}(^{12}\text{C}, \text{X})^7\text{Be} / ^9\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{O} / ^{19}\text{F} / ^{22}\text{Ne} / ^{23}\text{Na} / ^{24}\text{Mg} / ^{26}\text{Mg} / ^{26}\text{Al} / ^{27}\text{Al} / \text{Si}$ ,  $E=156$  MeV;  $^{12}\text{C}(^{27}\text{Al}, \text{X})^7\text{Be} / ^9\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{O} / ^{19}\text{F} / ^{22}\text{Ne} / ^{23}\text{Na} / ^{24}\text{Mg} / ^{26}\text{Mg} / \text{Si}$ ,  $E=348$  MeV; measured intermediate mass fragment spectra,  $\sigma(\theta, E)$  from fusion and fragmentation. Comparison with Boltzmann Master Equations theory. JOUR NUPAB 797 1
- 2007LE24      NUCLEAR REACTIONS  $^{27}\text{Al}(^6\text{He}, ^6\text{He})$ ,  $E=9.5, 11, 12, 13.4$  MeV;  $^{51}\text{V}(^8\text{Li}, ^8\text{Li})$ ,  $E=26$  MeV; measured  $\sigma(\theta)$ . Comparison with optical model.  $^{27}\text{Al}, ^{64}\text{Zn}(^6\text{He}, ^6\text{He})$ ,  $(^6\text{Li}, ^6\text{Li})$ ,  $(^7\text{Li}, ^7\text{Li})$ ,  $(^9\text{Be}, ^9\text{Be})$ ,  $(^{16}\text{O}, ^{16}\text{O})$ ,  $E\approx 5-25$  MeV; analyzed  $\sigma$ . Comparison with other data. Secondary radioactive beam. JOUR NUPAB 787 94c
- 2007LU14      NUCLEAR REACTIONS  $^{27}\text{Al}(^7\text{Li}, ^7\text{Li}')$ ,  $(^7\text{Li}, ^6\text{Li})$ ,  $E=6-18$  MeV; measured elastic and one neutron transfer cross sections and angular distributions. Deduced dynamic polarization potential. JOUR NUPAB 791 24
- 2007MA58      NUCLEAR REACTIONS  $^{27}\text{Al}, ^{127}\text{I}, ^{206,207,208}\text{Pb}(n, n'\gamma)$ ,  $E$  not give;  $^{10}\text{B}(\alpha, p\gamma)$ ,  $E=2.27$  MeV;  $^9\text{Be}(\alpha, n\gamma)$ ,  $E=2.27$  MeV; measured yields. JOUR PRVCA 76 022801
- 2007ME18      NUCLEAR REACTIONS  $^{27}\text{Al}, ^{28}\text{Si}(\mu^-, \nu)$ ,  $(\mu^-, n\nu)$ ,  $(\mu^-, 2n\nu)$ ,  $(\mu^-, 3n\nu)$ ,  $(\mu^-, p\nu)$ ,  $(\mu^-, np\nu)$ ,  $E$  not given; measured  $E\gamma, I\gamma$ , yields. JOUR PRVCA 76 035504

## A=27 (continued)

2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605



KEYNUMBERS AND KEYWORDS

A=27 (continued)

- <sup>27</sup>Si      2007N013      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007RUZZ      NUCLEAR REACTIONS <sup>1</sup>H(<sup>26</sup>Al,  $\gamma$ ), E=150-1800 keV / nucleon; measured recoils in coincidence with  $\gamma$  at DRAGON. <sup>26</sup>Al(p,  $\gamma$ ); deduced resonance strength and energy. CONF Geneva(NIC-IX) 004

A=28

- <sup>28</sup>Ne      2006FAZX      RADIOACTIVITY <sup>28,29,30</sup>Ne; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coinc. <sup>28,29,30</sup>Ne deduced level, J,  $\pi$ . CONF Tokyo(SENUF 06),P165,Fallon
- 2007JU03      ATOMIC MASSES <sup>23</sup>N, <sup>23,24</sup>O, <sup>25,26,27</sup>F, <sup>27,28,29,30,31</sup>Ne, <sup>31,32,33</sup>Na, <sup>34,35,36</sup>Mg, <sup>34,35,36,37,38,39</sup>Al, <sup>36,37,38,39,40,41,42</sup>Si, <sup>40,41,42,43,44</sup>P, <sup>40,43,44,45</sup>S, <sup>43,45,46,47</sup>Cl; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43

## A=28 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- ${}^{28}\text{Na}$  2006FUZX NUCLEAR REACTIONS  $\text{He}({}^{28}\text{Na}, \text{X})$ ,  $({}^{29}\text{Na}, \text{X})$ ,  $({}^{30}\text{Na}, \text{X})$ ,  $({}^{31}\text{Na}, \text{X})$ ,  $({}^{30}\text{Mg}, \text{X})$ ,  $({}^{31}\text{Mg}, \text{X})$ ,  $({}^{32}\text{Mg}, \text{X})$ ,  $({}^{33}\text{Mg}, \text{X})$ ,  $({}^{32}\text{Al}, \text{X})$ ,  $({}^{33}\text{Al}, \text{X})$ ,  $({}^{34}\text{Al}, \text{X})$ ,  $({}^{35}\text{Al}, \text{X})$ ,  $({}^{34}\text{Si}, \text{X})$ ,  $({}^{35}\text{Si}, \text{X})$ ,  $({}^{36}\text{Si}, \text{X})$ ,  $({}^{36}\text{P}, \text{X})$ ,  $({}^{37}\text{P}, \text{X})$ , E  $\approx$  40 MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$ , (particle) $\gamma$ -coin.  ${}^{28,29,30,31}\text{Na}$ ,  ${}^{30,31,32,33}\text{Mg}$ ,  ${}^{32,33,34,35}\text{Al}$  deduced transitions. REPT CNS-REP-69,P19,Fukui

## A=28 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- ${}^{28}\text{Mg}$  2005NIZS NUCLEAR REACTIONS  $\text{Ni}({}^{22}\text{Ne}, {}^{22}\text{Ne}')$ , E=2.25 MeV / nucleon;  ${}^{107}\text{Ag}({}^{22}\text{Ne}, {}^{22}\text{Ne}')$ , E=2.86 MeV / nucleon;  $\text{Ni}({}^{30}\text{Mg}, {}^{30}\text{Mg}')$ , E=2.25 MeV / nucleon;  ${}^{60}\text{Ni}$ ,  ${}^{107}\text{Ag}({}^{30}\text{Mg}, {}^{30}\text{Mg}')$ , E=2.69 MeV / nucleon;  $\text{U}(\text{p}, \text{X}){}^{22}\text{Ne}$  /  ${}^{30}\text{Mg}$  /  ${}^{32}\text{Mg}$ , E=1.01-1.40 GeV; measured  $E\gamma$ ,  $I\gamma(\theta)$ , (particle) $\gamma$ -coinc, cross sections following projectile and target Coulomb excitation.  ${}^{22}\text{Ne}$ ,  ${}^{30}\text{Mg}$ ,  ${}^{32}\text{Mg}$ ,  ${}^{107}\text{Ag}$  deduced levels, B(E2), half-lives, deformations. REX-ISOLDE-CERN facility. Coupled-channel and GOSIA analyses.  ${}^{24}\text{Mg}$ ,  ${}^{26}\text{Mg}$ ,  ${}^{28}\text{Mg}$ ,  ${}^{30}\text{Mg}$ ,  ${}^{32}\text{Mg}$ ,  ${}^{34}\text{Mg}$  systematics of B(E2) values. Comparisons with shell-model calculations. THESIS O T Niedermaier, Univ Heidelberg

## A=28 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- ${}^{28}\text{Al}$  2006GE20 NUCLEAR REACTIONS B, C,  ${}^{27}\text{Al}$ , Cu,  ${}^{115}\text{In}$ (polarized n,  $\gamma$ ), E=low; measured  $E_\gamma$ ,  $I_\gamma(\theta)$ ; deduced upper bounds on parity-violating  $\gamma$ -ray asymmetry. JOUR PRVCA 74 065503
- 2007LU14 NUCLEAR REACTIONS  ${}^{27}\text{Al}({}^7\text{Li}, {}^7\text{Li}')$ ,  $({}^7\text{Li}, {}^6\text{Li})$ , E=6-18 MeV; measured elastic and one neutron transfer cross sections and angular distributions. Deduced dynamic polarization potential. JOUR NUPAB 791 24
- 2007ME18 NUCLEAR REACTIONS  ${}^{27}\text{Al}$ ,  ${}^{28}\text{Si}(\mu^-, \nu)$ ,  $(\mu^-, n\nu)$ ,  $(\mu^-, 2n\nu)$ ,  $(\mu^-, 3n\nu)$ ,  $(\mu^-, p\nu)$ ,  $(\mu^-, np\nu)$ , E not given; measured  $E_\gamma$ ,  $I_\gamma$ , yields. JOUR PRVCA 76 035504

## A=28 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007TA25 NUCLEAR REACTIONS  ${}^7\text{Li}$ ,  ${}^{12}\text{C}$ ,  ${}^{28}\text{Si}(e, e'\text{K}^+)$ , E not given; measured missing mass spectra.  ${}^7\text{He}$ ,  ${}^{12}\text{B}$ ,  ${}^{28}\text{Al}$  deduced hypernucleus levels. JOUR NUPAB 790 679c
- ${}^{28}\text{Si}$  2006BR31 NUCLEAR REACTIONS  ${}^{28}\text{Si}({}^6\text{Li}, d\alpha)$ , E=47 MeV; measured Ed, E $\alpha$ , d $\alpha$ -coin, angular correlations.  ${}^{28}\text{Si}$ ,  ${}^{32}\text{S}$  deduced excited states energies. JOUR PHSTB 74 692
- 2007BE47 NUCLEAR REACTIONS  ${}^{12}\text{C}$ ,  ${}^{16}\text{O}$ ,  ${}^{24}\text{Mg}$ , Fe(p,  $\gamma$ ), e=5-25 meV;  ${}^{12}\text{C}$ ,  ${}^{16}\text{O}$ ,  ${}^{24}\text{Mg}$ , Fe( $\alpha$ ,  $\gamma$ ), E=5-40 MeV; measured E $\gamma$ , I $\gamma$ , angular distributions, cross sections and excitation functions. Compared results to model calculations. JOUR PRVCA 76 034607
- 2007KW02 NUCLEAR REACTIONS  ${}^{28}\text{Si}(\alpha, \alpha)$ , E=120 MeV; measured cross sections and angular distributions. Deduced optical potential parameters. JOUR KPSJA 51 1635

KEYNUMBERS AND KEYWORDS

A=28 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}, E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$
- ${}^{28}\text{P}$  2007WA10 NUCLEAR REACTIONS  ${}^{28}\text{Si}(\text{polarized p}, \text{n}), E=198 \text{ MeV}$ ; measured excitation energy spectrum,  $\sigma$ ; analysed spin-longitudinal and spin-transverse polarized  $\sigma$ . Distorted-wave impulse approximation. JOUR PYLBB 645 402
- ${}^{28}\text{S}$  2007BU15 NUCLEAR REACTIONS  $\text{C}({}^{40}\text{Ca}, \text{X}){}^{36}\text{Ca} / {}^{32}\text{Ar} / {}^{28}\text{S}, E=95 \text{ MeV}$  / nucleon; measured  $E\gamma, I\gamma$ . Deduced level energies. JOUR APOBB 38 1353

A=29

- ${}^{29}\text{F}$  2007KWZZ NUCLEAR REACTIONS  ${}^9\text{Be}, \text{Ni}, {}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{29}\text{F}, E=140 \text{ MeV}$  / nucleon; measured yields, momentum distributions for neutron-rich Fluorine isotope production. CONF Iguazu(Nuclear Physics and Applications) Proc,P213,Kwan
- ${}^{29}\text{Ne}$  2006FAZX RADIOACTIVITY  ${}^{28,29,30}\text{Ne}$ ; measured  $E\gamma, I\gamma, \gamma\gamma\text{-coinc.}$   ${}^{28,29,30}\text{Ne}$  deduced level, J,  $\pi$ . CONF Tokyo(SENUP 06),P165,Fallon
- 2007JU03 ATOMIC MASSES  ${}^{23}\text{N}, {}^{23,24}\text{O}, {}^{25,26,27}\text{F}, {}^{27,28,29,30,31}\text{Ne}, {}^{31,32,33}\text{Na}, {}^{34,35,36}\text{Mg}, {}^{34,35,36,37,38,39}\text{Al}, {}^{36,37,38,39,40,41,42}\text{Si}, {}^{40,41,42,43,44}\text{P}, {}^{40,43,44,45}\text{S}, {}^{43,45,46,47}\text{Cl}$ ; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43

## A=29 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- ${}^{29}\text{Na}$  2006FUZX NUCLEAR REACTIONS  $\text{He}({}^{28}\text{Na}, \text{X})$ ,  $({}^{29}\text{Na}, \text{X})$ ,  $({}^{30}\text{Na}, \text{X})$ ,  $({}^{31}\text{Na}, \text{X})$ ,  $({}^{30}\text{Mg}, \text{X})$ ,  $({}^{31}\text{Mg}, \text{X})$ ,  $({}^{32}\text{Mg}, \text{X})$ ,  $({}^{33}\text{Mg}, \text{X})$ ,  $({}^{32}\text{Al}, \text{X})$ ,  $({}^{33}\text{Al}, \text{X})$ ,  $({}^{34}\text{Al}, \text{X})$ ,  $({}^{35}\text{Al}, \text{X})$ ,  $({}^{34}\text{Si}, \text{X})$ ,  $({}^{35}\text{Si}, \text{X})$ ,  $({}^{36}\text{Si}, \text{X})$ ,  $({}^{36}\text{P}, \text{X})$ ,  $({}^{37}\text{P}, \text{X})$ , E  $\approx$  40 MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$ , (particle) $\gamma$ -coin.  ${}^{28,29,30,31}\text{Na}$ ,  ${}^{30,31,32,33}\text{Mg}$ ,  ${}^{32,33,34,35}\text{Al}$  deduced transitions. REPT  
CNS-REP-69,P19,Fukui

## A=29 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}, E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$
- ${}^{29}\text{Mg}$  2006K055 RADIOACTIVITY  ${}^{27,29,31,33}\text{Mg}(\beta^-)$  [from U(p, X)]; measured  $\beta$ -asymmetry and hfs,  $\beta$ -NMR spectra from polarized source.  ${}^{31}\text{Mg}$  deduced ground-state J,  $\pi$ ,  $\mu$ , quadrupole moment. JOUR HYIND 171 167



## A=29 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}, E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$
- ${}^{29}\text{Al}$  2006K055 RADIOACTIVITY  ${}^{27,29,31,33}\text{Mg}(\beta^-)$  [from U(p, X)]; measured  $\beta$ -asymmetry and hfs,  $\beta$ -NMR spectra from polarized source.  ${}^{31}\text{Mg}$  deduced ground-state J,  $\pi$ ,  $\mu$ , quadrupole moment. JOUR HYIND 171 167
- 2007KA33 NUCLEAR REACTIONS N, O, Ar(p, X) ${}^7\text{Be} / {}^{11}\text{C} / {}^{13}\text{N} / {}^{15}\text{O} / {}^{18}\text{F} / {}^{22}\text{Na} / {}^{24}\text{Na} / {}^{27}\text{Mg} / {}^{29}\text{Al} / {}^{38}\text{S} / {}^{38}\text{Cl} / {}^{39}\text{Cl}$ , E=12 GeV; measured radionuclide yields. JOUR JRNCD 273 507

## A=29 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}, E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$
- 2007VI11 NUCLEAR REACTIONS  ${}^{12}\text{C}({}^{48}\text{Ca}, \text{X}){}^8\text{Li} / {}^9\text{Li} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{29}\text{Al} / {}^{37}\text{K} / {}^{47}\text{K}$ , E=60 MeV / nucleon; measured yield. JOUR NUPAB 787 126c

## A=29 (continued)

<sup>29</sup>Si      2007N013      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605

## A=29 (continued)

- <sup>29</sup>P      2007N013      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605

## A=30

- <sup>30</sup>Ne      2006FAZX      RADIOACTIVITY <sup>28,29,30</sup>Ne; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coinc. <sup>28,29,30</sup>Ne deduced level, J,  $\pi$ . CONF Tokyo(SENUP 06),P165,Fallon
- 2007JU03      ATOMIC MASSES <sup>23</sup>N, <sup>23,24</sup>O, <sup>25,26,27</sup>F, <sup>27,28,29,30,31</sup>Ne, <sup>31,32,33</sup>Na, <sup>34,35,36</sup>Mg, <sup>34,35,36,37,38,39</sup>Al, <sup>36,37,38,39,40,41,42</sup>Si, <sup>40,41,42,43,44</sup>P, <sup>40,43,44,45</sup>S, <sup>43,45,46,47</sup>Cl; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43
- 2007TR08      RADIOACTIVITY <sup>30</sup>Ne( $\beta^-$ ) [from Be(<sup>48</sup>Ca, X), E=140 MeV / nucleon]; measured E $\gamma$ , I $\gamma$ ,  $\beta\gamma$ -coinc, T<sub>1/2</sub>. <sup>30</sup>Na deduced levels, J,  $\pi$ . Compared results to model calculations. JOUR PRVCA 76 021301
- 2007TRZZ      RADIOACTIVITY <sup>30</sup>Ne( $\beta^-$ ) [from Be(<sup>48</sup>Ca, X)]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -,  $\beta\gamma$ -coin, T<sub>1/2</sub>; deduced log ft. <sup>30</sup>Na deduced levels, J,  $\pi$ . Comparison with model predictions. PREPRINT nucl-ex/0703015,3/8/2007

## A=30 (continued)

- <sup>30</sup>Na      2006FUZX      NUCLEAR REACTIONS He(<sup>28</sup>Na, X), (<sup>29</sup>Na, X), (<sup>30</sup>Na, X), (<sup>31</sup>Na, X), (<sup>30</sup>Mg, X), (<sup>31</sup>Mg, X), (<sup>32</sup>Mg, X), (<sup>33</sup>Mg, X), (<sup>32</sup>Al, X), (<sup>33</sup>Al, X), (<sup>34</sup>Al, X), (<sup>35</sup>Al, X), (<sup>34</sup>Si, X), (<sup>35</sup>Si, X), (<sup>36</sup>Si, X), (<sup>36</sup>P, X), (<sup>37</sup>P, X), E ≈ 40 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin. <sup>28,29,30,31</sup>Na, <sup>30,31,32,33</sup>Mg, <sup>32,33,34,35</sup>Al deduced transitions. REPT  
CNS-REP-69,P19,Fukui
- 2007N013      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007TR08      RADIOACTIVITY <sup>30</sup>Ne( $\beta^-$ ) [from Be(<sup>48</sup>Ca, X), E=140 MeV / nucleon]; measured E $\gamma$ , I $\gamma$ ,  $\beta\gamma$ -coinc, T<sub>1/2</sub>. <sup>30</sup>Na deduced levels, J,  $\pi$ . Compared results to model calculations. JOUR PRVCA 76 021301
- 2007TRZZ      RADIOACTIVITY <sup>30</sup>Ne( $\beta^-$ ) [from Be(<sup>48</sup>Ca, X)]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma^-$ ,  $\beta\gamma$ -coin, T<sub>1/2</sub>; deduced log ft. <sup>30</sup>Na deduced levels, J,  $\pi$ . Comparison with model predictions. PREPRINT  
nucl-ex/0703015,3/8/2007

A=30 (continued)

- <sup>30</sup>Mg 2005NIZS NUCLEAR REACTIONS Ni(<sup>22</sup>Ne, <sup>22</sup>Ne'), E=2.25 MeV / nucleon; <sup>107</sup>Ag(<sup>22</sup>Ne, <sup>22</sup>Ne'), E=2.86 MeV / nucleon; Ni(<sup>30</sup>Mg, <sup>30</sup>Mg'), E=2.25 MeV / nucleon; <sup>60</sup>Ni, <sup>107</sup>Ag(<sup>30</sup>Mg, <sup>30</sup>Mg'), E=2.69 MeV / nucleon; U(p, X)<sup>22</sup>Ne / <sup>30</sup>Mg / <sup>32</sup>Mg, E=1.01-1.40 GeV; measured E $\gamma$ , I $\gamma$ ( $\theta$ ), (particle) $\gamma$ -coinc, cross sections following projectile and target Coulomb excitation. <sup>22</sup>Ne, <sup>30</sup>Mg, <sup>32</sup>Mg, <sup>107</sup>Ag deduced levels, B(E2), half-lives, deformations. REX-ISOLDE-CERN facility. Coupled-channel and GOSIA analyses. <sup>24</sup>Mg, <sup>26</sup>Mg, <sup>28</sup>Mg, <sup>30</sup>Mg, <sup>32</sup>Mg, <sup>34</sup>Mg systematics of B(E2) values. Comparisons with shell-model calculations. THESIS O T Niedermaier, Univ Heidelberg
- 2006FUZX NUCLEAR REACTIONS He(<sup>28</sup>Na, X), (<sup>29</sup>Na, X), (<sup>30</sup>Na, X), (<sup>31</sup>Na, X), (<sup>30</sup>Mg, X), (<sup>31</sup>Mg, X), (<sup>32</sup>Mg, X), (<sup>33</sup>Mg, X), (<sup>32</sup>Al, X), (<sup>33</sup>Al, X), (<sup>34</sup>Al, X), (<sup>35</sup>Al, X), (<sup>34</sup>Si, X), (<sup>35</sup>Si, X), (<sup>36</sup>Si, X), (<sup>36</sup>P, X), (<sup>37</sup>P, X), E  $\approx$  40 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin. <sup>28,29,30,31</sup>Na, <sup>30,31,32,33</sup>Mg, <sup>32,33,34,35</sup>Al deduced transitions. REPT CNS-REP-69,P19,Fukui
- 2007MA04 RADIOACTIVITY <sup>32</sup>Na( $\beta^-$ ), ( $\beta^-$ n), ( $\beta^-$ 2n) [from Ta(p, X)]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -,  $\beta\gamma$ -coin. <sup>32</sup>Mg deduced levels, J,  $\pi$ . <sup>30,31</sup>Mg deduced transitions. JOUR PRVCA 75 017302
- 2007N013 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605

## A=30 (continued)

<sup>30</sup>Al      2007N013      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605

## A=30 (continued)

<sup>30</sup>Si      2007N013      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605



KEYNUMBERS AND KEYWORDS

A=30 (continued)

- <sup>30</sup>P 2007N013 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007RA20 NUCLEAR REACTIONS <sup>16</sup>O(<sup>16</sup>O, np), E=40 MeV; measured E<sub>γ</sub>, I<sub>γ</sub>, γγ-coinc, polarization assymetry. <sup>30</sup>P deduced levels, J, π, branching ratios. JOUR PRVCA 76 034315
- <sup>30</sup>S 2007BA69 NUCLEAR REACTIONS <sup>32</sup>S(p, t), E=37 MeV; measured triton energies, angular distributions. <sup>30</sup>S deduced levels, J, π. <sup>29</sup>P(p, γ)<sup>30</sup>S; deduced reaction rates of astrophysical significance. JOUR PRVCA 76 045803
- 2007GA46 NUCLEAR REACTIONS <sup>1</sup>H, <sup>12</sup>C(<sup>31</sup>S, X), E=71 MeV / nucleon; measured E<sub>γ</sub>, I<sub>γ</sub>. <sup>30</sup>S deduced levels. JOUR NUPAB 788 381c

A=31

- <sup>31</sup>Ne 2007JU03 ATOMIC MASSES <sup>23</sup>N, <sup>23,24</sup>O, <sup>25,26,27</sup>F, <sup>27,28,29,30,31</sup>Ne, <sup>31,32,33</sup>Na, <sup>34,35,36</sup>Mg, <sup>34,35,36,37,38,39</sup>Al, <sup>36,37,38,39,40,41,42</sup>Si, <sup>40,41,42,43,44</sup>P, <sup>40,43,44,45</sup>S, <sup>43,45,46,47</sup>Cl; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43

## A=31 (continued)

- <sup>31</sup>Na      2006FUZX      NUCLEAR REACTIONS He(<sup>28</sup>Na, X), (<sup>29</sup>Na, X), (<sup>30</sup>Na, X), (<sup>31</sup>Na, X), (<sup>30</sup>Mg, X), (<sup>31</sup>Mg, X), (<sup>32</sup>Mg, X), (<sup>33</sup>Mg, X), (<sup>32</sup>Al, X), (<sup>33</sup>Al, X), (<sup>34</sup>Al, X), (<sup>35</sup>Al, X), (<sup>34</sup>Si, X), (<sup>35</sup>Si, X), (<sup>36</sup>Si, X), (<sup>36</sup>P, X), (<sup>37</sup>P, X), E ≈ 40 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin. <sup>28,29,30,31</sup>Na, <sup>30,31,32,33</sup>Mg, <sup>32,33,34,35</sup>Al deduced transitions. REPT  
CNS-REP-69,P19,Fukui
- 2007JU03      ATOMIC MASSES <sup>23</sup>N, <sup>23,24</sup>O, <sup>25,26,27</sup>F, <sup>27,28,29,30,31</sup>Ne, <sup>31,32,33</sup>Na, <sup>34,35,36</sup>Mg, <sup>34,35,36,37,38,39</sup>Al, <sup>36,37,38,39,40,41,42</sup>Si, <sup>40,41,42,43,44</sup>P, <sup>40,43,44,45</sup>S, <sup>43,45,46,47</sup>Cl; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43
- 2007N013      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- <sup>31</sup>Mg      2006FUZX      NUCLEAR REACTIONS He(<sup>28</sup>Na, X), (<sup>29</sup>Na, X), (<sup>30</sup>Na, X), (<sup>31</sup>Na, X), (<sup>30</sup>Mg, X), (<sup>31</sup>Mg, X), (<sup>32</sup>Mg, X), (<sup>33</sup>Mg, X), (<sup>32</sup>Al, X), (<sup>33</sup>Al, X), (<sup>34</sup>Al, X), (<sup>35</sup>Al, X), (<sup>34</sup>Si, X), (<sup>35</sup>Si, X), (<sup>36</sup>Si, X), (<sup>36</sup>P, X), (<sup>37</sup>P, X), E ≈ 40 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin. <sup>28,29,30,31</sup>Na, <sup>30,31,32,33</sup>Mg, <sup>32,33,34,35</sup>Al deduced transitions. REPT  
CNS-REP-69,P19,Fukui
- 2006K055      RADIOACTIVITY <sup>27,29,31,33</sup>Mg( $\beta^-$ ) [from U(p, X)]; measured  $\beta$ -asymmetry and hfs,  $\beta$ -NMR spectra from polarized source. <sup>31</sup>Mg deduced ground-state J,  $\pi$ ,  $\mu$ , quadrupole moment. JOUR HYIND 171 167

KEYNUMBERS AND KEYWORDS

A=31 (continued)

- 2007MA04 RADIOACTIVITY  $^{32}\text{Na}(\beta^-)$ ,  $(\beta^-n)$ ,  $(\beta^-2n)$  [from Ta(p, X)]; measured  $E_\gamma$ ,  $I_\gamma$ ,  $\gamma\gamma^-$ ,  $\beta\gamma$ -coin.  $^{32}\text{Mg}$  deduced levels, J,  $\pi$ .  $^{30,31}\text{Mg}$  deduced transitions. JOUR PRVCA 75 017302
- 2007N013 NUCLEAR REACTIONS  $^9\text{Be}(^{40}\text{Ar}, X)^6\text{Li}$  /  $^7\text{Li}$  /  $^8\text{Li}$  /  $^9\text{Li}$  /  $^7\text{Be}$  /  $^8\text{Be}$  /  $^9\text{Be}$  /  $^{10}\text{Be}$  /  $^{11}\text{Be}$  /  $^{12}\text{Be}$  /  $^{10}\text{B}$  /  $^{11}\text{B}$  /  $^{12}\text{B}$  /  $^{13}\text{B}$  /  $^{14}\text{B}$  /  $^{15}\text{B}$  /  $^{11}\text{C}$  /  $^{12}\text{C}$  /  $^{13}\text{C}$  /  $^{14}\text{C}$  /  $^{15}\text{C}$  /  $^{16}\text{C}$  /  $^{17}\text{C}$  /  $^{18}\text{C}$  /  $^{13}\text{N}$  /  $^{14}\text{N}$  /  $^{15}\text{N}$  /  $^{16}\text{N}$  /  $^{17}\text{N}$  /  $^{18}\text{N}$  /  $^{19}\text{N}$  /  $^{20}\text{N}$  /  $^{21}\text{N}$  /  $^{15}\text{O}$  /  $^{16}\text{O}$  /  $^{17}\text{O}$  /  $^{18}\text{O}$  /  $^{19}\text{O}$  /  $^{20}\text{O}$  /  $^{21}\text{O}$  /  $^{22}\text{O}$  /  $^{23}\text{O}$  /  $^{24}\text{O}$  /  $^{17}\text{F}$  /  $^{18}\text{F}$  /  $^{19}\text{F}$  /  $^{20}\text{F}$  /  $^{21}\text{F}$  /  $^{22}\text{F}$  /  $^{23}\text{F}$  /  $^{24}\text{F}$  /  $^{25}\text{F}$  /  $^{26}\text{F}$  /  $^{27}\text{F}$  /  $^{19}\text{Ne}$  /  $^{20}\text{Ne}$  /  $^{21}\text{Ne}$  /  $^{22}\text{Ne}$  /  $^{23}\text{Ne}$  /  $^{24}\text{Ne}$  /  $^{25}\text{Ne}$  /  $^{26}\text{Ne}$  /  $^{27}\text{Ne}$  /  $^{28}\text{Ne}$  /  $^{29}\text{Ne}$  /  $^{21}\text{Na}$  /  $^{22}\text{Na}$  /  $^{23}\text{Na}$  /  $^{24}\text{Na}$  /  $^{25}\text{Na}$  /  $^{26}\text{Na}$  /  $^{27}\text{Na}$  /  $^{28}\text{Na}$  /  $^{29}\text{Na}$  /  $^{30}\text{Na}$  /  $^{31}\text{Na}$  /  $^{32}\text{Na}$  /  $^{23}\text{Mg}$  /  $^{24}\text{Mg}$  /  $^{25}\text{Mg}$  /  $^{26}\text{Mg}$  /  $^{27}\text{Mg}$  /  $^{28}\text{Mg}$  /  $^{29}\text{Mg}$  /  $^{30}\text{Mg}$  /  $^{31}\text{Mg}$  /  $^{32}\text{Mg}$  /  $^{33}\text{Mg}$  /  $^{34}\text{Mg}$  /  $^{25}\text{Al}$  /  $^{26}\text{Al}$  /  $^{27}\text{Al}$  /  $^{28}\text{Al}$  /  $^{29}\text{Al}$  /  $^{30}\text{Al}$  /  $^{31}\text{Al}$  /  $^{32}\text{Al}$  /  $^{33}\text{Al}$  /  $^{34}\text{Al}$  /  $^{35}\text{Al}$  /  $^{36}\text{Al}$  /  $^{27}\text{Si}$  /  $^{28}\text{Si}$  /  $^{29}\text{Si}$  /  $^{30}\text{Si}$  /  $^{31}\text{Si}$  /  $^{32}\text{Si}$  /  $^{33}\text{Si}$  /  $^{34}\text{Si}$  /  $^{35}\text{Si}$  /  $^{36}\text{Si}$  /  $^{37}\text{Si}$  /  $^{38}\text{Si}$  /  $^{29}\text{P}$  /  $^{30}\text{P}$  /  $^{31}\text{P}$  /  $^{32}\text{P}$  /  $^{33}\text{P}$  /  $^{34}\text{P}$  /  $^{35}\text{P}$  /  $^{36}\text{P}$  /  $^{37}\text{P}$  /  $^{38}\text{P}$  /  $^{39}\text{P}$  /  $^{33}\text{S}$  /  $^{34}\text{S}$  /  $^{35}\text{S}$  /  $^{36}\text{S}$  /  $^{37}\text{S}$  /  $^{38}\text{S}$  /  $^{36}\text{Cl}$  /  $^{37}\text{Cl}$  /  $^{38}\text{Cl}$  /  $^{39}\text{Cl}$  /  $^{39}\text{Ar}$ , E=100 MeV / nucleon;  $^{181}\text{Ta}(^{40}\text{Ar}, X)^6\text{Li}$  /  $^7\text{Li}$  /  $^8\text{Li}$  /  $^9\text{Be}$  /  $^{10}\text{Be}$  /  $^{11}\text{Be}$  /  $^{10}\text{B}$  /  $^{11}\text{B}$  /  $^{12}\text{B}$  /  $^{13}\text{B}$  /  $^{14}\text{B}$  /  $^{11}\text{C}$  /  $^{12}\text{C}$  /  $^{13}\text{C}$  /  $^{14}\text{C}$  /  $^{15}\text{C}$  /  $^{16}\text{C}$  /  $^{17}\text{C}$  /  $^{13}\text{N}$  /  $^{14}\text{N}$  /  $^{15}\text{N}$  /  $^{16}\text{N}$  /  $^{17}\text{N}$  /  $^{18}\text{N}$  /  $^{19}\text{N}$  /  $^{15}\text{O}$  /  $^{16}\text{O}$  /  $^{17}\text{O}$  /  $^{18}\text{O}$  /  $^{19}\text{O}$  /  $^{20}\text{O}$  /  $^{21}\text{O}$  /  $^{17}\text{F}$  /  $^{18}\text{F}$  /  $^{19}\text{F}$  /  $^{20}\text{F}$  /  $^{21}\text{F}$  /  $^{22}\text{F}$  /  $^{23}\text{F}$  /  $^{24}\text{F}$  /  $^{19}\text{Ne}$  /  $^{20}\text{Ne}$  /  $^{21}\text{Ne}$  /  $^{22}\text{Ne}$  /  $^{23}\text{Ne}$  /  $^{24}\text{Ne}$  /  $^{25}\text{Ne}$  /  $^{26}\text{Ne}$  /  $^{27}\text{Ne}$  /  $^{21}\text{Na}$  /  $^{22}\text{Na}$  /  $^{23}\text{Na}$  /  $^{24}\text{Na}$  /  $^{25}\text{Na}$  /  $^{26}\text{Na}$  /  $^{27}\text{Na}$  /  $^{28}\text{Na}$  /  $^{29}\text{Na}$  /  $^{23}\text{Mg}$  /  $^{24}\text{Mg}$  /  $^{25}\text{Mg}$  /  $^{26}\text{Mg}$  /  $^{27}\text{Mg}$  /  $^{28}\text{Mg}$  /  $^{29}\text{Mg}$  /  $^{30}\text{Mg}$  /  $^{31}\text{Mg}$  /  $^{24}$  /  $^{25}\text{Al}$  /  $^{26}\text{Al}$  /  $^{27}\text{Al}$  /  $^{28}\text{Al}$  /  $^{29}\text{Al}$  /  $^{30}\text{Al}$  /  $^{31}\text{Al}$  /  $^{32}\text{Al}$  /  $^{33}\text{Al}$  /  $^{34}\text{Al}$  /  $^{26}\text{Si}$  /  $^{27}\text{Si}$  /  $^{28}\text{Si}$  /  $^{29}\text{Si}$  /  $^{30}\text{Si}$  /  $^{31}\text{Si}$  /  $^{32}\text{Si}$  /  $^{33}\text{Si}$  /  $^{34}\text{Si}$  /  $^{29}\text{P}$  /  $^{30}\text{P}$  /  $^{31}\text{P}$  /  $^{32}\text{P}$  /  $^{33}\text{P}$  /  $^{34}\text{P}$  /  $^{35}\text{P}$  /  $^{36}\text{P}$  /  $^{30}\text{S}$  /  $^{31}\text{S}$  /  $^{32}\text{S}$  /  $^{33}\text{S}$  /  $^{34}\text{S}$  /  $^{35}\text{S}$  /  $^{36}\text{S}$  /  $^{37}\text{S}$  /  $^{33}\text{Cl}$  /  $^{34}\text{Cl}$  /  $^{35}\text{Cl}$  /  $^{36}\text{Cl}$  /  $^{37}\text{Cl}$  /  $^{35}\text{Ar}$  /  $^{36}\text{Ar}$  /  $^{37}\text{Ar}$  /  $^{38}\text{Ar}$  /  $^{39}\text{Ar}$  /  $^{37}\text{K}$  /  $^{38}\text{K}$  /  $^{39}\text{K}$  /  $^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- $^{31}\text{Al}$  2006K055 RADIOACTIVITY  $^{27,29,31,33}\text{Mg}(\beta^-)$  [from U(p, X)]; measured  $\beta$ -asymmetry and hfs,  $\beta$ -NMR spectra from polarized source.  $^{31}\text{Mg}$  deduced ground-state J,  $\pi$ ,  $\mu$ , quadrupole moment. JOUR HYIND 171 167

## A=31 (continued)

2007N013 NUCLEAR REACTIONS  $^9\text{Be}(^{40}\text{Ar}, \text{X})^6\text{Li} / ^7\text{Li} / ^8\text{Li} / ^9\text{Li} / ^7\text{Be} / ^8\text{Be} / ^9\text{Be} / ^{10}\text{Be} / ^{11}\text{Be} / ^{12}\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{B} / ^{13}\text{B} / ^{14}\text{B} / ^{15}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{15}\text{C} / ^{16}\text{C} / ^{17}\text{C} / ^{18}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{N} / ^{17}\text{N} / ^{18}\text{N} / ^{19}\text{N} / ^{20}\text{N} / ^{21}\text{N} / ^{15}\text{O} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O} / ^{19}\text{O} / ^{20}\text{O} / ^{21}\text{O} / ^{22}\text{O} / ^{23}\text{O} / ^{24}\text{O} / ^{17}\text{F} / ^{18}\text{F} / ^{19}\text{F} / ^{20}\text{F} / ^{21}\text{F} / ^{22}\text{F} / ^{23}\text{F} / ^{24}\text{F} / ^{25}\text{F} / ^{26}\text{F} / ^{27}\text{F} / ^{19}\text{Ne} / ^{20}\text{Ne} / ^{21}\text{Ne} / ^{22}\text{Ne} / ^{23}\text{Ne} / ^{24}\text{Ne} / ^{25}\text{Ne} / ^{26}\text{Ne} / ^{27}\text{Ne} / ^{28}\text{Ne} / ^{29}\text{Ne} / ^{21}\text{Na} / ^{22}\text{Na} / ^{23}\text{Na} / ^{24}\text{Na} / ^{25}\text{Na} / ^{26}\text{Na} / ^{27}\text{Na} / ^{28}\text{Na} / ^{29}\text{Na} / ^{30}\text{Na} / ^{31}\text{Na} / ^{32}\text{Na} / ^{23}\text{Mg} / ^{24}\text{Mg} / ^{25}\text{Mg} / ^{26}\text{Mg} / ^{27}\text{Mg} / ^{28}\text{Mg} / ^{29}\text{Mg} / ^{30}\text{Mg} / ^{31}\text{Mg} / ^{32}\text{Mg} / ^{33}\text{Mg} / ^{34}\text{Mg} / ^{25}\text{Al} / ^{26}\text{Al} / ^{27}\text{Al} / ^{28}\text{Al} / ^{29}\text{Al} / ^{30}\text{Al} / ^{31}\text{Al} / ^{32}\text{Al} / ^{33}\text{Al} / ^{34}\text{Al} / ^{35}\text{Al} / ^{36}\text{Al} / ^{27}\text{Si} / ^{28}\text{Si} / ^{29}\text{Si} / ^{30}\text{Si} / ^{31}\text{Si} / ^{32}\text{Si} / ^{33}\text{Si} / ^{34}\text{Si} / ^{35}\text{Si} / ^{36}\text{Si} / ^{37}\text{Si} / ^{38}\text{Si} / ^{29}\text{P} / ^{30}\text{P} / ^{31}\text{P} / ^{32}\text{P} / ^{33}\text{P} / ^{34}\text{P} / ^{35}\text{P} / ^{36}\text{P} / ^{37}\text{P} / ^{38}\text{P} / ^{39}\text{P} / ^{33}\text{S} / ^{34}\text{S} / ^{35}\text{S} / ^{36}\text{S} / ^{37}\text{S} / ^{38}\text{S} / ^{36}\text{Cl} / ^{37}\text{Cl} / ^{38}\text{Cl} / ^{39}\text{Cl} / ^{39}\text{Ar}, E=100 MeV / nucleon;  $^{181}\text{Ta}(^{40}\text{Ar}, \text{X})^6\text{Li} / ^7\text{Li} / ^8\text{Li} / ^9\text{Be} / ^{10}\text{Be} / ^{11}\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{B} / ^{13}\text{B} / ^{14}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{15}\text{C} / ^{16}\text{C} / ^{17}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{N} / ^{17}\text{N} / ^{18}\text{N} / ^{19}\text{N} / ^{15}\text{O} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O} / ^{19}\text{O} / ^{20}\text{O} / ^{21}\text{O} / ^{17}\text{F} / ^{18}\text{F} / ^{19}\text{F} / ^{20}\text{F} / ^{21}\text{F} / ^{22}\text{F} / ^{23}\text{F} / ^{24}\text{F} / ^{19}\text{Ne} / ^{20}\text{Ne} / ^{21}\text{Ne} / ^{22}\text{Ne} / ^{23}\text{Ne} / ^{24}\text{Ne} / ^{25}\text{Ne} / ^{26}\text{Ne} / ^{27}\text{Ne} / ^{21}\text{Na} / ^{22}\text{Na} / ^{23}\text{Na} / ^{24}\text{Na} / ^{25}\text{Na} / ^{26}\text{Na} / ^{27}\text{Na} / ^{28}\text{Na} / ^{29}\text{Na} / ^{23}\text{Mg} / ^{24}\text{Mg} / ^{25}\text{Mg} / ^{26}\text{Mg} / ^{27}\text{Mg} / ^{28}\text{Mg} / ^{29}\text{Mg} / ^{30}\text{Mg} / ^{31}\text{Mg} / ^{24} / ^{25}\text{Al} / ^{26}\text{Al} / ^{27}\text{Al} / ^{28}\text{Al} / ^{29}\text{Al} / ^{30}\text{Al} / ^{31}\text{Al} / ^{32}\text{Al} / ^{33}\text{Al} / ^{34}\text{Al} / ^{26}\text{Si} / ^{27}\text{Si} / ^{28}\text{Si} / ^{29}\text{Si} / ^{30}\text{Si} / ^{31}\text{Si} / ^{32}\text{Si} / ^{33}\text{Si} / ^{34}\text{Si} / ^{29}\text{P} / ^{30}\text{P} / ^{31}\text{P} / ^{32}\text{P} / ^{33}\text{P} / ^{34}\text{P} / ^{35}\text{P} / ^{36}\text{P} / ^{30}\text{S} / ^{31}\text{S} / ^{32}\text{S} / ^{33}\text{S} / ^{34}\text{S} / ^{35}\text{S} / ^{36}\text{S} / ^{37}\text{S} / ^{33}\text{Cl} / ^{34}\text{Cl} / ^{35}\text{Cl} / ^{36}\text{Cl} / ^{37}\text{Cl} / ^{35}\text{Ar} / ^{36}\text{Ar} / ^{37}\text{Ar} / ^{38}\text{Ar} / ^{39}\text{Ar} / ^{37}\text{K} / ^{38}\text{K} / ^{39}\text{K} / ^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$

## A=31 (continued)

<sup>31</sup>Si      2007N013      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605

**A=31 (continued)**

- <sup>31</sup>P      2007N013      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- <sup>31</sup>S      2007MA48      NUCLEAR REACTIONS <sup>32</sup>S(p, d), E=32 MeV; measured Ed,  $\sigma$  and angular distributions. <sup>31</sup>S deduced level energies and spectroscopic factors. JOUR PRVCA 76 015803

**A=32**

- <sup>32</sup>Na      2007JU03      ATOMIC MASSES <sup>23</sup>N, <sup>23,24</sup>O, <sup>25,26,27</sup>F, <sup>27,28,29,30,31</sup>Ne, <sup>31,32,33</sup>Na, <sup>34,35,36</sup>Mg, <sup>34,35,36,37,38,39</sup>Al, <sup>36,37,38,39,40,41,42</sup>Si, <sup>40,41,42,43,44</sup>P, <sup>40,43,44,45</sup>S, <sup>43,45,46,47</sup>Cl; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43
- 2007MA04      RADIOACTIVITY <sup>32</sup>Na( $\beta^-$ ), ( $\beta^-n$ ), ( $\beta^-2n$ ) [from Ta(p, X)]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma^-$ ,  $\beta\gamma$ -coin. <sup>32</sup>Mg deduced levels, J,  $\pi$ . <sup>30,31</sup>Mg deduced transitions. JOUR PRVCA 75 017302

## A=32 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}, E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$
- ${}^{32}\text{Mg}$  2005NIZS NUCLEAR REACTIONS  $\text{Ni}({}^{22}\text{Ne}, {}^{22}\text{Ne}')$ , E=2.25 MeV / nucleon;  ${}^{107}\text{Ag}({}^{22}\text{Ne}, {}^{22}\text{Ne}')$ , E=2.86 MeV / nucleon;  $\text{Ni}({}^{30}\text{Mg}, {}^{30}\text{Mg}')$ , E=2.25 MeV / nucleon;  ${}^{60}\text{Ni}, {}^{107}\text{Ag}({}^{30}\text{Mg}, {}^{30}\text{Mg}')$ , E=2.69 MeV / nucleon;  $\text{U}(\text{p}, \text{X}){}^{22}\text{Ne} / {}^{30}\text{Mg} / {}^{32}\text{Mg}$ , E=1.01-1.40 GeV; measured  $E\gamma$ ,  $I\gamma(\theta)$ , (particle) $\gamma$ -coinc, cross sections following projectile and target Coulomb excitation.  ${}^{22}\text{Ne}, {}^{30}\text{Mg}, {}^{32}\text{Mg}, {}^{107}\text{Ag}$  deduced levels, B(E2), half-lives, deformations. REX-ISOLDE-CERN facility. Coupled-channel and GOSIA analyses.  ${}^{24}\text{Mg}, {}^{26}\text{Mg}, {}^{28}\text{Mg}, {}^{30}\text{Mg}, {}^{32}\text{Mg}, {}^{34}\text{Mg}$  systematics of B(E2) values. Comparisons with shell-model calculations. THESIS O T Niedermaier, Univ Heidelberg
- 2006FUZZ NUCLEAR REACTIONS  $\text{He}({}^{28}\text{Na}, \text{X}), ({}^{29}\text{Na}, \text{X}), ({}^{30}\text{Na}, \text{X}), ({}^{31}\text{Na}, \text{X}), ({}^{30}\text{Mg}, \text{X}), ({}^{31}\text{Mg}, \text{X}), ({}^{32}\text{Mg}, \text{X}), ({}^{33}\text{Mg}, \text{X}), ({}^{32}\text{Al}, \text{X}), ({}^{33}\text{Al}, \text{X}), ({}^{34}\text{Al}, \text{X}), ({}^{35}\text{Al}, \text{X}), ({}^{34}\text{Si}, \text{X}), ({}^{35}\text{Si}, \text{X}), ({}^{36}\text{Si}, \text{X}), ({}^{36}\text{P}, \text{X}), ({}^{37}\text{P}, \text{X})$ , E  $\approx$  40 MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$ , (particle) $\gamma$ -coinc.  ${}^{28,29,30,31}\text{Na}, {}^{30,31,32,33}\text{Mg}, {}^{32,33,34,35}\text{Al}$  deduced transitions. REPT
- CNS-REP-69,P19,Fukui
- 2006SUZZ NUCLEAR REACTIONS  $\text{Au}({}^{32}\text{Mg}, {}^{32}\text{Mg}')$ , E=26.1 MeV / nucleon; measured Doppler-shifted  $E\gamma$ ,  $I\gamma$ .  ${}^{32}\text{Mg}$  level deduced  $T_{1/2}$ . REPT
- CNS-REP-69,P35,Suzuki
- 2007MA04 RADIOACTIVITY  ${}^{32}\text{Na}(\beta^-), (\beta^-n), (\beta^-2n)$  [from  $\text{Ta}(\text{p}, \text{X})$ ]; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma^-$ ,  $\beta\gamma$ -coinc.  ${}^{32}\text{Mg}$  deduced levels, J,  $\pi$ .  ${}^{30,31}\text{Mg}$  deduced transitions. JOUR PRVCA 75 017302

## A=32 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- ${}^{32}\text{Al}$  2006FUZX NUCLEAR REACTIONS  $\text{He}({}^{28}\text{Na}, \text{X})$ ,  $({}^{29}\text{Na}, \text{X})$ ,  $({}^{30}\text{Na}, \text{X})$ ,  $({}^{31}\text{Na}, \text{X})$ ,  $({}^{30}\text{Mg}, \text{X})$ ,  $({}^{31}\text{Mg}, \text{X})$ ,  $({}^{32}\text{Mg}, \text{X})$ ,  $({}^{33}\text{Mg}, \text{X})$ ,  $({}^{32}\text{Al}, \text{X})$ ,  $({}^{33}\text{Al}, \text{X})$ ,  $({}^{34}\text{Al}, \text{X})$ ,  $({}^{35}\text{Al}, \text{X})$ ,  $({}^{34}\text{Si}, \text{X})$ ,  $({}^{35}\text{Si}, \text{X})$ ,  $({}^{36}\text{Si}, \text{X})$ ,  $({}^{36}\text{P}, \text{X})$ ,  $({}^{37}\text{P}, \text{X})$ , E  $\approx$  40 MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$ , (particle) $\gamma$ -coin.  ${}^{28,29,30,31}\text{Na}$ ,  ${}^{30,31,32,33}\text{Mg}$ ,  ${}^{32,33,34,35}\text{Al}$  deduced transitions. REPT
- 2007KA18 RADIOACTIVITY  ${}^{32}\text{Al}(\beta^-)$  [from  ${}^{40}\text{Ar}$  fragmentation]; measured  $\beta$ -NMR spectra.  ${}^{32}\text{Al}$  deduced quadrupole moment. JOUR PYLBB 647 93
- 2007KAZZ RADIOACTIVITY  ${}^{32}\text{Al}(\beta^-)$ ; measured  $\beta$ -NMR spectra; deduced electric quadrupole moment. REPT RIKEN-NC-NP-6,Kameda
- 2007KAZZ NUCLEAR MOMENTS  ${}^{32}\text{Al}$ ; measured  $\beta$ -NMR spectra; deduced electric quadrupole moment. REPT RIKEN-NC-NP-6,Kameda



## A=32 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007Y0ZZ NUCLEAR REACTIONS  $\text{Nb}({}^{40}\text{Ar}, \text{X}){}^{32}\text{Al}$ , E=95 MeV / nucleon; measured quadrupole moment using  $\beta$ -NMR method. CONF Khanty-Mansiysk (Exotic Nuclei) Proc, P105
- ${}^{32}\text{Si}$  2007KA18 RADIOACTIVITY  ${}^{32}\text{Al}(\beta^-)$  [from  ${}^{40}\text{Ar}$  fragmentation]; measured  $\beta$ -NMR spectra.  ${}^{32}\text{Al}$  deduced quadrupole moment. JOUR PYLBB 647 93
- 2007KAZZ RADIOACTIVITY  ${}^{32}\text{Al}(\beta^-)$ ; measured  $\beta$ -NMR spectra; deduced electric quadrupole moment. REPT RIKEN-NC-NP-6, Kameda

## A=32 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}, E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$
- ${}^{32}\text{P}$  2007H008 NUCLEAR REACTIONS  ${}^{208}\text{Pb}({}^{36}\text{S}, \text{X}){}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P}$ , E=215 MeV; measured particle yields,  $E\gamma$ ,  $I\gamma$ , (particle) $\gamma$ -coin.  ${}^{37}\text{P}$  deduced levels, J,  $\pi$ , configurations. Clara array. JOUR PRVCA 75 034313

KEYNUMBERS AND KEYWORDS

A=32 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}, E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$
- ${}^{32}\text{S}$  2006BR31 NUCLEAR REACTIONS  ${}^{28}\text{Si}({}^6\text{Li}, \alpha)$ , E=47 MeV; measured Ed, E $\alpha$ , d $\alpha$ -coin, angular correlations.  ${}^{28}\text{Si}$ ,  ${}^{32}\text{S}$  deduced excited states energies. JOUR PHSTB 74 692
- ${}^{32}\text{Ar}$  2007BU15 NUCLEAR REACTIONS C( ${}^{40}\text{Ca}, \text{X}$ ) ${}^{36}\text{Ca} / {}^{32}\text{Ar} / {}^{28}\text{S}$ , E=95 MeV / nucleon; measured E $\gamma$ , I $\gamma$ . Deduced level energies. JOUR APOBB 38 1353

A=33

- ${}^{33}\text{Na}$  2007JU03 ATOMIC MASSES  ${}^{23}\text{N}$ ,  ${}^{23,24}\text{O}$ ,  ${}^{25,26,27}\text{F}$ ,  ${}^{27,28,29,30,31}\text{Ne}$ ,  ${}^{31,32,33}\text{Na}$ ,  ${}^{34,35,36}\text{Mg}$ ,  ${}^{34,35,36,37,38,39}\text{Al}$ ,  ${}^{36,37,38,39,40,41,42}\text{Si}$ ,  ${}^{40,41,42,43,44}\text{P}$ ,  ${}^{40,43,44,45}\text{S}$ ,  ${}^{43,45,46,47}\text{Cl}$ ; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43
- ${}^{33}\text{Mg}$  2006FUZX NUCLEAR REACTIONS He( ${}^{28}\text{Na}, \text{X}$ ), ( ${}^{29}\text{Na}, \text{X}$ ), ( ${}^{30}\text{Na}, \text{X}$ ), ( ${}^{31}\text{Na}, \text{X}$ ), ( ${}^{30}\text{Mg}, \text{X}$ ), ( ${}^{31}\text{Mg}, \text{X}$ ), ( ${}^{32}\text{Mg}, \text{X}$ ), ( ${}^{33}\text{Mg}, \text{X}$ ), ( ${}^{32}\text{Al}, \text{X}$ ), ( ${}^{33}\text{Al}, \text{X}$ ), ( ${}^{34}\text{Al}, \text{X}$ ), ( ${}^{35}\text{Al}, \text{X}$ ), ( ${}^{34}\text{Si}, \text{X}$ ), ( ${}^{35}\text{Si}, \text{X}$ ), ( ${}^{36}\text{Si}, \text{X}$ ), ( ${}^{36}\text{P}, \text{X}$ ), ( ${}^{37}\text{P}, \text{X}$ ), E  $\approx$  40 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin.  ${}^{28,29,30,31}\text{Na}$ ,  ${}^{30,31,32,33}\text{Mg}$ ,  ${}^{32,33,34,35}\text{Al}$  deduced transitions. REPT CNS-REP-69,P19,Fukui

KEYNUMBERS AND KEYWORDS

A=33 (continued)

- 2006K055 RADIOACTIVITY  $^{27,29,31,33}\text{Mg}(\beta^-)$  [from U(p, X)]; measured  $\beta$ -asymmetry and hfs,  $\beta$ -NMR spectra from polarized source.  $^{31}\text{Mg}$  deduced ground-state J,  $\pi$ ,  $\mu$ , quadrupole moment. JOUR HYIND 171 167
- 2007N013 NUCLEAR REACTIONS  $^9\text{Be}(^{40}\text{Ar}, \text{X})^6\text{Li} / ^7\text{Li} / ^8\text{Li} / ^9\text{Li} / ^7\text{Be} / ^8\text{Be} / ^9\text{Be} / ^{10}\text{Be} / ^{11}\text{Be} / ^{12}\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{B} / ^{13}\text{B} / ^{14}\text{B} / ^{15}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{15}\text{C} / ^{16}\text{C} / ^{17}\text{C} / ^{18}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{N} / ^{17}\text{N} / ^{18}\text{N} / ^{19}\text{N} / ^{20}\text{N} / ^{21}\text{N} / ^{15}\text{O} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O} / ^{19}\text{O} / ^{20}\text{O} / ^{21}\text{O} / ^{22}\text{O} / ^{23}\text{O} / ^{24}\text{O} / ^{17}\text{F} / ^{18}\text{F} / ^{19}\text{F} / ^{20}\text{F} / ^{21}\text{F} / ^{22}\text{F} / ^{23}\text{F} / ^{24}\text{F} / ^{25}\text{F} / ^{26}\text{F} / ^{27}\text{F} / ^{19}\text{Ne} / ^{20}\text{Ne} / ^{21}\text{Ne} / ^{22}\text{Ne} / ^{23}\text{Ne} / ^{24}\text{Ne} / ^{25}\text{Ne} / ^{26}\text{Ne} / ^{27}\text{Ne} / ^{28}\text{Ne} / ^{29}\text{Ne} / ^{21}\text{Na} / ^{22}\text{Na} / ^{23}\text{Na} / ^{24}\text{Na} / ^{25}\text{Na} / ^{26}\text{Na} / ^{27}\text{Na} / ^{28}\text{Na} / ^{29}\text{Na} / ^{30}\text{Na} / ^{31}\text{Na} / ^{32}\text{Na} / ^{23}\text{Mg} / ^{24}\text{Mg} / ^{25}\text{Mg} / ^{26}\text{Mg} / ^{27}\text{Mg} / ^{28}\text{Mg} / ^{29}\text{Mg} / ^{30}\text{Mg} / ^{31}\text{Mg} / ^{32}\text{Mg} / ^{33}\text{Mg} / ^{34}\text{Mg} / ^{25}\text{Al} / ^{26}\text{Al} / ^{27}\text{Al} / ^{28}\text{Al} / ^{29}\text{Al} / ^{30}\text{Al} / ^{31}\text{Al} / ^{32}\text{Al} / ^{33}\text{Al} / ^{34}\text{Al} / ^{35}\text{Al} / ^{36}\text{Al} / ^{27}\text{Si} / ^{28}\text{Si} / ^{29}\text{Si} / ^{30}\text{Si} / ^{31}\text{Si} / ^{32}\text{Si} / ^{33}\text{Si} / ^{34}\text{Si} / ^{35}\text{Si} / ^{36}\text{Si} / ^{37}\text{Si} / ^{38}\text{Si} / ^{29}\text{P} / ^{30}\text{P} / ^{31}\text{P} / ^{32}\text{P} / ^{33}\text{P} / ^{34}\text{P} / ^{35}\text{P} / ^{36}\text{P} / ^{37}\text{P} / ^{38}\text{P} / ^{39}\text{P} / ^{33}\text{S} / ^{34}\text{S} / ^{35}\text{S} / ^{36}\text{S} / ^{37}\text{S} / ^{38}\text{S} / ^{36}\text{Cl} / ^{37}\text{Cl} / ^{38}\text{Cl} / ^{39}\text{Cl} / ^{39}\text{Ar}, E=100 MeV / nucleon;  $^{181}\text{Ta}(^{40}\text{Ar}, \text{X})^6\text{Li} / ^7\text{Li} / ^8\text{Li} / ^9\text{Be} / ^{10}\text{Be} / ^{11}\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{B} / ^{13}\text{B} / ^{14}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{15}\text{C} / ^{16}\text{C} / ^{17}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{N} / ^{17}\text{N} / ^{18}\text{N} / ^{19}\text{N} / ^{15}\text{O} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O} / ^{19}\text{O} / ^{20}\text{O} / ^{21}\text{O} / ^{17}\text{F} / ^{18}\text{F} / ^{19}\text{F} / ^{20}\text{F} / ^{21}\text{F} / ^{22}\text{F} / ^{23}\text{F} / ^{24}\text{F} / ^{19}\text{Ne} / ^{20}\text{Ne} / ^{21}\text{Ne} / ^{22}\text{Ne} / ^{23}\text{Ne} / ^{24}\text{Ne} / ^{25}\text{Ne} / ^{26}\text{Ne} / ^{27}\text{Ne} / ^{21}\text{Na} / ^{22}\text{Na} / ^{23}\text{Na} / ^{24}\text{Na} / ^{25}\text{Na} / ^{26}\text{Na} / ^{27}\text{Na} / ^{28}\text{Na} / ^{29}\text{Na} / ^{23}\text{Mg} / ^{24}\text{Mg} / ^{25}\text{Mg} / ^{26}\text{Mg} / ^{27}\text{Mg} / ^{28}\text{Mg} / ^{29}\text{Mg} / ^{30}\text{Mg} / ^{31}\text{Mg} / ^{24} / ^{25}\text{Al} / ^{26}\text{Al} / ^{27}\text{Al} / ^{28}\text{Al} / ^{29}\text{Al} / ^{30}\text{Al} / ^{31}\text{Al} / ^{32}\text{Al} / ^{33}\text{Al} / ^{34}\text{Al} / ^{26}\text{Si} / ^{27}\text{Si} / ^{28}\text{Si} / ^{29}\text{Si} / ^{30}\text{Si} / ^{31}\text{Si} / ^{32}\text{Si} / ^{33}\text{Si} / ^{34}\text{Si} / ^{29}\text{P} / ^{30}\text{P} / ^{31}\text{P} / ^{32}\text{P} / ^{33}\text{P} / ^{34}\text{P} / ^{35}\text{P} / ^{36}\text{P} / ^{30}\text{S} / ^{31}\text{S} / ^{32}\text{S} / ^{33}\text{S} / ^{34}\text{S} / ^{35}\text{S} / ^{36}\text{S} / ^{37}\text{S} / ^{33}\text{Cl} / ^{34}\text{Cl} / ^{35}\text{Cl} / ^{36}\text{Cl} / ^{37}\text{Cl} / ^{35}\text{Ar} / ^{36}\text{Ar} / ^{37}\text{Ar} / ^{38}\text{Ar} / ^{39}\text{Ar} / ^{37}\text{K} / ^{38}\text{K} / ^{39}\text{K} / ^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$
- 2007Y006 RADIOACTIVITY  $^{33}\text{Mg}(\beta^-)$  [from U(p, X), E-1.4 GeV]; measured  $\beta$ -decay anisotropy using laser spectroscopy and nuclear magnetic resonance techniques.  $^{33}\text{Mg}$  deduced ground state spin and magnetic moment. JOUR PRLTA 99 212501
- $^{33}\text{Al}$  2006FUZX NUCLEAR REACTIONS He( $^{28}\text{Na}$ , X), ( $^{29}\text{Na}$ , X), ( $^{30}\text{Na}$ , X), ( $^{31}\text{Na}$ , X), ( $^{30}\text{Mg}$ , X), ( $^{31}\text{Mg}$ , X), ( $^{32}\text{Mg}$ , X), ( $^{33}\text{Mg}$ , X), ( $^{32}\text{Al}$ , X), ( $^{33}\text{Al}$ , X), ( $^{34}\text{Al}$ , X), ( $^{35}\text{Al}$ , X), ( $^{34}\text{Si}$ , X), ( $^{35}\text{Si}$ , X), ( $^{36}\text{Si}$ , X), ( $^{36}\text{P}$ , X), ( $^{37}\text{P}$ , X), E  $\approx$  40 MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$ , (particle) $\gamma$ -coin.  $^{28,29,30,31}\text{Na}$ ,  $^{30,31,32,33}\text{Mg}$ ,  $^{32,33,34,35}\text{Al}$  deduced transitions. REPT
- 2006K055 CNS-REP-69,P19,Fukui  
RADIOACTIVITY  $^{27,29,31,33}\text{Mg}(\beta^-)$  [from U(p, X)]; measured  $\beta$ -asymmetry and hfs,  $\beta$ -NMR spectra from polarized source.  $^{31}\text{Mg}$  deduced ground-state J,  $\pi$ ,  $\mu$ , quadrupole moment. JOUR HYIND 171 167

## A=33 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007Y006 RADIOACTIVITY  ${}^{33}\text{Mg}(\beta^-)$  [from U(p, X), E-1.4 GeV]; measured  $\beta$ -decay anisotropy using laser spectroscopy and nuclear magnetic resonance techniques.  ${}^{33}\text{Mg}$  deduced ground state spin and magnetic moment. JOUR PRLTA 99 212501

## A=33 (continued)

- <sup>33</sup>Si      2007N013      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- <sup>33</sup>P      2007DE15      NUCLEAR REACTIONS <sup>36</sup>Cl(n, p), (n, α), E=0.5-250 keV; measured σ; deduced resonance parameters, Maxwellian-averaged cross section. Astrophysical implications discussed. JOUR PRVCA 75 034617
- 2007H008      NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>36</sup>S, X)<sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P, E=215 MeV; measured particle yields, Eγ, Iγ, (particle)γ-coin. <sup>37</sup>P deduced levels, J, π, configurations. Clara array. JOUR PRVCA 75 034313

## A=33 (continued)

2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605

**A=33 (continued)**

<sup>33</sup>S      2007N013      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605

**A=34**

<sup>34</sup>Mg      2005NIZS      NUCLEAR REACTIONS Ni(<sup>22</sup>Ne, <sup>22</sup>Ne'), E=2.25 MeV / nucleon; <sup>107</sup>Ag(<sup>22</sup>Ne, <sup>22</sup>Ne'), E=2.86 MeV / nucleon; Ni(<sup>30</sup>Mg, <sup>30</sup>Mg'), E=2.25 MeV / nucleon; <sup>60</sup>Ni, <sup>107</sup>Ag(<sup>30</sup>Mg, <sup>30</sup>Mg'), E=2.69 MeV / nucleon; U(p, X)<sup>22</sup>Ne / <sup>30</sup>Mg / <sup>32</sup>Mg, E=1.01-1.40 GeV; measured E $\gamma$ , I $\gamma$ ( $\theta$ ), (particle) $\gamma$ -coinc, cross sections following projectile and target Coulomb excitation. <sup>22</sup>Ne, <sup>30</sup>Mg, <sup>32</sup>Mg, <sup>107</sup>Ag deduced levels, B(E2), half-lives, deformations. REX-ISOLDE-CERN facility. Coupled-channel and GOSIA analyses. <sup>24</sup>Mg, <sup>26</sup>Mg, <sup>28</sup>Mg, <sup>30</sup>Mg, <sup>32</sup>Mg, <sup>34</sup>Mg systematics of B(E2) values. Comparisons with shell-model calculations. THESIS O T Niedermaier, Univ Heidelberg

2007JU03      ATOMIC MASSES <sup>23</sup>N, <sup>23,24</sup>O, <sup>25,26,27</sup>F, <sup>27,28,29,30,31</sup>Ne, <sup>31,32,33</sup>Na, <sup>34,35,36</sup>Mg, <sup>34,35,36,37,38,39</sup>Al, <sup>36,37,38,39,40,41,42</sup>Si, <sup>40,41,42,43,44</sup>P, <sup>40,43,44,45</sup>S, <sup>43,45,46,47</sup>Cl; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43



KEYNUMBERS AND KEYWORDS

A=34 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- ${}^{34}\text{Al}$  2006FUZX NUCLEAR REACTIONS  $\text{He}({}^{28}\text{Na}, \text{X})$ ,  $({}^{29}\text{Na}, \text{X})$ ,  $({}^{30}\text{Na}, \text{X})$ ,  $({}^{31}\text{Na}, \text{X})$ ,  $({}^{30}\text{Mg}, \text{X})$ ,  $({}^{31}\text{Mg}, \text{X})$ ,  $({}^{32}\text{Mg}, \text{X})$ ,  $({}^{33}\text{Mg}, \text{X})$ ,  $({}^{32}\text{Al}, \text{X})$ ,  $({}^{33}\text{Al}, \text{X})$ ,  $({}^{34}\text{Al}, \text{X})$ ,  $({}^{35}\text{Al}, \text{X})$ ,  $({}^{34}\text{Si}, \text{X})$ ,  $({}^{35}\text{Si}, \text{X})$ ,  $({}^{36}\text{Si}, \text{X})$ ,  $({}^{36}\text{P}, \text{X})$ ,  $({}^{37}\text{P}, \text{X})$ , E  $\approx$  40 MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$ , (particle) $\gamma$ -coin.  ${}^{28,29,30,31}\text{Na}$ ,  ${}^{30,31,32,33}\text{Mg}$ ,  ${}^{32,33,34,35}\text{Al}$  deduced transitions. REPT
- 2007JU03 CNS-REP-69,P19,Fukui ATOMIC MASSES  ${}^{23}\text{N}$ ,  ${}^{23,24}\text{O}$ ,  ${}^{25,26,27}\text{F}$ ,  ${}^{27,28,29,30,31}\text{Ne}$ ,  ${}^{31,32,33}\text{Na}$ ,  ${}^{34,35,36}\text{Mg}$ ,  ${}^{34,35,36,37,38,39}\text{Al}$ ,  ${}^{36,37,38,39,40,41,42}\text{Si}$ ,  ${}^{40,41,42,43,44}\text{P}$ ,  ${}^{40,43,44,45}\text{S}$ ,  ${}^{43,45,46,47}\text{Cl}$ ; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43

## A=34 (continued)

2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605

## A=34 (continued)

- <sup>34</sup>Si      2007N013      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- <sup>34</sup>P      2007H008      NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>36</sup>S, X)<sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P, E=215 MeV; measured particle yields, E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin. <sup>37</sup>P deduced levels, J,  $\pi$ , configurations. Clara array. JOUR PRVCA 75 034313

## A=34 (continued)

2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}, E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$

KEYNUMBERS AND KEYWORDS

A=34 (continued)

- <sup>34</sup>S      2007N013      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- <sup>34</sup>Ar      2007FA16      NUCLEAR REACTIONS <sup>12</sup>C(<sup>23</sup>Al, p), E=74 MeV / nucleon; measured fragment longitudinal momentum distributions. <sup>12</sup>C(<sup>23</sup>Al, X), (<sup>24</sup>Al, X), (<sup>24</sup>Al, X), E=74 MeV / nucleon; measured reaction cross sections. Compared results to model calculations. JOUR PRVCA 76 031601

A=35

- <sup>35</sup>Mg      2007JU03      ATOMIC MASSES <sup>23</sup>N, <sup>23,24</sup>O, <sup>25,26,27</sup>F, <sup>27,28,29,30,31</sup>Ne, <sup>31,32,33</sup>Na, <sup>34,35,36</sup>Mg, <sup>34,35,36,37,38,39</sup>Al, <sup>36,37,38,39,40,41,42</sup>Si, <sup>40,41,42,43,44</sup>P, <sup>40,43,44,45</sup>S, <sup>43,45,46,47</sup>Cl; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43
- <sup>35</sup>Al      2006FUZX      NUCLEAR REACTIONS He(<sup>28</sup>Na, X), (<sup>29</sup>Na, X), (<sup>30</sup>Na, X), (<sup>31</sup>Na, X), (<sup>30</sup>Mg, X), (<sup>31</sup>Mg, X), (<sup>32</sup>Mg, X), (<sup>33</sup>Mg, X), (<sup>32</sup>Al, X), (<sup>33</sup>Al, X), (<sup>34</sup>Al, X), (<sup>35</sup>Al, X), (<sup>34</sup>Si, X), (<sup>35</sup>Si, X), (<sup>36</sup>Si, X), (<sup>36</sup>P, X), (<sup>37</sup>P, X), E ≈ 40 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin. <sup>28,29,30,31</sup>Na, <sup>30,31,32,33</sup>Mg, <sup>32,33,34,35</sup>Al deduced transitions. REPT CNS-REP-69,P19,Fukui

KEYNUMBERS AND KEYWORDS

A=35 (continued)

- 2007JU03 ATOMIC MASSES  $^{23}\text{N}$ ,  $^{23,24}\text{O}$ ,  $^{25,26,27}\text{F}$ ,  $^{27,28,29,30,31}\text{Ne}$ ,  $^{31,32,33}\text{Na}$ ,  
 $^{34,35,36}\text{Mg}$ ,  $^{34,35,36,37,38,39}\text{Al}$ ,  $^{36,37,38,39,40,41,42}\text{Si}$ ,  $^{40,41,42,43,44}\text{P}$ ,  
 $^{40,43,44,45}\text{S}$ ,  $^{43,45,46,47}\text{Cl}$ ; measured masses; analysed neutron separation  
energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43
- 2007N013 NUCLEAR REACTIONS  $^9\text{Be}(^{40}\text{Ar}, \text{X})^6\text{Li}$  /  $^7\text{Li}$  /  $^8\text{Li}$  /  $^9\text{Li}$  /  $^7\text{Be}$  /  
 $^8\text{Be}$  /  $^9\text{Be}$  /  $^{10}\text{Be}$  /  $^{11}\text{Be}$  /  $^{12}\text{Be}$  /  $^{10}\text{B}$  /  $^{11}\text{B}$  /  $^{12}\text{B}$  /  $^{13}\text{B}$  /  $^{14}\text{B}$  /  $^{15}\text{B}$  /  
 $^{11}\text{C}$  /  $^{12}\text{C}$  /  $^{13}\text{C}$  /  $^{14}\text{C}$  /  $^{15}\text{C}$  /  $^{16}\text{C}$  /  $^{17}\text{C}$  /  $^{18}\text{C}$  /  $^{13}\text{N}$  /  $^{14}\text{N}$  /  $^{15}\text{N}$  /  
 $^{16}\text{N}$  /  $^{17}\text{N}$  /  $^{18}\text{N}$  /  $^{19}\text{N}$  /  $^{20}\text{N}$  /  $^{21}\text{N}$  /  $^{15}\text{O}$  /  $^{16}\text{O}$  /  $^{17}\text{O}$  /  $^{18}\text{O}$  /  $^{19}\text{O}$  /  
 $^{20}\text{O}$  /  $^{21}\text{O}$  /  $^{22}\text{O}$  /  $^{23}\text{O}$  /  $^{24}\text{O}$  /  $^{17}\text{F}$  /  $^{18}\text{F}$  /  $^{19}\text{F}$  /  $^{20}\text{F}$  /  $^{21}\text{F}$  /  $^{22}\text{F}$  /  $^{23}\text{F}$   
/  $^{24}\text{F}$  /  $^{25}\text{F}$  /  $^{26}\text{F}$  /  $^{27}\text{F}$  /  $^{19}\text{Ne}$  /  $^{20}\text{Ne}$  /  $^{21}\text{Ne}$  /  $^{22}\text{Ne}$  /  $^{23}\text{Ne}$  /  $^{24}\text{Ne}$  /  
 $^{25}\text{Ne}$  /  $^{26}\text{Ne}$  /  $^{27}\text{Ne}$  /  $^{28}\text{Ne}$  /  $^{29}\text{Ne}$  /  $^{21}\text{Na}$  /  $^{22}\text{Na}$  /  $^{23}\text{Na}$  /  $^{24}\text{Na}$  /  $^{25}\text{Na}$   
/  $^{26}\text{Na}$  /  $^{27}\text{Na}$  /  $^{28}\text{Na}$  /  $^{29}\text{Na}$  /  $^{30}\text{Na}$  /  $^{31}\text{Na}$  /  $^{32}\text{Na}$  /  $^{23}\text{Mg}$  /  $^{24}\text{Mg}$  /  
 $^{25}\text{Mg}$  /  $^{26}\text{Mg}$  /  $^{27}\text{Mg}$  /  $^{28}\text{Mg}$  /  $^{29}\text{Mg}$  /  $^{30}\text{Mg}$  /  $^{31}\text{Mg}$  /  $^{32}\text{Mg}$  /  $^{33}\text{Mg}$  /  
 $^{34}\text{Mg}$  /  $^{25}\text{Al}$  /  $^{26}\text{Al}$  /  $^{27}\text{Al}$  /  $^{28}\text{Al}$  /  $^{29}\text{Al}$  /  $^{30}\text{Al}$  /  $^{31}\text{Al}$  /  $^{32}\text{Al}$  /  $^{33}\text{Al}$  /  
 $^{34}\text{Al}$  /  $^{35}\text{Al}$  /  $^{36}\text{Al}$  /  $^{27}\text{Si}$  /  $^{28}\text{Si}$  /  $^{29}\text{Si}$  /  $^{30}\text{Si}$  /  $^{31}\text{Si}$  /  $^{32}\text{Si}$  /  $^{33}\text{Si}$  /  $^{34}\text{Si}$  /  
 $^{35}\text{Si}$  /  $^{36}\text{Si}$  /  $^{37}\text{Si}$  /  $^{38}\text{Si}$  /  $^{29}\text{P}$  /  $^{30}\text{P}$  /  $^{31}\text{P}$  /  $^{32}\text{P}$  /  $^{33}\text{P}$  /  $^{34}\text{P}$  /  $^{35}\text{P}$  /  
 $^{36}\text{P}$  /  $^{37}\text{P}$  /  $^{38}\text{P}$  /  $^{39}\text{P}$  /  $^{33}\text{S}$  /  $^{34}\text{S}$  /  $^{35}\text{S}$  /  $^{36}\text{S}$  /  $^{37}\text{S}$  /  $^{38}\text{S}$  /  $^{36}\text{Cl}$  /  $^{37}\text{Cl}$   
/  $^{38}\text{Cl}$  /  $^{39}\text{Cl}$  /  $^{39}\text{Ar}$ , E=100 MeV / nucleon;  $^{181}\text{Ta}(^{40}\text{Ar}, \text{X})^6\text{Li}$  /  $^7\text{Li}$  /  
 $^8\text{Li}$  /  $^9\text{Be}$  /  $^{10}\text{Be}$  /  $^{11}\text{Be}$  /  $^{10}\text{B}$  /  $^{11}\text{B}$  /  $^{12}\text{B}$  /  $^{13}\text{B}$  /  $^{14}\text{B}$  /  $^{11}\text{C}$  /  $^{12}\text{C}$  /  
 $^{13}\text{C}$  /  $^{14}\text{C}$  /  $^{15}\text{C}$  /  $^{16}\text{C}$  /  $^{17}\text{C}$  /  $^{13}\text{N}$  /  $^{14}\text{N}$  /  $^{15}\text{N}$  /  $^{16}\text{N}$  /  $^{17}\text{N}$  /  $^{18}\text{N}$  /  
 $^{19}\text{N}$  /  $^{15}\text{O}$  /  $^{16}\text{O}$  /  $^{17}\text{O}$  /  $^{18}\text{O}$  /  $^{19}\text{O}$  /  $^{20}\text{O}$  /  $^{21}\text{O}$  /  $^{17}\text{F}$  /  $^{18}\text{F}$  /  $^{19}\text{F}$  /  
 $^{20}\text{F}$  /  $^{21}\text{F}$  /  $^{22}\text{F}$  /  $^{23}\text{F}$  /  $^{24}\text{F}$  /  $^{19}\text{Ne}$  /  $^{20}\text{Ne}$  /  $^{21}\text{Ne}$  /  $^{22}\text{Ne}$  /  $^{23}\text{Ne}$  /  $^{24}\text{Ne}$   
/  $^{25}\text{Ne}$  /  $^{26}\text{Ne}$  /  $^{27}\text{Ne}$  /  $^{21}\text{Na}$  /  $^{22}\text{Na}$  /  $^{23}\text{Na}$  /  $^{24}\text{Na}$  /  $^{25}\text{Na}$  /  $^{26}\text{Na}$  /  
 $^{27}\text{Na}$  /  $^{28}\text{Na}$  /  $^{29}\text{Na}$  /  $^{23}\text{Mg}$  /  $^{24}\text{Mg}$  /  $^{25}\text{Mg}$  /  $^{26}\text{Mg}$  /  $^{27}\text{Mg}$  /  $^{28}\text{Mg}$  /  
 $^{29}\text{Mg}$  /  $^{30}\text{Mg}$  /  $^{31}\text{Mg}$  /  $^{24}$  /  $^{25}\text{Al}$  /  $^{26}\text{Al}$  /  $^{27}\text{Al}$  /  $^{28}\text{Al}$  /  $^{29}\text{Al}$  /  $^{30}\text{Al}$  /  
 $^{31}\text{Al}$  /  $^{32}\text{Al}$  /  $^{33}\text{Al}$  /  $^{34}\text{Al}$  /  $^{26}\text{Si}$  /  $^{27}\text{Si}$  /  $^{28}\text{Si}$  /  $^{29}\text{Si}$  /  $^{30}\text{Si}$  /  $^{31}\text{Si}$  /  $^{32}\text{Si}$   
/  $^{33}\text{Si}$  /  $^{34}\text{Si}$  /  $^{29}\text{P}$  /  $^{30}\text{P}$  /  $^{31}\text{P}$  /  $^{32}\text{P}$  /  $^{33}\text{P}$  /  $^{34}\text{P}$  /  $^{35}\text{P}$  /  $^{36}\text{P}$  /  $^{30}\text{S}$  /  
 $^{31}\text{S}$  /  $^{32}\text{S}$  /  $^{33}\text{S}$  /  $^{34}\text{S}$  /  $^{35}\text{S}$  /  $^{36}\text{S}$  /  $^{37}\text{S}$  /  $^{33}\text{Cl}$  /  $^{34}\text{Cl}$  /  $^{35}\text{Cl}$  /  $^{36}\text{Cl}$  /  
 $^{37}\text{Cl}$  /  $^{35}\text{Ar}$  /  $^{36}\text{Ar}$  /  $^{37}\text{Ar}$  /  $^{38}\text{Ar}$  /  $^{39}\text{Ar}$  /  $^{37}\text{K}$  /  $^{38}\text{K}$  /  $^{39}\text{K}$  /  $^{40}\text{K}$ ,  
E=100 MeV / nucleon; measured momentum distribution, production  
cross sections. RIKEN. JOUR PRVCA 76 044605

## A=35 (continued)

- <sup>35</sup>Si      2007N013      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- <sup>35</sup>P      2007H008      NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>36</sup>S, X)<sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P, E=215 MeV; measured particle yields, E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin. <sup>37</sup>P deduced levels, J,  $\pi$ , configurations. Clara array. JOUR PRVCA 75 034313

## A=35 (continued)

2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}, E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$



## A=35 (continued)

- <sup>35</sup>S      2007N013      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- <sup>35</sup>Cl      2007DE14      NUCLEAR REACTIONS <sup>24</sup>Mg(<sup>16</sup>O, n $\alpha$ ), (<sup>16</sup>O, p $\alpha$ ), E=70 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, (charged particle) $\gamma$ -coin. <sup>35</sup>Ar, <sup>35</sup>Cl deduced high-spin levels, J,  $\pi$ , configurations, analog states, spin-orbit interaction effects, isospin symmetry features. GASP, ISIS arrays. JOUR PRVCA 75 034317
- 2007KS01      NUCLEAR REACTIONS <sup>12</sup>C(<sup>28</sup>Si, p $\alpha$ ), E=70, 88 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, DSA. <sup>35</sup>Cl deduced levels J,  $\pi$ ,  $\delta$ , T<sub>1/2</sub>. INGA array, shell model calculations. JOUR NUPAB 781 277
- 2007LEZZ      NUCLEAR REACTIONS <sup>24</sup>Mg(<sup>16</sup>O, p $\alpha$ ), <sup>24</sup>Mg(<sup>16</sup>O, n $\alpha$ ), E=70 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, (charged particle) $\gamma$ -coinc. <sup>35</sup>Cl, <sup>35</sup>Ar deduced high-spin levels and isospin mixing. CONF Iguazu(Nuclear Physics and Applications) Proc,P135,Lenzi
- <sup>35</sup>Ar      2007DE14      NUCLEAR REACTIONS <sup>24</sup>Mg(<sup>16</sup>O, n $\alpha$ ), (<sup>16</sup>O, p $\alpha$ ), E=70 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, (charged particle) $\gamma$ -coin. <sup>35</sup>Ar, <sup>35</sup>Cl deduced high-spin levels, J,  $\pi$ , configurations, analog states, spin-orbit interaction effects, isospin symmetry features. GASP, ISIS arrays. JOUR PRVCA 75 034317

**A=35 (continued)**

- 2007D017 RADIOACTIVITY  $^{36,37}\text{Ca}$ ,  $^{39,40,41}\text{Ti}$ ,  $^{43}\text{V}$ ,  $^{42,43,44,45}\text{Cr}$ ,  $^{46,47}\text{Mn}$ ,  $^{46,47,48,49}\text{Fe}$ ,  $^{50,51}\text{Co}$ ,  $^{49,50,51,52,53}\text{Ni}$ ,  $^{55}\text{Cu}$ ,  $^{55,56}\text{Zn}(\beta^+)$ , (EC),  $(\beta^+p)$  [from Ni( $^{58}\text{Ni}$ , X)]; measured  $T_{1/2}$ ,  $\beta$ -delayed proton and  $\gamma$  spectra, branching ratios.  $^{43,45}\text{Cr}$ ,  $^{46}\text{Mn}$ ,  $^{46,47,48}\text{Fe}$ ,  $^{50}\text{Co}$ ,  $^{50,51,52,53}\text{Ni}$  deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18
- 2007LEZZ NUCLEAR REACTIONS  $^{24}\text{Mg}(^{16}\text{O}, p\alpha)$ ,  $^{24}\text{Mg}(^{16}\text{O}, n\alpha)$ ,  $E=70$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -, (charged particle) $\gamma$ -coinc.  $^{35}\text{Cl}$ ,  $^{35}\text{Ar}$  deduced high-spin levels and isospin mixing. CONF Iguazu(Nuclear Physics and Applications) Proc,P135,Lenzi
- $^{35}\text{K}$  2007YA08 ATOMIC MASSES  $^{35,36,37,38,43,44,45,56}\text{K}$ ; measured masses using ISOLTRAP. Discussed implications on IMME. JOUR PRVCA 76 024308
- 2007YAZX ATOMIC MASSES  $^{35,36,37,38,43,44,45,46}\text{K}$ ; measured masses using the ISOLTRAP mass spectrometer. PREPRINT arXiv:0707.3201v1 [nucl-ex]

**A=36**

- $^{36}\text{Mg}$  2007GA34 NUCLEAR REACTIONS  $^9\text{Be}(^{38}\text{Si}, ^{36}\text{Mg})$ ,  $E=83$  MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$ .  $^{36}\text{Mg}$  deduced level energy. Compared results to model calculations. JOUR PRLTA 99 072502
- 2007JU03 ATOMIC MASSES  $^{23}\text{N}$ ,  $^{23,24}\text{O}$ ,  $^{25,26,27}\text{F}$ ,  $^{27,28,29,30,31}\text{Ne}$ ,  $^{31,32,33}\text{Na}$ ,  $^{34,35,36}\text{Mg}$ ,  $^{34,35,36,37,38,39}\text{Al}$ ,  $^{36,37,38,39,40,41,42}\text{Si}$ ,  $^{40,41,42,43,44}\text{P}$ ,  $^{40,43,44,45}\text{S}$ ,  $^{43,45,46,47}\text{Cl}$ ; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43
- 2007TA15 NUCLEAR REACTIONS  $^{184}\text{W}$ ,  $^9\text{Be}(^{48}\text{Ca}, X)^{36}\text{Mg} / ^{37}\text{Mg} / ^{38}\text{Mg} / ^{41}\text{Si} / ^{42}\text{Si} / ^{43}\text{Si} / ^{44}\text{Si}$ ,  $E=142$  MeV / nucleon; measured production cross sections. Compared results to model calculations. JOUR PRVCA 75 064613
- 2007TAZZ NUCLEAR REACTIONS  $\text{Be}$ ,  $\text{W}(^{48}\text{Ca}, X)^{36}\text{Mg} / ^{37}\text{Mg} / ^{38}\text{Mg} / ^{41}\text{Si} / ^{42}\text{Si} / ^{43}\text{Si} / ^{44}\text{Si}$ ,  $E=142$  MeV / nucleon; measured production  $\sigma$ . PREPRINT arXiv:0705.0349v1 [nucl-ex]
- $^{36}\text{Al}$  2007JU03 ATOMIC MASSES  $^{23}\text{N}$ ,  $^{23,24}\text{O}$ ,  $^{25,26,27}\text{F}$ ,  $^{27,28,29,30,31}\text{Ne}$ ,  $^{31,32,33}\text{Na}$ ,  $^{34,35,36}\text{Mg}$ ,  $^{34,35,36,37,38,39}\text{Al}$ ,  $^{36,37,38,39,40,41,42}\text{Si}$ ,  $^{40,41,42,43,44}\text{P}$ ,  $^{40,43,44,45}\text{S}$ ,  $^{43,45,46,47}\text{Cl}$ ; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43

## A=36 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- ${}^{36}\text{Si}$  2007CA35 NUCLEAR REACTIONS  ${}^1\text{H}({}^{36}\text{Si}, {}^{36}\text{Si}')$ , E < 140 MeV / nucleon;  ${}^1\text{H}({}^{38}\text{Si}, {}^{38}\text{Si}')$ , E < 140 MeV / nucleon;  ${}^1\text{H}({}^{40}\text{Si}, {}^{40}\text{Si}')$ , E < 140 MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$ , (particle) $\gamma$ -coinc, inelastic proton scattering cross sections.  ${}^{36,38,40}\text{Si}$  deduced quadrupole deformation parameters. JOUR PYLBB 652 169
- 2007JU03 ATOMIC MASSES  ${}^{23}\text{N}$ ,  ${}^{23,24}\text{O}$ ,  ${}^{25,26,27}\text{F}$ ,  ${}^{27,28,29,30,31}\text{Ne}$ ,  ${}^{31,32,33}\text{Na}$ ,  ${}^{34,35,36}\text{Mg}$ ,  ${}^{34,35,36,37,38,39}\text{Al}$ ,  ${}^{36,37,38,39,40,41,42}\text{Si}$ ,  ${}^{40,41,42,43,44}\text{P}$ ,  ${}^{40,43,44,45}\text{S}$ ,  ${}^{43,45,46,47}\text{Cl}$ ; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43

## A=36 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}, E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$
- ${}^{36}\text{P}$  2007H008 NUCLEAR REACTIONS  ${}^{208}\text{Pb}({}^{36}\text{S}, \text{X}){}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P}$ , E=215 MeV; measured particle yields,  $E\gamma$ ,  $I\gamma$ , (particle) $\gamma$ -coin.  ${}^{37}\text{P}$  deduced levels, J,  $\pi$ , configurations. Clara array. JOUR PRVCA 75 034313

## A=36 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- ${}^{36}\text{S}$  2007DE15 NUCLEAR REACTIONS  ${}^{36}\text{Cl}(\text{n}, \text{p})$ ,  $(\text{n}, \alpha)$ , E=0.5-250 keV; measured  $\sigma$ ; deduced resonance parameters, Maxwellian-averaged cross section. Astrophysical implications discussed. JOUR PRVCA 75 034617

## A=36 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- ${}^{36}\text{Cl}$  2007AZ01 NUCLEAR REACTIONS Cl, K, Ca(n, X) ${}^{36}\text{Cl}$ , E  $\leq$  500 MeV; measured neutron-induced production rates of  ${}^{36}\text{Cl}$  using accelerator mass spectrometry. JOUR JRNCD 272 491

## A=36 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}, E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$
- ${}^{36}\text{Ar}$  2007D017 RADIOACTIVITY  ${}^{36,37}\text{Ca}$ ,  ${}^{39,40,41}\text{Ti}$ ,  ${}^{43}\text{V}$ ,  ${}^{42,43,44,45}\text{Cr}$ ,  ${}^{46,47}\text{Mn}$ ,  ${}^{46,47,48,49}\text{Fe}$ ,  ${}^{50,51}\text{Co}$ ,  ${}^{49,50,51,52,53}\text{Ni}$ ,  ${}^{55}\text{Cu}$ ,  ${}^{55,56}\text{Zn}(\beta^+)$ , (EC),  $(\beta^+p)$  [from  $\text{Ni}({}^{58}\text{Ni}, \text{X})$ ]; measured  $T_{1/2}$ ,  $\beta$ -delayed proton and  $\gamma$  spectra, branching ratios.  ${}^{43,45}\text{Cr}$ ,  ${}^{46}\text{Mn}$ ,  ${}^{46,47,48}\text{Fe}$ ,  ${}^{50}\text{Co}$ ,  ${}^{50,51,52,53}\text{Ni}$  deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18
- 2007FA17 NUCLEAR REACTIONS  ${}^{40}\text{Ca}({}^{40}\text{Ca}, \text{X}){}^{39}\text{K} / {}^{38}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Cl}$ , E=50 MeV / nucleon; measured  $E_p$ ,  $E_\alpha$ , missing energy spectra.  ${}^{40}\text{Ca}$  deduced two-, three-phonon giant resonance states. JOUR NUPAB 788 106c
- ${}^{36}\text{K}$  2007D017 RADIOACTIVITY  ${}^{36,37}\text{Ca}$ ,  ${}^{39,40,41}\text{Ti}$ ,  ${}^{43}\text{V}$ ,  ${}^{42,43,44,45}\text{Cr}$ ,  ${}^{46,47}\text{Mn}$ ,  ${}^{46,47,48,49}\text{Fe}$ ,  ${}^{50,51}\text{Co}$ ,  ${}^{49,50,51,52,53}\text{Ni}$ ,  ${}^{55}\text{Cu}$ ,  ${}^{55,56}\text{Zn}(\beta^+)$ , (EC),  $(\beta^+p)$  [from  $\text{Ni}({}^{58}\text{Ni}, \text{X})$ ]; measured  $T_{1/2}$ ,  $\beta$ -delayed proton and  $\gamma$  spectra, branching ratios.  ${}^{43,45}\text{Cr}$ ,  ${}^{46}\text{Mn}$ ,  ${}^{46,47,48}\text{Fe}$ ,  ${}^{50}\text{Co}$ ,  ${}^{50,51,52,53}\text{Ni}$  deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18
- 2007YA08 ATOMIC MASSES  ${}^{35,36,37,38,43,44,45,56}\text{K}$ ; measured masses using ISOLTRAP. Discussed implications on IMME. JOUR PRVCA 76 024308
- 2007YAZX ATOMIC MASSES  ${}^{35,36,37,38,43,44,45,46}\text{K}$ ; measured masses using the ISOLTRAP mass spectrometer. PREPRINT arXiv:0707.3201v1 [nucl-ex]

KEYNUMBERS AND KEYWORDS

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**A=36 (continued)**

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| $^{36}\text{Ca}$ | 2006D0ZV | NUCLEAR REACTIONS $^9\text{Be}(^{37}\text{Ca}, ^{36}\text{CaX})$ , E=196 MeV / nucleon; measured $E_\gamma$ , $I_\gamma$ , (particle) $\gamma$ -coin. $^{36}\text{Ca}$ deduced excited state energy. REPT GSI 2006-1,P145,Doornebal  |
|                  | 2007BU15 | NUCLEAR REACTIONS $\text{C}(^{40}\text{Ca}, \text{X})^{36}\text{Ca} / ^{32}\text{Ar} / ^{28}\text{S}$ , E=95 MeV / nucleon; measured $E_\gamma$ , $I_\gamma$ . Deduced level energies. JOUR APOBB 38 1353  |
|                  | 2007D011 | NUCLEAR REACTIONS $^9\text{Be}(^{37}\text{Ca}, \text{X})^{36}\text{Ca}$ , E=196 MeV / nucleon; measured $E_\gamma$ , $I_\gamma$ , (particle) $\gamma$ -coin. $^{36}\text{Ca}$ deduced excited state energy, mirror energy differences. Fragment separator, shell-model calculations. JOUR PYLBB 647 237  |
|                  | 2007D017 | RADIOACTIVITY $^{36,37}\text{Ca}$ , $^{39,40,41}\text{Ti}$ , $^{43}\text{V}$ , $^{42,43,44,45}\text{Cr}$ , $^{46,47}\text{Mn}$ , $^{46,47,48,49}\text{Fe}$ , $^{50,51}\text{Co}$ , $^{49,50,51,52,53}\text{Ni}$ , $^{55}\text{Cu}$ , $^{55,56}\text{Zn}(\beta^+)$ , (EC), ( $\beta^+\text{p}$ ) [from $\text{Ni}(^{58}\text{Ni}, \text{X})$ ]; measured $T_{1/2}$ , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. $^{43,45}\text{Cr}$ , $^{46}\text{Mn}$ , $^{46,47,48}\text{Fe}$ , $^{50}\text{Co}$ , $^{50,51,52,53}\text{Ni}$ deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18 |

**A=37**

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|------------------|----------|---|
| $^{37}\text{Mg}$ | 2007TA15 | NUCLEAR REACTIONS $^{184}\text{W}$ , $^9\text{Be}(^{48}\text{Ca}, \text{X})^{36}\text{Mg} / ^{37}\text{Mg} / ^{38}\text{Mg} / ^{41}\text{Si} / ^{42}\text{Si} / ^{43}\text{Si} / ^{44}\text{Si}$ , E=142 MeV / nucleon; measured production cross sections. Compared results to model calculations. JOUR PRVCA 75 064613  |
|                  | 2007TAZZ | NUCLEAR REACTIONS $\text{Be}$ , $\text{W}(^{48}\text{Ca}, \text{X})^{36}\text{Mg} / ^{37}\text{Mg} / ^{38}\text{Mg} / ^{41}\text{Si} / ^{42}\text{Si} / ^{43}\text{Si} / ^{44}\text{Si}$ , E=142 MeV / nucleon; measured production $\sigma$ . PREPRINT arXiv:0705.0349v1 [nucl-ex]   |
| $^{37}\text{Al}$ | 2007JU03 | ATOMIC MASSES $^{23}\text{N}$ , $^{23,24}\text{O}$ , $^{25,26,27}\text{F}$ , $^{27,28,29,30,31}\text{Ne}$ , $^{31,32,33}\text{Na}$ , $^{34,35,36}\text{Mg}$ , $^{34,35,36,37,38,39}\text{Al}$ , $^{36,37,38,39,40,41,42}\text{Si}$ , $^{40,41,42,43,44}\text{P}$ , $^{40,43,44,45}\text{S}$ , $^{43,45,46,47}\text{Cl}$ ; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43 |
| $^{37}\text{Si}$ | 2007JU03 | ATOMIC MASSES $^{23}\text{N}$ , $^{23,24}\text{O}$ , $^{25,26,27}\text{F}$ , $^{27,28,29,30,31}\text{Ne}$ , $^{31,32,33}\text{Na}$ , $^{34,35,36}\text{Mg}$ , $^{34,35,36,37,38,39}\text{Al}$ , $^{36,37,38,39,40,41,42}\text{Si}$ , $^{40,41,42,43,44}\text{P}$ , $^{40,43,44,45}\text{S}$ , $^{43,45,46,47}\text{Cl}$ ; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43 |



## A=37 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}, E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$
- ${}^{37}\text{P}$  2007H008 NUCLEAR REACTIONS  ${}^{208}\text{Pb}({}^{36}\text{S}, \text{X}){}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P}$ , E=215 MeV; measured particle yields,  $E\gamma$ ,  $I\gamma$ , (particle) $\gamma$ -coin.  ${}^{37}\text{P}$  deduced levels, J,  $\pi$ , configurations. Clara array. JOUR PRVCA 75 034313

## A=37 (continued)

2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}, E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$

## A=37 (continued)

- <sup>37</sup>S      2007N013      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- <sup>37</sup>Cl      2007FA17      NUCLEAR REACTIONS <sup>40</sup>Ca(<sup>40</sup>Ca, X)<sup>39</sup>K / <sup>38</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Cl, E=50 MeV / nucleon; measured Ep, E $\alpha$ , missing energy spectra. <sup>40</sup>Ca deduced two-, three-phonon giant resonance states. JOUR NUPAB 788 106c

## A=37 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}, E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$
- ${}^{37}\text{K}$  2007D017 RADIOACTIVITY  ${}^{36,37}\text{Ca}$ ,  ${}^{39,40,41}\text{Ti}$ ,  ${}^{43}\text{V}$ ,  ${}^{42,43,44,45}\text{Cr}$ ,  ${}^{46,47}\text{Mn}$ ,  ${}^{46,47,48,49}\text{Fe}$ ,  ${}^{50,51}\text{Co}$ ,  ${}^{49,50,51,52,53}\text{Ni}$ ,  ${}^{55}\text{Cu}$ ,  ${}^{55,56}\text{Zn}(\beta^+)$ , (EC),  $(\beta^+p)$  [from  $\text{Ni}({}^{58}\text{Ni}, \text{X})$ ]; measured  $T_{1/2}$ ,  $\beta$ -delayed proton and  $\gamma$  spectra, branching ratios.  ${}^{43,45}\text{Cr}$ ,  ${}^{46}\text{Mn}$ ,  ${}^{46,47,48}\text{Fe}$ ,  ${}^{50}\text{Co}$ ,  ${}^{50,51,52,53}\text{Ni}$  deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18
- 2007VI11 NUCLEAR REACTIONS  ${}^{12}\text{C}({}^{48}\text{Ca}, \text{X}){}^8\text{Li} / {}^9\text{Li} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{29}\text{Al} / {}^{37}\text{K} / {}^{47}\text{K}$ , E=60 MeV / nucleon; measured yield. JOUR NUPAB 787 126c
- 2007YA08 ATOMIC MASSES  ${}^{35,36,37,38,43,44,45,56}\text{K}$ ; measured masses using ISOLTRAP. Discussed implications on IMME. JOUR PRVCA 76 024308
- 2007YAZX ATOMIC MASSES  ${}^{35,36,37,38,43,44,45,46}\text{K}$ ; measured masses using the ISOLTRAP mass spectrometer. PREPRINT arXiv:0707.3201v1 [nucl-ex]
- ${}^{37}\text{Ca}$  2007D017 RADIOACTIVITY  ${}^{36,37}\text{Ca}$ ,  ${}^{39,40,41}\text{Ti}$ ,  ${}^{43}\text{V}$ ,  ${}^{42,43,44,45}\text{Cr}$ ,  ${}^{46,47}\text{Mn}$ ,  ${}^{46,47,48,49}\text{Fe}$ ,  ${}^{50,51}\text{Co}$ ,  ${}^{49,50,51,52,53}\text{Ni}$ ,  ${}^{55}\text{Cu}$ ,  ${}^{55,56}\text{Zn}(\beta^+)$ , (EC),  $(\beta^+p)$  [from  $\text{Ni}({}^{58}\text{Ni}, \text{X})$ ]; measured  $T_{1/2}$ ,  $\beta$ -delayed proton and  $\gamma$  spectra, branching ratios.  ${}^{43,45}\text{Cr}$ ,  ${}^{46}\text{Mn}$ ,  ${}^{46,47,48}\text{Fe}$ ,  ${}^{50}\text{Co}$ ,  ${}^{50,51,52,53}\text{Ni}$  deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18

**A=37 (continued)**

2007RI08 ATOMIC MASSES  $^{37,38}\text{Ca}$ ; measured masses using penning trap mass spectrometer. Deduced mass excess and implications on CVC and IMME. JOUR PRVCA 75 055503

**A=38**

$^{38}\text{Mg}$  2007TA15 NUCLEAR REACTIONS  $^{184}\text{W}$ ,  $^9\text{Be}(^{48}\text{Ca}, \text{X})^{36}\text{Mg} / ^{37}\text{Mg} / ^{38}\text{Mg} / ^{41}\text{Si} / ^{42}\text{Si} / ^{43}\text{Si} / ^{44}\text{Si}$ ,  $E=142$  MeV / nucleon; measured production cross sections. Compared results to model calculations. JOUR PRVCA 75 064613

2007TAZZ NUCLEAR REACTIONS  $\text{Be}$ ,  $\text{W}(^{48}\text{Ca}, \text{X})^{36}\text{Mg} / ^{37}\text{Mg} / ^{38}\text{Mg} / ^{41}\text{Si} / ^{42}\text{Si} / ^{43}\text{Si} / ^{44}\text{Si}$ ,  $E=142$  MeV / nucleon; measured production  $\sigma$ . PREPRINT arXiv:0705.0349v1 [nucl-ex]

$^{38}\text{Al}$  2007JU03 ATOMIC MASSES  $^{23}\text{N}$ ,  $^{23,24}\text{O}$ ,  $^{25,26,27}\text{F}$ ,  $^{27,28,29,30,31}\text{Ne}$ ,  $^{31,32,33}\text{Na}$ ,  $^{34,35,36}\text{Mg}$ ,  $^{34,35,36,37,38,39}\text{Al}$ ,  $^{36,37,38,39,40,41,42}\text{Si}$ ,  $^{40,41,42,43,44}\text{P}$ ,  $^{40,43,44,45}\text{S}$ ,  $^{43,45,46,47}\text{Cl}$ ; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43

$^{38}\text{Si}$  2007CA35 NUCLEAR REACTIONS  $^1\text{H}(^{36}\text{Si}, ^{36}\text{Si}')$ ,  $E < 140$  MeV / nucleon;  $^1\text{H}(^{38}\text{Si}, ^{38}\text{Si}')$ ,  $E < 140$  MeV / nucleon;  $^1\text{H}(^{40}\text{Si}, ^{40}\text{Si}')$ ,  $E < 140$  MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$ , (particle) $\gamma$ -coinc, inelastic proton scattering cross sections.  $^{36,38,40}\text{Si}$  deduced quadrupole deformation parameters. JOUR PYLBB 652 169

2007JU03 ATOMIC MASSES  $^{23}\text{N}$ ,  $^{23,24}\text{O}$ ,  $^{25,26,27}\text{F}$ ,  $^{27,28,29,30,31}\text{Ne}$ ,  $^{31,32,33}\text{Na}$ ,  $^{34,35,36}\text{Mg}$ ,  $^{34,35,36,37,38,39}\text{Al}$ ,  $^{36,37,38,39,40,41,42}\text{Si}$ ,  $^{40,41,42,43,44}\text{P}$ ,  $^{40,43,44,45}\text{S}$ ,  $^{43,45,46,47}\text{Cl}$ ; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43

## A=38 (continued)

2007N013 NUCLEAR REACTIONS  $^9\text{Be}(^{40}\text{Ar}, \text{X})^6\text{Li} / ^7\text{Li} / ^8\text{Li} / ^9\text{Li} / ^7\text{Be} / ^8\text{Be} / ^9\text{Be} / ^{10}\text{Be} / ^{11}\text{Be} / ^{12}\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{B} / ^{13}\text{B} / ^{14}\text{B} / ^{15}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{15}\text{C} / ^{16}\text{C} / ^{17}\text{C} / ^{18}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{N} / ^{17}\text{N} / ^{18}\text{N} / ^{19}\text{N} / ^{20}\text{N} / ^{21}\text{N} / ^{15}\text{O} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O} / ^{19}\text{O} / ^{20}\text{O} / ^{21}\text{O} / ^{22}\text{O} / ^{23}\text{O} / ^{24}\text{O} / ^{17}\text{F} / ^{18}\text{F} / ^{19}\text{F} / ^{20}\text{F} / ^{21}\text{F} / ^{22}\text{F} / ^{23}\text{F} / ^{24}\text{F} / ^{25}\text{F} / ^{26}\text{F} / ^{27}\text{F} / ^{19}\text{Ne} / ^{20}\text{Ne} / ^{21}\text{Ne} / ^{22}\text{Ne} / ^{23}\text{Ne} / ^{24}\text{Ne} / ^{25}\text{Ne} / ^{26}\text{Ne} / ^{27}\text{Ne} / ^{28}\text{Ne} / ^{29}\text{Ne} / ^{21}\text{Na} / ^{22}\text{Na} / ^{23}\text{Na} / ^{24}\text{Na} / ^{25}\text{Na} / ^{26}\text{Na} / ^{27}\text{Na} / ^{28}\text{Na} / ^{29}\text{Na} / ^{30}\text{Na} / ^{31}\text{Na} / ^{32}\text{Na} / ^{23}\text{Mg} / ^{24}\text{Mg} / ^{25}\text{Mg} / ^{26}\text{Mg} / ^{27}\text{Mg} / ^{28}\text{Mg} / ^{29}\text{Mg} / ^{30}\text{Mg} / ^{31}\text{Mg} / ^{32}\text{Mg} / ^{33}\text{Mg} / ^{34}\text{Mg} / ^{25}\text{Al} / ^{26}\text{Al} / ^{27}\text{Al} / ^{28}\text{Al} / ^{29}\text{Al} / ^{30}\text{Al} / ^{31}\text{Al} / ^{32}\text{Al} / ^{33}\text{Al} / ^{34}\text{Al} / ^{35}\text{Al} / ^{36}\text{Al} / ^{27}\text{Si} / ^{28}\text{Si} / ^{29}\text{Si} / ^{30}\text{Si} / ^{31}\text{Si} / ^{32}\text{Si} / ^{33}\text{Si} / ^{34}\text{Si} / ^{35}\text{Si} / ^{36}\text{Si} / ^{37}\text{Si} / ^{38}\text{Si} / ^{29}\text{P} / ^{30}\text{P} / ^{31}\text{P} / ^{32}\text{P} / ^{33}\text{P} / ^{34}\text{P} / ^{35}\text{P} / ^{36}\text{P} / ^{37}\text{P} / ^{38}\text{P} / ^{39}\text{P} / ^{33}\text{S} / ^{34}\text{S} / ^{35}\text{S} / ^{36}\text{S} / ^{37}\text{S} / ^{38}\text{S} / ^{36}\text{Cl} / ^{37}\text{Cl} / ^{38}\text{Cl} / ^{39}\text{Cl} / ^{39}\text{Ar}, E=100 MeV / nucleon;  $^{181}\text{Ta}(^{40}\text{Ar}, \text{X})^6\text{Li} / ^7\text{Li} / ^8\text{Li} / ^9\text{Be} / ^{10}\text{Be} / ^{11}\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{B} / ^{13}\text{B} / ^{14}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{15}\text{C} / ^{16}\text{C} / ^{17}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{N} / ^{17}\text{N} / ^{18}\text{N} / ^{19}\text{N} / ^{15}\text{O} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O} / ^{19}\text{O} / ^{20}\text{O} / ^{21}\text{O} / ^{17}\text{F} / ^{18}\text{F} / ^{19}\text{F} / ^{20}\text{F} / ^{21}\text{F} / ^{22}\text{F} / ^{23}\text{F} / ^{24}\text{F} / ^{19}\text{Ne} / ^{20}\text{Ne} / ^{21}\text{Ne} / ^{22}\text{Ne} / ^{23}\text{Ne} / ^{24}\text{Ne} / ^{25}\text{Ne} / ^{26}\text{Ne} / ^{27}\text{Ne} / ^{21}\text{Na} / ^{22}\text{Na} / ^{23}\text{Na} / ^{24}\text{Na} / ^{25}\text{Na} / ^{26}\text{Na} / ^{27}\text{Na} / ^{28}\text{Na} / ^{29}\text{Na} / ^{23}\text{Mg} / ^{24}\text{Mg} / ^{25}\text{Mg} / ^{26}\text{Mg} / ^{27}\text{Mg} / ^{28}\text{Mg} / ^{29}\text{Mg} / ^{30}\text{Mg} / ^{31}\text{Mg} / ^{24} / ^{25}\text{Al} / ^{26}\text{Al} / ^{27}\text{Al} / ^{28}\text{Al} / ^{29}\text{Al} / ^{30}\text{Al} / ^{31}\text{Al} / ^{32}\text{Al} / ^{33}\text{Al} / ^{34}\text{Al} / ^{26}\text{Si} / ^{27}\text{Si} / ^{28}\text{Si} / ^{29}\text{Si} / ^{30}\text{Si} / ^{31}\text{Si} / ^{32}\text{Si} / ^{33}\text{Si} / ^{34}\text{Si} / ^{29}\text{P} / ^{30}\text{P} / ^{31}\text{P} / ^{32}\text{P} / ^{33}\text{P} / ^{34}\text{P} / ^{35}\text{P} / ^{36}\text{P} / ^{30}\text{S} / ^{31}\text{S} / ^{32}\text{S} / ^{33}\text{S} / ^{34}\text{S} / ^{35}\text{S} / ^{36}\text{S} / ^{37}\text{S} / ^{33}\text{Cl} / ^{34}\text{Cl} / ^{35}\text{Cl} / ^{36}\text{Cl} / ^{37}\text{Cl} / ^{35}\text{Ar} / ^{36}\text{Ar} / ^{37}\text{Ar} / ^{38}\text{Ar} / ^{39}\text{Ar} / ^{37}\text{K} / ^{38}\text{K} / ^{39}\text{K} / ^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$

KEYNUMBERS AND KEYWORDS

A=38 (continued)

- <sup>38</sup>P      2007N013      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Li / <sup>7</sup>Be / <sup>8</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>12</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>15</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>18</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>20</sup>N / <sup>21</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>22</sup>O / <sup>23</sup>O / <sup>24</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>25</sup>F / <sup>26</sup>F / <sup>27</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>28</sup>Ne / <sup>29</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>30</sup>Na / <sup>31</sup>Na / <sup>32</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>32</sup>Mg / <sup>33</sup>Mg / <sup>34</sup>Mg / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>35</sup>Al / <sup>36</sup>Al / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>35</sup>Si / <sup>36</sup>Si / <sup>37</sup>Si / <sup>38</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>37</sup>P / <sup>38</sup>P / <sup>39</sup>P / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>38</sup>Cl / <sup>39</sup>Cl / <sup>39</sup>Ar, E=100 MeV / nucleon; <sup>181</sup>Ta(<sup>40</sup>Ar, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>9</sup>Be / <sup>10</sup>Be / <sup>11</sup>Be / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>B / <sup>13</sup>B / <sup>14</sup>B / <sup>11</sup>C / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>15</sup>C / <sup>16</sup>C / <sup>17</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>N / <sup>17</sup>N / <sup>18</sup>N / <sup>19</sup>N / <sup>15</sup>O / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O / <sup>19</sup>O / <sup>20</sup>O / <sup>21</sup>O / <sup>17</sup>F / <sup>18</sup>F / <sup>19</sup>F / <sup>20</sup>F / <sup>21</sup>F / <sup>22</sup>F / <sup>23</sup>F / <sup>24</sup>F / <sup>19</sup>Ne / <sup>20</sup>Ne / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>23</sup>Ne / <sup>24</sup>Ne / <sup>25</sup>Ne / <sup>26</sup>Ne / <sup>27</sup>Ne / <sup>21</sup>Na / <sup>22</sup>Na / <sup>23</sup>Na / <sup>24</sup>Na / <sup>25</sup>Na / <sup>26</sup>Na / <sup>27</sup>Na / <sup>28</sup>Na / <sup>29</sup>Na / <sup>23</sup>Mg / <sup>24</sup>Mg / <sup>25</sup>Mg / <sup>26</sup>Mg / <sup>27</sup>Mg / <sup>28</sup>Mg / <sup>29</sup>Mg / <sup>30</sup>Mg / <sup>31</sup>Mg / <sup>24</sup> / <sup>25</sup>Al / <sup>26</sup>Al / <sup>27</sup>Al / <sup>28</sup>Al / <sup>29</sup>Al / <sup>30</sup>Al / <sup>31</sup>Al / <sup>32</sup>Al / <sup>33</sup>Al / <sup>34</sup>Al / <sup>26</sup>Si / <sup>27</sup>Si / <sup>28</sup>Si / <sup>29</sup>Si / <sup>30</sup>Si / <sup>31</sup>Si / <sup>32</sup>Si / <sup>33</sup>Si / <sup>34</sup>Si / <sup>29</sup>P / <sup>30</sup>P / <sup>31</sup>P / <sup>32</sup>P / <sup>33</sup>P / <sup>34</sup>P / <sup>35</sup>P / <sup>36</sup>P / <sup>30</sup>S / <sup>31</sup>S / <sup>32</sup>S / <sup>33</sup>S / <sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>33</sup>Cl / <sup>34</sup>Cl / <sup>35</sup>Cl / <sup>36</sup>Cl / <sup>37</sup>Cl / <sup>35</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Ar / <sup>38</sup>Ar / <sup>39</sup>Ar / <sup>37</sup>K / <sup>38</sup>K / <sup>39</sup>K / <sup>40</sup>K, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- <sup>38</sup>S      2007KA33      NUCLEAR REACTIONS N, O, Ar(p, X)<sup>7</sup>Be / <sup>11</sup>C / <sup>13</sup>N / <sup>15</sup>O / <sup>18</sup>F / <sup>22</sup>Na / <sup>24</sup>Na / <sup>27</sup>Mg / <sup>29</sup>Al / <sup>38</sup>S / <sup>38</sup>Cl / <sup>39</sup>Cl, E=12 GeV; measured radionuclide yields. JOUR JRNCD 273 507

KEYNUMBERS AND KEYWORDS

A=38 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- 2007O04 NUCLEAR REACTIONS  ${}^1\text{H}({}^{38}\text{S}, \text{p}')$ , E=62 MeV / nucleon; measured  $\sigma(\theta, E^*)$ . JOUR NUPAB 788 266c
- ${}^{38}\text{Cl}$  2007KA33 NUCLEAR REACTIONS N, O, Ar(p, X) ${}^7\text{Be}$  /  ${}^{11}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{18}\text{F}$  /  ${}^{22}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{27}\text{Mg}$  /  ${}^{29}\text{Al}$  /  ${}^{38}\text{S}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$ , E=12 GeV; measured radionuclide yields. JOUR JRNCD 273 507



## A=38 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}, E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$
- ${}^{38}\text{Ar}$  2007DEZR NUCLEAR REACTIONS  ${}^{41}\text{Ca}(\text{n}, \alpha)$ , E=0.6-50 keV; measured cross section and partial widths. CONF Geneva(NIC-IX) 085
- 2007FA17 NUCLEAR REACTIONS  ${}^{40}\text{Ca}({}^{40}\text{Ca}, \text{X}){}^{39}\text{K} / {}^{38}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Cl}$ , E=50 MeV / nucleon; measured  $E_p$ ,  $E_\alpha$ , missing energy spectra.  ${}^{40}\text{Ca}$  deduced two-, three-phonon giant resonance states. JOUR NUPAB 788 106c
- ${}^{38}\text{K}$  2007PR03 NUCLEAR REACTIONS  ${}^{40}\text{Ca}(\text{d}, \alpha)$ , E=4.5 MeV; measured  $E_\gamma$ ,  $I_\gamma$ ,  $\gamma\gamma^-$ ,  $\alpha\gamma$ -coin, DSA.  ${}^{38}\text{K}$  deduced levels, J,  $\pi$ ,  $T_{1/2}$ . JOUR PRVCA 75 014309
- 2007YA08 ATOMIC MASSES  ${}^{35,36,37,38,43,44,45,56}\text{K}$ ; measured masses using ISOLTRAP. Discussed implications on IMME. JOUR PRVCA 76 024308
- 2007YAZX ATOMIC MASSES  ${}^{35,36,37,38,43,44,45,46}\text{K}$ ; measured masses using the ISOLTRAP mass spectrometer. PREPRINT arXiv:0707.3201v1 [nucl-ex]
- ${}^{38}\text{Ca}$  2007D017 RADIOACTIVITY  ${}^{36,37}\text{Ca}$ ,  ${}^{39,40,41}\text{Ti}$ ,  ${}^{43}\text{V}$ ,  ${}^{42,43,44,45}\text{Cr}$ ,  ${}^{46,47}\text{Mn}$ ,  ${}^{46,47,48,49}\text{Fe}$ ,  ${}^{50,51}\text{Co}$ ,  ${}^{49,50,51,52,53}\text{Ni}$ ,  ${}^{55}\text{Cu}$ ,  ${}^{55,56}\text{Zn}(\beta^+)$ , (EC), ( $\beta^+$ p) [from  $\text{Ni}({}^{58}\text{Ni}, \text{X})$ ]; measured  $T_{1/2}$ ,  $\beta$ -delayed proton and  $\gamma$  spectra, branching ratios.  ${}^{43,45}\text{Cr}$ ,  ${}^{46}\text{Mn}$ ,  ${}^{46,47,48}\text{Fe}$ ,  ${}^{50}\text{Co}$ ,  ${}^{50,51,52,53}\text{Ni}$  deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18

KEYNUMBERS AND KEYWORDS

A=38 (continued)

- 2007GE07 ATOMIC MASSES  $^{38}\text{Ca}$ ; measured mass. Penning trap, Ramsey method. JOUR PRLTA 98 162501
- 2007RI08 ATOMIC MASSES  $^{37,38}\text{Ca}$ ; measured masses using penning trap mass spectrometer. Deduced mass excess and implications on CVC and IMME. JOUR PRVCA 75 055503

A=39

- $^{39}\text{Al}$  2007JU03 ATOMIC MASSES  $^{23}\text{N}$ ,  $^{23,24}\text{O}$ ,  $^{25,26,27}\text{F}$ ,  $^{27,28,29,30,31}\text{Ne}$ ,  $^{31,32,33}\text{Na}$ ,  $^{34,35,36}\text{Mg}$ ,  $^{34,35,36,37,38,39}\text{Al}$ ,  $^{36,37,38,39,40,41,42}\text{Si}$ ,  $^{40,41,42,43,44}\text{P}$ ,  $^{40,43,44,45}\text{S}$ ,  $^{43,45,46,47}\text{Cl}$ ; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43
- $^{39}\text{Si}$  2007JU03 ATOMIC MASSES  $^{23}\text{N}$ ,  $^{23,24}\text{O}$ ,  $^{25,26,27}\text{F}$ ,  $^{27,28,29,30,31}\text{Ne}$ ,  $^{31,32,33}\text{Na}$ ,  $^{34,35,36}\text{Mg}$ ,  $^{34,35,36,37,38,39}\text{Al}$ ,  $^{36,37,38,39,40,41,42}\text{Si}$ ,  $^{40,41,42,43,44}\text{P}$ ,  $^{40,43,44,45}\text{S}$ ,  $^{43,45,46,47}\text{Cl}$ ; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43
- $^{39}\text{P}$  2007N013 NUCLEAR REACTIONS  $^9\text{Be}(^{40}\text{Ar}, \text{X})^6\text{Li} / ^7\text{Li} / ^8\text{Li} / ^9\text{Li} / ^7\text{Be} / ^8\text{Be} / ^9\text{Be} / ^{10}\text{Be} / ^{11}\text{Be} / ^{12}\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{B} / ^{13}\text{B} / ^{14}\text{B} / ^{15}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{15}\text{C} / ^{16}\text{C} / ^{17}\text{C} / ^{18}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{N} / ^{17}\text{N} / ^{18}\text{N} / ^{19}\text{N} / ^{20}\text{N} / ^{21}\text{N} / ^{15}\text{O} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O} / ^{19}\text{O} / ^{20}\text{O} / ^{21}\text{O} / ^{22}\text{O} / ^{23}\text{O} / ^{24}\text{O} / ^{17}\text{F} / ^{18}\text{F} / ^{19}\text{F} / ^{20}\text{F} / ^{21}\text{F} / ^{22}\text{F} / ^{23}\text{F} / ^{24}\text{F} / ^{25}\text{F} / ^{26}\text{F} / ^{27}\text{F} / ^{19}\text{Ne} / ^{20}\text{Ne} / ^{21}\text{Ne} / ^{22}\text{Ne} / ^{23}\text{Ne} / ^{24}\text{Ne} / ^{25}\text{Ne} / ^{26}\text{Ne} / ^{27}\text{Ne} / ^{28}\text{Ne} / ^{29}\text{Ne} / ^{21}\text{Na} / ^{22}\text{Na} / ^{23}\text{Na} / ^{24}\text{Na} / ^{25}\text{Na} / ^{26}\text{Na} / ^{27}\text{Na} / ^{28}\text{Na} / ^{29}\text{Na} / ^{30}\text{Na} / ^{31}\text{Na} / ^{32}\text{Na} / ^{23}\text{Mg} / ^{24}\text{Mg} / ^{25}\text{Mg} / ^{26}\text{Mg} / ^{27}\text{Mg} / ^{28}\text{Mg} / ^{29}\text{Mg} / ^{30}\text{Mg} / ^{31}\text{Mg} / ^{32}\text{Mg} / ^{33}\text{Mg} / ^{34}\text{Mg} / ^{25}\text{Al} / ^{26}\text{Al} / ^{27}\text{Al} / ^{28}\text{Al} / ^{29}\text{Al} / ^{30}\text{Al} / ^{31}\text{Al} / ^{32}\text{Al} / ^{33}\text{Al} / ^{34}\text{Al} / ^{35}\text{Al} / ^{36}\text{Al} / ^{27}\text{Si} / ^{28}\text{Si} / ^{29}\text{Si} / ^{30}\text{Si} / ^{31}\text{Si} / ^{32}\text{Si} / ^{33}\text{Si} / ^{34}\text{Si} / ^{35}\text{Si} / ^{36}\text{Si} / ^{37}\text{Si} / ^{38}\text{Si} / ^{29}\text{P} / ^{30}\text{P} / ^{31}\text{P} / ^{32}\text{P} / ^{33}\text{P} / ^{34}\text{P} / ^{35}\text{P} / ^{36}\text{P} / ^{37}\text{P} / ^{38}\text{P} / ^{39}\text{P} / ^{33}\text{S} / ^{34}\text{S} / ^{35}\text{S} / ^{36}\text{S} / ^{37}\text{S} / ^{38}\text{S} / ^{36}\text{Cl} / ^{37}\text{Cl} / ^{38}\text{Cl} / ^{39}\text{Cl} / ^{39}\text{Ar}, E=100 MeV / nucleon;  $^{181}\text{Ta}(^{40}\text{Ar}, \text{X})^6\text{Li} / ^7\text{Li} / ^8\text{Li} / ^9\text{Be} / ^{10}\text{Be} / ^{11}\text{Be} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{B} / ^{13}\text{B} / ^{14}\text{B} / ^{11}\text{C} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{15}\text{C} / ^{16}\text{C} / ^{17}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{N} / ^{17}\text{N} / ^{18}\text{N} / ^{19}\text{N} / ^{15}\text{O} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O} / ^{19}\text{O} / ^{20}\text{O} / ^{21}\text{O} / ^{17}\text{F} / ^{18}\text{F} / ^{19}\text{F} / ^{20}\text{F} / ^{21}\text{F} / ^{22}\text{F} / ^{23}\text{F} / ^{24}\text{F} / ^{19}\text{Ne} / ^{20}\text{Ne} / ^{21}\text{Ne} / ^{22}\text{Ne} / ^{23}\text{Ne} / ^{24}\text{Ne} / ^{25}\text{Ne} / ^{26}\text{Ne} / ^{27}\text{Ne} / ^{21}\text{Na} / ^{22}\text{Na} / ^{23}\text{Na} / ^{24}\text{Na} / ^{25}\text{Na} / ^{26}\text{Na} / ^{27}\text{Na} / ^{28}\text{Na} / ^{29}\text{Na} / ^{23}\text{Mg} / ^{24}\text{Mg} / ^{25}\text{Mg} / ^{26}\text{Mg} / ^{27}\text{Mg} / ^{28}\text{Mg} / ^{29}\text{Mg} / ^{30}\text{Mg} / ^{31}\text{Mg} / ^{24} / ^{25}\text{Al} / ^{26}\text{Al} / ^{27}\text{Al} / ^{28}\text{Al} / ^{29}\text{Al} / ^{30}\text{Al} / ^{31}\text{Al} / ^{32}\text{Al} / ^{33}\text{Al} / ^{34}\text{Al} / ^{26}\text{Si} / ^{27}\text{Si} / ^{28}\text{Si} / ^{29}\text{Si} / ^{30}\text{Si} / ^{31}\text{Si} / ^{32}\text{Si} / ^{33}\text{Si} / ^{34}\text{Si} / ^{29}\text{P} / ^{30}\text{P} / ^{31}\text{P} / ^{32}\text{P} / ^{33}\text{P} / ^{34}\text{P} / ^{35}\text{P} / ^{36}\text{P} / ^{30}\text{S} / ^{31}\text{S} / ^{32}\text{S} / ^{33}\text{S} / ^{34}\text{S} / ^{35}\text{S} / ^{36}\text{S} / ^{37}\text{S} / ^{33}\text{Cl} / ^{34}\text{Cl} / ^{35}\text{Cl} / ^{36}\text{Cl} / ^{37}\text{Cl} / ^{35}\text{Ar} / ^{36}\text{Ar} / ^{37}\text{Ar} / ^{38}\text{Ar} / ^{39}\text{Ar} / ^{37}\text{K} / ^{38}\text{K} / ^{39}\text{K} / ^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$
- $^{39}\text{Cl}$  2007KA33 NUCLEAR REACTIONS N, O, Ar(p, X) $^7\text{Be} / ^{11}\text{C} / ^{13}\text{N} / ^{15}\text{O} / ^{18}\text{F} / ^{22}\text{Na} / ^{24}\text{Na} / ^{27}\text{Mg} / ^{29}\text{Al} / ^{38}\text{S} / ^{38}\text{Cl} / ^{39}\text{Cl}$ , E=12 GeV; measured radionuclide yields. JOUR JRNCD 273 507

## A=39 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Li}$  /  ${}^7\text{Be}$  /  ${}^8\text{Be}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{12}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{15}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{18}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{20}\text{N}$  /  ${}^{21}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{22}\text{O}$  /  ${}^{23}\text{O}$  /  ${}^{24}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{25}\text{F}$  /  ${}^{26}\text{F}$  /  ${}^{27}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{28}\text{Ne}$  /  ${}^{29}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{30}\text{Na}$  /  ${}^{31}\text{Na}$  /  ${}^{32}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{32}\text{Mg}$  /  ${}^{33}\text{Mg}$  /  ${}^{34}\text{Mg}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{35}\text{Al}$  /  ${}^{36}\text{Al}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{35}\text{Si}$  /  ${}^{36}\text{Si}$  /  ${}^{37}\text{Si}$  /  ${}^{38}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{37}\text{P}$  /  ${}^{38}\text{P}$  /  ${}^{39}\text{P}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{38}\text{S}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{38}\text{Cl}$  /  ${}^{39}\text{Cl}$  /  ${}^{39}\text{Ar}$ , E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li}$  /  ${}^7\text{Li}$  /  ${}^8\text{Li}$  /  ${}^9\text{Be}$  /  ${}^{10}\text{Be}$  /  ${}^{11}\text{Be}$  /  ${}^{10}\text{B}$  /  ${}^{11}\text{B}$  /  ${}^{12}\text{B}$  /  ${}^{13}\text{B}$  /  ${}^{14}\text{B}$  /  ${}^{11}\text{C}$  /  ${}^{12}\text{C}$  /  ${}^{13}\text{C}$  /  ${}^{14}\text{C}$  /  ${}^{15}\text{C}$  /  ${}^{16}\text{C}$  /  ${}^{17}\text{C}$  /  ${}^{13}\text{N}$  /  ${}^{14}\text{N}$  /  ${}^{15}\text{N}$  /  ${}^{16}\text{N}$  /  ${}^{17}\text{N}$  /  ${}^{18}\text{N}$  /  ${}^{19}\text{N}$  /  ${}^{15}\text{O}$  /  ${}^{16}\text{O}$  /  ${}^{17}\text{O}$  /  ${}^{18}\text{O}$  /  ${}^{19}\text{O}$  /  ${}^{20}\text{O}$  /  ${}^{21}\text{O}$  /  ${}^{17}\text{F}$  /  ${}^{18}\text{F}$  /  ${}^{19}\text{F}$  /  ${}^{20}\text{F}$  /  ${}^{21}\text{F}$  /  ${}^{22}\text{F}$  /  ${}^{23}\text{F}$  /  ${}^{24}\text{F}$  /  ${}^{19}\text{Ne}$  /  ${}^{20}\text{Ne}$  /  ${}^{21}\text{Ne}$  /  ${}^{22}\text{Ne}$  /  ${}^{23}\text{Ne}$  /  ${}^{24}\text{Ne}$  /  ${}^{25}\text{Ne}$  /  ${}^{26}\text{Ne}$  /  ${}^{27}\text{Ne}$  /  ${}^{21}\text{Na}$  /  ${}^{22}\text{Na}$  /  ${}^{23}\text{Na}$  /  ${}^{24}\text{Na}$  /  ${}^{25}\text{Na}$  /  ${}^{26}\text{Na}$  /  ${}^{27}\text{Na}$  /  ${}^{28}\text{Na}$  /  ${}^{29}\text{Na}$  /  ${}^{23}\text{Mg}$  /  ${}^{24}\text{Mg}$  /  ${}^{25}\text{Mg}$  /  ${}^{26}\text{Mg}$  /  ${}^{27}\text{Mg}$  /  ${}^{28}\text{Mg}$  /  ${}^{29}\text{Mg}$  /  ${}^{30}\text{Mg}$  /  ${}^{31}\text{Mg}$  /  ${}^{24}$  /  ${}^{25}\text{Al}$  /  ${}^{26}\text{Al}$  /  ${}^{27}\text{Al}$  /  ${}^{28}\text{Al}$  /  ${}^{29}\text{Al}$  /  ${}^{30}\text{Al}$  /  ${}^{31}\text{Al}$  /  ${}^{32}\text{Al}$  /  ${}^{33}\text{Al}$  /  ${}^{34}\text{Al}$  /  ${}^{26}\text{Si}$  /  ${}^{27}\text{Si}$  /  ${}^{28}\text{Si}$  /  ${}^{29}\text{Si}$  /  ${}^{30}\text{Si}$  /  ${}^{31}\text{Si}$  /  ${}^{32}\text{Si}$  /  ${}^{33}\text{Si}$  /  ${}^{34}\text{Si}$  /  ${}^{29}\text{P}$  /  ${}^{30}\text{P}$  /  ${}^{31}\text{P}$  /  ${}^{32}\text{P}$  /  ${}^{33}\text{P}$  /  ${}^{34}\text{P}$  /  ${}^{35}\text{P}$  /  ${}^{36}\text{P}$  /  ${}^{30}\text{S}$  /  ${}^{31}\text{S}$  /  ${}^{32}\text{S}$  /  ${}^{33}\text{S}$  /  ${}^{34}\text{S}$  /  ${}^{35}\text{S}$  /  ${}^{36}\text{S}$  /  ${}^{37}\text{S}$  /  ${}^{33}\text{Cl}$  /  ${}^{34}\text{Cl}$  /  ${}^{35}\text{Cl}$  /  ${}^{36}\text{Cl}$  /  ${}^{37}\text{Cl}$  /  ${}^{35}\text{Ar}$  /  ${}^{36}\text{Ar}$  /  ${}^{37}\text{Ar}$  /  ${}^{38}\text{Ar}$  /  ${}^{39}\text{Ar}$  /  ${}^{37}\text{K}$  /  ${}^{38}\text{K}$  /  ${}^{39}\text{K}$  /  ${}^{40}\text{K}$ , E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605
- ${}^{39}\text{Ar}$  2007BE13 RADIOACTIVITY  ${}^{39}\text{Ar}(\beta^-)$ ; measured specific activity in natural argon. JOUR NIMAE 574 83

## A=39 (continued)

- 2007N013 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Li} / {}^7\text{Be} / {}^8\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{12}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{15}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{18}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{20}\text{N} / {}^{21}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{22}\text{O} / {}^{23}\text{O} / {}^{24}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{25}\text{F} / {}^{26}\text{F} / {}^{27}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{28}\text{Ne} / {}^{29}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{30}\text{Na} / {}^{31}\text{Na} / {}^{32}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{32}\text{Mg} / {}^{33}\text{Mg} / {}^{34}\text{Mg} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{35}\text{Al} / {}^{36}\text{Al} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{35}\text{Si} / {}^{36}\text{Si} / {}^{37}\text{Si} / {}^{38}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{37}\text{P} / {}^{38}\text{P} / {}^{39}\text{P} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{38}\text{S} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{38}\text{Cl} / {}^{39}\text{Cl} / {}^{39}\text{Ar}, E=100 MeV / nucleon;  ${}^{181}\text{Ta}({}^{40}\text{Ar}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{11}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{B} / {}^{13}\text{B} / {}^{14}\text{B} / {}^{11}\text{C} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{15}\text{C} / {}^{16}\text{C} / {}^{17}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{N} / {}^{17}\text{N} / {}^{18}\text{N} / {}^{19}\text{N} / {}^{15}\text{O} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O} / {}^{19}\text{O} / {}^{20}\text{O} / {}^{21}\text{O} / {}^{17}\text{F} / {}^{18}\text{F} / {}^{19}\text{F} / {}^{20}\text{F} / {}^{21}\text{F} / {}^{22}\text{F} / {}^{23}\text{F} / {}^{24}\text{F} / {}^{19}\text{Ne} / {}^{20}\text{Ne} / {}^{21}\text{Ne} / {}^{22}\text{Ne} / {}^{23}\text{Ne} / {}^{24}\text{Ne} / {}^{25}\text{Ne} / {}^{26}\text{Ne} / {}^{27}\text{Ne} / {}^{21}\text{Na} / {}^{22}\text{Na} / {}^{23}\text{Na} / {}^{24}\text{Na} / {}^{25}\text{Na} / {}^{26}\text{Na} / {}^{27}\text{Na} / {}^{28}\text{Na} / {}^{29}\text{Na} / {}^{23}\text{Mg} / {}^{24}\text{Mg} / {}^{25}\text{Mg} / {}^{26}\text{Mg} / {}^{27}\text{Mg} / {}^{28}\text{Mg} / {}^{29}\text{Mg} / {}^{30}\text{Mg} / {}^{31}\text{Mg} / {}^{24} / {}^{25}\text{Al} / {}^{26}\text{Al} / {}^{27}\text{Al} / {}^{28}\text{Al} / {}^{29}\text{Al} / {}^{30}\text{Al} / {}^{31}\text{Al} / {}^{32}\text{Al} / {}^{33}\text{Al} / {}^{34}\text{Al} / {}^{26}\text{Si} / {}^{27}\text{Si} / {}^{28}\text{Si} / {}^{29}\text{Si} / {}^{30}\text{Si} / {}^{31}\text{Si} / {}^{32}\text{Si} / {}^{33}\text{Si} / {}^{34}\text{Si} / {}^{29}\text{P} / {}^{30}\text{P} / {}^{31}\text{P} / {}^{32}\text{P} / {}^{33}\text{P} / {}^{34}\text{P} / {}^{35}\text{P} / {}^{36}\text{P} / {}^{30}\text{S} / {}^{31}\text{S} / {}^{32}\text{S} / {}^{33}\text{S} / {}^{34}\text{S} / {}^{35}\text{S} / {}^{36}\text{S} / {}^{37}\text{S} / {}^{33}\text{Cl} / {}^{34}\text{Cl} / {}^{35}\text{Cl} / {}^{36}\text{Cl} / {}^{37}\text{Cl} / {}^{35}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Ar} / {}^{38}\text{Ar} / {}^{39}\text{Ar} / {}^{37}\text{K} / {}^{38}\text{K} / {}^{39}\text{K} / {}^{40}\text{K}, E=100 MeV / nucleon; measured momentum distribution, production cross sections. RIKEN. JOUR PRVCA 76 044605$$
- ${}^{39}\text{K}$  2007BE13 RADIOACTIVITY  ${}^{39}\text{Ar}(\beta^-)$ ; measured specific activity in natural argon. JOUR NIMAE 574 83
- 2007FA17 NUCLEAR REACTIONS  ${}^{40}\text{Ca}({}^{40}\text{Ca}, \text{X}){}^{39}\text{K} / {}^{38}\text{Ar} / {}^{36}\text{Ar} / {}^{37}\text{Cl}$ , E=50 MeV / nucleon; measured  $E_p$ ,  $E_\alpha$ , missing energy spectra.  ${}^{40}\text{Ca}$  deduced two-, three-phonon giant resonance states. JOUR NUPAB 788 106c
- ${}^{39}\text{Ca}$  2007D017 RADIOACTIVITY  ${}^{36,37}\text{Ca}$ ,  ${}^{39,40,41}\text{Ti}$ ,  ${}^{43}\text{V}$ ,  ${}^{42,43,44,45}\text{Cr}$ ,  ${}^{46,47}\text{Mn}$ ,  ${}^{46,47,48,49}\text{Fe}$ ,  ${}^{50,51}\text{Co}$ ,  ${}^{49,50,51,52,53}\text{Ni}$ ,  ${}^{55}\text{Cu}$ ,  ${}^{55,56}\text{Zn}(\beta^+)$ , (EC), ( $\beta^+$ p) [from  $\text{Ni}({}^{58}\text{Ni}, \text{X})$ ]; measured  $T_{1/2}$ ,  $\beta$ -delayed proton and  $\gamma$  spectra, branching ratios.  ${}^{43,45}\text{Cr}$ ,  ${}^{46}\text{Mn}$ ,  ${}^{46,47,48}\text{Fe}$ ,  ${}^{50}\text{Co}$ ,  ${}^{50,51,52,53}\text{Ni}$  deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18
- ${}^{39}\text{Sc}$  2007D017 RADIOACTIVITY  ${}^{36,37}\text{Ca}$ ,  ${}^{39,40,41}\text{Ti}$ ,  ${}^{43}\text{V}$ ,  ${}^{42,43,44,45}\text{Cr}$ ,  ${}^{46,47}\text{Mn}$ ,  ${}^{46,47,48,49}\text{Fe}$ ,  ${}^{50,51}\text{Co}$ ,  ${}^{49,50,51,52,53}\text{Ni}$ ,  ${}^{55}\text{Cu}$ ,  ${}^{55,56}\text{Zn}(\beta^+)$ , (EC), ( $\beta^+$ p) [from  $\text{Ni}({}^{58}\text{Ni}, \text{X})$ ]; measured  $T_{1/2}$ ,  $\beta$ -delayed proton and  $\gamma$  spectra, branching ratios.  ${}^{43,45}\text{Cr}$ ,  ${}^{46}\text{Mn}$ ,  ${}^{46,47,48}\text{Fe}$ ,  ${}^{50}\text{Co}$ ,  ${}^{50,51,52,53}\text{Ni}$  deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18

KEYNUMBERS AND KEYWORDS

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**A=39 (continued)**

<sup>39</sup>Ti      2007D017      RADIOACTIVITY <sup>36,37</sup>Ca, <sup>39,40,41</sup>Ti, <sup>43</sup>V, <sup>42,43,44,45</sup>Cr, <sup>46,47</sup>Mn, <sup>46,47,48,49</sup>Fe, <sup>50,51</sup>Co, <sup>49,50,51,52,53</sup>Ni, <sup>55</sup>Cu, <sup>55,56</sup>Zn( $\beta^+$ ), (EC), ( $\beta^+$ p) [from Ni(<sup>58</sup>Ni, X)]; measured  $T_{1/2}$ ,  $\beta$ -delayed proton and  $\gamma$  spectra, branching ratios. <sup>43,45</sup>Cr, <sup>46</sup>Mn, <sup>46,47,48</sup>Fe, <sup>50</sup>Co, <sup>50,51,52,53</sup>Ni deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18

**A=40**

<sup>40</sup>Mg      2007BA71      NUCLEAR REACTIONS W(<sup>48</sup>Ca, X)<sup>40</sup>Mg / <sup>42</sup>Al, E=141 MeV / nucleon; measured fragment energies, charge and mass distributions. JOUR NATUA 449 1022

<sup>40</sup>Si      2007CA35      NUCLEAR REACTIONS <sup>1</sup>H(<sup>36</sup>Si, <sup>36</sup>Si'), E < 140 MeV / nucleon; <sup>1</sup>H(<sup>38</sup>Si, <sup>38</sup>Si'), E < 140 MeV / nucleon; <sup>1</sup>H(<sup>40</sup>Si, <sup>40</sup>Si'), E < 140 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coinc, inelastic proton scattering cross sections. <sup>36,38,40</sup>Si deduced quadrupole deformation parameters. JOUR PYLBB 652 169

            2007JU03      ATOMIC MASSES <sup>23</sup>N, <sup>23,24</sup>O, <sup>25,26,27</sup>F, <sup>27,28,29,30,31</sup>Ne, <sup>31,32,33</sup>Na, <sup>34,35,36</sup>Mg, <sup>34,35,36,37,38,39</sup>Al, <sup>36,37,38,39,40,41,42</sup>Si, <sup>40,41,42,43,44</sup>P, <sup>40,43,44,45</sup>S, <sup>43,45,46,47</sup>Cl; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43

<sup>40</sup>P      2007JU03      ATOMIC MASSES <sup>23</sup>N, <sup>23,24</sup>O, <sup>25,26,27</sup>F, <sup>27,28,29,30,31</sup>Ne, <sup>31,32,33</sup>Na, <sup>34,35,36</sup>Mg, <sup>34,35,36,37,38,39</sup>Al, <sup>36,37,38,39,40,41,42</sup>Si, <sup>40,41,42,43,44</sup>P, <sup>40,43,44,45</sup>S, <sup>43,45,46,47</sup>Cl; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43

<sup>40</sup>S      2007JU03      ATOMIC MASSES <sup>23</sup>N, <sup>23,24</sup>O, <sup>25,26,27</sup>F, <sup>27,28,29,30,31</sup>Ne, <sup>31,32,33</sup>Na, <sup>34,35,36</sup>Mg, <sup>34,35,36,37,38,39</sup>Al, <sup>36,37,38,39,40,41,42</sup>Si, <sup>40,41,42,43,44</sup>P, <sup>40,43,44,45</sup>S, <sup>43,45,46,47</sup>Cl; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43

<sup>40</sup>Ar      2006LIZX      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>38</sup>S, X)<sup>42</sup>Ca / <sup>43</sup>Ca / <sup>40</sup>Ar, E=5.45 MeV / nucleon; measured E $\gamma$ , I $\gamma$ . REPT CNS-REP-69,P6,Liu

            2007OK01      NUCLEAR REACTIONS <sup>40</sup>Ar(p, p), (p, p'), E=25.1, 32.5, 40.7 MeV; measured  $\sigma(E, \theta)$ , Ay( $\theta$ ). <sup>40</sup>Ar deduced deformation parameters. Isospin dependent soft-rotator coupled-channels optical model analysis. JOUR PRVCA 75 034616

<sup>40</sup>K      2007GR05      RADIOACTIVITY <sup>10</sup>Be, <sup>40</sup>K, <sup>87</sup>Rb( $\beta^-$ ); measured E $\beta$ ; deduced shape-factor functions, cutoff energy yields, maximum-point energies. Comparison with previous results. JOUR NIMAE 572 760

<sup>40</sup>Ca      2007D017      RADIOACTIVITY <sup>36,37</sup>Ca, <sup>39,40,41</sup>Ti, <sup>43</sup>V, <sup>42,43,44,45</sup>Cr, <sup>46,47</sup>Mn, <sup>46,47,48,49</sup>Fe, <sup>50,51</sup>Co, <sup>49,50,51,52,53</sup>Ni, <sup>55</sup>Cu, <sup>55,56</sup>Zn( $\beta^+$ ), (EC), ( $\beta^+$ p) [from Ni(<sup>58</sup>Ni, X)]; measured  $T_{1/2}$ ,  $\beta$ -delayed proton and  $\gamma$  spectra, branching ratios. <sup>43,45</sup>Cr, <sup>46</sup>Mn, <sup>46,47,48</sup>Fe, <sup>50</sup>Co, <sup>50,51,52,53</sup>Ni deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18

            2007FA17      NUCLEAR REACTIONS <sup>40</sup>Ca(<sup>40</sup>Ca, X)<sup>39</sup>K / <sup>38</sup>Ar / <sup>36</sup>Ar / <sup>37</sup>Cl, E=50 MeV / nucleon; measured Ep, E $\alpha$ , missing energy spectra. <sup>40</sup>Ca deduced two-, three-phonon giant resonance states. JOUR NUPAB 788 106c

KEYNUMBERS AND KEYWORDS

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**A=40 (continued)**

- 2007GR05 RADIOACTIVITY  $^{10}\text{Be}$ ,  $^{40}\text{K}$ ,  $^{87}\text{Rb}(\beta^-)$ ; measured  $E\beta$ ; deduced shape-factor functions, cutoff energy yields, maximum-point energies. Comparison with previous results. JOUR NIMAE 572 760
- 2007KL05 NUCLEAR REACTIONS  $\text{Be}(^{238}\text{U}, \text{X})$ ,  $E=550$  MeV / nucleon; measured fragment yields.  $^{12}\text{C}$ ,  $^{208}\text{Pb}(^{129}\text{Sn}, \text{X})$ ,  $(^{130}\text{Sn}, \text{X})$ ,  $(^{131}\text{Sn}, \text{X})$ ,  $(^{132}\text{Sn}, \text{X})$ ,  $(^{133}\text{Sn}, \text{X})$ ,  $E\approx 500$  MeV / nucleon; measured  $E_n$ ,  $E_\gamma$ ,  $n\gamma$ -coin; deduced electromagnetic dissociation  $\sigma(E)$ .  $^{129,130,131,132,133}\text{Sn}$  deduced dipole strength distributions,  $B(E1)$ , pygmy and giant dipole resonance parameters. Comparison with RPA calculations.  $^{40,44,48}\text{Ca}$ ,  $^{116,124}\text{Sn}$ ,  $^{138}\text{Ba}$ ,  $^{140}\text{Ce}$ ,  $^{142}\text{Nd}$ ,  $^{144}\text{Sm}$ ,  $^{208}\text{Pb}(\gamma, \gamma')$ ,  $E$  not given; analyzed  $E_\gamma$ ,  $I_\gamma$ .  $^{40,44,48}\text{Ca}$ ,  $^{116,124}\text{Sn}$ ,  $^{138}\text{Ba}$ ,  $^{140}\text{Ce}$ ,  $^{142}\text{Nd}$ ,  $^{144}\text{Sm}$ ,  $^{208}\text{Pb}$  deduced  $B(E1)$ . JOUR NUPAB 788 145c
- $^{40}\text{Sc}$  2007D017 RADIOACTIVITY  $^{36,37}\text{Ca}$ ,  $^{39,40,41}\text{Ti}$ ,  $^{43}\text{V}$ ,  $^{42,43,44,45}\text{Cr}$ ,  $^{46,47}\text{Mn}$ ,  $^{46,47,48,49}\text{Fe}$ ,  $^{50,51}\text{Co}$ ,  $^{49,50,51,52,53}\text{Ni}$ ,  $^{55}\text{Cu}$ ,  $^{55,56}\text{Zn}(\beta^+)$ , (EC),  $(\beta^+p)$  [from  $\text{Ni}(^{58}\text{Ni}, \text{X})$ ]; measured  $T_{1/2}$ ,  $\beta$ -delayed proton and  $\gamma$  spectra, branching ratios.  $^{43,45}\text{Cr}$ ,  $^{46}\text{Mn}$ ,  $^{46,47,48}\text{Fe}$ ,  $^{50}\text{Co}$ ,  $^{50,51,52,53}\text{Ni}$  deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18
- $^{40}\text{Ti}$  2007D017 RADIOACTIVITY  $^{36,37}\text{Ca}$ ,  $^{39,40,41}\text{Ti}$ ,  $^{43}\text{V}$ ,  $^{42,43,44,45}\text{Cr}$ ,  $^{46,47}\text{Mn}$ ,  $^{46,47,48,49}\text{Fe}$ ,  $^{50,51}\text{Co}$ ,  $^{49,50,51,52,53}\text{Ni}$ ,  $^{55}\text{Cu}$ ,  $^{55,56}\text{Zn}(\beta^+)$ , (EC),  $(\beta^+p)$  [from  $\text{Ni}(^{58}\text{Ni}, \text{X})$ ]; measured  $T_{1/2}$ ,  $\beta$ -delayed proton and  $\gamma$  spectra, branching ratios.  $^{43,45}\text{Cr}$ ,  $^{46}\text{Mn}$ ,  $^{46,47,48}\text{Fe}$ ,  $^{50}\text{Co}$ ,  $^{50,51,52,53}\text{Ni}$  deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18

**A=41**

- $^{41}\text{Si}$  2007JU03 ATOMIC MASSES  $^{23}\text{N}$ ,  $^{23,24}\text{O}$ ,  $^{25,26,27}\text{F}$ ,  $^{27,28,29,30,31}\text{Ne}$ ,  $^{31,32,33}\text{Na}$ ,  $^{34,35,36}\text{Mg}$ ,  $^{34,35,36,37,38,39}\text{Al}$ ,  $^{36,37,38,39,40,41,42}\text{Si}$ ,  $^{40,41,42,43,44}\text{P}$ ,  $^{40,43,44,45}\text{S}$ ,  $^{43,45,46,47}\text{Cl}$ ; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43
- 2007TA15 NUCLEAR REACTIONS  $^{184}\text{W}$ ,  $^9\text{Be}(^{48}\text{Ca}, \text{X})^{36}\text{Mg} / ^{37}\text{Mg} / ^{38}\text{Mg} / ^{41}\text{Si} / ^{42}\text{Si} / ^{43}\text{Si} / ^{44}\text{Si}$ ,  $E=142$  MeV / nucleon; measured production cross sections. Compared results to model calculations. JOUR PRVCA 75 064613
- 2007TAZZ NUCLEAR REACTIONS  $\text{Be}$ ,  $\text{W}(^{48}\text{Ca}, \text{X})^{36}\text{Mg} / ^{37}\text{Mg} / ^{38}\text{Mg} / ^{41}\text{Si} / ^{42}\text{Si} / ^{43}\text{Si} / ^{44}\text{Si}$ ,  $E=142$  MeV / nucleon; measured production  $\sigma$ . PREPRINT arXiv:0705.0349v1 [nucl-ex]
- $^{41}\text{P}$  2007BA47 NUCLEAR REACTIONS  $^{42,44}\text{S}(^9\text{Be}, \text{X})$ ,  $E=39$  MeV / nucleon; measured  $E_\gamma$ ,  $I_\gamma$ ,  $\gamma\gamma$ -coinc.  $^{42}\text{Si}$ ,  $^{41,43}\text{P}$  deduced levels. JOUR PRLTA 99 022503
- 2007JU03 ATOMIC MASSES  $^{23}\text{N}$ ,  $^{23,24}\text{O}$ ,  $^{25,26,27}\text{F}$ ,  $^{27,28,29,30,31}\text{Ne}$ ,  $^{31,32,33}\text{Na}$ ,  $^{34,35,36}\text{Mg}$ ,  $^{34,35,36,37,38,39}\text{Al}$ ,  $^{36,37,38,39,40,41,42}\text{Si}$ ,  $^{40,41,42,43,44}\text{P}$ ,  $^{40,43,44,45}\text{S}$ ,  $^{43,45,46,47}\text{Cl}$ ; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43

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**A=41 (continued)**

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| $^{41}\text{Sc}$ | 2007D017 | RADIOACTIVITY $^{36,37}\text{Ca}$ , $^{39,40,41}\text{Ti}$ , $^{43}\text{V}$ , $^{42,43,44,45}\text{Cr}$ , $^{46,47}\text{Mn}$ , $^{46,47,48,49}\text{Fe}$ , $^{50,51}\text{Co}$ , $^{49,50,51,52,53}\text{Ni}$ , $^{55}\text{Cu}$ , $^{55,56}\text{Zn}(\beta^+)$ , (EC), $(\beta^+p)$ [from Ni( $^{58}\text{Ni}$ , X)]; measured $T_{1/2}$ , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. $^{43,45}\text{Cr}$ , $^{46}\text{Mn}$ , $^{46,47,48}\text{Fe}$ , $^{50}\text{Co}$ , $^{50,51,52,53}\text{Ni}$ deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18 |
|                  | 2007GIZZ | RADIOACTIVITY $^{45}\text{Fe}(2p)$ [from Ni( $^{58}\text{Ni}$ , X)]; measured $E_p$ , pp-coin, $T_{1/2}$ . $^{43}\text{Cr}(\beta^+2p)$ [from Ni( $^{58}\text{Ni}$ , X)]; measured $\beta$ -delayed $E_p$ , pp-coin. Time-projection chamber. PREPRINT nucl-ex/0703011,3/5/2007   |
|                  | 2007MI36 | RADIOACTIVITY $^{45}\text{Fe}(2p)$ , $(\beta^+)$ , $(\beta^+p)$ , $(\beta^+2p)$ , $(\beta^+3p)$ , $(\beta^+4p)$ ; measured decay branches, half-lives, partial half-lives. JOUR PRVCA 76 041304  |
| $^{41}\text{Ti}$ | 2007D017 | RADIOACTIVITY $^{36,37}\text{Ca}$ , $^{39,40,41}\text{Ti}$ , $^{43}\text{V}$ , $^{42,43,44,45}\text{Cr}$ , $^{46,47}\text{Mn}$ , $^{46,47,48,49}\text{Fe}$ , $^{50,51}\text{Co}$ , $^{49,50,51,52,53}\text{Ni}$ , $^{55}\text{Cu}$ , $^{55,56}\text{Zn}(\beta^+)$ , (EC), $(\beta^+p)$ [from Ni( $^{58}\text{Ni}$ , X)]; measured $T_{1/2}$ , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. $^{43,45}\text{Cr}$ , $^{46}\text{Mn}$ , $^{46,47,48}\text{Fe}$ , $^{50}\text{Co}$ , $^{50,51,52,53}\text{Ni}$ deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18 |

**A=42**

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| $^{42}\text{Al}$ | 2007BA71 | NUCLEAR REACTIONS W( $^{48}\text{Ca}$ , X) $^{40}\text{Mg}$ / $^{42}\text{Al}$ , E=141 MeV / nucleon; measured fragment energies, charge and mass distributions. JOUR NATUA 449 1022  |
| $^{42}\text{Si}$ | 2007BA47 | NUCLEAR REACTIONS $^{42,44}\text{S}(\text{}^9\text{Be}$ , X), E=39 MeV / nucleon; measured $E_\gamma$ , $I_\gamma$ , $\gamma\gamma$ -coinc. $^{42}\text{Si}$ , $^{41,43}\text{P}$ deduced levels. JOUR PRLTA 99 022503  |
|                  | 2007JU03 | ATOMIC MASSES $^{23}\text{N}$ , $^{23,24}\text{O}$ , $^{25,26,27}\text{F}$ , $^{27,28,29,30,31}\text{Ne}$ , $^{31,32,33}\text{Na}$ , $^{34,35,36}\text{Mg}$ , $^{34,35,36,37,38,39}\text{Al}$ , $^{36,37,38,39,40,41,42}\text{Si}$ , $^{40,41,42,43,44}\text{P}$ , $^{40,43,44,45}\text{S}$ , $^{43,45,46,47}\text{Cl}$ ; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43 |
|                  | 2007TA15 | NUCLEAR REACTIONS $^{184}\text{W}$ , $^9\text{Be}(\text{}^{48}\text{Ca}$ , X) $^{36}\text{Mg}$ / $^{37}\text{Mg}$ / $^{38}\text{Mg}$ / $^{41}\text{Si}$ / $^{42}\text{Si}$ / $^{43}\text{Si}$ / $^{44}\text{Si}$ , E=142 MeV / nucleon; measured production cross sections. Compared results to model calculations. JOUR PRVCA 75 064613  |
|                  | 2007TAZZ | NUCLEAR REACTIONS Be, W( $^{48}\text{Ca}$ , X) $^{36}\text{Mg}$ / $^{37}\text{Mg}$ / $^{38}\text{Mg}$ / $^{41}\text{Si}$ / $^{42}\text{Si}$ / $^{43}\text{Si}$ / $^{44}\text{Si}$ , E=142 MeV / nucleon; measured production $\sigma$ . PREPRINT arXiv:0705.0349v1 [nucl-ex]  |
| $^{42}\text{P}$  | 2007JU03 | ATOMIC MASSES $^{23}\text{N}$ , $^{23,24}\text{O}$ , $^{25,26,27}\text{F}$ , $^{27,28,29,30,31}\text{Ne}$ , $^{31,32,33}\text{Na}$ , $^{34,35,36}\text{Mg}$ , $^{34,35,36,37,38,39}\text{Al}$ , $^{36,37,38,39,40,41,42}\text{Si}$ , $^{40,41,42,43,44}\text{P}$ , $^{40,43,44,45}\text{S}$ , $^{43,45,46,47}\text{Cl}$ ; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43 |
| $^{42}\text{Ca}$ | 2006LIZX | NUCLEAR REACTIONS $^9\text{Be}(\text{}^{38}\text{S}$ , X) $^{42}\text{Ca}$ / $^{43}\text{Ca}$ / $^{40}\text{Ar}$ , E=5.45 MeV / nucleon; measured $E_\gamma$ , $I_\gamma$ . REPT CNS-REP-69,P6,Liu  |



## A=42 (continued)

- 2007C021 NUCLEAR REACTIONS  $^{208}\text{Pb}(^{40}\text{Ca}, \text{X})$ , E=235, 249 MeV; analyzed single and paired nucleon transfer  $\sigma$ .  $^{208}\text{Pb}(^{40}\text{Ca}, \text{X})^{42}\text{Ca}$ , E=225, 236, 250 MeV; analyzed total kinetic energy loss distribution.  $^{208}\text{Pb}(^{90}\text{Zr}, \text{X})$ , E=560 MeV; analyzed fragment mass distributions,  $\sigma$ ; measured  $E\gamma$ ,  $I\gamma$ , (particle) $\gamma$ -coin, DSA.  $^{92}\text{Zr}$  deduced levels, J,  $\pi$ .  $^{238}\text{U}(^{82}\text{Se}, \text{X})$ , E=500 MeV; measured fragment yields,  $\sigma$ . Prisma and Clara arrays. Mutli-nucleon transfer reaction mechanisms discussed. JOUR NUPAB 787 160c
- 2007SZ05 NUCLEAR REACTIONS  $^{98}\text{Zr}(^{40}\text{Ca}, \text{X})$ , E=152 MeV;  $^{208}\text{Pb}(^{90}\text{Zr}, \text{X})$ , E=560 MeV; measured EF,  $I\gamma$ , (particle) $\gamma$ -coinc.  $^{95}\text{Zr}$ ,  $^{42}\text{Ca}$  deduced levels. JOUR PRVCA 76 024604
- $^{42}\text{Sc}$  2006GA47 NUCLEAR MOMENTS  $^{42,43,44,44m,45,45m,46}\text{Sc}$ ; measured hfs, isotope shifts; deduced  $\mu$ , quadrupole moments. Collinear laser spectroscopy. JOUR HYIND 171 209
- 2007AD27 NUCLEAR REACTIONS  $^{42}\text{Ca}$ ,  $^{46}\text{Ti}$ ,  $^{50}\text{Cr}$ ,  $^{54}\text{Fe}(^3\text{He}, \text{t})$ , E=140 MeV / nucleon; measured excitation energy spectra.  $^{42}\text{Sc}$ ,  $^{46}\text{V}$ ,  $^{50}\text{Mn}$ ,  $^{54}\text{Co}$  deduced Gamow-Teller strength distribution. Comparison with shell model. JOUR NUPAB 788 70c
- 2007CH40 NUCLEAR REACTIONS  $^{28}\text{Si}(^{20}\text{Ne}, \text{X})^{42}\text{Sc}$ ,  $^{28}\text{Si}(^{20}\text{Ne}, \text{X})^{43}\text{Sc}$ , E=84 MeV;  $^{24}\text{Mg}(^{24}\text{Mg}, \text{X})^{42,43}\text{Sc}$ , E=94 MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -, (charged-particle) $\gamma$ -coinc, angular distributions using the Gammasphere. Deduced level energies, J,  $\pi$ , high-spin and high-energy extension of level scheme. JOUR PRVCA 75 054305
- 2007D017 RADIOACTIVITY  $^{36,37}\text{Ca}$ ,  $^{39,40,41}\text{Ti}$ ,  $^{43}\text{V}$ ,  $^{42,43,44,45}\text{Cr}$ ,  $^{46,47}\text{Mn}$ ,  $^{46,47,48,49}\text{Fe}$ ,  $^{50,51}\text{Co}$ ,  $^{49,50,51,52,53}\text{Ni}$ ,  $^{55}\text{Cu}$ ,  $^{55,56}\text{Zn}(\beta^+)$ , (EC), ( $\beta^+$ p) [from Ni( $^{58}\text{Ni}, \text{X}$ )]; measured  $T_{1/2}$ ,  $\beta$ -delayed proton and  $\gamma$  spectra, branching ratios.  $^{43,45}\text{Cr}$ ,  $^{46}\text{Mn}$ ,  $^{46,47,48}\text{Fe}$ ,  $^{50}\text{Co}$ ,  $^{50,51,52,53}\text{Ni}$  deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18
- 2007SC26 NUCLEAR REACTIONS  $^{40}\text{Ca}(^3\text{He}, \text{p})^{42}\text{Sc}$ , E=9 MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coinc, and angular correlations.  $^{42}\text{Sc}$  deduced levels, J,  $\pi$ , B(E2), B(M1), multipole mixing ratios. Compared results to model calculations. JOUR PRVCA 75 064321
- $^{42}\text{Ti}$  2007D017 RADIOACTIVITY  $^{36,37}\text{Ca}$ ,  $^{39,40,41}\text{Ti}$ ,  $^{43}\text{V}$ ,  $^{42,43,44,45}\text{Cr}$ ,  $^{46,47}\text{Mn}$ ,  $^{46,47,48,49}\text{Fe}$ ,  $^{50,51}\text{Co}$ ,  $^{49,50,51,52,53}\text{Ni}$ ,  $^{55}\text{Cu}$ ,  $^{55,56}\text{Zn}(\beta^+)$ , (EC), ( $\beta^+$ p) [from Ni( $^{58}\text{Ni}, \text{X}$ )]; measured  $T_{1/2}$ ,  $\beta$ -delayed proton and  $\gamma$  spectra, branching ratios.  $^{43,45}\text{Cr}$ ,  $^{46}\text{Mn}$ ,  $^{46,47,48}\text{Fe}$ ,  $^{50}\text{Co}$ ,  $^{50,51,52,53}\text{Ni}$  deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18
- 2007MI36 RADIOACTIVITY  $^{45}\text{Fe}(2\text{p})$ , ( $\beta^+$ ), ( $\beta^+$ p), ( $\beta^+$ 2p), ( $\beta^+$ 3p), ( $\beta^+$ 4p); measured decay branches, half-lives, partial half-lives. JOUR PRVCA 76 041304
- $^{42}\text{V}$  2007D017 RADIOACTIVITY  $^{36,37}\text{Ca}$ ,  $^{39,40,41}\text{Ti}$ ,  $^{43}\text{V}$ ,  $^{42,43,44,45}\text{Cr}$ ,  $^{46,47}\text{Mn}$ ,  $^{46,47,48,49}\text{Fe}$ ,  $^{50,51}\text{Co}$ ,  $^{49,50,51,52,53}\text{Ni}$ ,  $^{55}\text{Cu}$ ,  $^{55,56}\text{Zn}(\beta^+)$ , (EC), ( $\beta^+$ p) [from Ni( $^{58}\text{Ni}, \text{X}$ )]; measured  $T_{1/2}$ ,  $\beta$ -delayed proton and  $\gamma$  spectra, branching ratios.  $^{43,45}\text{Cr}$ ,  $^{46}\text{Mn}$ ,  $^{46,47,48}\text{Fe}$ ,  $^{50}\text{Co}$ ,  $^{50,51,52,53}\text{Ni}$  deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18



KEYNUMBERS AND KEYWORDS

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**A=42 (continued)**

<sup>42</sup>Cr      2007D017      RADIOACTIVITY <sup>36,37</sup>Ca, <sup>39,40,41</sup>Ti, <sup>43</sup>V, <sup>42,43,44,45</sup>Cr, <sup>46,47</sup>Mn, <sup>46,47,48,49</sup>Fe, <sup>50,51</sup>Co, <sup>49,50,51,52,53</sup>Ni, <sup>55</sup>Cu, <sup>55,56</sup>Zn( $\beta^+$ ), (EC), ( $\beta^+$ p) [from Ni(<sup>58</sup>Ni, X)]; measured  $T_{1/2}$ ,  $\beta$ -delayed proton and  $\gamma$  spectra, branching ratios. <sup>43,45</sup>Cr, <sup>46</sup>Mn, <sup>46,47,48</sup>Fe, <sup>50</sup>Co, <sup>50,51,52,53</sup>Ni deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18

**A=43**

<sup>43</sup>Si      2007TA15      NUCLEAR REACTIONS <sup>184</sup>W, <sup>9</sup>Be(<sup>48</sup>Ca, X)<sup>36</sup>Mg / <sup>37</sup>Mg / <sup>38</sup>Mg / <sup>41</sup>Si / <sup>42</sup>Si / <sup>43</sup>Si / <sup>44</sup>Si, E=142 MeV / nucleon; measured production cross sections. Compared results to model calculations. JOUR PRVCA 75 064613

            2007TAZZ      NUCLEAR REACTIONS Be, W(<sup>48</sup>Ca, X)<sup>36</sup>Mg / <sup>37</sup>Mg / <sup>38</sup>Mg / <sup>41</sup>Si / <sup>42</sup>Si / <sup>43</sup>Si / <sup>44</sup>Si, E=142 MeV / nucleon; measured production  $\sigma$ . PREPRINT arXiv:0705.0349v1 [nucl-ex]

<sup>43</sup>P      2007BA47      NUCLEAR REACTIONS <sup>42,44</sup>S(<sup>9</sup>Be, X), E=39 MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coinc. <sup>42</sup>Si, <sup>41,43</sup>P deduced levels. JOUR PRLTA 99 022503

            2007JU03      ATOMIC MASSES <sup>23</sup>N, <sup>23,24</sup>O, <sup>25,26,27</sup>F, <sup>27,28,29,30,31</sup>Ne, <sup>31,32,33</sup>Na, <sup>34,35,36</sup>Mg, <sup>34,35,36,37,38,39</sup>Al, <sup>36,37,38,39,40,41,42</sup>Si, <sup>40,41,42,43,44</sup>P, <sup>40,43,44,45</sup>S, <sup>43,45,46,47</sup>Cl; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43

<sup>43</sup>S      2007JU03      ATOMIC MASSES <sup>23</sup>N, <sup>23,24</sup>O, <sup>25,26,27</sup>F, <sup>27,28,29,30,31</sup>Ne, <sup>31,32,33</sup>Na, <sup>34,35,36</sup>Mg, <sup>34,35,36,37,38,39</sup>Al, <sup>36,37,38,39,40,41,42</sup>Si, <sup>40,41,42,43,44</sup>P, <sup>40,43,44,45</sup>S, <sup>43,45,46,47</sup>Cl; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43

<sup>43</sup>Cl      2007JU03      ATOMIC MASSES <sup>23</sup>N, <sup>23,24</sup>O, <sup>25,26,27</sup>F, <sup>27,28,29,30,31</sup>Ne, <sup>31,32,33</sup>Na, <sup>34,35,36</sup>Mg, <sup>34,35,36,37,38,39</sup>Al, <sup>36,37,38,39,40,41,42</sup>Si, <sup>40,41,42,43,44</sup>P, <sup>40,43,44,45</sup>S, <sup>43,45,46,47</sup>Cl; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43

<sup>43</sup>K      2007YA08      ATOMIC MASSES <sup>35,36,37,38,43,44,45,56</sup>K; measured masses using ISOLTRAP. Discussed implications on IMME. JOUR PRVCA 76 024308

            2007YAZX      ATOMIC MASSES <sup>35,36,37,38,43,44,45,56</sup>K; measured masses using the ISOLTRAP mass spectrometer. PREPRINT arXiv:0707.3201v1 [nucl-ex]

<sup>43</sup>Ca      2006LIZX      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>38</sup>S, X)<sup>42</sup>Ca / <sup>43</sup>Ca / <sup>40</sup>Ar, E=5.45 MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$ . REPT CNS-REP-69,P6,Liu

<sup>43</sup>Sc      2006GA47      NUCLEAR MOMENTS <sup>42,43,44,44m,45,45m,46</sup>Sc; measured hfs, isotope shifts; deduced  $\mu$ , quadrupole moments. Collinear laser spectroscopy. JOUR HYIND 171 209

            2006ZA11      NUCLEAR REACTIONS Ti(p, X)<sup>48</sup>V / <sup>47</sup>Sc / <sup>44m</sup>Sc / <sup>44</sup>Sc / <sup>43</sup>Sc, E  $\approx$  4-27 MeV; measured excitation functions. Stacked-foil activation. JOUR RAACA 94 795

KEYNUMBERS AND KEYWORDS

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**A=43 (continued)**

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|------------------|----------|---|
|                  | 2007CH40 | NUCLEAR REACTIONS $^{28}\text{Si}(^{20}\text{Ne}, \text{X})^{42}\text{Sc}$ , $^{28}\text{Si}(^{20}\text{Ne}, \text{X})^{43}\text{Sc}$ , E=84 MeV; $^{24}\text{Mg}(^{24}\text{Mg}, \text{X})^{42,43}\text{Sc}$ , E=94 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma^-$ , (charged-particle) $\gamma^-$ coinc, angular distributions using the Gammasphere. Deduced level energies, J, $\pi$ , high-spin and high-energy extension of level scheme. JOUR PRVCA 75 054305  |
| $^{43}\text{Ti}$ | 2007D017 | RADIOACTIVITY $^{36,37}\text{Ca}$ , $^{39,40,41}\text{Ti}$ , $^{43}\text{V}$ , $^{42,43,44,45}\text{Cr}$ , $^{46,47}\text{Mn}$ , $^{46,47,48,49}\text{Fe}$ , $^{50,51}\text{Co}$ , $^{49,50,51,52,53}\text{Ni}$ , $^{55}\text{Cu}$ , $^{55,56}\text{Zn}(\beta^+)$ , (EC), ( $\beta^+\text{p}$ ) [from Ni( $^{58}\text{Ni}$ , X)]; measured $T_{1/2}$ , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. $^{43,45}\text{Cr}$ , $^{46}\text{Mn}$ , $^{46,47,48}\text{Fe}$ , $^{50}\text{Co}$ , $^{50,51,52,53}\text{Ni}$ deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18 |
| $^{43}\text{V}$  | 2007D017 | RADIOACTIVITY $^{36,37}\text{Ca}$ , $^{39,40,41}\text{Ti}$ , $^{43}\text{V}$ , $^{42,43,44,45}\text{Cr}$ , $^{46,47}\text{Mn}$ , $^{46,47,48,49}\text{Fe}$ , $^{50,51}\text{Co}$ , $^{49,50,51,52,53}\text{Ni}$ , $^{55}\text{Cu}$ , $^{55,56}\text{Zn}(\beta^+)$ , (EC), ( $\beta^+\text{p}$ ) [from Ni( $^{58}\text{Ni}$ , X)]; measured $T_{1/2}$ , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. $^{43,45}\text{Cr}$ , $^{46}\text{Mn}$ , $^{46,47,48}\text{Fe}$ , $^{50}\text{Co}$ , $^{50,51,52,53}\text{Ni}$ deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18 |
|                  | 2007GI10 | RADIOACTIVITY $^{45}\text{Fe}(2\text{p})$ , $^{43}\text{Cr}(\beta^+)$ ; measured direct and $\beta$ -delayed proton energies, $T_{1/2}$ . JOUR PRLTA 99 102501  |
|                  | 2007MI36 | RADIOACTIVITY $^{45}\text{Fe}(2\text{p})$ , ( $\beta^+$ ), ( $\beta^+\text{p}$ ), ( $\beta^+2\text{p}$ ), ( $\beta^+3\text{p}$ ), ( $\beta^+4\text{p}$ ); measured decay branches, half-lives, partial half-lives. JOUR PRVCA 76 041304   |
| $^{43}\text{Cr}$ | 2007D017 | RADIOACTIVITY $^{36,37}\text{Ca}$ , $^{39,40,41}\text{Ti}$ , $^{43}\text{V}$ , $^{42,43,44,45}\text{Cr}$ , $^{46,47}\text{Mn}$ , $^{46,47,48,49}\text{Fe}$ , $^{50,51}\text{Co}$ , $^{49,50,51,52,53}\text{Ni}$ , $^{55}\text{Cu}$ , $^{55,56}\text{Zn}(\beta^+)$ , (EC), ( $\beta^+\text{p}$ ) [from Ni( $^{58}\text{Ni}$ , X)]; measured $T_{1/2}$ , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. $^{43,45}\text{Cr}$ , $^{46}\text{Mn}$ , $^{46,47,48}\text{Fe}$ , $^{50}\text{Co}$ , $^{50,51,52,53}\text{Ni}$ deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18 |
|                  | 2007GI10 | RADIOACTIVITY $^{45}\text{Fe}(2\text{p})$ , $^{43}\text{Cr}(\beta^+)$ ; measured direct and $\beta$ -delayed proton energies, $T_{1/2}$ . JOUR PRLTA 99 102501  |
|                  | 2007GIZZ | RADIOACTIVITY $^{45}\text{Fe}(2\text{p})$ [from Ni( $^{58}\text{Ni}$ , X)]; measured $E\text{p}$ , pp-coin, $T_{1/2}$ . $^{43}\text{Cr}(\beta^+2\text{p})$ [from Ni( $^{58}\text{Ni}$ , X)]; measured $\beta$ -delayed $E\text{p}$ , pp-coin. Time-projection chamber. PREPRINT nucl-ex/0703011,3/5/2007  |
|                  | 2007MI36 | RADIOACTIVITY $^{45}\text{Fe}(2\text{p})$ , ( $\beta^+$ ), ( $\beta^+\text{p}$ ), ( $\beta^+2\text{p}$ ), ( $\beta^+3\text{p}$ ), ( $\beta^+4\text{p}$ ); measured decay branches, half-lives, partial half-lives. JOUR PRVCA 76 041304   |

**A=44**

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|------------------|----------|--|
| $^{44}\text{Si}$ | 2007TA15 | NUCLEAR REACTIONS $^{184}\text{W}$ , $^9\text{Be}(^{48}\text{Ca}, \text{X})^{36}\text{Mg}$ / $^{37}\text{Mg}$ / $^{38}\text{Mg}$ / $^{41}\text{Si}$ / $^{42}\text{Si}$ / $^{43}\text{Si}$ / $^{44}\text{Si}$ , E=142 MeV / nucleon; measured production cross sections. Compared results to model calculations. JOUR PRVCA 75 064613 |
|                  | 2007TAZZ | NUCLEAR REACTIONS $\text{Be}$ , $\text{W}(^{48}\text{Ca}, \text{X})^{36}\text{Mg}$ / $^{37}\text{Mg}$ / $^{38}\text{Mg}$ / $^{41}\text{Si}$ / $^{42}\text{Si}$ / $^{43}\text{Si}$ / $^{44}\text{Si}$ , E=142 MeV / nucleon; measured production $\sigma$ . PREPRINT arXiv:0705.0349v1 [nucl-ex]                                      |

KEYNUMBERS AND KEYWORDS

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**A=44 (continued)**

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|------------------|----------|---|
| $^{44}\text{P}$  | 2007JU03 | ATOMIC MASSES $^{23}\text{N}$ , $^{23,24}\text{O}$ , $^{25,26,27}\text{F}$ , $^{27,28,29,30,31}\text{Ne}$ , $^{31,32,33}\text{Na}$ , $^{34,35,36}\text{Mg}$ , $^{34,35,36,37,38,39}\text{Al}$ , $^{36,37,38,39,40,41,42}\text{Si}$ , $^{40,41,42,43,44}\text{P}$ , $^{40,43,44,45}\text{S}$ , $^{43,45,46,47}\text{Cl}$ ; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43   |
| $^{44}\text{S}$  | 2007JU03 | ATOMIC MASSES $^{23}\text{N}$ , $^{23,24}\text{O}$ , $^{25,26,27}\text{F}$ , $^{27,28,29,30,31}\text{Ne}$ , $^{31,32,33}\text{Na}$ , $^{34,35,36}\text{Mg}$ , $^{34,35,36,37,38,39}\text{Al}$ , $^{36,37,38,39,40,41,42}\text{Si}$ , $^{40,41,42,43,44}\text{P}$ , $^{40,43,44,45}\text{S}$ , $^{43,45,46,47}\text{Cl}$ ; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43   |
| $^{44}\text{K}$  | 2007YA08 | ATOMIC MASSES $^{35,36,37,38,43,44,45,56}\text{K}$ ; measured masses using ISOLTRAP. Discussed implications on IMME. JOUR PRVCA 76 024308   |
|                  | 2007YAZX | ATOMIC MASSES $^{35,36,37,38,43,44,45,46}\text{K}$ ; measured masses using the ISOLTRAP mass spectrometer. PREPRINT arXiv:0707.3201v1 [nucl-ex]   |
| $^{44}\text{Ca}$ | 2007KL05 | NUCLEAR REACTIONS $\text{Be}(^{238}\text{U}, \text{X})$ , $E=550$ MeV / nucleon; measured fragment yields. $^{12}\text{C}$ , $^{208}\text{Pb}(^{129}\text{Sn}, \text{X})$ , $(^{130}\text{Sn}, \text{X})$ , $(^{131}\text{Sn}, \text{X})$ , $(^{132}\text{Sn}, \text{X})$ , $(^{133}\text{Sn}, \text{X})$ , $E \approx 500$ MeV / nucleon; measured $E_n$ , $E_\gamma$ , $n\gamma$ -coin; deduced electromagnetic dissociation $\sigma(E)$ . $^{129,130,131,132,133}\text{Sn}$ deduced dipole strength distributions, $B(E1)$ , pygmy and giant dipole resonance parameters. Comparison with RPA calculations. $^{40,44,48}\text{Ca}$ , $^{116,124}\text{Sn}$ , $^{138}\text{Ba}$ , $^{140}\text{Ce}$ , $^{142}\text{Nd}$ , $^{144}\text{Sm}$ , $^{208}\text{Pb}(\gamma, \gamma')$ , $E$ not given; analyzed $E_\gamma$ , $I_\gamma$ . $^{40,44,48}\text{Ca}$ , $^{116,124}\text{Sn}$ , $^{138}\text{Ba}$ , $^{140}\text{Ce}$ , $^{142}\text{Nd}$ , $^{144}\text{Sm}$ , $^{208}\text{Pb}$ deduced $B(E1)$ . JOUR NUPAB 788 145c |
| $^{44}\text{Sc}$ | 2006AH10 | RADIOACTIVITY $^{44}\text{Ti}(\text{EC})$ [from $^{45}\text{Sc}(p, 2n)$ ]; measured $E_\gamma$ , $I_\gamma$ , $T_{1/2}$ . JOUR PRVCA 74 065803  |
|                  | 2006GA47 | NUCLEAR MOMENTS $^{42,43,44,44m,45,45m,46}\text{Sc}$ ; measured hfs, isotope shifts; deduced $\mu$ , quadrupole moments. Collinear laser spectroscopy. JOUR HYIND 171 209   |
|                  | 2006ZA11 | NUCLEAR REACTIONS $\text{Ti}(p, \text{X})^{48}\text{V}$ / $^{47}\text{Sc}$ / $^{44m}\text{Sc}$ / $^{44}\text{Sc}$ / $^{43}\text{Sc}$ , $E \approx 4\text{-}27$ MeV; measured excitation functions. Stacked-foil activation. JOUR RAACA 94 795   |
|                  | 2007DR05 | RADIOACTIVITY $^{44}\text{Ti}(\text{EC})$ ; measured $E_\gamma$ , $I_\gamma$ , $\gamma\gamma$ -coinc. $^{44}\text{Sc}$ deduced conversion coefficients and penetration parameter. JOUR BRSPE 71 887   |
|                  | 2007LA23 | NUCLEAR REACTIONS $^{51}\text{V}$ , $^{45}\text{Sc}(^3\text{He}, \alpha\gamma)$ , $(^3\text{He}, ^3\text{He}'\gamma)$ , $E=30, 38$ MeV; measured $E_\gamma$ , $E_\alpha$ , $E(^3\text{He})$ , (particle) $\gamma$ -coinc. $^{50,51}\text{V}$ , $^{44,45}\text{Sc}$ deduced level densities and giant resonance strength functions. JOUR APOBB 38 1495   |
|                  | 2007LA31 | NUCLEAR REACTIONS $^{45}\text{Sc}(^3\text{He}, \alpha\gamma)$ , $(^3\text{He}, ^3\text{He}'\gamma)$ , $E=38$ MeV; measured $E_\gamma$ , $I_\gamma$ . $^{44}\text{Sc}$ , $^{45}\text{Sc}$ ; deduced level densities, $\gamma$ -strength functions, parity asymmetry. JOUR PRVCA 76 044303  |
|                  | 2007LAZZ | NUCLEAR REACTIONS $^{45}\text{Sc}(^3\text{He}, \alpha)^{44}\text{Sc}$ , $^{45}\text{Sc}(^3\text{He}, ^3\text{He})$ , $E=38$ MeV; measured $E_\gamma$ , $I_\gamma$ . Deduced nuclear level densities and $\gamma$ -ray strength functions. PREPRINT arXiv:0706.0533v1 [nucl-ex]  |
|                  | 2007NG01 | NUCLEAR REACTIONS $^{45}\text{Sc}(\gamma, n)$ , $^{103}\text{Rh}(\gamma, 4n)$ , $E=65$ MeV / bremsstrahlung; $\text{Ti}(\gamma, \text{X})^{44}\text{Sc}$ , $E=65$ MeV / bremsstrahlung; $\text{Fe}(\gamma, \text{X})^{52}\text{Mn}$ , $E=65$ MeV / bremsstrahlung; measured $\sigma$ , isomer ratios. Activation method. JOUR KPSJA 50 417  |

KEYNUMBERS AND KEYWORDS

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**A=44 (continued)**

<sup>44</sup> Ti	2006AH10	RADIOACTIVITY <sup>44</sup> Ti(EC) [from <sup>45</sup> Sc(p, 2n)]; measured E $\gamma$ , I $\gamma$ , T <sub>1/2</sub> . JOUR PRVCA 74 065803
	2007D017	RADIOACTIVITY <sup>36,37</sup> Ca, <sup>39,40,41</sup> Ti, <sup>43</sup> V, <sup>42,43,44,45</sup> Cr, <sup>46,47</sup> Mn, <sup>46,47,48,49</sup> Fe, <sup>50,51</sup> Co, <sup>49,50,51,52,53</sup> Ni, <sup>55</sup> Cu, <sup>55,56</sup> Zn( $\beta^+$ ), (EC), ( $\beta^+$ p) [from Ni( <sup>58</sup> Ni, X)]; measured T <sub>1/2</sub> , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. <sup>43,45</sup> Cr, <sup>46</sup> Mn, <sup>46,47,48</sup> Fe, <sup>50</sup> Co, <sup>50,51,52,53</sup> Ni deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18
	2007DR05	RADIOACTIVITY <sup>44</sup> Ti(EC); measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coinc. <sup>44</sup> Sc deduced conversion coefficients and penetration parameter. JOUR BRSPE 71 887
	2007NAZZ	NUCLEAR REACTIONS <sup>40</sup> Ca( $\alpha$ , $\gamma$ ), E(cm)=0.6-1.2 MeV / nucleon; measured yields using accelerator mass spectroscopy. Deduced resonance strength and cross section. CONF Geneva(NIC-IX) 031
	2007V003	NUCLEAR REACTIONS <sup>4</sup> He( <sup>40</sup> Ca, $\gamma$ ) <sup>44</sup> Ti, E=1.135 MeV / nucleon; measured yield and resonance strength at DRAGON recoil mass spectrometer. JOUR NIMBE 259 688
	2007V006	NUCLEAR REACTIONS <sup>4</sup> He( <sup>40</sup> Ca, $\gamma$ ) <sup>44</sup> Ti, E=0.60-1.15 MeV / nucleon; measured recoil energies, yields, and cross section. JOUR PRVCA 76 035801
	2007VOZY	NUCLEAR REACTIONS <sup>4</sup> He( <sup>40</sup> Ca, $\gamma$ ), E=600-1200 keV / nucleon; measured prompt $\gamma$ s in coincidence with recoils, yield using the recoil mass spectrometer DRAGON. <sup>40</sup> Ca( $\alpha$ , $\gamma$ ); deduced reaction rate. CONF Geneva(NIC-IX) 030
<sup>44</sup> V	2007D017	RADIOACTIVITY <sup>36,37</sup> Ca, <sup>39,40,41</sup> Ti, <sup>43</sup> V, <sup>42,43,44,45</sup> Cr, <sup>46,47</sup> Mn, <sup>46,47,48,49</sup> Fe, <sup>50,51</sup> Co, <sup>49,50,51,52,53</sup> Ni, <sup>55</sup> Cu, <sup>55,56</sup> Zn( $\beta^+$ ), (EC), ( $\beta^+$ p) [from Ni( <sup>58</sup> Ni, X)]; measured T <sub>1/2</sub> , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. <sup>43,45</sup> Cr, <sup>46</sup> Mn, <sup>46,47,48</sup> Fe, <sup>50</sup> Co, <sup>50,51,52,53</sup> Ni deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18
<sup>44</sup> Cr	2007D017	RADIOACTIVITY <sup>36,37</sup> Ca, <sup>39,40,41</sup> Ti, <sup>43</sup> V, <sup>42,43,44,45</sup> Cr, <sup>46,47</sup> Mn, <sup>46,47,48,49</sup> Fe, <sup>50,51</sup> Co, <sup>49,50,51,52,53</sup> Ni, <sup>55</sup> Cu, <sup>55,56</sup> Zn( $\beta^+$ ), (EC), ( $\beta^+$ p) [from Ni( <sup>58</sup> Ni, X)]; measured T <sub>1/2</sub> , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. <sup>43,45</sup> Cr, <sup>46</sup> Mn, <sup>46,47,48</sup> Fe, <sup>50</sup> Co, <sup>50,51,52,53</sup> Ni deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18
	2007MI36	RADIOACTIVITY <sup>45</sup> Fe(2p), ( $\beta^+$ ), ( $\beta^+$ p), ( $\beta^+$ 2p), ( $\beta^+$ 3p), ( $\beta^+$ 4p); measured decay branches, half-lives, partial half-lives. JOUR PRVCA 76 041304

**A=45**

<sup>45</sup> S	2007JU03	ATOMIC MASSES <sup>23</sup> N, <sup>23,24</sup> O, <sup>25,26,27</sup> F, <sup>27,28,29,30,31</sup> Ne, <sup>31,32,33</sup> Na, <sup>34,35,36</sup> Mg, <sup>34,35,36,37,38,39</sup> Al, <sup>36,37,38,39,40,41,42</sup> Si, <sup>40,41,42,43,44</sup> P, <sup>40,43,44,45</sup> S, <sup>43,45,46,47</sup> Cl; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43
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KEYNUMBERS AND KEYWORDS

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**A=45 (continued)**

<sup>45</sup> Cl	2007JU03	ATOMIC MASSES <sup>23</sup> N, <sup>23,24</sup> O, <sup>25,26,27</sup> F, <sup>27,28,29,30,31</sup> Ne, <sup>31,32,33</sup> Na, <sup>34,35,36</sup> Mg, <sup>34,35,36,37,38,39</sup> Al, <sup>36,37,38,39,40,41,42</sup> Si, <sup>40,41,42,43,44</sup> P, <sup>40,43,44,45</sup> S, <sup>43,45,46,47</sup> Cl; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43
<sup>45</sup> K	2007YA08	ATOMIC MASSES <sup>35,36,37,38,43,44,45,56</sup> K; measured masses using ISOLTRAP. Discussed implications on IMME. JOUR PRVCA 76 024308
	2007YAZX	ATOMIC MASSES <sup>35,36,37,38,43,44,45,46</sup> K; measured masses using the ISOLTRAP mass spectrometer. PREPRINT arXiv:0707.3201v1 [nucl-ex]
<sup>45</sup> Sc	2006GA47	NUCLEAR MOMENTS <sup>42,43,44,44m,45,45m,46</sup> Sc; measured hfs, isotope shifts; deduced $\mu$ , quadrupole moments. Collinear laser spectroscopy. JOUR HYIND 171 209
	2007LA23	NUCLEAR REACTIONS <sup>51</sup> V, <sup>45</sup> Sc( <sup>3</sup> He, $\alpha\gamma$ ), ( <sup>3</sup> He, <sup>3</sup> He' $\gamma$ ), E=30, 38 MeV; measured E $\gamma$ , E $\alpha$ , E( <sup>3</sup> He), (particle) $\gamma$ -coinc. <sup>50,51</sup> V, <sup>44,45</sup> Sc deduced level densities and giant resonance strength functions. JOUR APOBB 38 1495
	2007LA31	NUCLEAR REACTIONS <sup>45</sup> Sc( <sup>3</sup> He, $\alpha\gamma$ ), ( <sup>3</sup> He, <sup>3</sup> He' $\gamma$ ), E=38 MeV; measured E $\gamma$ , I $\gamma$ . <sup>44</sup> Sc, <sup>45</sup> Sc; deduced level densities, $\gamma$ -strength functions, parity asymmetry. JOUR PRVCA 76 044303
	2007LAZZ	NUCLEAR REACTIONS <sup>45</sup> Sc( <sup>3</sup> He, $\alpha$ ) <sup>44</sup> Sc, <sup>45</sup> Sc( <sup>3</sup> He, <sup>3</sup> He), E=38 MeV; measured E $\gamma$ , I $\gamma$ . Deduced nuclear level densities and $\gamma$ -ray strength functions. PREPRINT arXiv:0706.0533v1 [nucl-ex]
<sup>45</sup> V	2007D017	RADIOACTIVITY <sup>36,37</sup> Ca, <sup>39,40,41</sup> Ti, <sup>43</sup> V, <sup>42,43,44,45</sup> Cr, <sup>46,47</sup> Mn, <sup>46,47,48,49</sup> Fe, <sup>50,51</sup> Co, <sup>49,50,51,52,53</sup> Ni, <sup>55</sup> Cu, <sup>55,56</sup> Zn( $\beta^+$ ), (EC), ( $\beta^+$ p) [from Ni( <sup>58</sup> Ni, X)]; measured T <sub>1/2</sub> , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. <sup>43,45</sup> Cr, <sup>46</sup> Mn, <sup>46,47,48</sup> Fe, <sup>50</sup> Co, <sup>50,51,52,53</sup> Ni deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18
<sup>45</sup> Cr	2007D017	RADIOACTIVITY <sup>36,37</sup> Ca, <sup>39,40,41</sup> Ti, <sup>43</sup> V, <sup>42,43,44,45</sup> Cr, <sup>46,47</sup> Mn, <sup>46,47,48,49</sup> Fe, <sup>50,51</sup> Co, <sup>49,50,51,52,53</sup> Ni, <sup>55</sup> Cu, <sup>55,56</sup> Zn( $\beta^+$ ), (EC), ( $\beta^+$ p) [from Ni( <sup>58</sup> Ni, X)]; measured T <sub>1/2</sub> , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. <sup>43,45</sup> Cr, <sup>46</sup> Mn, <sup>46,47,48</sup> Fe, <sup>50</sup> Co, <sup>50,51,52,53</sup> Ni deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18
<sup>45</sup> Mn	2007MI36	RADIOACTIVITY <sup>45</sup> Fe(2p), ( $\beta^+$ ), ( $\beta^+$ p), ( $\beta^+$ 2p), ( $\beta^+$ 3p), ( $\beta^+$ 4p); measured decay branches, half-lives, partial half-lives. JOUR PRVCA 76 041304
<sup>45</sup> Fe	2007GI10	RADIOACTIVITY <sup>45</sup> Fe(2p), <sup>43</sup> Cr( $\beta^+$ ); measured direct and $\beta$ -delayed proton energies, T <sub>1/2</sub> . JOUR PRLTA 99 102501
	2007GIZZ	RADIOACTIVITY <sup>45</sup> Fe(2p) [from Ni( <sup>58</sup> Ni, X)]; measured E <sub>p</sub> , pp-coin, T <sub>1/2</sub> . <sup>43</sup> Cr( $\beta^+$ 2p) [from Ni( <sup>58</sup> Ni, X)]; measured $\beta$ -delayed E <sub>p</sub> , pp-coin. Time-projection chamber. PREPRINT nucl-ex/0703011,3/5/2007
	2007MI36	RADIOACTIVITY <sup>45</sup> Fe(2p), ( $\beta^+$ ), ( $\beta^+$ p), ( $\beta^+$ 2p), ( $\beta^+$ 3p), ( $\beta^+$ 4p); measured decay branches, half-lives, partial half-lives. JOUR PRVCA 76 041304

KEYNUMBERS AND KEYWORDS

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A=46

$^{46}\text{Cl}$	2007JU03	ATOMIC MASSES $^{23}\text{N}$ , $^{23,24}\text{O}$ , $^{25,26,27}\text{F}$ , $^{27,28,29,30,31}\text{Ne}$ , $^{31,32,33}\text{Na}$ , $^{34,35,36}\text{Mg}$ , $^{34,35,36,37,38,39}\text{Al}$ , $^{36,37,38,39,40,41,42}\text{Si}$ , $^{40,41,42,43,44}\text{P}$ , $^{40,43,44,45}\text{S}$ , $^{43,45,46,47}\text{Cl}$ ; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43
$^{46}\text{K}$	2007YAZX	ATOMIC MASSES $^{35,36,37,38,43,44,45,46}\text{K}$ ; measured masses using the ISOLTRAP mass spectrometer. PREPRINT arXiv:0707.3201v1 [nucl-ex]
$^{46}\text{Sc}$	2006GA47	NUCLEAR MOMENTS $^{42,43,44,44m,45,45m,46}\text{Sc}$ ; measured hfs, isotope shifts; deduced $\mu$ , quadrupole moments. Collinear laser spectroscopy. JOUR HYIND 171 209
$^{46}\text{Ti}$	2006KMZZ	NUCLEAR REACTIONS $^{19}\text{F}(^{27}\text{Al}, \text{X})$ , E=144 MeV; measured $E\gamma$ , $E\alpha$ , angular distributions, $\alpha\gamma^-$ , (recoil) $\alpha$ -coin. $^{46}\text{Ti}$ deduced large deformation at high spin, GDR strength distribution, Jacobi shape transition. Comparison with previous results and model predictions. PREPRINT nucl-ex/0612029,12/28/2006
	2007BR25	NUCLEAR REACTIONS $^{19}\text{F}(^{27}\text{Al}, \text{X})$ , E=144 MeV; measured $E\gamma$ , $I\gamma$ , $E\alpha$ , $I\alpha$ , (residue) $\alpha$ -coin. $^{46}\text{Ti}$ deduced giant dipole resonance strength distributions. JOUR NUPAB 788 224c
	2007KM01	NUCLEAR REACTIONS $^{28}\text{Si}(^{18}\text{O}, \text{F})$ , E=105 MeV; measured $E\gamma$ , $E_p$ , $E\alpha$ , yields, angular distributions, and (particle) $\gamma$ -coinc. $^{46}\text{Ti}$ deduced deformation effects. JOUR APOBB 38 1437
	2007WE01	NUCLEAR REACTIONS $^{46,50}\text{Ti}(^{16}\text{O}, ^{16}\text{O})$ , E=30-70 MeV; measured elastic $\sigma(\theta)$ ; deduced model parameters, threshold anomaly. Unexpected structure effects not observed. JOUR NUPAB 781 342
$^{46}\text{V}$	2007AD27	NUCLEAR REACTIONS $^{42}\text{Ca}$ , $^{46}\text{Ti}$ , $^{50}\text{Cr}$ , $^{54}\text{Fe}(^3\text{He}, \text{t})$ , E=140 MeV / nucleon; measured excitation energy spectra. $^{42}\text{Sc}$ , $^{46}\text{V}$ , $^{50}\text{Mn}$ , $^{54}\text{Co}$ deduced Gamow-Teller strength distribution. Comparison with shell model. JOUR NUPAB 788 70c
	2007D017	RADIOACTIVITY $^{36,37}\text{Ca}$ , $^{39,40,41}\text{Ti}$ , $^{43}\text{V}$ , $^{42,43,44,45}\text{Cr}$ , $^{46,47}\text{Mn}$ , $^{46,47,48,49}\text{Fe}$ , $^{50,51}\text{Co}$ , $^{49,50,51,52,53}\text{Ni}$ , $^{55}\text{Cu}$ , $^{55,56}\text{Zn}(\beta^+)$ , (EC), ( $\beta^+$ p) [from Ni( $^{58}\text{Ni}$ , X)]; measured $T_{1/2}$ , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. $^{43,45}\text{Cr}$ , $^{46}\text{Mn}$ , $^{46,47,48}\text{Fe}$ , $^{50}\text{Co}$ , $^{50,51,52,53}\text{Ni}$ deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18
$^{46}\text{Cr}$	2007D017	RADIOACTIVITY $^{36,37}\text{Ca}$ , $^{39,40,41}\text{Ti}$ , $^{43}\text{V}$ , $^{42,43,44,45}\text{Cr}$ , $^{46,47}\text{Mn}$ , $^{46,47,48,49}\text{Fe}$ , $^{50,51}\text{Co}$ , $^{49,50,51,52,53}\text{Ni}$ , $^{55}\text{Cu}$ , $^{55,56}\text{Zn}(\beta^+)$ , (EC), ( $\beta^+$ p) [from Ni( $^{58}\text{Ni}$ , X)]; measured $T_{1/2}$ , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. $^{43,45}\text{Cr}$ , $^{46}\text{Mn}$ , $^{46,47,48}\text{Fe}$ , $^{50}\text{Co}$ , $^{50,51,52,53}\text{Ni}$ deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18
	2007GA03	NUCLEAR REACTIONS $^{12}\text{C}(^{36}\text{Ar}, 2n)$ , E=105 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma^-$ , (recoil) $\gamma$ -coin. $^{46}\text{Cr}$ deduced levels, J, $\pi$ , analog states features. Gammasphere array, fragment separator. JOUR PRVCA 75 014307



KEYNUMBERS AND KEYWORDS

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**A=46 (continued)**

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| $^{46}\text{Mn}$ | 2007D017 | RADIOACTIVITY $^{36,37}\text{Ca}$ , $^{39,40,41}\text{Ti}$ , $^{43}\text{V}$ , $^{42,43,44,45}\text{Cr}$ , $^{46,47}\text{Mn}$ , $^{46,47,48,49}\text{Fe}$ , $^{50,51}\text{Co}$ , $^{49,50,51,52,53}\text{Ni}$ , $^{55}\text{Cu}$ , $^{55,56}\text{Zn}(\beta^+)$ , (EC), ( $\beta^+\text{p}$ ) [from Ni( $^{58}\text{Ni}$ , X)]; measured $T_{1/2}$ , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. $^{43,45}\text{Cr}$ , $^{46}\text{Mn}$ , $^{46,47,48}\text{Fe}$ , $^{50}\text{Co}$ , $^{50,51,52,53}\text{Ni}$ deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18 |
| $^{46}\text{Fe}$ | 2007D017 | RADIOACTIVITY $^{36,37}\text{Ca}$ , $^{39,40,41}\text{Ti}$ , $^{43}\text{V}$ , $^{42,43,44,45}\text{Cr}$ , $^{46,47}\text{Mn}$ , $^{46,47,48,49}\text{Fe}$ , $^{50,51}\text{Co}$ , $^{49,50,51,52,53}\text{Ni}$ , $^{55}\text{Cu}$ , $^{55,56}\text{Zn}(\beta^+)$ , (EC), ( $\beta^+\text{p}$ ) [from Ni( $^{58}\text{Ni}$ , X)]; measured $T_{1/2}$ , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. $^{43,45}\text{Cr}$ , $^{46}\text{Mn}$ , $^{46,47,48}\text{Fe}$ , $^{50}\text{Co}$ , $^{50,51,52,53}\text{Ni}$ deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18 |

**A=47**

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| $^{47}\text{Cl}$ | 2007JU03 | ATOMIC MASSES $^{23}\text{N}$ , $^{23,24}\text{O}$ , $^{25,26,27}\text{F}$ , $^{27,28,29,30,31}\text{Ne}$ , $^{31,32,33}\text{Na}$ , $^{34,35,36}\text{Mg}$ , $^{34,35,36,37,38,39}\text{Al}$ , $^{36,37,38,39,40,41,42}\text{Si}$ , $^{40,41,42,43,44}\text{P}$ , $^{40,43,44,45}\text{S}$ , $^{43,45,46,47}\text{Cl}$ ; measured masses; analysed neutron separation energy. Cyclotron-based mass spectrometry. JOUR PYLBB 649 43   |
| $^{47}\text{K}$  | 2007VI11 | NUCLEAR REACTIONS $^{12}\text{C}(^{48}\text{Ca}, \text{X})^8\text{Li}$ / $^9\text{Li}$ / $^{25}\text{Na}$ / $^{26}\text{Na}$ / $^{27}\text{Na}$ / $^{29}\text{Al}$ / $^{37}\text{K}$ / $^{47}\text{K}$ , E=60 MeV / nucleon; measured yield. JOUR NUPAB 787 126c  |
| $^{47}\text{Sc}$ | 2006ZA11 | NUCLEAR REACTIONS $\text{Ti}(\text{p}, \text{X})^{48}\text{V}$ / $^{47}\text{Sc}$ / $^{44m}\text{Sc}$ / $^{44}\text{Sc}$ / $^{43}\text{Sc}$ , E $\approx$ 4-27 MeV; measured excitation functions. Stacked-foil activation. JOUR RAACA 94 795   |
| $^{47}\text{Ti}$ | 2007SC03 | NUCLEAR MOMENTS $^{47}\text{Ti}$ ; measured hyperfine-induced transition rate in beryllium-like ions. JOUR PRLTA 98 033001  |
| $^{47}\text{Cr}$ | 2007D017 | RADIOACTIVITY $^{36,37}\text{Ca}$ , $^{39,40,41}\text{Ti}$ , $^{43}\text{V}$ , $^{42,43,44,45}\text{Cr}$ , $^{46,47}\text{Mn}$ , $^{46,47,48,49}\text{Fe}$ , $^{50,51}\text{Co}$ , $^{49,50,51,52,53}\text{Ni}$ , $^{55}\text{Cu}$ , $^{55,56}\text{Zn}(\beta^+)$ , (EC), ( $\beta^+\text{p}$ ) [from Ni( $^{58}\text{Ni}$ , X)]; measured $T_{1/2}$ , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. $^{43,45}\text{Cr}$ , $^{46}\text{Mn}$ , $^{46,47,48}\text{Fe}$ , $^{50}\text{Co}$ , $^{50,51,52,53}\text{Ni}$ deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18 |
| $^{47}\text{Mn}$ | 2007D017 | RADIOACTIVITY $^{36,37}\text{Ca}$ , $^{39,40,41}\text{Ti}$ , $^{43}\text{V}$ , $^{42,43,44,45}\text{Cr}$ , $^{46,47}\text{Mn}$ , $^{46,47,48,49}\text{Fe}$ , $^{50,51}\text{Co}$ , $^{49,50,51,52,53}\text{Ni}$ , $^{55}\text{Cu}$ , $^{55,56}\text{Zn}(\beta^+)$ , (EC), ( $\beta^+\text{p}$ ) [from Ni( $^{58}\text{Ni}$ , X)]; measured $T_{1/2}$ , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. $^{43,45}\text{Cr}$ , $^{46}\text{Mn}$ , $^{46,47,48}\text{Fe}$ , $^{50}\text{Co}$ , $^{50,51,52,53}\text{Ni}$ deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18 |
| $^{47}\text{Fe}$ | 2007D017 | RADIOACTIVITY $^{36,37}\text{Ca}$ , $^{39,40,41}\text{Ti}$ , $^{43}\text{V}$ , $^{42,43,44,45}\text{Cr}$ , $^{46,47}\text{Mn}$ , $^{46,47,48,49}\text{Fe}$ , $^{50,51}\text{Co}$ , $^{49,50,51,52,53}\text{Ni}$ , $^{55}\text{Cu}$ , $^{55,56}\text{Zn}(\beta^+)$ , (EC), ( $\beta^+\text{p}$ ) [from Ni( $^{58}\text{Ni}$ , X)]; measured $T_{1/2}$ , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. $^{43,45}\text{Cr}$ , $^{46}\text{Mn}$ , $^{46,47,48}\text{Fe}$ , $^{50}\text{Co}$ , $^{50,51,52,53}\text{Ni}$ deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18 |

## A=48

- <sup>48</sup>Ca      2007KL05      NUCLEAR REACTIONS Be(<sup>238</sup>U, X), E=550 MeV / nucleon; measured fragment yields. <sup>12</sup>C, <sup>208</sup>Pb(<sup>129</sup>Sn, X), (<sup>130</sup>Sn, X), (<sup>131</sup>Sn, X), (<sup>132</sup>Sn, X), (<sup>133</sup>Sn, X), E≈ 500 MeV / nucleon; measured En, E $\gamma$ , n $\gamma$ -coin; deduced electromagnetic dissociation  $\sigma(E)$ . <sup>129,130,131,132,133</sup>Sn deduced dipole strength distributions, B(E1), pygmy and giant dipole resonance parameters. Comparison with RPA calculations. <sup>40,44,48</sup>Ca, <sup>116,124</sup>Sn, <sup>138</sup>Ba, <sup>140</sup>Ce, <sup>142</sup>Nd, <sup>144</sup>Sm, <sup>208</sup>Pb( $\gamma$ ,  $\gamma'$ ), E not given; analyzed E $\gamma$ , I $\gamma$ . <sup>40,44,48</sup>Ca, <sup>116,124</sup>Sn, <sup>138</sup>Ba, <sup>140</sup>Ce, <sup>142</sup>Nd, <sup>144</sup>Sm, <sup>208</sup>Pb deduced B(E1). JOUR NUPAB 788 145c
- 2007TA27      NUCLEAR REACTIONS <sup>26</sup>Mg, <sup>48</sup>Ca(p, p'), E=295 MeV; measured excitation energy spectrum. <sup>12</sup>C(p, p'), E=295 MeV; calculated  $\sigma(\theta)$ . DWIA method. JOUR NUPAB 788 53c
- <sup>48</sup>V      2006ZA11      NUCLEAR REACTIONS Ti(p, X)<sup>48</sup>V / <sup>47</sup>Sc / <sup>44m</sup>Sc / <sup>44</sup>Sc / <sup>43</sup>Sc, E ≈ 4-27 MeV; measured excitation functions. Stacked-foil activation. JOUR RAACA 94 795
- 2007TA16      NUCLEAR REACTIONS Ti(d, X)<sup>48</sup>V / <sup>44,46,47,48</sup>Sc, E < 10 MeV; measured E $\gamma$ , I $\gamma$ . Deduced cross sections using stacked foil technique. JOUR NIMBE 262 7
- <sup>48</sup>Cr      2007D017      RADIOACTIVITY <sup>36,37</sup>Ca, <sup>39,40,41</sup>Ti, <sup>43</sup>V, <sup>42,43,44,45</sup>Cr, <sup>46,47</sup>Mn, <sup>46,47,48,49</sup>Fe, <sup>50,51</sup>Co, <sup>49,50,51,52,53</sup>Ni, <sup>55</sup>Cu, <sup>55,56</sup>Zn( $\beta^+$ ), (EC), ( $\beta^+$ p) [from Ni(<sup>58</sup>Ni, X)]; measured T<sub>1/2</sub>,  $\beta$ -delayed proton and  $\gamma$  spectra, branching ratios. <sup>43,45</sup>Cr, <sup>46</sup>Mn, <sup>46,47,48</sup>Fe, <sup>50</sup>Co, <sup>50,51,52,53</sup>Ni deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18
- <sup>48</sup>Mn      2007D017      RADIOACTIVITY <sup>36,37</sup>Ca, <sup>39,40,41</sup>Ti, <sup>43</sup>V, <sup>42,43,44,45</sup>Cr, <sup>46,47</sup>Mn, <sup>46,47,48,49</sup>Fe, <sup>50,51</sup>Co, <sup>49,50,51,52,53</sup>Ni, <sup>55</sup>Cu, <sup>55,56</sup>Zn( $\beta^+$ ), (EC), ( $\beta^+$ p) [from Ni(<sup>58</sup>Ni, X)]; measured T<sub>1/2</sub>,  $\beta$ -delayed proton and  $\gamma$  spectra, branching ratios. <sup>43,45</sup>Cr, <sup>46</sup>Mn, <sup>46,47,48</sup>Fe, <sup>50</sup>Co, <sup>50,51,52,53</sup>Ni deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18
- <sup>48</sup>Fe      2007D017      RADIOACTIVITY <sup>36,37</sup>Ca, <sup>39,40,41</sup>Ti, <sup>43</sup>V, <sup>42,43,44,45</sup>Cr, <sup>46,47</sup>Mn, <sup>46,47,48,49</sup>Fe, <sup>50,51</sup>Co, <sup>49,50,51,52,53</sup>Ni, <sup>55</sup>Cu, <sup>55,56</sup>Zn( $\beta^+$ ), (EC), ( $\beta^+$ p) [from Ni(<sup>58</sup>Ni, X)]; measured T<sub>1/2</sub>,  $\beta$ -delayed proton and  $\gamma$  spectra, branching ratios. <sup>43,45</sup>Cr, <sup>46</sup>Mn, <sup>46,47,48</sup>Fe, <sup>50</sup>Co, <sup>50,51,52,53</sup>Ni deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18

## A=49

- <sup>49</sup>Ti      2007LIZW      NUCLEAR REACTIONS <sup>48</sup>Ti(<sup>11</sup>Be, <sup>10</sup>Be), E=41 MeV / nucleon; measured fragment energies and yields, neutron energies, intensities, and angular distributions, and E $\gamma$ , I $\gamma$ . <sup>11</sup>Be deduced breakup  $\sigma$ . PREPRINT arXiv:0709.3981v1 [nucl-ex]



KEYNUMBERS AND KEYWORDS

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**A=49 (continued)**

$^{49}\text{Mn}$	2007D017	RADIOACTIVITY $^{36,37}\text{Ca}$ , $^{39,40,41}\text{Ti}$ , $^{43}\text{V}$ , $^{42,43,44,45}\text{Cr}$ , $^{46,47}\text{Mn}$ , $^{46,47,48,49}\text{Fe}$ , $^{50,51}\text{Co}$ , $^{49,50,51,52,53}\text{Ni}$ , $^{55}\text{Cu}$ , $^{55,56}\text{Zn}(\beta^+)$ , (EC), ( $\beta^+\text{p}$ ) [from Ni( $^{58}\text{Ni}$ , X)]; measured $T_{1/2}$ , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. $^{43,45}\text{Cr}$ , $^{46}\text{Mn}$ , $^{46,47,48}\text{Fe}$ , $^{50}\text{Co}$ , $^{50,51,52,53}\text{Ni}$ deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18
$^{49}\text{Fe}$	2007D017	RADIOACTIVITY $^{36,37}\text{Ca}$ , $^{39,40,41}\text{Ti}$ , $^{43}\text{V}$ , $^{42,43,44,45}\text{Cr}$ , $^{46,47}\text{Mn}$ , $^{46,47,48,49}\text{Fe}$ , $^{50,51}\text{Co}$ , $^{49,50,51,52,53}\text{Ni}$ , $^{55}\text{Cu}$ , $^{55,56}\text{Zn}(\beta^+)$ , (EC), ( $\beta^+\text{p}$ ) [from Ni( $^{58}\text{Ni}$ , X)]; measured $T_{1/2}$ , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. $^{43,45}\text{Cr}$ , $^{46}\text{Mn}$ , $^{46,47,48}\text{Fe}$ , $^{50}\text{Co}$ , $^{50,51,52,53}\text{Ni}$ deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18
$^{49}\text{Co}$	2007D017	RADIOACTIVITY $^{36,37}\text{Ca}$ , $^{39,40,41}\text{Ti}$ , $^{43}\text{V}$ , $^{42,43,44,45}\text{Cr}$ , $^{46,47}\text{Mn}$ , $^{46,47,48,49}\text{Fe}$ , $^{50,51}\text{Co}$ , $^{49,50,51,52,53}\text{Ni}$ , $^{55}\text{Cu}$ , $^{55,56}\text{Zn}(\beta^+)$ , (EC), ( $\beta^+\text{p}$ ) [from Ni( $^{58}\text{Ni}$ , X)]; measured $T_{1/2}$ , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. $^{43,45}\text{Cr}$ , $^{46}\text{Mn}$ , $^{46,47,48}\text{Fe}$ , $^{50}\text{Co}$ , $^{50,51,52,53}\text{Ni}$ deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18
$^{49}\text{Ni}$	2007D017	RADIOACTIVITY $^{36,37}\text{Ca}$ , $^{39,40,41}\text{Ti}$ , $^{43}\text{V}$ , $^{42,43,44,45}\text{Cr}$ , $^{46,47}\text{Mn}$ , $^{46,47,48,49}\text{Fe}$ , $^{50,51}\text{Co}$ , $^{49,50,51,52,53}\text{Ni}$ , $^{55}\text{Cu}$ , $^{55,56}\text{Zn}(\beta^+)$ , (EC), ( $\beta^+\text{p}$ ) [from Ni( $^{58}\text{Ni}$ , X)]; measured $T_{1/2}$ , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. $^{43,45}\text{Cr}$ , $^{46}\text{Mn}$ , $^{46,47,48}\text{Fe}$ , $^{50}\text{Co}$ , $^{50,51,52,53}\text{Ni}$ deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18

**A=50**

$^{50}\text{Ca}$	2007RE19	NUCLEAR REACTIONS $^{48}\text{Ca}(^{238}\text{U}, \text{X})$ , $E=1.31$ GeV / nucleon; measured $E\gamma$ , $I\gamma$ , (particle) $\gamma$ -coinc. $^{50,51,52}\text{Ca}$ deduced levels, J, $\pi$ . Compared results to model calculations. JOUR PRVCA 76 021304
$^{50}\text{Ti}$	2007WE01	NUCLEAR REACTIONS $^{46,50}\text{Ti}(^{16}\text{O}, ^{16}\text{O})$ , $E=30-70$ MeV; measured elastic $\sigma(\theta)$ ; deduced model parameters, threshold anomaly. Unexpected structure effects not observed. JOUR NUPAB 781 342
$^{50}\text{V}$	2007LA23	NUCLEAR REACTIONS $^{51}\text{V}$ , $^{45}\text{Sc}(^3\text{He}, \alpha\gamma)$ , ( $^3\text{He}$ , $^3\text{He}'\gamma$ ), $E=30, 38$ MeV; measured $E\gamma$ , $E\alpha$ , $E(^3\text{He})$ , (particle) $\gamma$ -coinc. $^{50,51}\text{V}$ , $^{44,45}\text{Sc}$ deduced level densities and giant resonance strength functions. JOUR APOBB 38 1495
$^{50}\text{Mn}$	2007AD27	NUCLEAR REACTIONS $^{42}\text{Ca}$ , $^{46}\text{Ti}$ , $^{50}\text{Cr}$ , $^{54}\text{Fe}(^3\text{He}, \text{t})$ , $E=140$ MeV / nucleon; measured excitation energy spectra. $^{42}\text{Sc}$ , $^{46}\text{V}$ , $^{50}\text{Mn}$ , $^{54}\text{Co}$ deduced Gamow-Teller strength distribution. Comparison with shell model. JOUR NUPAB 788 70c
	2007D017	RADIOACTIVITY $^{36,37}\text{Ca}$ , $^{39,40,41}\text{Ti}$ , $^{43}\text{V}$ , $^{42,43,44,45}\text{Cr}$ , $^{46,47}\text{Mn}$ , $^{46,47,48,49}\text{Fe}$ , $^{50,51}\text{Co}$ , $^{49,50,51,52,53}\text{Ni}$ , $^{55}\text{Cu}$ , $^{55,56}\text{Zn}(\beta^+)$ , (EC), ( $\beta^+\text{p}$ ) [from Ni( $^{58}\text{Ni}$ , X)]; measured $T_{1/2}$ , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. $^{43,45}\text{Cr}$ , $^{46}\text{Mn}$ , $^{46,47,48}\text{Fe}$ , $^{50}\text{Co}$ , $^{50,51,52,53}\text{Ni}$ deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18

KEYNUMBERS AND KEYWORDS

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**A=50 (continued)**

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| $^{50}\text{Fe}$ | 2007D017 | RADIOACTIVITY $^{36,37}\text{Ca}$ , $^{39,40,41}\text{Ti}$ , $^{43}\text{V}$ , $^{42,43,44,45}\text{Cr}$ , $^{46,47}\text{Mn}$ , $^{46,47,48,49}\text{Fe}$ , $^{50,51}\text{Co}$ , $^{49,50,51,52,53}\text{Ni}$ , $^{55}\text{Cu}$ , $^{55,56}\text{Zn}(\beta^+)$ , (EC), ( $\beta^+\text{p}$ ) [from Ni( $^{58}\text{Ni}$ , X)]; measured $T_{1/2}$ , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. $^{43,45}\text{Cr}$ , $^{46}\text{Mn}$ , $^{46,47,48}\text{Fe}$ , $^{50}\text{Co}$ , $^{50,51,52,53}\text{Ni}$ deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18 |
| $^{50}\text{Co}$ | 2007D017 | RADIOACTIVITY $^{36,37}\text{Ca}$ , $^{39,40,41}\text{Ti}$ , $^{43}\text{V}$ , $^{42,43,44,45}\text{Cr}$ , $^{46,47}\text{Mn}$ , $^{46,47,48,49}\text{Fe}$ , $^{50,51}\text{Co}$ , $^{49,50,51,52,53}\text{Ni}$ , $^{55}\text{Cu}$ , $^{55,56}\text{Zn}(\beta^+)$ , (EC), ( $\beta^+\text{p}$ ) [from Ni( $^{58}\text{Ni}$ , X)]; measured $T_{1/2}$ , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. $^{43,45}\text{Cr}$ , $^{46}\text{Mn}$ , $^{46,47,48}\text{Fe}$ , $^{50}\text{Co}$ , $^{50,51,52,53}\text{Ni}$ deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18 |
| $^{50}\text{Ni}$ | 2007D017 | RADIOACTIVITY $^{36,37}\text{Ca}$ , $^{39,40,41}\text{Ti}$ , $^{43}\text{V}$ , $^{42,43,44,45}\text{Cr}$ , $^{46,47}\text{Mn}$ , $^{46,47,48,49}\text{Fe}$ , $^{50,51}\text{Co}$ , $^{49,50,51,52,53}\text{Ni}$ , $^{55}\text{Cu}$ , $^{55,56}\text{Zn}(\beta^+)$ , (EC), ( $\beta^+\text{p}$ ) [from Ni( $^{58}\text{Ni}$ , X)]; measured $T_{1/2}$ , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. $^{43,45}\text{Cr}$ , $^{46}\text{Mn}$ , $^{46,47,48}\text{Fe}$ , $^{50}\text{Co}$ , $^{50,51,52,53}\text{Ni}$ deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18 |

**A=51**

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| $^{51}\text{Ca}$ | 2007RE19 | NUCLEAR REACTIONS $^{48}\text{Ca}(^{238}\text{U}, \text{X})$ , $E=1.31$ GeV / nucleon; measured $E_\gamma$ , $I_\gamma$ , (particle) $\gamma$ -coinc. $^{50,51,52}\text{Ca}$ deduced levels, J, $\pi$ . Compared results to model calculations. JOUR PRVCA 76 021304   |
| $^{51}\text{V}$  | 2007LA23 | NUCLEAR REACTIONS $^{51}\text{V}$ , $^{45}\text{Sc}(^3\text{He}, \alpha\gamma)$ , ( $^3\text{He}$ , $^3\text{He}'\gamma$ ), $E=30, 38$ MeV; measured $E_\gamma$ , $E_\alpha$ , $E(^3\text{He})$ , (particle) $\gamma$ -coinc. $^{50,51}\text{V}$ , $^{44,45}\text{Sc}$ deduced level densities and giant resonance strength functions. JOUR APOBB 38 1495  |
|                  | 2007LE24 | NUCLEAR REACTIONS $^{27}\text{Al}(^6\text{He}, ^6\text{He})$ , $E=9.5, 11, 12, 13.4$ MeV; $^{51}\text{V}(^8\text{Li}, ^8\text{Li})$ , $E=26$ MeV; measured $\sigma(\theta)$ . Comparison with optical model. $^{27}\text{Al}$ , $^{64}\text{Zn}(^6\text{He}, ^6\text{He})$ , ( $^6\text{Li}$ , $^6\text{Li}$ ), ( $^7\text{Li}$ , $^7\text{Li}$ ), ( $^9\text{Be}$ , $^9\text{Be}$ ), ( $^{16}\text{O}$ , $^{16}\text{O}$ ), $E\approx 5-25$ MeV; analyzed $\sigma$ . Comparison with other data. Secondary radioactive beam. JOUR NUPAB 787 94c |
|                  | 2007YA02 | RADIOACTIVITY $^{51}\text{Cr}$ , $^{55}\text{Fe}$ , $^{67}\text{Ga}$ , $^{111}\text{In}$ , $^{133}\text{Ba}$ , $^{201}\text{Tl}(\text{EC})$ ; $^{99m}\text{Tc}(\text{IT})$ , ( $\beta^-$ ); $^{131}\text{I}$ , $^{133}\text{Xe}$ , $^{137}\text{Cs}(\beta^-)$ ; $^{226}\text{Ra}(\alpha)$ ; measured K X-ray intensity ratios following decay and photoionization. JOUR NIMBE 254 182  |
| $^{51}\text{Cr}$ | 2006ITZY | NUCLEAR REACTIONS Fe, Ta(d, nX), $E=40$ MeV; measured neutron spectra, $\sigma(\theta)$ . Fe(d, X) $^{51}\text{Cr}$ / $^{52}\text{Mn}$ / $^{56}\text{Co}$ / $^{57}\text{Co}$ , $E \approx 5-40$ MeV; measured production $\sigma$ . REPT JAEA-Conf 2006-009,P124,Itoga   |
|                  | 2007MI07 | NUCLEAR REACTIONS $^{52}\text{Cr}(\text{n}, \text{n}')$ , ( $\text{n}$ , $2\text{n}$ ), $E \approx 3-18$ MeV; measured $E_\gamma$ , $I_\gamma$ , $\sigma$ . Comparison with model predictions. JOUR NUPAB 786 1  |
|                  | 2007TA14 | NUCLEAR REACTIONS Ni(d, X) $^{51}\text{Cr}$ / $^{52}\text{Mn}$ / $^{54}\text{Mn}$ / $^{56}\text{Mn}$ / $^{56}\text{Ni}$ / $^{57}\text{Ni}$ / $^{55}\text{Co}$ / $^{56}\text{Co}$ / $^{57}\text{Co}$ / $^{58}\text{Co}$ / $^{60}\text{Co}$ / $^{61}\text{Co}$ / $^{61}\text{Cu}$ / $^{64}\text{Cu}$ , $E < 50$ MeV; measured $E_\gamma$ , $I_\gamma$ , activation cross section and excitation functions using stacked foil technique. Compared results to existing data. JOUR NIMBE 260 495  |

KEYNUMBERS AND KEYWORDS

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**A=51 (continued)**

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|                  | 2007YA02 | RADIOACTIVITY $^{51}\text{Cr}$ , $^{55}\text{Fe}$ , $^{67}\text{Ga}$ , $^{111}\text{In}$ , $^{133}\text{Ba}$ , $^{201}\text{Tl}(\text{EC})$ ; $^{99m}\text{Tc}(\text{IT})$ , $(\beta^-)$ ; $^{131}\text{I}$ , $^{133}\text{Xe}$ , $^{137}\text{Cs}(\beta^-)$ ; $^{226}\text{Ra}(\alpha)$ ; measured K X-ray intensity ratios following decay and photoionization. JOUR NIMBE 254 182  |
| $^{51}\text{Fe}$ | 2007D017 | RADIOACTIVITY $^{36,37}\text{Ca}$ , $^{39,40,41}\text{Ti}$ , $^{43}\text{V}$ , $^{42,43,44,45}\text{Cr}$ , $^{46,47}\text{Mn}$ , $^{46,47,48,49}\text{Fe}$ , $^{50,51}\text{Co}$ , $^{49,50,51,52,53}\text{Ni}$ , $^{55}\text{Cu}$ , $^{55,56}\text{Zn}(\beta^+)$ , (EC), $(\beta^+\text{p})$ [from Ni( $^{58}\text{Ni}$ , X)]; measured $T_{1/2}$ , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. $^{43,45}\text{Cr}$ , $^{46}\text{Mn}$ , $^{46,47,48}\text{Fe}$ , $^{50}\text{Co}$ , $^{50,51,52,53}\text{Ni}$ deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18 |
| $^{51}\text{Co}$ | 2007D017 | RADIOACTIVITY $^{36,37}\text{Ca}$ , $^{39,40,41}\text{Ti}$ , $^{43}\text{V}$ , $^{42,43,44,45}\text{Cr}$ , $^{46,47}\text{Mn}$ , $^{46,47,48,49}\text{Fe}$ , $^{50,51}\text{Co}$ , $^{49,50,51,52,53}\text{Ni}$ , $^{55}\text{Cu}$ , $^{55,56}\text{Zn}(\beta^+)$ , (EC), $(\beta^+\text{p})$ [from Ni( $^{58}\text{Ni}$ , X)]; measured $T_{1/2}$ , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. $^{43,45}\text{Cr}$ , $^{46}\text{Mn}$ , $^{46,47,48}\text{Fe}$ , $^{50}\text{Co}$ , $^{50,51,52,53}\text{Ni}$ deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18 |
| $^{51}\text{Ni}$ | 2007D017 | RADIOACTIVITY $^{36,37}\text{Ca}$ , $^{39,40,41}\text{Ti}$ , $^{43}\text{V}$ , $^{42,43,44,45}\text{Cr}$ , $^{46,47}\text{Mn}$ , $^{46,47,48,49}\text{Fe}$ , $^{50,51}\text{Co}$ , $^{49,50,51,52,53}\text{Ni}$ , $^{55}\text{Cu}$ , $^{55,56}\text{Zn}(\beta^+)$ , (EC), $(\beta^+\text{p})$ [from Ni( $^{58}\text{Ni}$ , X)]; measured $T_{1/2}$ , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. $^{43,45}\text{Cr}$ , $^{46}\text{Mn}$ , $^{46,47,48}\text{Fe}$ , $^{50}\text{Co}$ , $^{50,51,52,53}\text{Ni}$ deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18 |

**A=52**

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| $^{52}\text{Ca}$ | 2007RE19 | NUCLEAR REACTIONS $^{48}\text{Ca}(^{238}\text{U}, \text{X})$ , $E=1.31$ GeV / nucleon; measured $E\gamma$ , $I\gamma$ , (particle) $\gamma$ -coinc. $^{50,51,52}\text{Ca}$ deduced levels, $J$ , $\pi$ . Compared results to model calculations. JOUR PRVCA 76 021304  |
| $^{52}\text{Cr}$ | 2007EN02 | NUCLEAR REACTIONS $^{52}\text{Cr}(\gamma, \gamma')$ , $E=8.0, 9.9$ MeV bremsstrahlung; measured $E\gamma$ , $I\gamma$ . $^{52}\text{Cr}$ deduced $2^+$ states energies, $B(E2)$ . JOUR ZAANE 31 15   |
|                  | 2007KU19 | NUCLEAR REACTIONS $^{27}\text{Al}(^{28}\text{Si}, 3\text{p})$ , $E=70$ MeV; measured $E\gamma$ , $I\gamma(\theta)$ , $\gamma\gamma$ -coinc. $^{52}\text{Cr}$ deduced levels, $J$ , $\pi$ . Compared results to model calculations. JOUR PRVCA 76 034301  |
|                  | 2007MI07 | NUCLEAR REACTIONS $^{52}\text{Cr}(n, n')$ , $(n, 2n)$ , $E \approx 3-18$ MeV; measured $E\gamma$ , $I\gamma$ , $\sigma$ . Comparison with model predictions. JOUR NUPAB 786 1  |
| $^{52}\text{Mn}$ | 2006ITZY | NUCLEAR REACTIONS $\text{Fe}, \text{Ta}(d, n\text{X})$ , $E=40$ MeV; measured neutron spectra, $\sigma(\theta)$ . $\text{Fe}(d, \text{X})^{51}\text{Cr} / ^{52}\text{Mn} / ^{56}\text{Co} / ^{57}\text{Co}$ , $E \approx 5-40$ MeV; measured production $\sigma$ . REPT JAEA-Conf 2006-009,P124,Itoga  |
|                  | 2007AX01 | NUCLEAR REACTIONS $^{28}\text{Si}(^{28}\text{Si}, n3\text{p})$ , $E=110, 115$ MeV; $^{24}\text{Mg}(^{32}\text{S}, n3\text{p})$ , $E=130$ MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coinc, (particle) $\gamma$ -coinc, angular distributions, lifetimes and polarization. $^{52}\text{Mn}$ deduced levels, $J$ , $\pi$ for high spin states. JOUR PRVCA 76 014303 |
|                  | 2007NG01 | NUCLEAR REACTIONS $^{45}\text{Sc}(\gamma, n)$ , $^{103}\text{Rh}(\gamma, 4n)$ , $E=65$ MeV / bremsstrahlung; $\text{Ti}(\gamma, \text{X})^{44}\text{Sc}$ , $E=65$ MeV / bremsstrahlung; $\text{Fe}(\gamma, \text{X})^{52}\text{Mn}$ , $E=65$ MeV / bremsstrahlung; measured $\sigma$ , isomer ratios. Activation method. JOUR KPSJA 50 417                                   |

KEYNUMBERS AND KEYWORDS

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**A=52 (continued)**

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| 2007TA14         | NUCLEAR REACTIONS Ni(d, X) <sup>51</sup> Cr / <sup>52</sup> Mn / <sup>54</sup> Mn / <sup>56</sup> Mn / <sup>56</sup> Ni / <sup>57</sup> Ni / <sup>55</sup> Co / <sup>56</sup> Co / <sup>57</sup> Co / <sup>58</sup> Co / <sup>60</sup> Co / <sup>61</sup> Co / <sup>61</sup> Cu / <sup>64</sup> Cu, E < 50 MeV; measured E $\gamma$ , I $\gamma$ , activation cross section and excitation functions using stacked foil technique. Compared results to existing data. JOUR NIMBE 260 495  |
| <sup>52</sup> Fe | 2007D017 RADIOACTIVITY <sup>36,37</sup> Ca, <sup>39,40,41</sup> Ti, <sup>43</sup> V, <sup>42,43,44,45</sup> Cr, <sup>46,47</sup> Mn, <sup>46,47,48,49</sup> Fe, <sup>50,51</sup> Co, <sup>49,50,51,52,53</sup> Ni, <sup>55</sup> Cu, <sup>55,56</sup> Zn( $\beta^+$ ), (EC), ( $\beta^+$ p) [from Ni( <sup>58</sup> Ni, X)]; measured T <sub>1/2</sub> , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. <sup>43,45</sup> Cr, <sup>46</sup> Mn, <sup>46,47,48</sup> Fe, <sup>50</sup> Co, <sup>50,51,52,53</sup> Ni deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18 |
| <sup>52</sup> Co | 2007D017 RADIOACTIVITY <sup>36,37</sup> Ca, <sup>39,40,41</sup> Ti, <sup>43</sup> V, <sup>42,43,44,45</sup> Cr, <sup>46,47</sup> Mn, <sup>46,47,48,49</sup> Fe, <sup>50,51</sup> Co, <sup>49,50,51,52,53</sup> Ni, <sup>55</sup> Cu, <sup>55,56</sup> Zn( $\beta^+$ ), (EC), ( $\beta^+$ p) [from Ni( <sup>58</sup> Ni, X)]; measured T <sub>1/2</sub> , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. <sup>43,45</sup> Cr, <sup>46</sup> Mn, <sup>46,47,48</sup> Fe, <sup>50</sup> Co, <sup>50,51,52,53</sup> Ni deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18 |
| <sup>52</sup> Ni | 2007D017 RADIOACTIVITY <sup>36,37</sup> Ca, <sup>39,40,41</sup> Ti, <sup>43</sup> V, <sup>42,43,44,45</sup> Cr, <sup>46,47</sup> Mn, <sup>46,47,48,49</sup> Fe, <sup>50,51</sup> Co, <sup>49,50,51,52,53</sup> Ni, <sup>55</sup> Cu, <sup>55,56</sup> Zn( $\beta^+$ ), (EC), ( $\beta^+$ p) [from Ni( <sup>58</sup> Ni, X)]; measured T <sub>1/2</sub> , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. <sup>43,45</sup> Cr, <sup>46</sup> Mn, <sup>46,47,48</sup> Fe, <sup>50</sup> Co, <sup>50,51,52,53</sup> Ni deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18 |

**A=53**

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| <sup>53</sup> Co | 2007D017 RADIOACTIVITY <sup>36,37</sup> Ca, <sup>39,40,41</sup> Ti, <sup>43</sup> V, <sup>42,43,44,45</sup> Cr, <sup>46,47</sup> Mn, <sup>46,47,48,49</sup> Fe, <sup>50,51</sup> Co, <sup>49,50,51,52,53</sup> Ni, <sup>55</sup> Cu, <sup>55,56</sup> Zn( $\beta^+$ ), (EC), ( $\beta^+$ p) [from Ni( <sup>58</sup> Ni, X)]; measured T <sub>1/2</sub> , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. <sup>43,45</sup> Cr, <sup>46</sup> Mn, <sup>46,47,48</sup> Fe, <sup>50</sup> Co, <sup>50,51,52,53</sup> Ni deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18 |
| <sup>53</sup> Ni | 2007D017 RADIOACTIVITY <sup>36,37</sup> Ca, <sup>39,40,41</sup> Ti, <sup>43</sup> V, <sup>42,43,44,45</sup> Cr, <sup>46,47</sup> Mn, <sup>46,47,48,49</sup> Fe, <sup>50,51</sup> Co, <sup>49,50,51,52,53</sup> Ni, <sup>55</sup> Cu, <sup>55,56</sup> Zn( $\beta^+$ ), (EC), ( $\beta^+$ p) [from Ni( <sup>58</sup> Ni, X)]; measured T <sub>1/2</sub> , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. <sup>43,45</sup> Cr, <sup>46</sup> Mn, <sup>46,47,48</sup> Fe, <sup>50</sup> Co, <sup>50,51,52,53</sup> Ni deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18 |

**A=54**

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| <sup>54</sup> Cr | 2006BUZV NUCLEAR REACTIONS Au( <sup>54</sup> Cr, <sup>54</sup> Cr'), ( <sup>56</sup> Cr, <sup>56</sup> Cr'), ( <sup>58</sup> Cr, <sup>58</sup> Cr'), E=100 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin following projectile Coulomb excitation. <sup>54,56,58</sup> Cr deduced excited states energies, B(E2). Comparison with model predictions and previous results. REPT GSI 2006-1,P146,Burger |
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KEYNUMBERS AND KEYWORDS

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**A=54 (continued)**

$^{54}\text{Mn}$	2007TA14	NUCLEAR REACTIONS Ni(d, X) $^{51}\text{Cr}$ / $^{52}\text{Mn}$ / $^{54}\text{Mn}$ / $^{56}\text{Mn}$ / $^{56}\text{Ni}$ / $^{57}\text{Ni}$ / $^{55}\text{Co}$ / $^{56}\text{Co}$ / $^{57}\text{Co}$ / $^{58}\text{Co}$ / $^{60}\text{Co}$ / $^{61}\text{Co}$ / $^{61}\text{Cu}$ / $^{64}\text{Cu}$ , E < 50 MeV; measured E $\gamma$ , I $\gamma$ , activation cross section and excitation functions using stacked foil technique. Compared results to existing data. JOUR NIMBE 260 495
$^{54}\text{Fe}$	2006KH14	NUCLEAR REACTIONS $^{54,56}\text{Fe}(e, e')$ , E=225 MeV; measured energy and angular distributions. Deduced reduced transition probabilities B(E1), B(E2), B(E3), B(E4), B(E5). JOUR BRSPPE 70 1805
$^{54}\text{Co}$	2007AD27	NUCLEAR REACTIONS $^{42}\text{Ca}$ , $^{46}\text{Ti}$ , $^{50}\text{Cr}$ , $^{54}\text{Fe}(\text{}^3\text{He}, t)$ , E=140 MeV / nucleon; measured excitation energy spectra. $^{42}\text{Sc}$ , $^{46}\text{V}$ , $^{50}\text{Mn}$ , $^{54}\text{Co}$ deduced Gamow-Teller strength distribution. Comparison with shell model. JOUR NUPAB 788 70c
	2007D017	RADIOACTIVITY $^{36,37}\text{Ca}$ , $^{39,40,41}\text{Ti}$ , $^{43}\text{V}$ , $^{42,43,44,45}\text{Cr}$ , $^{46,47}\text{Mn}$ , $^{46,47,48,49}\text{Fe}$ , $^{50,51}\text{Co}$ , $^{49,50,51,52,53}\text{Ni}$ , $^{55}\text{Cu}$ , $^{55,56}\text{Zn}(\beta^+)$ , (EC), ( $\beta^+$ p) [from Ni( $^{58}\text{Ni}$ , X)]; measured T $_{1/2}$ , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. $^{43,45}\text{Cr}$ , $^{46}\text{Mn}$ , $^{46,47,48}\text{Fe}$ , $^{50}\text{Co}$ , $^{50,51,52,53}\text{Ni}$ deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18
$^{54}\text{Ni}$	2007D017	RADIOACTIVITY $^{36,37}\text{Ca}$ , $^{39,40,41}\text{Ti}$ , $^{43}\text{V}$ , $^{42,43,44,45}\text{Cr}$ , $^{46,47}\text{Mn}$ , $^{46,47,48,49}\text{Fe}$ , $^{50,51}\text{Co}$ , $^{49,50,51,52,53}\text{Ni}$ , $^{55}\text{Cu}$ , $^{55,56}\text{Zn}(\beta^+)$ , (EC), ( $\beta^+$ p) [from Ni( $^{58}\text{Ni}$ , X)]; measured T $_{1/2}$ , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. $^{43,45}\text{Cr}$ , $^{46}\text{Mn}$ , $^{46,47,48}\text{Fe}$ , $^{50}\text{Co}$ , $^{50,51,52,53}\text{Ni}$ deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18

**A=55**

$^{55}\text{Ti}$	2007ZH37	NUCLEAR REACTIONS $^9\text{Be}(\text{}^{48}\text{Ca}, np)$ , ( $^{48}\text{Ca}, 2p)$ , E=172 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin, (particle) $\gamma$ -coin using Gammasphere. $^{55}\text{V}$ , $^{55}\text{Ti}$ deduced levels, J, $\pi$ . Comparison with model calculations. JOUR PYLBB 650 135
$^{55}\text{V}$	2007ZH37	NUCLEAR REACTIONS $^9\text{Be}(\text{}^{48}\text{Ca}, np)$ , ( $^{48}\text{Ca}, 2p)$ , E=172 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin, (particle) $\gamma$ -coin using Gammasphere. $^{55}\text{V}$ , $^{55}\text{Ti}$ deduced levels, J, $\pi$ . Comparison with model calculations. JOUR PYLBB 650 135
$^{55}\text{Mn}$	2006UT03	NUCLEAR REACTIONS $^{54}\text{Cr}(p, \gamma)$ , E=1.5-2.5 MeV; measured E $\gamma$ , I $\gamma$ , and partial cross sections. JOUR BRSPPE 70 1859
	2007YA02	RADIOACTIVITY $^{51}\text{Cr}$ , $^{55}\text{Fe}$ , $^{67}\text{Ga}$ , $^{111}\text{In}$ , $^{133}\text{Ba}$ , $^{201}\text{Tl}(\text{EC})$ ; $^{99m}\text{Tc}(\text{IT})$ , ( $\beta^-$ ); $^{131}\text{I}$ , $^{133}\text{Xe}$ , $^{137}\text{Cs}(\beta^-)$ ; $^{226}\text{Ra}(\alpha)$ ; measured K X-ray intensity ratios following decay and photoionization. JOUR NIMBE 254 182
$^{55}\text{Fe}$	2007COZX	NUCLEAR REACTIONS $^{54}\text{Fe}(n, \gamma)$ , E=spectrum; measured cross section using accelerator mass spectroscopy. CONF Geneva(NIC-IX) 274
	2007YA02	RADIOACTIVITY $^{51}\text{Cr}$ , $^{55}\text{Fe}$ , $^{67}\text{Ga}$ , $^{111}\text{In}$ , $^{133}\text{Ba}$ , $^{201}\text{Tl}(\text{EC})$ ; $^{99m}\text{Tc}(\text{IT})$ , ( $\beta^-$ ); $^{131}\text{I}$ , $^{133}\text{Xe}$ , $^{137}\text{Cs}(\beta^-)$ ; $^{226}\text{Ra}(\alpha)$ ; measured K X-ray intensity ratios following decay and photoionization. JOUR NIMBE 254 182

KEYNUMBERS AND KEYWORDS

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**A=55 (continued)**

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| $^{55}\text{Co}$ | 2007SH15 | NUCLEAR REACTIONS $^{232}\text{Th}(n, \gamma)$ , $(n, 2n)$ , $^{197}\text{Au}(n, \gamma)$ , $(n, \alpha)$ , $(n, 2n)$ , $(n, 4n)$ , $(n, 6n)$ , $(n, 7n)$ , $(n, 8n)$ , $(n, 6np)$ , $^{59}\text{Co}(n, \alpha)$ , $(n, 2n)$ , $(n, 4n)$ , $(n, 5n)$ , $^{181}\text{Ta}(n, \gamma)$ , $(n, 2n)$ , $(n, 4n)$ , $(n, 5n)$ , $(n, np)$ , E=spectrum; measured spectrum-averaged $\sigma$ . Spallation neutrons from proton-induced reaction. JOUR PRAMC 68 307  |
|                  | 2007TA14 | NUCLEAR REACTIONS $\text{Ni}(d, X)^{51}\text{Cr} / ^{52}\text{Mn} / ^{54}\text{Mn} / ^{56}\text{Mn} / ^{56}\text{Ni} / ^{57}\text{Ni} / ^{55}\text{Co} / ^{56}\text{Co} / ^{57}\text{Co} / ^{58}\text{Co} / ^{60}\text{Co} / ^{61}\text{Co} / ^{61}\text{Cu} / ^{64}\text{Cu}$ , E < 50 MeV; measured $E\gamma$ , $I\gamma$ , activation cross section and excitation functions using stacked foil technique. Compared results to existing data. JOUR NIMBE 260 495  |
| $^{55}\text{Ni}$ | 2007D017 | RADIOACTIVITY $^{36,37}\text{Ca}$ , $^{39,40,41}\text{Ti}$ , $^{43}\text{V}$ , $^{42,43,44,45}\text{Cr}$ , $^{46,47}\text{Mn}$ , $^{46,47,48,49}\text{Fe}$ , $^{50,51}\text{Co}$ , $^{49,50,51,52,53}\text{Ni}$ , $^{55}\text{Cu}$ , $^{55,56}\text{Zn}(\beta^+)$ , (EC), $(\beta^+p)$ [from $\text{Ni}(^{58}\text{Ni}, X)$ ]; measured $T_{1/2}$ , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. $^{43,45}\text{Cr}$ , $^{46}\text{Mn}$ , $^{46,47,48}\text{Fe}$ , $^{50}\text{Co}$ , $^{50,51,52,53}\text{Ni}$ deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18 |
| $^{55}\text{Cu}$ | 2007BL09 | NUCLEAR REACTIONS $\text{Ni}(^{70}\text{Ge}, X)^{55}\text{Cu} / ^{56}\text{Cu} / ^{57}\text{Cu} / ^{58}\text{Cu} / ^{56}\text{Zn} / ^{57}\text{Zn} / ^{58}\text{Zn} / ^{59}\text{Zn} / ^{60}\text{Zn} / ^{60}\text{Ga} / ^{61}\text{Ga} / ^{60}\text{Ge} / ^{61}\text{Ge} / ^{62}\text{Ge} / ^{63}\text{Ge} / ^{64}\text{As}$ , E=71.6 MeV / nucleon; measured production $\sigma$ . Comparison with model predictions. JOUR ZAANE 31 267  |
|                  | 2007D017 | RADIOACTIVITY $^{36,37}\text{Ca}$ , $^{39,40,41}\text{Ti}$ , $^{43}\text{V}$ , $^{42,43,44,45}\text{Cr}$ , $^{46,47}\text{Mn}$ , $^{46,47,48,49}\text{Fe}$ , $^{50,51}\text{Co}$ , $^{49,50,51,52,53}\text{Ni}$ , $^{55}\text{Cu}$ , $^{55,56}\text{Zn}(\beta^+)$ , (EC), $(\beta^+p)$ [from $\text{Ni}(^{58}\text{Ni}, X)$ ]; measured $T_{1/2}$ , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. $^{43,45}\text{Cr}$ , $^{46}\text{Mn}$ , $^{46,47,48}\text{Fe}$ , $^{50}\text{Co}$ , $^{50,51,52,53}\text{Ni}$ deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18 |
| $^{55}\text{Zn}$ | 2007D017 | RADIOACTIVITY $^{36,37}\text{Ca}$ , $^{39,40,41}\text{Ti}$ , $^{43}\text{V}$ , $^{42,43,44,45}\text{Cr}$ , $^{46,47}\text{Mn}$ , $^{46,47,48,49}\text{Fe}$ , $^{50,51}\text{Co}$ , $^{49,50,51,52,53}\text{Ni}$ , $^{55}\text{Cu}$ , $^{55,56}\text{Zn}(\beta^+)$ , (EC), $(\beta^+p)$ [from $\text{Ni}(^{58}\text{Ni}, X)$ ]; measured $T_{1/2}$ , $\beta$ -delayed proton and $\gamma$ spectra, branching ratios. $^{43,45}\text{Cr}$ , $^{46}\text{Mn}$ , $^{46,47,48}\text{Fe}$ , $^{50}\text{Co}$ , $^{50,51,52,53}\text{Ni}$ deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18 |

**A=56**

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| $^{56}\text{K}$  | 2007YA08 | ATOMIC MASSES $^{35,36,37,38,43,44,45,56}\text{K}$ ; measured masses using ISOLTRAP. Discussed implications on IMME. JOUR PRVCA 76 024308  |
| $^{56}\text{Cr}$ | 2006BUZV | NUCLEAR REACTIONS $\text{Au}(^{54}\text{Cr}, ^{54}\text{Cr}')$ , $(^{56}\text{Cr}, ^{56}\text{Cr}')$ , $(^{58}\text{Cr}, ^{58}\text{Cr}')$ , E=100 MeV / nucleon; measured $E\gamma$ , $I\gamma$ , (particle) $\gamma$ -coin following projectile Coulomb excitation. $^{54,56,58}\text{Cr}$ deduced excited states energies, B(E2). Comparison with model predictions and previous results. REPT GSI 2006-1,P146,Burger   |
|                  | 2006ZH42 | NUCLEAR REACTIONS $^{208}\text{Pb}(^{48}\text{Ca}, X)^{56}\text{Cr} / ^{58}\text{Cr}$ , E=305 MeV; $^{238}\text{U}(^{48}\text{Ca}, X)^{56}\text{Cr} / ^{58}\text{Cr} / ^{60}\text{Cr}$ , E=330 MeV; $^{14}\text{C}(^{48}\text{Ca}, 2p)$ , $(^{48}\text{Ca}, 2n\alpha)$ , E=130 MeV; measured $E\gamma$ , $I\gamma$ , (particle) $\gamma$ , $\gamma\gamma$ -coin. $^{56,58,60}\text{Cr}$ deduced levels, J, $\pi$ , configurations. Comparison with model predictions. JOUR PRVCA 74 064315 |



## A=56 (continued)

- <sup>56</sup>Mn      2007SH15      NUCLEAR REACTIONS <sup>232</sup>Th(n, γ), (n, 2n), <sup>197</sup>Au(n, γ), (n, α), (n, 2n), (n, 4n), (n, 6n), (n, 7n), (n, 8n), (n, 6np), <sup>59</sup>Co(n, α), (n, 2n), (n, 4n), (n, 5n), <sup>181</sup>Ta(n, γ), (n, 2n), (n, 4n), (n, 5n), (n, np), E=spectrum; measured spectrum-averaged σ. Spallation neutrons from proton-induced reaction. JOUR PRAMC 68 307
- 2007TA14      NUCLEAR REACTIONS Ni(d, X)<sup>51</sup>Cr / <sup>52</sup>Mn / <sup>54</sup>Mn / <sup>56</sup>Mn / <sup>56</sup>Ni / <sup>57</sup>Ni / <sup>55</sup>Co / <sup>56</sup>Co / <sup>57</sup>Co / <sup>58</sup>Co / <sup>60</sup>Co / <sup>61</sup>Co / <sup>61</sup>Cu / <sup>64</sup>Cu, E < 50 MeV; measured Eγ, Iγ, activation cross section and excitation functions using stacked foil technique. Compared results to existing data. JOUR NIMBE 260 495
- <sup>56</sup>Fe      2006KH14      NUCLEAR REACTIONS <sup>54,56</sup>Fe(e, e'), E=225 MeV; measured energy and angular distributions. Deduced reduced transition probabilities B(E1), B(E2), B(E3), B(E4), B(E5). JOUR BRSP 70 1805
- 2007AL49      NUCLEAR REACTIONS <sup>57</sup>Fe(<sup>3</sup>He, α), (<sup>3</sup>He, <sup>3</sup>He'), E=45 MeV; <sup>56</sup>Fe(n, γ), E=thermal; <sup>55</sup>Mn(d, n), E=7.0 MeV; measured Eγ, Iγ. Deduced nuclear level densities and radiative strength functions. Compared results to model calculations. JOUR PANUE 70 1634
- <sup>56</sup>Co      2006ITZY      NUCLEAR REACTIONS Fe, Ta(d, nX), E=40 MeV; measured neutron spectra, σ(θ). Fe(d, X)<sup>51</sup>Cr / <sup>52</sup>Mn / <sup>56</sup>Co / <sup>57</sup>Co, E ≈ 5-40 MeV; measured production σ. REPT JAEA-Conf 2006-009,P124,Itoga
- 2007BL10      NUCLEAR REACTIONS <sup>12</sup>C, <sup>208</sup>Pb(n, n), E=96 MeV; Fe, Pb, U(n, pX), (n, dX), (n, tX), E=96 MeV; measured σ(θ). <sup>181</sup>Ta, W, <sup>197</sup>Au, Pb, <sup>208</sup>Pb(n, F), E=20-200 MeV; measured fission σ. Cu(n, X)<sup>56</sup>Co, E=50-180 MeV; measured σ. JOUR PRAMC 68 269
- 2007SH15      NUCLEAR REACTIONS <sup>232</sup>Th(n, γ), (n, 2n), <sup>197</sup>Au(n, γ), (n, α), (n, 2n), (n, 4n), (n, 6n), (n, 7n), (n, 8n), (n, 6np), <sup>59</sup>Co(n, α), (n, 2n), (n, 4n), (n, 5n), <sup>181</sup>Ta(n, γ), (n, 2n), (n, 4n), (n, 5n), (n, np), E=spectrum; measured spectrum-averaged σ. Spallation neutrons from proton-induced reaction. JOUR PRAMC 68 307
- 2007TA14      NUCLEAR REACTIONS Ni(d, X)<sup>51</sup>Cr / <sup>52</sup>Mn / <sup>54</sup>Mn / <sup>56</sup>Mn / <sup>56</sup>Ni / <sup>57</sup>Ni / <sup>55</sup>Co / <sup>56</sup>Co / <sup>57</sup>Co / <sup>58</sup>Co / <sup>60</sup>Co / <sup>61</sup>Co / <sup>61</sup>Cu / <sup>64</sup>Cu, E < 50 MeV; measured Eγ, Iγ, activation cross section and excitation functions using stacked foil technique. Compared results to existing data. JOUR NIMBE 260 495
- <sup>56</sup>Ni      2007BL09      RADIOACTIVITY <sup>57</sup>Zn, <sup>61</sup>Ge(β<sup>+</sup>p) [from Ni(<sup>70</sup>Ge, X)]; measured β-delayed proton spectra, T<sub>1/2</sub>. JOUR ZAANE 31 267
- 2007M029      NUCLEAR REACTIONS <sup>2</sup>H(<sup>56</sup>Ni, d), E=50 MeV / nucleon; measured Ed, E(recoil), energy excitation spectrum. JOUR NUPAB 788 182c
- 2007TA14      NUCLEAR REACTIONS Ni(d, X)<sup>51</sup>Cr / <sup>52</sup>Mn / <sup>54</sup>Mn / <sup>56</sup>Mn / <sup>56</sup>Ni / <sup>57</sup>Ni / <sup>55</sup>Co / <sup>56</sup>Co / <sup>57</sup>Co / <sup>58</sup>Co / <sup>60</sup>Co / <sup>61</sup>Co / <sup>61</sup>Cu / <sup>64</sup>Cu, E < 50 MeV; measured Eγ, Iγ, activation cross section and excitation functions using stacked foil technique. Compared results to existing data. JOUR NIMBE 260 495
- <sup>56</sup>Cu      2007BL09      NUCLEAR REACTIONS Ni(<sup>70</sup>Ge, X)<sup>55</sup>Cu / <sup>56</sup>Cu / <sup>57</sup>Cu / <sup>58</sup>Cu / <sup>56</sup>Zn / <sup>57</sup>Zn / <sup>58</sup>Zn / <sup>59</sup>Zn / <sup>60</sup>Zn / <sup>60</sup>Ga / <sup>61</sup>Ga / <sup>60</sup>Ge / <sup>61</sup>Ge / <sup>62</sup>Ge / <sup>63</sup>Ge / <sup>64</sup>As, E=71.6 MeV / nucleon; measured production σ. Comparison with model predictions. JOUR ZAANE 31 267

KEYNUMBERS AND KEYWORDS

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**A=56 (continued)**

- 2007D017 RADIOACTIVITY <sup>36,37</sup>Ca, <sup>39,40,41</sup>Ti, <sup>43</sup>V, <sup>42,43,44,45</sup>Cr, <sup>46,47</sup>Mn, <sup>46,47,48,49</sup>Fe, <sup>50,51</sup>Co, <sup>49,50,51,52,53</sup>Ni, <sup>55</sup>Cu, <sup>55,56</sup>Zn( $\beta^+$ ), (EC), ( $\beta^+$ p) [from Ni(<sup>58</sup>Ni, X)]; measured T<sub>1/2</sub>,  $\beta$ -delayed proton and  $\gamma$  spectra, branching ratios. <sup>43,45</sup>Cr, <sup>46</sup>Mn, <sup>46,47,48</sup>Fe, <sup>50</sup>Co, <sup>50,51,52,53</sup>Ni deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18
- <sup>56</sup>Zn 2007BL09 NUCLEAR REACTIONS Ni(<sup>70</sup>Ge, X)<sup>55</sup>Cu / <sup>56</sup>Cu / <sup>57</sup>Cu / <sup>58</sup>Cu / <sup>56</sup>Zn / <sup>57</sup>Zn / <sup>58</sup>Zn / <sup>59</sup>Zn / <sup>60</sup>Zn / <sup>60</sup>Ga / <sup>61</sup>Ga / <sup>60</sup>Ge / <sup>61</sup>Ge / <sup>62</sup>Ge / <sup>63</sup>Ge / <sup>64</sup>As, E=71.6 MeV / nucleon; measured production  $\sigma$ . Comparison with model predictions. JOUR ZAANE 31 267
- 2007D017 RADIOACTIVITY <sup>36,37</sup>Ca, <sup>39,40,41</sup>Ti, <sup>43</sup>V, <sup>42,43,44,45</sup>Cr, <sup>46,47</sup>Mn, <sup>46,47,48,49</sup>Fe, <sup>50,51</sup>Co, <sup>49,50,51,52,53</sup>Ni, <sup>55</sup>Cu, <sup>55,56</sup>Zn( $\beta^+$ ), (EC), ( $\beta^+$ p) [from Ni(<sup>58</sup>Ni, X)]; measured T<sub>1/2</sub>,  $\beta$ -delayed proton and  $\gamma$  spectra, branching ratios. <sup>43,45</sup>Cr, <sup>46</sup>Mn, <sup>46,47,48</sup>Fe, <sup>50</sup>Co, <sup>50,51,52,53</sup>Ni deduced levels. Two-proton decay observed. Comparison with model predictions. JOUR NUPAB 792 18

**A=57**

- <sup>57</sup>Fe 2007AL49 NUCLEAR REACTIONS <sup>57</sup>Fe(<sup>3</sup>He,  $\alpha$ ), (<sup>3</sup>He, <sup>3</sup>He'), E=45 MeV; <sup>56</sup>Fe(n,  $\gamma$ ), E=thermal; <sup>55</sup>Mn(d, n), E=7.0 MeV; measured E $\gamma$ , I $\gamma$ . Deduced nuclear level densities and radiative strength functions. Compared results to model calculations. JOUR PANUE 70 1634
- 2007C014 NUCLEAR REACTIONS <sup>59</sup>Co, <sup>93</sup>Nb(polarized p, <sup>3</sup>He), E=40-160 MeV; measured  $\sigma$ , angular distributions and analyzing powers. Compared results to model calculations. JOUR PRVCA 75 054617
- 2007V008 NUCLEAR REACTIONS <sup>59</sup>Co(d, n), (d, p), (d,  $\alpha$ ), <sup>58</sup>Fe(<sup>3</sup>He, n), (<sup>3</sup>He, p), (<sup>3</sup>He,  $\alpha$ )<sup>61</sup>Ni, E=7.5, 10 MeV; measured neutron, proton and  $\alpha$  particle spectra, reaction cross sections. <sup>57</sup>Fe, <sup>60</sup>Ni, <sup>60</sup>Cu; deduced level densities. JOUR PRVCA 76 044602
- 2007V0ZZ NUCLEAR REACTIONS <sup>58</sup>Fe(<sup>3</sup>He, n), (<sup>3</sup>He, p), (<sup>3</sup>He,  $\alpha$ ), E=10 MeV; <sup>59</sup>Co(d, n), (d, p), (d,  $\alpha$ ), E=7.5 MeV; measured En, Ep, E $\alpha$ . <sup>57</sup>Fe, <sup>60</sup>Ni, <sup>60</sup>Co deduced level densities, Fermi-gas parameters. Comparison with model predictions. PREPRINT arXiv:0704.0916v1 [nucl-ex]
- <sup>57</sup>Co 2006ITZY NUCLEAR REACTIONS Fe, Ta(d, nX), E=40 MeV; measured neutron spectra,  $\sigma(\theta)$ . Fe(d, X)<sup>51</sup>Cr / <sup>52</sup>Mn / <sup>56</sup>Co / <sup>57</sup>Co, E  $\approx$  5-40 MeV; measured production  $\sigma$ . REPT JAEA-Conf 2006-009,P124,Itoga
- 2007TA14 NUCLEAR REACTIONS Ni(d, X)<sup>51</sup>Cr / <sup>52</sup>Mn / <sup>54</sup>Mn / <sup>56</sup>Mn / <sup>56</sup>Ni / <sup>57</sup>Ni / <sup>55</sup>Co / <sup>56</sup>Co / <sup>57</sup>Co / <sup>58</sup>Co / <sup>60</sup>Co / <sup>61</sup>Co / <sup>61</sup>Cu / <sup>64</sup>Cu, E < 50 MeV; measured E $\gamma$ , I $\gamma$ , activation cross section and excitation functions using stacked foil technique. Compared results to existing data. JOUR NIMBE 260 495
- <sup>57</sup>Ni 2007GU09 ATOMIC MASSES <sup>57,60,64,65,66,67,68,69</sup>Ni, <sup>65,66,67,68,69,70,71,72,73,74,76</sup>Cu, <sup>63,64,65,68,69,70,71,72,73,74,75,76,77,78</sup>Ga; measured masses; analyzed the resulting mass surface for signs of magicity, compared the behavior of N=40 with that of the known magic numbers and with midshell behavior. JOUR PRVCA 75 044303



KEYNUMBERS AND KEYWORDS

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**A=57 (continued)**

- 2007GUZZ ATOMIC MASSES <sup>57,60,64,65,66,67,68,69</sup>Ni,  
<sup>65,66,67,68,68m,69,70,70m,71,72,73,74,76</sup>Cu,  
<sup>63,64,65,68,69,70,71,72,73,74,75,76,77,78</sup>Ga; measured masses. Penning-trap  
mass spectrometer. PREPRINT nucl-ex/0701029,01/22/2007
- 2007TA14 NUCLEAR REACTIONS Ni(d, X)<sup>51</sup>Cr / <sup>52</sup>Mn / <sup>54</sup>Mn / <sup>56</sup>Mn / <sup>56</sup>Ni  
/ <sup>57</sup>Ni / <sup>55</sup>Co / <sup>56</sup>Co / <sup>57</sup>Co / <sup>58</sup>Co / <sup>60</sup>Co / <sup>61</sup>Co / <sup>61</sup>Cu / <sup>64</sup>Cu, E <  
50 MeV; measured E $\gamma$ , I $\gamma$ , activation cross section and excitation  
functions using stacked foil technique. Compared results to existing  
data. JOUR NIMBE 260 495
- <sup>57</sup>Cu 2007BL09 NUCLEAR REACTIONS Ni(<sup>70</sup>Ge, X)<sup>55</sup>Cu / <sup>56</sup>Cu / <sup>57</sup>Cu / <sup>58</sup>Cu /  
<sup>56</sup>Zn / <sup>57</sup>Zn / <sup>58</sup>Zn / <sup>59</sup>Zn / <sup>60</sup>Zn / <sup>60</sup>Ga / <sup>61</sup>Ga / <sup>60</sup>Ge / <sup>61</sup>Ge / <sup>62</sup>Ge  
/ <sup>63</sup>Ge / <sup>64</sup>As, E=71.6 MeV / nucleon; measured production  $\sigma$ .  
Comparison with model predictions. JOUR ZAANE 31 267
- <sup>57</sup>Zn 2007BL09 NUCLEAR REACTIONS Ni(<sup>70</sup>Ge, X)<sup>55</sup>Cu / <sup>56</sup>Cu / <sup>57</sup>Cu / <sup>58</sup>Cu /  
<sup>56</sup>Zn / <sup>57</sup>Zn / <sup>58</sup>Zn / <sup>59</sup>Zn / <sup>60</sup>Zn / <sup>60</sup>Ga / <sup>61</sup>Ga / <sup>60</sup>Ge / <sup>61</sup>Ge / <sup>62</sup>Ge  
/ <sup>63</sup>Ge / <sup>64</sup>As, E=71.6 MeV / nucleon; measured production  $\sigma$ .  
Comparison with model predictions. JOUR ZAANE 31 267
- 2007BL09 RADIOACTIVITY <sup>57</sup>Zn, <sup>61</sup>Ge( $\beta^+$ p) [from Ni(<sup>70</sup>Ge, X)]; measured  
 $\beta$ -delayed proton spectra, T<sub>1/2</sub>. JOUR ZAANE 31 267

**A=58**

- <sup>58</sup>Cr 2006BUZV NUCLEAR REACTIONS Au(<sup>54</sup>Cr, <sup>54</sup>Cr'), (<sup>56</sup>Cr, <sup>56</sup>Cr'), (<sup>58</sup>Cr, <sup>58</sup>Cr'),  
E=100 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin following  
projectile Coulomb excitation. <sup>54,56,58</sup>Cr deduced excited states  
energies, B(E2). Comparison with model predictions and previous  
results. REPT GSI 2006-1,P146,Burger
- 2006ZH42 NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>48</sup>Ca, X)<sup>56</sup>Cr / <sup>58</sup>Cr, E=305 MeV;  
<sup>238</sup>U(<sup>48</sup>Ca, X)<sup>56</sup>Cr / <sup>58</sup>Cr / <sup>60</sup>Cr, E=330 MeV; <sup>14</sup>C(<sup>48</sup>Ca, 2p), (<sup>48</sup>Ca,  
2n $\alpha$ ), E=130 MeV; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ ,  $\gamma\gamma$ -coin. <sup>56,58,60</sup>Cr  
deduced levels, J,  $\pi$ , configurations. Comparison with model  
predictions. JOUR PRVCA 74 064315
- <sup>58</sup>Fe 2007LI62 NUCLEAR REACTIONS <sup>48</sup>Ti(<sup>11</sup>Be, n), E=41 MeV / nucleon;  
measured En, In, E $\gamma$ , I $\gamma$ ,  $\sigma(\theta)$ , (<sup>10</sup>Be)n-,  $\gamma$ n-coin. <sup>11</sup>Be deduced  
spectroscopic factor, configurations. JOUR NUPAB 795 1
- <sup>58</sup>Co 2006SI37 NUCLEAR REACTIONS <sup>51</sup>V(<sup>10</sup>B, 2np), E=33, 36 MeV; measured  
E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, (charged particle) $\gamma$ -coin, DSA. <sup>58</sup>Co deduced high-spin  
levels, J,  $\pi$ , T<sub>1/2</sub>, configurations, B(M1), B(E2). Shell-model  
calculations. JOUR PRVCA 74 064312
- 2007SH15 NUCLEAR REACTIONS <sup>232</sup>Th(n,  $\gamma$ ), (n, 2n), <sup>197</sup>Au(n,  $\gamma$ ), (n,  $\alpha$ ), (n,  
2n), (n, 4n), (n, 6n), (n, 7n), (n, 8n), (n, 6np), <sup>59</sup>Co(n,  $\alpha$ ), (n, 2n), (n,  
4n), (n, 5n), <sup>181</sup>Ta(n,  $\gamma$ ), (n, 2n), (n, 4n), (n, 5n), (n, np), E=spectrum;  
measured spectrum-averaged  $\sigma$ . Spallation neutrons from  
proton-induced reaction. JOUR PRAMC 68 307

KEYNUMBERS AND KEYWORDS

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**A=58 (continued)**

- 2007TA14 NUCLEAR REACTIONS Ni(d, X)<sup>51</sup>Cr / <sup>52</sup>Mn / <sup>54</sup>Mn / <sup>56</sup>Mn / <sup>56</sup>Ni / <sup>57</sup>Ni / <sup>55</sup>Co / <sup>56</sup>Co / <sup>57</sup>Co / <sup>58</sup>Co / <sup>60</sup>Co / <sup>61</sup>Co / <sup>61</sup>Cu / <sup>64</sup>Cu, E < 50 MeV; measured E $\gamma$ , I $\gamma$ , activation cross section and excitation functions using stacked foil technique. Compared results to existing data. JOUR NIMBE 260 495
- 2007ZE03 NUCLEAR REACTIONS <sup>58</sup>Ni(t, <sup>3</sup>He), E=115 MeV / nucleon; measured particle spectra,  $\sigma(\theta)$ . <sup>58</sup>Co deduced Gamow-Teller strength distribution. Comparison with other results, model predictions. JOUR NUPAB 787 329c
- <sup>58</sup>Ni 2007AGZV NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>8</sup>B, <sup>8</sup>B), E=20.7, 23.4, 25.3, 27.2, 29.3 MeV; measured <sup>8</sup>B( $\theta$ ); deduced  $\sigma_{el} / \sigma_{Ruth}$ . TWINSOL facility. CONF Voronezh(Nucleus-2007),Contrib,P120,Aguilera
- 2007CE02 NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>110</sup>Sn, <sup>110</sup>Sn'), E=2.82 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin following Coulomb excitation. <sup>110</sup>Sn deduced B(E2) of the first excited 2<sup>+</sup> state. MINIBALL array at REX-ISOLDE. JOUR PRLTA 98 172501
- 2007FU04 NUCLEAR REACTIONS <sup>58</sup>Ni(p, p'), E=160 MeV; measured Ep,  $\sigma(\theta=0^\circ)$ . <sup>58</sup>Ni(<sup>3</sup>He, t), E=140 MeV / nucleon; measured triton spectra,  $\sigma(\theta=0^\circ)$ . <sup>58</sup>Ni, <sup>58</sup>Cu deduced 1<sup>+</sup> level energies, B(GT), isospin symmetry features. Comparison with shell model predictions. JOUR PRVCA 75 034310
- 2007HI06 NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>58</sup>Ni, <sup>58</sup>Ni), E=260=220 MeV; measured angular distributions. Deduced Mott oscillations. JOUR PRVCA 76 014617
- 2007H013 NUCLEAR REACTIONS <sup>58</sup>Ni(p, p'), E=172 MeV; measured cross sections, spin flip cross sections and spin-flip probabilities. Compared results to model calculations. JOUR PRVCA 76 014314
- <sup>58</sup>Cu 2007BL09 NUCLEAR REACTIONS Ni(<sup>70</sup>Ge, X)<sup>55</sup>Cu / <sup>56</sup>Cu / <sup>57</sup>Cu / <sup>58</sup>Cu / <sup>56</sup>Zn / <sup>57</sup>Zn / <sup>58</sup>Zn / <sup>59</sup>Zn / <sup>60</sup>Zn / <sup>60</sup>Ga / <sup>61</sup>Ga / <sup>60</sup>Ge / <sup>61</sup>Ge / <sup>62</sup>Ge / <sup>63</sup>Ge / <sup>64</sup>As, E=71.6 MeV / nucleon; measured production  $\sigma$ . Comparison with model predictions. JOUR ZAANE 31 267
- 2007FU04 NUCLEAR REACTIONS <sup>58</sup>Ni(p, p'), E=160 MeV; measured Ep,  $\sigma(\theta=0^\circ)$ . <sup>58</sup>Ni(<sup>3</sup>He, t), E=140 MeV / nucleon; measured triton spectra,  $\sigma(\theta=0^\circ)$ . <sup>58</sup>Ni, <sup>58</sup>Cu deduced 1<sup>+</sup> level energies, B(GT), isospin symmetry features. Comparison with shell model predictions. JOUR PRVCA 75 034310
- 2007ZE06 NUCLEAR REACTIONS <sup>12,13</sup>C, <sup>18</sup>O, <sup>26</sup>Mg, <sup>58</sup>Ni, <sup>60</sup>Ni, <sup>90</sup>Zr, <sup>118</sup>Sn, <sup>208</sup>Pb(<sup>3</sup>He, t), E=420 MeV; measured triton spectra and cross sections. Deduced B(GT). JOUR PRLTA 99 202501
- 2007ZEZZ NUCLEAR REACTIONS <sup>12,13</sup>C, <sup>18</sup>O, <sup>26</sup>Mg, <sup>58</sup>Ni, <sup>60</sup>Ni, <sup>90</sup>Zr, <sup>118</sup>Sn, <sup>208</sup>Pb(<sup>3</sup>He, t), E=420 MeV; measured triton spectra and cross sections. Deduced B(GT). PREPRINT arXiv:0707.2840v1 [nucl-ex]
- <sup>58</sup>Zn 2007BL09 NUCLEAR REACTIONS Ni(<sup>70</sup>Ge, X)<sup>55</sup>Cu / <sup>56</sup>Cu / <sup>57</sup>Cu / <sup>58</sup>Cu / <sup>56</sup>Zn / <sup>57</sup>Zn / <sup>58</sup>Zn / <sup>59</sup>Zn / <sup>60</sup>Zn / <sup>60</sup>Ga / <sup>61</sup>Ga / <sup>60</sup>Ge / <sup>61</sup>Ge / <sup>62</sup>Ge / <sup>63</sup>Ge / <sup>64</sup>As, E=71.6 MeV / nucleon; measured production  $\sigma$ . Comparison with model predictions. JOUR ZAANE 31 267

**A=59**

- <sup>59</sup>Fe 2007TI03 NUCLEAR REACTIONS Pb, <sup>208</sup>Pb, <sup>209</sup>Bi(p, X)<sup>7</sup>Be / <sup>24</sup>Na / <sup>59</sup>Fe / <sup>86</sup>Rb / <sup>101m</sup>Rh / <sup>173</sup>Lu / <sup>190</sup>Ir / <sup>192</sup>Ir / <sup>196</sup>Au / <sup>199</sup>Tl / <sup>200</sup>Tl / <sup>203</sup>Pb, E=0.04-2.6 GeV; measured excitation functions. Comparison with model predictions and previous data. JOUR PRAMC 68 289
- <sup>59</sup>Co 2007S009 NUCLEAR REACTIONS <sup>59</sup>Co(<sup>6</sup>Li, <sup>6</sup>Li), (<sup>7</sup>Li, <sup>7</sup>Li), E=12-30 MeV; measured elastic  $\sigma(\theta)$ ; deduced breakup threshold anomaly. JOUR PRVCA 75 044601
- <sup>59</sup>Ni 2007RU09 NUCLEAR REACTIONS <sup>58</sup>Ni(n,  $\gamma$ ), <sup>78</sup>Se(n,  $\gamma$ ), E  $\approx$  0-100 keV; measured cross sections using accelerator mass spectrometry. Quasi-stellar neutron spectrum. JOUR NIMBE 259 683
- <sup>59</sup>Zn 2007BL09 NUCLEAR REACTIONS Ni(<sup>70</sup>Ge, X)<sup>55</sup>Cu / <sup>56</sup>Cu / <sup>57</sup>Cu / <sup>58</sup>Cu / <sup>56</sup>Zn / <sup>57</sup>Zn / <sup>58</sup>Zn / <sup>59</sup>Zn / <sup>60</sup>Zn / <sup>60</sup>Ga / <sup>61</sup>Ga / <sup>60</sup>Ge / <sup>61</sup>Ge / <sup>62</sup>Ge / <sup>63</sup>Ge / <sup>64</sup>As, E=71.6 MeV / nucleon; measured production  $\sigma$ . Comparison with model predictions. JOUR ZAANE 31 267

**A=60**

- <sup>60</sup>Cr 2006ZH42 NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>48</sup>Ca, X)<sup>56</sup>Cr / <sup>58</sup>Cr, E=305 MeV; <sup>238</sup>U(<sup>48</sup>Ca, X)<sup>56</sup>Cr / <sup>58</sup>Cr / <sup>60</sup>Cr, E=330 MeV; <sup>14</sup>C(<sup>48</sup>Ca, 2p), (<sup>48</sup>Ca, 2n $\alpha$ ), E=130 MeV; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ ,  $\gamma\gamma$ -coin. <sup>56,58,60</sup>Cr deduced levels, J,  $\pi$ , configurations. Comparison with model predictions. JOUR PRVCA 74 064315
- <sup>60</sup>Co 2007TA14 NUCLEAR REACTIONS Ni(d, X)<sup>51</sup>Cr / <sup>52</sup>Mn / <sup>54</sup>Mn / <sup>56</sup>Mn / <sup>56</sup>Ni / <sup>57</sup>Ni / <sup>55</sup>Co / <sup>56</sup>Co / <sup>57</sup>Co / <sup>58</sup>Co / <sup>60</sup>Co / <sup>61</sup>Co / <sup>61</sup>Cu / <sup>64</sup>Cu, E < 50 MeV; measured E $\gamma$ , I $\gamma$ , activation cross section and excitation functions using stacked foil technique. Compared results to existing data. JOUR NIMBE 260 495
- 2007V008 NUCLEAR REACTIONS <sup>59</sup>Co(d, n), (d, p), (d,  $\alpha$ ), <sup>58</sup>Fe(<sup>3</sup>He, n), (<sup>3</sup>He, p), (<sup>3</sup>He,  $\alpha$ )<sup>61</sup>Ni, E=7.5, 10 MeV; measured neutron, proton and  $\alpha$  particle spectra, reaction cross sections. <sup>57</sup>Fe, <sup>60</sup>Ni, <sup>60</sup>Cu; deduced level densities. JOUR PRVCA 76 044602
- 2007V0ZZ NUCLEAR REACTIONS <sup>58</sup>Fe(<sup>3</sup>He, n), (<sup>3</sup>He, p), (<sup>3</sup>He,  $\alpha$ ), E=10 MeV; <sup>59</sup>Co(d, n), (d, p), (d,  $\alpha$ ), E=7.5 MeV; measured En, Ep, E $\alpha$ . <sup>57</sup>Fe, <sup>60</sup>Ni, <sup>60</sup>Co deduced level densities, Fermi-gas parameters. Comparison with model predictions. PREPRINT arXiv:0704.0916v1 [nucl-ex]
- 2007ZH34 NUCLEAR REACTIONS <sup>63</sup>Cu(n, n'), (n, 2n), (n, np), (n, d), (n, p), (n,  $\alpha$ ), E=14.9 MeV; <sup>65</sup>Cu(n, n'), (n, 2n), (n, np), (n, d), (n, p), E=14.9 MeV; measured E $\gamma$ , I $\gamma$ , and cross sections. JOUR NSENA 157 354
- <sup>60</sup>Ni 2005NIZS NUCLEAR REACTIONS Ni(<sup>22</sup>Ne, <sup>22</sup>Ne'), E=2.25 MeV / nucleon; <sup>107</sup>Ag(<sup>22</sup>Ne, <sup>22</sup>Ne'), E=2.86 MeV / nucleon; Ni(<sup>30</sup>Mg, <sup>30</sup>Mg'), E=2.25 MeV / nucleon; <sup>60</sup>Ni, <sup>107</sup>Ag(<sup>30</sup>Mg, <sup>30</sup>Mg'), E=2.69 MeV / nucleon; U(p, X)<sup>22</sup>Ne / <sup>30</sup>Mg / <sup>32</sup>Mg, E=1.01-1.40 GeV; measured E $\gamma$ , I $\gamma(\theta)$ , (particle) $\gamma$ -coinc, cross sections following projectile and target Coulomb excitation. <sup>22</sup>Ne, <sup>30</sup>Mg, <sup>32</sup>Mg, <sup>107</sup>Ag deduced levels, B(E2), half-lives, deformations. REX-ISOLDE-CERN facility. Coupled-channel and GOSIA analyses. <sup>24</sup>Mg, <sup>26</sup>Mg, <sup>28</sup>Mg, <sup>30</sup>Mg, <sup>32</sup>Mg, <sup>34</sup>Mg systematics of B(E2) values. Comparisons with shell-model calculations. THESIS O T Niedermaier, Univ Heidelberg

KEYNUMBERS AND KEYWORDS

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A=60 (*continued*)

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|                  | 2007GU09 | ATOMIC MASSES <sup>57,60,64,65,66,67,68,69</sup> Ni, <sup>65,66,67,68,69,70,71,72,73,74,76</sup> Cu, <sup>63,64,65,68,69,70,71,72,73,74,75,76,77,78</sup> Ga; measured masses; analyzed the resulting mass surface for signs of magicity, compared the behavior of N=40 with that of the known magic numbers and with midshell behavior. JOUR PRVCA 75 044303   |
|                  | 2007GUZZ | ATOMIC MASSES <sup>57,60,64,65,66,67,68,69</sup> Ni, <sup>65,66,67,68,68m,69,70,70m,71,72,73,74,76</sup> Cu, <sup>63,64,65,68,69,70,71,72,73,74,75,76,77,78</sup> Ga; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701029,01/22/2007  |
|                  | 2007V008 | NUCLEAR REACTIONS <sup>59</sup> Co(d, n), (d, p), (d, α), <sup>58</sup> Fe( <sup>3</sup> He, n), ( <sup>3</sup> He, p), ( <sup>3</sup> He, α) <sup>61</sup> Ni, E=7.5, 10 MeV; measured neutron, proton and α particle spectra, reaction cross sections. <sup>57</sup> Fe, <sup>60</sup> Ni, <sup>60</sup> Cu; deduced level densities. JOUR PRVCA 76 044602  |
|                  | 2007V0ZZ | NUCLEAR REACTIONS <sup>58</sup> Fe( <sup>3</sup> He, n), ( <sup>3</sup> He, p), ( <sup>3</sup> He, α), E=10 MeV; <sup>59</sup> Co(d, n), (d, p), (d, α), E=7.5 MeV; measured En, Ep, Eα. <sup>57</sup> Fe, <sup>60</sup> Ni, <sup>60</sup> Co deduced level densities, Fermi-gas parameters. Comparison with model predictions. PREPRINT arXiv:0704.0916v1 [nucl-ex]  |
| <sup>60</sup> Cu | 2007V008 | NUCLEAR REACTIONS <sup>59</sup> Co(d, n), (d, p), (d, α), <sup>58</sup> Fe( <sup>3</sup> He, n), ( <sup>3</sup> He, p), ( <sup>3</sup> He, α) <sup>61</sup> Ni, E=7.5, 10 MeV; measured neutron, proton and α particle spectra, reaction cross sections. <sup>57</sup> Fe, <sup>60</sup> Ni, <sup>60</sup> Cu; deduced level densities. JOUR PRVCA 76 044602  |
|                  | 2007ZE06 | NUCLEAR REACTIONS <sup>12,13</sup> C, <sup>18</sup> O, <sup>26</sup> Mg, <sup>58</sup> Ni, <sup>60</sup> Ni, <sup>90</sup> Zr, <sup>118</sup> Sn, <sup>208</sup> Pb( <sup>3</sup> He, t), E=420 MeV; measured triton spectra and cross sections. Deduced B(GT). JOUR PRLTA 99 202501  |
|                  | 2007ZEZZ | NUCLEAR REACTIONS <sup>12,13</sup> C, <sup>18</sup> O, <sup>26</sup> Mg, <sup>58</sup> Ni, <sup>60</sup> Ni, <sup>90</sup> Zr, <sup>118</sup> Sn, <sup>208</sup> Pb( <sup>3</sup> He, t), E=420 MeV; measured triton spectra and cross sections. Deduced B(GT). PREPRINT arXiv:0707.2840v1 [nucl-ex]  |
| <sup>60</sup> Zn | 2007BL09 | NUCLEAR REACTIONS Ni( <sup>70</sup> Ge, X) <sup>55</sup> Cu / <sup>56</sup> Cu / <sup>57</sup> Cu / <sup>58</sup> Cu / <sup>56</sup> Zn / <sup>57</sup> Zn / <sup>58</sup> Zn / <sup>59</sup> Zn / <sup>60</sup> Zn / <sup>60</sup> Ga / <sup>61</sup> Ga / <sup>60</sup> Ge / <sup>61</sup> Ge / <sup>62</sup> Ge / <sup>63</sup> Ge / <sup>64</sup> As, E=71.6 MeV / nucleon; measured production σ. Comparison with model predictions. JOUR ZAANE 31 267 |
|                  | 2007BL09 | RADIOACTIVITY <sup>57</sup> Zn, <sup>61</sup> Ge(β <sup>+</sup> p) [from Ni( <sup>70</sup> Ge, X)]; measured β-delayed proton spectra, T <sub>1/2</sub> . JOUR ZAANE 31 267   |
|                  | 2007W002 | NUCLEAR REACTIONS <sup>36</sup> Ar( <sup>24</sup> Mg, F), E=123.1 MeV; <sup>36</sup> Ar( <sup>25</sup> Mg, F), E=119.3 MeV; measured Eγ, Iγ from GDR decay. <sup>60,61</sup> Zn deduced GDR parameters, isospin mixing probability. JOUR APOBB 38 1469  |
|                  | 2007ZH16 | NUCLEAR REACTIONS <sup>24</sup> Mg( <sup>36</sup> Ar, X), E=195 MeV; measured fission fragment energy spectra, angular distributions. <sup>60</sup> Zn deduced ternary cluster decay from hyperdeformed states in compound nucleus. JOUR JTPLA 85 136   |
| <sup>60</sup> Ga | 2007BL09 | NUCLEAR REACTIONS Ni( <sup>70</sup> Ge, X) <sup>55</sup> Cu / <sup>56</sup> Cu / <sup>57</sup> Cu / <sup>58</sup> Cu / <sup>56</sup> Zn / <sup>57</sup> Zn / <sup>58</sup> Zn / <sup>59</sup> Zn / <sup>60</sup> Zn / <sup>60</sup> Ga / <sup>61</sup> Ga / <sup>60</sup> Ge / <sup>61</sup> Ge / <sup>62</sup> Ge / <sup>63</sup> Ge / <sup>64</sup> As, E=71.6 MeV / nucleon; measured production σ. Comparison with model predictions. JOUR ZAANE 31 267 |
| <sup>60</sup> Ge | 2007BL09 | NUCLEAR REACTIONS Ni( <sup>70</sup> Ge, X) <sup>55</sup> Cu / <sup>56</sup> Cu / <sup>57</sup> Cu / <sup>58</sup> Cu / <sup>56</sup> Zn / <sup>57</sup> Zn / <sup>58</sup> Zn / <sup>59</sup> Zn / <sup>60</sup> Zn / <sup>60</sup> Ga / <sup>61</sup> Ga / <sup>60</sup> Ge / <sup>61</sup> Ge / <sup>62</sup> Ge / <sup>63</sup> Ge / <sup>64</sup> As, E=71.6 MeV / nucleon; measured production σ. Comparison with model predictions. JOUR ZAANE 31 267 |

## A=61

- $^{61}\text{Fe}$  2007LU13 NUCLEAR REACTIONS  $^{238}\text{U}(^{64}\text{Ni}, \text{X})^{61}\text{Fe} / ^{62}\text{Fe} / ^{63}\text{Fe} / ^{64}\text{Fe} / ^{65}\text{Fe} / ^{66}\text{Fe}$ , E=400 MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ , (particle) $\gamma$ -coinc.  $^{61,62,63,64,65}\text{Fe}$  deduced levels, J,  $\pi$ . Compared results to model calculations. JOUR PRVCA 76 034303
- 2007VE05 NUCLEAR REACTIONS  $^9\text{Be}(^{64}\text{Ni}, \text{X})^{61}\text{Fe}$ , E=64.6 MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$  and quadrupole moment of the  $9 / 2^+$  isomeric state using time dependent perturbed angular momentum technique. JOUR PRVCA 75 051302
- $^{61}\text{Co}$  2006AL31 NUCLEAR REACTIONS  $\text{Cu}(p, \text{X})^{62}\text{Zn} / ^{63}\text{Zn} / ^{65}\text{Zn} / ^{61}\text{Cu} / ^{61}\text{Co}$ , E  $\approx$  2-27 MeV; measured excitation functions; deduced integral yields. Stacked-foil activation, comparison with model predictions. JOUR RAACA 94 391
- 2007TA14 NUCLEAR REACTIONS  $\text{Ni}(d, \text{X})^{51}\text{Cr} / ^{52}\text{Mn} / ^{54}\text{Mn} / ^{56}\text{Mn} / ^{56}\text{Ni} / ^{57}\text{Ni} / ^{55}\text{Co} / ^{56}\text{Co} / ^{57}\text{Co} / ^{58}\text{Co} / ^{60}\text{Co} / ^{61}\text{Co} / ^{61}\text{Cu} / ^{64}\text{Cu}$ , E < 50 MeV; measured  $E\gamma$ ,  $I\gamma$ , activation cross section and excitation functions using stacked foil technique. Compared results to existing data. JOUR NIMBE 260 495
- $^{61}\text{Ni}$  2007V008 NUCLEAR REACTIONS  $^{59}\text{Co}(d, n)$ ,  $(d, p)$ ,  $(d, \alpha)$ ,  $^{58}\text{Fe}(^3\text{He}, n)$ ,  $(^3\text{He}, p)$ ,  $(^3\text{He}, \alpha)^{61}\text{Ni}$ , E=7.5, 10 MeV; measured neutron, proton and  $\alpha$  particle spectra, reaction cross sections.  $^{57}\text{Fe}$ ,  $^{60}\text{Ni}$ ,  $^{60}\text{Cu}$ ; deduced level densities. JOUR PRVCA 76 044602
- 2007ZH12 NUCLEAR REACTIONS  $^{64}\text{Zn}(n, \alpha)$ , E=5.03, 5.95 MeV; measured  $E\alpha$ ,  $\sigma(\theta)$ ; deduced angle-integrated  $\sigma$ . JOUR NSENA 156 115
- $^{61}\text{Cu}$  2006AL31 NUCLEAR REACTIONS  $\text{Cu}(p, \text{X})^{62}\text{Zn} / ^{63}\text{Zn} / ^{65}\text{Zn} / ^{61}\text{Cu} / ^{61}\text{Co}$ , E  $\approx$  2-27 MeV; measured excitation functions; deduced integral yields. Stacked-foil activation, comparison with model predictions. JOUR RAACA 94 391
- 2007HE12 NUCLEAR REACTIONS  $^{64}\text{Ni}(d, 2n)$ , E=4-20.5 MeV;  $\text{Ni}(d, \text{X})^{61}\text{Cu}$ , E=4-20.5 MeV; measured production cross sections using stacked-foil activation technique. JOUR NIMBE 258 308
- 2007TA14 NUCLEAR REACTIONS  $\text{Ni}(d, \text{X})^{51}\text{Cr} / ^{52}\text{Mn} / ^{54}\text{Mn} / ^{56}\text{Mn} / ^{56}\text{Ni} / ^{57}\text{Ni} / ^{55}\text{Co} / ^{56}\text{Co} / ^{57}\text{Co} / ^{58}\text{Co} / ^{60}\text{Co} / ^{61}\text{Co} / ^{61}\text{Cu} / ^{64}\text{Cu}$ , E < 50 MeV; measured  $E\gamma$ ,  $I\gamma$ , activation cross section and excitation functions using stacked foil technique. Compared results to existing data. JOUR NIMBE 260 495
- 2007UD02 NUCLEAR REACTIONS  $\text{Zn}(p, xn)^{66}\text{Ga} / ^{67}\text{Ga}$ , E=4-40 MeV;  $\text{Zn}(p, xnp)^{62}\text{Zn} / ^{65}\text{Zn} / ^{69m}\text{Zn}$ , E=10-40 MeV;  $\text{Zn}(p, xn\alpha)^{61}\text{Cu}$ , E=6-40 MeV; measured cross sections and excitation functions using stacked-foil activation technique. Compared results to calculations. JOUR NIMBE 258 313
- $^{61}\text{Zn}$  2007W002 NUCLEAR REACTIONS  $^{36}\text{Ar}(^{24}\text{Mg}, \text{F})$ , E=123.1 MeV;  $^{36}\text{Ar}(^{25}\text{Mg}, \text{F})$ , E=119.3 MeV; measured  $E\gamma$ ,  $I\gamma$  from GDR decay.  $^{60,61}\text{Zn}$  deduced GDR parameters, isospin mixing probability. JOUR APOBB 38 1469
- $^{61}\text{Ga}$  2007BL09 NUCLEAR REACTIONS  $\text{Ni}(^{70}\text{Ge}, \text{X})^{55}\text{Cu} / ^{56}\text{Cu} / ^{57}\text{Cu} / ^{58}\text{Cu} / ^{56}\text{Zn} / ^{57}\text{Zn} / ^{58}\text{Zn} / ^{59}\text{Zn} / ^{60}\text{Zn} / ^{60}\text{Ga} / ^{61}\text{Ga} / ^{60}\text{Ge} / ^{61}\text{Ge} / ^{62}\text{Ge} / ^{63}\text{Ge} / ^{64}\text{As}$ , E=71.6 MeV / nucleon; measured production  $\sigma$ . Comparison with model predictions. JOUR ZAANE 31 267

KEYNUMBERS AND KEYWORDS

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**A=61 (continued)**

- <sup>61</sup>Ge      2007BL09      NUCLEAR REACTIONS Ni(<sup>70</sup>Ge, X)<sup>55</sup>Cu / <sup>56</sup>Cu / <sup>57</sup>Cu / <sup>58</sup>Cu / <sup>56</sup>Zn / <sup>57</sup>Zn / <sup>58</sup>Zn / <sup>59</sup>Zn / <sup>60</sup>Zn / <sup>60</sup>Ga / <sup>61</sup>Ga / <sup>60</sup>Ge / <sup>61</sup>Ge / <sup>62</sup>Ge / <sup>63</sup>Ge / <sup>64</sup>As, E=71.6 MeV / nucleon; measured production  $\sigma$ . Comparison with model predictions. JOUR ZAANE 31 267
- 2007BL09      RADIOACTIVITY <sup>57</sup>Zn, <sup>61</sup>Ge( $\beta^+$ p) [from Ni(<sup>70</sup>Ge, X)]; measured  $\beta$ -delayed proton spectra, T<sub>1/2</sub>. JOUR ZAANE 31 267

**A=62**

- <sup>62</sup>Fe      2007LU13      NUCLEAR REACTIONS <sup>238</sup>U(<sup>64</sup>Ni, X)<sup>61</sup>Fe / <sup>62</sup>Fe / <sup>63</sup>Fe / <sup>64</sup>Fe / <sup>65</sup>Fe / <sup>66</sup>Fe, E=400 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ , (particle) $\gamma$ -coinc. <sup>61,62,63,64,65</sup>Fe deduced levels, J,  $\pi$ . Compared results to model calculations. JOUR PRVCA 76 034303
- <sup>62</sup>Ni      2007ZH34      NUCLEAR REACTIONS <sup>63</sup>Cu(n, n'), (n, 2n), (n, np), (n, d), (n, p), (n,  $\alpha$ ), E=14.9 MeV; <sup>65</sup>Cu(n, n'), (n, 2n), (n, np), (n, d), (n, p), E=14.9 MeV; measured E $\gamma$ , I $\gamma$ , and cross sections. JOUR NSENA 157 354
- <sup>62</sup>Cu      2007ZH34      NUCLEAR REACTIONS <sup>63</sup>Cu(n, n'), (n, 2n), (n, np), (n, d), (n, p), (n,  $\alpha$ ), E=14.9 MeV; <sup>65</sup>Cu(n, n'), (n, 2n), (n, np), (n, d), (n, p), E=14.9 MeV; measured E $\gamma$ , I $\gamma$ , and cross sections. JOUR NSENA 157 354
- <sup>62</sup>Zn      2006AL31      NUCLEAR REACTIONS Cu(p, X)<sup>62</sup>Zn / <sup>63</sup>Zn / <sup>65</sup>Zn / <sup>61</sup>Cu / <sup>61</sup>Co, E  $\approx$  2-27 MeV; measured excitation functions; deduced integral yields. Stacked-foil activation, comparison with model predictions. JOUR RAACA 94 391
- 2007AL41      NUCLEAR REACTIONS Zn(p, X)<sup>62</sup>Zn / <sup>65</sup>Zn / <sup>66</sup>Ga / <sup>67</sup>Ga / <sup>68</sup>Ga, E < 27.5 MeV; measured yields, cross sections, and excitation functions using stacked foil activation. JOUR ARISE 65 1101
- 2007STZZ      NUCLEAR REACTIONS C(<sup>63</sup>Zn, <sup>62</sup>ZnX), (<sup>65</sup>Ge, <sup>64</sup>GeX), E not given; measured Doppler-shifted E $\gamma$ , I $\gamma$ , (recoil) $\gamma$ -coin. <sup>64</sup>Ge, <sup>62</sup>Zn deduced transitions T<sub>1/2</sub>, B(E2), quadrupole moments. Recoil distance method, comparison with model predictions. PREPRINT nucl-ex/0703021,3/13/2007
- 2007UD02      NUCLEAR REACTIONS Zn(p, xn)<sup>66</sup>Ga / <sup>67</sup>Ga, E=4-40 MeV; Zn(p, xnp)<sup>62</sup>Zn / <sup>65</sup>Zn / <sup>69m</sup>Zn, E=10-40 MeV; Zn(p, xn $\alpha$ )<sup>61</sup>Cu, E=6-40 MeV; measured cross sections and excitation functions using stacked-foil activation technique. Compared results to calculations. JOUR NIMBE 258 313
- <sup>62</sup>Ge      2007BL09      NUCLEAR REACTIONS Ni(<sup>70</sup>Ge, X)<sup>55</sup>Cu / <sup>56</sup>Cu / <sup>57</sup>Cu / <sup>58</sup>Cu / <sup>56</sup>Zn / <sup>57</sup>Zn / <sup>58</sup>Zn / <sup>59</sup>Zn / <sup>60</sup>Zn / <sup>60</sup>Ga / <sup>61</sup>Ga / <sup>60</sup>Ge / <sup>61</sup>Ge / <sup>62</sup>Ge / <sup>63</sup>Ge / <sup>64</sup>As, E=71.6 MeV / nucleon; measured production  $\sigma$ . Comparison with model predictions. JOUR ZAANE 31 267

**A=63**

- <sup>63</sup>Fe      2007LU13      NUCLEAR REACTIONS <sup>238</sup>U(<sup>64</sup>Ni, X)<sup>61</sup>Fe / <sup>62</sup>Fe / <sup>63</sup>Fe / <sup>64</sup>Fe / <sup>65</sup>Fe / <sup>66</sup>Fe, E=400 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ , (particle) $\gamma$ -coinc. <sup>61,62,63,64,65</sup>Fe deduced levels, J,  $\pi$ . Compared results to model calculations. JOUR PRVCA 76 034303



KEYNUMBERS AND KEYWORDS

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**A=63 (continued)**

<sup>63</sup> Ni	2007NAZW	NUCLEAR REACTIONS <sup>4</sup> He( $\gamma$ , X), E < 50 MeV; <sup>12</sup> C( $\alpha$ , $\gamma$ ), E(cm)=1.4-1.6 MeV; <sup>2</sup> H, <sup>62</sup> Ni(n, $\gamma$ ), E= low; measured cross sections. CONF Tokai-mura (Nuclear Data) Proc,PIII.01,Nagai
	2007ZH34	NUCLEAR REACTIONS <sup>63</sup> Cu(n, n'), (n, 2n), (n, np), (n, d), (n, p), (n, $\alpha$ ), E=14.9 MeV; <sup>65</sup> Cu(n, n'), (n, 2n), (n, np), (n, d), (n, p), E=14.9 MeV; measured E $\gamma$ , I $\gamma$ , and cross sections. JOUR NSENA 157 354
<sup>63</sup> Cu	2008C001	RADIOACTIVITY <sup>63</sup> Ni( $\beta^-$ ); measured T <sub>1/2</sub> . JOUR ARISE 66 60
	2007ZH34	NUCLEAR REACTIONS <sup>63</sup> Cu(n, n'), (n, 2n), (n, np), (n, d), (n, p), (n, $\alpha$ ), E=14.9 MeV; <sup>65</sup> Cu(n, n'), (n, 2n), (n, np), (n, d), (n, p), E=14.9 MeV; measured E $\gamma$ , I $\gamma$ , and cross sections. JOUR NSENA 157 354
<sup>63</sup> Zn	2008C001	RADIOACTIVITY <sup>63</sup> Ni( $\beta^-$ ); measured T <sub>1/2</sub> . JOUR ARISE 66 60
	2006AB61	NUCLEAR REACTIONS <sup>64,67</sup> Zn(n, p), <sup>64</sup> Zn(n, 2n), <sup>68</sup> Zn(n, $\alpha$ ), E=reactor; measured spectrum-averaged $\sigma$ . Activation, radiochemical separation. JOUR RAACA 94 63
	2006AL31	NUCLEAR REACTIONS Cu(p, X) <sup>62</sup> Zn / <sup>63</sup> Zn / <sup>65</sup> Zn / <sup>61</sup> Cu / <sup>61</sup> Co, E $\approx$ 2-27 MeV; measured excitation functions; deduced integral yields. Stacked-foil activation, comparison with model predictions. JOUR RAACA 94 391
<sup>63</sup> Ga	2007GU09	ATOMIC MASSES <sup>57,60,64,65,66,67,68,69</sup> Ni, <sup>65,66,67,68,69,70,71,72,73,74,76</sup> Cu, <sup>63,64,65,68,69,70,71,72,73,74,75,76,77,78</sup> Ga; measured masses; analyzed the resulting mass surface for signs of magicity, compared the behavior of N=40 with that of the known magic numbers and with midshell behavior. JOUR PRVCA 75 044303
	2007GUZZ	ATOMIC MASSES <sup>57,60,64,65,66,67,68,69</sup> Ni, <sup>65,66,67,68,68m,69,70,70m,71,72,73,74,76</sup> Cu, <sup>63,64,65,68,69,70,71,72,73,74,75,76,77,78</sup> Ga; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701029,01/22/2007
	2007SC24	ATOMIC MASSES <sup>63,64</sup> Ga, <sup>64,65,66</sup> Ge, <sup>66,67,68</sup> As, <sup>69</sup> Se; measured masses using penning trap mass spectrometer. Astrophysical implications discussed. JOUR PRVCA 75 055801
<sup>63</sup> Ge	2007BL09	NUCLEAR REACTIONS Ni( <sup>70</sup> Ge, X) <sup>55</sup> Cu / <sup>56</sup> Cu / <sup>57</sup> Cu / <sup>58</sup> Cu / <sup>56</sup> Zn / <sup>57</sup> Zn / <sup>58</sup> Zn / <sup>59</sup> Zn / <sup>60</sup> Zn / <sup>60</sup> Ga / <sup>61</sup> Ga / <sup>60</sup> Ge / <sup>61</sup> Ge / <sup>62</sup> Ge / <sup>63</sup> Ge / <sup>64</sup> As, E=71.6 MeV / nucleon; measured production $\sigma$ . Comparison with model predictions. JOUR ZAANE 31 267

**A=64**

<sup>64</sup> Fe	2006H020	NUCLEAR REACTIONS <sup>238</sup> U( <sup>64</sup> Ni, X) <sup>64</sup> Fe / <sup>69</sup> Ga, E=430 MeV; measured prompt and delayed E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin. <sup>64</sup> Fe deduced levels, J, $\pi$ , configurations. Gammasphere array, comparison with shell model predictions. Level systematics in neighboring nuclides discussed. JOUR PRVCA 74 064313
	2007LU13	NUCLEAR REACTIONS <sup>238</sup> U( <sup>64</sup> Ni, X) <sup>61</sup> Fe / <sup>62</sup> Fe / <sup>63</sup> Fe / <sup>64</sup> Fe / <sup>65</sup> Fe / <sup>66</sup> Fe, E=400 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ , (particle) $\gamma$ -coinc. <sup>61,62,63,64,65</sup> Fe deduced levels, J, $\pi$ . Compared results to model calculations. JOUR PRVCA 76 034303

KEYNUMBERS AND KEYWORDS

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**A=64 (continued)**

<sup>64</sup> Co	2007P006	NUCLEAR REACTIONS <sup>64</sup> Ni(d, 2p), E=171 MeV; measured $\sigma$ and angular distributions. Deduced GT strength to low lying states. JOUR PRVCA 75 054312
<sup>64</sup> Ni	2007BL15	RADIOACTIVITY <sup>70</sup> Zn, <sup>116</sup> Cd, <sup>128,130</sup> Te( $\beta^- \beta^-$ ); <sup>64</sup> Zn, <sup>106</sup> Cd, <sup>120</sup> Te( $\beta^+ \beta^+$ ); measured summed E $\beta$ . Deduced upper limits for T <sub>1/2</sub> . JOUR PRVCA 76 025501
	2007GU09	ATOMIC MASSES <sup>57,60,64,65,66,67,68,69</sup> Ni, <sup>65,66,67,68,69,70,71,72,73,74,76</sup> Cu, <sup>63,64,65,68,69,70,71,72,73,74,75,76,77,78</sup> Ga; measured masses; analyzed the resulting mass surface for signs of magicity, compared the behavior of N=40 with that of the known magic numbers and with midshell behavior. JOUR PRVCA 75 044303
	2007GUZZ	ATOMIC MASSES <sup>57,60,64,65,66,67,68,69</sup> Ni, <sup>65,66,67,68,68m,69,70,70m,71,72,73,74,76</sup> Cu, <sup>63,64,65,68,69,70,71,72,73,74,75,76,77,78</sup> Ga; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701029,01/22/2007
	2007QA02	RADIOACTIVITY <sup>64</sup> Cu( $\beta^-$ ), ( $\beta^+$ ), (EC) [from <sup>66</sup> Zn(d, $\alpha$ ) and Zn(d, X)]; <sup>76</sup> Br, <sup>124</sup> I( $\beta^+$ ), (EC) [from <sup>76</sup> Se, <sup>124</sup> Te(p, n)]; measured E $\gamma$ , E $\beta$ , X-ray spectra, $\gamma\gamma^-$ , $\beta\gamma$ -coin; deduced positron emission intensities. JOUR RAACA 95 67
	2007ZH34	NUCLEAR REACTIONS <sup>63</sup> Cu(n, n'), (n, 2n), (n, np), (n, d), (n, p), (n, $\alpha$ ), E=14.9 MeV; <sup>65</sup> Cu(n, n'), (n, 2n), (n, np), (n, d), (n, p), E=14.9 MeV; measured E $\gamma$ , I $\gamma$ , and cross sections. JOUR NSENA 157 354
<sup>64</sup> Cu	2006AB61	NUCLEAR REACTIONS <sup>64,67</sup> Zn(n, p), <sup>64</sup> Zn(n, 2n), <sup>68</sup> Zn(n, $\alpha$ ), E=reactor; measured spectrum-averaged $\sigma$ . Activation, radiochemical separation. JOUR RAACA 94 63
	2007HE12	NUCLEAR REACTIONS <sup>64</sup> Ni(d, 2n), E=4-20.5 MeV; Ni(d, X) <sup>61</sup> Cu, E=4-20.5 MeV; measured production cross sections using stacked-foil activation technique. JOUR NIMBE 258 308
	2007KI03	NUCLEAR REACTIONS <sup>63</sup> Cu, <sup>186</sup> W(n, $\gamma$ ), E=1-2 MeV; measured capture $\sigma$ . JOUR JRNC D 271 553
	2007KI13	RADIOACTIVITY <sup>64</sup> Zn, <sup>112</sup> Sn( $\beta^+$ ), (EC); <sup>124</sup> Sn(2 $\beta^-$ ); measured E $\gamma$ , I $\gamma$ ; deduced T <sub>1/2</sub> lower limits for $\beta^+$ , EC and 0 $\nu$ -accompanied 2 $\beta^-$ -decay to ground and excited states. Comparison with theoretical values and previous data. JOUR NUPAB 793 171
	2007QA02	RADIOACTIVITY <sup>64</sup> Cu( $\beta^-$ ), ( $\beta^+$ ), (EC) [from <sup>66</sup> Zn(d, $\alpha$ ) and Zn(d, X)]; <sup>76</sup> Br, <sup>124</sup> I( $\beta^+$ ), (EC) [from <sup>76</sup> Se, <sup>124</sup> Te(p, n)]; measured E $\gamma$ , E $\beta$ , X-ray spectra, $\gamma\gamma^-$ , $\beta\gamma$ -coin; deduced positron emission intensities. JOUR RAACA 95 67
	2007TA14	NUCLEAR REACTIONS Ni(d, X) <sup>51</sup> Cr / <sup>52</sup> Mn / <sup>54</sup> Mn / <sup>56</sup> Mn / <sup>56</sup> Ni / <sup>57</sup> Ni / <sup>55</sup> Co / <sup>56</sup> Co / <sup>57</sup> Co / <sup>58</sup> Co / <sup>60</sup> Co / <sup>61</sup> Co / <sup>61</sup> Cu / <sup>64</sup> Cu, E < 50 MeV; measured E $\gamma$ , I $\gamma$ , activation cross section and excitation functions using stacked foil technique. Compared results to existing data. JOUR NIMBE 260 495
	2007ZH34	NUCLEAR REACTIONS <sup>63</sup> Cu(n, n'), (n, 2n), (n, np), (n, d), (n, p), (n, $\alpha$ ), E=14.9 MeV; <sup>65</sup> Cu(n, n'), (n, 2n), (n, np), (n, d), (n, p), E=14.9 MeV; measured E $\gamma$ , I $\gamma$ , and cross sections. JOUR NSENA 157 354
<sup>64</sup> Zn	2007BL15	RADIOACTIVITY <sup>70</sup> Zn, <sup>116</sup> Cd, <sup>128,130</sup> Te( $\beta^- \beta^-$ ); <sup>64</sup> Zn, <sup>106</sup> Cd, <sup>120</sup> Te( $\beta^+ \beta^+$ ); measured summed E $\beta$ . Deduced upper limits for T <sub>1/2</sub> . JOUR PRVCA 76 025501



## A=64 (continued)

- 2007KE09 ATOMIC MASSES <sup>74,75,76,77,79,80,83,87</sup>Rb; <sup>64</sup>Zn; <sup>71,74</sup>Ga; <sup>84,88</sup>Sr; <sup>133</sup>Cs; measured atomic masses. ISOLTRAP Penning Trap. JOUR PRVCA 76 045504
- 2007KI13 RADIOACTIVITY <sup>64</sup>Zn, <sup>112</sup>Sn( $\beta^+$ ), (EC); <sup>124</sup>Sn( $2\beta^-$ ); measured E $\gamma$ , I $\gamma$ ; deduced T<sub>1/2</sub> lower limits for  $\beta^+$ , EC and  $0\nu$ -accompanied  $2\beta^-$ -decay to ground and excited states. Comparison with theoretical values and previous data. JOUR NUPAB 793 171
- 2007LE24 NUCLEAR REACTIONS <sup>27</sup>Al(<sup>6</sup>He, <sup>6</sup>He), E=9.5, 11, 12, 13.4 MeV; <sup>51</sup>V(<sup>8</sup>Li, <sup>8</sup>Li), E=26 MeV; measured  $\sigma(\theta)$ . Comparison with optical model. <sup>27</sup>Al, <sup>64</sup>Zn(<sup>6</sup>He, <sup>6</sup>He), (<sup>6</sup>Li, <sup>6</sup>Li), (<sup>7</sup>Li, <sup>7</sup>Li), (<sup>9</sup>Be, <sup>9</sup>Be), (<sup>16</sup>O, <sup>16</sup>O), E $\approx$ 5-25 MeV; analyzed  $\sigma$ . Comparison with other data. Secondary radioactive beam. JOUR NUPAB 787 94c
- 2007MI12 RADIOACTIVITY <sup>64</sup>Ga( $\beta^+$ ), (EC) [from <sup>54</sup>Fe(<sup>12</sup>C, np)]; measured  $\beta$ -delayed E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>64</sup>Zn deduced levels, J,  $\pi$ , transition strengths. Comparisons with predictions of the E(5) critical point symmetry. JOUR PRVCA 75 044302
- 2007QA02 RADIOACTIVITY <sup>64</sup>Cu( $\beta^-$ ), ( $\beta^+$ ), (EC) [from <sup>66</sup>Zn(d,  $\alpha$ ) and Zn(d, X)]; <sup>76</sup>Br, <sup>124</sup>I( $\beta^+$ ), (EC) [from <sup>76</sup>Se, <sup>124</sup>Te(p, n)]; measured E $\gamma$ , E $\beta$ , X-ray spectra,  $\gamma\gamma$ -,  $\beta\gamma$ -coin; deduced positron emission intensities. JOUR RAACA 95 67
- <sup>64</sup>Ga 2007CL01 ATOMIC MASSES <sup>64</sup>Ge, <sup>64</sup>Ga; measured mass. Penning trap mass spectrometer. Astrophysical implications discussed. JOUR PRVCA 75 032801
- 2007GU09 ATOMIC MASSES <sup>57,60,64,65,66,67,68,69</sup>Ni, <sup>65,66,67,68,69,70,71,72,73,74,76</sup>Cu, <sup>63,64,65,68,69,70,71,72,73,74,75,76,77,78</sup>Ga; measured masses; analyzed the resulting mass surface for signs of magicity, compared the behavior of N=40 with that of the known magic numbers and with midshell behavior. JOUR PRVCA 75 044303
- 2007GUZZ ATOMIC MASSES <sup>57,60,64,65,66,67,68,69</sup>Ni, <sup>65,66,67,68,68m,69,70,70m,71,72,73,74,76</sup>Cu, <sup>63,64,65,68,69,70,71,72,73,74,75,76,77,78</sup>Ga; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701029,01/22/2007
- 2007MI12 RADIOACTIVITY <sup>64</sup>Ga( $\beta^+$ ), (EC) [from <sup>54</sup>Fe(<sup>12</sup>C, np)]; measured  $\beta$ -delayed E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>64</sup>Zn deduced levels, J,  $\pi$ , transition strengths. Comparisons with predictions of the E(5) critical point symmetry. JOUR PRVCA 75 044302
- 2007SC24 ATOMIC MASSES <sup>63,64</sup>Ga, <sup>64,65,66</sup>Ge, <sup>66,67,68</sup>As, <sup>69</sup>Se; measured masses using penning trap mass spectrometer. Astrophysical implications discussed. JOUR PRVCA 75 055801
- <sup>64</sup>Ge 2007CL01 ATOMIC MASSES <sup>64</sup>Ge, <sup>64</sup>Ga; measured mass. Penning trap mass spectrometer. Astrophysical implications discussed. JOUR PRVCA 75 032801
- 2007SC24 ATOMIC MASSES <sup>63,64</sup>Ga, <sup>64,65,66</sup>Ge, <sup>66,67,68</sup>As, <sup>69</sup>Se; measured masses using penning trap mass spectrometer. Astrophysical implications discussed. JOUR PRVCA 75 055801
- 2007ST16 NUCLEAR REACTIONS <sup>93</sup>Nb(<sup>65</sup>Ge, n), E not given; measured E $\gamma$ , I $\gamma$  and transition rates using recoil distance method. <sup>64</sup>Ge deduced B(E2) and lifetimes. JOUR PRLTA 99 042503

KEYNUMBERS AND KEYWORDS

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**A=64 (continued)**

- 2007STZZ NUCLEAR REACTIONS C( $^{63}\text{Zn}$ ,  $^{62}\text{ZnX}$ ), ( $^{65}\text{Ge}$ ,  $^{64}\text{GeX}$ ), E not given; measured Doppler-shifted  $E\gamma$ ,  $I\gamma$ , (recoil) $\gamma$ -coin.  $^{64}\text{Ge}$ ,  $^{62}\text{Zn}$  deduced transitions  $T_{1/2}$ , B(E2), quadrupole moments. Recoil distance method, comparison with model predictions. PREPRINT nucl-ex/0703021,3/13/2007
- $^{64}\text{As}$  2007BL09 NUCLEAR REACTIONS Ni( $^{70}\text{Ge}$ , X) $^{55}\text{Cu}$  /  $^{56}\text{Cu}$  /  $^{57}\text{Cu}$  /  $^{58}\text{Cu}$  /  $^{56}\text{Zn}$  /  $^{57}\text{Zn}$  /  $^{58}\text{Zn}$  /  $^{59}\text{Zn}$  /  $^{60}\text{Zn}$  /  $^{60}\text{Ga}$  /  $^{61}\text{Ga}$  /  $^{60}\text{Ge}$  /  $^{61}\text{Ge}$  /  $^{62}\text{Ge}$  /  $^{63}\text{Ge}$  /  $^{64}\text{As}$ , E=71.6 MeV / nucleon; measured production  $\sigma$ . Comparison with model predictions. JOUR ZAANE 31 267

**A=65**

- $^{65}\text{Fe}$  2007LU13 NUCLEAR REACTIONS  $^{238}\text{U}({}^{64}\text{Ni}$ , X) $^{61}\text{Fe}$  /  $^{62}\text{Fe}$  /  $^{63}\text{Fe}$  /  $^{64}\text{Fe}$  /  $^{65}\text{Fe}$  /  $^{66}\text{Fe}$ , E=400 MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ , (particle) $\gamma$ -coin.  $^{61,62,63,64,65}\text{Fe}$  deduced levels, J,  $\pi$ . Compared results to model calculations. JOUR PRVCA 76 034303
- $^{65}\text{Ni}$  2006AB61 NUCLEAR REACTIONS  $^{64,67}\text{Zn}(n, p)$ ,  $^{64}\text{Zn}(n, 2n)$ ,  $^{68}\text{Zn}(n, \alpha)$ , E=reactor; measured spectrum-averaged  $\sigma$ . Activation, radiochemical separation. JOUR RAACA 94 63
- 2007GU09 ATOMIC MASSES  $^{57,60,64,65,66,67,68,69}\text{Ni}$ ,  $^{65,66,67,68,69,70,71,72,73,74,76}\text{Cu}$ ,  $^{63,64,65,68,69,70,71,72,73,74,75,76,77,78}\text{Ga}$ ; measured masses; analyzed the resulting mass surface for signs of magicity, compared the behavior of N=40 with that of the known magic numbers and with midshell behavior. JOUR PRVCA 75 044303
- 2007GUZZ ATOMIC MASSES  $^{57,60,64,65,66,67,68,69}\text{Ni}$ ,  $^{65,66,67,68,68m,69,70,70m,71,72,73,74,76}\text{Cu}$ ,  $^{63,64,65,68,69,70,71,72,73,74,75,76,77,78}\text{Ga}$ ; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701029,01/22/2007
- 2007ZH34 NUCLEAR REACTIONS  $^{63}\text{Cu}(n, n')$ , (n, 2n), (n, np), (n, d), (n, p), (n,  $\alpha$ ), E=14.9 MeV;  $^{65}\text{Cu}(n, n')$ , (n, 2n), (n, np), (n, d), (n, p), E=14.9 MeV; measured  $E\gamma$ ,  $I\gamma$ , and cross sections. JOUR NSENA 157 354
- $^{65}\text{Cu}$  2007DEZU NUCLEAR REACTIONS  $^{65}\text{Cu}(e, e')$ , E=150, 225 MeV; measured electron energy spectra; deduced reduced transition probability. CONF Iguazu(Nuclear Physics and Applications) Proc,P456,Denyak
- 2007GU09 ATOMIC MASSES  $^{57,60,64,65,66,67,68,69}\text{Ni}$ ,  $^{65,66,67,68,69,70,71,72,73,74,76}\text{Cu}$ ,  $^{63,64,65,68,69,70,71,72,73,74,75,76,77,78}\text{Ga}$ ; measured masses; analyzed the resulting mass surface for signs of magicity, compared the behavior of N=40 with that of the known magic numbers and with midshell behavior. JOUR PRVCA 75 044303
- 2007GUZZ ATOMIC MASSES  $^{57,60,64,65,66,67,68,69}\text{Ni}$ ,  $^{65,66,67,68,68m,69,70,70m,71,72,73,74,76}\text{Cu}$ ,  $^{63,64,65,68,69,70,71,72,73,74,75,76,77,78}\text{Ga}$ ; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701029,01/22/2007
- 2007ZH34 NUCLEAR REACTIONS  $^{63}\text{Cu}(n, n')$ , (n, 2n), (n, np), (n, d), (n, p), (n,  $\alpha$ ), E=14.9 MeV;  $^{65}\text{Cu}(n, n')$ , (n, 2n), (n, np), (n, d), (n, p), E=14.9 MeV; measured  $E\gamma$ ,  $I\gamma$ , and cross sections. JOUR NSENA 157 354

KEYNUMBERS AND KEYWORDS

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**A=65 (continued)**

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| $^{65}\text{Zn}$ | 2006AL31 | NUCLEAR REACTIONS $\text{Cu}(p, X)^{62}\text{Zn} / ^{63}\text{Zn} / ^{65}\text{Zn} / ^{61}\text{Cu} / ^{61}\text{Co}$ , $E \approx 2\text{-}27$ MeV; measured excitation functions; deduced integral yields. Stacked-foil activation, comparison with model predictions. JOUR RAACA 94 391   |
|                  | 2007AL41 | NUCLEAR REACTIONS $\text{Zn}(p, X)^{62}\text{Zn} / ^{65}\text{Zn} / ^{66}\text{Ga} / ^{67}\text{Ga} / ^{68}\text{Ga}$ , $E < 27.5$ MeV; measured yields, cross sections, and excitation functions using stacked foil activation. JOUR ARISE 65 1101  |
|                  | 2007K018 | NUCLEAR REACTIONS $^{64}\text{Zn}(d, p)$ , $E=19.5$ MeV; measured $E\gamma$ , $I\gamma$ , radiochemical yield. JOUR RAACA 95 75  |
|                  | 2007UD02 | NUCLEAR REACTIONS $\text{Zn}(p, xn)^{66}\text{Ga} / ^{67}\text{Ga}$ , $E=4\text{-}40$ MeV; $\text{Zn}(p, xnp)^{62}\text{Zn} / ^{65}\text{Zn} / ^{69m}\text{Zn}$ , $E=10\text{-}40$ MeV; $\text{Zn}(p, xn\alpha)^{61}\text{Cu}$ , $E=6\text{-}40$ MeV; measured cross sections and excitation functions using stacked-foil activation technique. Compared results to calculations. JOUR NIMBE 258 313 |
| $^{65}\text{Ga}$ | 2007GU09 | ATOMIC MASSES $^{57,60,64,65,66,67,68,69}\text{Ni}$ , $^{65,66,67,68,69,70,71,72,73,74,76}\text{Cu}$ , $^{63,64,65,68,69,70,71,72,73,74,75,76,77,78}\text{Ga}$ ; measured masses; analyzed the resulting mass surface for signs of magicity, compared the behavior of $N=40$ with that of the known magic numbers and with midshell behavior. JOUR PRVCA 75 044303                                   |
|                  | 2007GUZZ | ATOMIC MASSES $^{57,60,64,65,66,67,68,69}\text{Ni}$ , $^{65,66,67,68,68m,69,70,70m,71,72,73,74,76}\text{Cu}$ , $^{63,64,65,68,69,70,71,72,73,74,75,76,77,78}\text{Ga}$ ; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701029,01/22/2007  |
| $^{65}\text{Ge}$ | 2007SC24 | ATOMIC MASSES $^{63,64}\text{Ga}$ , $^{64,65,66}\text{Ge}$ , $^{66,67,68}\text{As}$ , $^{69}\text{Se}$ ; measured masses using penning trap mass spectrometer. Astrophysical implications discussed. JOUR PRVCA 75 055801  |

**A=66**

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| $^{66}\text{Fe}$ | 2007LU13 | NUCLEAR REACTIONS $^{238}\text{U}(^{64}\text{Ni}, X)^{61}\text{Fe} / ^{62}\text{Fe} / ^{63}\text{Fe} / ^{64}\text{Fe} / ^{65}\text{Fe} / ^{66}\text{Fe}$ , $E=400$ MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ , (particle) $\gamma$ -coinc. $^{61,62,63,64,65}\text{Fe}$ deduced levels, $J$ , $\pi$ . Compared results to model calculations. JOUR PRVCA 76 034303 |
| $^{66}\text{Ni}$ | 2007GU09 | ATOMIC MASSES $^{57,60,64,65,66,67,68,69}\text{Ni}$ , $^{65,66,67,68,69,70,71,72,73,74,76}\text{Cu}$ , $^{63,64,65,68,69,70,71,72,73,74,75,76,77,78}\text{Ga}$ ; measured masses; analyzed the resulting mass surface for signs of magicity, compared the behavior of $N=40$ with that of the known magic numbers and with midshell behavior. JOUR PRVCA 75 044303            |
|                  | 2007GUZZ | ATOMIC MASSES $^{57,60,64,65,66,67,68,69}\text{Ni}$ , $^{65,66,67,68,68m,69,70,70m,71,72,73,74,76}\text{Cu}$ , $^{63,64,65,68,69,70,71,72,73,74,75,76,77,78}\text{Ga}$ ; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701029,01/22/2007   |
| $^{66}\text{Cu}$ | 2007GU09 | ATOMIC MASSES $^{57,60,64,65,66,67,68,69}\text{Ni}$ , $^{65,66,67,68,69,70,71,72,73,74,76}\text{Cu}$ , $^{63,64,65,68,69,70,71,72,73,74,75,76,77,78}\text{Ga}$ ; measured masses; analyzed the resulting mass surface for signs of magicity, compared the behavior of $N=40$ with that of the known magic numbers and with midshell behavior. JOUR PRVCA 75 044303            |

KEYNUMBERS AND KEYWORDS

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**A=66 (continued)**

	2007GUZZ	ATOMIC MASSES <sup>57,60,64,65,66,67,68,69</sup> Ni, <sup>65,66,67,68,68m,69,70,70m,71,72,73,74,76</sup> Cu, <sup>63,64,65,68,69,70,71,72,73,74,75,76,77,78</sup> Ga; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701029,01/22/2007
<sup>66</sup> Zn	2007SP04	NUCLEAR REACTIONS <sup>62</sup> Ni( $\alpha$ , $\gamma$ ), E=5, 9 MeV; <sup>103</sup> Rh(p, $\gamma$ ), E=3, 5 MeV; measured E $\gamma$ , I $\gamma$ . Deduced total cross sections. Compared results to model calculations. JOUR PRVCA 76 015802
<sup>66</sup> Ga	2007AL41	NUCLEAR REACTIONS Zn(p, X) <sup>62</sup> Zn / <sup>65</sup> Zn / <sup>66</sup> Ga / <sup>67</sup> Ga / <sup>68</sup> Ga, E < 27.5 MeV; measured yields, cross sections, and excitation functions using stacked foil activation. JOUR ARISE 65 1101
	2007UD02	NUCLEAR REACTIONS Zn(p, xn) <sup>66</sup> Ga / <sup>67</sup> Ga, E=4-40 MeV; Zn(p, xnp) <sup>62</sup> Zn / <sup>65</sup> Zn / <sup>69m</sup> Zn, E=10-40 MeV; Zn(p, xn $\alpha$ ) <sup>61</sup> Cu, E=6-40 MeV; measured cross sections and excitation functions using stacked-foil activation technique. Compared results to calculations. JOUR NIMBE 258 313
<sup>66</sup> Ge	2007SC24	ATOMIC MASSES <sup>63,64</sup> Ga, <sup>64,65,66</sup> Ge, <sup>66,67,68</sup> As, <sup>69</sup> Se; measured masses using penning trap mass spectrometer. Astrophysical implications discussed. JOUR PRVCA 75 055801
<sup>66</sup> As	2007SC24	ATOMIC MASSES <sup>63,64</sup> Ga, <sup>64,65,66</sup> Ge, <sup>66,67,68</sup> As, <sup>69</sup> Se; measured masses using penning trap mass spectrometer. Astrophysical implications discussed. JOUR PRVCA 75 055801

**A=67**

<sup>67</sup> Ni	2007GU09	ATOMIC MASSES <sup>57,60,64,65,66,67,68,69</sup> Ni, <sup>65,66,67,68,69,70,71,72,73,74,76</sup> Cu, <sup>63,64,65,68,69,70,71,72,73,74,75,76,77,78</sup> Ga; measured masses; analyzed the resulting mass surface for signs of magicity, compared the behavior of N=40 with that of the known magic numbers and with midshell behavior. JOUR PRVCA 75 044303
	2007GUZZ	ATOMIC MASSES <sup>57,60,64,65,66,67,68,69</sup> Ni, <sup>65,66,67,68,68m,69,70,70m,71,72,73,74,76</sup> Cu, <sup>63,64,65,68,69,70,71,72,73,74,75,76,77,78</sup> Ga; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701029,01/22/2007
<sup>67</sup> Cu	2006AB61	NUCLEAR REACTIONS <sup>64,67</sup> Zn(n, p), <sup>64</sup> Zn(n, 2n), <sup>68</sup> Zn(n, $\alpha$ ), E=reactor; measured spectrum-averaged $\sigma$ . Activation, radiochemical separation. JOUR RAACA 94 63
	2007GU09	ATOMIC MASSES <sup>57,60,64,65,66,67,68,69</sup> Ni, <sup>65,66,67,68,69,70,71,72,73,74,76</sup> Cu, <sup>63,64,65,68,69,70,71,72,73,74,75,76,77,78</sup> Ga; measured masses; analyzed the resulting mass surface for signs of magicity, compared the behavior of N=40 with that of the known magic numbers and with midshell behavior. JOUR PRVCA 75 044303
	2007GUZZ	ATOMIC MASSES <sup>57,60,64,65,66,67,68,69</sup> Ni, <sup>65,66,67,68,68m,69,70,70m,71,72,73,74,76</sup> Cu, <sup>63,64,65,68,69,70,71,72,73,74,75,76,77,78</sup> Ga; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701029,01/22/2007

KEYNUMBERS AND KEYWORDS

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**A=67 (continued)**

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| $^{67}\text{Zn}$ | 2007YA02 | RADIOACTIVITY $^{51}\text{Cr}$ , $^{55}\text{Fe}$ , $^{67}\text{Ga}$ , $^{111}\text{In}$ , $^{133}\text{Ba}$ , $^{201}\text{Tl}(\text{EC})$ ; $^{99m}\text{Tc}(\text{IT})$ , $(\beta^-)$ ; $^{131}\text{I}$ , $^{133}\text{Xe}$ , $^{137}\text{Cs}(\beta^-)$ ; $^{226}\text{Ra}(\alpha)$ ; measured K X-ray intensity ratios following decay and photoionization. JOUR NIMBE 254 182   |
| $^{67}\text{Ga}$ | 2007AL41 | NUCLEAR REACTIONS $\text{Zn}(\text{p}, \text{X})^{62}\text{Zn} / ^{65}\text{Zn} / ^{66}\text{Ga} / ^{67}\text{Ga} / ^{68}\text{Ga}$ , $E < 27.5$ MeV; measured yields, cross sections, and excitation functions using stacked foil activation. JOUR ARISE 65 1101  |
|                  | 2007BA04 | NUCLEAR REACTIONS $^{197}\text{Au}(\alpha, \gamma)$ , $(\alpha, 2\text{n})$ , $E=17.9\text{-}23.9$ MeV; $^{197}\text{Au}(\alpha, \text{n})$ , $E=13.4\text{-}23.9$ MeV; measured $\sigma$ . $^{64}\text{Zn}(\alpha, \gamma)$ , $E=7\text{-}14$ MeV; $^{63}\text{Cu}(\alpha, \gamma)$ , $E=7$ MeV; measured thick target yields. Activation technique, comparison with model predictions. JOUR PRVCA 75 015802                                  |
|                  | 2007UD02 | NUCLEAR REACTIONS $\text{Zn}(\text{p}, \text{xn})^{66}\text{Ga} / ^{67}\text{Ga}$ , $E=4\text{-}40$ MeV; $\text{Zn}(\text{p}, \text{xnp})^{62}\text{Zn} / ^{65}\text{Zn} / ^{69m}\text{Zn}$ , $E=10\text{-}40$ MeV; $\text{Zn}(\text{p}, \text{xn}\alpha)^{61}\text{Cu}$ , $E=6\text{-}40$ MeV; measured cross sections and excitation functions using stacked-foil activation technique. Compared results to calculations. JOUR NIMBE 258 313 |
|                  | 2007YA02 | RADIOACTIVITY $^{51}\text{Cr}$ , $^{55}\text{Fe}$ , $^{67}\text{Ga}$ , $^{111}\text{In}$ , $^{133}\text{Ba}$ , $^{201}\text{Tl}(\text{EC})$ ; $^{99m}\text{Tc}(\text{IT})$ , $(\beta^-)$ ; $^{131}\text{I}$ , $^{133}\text{Xe}$ , $^{137}\text{Cs}(\beta^-)$ ; $^{226}\text{Ra}(\alpha)$ ; measured K X-ray intensity ratios following decay and photoionization. JOUR NIMBE 254 182   |
| $^{67}\text{As}$ | 2007SC24 | ATOMIC MASSES $^{63,64}\text{Ga}$ , $^{64,65,66}\text{Ge}$ , $^{66,67,68}\text{As}$ , $^{69}\text{Se}$ ; measured masses using penning trap mass spectrometer. Astrophysical implications discussed. JOUR PRVCA 75 055801  |

**A=68**

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| $^{68}\text{Ni}$ | 2007BR15 | NUCLEAR REACTIONS $^9\text{Be}(\text{}^{86}\text{Kr}, \text{X})^{68}\text{Ni}$ , $E= 900$ MeV / nucleon; measured $E\gamma$ , $I\gamma$ following projectile coulomb excitation. JOUR APOBB 38 1229  |
|                  | 2007GU09 | ATOMIC MASSES $^{57,60,64,65,66,67,68,69}\text{Ni}$ , $^{65,66,67,68,69,70,71,72,73,74,76}\text{Cu}$ , $^{63,64,65,68,69,70,71,72,73,74,75,76,77,78}\text{Ga}$ ; measured masses; analyzed the resulting mass surface for signs of magicity, compared the behavior of $N=40$ with that of the known magic numbers and with midshell behavior. JOUR PRVCA 75 044303 |
|                  | 2007GUZZ | ATOMIC MASSES $^{57,60,64,65,66,67,68,69}\text{Ni}$ , $^{65,66,67,68,68m,69,70,70m,71,72,73,74,76}\text{Cu}$ , $^{63,64,65,68,69,70,71,72,73,74,75,76,77,78}\text{Ga}$ ; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701029,01/22/2007  |
| $^{68}\text{Cu}$ | 2007GU09 | ATOMIC MASSES $^{57,60,64,65,66,67,68,69}\text{Ni}$ , $^{65,66,67,68,69,70,71,72,73,74,76}\text{Cu}$ , $^{63,64,65,68,69,70,71,72,73,74,75,76,77,78}\text{Ga}$ ; measured masses; analyzed the resulting mass surface for signs of magicity, compared the behavior of $N=40$ with that of the known magic numbers and with midshell behavior. JOUR PRVCA 75 044303 |
|                  | 2007GUZZ | ATOMIC MASSES $^{57,60,64,65,66,67,68,69}\text{Ni}$ , $^{65,66,67,68,68m,69,70,70m,71,72,73,74,76}\text{Cu}$ , $^{63,64,65,68,69,70,71,72,73,74,75,76,77,78}\text{Ga}$ ; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701029,01/22/2007  |

KEYNUMBERS AND KEYWORDS

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**A=68 (continued)**

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|                  | 2007KE05 | NUCLEAR REACTIONS $^{68}\text{Zn}(n, p)$ , E=spectrum; measured production cross sections for ground and metastable states. Neutrons from $^{235}\text{U}$ fission. JOUR ARISE 65 872   |
|                  | 2007ST03 | NUCLEAR REACTIONS $^{120}\text{Sn}(^{68}\text{Cu}, ^{68}\text{Cu}')$ , ( $^{70}\text{Cu}, ^{70}\text{Cu}'$ ), E=2.83 MeV / nucleon; measured $E\gamma$ , $I\gamma$ , (particle) $\gamma$ -coin following projectile Coulomb excitation. $^{68,70}\text{Cu}$ deduced transitions B(E2). Isomeric beams, comparison with large-scale shell model calculations. JOUR PRLTA 98 122701 |
| $^{68}\text{Zn}$ | 2007B004 | NUCLEAR REACTIONS $^{12}\text{C}(^{68}\text{Zn}, ^{68}\text{Zn}')$ , E=180, 200 MeV; measured $E\gamma$ , $I\gamma(\theta, H, t)$ , (particle) $\gamma$ -coin following projectile Coulomb excitation. $^{68}\text{Zn}$ deduced levels, J, $\pi$ , g. Transient field technique. Comparison with model predictions. JOUR PRVCA 75 021302  |
| $^{68}\text{Ga}$ | 2007AL41 | NUCLEAR REACTIONS $\text{Zn}(p, X)^{62}\text{Zn} / ^{65}\text{Zn} / ^{66}\text{Ga} / ^{67}\text{Ga} / ^{68}\text{Ga}$ , E < 27.5 MeV; measured yields, cross sections, and excitation functions using stacked foil activation. JOUR ARISE 65 1101   |
|                  | 2007GU09 | ATOMIC MASSES $^{57,60,64,65,66,67,68,69}\text{Ni}$ , $^{65,66,67,68,69,70,71,72,73,74,76}\text{Cu}$ , $^{63,64,65,68,69,70,71,72,73,74,75,76,77,78}\text{Ga}$ ; measured masses; analyzed the resulting mass surface for signs of magicity, compared the behavior of N=40 with that of the known magic numbers and with midshell behavior. JOUR PRVCA 75 044303                  |
|                  | 2007GUZZ | ATOMIC MASSES $^{57,60,64,65,66,67,68,69}\text{Ni}$ , $^{65,66,67,68,68m,69,70,70m,71,72,73,74,76}\text{Cu}$ , $^{63,64,65,68,69,70,71,72,73,74,75,76,77,78}\text{Ga}$ ; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701029,01/22/2007   |
| $^{68}\text{Ge}$ | 2007BA04 | NUCLEAR REACTIONS $^{197}\text{Au}(\alpha, \gamma)$ , ( $\alpha, 2n$ ), E=17.9-23.9 MeV; $^{197}\text{Au}(\alpha, n)$ , E=13.4-23.9 MeV; measured $\sigma$ . $^{64}\text{Zn}(\alpha, \gamma)$ , E=7-14 MeV; $^{63}\text{Cu}(\alpha, \gamma)$ , E=7 MeV; measured thick target yields. Activation technique, comparison with model predictions. JOUR PRVCA 75 015802               |
| $^{68}\text{As}$ | 2007SC24 | ATOMIC MASSES $^{63,64}\text{Ga}$ , $^{64,65,66}\text{Ge}$ , $^{66,67,68}\text{As}$ , $^{69}\text{Se}$ ; measured masses using penning trap mass spectrometer. Astrophysical implications discussed. JOUR PRVCA 75 055801   |

**A=69**

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| $^{69}\text{Ni}$ | 2007GU09 | ATOMIC MASSES $^{57,60,64,65,66,67,68,69}\text{Ni}$ , $^{65,66,67,68,69,70,71,72,73,74,76}\text{Cu}$ , $^{63,64,65,68,69,70,71,72,73,74,75,76,77,78}\text{Ga}$ ; measured masses; analyzed the resulting mass surface for signs of magicity, compared the behavior of N=40 with that of the known magic numbers and with midshell behavior. JOUR PRVCA 75 044303 |
|                  | 2007GUZZ | ATOMIC MASSES $^{57,60,64,65,66,67,68,69}\text{Ni}$ , $^{65,66,67,68,68m,69,70,70m,71,72,73,74,76}\text{Cu}$ , $^{63,64,65,68,69,70,71,72,73,74,75,76,77,78}\text{Ga}$ ; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701029,01/22/2007  |



KEYNUMBERS AND KEYWORDS

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**A=69 (continued)**

<sup>69</sup> Cu	2007GU09	ATOMIC MASSES <sup>57,60,64,65,66,67,68,69</sup> Ni, <sup>65,66,67,68,69,70,71,72,73,74,76</sup> Cu, <sup>63,64,65,68,69,70,71,72,73,74,75,76,77,78</sup> Ga; measured masses; analyzed the resulting mass surface for signs of magicity, compared the behavior of N=40 with that of the known magic numbers and with midshell behavior. JOUR PRVCA 75 044303
	2007GUZZ	ATOMIC MASSES <sup>57,60,64,65,66,67,68,69</sup> Ni, <sup>65,66,67,68,68m,69,70,70m,71,72,73,74,76</sup> Cu, <sup>63,64,65,68,69,70,71,72,73,74,75,76,77,78</sup> Ga; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701029,01/22/2007
<sup>69</sup> Zn	2007UD02	NUCLEAR REACTIONS Zn(p, xn) <sup>66</sup> Ga / <sup>67</sup> Ga, E=4-40 MeV; Zn(p, xnp) <sup>62</sup> Zn / <sup>65</sup> Zn / <sup>69m</sup> Zn, E=10-40 MeV; Zn(p, xnα) <sup>61</sup> Cu, E=6-40 MeV; measured cross sections and excitation functions using stacked-foil activation technique. Compared results to calculations. JOUR NIMBE 258 313
	2007VL01	NUCLEAR REACTIONS <sup>72,74</sup> Ge(n, α), <sup>72,73</sup> Ge(n, p), <sup>174,176</sup> Hf(n, 2n), E ≈ 8-11.5 MeV; measured σ. Activation method, comparison with previous results. JOUR JRNCD 272 219
<sup>69</sup> Ga	2006H020	NUCLEAR REACTIONS <sup>238</sup> U( <sup>64</sup> Ni, X) <sup>64</sup> Fe / <sup>69</sup> Ga, E=430 MeV; measured prompt and delayed Eγ, Iγ, γγ-coin. <sup>64</sup> Fe deduced levels, J, π, configurations. Gammasphere array, comparison with shell model predictions. Level systematics in neighboring nuclides discussed. JOUR PRVCA 74 064313
	2007GU09	ATOMIC MASSES <sup>57,60,64,65,66,67,68,69</sup> Ni, <sup>65,66,67,68,69,70,71,72,73,74,76</sup> Cu, <sup>63,64,65,68,69,70,71,72,73,74,75,76,77,78</sup> Ga; measured masses; analyzed the resulting mass surface for signs of magicity, compared the behavior of N=40 with that of the known magic numbers and with midshell behavior. JOUR PRVCA 75 044303
	2007GUZZ	ATOMIC MASSES <sup>57,60,64,65,66,67,68,69</sup> Ni, <sup>65,66,67,68,68m,69,70,70m,71,72,73,74,76</sup> Cu, <sup>63,64,65,68,69,70,71,72,73,74,75,76,77,78</sup> Ga; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701029,01/22/2007
<sup>69</sup> Ge	2007BEZZ	NUCLEAR REACTIONS <sup>70,72,76</sup> Ge(n, 2n), <sup>76</sup> Ge(n, γ), E=13.96 MeV; measured σ. Activation technique. PREPRINT nucl-ex/0701039,01/23/2007
	2007SU07	ATOMIC MASSES <sup>69</sup> Ge, <sup>125</sup> Ce; measured masses. <sup>125</sup> Ce deduced long-lived isomeric state, excitation energy, T <sub>1/2</sub> . JOUR ZAANE 31 393
<sup>69</sup> Se	2007SC24	ATOMIC MASSES <sup>63,64</sup> Ga, <sup>64,65,66</sup> Ge, <sup>66,67,68</sup> As, <sup>69</sup> Se; measured masses using penning trap mass spectrometer. Astrophysical implications discussed. JOUR PRVCA 75 055801

**A=70**

<sup>70</sup> Ni	2007RA27	ATOMIC MASSES <sup>70,71,72,73</sup> Ni, <sup>73,75</sup> Cu; measured masses using the JYFLTRAP double Penning trap setup; analyzed two neutron and proton separation energies. JOUR ZAANE 34 5
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KEYNUMBERS AND KEYWORDS

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**A=70 (continued)**

<sup>70</sup> Cu	2007GU09	ATOMIC MASSES <sup>57,60,64,65,66,67,68,69</sup> Ni, <sup>65,66,67,68,69,70,71,72,73,74,76</sup> Cu, <sup>63,64,65,68,69,70,71,72,73,74,75,76,77,78</sup> Ga; measured masses; analyzed the resulting mass surface for signs of magicity, compared the behavior of N=40 with that of the known magic numbers and with midshell behavior. JOUR PRVCA 75 044303
	2007GUZZ	ATOMIC MASSES <sup>57,60,64,65,66,67,68,69</sup> Ni, <sup>65,66,67,68,68m,69,70,70m,71,72,73,74,76</sup> Cu, <sup>63,64,65,68,69,70,71,72,73,74,75,76,77,78</sup> Ga; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701029,01/22/2007
	2007ST03	NUCLEAR REACTIONS <sup>120</sup> Sn( <sup>68</sup> Cu, <sup>68</sup> Cu'), ( <sup>70</sup> Cu, <sup>70</sup> Cu'), E=2.83 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin following projectile Coulomb excitation. <sup>68,70</sup> Cu deduced transitions B(E2). Isomeric beams, comparison with large-scale shell model calculations. JOUR PRLTA 98 122701
<sup>70</sup> Zn	2007BL15	RADIOACTIVITY <sup>70</sup> Zn, <sup>116</sup> Cd, <sup>128,130</sup> Te( $\beta^- \beta^-$ ); <sup>64</sup> Zn, <sup>106</sup> Cd, <sup>120</sup> Te( $\beta^+ \beta^+$ ); measured summed E $\beta$ . Deduced upper limits for T <sub>1/2</sub> . JOUR PRVCA 76 025501
	2007BLZY	RADIOACTIVITY <sup>70</sup> Zn, <sup>116</sup> Cd, <sup>128</sup> Te, <sup>130</sup> Te( $2\beta^-$ ); measured summed $\beta$ energies. Deduced T <sub>1/2</sub> limits. PREPRINT arXiv:0707.2756v1 [nucl-ex]
<sup>70</sup> Ga	2007GU09	ATOMIC MASSES <sup>57,60,64,65,66,67,68,69</sup> Ni, <sup>65,66,67,68,69,70,71,72,73,74,76</sup> Cu, <sup>63,64,65,68,69,70,71,72,73,74,75,76,77,78</sup> Ga; measured masses; analyzed the resulting mass surface for signs of magicity, compared the behavior of N=40 with that of the known magic numbers and with midshell behavior. JOUR PRVCA 75 044303
	2007GUZZ	ATOMIC MASSES <sup>57,60,64,65,66,67,68,69</sup> Ni, <sup>65,66,67,68,68m,69,70,70m,71,72,73,74,76</sup> Cu, <sup>63,64,65,68,69,70,71,72,73,74,75,76,77,78</sup> Ga; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701029,01/22/2007
<sup>70</sup> Ge	2007BL15	RADIOACTIVITY <sup>70</sup> Zn, <sup>116</sup> Cd, <sup>128,130</sup> Te( $\beta^- \beta^-$ ); <sup>64</sup> Zn, <sup>106</sup> Cd, <sup>120</sup> Te( $\beta^+ \beta^+$ ); measured summed E $\beta$ . Deduced upper limits for T <sub>1/2</sub> . JOUR PRVCA 76 025501
	2007BLZY	RADIOACTIVITY <sup>70</sup> Zn, <sup>116</sup> Cd, <sup>128</sup> Te, <sup>130</sup> Te( $2\beta^-$ ); measured summed $\beta$ energies. Deduced T <sub>1/2</sub> limits. PREPRINT arXiv:0707.2756v1 [nucl-ex]
<sup>70</sup> Se	2007HU03	NUCLEAR REACTIONS <sup>104</sup> Pd( <sup>70</sup> Se, <sup>70</sup> Se'), E=206 MeV; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin following projectile Coulomb excitation. <sup>70</sup> Se deduced prolate deformation. JOUR PRLTA 98 072501

**A=71**

<sup>71</sup> Ni	2007RA27	ATOMIC MASSES <sup>70,71,72,73</sup> Ni, <sup>73,75</sup> Cu; measured masses using the JYFLTRAP double Penning trap setup; analyzed two neutron and proton separation energies. JOUR ZAANE 34 5
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KEYNUMBERS AND KEYWORDS

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**A=71 (continued)**

<sup>71</sup> Cu	2007GU09	ATOMIC MASSES <sup>57,60,64,65,66,67,68,69</sup> Ni, <sup>65,66,67,68,69,70,71,72,73,74,76</sup> Cu, <sup>63,64,65,68,69,70,71,72,73,74,75,76,77,78</sup> Ga; measured masses; analyzed the resulting mass surface for signs of magicity, compared the behavior of N=40 with that of the known magic numbers and with midshell behavior. JOUR PRVCA 75 044303
	2007GUZZ	ATOMIC MASSES <sup>57,60,64,65,66,67,68,69</sup> Ni, <sup>65,66,67,68,68m,69,70,70m,71,72,73,74,76</sup> Cu, <sup>63,64,65,68,69,70,71,72,73,74,75,76,77,78</sup> Ga; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701029,01/22/2007
<sup>71</sup> Zn	2007VL01	NUCLEAR REACTIONS <sup>72,74</sup> Ge(n, α), <sup>72,73</sup> Ge(n, p), <sup>174,176</sup> Hf(n, 2n), E ≈ 8-11.5 MeV; measured σ. Activation method, comparison with previous results. JOUR JRNCD 272 219
<sup>71</sup> Ga	2007GU09	ATOMIC MASSES <sup>57,60,64,65,66,67,68,69</sup> Ni, <sup>65,66,67,68,69,70,71,72,73,74,76</sup> Cu, <sup>63,64,65,68,69,70,71,72,73,74,75,76,77,78</sup> Ga; measured masses; analyzed the resulting mass surface for signs of magicity, compared the behavior of N=40 with that of the known magic numbers and with midshell behavior. JOUR PRVCA 75 044303
	2007GUZZ	ATOMIC MASSES <sup>57,60,64,65,66,67,68,69</sup> Ni, <sup>65,66,67,68,68m,69,70,70m,71,72,73,74,76</sup> Cu, <sup>63,64,65,68,69,70,71,72,73,74,75,76,77,78</sup> Ga; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701029,01/22/2007
	2007KE09	ATOMIC MASSES <sup>74,75,76,77,79,80,83,87</sup> Rb; <sup>64</sup> Zn; <sup>71,74</sup> Ga; <sup>84,88</sup> Sr; <sup>133</sup> Cs; measured atomic masses. ISOLTRAP Penning Trap. JOUR PRVCA 76 045504
<sup>71</sup> Ge	2007BEZZ	NUCLEAR REACTIONS <sup>70,72,76</sup> Ge(n, 2n), <sup>76</sup> Ge(n, γ), E=13.96 MeV; measured σ. Activation technique. PREPRINT nucl-ex/0701039,01/23/2007

**A=72**

<sup>72</sup> Ni	2007RA27	ATOMIC MASSES <sup>70,71,72,73</sup> Ni, <sup>73,75</sup> Cu; measured masses using the JYFLTRAP double Penning trap setup; analyzed two neutron and proton separation energies. JOUR ZAANE 34 5
<sup>72</sup> Cu	2007GU09	ATOMIC MASSES <sup>57,60,64,65,66,67,68,69</sup> Ni, <sup>65,66,67,68,69,70,71,72,73,74,76</sup> Cu, <sup>63,64,65,68,69,70,71,72,73,74,75,76,77,78</sup> Ga; measured masses; analyzed the resulting mass surface for signs of magicity, compared the behavior of N=40 with that of the known magic numbers and with midshell behavior. JOUR PRVCA 75 044303
	2007GUZZ	ATOMIC MASSES <sup>57,60,64,65,66,67,68,69</sup> Ni, <sup>65,66,67,68,68m,69,70,70m,71,72,73,74,76</sup> Cu, <sup>63,64,65,68,69,70,71,72,73,74,75,76,77,78</sup> Ga; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701029,01/22/2007
<sup>72</sup> Ga	2007GA29	NUCLEAR REACTIONS <sup>72,73</sup> Ge(n, p), E=8.8-11.4 MeV; measured cross sections using activation technique. Compared results to model calculations. JOUR NIMBE 261 969

KEYNUMBERS AND KEYWORDS

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**A=72 (continued)**

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|                  | 2007GU09 | ATOMIC MASSES <sup>57,60,64,65,66,67,68,69</sup> Ni, <sup>65,66,67,68,69,70,71,72,73,74,76</sup> Cu, <sup>63,64,65,68,69,70,71,72,73,74,75,76,77,78</sup> Ga; measured masses; analyzed the resulting mass surface for signs of magicity, compared the behavior of N=40 with that of the known magic numbers and with midshell behavior. JOUR PRVCA 75 044303                |
|                  | 2007GUZZ | ATOMIC MASSES <sup>57,60,64,65,66,67,68,69</sup> Ni, <sup>65,66,67,68,68m,69,70,70m,71,72,73,74,76</sup> Cu, <sup>63,64,65,68,69,70,71,72,73,74,75,76,77,78</sup> Ga; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701029,01/22/2007   |
|                  | 2007TU08 | NUCLEAR REACTIONS <sup>75</sup> As(n, 2n), (n, p), (n, α), E=13.5-14.8 MeV; measured E <sub>γ</sub> , I <sub>γ</sub> , cross sections using the activation technique. JOUR NIMBE 264 235   |
|                  | 2007VL01 | NUCLEAR REACTIONS <sup>72,74</sup> Ge(n, α), <sup>72,73</sup> Ge(n, p), <sup>174,176</sup> Hf(n, 2n), E ≈ 8-11.5 MeV; measured σ. Activation method, comparison with previous results. JOUR JRNC D 272 219   |
| <sup>72</sup> Ge | 2007FR10 | NUCLEAR REACTIONS <sup>74,76</sup> Ge, <sup>76,78</sup> Se(p, t), E=23 MeV; measured yields, cross sections and angular distributions. Compared results to DWBA calculations. JOUR PRVCA 75 051301   |
|                  | 2007FRZZ | NUCLEAR REACTIONS <sup>74,76</sup> Ge, <sup>76,78</sup> Se(p, t), E=23 MeV; measured triton spectra, σ(E, θ). <sup>76</sup> Ge, <sup>76</sup> Se deduced neutron-pair correlation features. PREPRINT nucl-ex/0701003,01/03/2007  |
| <sup>72</sup> Kr | 2007AN12 | NUCLEAR REACTIONS <sup>40</sup> Ca( <sup>40</sup> Ca, 2α), E=165 MeV; measured E <sub>γ</sub> , I <sub>γ</sub> , γγ-, (charged particle)γ-coin, DSA. <sup>72</sup> Kr deduced high-spin levels, J, π, T <sub>1/2</sub> . Gammasphere, Microball arrays. Doppler shift attenuation method, compared results to isovector mean field theory calculations. JOUR PRVCA 75 041301 |
|                  | 2007YA06 | NUCLEAR REACTIONS <sup>12</sup> C( <sup>72</sup> Kr, X), ( <sup>76</sup> Kr, X), ( <sup>80</sup> Kr, X), E ≤ 1.05 GeV / nucleon; measured σ. <sup>72,76,80</sup> Kr deduced rms matter radii. Secondary beams, Glauber model. Comparison with other data. JOUR NUPAB 787 471c  |

**A=73**

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| <sup>73</sup> Ni | 2007RA27 | ATOMIC MASSES <sup>70,71,72,73</sup> Ni, <sup>73,75</sup> Cu; measured masses using the JYFLTRAP double Penning trap setup; analyzed two neutron and proton separation energies. JOUR ZAANE 34 5  |
| <sup>73</sup> Cu | 2007GU09 | ATOMIC MASSES <sup>57,60,64,65,66,67,68,69</sup> Ni, <sup>65,66,67,68,69,70,71,72,73,74,76</sup> Cu, <sup>63,64,65,68,69,70,71,72,73,74,75,76,77,78</sup> Ga; measured masses; analyzed the resulting mass surface for signs of magicity, compared the behavior of N=40 with that of the known magic numbers and with midshell behavior. JOUR PRVCA 75 044303 |
|                  | 2007GUZZ | ATOMIC MASSES <sup>57,60,64,65,66,67,68,69</sup> Ni, <sup>65,66,67,68,68m,69,70,70m,71,72,73,74,76</sup> Cu, <sup>63,64,65,68,69,70,71,72,73,74,75,76,77,78</sup> Ga; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701029,01/22/2007  |
|                  | 2007RA27 | ATOMIC MASSES <sup>70,71,72,73</sup> Ni, <sup>73,75</sup> Cu; measured masses using the JYFLTRAP double Penning trap setup; analyzed two neutron and proton separation energies. JOUR ZAANE 34 5  |

KEYNUMBERS AND KEYWORDS

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**A=73 (continued)**

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| $^{73}\text{Ga}$ | 2007GA29 | NUCLEAR REACTIONS $^{72,73}\text{Ge}(\text{n}, \text{p})$ , $E=8.8\text{-}11.4$ MeV; measured cross sections using activation technique. Compared results to model calculations. JOUR NIMBE 261 969   |
|                  | 2007GU09 | ATOMIC MASSES $^{57,60,64,65,66,67,68,69}\text{Ni}$ , $^{65,66,67,68,69,70,71,72,73,74,76}\text{Cu}$ , $^{63,64,65,68,69,70,71,72,73,74,75,76,77,78}\text{Ga}$ ; measured masses; analyzed the resulting mass surface for signs of magicity, compared the behavior of $N=40$ with that of the known magic numbers and with midshell behavior. JOUR PRVCA 75 044303  |
|                  | 2007GUZZ | ATOMIC MASSES $^{57,60,64,65,66,67,68,69}\text{Ni}$ , $^{65,66,67,68,68m,69,70,70m,71,72,73,74,76}\text{Cu}$ , $^{63,64,65,68,69,70,71,72,73,74,75,76,77,78}\text{Ga}$ ; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701029,01/22/2007   |
|                  | 2007VL01 | NUCLEAR REACTIONS $^{72,74}\text{Ge}(\text{n}, \alpha)$ , $^{72,73}\text{Ge}(\text{n}, \text{p})$ , $^{174,176}\text{Hf}(\text{n}, 2\text{n})$ , $E \approx 8\text{-}11.5$ MeV; measured $\sigma$ . Activation method, comparison with previous results. JOUR JRNCD 272 219   |
| $^{73}\text{Ge}$ | 2007SCZX | NUCLEAR REACTIONS $^{74,76}\text{Ge}$ , $^{76,78}\text{Se}(\text{d}, \text{p})$ , $E=15$ MeV; $^{76}\text{Ge}$ , $^{76}\text{Se}(\text{p}, \text{d})$ , $E=23$ MeV; $^{74,76}\text{Ge}$ , $^{76,78}\text{Se}(\text{}^3\text{He}, \alpha)$ , $E=26$ MeV; $^{74,76}\text{Ge}$ , $^{76,78}\text{Se}(\alpha, \text{}^3\text{He})$ , $E=40$ MeV; measured cross sections. Deduced spectroscopic factors. PC J P Schiffer/10/2007 |

**A=74**

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| $^{74}\text{Cu}$ | 2007GU09 | ATOMIC MASSES $^{57,60,64,65,66,67,68,69}\text{Ni}$ , $^{65,66,67,68,69,70,71,72,73,74,76}\text{Cu}$ , $^{63,64,65,68,69,70,71,72,73,74,75,76,77,78}\text{Ga}$ ; measured masses; analyzed the resulting mass surface for signs of magicity, compared the behavior of $N=40$ with that of the known magic numbers and with midshell behavior. JOUR PRVCA 75 044303   |
|                  | 2007GUZZ | ATOMIC MASSES $^{57,60,64,65,66,67,68,69}\text{Ni}$ , $^{65,66,67,68,68m,69,70,70m,71,72,73,74,76}\text{Cu}$ , $^{63,64,65,68,69,70,71,72,73,74,75,76,77,78}\text{Ga}$ ; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701029,01/22/2007  |
| $^{74}\text{Zn}$ | 2007VA20 | NUCLEAR REACTIONS $^{108}\text{Pd}$ , $^{120}\text{Sn}(\text{}^{74}\text{Zn}, \text{}^{74}\text{Zn}')$ , $(\text{}^{76}\text{Zn}, \text{}^{76}\text{Zn}')$ , $(\text{}^{78}\text{Zn}, \text{}^{78}\text{Zn}')$ , $(\text{}^{80}\text{Zn}, \text{}^{80}\text{Zn}')$ , $E=2.79\text{-}2.87$ MeV / nucleon; measured $E\gamma$ , $I\gamma$ . $^{74,76,78,80}\text{Zn}$ deduced $B(E2)$ . JOUR PRLTA 99 142501 |
| $^{74}\text{Ga}$ | 2007GU09 | ATOMIC MASSES $^{57,60,64,65,66,67,68,69}\text{Ni}$ , $^{65,66,67,68,69,70,71,72,73,74,76}\text{Cu}$ , $^{63,64,65,68,69,70,71,72,73,74,75,76,77,78}\text{Ga}$ ; measured masses; analyzed the resulting mass surface for signs of magicity, compared the behavior of $N=40$ with that of the known magic numbers and with midshell behavior. JOUR PRVCA 75 044303   |
|                  | 2007GUZZ | ATOMIC MASSES $^{57,60,64,65,66,67,68,69}\text{Ni}$ , $^{65,66,67,68,68m,69,70,70m,71,72,73,74,76}\text{Cu}$ , $^{63,64,65,68,69,70,71,72,73,74,75,76,77,78}\text{Ga}$ ; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701029,01/22/2007  |
|                  | 2007KE09 | ATOMIC MASSES $^{74,75,76,77,79,80,83,87}\text{Rb}$ ; $^{64}\text{Zn}$ ; $^{71,74}\text{Ga}$ ; $^{84,88}\text{Sr}$ ; $^{133}\text{Cs}$ ; measured atomic masses. ISOLTRAP Penning Trap. JOUR PRVCA 76 045504   |
| $^{74}\text{Ge}$ | 2007BA26 | RADIOACTIVITY $^{74}\text{Se}(\beta^+\text{EC})$ , $(2\text{EC})$ ; measured $0\nu\beta\beta$ -decay and $2\nu\beta\beta$ -decay $T_{1/2}$ lower limits. JOUR NUPAB 785 371  |

KEYNUMBERS AND KEYWORDS

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**A=74 (continued)**

	2007FR10	NUCLEAR REACTIONS $^{74,76}\text{Ge}$ , $^{76,78}\text{Se}(p, t)$ , $E=23$ MeV; measured yields, cross sections and angular distributions. Compared results to DWBA calculations. JOUR PRVCA 75 051301
	2007FRZZ	NUCLEAR REACTIONS $^{74,76}\text{Ge}$ , $^{76,78}\text{Se}(p, t)$ , $E=23$ MeV; measured triton spectra, $\sigma(E, \theta)$ . $^{76}\text{Ge}$ , $^{76}\text{Se}$ deduced neutron-pair correlation features. PREPRINT nucl-ex/0701003,01/03/2007
$^{74}\text{As}$	2007TU08	NUCLEAR REACTIONS $^{75}\text{As}(n, 2n)$ , $(n, p)$ , $(n, \alpha)$ , $E=13.5-14.8$ MeV; measured $E\gamma$ , $I\gamma$ , cross sections using the activation technique. JOUR NIMBE 264 235
$^{74}\text{Se}$	2007BA26	RADIOACTIVITY $^{74}\text{Se}(\beta^+ \text{EC})$ , $(2\text{EC})$ ; measured $0\nu\beta\beta$ -decay and $2\nu\beta\beta$ -decay $T_{1/2}$ lower limits. JOUR NUPAB 785 371
	2007FR10	NUCLEAR REACTIONS $^{74,76}\text{Ge}$ , $^{76,78}\text{Se}(p, t)$ , $E=23$ MeV; measured yields, cross sections and angular distributions. Compared results to DWBA calculations. JOUR PRVCA 75 051301
	2007FRZZ	NUCLEAR REACTIONS $^{74,76}\text{Ge}$ , $^{76,78}\text{Se}(p, t)$ , $E=23$ MeV; measured triton spectra, $\sigma(E, \theta)$ . $^{76}\text{Ge}$ , $^{76}\text{Se}$ deduced neutron-pair correlation features. PREPRINT nucl-ex/0701003,01/03/2007
$^{74}\text{Kr}$	2007CL02	NUCLEAR REACTIONS $^{12}\text{C}(^{78}\text{Kr}, X)^{76,74}\text{Kr}$ , $E=68.5$ MeV / nucleon; measured $E\gamma$ , $I\gamma$ and angular distributions; $^{74}\text{Kr}$ , $^{76}\text{Kr}$ ; deduced level energies, $J$ , $\pi$ , $B(E2)$ , and shape coexistence. JOUR PRVCA 75 054313
$^{74}\text{Rb}$	2007KE09	ATOMIC MASSES $^{74,75,76,77,79,80,83,87}\text{Rb}$ ; $^{64}\text{Zn}$ ; $^{71,74}\text{Ga}$ ; $^{84,88}\text{Sr}$ ; $^{133}\text{Cs}$ ; measured atomic masses. ISOLTRAP Penning Trap. JOUR PRVCA 76 045504
	2007NA13	NUCLEAR REACTIONS $\text{Ca}(^{36}\text{Ar}, np)^{74}\text{Rb}$ , $E=103$ MeV; $\text{Ca}(^{40}\text{Ca}, np)^{78}\text{Y}$ , $E=118, 121$ MeV; measured $E\gamma$ , $I\gamma$ , $\beta\gamma$ -coinc using recoil-decay tagging technique. $^{74}\text{Rb}$ , $^{78}\text{Y}$ deduced coulomb energy differences between $T=1$ states. JOUR PRVCA 75 061301

**A=75**

$^{75}\text{Cu}$	2007RA27	ATOMIC MASSES $^{70,71,72,73}\text{Ni}$ , $^{73,75}\text{Cu}$ ; measured masses using the JYFLTRAP double Penning trap setup; analyzed two neutron and proton separation energies. JOUR ZAANE 34 5
$^{75}\text{Ga}$	2007GU09	ATOMIC MASSES $^{57,60,64,65,66,67,68,69}\text{Ni}$ , $^{65,66,67,68,69,70,71,72,73,74,76}\text{Cu}$ , $^{63,64,65,68,69,70,71,72,73,74,75,76,77,78}\text{Ga}$ ; measured masses; analyzed the resulting mass surface for signs of magicity, compared the behavior of $N=40$ with that of the known magic numbers and with midshell behavior. JOUR PRVCA 75 044303
	2007GUZZ	ATOMIC MASSES $^{57,60,64,65,66,67,68,69}\text{Ni}$ , $^{65,66,67,68,68m,69,70,70m,71,72,73,74,76}\text{Cu}$ , $^{63,64,65,68,69,70,71,72,73,74,75,76,77,78}\text{Ga}$ ; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701029,01/22/2007
$^{75}\text{Ge}$	2007BEZZ	NUCLEAR REACTIONS $^{70,72,76}\text{Ge}(n, 2n)$ , $^{76}\text{Ge}(n, \gamma)$ , $E=13.96$ MeV; measured $\sigma$ . Activation technique. PREPRINT nucl-ex/0701039,01/23/2007

KEYNUMBERS AND KEYWORDS

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**A=75 (continued)**

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| 2007SCZX         |          | NUCLEAR REACTIONS $^{74,76}\text{Ge}$ , $^{76,78}\text{Se}(\text{d}, \text{p})$ , $E=15$ MeV; $^{76}\text{Ge}$ , $^{76}\text{Se}(\text{p}, \text{d})$ , $E=23$ MeV; $^{74,76}\text{Ge}$ , $^{76,78}\text{Se}(\text{}^3\text{He}, \alpha)$ , $E=26$ MeV; $^{74,76}\text{Ge}$ , $^{76,78}\text{Se}(\alpha, \text{}^3\text{He})$ , $E=40$ MeV; measured cross sections. Deduced spectroscopic factors. PC J P Schiffer/10/2007 |
| 2007TU08         |          | NUCLEAR REACTIONS $^{75}\text{As}(\text{n}, 2\text{n})$ , $(\text{n}, \text{p})$ , $(\text{n}, \alpha)$ , $E=13.5\text{-}14.8$ MeV; measured $E\gamma$ , $I\gamma$ , cross sections using the activation technique. JOUR NIMBE 264 235  |
| $^{75}\text{Se}$ | 2007SCZX | NUCLEAR REACTIONS $^{74,76}\text{Ge}$ , $^{76,78}\text{Se}(\text{d}, \text{p})$ , $E=15$ MeV; $^{76}\text{Ge}$ , $^{76}\text{Se}(\text{p}, \text{d})$ , $E=23$ MeV; $^{74,76}\text{Ge}$ , $^{76,78}\text{Se}(\text{}^3\text{He}, \alpha)$ , $E=26$ MeV; $^{74,76}\text{Ge}$ , $^{76,78}\text{Se}(\alpha, \text{}^3\text{He})$ , $E=40$ MeV; measured cross sections. Deduced spectroscopic factors. PC J P Schiffer/10/2007 |
| $^{75}\text{Rb}$ | 2007KE09 | ATOMIC MASSES $^{74,75,76,77,79,80,83,87}\text{Rb}$ ; $^{64}\text{Zn}$ ; $^{71,74}\text{Ga}$ ; $^{84,88}\text{Sr}$ ; $^{133}\text{Cs}$ ; measured atomic masses. ISOLTRAP Penning Trap. JOUR PRVCA 76 045504  |

**A=76**

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| $^{76}\text{Cu}$ | 2007GU09 | ATOMIC MASSES $^{57,60,64,65,66,67,68,69}\text{Ni}$ , $^{65,66,67,68,69,70,71,72,73,74,76}\text{Cu}$ , $^{63,64,65,68,69,70,71,72,73,74,75,76,77,78}\text{Ga}$ ; measured masses; analyzed the resulting mass surface for signs of magicity, compared the behavior of $N=40$ with that of the known magic numbers and with midshell behavior. JOUR PRVCA 75 044303   |
|                  | 2007GUZZ | ATOMIC MASSES $^{57,60,64,65,66,67,68,69}\text{Ni}$ , $^{65,66,67,68,68m,69,70,70m,71,72,73,74,76}\text{Cu}$ , $^{63,64,65,68,69,70,71,72,73,74,75,76,77,78}\text{Ga}$ ; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701029,01/22/2007  |
| $^{76}\text{Zn}$ | 2007VA20 | NUCLEAR REACTIONS $^{108}\text{Pd}$ , $^{120}\text{Sn}(\text{}^{74}\text{Zn}, \text{}^{74}\text{Zn}')$ , $(\text{}^{76}\text{Zn}, \text{}^{76}\text{Zn}')$ , $(\text{}^{78}\text{Zn}, \text{}^{78}\text{Zn}')$ , $(\text{}^{80}\text{Zn}, \text{}^{80}\text{Zn}')$ , $E=2.79\text{-}2.87$ MeV / nucleon; measured $E\gamma$ , $I\gamma$ . $^{74,76,78,80}\text{Zn}$ deduced $B(E2)$ . JOUR PRLTA 99 142501 |
| $^{76}\text{Ga}$ | 2007GU09 | ATOMIC MASSES $^{57,60,64,65,66,67,68,69}\text{Ni}$ , $^{65,66,67,68,69,70,71,72,73,74,76}\text{Cu}$ , $^{63,64,65,68,69,70,71,72,73,74,75,76,77,78}\text{Ga}$ ; measured masses; analyzed the resulting mass surface for signs of magicity, compared the behavior of $N=40$ with that of the known magic numbers and with midshell behavior. JOUR PRVCA 75 044303   |
|                  | 2007GUZZ | ATOMIC MASSES $^{57,60,64,65,66,67,68,69}\text{Ni}$ , $^{65,66,67,68,68m,69,70,70m,71,72,73,74,76}\text{Cu}$ , $^{63,64,65,68,69,70,71,72,73,74,75,76,77,78}\text{Ga}$ ; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701029,01/22/2007  |
| $^{76}\text{Ge}$ | 2007FRZZ | NUCLEAR REACTIONS $^{74,76}\text{Ge}$ , $^{76,78}\text{Se}(\text{p}, \text{t})$ , $E=23$ MeV; measured triton spectra, $\sigma(E, \theta)$ . $^{76}\text{Ge}$ , $^{76}\text{Se}$ deduced neutron-pair correlation features. PREPRINT nucl-ex/0701003,01/03/2007  |
| $^{76}\text{Se}$ | 2007FR10 | NUCLEAR REACTIONS $^{74,76}\text{Ge}$ , $^{76,78}\text{Se}(\text{p}, \text{t})$ , $E=23$ MeV; measured yields, cross sections and angular distributions. Compared results to DWBA calculations. JOUR PRVCA 75 051301   |
|                  | 2007FRZZ | NUCLEAR REACTIONS $^{74,76}\text{Ge}$ , $^{76,78}\text{Se}(\text{p}, \text{t})$ , $E=23$ MeV; measured triton spectra, $\sigma(E, \theta)$ . $^{76}\text{Ge}$ , $^{76}\text{Se}$ deduced neutron-pair correlation features. PREPRINT nucl-ex/0701003,01/03/2007  |

KEYNUMBERS AND KEYWORDS

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**A=76 (continued)**

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|                  | 2007QA02 | RADIOACTIVITY $^{64}\text{Cu}(\beta^-)$ , $(\beta^+)$ , (EC) [from $^{66}\text{Zn}(d, \alpha)$ and $\text{Zn}(d, X)$ ]; $^{76}\text{Br}$ , $^{124}\text{I}(\beta^+)$ , (EC) [from $^{76}\text{Se}$ , $^{124}\text{Te}(p, n)$ ]; measured $E_\gamma$ , $E_\beta$ , X-ray spectra, $\gamma\gamma$ -, $\beta\gamma$ -coin; deduced positron emission intensities. JOUR RAACA 95 67 |
| $^{76}\text{Br}$ | 2007QA02 | RADIOACTIVITY $^{64}\text{Cu}(\beta^-)$ , $(\beta^+)$ , (EC) [from $^{66}\text{Zn}(d, \alpha)$ and $\text{Zn}(d, X)$ ]; $^{76}\text{Br}$ , $^{124}\text{I}(\beta^+)$ , (EC) [from $^{76}\text{Se}$ , $^{124}\text{Te}(p, n)$ ]; measured $E_\gamma$ , $E_\beta$ , X-ray spectra, $\gamma\gamma$ -, $\beta\gamma$ -coin; deduced positron emission intensities. JOUR RAACA 95 67 |
| $^{76}\text{Kr}$ | 2007CL02 | NUCLEAR REACTIONS $^{12}\text{C}(^{78}\text{Kr}, X)^{76,74}\text{Kr}$ , $E=68.5$ MeV / nucleon; measured $E_\gamma$ , $I_\gamma$ and angular distributions; $^{74}\text{Kr}$ , $^{76}\text{Kr}$ ; deduced level energies, $J$ , $\pi$ , $B(E2)$ , and shape coexistence. JOUR PRVCA 75 054313   |
|                  | 2007YA06 | NUCLEAR REACTIONS $^{12}\text{C}(^{72}\text{Kr}, X)$ , $(^{76}\text{Kr}, X)$ , $(^{80}\text{Kr}, X)$ , $E \leq 1.05$ GeV / nucleon; measured $\sigma$ . $^{72,76,80}\text{Kr}$ deduced rms matter radii. Secondary beams, Glauber model. Comparison with other data. JOUR NUPAB 787 471c  |
| $^{76}\text{Rb}$ | 2007KE09 | ATOMIC MASSES $^{74,75,76,77,79,80,83,87}\text{Rb}$ ; $^{64}\text{Zn}$ ; $^{71,74}\text{Ga}$ ; $^{84,88}\text{Sr}$ ; $^{133}\text{Cs}$ ; measured atomic masses. ISOLTRAP Penning Trap. JOUR PRVCA 76 045504  |
| $^{76}\text{Sr}$ | 2007DA04 | NUCLEAR REACTIONS $^{40}\text{Ca}(^{40}\text{Ca}, 2n2p)$ , $E=165$ MeV; measured $E_\gamma$ , $I_\gamma$ , $\gamma\gamma$ -, (charged particle) $\gamma$ -coin. $^{76}\text{Sr}$ deduced high-spin levels, $J$ , $\pi$ , configurations. Gammasphere, Microball arrays, comparison with model predictions. JOUR PRVCA 75 011302   |

**A=77**

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|------------------|----------|---|
| $^{77}\text{Ga}$ | 2007GU09 | ATOMIC MASSES $^{57,60,64,65,66,67,68,69}\text{Ni}$ , $^{65,66,67,68,69,70,71,72,73,74,76}\text{Cu}$ , $^{63,64,65,68,69,70,71,72,73,74,75,76,77,78}\text{Ga}$ ; measured masses; analyzed the resulting mass surface for signs of magicity, compared the behavior of $N=40$ with that of the known magic numbers and with midshell behavior. JOUR PRVCA 75 044303                |
|                  | 2007GUZZ | ATOMIC MASSES $^{57,60,64,65,66,67,68,69}\text{Ni}$ , $^{65,66,67,68,68m,69,70,70m,71,72,73,74,76}\text{Cu}$ , $^{63,64,65,68,69,70,71,72,73,74,75,76,77,78}\text{Ga}$ ; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701029,01/22/2007   |
| $^{77}\text{Ge}$ | 2007BEZZ | NUCLEAR REACTIONS $^{70,72,76}\text{Ge}(n, 2n)$ , $^{76}\text{Ge}(n, \gamma)$ , $E=13.96$ MeV; measured $\sigma$ . Activation technique. PREPRINT nucl-ex/0701039,01/23/2007  |
|                  | 2007LI06 | RADIOACTIVITY $^{77}\text{Ge}(\beta^-)$ ; measured $T_{1/2}$ . JOUR JRNC D 271 311  |
|                  | 2007SCZX | NUCLEAR REACTIONS $^{74,76}\text{Ge}$ , $^{76,78}\text{Se}(d, p)$ , $E=15$ MeV; $^{76}\text{Ge}$ , $^{76}\text{Se}(p, d)$ , $E=23$ MeV; $^{74,76}\text{Ge}$ , $^{76,78}\text{Se}(^3\text{He}, \alpha)$ , $E=26$ MeV; $^{74,76}\text{Ge}$ , $^{76,78}\text{Se}(\alpha, ^3\text{He})$ , $E=40$ MeV; measured cross sections. Deduced spectroscopic factors. PC J P Schiffer/10/2007 |
| $^{77}\text{As}$ | 2007LI06 | RADIOACTIVITY $^{77}\text{Ge}(\beta^-)$ ; measured $T_{1/2}$ . JOUR JRNC D 271 311  |
| $^{77}\text{Se}$ | 2007SCZX | NUCLEAR REACTIONS $^{74,76}\text{Ge}$ , $^{76,78}\text{Se}(d, p)$ , $E=15$ MeV; $^{76}\text{Ge}$ , $^{76}\text{Se}(p, d)$ , $E=23$ MeV; $^{74,76}\text{Ge}$ , $^{76,78}\text{Se}(^3\text{He}, \alpha)$ , $E=26$ MeV; $^{74,76}\text{Ge}$ , $^{76,78}\text{Se}(\alpha, ^3\text{He})$ , $E=40$ MeV; measured cross sections. Deduced spectroscopic factors. PC J P Schiffer/10/2007 |



KEYNUMBERS AND KEYWORDS

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**A=77 (continued)**

<sup>77</sup>Rb      2007KE09      ATOMIC MASSES <sup>74,75,76,77,79,80,83,87</sup>Rb; <sup>64</sup>Zn; <sup>71,74</sup>Ga; <sup>84,88</sup>Sr; <sup>133</sup>Cs; measured atomic masses. ISOLTRAP Penning Trap. JOUR PRVCA 76 045504

**A=78**

<sup>78</sup>Ni      2007SC29      RADIOACTIVITY <sup>78</sup>Ni( $\beta^-$ ); measured  $T_{1/2}$ . Silicon strip detector. JOUR NUPAB 787 299c

<sup>78</sup>Cu      2007SC29      RADIOACTIVITY <sup>78</sup>Ni( $\beta^-$ ); measured  $T_{1/2}$ . Silicon strip detector. JOUR NUPAB 787 299c

<sup>78</sup>Zn      2007IB01      NUCLEAR REACTIONS <sup>238</sup>U( $\gamma$ , F)<sup>78</sup>Zn / <sup>132</sup>Sn, E not given; measured fission fragment yields. ALTO facility. <sup>238</sup>U(n, F)<sup>81</sup>Zn / <sup>83</sup>Ga, E not given; measured E $\gamma$ , I $\gamma$ , E $\beta$ , I $\beta$ ,  $\gamma\gamma$ -coin. <sup>81</sup>Ga, <sup>83</sup>Ge deduced levels, J,  $\pi$ . Online mass separator. JOUR NUPAB 787 110c

2007VA20      NUCLEAR REACTIONS <sup>108</sup>Pd, <sup>120</sup>Sn(<sup>74</sup>Zn, <sup>74</sup>Zn'), (<sup>76</sup>Zn, <sup>76</sup>Zn'), (<sup>78</sup>Zn, <sup>78</sup>Zn'), (<sup>80</sup>Zn, <sup>80</sup>Zn'), E=2.79-2.87 MeV / nucleon; measured E $\gamma$ , I $\gamma$ . <sup>74,76,78,80</sup>Zn deduced B(E2). JOUR PRLTA 99 142501

<sup>78</sup>Ga      2007GU09      ATOMIC MASSES <sup>57,60,64,65,66,67,68,69</sup>Ni, <sup>65,66,67,68,69,70,71,72,73,74,76</sup>Cu, <sup>63,64,65,68,69,70,71,72,73,74,75,76,77,78</sup>Ga; measured masses; analyzed the resulting mass surface for signs of magicity, compared the behavior of N=40 with that of the known magic numbers and with midshell behavior. JOUR PRVCA 75 044303

2007GUZZ      ATOMIC MASSES <sup>57,60,64,65,66,67,68,69</sup>Ni, <sup>65,66,67,68,68m,69,70,70m,71,72,73,74,76</sup>Cu, <sup>63,64,65,68,69,70,71,72,73,74,75,76,77,78</sup>Ga; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701029,01/22/2007

<sup>78</sup>Se      2006GA43      RADIOACTIVITY <sup>78</sup>Kr(2EC); measured 2K(2 $\nu$ )-capture  $T_{1/2}$  lower limit. JOUR PANUE 69 2124

<sup>78</sup>Kr      2006GA43      RADIOACTIVITY <sup>78</sup>Kr(2EC); measured 2K(2 $\nu$ )-capture  $T_{1/2}$  lower limit. JOUR PANUE 69 2124

<sup>78</sup>Y      2007NA13      NUCLEAR REACTIONS Ca(<sup>36</sup>Ar, np)<sup>74</sup>Rb, E=103 MeV; Ca(<sup>40</sup>Ca, np)<sup>78</sup>Y, E=118, 121 MeV; measured E $\gamma$ , I $\gamma$ ,  $\beta\gamma$ -coinc using recoil-decay tagging technique. <sup>74</sup>Rb, <sup>78</sup>Y deduced coulomb energy differences between T=1 states. JOUR PRVCA 75 061301

**A=79**

<sup>79</sup>Se      2007BI01      RADIOACTIVITY <sup>79</sup>Se( $\beta^-$ ); measured  $T_{1/2}$ . Inductively coupled plasma mass spectrometry, liquid scintillation counting. JOUR ARISE 65 355

2007MAZV      NUCLEAR REACTIONS <sup>80</sup>Se( $\gamma$ , n), E=9.98-11.80 MeV; measured photoneutron cross section. Calculated stellar neutron capture rates within the framework of the Hauser-Feshbach model. CONF Geneva(NIC-IX) 239

2007RU09      NUCLEAR REACTIONS <sup>58</sup>Ni(n,  $\gamma$ ), <sup>78</sup>Se(n,  $\gamma$ ), E  $\approx$  0-100 keV; measured cross sections using accelerator mass spectrometry. Quasi-stellar neutron spectrum. JOUR NIMBE 259 683

KEYNUMBERS AND KEYWORDS

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**A=79 (continued)**

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|------------------|----------|---|
|                  | 2007SCZX | NUCLEAR REACTIONS $^{74,76}\text{Ge}$ , $^{76,78}\text{Se}(\text{d}, \text{p})$ , $E=15$ MeV; $^{76}\text{Ge}$ , $^{76}\text{Se}(\text{p}, \text{d})$ , $E=23$ MeV; $^{74,76}\text{Ge}$ , $^{76,78}\text{Se}(\text{}^3\text{He}, \alpha)$ , $E=26$ MeV; $^{74,76}\text{Ge}$ , $^{76,78}\text{Se}(\alpha, \text{}^3\text{He})$ , $E=40$ MeV; measured cross sections. Deduced spectroscopic factors. PC J P Schiffer/10/2007 |
| $^{79}\text{Br}$ | 2007BI01 | RADIOACTIVITY $^{79}\text{Se}(\beta^-)$ ; measured $T_{1/2}$ . Inductively coupled plasma mass spectrometry, liquid scintillation counting. JOUR ARISE 65 355   |
| $^{79}\text{Rb}$ | 2007KE09 | ATOMIC MASSES $^{74,75,76,77,79,80,83,87}\text{Rb}$ ; $^{64}\text{Zn}$ ; $^{71,74}\text{Ga}$ ; $^{84,88}\text{Sr}$ ; $^{133}\text{Cs}$ ; measured atomic masses. ISOLTRAP Penning Trap. JOUR PRVCA 76 045504  |
| $^{79}\text{Sr}$ | 2007KA13 | NUCLEAR REACTIONS $^{54}\text{Fe}(\text{}^{28}\text{Si}, \text{n}2\text{p})$ , $E=90$ MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, DSA. $^{79}\text{Sr}$ deduced high-spin levels, $J$ , $\pi$ , configurations, $T_{1/2}$ , $B(E2)$ , $B(M1)$ , transition quadrupole moments, $\beta_2$ . Comparison with cranked mean-field and projected shell-model predictions. JOUR PRVCA 75 034311                   |

**A=80**

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| $^{80}\text{Zn}$ | 2007DE37 | NUCLEAR REACTIONS $^{192}\text{Os}$ , $^{238}\text{U}(\text{}^{82}\text{Se}, \text{X})^{80}\text{Zn}$ / $^{81}\text{Ga}$ / $^{82}\text{Ge}$ / $^{83}\text{As}$ / $^{84}\text{Se}$ / $^{85}\text{Se}$ / $^{87}\text{Kr}$ , $E=460, 505$ MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin. $^{80}\text{Zn}$ , $^{81}\text{Ga}$ , $^{82}\text{Ge}$ , $^{83}\text{As}$ , $^{84,85}\text{Se}$ , $^{87}\text{Kr}$ deduced levels, $J$ , $\pi$ . Comparison with Oxbash shell model. $^{206}\text{Pb}(\text{}^{132}\text{Xe}, \text{X})$ , $(\text{}^{144}\text{Xe}, \text{X})$ , $E=8.26$ MeV / nucleon; calculated production $\sigma$ of neutron-rich nuclei. Grazing coupled channels model. JOUR NUPAB 787 74c |
|                  | 2007VA20 | NUCLEAR REACTIONS $^{108}\text{Pd}$ , $^{120}\text{Sn}(\text{}^{74}\text{Zn}, \text{}^{74}\text{Zn}')$ , $(\text{}^{76}\text{Zn}, \text{}^{76}\text{Zn}')$ , $(\text{}^{78}\text{Zn}, \text{}^{78}\text{Zn}')$ , $(\text{}^{80}\text{Zn}, \text{}^{80}\text{Zn}')$ , $E=2.79\text{-}2.87$ MeV / nucleon; measured $E\gamma$ , $I\gamma$ . $^{74,76,78,80}\text{Zn}$ deduced $B(E2)$ . JOUR PRLTA 99 142501   |
| $^{80}\text{Ga}$ | 2007VEZZ | RADIOACTIVITY $^{81}\text{Zn}(\beta^-)$ , $(\beta^- \text{n})$ [from $\text{U}(\text{n}, \text{F})$ ]; measured $E\gamma$ , $I\gamma$ , $\beta\gamma$ -coin. $^{81}\text{Ga}$ deduced levels, $J$ , $\pi$ . Level systematics in neighboring nuclides discussed. PREPRINT nucl-ex/0701066,1/26/2007  |
| $^{80}\text{Kr}$ | 2007YA06 | NUCLEAR REACTIONS $^{12}\text{C}(\text{}^{72}\text{Kr}, \text{X})$ , $(\text{}^{76}\text{Kr}, \text{X})$ , $(\text{}^{80}\text{Kr}, \text{X})$ , $E \leq 1.05$ GeV / nucleon; measured $\sigma$ . $^{72,76,80}\text{Kr}$ deduced rms matter radii. Secondary beams, Glauber model. Comparison with other data. JOUR NUPAB 787 471c   |
| $^{80}\text{Rb}$ | 2007KE09 | ATOMIC MASSES $^{74,75,76,77,79,80,83,87}\text{Rb}$ ; $^{64}\text{Zn}$ ; $^{71,74}\text{Ga}$ ; $^{84,88}\text{Sr}$ ; $^{133}\text{Cs}$ ; measured atomic masses. ISOLTRAP Penning Trap. JOUR PRVCA 76 045504   |

**A=81**

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|------------------|----------|---|
| $^{81}\text{Zn}$ | 2007IB01 | NUCLEAR REACTIONS $^{238}\text{U}(\gamma, \text{F})^{78}\text{Zn}$ / $^{132}\text{Sn}$ , $E$ not given; measured fission fragment yields. ALTO facility. $^{238}\text{U}(\text{n}, \text{F})^{81}\text{Zn}$ / $^{83}\text{Ga}$ , $E$ not given; measured $E\gamma$ , $I\gamma$ , $E\beta$ , $I\beta$ , $\gamma\gamma$ -coin. $^{81}\text{Ga}$ , $^{83}\text{Ge}$ deduced levels, $J$ , $\pi$ . Online mass separator. JOUR NUPAB 787 110c |
|                  | 2007VEZZ | RADIOACTIVITY $^{81}\text{Zn}(\beta^-)$ , $(\beta^- \text{n})$ [from $\text{U}(\text{n}, \text{F})$ ]; measured $E\gamma$ , $I\gamma$ , $\beta\gamma$ -coin. $^{81}\text{Ga}$ deduced levels, $J$ , $\pi$ . Level systematics in neighboring nuclides discussed. PREPRINT nucl-ex/0701066,1/26/2007   |



KEYNUMBERS AND KEYWORDS

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**A=81 (continued)**

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| $^{81}\text{Ga}$ | 2007DE37 | NUCLEAR REACTIONS $^{192}\text{Os}$ , $^{238}\text{U}(^{82}\text{Se}, \text{X})^{80}\text{Zn}$ / $^{81}\text{Ga}$ / $^{82}\text{Ge}$ / $^{83}\text{As}$ / $^{84}\text{Se}$ / $^{85}\text{Se}$ / $^{87}\text{Kr}$ , E=460, 505 MeV; measured $E_\gamma$ , $I_\gamma$ , $\gamma\gamma$ -coin. $^{80}\text{Zn}$ , $^{81}\text{Ga}$ , $^{82}\text{Ge}$ , $^{83}\text{As}$ , $^{84,85}\text{Se}$ , $^{87}\text{Kr}$ deduced levels, J, $\pi$ . Comparison with Oxbash shell model. $^{206}\text{Pb}(^{132}\text{Xe}, \text{X})$ , ( $^{144}\text{Xe}, \text{X}$ ), E=8.26 MeV / nucleon; calculated production $\sigma$ of neutron-rich nuclei. Grazing coupled channels model. JOUR NUPAB 787 74c |
|                  | 2007IB01 | NUCLEAR REACTIONS $^{238}\text{U}(\gamma, \text{F})^{78}\text{Zn}$ / $^{132}\text{Sn}$ , E not given; measured fission fragment yields. ALTO facility. $^{238}\text{U}(\text{n}, \text{F})^{81}\text{Zn}$ / $^{83}\text{Ga}$ , E not given; measured $E_\gamma$ , $I_\gamma$ , $E\beta$ , $I\beta$ , $\gamma\gamma$ -coin. $^{81}\text{Ga}$ , $^{83}\text{Ge}$ deduced levels, J, $\pi$ . Online mass separator. JOUR NUPAB 787 110c  |
|                  | 2007VEZZ | RADIOACTIVITY $^{81}\text{Zn}(\beta^-)$ , ( $\beta^- \text{n}$ ) [from $\text{U}(\text{n}, \text{F})$ ]; measured $E_\gamma$ , $I_\gamma$ , $\beta\gamma$ -coin. $^{81}\text{Ga}$ deduced levels, J, $\pi$ . Level systematics in neighboring nuclides discussed. PREPRINT nucl-ex/0701066,1/26/2007  |
| $^{81}\text{Se}$ | 2007CI05 | NUCLEAR REACTIONS $^2\text{H}(^{90}\text{Zr}, \text{p}\gamma)$ , ( $^{80}\text{Se}, \text{p}\gamma$ ), E=4 MeV / nucleon; measured $E_\gamma$ , $E_p$ , $\text{p}\gamma$ -coinc. JOUR NIMBE 261 938   |

**A=82**

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|------------------|----------|---|
| $^{82}\text{Ge}$ | 2007DE37 | NUCLEAR REACTIONS $^{192}\text{Os}$ , $^{238}\text{U}(^{82}\text{Se}, \text{X})^{80}\text{Zn}$ / $^{81}\text{Ga}$ / $^{82}\text{Ge}$ / $^{83}\text{As}$ / $^{84}\text{Se}$ / $^{85}\text{Se}$ / $^{87}\text{Kr}$ , E=460, 505 MeV; measured $E_\gamma$ , $I_\gamma$ , $\gamma\gamma$ -coin. $^{80}\text{Zn}$ , $^{81}\text{Ga}$ , $^{82}\text{Ge}$ , $^{83}\text{As}$ , $^{84,85}\text{Se}$ , $^{87}\text{Kr}$ deduced levels, J, $\pi$ . Comparison with Oxbash shell model. $^{206}\text{Pb}(^{132}\text{Xe}, \text{X})$ , ( $^{144}\text{Xe}, \text{X}$ ), E=8.26 MeV / nucleon; calculated production $\sigma$ of neutron-rich nuclei. Grazing coupled channels model. JOUR NUPAB 787 74c |
|                  | 2007RZ02 | RADIOACTIVITY $^{82}\text{Ge}(\text{IT})$ [from $^{248}\text{Cm}(\text{SF})$ ]; measured $E_\gamma$ , $I_\gamma$ , $\gamma\gamma$ -coinc. $^{82}\text{Ge}$ deduced levels, J, $\pi$ . JOUR PRVCA 76 027302  |
| $^{82}\text{Se}$ | 2006SH31 | RADIOACTIVITY $^{82}\text{Se}$ , $^{100}\text{Mo}(2\beta^-)$ ; measured $0\nu\beta\beta$ -decay $T_{1/2}$ lower limit. $^{82}\text{Se}$ , $^{96}\text{Zr}$ , $^{100}\text{Mo}$ , $^{116}\text{Cd}$ , $^{150}\text{Nd}(2\beta^-)$ ; measured $2\nu\beta\beta$ -decay $T_{1/2}$ . JOUR PANUE 69 2090  |
|                  | 2006SH32 | RADIOACTIVITY $^{82}\text{Se}$ , $^{96}\text{Zr}$ , $^{100}\text{Mo}$ , $^{116}\text{Cd}$ , $^{150}\text{Nd}(2\beta^-)$ ; measured $2\nu\beta\beta$ -decay $T_{1/2}$ . $^{82}\text{Se}$ , $^{100}\text{Mo}(2\beta^-)$ ; measured $0\nu\beta\beta$ -decay $T_{1/2}$ lower limits. JOUR BRSPE 70 731  |
| $^{82}\text{Kr}$ | 2006SH31 | RADIOACTIVITY $^{82}\text{Se}$ , $^{100}\text{Mo}(2\beta^-)$ ; measured $0\nu\beta\beta$ -decay $T_{1/2}$ lower limit. $^{82}\text{Se}$ , $^{96}\text{Zr}$ , $^{100}\text{Mo}$ , $^{116}\text{Cd}$ , $^{150}\text{Nd}(2\beta^-)$ ; measured $2\nu\beta\beta$ -decay $T_{1/2}$ . JOUR PANUE 69 2090  |
|                  | 2006SH32 | RADIOACTIVITY $^{82}\text{Se}$ , $^{96}\text{Zr}$ , $^{100}\text{Mo}$ , $^{116}\text{Cd}$ , $^{150}\text{Nd}(2\beta^-)$ ; measured $2\nu\beta\beta$ -decay $T_{1/2}$ . $^{82}\text{Se}$ , $^{100}\text{Mo}(2\beta^-)$ ; measured $0\nu\beta\beta$ -decay $T_{1/2}$ lower limits. JOUR BRSPE 70 731  |
| $^{82}\text{Nb}$ | 2007CA26 | NUCLEAR REACTIONS $^9\text{Be}(^{107}\text{Ag}, \text{X})^{82}\text{Nb}$ , E=750 MeV / nucleon; measured $E_\gamma$ , $I_\gamma$ , lifetime of low lying isomeric state. $^{82}\text{Nb}$ deduced levels, J, $\pi$ . JOUR APOBB 38 1271   |
|                  | 2007RE18 | NUCLEAR REACTIONS $\text{Be}(^{107}\text{Ag}, \text{X})^{82}\text{Nb}$ / $^{84}\text{Nb}$ / $^{86}\text{Tc}$ / $^{87}\text{Tc}$ / $^{88}\text{Tc}$ , E=750 MeV / nucleon; measured delayed $E_\gamma$ , $I_\gamma$ , (particle) $\gamma$ -coin, yield. $^{82}\text{Nb}$ , $^{86}\text{Tc}$ deduced level energy of first excited state. JOUR NUPAB 787 491c   |

## A=83

- <sup>83</sup>Ga 2007IB01 NUCLEAR REACTIONS  $^{238}\text{U}(\gamma, \text{F})^{78}\text{Zn} / ^{132}\text{Sn}$ , E not given; measured fission fragment yields. ALTO facility.  $^{238}\text{U}(\text{n}, \text{F})^{81}\text{Zn} / ^{83}\text{Ga}$ , E not given; measured  $\text{E}\gamma$ ,  $\text{I}\gamma$ ,  $\text{E}\beta$ ,  $\text{I}\beta$ ,  $\gamma\gamma$ -coin.  $^{81}\text{Ga}$ ,  $^{83}\text{Ge}$  deduced levels, J,  $\pi$ . Online mass separator. JOUR NUPAB 787 110c
- <sup>83</sup>Ge 2007IB01 NUCLEAR REACTIONS  $^{238}\text{U}(\gamma, \text{F})^{78}\text{Zn} / ^{132}\text{Sn}$ , E not given; measured fission fragment yields. ALTO facility.  $^{238}\text{U}(\text{n}, \text{F})^{81}\text{Zn} / ^{83}\text{Ga}$ , E not given; measured  $\text{E}\gamma$ ,  $\text{I}\gamma$ ,  $\text{E}\beta$ ,  $\text{I}\beta$ ,  $\gamma\gamma$ -coin.  $^{81}\text{Ga}$ ,  $^{83}\text{Ge}$  deduced levels, J,  $\pi$ . Online mass separator. JOUR NUPAB 787 110c
- 2007J009 NUCLEAR REACTIONS  $^2\text{H}(^{82}\text{Ge}, \text{p})$ , E=4 MeV / nucleon;  $^2\text{H}(^{84}\text{Se}, \text{p})$ , E=4.5 MeV / nucleon;  $^2\text{H}(^{132}\text{Sn}, \text{p})$ , E=4.77 MeV / nucleon; measured  $\text{E}_\text{p}$  and angular distributions.  $^{83}\text{Ge}$ ,  $^{85}\text{Se}$ ,  $^{133}\text{Sn}$  deduced levels, J,  $\pi$  and spectroscopic factors. Compared results to model calculations. JOUR APOBB 38 1205
- 2007TH15 NUCLEAR REACTIONS  $^2\text{H}(^{82}\text{Ge}, \text{p})$ , ( $^{84}\text{Se}, \text{p}$ ), E=330, 380 MeV; measured  $\text{E}_\text{p}$ ,  $\text{I}_\text{p}$ , recoil-proton-coin, angular distributions; deduced asymptotic normalization coefficients, spectroscopic factors.  $^{83}\text{Ge}$ ,  $^{85}\text{Se}$ ; deduced levels, J,  $\pi$ , angular momentum using DWBA analysis.  $^{82}\text{Ge}$ ,  $^{84}\text{Se}(\text{n}, \gamma)$ , E=0-1 MeV; calculated cross sections. JOUR PRVCA 76 044302
- <sup>83</sup>As 2007DE37 NUCLEAR REACTIONS  $^{192}\text{Os}$ ,  $^{238}\text{U}(^{82}\text{Se}, \text{X})^{80}\text{Zn} / ^{81}\text{Ga} / ^{82}\text{Ge} / ^{83}\text{As} / ^{84}\text{Se} / ^{85}\text{Se} / ^{87}\text{Kr}$ , E=460, 505 MeV; measured  $\text{E}\gamma$ ,  $\text{I}\gamma$ ,  $\gamma\gamma$ -coin.  $^{80}\text{Zn}$ ,  $^{81}\text{Ga}$ ,  $^{82}\text{Ge}$ ,  $^{83}\text{As}$ ,  $^{84,85}\text{Se}$ ,  $^{87}\text{Kr}$  deduced levels, J,  $\pi$ . Comparison with Oxbash shell model.  $^{206}\text{Pb}(^{132}\text{Xe}, \text{X})$ , ( $^{144}\text{Xe}, \text{X}$ ), E=8.26 MeV / nucleon; calculated production  $\sigma$  of neutron-rich nuclei. Grazing coupled channels model. JOUR NUPAB 787 74c
- <sup>83</sup>Rb 2007KE09 ATOMIC MASSES  $^{74,75,76,77,79,80,83,87}\text{Rb}$ ;  $^{64}\text{Zn}$ ;  $^{71,74}\text{Ga}$ ;  $^{84,88}\text{Sr}$ ;  $^{133}\text{Cs}$ ; measured atomic masses. ISOLTRAP Penning Trap. JOUR PRVCA 76 045504
- <sup>83</sup>Nb 2007FI07 NUCLEAR REACTIONS  $^{28}\text{Si}(^{58}\text{Ni}, 2\text{np})^{83}\text{Nb}$ , E=204, 215 MeV; measured  $\text{E}\gamma$ ,  $\text{I}\gamma$ ,  $\gamma\gamma$ -coin.  $^{83}\text{Nb}$  deduced levels, J,  $\pi$ , transition multipolarities, mixing ratios and transition quadrupole moments. JOUR PRVCA 75 064310

## A=84

- <sup>84</sup>Se 2007DE37 NUCLEAR REACTIONS  $^{192}\text{Os}$ ,  $^{238}\text{U}(^{82}\text{Se}, \text{X})^{80}\text{Zn} / ^{81}\text{Ga} / ^{82}\text{Ge} / ^{83}\text{As} / ^{84}\text{Se} / ^{85}\text{Se} / ^{87}\text{Kr}$ , E=460, 505 MeV; measured  $\text{E}\gamma$ ,  $\text{I}\gamma$ ,  $\gamma\gamma$ -coin.  $^{80}\text{Zn}$ ,  $^{81}\text{Ga}$ ,  $^{82}\text{Ge}$ ,  $^{83}\text{As}$ ,  $^{84,85}\text{Se}$ ,  $^{87}\text{Kr}$  deduced levels, J,  $\pi$ . Comparison with Oxbash shell model.  $^{206}\text{Pb}(^{132}\text{Xe}, \text{X})$ , ( $^{144}\text{Xe}, \text{X}$ ), E=8.26 MeV / nucleon; calculated production  $\sigma$  of neutron-rich nuclei. Grazing coupled channels model. JOUR NUPAB 787 74c
- <sup>84</sup>Br 2006AS07 NUCLEAR REACTIONS  $^{208}\text{Pb}(^{18}\text{O}, \text{X})^{84}\text{Br} / ^{85}\text{Br}$ , E=85 MeV; measured  $\text{E}\gamma$ ,  $\text{I}\gamma$ ,  $\gamma\gamma$ -coin.  $^{84,85}\text{Br}$  deduced high-spin levels, J,  $\pi$ , configurations. Euroball IV array. JOUR ZAANE 30 541
- <sup>84</sup>Sr 2007KE09 ATOMIC MASSES  $^{74,75,76,77,79,80,83,87}\text{Rb}$ ;  $^{64}\text{Zn}$ ;  $^{71,74}\text{Ga}$ ;  $^{84,88}\text{Sr}$ ;  $^{133}\text{Cs}$ ; measured atomic masses. ISOLTRAP Penning Trap. JOUR PRVCA 76 045504

KEYNUMBERS AND KEYWORDS

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**A=84 (continued)**

<sup>84</sup>Nb      2007RE18      NUCLEAR REACTIONS Be(<sup>107</sup>Ag, X)<sup>82</sup>Nb / <sup>84</sup>Nb / <sup>86</sup>Tc / <sup>87</sup>Tc / <sup>88</sup>Tc, E=750 MeV / nucleon; measured delayed E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin, yield. <sup>82</sup>Nb, <sup>86</sup>Tc deduced level energy of first excited state. JOUR NUPAB 787 491c

**A=85**

<sup>85</sup>Se      2007DE37      NUCLEAR REACTIONS <sup>192</sup>Os, <sup>238</sup>U(<sup>82</sup>Se, X)<sup>80</sup>Zn / <sup>81</sup>Ga / <sup>82</sup>Ge / <sup>83</sup>As / <sup>84</sup>Se / <sup>85</sup>Se / <sup>87</sup>Kr, E=460, 505 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>80</sup>Zn, <sup>81</sup>Ga, <sup>82</sup>Ge, <sup>83</sup>As, <sup>84,85</sup>Se, <sup>87</sup>Kr deduced levels, J,  $\pi$ . Comparison with Oxbash shell model. <sup>206</sup>Pb(<sup>132</sup>Xe, X), (<sup>144</sup>Xe, X), E=8.26 MeV / nucleon; calculated production  $\sigma$  of neutron-rich nuclei. Grazing coupled channels model. JOUR NUPAB 787 74c

2007J009      NUCLEAR REACTIONS <sup>2</sup>H(<sup>82</sup>Ge, p), E=4 MeV / nucleon; <sup>2</sup>H(<sup>84</sup>Se, p), E=4.5 MeV / nucleon; <sup>2</sup>H(<sup>132</sup>Sn, p), E=4.77 MeV / nucleon; measured E $p$  and angular distributions. <sup>83</sup>Ge, <sup>85</sup>Se, <sup>133</sup>Sn deduced levels, J,  $\pi$  and spectroscopic factors. Compared results to model calculations. JOUR APOBB 38 1205

2007TH15      NUCLEAR REACTIONS <sup>2</sup>H(<sup>82</sup>Ge, p), (<sup>84</sup>Se, p), E=330, 380 MeV; measured E $p$ , I $p$ , recoil-proton-coin, angular distributions; deduced asymptotic normalization coefficients, spectroscopic factors. <sup>83</sup>Ge, <sup>85</sup>Se; deduced levels, J,  $\pi$ , angular momentum using DWBA analysis. <sup>82</sup>Ge, <sup>84</sup>Se(n,  $\gamma$ ), E=0-1 MeV; calculated cross sections. JOUR PRVCA 76 044302

<sup>85</sup>Br      2006AS07      NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>18</sup>O, X)<sup>84</sup>Br / <sup>85</sup>Br, E=85 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>84,85</sup>Br deduced high-spin levels, J,  $\pi$ , configurations. Euroball IV array. JOUR ZAANE 30 541

2007RA23      ATOMIC MASSES <sup>85,86,87,88,89,90,91,92</sup>Br, <sup>94,95,96,97</sup>Rb; measured masses using the JYFLTRAP. Deduced Q-values. Compared results to previous measurements. JOUR ZAANE 32 87

2007RAZY      ATOMIC MASSES <sup>85,86,87,88,89,90,91,92</sup>Br, <sup>94,95,96,97</sup>Rb; measured masses. Penning trap mass spectrometer. PREPRINT  
nucl-ex/0703017,3/12/2007

<sup>85</sup>Rb      2007PE27      NUCLEAR MOMENTS <sup>85,87</sup>Rb; measured hfs for excited states. JOUR PYLBB 655 114

<sup>85</sup>Sr      2007UD01      NUCLEAR REACTIONS <sup>89</sup>Y(d, X)<sup>90m</sup>Y / <sup>88</sup>Y / <sup>87m</sup>Y / <sup>87</sup>Y / <sup>88</sup>Zr / <sup>89</sup>Zr / <sup>85</sup>Sr, E=9-40 MeV; measured excitation functions. Stacked-foil activation. JOUR RAACA 95 187

**A=86**

<sup>86</sup>Br      2007RA23      ATOMIC MASSES <sup>85,86,87,88,89,90,91,92</sup>Br, <sup>94,95,96,97</sup>Rb; measured masses using the JYFLTRAP. Deduced Q-values. Compared results to previous measurements. JOUR ZAANE 32 87

2007RAZY      ATOMIC MASSES <sup>85,86,87,88,89,90,91,92</sup>Br, <sup>94,95,96,97</sup>Rb; measured masses. Penning trap mass spectrometer. PREPRINT  
nucl-ex/0703017,3/12/2007

KEYNUMBERS AND KEYWORDS

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**A=86 (continued)**

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|------------------|----------|--|
| $^{86}\text{Rb}$ | 2007TI03 | NUCLEAR REACTIONS Pb, $^{208}\text{Pb}$ , $^{209}\text{Bi}(p, X)^7\text{Be}$ / $^{24}\text{Na}$ / $^{59}\text{Fe}$ / $^{86}\text{Rb}$ / $^{101m}\text{Rh}$ / $^{173}\text{Lu}$ / $^{190}\text{Ir}$ / $^{192}\text{Ir}$ / $^{196}\text{Au}$ / $^{199}\text{Tl}$ / $^{200}\text{Tl}$ / $^{203}\text{Pb}$ , E=0.04-2.6 GeV; measured excitation functions. Comparison with model predictions and previous data. JOUR PRAMC 68 289 |
| $^{86}\text{Y}$  | 2006CA38 | NUCLEAR MOMENTS<br>$^{86,87,87m,88,88m,89,89m,90,90m,92,93,93m,94,95,96,96m,97,97m,98,98m,99,100,101,102}\text{Y}$ ;<br>measured resonance fluorescence spectra. Collinear laser spectroscopy. JOUR HYIND 171 143  |
|                  | 2007CH07 | NUCLEAR MOMENTS<br>$^{86,87,87m,88,88m,89,89m,90,90m,92,93,93m,94,95,96,96m,97,97m,98,98m,99,100,101,102}\text{Y}$ ;<br>measured isotope and isomer shifts, $\mu$ , quadrupole moments, radii, deformation. Laser spectroscopy. JOUR PYLBB 645 133   |
| $^{86}\text{Zr}$ | 2007KA12 | NUCLEAR REACTIONS Rb( $\alpha$ , xn) $^{87}\text{Y}$ / $^{87m}\text{Y}$ / $^{88}\text{Y}$ , E=threshold-26 MeV; Sr( $\alpha$ , xn) $^{86}\text{Zr}$ / $^{88}\text{Zr}$ / $^{89}\text{Zr}$ , E=threshold-26 MeV; measured excitation functions; deduced integral yields. Stacked-foil activation technique. JOUR ARISE 65 561   |
| $^{86}\text{Mo}$ | 2007AN21 | NUCLEAR REACTIONS $^{58}\text{Ni}(^{36}\text{Ar}, X)^{86}$ / $^{88}\text{Mo}$ , E=111 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coinc. $^{86,88}\text{Mo}$ deduced levels, J, $\pi$ . JOUR PRVCA 76 014307   |
| $^{86}\text{Tc}$ | 2007RE18 | NUCLEAR REACTIONS Be( $^{107}\text{Ag}$ , X) $^{82}\text{Nb}$ / $^{84}\text{Nb}$ / $^{86}\text{Tc}$ / $^{87}\text{Tc}$ / $^{88}\text{Tc}$ , E=750 MeV / nucleon; measured delayed $E\gamma$ , $I\gamma$ , (particle) $\gamma$ -coin, yield. $^{82}\text{Nb}$ , $^{86}\text{Tc}$ deduced level energy of first excited state. JOUR NUPAB 787 491c   |

**A=87**

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| $^{87}\text{Br}$ | 2007RA23 | ATOMIC MASSES $^{85,86,87,88,89,90,91,92}\text{Br}$ , $^{94,95,96,97}\text{Rb}$ ; measured masses using the JYFLTRAP. Deduced Q-values. Compared results to previous measurements. JOUR ZAANE 32 87  |
|                  | 2007RAZY | ATOMIC MASSES $^{85,86,87,88,89,90,91,92}\text{Br}$ , $^{94,95,96,97}\text{Rb}$ ; measured masses. Penning trap mass spectrometer. PREPRINT<br>nucl-ex/0703017,3/12/2007   |
|                  | 2007RI15 | NUCLEAR REACTIONS Pb(p, X) $^{17}\text{N}$ / $^{87}\text{Br}$ / $^{88}\text{Br}$ , E=1 GeV; measured delayed neutron yields and precursor production cross sections. JOUR ZAANE 32 1   |
| $^{87}\text{Kr}$ | 2007DE37 | NUCLEAR REACTIONS $^{192}\text{Os}$ , $^{238}\text{U}(^{82}\text{Se}, X)^{80}\text{Zn}$ / $^{81}\text{Ga}$ / $^{82}\text{Ge}$ / $^{83}\text{As}$ / $^{84}\text{Se}$ / $^{85}\text{Se}$ / $^{87}\text{Kr}$ , E=460, 505 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin. $^{80}\text{Zn}$ , $^{81}\text{Ga}$ , $^{82}\text{Ge}$ , $^{83}\text{As}$ , $^{84,85}\text{Se}$ , $^{87}\text{Kr}$ deduced levels, J, $\pi$ . Comparison with Oxbash shell model. $^{206}\text{Pb}(^{132}\text{Xe}, X)$ , ( $^{144}\text{Xe}, X$ ), E=8.26 MeV / nucleon; calculated production $\sigma$ of neutron-rich nuclei. Grazing coupled channels model. JOUR NUPAB 787 74c |
| $^{87}\text{Rb}$ | 2007GR05 | RADIOACTIVITY $^{10}\text{Be}$ , $^{40}\text{K}$ , $^{87}\text{Rb}(\beta^-)$ ; measured $E\beta$ ; deduced shape-factor functions, cutoff energy yields, maximum-point energies. Comparison with previous results. JOUR NIMAE 572 760  |
|                  | 2007KE09 | ATOMIC MASSES $^{74,75,76,77,79,80,83,87}\text{Rb}$ ; $^{64}\text{Zn}$ ; $^{71,74}\text{Ga}$ ; $^{84,88}\text{Sr}$ ; $^{133}\text{Cs}$ ; measured atomic masses. ISOLTRAP Penning Trap. JOUR PRVCA 76 045504   |

KEYNUMBERS AND KEYWORDS

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**A=87 (continued)**

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|                  | 2007PE27 | NUCLEAR MOMENTS <sup>85,87</sup> Rb; measured hfs for excited states. JOUR PYLBB 655 114  |
| <sup>87</sup> Sr | 2007GR05 | RADIOACTIVITY <sup>10</sup> Be, <sup>40</sup> K, <sup>87</sup> Rb( $\beta^-$ ); measured E $\beta$ ; deduced shape-factor functions, cutoff energy yields, maximum-point energies. Comparison with previous results. JOUR NIMAE 572 760   |
| <sup>87</sup> Y  | 2006CA38 | NUCLEAR MOMENTS <sup>86,87,87m,88,88m,89,89m,90,90m,92,93,93m,94,95,96,96m,97,97m,98,98m,99,100,101,102</sup> Y; measured resonance fluorescence spectra. Collinear laser spectroscopy. JOUR HYIND 171 143  |
|                  | 2007CH07 | NUCLEAR MOMENTS <sup>86,87,87m,88,88m,89,89m,90,90m,92,93,93m,94,95,96,96m,97,97m,98,98m,99,100,101,102</sup> Y; measured isotope and isomer shifts, $\mu$ , quadrupole moments, radii, deformation. Laser spectroscopy. JOUR PYLBB 645 133   |
|                  | 2007KA12 | NUCLEAR REACTIONS Rb( $\alpha$ , xn) <sup>87</sup> Y / <sup>87m</sup> Y / <sup>88</sup> Y, E=threshold-26 MeV; Sr( $\alpha$ , xn) <sup>86</sup> Zr / <sup>88</sup> Zr / <sup>89</sup> Zr, E=threshold-26 MeV; measured excitation functions; deduced integral yields. Stacked-foil activation technique. JOUR ARISE 65 561                      |
|                  | 2007UD01 | NUCLEAR REACTIONS <sup>89</sup> Y(d, X) <sup>90m</sup> Y / <sup>88</sup> Y / <sup>87m</sup> Y / <sup>87</sup> Y / <sup>88</sup> Zr / <sup>89</sup> Zr / <sup>85</sup> Sr, E=9-40 MeV; measured excitation functions. Stacked-foil activation. JOUR RAACA 95 187   |
| <sup>87</sup> Tc | 2007RE18 | NUCLEAR REACTIONS Be( <sup>107</sup> Ag, X) <sup>82</sup> Nb / <sup>84</sup> Nb / <sup>86</sup> Tc / <sup>87</sup> Tc / <sup>88</sup> Tc, E=750 MeV / nucleon; measured delayed E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin, yield. <sup>82</sup> Nb, <sup>86</sup> Tc deduced level energy of first excited state. JOUR NUPAB 787 491c |

**A=88**

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| <sup>88</sup> Br | 2007RA23 | ATOMIC MASSES <sup>85,86,87,88,89,90,91,92</sup> Br, <sup>94,95,96,97</sup> Rb; measured masses using the JYFLTRAP. Deduced Q-values. Compared results to previous measurements. JOUR ZAANE 32 87   |
|                  | 2007RAZY | ATOMIC MASSES <sup>85,86,87,88,89,90,91,92</sup> Br, <sup>94,95,96,97</sup> Rb; measured masses. Penning trap mass spectrometer. PREPRINT nucl-ex/0703017,3/12/2007   |
|                  | 2007RI15 | NUCLEAR REACTIONS Pb(p, X) <sup>17</sup> N / <sup>87</sup> Br / <sup>88</sup> Br, E=1 GeV; measured delayed neutron yields and precursor production cross sections. JOUR ZAANE 32 1   |
| <sup>88</sup> Sr | 2007GOZW | NUCLEAR REACTIONS Sr(n, n' $\gamma$ ) <sup>88</sup> Sr, E=fast; measured E $\gamma$ , I $\gamma$ , DSAM; <sup>88</sup> Sr deduced levels, J, $\pi$ , $\tau$ . Reactor, fast neutron facilities. CONF Voronezh(Nucleus-2007),Contrib,P102,Govor                        |
|                  | 2007KE09 | ATOMIC MASSES <sup>74,75,76,77,79,80,83,87</sup> Rb; <sup>64</sup> Zn; <sup>71,74</sup> Ga; <sup>84,88</sup> Sr; <sup>133</sup> Cs; measured atomic masses. ISOLTRAP Penning Trap. JOUR PRVCA 76 045504   |
|                  | 2007SC36 | NUCLEAR REACTIONS <sup>88</sup> Sr( $\gamma$ , $\gamma'$ ), E=9.0, 13.2, 16.0 MeV; measured E $\gamma$ , I $\gamma$ and angular distributions. <sup>88</sup> Sr deduced levels, J, $\pi$ , photon scattering and photoabsorption cross sections. JOUR PRVCA 76 034321 |

KEYNUMBERS AND KEYWORDS

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**A=88 (continued)**

$^{88}\text{Y}$	2006CA38	NUCLEAR MOMENTS 86,87,87m,88,88m,89,89m,90,90m,92,93,93m,94,95,96,96m,97,97m,98,98m,99,100,101,102Y; measured resonance fluorescence spectra. Collinear laser spectroscopy. JOUR HYIND 171 143
	2007CH07	NUCLEAR MOMENTS 86,87,87m,88,88m,89,89m,90,90m,92,93,93m,94,95,96,96m,97,97m,98,98m,99,100,101,102Y; measured isotope and isomer shifts, $\mu$ , quadrupole moments, radii, deformation. Laser spectroscopy. JOUR PYLBB 645 133
	2007KA12	NUCLEAR REACTIONS Rb( $\alpha$ , xn) $^{87}\text{Y}$ / $^{87m}\text{Y}$ / $^{88}\text{Y}$ , E=threshold-26 MeV; Sr( $\alpha$ , xn) $^{86}\text{Zr}$ / $^{88}\text{Zr}$ / $^{89}\text{Zr}$ , E=threshold-26 MeV; measured excitation functions; deduced integral yields. Stacked-foil activation technique. JOUR ARISE 65 561
	2007QA03	NUCLEAR REACTIONS Sr(p, nx) $^{88}\text{Y}$ , E=9-14 MeV; Rb( $\alpha$ , nx) $^{88}\text{Y}$ , E=12-18 MeV; $^{141}\text{Pr}$ (p, 2n), E=15-30 MeV; Ce( $^3\text{He}$ , nx) $^{140}\text{Nd}$ , E=20-35 MeV; $^{153}\text{Eu}$ (n, p), E=14 MeV; $^{150}\text{Nd}$ ( $\alpha$ , n), E=15-25 MeV; measured yields, excitation function and cross section. JOUR RAACA 95 313
	2007UD01	NUCLEAR REACTIONS $^{89}\text{Y}$ (d, X) $^{90m}\text{Y}$ / $^{88}\text{Y}$ / $^{87m}\text{Y}$ / $^{87}\text{Y}$ / $^{88}\text{Zr}$ / $^{89}\text{Zr}$ / $^{85}\text{Sr}$ , E=9-40 MeV; measured excitation functions. Stacked-foil activation. JOUR RAACA 95 187
$^{88}\text{Zr}$	2007KA12	NUCLEAR REACTIONS Rb( $\alpha$ , xn) $^{87}\text{Y}$ / $^{87m}\text{Y}$ / $^{88}\text{Y}$ , E=threshold-26 MeV; Sr( $\alpha$ , xn) $^{86}\text{Zr}$ / $^{88}\text{Zr}$ / $^{89}\text{Zr}$ , E=threshold-26 MeV; measured excitation functions; deduced integral yields. Stacked-foil activation technique. JOUR ARISE 65 561
	2007SC39	NUCLEAR REACTIONS $^{92,98,100}\text{Mo}$ ( $\gamma$ , $\gamma'$ ), E $\approx$ 13.2 MeV bremsstrahlung; measured E $\gamma$ , I $\gamma$ , angular distributions, photoabsorption $\sigma$ . $^{92}\text{Mo}$ ( $\gamma$ , n), ( $\gamma$ , p), ( $\gamma$ , $\alpha$ ), E $\approx$ 10-16.5 MeV bremsstrahlung; measured activation yields and compared with QRPA calculations. JOUR NUPAB 788 331c
	2007UD01	NUCLEAR REACTIONS $^{89}\text{Y}$ (d, X) $^{90m}\text{Y}$ / $^{88}\text{Y}$ / $^{87m}\text{Y}$ / $^{87}\text{Y}$ / $^{88}\text{Zr}$ / $^{89}\text{Zr}$ / $^{85}\text{Sr}$ , E=9-40 MeV; measured excitation functions. Stacked-foil activation. JOUR RAACA 95 187
$^{88}\text{Mo}$	2007AN21	NUCLEAR REACTIONS $^{58}\text{Ni}$ ( $^{36}\text{Ar}$ , X) $^{86}$ / $^{88}\text{Mo}$ , E=111 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coinc. $^{86,88}\text{Mo}$ deduced levels, J, $\pi$ . JOUR PRVCA 76 014307
$^{88}\text{Tc}$	2007RE18	NUCLEAR REACTIONS Be( $^{107}\text{Ag}$ , X) $^{82}\text{Nb}$ / $^{84}\text{Nb}$ / $^{86}\text{Tc}$ / $^{87}\text{Tc}$ / $^{88}\text{Tc}$ , E=750 MeV / nucleon; measured delayed E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin, yield. $^{82}\text{Nb}$ , $^{86}\text{Tc}$ deduced level energy of first excited state. JOUR NUPAB 787 491c

**A=89**

$^{89}\text{Br}$	2007RA23	ATOMIC MASSES $^{85,86,87,88,89,90,91,92}\text{Br}$ , $^{94,95,96,97}\text{Rb}$ ; measured masses using the JYFLTRAP. Deduced Q-values. Compared results to previous measurements. JOUR ZAANE 32 87
	2007RAZY	ATOMIC MASSES $^{85,86,87,88,89,90,91,92}\text{Br}$ , $^{94,95,96,97}\text{Rb}$ ; measured masses. Penning trap mass spectrometer. PREPRINT nucl-ex/0703017,3/12/2007



KEYNUMBERS AND KEYWORDS

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**A=89 (continued)**

<sup>89</sup> Sr	2006AB62	NUCLEAR REACTIONS <sup>90,91</sup> Zr(n, p), <sup>92,94</sup> Zr(n, α), E=reactor; measured spectrum-averaged σ. Activation, radiochemical separation. JOUR RAACA 94 381
<sup>89</sup> Y	2006CA38	NUCLEAR MOMENTS 86,87,87m,88,88m,89,89m,90,90m,92,93,93m,94,95,96,96m,97,97m,98,98m,99,100,101,102Y; measured resonance fluorescence spectra. Collinear laser spectroscopy. JOUR HYIND 171 143
	2007CH07	NUCLEAR MOMENTS 86,87,87m,88,88m,89,89m,90,90m,92,93,93m,94,95,96,96m,97,97m,98,98m,99,100,101,102Y; measured isotope and isomer shifts, μ, quadrupole moments, radii, deformation. Laser spectroscopy. JOUR PYLBB 645 133
<sup>89</sup> Zr	2007HU02	NUCLEAR REACTIONS <sup>90</sup> Zr, <sup>116</sup> Sn, <sup>208</sup> Pb(α, α'), (α, nα), E=200 MeV; measured Eγ, Eα, En, σ(E, θ). <sup>90</sup> Zr, <sup>116</sup> Sn, <sup>208</sup> Pb deduced isoscalar GDR neutron decay features. JOUR PRVCA 75 014606
	2007HU16	NUCLEAR REACTIONS <sup>90</sup> Zr, <sup>116</sup> Sn, <sup>208</sup> Pb(α, α'n), E=200 MeV; measured measured σ, angular distributions. Deduced ISGDR direct-decay branching ratios. JOUR APOBB 38 1479
	2007HU20	NUCLEAR REACTIONS <sup>90</sup> Zr, <sup>116</sup> Sn, <sup>208</sup> Pb(α, α'n), E=200 MeV; measured σ and angular distributions. <sup>90</sup> Zr, <sup>116</sup> Sn, <sup>208</sup> Pb deduced branching ratios for direct and statistical neutron decay of isoscalar giant dipole resonance. JOUR PANUE 70 1407
	2007KA12	NUCLEAR REACTIONS Rb(α, xn) <sup>87</sup> Y / <sup>87m</sup> Y / <sup>88</sup> Y, E=threshold-26 MeV; Sr(α, xn) <sup>86</sup> Zr / <sup>88</sup> Zr / <sup>89</sup> Zr, E=threshold-26 MeV; measured excitation functions; deduced integral yields. Stacked-foil activation technique. JOUR ARISE 65 561
	2007UD01	NUCLEAR REACTIONS <sup>89</sup> Y(d, X) <sup>90m</sup> Y / <sup>88</sup> Y / <sup>87m</sup> Y / <sup>87</sup> Y / <sup>88</sup> Zr / <sup>89</sup> Zr / <sup>85</sup> Sr, E=9-40 MeV; measured excitation functions. Stacked-foil activation. JOUR RAACA 95 187
	2007W006	NUCLEAR REACTIONS <sup>90</sup> Zr, <sup>116</sup> Sn, <sup>208</sup> Pb(α, α'), (α, nα), E=200 MeV; measured Eγ, Eα, En, σ(E, θ), excitation energy spectra. <sup>90</sup> Zr, <sup>116</sup> Sn, <sup>208</sup> Pb deduced isoscalar GDR neutron decay features. <sup>140</sup> Ce(α, αγ), E=136 MeV; measured Eγ, Eα. <sup>140</sup> Ce deduced E1 strength distribution. JOUR NUPAB 788 27c

**A=90**

<sup>90</sup> Br	2007RA23	ATOMIC MASSES <sup>85,86,87,88,89,90,91,92</sup> Br, <sup>94,95,96,97</sup> Rb; measured masses using the JYFLTRAP. Deduced Q-values. Compared results to previous measurements. JOUR ZAANE 32 87
	2007RAZY	ATOMIC MASSES <sup>85,86,87,88,89,90,91,92</sup> Br, <sup>94,95,96,97</sup> Rb; measured masses. Penning trap mass spectrometer. PREPRINT nucl-ex/0703017,3/12/2007
<sup>90</sup> Sr	2007AL42	RADIOACTIVITY <sup>90</sup> Sr(β <sup>-</sup> ); measured internal bremsstrahlung spectrum using the beta-stopper method. Compared results to model calculations. JOUR IMPEE 16 1733
<sup>90</sup> Y	2006AB62	NUCLEAR REACTIONS <sup>90,91</sup> Zr(n, p), <sup>92,94</sup> Zr(n, α), E=reactor; measured spectrum-averaged σ. Activation, radiochemical separation. JOUR RAACA 94 381

KEYNUMBERS AND KEYWORDS

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**A=90 (continued)**

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|                  | 2006CA38 | NUCLEAR MOMENTS<br>86,87,87m,88,88m,89,89m,90,90m,92,93,93m,94,95,96,96m,97,97m,98,98m,99,100,101,102Y;<br>measured resonance fluorescence spectra. Collinear laser spectroscopy.<br>JOUR HYIND 171 143  |
|                  | 2007AL42 | RADIOACTIVITY $^{90}\text{Sr}(\beta^-)$ ; measured internal bremsstrahlung<br>spectrum using the beta-stopper method. Compared results to model<br>calculations. JOUR IMPEE 16 1733  |
|                  | 2007CH07 | NUCLEAR MOMENTS<br>86,87,87m,88,88m,89,89m,90,90m,92,93,93m,94,95,96,96m,97,97m,98,98m,99,100,101,102Y;<br>measured isotope and isomer shifts, $\mu$ , quadrupole moments, radii,<br>deformation. Laser spectroscopy. JOUR PYLBB 645 133   |
|                  | 2007SE01 | RADIOACTIVITY $^{90}\text{Y}(\beta^-)$ ; measured $E\gamma$ , $I\gamma$ . $^{90}\text{Zr}$ transition deduced<br>branching ratio for internal pair production. JOUR ARISE 65 318   |
|                  | 2007UD01 | NUCLEAR REACTIONS $^{89}\text{Y}(\text{d}, \text{X})^{90\text{m}}\text{Y} / ^{88}\text{Y} / ^{87\text{m}}\text{Y} / ^{87}\text{Y} / ^{88}\text{Zr} /$<br>$^{89}\text{Zr} / ^{85}\text{Sr}$ , E=9-40 MeV; measured excitation functions. Stacked-foil<br>activation. JOUR RAACA 95 187  |
| $^{90}\text{Zr}$ | 2007HU02 | NUCLEAR REACTIONS $^{90}\text{Zr}$ , $^{116}\text{Sn}$ , $^{208}\text{Pb}(\alpha, \alpha')$ , $(\alpha, n\alpha)$ , E=200<br>MeV; measured $E\gamma$ , $E\alpha$ , $E_n$ , $\sigma(E, \theta)$ . $^{90}\text{Zr}$ , $^{116}\text{Sn}$ , $^{208}\text{Pb}$ deduced<br>isoscalar GDR neutron decay features. JOUR PRVCA 75 014606  |
|                  | 2007HU20 | NUCLEAR REACTIONS $^{90}\text{Zr}$ , $^{116}\text{Sn}$ , $^{208}\text{Pb}(\alpha, \alpha'n)$ , E=200 MeV;<br>measured $\sigma$ and angular distributions. $^{90}\text{Zr}$ , $^{116}\text{Sn}$ , $^{208}\text{Pb}$ deduced<br>branching ratios for direct and statistical neutron decay of isoscalar<br>giant dipole resonance. JOUR PANUE 70 1407   |
|                  | 2007SE01 | RADIOACTIVITY $^{90}\text{Y}(\beta^-)$ ; measured $E\gamma$ , $I\gamma$ . $^{90}\text{Zr}$ transition deduced<br>branching ratio for internal pair production. JOUR ARISE 65 318   |
|                  | 2007VA01 | NUCLEAR REACTIONS $^{90}\text{Zr}(\alpha, \text{t})$ , $(\alpha, \text{pt})$ , E=180 MeV; measured<br>triton and proton spectra, pt-coin. $^{91}\text{Nb}$ deduced excited states<br>energies, proton emission features. Optical-model coupled-channels<br>analysis. JOUR PRVCA 75 014311  |
|                  | 2007W006 | NUCLEAR REACTIONS $^{90}\text{Zr}$ , $^{116}\text{Sn}$ , $^{208}\text{Pb}(\alpha, \alpha')$ , $(\alpha, n\alpha)$ , E=200<br>MeV; measured $E\gamma$ , $E\alpha$ , $E_n$ , $\sigma(E, \theta)$ , excitation energy spectra. $^{90}\text{Zr}$ ,<br>$^{116}\text{Sn}$ , $^{208}\text{Pb}$ deduced isoscalar GDR neutron decay features. $^{140}\text{Ce}(\alpha,$<br>$\alpha\gamma)$ , E=136 MeV; measured $E\gamma$ , $E\alpha$ . $^{140}\text{Ce}$ deduced E1 strength<br>distribution. JOUR NUPAB 788 27c |
| $^{90}\text{Nb}$ | 2007ZE06 | NUCLEAR REACTIONS $^{12,13}\text{C}$ , $^{18}\text{O}$ , $^{26}\text{Mg}$ , $^{58}\text{Ni}$ , $^{60}\text{Ni}$ , $^{90}\text{Zr}$ , $^{118}\text{Sn}$ ,<br>$^{208}\text{Pb}({}^3\text{He}, \text{t})$ , E=420 MeV; measured triton spectra and cross sections.<br>Deduced B(GT). JOUR PRLTA 99 202501   |
|                  | 2007ZEZZ | NUCLEAR REACTIONS $^{12,13}\text{C}$ , $^{18}\text{O}$ , $^{26}\text{Mg}$ , $^{58}\text{Ni}$ , $^{60}\text{Ni}$ , $^{90}\text{Zr}$ , $^{118}\text{Sn}$ ,<br>$^{208}\text{Pb}({}^3\text{He}, \text{t})$ , E=420 MeV; measured triton spectra and cross sections.<br>Deduced B(GT). PREPRINT arXiv:0707.2840v1 [nucl-ex]   |

**A=91**

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| $^{91}\text{Br}$ | 2007RA23 | ATOMIC MASSES $^{85,86,87,88,89,90,91,92}\text{Br}$ , $^{94,95,96,97}\text{Rb}$ ; measured<br>masses using the JYFLTRAP. Deduced Q-values. Compared results to<br>previous measurements. JOUR ZAANE 32 87 |
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KEYNUMBERS AND KEYWORDS

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**A=91 (continued)**

	2007RAZY	ATOMIC MASSES <sup>85,86,87,88,89,90,91,92</sup> Br, <sup>94,95,96,97</sup> Rb; measured masses. Penning trap mass spectrometer. PREPRINT nucl-ex/0703017,3/12/2007
<sup>91</sup> Sr	2006AB62	NUCLEAR REACTIONS <sup>90,91</sup> Zr(n, p), <sup>92,94</sup> Zr(n, α), E=reactor; measured spectrum-averaged σ. Activation, radiochemical separation. JOUR RAACA 94 381
<sup>91</sup> Y	2006AB62	NUCLEAR REACTIONS <sup>90,91</sup> Zr(n, p), <sup>92,94</sup> Zr(n, α), E=reactor; measured spectrum-averaged σ. Activation, radiochemical separation. JOUR RAACA 94 381
	2007TR10	NUCLEAR REACTIONS <sup>92</sup> Zr, <sup>183</sup> W(γ, p), E=10-25 MeV; measured Eγ, Iγ. Deduced isomeric ratios. JOUR PPNLA 4 397
<sup>91</sup> Zr	2007CI05	NUCLEAR REACTIONS <sup>2</sup> H( <sup>90</sup> Zr, pγ), ( <sup>80</sup> Se, pγ), E=4 MeV / nucleon; measured Eγ, Ep, pγ-coinc. JOUR NIMBE 261 938
	2007C014	NUCLEAR REACTIONS <sup>59</sup> Co, <sup>93</sup> Nb(polarized p, <sup>3</sup> He), E=40-160 MeV; measured σ, angular distributions and analyzing powers. Compared results to model calculations. JOUR PRVCA 75 054617
	2007TH07	NUCLEAR REACTIONS <sup>82</sup> Se( <sup>13</sup> C, 4n) <sup>91</sup> Zr, E=50 MeV; measured Eγ, Iγ, γγ-coinc. <sup>91</sup> Zr deduced levels, J, π. JOUR APOBB 38 1381
<sup>91</sup> Nb	2007SC39	NUCLEAR REACTIONS <sup>92,98,100</sup> Mo(γ, γ'), E≈13.2 MeV bremsstrahlung; measured Eγ, Iγ, angular distributions, photoabsorption σ. <sup>92</sup> Mo(γ, n), (γ, p), (γ, α), E≈10-16.5 MeV bremsstrahlung; measured activation yields and compared with QRPA calculations. JOUR NUPAB 788 331c
	2007VA01	NUCLEAR REACTIONS <sup>90</sup> Zr(α, t), (α, pt), E=180 MeV; measured triton and proton spectra, pt-coin. <sup>91</sup> Nb deduced excited states energies, proton emission features. Optical-model coupled-channels analysis. JOUR PRVCA 75 014311
<sup>91</sup> Mo	2007SC39	NUCLEAR REACTIONS <sup>92,98,100</sup> Mo(γ, γ'), E≈13.2 MeV bremsstrahlung; measured Eγ, Iγ, angular distributions, photoabsorption σ. <sup>92</sup> Mo(γ, n), (γ, p), (γ, α), E≈10-16.5 MeV bremsstrahlung; measured activation yields and compared with QRPA calculations. JOUR NUPAB 788 331c

**A=92**

<sup>92</sup> Br	2007RA23	ATOMIC MASSES <sup>85,86,87,88,89,90,91,92</sup> Br, <sup>94,95,96,97</sup> Rb; measured masses using the JYFLTRAP. Deduced Q-values. Compared results to previous measurements. JOUR ZAANE 32 87
	2007RAZY	ATOMIC MASSES <sup>85,86,87,88,89,90,91,92</sup> Br, <sup>94,95,96,97</sup> Rb; measured masses. Penning trap mass spectrometer. PREPRINT nucl-ex/0703017,3/12/2007
<sup>92</sup> Y	2006CA38	NUCLEAR MOMENTS <sup>86,87,87m,88,88m,89,89m,90,90m,92,93,93m,94,95,96,96m,97,97m,98,98m,99,100,101,102</sup> Y; measured resonance fluorescence spectra. Collinear laser spectroscopy. JOUR HYIND 171 143

KEYNUMBERS AND KEYWORDS

A=92 (continued)

- 2007CH07 NUCLEAR MOMENTS  
86,87,87m,88,88m,89,89m,90,90m,92,93,93m,94,95,96,96m,97,97m,98,98m,99,100,101,102 $\Upsilon$ ;  
measured isotope and isomer shifts,  $\mu$ , quadrupole moments, radii,  
deformation. Laser spectroscopy. JOUR PYLBB 645 133
- <sup>92</sup>Zr 2007C021 NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>40</sup>Ca, X), E=235, 249 MeV; analyzed  
single and paired nucleon transfer  $\sigma$ . <sup>208</sup>Pb(<sup>40</sup>Ca, X)<sup>42</sup>Ca, E=225, 236,  
250 MeV; analyzed total kinetic energy loss distribution. <sup>208</sup>Pb(<sup>90</sup>Zr,  
X), E=560 MeV; analyzed fragment mass distributions,  $\sigma$ ; measured  
E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin, DSA. <sup>92</sup>Zr deduced levels, J,  $\pi$ . <sup>238</sup>U(<sup>82</sup>Se, X),  
E=500 MeV; measured fragment yields,  $\sigma$ . Prisma and Clara arrays.  
Mutli-nucleon transfer reaction mechanisms discussed. JOUR NUPAB  
787 160c
- 2007EG02 NUCLEAR REACTIONS <sup>91</sup>Zr, <sup>116,118,119,120,122,124</sup>Sn, <sup>143</sup>Nd, <sup>177</sup>Hf(n,  
 $\gamma$ );E=thermal; measured E $\gamma$ , I $\gamma$ , cross sections. JOUR ARISE 65 1290
- 2007NA05 NUCLEAR REACTIONS <sup>91,93</sup>Zr(n,  $\gamma$ ), E=thermal; measured prompt  
E $\gamma$ , I $\gamma$ ; deduced  $\sigma$  lower limits. JOUR JNSTA 44 21
- <sup>92</sup>Mo 2007SC39 NUCLEAR REACTIONS <sup>92,98,100</sup>Mo( $\gamma$ ,  $\gamma'$ ), E $\approx$ 13.2 MeV  
bremsstrahlung; measured E $\gamma$ , I $\gamma$ , angular distributions,  
photoabsorption  $\sigma$ . <sup>92</sup>Mo( $\gamma$ , n), ( $\gamma$ , p), ( $\gamma$ ,  $\alpha$ ), E $\approx$ 10-16.5 MeV  
bremsstrahlung; measured activation yields and compared with QRPA  
calculations. JOUR NUPAB 788 331c
- <sup>92</sup>Rh 2007PE14 NUCLEAR REACTIONS <sup>40</sup>Ca(<sup>58</sup>Ni, np $\alpha$ ), E=240 MeV; measured E $\gamma$ ,  
I $\gamma$ ,  $\gamma\gamma$ -coinc, (particle) $\gamma$ -coinc. <sup>92</sup>Rh deduced levels, J,  $\pi$ . JOUR  
PRVCA 76 011304

A=93

- <sup>93</sup>Y 2006CA38 NUCLEAR MOMENTS  
86,87,87m,88,88m,89,89m,90,90m,92,93,93m,94,95,96,96m,97,97m,98,98m,99,100,101,102 $\Upsilon$ ;  
measured resonance fluorescence spectra. Collinear laser spectroscopy.  
JOUR HYIND 171 143
- 2007CH07 NUCLEAR MOMENTS  
86,87,87m,88,88m,89,89m,90,90m,92,93,93m,94,95,96,96m,97,97m,98,98m,99,100,101,102 $\Upsilon$ ;  
measured isotope and isomer shifts,  $\mu$ , quadrupole moments, radii,  
deformation. Laser spectroscopy. JOUR PYLBB 645 133
- <sup>93</sup>Nb 2006WAZX NUCLEAR REACTIONS <sup>82</sup>Se(<sup>16</sup>O, 4np), E=100 MeV; measured  
prompt and delayed E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma$ -ray polarization. <sup>93</sup>Nb deduced  
high-spin levels, J,  $\pi$ , isomer T<sub>1/2</sub>. REPT  
CNS-REP-69,P25,Wakabayashi
- 2007CH20 NUCLEAR REACTIONS <sup>93</sup>Nb(t, t), E=12 MeV; measured  $\sigma(\theta)$ ;  
deduced optical model parameters. JOUR APOBB 38 181
- 2007OR01 NUCLEAR REACTIONS <sup>93</sup>Nb( $\gamma$ ,  $\gamma'$ ), E=2.75 MeV bremsstrahlung;  
measured E $\gamma$ , I $\gamma$ . <sup>93</sup>Nb(n, n' $\gamma$ ), E=2.1, 2.6 MeV; measured E $\gamma$ , I $\gamma$ ,  
DSA. <sup>94</sup>Zr(p, 2n), E=11.5-19 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, angular  
correlations. <sup>93</sup>Nb deduced levels, J,  $\pi$ ,  $\delta$ , T<sub>1/2</sub>. JOUR PRVCA 75  
014303

KEYNUMBERS AND KEYWORDS

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**A=93 (continued)**

<sup>93</sup>Tc      2007KH06      NUCLEAR REACTIONS Mo(p, xn)<sup>93</sup>Tc / <sup>93m</sup>Tc / <sup>94</sup>Tc / <sup>94m</sup>Tc, E=10-30 MeV; measured proton induced cross sections using stacked foil activation technique. JOUR KPSJA 50 1518

**A=94**

<sup>94</sup>Rb      2007RA23      ATOMIC MASSES <sup>85,86,87,88,89,90,91,92</sup>Br, <sup>94,95,96,97</sup>Rb; measured masses using the JYFLTRAP. Deduced Q-values. Compared results to previous measurements. JOUR ZAANE 32 87

            2007RAZY      ATOMIC MASSES <sup>85,86,87,88,89,90,91,92</sup>Br, <sup>94,95,96,97</sup>Rb; measured masses. Penning trap mass spectrometer. PREPRINT nucl-ex/0703017,3/12/2007

<sup>94</sup>Y      2006CA38      NUCLEAR MOMENTS <sup>86,87,87m,88,88m,89,89m,90,90m,92,93,93m,94,95,96,96m,97,97m,98,98m,99,100,101,102</sup>Y; measured resonance fluorescence spectra. Collinear laser spectroscopy. JOUR HYIND 171 143

            2007CH07      NUCLEAR MOMENTS <sup>86,87,87m,88,88m,89,89m,90,90m,92,93,93m,94,95,96,96m,97,97m,98,98m,99,100,101,102</sup>Y; measured isotope and isomer shifts,  $\mu$ , quadrupole moments, radii, deformation. Laser spectroscopy. JOUR PYLBB 645 133

<sup>94</sup>Zr      2007EL01      NUCLEAR REACTIONS <sup>94</sup>Zr(n, n' $\gamma$ ), E=2.3 MeV; measured E $\gamma$ , I $\gamma$ , DSA. <sup>94</sup>Zr deduced levels, J,  $\pi$ ,  $\delta$ , B(M1), B(E2), mixed-symmetry state. JOUR PRVCA 75 011301

            2007NA05      NUCLEAR REACTIONS <sup>91,93</sup>Zr(n,  $\gamma$ ), E=thermal; measured prompt E $\gamma$ , I $\gamma$ ; deduced  $\sigma$  lower limits. JOUR JNSTA 44 21

<sup>94</sup>Mo      2007BU23      NUCLEAR REACTIONS <sup>94</sup>Mo(e, e'), E=70 MeV; <sup>94</sup>Mo(p, p'), E=200 MeV; measured  $\sigma$  and excitation strengths. Compared results to model calculations. JOUR PRLTA 99 092503

            2007FU12      NUCLEAR REACTIONS <sup>94</sup>Mo(e, e'), E=70 MeV; <sup>94</sup>Mo(p, p')E=200 MeV; measured excitation energy spectra; deduced mixed-symmetry state features. Comparison with shell model, quasiparticle phonon model and interacting boson model. JOUR NUPAB 788 94c

<sup>94</sup>Tc      2007KH06      NUCLEAR REACTIONS Mo(p, xn)<sup>93</sup>Tc / <sup>93m</sup>Tc / <sup>94</sup>Tc / <sup>94m</sup>Tc, E=10-30 MeV; measured proton induced cross sections using stacked foil activation technique. JOUR KPSJA 50 1518

            2007SH01      NUCLEAR REACTIONS <sup>93</sup>Nb( $\alpha$ , n), ( $\alpha$ , 2n), ( $\alpha$ , 3n), E  $\approx$  10-40 MeV; measured excitation functions, isomer ratios; deduced role of pre-equilibrium neutron emission. Stacked-foil activation technique. JOUR ZAANE 31 43

<sup>94</sup>Ru      2007MI14      RADIOACTIVITY <sup>94</sup>Rh( $\beta^+$ ), (EC) [from <sup>58</sup>Ni(<sup>40</sup>Ca, n3p)]; measured  $\beta$ -delayed E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>94</sup>Ru deduced levels, J,  $\pi$ , configurations. Empirical shell model analysis. JOUR PRVCA 75 047302

<sup>94</sup>Rh      2007MI14      RADIOACTIVITY <sup>94</sup>Rh( $\beta^+$ ), (EC) [from <sup>58</sup>Ni(<sup>40</sup>Ca, n3p)]; measured  $\beta$ -delayed E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>94</sup>Ru deduced levels, J,  $\pi$ , configurations. Empirical shell model analysis. JOUR PRVCA 75 047302

<sup>94</sup>Ag      2007R016      NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>40</sup>Ca, 3np), E not given; measured E $p$ , E $\gamma$ ,  $p\gamma$ -coinc. Deduced spectroscopic factors and deformation parameters. JOUR APOBB 38 1121

KEYNUMBERS AND KEYWORDS

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**A=95**

<sup>95</sup> Kr	2007SI16	NUCLEAR REACTIONS <sup>239,241</sup> Pu(n, F), E=thermal; measured E $\gamma$ , I $\gamma$ from isomeric decays. <sup>95</sup> Kr, <sup>96</sup> Rb, <sup>98</sup> Zr deduced levels, J, $\pi$ . JOUR APOBB 38 1321
<sup>95</sup> Rb	2007RA23	ATOMIC MASSES <sup>85,86,87,88,89,90,91,92</sup> Br, <sup>94,95,96,97</sup> Rb; measured masses using the JYFLTRAP. Deduced Q-values. Compared results to previous measurements. JOUR ZAANE 32 87
	2007RAZY	ATOMIC MASSES <sup>85,86,87,88,89,90,91,92</sup> Br, <sup>94,95,96,97</sup> Rb; measured masses. Penning trap mass spectrometer. PREPRINT nucl-ex/0703017,3/12/2007
<sup>95</sup> Y	2006CA38	NUCLEAR MOMENTS <sup>86,87,87m,88,88m,89,89m,90,90m,92,93,93m,94,95,96,96m,97,97m,98,98m,99,100,101,102</sup> Y; measured resonance fluorescence spectra. Collinear laser spectroscopy. JOUR HYIND 171 143
	2007CH07	NUCLEAR MOMENTS <sup>86,87,87m,88,88m,89,89m,90,90m,92,93,93m,94,95,96,96m,97,97m,98,98m,99,100,101,102</sup> Y; measured isotope and isomer shifts, $\mu$ , quadrupole moments, radii, deformation. Laser spectroscopy. JOUR PYLBB 645 133
	2007HA32	ATOMIC MASSES <sup>95,96,97,98,99,100,101</sup> Y, <sup>101,102,103,104,105,106,107</sup> Nb; measured masses; analyzed two neutron separation energy. JYFLTRAP double Penning trap. Comparison with model predictions and previous data. JOUR NUPAB 793 20
<sup>95</sup> Zr	2007SZ05	NUCLEAR REACTIONS <sup>98</sup> Zr( <sup>40</sup> Ca, X), E=152 MeV; <sup>208</sup> Pb( <sup>90</sup> Zr, X), E=560 MeV; measured EF, I $\gamma$ , (particle) $\gamma$ -coinc. <sup>95</sup> Zr, <sup>42</sup> Ca deduced levels. JOUR PRVCA 76 024604
<sup>95</sup> Tc	2007BU30	RADIOACTIVITY <sup>95</sup> Ru( $\beta^+$ ) [from <sup>92</sup> Mo( $\alpha$ , n), E=17 MeV]; measured $\beta$ -delayed E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -c0inc. <sup>95</sup> Tc deduced levels, J, $\pi$ . Compared results to shell model calculations. JOUR ZAANE 32 123
	2007SH01	NUCLEAR REACTIONS <sup>93</sup> Nb( $\alpha$ , n), ( $\alpha$ , 2n), ( $\alpha$ , 3n), E $\approx$ 10-40 MeV; measured excitation functions, isomer ratios; deduced role of pre-equilibrium neutron emission. Stacked-foil activation technique. JOUR ZAANE 31 43
	2007SH35	RADIOACTIVITY <sup>95</sup> Ru( $\beta^+$ ), (EC) [from <sup>92</sup> Mo( $\alpha$ , n), E=17 MeV]; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coinc. <sup>95</sup> Tc deduced levels, J, $\pi$ . Compared results to model calculations. JOUR ZAANE 32 149
<sup>95</sup> Ru	2007BU30	RADIOACTIVITY <sup>95</sup> Ru( $\beta^+$ ) [from <sup>92</sup> Mo( $\alpha$ , n), E=17 MeV]; measured $\beta$ -delayed E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -c0inc. <sup>95</sup> Tc deduced levels, J, $\pi$ . Compared results to shell model calculations. JOUR ZAANE 32 123
	2007SH35	RADIOACTIVITY <sup>95</sup> Ru( $\beta^+$ ), (EC) [from <sup>92</sup> Mo( $\alpha$ , n), E=17 MeV]; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coinc. <sup>95</sup> Tc deduced levels, J, $\pi$ . Compared results to model calculations. JOUR ZAANE 32 149

**A=96**

<sup>96</sup> Rb	2007RA23	ATOMIC MASSES <sup>85,86,87,88,89,90,91,92</sup> Br, <sup>94,95,96,97</sup> Rb; measured masses using the JYFLTRAP. Deduced Q-values. Compared results to previous measurements. JOUR ZAANE 32 87
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KEYNUMBERS AND KEYWORDS

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A=96 (*continued*)

	2007RAZY	ATOMIC MASSES <sup>85,86,87,88,89,90,91,92</sup> Br, <sup>94,95,96,97</sup> Rb; measured masses. Penning trap mass spectrometer. PREPRINT nucl-ex/0703017,3/12/2007
	2007SI16	NUCLEAR REACTIONS <sup>239,241</sup> Pu(n, F), E=thermal; measured E $\gamma$ , I $\gamma$ from isomeric decays. <sup>95</sup> Kr, <sup>96</sup> Rb, <sup>98</sup> Zr deduced levels, J, $\pi$ . JOUR APOBB 38 1321
<sup>96</sup> Y	2006CA38	NUCLEAR MOMENTS <sup>86,87,87m,88,88m,89,89m,90,90m,92,93,93m,94,95,96,96m,97,97m,98,98m,99,100,101,102</sup> Y; measured resonance fluorescence spectra. Collinear laser spectroscopy. JOUR HYIND 171 143
	2007CH07	NUCLEAR MOMENTS <sup>86,87,87m,88,88m,89,89m,90,90m,92,93,93m,94,95,96,96m,97,97m,98,98m,99,100,101,102</sup> Y; measured isotope and isomer shifts, $\mu$ , quadrupole moments, radii, deformation. Laser spectroscopy. JOUR PYLBB 645 133
	2007HA32	ATOMIC MASSES <sup>95,96,97,98,99,100,101</sup> Y, <sup>101,102,103,104,105,106,107</sup> Nb; measured masses; analyzed two neutron separation energy. JYFLTRAP double Penning trap. Comparison with model predictions and previous data. JOUR NUPAB 793 20
<sup>96</sup> Zr	2006SH31	RADIOACTIVITY <sup>82</sup> Se, <sup>100</sup> Mo( $2\beta^-$ ); measured $0\nu\beta\beta$ -decay T <sub>1/2</sub> lower limit. <sup>82</sup> Se, <sup>96</sup> Zr, <sup>100</sup> Mo, <sup>116</sup> Cd, <sup>150</sup> Nd( $2\beta^-$ ); measured $2\nu\beta\beta$ -decay T <sub>1/2</sub> . JOUR PANUE 69 2090
	2006SH32	RADIOACTIVITY <sup>82</sup> Se, <sup>96</sup> Zr, <sup>100</sup> Mo, <sup>116</sup> Cd, <sup>150</sup> Nd( $2\beta^-$ ); measured $2\nu\beta\beta$ -decay T <sub>1/2</sub> . <sup>82</sup> Se, <sup>100</sup> Mo( $2\beta^-$ ); measured $0\nu\beta\beta$ -decay T <sub>1/2</sub> lower limits. JOUR BRSPE 70 731
<sup>96</sup> Mo	2006SH31	RADIOACTIVITY <sup>82</sup> Se, <sup>100</sup> Mo( $2\beta^-$ ); measured $0\nu\beta\beta$ -decay T <sub>1/2</sub> lower limit. <sup>82</sup> Se, <sup>96</sup> Zr, <sup>100</sup> Mo, <sup>116</sup> Cd, <sup>150</sup> Nd( $2\beta^-$ ); measured $2\nu\beta\beta$ -decay T <sub>1/2</sub> . JOUR PANUE 69 2090
	2006SH32	RADIOACTIVITY <sup>82</sup> Se, <sup>96</sup> Zr, <sup>100</sup> Mo, <sup>116</sup> Cd, <sup>150</sup> Nd( $2\beta^-$ ); measured $2\nu\beta\beta$ -decay T <sub>1/2</sub> . <sup>82</sup> Se, <sup>100</sup> Mo( $2\beta^-$ ); measured $0\nu\beta\beta$ -decay T <sub>1/2</sub> lower limits. JOUR BRSPE 70 731
	2007LE05	NUCLEAR REACTIONS <sup>96</sup> Mo(n, n' $\gamma$ ), E=2-4 MeV; measured E $\gamma$ , I $\gamma$ , DSA. <sup>96</sup> Mo deduced levels, J, $\pi$ , $\delta$ , T <sub>1/2</sub> , B(M1), B(E2), mixed-symmetry states. JOUR PRVCA 75 034318
<sup>96</sup> Tc	2006MU20	NUCLEAR REACTIONS <sup>93</sup> Nb( <sup>16</sup> O, X) <sup>103</sup> Ag / <sup>104</sup> Ag / <sup>105</sup> Ag / <sup>96</sup> Tc / <sup>98</sup> Rh / <sup>99</sup> Rh, E=96 MeV; measured production $\sigma$ , recoil range distributions; deduced contribution from incomplete fusion. JOUR RAACA 94 301
	2007SH01	NUCLEAR REACTIONS <sup>93</sup> Nb( $\alpha$ , n), ( $\alpha$ , 2n), ( $\alpha$ , 3n), E $\approx$ 10-40 MeV; measured excitation functions, isomer ratios; deduced role of pre-equilibrium neutron emission. Stacked-foil activation technique. JOUR ZAANE 31 43
<sup>96</sup> Pd	2007MY02	NUCLEAR REACTIONS <sup>9</sup> Be( <sup>107</sup> Ag, X) <sup>96</sup> Pd, E=750 MeV / nucleon; measured E $\gamma$ , I $\gamma$ from the decay of the isomeric states. Deduced isomeric ratios. JOUR APOBB 38 1277

KEYNUMBERS AND KEYWORDS

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**A=97**

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| <sup>97</sup> Rb | 2007RA23 | ATOMIC MASSES <sup>85,86,87,88,89,90,91,92</sup> Br, <sup>94,95,96,97</sup> Rb; measured masses using the JYFLTRAP. Deduced Q-values. Compared results to previous measurements. JOUR ZAANE 32 87  |
|                  | 2007RAZY | ATOMIC MASSES <sup>85,86,87,88,89,90,91,92</sup> Br, <sup>94,95,96,97</sup> Rb; measured masses. Penning trap mass spectrometer. PREPRINT nucl-ex/0703017,3/12/2007  |
| <sup>97</sup> Y  | 2006CA38 | NUCLEAR MOMENTS <sup>86,87,87m,88,88m,89,89m,90,90m,92,93,93m,94,95,96,96m,97,97m,98,98m,99,100,101,102</sup> Y; measured resonance fluorescence spectra. Collinear laser spectroscopy. JOUR HYIND 171 143   |
|                  | 2007BI14 | NUCLEAR MOMENTS <sup>97m</sup> Y, <sup>176,176m</sup> Yb, <sup>178,178m</sup> Hf; measured isomer shifts, $\mu$ , quadrupole moments, radii; deduced hyperfine structure coefficients. Laser spectroscopy. JOUR PYLBB 645 330  |
|                  | 2007CH07 | NUCLEAR MOMENTS <sup>86,87,87m,88,88m,89,89m,90,90m,92,93,93m,94,95,96,96m,97,97m,98,98m,99,100,101,102</sup> Y; measured isotope and isomer shifts, $\mu$ , quadrupole moments, radii, deformation. Laser spectroscopy. JOUR PYLBB 645 133  |
|                  | 2007HA32 | ATOMIC MASSES <sup>95,96,97,98,99,100,101</sup> Y, <sup>101,102,103,104,105,106,107</sup> Nb; measured masses; analyzed two neutron separation energy. JYFLTRAP double Penning trap. Comparison with model predictions and previous data. JOUR NUPAB 793 20  |
| <sup>97</sup> Ru | 2007CEZZ | NUCLEAR REACTIONS <sup>59</sup> Co( <sup>16</sup> O, X), E=400 MeV; measured Z=5-7 fragments $\sigma(E, \theta)$ . <sup>103</sup> Rh( <sup>12</sup> C, X) <sup>111m</sup> In / <sup>108</sup> In / <sup>105</sup> Ag / <sup>101</sup> Pd / <sup>102m</sup> Rh / <sup>97</sup> Ru, E $\approx$ 50-400 MeV; measured excitation functions. CONF Iguazu(Nuclear Physics and Applications) Proc,P207,Cerutti |
|                  | 2007DI06 | NUCLEAR REACTIONS Pd(p, X) <sup>105</sup> Ag / <sup>106m</sup> Ag / <sup>100</sup> Pd / <sup>101m</sup> Rh / <sup>97</sup> Ru, E=5-70 MeV; measured excitation functions. Activation method. JOUR JRNCD 272 231  |
| <sup>97</sup> Rh | 2007SEZW | NUCLEAR REACTIONS <sup>96</sup> Ru(p, $\gamma$ ), E=4.0-6.5 MeV; measured E $\gamma$ , I $\gamma$ ; <sup>97</sup> Rh deduced levels, J $\pi$ . CONF Voronezh(Nucleus-2007),Contrib,P101,Sergeev  |

**A=98**

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| <sup>98</sup> Y | 2006CA38 | NUCLEAR MOMENTS <sup>86,87,87m,88,88m,89,89m,90,90m,92,93,93m,94,95,96,96m,97,97m,98,98m,99,100,101,102</sup> Y; measured resonance fluorescence spectra. Collinear laser spectroscopy. JOUR HYIND 171 143  |
|                 | 2007CH07 | NUCLEAR MOMENTS <sup>86,87,87m,88,88m,89,89m,90,90m,92,93,93m,94,95,96,96m,97,97m,98,98m,99,100,101,102</sup> Y; measured isotope and isomer shifts, $\mu$ , quadrupole moments, radii, deformation. Laser spectroscopy. JOUR PYLBB 645 133                 |
|                 | 2007HA32 | ATOMIC MASSES <sup>95,96,97,98,99,100,101</sup> Y, <sup>101,102,103,104,105,106,107</sup> Nb; measured masses; analyzed two neutron separation energy. JYFLTRAP double Penning trap. Comparison with model predictions and previous data. JOUR NUPAB 793 20 |



KEYNUMBERS AND KEYWORDS

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**A=98 (continued)**

<sup>98</sup> Zr	2006SI36	RADIOACTIVITY <sup>98</sup> Zr(IT) [from <sup>239</sup> Pu(n, F)]; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin, T <sub>1/2</sub> . <sup>98</sup> Zr deduced levels, J, $\pi$ , configurations. JOUR PRVCA 74 064308
	2006SI36	NUCLEAR REACTIONS <sup>239</sup> Pu(n, F), E=thermal; measured prompt and delayed E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -, (particle) $\gamma$ -coin. <sup>98</sup> Zr deduced high-spin isomer, T <sub>1/2</sub> , configurations. Mass separator. JOUR PRVCA 74 064308
	2007SI16	NUCLEAR REACTIONS <sup>239,241</sup> Pu(n, F), E=thermal; measured E $\gamma$ , I $\gamma$ from isomeric decays. <sup>95</sup> Kr, <sup>96</sup> Rb, <sup>98</sup> Zr deduced levels, J, $\pi$ . JOUR APOBB 38 1321
<sup>98</sup> Mo	2007LA03	NUCLEAR REACTIONS <sup>168</sup> Er( <sup>30</sup> Si, F) <sup>98</sup> Mo / <sup>100</sup> Mo / <sup>102</sup> Mo, E=142 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin. <sup>98,100,102</sup> Mo deduced levels, J, $\pi$ . Euroball III array, Soft-octupole vibration model analysis. JOUR PRVCA 75 014314
	2007SC39	NUCLEAR REACTIONS <sup>92,98,100</sup> Mo( $\gamma$ , $\gamma'$ ), E $\approx$ 13.2 MeV bremsstrahlung; measured E $\gamma$ , I $\gamma$ , angular distributions, photoabsorption $\sigma$ . <sup>92</sup> Mo( $\gamma$ , n), ( $\gamma$ , p), ( $\gamma$ , $\alpha$ ), E $\approx$ 10-16.5 MeV bremsstrahlung; measured activation yields and compared with QRPA calculations. JOUR NUPAB 788 331c
<sup>98</sup> Rh	2006MU20	NUCLEAR REACTIONS <sup>93</sup> Nb( <sup>16</sup> O, X) <sup>103</sup> Ag / <sup>104</sup> Ag / <sup>105</sup> Ag / <sup>96</sup> Tc / <sup>98</sup> Rh / <sup>99</sup> Rh, E=96 MeV; measured production $\sigma$ , recoil range distributions; deduced contribution from incomplete fusion. JOUR RAACA 94 301

**A=99**

<sup>99</sup> Y	2006CA38	NUCLEAR MOMENTS 86,87,87m,88,88m,89,89m,90,90m,92,93,93m,94,95,96,96m,97,97m,98,98m,99,100,101,102Y; measured resonance fluorescence spectra. Collinear laser spectroscopy. JOUR HYIND 171 143
	2007CH07	NUCLEAR MOMENTS 86,87,87m,88,88m,89,89m,90,90m,92,93,93m,94,95,96,96m,97,97m,98,98m,99,100,101,102Y; measured isotope and isomer shifts, $\mu$ , quadrupole moments, radii, deformation. Laser spectroscopy. JOUR PYLBB 645 133
	2007HA32	ATOMIC MASSES <sup>95,96,97,98,99,100,101</sup> Y, <sup>101,102,103,104,105,106,107</sup> Nb; measured masses; analyzed two neutron separation energy. JYFLTRAP double Penning trap. Comparison with model predictions and previous data. JOUR NUPAB 793 20
<sup>99</sup> Mo	2007J013	NUCLEAR REACTIONS <sup>27</sup> Al( <sup>178</sup> Hf, X), E=1150 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin. <sup>99</sup> Mo deduced levels, J, $\pi$ , half-life, isomer, band structure. JOUR PRVCA 76 047303
<sup>99</sup> Tc	2007YA02	RADIOACTIVITY <sup>51</sup> Cr, <sup>55</sup> Fe, <sup>67</sup> Ga, <sup>111</sup> In, <sup>133</sup> Ba, <sup>201</sup> Tl(EC); <sup>99m</sup> Tc(IT), ( $\beta^-$ ); <sup>131</sup> I, <sup>133</sup> Xe, <sup>137</sup> Cs( $\beta^-$ ); <sup>226</sup> Ra( $\alpha$ ); measured K X-ray intensity ratios following decay and photoionization. JOUR NIMBE 254 182
<sup>99</sup> Ru	2007YA02	RADIOACTIVITY <sup>51</sup> Cr, <sup>55</sup> Fe, <sup>67</sup> Ga, <sup>111</sup> In, <sup>133</sup> Ba, <sup>201</sup> Tl(EC); <sup>99m</sup> Tc(IT), ( $\beta^-$ ); <sup>131</sup> I, <sup>133</sup> Xe, <sup>137</sup> Cs( $\beta^-$ ); <sup>226</sup> Ra( $\alpha$ ); measured K X-ray intensity ratios following decay and photoionization. JOUR NIMBE 254 182



KEYNUMBERS AND KEYWORDS

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**A=99 (continued)**

- <sup>99</sup>Rh      2006MU20      NUCLEAR REACTIONS <sup>93</sup>Nb(<sup>16</sup>O, X)<sup>103</sup>Ag / <sup>104</sup>Ag / <sup>105</sup>Ag / <sup>96</sup>Tc / <sup>98</sup>Rh / <sup>99</sup>Rh, E=96 MeV; measured production  $\sigma$ , recoil range distributions; deduced contribution from incomplete fusion. JOUR RAACA 94 301
- 2007NG01      NUCLEAR REACTIONS <sup>45</sup>Sc( $\gamma$ , n), <sup>103</sup>Rh( $\gamma$ , 4n), E=65 MeV / bremsstrahlung; Ti( $\gamma$ , X)<sup>44</sup>Sc, E=65 MeV / bremsstrahlung; Fe( $\gamma$ , X)<sup>52</sup>Mn, E=65 MeV / bremsstrahlung; measured  $\sigma$ , isomer ratios. Activation method. JOUR KPSJA 50 417

**A=100**

- <sup>100</sup>Y      2006CA38      NUCLEAR MOMENTS  
86,87,87m,88,88m,89,89m,90,90m,92,93,93m,94,95,96,96m,97,97m,98,98m,99,100,101,102Y;  
measured resonance fluorescence spectra. Collinear laser spectroscopy. JOUR HYIND 171 143
- 2007CH07      NUCLEAR MOMENTS  
86,87,87m,88,88m,89,89m,90,90m,92,93,93m,94,95,96,96m,97,97m,98,98m,99,100,101,102Y;  
measured isotope and isomer shifts,  $\mu$ , quadrupole moments, radii, deformation. Laser spectroscopy. JOUR PYLBB 645 133
- 2007HA32      ATOMIC MASSES <sup>95,96,97,98,99,100,101</sup>Y, <sup>101,102,103,104,105,106,107</sup>Nb;  
measured masses; analyzed two neutron separation energy. JYFLTRAP double Penning trap. Comparison with model predictions and previous data. JOUR NUPAB 793 20
- <sup>100</sup>Zr      2007RI01      RADIOACTIVITY <sup>100,102,104</sup>Zr( $\beta^-$ ); measured  $\beta$ -delayed E $\gamma$ , I $\gamma$ ; deduced Q $\beta$ , log ft. <sup>100,102,104</sup>Nb deduced levels, J,  $\pi$ . Penning trap. JOUR ZAANE 31 1
- 2007RI01      ATOMIC MASSES <sup>100,102,104</sup>Zr, <sup>100,102,104</sup>Nb; measured masses. Penning trap. JOUR ZAANE 31 1
- <sup>100</sup>Nb      2007RI01      RADIOACTIVITY <sup>100,102,104</sup>Zr( $\beta^-$ ); measured  $\beta$ -delayed E $\gamma$ , I $\gamma$ ; deduced Q $\beta$ , log ft. <sup>100,102,104</sup>Nb deduced levels, J,  $\pi$ . Penning trap. JOUR ZAANE 31 1
- 2007RI01      ATOMIC MASSES <sup>100,102,104</sup>Zr, <sup>100,102,104</sup>Nb; measured masses. Penning trap. JOUR ZAANE 31 1
- <sup>100</sup>Mo      2006CH64      NUCLEAR REACTIONS <sup>100</sup>Mo(t, t), E=12 MeV; measured  $\sigma(\theta)$ ; deduced optical model parameters. JOUR APSVC 56 491
- 2006SH31      RADIOACTIVITY <sup>82</sup>Se, <sup>100</sup>Mo( $2\beta^-$ ); measured  $0\nu\beta\beta$ -decay T<sub>1/2</sub> lower limit. <sup>82</sup>Se, <sup>96</sup>Zr, <sup>100</sup>Mo, <sup>116</sup>Cd, <sup>150</sup>Nd( $2\beta^-$ ); measured  $2\nu\beta\beta$ -decay T<sub>1/2</sub>. JOUR PANUE 69 2090
- 2006SH32      RADIOACTIVITY <sup>82</sup>Se, <sup>96</sup>Zr, <sup>100</sup>Mo, <sup>116</sup>Cd, <sup>150</sup>Nd( $2\beta^-$ ); measured  $2\nu\beta\beta$ -decay T<sub>1/2</sub>. <sup>82</sup>Se, <sup>100</sup>Mo( $2\beta^-$ ); measured  $0\nu\beta\beta$ -decay T<sub>1/2</sub> lower limits. JOUR BRSPE 70 731
- 2007LA03      NUCLEAR REACTIONS <sup>168</sup>Er(<sup>30</sup>Si, F)<sup>98</sup>Mo / <sup>100</sup>Mo / <sup>102</sup>Mo, E=142 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>98,100,102</sup>Mo deduced levels, J,  $\pi$ . Euroball III array, Soft-octupole vibration model analysis. JOUR PRVCA 75 014314

KEYNUMBERS AND KEYWORDS

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**A=100 (continued)**

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|                   | 2007SC39 | NUCLEAR REACTIONS $^{92,98,100}\text{Mo}(\gamma, \gamma')$ , $E \approx 13.2$ MeV<br>bremsstrahlung; measured $E\gamma$ , $I\gamma$ , angular distributions,<br>photoabsorption $\sigma$ . $^{92}\text{Mo}(\gamma, n)$ , $(\gamma, p)$ , $(\gamma, \alpha)$ , $E \approx 10$ -16.5 MeV<br>bremsstrahlung; measured activation yields and compared with QRPA<br>calculations. JOUR NUPAB 788 331c |
| $^{100}\text{Ru}$ | 2006SH31 | RADIOACTIVITY $^{82}\text{Se}$ , $^{100}\text{Mo}(2\beta^-)$ ; measured $0\nu\beta\beta$ -decay $T_{1/2}$<br>lower limit. $^{82}\text{Se}$ , $^{96}\text{Zr}$ , $^{100}\text{Mo}$ , $^{116}\text{Cd}$ , $^{150}\text{Nd}(2\beta^-)$ ; measured<br>$2\nu\beta\beta$ -decay $T_{1/2}$ . JOUR PANUE 69 2090   |
|                   | 2006SH32 | RADIOACTIVITY $^{82}\text{Se}$ , $^{96}\text{Zr}$ , $^{100}\text{Mo}$ , $^{116}\text{Cd}$ , $^{150}\text{Nd}(2\beta^-)$ ; measured<br>$2\nu\beta\beta$ -decay $T_{1/2}$ . $^{82}\text{Se}$ , $^{100}\text{Mo}(2\beta^-)$ ; measured $0\nu\beta\beta$ -decay $T_{1/2}$ lower<br>limits. JOUR BRSPE 70 731   |
| $^{100}\text{Pd}$ | 2007DI06 | NUCLEAR REACTIONS $\text{Pd}(p, X)^{105}\text{Ag} / ^{106m}\text{Ag} / ^{100}\text{Pd} / ^{101m}\text{Rh} /$<br>$^{97}\text{Ru}$ , $E=5$ -70 MeV; measured excitation functions. Activation method.<br>JOUR JRNC 272 231   |
| $^{100}\text{Cd}$ | 2006KAZR | RADIOACTIVITY $^{101}\text{Sn}(\beta^+p)$ [from $^{50}\text{Cr}(^{58}\text{Ni}, xnyp)$ ]; measured<br>$\beta$ -delayed proton spectrum. $^{101}\text{Sn}$ deduced ground-state $J$ , $\pi$ . REPT<br>GSI 2006-1,P152,Kavatsyuk   |
|                   | 2007H022 | NUCLEAR REACTIONS $\text{Be}(^{136}\text{Xe}, X)$ , $E=120$ MeV / nucleon;<br>measured $E\gamma$ , $I\gamma$ . $^{125}\text{Cd}$ , $^{126}\text{Cd}$ , $^{127}\text{Cd}$ , $^{128}\text{Cd}$ deduced levels, $J$ , $\pi$ ,<br>isomers, half-lives, band structure; $^{100,115,117,119,121,122,123,124}\text{Cd}$ ; level<br>systematics. JOUR PRVCA 76 044324                                    |
|                   | 2007KA15 | RADIOACTIVITY $^{101}\text{Sn}(\beta^+)$ , $(EC)$ , $(\beta^+p)$ [from $^{50}\text{Cr}(^{58}\text{Ni}, 3n\alpha)$ ];<br>measured $\beta$ -delayed $E_p$ , $E\gamma$ , $\gamma\gamma$ -coin, $T_{1/2}$ . $^{101}\text{Sn}$ deduced ground-state<br>$J$ , $\pi$ . $^{101}\text{In}$ deduced transitions. Mass separator. JOUR ZAANE 31 319   |

**A=101**

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|-------------------|----------|--|
| $^{101}\text{Y}$  | 2006CA38 | NUCLEAR MOMENTS<br>$^{86,87,87m,88,88m,89,89m,90,90m,92,93,93m,94,95,96,96m,97,97m,98,98m,99,100,101,102}\text{Y}$ ;<br>measured resonance fluorescence spectra. Collinear laser spectroscopy.<br>JOUR HYIND 171 143   |
|                   | 2007CH07 | NUCLEAR MOMENTS<br>$^{86,87,87m,88,88m,89,89m,90,90m,92,93,93m,94,95,96,96m,97,97m,98,98m,99,100,101,102}\text{Y}$ ;<br>measured isotope and isomer shifts, $\mu$ , quadrupole moments, radii,<br>deformation. Laser spectroscopy. JOUR PYLBB 645 133                  |
|                   | 2007HA32 | ATOMIC MASSES $^{95,96,97,98,99,100,101}\text{Y}$ , $^{101,102,103,104,105,106,107}\text{Nb}$ ;<br>measured masses; analyzed two neutron separation energy.<br>JYFLTRAP double Penning trap. Comparison with model predictions<br>and previous data. JOUR NUPAB 793 20 |
| $^{101}\text{Nb}$ | 2007HA32 | ATOMIC MASSES $^{95,96,97,98,99,100,101}\text{Y}$ , $^{101,102,103,104,105,106,107}\text{Nb}$ ;<br>measured masses; analyzed two neutron separation energy.<br>JYFLTRAP double Penning trap. Comparison with model predictions<br>and previous data. JOUR NUPAB 793 20 |
| $^{101}\text{Rh}$ | 2007DI06 | NUCLEAR REACTIONS $\text{Pd}(p, X)^{105}\text{Ag} / ^{106m}\text{Ag} / ^{100}\text{Pd} / ^{101m}\text{Rh} /$<br>$^{97}\text{Ru}$ , $E=5$ -70 MeV; measured excitation functions. Activation method.<br>JOUR JRNC 272 231   |

KEYNUMBERS AND KEYWORDS

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**A=101 (continued)**

- 2007TI03 NUCLEAR REACTIONS Pb,  $^{208}\text{Pb}$ ,  $^{209}\text{Bi}(p, X)^7\text{Be}$  /  $^{24}\text{Na}$  /  $^{59}\text{Fe}$  /  $^{86}\text{Rb}$  /  $^{101m}\text{Rh}$  /  $^{173}\text{Lu}$  /  $^{190}\text{Ir}$  /  $^{192}\text{Ir}$  /  $^{196}\text{Au}$  /  $^{199}\text{Tl}$  /  $^{200}\text{Tl}$  /  $^{203}\text{Pb}$ , E=0.04-2.6 GeV; measured excitation functions. Comparison with model predictions and previous data. JOUR PRAMC 68 289
- $^{101}\text{Pd}$  2007CEZZ NUCLEAR REACTIONS  $^{59}\text{Co}(^{16}\text{O}, X)$ , E=400 MeV; measured Z=5-7 fragments  $\sigma(E, \theta)$ .  $^{103}\text{Rh}(^{12}\text{C}, X)^{111m}\text{In}$  /  $^{108}\text{In}$  /  $^{105}\text{Ag}$  /  $^{101}\text{Pd}$  /  $^{102m}\text{Rh}$  /  $^{97}\text{Ru}$ , E  $\approx$  50-400 MeV; measured excitation functions. CONF Iguazu(Nuclear Physics and Applications) Proc,P207,Cerutti
- $^{101}\text{In}$  2007KA15 RADIOACTIVITY  $^{101}\text{Sn}(\beta^+)$ , (EC), ( $\beta^+p$ ) [from  $^{50}\text{Cr}(^{58}\text{Ni}, 3n\alpha)$ ]; measured  $\beta$ -delayed Ep, E $\gamma$ ,  $\gamma\gamma$ -coin, T $_{1/2}$ .  $^{101}\text{Sn}$  deduced ground-state J,  $\pi$ .  $^{101}\text{In}$  deduced transitions. Mass separator. JOUR ZAANE 31 319
- $^{101}\text{Sn}$  2006KAZR RADIOACTIVITY  $^{101}\text{Sn}(\beta^+p)$  [from  $^{50}\text{Cr}(^{58}\text{Ni}, xnyp)$ ]; measured  $\beta$ -delayed proton spectrum.  $^{101}\text{Sn}$  deduced ground-state J,  $\pi$ . REPT GSI 2006-1,P152,Kavatsyuk
- 2007KA15 RADIOACTIVITY  $^{101}\text{Sn}(\beta^+)$ , (EC), ( $\beta^+p$ ) [from  $^{50}\text{Cr}(^{58}\text{Ni}, 3n\alpha)$ ]; measured  $\beta$ -delayed Ep, E $\gamma$ ,  $\gamma\gamma$ -coin, T $_{1/2}$ .  $^{101}\text{Sn}$  deduced ground-state J,  $\pi$ .  $^{101}\text{In}$  deduced transitions. Mass separator. JOUR ZAANE 31 319
- 2007KA15 NUCLEAR REACTIONS  $^{50}\text{Cr}(^{58}\text{Ni}, 3n\alpha)$ , E=4.9, 5.2 MeV / nucleon; measured delayed Ep; deduced  $\sigma$ . Mass separator. JOUR ZAANE 31 319
- 2007SE04 NUCLEAR REACTIONS  $^{46}\text{Ti}(^{58}\text{Ni}, X)^{101}\text{Sn}$ , E=192 MeV; measured E $\gamma$ , Ep, p $\gamma$ -coinc.  $^{101}\text{Sn}$  deduced levels and relative single particle energies. JOUR PRLTA 99 022504

**A=102**

- $^{102}\text{Y}$  2006CA38 NUCLEAR MOMENTS  $^{86,87,87m,88,88m,89,89m,90,90m,92,93,93m,94,95,96,96m,97,97m,98,98m,99,100,101,102}\text{Y}$ ; measured resonance fluorescence spectra. Collinear laser spectroscopy. JOUR HYIND 171 143
- 2007CH07 NUCLEAR MOMENTS  $^{86,87,87m,88,88m,89,89m,90,90m,92,93,93m,94,95,96,96m,97,97m,98,98m,99,100,101,102}\text{Y}$ ; measured isotope and isomer shifts,  $\mu$ , quadrupole moments, radii, deformation. Laser spectroscopy. JOUR PYLBB 645 133
- $^{102}\text{Zr}$  2007RI01 RADIOACTIVITY  $^{100,102,104}\text{Zr}(\beta^-)$ ; measured  $\beta$ -delayed E $\gamma$ , I $\gamma$ ; deduced Q $\beta$ , log ft.  $^{100,102,104}\text{Nb}$  deduced levels, J,  $\pi$ . Penning trap. JOUR ZAANE 31 1
- 2007RI01 ATOMIC MASSES  $^{100,102,104}\text{Zr}$ ,  $^{100,102,104}\text{Nb}$ ; measured masses. Penning trap. JOUR ZAANE 31 1
- $^{102}\text{Nb}$  2007HA32 ATOMIC MASSES  $^{95,96,97,98,99,100,101}\text{Y}$ ,  $^{101,102,103,104,105,106,107}\text{Nb}$ ; measured masses; analyzed two neutron separation energy. JYFLTRAP double Penning trap. Comparison with model predictions and previous data. JOUR NUPAB 793 20
- 2007RI01 RADIOACTIVITY  $^{100,102,104}\text{Zr}(\beta^-)$ ; measured  $\beta$ -delayed E $\gamma$ , I $\gamma$ ; deduced Q $\beta$ , log ft.  $^{100,102,104}\text{Nb}$  deduced levels, J,  $\pi$ . Penning trap. JOUR ZAANE 31 1
- 2007RI01 ATOMIC MASSES  $^{100,102,104}\text{Zr}$ ,  $^{100,102,104}\text{Nb}$ ; measured masses. Penning trap. JOUR ZAANE 31 1

KEYNUMBERS AND KEYWORDS

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**A=102 (continued)**

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| $^{102}\text{Mo}$ | 2007LA03 | NUCLEAR REACTIONS $^{168}\text{Er}(^{30}\text{Si}, \text{F})^{98}\text{Mo} / ^{100}\text{Mo} / ^{102}\text{Mo}$ , E=142 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin. $^{98,100,102}\text{Mo}$ deduced levels, J, $\pi$ . Euroball III array, Soft-octupole vibration model analysis. JOUR PRVCA 75 014314  |
| $^{102}\text{Rh}$ | 2007CEZZ | NUCLEAR REACTIONS $^{59}\text{Co}(^{16}\text{O}, \text{X})$ , E=400 MeV; measured Z=5-7 fragments $\sigma(E, \theta)$ . $^{103}\text{Rh}(^{12}\text{C}, \text{X})^{111m}\text{In} / ^{108}\text{In} / ^{105}\text{Ag} / ^{101}\text{Pd} / ^{102m}\text{Rh} / ^{97}\text{Ru}$ , E $\approx$ 50-400 MeV; measured excitation functions. CONF Iguazu(Nuclear Physics and Applications) Proc,P207,Cerutti |
| $^{102}\text{Cd}$ | 2007B017 | NUCLEAR REACTIONS $^{92}\text{Mo}(^{12}\text{C}, 2n)$ , E=41 MeV; $^{94}\text{Mo}(^{12}\text{C}, 2n)$ , E=42 MeV; measured $E\gamma$ , $I\gamma$ and lifetimes for low lying states using recoil distance Doppler shift technique. Deduced B(E2). JOUR PRVCA 75 054311  |

**A=103**

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| $^{103}\text{Nb}$ | 2007HA32 | ATOMIC MASSES $^{95,96,97,98,99,100,101}\text{Y}$ , $^{101,102,103,104,105,106,107}\text{Nb}$ ; measured masses; analyzed two neutron separation energy. JYFLTRAP double Penning trap. Comparison with model predictions and previous data. JOUR NUPAB 793 20  |
| $^{103}\text{Rh}$ | 2006CH61 | NUCLEAR REACTIONS $^{103}\text{Rh}(\gamma, \gamma')$ , E=6 MeV bremsstrahlung; measured prompt and delayed $E\gamma$ , $I\gamma$ ; deduced isomer yield. Gravitational effects discussed. JOUR HYIND 167 833   |
| $^{103}\text{Pd}$ | 2006R050 | NUCLEAR REACTIONS $^{104}\text{Pd}(d, t)$ , E=15 MeV; measured triton spectra, $\sigma(\theta)$ . $^{103}\text{Pd}$ deduced low lying levels, J, $\pi$ . JOUR BJPHE 36 1363  |
| $^{103}\text{Ag}$ | 2006MU20 | NUCLEAR REACTIONS $^{93}\text{Nb}(^{16}\text{O}, \text{X})^{103}\text{Ag} / ^{104}\text{Ag} / ^{105}\text{Ag} / ^{96}\text{Tc} / ^{98}\text{Rh} / ^{99}\text{Rh}$ , E=96 MeV; measured production $\sigma$ , recoil range distributions; deduced contribution from incomplete fusion. JOUR RAACA 94 301                    |
| $^{103}\text{Cd}$ | 2007CH74 | NUCLEAR REACTIONS $^{72}\text{Ge}(^{35}\text{Cl}, 3np)$ , E=135 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, $\gamma\gamma(\theta)$ , multipolarities. $^{103}\text{Cd}$ deduced levels, J, $\pi$ , angular momentum, bands; calculated shell-model configurations. Gammasphere array. JOUR PRVCA 76 044327 |
|                   | 2007CHZS | NUCLEAR REACTIONS $^{72}\text{Ge}(^{35}\text{Cl}, 3np)$ , E=135 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coinc. $^{103}\text{Cd}$ deduced levels, J, $\pi$ , multipolarities. PREPRINT arXiv:0709.1702v1 [nucl-ex]  |

**A=104**

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| $^{104}\text{Zr}$ | 2007G021 | RADIOACTIVITY $^{252}\text{Cf}(\text{SF})$ ; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, fission fragment and light charged particle yields. $^{108,110,112}\text{Ru}$ deduced levels, J, $\pi$ . $^{104}\text{Zr}$ , $^{106}\text{Mo}$ , $^{148}\text{Ce}(\text{IT})$ ; measured $T_{1/2}$ , B(E2). Gammasphere array. JOUR NUPAB 787 231c |
|                   | 2007RI01 | RADIOACTIVITY $^{100,102,104}\text{Zr}(\beta^-)$ ; measured $\beta$ -delayed $E\gamma$ , $I\gamma$ ; deduced Q $\beta$ , log ft. $^{100,102,104}\text{Nb}$ deduced levels, J, $\pi$ . Penning trap. JOUR ZAANE 31 1  |

KEYNUMBERS AND KEYWORDS

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**A=104 (continued)**

	2007RI01	ATOMIC MASSES $^{100,102,104}\text{Zr}$ , $^{100,102,104}\text{Nb}$ ; measured masses. Penning trap. JOUR ZAANE 31 1
$^{104}\text{Nb}$	2007HA32	ATOMIC MASSES $^{95,96,97,98,99,100,101}\text{Y}$ , $^{101,102,103,104,105,106,107}\text{Nb}$ ; measured masses; analyzed two neutron separation energy. JYFLTRAP double Penning trap. Comparison with model predictions and previous data. JOUR NUPAB 793 20
	2007RI01	RADIOACTIVITY $^{100,102,104}\text{Zr}(\beta^-)$ ; measured $\beta$ -delayed $E\gamma$ , $I\gamma$ ; deduced $Q\beta$ , log ft. $^{100,102,104}\text{Nb}$ deduced levels, J, $\pi$ . Penning trap. JOUR ZAANE 31 1
	2007RI01	ATOMIC MASSES $^{100,102,104}\text{Zr}$ , $^{100,102,104}\text{Nb}$ ; measured masses. Penning trap. JOUR ZAANE 31 1
$^{104}\text{Pd}$	2007HU03	NUCLEAR REACTIONS $^{104}\text{Pd}(^{70}\text{Se}, ^{70}\text{Se}')$ , $E=206$ MeV; measured $E\gamma$ , $I\gamma$ , (particle) $\gamma$ -coin following projectile Coulomb excitation. $^{70}\text{Se}$ deduced prolate deformation. JOUR PRLTA 98 072501
	2007SP04	NUCLEAR REACTIONS $^{62}\text{Ni}(\alpha, \gamma)$ , $E=5, 9$ MeV; $^{103}\text{Rh}(p, \gamma)$ , $E=3, 5$ MeV; measured $E\gamma$ , $I\gamma$ . Deduced total cross sections. Compared results to model calculations. JOUR PRVCA 76 015802
$^{104}\text{Ag}$	2006MU20	NUCLEAR REACTIONS $^{93}\text{Nb}(^{16}\text{O}, X)^{103}\text{Ag} / ^{104}\text{Ag} / ^{105}\text{Ag} / ^{96}\text{Tc} / ^{98}\text{Rh} / ^{99}\text{Rh}$ , $E=96$ MeV; measured production $\sigma$ , recoil range distributions; deduced contribution from incomplete fusion. JOUR RAACA 94 301
$^{104}\text{Cd}$	2007B017	NUCLEAR REACTIONS $^{92}\text{Mo}(^{12}\text{C}, 2n)$ , $E=41$ MeV; $^{94}\text{Mo}(^{12}\text{C}, 2n)$ , $E=42$ MeV; measured $E\gamma$ , $I\gamma$ and lifetimes for low lying states using recoil distance Doppler shift technique. Deduced $B(E2)$ . JOUR PRVCA 75 054311

**A=105**

$^{105}\text{Nb}$	2007HA32	ATOMIC MASSES $^{95,96,97,98,99,100,101}\text{Y}$ , $^{101,102,103,104,105,106,107}\text{Nb}$ ; measured masses; analyzed two neutron separation energy. JYFLTRAP double Penning trap. Comparison with model predictions and previous data. JOUR NUPAB 793 20
$^{105}\text{Mo}$	2006PI14	RADIOACTIVITY $^{248}\text{Cm}(\text{SF})$ ; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin. $^{105}\text{Mo}$ deduced levels, J, $\pi$ , rotational bands, configurations, triaxial deformation. Eurogam2 array. JOUR PRVCA 74 064304
$^{105}\text{Ag}$	2006MU20	NUCLEAR REACTIONS $^{93}\text{Nb}(^{16}\text{O}, X)^{103}\text{Ag} / ^{104}\text{Ag} / ^{105}\text{Ag} / ^{96}\text{Tc} / ^{98}\text{Rh} / ^{99}\text{Rh}$ , $E=96$ MeV; measured production $\sigma$ , recoil range distributions; deduced contribution from incomplete fusion. JOUR RAACA 94 301
	2006ZHYZ	NUCLEAR REACTIONS $^{96}\text{Zr}(^{19}\text{F}, \text{xny}\nu\alpha)^{107}\text{Cd} / ^{108}\text{Cd} / ^{109}\text{Cd} / ^{105}\text{Ag} / ^{106}\text{Ag} / ^{107}\text{Ag}$ , $E=5.45, 6.0$ MeV / nucleon; measured $E\gamma$ , $I\gamma$ , (charged particle) $\gamma$ -coin, $\gamma$ -ray yields. REPT CNS-REP-69,P12,Zheng
	2007CEZZ	NUCLEAR REACTIONS $^{59}\text{Co}(^{16}\text{O}, X)$ , $E=400$ MeV; measured $Z=5-7$ fragments $\sigma(E, \theta)$ . $^{103}\text{Rh}(^{12}\text{C}, X)^{111m}\text{In} / ^{108}\text{In} / ^{105}\text{Ag} / ^{101}\text{Pd} / ^{102m}\text{Rh} / ^{97}\text{Ru}$ , $E \approx 50-400$ MeV; measured excitation functions. CONF Iguazu(Nuclear Physics and Applications) Proc,P207,Cerutti

KEYNUMBERS AND KEYWORDS

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**A=105 (continued)**

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|----------------------------|---|
| 2007DI06                   | NUCLEAR REACTIONS Pd(p, X) <sup>105</sup> Ag / <sup>106m</sup> Ag / <sup>100</sup> Pd / <sup>101m</sup> Rh / <sup>97</sup> Ru, E=5-70 MeV; measured excitation functions. Activation method. JOUR JRNCD 272 231       |
| 2007TI07                   | NUCLEAR REACTIONS <sup>100</sup> Mo( <sup>10</sup> B, 5n), E=58, 64 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coinc. <sup>105</sup> Ag deduced levels, J, $\pi$ , multipolarities. JOUR PRVCA 76 024307 |
| <sup>105</sup> Sb 2007MA35 | RADIOACTIVITY <sup>109</sup> I( $\alpha$ ); measured E $\alpha$ , Q $\alpha$ and branching ratio. JOUR PRLTA 98 212501  |

**A=106**

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|----------------------------|---|
| <sup>106</sup> Nb 2007HA32 | ATOMIC MASSES <sup>95,96,97,98,99,100,101</sup> Y, <sup>101,102,103,104,105,106,107</sup> Nb; measured masses; analyzed two neutron separation energy. JYFLTRAP double Penning trap. Comparison with model predictions and previous data. JOUR NUPAB 793 20   |
| <sup>106</sup> Mo 2007G021 | RADIOACTIVITY <sup>252</sup> Cf(SF); measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin, fission fragment and light charged particle yields. <sup>108,110,112</sup> Ru deduced levels, J, $\pi$ . <sup>104</sup> Zr, <sup>106</sup> Mo, <sup>148</sup> Ce(IT); measured T <sub>1/2</sub> , B(E2). Gammasphere array. JOUR NUPAB 787 231c   |
| <sup>106</sup> Tc 2007HA20 | ATOMIC MASSES <sup>106,107,108,109,110</sup> Tc, <sup>106,107,108,109,110,111,112,113,114,115</sup> Ru, <sup>108,109,110,111,112,113,114,115,116,117,118</sup> Rh, <sup>112,113,114,115,116,117,118,119,120</sup> Pd; measured masses using the JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302  |
| <sup>106</sup> Ru 2007HA20 | ATOMIC MASSES <sup>106,107,108,109,110</sup> Tc, <sup>106,107,108,109,110,111,112,113,114,115</sup> Ru, <sup>108,109,110,111,112,113,114,115,116,117,118</sup> Rh, <sup>112,113,114,115,116,117,118,119,120</sup> Pd; measured masses using the JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302  |
| <sup>106</sup> Pd 2006BR32 | RADIOACTIVITY <sup>106</sup> Cd( $\beta^+$ EC), (2EC); measured $2\nu\beta\beta$ -decay T <sub>1/2</sub> lower limits. JOUR BRSPE 70 316  |
| 2006RU15                   | RADIOACTIVITY <sup>106</sup> Cd( $\beta^+$ EC), (2EC); measured $2\nu$ -accompanied decay T <sub>1/2</sub> lower limits. JOUR PANUE 69 2117   |
| 2007BL15                   | RADIOACTIVITY <sup>70</sup> Zn, <sup>116</sup> Cd, <sup>128,130</sup> Te( $\beta^-\beta^-$ ); <sup>64</sup> Zn, <sup>106</sup> Cd, <sup>120</sup> Te( $\beta^+\beta^+$ ); measured summed E $\beta$ . Deduced upper limits for T <sub>1/2</sub> . JOUR PRVCA 76 025501  |
| 2007R011                   | NUCLEAR REACTIONS <sup>105</sup> Pd(n, $\gamma$ ), E=10-90 keV; measured capture cross sections relative to standard capture cross sections for <sup>197</sup> Au. JOUR KPSJA 50 1598   |
| 2007RUZY                   | RADIOACTIVITY <sup>106</sup> Cd( $\beta^+$ EC), (2EC); measured $\gamma\gamma$ , x $\gamma$ -coin; deduced T <sub>1/2</sub> lower limits for $2\nu$ EC / EC decay, for $2\nu\beta^+$ / EC and $2\nu$ EC / EC branches to ground and excited states. Underground laboratory, TGV-2spectrometer. CONF   |
| <sup>106</sup> Ag 2006ZHZY | Voronezh(Nucleus-2007),Contrib,P181,Rukhadze<br>NUCLEAR REACTIONS <sup>96</sup> Zr( <sup>19</sup> F, xnypz $\alpha$ ) <sup>107</sup> Cd / <sup>108</sup> Cd / <sup>109</sup> Cd / <sup>105</sup> Ag / <sup>106</sup> Ag / <sup>107</sup> Ag, E=5.45, 6.0 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (charged particle) $\gamma$ -coin, $\gamma$ -ray yields. REPT CNS-REP-69,P12,Zheng |



KEYNUMBERS AND KEYWORDS

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**A=106 (continued)**

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|                   | 2007DI06 | NUCLEAR REACTIONS Pd(p, X) <sup>105</sup> Ag / <sup>106m</sup> Ag / <sup>100</sup> Pd / <sup>101m</sup> Rh / <sup>97</sup> Ru, E=5-70 MeV; measured excitation functions. Activation method. JOUR JRNCD 272 231   |
|                   | 2007HU04 | NUCLEAR REACTIONS <sup>106</sup> Pd(p, n), E=6.1-7.5 MeV; <sup>110</sup> Pd(p, n), E=6.0-7.7 MeV; measured excitation functions. <sup>107,111</sup> Pd deduced IAR energies, J, $\pi$ . JOUR CHPHD 16 989   |
|                   | 2007J001 | NUCLEAR REACTIONS <sup>100</sup> Mo( <sup>10</sup> B, 4n), E=42 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin. <sup>106</sup> Ag deduced high-spin levels, J, $\pi$ , B(M1) / B(E2), configurations, $\gamma$ -softness. Gammasphere array, total Routhian surface calculation. JOUR PRLTA 98 102501   |
| <sup>106</sup> Cd | 2006BR32 | RADIOACTIVITY <sup>106</sup> Cd( $\beta^+$ EC), (2EC); measured $2\nu\beta\beta$ -decay T <sub>1/2</sub> lower limits. JOUR BRSPPE 70 316   |
|                   | 2006RU15 | RADIOACTIVITY <sup>106</sup> Cd( $\beta^+$ EC), (2EC); measured $2\nu$ -accompanied decay T <sub>1/2</sub> lower limits. JOUR PANUE 69 2117   |
|                   | 2007AS05 | NUCLEAR REACTIONS <sup>98</sup> Mo( <sup>12</sup> C, 4n) <sup>106</sup> Cd, E=60 MeV; <sup>96</sup> Mo( <sup>13</sup> C, 3n) <sup>106</sup> Cd, E=43 MeV; measured E $\gamma$ , I $\gamma$ , lifetimes for isomeric states. JOUR APOBB 38 1385  |
|                   | 2007BL15 | RADIOACTIVITY <sup>70</sup> Zn, <sup>116</sup> Cd, <sup>128,130</sup> Te( $\beta^-\beta^-$ ); <sup>64</sup> Zn, <sup>106</sup> Cd, <sup>120</sup> Te( $\beta^+\beta^+$ ); measured summed E $\beta$ . Deduced upper limits for T <sub>1/2</sub> . JOUR PRVCA 76 025501  |
|                   | 2007LI07 | RADIOACTIVITY <sup>106</sup> In( $\beta^+$ ), (EC) [from <sup>106</sup> Cd(p, n)]; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin. <sup>106</sup> Cd deduced levels, J, $\pi$ , $\delta$ , configurations, possible quadrupole-octupole coupled state. JOUR PRVCA 75 024310  |
|                   | 2007LI07 | NUCLEAR REACTIONS <sup>106</sup> Cd( $\gamma$ , $\gamma'$ ), E=3.1 MeV bremsstrahlung; measured E $\gamma$ , I $\gamma$ . <sup>106</sup> Cd deduced levels, J, $\pi$ , $\delta$ , configurations, possible quadrupole-octupole coupled state. JOUR PRVCA 75 024310  |
|                   | 2007RUZY | RADIOACTIVITY <sup>106</sup> Cd( $\beta^+$ EC), (2EC); measured $\gamma\gamma$ , x $\gamma$ -coin; deduced T <sub>1/2</sub> lower limits for $2\nu$ EC / EC decay, for $2\nu\beta^+$ / EC and $2\nu$ EC / EC branches to ground and excited states. Underground laboratory, TGV-2spectrometer. CONF<br>Voronezh(Nucleus-2007),Contrib,P181,Rukhadze   |
| <sup>106</sup> In | 2007LI07 | RADIOACTIVITY <sup>106</sup> In( $\beta^+$ ), (EC) [from <sup>106</sup> Cd(p, n)]; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin. <sup>106</sup> Cd deduced levels, J, $\pi$ , $\delta$ , configurations, possible quadrupole-octupole coupled state. JOUR PRVCA 75 024310  |
| <sup>106</sup> Sn | 2007VA22 | NUCLEAR REACTIONS <sup>197</sup> Au( <sup>106</sup> Sn, <sup>106</sup> Sn'), ( <sup>108</sup> Sn, <sup>108</sup> Sn'), ( <sup>110</sup> Sn, <sup>110</sup> sn'), ( <sup>112</sup> Sn, <sup>112</sup> Sn'), E=78-81 MeV; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coinc from projectile coulomb excitation. <sup>106,108,110,112</sup> Sn deduced B(E2). JOUR PRLTA 99 162501 |

**A=107**

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|-------------------|----------|---|
| <sup>107</sup> Nb | 2007HA32 | ATOMIC MASSES <sup>95,96,97,98,99,100,101</sup> Y, <sup>101,102,103,104,105,106,107</sup> Nb; measured masses; analyzed two neutron separation energy. JYFLTRAP double Penning trap. Comparison with model predictions and previous data. JOUR NUPAB 793 20 |
| <sup>107</sup> Mo | 2006PI14 | NUCLEAR REACTIONS <sup>241</sup> Pu(n, F), E=thermal; measured prompt and delayed E $\gamma$ , I $\gamma$ . <sup>107</sup> Mo deduced levels, isomer T <sub>1/2</sub> , branching ratios, triaxial deformation. JOUR PRVCA 74 064304                        |



KEYNUMBERS AND KEYWORDS

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A=107 (*continued*)

$^{107}\text{Tc}$	2007HA20	ATOMIC MASSES $^{106,107,108,109,110}\text{Tc}$ , $^{106,107,108,109,110,111,112,113,114,115}\text{Ru}$ , $^{108,109,110,111,112,113,114,115,116,117,118}\text{Rh}$ , $^{112,113,114,115,116,117,118,119,120}\text{Pd}$ ; measured masses using the JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302
	2007SI06	RADIOACTIVITY $^{107}\text{Tc}(\text{IT})$ [from $^{241}\text{Pu}(\text{n}, \text{F})$ ]; measured $E\gamma$ , $T_{1/2}$ from mass-separated source. $^{107}\text{Tc}$ deduced isomeric level J, $\pi$ , configuration, deformation. JOUR PRVCA 75 027301
	2007SI06	NUCLEAR REACTIONS $^{241}\text{Pu}(\text{n}, \text{F})$ , E=thermal; measured delayed $E\gamma$ , $I\gamma$ , (particle) $\gamma$ -coin. $^{107}\text{Tc}$ deduced isomeric level J, $\pi$ , configuration, deformation. JOUR PRVCA 75 027301
$^{107}\text{Ru}$	2007HA20	ATOMIC MASSES $^{106,107,108,109,110}\text{Tc}$ , $^{106,107,108,109,110,111,112,113,114,115}\text{Ru}$ , $^{108,109,110,111,112,113,114,115,116,117,118}\text{Rh}$ , $^{112,113,114,115,116,117,118,119,120}\text{Pd}$ ; measured masses using the JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302
$^{107}\text{Pd}$	2007HU04	NUCLEAR REACTIONS $^{106}\text{Pd}(\text{p}, \text{n})$ , E=6.1-7.5 MeV; $^{110}\text{Pd}(\text{p}, \text{n})$ , E=6.0-7.7 MeV; measured excitation functions. $^{107,111}\text{Pd}$ deduced IAR energies, J, $\pi$ . JOUR CHPHD 16 989
$^{107}\text{Ag}$	2005NIZS	NUCLEAR REACTIONS Ni( $^{22}\text{Ne}$ , $^{22}\text{Ne}'$ ), E=2.25 MeV / nucleon; $^{107}\text{Ag}(\text{Ni}, \text{Ni}'$ ), E=2.86 MeV / nucleon; Ni( $^{30}\text{Mg}$ , $^{30}\text{Mg}'$ ), E=2.25 MeV / nucleon; $^{60}\text{Ni}$ , $^{107}\text{Ag}(\text{Ni}, \text{Ni}'$ ), E=2.69 MeV / nucleon; U(p, X) $^{22}\text{Ne}$ / $^{30}\text{Mg}$ / $^{32}\text{Mg}$ , E=1.01-1.40 GeV; measured $E\gamma$ , $I\gamma(\theta)$ , (particle) $\gamma$ -coinc, cross sections following projectile and target Coulomb excitation. $^{22}\text{Ne}$ , $^{30}\text{Mg}$ , $^{32}\text{Mg}$ , $^{107}\text{Ag}$ deduced levels, B(E2), half-lives, deformations. REX-ISOLDE-CERN facility. Coupled-channel and GOSIA analyses. $^{24}\text{Mg}$ , $^{26}\text{Mg}$ , $^{28}\text{Mg}$ , $^{30}\text{Mg}$ , $^{32}\text{Mg}$ , $^{34}\text{Mg}$ systematics of B(E2) values. Comparisons with shell-model calculations. THESIS O T Niedermaier, Univ Heidelberg
	2006ZHYZ	NUCLEAR REACTIONS $^{96}\text{Zr}(\text{F}, \text{xnyp}\alpha)^{107}\text{Cd}$ / $^{108}\text{Cd}$ / $^{109}\text{Cd}$ / $^{105}\text{Ag}$ / $^{106}\text{Ag}$ / $^{107}\text{Ag}$ , E=5.45, 6.0 MeV / nucleon; measured $E\gamma$ , $I\gamma$ , (charged particle) $\gamma$ -coin, $\gamma$ -ray yields. REPT CNS-REP-69,P12,Zheng
$^{107}\text{Cd}$	2006ZHYZ	NUCLEAR REACTIONS $^{96}\text{Zr}(\text{F}, \text{xnyp}\alpha)^{107}\text{Cd}$ / $^{108}\text{Cd}$ / $^{109}\text{Cd}$ / $^{105}\text{Ag}$ / $^{106}\text{Ag}$ / $^{107}\text{Ag}$ , E=5.45, 6.0 MeV / nucleon; measured $E\gamma$ , $I\gamma$ , (charged particle) $\gamma$ -coin, $\gamma$ -ray yields. REPT CNS-REP-69,P12,Zheng
$^{107}\text{In}$	2007GY03	NUCLEAR REACTIONS $^{106,108}\text{Cd}(\text{p}, \gamma)$ , E=2.4-4.7 MeV; measured activation $\sigma$ ; deduced astrophysical S-factors. Comparison with model predictions. JOUR JPGPE 34 817
	2007GYZZ	NUCLEAR REACTIONS $^{106,108}\text{Cd}(\text{p}, \gamma)$ , E=2.4-4.7 MeV; measured $\sigma$ ; deduced astrophysical S-factors. Comparison with model predictions. PREPRINT nucl-ex/0703045,3/29/2007
	2007TA10	NUCLEAR REACTIONS Cd(d, x) $^{107}\text{In}$ / $^{108}\text{In}$ / $^{108m}\text{In}$ / $^{109}\text{In}$ / $^{110}\text{In}$ / $^{110m}\text{In}$ / $^{111}\text{In}$ / $^{112m}\text{In}$ / $^{113m}\text{In}$ / $^{114m}\text{In}$ / $^{115m}\text{In}$ / $^{116m1}\text{In}$ / $^{111m}\text{Cd}$ / $^{115}\text{Cd}$ / $^{115m}\text{Cd}$ / $^{117}\text{Cd}$ / $^{117m}\text{Cd}$ / $^{105}\text{Ag}$ / $^{106m}\text{Ag}$ / $^{110m}\text{Ag}$ / $^{111}\text{Ag}$ , E< 40 MeV; measured $E\gamma$ , $I\gamma$ , integral yields, excitation functions and cross sections. Compared results to model calculations. JOUR NIMBE 259 817

KEYNUMBERS AND KEYWORDS

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A=108

$^{108}\text{Mo}$	2007DI09	RADIOACTIVITY $^{252}\text{Cf}(\text{SF})$ ; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -conic using the Gammasphere array. $^{108}\text{Mo}$ deduced level energies, J, $\pi$ . JOUR CPLEE 24 1517
$^{108}\text{Tc}$	2007HA20	ATOMIC MASSES $^{106,107,108,109,110}\text{Tc}$ , $^{106,107,108,109,110,111,112,113,114,115}\text{Ru}$ , $^{108,109,110,111,112,113,114,115,116,117,118}\text{Rh}$ , $^{112,113,114,115,116,117,118,119,120}\text{Pd}$ ; measured masses using the JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302
$^{108}\text{Ru}$	2007G021	RADIOACTIVITY $^{252}\text{Cf}(\text{SF})$ ; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, fission fragment and light charged particle yields. $^{108,110,112}\text{Ru}$ deduced levels, J, $\pi$ . $^{104}\text{Zr}$ , $^{106}\text{Mo}$ , $^{148}\text{Ce}(\text{IT})$ ; measured $T_{1/2}$ , B(E2). Gammasphere array. JOUR NUPAB 787 231c
	2007HA20	ATOMIC MASSES $^{106,107,108,109,110}\text{Tc}$ , $^{106,107,108,109,110,111,112,113,114,115}\text{Ru}$ , $^{108,109,110,111,112,113,114,115,116,117,118}\text{Rh}$ , $^{112,113,114,115,116,117,118,119,120}\text{Pd}$ ; measured masses using the JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302
$^{108}\text{Rh}$	2007HA20	ATOMIC MASSES $^{106,107,108,109,110}\text{Tc}$ , $^{106,107,108,109,110,111,112,113,114,115}\text{Ru}$ , $^{108,109,110,111,112,113,114,115,116,117,118}\text{Rh}$ , $^{112,113,114,115,116,117,118,119,120}\text{Pd}$ ; measured masses using the JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302
$^{108}\text{Pd}$	2007NA10	NUCLEAR REACTIONS $^{107}\text{Pd}(\text{n}, \gamma)$ , E=thermal; measured $E\gamma$ , $I\gamma$ ; deduced capture $\sigma$ . Comparison with previous results. JOUR JNSTA 44 103
	2007VA20	NUCLEAR REACTIONS $^{108}\text{Pd}$ , $^{120}\text{Sn}({}^{74}\text{Zn}, {}^{74}\text{Zn}')$ , $({}^{76}\text{Zn}, {}^{76}\text{Zn}')$ , $({}^{78}\text{Zn}, {}^{78}\text{Zn}')$ , $({}^{80}\text{Zn}, {}^{80}\text{Zn}')$ , E=2.79-2.87 MeV / nucleon; measured $E\gamma$ , $I\gamma$ . ${}^{74,76,78,80}\text{Zn}$ deduced B(E2). JOUR PRLTA 99 142501
$^{108}\text{Cd}$	2006ZHZY	NUCLEAR REACTIONS ${}^{96}\text{Zr}({}^{19}\text{F}, \text{xny}\alpha){}^{107}\text{Cd} / {}^{108}\text{Cd} / {}^{109}\text{Cd} / {}^{105}\text{Ag} / {}^{106}\text{Ag} / {}^{107}\text{Ag}$ , E=5.45, 6.0 MeV / nucleon; measured $E\gamma$ , $I\gamma$ , (charged particle) $\gamma$ -coin, $\gamma$ -ray yields. REPT CNS-REP-69,P12,Zheng
$^{108}\text{In}$	2007CEZZ	NUCLEAR REACTIONS ${}^{59}\text{Co}({}^{16}\text{O}, \text{X})$ , E=400 MeV; measured Z=5-7 fragments $\sigma(E, \theta)$ . ${}^{103}\text{Rh}({}^{12}\text{C}, \text{X}){}^{111\text{m}}\text{In} / {}^{108}\text{In} / {}^{105}\text{Ag} / {}^{101}\text{Pd} / {}^{102\text{m}}\text{Rh} / {}^{97}\text{Ru}$ , E $\approx$ 50-400 MeV; measured excitation functions.
	2007TA10	CONF Iguazu(Nuclear Physics and Applications) Proc,P207,Cerutti NUCLEAR REACTIONS $\text{Cd}(\text{d}, \text{x}){}^{107}\text{In} / {}^{108}\text{In} / {}^{108\text{m}}\text{In} / {}^{109}\text{In} / {}^{110}\text{In} / {}^{110\text{m}}\text{In} / {}^{111}\text{In} / {}^{112\text{m}}\text{In} / {}^{113\text{m}}\text{In} / {}^{114\text{m}}\text{In} / {}^{115\text{m}}\text{In} / {}^{116\text{m}1}\text{In} / {}^{111\text{m}}\text{Cd} / {}^{115}\text{Cd} / {}^{115\text{m}}\text{Cd} / {}^{117}\text{Cd} / {}^{117\text{m}}\text{Cd} / {}^{105}\text{Ag} / {}^{106\text{m}}\text{Ag} / {}^{110\text{m}}\text{Ag} / {}^{111}\text{Ag}$ , E < 40 MeV; measured $E\gamma$ , $I\gamma$ , integral yields, excitation functions and cross sections. Compared results to model calculations. JOUR NIMBE 259 817
$^{108}\text{Sn}$	2007VA22	NUCLEAR REACTIONS ${}^{197}\text{Au}({}^{106}\text{Sn}, {}^{106}\text{Sn}')$ , $({}^{108}\text{Sn}, {}^{108}\text{Sn}')$ , $({}^{110}\text{Sn}, {}^{110}\text{sn}')$ , $({}^{112}\text{Sn}, {}^{112}\text{Sn}')$ , E=78-81 MeV; measured $E\gamma$ , $I\gamma$ , (particle) $\gamma$ -coinc from projectile coulomb excitation. ${}^{106,108,110,112}\text{Sn}$ deduced B(E2). JOUR PRLTA 99 162501

KEYNUMBERS AND KEYWORDS

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**A=109**

$^{109}\text{Tc}$	2007HA20	ATOMIC MASSES $^{106,107,108,109,110}\text{Tc}$ , $^{106,107,108,109,110,111,112,113,114,115}\text{Ru}$ , $^{108,109,110,111,112,113,114,115,116,117,118}\text{Rh}$ , $^{112,113,114,115,116,117,118,119,120}\text{Pd}$ ; measured masses using the JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302
$^{109}\text{Ru}$	2007HA20	ATOMIC MASSES $^{106,107,108,109,110}\text{Tc}$ , $^{106,107,108,109,110,111,112,113,114,115}\text{Ru}$ , $^{108,109,110,111,112,113,114,115,116,117,118}\text{Rh}$ , $^{112,113,114,115,116,117,118,119,120}\text{Pd}$ ; measured masses using the JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302
$^{109}\text{Rh}$	2007HA20	ATOMIC MASSES $^{106,107,108,109,110}\text{Tc}$ , $^{106,107,108,109,110,111,112,113,114,115}\text{Ru}$ , $^{108,109,110,111,112,113,114,115,116,117,118}\text{Rh}$ , $^{112,113,114,115,116,117,118,119,120}\text{Pd}$ ; measured masses using the JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302
$^{109}\text{Pd}$	2007MA66	NUCLEAR REACTIONS $^{110}\text{Pd}$ , $^{112}\text{Cd}(\gamma, n)$ , $E=8-18$ MeV; measured cross sections and excitation functions for populating the isomeric states. JOUR UKPJA 52 744
$^{109}\text{Ag}$	2007VI10	RADIOACTIVITY $^{109}\text{Cd}(\text{EC})$ ; measured $E\gamma$ , $I\gamma$ , $E(\text{X-ray})$ . $^{109}\text{Ag}$ deduced double ionization probability. JOUR BRSPPE 71 890
$^{109}\text{Cd}$	2006ZHZY	NUCLEAR REACTIONS $^{96}\text{Zr}(\text{}^{19}\text{F}, \text{xny}\alpha)^{107}\text{Cd}$ / $^{108}\text{Cd}$ / $^{109}\text{Cd}$ / $^{105}\text{Ag}$ / $^{106}\text{Ag}$ / $^{107}\text{Ag}$ , $E=5.45, 6.0$ MeV / nucleon; measured $E\gamma$ , $I\gamma$ , (charged particle) $\gamma$ -coin, $\gamma$ -ray yields. REPT CNS-REP-69,P12,Zheng
	2007VI10	RADIOACTIVITY $^{109}\text{Cd}(\text{EC})$ ; measured $E\gamma$ , $I\gamma$ , $E(\text{X-ray})$ . $^{109}\text{Ag}$ deduced double ionization probability. JOUR BRSPPE 71 890
$^{109}\text{In}$	2007GY03	NUCLEAR REACTIONS $^{106,108}\text{Cd}(\text{p}, \gamma)$ , $E=2.4-4.7$ MeV; measured activation $\sigma$ ; deduced astrophysical S-factors. Comparison with model predictions. JOUR JPGPE 34 817
	2007GYZZ	NUCLEAR REACTIONS $^{106,108}\text{Cd}(\text{p}, \gamma)$ , $E=2.4-4.7$ MeV; measured $\sigma$ ; deduced astrophysical S-factors. Comparison with model predictions. PREPRINT nucl-ex/0703045,3/29/2007
	2007TA10	NUCLEAR REACTIONS $\text{Cd}(\text{d}, \text{x})^{107}\text{In}$ / $^{108}\text{In}$ / $^{108\text{m}}\text{In}$ / $^{109}\text{In}$ / $^{110}\text{In}$ / $^{110\text{m}}\text{In}$ / $^{111}\text{In}$ / $^{112\text{m}}\text{In}$ / $^{113\text{m}}\text{In}$ / $^{114\text{m}}\text{In}$ / $^{115\text{m}}\text{In}$ / $^{116\text{m}1}\text{In}$ / $^{111\text{m}}\text{Cd}$ / $^{115}\text{Cd}$ / $^{115\text{m}}\text{Cd}$ / $^{117}\text{Cd}$ / $^{117\text{m}}\text{Cd}$ / $^{105}\text{Ag}$ / $^{106\text{m}}\text{Ag}$ / $^{110\text{m}}\text{Ag}$ / $^{111}\text{Ag}$ , $E < 40$ MeV; measured $E\gamma$ , $I\gamma$ , integral yields, excitation functions and cross sections. Compared results to model calculations. JOUR NIMBE 259 817
$^{109}\text{I}$	2007MA35	RADIOACTIVITY $^{109}\text{I}(\alpha)$ ; measured $E\alpha$ , $Q\alpha$ and branching ratio. JOUR PRLTA 98 212501

**A=110**

$^{110}\text{Tc}$	2007HA20	ATOMIC MASSES $^{106,107,108,109,110}\text{Tc}$ , $^{106,107,108,109,110,111,112,113,114,115}\text{Ru}$ , $^{108,109,110,111,112,113,114,115,116,117,118}\text{Rh}$ , $^{112,113,114,115,116,117,118,119,120}\text{Pd}$ ; measured masses using the JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302
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KEYNUMBERS AND KEYWORDS

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A=110 (*continued*)

<sup>110</sup> Ru	2007G021	RADIOACTIVITY <sup>252</sup> Cf(SF); measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin, fission fragment and light charged particle yields. <sup>108,110,112</sup> Ru deduced levels, J, $\pi$ . <sup>104</sup> Zr, <sup>106</sup> Mo, <sup>148</sup> Ce(IT); measured T <sub>1/2</sub> , B(E2). Gammasphere array. JOUR NUPAB 787 231c
	2007HA20	ATOMIC MASSES <sup>106,107,108,109,110</sup> Tc, <sup>106,107,108,109,110,111,112,113,114,115</sup> Ru, <sup>108,109,110,111,112,113,114,115,116,117,118</sup> Rh, <sup>112,113,114,115,116,117,118,119,120</sup> Pd; measured masses using the JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302
<sup>110</sup> Rh	2007HA20	ATOMIC MASSES <sup>106,107,108,109,110</sup> Tc, <sup>106,107,108,109,110,111,112,113,114,115</sup> Ru, <sup>108,109,110,111,112,113,114,115,116,117,118</sup> Rh, <sup>112,113,114,115,116,117,118,119,120</sup> Pd; measured masses using the JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302
	2007HU04	NUCLEAR REACTIONS <sup>106</sup> Pd(p, n), E=6.1-7.5 MeV; <sup>110</sup> Pd(p, n), E=6.0-7.7 MeV; measured excitation functions. <sup>107,111</sup> Pd deduced IAR energies, J, $\pi$ . JOUR CHPHD 16 989
<sup>110</sup> In	2007TA10	NUCLEAR REACTIONS Cd(d, x) <sup>107</sup> In / <sup>108</sup> In / <sup>108m</sup> In / <sup>109</sup> In / <sup>110</sup> In / <sup>110m</sup> In / <sup>111</sup> In / <sup>112m</sup> In / <sup>113m</sup> In / <sup>114m</sup> In / <sup>115m</sup> In / <sup>116m1</sup> In / <sup>111m</sup> Cd / <sup>115</sup> Cd / <sup>115m</sup> Cd / <sup>117</sup> Cd / <sup>117m</sup> Cd / <sup>105</sup> Ag / <sup>106m</sup> Ag / <sup>110m</sup> Ag / <sup>111</sup> Ag, E < 40 MeV; measured E $\gamma$ , I $\gamma$ , integral yields, excitation functions and cross sections. Compared results to model calculations. JOUR NIMBE 259 817
<sup>110</sup> Sn	2007CE02	NUCLEAR REACTIONS <sup>58</sup> Ni( <sup>110</sup> Sn, <sup>110</sup> Sn'), E=2.82 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin following Coulomb excitation. <sup>110</sup> Sn deduced B(E2) of the first excited 2 <sup>+</sup> state. MINIBALL array at REX-ISOLDE. JOUR PRLTA 98 172501
	2007VA22	NUCLEAR REACTIONS <sup>197</sup> Au( <sup>106</sup> Sn, <sup>106</sup> Sn'), ( <sup>108</sup> Sn, <sup>108</sup> Sn'), ( <sup>110</sup> Sn, <sup>110</sup> sn'), ( <sup>112</sup> Sn, <sup>112</sup> Sn'), E=78-81 MeV; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coinc from projectile coulomb excitation. <sup>106,108,110,112</sup> Sn deduced B(E2). JOUR PRLTA 99 162501
<sup>110</sup> Te	2007PA34	NUCLEAR REACTIONS <sup>58</sup> Ni( <sup>58</sup> Ni, 2p $\alpha$ ), E=250 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ , (particle) $\gamma$ -coinc. <sup>110</sup> Te deduced levels, J, $\pi$ , multipolarity. JOUR PRVCA 76 034322
	2007PA35	NUCLEAR REACTIONS <sup>58</sup> Ni( <sup>58</sup> Ni, 2p $\alpha$ ), E=240, 250 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ , (particle) $\gamma$ -coinc. <sup>110</sup> Te deduced levels, J, $\pi$ , multipolarity. JOUR PRVCA 76 034323
<sup>110</sup> Xe	2007SA36	NUCLEAR REACTIONS <sup>58</sup> Ni( <sup>54</sup> Fe, X) <sup>110</sup> Xe, E=195 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coinc. <sup>110</sup> Xe deduced levels and B(E2). JOUR PRLTA 99 022501

A=111

<sup>111</sup> Ru	2007HA20	ATOMIC MASSES <sup>106,107,108,109,110</sup> Tc, <sup>106,107,108,109,110,111,112,113,114,115</sup> Ru, <sup>108,109,110,111,112,113,114,115,116,117,118</sup> Rh, <sup>112,113,114,115,116,117,118,119,120</sup> Pd; measured masses using the JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302
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**A=111 (continued)**

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| $^{111}\text{Rh}$ | 2007HA20 | ATOMIC MASSES $^{106,107,108,109,110}\text{Tc}$ ,<br>$^{106,107,108,109,110,111,112,113,114,115}\text{Ru}$ ,<br>$^{108,109,110,111,112,113,114,115,116,117,118}\text{Rh}$ ,<br>$^{112,113,114,115,116,117,118,119,120}\text{Pd}$ ; measured masses using the<br>JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302  |
| $^{111}\text{Pd}$ | 2007HU04 | NUCLEAR REACTIONS $^{106}\text{Pd}(p, n)$ , $E=6.1-7.5$ MeV; $^{110}\text{Pd}(p, n)$ ,<br>$E=6.0-7.7$ MeV; measured excitation functions. $^{107,111}\text{Pd}$ deduced IAR<br>energies, $J, \pi$ . JOUR CHPHD 16 989   |
| $^{111}\text{Cd}$ | 2007MA66 | NUCLEAR REACTIONS $^{110}\text{Pd}, ^{112}\text{Cd}(\gamma, n)$ , $E=8-18$ MeV; measured<br>cross sections and excitation functions for populating the isomeric<br>states. JOUR UKPJA 52 744  |
|                   | 2007YA02 | RADIOACTIVITY $^{51}\text{Cr}, ^{55}\text{Fe}, ^{67}\text{Ga}, ^{111}\text{In}, ^{133}\text{Ba}, ^{201}\text{Tl}(\text{EC});$<br>$^{99m}\text{Tc}(\text{IT}), (\beta^-); ^{131}\text{I}, ^{133}\text{Xe}, ^{137}\text{Cs}(\beta^-); ^{226}\text{Ra}(\alpha)$ ; measured K X-ray<br>intensity ratios following decay and photoionization. JOUR NIMBE<br>254 182  |
| $^{111}\text{In}$ | 2007CEZZ | NUCLEAR REACTIONS $^{59}\text{Co}(^{16}\text{O}, X)$ , $E=400$ MeV; measured $Z=5-7$<br>fragments $\sigma(E, \theta)$ . $^{103}\text{Rh}(^{12}\text{C}, X)^{111m}\text{In} / ^{108}\text{In} / ^{105}\text{Ag} / ^{101}\text{Pd} /$<br>$^{102m}\text{Rh} / ^{97}\text{Ru}$ , $E \approx 50-400$ MeV; measured excitation functions.<br>CONF Iguazu(Nuclear Physics and Applications) Proc,P207,Cerutti  |
|                   | 2007RE12 | NUCLEAR REACTIONS $\text{Sn}(\alpha, X)^{116}\text{Te} / ^{117}\text{Te} / ^{118}\text{Te} / ^{119}\text{Te} /$<br>$^{121}\text{Te} / ^{123}\text{Te} / ^{117}\text{Sb} / ^{118}\text{Sb} / ^{120}\text{Sb} / ^{122}\text{Sb} / ^{124}\text{Sb} / ^{126}\text{Sb} / ^{117}\text{Sn} /$<br>$^{111}\text{In}$ , $E=12-38$ MeV; measured $E\gamma, I\gamma$ , cross sections and excitation<br>functions using stacked foil activation technique. JOUR NIMBE 260<br>672  |
|                   | 2007TA10 | NUCLEAR REACTIONS $\text{Cd}(d, x)^{107}\text{In} / ^{108}\text{In} / ^{108m}\text{In} / ^{109}\text{In} /$<br>$^{110}\text{In} / ^{110m}\text{In} / ^{111}\text{In} / ^{112m}\text{In} / ^{113m}\text{In} / ^{114m}\text{In} / ^{115m}\text{In} / ^{116m1}\text{In} /$<br>$^{111m}\text{Cd} / ^{115}\text{Cd} / ^{115m}\text{Cd} / ^{117}\text{Cd} / ^{117m}\text{Cd} / ^{105}\text{Ag} / ^{106m}\text{Ag} /$<br>$^{110m}\text{Ag} / ^{111}\text{Ag}$ , $E < 40$ MeV; measured $E\gamma, I\gamma$ , integral yields,<br>excitation functions and cross sections. Compared results to model<br>calculations. JOUR NIMBE 259 817 |
|                   | 2007YA02 | RADIOACTIVITY $^{51}\text{Cr}, ^{55}\text{Fe}, ^{67}\text{Ga}, ^{111}\text{In}, ^{133}\text{Ba}, ^{201}\text{Tl}(\text{EC});$<br>$^{99m}\text{Tc}(\text{IT}), (\beta^-); ^{131}\text{I}, ^{133}\text{Xe}, ^{137}\text{Cs}(\beta^-); ^{226}\text{Ra}(\alpha)$ ; measured K X-ray<br>intensity ratios following decay and photoionization. JOUR NIMBE<br>254 182  |

**A=112**

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|-------------------|----------|---|
| $^{112}\text{Ru}$ | 2007G021 | RADIOACTIVITY $^{252}\text{Cf}(\text{SF})$ ; measured $E\gamma, I\gamma, \gamma\gamma$ -coin, fission<br>fragment and light charged particle yields. $^{108,110,112}\text{Ru}$ deduced levels,<br>$J, \pi$ . $^{104}\text{Zr}, ^{106}\text{Mo}, ^{148}\text{Ce}(\text{IT})$ ; measured $T_{1/2}, B(E2)$ . Gammasphere<br>array. JOUR NUPAB 787 231c |
|                   | 2007HA20 | ATOMIC MASSES $^{106,107,108,109,110}\text{Tc}$ ,<br>$^{106,107,108,109,110,111,112,113,114,115}\text{Ru}$ ,<br>$^{108,109,110,111,112,113,114,115,116,117,118}\text{Rh}$ ,<br>$^{112,113,114,115,116,117,118,119,120}\text{Pd}$ ; measured masses using the<br>JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302                            |

KEYNUMBERS AND KEYWORDS

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A=112 (*continued*)

$^{112}\text{Rh}$	2007HA20	ATOMIC MASSES $^{106,107,108,109,110}\text{Tc}$ , $^{106,107,108,109,110,111,112,113,114,115}\text{Ru}$ , $^{108,109,110,111,112,113,114,115,116,117,118}\text{Rh}$ , $^{112,113,114,115,116,117,118,119,120}\text{Pd}$ ; measured masses using the JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302
$^{112}\text{Pd}$	2007HA20	ATOMIC MASSES $^{106,107,108,109,110}\text{Tc}$ , $^{106,107,108,109,110,111,112,113,114,115}\text{Ru}$ , $^{108,109,110,111,112,113,114,115,116,117,118}\text{Rh}$ , $^{112,113,114,115,116,117,118,119,120}\text{Pd}$ ; measured masses using the JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302
$^{112}\text{Cd}$	2007DAZX	RADIOACTIVITY $^{124}\text{Sn}(2\beta^-)$ ; $^{112}\text{Sn}(\beta^+\text{EC})$ , (2EC); measured $E\gamma$ , $I\gamma$ . Deduced lower limits for $T_{1/2}$ . PREPRINT arXiv:0709.4342v1 [nucl-ex]
	2007GA22	NUCLEAR REACTIONS $^{112}\text{Cd}(n, n'\gamma)$ , E=fast; measured $E\gamma$ , $I\gamma$ , angular distributions and lifetimes using Dopler shift attenuation technique. Deduced B(E1) and B(M1). JOUR PRVCA 75 054310
$^{112}\text{In}$	2007KI13	RADIOACTIVITY $^{64}\text{Zn}$ , $^{112}\text{Sn}(\beta^+)$ , (EC); $^{124}\text{Sn}(2\beta^-)$ ; measured $E\gamma$ , $I\gamma$ ; deduced $T_{1/2}$ lower limits for $\beta^+$ , EC and $0\nu$ -accompanied $2\beta$ -decay to ground and excited states. Comparison with theoretical values and previous data. JOUR NUPAB 793 171
	2007TA10	NUCLEAR REACTIONS $\text{Cd}(d, x)^{107}\text{In} / ^{108}\text{In} / ^{108m}\text{In} / ^{109}\text{In} /$ $^{110}\text{In} / ^{110m}\text{In} / ^{111}\text{In} / ^{112m}\text{In} / ^{113m}\text{In} / ^{114m}\text{In} / ^{115m}\text{In} / ^{116m1}\text{In} /$ $^{111m}\text{Cd} / ^{115}\text{Cd} / ^{115m}\text{Cd} / ^{117}\text{Cd} / ^{117m}\text{Cd} / ^{105}\text{Ag} / ^{106m}\text{Ag} /$ $^{110m}\text{Ag} / ^{111}\text{Ag}$ , E< 40 MeV; measured $E\gamma$ , $I\gamma$ , integral yields, excitation functions and cross sections. Compared results to model calculations. JOUR NIMBE 259 817
$^{112}\text{Sn}$	2007DAZX	RADIOACTIVITY $^{124}\text{Sn}(2\beta^-)$ ; $^{112}\text{Sn}(\beta^+\text{EC})$ , (2EC); measured $E\gamma$ , $I\gamma$ . Deduced lower limits for $T_{1/2}$ . PREPRINT arXiv:0709.4342v1 [nucl-ex]
	2007GA44	NUCLEAR REACTIONS $^{112,114,116,118,120,122,124}\text{Sn}(\alpha, \alpha')$ , E=400 MeV; measured $E\alpha$ , $I\alpha$ , $\sigma(E, \theta)$ . $^{112,114,116,118,120,122,124}\text{Sn}$ deduced GMR energy, strength distributions, moment ratios. Comparison with other data and calculations. JOUR NUPAB 788 36c
	2007GA45	NUCLEAR REACTIONS $^{100}\text{Mo}(^{20}\text{Ne}, 4n\alpha)$ , E=136 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coinc. $^{112}\text{Sn}$ deduced levels, J, $\pi$ , lifetimes, multipolarities, and B(E2). JOUR NUPAB 789 1
	2007KI13	RADIOACTIVITY $^{64}\text{Zn}$ , $^{112}\text{Sn}(\beta^+)$ , (EC); $^{124}\text{Sn}(2\beta^-)$ ; measured $E\gamma$ , $I\gamma$ ; deduced $T_{1/2}$ lower limits for $\beta^+$ , EC and $0\nu$ -accompanied $2\beta$ -decay to ground and excited states. Comparison with theoretical values and previous data. JOUR NUPAB 793 171
	2007LI61	NUCLEAR REACTIONS $^{112,114,116,118,120,122,124}\text{Sn}(\alpha, \alpha')$ , E=400 MeV; measured $E\alpha$ , $I\alpha$ . Deduced GMR strength distributions. JOUR PRLTA 99 162503
	2007LIZX	NUCLEAR REACTIONS $^{112,114,116,118,120,122,124}\text{Sn}(\alpha, \alpha')$ , E=400 MeV; measured $E\alpha$ , $I\alpha$ . Deduced GMR strength distributions. PREPRINT arXiv:0709.0567v1 [nucl-ex]
	2007OR04	NUCLEAR REACTIONS $^{112}\text{Sn}(n, n'\gamma)$ , E=1.7 MeV; measured $E\gamma$ , $I\gamma$ , angular distributions. Deduced lifetime and B(E2) using DSAM. JOUR PRVCA 76 021302



KEYNUMBERS AND KEYWORDS

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**A=112 (continued)**

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| 2007OZ04          | NUCLEAR REACTIONS $^{112,120}\text{Sn}(\gamma, \gamma')$ , $E \approx 9-11$ MeV<br>bremsstrahlung; measured $E\gamma$ , $I\gamma$ . $^{112}\text{Sn}$ deduced $B(E1)$ strength<br>distribution. Sn analyzed $B(E1)$ . JOUR NUPAB 788 385c  |
| 2007VA22          | NUCLEAR REACTIONS $^{197}\text{Au}(^{106}\text{Sn}, ^{106}\text{Sn}')$ , $(^{108}\text{Sn}, ^{108}\text{Sn}')$ , $(^{110}\text{Sn}, ^{110}\text{Sn}')$ , $(^{112}\text{Sn}, ^{112}\text{Sn}')$ , $E=78-81$ MeV; measured $E\gamma$ , $I\gamma$ ,<br>(particle) $\gamma$ -coinc from projectile coulomb excitation. $^{106,108,110,112}\text{Sn}$<br>deduced $B(E2)$ . JOUR PRLTA 99 162501   |
| $^{112}\text{Te}$ | 2007PA07 NUCLEAR REACTIONS $^{58}\text{Ni}(^{58}\text{Ni}, 4p)$ , $(^{58}\text{Ni}, 2p)$ , $E=240, 250$ MeV;<br>measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -, (charged particle) $\gamma$ -coin, DSA. $^{112}\text{Te}$ deduced<br>high-spin levels, $J$ , $\pi$ , $T_{1/2}$ , configurations, deformation, band<br>termination features. $^{114}\text{Xe}$ levels deduced $T_{1/2}$ , transition quadrupole<br>moment. Gammasphere, Microball arrays. JOUR PRVCA 75 014308 |

**A=113**

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|-------------------|---|
| $^{113}\text{Ru}$ | 2007HA20 ATOMIC MASSES $^{106,107,108,109,110}\text{Tc}$ ,<br>$^{106,107,108,109,110,111,112,113,114,115}\text{Ru}$ ,<br>$^{108,109,110,111,112,113,114,115,116,117,118}\text{Rh}$ ,<br>$^{112,113,114,115,116,117,118,119,120}\text{Pd}$ ; measured masses using the<br>JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302   |
|                   | 2007KU23 RADIOACTIVITY $^{113}\text{Ru}$ , $^{113}\text{Rh}(\beta^-)$ [from $^{248}\text{cm}(\text{SF})$ ]; measured $E\gamma$ ,<br>$I\gamma$ , $\beta\gamma$ , $\gamma\gamma$ -coinc. $^{113}\text{Ru}$ , Rh deduced levels, $J$ , $\pi$ , logft. Compared<br>results to model calculations. JOUR ZAANE 33 307   |
| $^{113}\text{Rh}$ | 2007HA20 ATOMIC MASSES $^{106,107,108,109,110}\text{Tc}$ ,<br>$^{106,107,108,109,110,111,112,113,114,115}\text{Ru}$ ,<br>$^{108,109,110,111,112,113,114,115,116,117,118}\text{Rh}$ ,<br>$^{112,113,114,115,116,117,118,119,120}\text{Pd}$ ; measured masses using the<br>JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302   |
|                   | 2007KU23 RADIOACTIVITY $^{113}\text{Ru}$ , $^{113}\text{Rh}(\beta^-)$ [from $^{248}\text{cm}(\text{SF})$ ]; measured $E\gamma$ ,<br>$I\gamma$ , $\beta\gamma$ , $\gamma\gamma$ -coinc. $^{113}\text{Ru}$ , Rh deduced levels, $J$ , $\pi$ , logft. Compared<br>results to model calculations. JOUR ZAANE 33 307   |
| $^{113}\text{Pd}$ | 2007HA20 ATOMIC MASSES $^{106,107,108,109,110}\text{Tc}$ ,<br>$^{106,107,108,109,110,111,112,113,114,115}\text{Ru}$ ,<br>$^{108,109,110,111,112,113,114,115,116,117,118}\text{Rh}$ ,<br>$^{112,113,114,115,116,117,118,119,120}\text{Pd}$ ; measured masses using the<br>JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302   |
|                   | 2007KU23 RADIOACTIVITY $^{113}\text{Ru}$ , $^{113}\text{Rh}(\beta^-)$ [from $^{248}\text{cm}(\text{SF})$ ]; measured $E\gamma$ ,<br>$I\gamma$ , $\beta\gamma$ , $\gamma\gamma$ -coinc. $^{113}\text{Ru}$ , Rh deduced levels, $J$ , $\pi$ , logft. Compared<br>results to model calculations. JOUR ZAANE 33 307   |
| $^{113}\text{In}$ | 2006BI19 NUCLEAR REACTIONS $^{113}\text{In}$ , $^{195}\text{Pt}$ , $^{199}\text{Hg}(\gamma, \gamma')$ , $E=4-12$ MeV;<br>measured isomer production $\sigma$ . JOUR BRSPE 70 292  |
|                   | 2007TA10 NUCLEAR REACTIONS $\text{Cd}(d, x)^{107}\text{In} / ^{108}\text{In} / ^{108m}\text{In} / ^{109}\text{In} /$<br>$^{110}\text{In} / ^{110m}\text{In} / ^{111}\text{In} / ^{112m}\text{In} / ^{113m}\text{In} / ^{114m}\text{In} / ^{115m}\text{In} / ^{116m1}\text{In} /$<br>$^{111m}\text{Cd} / ^{115}\text{Cd} / ^{115m}\text{Cd} / ^{117}\text{Cd} / ^{117m}\text{Cd} / ^{105}\text{Ag} / ^{106m}\text{Ag} /$<br>$^{110m}\text{Ag} / ^{111}\text{Ag}$ , $E < 40$ MeV; measured $E\gamma$ , $I\gamma$ , integral yields,<br>excitation functions and cross sections. Compared results to model<br>calculations. JOUR NIMBE 259 817 |



KEYNUMBERS AND KEYWORDS

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**A=113 (continued)**

2007VI09 NUCLEAR REACTIONS  $^{113,115}\text{In}(e^+, e^{+\prime})$ ,  $E=3.9$  MeV; measured  $E\gamma$ ,  $I\gamma$  from isomeric excitations. JOUR BRSPE 71 884

**A=114**

$^{114}\text{Ru}$	2007HA20	ATOMIC MASSES $^{106,107,108,109,110}\text{Tc}$ , $^{106,107,108,109,110,111,112,113,114,115}\text{Ru}$ , $^{108,109,110,111,112,113,114,115,116,117,118}\text{Rh}$ , $^{112,113,114,115,116,117,118,119,120}\text{Pd}$ ; measured masses using the JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302
$^{114}\text{Rh}$	2007HA20	ATOMIC MASSES $^{106,107,108,109,110}\text{Tc}$ , $^{106,107,108,109,110,111,112,113,114,115}\text{Ru}$ , $^{108,109,110,111,112,113,114,115,116,117,118}\text{Rh}$ , $^{112,113,114,115,116,117,118,119,120}\text{Pd}$ ; measured masses using the JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302
$^{114}\text{Pd}$	2007HA20	ATOMIC MASSES $^{106,107,108,109,110}\text{Tc}$ , $^{106,107,108,109,110,111,112,113,114,115}\text{Ru}$ , $^{108,109,110,111,112,113,114,115,116,117,118}\text{Rh}$ , $^{112,113,114,115,116,117,118,119,120}\text{Pd}$ ; measured masses using the JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302
$^{114}\text{In}$	2007TA10	NUCLEAR REACTIONS $\text{Cd}(d, x)^{107}\text{In} / ^{108}\text{In} / ^{108m}\text{In} / ^{109}\text{In} /$ $^{110}\text{In} / ^{110m}\text{In} / ^{111}\text{In} / ^{112m}\text{In} / ^{113m}\text{In} / ^{114m}\text{In} / ^{115m}\text{In} / ^{116m1}\text{In} /$ $^{111m}\text{Cd} / ^{115}\text{Cd} / ^{115m}\text{Cd} / ^{117}\text{Cd} / ^{117m}\text{Cd} / ^{105}\text{Ag} / ^{106m}\text{Ag} /$ $^{110m}\text{Ag} / ^{111}\text{Ag}$ , $E < 40$ MeV; measured $E\gamma$ , $I\gamma$ , integral yields, excitation functions and cross sections. Compared results to model calculations. JOUR NIMBE 259 817
$^{114}\text{Sn}$	2007GA44	NUCLEAR REACTIONS $^{112,114,116,118,120,122,124}\text{Sn}(\alpha, \alpha')$ , $E=400$ MeV; measured $E\alpha$ , $I\alpha$ , $\sigma(E, \theta)$ . $^{112,114,116,118,120,122,124}\text{Sn}$ deduced GMR energy, strength distributions, moment ratios. Comparison with other data and calculations. JOUR NUPAB 788 36c
	2007LI61	NUCLEAR REACTIONS $^{112,114,116,118,120,122,124}\text{Sn}(\alpha, \alpha')$ , $E=400$ MeV; measured $E\alpha$ , $I\alpha$ . Deduced GMR strength distributions. JOUR PRLTA 99 162503
	2007LIZX	NUCLEAR REACTIONS $^{112,114,116,118,120,122,124}\text{Sn}(\alpha, \alpha')$ , $E=400$ MeV; measured $E\alpha$ , $I\alpha$ . Deduced GMR strength distributions. PREPRINT arXiv:0709.0567v1 [nucl-ex]
$^{114}\text{Xe}$	2007PA07	NUCLEAR REACTIONS $^{58}\text{Ni}(^{58}\text{Ni}, 4p)$ , $(^{58}\text{Ni}, 2p)$ , $E=240, 250$ MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma^-$ , (charged particle) $\gamma$ -coin, DSA. $^{112}\text{Te}$ deduced high-spin levels, $J$ , $\pi$ , $T_{1/2}$ , configurations, deformation, band termination features. $^{114}\text{Xe}$ levels deduced $T_{1/2}$ , transition quadrupole moment. Gammasphere, Microball arrays. JOUR PRVCA 75 014308

## A=115

$^{115}\text{Ru}$	2007HA20	ATOMIC MASSES $^{106,107,108,109,110}\text{Tc}$ , $^{106,107,108,109,110,111,112,113,114,115}\text{Ru}$ , $^{108,109,110,111,112,113,114,115,116,117,118}\text{Rh}$ , $^{112,113,114,115,116,117,118,119,120}\text{Pd}$ ; measured masses using the JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302
	2007KU06	RADIOACTIVITY $^{115}\text{Ru}(\beta^-)$ [from $^{238}\text{U}(\text{p}, \text{F})$ ]; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin. $^{115}\text{Rh}$ deduced levels, $J$ , $\pi$ . Level systematics in neighboring nuclides discussed. JOUR ZAANE 31 263
$^{115}\text{Rh}$	2007HA20	ATOMIC MASSES $^{106,107,108,109,110}\text{Tc}$ , $^{106,107,108,109,110,111,112,113,114,115}\text{Ru}$ , $^{108,109,110,111,112,113,114,115,116,117,118}\text{Rh}$ , $^{112,113,114,115,116,117,118,119,120}\text{Pd}$ ; measured masses using the JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302
	2007KU06	RADIOACTIVITY $^{115}\text{Ru}(\beta^-)$ [from $^{238}\text{U}(\text{p}, \text{F})$ ]; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin. $^{115}\text{Rh}$ deduced levels, $J$ , $\pi$ . Level systematics in neighboring nuclides discussed. JOUR ZAANE 31 263
$^{115}\text{Pd}$	2007HA20	ATOMIC MASSES $^{106,107,108,109,110}\text{Tc}$ , $^{106,107,108,109,110,111,112,113,114,115}\text{Ru}$ , $^{108,109,110,111,112,113,114,115,116,117,118}\text{Rh}$ , $^{112,113,114,115,116,117,118,119,120}\text{Pd}$ ; measured masses using the JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302
	2007HA20	ATOMIC MASSES $^{106,107,108,109,110}\text{Tc}$ , $^{106,107,108,109,110,111,112,113,114,115}\text{Ru}$ , $^{108,109,110,111,112,113,114,115,116,117,118}\text{Rh}$ , $^{112,113,114,115,116,117,118,119,120}\text{Pd}$ ; measured masses using the JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302
$^{115}\text{Cd}$	2006VI11	NUCLEAR REACTIONS $^{114}\text{Cd}(\text{n}, \gamma)$ , $^{116}\text{Sn}(\text{n}, \gamma)$ , $^{124}\text{Te}(\text{n}, \gamma)$ , E=reactor spectrum; measured x-ray spectra. deduced K-shell internal conversion coefficients. JOUR BRSPPE 70 1842
	2007H022	NUCLEAR REACTIONS $\text{Be}(^{136}\text{Xe}, \text{X})$ , E=120 MeV / nucleon; measured $E\gamma$ , $I\gamma$ . $^{125}\text{Cd}$ , $^{126}\text{Cd}$ , $^{127}\text{Cd}$ , $^{128}\text{Cd}$ deduced levels, $J$ , $\pi$ , isomers, half-lives, band structure; $^{100,115,117,119,121,122,123,124}\text{Cd}$ ; level systematics. JOUR PRVCA 76 044324
$^{115}\text{In}$	2007CA05	RADIOACTIVITY $^{115}\text{In}(\beta^-)$ ; measured $\beta$ -delayed $E\gamma$ , $I\gamma$ , $T_{1/2}$ for decay to excited state; deduced $Q\beta$ , log ft. Implication for neutrino mass discussed. JOUR PANUE 70 127
	2007TA10	NUCLEAR REACTIONS $\text{Cd}(\text{d}, \text{x})^{107}\text{In} / ^{108}\text{In} / ^{108\text{m}}\text{In} / ^{109}\text{In} /$ $^{110}\text{In} / ^{110\text{m}}\text{In} / ^{111}\text{In} / ^{112\text{m}}\text{In} / ^{113\text{m}}\text{In} / ^{114\text{m}}\text{In} / ^{115\text{m}}\text{In} / ^{116\text{m}1}\text{In} /$ $^{111\text{m}}\text{Cd} / ^{115}\text{Cd} / ^{115\text{m}}\text{Cd} / ^{117}\text{Cd} / ^{117\text{m}}\text{Cd} / ^{105}\text{Ag} / ^{106\text{m}}\text{Ag} /$ $^{110\text{m}}\text{Ag} / ^{111}\text{Ag}$ , E< 40 MeV; measured $E\gamma$ , $I\gamma$ , integral yields, excitation functions and cross sections. Compared results to model calculations. JOUR NIMBE 259 817
	2007VI09	NUCLEAR REACTIONS $^{113,115}\text{In}(\text{e}^+, \text{e}^{+\prime})$ , E=3.9 MeV; measured $E\gamma$ , $I\gamma$ from isomeric excitations. JOUR BRSPPE 71 884
$^{115}\text{Sn}$	2007CA05	RADIOACTIVITY $^{115}\text{In}(\beta^-)$ ; measured $\beta$ -delayed $E\gamma$ , $I\gamma$ , $T_{1/2}$ for decay to excited state; deduced $Q\beta$ , log ft. Implication for neutrino mass discussed. JOUR PANUE 70 127
	2007HU02	NUCLEAR REACTIONS $^{90}\text{Zr}$ , $^{116}\text{Sn}$ , $^{208}\text{Pb}(\alpha, \alpha')$ , $(\alpha, \text{n}\alpha)$ , E=200 MeV; measured $E\gamma$ , $E\alpha$ , $E\text{n}$ , $\sigma(\text{E}, \theta)$ . $^{90}\text{Zr}$ , $^{116}\text{Sn}$ , $^{208}\text{Pb}$ deduced isoscalar GDR neutron decay features. JOUR PRVCA 75 014606
	2007HU16	NUCLEAR REACTIONS $^{90}\text{Zr}$ , $^{116}\text{Sn}$ , $^{208}\text{Pb}(\alpha, \alpha'\text{n})$ , E=200 MeV; measured measured $\sigma$ , angular distributions. Deduced ISGDR direct-decay branching ratios. JOUR APOBB 38 1479

KEYNUMBERS AND KEYWORDS

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**A=115 (continued)**

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| 2007HU20                   | NUCLEAR REACTIONS $^{90}\text{Zr}$ , $^{116}\text{Sn}$ , $^{208}\text{Pb}(\alpha, \alpha'n)$ , $E=200$ MeV; measured $\sigma$ and angular distributions. $^{90}\text{Zr}$ , $^{116}\text{Sn}$ , $^{208}\text{Pb}$ deduced branching ratios for direct and statistical neutron decay of isoscalar giant dipole resonance. JOUR PANUE 70 1407  |
| 2007W006                   | NUCLEAR REACTIONS $^{90}\text{Zr}$ , $^{116}\text{Sn}$ , $^{208}\text{Pb}(\alpha, \alpha')$ , $(\alpha, n\alpha)$ , $E=200$ MeV; measured $E\gamma$ , $E\alpha$ , $E_n$ , $\sigma(E, \theta)$ , excitation energy spectra. $^{90}\text{Zr}$ , $^{116}\text{Sn}$ , $^{208}\text{Pb}$ deduced isoscalar GDR neutron decay features. $^{140}\text{Ce}(\alpha, \alpha\gamma)$ , $E=136$ MeV; measured $E\gamma$ , $E\alpha$ . $^{140}\text{Ce}$ deduced E1 strength distribution. JOUR NUPAB 788 27c |
| $^{115}\text{Sb}$ 2007OZ01 | NUCLEAR REACTIONS $^{112}\text{Sn}(\alpha, \gamma)$ , $(\alpha, p)$ , $E(\text{cm})=7.59-11.42$ MeV; measured $\sigma$ ; deduced astrophysical S-factors. Activation technique. JOUR PRVCA 75 025801   |
| 2007SKZZ                   | NUCLEAR REACTIONS $^{115,116,120}\text{Sn}(p, n)$ , $E=4.5-9.0$ MeV; measured cross sections using activation technique. Compared cross sections, S-factors and reaction rates to Hauser-Feshbach statistical theory predictions. CONF Geneva(NIC-IX) 204  |

**A=116**

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| $^{116}\text{Rh}$ 2007HA20 | ATOMIC MASSES $^{106,107,108,109,110}\text{Tc}$ , $^{106,107,108,109,110,111,112,113,114,115}\text{Ru}$ , $^{108,109,110,111,112,113,114,115,116,117,118}\text{Rh}$ , $^{112,113,114,115,116,117,118,119,120}\text{Pd}$ ; measured masses using the JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302 |
| $^{116}\text{Pd}$ 2007HA20 | ATOMIC MASSES $^{106,107,108,109,110}\text{Tc}$ , $^{106,107,108,109,110,111,112,113,114,115}\text{Ru}$ , $^{108,109,110,111,112,113,114,115,116,117,118}\text{Rh}$ , $^{112,113,114,115,116,117,118,119,120}\text{Pd}$ ; measured masses using the JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302 |
| $^{116}\text{Cd}$ 2006SH31 | RADIOACTIVITY $^{82}\text{Se}$ , $^{100}\text{Mo}(2\beta^-)$ ; measured $0\nu\beta\beta$ -decay $T_{1/2}$ lower limit. $^{82}\text{Se}$ , $^{96}\text{Zr}$ , $^{100}\text{Mo}$ , $^{116}\text{Cd}$ , $^{150}\text{Nd}(2\beta^-)$ ; measured $2\nu\beta\beta$ -decay $T_{1/2}$ . JOUR PANUE 69 2090           |
| 2006SH32                   | RADIOACTIVITY $^{82}\text{Se}$ , $^{96}\text{Zr}$ , $^{100}\text{Mo}$ , $^{116}\text{Cd}$ , $^{150}\text{Nd}(2\beta^-)$ ; measured $2\nu\beta\beta$ -decay $T_{1/2}$ . $^{82}\text{Se}$ , $^{100}\text{Mo}(2\beta^-)$ ; measured $0\nu\beta\beta$ -decay $T_{1/2}$ lower limits. JOUR BRSPE 70 731           |
| 2007BL15                   | RADIOACTIVITY $^{70}\text{Zn}$ , $^{116}\text{Cd}$ , $^{128,130}\text{Te}(\beta^-\beta^-)$ ; $^{64}\text{Zn}$ , $^{106}\text{Cd}$ , $^{120}\text{Te}(\beta^+\beta^+)$ ; measured summed $E\beta$ . Deduced upper limits for $T_{1/2}$ . JOUR PRVCA 76 025501   |
| 2007BLZY                   | RADIOACTIVITY $^{70}\text{Zn}$ , $^{116}\text{Cd}$ , $^{128}\text{Te}$ , $^{130}\text{Te}(2\beta^-)$ ; measured summed $\beta$ energies. Deduced $T_{1/2}$ limits. PREPRINT arXiv:0707.2756v1 [nucl-ex]  |
| $^{116}\text{In}$ 2006GE20 | NUCLEAR REACTIONS B, C, $^{27}\text{Al}$ , Cu, $^{115}\text{In}(\text{polarized } n, \gamma)$ , $E=\text{low}$ ; measured $E\gamma$ , $I\gamma(\theta)$ ; deduced upper bounds on parity-violating $\gamma$ -ray asymmetry. JOUR PRVCA 74 065503   |
| 2007SA47                   | NUCLEAR REACTIONS $^{116}\text{Cd}(p, n)$ , $E=300$ MeV; measured excitation energy spectrum. $^{116}\text{In}$ deduced Gamow-Teller strength distribution, nuclear matrix elements. Comparison with other data. JOUR NUPAB 788 76c  |

KEYNUMBERS AND KEYWORDS

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A=116 (*continued*)

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| 2007VIZZ                   | NUCLEAR REACTIONS $^{118}\text{Sn}(\gamma, p)$ , $(\gamma, d)$ , $^{121}\text{Sb}(\gamma, n)$ , $(\gamma, \alpha)$ , $(\gamma, \alpha n)$ , E(end point)=22 MeV; measured integral cross-sections. Betatron, activation method, NaI(Tl) detector. CONF   |
| $^{116}\text{Sn}$ 2006SH31 | RADIOACTIVITY $^{82}\text{Se}$ , $^{100}\text{Mo}(2\beta^-)$ ; measured $0\nu\beta\beta$ -decay $T_{1/2}$ lower limit. $^{82}\text{Se}$ , $^{96}\text{Zr}$ , $^{100}\text{Mo}$ , $^{116}\text{Cd}$ , $^{150}\text{Nd}(2\beta^-)$ ; measured $2\nu\beta\beta$ -decay $T_{1/2}$ . JOUR PANUE 69 2090   |
| 2006SH32                   | RADIOACTIVITY $^{82}\text{Se}$ , $^{96}\text{Zr}$ , $^{100}\text{Mo}$ , $^{116}\text{Cd}$ , $^{150}\text{Nd}(2\beta^-)$ ; measured $2\nu\beta\beta$ -decay $T_{1/2}$ . $^{82}\text{Se}$ , $^{100}\text{Mo}(2\beta^-)$ ; measured $0\nu\beta\beta$ -decay $T_{1/2}$ lower limits. JOUR BRSPE 70 731   |
| 2007BL15                   | RADIOACTIVITY $^{70}\text{Zn}$ , $^{116}\text{Cd}$ , $^{128,130}\text{Te}(\beta^-\beta^-)$ ; $^{64}\text{Zn}$ , $^{106}\text{Cd}$ , $^{120}\text{Te}(\beta^+\beta^+)$ ; measured summed $E\beta$ . Deduced upper limits for $T_{1/2}$ . JOUR PRVCA 76 025501   |
| 2007BLZY                   | RADIOACTIVITY $^{70}\text{Zn}$ , $^{116}\text{Cd}$ , $^{128}\text{Te}$ , $^{130}\text{Te}(2\beta^-)$ ; measured summed $\beta$ energies. Deduced $T_{1/2}$ limits. PREPRINT arXiv:0707.2756v1 [nucl-ex]  |
| 2007GA44                   | NUCLEAR REACTIONS $^{112,114,116,118,120,122,124}\text{Sn}(\alpha, \alpha')$ , E=400 MeV; measured $E\alpha$ , $I\alpha$ , $\sigma(E, \theta)$ . $^{112,114,116,118,120,122,124}\text{Sn}$ deduced GMR energy, strength distributions, moment ratios. Comparison with other data and calculations. JOUR NUPAB 788 36c  |
| 2007HU02                   | NUCLEAR REACTIONS $^{90}\text{Zr}$ , $^{116}\text{Sn}$ , $^{208}\text{Pb}(\alpha, \alpha')$ , $(\alpha, n\alpha)$ , E=200 MeV; measured $E\gamma$ , $E\alpha$ , $E_n$ , $\sigma(E, \theta)$ . $^{90}\text{Zr}$ , $^{116}\text{Sn}$ , $^{208}\text{Pb}$ deduced isoscalar GDR neutron decay features. JOUR PRVCA 75 014606  |
| 2007HU20                   | NUCLEAR REACTIONS $^{90}\text{Zr}$ , $^{116}\text{Sn}$ , $^{208}\text{Pb}(\alpha, \alpha'n)$ , E=200 MeV; measured $\sigma$ and angular distributions. $^{90}\text{Zr}$ , $^{116}\text{Sn}$ , $^{208}\text{Pb}$ deduced branching ratios for direct and statistical neutron decay of isoscalar giant dipole resonance. JOUR PANUE 70 1407  |
| 2007KL05                   | NUCLEAR REACTIONS $\text{Be}(^{238}\text{U}, X)$ , E=550 MeV / nucleon; measured fragment yields. $^{12}\text{C}$ , $^{208}\text{Pb}(^{129}\text{Sn}, X)$ , $(^{130}\text{Sn}, X)$ , $(^{131}\text{Sn}, X)$ , $(^{132}\text{Sn}, X)$ , $(^{133}\text{Sn}, X)$ , E $\approx$ 500 MeV / nucleon; measured $E_n$ , $E\gamma$ , $n\gamma$ -coin; deduced electromagnetic dissociation $\sigma(E)$ . $^{129,130,131,132,133}\text{Sn}$ deduced dipole strength distributions, B(E1), pygmy and giant dipole resonance parameters. Comparison with RPA calculations. $^{40,44,48}\text{Ca}$ , $^{116,124}\text{Sn}$ , $^{138}\text{Ba}$ , $^{140}\text{Ce}$ , $^{142}\text{Nd}$ , $^{144}\text{Sm}$ , $^{208}\text{Pb}(\gamma, \gamma')$ , E not given; analyzed $E\gamma$ , $I\gamma$ . $^{40,44,48}\text{Ca}$ , $^{116,124}\text{Sn}$ , $^{138}\text{Ba}$ , $^{140}\text{Ce}$ , $^{142}\text{Nd}$ , $^{144}\text{Sm}$ , $^{208}\text{Pb}$ deduced B(E1). JOUR NUPAB 788 145c |
| 2007LI61                   | NUCLEAR REACTIONS $^{112,114,116,118,120,122,124}\text{Sn}(\alpha, \alpha')$ , E=400 MeV; measured $E\alpha$ , $I\alpha$ . Deduced GMR strength distributions. JOUR PRLTA 99 162503  |
| 2007LIZX                   | NUCLEAR REACTIONS $^{112,114,116,118,120,122,124}\text{Sn}(\alpha, \alpha')$ , E=400 MeV; measured $E\alpha$ , $I\alpha$ . Deduced GMR strength distributions. PREPRINT arXiv:0709.0567v1 [nucl-ex]  |
| 2007W006                   | NUCLEAR REACTIONS $^{90}\text{Zr}$ , $^{116}\text{Sn}$ , $^{208}\text{Pb}(\alpha, \alpha')$ , $(\alpha, n\alpha)$ , E=200 MeV; measured $E\gamma$ , $E\alpha$ , $E_n$ , $\sigma(E, \theta)$ , excitation energy spectra. $^{90}\text{Zr}$ , $^{116}\text{Sn}$ , $^{208}\text{Pb}$ deduced isoscalar GDR neutron decay features. $^{140}\text{Ce}(\alpha, \alpha\gamma)$ , E=136 MeV; measured $E\gamma$ , $E\alpha$ . $^{140}\text{Ce}$ deduced E1 strength distribution. JOUR NUPAB 788 27c   |

KEYNUMBERS AND KEYWORDS

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**A=116 (continued)**

- <sup>116</sup>Sb    2007SKZZ    NUCLEAR REACTIONS <sup>115,116,120</sup>Sn(p, n), E=4.5-9.0 MeV; measured cross sections using activation technique. Compared cross sections, S-factors and reaction rates to Hauser-Feshbach statistical theory predictions. CONF Geneva(NIC-IX) 204
- <sup>116</sup>Te    2007OZ01    NUCLEAR REACTIONS <sup>112</sup>Sn(α, γ), (α, p), E(cm)=7.59-11.42 MeV; measured σ; deduced astrophysical S-factors. Activation technique. JOUR PRVCA 75 025801
- 2007RE12    NUCLEAR REACTIONS Sn(α, X)<sup>116</sup>Te / <sup>117</sup>Te / <sup>118</sup>Te / <sup>119</sup>Te / <sup>121</sup>Te / <sup>123</sup>Te / <sup>117</sup>Sb / <sup>118</sup>Sb / <sup>120</sup>Sb / <sup>122</sup>Sb / <sup>124</sup>Sb / <sup>126</sup>Sb / <sup>117</sup>Sn / <sup>111</sup>In, E=12-38 MeV; measured Eγ, Iγ, cross sections and excitation functions using stacked foil activation technique. JOUR NIMBE 260 672

**A=117**

- <sup>117</sup>Rh    2007HA20    ATOMIC MASSES <sup>106,107,108,109,110</sup>Tc, <sup>106,107,108,109,110,111,112,113,114,115</sup>Ru, <sup>108,109,110,111,112,113,114,115,116,117,118</sup>Rh, <sup>112,113,114,115,116,117,118,119,120</sup>Pd; measured masses using the JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302
- <sup>117</sup>Pd    2007HA20    ATOMIC MASSES <sup>106,107,108,109,110</sup>Tc, <sup>106,107,108,109,110,111,112,113,114,115</sup>Ru, <sup>108,109,110,111,112,113,114,115,116,117,118</sup>Rh, <sup>112,113,114,115,116,117,118,119,120</sup>Pd; measured masses using the JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302
- 2007ST19    NUCLEAR REACTIONS <sup>238</sup>U(α, F), E=30 MeV; measured fission fragment yield, Eγ, Iγ, (fragment)γ-coin. <sup>117,118,120</sup>Pd, <sup>122,124</sup>Cd deduced levels, J, π. JOUR NUPAB 787 455c
- <sup>117</sup>Cd    2007H022    NUCLEAR REACTIONS Be(<sup>136</sup>Xe, X), E=120 MeV / nucleon; measured Eγ, Iγ. <sup>125</sup>Cd, <sup>126</sup>Cd, <sup>127</sup>Cd, <sup>128</sup>Cd deduced levels, J, π, isomers, half-lives, band structure; <sup>100,115,117,119,121,122,123,124</sup>Cd; level systematics. JOUR PRVCA 76 044324
- <sup>117</sup>In    2007VIZZ    NUCLEAR REACTIONS <sup>118</sup>Sn(γ, p), (γ, d), <sup>121</sup>Sb(γ, n), (γ, α), (γ, αn), E(end point)=22 MeV; measured integral cross-sections. Betatron, activation method, NaI(Tl) detector. CONF Voronezh(Nucleus-2007),Contrib,P121,Vishnevsky
- <sup>117</sup>Sn    2006VI11    NUCLEAR REACTIONS <sup>114</sup>Cd(n, γ), <sup>116</sup>Sn(n, γ), <sup>124</sup>Te(n, γ), E=reactor spectrum; measured x-ray spectra. deduced K-shell internal conversion coefficients. JOUR BRSPPE 70 1842
- 2007EG02    NUCLEAR REACTIONS <sup>91</sup>Zr, <sup>116,118,119,120,122,124</sup>Sn, <sup>143</sup>Nd, <sup>177</sup>Hf(n, γ);E=thermal; measured Eγ, Iγ, cross sections. JOUR ARISE 65 1290
- 2007RE12    NUCLEAR REACTIONS Sn(α, X)<sup>116</sup>Te / <sup>117</sup>Te / <sup>118</sup>Te / <sup>119</sup>Te / <sup>121</sup>Te / <sup>123</sup>Te / <sup>117</sup>Sb / <sup>118</sup>Sb / <sup>120</sup>Sb / <sup>122</sup>Sb / <sup>124</sup>Sb / <sup>126</sup>Sb / <sup>117</sup>Sn / <sup>111</sup>In, E=12-38 MeV; measured Eγ, Iγ, cross sections and excitation functions using stacked foil activation technique. JOUR NIMBE 260 672

KEYNUMBERS AND KEYWORDS

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**A=117 (continued)**

- <sup>117</sup>Sb      2007RE12      NUCLEAR REACTIONS Sn( $\alpha$ , X)<sup>116</sup>Te / <sup>117</sup>Te / <sup>118</sup>Te / <sup>119</sup>Te / <sup>121</sup>Te / <sup>123</sup>Te / <sup>117</sup>Sb / <sup>118</sup>Sb / <sup>120</sup>Sb / <sup>122</sup>Sb / <sup>124</sup>Sb / <sup>126</sup>Sb / <sup>117</sup>Sn / <sup>111</sup>In, E=12-38 MeV; measured E $\gamma$ , I $\gamma$ , cross sections and excitation functions using stacked foil activation technique. JOUR NIMBE 260 672
- <sup>117</sup>Te      2007RE12      NUCLEAR REACTIONS Sn( $\alpha$ , X)<sup>116</sup>Te / <sup>117</sup>Te / <sup>118</sup>Te / <sup>119</sup>Te / <sup>121</sup>Te / <sup>123</sup>Te / <sup>117</sup>Sb / <sup>118</sup>Sb / <sup>120</sup>Sb / <sup>122</sup>Sb / <sup>124</sup>Sb / <sup>126</sup>Sb / <sup>117</sup>Sn / <sup>111</sup>In, E=12-38 MeV; measured E $\gamma$ , I $\gamma$ , cross sections and excitation functions using stacked foil activation technique. JOUR NIMBE 260 672

**A=118**

- <sup>118</sup>Rh      2007HA20      ATOMIC MASSES <sup>106,107,108,109,110</sup>Tc, <sup>106,107,108,109,110,111,112,113,114,115</sup>Ru, <sup>108,109,110,111,112,113,114,115,116,117,118</sup>Rh, <sup>112,113,114,115,116,117,118,119,120</sup>Pd; measured masses using the JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302
- <sup>118</sup>Pd      2007HA20      ATOMIC MASSES <sup>106,107,108,109,110</sup>Tc, <sup>106,107,108,109,110,111,112,113,114,115</sup>Ru, <sup>108,109,110,111,112,113,114,115,116,117,118</sup>Rh, <sup>112,113,114,115,116,117,118,119,120</sup>Pd; measured masses using the JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302
- 2007ST19      NUCLEAR REACTIONS <sup>238</sup>U( $\alpha$ , F), E=30 MeV; measured fission fragment yield, E $\gamma$ , I $\gamma$ , (fragment) $\gamma$ -coin. <sup>117,118,120</sup>Pd, <sup>122,124</sup>Cd deduced levels, J,  $\pi$ . JOUR NUPAB 787 455c
- <sup>118</sup>Sn      2006H023      NUCLEAR REACTIONS <sup>117</sup>Sn(n,  $\gamma$ ), E=thermal; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, two-step cascade intensities. <sup>118</sup>Sn deduced levels. JOUR FIZBE 15 189
- 2006NIZT      NUCLEAR REACTIONS <sup>117,119</sup>Sn(n,  $\gamma$ ), E=10-100, 570 keV; measured E $\gamma$ , I $\gamma$ , capture  $\sigma$ . Comparison with model predictions. REPT JAEA-Conf 2006-009,P101,Nishiyama
- 2007GA44      NUCLEAR REACTIONS <sup>112,114,116,118,120,122,124</sup>Sn( $\alpha$ ,  $\alpha'$ ), E=400 MeV; measured E $\alpha$ , I $\alpha$ ,  $\sigma$ (E,  $\theta$ ). <sup>112,114,116,118,120,122,124</sup>Sn deduced GMR energy, strength distributions, moment ratios. Comparison with other data and calculations. JOUR NUPAB 788 36c
- 2007LI61      NUCLEAR REACTIONS <sup>112,114,116,118,120,122,124</sup>Sn( $\alpha$ ,  $\alpha'$ ), E=400 MeV; measured E $\alpha$ , I $\alpha$ . Deduced GMR strength distributions. JOUR PRLTA 99 162503
- 2007LIZX      NUCLEAR REACTIONS <sup>112,114,116,118,120,122,124</sup>Sn( $\alpha$ ,  $\alpha'$ ), E=400 MeV; measured E $\alpha$ , I $\alpha$ . Deduced GMR strength distributions. PREPRINT arXiv:0709.0567v1 [nucl-ex]
- <sup>118</sup>Sb      2007RE12      NUCLEAR REACTIONS Sn( $\alpha$ , X)<sup>116</sup>Te / <sup>117</sup>Te / <sup>118</sup>Te / <sup>119</sup>Te / <sup>121</sup>Te / <sup>123</sup>Te / <sup>117</sup>Sb / <sup>118</sup>Sb / <sup>120</sup>Sb / <sup>122</sup>Sb / <sup>124</sup>Sb / <sup>126</sup>Sb / <sup>117</sup>Sn / <sup>111</sup>In, E=12-38 MeV; measured E $\gamma$ , I $\gamma$ , cross sections and excitation functions using stacked foil activation technique. JOUR NIMBE 260 672



KEYNUMBERS AND KEYWORDS

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**A=118 (continued)**

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| 2007ZE06                   | NUCLEAR REACTIONS $^{12,13}\text{C}$ , $^{18}\text{O}$ , $^{26}\text{Mg}$ , $^{58}\text{Ni}$ , $^{60}\text{Ni}$ , $^{90}\text{Zr}$ , $^{118}\text{Sn}$ , $^{208}\text{Pb}$ ( $^3\text{He}$ , t), E=420 MeV; measured triton spectra and cross sections. Deduced B(GT). JOUR PRLTA 99 202501  |
| 2007ZEZZ                   | NUCLEAR REACTIONS $^{12,13}\text{C}$ , $^{18}\text{O}$ , $^{26}\text{Mg}$ , $^{58}\text{Ni}$ , $^{60}\text{Ni}$ , $^{90}\text{Zr}$ , $^{118}\text{Sn}$ , $^{208}\text{Pb}$ ( $^3\text{He}$ , t), E=420 MeV; measured triton spectra and cross sections. Deduced B(GT). PREPRINT arXiv:0707.2840v1 [nucl-ex]  |
| $^{118}\text{Te}$ 2007HE20 | NUCLEAR REACTIONS $^{64}\text{Ni}$ ( $^{64}\text{Ni}$ , F), E=255, 261 MeV; measured $E\gamma$ , $I\gamma$ , (particle) $\gamma$ -coinc, charged particle angular distributions. $^{118}\text{Te}$ , $^{124}\text{Xe}$ , $^{124,125}\text{Cs}$ deduced levels, J. JOUR APOBB 38 1421   |
| 2007RE12                   | NUCLEAR REACTIONS $\text{Sn}(\alpha, \text{X})^{116}\text{Te} / ^{117}\text{Te} / ^{118}\text{Te} / ^{119}\text{Te} / ^{121}\text{Te} / ^{123}\text{Te} / ^{117}\text{Sb} / ^{118}\text{Sb} / ^{120}\text{Sb} / ^{122}\text{Sb} / ^{124}\text{Sb} / ^{126}\text{Sb} / ^{117}\text{Sn} / ^{111}\text{In}$ , E=12-38 MeV; measured $E\gamma$ , $I\gamma$ , cross sections and excitation functions using stacked foil activation technique. JOUR NIMBE 260 672 |

**A=119**

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|----------------------------|--|
| $^{119}\text{Pd}$ 2007HA20 | ATOMIC MASSES $^{106,107,108,109,110}\text{Tc}$ , $^{106,107,108,109,110,111,112,113,114,115}\text{Ru}$ , $^{108,109,110,111,112,113,114,115,116,117,118}\text{Rh}$ , $^{112,113,114,115,116,117,118,119,120}\text{Pd}$ ; measured masses using the JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302   |
| $^{119}\text{Cd}$ 2007H022 | NUCLEAR REACTIONS $\text{Be}(^{136}\text{Xe}, \text{X})$ , E=120 MeV / nucleon; measured $E\gamma$ , $I\gamma$ . $^{125}\text{Cd}$ , $^{126}\text{Cd}$ , $^{127}\text{Cd}$ , $^{128}\text{Cd}$ deduced levels, J, $\pi$ , isomers, half-lives, band structure; $^{100,115,117,119,121,122,123,124}\text{Cd}$ ; level systematics. JOUR PRVCA 76 044324   |
| $^{119}\text{Sn}$ 2007EG02 | NUCLEAR REACTIONS $^{91}\text{Zr}$ , $^{116,118,119,120,122,124}\text{Sn}$ , $^{143}\text{Nd}$ , $^{177}\text{Hf}$ (n, $\gamma$ ); E=thermal; measured $E\gamma$ , $I\gamma$ , cross sections. JOUR ARISE 65 1290  |
| 2007L0ZZ                   | RADIOACTIVITY $^{119}\text{Sn}$ (IT) [from $^{118}\text{Sn}$ (n, $\gamma$ )]; measured $E\gamma$ , $I\gamma$ , ce, (ce) $\gamma$ -coin, $T_{1/2}$ . Half-life dependence on $^{119}\text{Sn} / ^{119m2}\text{Sn}$ ratio observed; inhibition effect due to Moessbauer backscattering is discussed. REPT PNPI-2732, Loginov   |
| $^{119}\text{Te}$ 2007PAZX | NUCLEAR REACTIONS $^{120,130}\text{Te}(\gamma, \text{n})$ , E(end point)=25-30 MeV; measured $E\gamma$ , $I\gamma$ ; $^{119m,119g,129m,129g}\text{Te}$ deduced yield ratio $Y_m / Y_g$ . Betatron, activation method, Ge(Li) detector. CONF Voronezh(Nucleus-2007), Contrib, P146, Palvanov  |
| 2007RE12                   | NUCLEAR REACTIONS $\text{Sn}(\alpha, \text{X})^{116}\text{Te} / ^{117}\text{Te} / ^{118}\text{Te} / ^{119}\text{Te} / ^{121}\text{Te} / ^{123}\text{Te} / ^{117}\text{Sb} / ^{118}\text{Sb} / ^{120}\text{Sb} / ^{122}\text{Sb} / ^{124}\text{Sb} / ^{126}\text{Sb} / ^{117}\text{Sn} / ^{111}\text{In}$ , E=12-38 MeV; measured $E\gamma$ , $I\gamma$ , cross sections and excitation functions using stacked foil activation technique. JOUR NIMBE 260 672 |



## A=120

- <sup>120</sup>Pd 2007HA20 ATOMIC MASSES <sup>106,107,108,109,110</sup>Tc,  
<sup>106,107,108,109,110,111,112,113,114,115</sup>Ru,  
<sup>108,109,110,111,112,113,114,115,116,117,118</sup>Rh,  
<sup>112,113,114,115,116,117,118,119,120</sup>Pd; measured masses using the  
 JYFLTRAP double penning trap setup. JOUR PRVCA 75 064302
- 2007ST19 NUCLEAR REACTIONS <sup>238</sup>U( $\alpha$ , F), E=30 MeV; measured fission  
 fragment yield, E $\gamma$ , I $\gamma$ , (fragment) $\gamma$ -coin. <sup>117,118,120</sup>Pd, <sup>122,124</sup>Cd  
 deduced levels, J,  $\pi$ . JOUR NUPAB 787 455c
- <sup>120</sup>Sn 2006NIZT NUCLEAR REACTIONS <sup>117,119</sup>Sn(n,  $\gamma$ ), E=10-100, 570 keV;  
 measured E $\gamma$ , I $\gamma$ , capture  $\sigma$ . Comparison with model predictions.  
 REPT JAEA-Conf 2006-009,P101,Nishiyama
- 2007BA43 RADIOACTIVITY <sup>120</sup>Te( $\beta^+$ EC); measured E $\gamma$ , I $\gamma$ . Deduced limits for  
 ( $0\nu+2\nu$ ) and ( $0\nu$ ) T<sub>1/2</sub>. JOUR JPGPE 34 1721
- 2007BAZZ RADIOACTIVITY <sup>120</sup>Te( $\beta^+$ EC), (2EC); measured T<sub>1/2</sub> lower limits  
 for decay to ground and excited states. PREPRINT  
 nucl-ex/0703020,3/14/2007
- 2007BL15 RADIOACTIVITY <sup>70</sup>Zn, <sup>116</sup>Cd, <sup>128,130</sup>Te( $\beta^-\beta^-$ ); <sup>64</sup>Zn, <sup>106</sup>Cd,  
<sup>120</sup>Te( $\beta^+\beta^+$ ); measured summed E $\beta$ . Deduced upper limits for T<sub>1/2</sub>.  
 JOUR PRVCA 76 025501
- 2007EG02 NUCLEAR REACTIONS <sup>91</sup>Zr, <sup>116,118,119,120,122,124</sup>Sn, <sup>143</sup>Nd, <sup>177</sup>Hf(n,  
 $\gamma$ );E=thermal; measured E $\gamma$ , I $\gamma$ , cross sections. JOUR ARISE 65 1290
- 2007GA44 NUCLEAR REACTIONS <sup>112,114,116,118,120,122,124</sup>Sn( $\alpha$ ,  $\alpha'$ ), E=400  
 MeV; measured E $\alpha$ , I $\alpha$ ,  $\sigma$ (E,  $\theta$ ). <sup>112,114,116,118,120,122,124</sup>Sn deduced  
 GMR energy, strength distributions, moment ratios. Comparison with  
 other data and calculations. JOUR NUPAB 788 36c
- 2007LI61 NUCLEAR REACTIONS <sup>112,114,116,118,120,122,124</sup>Sn( $\alpha$ ,  $\alpha'$ ), E=400  
 MeV; measured E $\alpha$ , I $\alpha$ . Deduced GMR strength distributions. JOUR  
 PRLTA 99 162503
- 2007LIZX NUCLEAR REACTIONS <sup>112,114,116,118,120,122,124</sup>Sn( $\alpha$ ,  $\alpha'$ ), E=400  
 MeV; measured E $\alpha$ , I $\alpha$ . Deduced GMR strength distributions.  
 PREPRINT arXiv:0709.0567v1 [nucl-ex]
- 2007OZ04 NUCLEAR REACTIONS <sup>112,120</sup>Sn( $\gamma$ ,  $\gamma'$ ), E $\approx$ 9-11 MeV  
 bremsstrahlung; measured E $\gamma$ , I $\gamma$ . <sup>112</sup>Sn deduced B(E1) strength  
 distribution. Sn analyzed B(E1). JOUR NUPAB 788 385c
- 2007ST03 NUCLEAR REACTIONS <sup>120</sup>Sn(<sup>68</sup>Cu, <sup>68</sup>Cu'), (<sup>70</sup>Cu, <sup>70</sup>Cu'), E=2.83  
 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin following projectile  
 Coulomb excitation. <sup>68,70</sup>Cu deduced transitions B(E2). Isomeric  
 beams, comparison with large-scale shell model calculations. JOUR  
 PRLTA 98 122701
- 2007VA20 NUCLEAR REACTIONS <sup>108</sup>Pd, <sup>120</sup>Sn(<sup>74</sup>Zn, <sup>74</sup>Zn'), (<sup>76</sup>Zn, <sup>76</sup>Zn'),  
 (<sup>78</sup>Zn, <sup>78</sup>Zn'), (<sup>80</sup>Zn, <sup>80</sup>Zn'), E=2.79-2.87 MeV / nucleon; measured  
 E $\gamma$ , I $\gamma$ . <sup>74,76,78,80</sup>Zn deduced B(E2). JOUR PRLTA 99 142501
- <sup>120</sup>Sb 2007RE12 NUCLEAR REACTIONS Sn( $\alpha$ , X)<sup>116</sup>Te / <sup>117</sup>Te / <sup>118</sup>Te / <sup>119</sup>Te /  
<sup>121</sup>Te / <sup>123</sup>Te / <sup>117</sup>Sb / <sup>118</sup>Sb / <sup>120</sup>Sb / <sup>122</sup>Sb / <sup>124</sup>Sb / <sup>126</sup>Sb / <sup>117</sup>Sn /  
<sup>111</sup>In, E=12-38 MeV; measured E $\gamma$ , I $\gamma$ , cross sections and excitation  
 functions using stacked foil activation technique. JOUR NIMBE 260  
 672

KEYNUMBERS AND KEYWORDS

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**A=120 (continued)**

- 2007SKZZ NUCLEAR REACTIONS  $^{115,116,120}\text{Sn}(p, n)$ ,  $E=4.5\text{-}9.0$  MeV; measured cross sections using activation technique. Compared cross sections, S-factors and reaction rates to Hauser-Feshbach statistical theory predictions. CONF Geneva(NIC-IX) 204
- 2007VIZY NUCLEAR REACTIONS  $^{121}\text{Sb}(\gamma, n)$ ,  $^{153}\text{Eu}(\gamma, n)$ ,  $E(\text{end point})=12.5, 22$  MeV;  $^{151}\text{Eu}(n, \gamma)$ ,  $E=\text{thermal, slow}$ ; measured  $E\gamma, I\gamma$ ;  $^{120m,120g}\text{Sb}$ ,  $^{152m,152g}\text{Eu}$  deduced yield ratio  $Y_m / Y_g$ ;  $^{152m,152g}\text{Eu}$  deduced  $\sigma(8^-) / \sigma(0^-)$ . Microtron, betatron, reactor, activation method, NaI(Tl), Ge detectors. CONF Voronezh(Nucleus-2007),Contrib,P135,Vishnevsky
- 2007VIZZ NUCLEAR REACTIONS  $^{118}\text{Sn}(\gamma, p)$ ,  $(\gamma, d)$ ,  $^{121}\text{Sb}(\gamma, n)$ ,  $(\gamma, \alpha)$ ,  $(\gamma, \alpha n)$ ,  $E(\text{end point})=22$  MeV; measured integral cross-sections. Betatron, activation method, NaI(Tl) detector. CONF Voronezh(Nucleus-2007),Contrib,P121,Vishnevsky
- $^{120}\text{Te}$  2006SI40 NUCLEAR MOMENTS  $^{120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Te}$ ; measured hfs, isotope shifts; deduced  $\mu$ , quadrupole moments, radii. Laser spectroscopy, comparison with model predictions. JOUR HYIND 171 173
- 2007BA43 RADIOACTIVITY  $^{120}\text{Te}(\beta^+ \text{EC})$ ; measured  $E\gamma, I\gamma$ . Deduced limits for  $(0\nu+2\nu)$  and  $(0\nu) T_{1/2}$ . JOUR JPGPE 34 1721
- 2007BAZZ RADIOACTIVITY  $^{120}\text{Te}(\beta^+ \text{EC})$ ,  $(2\text{EC})$ ; measured  $T_{1/2}$  lower limits for decay to ground and excited states. PREPRINT nucl-ex/0703020,3/14/2007
- 2007BL15 RADIOACTIVITY  $^{70}\text{Zn}$ ,  $^{116}\text{Cd}$ ,  $^{128,130}\text{Te}(\beta^- \beta^-)$ ;  $^{64}\text{Zn}$ ,  $^{106}\text{Cd}$ ,  $^{120}\text{Te}(\beta^+ \beta^+)$ ; measured summed  $E\beta$ . Deduced upper limits for  $T_{1/2}$ . JOUR PRVCA 76 025501

**A=121**

- $^{121}\text{Cd}$  2007H022 NUCLEAR REACTIONS  $\text{Be}(^{136}\text{Xe}, X)$ ,  $E=120$  MeV / nucleon; measured  $E\gamma, I\gamma$ .  $^{125}\text{Cd}$ ,  $^{126}\text{Cd}$ ,  $^{127}\text{Cd}$ ,  $^{128}\text{Cd}$  deduced levels, J,  $\pi$ , isomers, half-lives, band structure;  $^{100,115,117,119,121,122,123,124}\text{Cd}$ ; level systematics. JOUR PRVCA 76 044324
- $^{121}\text{Sn}$  2007EG02 NUCLEAR REACTIONS  $^{91}\text{Zr}$ ,  $^{116,118,119,120,122,124}\text{Sn}$ ,  $^{143}\text{Nd}$ ,  $^{177}\text{Hf}(n, \gamma)$ ;  $E=\text{thermal}$ ; measured  $E\gamma, I\gamma$ , cross sections. JOUR ARISE 65 1290
- $^{121}\text{Te}$  2006SI40 NUCLEAR MOMENTS  $^{120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Te}$ ; measured hfs, isotope shifts; deduced  $\mu$ , quadrupole moments, radii. Laser spectroscopy, comparison with model predictions. JOUR HYIND 171 173
- 2007ME09 NUCLEAR REACTIONS  $^{127}\text{I}(\mu^-, \nu)$ ,  $(\mu^-, n\nu)$ ,  $(\mu^-, 2n\nu)$ ,  $(\mu^-, 3n\nu)$ ,  $(\mu^-, 4n\nu)$ ,  $(\mu^-, 5n\nu)$ ,  $(\mu^-, 6n\nu)$ ,  $E$  at rest;  $^{197}\text{Au}(\mu^-, n\nu)$ ,  $(\mu^-, 3n\nu)$ ,  $E$  at rest;  $^{209}\text{Bi}(\mu^-, n\nu)$ ,  $(\mu^-, 2n\nu)$ ,  $(\mu^-, 3n\nu)$ ,  $(\mu^-, 4n\nu)$ ,  $(\mu^-, 5n\nu)$ ,  $E$  at rest; measured  $E\gamma, I\gamma$ , X-ray spectra. JOUR PRVCA 75 045501

**A=121 (continued)**

- 2007RE12 NUCLEAR REACTIONS Sn( $\alpha$ , X) $^{116}\text{Te}$  /  $^{117}\text{Te}$  /  $^{118}\text{Te}$  /  $^{119}\text{Te}$  /  $^{121}\text{Te}$  /  $^{123}\text{Te}$  /  $^{117}\text{Sb}$  /  $^{118}\text{Sb}$  /  $^{120}\text{Sb}$  /  $^{122}\text{Sb}$  /  $^{124}\text{Sb}$  /  $^{126}\text{Sb}$  /  $^{117}\text{Sn}$  /  $^{111}\text{In}$ , E=12-38 MeV; measured  $E\gamma$ ,  $I\gamma$ , cross sections and excitation functions using stacked foil activation technique. JOUR NIMBE 260 672

**A=122**

- $^{122}\text{Cd}$  2007H022 NUCLEAR REACTIONS Be( $^{136}\text{Xe}$ , X), E=120 MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$ .  $^{125}\text{Cd}$ ,  $^{126}\text{Cd}$ ,  $^{127}\text{Cd}$ ,  $^{128}\text{Cd}$  deduced levels, J,  $\pi$ , isomers, half-lives, band structure;  $^{100,115,117,119,121,122,123,124}\text{Cd}$ ; level systematics. JOUR PRVCA 76 044324
- 2007ST19 NUCLEAR REACTIONS  $^{238}\text{U}$ ( $\alpha$ , F), E=30 MeV; measured fission fragment yield,  $E\gamma$ ,  $I\gamma$ , (fragment) $\gamma$ -coin.  $^{117,118,120}\text{Pd}$ ,  $^{122,124}\text{Cd}$  deduced levels, J,  $\pi$ . JOUR NUPAB 787 455c
- $^{122}\text{Sn}$  2007GA44 NUCLEAR REACTIONS  $^{112,114,116,118,120,122,124}\text{Sn}$ ( $\alpha$ ,  $\alpha'$ ), E=400 MeV; measured  $E\alpha$ ,  $I\alpha$ ,  $\sigma(E, \theta)$ .  $^{112,114,116,118,120,122,124}\text{Sn}$  deduced GMR energy, strength distributions, moment ratios. Comparison with other data and calculations. JOUR NUPAB 788 36c
- 2007LI61 NUCLEAR REACTIONS  $^{112,114,116,118,120,122,124}\text{Sn}$ ( $\alpha$ ,  $\alpha'$ ), E=400 MeV; measured  $E\alpha$ ,  $I\alpha$ . Deduced GMR strength distributions. JOUR PRLTA 99 162503
- 2007LIZX NUCLEAR REACTIONS  $^{112,114,116,118,120,122,124}\text{Sn}$ ( $\alpha$ ,  $\alpha'$ ), E=400 MeV; measured  $E\alpha$ ,  $I\alpha$ . Deduced GMR strength distributions. PREPRINT arXiv:0709.0567v1 [nucl-ex]
- $^{122}\text{Sb}$  2007MA15 NUCLEAR REACTIONS Sb( $^7\text{Li}$ , X) $^{125}\text{Xe}$  /  $^{123}\text{Xe}$  /  $^{124}\text{I}$  /  $^{123}\text{I}$  /  $^{122}\text{Sb}$ , E=32, 35, 38, 42, 45, 48 MeV; measured yields. JOUR RAACA 95 133
- 2007RE12 NUCLEAR REACTIONS Sn( $\alpha$ , X) $^{116}\text{Te}$  /  $^{117}\text{Te}$  /  $^{118}\text{Te}$  /  $^{119}\text{Te}$  /  $^{121}\text{Te}$  /  $^{123}\text{Te}$  /  $^{117}\text{Sb}$  /  $^{118}\text{Sb}$  /  $^{120}\text{Sb}$  /  $^{122}\text{Sb}$  /  $^{124}\text{Sb}$  /  $^{126}\text{Sb}$  /  $^{117}\text{Sn}$  /  $^{111}\text{In}$ , E=12-38 MeV; measured  $E\gamma$ ,  $I\gamma$ , cross sections and excitation functions using stacked foil activation technique. JOUR NIMBE 260 672
- $^{122}\text{Te}$  2006SI40 NUCLEAR MOMENTS  $^{120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Te}$ ; measured hfs, isotope shifts; deduced  $\mu$ , quadrupole moments, radii. Laser spectroscopy, comparison with model predictions. JOUR HYIND 171 173
- 2007ME09 NUCLEAR REACTIONS  $^{127}\text{I}(\mu^-, \nu)$ ,  $(\mu^-, n\nu)$ ,  $(\mu^-, 2n\nu)$ ,  $(\mu^-, 3n\nu)$ ,  $(\mu^-, 4n\nu)$ ,  $(\mu^-, 5n\nu)$ ,  $(\mu^-, 6n\nu)$ , E at rest;  $^{197}\text{Au}(\mu^-, n\nu)$ ,  $(\mu^-, 3n\nu)$ , E at rest;  $^{209}\text{Bi}(\mu^-, n\nu)$ ,  $(\mu^-, 2n\nu)$ ,  $(\mu^-, 3n\nu)$ ,  $(\mu^-, 4n\nu)$ ,  $(\mu^-, 5n\nu)$ , E at rest; measured  $E\gamma$ ,  $I\gamma$ , X-ray spectra. JOUR PRVCA 75 045501
- 2007ST24 NUCLEAR REACTIONS Te( $^{58}\text{Ni}$ ,  $\gamma$ ) $^{122}\text{Te}$  /  $^{124}\text{Te}$  /  $^{125}\text{Te}$  /  $^{126}\text{Te}$  /  $^{128}\text{Te}$  /  $^{130}\text{Te}$ , E=195 MeV; measured  $E\gamma$ ,  $I\gamma$ , (particle) $\gamma$  angular correlations.  $^{122,124,125,126,128,130}\text{Te}$  deduced g-factors. JOUR PRVCA 76 034306

KEYNUMBERS AND KEYWORDS

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**A=123**

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| $^{123}\text{Cd}$ | 2007H022 | NUCLEAR REACTIONS $\text{Be}(^{136}\text{Xe}, \text{X})$ , $E=120$ MeV / nucleon; measured $E\gamma$ , $I\gamma$ . $^{125}\text{Cd}$ , $^{126}\text{Cd}$ , $^{127}\text{Cd}$ , $^{128}\text{Cd}$ deduced levels, $J$ , $\pi$ , isomers, half-lives, band structure; $^{100,115,117,119,121,122,123,124}\text{Cd}$ ; level systematics. JOUR PRVCA 76 044324  |
| $^{123}\text{Sn}$ | 2007EG02 | NUCLEAR REACTIONS $^{91}\text{Zr}$ , $^{116,118,119,120,122,124}\text{Sn}$ , $^{143}\text{Nd}$ , $^{177}\text{Hf}(n, \gamma)$ ; $E=\text{thermal}$ ; measured $E\gamma$ , $I\gamma$ , cross sections. JOUR ARISE 65 1290   |
| $^{123}\text{Te}$ | 2006SI40 | NUCLEAR MOMENTS $^{120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Te}$ ; measured hfs, isotope shifts; deduced $\mu$ , quadrupole moments, radii. Laser spectroscopy, comparison with model predictions. JOUR HYIND 171 173   |
|                   | 2007ME09 | NUCLEAR REACTIONS $^{127}\text{I}(\mu^-, \nu)$ , $(\mu^-, n\nu)$ , $(\mu^-, 2n\nu)$ , $(\mu^-, 3n\nu)$ , $(\mu^-, 4n\nu)$ , $(\mu^-, 5n\nu)$ , $(\mu^-, 6n\nu)$ , $E$ at rest; $^{197}\text{Au}(\mu^-, n\nu)$ , $(\mu^-, 3n\nu)$ , $E$ at rest; $^{209}\text{Bi}(\mu^-, n\nu)$ , $(\mu^-, 2n\nu)$ , $(\mu^-, 3n\nu)$ , $(\mu^-, 4n\nu)$ , $(\mu^-, 5n\nu)$ , $E$ at rest; measured $E\gamma$ , $I\gamma$ , X-ray spectra. JOUR PRVCA 75 045501                           |
|                   | 2007RE12 | NUCLEAR REACTIONS $\text{Sn}(\alpha, \text{X})$ $^{116}\text{Te} / ^{117}\text{Te} / ^{118}\text{Te} / ^{119}\text{Te} / ^{121}\text{Te} / ^{123}\text{Te} / ^{117}\text{Sb} / ^{118}\text{Sb} / ^{120}\text{Sb} / ^{122}\text{Sb} / ^{124}\text{Sb} / ^{126}\text{Sb} / ^{117}\text{Sn} / ^{111}\text{In}$ , $E=12\text{-}38$ MeV; measured $E\gamma$ , $I\gamma$ , cross sections and excitation functions using stacked foil activation technique. JOUR NIMBE 260 672 |
| $^{123}\text{I}$  | 2007BEZT | NUCLEAR REACTIONS $^{127}\text{I}(\gamma, n)$ , $(\gamma, 3n)$ , $(\gamma, 4n)$ , $E(\text{end point})=50$ MeV; measured $E\gamma$ ; deduced yields of reactions. Microtron, activation method, HPGe detector. CONF  |
|                   | 2007MA15 | Voronezh(Nucleus-2007),Contrib,P132,Belyshev<br>NUCLEAR REACTIONS $\text{Sb}(^7\text{Li}, \text{X})$ $^{125}\text{Xe} / ^{123}\text{Xe} / ^{124}\text{I} / ^{123}\text{I} / ^{122}\text{Sb}$ , $E=32, 35, 38, 42, 45, 48$ MeV; measured yields. JOUR RAACA 95 133  |
| $^{123}\text{Xe}$ | 2007MA15 | NUCLEAR REACTIONS $\text{Sb}(^7\text{Li}, \text{X})$ $^{125}\text{Xe} / ^{123}\text{Xe} / ^{124}\text{I} / ^{123}\text{I} / ^{122}\text{Sb}$ , $E=32, 35, 38, 42, 45, 48$ MeV; measured yields. JOUR RAACA 95 133  |

**A=124**

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| $^{124}\text{Cd}$ | 2007H022 | NUCLEAR REACTIONS $\text{Be}(^{136}\text{Xe}, \text{X})$ , $E=120$ MeV / nucleon; measured $E\gamma$ , $I\gamma$ . $^{125}\text{Cd}$ , $^{126}\text{Cd}$ , $^{127}\text{Cd}$ , $^{128}\text{Cd}$ deduced levels, $J$ , $\pi$ , isomers, half-lives, band structure; $^{100,115,117,119,121,122,123,124}\text{Cd}$ ; level systematics. JOUR PRVCA 76 044324 |
|                   | 2007ST19 | NUCLEAR REACTIONS $^{238}\text{U}(\alpha, \text{F})$ , $E=30$ MeV; measured fission fragment yield, $E\gamma$ , $I\gamma$ , (fragment) $\gamma$ -coin. $^{117,118,120}\text{Pd}$ , $^{122,124}\text{Cd}$ deduced levels, $J$ , $\pi$ . JOUR NUPAB 787 455c  |
| $^{124}\text{Sn}$ | 2007DAZX | RADIOACTIVITY $^{124}\text{Sn}(2\beta^-)$ ; $^{112}\text{Sn}(\beta^+\text{EC})$ , $(2\text{EC})$ ; measured $E\gamma$ , $I\gamma$ . Deduced lower limits for $T_{1/2}$ . PREPRINT arXiv:0709.4342v1 [nucl-ex]   |
|                   | 2007GA44 | NUCLEAR REACTIONS $^{112,114,116,118,120,122,124}\text{Sn}(\alpha, \alpha')$ , $E=400$ MeV; measured $E\alpha$ , $I\alpha$ , $\sigma(E, \theta)$ . $^{112,114,116,118,120,122,124}\text{Sn}$ deduced GMR energy, strength distributions, moment ratios. Comparison with other data and calculations. JOUR NUPAB 788 36c                                     |

A=124 (*continued*)

- 2007KI13 RADIOACTIVITY  $^{64}\text{Zn}$ ,  $^{112}\text{Sn}(\beta^+)$ , (EC);  $^{124}\text{Sn}(2\beta^-)$ ; measured  $E\gamma$ ,  $I\gamma$ ; deduced  $T_{1/2}$  lower limits for  $\beta^+$ , EC and  $0\nu$ -accompanied  $2\beta^-$ -decay to ground and excited states. Comparison with theoretical values and previous data. JOUR NUPAB 793 171
- 2007KL05 NUCLEAR REACTIONS  $\text{Be}(^{238}\text{U}, \text{X})$ ,  $E=550$  MeV / nucleon; measured fragment yields.  $^{12}\text{C}$ ,  $^{208}\text{Pb}(^{129}\text{Sn}, \text{X})$ ,  $(^{130}\text{Sn}, \text{X})$ ,  $(^{131}\text{Sn}, \text{X})$ ,  $(^{132}\text{Sn}, \text{X})$ ,  $(^{133}\text{Sn}, \text{X})$ ,  $E\approx 500$  MeV / nucleon; measured  $\text{En}$ ,  $E\gamma$ ,  $n\gamma$ -coin; deduced electromagnetic dissociation  $\sigma(E)$ .  $^{129,130,131,132,133}\text{Sn}$  deduced dipole strength distributions,  $B(E1)$ , pygmy and giant dipole resonance parameters. Comparison with RPA calculations.  $^{40,44,48}\text{Ca}$ ,  $^{116,124}\text{Sn}$ ,  $^{138}\text{Ba}$ ,  $^{140}\text{Ce}$ ,  $^{142}\text{Nd}$ ,  $^{144}\text{Sm}$ ,  $^{208}\text{Pb}(\gamma, \gamma')$ ,  $E$  not given; analyzed  $E\gamma$ ,  $I\gamma$ .  $^{40,44,48}\text{Ca}$ ,  $^{116,124}\text{Sn}$ ,  $^{138}\text{Ba}$ ,  $^{140}\text{Ce}$ ,  $^{142}\text{Nd}$ ,  $^{144}\text{Sm}$ ,  $^{208}\text{Pb}$  deduced  $B(E1)$ . JOUR NUPAB 788 145c
- 2007LI61 NUCLEAR REACTIONS  $^{112,114,116,118,120,122,124}\text{Sn}(\alpha, \alpha')$ ,  $E=400$  MeV; measured  $E\alpha$ ,  $I\alpha$ . Deduced GMR strength distributions. JOUR PRLTA 99 162503
- 2007LIZX NUCLEAR REACTIONS  $^{112,114,116,118,120,122,124}\text{Sn}(\alpha, \alpha')$ ,  $E=400$  MeV; measured  $E\alpha$ ,  $I\alpha$ . Deduced GMR strength distributions. PREPRINT arXiv:0709.0567v1 [nucl-ex]
- $^{124}\text{Sb}$  2007RE12 NUCLEAR REACTIONS  $\text{Sn}(\alpha, \text{X})$   $^{116}\text{Te} / ^{117}\text{Te} / ^{118}\text{Te} / ^{119}\text{Te} / ^{121}\text{Te} / ^{123}\text{Te} / ^{117}\text{Sb} / ^{118}\text{Sb} / ^{120}\text{Sb} / ^{122}\text{Sb} / ^{124}\text{Sb} / ^{126}\text{Sb} / ^{117}\text{Sn} / ^{111}\text{In}$ ,  $E=12\text{-}38$  MeV; measured  $E\gamma$ ,  $I\gamma$ , cross sections and excitation functions using stacked foil activation technique. JOUR NIMBE 260 672
- $^{124}\text{Te}$  2006SI40 NUCLEAR MOMENTS  $^{120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Te}$ ; measured hfs, isotope shifts; deduced  $\mu$ , quadrupole moments, radii. Laser spectroscopy, comparison with model predictions. JOUR HYIND 171 173
- 2007DAZX RADIOACTIVITY  $^{124}\text{Sn}(2\beta^-)$ ;  $^{112}\text{Sn}(\beta^+\text{EC})$ , (2EC); measured  $E\gamma$ ,  $I\gamma$ . Deduced lower limits for  $T_{1/2}$ . PREPRINT arXiv:0709.4342v1 [nucl-ex]
- 2007KI13 RADIOACTIVITY  $^{64}\text{Zn}$ ,  $^{112}\text{Sn}(\beta^+)$ , (EC);  $^{124}\text{Sn}(2\beta^-)$ ; measured  $E\gamma$ ,  $I\gamma$ ; deduced  $T_{1/2}$  lower limits for  $\beta^+$ , EC and  $0\nu$ -accompanied  $2\beta^-$ -decay to ground and excited states. Comparison with theoretical values and previous data. JOUR NUPAB 793 171
- 2007ME09 NUCLEAR REACTIONS  $^{127}\text{I}(\mu^-, \nu)$ ,  $(\mu^-, n\nu)$ ,  $(\mu^-, 2n\nu)$ ,  $(\mu^-, 3n\nu)$ ,  $(\mu^-, 4n\nu)$ ,  $(\mu^-, 5n\nu)$ ,  $(\mu^-, 6n\nu)$ ,  $E$  at rest;  $^{197}\text{Au}(\mu^-, n\nu)$ ,  $(\mu^-, 3n\nu)$ ,  $E$  at rest;  $^{209}\text{Bi}(\mu^-, n\nu)$ ,  $(\mu^-, 2n\nu)$ ,  $(\mu^-, 3n\nu)$ ,  $(\mu^-, 4n\nu)$ ,  $(\mu^-, 5n\nu)$ ,  $E$  at rest; measured  $E\gamma$ ,  $I\gamma$ , X-ray spectra. JOUR PRVCA 75 045501
- 2007QA02 RADIOACTIVITY  $^{64}\text{Cu}(\beta^-)$ ,  $(\beta^+)$ , (EC) [from  $^{66}\text{Zn}(d, \alpha)$  and  $\text{Zn}(d, \text{X})$ ];  $^{76}\text{Br}$ ,  $^{124}\text{I}(\beta^+)$ , (EC) [from  $^{76}\text{Se}$ ,  $^{124}\text{Te}(p, n)$ ]; measured  $E\gamma$ ,  $E\beta$ , X-ray spectra,  $\gamma\gamma^-$ ,  $\beta\gamma$ -coin; deduced positron emission intensities. JOUR RAACA 95 67
- 2007ST24 NUCLEAR REACTIONS  $\text{Te}(^{58}\text{Ni}, \gamma)$   $^{122}\text{Te} / ^{124}\text{Te} / ^{125}\text{Te} / ^{126}\text{Te} / ^{128}\text{Te} / ^{130}\text{Te}$ ,  $E=195$  MeV; measured  $E\gamma$ ,  $I\gamma$ , (particle) $\gamma$  angular correlations.  $^{122,124,125,126,128,130}\text{Te}$  deduced g-factors. JOUR PRVCA 76 034306

KEYNUMBERS AND KEYWORDS

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**A=124 (continued)**

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| $^{124}\text{I}$  | 2007BEZT | NUCLEAR REACTIONS $^{127}\text{I}(\gamma, n)$ , $(\gamma, 3n)$ , $(\gamma, 4n)$ , E(end point)=50 MeV; measured $E\gamma$ ; deduced yields of reactions. Microtron, activation method, HPGe detector. CONF<br>Voronezh(Nucleus-2007),Contrib,P132,Belyshev   |
|                   | 2007MA15 | NUCLEAR REACTIONS $\text{Sb}(^7\text{Li}, X)^{125}\text{Xe} / ^{123}\text{Xe} / ^{124}\text{I} / ^{123}\text{I} / ^{122}\text{Sb}$ , E=32, 35, 38, 42, 45, 48 MeV; measured yields. JOUR RAACA 95 133  |
|                   | 2007NY01 | NUCLEAR REACTIONS $^{124}\text{Te}(p, n)$ , E=11 MeV; measured thick-target yield. JOUR ARISE 65 407   |
|                   | 2007QA02 | RADIOACTIVITY $^{64}\text{Cu}(\beta^-)$ , $(\beta^+)$ , (EC) [from $^{66}\text{Zn}(d, \alpha)$ and $\text{Zn}(d, X)$ ]; $^{76}\text{Br}$ , $^{124}\text{I}(\beta^+)$ , (EC) [from $^{76}\text{Se}$ , $^{124}\text{Te}(p, n)$ ]; measured $E\gamma$ , $E\beta$ , X-ray spectra, $\gamma\gamma$ -, $\beta\gamma$ -coinc; deduced positron emission intensities. JOUR RAACA 95 67 |
| $^{124}\text{Xe}$ | 2007AL37 | NUCLEAR REACTIONS $^{82}\text{Se}(^{48}\text{Ca}, X)$ , E=205 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coinc using Gammasphere. $^{124,125,126}\text{Xe}$ deduced levels, J, $\pi$ . JOUR APOBB 38 1431   |
|                   | 2007HE20 | NUCLEAR REACTIONS $^{64}\text{Ni}(^{64}\text{Ni}, F)$ , E=255, 261 MeV; measured $E\gamma$ , $I\gamma$ , (particle) $\gamma$ -coinc, charged particle angular distributions. $^{118}\text{Te}$ , $^{124}\text{Xe}$ , $^{124,125}\text{Cs}$ deduced levels, J. JOUR APOBB 38 1421   |
| $^{124}\text{Cs}$ | 2007HE20 | NUCLEAR REACTIONS $^{64}\text{Ni}(^{64}\text{Ni}, F)$ , E=255, 261 MeV; measured $E\gamma$ , $I\gamma$ , (particle) $\gamma$ -coinc, charged particle angular distributions. $^{118}\text{Te}$ , $^{124}\text{Xe}$ , $^{124,125}\text{Cs}$ deduced levels, J. JOUR APOBB 38 1421   |

**A=125**

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|-------------------|----------|--|
| $^{125}\text{Cd}$ | 2007H022 | NUCLEAR REACTIONS $\text{Be}(^{136}\text{Xe}, X)$ , E=120 MeV / nucleon; measured $E\gamma$ , $I\gamma$ . $^{125}\text{Cd}$ , $^{126}\text{Cd}$ , $^{127}\text{Cd}$ , $^{128}\text{Cd}$ deduced levels, J, $\pi$ , isomers, half-lives, band structure; $^{100,115,117,119,121,122,123,124}\text{Cd}$ ; level systematics. JOUR PRVCA 76 044324  |
| $^{125}\text{Sn}$ | 2007EG02 | NUCLEAR REACTIONS $^{91}\text{Zr}$ , $^{116,118,119,120,122,124}\text{Sn}$ , $^{143}\text{Nd}$ , $^{177}\text{Hf}(n, \gamma)$ ; E=thermal; measured $E\gamma$ , $I\gamma$ , cross sections. JOUR ARISE 65 1290   |
| $^{125}\text{Te}$ | 2006SI40 | NUCLEAR MOMENTS<br>$^{120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Te}$ ; measured hfs, isotope shifts; deduced $\mu$ , quadrupole moments, radii. Laser spectroscopy, comparison with model predictions. JOUR HYIND 171 173  |
|                   | 2006VI11 | NUCLEAR REACTIONS $^{114}\text{Cd}(n, \gamma)$ , $^{116}\text{Sn}(n, \gamma)$ , $^{124}\text{Te}(n, \gamma)$ , E=reactor spectrum; measured x-ray spectra. deduced K-shell internal conversion coefficients. JOUR BRSPPE 70 1842   |
|                   | 2007ME09 | NUCLEAR REACTIONS $^{127}\text{I}(\mu^-, \nu)$ , $(\mu^-, n\nu)$ , $(\mu^-, 2n\nu)$ , $(\mu^-, 3n\nu)$ , $(\mu^-, 4n\nu)$ , $(\mu^-, 5n\nu)$ , $(\mu^-, 6n\nu)$ , E at rest; $^{197}\text{Au}(\mu^-, n\nu)$ , $(\mu^-, 3n\nu)$ , E at rest; $^{209}\text{Bi}(\mu^-, n\nu)$ , $(\mu^-, 2n\nu)$ , $(\mu^-, 3n\nu)$ , $(\mu^-, 4n\nu)$ , $(\mu^-, 5n\nu)$ , E at rest; measured $E\gamma$ , $I\gamma$ , X-ray spectra. JOUR PRVCA 75 045501 |
|                   | 2007ST24 | NUCLEAR REACTIONS $\text{Te}(^{58}\text{Ni}, \gamma)^{122}\text{Te} / ^{124}\text{Te} / ^{125}\text{Te} / ^{126}\text{Te} / ^{128}\text{Te} / ^{130}\text{Te}$ , E=195 MeV; measured $E\gamma$ , $I\gamma$ , (particle) $\gamma$ angular correlations. $^{122,124,125,126,128,130}\text{Te}$ deduced g-factors. JOUR PRVCA 76 034306   |



KEYNUMBERS AND KEYWORDS

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**A=125 (continued)**

- <sup>125</sup>Xe    2007AL37    NUCLEAR REACTIONS <sup>82</sup>Se(<sup>48</sup>Ca, X), E=205 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coinc using Gammasphere. <sup>124,125,126</sup>Xe deduced levels, J,  $\pi$ . JOUR APOBB 38 1431
- 2007MA15    NUCLEAR REACTIONS Sb(<sup>7</sup>Li, X)<sup>125</sup>Xe / <sup>123</sup>Xe / <sup>124</sup>I / <sup>123</sup>I / <sup>122</sup>Sb, E=32, 35, 38, 42, 45, 48 MeV; measured yields. JOUR RAACA 95 133
- <sup>125</sup>Cs    2007HE20    NUCLEAR REACTIONS <sup>64</sup>Ni(<sup>64</sup>Ni, F), E=255, 261 MeV; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coinc, charged particle angular distributions. <sup>118</sup>Te, <sup>124</sup>Xe, <sup>124,125</sup>Cs deduced levels, J. JOUR APOBB 38 1421
- <sup>125</sup>Ce    2007SU07    ATOMIC MASSES <sup>69</sup>Ge, <sup>125</sup>Ce; measured masses. <sup>125</sup>Ce deduced long-lived isomeric state, excitation energy, T<sub>1/2</sub>. JOUR ZAANE 31 393

**A=126**

- <sup>126</sup>Cd    2007H022    NUCLEAR REACTIONS Be(<sup>136</sup>Xe, X), E=120 MeV / nucleon; measured E $\gamma$ , I $\gamma$ . <sup>125</sup>Cd, <sup>126</sup>Cd, <sup>127</sup>Cd, <sup>128</sup>Cd deduced levels, J,  $\pi$ , isomers, half-lives, band structure; <sup>100,115,117,119,121,122,123,124</sup>Cd; level systematics. JOUR PRVCA 76 044324
- <sup>126</sup>Sb    2007RE12    NUCLEAR REACTIONS Sn( $\alpha$ , X)<sup>116</sup>Te / <sup>117</sup>Te / <sup>118</sup>Te / <sup>119</sup>Te / <sup>121</sup>Te / <sup>123</sup>Te / <sup>117</sup>Sb / <sup>118</sup>Sb / <sup>120</sup>Sb / <sup>122</sup>Sb / <sup>124</sup>Sb / <sup>126</sup>Sb / <sup>117</sup>Sn / <sup>111</sup>In, E=12-38 MeV; measured E $\gamma$ , I $\gamma$ , cross sections and excitation functions using stacked foil activation technique. JOUR NIMBE 260 672
- <sup>126</sup>Te    2006SI40    NUCLEAR MOMENTS <sup>120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Te; measured hfs, isotope shifts; deduced  $\mu$ , quadrupole moments, radii. Laser spectroscopy, comparison with model predictions. JOUR HYIND 171 173
- 2007ME09    NUCLEAR REACTIONS <sup>127</sup>I( $\mu^-$ ,  $\nu$ ), ( $\mu^-$ ,  $n\nu$ ), ( $\mu^-$ ,  $2n\nu$ ), ( $\mu^-$ ,  $3n\nu$ ), ( $\mu^-$ ,  $4n\nu$ ), ( $\mu^-$ ,  $5n\nu$ ), ( $\mu^-$ ,  $6n\nu$ ), E at rest; <sup>197</sup>Au( $\mu^-$ ,  $n\nu$ ), ( $\mu^-$ ,  $3n\nu$ ), E at rest; <sup>209</sup>Bi( $\mu^-$ ,  $n\nu$ ), ( $\mu^-$ ,  $2n\nu$ ), ( $\mu^-$ ,  $3n\nu$ ), ( $\mu^-$ ,  $4n\nu$ ), ( $\mu^-$ ,  $5n\nu$ ), E at rest; measured E $\gamma$ , I $\gamma$ , X-ray spectra. JOUR PRVCA 75 045501
- 2007ST24    NUCLEAR REACTIONS Te(<sup>58</sup>Ni,  $\gamma$ )<sup>122</sup>Te / <sup>124</sup>Te / <sup>125</sup>Te / <sup>126</sup>Te / <sup>128</sup>Te / <sup>130</sup>Te, E=195 MeV; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$  angular correlations. <sup>122,124,125,126,128,130</sup>Te deduced g-factors. JOUR PRVCA 76 034306
- <sup>126</sup>I    2007BEZT    NUCLEAR REACTIONS <sup>127</sup>I( $\gamma$ , n), ( $\gamma$ , 3n), ( $\gamma$ , 4n), E(end point)=50 MeV; measured E $\gamma$ ; deduced yields of reactions. Microtron, activation method, HPGe detector. CONF Voronezh(Nucleus-2007),Contrib,P132,Belyshev
- <sup>126</sup>Xe    2007AL37    NUCLEAR REACTIONS <sup>82</sup>Se(<sup>48</sup>Ca, X), E=205 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coinc using Gammasphere. <sup>124,125,126</sup>Xe deduced levels, J,  $\pi$ . JOUR APOBB 38 1431
- 2007HA34    NUCLEAR REACTIONS <sup>82</sup>Se(<sup>48</sup>Ca, 4n)<sup>126</sup>Xe, E=190, 200 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coinc using the Gammasphere and the Euroball array. <sup>126</sup>Xe deduced levels, J,  $\pi$ . JOUR PRVCA 76 034311



KEYNUMBERS AND KEYWORDS

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**A=126 (continued)**

<sup>126</sup>Cs    2007WA09    NUCLEAR REACTIONS <sup>116</sup>Cd(<sup>14</sup>N, 4n), E=65 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>126</sup>Cs deduced high-spin levels, J,  $\pi$ , configurations. JOUR PRVCA 75 037302

**A=127**

<sup>127</sup>Cd    2007H022    NUCLEAR REACTIONS Be(<sup>136</sup>Xe, X), E=120 MeV / nucleon; measured E $\gamma$ , I $\gamma$ . <sup>125</sup>Cd, <sup>126</sup>Cd, <sup>127</sup>Cd, <sup>128</sup>Cd deduced levels, J,  $\pi$ , isomers, half-lives, band structure; <sup>100,115,117,119,121,122,123,124</sup>Cd; level systematics. JOUR PRVCA 76 044324

<sup>127</sup>Sn    2006ZH47    NUCLEAR REACTIONS <sup>126</sup>Sn(n,  $\gamma$ ), E=thermal; measured production  $\sigma$  for ground and metastable states. Activation, radiochemical separation. JOUR RAACA 94 385

2006ZH47    RADIOACTIVITY <sup>127,127m</sup>Sn, <sup>127</sup>Sb( $\beta^-$ ) [from <sup>126</sup>Sn(n,  $\gamma$ ) and subsequent decay]; measured E $\gamma$ , I $\gamma$ . JOUR RAACA 94 385

2007AT03    NUCLEAR REACTIONS <sup>136</sup>Xe(Be, x)<sup>127</sup>Sn, E=600 MeV / nucleon; measured g-factor for 19 / 2<sup>+</sup> isomer using time-differential perturbed angular distribution method. JOUR PPNPD 59 355

2007NE10    NUCLEAR REACTIONS <sup>9</sup>Be(<sup>238</sup>U, F)<sup>127</sup>Sn, E=750 MeV / nucleon; <sup>9</sup>Be(<sup>136</sup>Xe, X)<sup>127</sup>Sn, E=650 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ( $\theta$ , H, t), (particle) $\gamma$ -coinc. <sup>127</sup>Sn deduced g-factor using TDPAD method. JOUR APOBB 38 1237

<sup>127</sup>Sb    2006ZH47    RADIOACTIVITY <sup>127,127m</sup>Sn, <sup>127</sup>Sb( $\beta^-$ ) [from <sup>126</sup>Sn(n,  $\gamma$ ) and subsequent decay]; measured E $\gamma$ , I $\gamma$ . JOUR RAACA 94 385

<sup>127</sup>Te    2006SI40    NUCLEAR MOMENTS  
120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135,136Te; measured hfs, isotope shifts; deduced  $\mu$ , quadrupole moments, radii. Laser spectroscopy, comparison with model predictions. JOUR HYIND 171 173

2006ZH47    RADIOACTIVITY <sup>127,127m</sup>Sn, <sup>127</sup>Sb( $\beta^-$ ) [from <sup>126</sup>Sn(n,  $\gamma$ ) and subsequent decay]; measured E $\gamma$ , I $\gamma$ . JOUR RAACA 94 385

2007ME09    NUCLEAR REACTIONS <sup>127</sup>I( $\mu^-$ ,  $\nu$ ), ( $\mu^-$ ,  $n\nu$ ), ( $\mu^-$ ,  $2n\nu$ ), ( $\mu^-$ ,  $3n\nu$ ), ( $\mu^-$ ,  $4n\nu$ ), ( $\mu^-$ ,  $5n\nu$ ), ( $\mu^-$ ,  $6n\nu$ ), E at rest; <sup>197</sup>Au( $\mu^-$ ,  $n\nu$ ), ( $\mu^-$ ,  $3n\nu$ ), E at rest; <sup>209</sup>Bi( $\mu^-$ ,  $n\nu$ ), ( $\mu^-$ ,  $2n\nu$ ), ( $\mu^-$ ,  $3n\nu$ ), ( $\mu^-$ ,  $4n\nu$ ), ( $\mu^-$ ,  $5n\nu$ ), E at rest; measured E $\gamma$ , I $\gamma$ , X-ray spectra. JOUR PRVCA 75 045501

<sup>127</sup>I    2007MA58    NUCLEAR REACTIONS <sup>27</sup>Al, <sup>127</sup>I, <sup>206,207,208</sup>Pb(n, n' $\gamma$ ), E not give; <sup>10</sup>B( $\alpha$ , p $\gamma$ ), E=2.27 MeV; <sup>9</sup>Be( $\alpha$ , n $\gamma$ ), E=2.27 MeV; measured yields. JOUR PRVCA 76 022801

**A=128**

<sup>128</sup>Cd    2007H022    NUCLEAR REACTIONS Be(<sup>136</sup>Xe, X), E=120 MeV / nucleon; measured E $\gamma$ , I $\gamma$ . <sup>125</sup>Cd, <sup>126</sup>Cd, <sup>127</sup>Cd, <sup>128</sup>Cd deduced levels, J,  $\pi$ , isomers, half-lives, band structure; <sup>100,115,117,119,121,122,123,124</sup>Cd; level systematics. JOUR PRVCA 76 044324

KEYNUMBERS AND KEYWORDS

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**A=128 (continued)**

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|-------------------|----------|---|
| $^{128}\text{Sb}$ | 2007NA04 | NUCLEAR REACTIONS $^{243}\text{Am}(n, F)^{128}\text{Sb} / ^{130}\text{Sb} / ^{132}\text{Sb} / ^{131}\text{Te} / ^{133}\text{Te} / ^{132}\text{I} / ^{134}\text{I} / ^{136}\text{I} / ^{135}\text{Xe} / ^{138}\text{Cs}$ , E=fast; measured isomeric yield ratios; deduced fission fragment angular momenta, single-particle spin effect. Comparison with results from other fissioning systems. JOUR ZAANE 31 195 |
| $^{128}\text{Te}$ | 2006SI40 | NUCLEAR MOMENTS $^{120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Te}$ ; measured hfs, isotope shifts; deduced $\mu$ , quadrupole moments, radii. Laser spectroscopy, comparison with model predictions. JOUR HYIND 171 173  |
|                   | 2007BL15 | RADIOACTIVITY $^{70}\text{Zn}$ , $^{116}\text{Cd}$ , $^{128,130}\text{Te}(\beta^-\beta^-)$ ; $^{64}\text{Zn}$ , $^{106}\text{Cd}$ , $^{120}\text{Te}(\beta^+\beta^+)$ ; measured summed $E\beta$ . Deduced upper limits for $T_{1/2}$ . JOUR PRVCA 76 025501  |
|                   | 2007BLZY | RADIOACTIVITY $^{70}\text{Zn}$ , $^{116}\text{Cd}$ , $^{128}\text{Te}$ , $^{130}\text{Te}(2\beta^-)$ ; measured summed $\beta$ energies. Deduced $T_{1/2}$ limits. PREPRINT arXiv:0707.2756v1 [nucl-ex]   |
|                   | 2007ST24 | NUCLEAR REACTIONS $\text{Te}(^{58}\text{Ni}, \gamma)^{122}\text{Te} / ^{124}\text{Te} / ^{125}\text{Te} / ^{126}\text{Te} / ^{128}\text{Te} / ^{130}\text{Te}$ , E=195 MeV; measured $E\gamma$ , $I\gamma$ , (particle) $\gamma$ angular correlations. $^{122,124,125,126,128,130}\text{Te}$ deduced g-factors. JOUR PRVCA 76 034306  |
| $^{128}\text{Xe}$ | 2007BL15 | RADIOACTIVITY $^{70}\text{Zn}$ , $^{116}\text{Cd}$ , $^{128,130}\text{Te}(\beta^-\beta^-)$ ; $^{64}\text{Zn}$ , $^{106}\text{Cd}$ , $^{120}\text{Te}(\beta^+\beta^+)$ ; measured summed $E\beta$ . Deduced upper limits for $T_{1/2}$ . JOUR PRVCA 76 025501  |
|                   | 2007BLZY | RADIOACTIVITY $^{70}\text{Zn}$ , $^{116}\text{Cd}$ , $^{128}\text{Te}$ , $^{130}\text{Te}(2\beta^-)$ ; measured summed $\beta$ energies. Deduced $T_{1/2}$ limits. PREPRINT arXiv:0707.2756v1 [nucl-ex]   |
| $^{128}\text{Ce}$ | 2006BA75 | NUCLEAR REACTIONS $^{100}\text{Mo}(^{32}\text{S}, 4n)$ , E=120 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, DSA. $^{128}\text{Ce}$ levels deduced $T_{1/2}$ , B(E2), symmetry features. DSAM and recoil-distance techniques. JOUR IMPEE 15 1735  |

**A=129**

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|-------------------|----------|--|
| $^{129}\text{Sn}$ | 2007KL05 | NUCLEAR REACTIONS $\text{Be}(^{238}\text{U}, X)$ , E=550 MeV / nucleon; measured fragment yields. $^{12}\text{C}$ , $^{208}\text{Pb}(^{129}\text{Sn}, X)$ , $(^{130}\text{Sn}, X)$ , $(^{131}\text{Sn}, X)$ , $(^{132}\text{Sn}, X)$ , $(^{133}\text{Sn}, X)$ , E $\approx$ 500 MeV / nucleon; measured $E_n$ , $E\gamma$ , $n\gamma$ -coin; deduced electromagnetic dissociation $\sigma(E)$ . $^{129,130,131,132,133}\text{Sn}$ deduced dipole strength distributions, B(E1), pygmy and giant dipole resonance parameters. Comparison with RPA calculations. $^{40,44,48}\text{Ca}$ , $^{116,124}\text{Sn}$ , $^{138}\text{Ba}$ , $^{140}\text{Ce}$ , $^{142}\text{Nd}$ , $^{144}\text{Sm}$ , $^{208}\text{Pb}(\gamma, \gamma')$ , E not given; analyzed $E\gamma$ , $I\gamma$ . $^{40,44,48}\text{Ca}$ , $^{116,124}\text{Sn}$ , $^{138}\text{Ba}$ , $^{140}\text{Ce}$ , $^{142}\text{Nd}$ , $^{144}\text{Sm}$ , $^{208}\text{Pb}$ deduced B(E1). JOUR NUPAB 788 145c |
| $^{129}\text{Te}$ | 2006SI40 | NUCLEAR MOMENTS $^{120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Te}$ ; measured hfs, isotope shifts; deduced $\mu$ , quadrupole moments, radii. Laser spectroscopy, comparison with model predictions. JOUR HYIND 171 173   |

KEYNUMBERS AND KEYWORDS

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**A=129 (continued)**

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|-------------------|--|
| 2007PAZX          | NUCLEAR REACTIONS $^{120,130}\text{Te}(\gamma, n)$ , $E(\text{end point})=25\text{-}30$ MeV; measured $E\gamma$ , $I\gamma$ ; $^{119m,119g,129m,129g}\text{Te}$ deduced yield ratio $Y_m / Y_g$ . Betatron, activation method, Ge(Li) detector. CONF |
| $^{129}\text{Xe}$ | 2007KI06 NUCLEAR MOMENTS $^{129}\text{Xe}$ ; measured precession, transverse relaxation of polarized gas in weak magnetic fields. JOUR ZDDNE 42 197  |

**A=130**

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|-------------------|--|
| $^{130}\text{Cd}$ | 2007JU05 RADIOACTIVITY $^{130}\text{Cd}(\text{IT})$ [from $\text{Be}(^{136}\text{Xe}, 6n)$ , $E=750$ MeV / nucleon]; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coinc. $^{130}\text{Cd}$ deduced levels, $J$ , $\pi$ . JOUR PRLTA 99 132501  |
| $^{130}\text{Sn}$ | 2007KL05 NUCLEAR REACTIONS $\text{Be}(^{238}\text{U}, X)$ , $E=550$ MeV / nucleon; measured fragment yields. $^{12}\text{C}$ , $^{208}\text{Pb}(^{129}\text{Sn}, X)$ , $(^{130}\text{Sn}, X)$ , $(^{131}\text{Sn}, X)$ , $(^{132}\text{Sn}, X)$ , $(^{133}\text{Sn}, X)$ , $E\approx 500$ MeV / nucleon; measured $E_n$ , $E\gamma$ , $n\gamma$ -coin; deduced electromagnetic dissociation $\sigma(E)$ . $^{129,130,131,132,133}\text{Sn}$ deduced dipole strength distributions, $B(E1)$ , pygmy and giant dipole resonance parameters. Comparison with RPA calculations. $^{40,44,48}\text{Ca}$ , $^{116,124}\text{Sn}$ , $^{138}\text{Ba}$ , $^{140}\text{Ce}$ , $^{142}\text{Nd}$ , $^{144}\text{Sm}$ , $^{208}\text{Pb}(\gamma, \gamma')$ , $E$ not given; analyzed $E\gamma$ , $I\gamma$ . $^{40,44,48}\text{Ca}$ , $^{116,124}\text{Sn}$ , $^{138}\text{Ba}$ , $^{140}\text{Ce}$ , $^{142}\text{Nd}$ , $^{144}\text{Sm}$ , $^{208}\text{Pb}$ deduced $B(E1)$ . JOUR NUPAB 788 145c |
| $^{130}\text{Sb}$ | 2007NA04 NUCLEAR REACTIONS $^{243}\text{Am}(n, F)^{128}\text{Sb} / ^{130}\text{Sb} / ^{132}\text{Sb} / ^{131}\text{Te} / ^{133}\text{Te} / ^{132}\text{I} / ^{134}\text{I} / ^{136}\text{I} / ^{135}\text{Xe} / ^{138}\text{Cs}$ , $E=\text{fast}$ ; measured isomeric yield ratios; deduced fission fragment angular momenta, single-particle spin effect. Comparison with results from other fissioning systems. JOUR ZAANE 31 195   |
| $^{130}\text{Te}$ | 2006CR04 RADIOACTIVITY $^{130}\text{Te}(2\beta^-)$ ; measured $0\nu\beta\beta$ -decay $T_{1/2}$ lower limit. JOUR PANUE 69 2083  |
|                   | 2006SI40 NUCLEAR MOMENTS $^{120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Te}$ ; measured hfs, isotope shifts; deduced $\mu$ , quadrupole moments, radii. Laser spectroscopy, comparison with model predictions. JOUR HYIND 171 173  |
|                   | 2007BL15 RADIOACTIVITY $^{70}\text{Zn}$ , $^{116}\text{Cd}$ , $^{128,130}\text{Te}(\beta^-\beta^-)$ ; $^{64}\text{Zn}$ , $^{106}\text{Cd}$ , $^{120}\text{Te}(\beta^+\beta^+)$ ; measured summed $E\beta$ . Deduced upper limits for $T_{1/2}$ . JOUR PRVCA 76 025501  |
|                   | 2007BLZY RADIOACTIVITY $^{70}\text{Zn}$ , $^{116}\text{Cd}$ , $^{128}\text{Te}$ , $^{130}\text{Te}(2\beta^-)$ ; measured summed $\beta$ energies. Deduced $T_{1/2}$ limits. PREPRINT arXiv:0707.2756v1 [nucl-ex]   |
|                   | 2007ST24 NUCLEAR REACTIONS $\text{Te}(^{58}\text{Ni}, \gamma)^{122}\text{Te} / ^{124}\text{Te} / ^{125}\text{Te} / ^{126}\text{Te} / ^{128}\text{Te} / ^{130}\text{Te}$ , $E=195$ MeV; measured $E\gamma$ , $I\gamma$ , (particle) $\gamma$ angular correlations. $^{122,124,125,126,128,130}\text{Te}$ deduced g-factors. JOUR PRVCA 76 034306  |
| $^{130}\text{Xe}$ | 2006CR04 RADIOACTIVITY $^{130}\text{Te}(2\beta^-)$ ; measured $0\nu\beta\beta$ -decay $T_{1/2}$ lower limit. JOUR PANUE 69 2083  |

KEYNUMBERS AND KEYWORDS

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**A=130 (continued)**

- 2007BL15 RADIOACTIVITY  $^{70}\text{Zn}$ ,  $^{116}\text{Cd}$ ,  $^{128,130}\text{Te}(\beta^-\beta^-)$ ;  $^{64}\text{Zn}$ ,  $^{106}\text{Cd}$ ,  $^{120}\text{Te}(\beta^+\beta^+)$ ; measured summed  $E\beta$ . Deduced upper limits for  $T_{1/2}$ . JOUR PRVCA 76 025501
- 2007BLZY RADIOACTIVITY  $^{70}\text{Zn}$ ,  $^{116}\text{Cd}$ ,  $^{128}\text{Te}$ ,  $^{130}\text{Te}(2\beta^-)$ ; measured summed  $\beta$  energies. Deduced  $T_{1/2}$  limits. PREPRINT arXiv:0707.2756v1 [nucl-ex]

**A=131**

- $^{131}\text{Sn}$  2007KL05 NUCLEAR REACTIONS  $\text{Be}(^{238}\text{U}, \text{X})$ ,  $E=550$  MeV / nucleon; measured fragment yields.  $^{12}\text{C}$ ,  $^{208}\text{Pb}(^{129}\text{Sn}, \text{X})$ ,  $(^{130}\text{Sn}, \text{X})$ ,  $(^{131}\text{Sn}, \text{X})$ ,  $(^{132}\text{Sn}, \text{X})$ ,  $(^{133}\text{Sn}, \text{X})$ ,  $E\approx 500$  MeV / nucleon; measured  $E_n$ ,  $E_\gamma$ ,  $n\gamma$ -coin; deduced electromagnetic dissociation  $\sigma(E)$ .  $^{129,130,131,132,133}\text{Sn}$  deduced dipole strength distributions,  $B(E1)$ , pygmy and giant dipole resonance parameters. Comparison with RPA calculations.  $^{40,44,48}\text{Ca}$ ,  $^{116,124}\text{Sn}$ ,  $^{138}\text{Ba}$ ,  $^{140}\text{Ce}$ ,  $^{142}\text{Nd}$ ,  $^{144}\text{Sm}$ ,  $^{208}\text{Pb}(\gamma, \gamma')$ ,  $E$  not given; analyzed  $E_\gamma$ ,  $I_\gamma$ .  $^{40,44,48}\text{Ca}$ ,  $^{116,124}\text{Sn}$ ,  $^{138}\text{Ba}$ ,  $^{140}\text{Ce}$ ,  $^{142}\text{Nd}$ ,  $^{144}\text{Sm}$ ,  $^{208}\text{Pb}$  deduced  $B(E1)$ . JOUR NUPAB 788 145c
- $^{131}\text{Te}$  2006SI40 NUCLEAR MOMENTS  $^{120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Te}$ ; measured hfs, isotope shifts; deduced  $\mu$ , quadrupole moments, radii. Laser spectroscopy, comparison with model predictions. JOUR HYIND 171 173
- 2007NA04 NUCLEAR REACTIONS  $^{243}\text{Am}(n, \text{F})^{128}\text{Sb} / ^{130}\text{Sb} / ^{132}\text{Sb} / ^{131}\text{Te} / ^{133}\text{Te} / ^{132}\text{I} / ^{134}\text{I} / ^{136}\text{I} / ^{135}\text{Xe} / ^{138}\text{Cs}$ ,  $E=\text{fast}$ ; measured isomeric yield ratios; deduced fission fragment angular momenta, single-particle spin effect. Comparison with results from other fissioning systems. JOUR ZAANE 31 195
- $^{131}\text{I}$  2007YA02 RADIOACTIVITY  $^{51}\text{Cr}$ ,  $^{55}\text{Fe}$ ,  $^{67}\text{Ga}$ ,  $^{111}\text{In}$ ,  $^{133}\text{Ba}$ ,  $^{201}\text{Tl}(\text{EC})$ ;  $^{99m}\text{Tc}(\text{IT})$ ,  $(\beta^-)$ ;  $^{131}\text{I}$ ,  $^{133}\text{Xe}$ ,  $^{137}\text{Cs}(\beta^-)$ ;  $^{226}\text{Ra}(\alpha)$ ; measured K X-ray intensity ratios following decay and photoionization. JOUR NIMBE 254 182
- $^{131}\text{Xe}$  2007YA02 RADIOACTIVITY  $^{51}\text{Cr}$ ,  $^{55}\text{Fe}$ ,  $^{67}\text{Ga}$ ,  $^{111}\text{In}$ ,  $^{133}\text{Ba}$ ,  $^{201}\text{Tl}(\text{EC})$ ;  $^{99m}\text{Tc}(\text{IT})$ ,  $(\beta^-)$ ;  $^{131}\text{I}$ ,  $^{133}\text{Xe}$ ,  $^{137}\text{Cs}(\beta^-)$ ;  $^{226}\text{Ra}(\alpha)$ ; measured K X-ray intensity ratios following decay and photoionization. JOUR NIMBE 254 182

**A=132**

- $^{132}\text{Sn}$  2007IB01 NUCLEAR REACTIONS  $^{238}\text{U}(\gamma, \text{F})^{78}\text{Zn} / ^{132}\text{Sn}$ ,  $E$  not given; measured fission fragment yields. ALTO facility.  $^{238}\text{U}(n, \text{F})^{81}\text{Zn} / ^{83}\text{Ga}$ ,  $E$  not given; measured  $E_\gamma$ ,  $I_\gamma$ ,  $E\beta$ ,  $I\beta$ ,  $\gamma\gamma$ -coin.  $^{81}\text{Ga}$ ,  $^{83}\text{Ge}$  deduced levels,  $J$ ,  $\pi$ . Online mass separator. JOUR NUPAB 787 110c

KEYNUMBERS AND KEYWORDS

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**A=132** (*continued*)

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|-------------------|----------|--|
|                   | 2007KL05 | NUCLEAR REACTIONS Be( <sup>238</sup> U, X), E=550 MeV / nucleon; measured fragment yields. <sup>12</sup> C, <sup>208</sup> Pb( <sup>129</sup> Sn, X), ( <sup>130</sup> Sn, X), ( <sup>131</sup> Sn, X), ( <sup>132</sup> Sn, X), ( <sup>133</sup> Sn, X), E≈ 500 MeV / nucleon; measured En, E <sub>γ</sub> , n <sub>γ</sub> -coin; deduced electromagnetic dissociation σ(E). <sup>129,130,131,132,133</sup> Sn deduced dipole strength distributions, B(E1), pygmy and giant dipole resonance parameters. Comparison with RPA calculations. <sup>40,44,48</sup> Ca, <sup>116,124</sup> Sn, <sup>138</sup> Ba, <sup>140</sup> Ce, <sup>142</sup> Nd, <sup>144</sup> Sm, <sup>208</sup> Pb(γ, γ'), E not given; analyzed E <sub>γ</sub> , I <sub>γ</sub> . <sup>40,44,48</sup> Ca, <sup>116,124</sup> Sn, <sup>138</sup> Ba, <sup>140</sup> Ce, <sup>142</sup> Nd, <sup>144</sup> Sm, <sup>208</sup> Pb deduced B(E1). JOUR NUPAB 788 145c |
| <sup>132</sup> Sb | 2007NA04 | NUCLEAR REACTIONS <sup>243</sup> Am(n, F) <sup>128</sup> Sb / <sup>130</sup> Sb / <sup>132</sup> Sb / <sup>131</sup> Te / <sup>133</sup> Te / <sup>132</sup> I / <sup>134</sup> I / <sup>136</sup> I / <sup>135</sup> Xe / <sup>138</sup> Cs, E=fast; measured isomeric yield ratios; deduced fission fragment angular momenta, single-particle spin effect. Comparison with results from other fissioning systems. JOUR ZAANE 31 195  |
| <sup>132</sup> Te | 2006SI40 | NUCLEAR MOMENTS <sup>120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup> Te; measured hfs, isotope shifts; deduced μ, quadrupole moments, radii. Laser spectroscopy, comparison with model predictions. JOUR HYIND 171 173   |
|                   | 2007G003 | NUCLEAR REACTIONS <sup>235</sup> U(n, F), E=thermal; <sup>235</sup> U(γ, F), E=12-30 MeV bremsstrahlung; analyzed fission fragment spin vs mass. <sup>239</sup> Pu(n, F) <sup>132</sup> Te, E=thermal; measured delayed E <sub>γ</sub> , fission fragment kinetic energy, (fragment)γ-coin; deduced high-spin isomer yield. JOUR IMPEE 16 410  |
| <sup>132</sup> I  | 2006MA87 | RADIOACTIVITY <sup>132</sup> I(β <sup>-</sup> ) [from U(n, F)]; measured E <sub>γ</sub> , I <sub>γ</sub> , T <sub>1/2</sub> . Radiochemical preparation, place-relay method. JOUR RAACA 94 403   |
|                   | 2007NA04 | NUCLEAR REACTIONS <sup>243</sup> Am(n, F) <sup>128</sup> Sb / <sup>130</sup> Sb / <sup>132</sup> Sb / <sup>131</sup> Te / <sup>133</sup> Te / <sup>132</sup> I / <sup>134</sup> I / <sup>136</sup> I / <sup>135</sup> Xe / <sup>138</sup> Cs, E=fast; measured isomeric yield ratios; deduced fission fragment angular momenta, single-particle spin effect. Comparison with results from other fissioning systems. JOUR ZAANE 31 195  |
| <sup>132</sup> Xe | 2006MA87 | RADIOACTIVITY <sup>132</sup> I(β <sup>-</sup> ) [from U(n, F)]; measured E <sub>γ</sub> , I <sub>γ</sub> , T <sub>1/2</sub> . Radiochemical preparation, place-relay method. JOUR RAACA 94 403   |
| <sup>132</sup> Ce | 2007BR24 | NUCLEAR REACTIONS <sup>68</sup> Zn( <sup>64</sup> Ni, X) <sup>132</sup> Ce, E=300, 400, 500 MeV; <sup>116</sup> Sn( <sup>16</sup> O, X) <sup>132</sup> Ce, E=130, 250 MeV; measured E <sub>γ</sub> , I <sub>γ</sub> , E <sub>α</sub> , I <sub>α</sub> , (residual)γ-coin using Hector and Garfield arrays; deduced average giant dipole resonance width and energy. JOUR NUPAB 788 205c  |
|                   | 2007VE02 | NUCLEAR REACTIONS <sup>141</sup> Pr(p, X) <sup>132</sup> Ce / <sup>133m</sup> Ce / <sup>135</sup> Ce / <sup>137m</sup> Ce / <sup>139</sup> Ce, E ≈ 21-97 MeV; La(p, X) <sup>139</sup> Ce, E ≈ 4-11 MeV; measured production σ; deduced thick-target yields. JOUR NIMBE 255 331   |
|                   | 2007WI08 | NUCLEAR REACTIONS <sup>68</sup> Zn( <sup>64</sup> Ni, F), E=300, 400, 500 MeV; <sup>116</sup> Sn( <sup>16</sup> O, F), E=130, 250 MeV; measured E <sub>γ</sub> , I <sub>γ</sub> from GDR decay. <sup>132</sup> Ce deduced GDR parameters. JOUR APOBB 38 1447   |

**A=133**

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|-------------------|----------|--|
| <sup>133</sup> Sn | 2006KEZZ | RADIOACTIVITY <sup>133,135</sup> Sn, <sup>137,138</sup> Sb, <sup>138,139,140</sup> Te, <sup>142,143</sup> I(β <sup>-</sup> ) [from Pb( <sup>238</sup> U, X)]; measured T <sub>1/2</sub> . REPT GSI 2006-1,P154,Kessler |
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KEYNUMBERS AND KEYWORDS

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**A=133 (continued)**

- 2007J009 NUCLEAR REACTIONS  $^2\text{H}(^{82}\text{Ge}, \text{p})$ ,  $E=4$  MeV / nucleon;  $^2\text{H}(^{84}\text{Se}, \text{p})$ ,  $E=4.5$  MeV / nucleon;  $^2\text{H}(^{132}\text{Sn}, \text{p})$ ,  $E=4.77$  MeV / nucleon; measured  $E_p$  and angular distributions.  $^{83}\text{Ge}$ ,  $^{85}\text{Se}$ ,  $^{133}\text{Sn}$  deduced levels,  $J$ ,  $\pi$  and spectroscopic factors. Compared results to model calculations. JOUR APOBB 38 1205
- 2007KL05 NUCLEAR REACTIONS  $\text{Be}(^{238}\text{U}, \text{X})$ ,  $E=550$  MeV / nucleon; measured fragment yields.  $^{12}\text{C}$ ,  $^{208}\text{Pb}(^{129}\text{Sn}, \text{X})$ ,  $(^{130}\text{Sn}, \text{X})$ ,  $(^{131}\text{Sn}, \text{X})$ ,  $(^{132}\text{Sn}, \text{X})$ ,  $(^{133}\text{Sn}, \text{X})$ ,  $E \approx 500$  MeV / nucleon; measured  $E_n$ ,  $E_\gamma$ ,  $n\gamma$ -coin; deduced electromagnetic dissociation  $\sigma(E)$ .  $^{129,130,131,132,133}\text{Sn}$  deduced dipole strength distributions,  $B(E1)$ , pygmy and giant dipole resonance parameters. Comparison with RPA calculations.  $^{40,44,48}\text{Ca}$ ,  $^{116,124}\text{Sn}$ ,  $^{138}\text{Ba}$ ,  $^{140}\text{Ce}$ ,  $^{142}\text{Nd}$ ,  $^{144}\text{Sm}$ ,  $^{208}\text{Pb}(\gamma, \gamma')$ ,  $E$  not given; analyzed  $E_\gamma$ ,  $I_\gamma$ .  $^{40,44,48}\text{Ca}$ ,  $^{116,124}\text{Sn}$ ,  $^{138}\text{Ba}$ ,  $^{140}\text{Ce}$ ,  $^{142}\text{Nd}$ ,  $^{144}\text{Sm}$ ,  $^{208}\text{Pb}$  deduced  $B(E1)$ . JOUR NUPAB 788 145c
- $^{133}\text{Sb}$  2006KEZZ RADIOACTIVITY  $^{133,135}\text{Sn}$ ,  $^{137,138}\text{Sb}$ ,  $^{138,139,140}\text{Te}$ ,  $^{142,143}\text{I}(\beta^-)$  [from  $\text{Pb}(^{238}\text{U}, \text{X})$ ]; measured  $T_{1/2}$ . REPT GSI 2006-1,P154,Kessler
- $^{133}\text{Te}$  2006SI40 NUCLEAR MOMENTS  $^{120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Te}$ ; measured hfs, isotope shifts; deduced  $\mu$ , quadrupole moments, radii. Laser spectroscopy, comparison with model predictions. JOUR HYIND 171 173
- 2007NA04 NUCLEAR REACTIONS  $^{243}\text{Am}(n, \text{F})^{128}\text{Sb} / ^{130}\text{Sb} / ^{132}\text{Sb} / ^{131}\text{Te} / ^{133}\text{Te} / ^{132}\text{I} / ^{134}\text{I} / ^{136}\text{I} / ^{135}\text{Xe} / ^{138}\text{Cs}$ ,  $E=\text{fast}$ ; measured isomeric yield ratios; deduced fission fragment angular momenta, single-particle spin effect. Comparison with results from other fissioning systems. JOUR ZAANE 31 195
- $^{133}\text{Xe}$  2007YA02 RADIOACTIVITY  $^{51}\text{Cr}$ ,  $^{55}\text{Fe}$ ,  $^{67}\text{Ga}$ ,  $^{111}\text{In}$ ,  $^{133}\text{Ba}$ ,  $^{201}\text{Tl}(\text{EC})$ ;  $^{99m}\text{Tc}(\text{IT})$ ,  $(\beta^-)$ ;  $^{131}\text{I}$ ,  $^{133}\text{Xe}$ ,  $^{137}\text{Cs}(\beta^-)$ ;  $^{226}\text{Ra}(\alpha)$ ; measured K X-ray intensity ratios following decay and photoionization. JOUR NIMBE 254 182
- $^{133}\text{Cs}$  2007KE09 ATOMIC MASSES  $^{74,75,76,77,79,80,83,87}\text{Rb}$ ;  $^{64}\text{Zn}$ ;  $^{71,74}\text{Ga}$ ;  $^{84,88}\text{Sr}$ ;  $^{133}\text{Cs}$ ; measured atomic masses. ISOLTRAP Penning Trap. JOUR PRVCA 76 045504
- 2007YA02 RADIOACTIVITY  $^{51}\text{Cr}$ ,  $^{55}\text{Fe}$ ,  $^{67}\text{Ga}$ ,  $^{111}\text{In}$ ,  $^{133}\text{Ba}$ ,  $^{201}\text{Tl}(\text{EC})$ ;  $^{99m}\text{Tc}(\text{IT})$ ,  $(\beta^-)$ ;  $^{131}\text{I}$ ,  $^{133}\text{Xe}$ ,  $^{137}\text{Cs}(\beta^-)$ ;  $^{226}\text{Ra}(\alpha)$ ; measured K X-ray intensity ratios following decay and photoionization. JOUR NIMBE 254 182
- $^{133}\text{Ba}$  2007YA02 RADIOACTIVITY  $^{51}\text{Cr}$ ,  $^{55}\text{Fe}$ ,  $^{67}\text{Ga}$ ,  $^{111}\text{In}$ ,  $^{133}\text{Ba}$ ,  $^{201}\text{Tl}(\text{EC})$ ;  $^{99m}\text{Tc}(\text{IT})$ ,  $(\beta^-)$ ;  $^{131}\text{I}$ ,  $^{133}\text{Xe}$ ,  $^{137}\text{Cs}(\beta^-)$ ;  $^{226}\text{Ra}(\alpha)$ ; measured K X-ray intensity ratios following decay and photoionization. JOUR NIMBE 254 182
- $^{133}\text{Ce}$  2007VE02 NUCLEAR REACTIONS  $^{141}\text{Pr}(\text{p}, \text{X})^{132}\text{Ce} / ^{133m}\text{Ce} / ^{135}\text{Ce} / ^{137m}\text{Ce} / ^{139}\text{Ce}$ ,  $E \approx 21\text{-}97$  MeV;  $\text{La}(\text{p}, \text{X})^{139}\text{Ce}$ ,  $E \approx 4\text{-}11$  MeV; measured production  $\sigma$ ; deduced thick-target yields. JOUR NIMBE 255 331



KEYNUMBERS AND KEYWORDS

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**A=134**

- <sup>134</sup>Te    2006SI40    NUCLEAR MOMENTS  
120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135,136Te; measured  
hfs, isotope shifts; deduced  $\mu$ , quadrupole moments, radii. Laser  
spectroscopy, comparison with model predictions. JOUR HYIND 171  
173
- <sup>134</sup>I    2007NA04    NUCLEAR REACTIONS <sup>243</sup>Am(n, F)<sup>128</sup>Sb / <sup>130</sup>Sb / <sup>132</sup>Sb / <sup>131</sup>Te /  
<sup>133</sup>Te / <sup>132</sup>I / <sup>134</sup>I / <sup>136</sup>I / <sup>135</sup>Xe / <sup>138</sup>Cs, E=fast; measured isomeric  
yield ratios; deduced fission fragment angular momenta, single-particle  
spin effect. Comparison with results from other fissioning systems.  
JOUR ZAANE 31 195
- <sup>134</sup>Cs    2007NI04    RADIOACTIVITY <sup>137</sup>Cs( $\beta^-$ ); <sup>134m</sup>Cs(IT) [from <sup>133</sup>Cs(n,  $\gamma$ )];  
measured E $\gamma$ , I $\gamma$ , X-ray spectra. <sup>134</sup>Cs, <sup>137</sup>Ba transitions deduced ICC.  
Comparison with model predictions. JOUR PRVCA 75 024308
- <sup>134</sup>La    2007KU13    NUCLEAR REACTIONS <sup>124</sup>Sn(<sup>14</sup>N, 4n), E=67 MeV; measured E $\gamma$ ,  
I $\gamma$ ,  $\gamma\gamma$ -coinc, lifetimes. <sup>134</sup>La deduced levels, J,  $\pi$ . JOUR PRVCA 76  
014309
- <sup>134</sup>Pr    2007T021    NUCLEAR REACTIONS <sup>119</sup>Sn(<sup>19</sup>F, 4n $\gamma$ ), E=83, 87 MeV; measured  
E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, lifetimes, multipolarity, linear polarization. <sup>134</sup>Pr;  
deduced levels, J,  $\pi$ , band structure, chiral behavior, TQPTT and  
IBFFM model calculations, B(E2), B(M1). JOUR PRVCA 76 044313

**A=135**

- <sup>135</sup>Sn    2006KEZZ    RADIOACTIVITY <sup>133,135</sup>Sn, <sup>137,138</sup>Sb, <sup>138,139,140</sup>Te, <sup>142,143</sup>I( $\beta^-$ ) [from  
Pb(<sup>238</sup>U, X)]; measured T<sub>1/2</sub>. REPT GSI 2006-1,P154,Kessler
- 2007K066    RADIOACTIVITY <sup>135</sup>Sn( $\beta^-$ ) [from <sup>235</sup>U(n, X), E=thermal]; measured  
E $\gamma$ , I $\gamma$ ,  $\beta\gamma$ ,  $\gamma\gamma$ -coinc. <sup>135</sup>Sb deduced T<sub>1/2</sub>, B(M1), B(E2). JOUR  
ZAANE 32 25
- <sup>135</sup>Sb    2006KEZZ    RADIOACTIVITY <sup>133,135</sup>Sn, <sup>137,138</sup>Sb, <sup>138,139,140</sup>Te, <sup>142,143</sup>I( $\beta^-$ ) [from  
Pb(<sup>238</sup>U, X)]; measured T<sub>1/2</sub>. REPT GSI 2006-1,P154,Kessler
- 2007K066    RADIOACTIVITY <sup>135</sup>Sn( $\beta^-$ ) [from <sup>235</sup>U(n, X), E=thermal]; measured  
E $\gamma$ , I $\gamma$ ,  $\beta\gamma$ ,  $\gamma\gamma$ -coinc. <sup>135</sup>Sb deduced T<sub>1/2</sub>, B(M1), B(E2). JOUR  
ZAANE 32 25
- 2007MA40    RADIOACTIVITY <sup>136</sup>Sn( $\beta^-$ ); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coinc. <sup>135</sup>Sb  
deduced levels, B(E2). JOUR APOBB 38 1213
- <sup>135</sup>Te    2006SI40    NUCLEAR MOMENTS  
120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135,136Te; measured  
hfs, isotope shifts; deduced  $\mu$ , quadrupole moments, radii. Laser  
spectroscopy, comparison with model predictions. JOUR HYIND 171  
173
- 2007F002    RADIOACTIVITY <sup>135,136</sup>Te( $\beta^-$ ); measured E $\beta$ , E $\gamma$ ,  $\beta\gamma$ -coinc.  
Deduced  $\beta$  endpoint energies and mass excess. JOUR PRVCA 75  
054308
- <sup>135</sup>I    2007F002    RADIOACTIVITY <sup>135,136</sup>Te( $\beta^-$ ); measured E $\beta$ , E $\gamma$ ,  $\beta\gamma$ -coinc.  
Deduced  $\beta$  endpoint energies and mass excess. JOUR PRVCA 75  
054308
- <sup>135</sup>Xe    2007F003    RADIOACTIVITY <sup>135</sup>Xe; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coinc. Deduced high  
spin level structure, J,  $\pi$ . JOUR PRVCA 75 054322



KEYNUMBERS AND KEYWORDS

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**A=135 (continued)**

- 2007F003 NUCLEAR REACTIONS  $^{136}\text{Xe}(n, 2n\gamma)$ , E not given; measured excitation functions. JOUR PRVCA 75 054322
- 2007NA04 NUCLEAR REACTIONS  $^{243}\text{Am}(n, F)^{128}\text{Sb} / ^{130}\text{Sb} / ^{132}\text{Sb} / ^{131}\text{Te} / ^{133}\text{Te} / ^{132}\text{I} / ^{134}\text{I} / ^{136}\text{I} / ^{135}\text{Xe} / ^{138}\text{Cs}$ , E=fast; measured isomeric yield ratios; deduced fission fragment angular momenta, single-particle spin effect. Comparison with results from other fissioning systems. JOUR ZAANE 31 195
- $^{135}\text{Ce}$  2007VE02 NUCLEAR REACTIONS  $^{141}\text{Pr}(p, X)^{132}\text{Ce} / ^{133m}\text{Ce} / ^{135}\text{Ce} / ^{137m}\text{Ce} / ^{139}\text{Ce}$ , E  $\approx$  21-97 MeV; La(p, X) $^{139}\text{Ce}$ , E  $\approx$  4-11 MeV; measured production  $\sigma$ ; deduced thick-target yields. JOUR NIMBE 255 331
- $^{135}\text{Nd}$  2007MU14 NUCLEAR REACTIONS  $^{100}\text{Mo}(^{40}\text{Ar}, 5n)$ , E=175 MeV; measured  $E\gamma$ ,  $I\gamma$ , lifetimes.  $^{135}\text{Nd}$  deduced B(M1), B(E2). JOUR PRLTA 99 172501

**A=136**

- $^{136}\text{Sn}$  2007MA40 RADIOACTIVITY  $^{136}\text{Sn}(\beta^-)$ ; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coinc.  $^{135}\text{Sb}$  deduced levels, B(E2). JOUR APOBB 38 1213
- $^{136}\text{Sb}$  2007MA40 RADIOACTIVITY  $^{136}\text{Sb}(\beta^-)$ ; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coinc.  $^{135}\text{Sb}$  deduced levels, B(E2). JOUR APOBB 38 1213
- 2007SI27 NUCLEAR REACTIONS  $^{241}\text{Pu}(n, F)$ , E=thermal; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin, X-ray spectra, i(X-ray) $\gamma$ -coin, conversion electrons.  $^{136}\text{Sb}$ ; deduced levels, J,  $\pi$ , half-lives, isomer. JOUR PRVCA 76 041303
- $^{136}\text{Te}$  2006SI40 NUCLEAR MOMENTS  $^{120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Te}$ ; measured hfs, isotope shifts; deduced  $\mu$ , quadrupole moments, radii. Laser spectroscopy, comparison with model predictions. JOUR HYIND 171 173
- 2007F002 RADIOACTIVITY  $^{135,136}\text{Te}(\beta^-)$ ; measured  $E\beta$ ,  $E\gamma$ ,  $\beta\gamma$ -coinc. Deduced  $\beta$  endpoint energies and mass excess. JOUR PRVCA 75 054308
- $^{136}\text{I}$  2007F002 RADIOACTIVITY  $^{135,136}\text{Te}(\beta^-)$ ; measured  $E\beta$ ,  $E\gamma$ ,  $\beta\gamma$ -coinc. Deduced  $\beta$  endpoint energies and mass excess. JOUR PRVCA 75 054308
- 2007NA04 NUCLEAR REACTIONS  $^{243}\text{Am}(n, F)^{128}\text{Sb} / ^{130}\text{Sb} / ^{132}\text{Sb} / ^{131}\text{Te} / ^{133}\text{Te} / ^{132}\text{I} / ^{134}\text{I} / ^{136}\text{I} / ^{135}\text{Xe} / ^{138}\text{Cs}$ , E=fast; measured isomeric yield ratios; deduced fission fragment angular momenta, single-particle spin effect. Comparison with results from other fissioning systems. JOUR ZAANE 31 195
- $^{136}\text{Xe}$  2006GA44 RADIOACTIVITY  $^{136}\text{Xe}(2\beta^-)$ ; measured  $T_{1/2}$  lower limits for  $0\nu\beta\beta$  and  $2\nu\beta\beta$ -decay. JOUR PANUE 69 2129
- 2007RE03 ATOMIC MASSES  $^{136}\text{Xe}$ ; measured mass; deduced Q-value for  $2\beta$ -decay. JOUR PRLTA 98 053003
- $^{136}\text{Ba}$  2006GA44 RADIOACTIVITY  $^{136}\text{Xe}(2\beta^-)$ ; measured  $T_{1/2}$  lower limits for  $0\nu\beta\beta$  and  $2\nu\beta\beta$ -decay. JOUR PANUE 69 2129
- $^{136}\text{Ce}$  2007AH02 RADIOACTIVITY  $^{136}\text{Pr}(\text{EC})$ , ( $\beta^+$ ) [from  $^{134}\text{Ba}(^6\text{Li}, 4n)$ ]; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin.  $^{136}\text{Ce}$  deduced levels, J,  $\pi$ ,  $\delta$ , B(E2) / B(M1), possible mixed-symmetry state. JOUR PRVCA 75 014313

KEYNUMBERS AND KEYWORDS

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**A=136 (continued)**

<sup>136</sup>Pr 2007AH02 RADIOACTIVITY <sup>136</sup>Pr(EC), ( $\beta^+$ ) [from <sup>134</sup>Ba(<sup>6</sup>Li, 4n)]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>136</sup>Ce deduced levels, J,  $\pi$ ,  $\delta$ , B(E2) / B(M1), possible mixed-symmetry state. JOUR PRVCA 75 014313

**A=137**

<sup>137</sup>Sb 2006KEZZ RADIOACTIVITY <sup>133,135</sup>Sn, <sup>137,138</sup>Sb, <sup>138,139,140</sup>Te, <sup>142,143</sup>I( $\beta^-$ ) [from Pb(<sup>238</sup>U, X)]; measured T<sub>1/2</sub>. REPT GSI 2006-1,P154,Kessler

<sup>137</sup>Te 2006KEZZ RADIOACTIVITY <sup>133,135</sup>Sn, <sup>137,138</sup>Sb, <sup>138,139,140</sup>Te, <sup>142,143</sup>I( $\beta^-$ ) [from Pb(<sup>238</sup>U, X)]; measured T<sub>1/2</sub>. REPT GSI 2006-1,P154,Kessler

<sup>137</sup>Cs 2007LI21 RADIOACTIVITY <sup>252</sup>Cf(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>137,138</sup>Cs deduced high-spin levels, J,  $\pi$ , configurations. Gammasphere array, comparison with shell model predictions. JOUR PRVCA 75 044314

2007NI04 RADIOACTIVITY <sup>137</sup>Cs( $\beta^-$ ); <sup>134m</sup>Cs(IT) [from <sup>133</sup>Cs(n,  $\gamma$ )]; measured E $\gamma$ , I $\gamma$ , X-ray spectra. <sup>134</sup>Cs, <sup>137</sup>Ba transitions deduced ICC. Comparison with model predictions. JOUR PRVCA 75 024308

2007SE05 RADIOACTIVITY <sup>137</sup>Cs( $\beta^-$ ); measured E $\gamma$ , I $\gamma$ . Deduced branching ratio and ft value. JOUR BRSPE 71 827

2007YA02 RADIOACTIVITY <sup>51</sup>Cr, <sup>55</sup>Fe, <sup>67</sup>Ga, <sup>111</sup>In, <sup>133</sup>Ba, <sup>201</sup>Tl(EC); <sup>99m</sup>Tc(IT), ( $\beta^-$ ); <sup>131</sup>I, <sup>133</sup>Xe, <sup>137</sup>Cs( $\beta^-$ ); <sup>226</sup>Ra( $\alpha$ ); measured K X-ray intensity ratios following decay and photoionization. JOUR NIMBE 254 182

<sup>137</sup>Ba 2007NI04 RADIOACTIVITY <sup>137</sup>Cs( $\beta^-$ ); <sup>134m</sup>Cs(IT) [from <sup>133</sup>Cs(n,  $\gamma$ )]; measured E $\gamma$ , I $\gamma$ , X-ray spectra. <sup>134</sup>Cs, <sup>137</sup>Ba transitions deduced ICC. Comparison with model predictions. JOUR PRVCA 75 024308

2007SE05 RADIOACTIVITY <sup>137</sup>Cs( $\beta^-$ ); measured E $\gamma$ , I $\gamma$ . Deduced branching ratio and ft value. JOUR BRSPE 71 827

2007YA02 RADIOACTIVITY <sup>51</sup>Cr, <sup>55</sup>Fe, <sup>67</sup>Ga, <sup>111</sup>In, <sup>133</sup>Ba, <sup>201</sup>Tl(EC); <sup>99m</sup>Tc(IT), ( $\beta^-$ ); <sup>131</sup>I, <sup>133</sup>Xe, <sup>137</sup>Cs( $\beta^-$ ); <sup>226</sup>Ra( $\alpha$ ); measured K X-ray intensity ratios following decay and photoionization. JOUR NIMBE 254 182

<sup>137</sup>Ce 2007VE02 NUCLEAR REACTIONS <sup>141</sup>Pr(p, X)<sup>132</sup>Ce / <sup>133m</sup>Ce / <sup>135</sup>Ce / <sup>137m</sup>Ce / <sup>139</sup>Ce, E  $\approx$  21-97 MeV; La(p, X)<sup>139</sup>Ce, E  $\approx$  4-11 MeV; measured production  $\sigma$ ; deduced thick-target yields. JOUR NIMBE 255 331

<sup>137</sup>Pr 2007AG13 NUCLEAR REACTIONS <sup>122</sup>Sn(<sup>19</sup>F, 4n), E=80 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>137</sup>Pr deduced levels, J,  $\pi$ , multipolarity. JOUR PRVCA 76 024321

**A=138**

<sup>138</sup>Sb 2006KEZZ RADIOACTIVITY <sup>133,135</sup>Sn, <sup>137,138</sup>Sb, <sup>138,139,140</sup>Te, <sup>142,143</sup>I( $\beta^-$ ) [from Pb(<sup>238</sup>U, X)]; measured T<sub>1/2</sub>. REPT GSI 2006-1,P154,Kessler

<sup>138</sup>Te 2006KEZZ RADIOACTIVITY <sup>133,135</sup>Sn, <sup>137,138</sup>Sb, <sup>138,139,140</sup>Te, <sup>142,143</sup>I( $\beta^-$ ) [from Pb(<sup>238</sup>U, X)]; measured T<sub>1/2</sub>. REPT GSI 2006-1,P154,Kessler

<sup>138</sup>I 2006KEZZ RADIOACTIVITY <sup>133,135</sup>Sn, <sup>137,138</sup>Sb, <sup>138,139,140</sup>Te, <sup>142,143</sup>I( $\beta^-$ ) [from Pb(<sup>238</sup>U, X)]; measured T<sub>1/2</sub>. REPT GSI 2006-1,P154,Kessler

KEYNUMBERS AND KEYWORDS

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**A=138 (continued)**

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|-------------------|----------|---|
|                   | 2007RZ01 | RADIOACTIVITY $^{138}\text{I}$ [from $^{248}\text{Cm}(\text{SF})$ ]; measured prompt and delayed $E\gamma$ , $I\gamma$ . Deduced level energies, J, $\pi$ . JOUR PRVCA 75 054319  |
| $^{138}\text{Cs}$ | 2007LI21 | RADIOACTIVITY $^{252}\text{Cf}(\text{SF})$ ; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin. $^{137,138}\text{Cs}$ deduced high-spin levels, J, $\pi$ , configurations. Gammasphere array, comparison with shell model predictions. JOUR PRVCA 75 044314   |
|                   | 2007NA04 | NUCLEAR REACTIONS $^{243}\text{Am}(\text{n}, \text{F})^{128}\text{Sb} / ^{130}\text{Sb} / ^{132}\text{Sb} / ^{131}\text{Te} / ^{133}\text{Te} / ^{132}\text{I} / ^{134}\text{I} / ^{136}\text{I} / ^{135}\text{Xe} / ^{138}\text{Cs}$ , E=fast; measured isomeric yield ratios; deduced fission fragment angular momenta, single-particle spin effect. Comparison with results from other fissioning systems. JOUR ZAANE 31 195   |
|                   | 2007RZ03 | RADIOACTIVITY $^{138}\text{Cs}(\text{IT})$ [from $^{248}\text{Cm}(\text{SF})$ ]; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coinc. $^{138}\text{Cs}$ deduced levels, J, $\pi$ . JOUR ZAANE 32 5   |
| $^{138}\text{Ba}$ | 2007KL05 | NUCLEAR REACTIONS $\text{Be}(^{238}\text{U}, \text{X})$ , E=550 MeV / nucleon; measured fragment yields. $^{12}\text{C}$ , $^{208}\text{Pb}(^{129}\text{Sn}, \text{X})$ , ( $^{130}\text{Sn}, \text{X}$ ), ( $^{131}\text{Sn}, \text{X}$ ), ( $^{132}\text{Sn}, \text{X}$ ), ( $^{133}\text{Sn}, \text{X}$ ), E $\approx$ 500 MeV / nucleon; measured En, $E\gamma$ , $n\gamma$ -coin; deduced electromagnetic dissociation $\sigma(\text{E})$ . $^{129,130,131,132,133}\text{Sn}$ deduced dipole strength distributions, B(E1), pygmy and giant dipole resonance parameters. Comparison with RPA calculations. $^{40,44,48}\text{Ca}$ , $^{116,124}\text{Sn}$ , $^{138}\text{Ba}$ , $^{140}\text{Ce}$ , $^{142}\text{Nd}$ , $^{144}\text{Sm}$ , $^{208}\text{Pb}(\gamma, \gamma')$ , E not given; analyzed $E\gamma$ , $I\gamma$ . $^{40,44,48}\text{Ca}$ , $^{116,124}\text{Sn}$ , $^{138}\text{Ba}$ , $^{140}\text{Ce}$ , $^{142}\text{Nd}$ , $^{144}\text{Sm}$ , $^{208}\text{Pb}$ deduced B(E1). JOUR NUPAB 788 145c |
| $^{138}\text{La}$ | 2007BY02 | NUCLEAR REACTIONS $^{138}\text{Ba}$ , $^{180}\text{Hf}(^3\text{He}, \text{t})$ , E=140 MeV / nucleon; measured particle spectra. $^{138}\text{La}$ , $^{180}\text{Ta}$ deduced Gamow-Teller strength distributions. Implications for stellar nucleosynthesis discussed. JOUR PRLTA 98 082501  |
| $^{138}\text{Ce}$ | 2007PI13 | NUCLEAR REACTIONS $^{12}\text{C}(^{138}\text{Ce}, ^{138}\text{Ce}')$ , E=480 MeV; measured $E\gamma$ , $I\gamma$ , angular distributions following projectile Coulomb excitation. $^{138}\text{Ce}$ deduced levels, J, $\pi$ , B(M1), B(E2), matrix elements, $\delta$ , mixed-symmetry state. Gammasphere array. JOUR NUPAB 788 85c  |
| $^{138}\text{Pr}$ | 2007LI12 | NUCLEAR REACTIONS $^{128}\text{Te}(^{14}\text{N}, 4\text{n})$ , E=64 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin. $^{138}\text{Pr}$ deduced high-spin levels, J, $\pi$ , configurations. JOUR PRVCA 75 034304  |

**A=139**

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|-------------------|----------|---|
| $^{139}\text{Te}$ | 2006KEZZ | RADIOACTIVITY $^{133,135}\text{Sn}$ , $^{137,138}\text{Sb}$ , $^{138,139,140}\text{Te}$ , $^{142,143}\text{I}(\beta^-)$ [from $\text{Pb}(^{238}\text{U}, \text{X})$ ]; measured $T_{1/2}$ . REPT GSI 2006-1,P154,Kessler  |
| $^{139}\text{I}$  | 2006KEZZ | RADIOACTIVITY $^{133,135}\text{Sn}$ , $^{137,138}\text{Sb}$ , $^{138,139,140}\text{Te}$ , $^{142,143}\text{I}(\beta^-)$ [from $\text{Pb}(^{238}\text{U}, \text{X})$ ]; measured $T_{1/2}$ . REPT GSI 2006-1,P154,Kessler  |
| $^{139}\text{La}$ | 2006SC30 | NUCLEAR MOMENTS $^{139}\text{La}$ ; measured hfs; deduced magnetic dipole and electric quadrupole hyperfine constants. JOUR PHSTB 73 217  |
|                   | 2007SC18 | NUCLEAR REACTIONS $^{139}\text{La}$ , $^{141}\text{Pr}(\gamma, \gamma')$ , E=4.1 MeV bremsstrahlung; measured $E\gamma$ , $I\gamma$ . $^{139}\text{La}$ , $^{141}\text{Pr}$ deduced level energies, widths, B(E1), B(M1), dipole strength distributions, blocking effect. JOUR PRVCA 75 044313  |
| $^{139}\text{Ce}$ | 2007VE02 | NUCLEAR REACTIONS $^{141}\text{Pr}(\text{p}, \text{X})^{132}\text{Ce} / ^{133\text{m}}\text{Ce} / ^{135}\text{Ce} / ^{137\text{m}}\text{Ce} / ^{139}\text{Ce}$ , E $\approx$ 21-97 MeV; $\text{La}(\text{p}, \text{X})^{139}\text{Ce}$ , E $\approx$ 4-11 MeV; measured production $\sigma$ ; deduced thick-target yields. JOUR NIMBE 255 331 |

KEYNUMBERS AND KEYWORDS

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**A=139 (continued)**

- <sup>139</sup>Nd    2007KU12    NUCLEAR REACTIONS <sup>128</sup>Te(<sup>16</sup>O, 5n), E=85 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coinc, polarization asymmetry. <sup>139</sup>Nd deduced levels, J,  $\pi$ . JOUR PRVCA 76 014306
- <sup>139</sup>Sm    2007LIZY    NUCLEAR REACTIONS <sup>114</sup>Sn(<sup>32</sup>S, n2p $\alpha$ ), (<sup>32</sup>S, n2p), E=160 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coinc, DSAM. <sup>139</sup>Sm, <sup>142</sup>Gd deduced high-spin levels, J,  $\pi$ ,  $\tau$ . EUROBALL IV array. CONF Voronezh(Nucleus-2007),Contrib,P94,Lieder

**A=140**

- <sup>140</sup>Te    2006KEZZ    RADIOACTIVITY <sup>133,135</sup>Sn, <sup>137,138</sup>Sb, <sup>138,139,140</sup>Te, <sup>142,143</sup>I( $\beta^-$ ) [from Pb(<sup>238</sup>U, X)]; measured T<sub>1/2</sub>. REPT GSI 2006-1,P154,Kessler
- <sup>140</sup>I    2006KEZZ    RADIOACTIVITY <sup>133,135</sup>Sn, <sup>137,138</sup>Sb, <sup>138,139,140</sup>Te, <sup>142,143</sup>I( $\beta^-$ ) [from Pb(<sup>238</sup>U, X)]; measured T<sub>1/2</sub>. REPT GSI 2006-1,P154,Kessler
- <sup>140</sup>La    2007MAZW    NUCLEAR REACTIONS <sup>139</sup>La(n,  $\gamma$ ), <sup>151</sup>Sm(n,  $\gamma$ ), E < 1 MeV; measured yields, cross sections. CONF Geneva(NIC-IX) 138
- 2007TAZW    NUCLEAR REACTIONS <sup>139</sup>La, <sup>152</sup>Sm, <sup>192,193</sup>Ir(n,  $\gamma$ ), E=55, 144 keV; measured cross sections relative to <sup>197</sup>Au. CONF Tokai-mura (Nuclear Data) Proc,PV.02,Tan
- 2007TE03    NUCLEAR REACTIONS <sup>139</sup>La(n,  $\gamma$ ), E=0.6-9000 eV; measured capture  $\sigma$ ; deduced resonance parameters, level densities, Maxwellian averaged  $\sigma$ . Astrophysical implications discussed. JOUR PRVCA 75 035807
- <sup>140</sup>Ce    2007KL05    NUCLEAR REACTIONS Be(<sup>238</sup>U, X), E=550 MeV / nucleon; measured fragment yields. <sup>12</sup>C, <sup>208</sup>Pb(<sup>129</sup>Sn, X), (<sup>130</sup>Sn, X), (<sup>131</sup>Sn, X), (<sup>132</sup>Sn, X), (<sup>133</sup>Sn, X), E $\approx$  500 MeV / nucleon; measured En, E $\gamma$ , n $\gamma$ -coinc; deduced electromagnetic dissociation  $\sigma(E)$ . <sup>129,130,131,132,133</sup>Sn deduced dipole strength distributions, B(E1), pygmy and giant dipole resonance parameters. Comparison with RPA calculations. <sup>40,44,48</sup>Ca, <sup>116,124</sup>Sn, <sup>138</sup>Ba, <sup>140</sup>Ce, <sup>142</sup>Nd, <sup>144</sup>Sm, <sup>208</sup>Pb( $\gamma$ ,  $\gamma'$ ), E not given; analyzed E $\gamma$ , I $\gamma$ . <sup>40,44,48</sup>Ca, <sup>116,124</sup>Sn, <sup>138</sup>Ba, <sup>140</sup>Ce, <sup>142</sup>Nd, <sup>144</sup>Sm, <sup>208</sup>Pb deduced B(E1). JOUR NUPAB 788 145c
- 2007SA25    RADIOACTIVITY <sup>140</sup>Ce( $\beta^-$ ); measured E $\gamma$ , I $\gamma$ , angular anisotropy for source implanted in highly oriented pyrolytic graphite. Time-differential perturbed angular correlation. JOUR JRNCD 272 665
- 2007SA48    NUCLEAR REACTIONS <sup>140</sup>Ce( $\alpha$ ,  $\alpha'$ ), E=136 MeV; measured E $\alpha$ , E $\gamma$ ,  $\alpha\gamma$ -coinc,  $\sigma(\theta)$ . <sup>140</sup>Ce deduced electric dipole strength distribution, pygmy resonance features. JOUR NUPAB 788 165c
- 2007W006    NUCLEAR REACTIONS <sup>90</sup>Zr, <sup>116</sup>Sn, <sup>208</sup>Pb( $\alpha$ ,  $\alpha'$ ), ( $\alpha$ , n $\alpha$ ), E=200 MeV; measured E $\gamma$ , E $\alpha$ , En,  $\sigma(E, \theta)$ , excitation energy spectra. <sup>90</sup>Zr, <sup>116</sup>Sn, <sup>208</sup>Pb deduced isoscalar GDR neutron decay features. <sup>140</sup>Ce( $\alpha$ ,  $\alpha\gamma$ ), E=136 MeV; measured E $\gamma$ , E $\alpha$ . <sup>140</sup>Ce deduced E1 strength distribution. JOUR NUPAB 788 27c
- <sup>140</sup>Pr    2007SA25    RADIOACTIVITY <sup>140</sup>Ce( $\beta^-$ ); measured E $\gamma$ , I $\gamma$ , angular anisotropy for source implanted in highly oriented pyrolytic graphite. Time-differential perturbed angular correlation. JOUR JRNCD 272 665

KEYNUMBERS AND KEYWORDS

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**A=140 (continued)**

$^{140}\text{Nd}$	2007QA03	NUCLEAR REACTIONS $\text{Sr}(p, \text{nx})^{88}\text{Y}$ , $E=9\text{-}14$ MeV; $\text{Rb}(\alpha, \text{nx})^{88}\text{Y}$ , $E=12\text{-}18$ MeV; $^{141}\text{Pr}(p, 2n)$ , $E=15\text{-}30$ MeV; $\text{Ce}(^3\text{He}, \text{nx})^{140}\text{Nd}$ , $E=20\text{-}35$ MeV; $^{153}\text{Eu}(n, p)$ , $E=14$ MeV; $^{150}\text{Nd}(\alpha, n)$ , $E=15\text{-}25$ MeV; measured yields, excitation function and cross section. JOUR RAACA 95 313
	2007ZH23	NUCLEAR REACTIONS $\text{Ce}(^3\text{He}, \text{nx})$ , $E < 33.5$ MeV; $^{141}\text{Pr}(p, 2n)$ , $E=16.2\text{-}18.6$ MeV; measured yields. JOUR RAACA 95 319
$^{140}\text{Gd}$	20060L09	NUCLEAR REACTIONS $^{92}\text{Mo}(^54\text{Fe}, 2p\alpha)$ , $E=240$ MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin. $^{140}\text{Gd}$ deduced high-spin levels $J, \pi$ . JOUR BJPHE 36 1371

**A=141**

$^{141}\text{Pr}$	2007SC18	NUCLEAR REACTIONS $^{139}\text{La}$ , $^{141}\text{Pr}(\gamma, \gamma')$ , $E=4.1$ MeV bremsstrahlung; measured $E\gamma$ , $I\gamma$ . $^{139}\text{La}$ , $^{141}\text{Pr}$ deduced level energies, widths, $B(E1)$ , $B(M1)$ , dipole strength distributions, blocking effect. JOUR PRVCA 75 044313
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**A=142**

$^{142}\text{I}$	2006KEZZ	RADIOACTIVITY $^{133,135}\text{Sn}$ , $^{137,138}\text{Sb}$ , $^{138,139,140}\text{Te}$ , $^{142,143}\text{I}(\beta^-)$ [from $\text{Pb}(^{238}\text{U}, X)$ ]; measured $T_{1/2}$ . REPT GSI 2006-1,P154,Kessler
$^{142}\text{Xe}$	2006KEZZ	RADIOACTIVITY $^{133,135}\text{Sn}$ , $^{137,138}\text{Sb}$ , $^{138,139,140}\text{Te}$ , $^{142,143}\text{I}(\beta^-)$ [from $\text{Pb}(^{238}\text{U}, X)$ ]; measured $T_{1/2}$ . REPT GSI 2006-1,P154,Kessler
$^{142}\text{Pr}$	2007ZH42	NUCLEAR REACTIONS $^{141}\text{Pr}(n, \gamma)$ , $E=0.54, 1.09, 1.59$ MeV; measured $E\gamma$ , $I\gamma$ , cross sections using the activation method. Compared results to model calculations. JOUR ARISE 65 1314
$^{142}\text{Nd}$	2007KL05	NUCLEAR REACTIONS $\text{Be}(^{238}\text{U}, X)$ , $E=550$ MeV / nucleon; measured fragment yields. $^{12}\text{C}$ , $^{208}\text{Pb}(^{129}\text{Sn}, X)$ , $(^{130}\text{Sn}, X)$ , $(^{131}\text{Sn}, X)$ , $(^{132}\text{Sn}, X)$ , $(^{133}\text{Sn}, X)$ , $E \approx 500$ MeV / nucleon; measured $E_n$ , $E\gamma$ , $n\gamma$ -coin; deduced electromagnetic dissociation $\sigma(E)$ . $^{129,130,131,132,133}\text{Sn}$ deduced dipole strength distributions, $B(E1)$ , pygmy and giant dipole resonance parameters. Comparison with RPA calculations. $^{40,44,48}\text{Ca}$ , $^{116,124}\text{Sn}$ , $^{138}\text{Ba}$ , $^{140}\text{Ce}$ , $^{142}\text{Nd}$ , $^{144}\text{Sm}$ , $^{208}\text{Pb}(\gamma, \gamma')$ , $E$ not given; analyzed $E\gamma$ , $I\gamma$ . $^{40,44,48}\text{Ca}$ , $^{116,124}\text{Sn}$ , $^{138}\text{Ba}$ , $^{140}\text{Ce}$ , $^{142}\text{Nd}$ , $^{144}\text{Sm}$ , $^{208}\text{Pb}$ deduced $B(E1)$ . JOUR NUPAB 788 145c
$^{142}\text{Gd}$	2007LIZY	NUCLEAR REACTIONS $^{114}\text{Sn}(^{32}\text{S}, n2p\alpha)$ , $(^{32}\text{S}, n2p)$ , $E=160$ MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, DSAM. $^{139}\text{Sm}$ , $^{142}\text{Gd}$ deduced high-spin levels, $J, \pi, \tau$ . EUROBALL IV array. CONF Voronezh(Nucleus-2007),Contrib,P94,Lieder

**A=143**

$^{143}\text{I}$	2006KEZZ	RADIOACTIVITY $^{133,135}\text{Sn}$ , $^{137,138}\text{Sb}$ , $^{138,139,140}\text{Te}$ , $^{142,143}\text{I}(\beta^-)$ [from $\text{Pb}(^{238}\text{U}, X)$ ]; measured $T_{1/2}$ . REPT GSI 2006-1,P154,Kessler
$^{143}\text{Xe}$	2006KEZZ	RADIOACTIVITY $^{133,135}\text{Sn}$ , $^{137,138}\text{Sb}$ , $^{138,139,140}\text{Te}$ , $^{142,143}\text{I}(\beta^-)$ [from $\text{Pb}(^{238}\text{U}, X)$ ]; measured $T_{1/2}$ . REPT GSI 2006-1,P154,Kessler

KEYNUMBERS AND KEYWORDS

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**A=143 (continued)**

<sup>143</sup> La	2007WA20	RADIOACTIVITY <sup>143</sup> La[from <sup>252</sup> Cf(SF)]; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coinc. <sup>143</sup> La deduced levels, J, $\pi$ for high spin levels. JOUR PRVCA 75 064301
<sup>143</sup> Sm	2006ARZX	NUCLEAR REACTIONS <sup>27</sup> Al(n, $\alpha$ ), E=14 MeV; <sup>144</sup> Sm, <sup>206,208</sup> Pb(n, 2n), E=14 MeV; measured isomer production $\sigma$ . REPT JAEA-Conf 2006-009,P89,Arakita
	2007PAZY	NUCLEAR REACTIONS <sup>144</sup> Sm( $\gamma$ , n), E(end point)=20-30 MeV; measured E $\gamma$ , I $\gamma$ ; <sup>143m,143g</sup> Sm deduced yield ratio $Y_m / Y_g$ . Betatron, activation method, Ge(Li) detector. CONF Voronezh(Nucleus-2007),Contrib,P145,Palvanov
<sup>143</sup> Gd	2007LIZY	NUCLEAR REACTIONS <sup>114</sup> Sn( <sup>32</sup> S, n2p $\alpha$ ), ( <sup>32</sup> S, n2p), E=160 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin, DSAM. <sup>139</sup> Sm, <sup>142</sup> Gd deduced high-spin levels, J, $\pi$ , $\tau$ . EUROBALL IV array. CONF Voronezh(Nucleus-2007),Contrib,P94,Lieder
<sup>143</sup> Tb	2007RAZZ	ATOMIC MASSES <sup>143,147</sup> Tb, <sup>143,144,145,146,147,148</sup> Dy, <sup>144,145,146,147,148</sup> Ho, <sup>146,147,148</sup> Er, <sup>147,148</sup> Tm; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701030,01/22/2007
<sup>143</sup> Dy	2007RAZZ	ATOMIC MASSES <sup>143,147</sup> Tb, <sup>143,144,145,146,147,148</sup> Dy, <sup>144,145,146,147,148</sup> Ho, <sup>146,147,148</sup> Er, <sup>147,148</sup> Tm; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701030,01/22/2007

**A=144**

<sup>144</sup> Nd	2007EG02	NUCLEAR REACTIONS <sup>91</sup> Zr, <sup>116,118,119,120,122,124</sup> Sn, <sup>143</sup> Nd, <sup>177</sup> Hf(n, $\gamma$ );E=thermal; measured E $\gamma$ , I $\gamma$ , cross sections. JOUR ARISE 65 1290
<sup>144</sup> Sm	2007KL05	NUCLEAR REACTIONS Be( <sup>238</sup> U, X), E=550 MeV / nucleon; measured fragment yields. <sup>12</sup> C, <sup>208</sup> Pb( <sup>129</sup> Sn, X), ( <sup>130</sup> Sn, X), ( <sup>131</sup> Sn, X), ( <sup>132</sup> Sn, X), ( <sup>133</sup> Sn, X), E $\approx$ 500 MeV / nucleon; measured En, E $\gamma$ , n $\gamma$ -coin; deduced electromagnetic dissociation $\sigma$ (E). <sup>129,130,131,132,133</sup> Sn deduced dipole strength distributions, B(E1), pygmy and giant dipole resonance parameters. Comparison with RPA calculations. <sup>40,44,48</sup> Ca, <sup>116,124</sup> Sn, <sup>138</sup> Ba, <sup>140</sup> Ce, <sup>142</sup> Nd, <sup>144</sup> Sm, <sup>208</sup> Pb( $\gamma$ , $\gamma'$ ), E not given; analyzed E $\gamma$ , I $\gamma$ . <sup>40,44,48</sup> Ca, <sup>116,124</sup> Sn, <sup>138</sup> Ba, <sup>140</sup> Ce, <sup>142</sup> Nd, <sup>144</sup> Sm, <sup>208</sup> Pb deduced B(E1). JOUR NUPAB 788 145c
<sup>144</sup> Dy	2007RAZZ	ATOMIC MASSES <sup>143,147</sup> Tb, <sup>143,144,145,146,147,148</sup> Dy, <sup>144,145,146,147,148</sup> Ho, <sup>146,147,148</sup> Er, <sup>147,148</sup> Tm; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701030,01/22/2007
<sup>144</sup> Ho	2007RAZZ	ATOMIC MASSES <sup>143,147</sup> Tb, <sup>143,144,145,146,147,148</sup> Dy, <sup>144,145,146,147,148</sup> Ho, <sup>146,147,148</sup> Er, <sup>147,148</sup> Tm; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701030,01/22/2007



KEYNUMBERS AND KEYWORDS

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**A=145**

- <sup>145</sup>Dy    2007RAZZ    ATOMIC MASSES <sup>143,147</sup>Tb, <sup>143,144,145,146,147,148</sup>Dy,  
<sup>144,145,146,147,148</sup>Ho, <sup>146,147,148</sup>Er, <sup>147,148</sup>Tm; measured masses.  
 Penning-trap mass spectrometer. PREPRINT  
 nucl-ex/0701030,01/22/2007
- <sup>145</sup>Ho    2007RAZZ    ATOMIC MASSES <sup>143,147</sup>Tb, <sup>143,144,145,146,147,148</sup>Dy,  
<sup>144,145,146,147,148</sup>Ho, <sup>146,147,148</sup>Er, <sup>147,148</sup>Tm; measured masses.  
 Penning-trap mass spectrometer. PREPRINT  
 nucl-ex/0701030,01/22/2007
- <sup>145</sup>Tm    2007SE06    NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>92</sup>Mo, 4np), E=417 MeV; measured E $\gamma$ ,  
 I $\gamma$ , Ep, p $\gamma$ -coinc. <sup>145</sup>Tm deduced levels, J,  $\pi$ . JOUR PRLTA 99 082502

**A=146**

- <sup>146</sup>Sm    2007HA49    NUCLEAR REACTIONS <sup>147</sup>Sm( $\gamma$ , n), E < 50 MeV; <sup>147</sup>Sm(n, 2n),  
 E=6-10 MeV; <sup>147</sup>Sm(p, 2n), E=21 MeV; measured E $\alpha$ , I $\alpha$ . JOUR  
 JNRS A 8 109
- <sup>146</sup>Eu    2007HA49    NUCLEAR REACTIONS <sup>147</sup>Sm( $\gamma$ , n), E < 50 MeV; <sup>147</sup>Sm(n, 2n),  
 E=6-10 MeV; <sup>147</sup>Sm(p, 2n), E=21 MeV; measured E $\alpha$ , I $\alpha$ . JOUR  
 JNRS A 8 109
- <sup>146</sup>Dy    2007RAZZ    ATOMIC MASSES <sup>143,147</sup>Tb, <sup>143,144,145,146,147,148</sup>Dy,  
<sup>144,145,146,147,148</sup>Ho, <sup>146,147,148</sup>Er, <sup>147,148</sup>Tm; measured masses.  
 Penning-trap mass spectrometer. PREPRINT  
 nucl-ex/0701030,01/22/2007
- <sup>146</sup>Ho    2007RAZZ    ATOMIC MASSES <sup>143,147</sup>Tb, <sup>143,144,145,146,147,148</sup>Dy,  
<sup>144,145,146,147,148</sup>Ho, <sup>146,147,148</sup>Er, <sup>147,148</sup>Tm; measured masses.  
 Penning-trap mass spectrometer. PREPRINT  
 nucl-ex/0701030,01/22/2007
- <sup>146</sup>Er    2007RAZZ    ATOMIC MASSES <sup>143,147</sup>Tb, <sup>143,144,145,146,147,148</sup>Dy,  
<sup>144,145,146,147,148</sup>Ho, <sup>146,147,148</sup>Er, <sup>147,148</sup>Tm; measured masses.  
 Penning-trap mass spectrometer. PREPRINT  
 nucl-ex/0701030,01/22/2007

**A=147**

- <sup>147</sup>Pm    2007BE48    RADIOACTIVITY <sup>151</sup>Eu( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . Deduced lower lime  
 for T<sub>1/2</sub>. JOUR NUPAB 789 15
- <sup>147</sup>Sm    2007K054    NUCLEAR REACTIONS <sup>147</sup>Sm(n,  $\gamma$ ), E=spectrum; measured E $\gamma$ , I $\gamma$ ,  
 multiplicities. <sup>147</sup>Sm deduced resonance energies and spins. JOUR  
 PRVCA 76 025804
- <sup>147</sup>Tb    2007RAZZ    ATOMIC MASSES <sup>143,147</sup>Tb, <sup>143,144,145,146,147,148</sup>Dy,  
<sup>144,145,146,147,148</sup>Ho, <sup>146,147,148</sup>Er, <sup>147,148</sup>Tm; measured masses.  
 Penning-trap mass spectrometer. PREPRINT  
 nucl-ex/0701030,01/22/2007
- <sup>147</sup>Dy    2007RAZZ    ATOMIC MASSES <sup>143,147</sup>Tb, <sup>143,144,145,146,147,148</sup>Dy,  
<sup>144,145,146,147,148</sup>Ho, <sup>146,147,148</sup>Er, <sup>147,148</sup>Tm; measured masses.  
 Penning-trap mass spectrometer. PREPRINT  
 nucl-ex/0701030,01/22/2007



KEYNUMBERS AND KEYWORDS

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**A=147 (continued)**

$^{147}\text{Ho}$	2007RAZZ	ATOMIC MASSES $^{143,147}\text{Tb}$ , $^{143,144,145,146,147,148}\text{Dy}$ , $^{144,145,146,147,148}\text{Ho}$ , $^{146,147,148}\text{Er}$ , $^{147,148}\text{Tm}$ ; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701030,01/22/2007
$^{147}\text{Er}$	2007RAZZ	ATOMIC MASSES $^{143,147}\text{Tb}$ , $^{143,144,145,146,147,148}\text{Dy}$ , $^{144,145,146,147,148}\text{Ho}$ , $^{146,147,148}\text{Er}$ , $^{147,148}\text{Tm}$ ; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701030,01/22/2007
$^{147}\text{Tm}$	2007RAZZ	ATOMIC MASSES $^{143,147}\text{Tb}$ , $^{143,144,145,146,147,148}\text{Dy}$ , $^{144,145,146,147,148}\text{Ho}$ , $^{146,147,148}\text{Er}$ , $^{147,148}\text{Tm}$ ; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701030,01/22/2007

**A=148**

$^{148}\text{Ce}$	2007G021	RADIOACTIVITY $^{252}\text{Cf}(\text{SF})$ ; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, fission fragment and light charged particle yields. $^{108,110,112}\text{Ru}$ deduced levels, $J$ , $\pi$ . $^{104}\text{Zr}$ , $^{106}\text{Mo}$ , $^{148}\text{Ce}(\text{IT})$ ; measured $T_{1/2}$ , $B(\text{E}2)$ . Gammasphere array. JOUR NUPAB 787 231c
$^{148}\text{Sm}$	2007K054	NUCLEAR REACTIONS $^{147}\text{Sm}(\text{n}, \gamma)$ , $E$ =spectrum; measured $E\gamma$ , $I\gamma$ , multiplicities. $^{147}\text{Sm}$ deduced resonance energies and spins. JOUR PRVCA 76 025804
	2007K0ZY	NUCLEAR REACTIONS $^{147}\text{Sm}(\text{n}, \gamma)$ , $E$ =spectrum; measured $E\gamma$ , yields. Deduced resonance parameters. PREPRINT ArXiv:0708.0218v1 [nucl-ex]
$^{148}\text{Dy}$	2007RAZZ	ATOMIC MASSES $^{143,147}\text{Tb}$ , $^{143,144,145,146,147,148}\text{Dy}$ , $^{144,145,146,147,148}\text{Ho}$ , $^{146,147,148}\text{Er}$ , $^{147,148}\text{Tm}$ ; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701030,01/22/2007
$^{148}\text{Ho}$	2007RAZZ	ATOMIC MASSES $^{143,147}\text{Tb}$ , $^{143,144,145,146,147,148}\text{Dy}$ , $^{144,145,146,147,148}\text{Ho}$ , $^{146,147,148}\text{Er}$ , $^{147,148}\text{Tm}$ ; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701030,01/22/2007
$^{148}\text{Er}$	2007RAZZ	ATOMIC MASSES $^{143,147}\text{Tb}$ , $^{143,144,145,146,147,148}\text{Dy}$ , $^{144,145,146,147,148}\text{Ho}$ , $^{146,147,148}\text{Er}$ , $^{147,148}\text{Tm}$ ; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701030,01/22/2007
$^{148}\text{Tm}$	2007RAZZ	ATOMIC MASSES $^{143,147}\text{Tb}$ , $^{143,144,145,146,147,148}\text{Dy}$ , $^{144,145,146,147,148}\text{Ho}$ , $^{146,147,148}\text{Er}$ , $^{147,148}\text{Tm}$ ; measured masses. Penning-trap mass spectrometer. PREPRINT nucl-ex/0701030,01/22/2007

**A=149**

$^{149}\text{La}$	2007UR03	RADIOACTIVITY $^{149}\text{La}$ [from $^{248}\text{Cm}(\text{SF})$ ]; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coinc. $^{149}\text{La}$ deduced levels, $J$ , $\pi$ . JOUR PRVCA 76 037301
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KEYNUMBERS AND KEYWORDS

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**A=150**

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|-------------------|----------|---|
| <sup>150</sup> Nd | 2006SH31 | RADIOACTIVITY <sup>82</sup> Se, <sup>100</sup> Mo( $2\beta^-$ ); measured $0\nu\beta\beta$ -decay $T_{1/2}$ lower limit. <sup>82</sup> Se, <sup>96</sup> Zr, <sup>100</sup> Mo, <sup>116</sup> Cd, <sup>150</sup> Nd( $2\beta^-$ ); measured $2\nu\beta\beta$ -decay $T_{1/2}$ . JOUR PANUE 69 2090 |
|                   | 2006SH32 | RADIOACTIVITY <sup>82</sup> Se, <sup>96</sup> Zr, <sup>100</sup> Mo, <sup>116</sup> Cd, <sup>150</sup> Nd( $2\beta^-$ ); measured $2\nu\beta\beta$ -decay $T_{1/2}$ . <sup>82</sup> Se, <sup>100</sup> Mo( $2\beta^-$ ); measured $0\nu\beta\beta$ -decay $T_{1/2}$ lower limits. JOUR BRSPE 70 731 |
| <sup>150</sup> Sm | 2006SH31 | RADIOACTIVITY <sup>82</sup> Se, <sup>100</sup> Mo( $2\beta^-$ ); measured $0\nu\beta\beta$ -decay $T_{1/2}$ lower limit. <sup>82</sup> Se, <sup>96</sup> Zr, <sup>100</sup> Mo, <sup>116</sup> Cd, <sup>150</sup> Nd( $2\beta^-$ ); measured $2\nu\beta\beta$ -decay $T_{1/2}$ . JOUR PANUE 69 2090 |
|                   | 2006SH32 | RADIOACTIVITY <sup>82</sup> Se, <sup>96</sup> Zr, <sup>100</sup> Mo, <sup>116</sup> Cd, <sup>150</sup> Nd( $2\beta^-$ ); measured $2\nu\beta\beta$ -decay $T_{1/2}$ . <sup>82</sup> Se, <sup>100</sup> Mo( $2\beta^-$ ); measured $0\nu\beta\beta$ -decay $T_{1/2}$ lower limits. JOUR BRSPE 70 731 |

**A=151**

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|-------------------|----------|--|
| <sup>151</sup> Sm | 2007DA23 | NUCLEAR REACTIONS <sup>150</sup> Sm(n, $\gamma$ ), E=1-35 MeV; measured $E\gamma$ , $I\gamma$ , excitation functions and partial $\gamma$ -ray production cross sections. Compared results to model calculations. JOUR NIMBE 261 948   |
|                   | 2007HA24 | NUCLEAR REACTIONS <sup>152</sup> Sm, <sup>197</sup> Au( $\gamma$ , n), E=8.3-12.4 MeV; measured cross sections. JOUR JNSTA 44 938  |
| <sup>151</sup> Eu | 2007BE48 | RADIOACTIVITY <sup>151</sup> Eu( $\alpha$ ); measured $E\alpha$ , $I\alpha$ . Deduced lower limit for $T_{1/2}$ . JOUR NUPAB 789 15  |
| <sup>151</sup> Tb | 2007BE20 | NUCLEAR REACTIONS <sup>130</sup> Te( <sup>27</sup> Al, 6n), E=155 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin. <sup>151</sup> Tb deduced unresolved superdeformed bands, decay-out features. Euroball IV array, comparison with band mixing model predictions. JOUR PRVCA 75 047301 |

**A=152**

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|-------------------|----------|---|
| <sup>152</sup> Sm | 2007KU20 | RADIOACTIVITY <sup>152</sup> Eu( $\beta^+$ ), (EC); measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coinc. <sup>152</sup> Sm deduced levels, J, II. JOUR PRVCA 76 034319   |
|                   | 2007LI43 | NUCLEAR REACTIONS <sup>152</sup> Sm( <sup>16</sup> O, <sup>16</sup> O), ( <sup>16</sup> O, <sup>16</sup> O'), ( <sup>16</sup> O, X), E(cm)=45-70 MeV; measured $\sigma(\theta=156, \theta=160, \theta=164)$ , evaporation residue $\sigma$ for boron, carbon, nitrogen and oxygen isotopes; deduced reaction mechanism features. <sup>208</sup> Pb( <sup>6</sup> Li, <sup>6</sup> Li), ( <sup>6</sup> Li, <sup>6</sup> Li'), ( <sup>6</sup> Li, X), ( <sup>7</sup> Li, <sup>7</sup> Li), ( <sup>7</sup> Li, <sup>7</sup> Li'), ( <sup>7</sup> Li, X), E(cm)=18-42 MeV; <sup>90,96</sup> Zr( <sup>32</sup> S, X), E(cm)=60-95 MeV; measured $\sigma$ ; deduced reaction mechanism features. <sup>208</sup> Pb( <sup>6</sup> Li, <sup>6</sup> Li), E(cm)=26-40 MeV; measured fusion $\sigma$ ; deduced reaction mechanism features. Comparison with coupled-channels model. JOUR NUPAB 787 281c |
|                   | 2007MAZW | NUCLEAR REACTIONS <sup>139</sup> La(n, $\gamma$ ), <sup>151</sup> Sm(n, $\gamma$ ), E < 1 MeV; measured yields, cross sections. CONF Geneva(NIC-IX) 138   |
| <sup>152</sup> Eu | 2007AG09 | NUCLEAR REACTIONS <sup>151,153</sup> Eu(n, $\gamma$ ), E=0.1-100 keV; measured $E\gamma$ , $I\gamma$ , and multiplicity distributions. JOUR NIMBE 261 934   |
|                   | 2007KU20 | RADIOACTIVITY <sup>152</sup> Eu( $\beta^+$ ), (EC); measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coinc. <sup>152</sup> Sm deduced levels, J, II. JOUR PRVCA 76 034319   |

KEYNUMBERS AND KEYWORDS

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**A=152 (continued)**

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|-------------------|----------|--|
| 2007VIZY          |          | NUCLEAR REACTIONS $^{121}\text{Sb}(\gamma, n)$ , $^{153}\text{Eu}(\gamma, n)$ , $E(\text{end point})=12.5, 22 \text{ MeV}$ ; $^{151}\text{Eu}(n, \gamma)$ , $E=\text{thermal, slow}$ ; measured $E\gamma, I\gamma$ ; $^{120m,120g}\text{Sb}$ , $^{152m,152g}\text{Eu}$ deduced yield ratio $Y_m / Y_g$ ; $^{152m,152g}\text{Eu}$ deduced $\sigma(8^-) / \sigma(0^-)$ . Microtron, betatron, reactor, activation method, NaI(Tl), Ge detectors. CONF Voronezh(Nucleus-2007),Contrib,P135,Vishnevsky |
| $^{152}\text{Gd}$ | 2007CA25 | NUCLEAR REACTIONS $^{124}\text{Sn}(^{36}\text{S}, 4n\alpha)^{152}\text{Gd}$ , $e=175 \text{ MeV}$ ; measured $E\gamma, I\gamma, \gamma\gamma\text{-coinc}$ using the Gammasphere. $^{152}\text{Gd}$ deduced levels, $J, \pi$ . Compared results to model calculations. JOUR PRVCA 75 064314  |
| $^{152}\text{Dy}$ | 2007LA20 | NUCLEAR REACTIONS $^{108}\text{Pd}(^{48}\text{Ca}, 4n)^{152}\text{Dy}$ , $E=191 \text{ MeV}$ ; measured $E\gamma, I\gamma, \gamma\gamma\text{-coinc}$ . Analyzed quasicontinuum and ridge spectra and feeding intensity of the superdeformed bands. JOUR PRVCA 75 064309   |

**A=153**

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|-------------------|----------|--|
| $^{153}\text{Sm}$ | 2007KA16 | NUCLEAR REACTIONS $^{152}\text{Sm}(n, \gamma)$ , $E=\text{thermal}$ ; measured capture $\sigma$ ; deduced resonance integral. Comparison with previous results. JOUR ANEND 34 188  |
|                   | 2007QA03 | NUCLEAR REACTIONS $\text{Sr}(p, nx)^{88}\text{Y}$ , $E=9-14 \text{ MeV}$ ; $\text{Rb}(\alpha, nx)^{88}\text{Y}$ , $E=12-18 \text{ MeV}$ ; $^{141}\text{Pr}(p, 2n)$ , $E=15-30 \text{ MeV}$ ; $\text{Ce}(^3\text{He}, nx)^{140}\text{Nd}$ , $E=20-35 \text{ MeV}$ ; $^{153}\text{Eu}(n, p)$ , $E=14 \text{ MeV}$ ; $^{150}\text{Nd}(\alpha, n)$ , $E=15-25 \text{ MeV}$ ; measured yields, excitation function and cross section. JOUR RAACA 95 313 |
|                   | 2007TAZW | NUCLEAR REACTIONS $^{139}\text{La}$ , $^{152}\text{Sm}$ , $^{192,193}\text{Ir}(n, \gamma)$ , $E=55, 144 \text{ keV}$ ; measured cross sections relative to $^{197}\text{Au}$ . CONF Tokai-mura (Nuclear Data) Proc,PV.02,Tan   |

**A=154**

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|-------------------|----------|--|
| $^{154}\text{Eu}$ | 2007AG09 | NUCLEAR REACTIONS $^{151,153}\text{Eu}(n, \gamma)$ , $E=0.1-100 \text{ keV}$ ; measured $E\gamma, I\gamma$ , and multiplicity distributions. JOUR NIMBE 261 934  |
| $^{154}\text{Hf}$ | 2007PA27 | RADIOACTIVITY $^{159}\text{Re}(\alpha)$ [from $^{106}\text{Cd}(^{58}\text{Ni}, X)$ ]; $^{155}\text{Ta}(p)$ ; measured $E\alpha, I\alpha, E_p, I_p$ . deduced separation energies. JOUR PRVCA 75 061302 |

**A=155**

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|-------------------|----------|--|
| $^{155}\text{Tm}$ | 2007RA21 | NUCLEAR REACTIONS $^{144}\text{Sm}(^{14}\text{N}, 3n)$ , $E=70 \text{ MeV}$ ; measured $E\gamma, I\gamma, \gamma\gamma\text{-coinc}$ . $^{155}\text{Tm}$ deduced levels, $J, \pi$ . JOUR NUPAB 794 1   |
| $^{155}\text{Ta}$ | 2007PA27 | RADIOACTIVITY $^{159}\text{Re}(\alpha)$ [from $^{106}\text{Cd}(^{58}\text{Ni}, X)$ ]; $^{155}\text{Ta}(p)$ ; measured $E\alpha, I\alpha, E_p, I_p$ . deduced separation energies. JOUR PRVCA 75 061302 |

**A=156**

- <sup>156</sup>Nd 2007SH05 RADIOACTIVITY <sup>156</sup>Nd, <sup>156</sup>Pm( $\beta^-$ ) [from <sup>235</sup>U(n, F) and subsequent decay]; <sup>156m</sup>Pm( $\beta^-$ ), (IT) [from <sup>156</sup>Nd decay]; measured E $\gamma$ , I $\gamma$ , E(ce), I(ce), T<sub>1/2</sub>. <sup>156</sup>Pm, <sup>156</sup>Sm deduced levels, J,  $\pi$ , ICC, configurations. Mass separator. JOUR ZAANE 31 171
- <sup>156</sup>Pm 2007SH05 RADIOACTIVITY <sup>156</sup>Nd, <sup>156</sup>Pm( $\beta^-$ ) [from <sup>235</sup>U(n, F) and subsequent decay]; <sup>156m</sup>Pm( $\beta^-$ ), (IT) [from <sup>156</sup>Nd decay]; measured E $\gamma$ , I $\gamma$ , E(ce), I(ce), T<sub>1/2</sub>. <sup>156</sup>Pm, <sup>156</sup>Sm deduced levels, J,  $\pi$ , ICC, configurations. Mass separator. JOUR ZAANE 31 171
- <sup>156</sup>Sm 2007SH05 RADIOACTIVITY <sup>156</sup>Nd, <sup>156</sup>Pm( $\beta^-$ ) [from <sup>235</sup>U(n, F) and subsequent decay]; <sup>156m</sup>Pm( $\beta^-$ ), (IT) [from <sup>156</sup>Nd decay]; measured E $\gamma$ , I $\gamma$ , E(ce), I(ce), T<sub>1/2</sub>. <sup>156</sup>Pm, <sup>156</sup>Sm deduced levels, J,  $\pi$ , ICC, configurations. Mass separator. JOUR ZAANE 31 171
- <sup>156</sup>Gd 2007CH09 NUCLEAR REACTIONS <sup>155,157</sup>Gd(n,  $\gamma$ ), E=10-550 keV; measured E $\gamma$ , capture  $\sigma$ . Comparison with previous results. JOUR KPSJA 50 409

**A=157**

- <sup>157</sup>Gd 2007CH37 NUCLEAR REACTIONS <sup>156,158</sup>Gd(n,  $\gamma$ ), E=10-90 keV; measured capture cross sections relative to standard capture cross sections for <sup>197</sup>Au. JOUR KPSJA 50 1592
- <sup>157</sup>Er 2007PA03 NUCLEAR REACTIONS <sup>114</sup>Cd(<sup>48</sup>Ca, 4n), (<sup>48</sup>Ca, 5n), E=215 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>157,158</sup>Er deduced high-spin levels, J,  $\pi$ , configurations, collective rotation above band-terminating states. Gammasphere array, cranked Nilsson-Strutinsky calculations. JOUR PRLTA 98 012501
- <sup>157</sup>Ta 2007ST16 NUCLEAR REACTIONS <sup>93</sup>Nb(<sup>65</sup>Ge, n), E not given; measured E $\gamma$ , I $\gamma$  and transition rates using recoil distance method. <sup>64</sup>Ge deduced B(E2) and lifetimes. JOUR PRLTA 99 042503

**A=158**

- <sup>158</sup>Gd 2007CH09 NUCLEAR REACTIONS <sup>155,157</sup>Gd(n,  $\gamma$ ), E=10-550 keV; measured E $\gamma$ , capture  $\sigma$ . Comparison with previous results. JOUR KPSJA 50 409
- 2007LE29 NUCLEAR REACTIONS <sup>158</sup>Gd(n, n' $\gamma$ ), E < 3.3 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coinc, excitation functions and angular distributions. <sup>158</sup>Gd deduced level energies, lifetimes, B(E1), B(E2) for 0<sup>+</sup> states. JOUR PRVCA 76 034318
- <sup>158</sup>Er 2007PA03 NUCLEAR REACTIONS <sup>114</sup>Cd(<sup>48</sup>Ca, 4n), (<sup>48</sup>Ca, 5n), E=215 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>157,158</sup>Er deduced high-spin levels, J,  $\pi$ , configurations, collective rotation above band-terminating states. Gammasphere array, cranked Nilsson-Strutinsky calculations. JOUR PRLTA 98 012501

KEYNUMBERS AND KEYWORDS

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**A=159**

$^{159}\text{Gd}$	2007CH37	NUCLEAR REACTIONS $^{156,158}\text{Gd}(n, \gamma)$ , E=10-90 keV; measured capture cross sections relative to standard capture cross sections for $^{197}\text{Au}$ . JOUR KPSJA 50 1592
$^{159}\text{Ho}$	2007VAZX	RADIOACTIVITY $^{159,161}\text{Er}(\text{EC})$ ; measured ce; $^{159,161}\text{Ho}$ deduced multipolarities. Mass-separator, Si(Li) detector with mini-orange magnetic filter. CONF Voronezh(Nucleus-2007),Contrib,P76,Vaganov
$^{159}\text{Er}$	2007VAZX	RADIOACTIVITY $^{159,161}\text{Er}(\text{EC})$ ; measured ce; $^{159,161}\text{Ho}$ deduced multipolarities. Mass-separator, Si(Li) detector with mini-orange magnetic filter. CONF Voronezh(Nucleus-2007),Contrib,P76,Vaganov
$^{159}\text{Re}$	2007PA27	RADIOACTIVITY $^{159}\text{Re}(\alpha)$ [from $^{106}\text{Cd}(^{58}\text{Ni}, \text{X})$ ]; $^{155}\text{Ta}(\text{p})$ ; measured $E\alpha$ , $I\alpha$ , $E\text{p}$ , $I\text{p}$ . deduced separation energies. JOUR PRVCA 75 061302

**A=160**

$^{160}\text{Tb}$	2007BU29	NUCLEAR REACTIONS $^{161,163}\text{Dy}(^3\text{H}, \alpha)$ , E=17 MeV; measured $E\alpha$ , $I\alpha$ , $\sigma(\theta)$ , Q-value. $^{160,162}\text{Tb}$ deduced levels, J, $\pi$ , atomic masses. Enriched targets, magnetic spectrograph, DWBA analysis. JOUR NUPAB 794 149
$^{160}\text{Dy}$	2006B037	RADIOACTIVITY $^{160}\text{Ho}(\text{EC})$ [from $^{160}\text{Er}(\text{EC})$ ]; measured E(ce), I(ce). $^{160}\text{Dy}$ deduced E0 transitions. Magnetic spectrograph, photoplate. JOUR BRSPE 70 354
	2007ADZY	RADIOACTIVITY $^{160}\text{Ho}(\text{EC})$ ; measured E(ce); $^{160}\text{Dy}$ deduced levels, J $\pi$ , $J\pi=0^+$ level. CONF Voronezh(Nucleus-2007),Contrib,P106,Adam
$^{160}\text{Ho}$	2006B037	RADIOACTIVITY $^{160}\text{Ho}(\text{EC})$ [from $^{160}\text{Er}(\text{EC})$ ]; measured E(ce), I(ce). $^{160}\text{Dy}$ deduced E0 transitions. Magnetic spectrograph, photoplate. JOUR BRSPE 70 354
	2007ADZY	RADIOACTIVITY $^{160}\text{Ho}(\text{EC})$ ; measured E(ce); $^{160}\text{Dy}$ deduced levels, J $\pi$ , $J\pi=0^+$ level. CONF Voronezh(Nucleus-2007),Contrib,P106,Adam
$^{160}\text{Er}$	2007GA26	RADIOACTIVITY $^{160}\text{Er}(\text{IT})$ ; measured $E\gamma$ , $I\gamma$ , $e\gamma$ -coinc. Deduced levels, J, $\pi$ . JOUR APOBB 38 1169

**A=161**

$^{161}\text{Ho}$	2007VAZX	RADIOACTIVITY $^{159,161}\text{Er}(\text{EC})$ ; measured ce; $^{159,161}\text{Ho}$ deduced multipolarities. Mass-separator, Si(Li) detector with mini-orange magnetic filter. CONF Voronezh(Nucleus-2007),Contrib,P76,Vaganov
$^{161}\text{Er}$	2007VAZX	RADIOACTIVITY $^{159,161}\text{Er}(\text{EC})$ ; measured ce; $^{159,161}\text{Ho}$ deduced multipolarities. Mass-separator, Si(Li) detector with mini-orange magnetic filter. CONF Voronezh(Nucleus-2007),Contrib,P76,Vaganov

**A=162**

$^{162}\text{Tb}$	2007BU29	NUCLEAR REACTIONS $^{161,163}\text{Dy}(^3\text{H}, \alpha)$ , E=17 MeV; measured $E\alpha$ , $I\alpha$ , $\sigma(\theta)$ , Q-value. $^{160,162}\text{Tb}$ deduced levels, J, $\pi$ , atomic masses. Enriched targets, magnetic spectrograph, DWBA analysis. JOUR NUPAB 794 149
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**A=163**

- $^{163}\text{Tm}$     2007PA22    NUCLEAR REACTIONS  $^{130}\text{Te}(^{37}\text{Cl}, 4n)$ ,  $E=170$  MeV; measured  $E_\gamma$ ,  $I_\gamma$ ,  $\gamma\gamma$ -coin.  $^{163}\text{Tm}$  deduced high-spin levels,  $J$ ,  $\pi$ , triaxial superdeformed bands,  $B(M1)$  /  $B(E2)$ . Gammasphere array, potential energy surface calculations. JOUR PYLBB 647 243
- 2007TA11    NUCLEAR REACTIONS  $\text{Er}(d, x)^{163}\text{Tm}$  /  $^{165}\text{Tm}$  /  $^{166}\text{Tm}$  /  $^{167}\text{Tm}$  /  $^{168}\text{Tm}$  /  $^{170}\text{Tm}$  /  $^{171}\text{Er}$ ,  $E < 40$  MeV; measured excitation functions and cross section using stacked foil activation technique. Compared results to model calculations. JOUR NIMBE 259 829
- 2007WA21    NUCLEAR REACTIONS  $^{130}\text{Te}(^{37}\text{Cl}, 4n)^{163}\text{Tm}$ ,  $E=165$  MeV; measured  $E$ ,  $I_\gamma$ ,  $\gamma\gamma$ -coinc, mean lifetimes using DSAM and the Gammasphere array.  $^{163}\text{Tm}$  deduced quadrupole transition moments for proposed triaxial strongly deformed bands. JOUR PRVCA 75 064315
- 2007WAZZ    NUCLEAR REACTIONS  $^{130}\text{Te}(^{37}\text{Cl}, 4n)$ ,  $E=165$  MeV; measured  $E_\gamma$ ,  $I_\gamma$  using Gammasphere. Deduced quadrupole transition moments for two triaxial strongly deformed bands using doppler shift attenuation method. PREPRINT arXiv:0705.1987v1 [nucl-ex]

**A=164**

- $^{164}\text{Lu}$     2007BR09    NUCLEAR REACTIONS  $^{121}\text{Sb}(^{48}\text{Ca}, 5n)$ ,  $E=215$  MeV; measured  $E_\gamma$ ,  $I_\gamma$ ,  $\gamma\gamma$ -coin.  $^{164}\text{Lu}$  deduced high-spin levels,  $J$ ,  $\pi$ , triaxial superdeformed bands, octupole vibration. Gammasphere array. JOUR PRVCA 75 044306

**A=165**

- $^{165}\text{Tm}$     2007TA11    NUCLEAR REACTIONS  $\text{Er}(d, x)^{163}\text{Tm}$  /  $^{165}\text{Tm}$  /  $^{166}\text{Tm}$  /  $^{167}\text{Tm}$  /  $^{168}\text{Tm}$  /  $^{170}\text{Tm}$  /  $^{171}\text{Er}$ ,  $E < 40$  MeV; measured excitation functions and cross section using stacked foil activation technique. Compared results to model calculations. JOUR NIMBE 259 829

**A=166**

- $^{166}\text{Ho}$     2007R010    NUCLEAR REACTIONS  $^{165}\text{Ho}(n, \gamma)$ ,  $E=10-90$  keV; measured capture cross sections relative to standard capture cross sections for  $^{197}\text{Au}$ . JOUR KPSJA 50 1494
- $^{166}\text{Tm}$     2007SI30    NUCLEAR REACTIONS  $^{159}\text{Tb}(^{16}\text{O}, X)^{166}\text{Tm}$  /  $^{167}\text{Yb}$  /  $^{167}\text{Lu}$  /  $^{168m}\text{Lu}$ ,  $E \approx 90$  MeV;  $^{169}\text{Tm}(^{16}\text{O}, X)^{177}\text{Hf}$  /  $^{178}\text{Ta}$  /  $^{177}\text{W}$  /  $^{177}\text{Re}$  /  $^{179}\text{Re}$ ,  $E \approx 87$  MeV; measured  $E_\gamma$ ,  $I_\gamma$ ; deduced (in-)complete fusion evaporation residue yields,  $\sigma$ ,  $T_{1/2}$ , recoil range distributions. JOUR ZAANE 34 29
- 2007TA11    NUCLEAR REACTIONS  $\text{Er}(d, x)^{163}\text{Tm}$  /  $^{165}\text{Tm}$  /  $^{166}\text{Tm}$  /  $^{167}\text{Tm}$  /  $^{168}\text{Tm}$  /  $^{170}\text{Tm}$  /  $^{171}\text{Er}$ ,  $E < 40$  MeV; measured excitation functions and cross section using stacked foil activation technique. Compared results to model calculations. JOUR NIMBE 259 829

KEYNUMBERS AND KEYWORDS

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**A=166 (continued)**

<sup>166</sup>Re      2007HA45      RADIOACTIVITY <sup>170</sup>Ir( $\alpha$ ); measured E( $\alpha$ ). <sup>166</sup>Re; deduced levels. JOUR PRVCA 76 044312

**A=167**

<sup>167</sup>Tm      2007TA09      NUCLEAR REACTIONS <sup>169</sup>Tm(d, 2n), E  $\approx$  4-20.5 MeV; measured excitation functions; deduced integral yield. <sup>169</sup>Tm(d, 2np), (d, 3np), E  $\approx$  4-20.5 MeV; measured excitation functions. Stacked foil activation, comparison with model predictions. JOUR ARISE 65 663

2007TA11      NUCLEAR REACTIONS Er(d, x)<sup>163</sup>Tm / <sup>165</sup>Tm / <sup>166</sup>Tm / <sup>167</sup>Tm / <sup>168</sup>Tm / <sup>170</sup>Tm / <sup>171</sup>Er, E < 40 MeV; measured excitation functions and cross section using stacked foil activation technique. Compared results to model calculations. JOUR NIMBE 259 829

<sup>167</sup>Yb      2007SI30      NUCLEAR REACTIONS <sup>159</sup>Tb(<sup>16</sup>O, X)<sup>166</sup>Tm / <sup>167</sup>Yb / <sup>167</sup>Lu / <sup>168<sup>m</sup></sup>Lu, E $\approx$ 90 MeV; <sup>169</sup>Tm(<sup>16</sup>O, X)<sup>177</sup>Hf / <sup>178</sup>Ta / <sup>177</sup>W / <sup>177</sup>Re / <sup>179</sup>Re, E $\approx$ 87 MeV; measured E $\gamma$ , I $\gamma$ ; deduced (in-)complete fusion evaporation residue yields,  $\sigma$ , T<sub>1/2</sub>, recoil range distributions. JOUR ZAANE 34 29

<sup>167</sup>Lu      2007BE33      NUCLEAR REACTIONS <sup>123</sup>Sb(<sup>48</sup>Ca, X)<sup>167</sup>Lu, E=203 MeV; measured E $\gamma$ , I $\gamma$ , conversion electron energies,  $\gamma\gamma$ -coinc, (conversion-electron) $\gamma$ -coinc. <sup>167</sup>Lu deduced conversion coefficients. JOUR APOBB 38 1535

2007SI30      NUCLEAR REACTIONS <sup>159</sup>Tb(<sup>16</sup>O, X)<sup>166</sup>Tm / <sup>167</sup>Yb / <sup>167</sup>Lu / <sup>168<sup>m</sup></sup>Lu, E $\approx$ 90 MeV; <sup>169</sup>Tm(<sup>16</sup>O, X)<sup>177</sup>Hf / <sup>178</sup>Ta / <sup>177</sup>W / <sup>177</sup>Re / <sup>179</sup>Re, E $\approx$ 87 MeV; measured E $\gamma$ , I $\gamma$ ; deduced (in-)complete fusion evaporation residue yields,  $\sigma$ , T<sub>1/2</sub>, recoil range distributions. JOUR ZAANE 34 29

**A=168**

<sup>168</sup>Er      2007BU25      NUCLEAR REACTIONS <sup>170</sup>Er(p, t), E=25 MeV; measured reaction product energies and angular distributions. <sup>168</sup>Er deduced 0<sup>+</sup> and 2<sup>+</sup> level energies and reaction transfer strength distributions. JOUR PANUE 70 1336

<sup>168</sup>Tm      2007CAZW      NUCLEAR REACTIONS <sup>164</sup>Dy(<sup>11</sup>B, 3n $\alpha$ ), E=65 MeV; measured E $\gamma$ , I $\gamma$ . <sup>168</sup>Tm deduced high spin levels, J,  $\pi$ . GASP array. CONF Iguazu(Nuclear Physics and Applications) Proc,P446,Cardona

2007TA09      NUCLEAR REACTIONS <sup>169</sup>Tm(d, 2n), E  $\approx$  4-20.5 MeV; measured excitation functions; deduced integral yield. <sup>169</sup>Tm(d, 2np), (d, 3np), E  $\approx$  4-20.5 MeV; measured excitation functions. Stacked foil activation, comparison with model predictions. JOUR ARISE 65 663

2007TA11      NUCLEAR REACTIONS Er(d, x)<sup>163</sup>Tm / <sup>165</sup>Tm / <sup>166</sup>Tm / <sup>167</sup>Tm / <sup>168</sup>Tm / <sup>170</sup>Tm / <sup>171</sup>Er, E < 40 MeV; measured excitation functions and cross section using stacked foil activation technique. Compared results to model calculations. JOUR NIMBE 259 829



KEYNUMBERS AND KEYWORDS

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**A=168 (continued)**

<sup>168</sup>Lu      2007SI30      NUCLEAR REACTIONS <sup>159</sup>Tb(<sup>16</sup>O, X)<sup>166</sup>Tm / <sup>167</sup>Yb / <sup>167</sup>Lu / <sup>168<sup>m</sup></sup>Lu, E≈90 MeV; <sup>169</sup>Tm(<sup>16</sup>O, X)<sup>177</sup>Hf / <sup>178</sup>Ta / <sup>177</sup>W / <sup>177</sup>Re / <sup>179</sup>Re, E≈87 MeV; measured E $\gamma$ , I $\gamma$ ; deduced (in-)complete fusion evaporation residue yields,  $\sigma$ , T<sub>1/2</sub>, recoil range distributions. JOUR ZAANE 34 29

**A=169**

<sup>169</sup>Yb      2007TA09      NUCLEAR REACTIONS <sup>169</sup>Tm(d, 2n), E ≈ 4-20.5 MeV; measured excitation functions; deduced integral yield. <sup>169</sup>Tm(d, 2np), (d, 3np), E ≈ 4-20.5 MeV; measured excitation functions. Stacked foil activation, comparison with model predictions. JOUR ARISE 65 663

<sup>169</sup>Ir      2007SA33      NUCLEAR REACTIONS <sup>112</sup>Sn(<sup>60</sup>Ni, 2np), E=266 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, (particle) $\gamma$ -coinc. Deduced level energies, J,  $\pi$ . JOUR PRVCA 75 054321

**A=170**

<sup>170</sup>Er      2007I001      NUCLEAR REACTIONS <sup>168</sup>Er(<sup>28</sup>Si, 4n)<sup>192</sup>Pb, <sup>170</sup>Er(<sup>29</sup>Si, 5n)<sup>170</sup>Er, E not given; measured E $\gamma$ , I $\gamma$ ( $\theta$ , E, t). <sup>192,194</sup>Pb deduced quadrupole moments of isomeric states using the TDPAD method. JOUR APOBB 38 1249

<sup>170</sup>Tm      2007TA11      NUCLEAR REACTIONS Er(d, x)<sup>163</sup>Tm / <sup>165</sup>Tm / <sup>166</sup>Tm / <sup>167</sup>Tm / <sup>168</sup>Tm / <sup>170</sup>Tm / <sup>171</sup>Er, E < 40 MeV; measured excitation functions and cross section using stacked foil activation technique. Compared results to model calculations. JOUR NIMBE 259 829

<sup>170</sup>Hf      2006C020      NUCLEAR REACTIONS <sup>158</sup>Gd(<sup>16</sup>O, 4n), E=80 MeV; measured prompt and delayed E $\gamma$ , I $\gamma$ . <sup>170</sup>Hf levels deduced T<sub>1/2</sub>, B(E2). Pulsed beam, level systematics in neighboring nuclides discussed. JOUR PRVCA 74 067301

                 2007W008      RADIOACTIVITY <sup>170</sup>Ta( $\beta^+$ ), (EC) [from <sup>159</sup>Tb(<sup>16</sup>O, 5n), E=100 MeV]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ ( $\theta$ ) in static magnetic field. <sup>170</sup>Hf; deduced levels, J,  $\pi$ , g-factor of first 2+ state. JOUR PRVCA 76 047308

<sup>170</sup>Ta      2007W008      RADIOACTIVITY <sup>170</sup>Ta( $\beta^+$ ), (EC) [from <sup>159</sup>Tb(<sup>16</sup>O, 5n), E=100 MeV]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ ( $\theta$ ) in static magnetic field. <sup>170</sup>Hf; deduced levels, J,  $\pi$ , g-factor of first 2+ state. JOUR PRVCA 76 047308

<sup>170</sup>Ir      2007HA45      NUCLEAR REACTIONS <sup>112</sup>Sn(<sup>60</sup>Ni, np), E=266 MeV; measured E $\gamma$ , I $\gamma$ , recoil decay tagging,  $\gamma\gamma$ -, (recoil) $\gamma$ -coin; <sup>170</sup>Ir deduced levels, J,  $\pi$ , bands, half-lives. JUROGAM array used with RITU, GREAT spectrometer. JOUR PRVCA 76 044312

                 2007HA45      RADIOACTIVITY <sup>170</sup>Ir( $\alpha$ ); measured E( $\alpha$ ). <sup>166</sup>Re; deduced levels. JOUR PRVCA 76 044312

KEYNUMBERS AND KEYWORDS

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**A=171**

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| $^{171}\text{Er}$ | 2007TA11 | NUCLEAR REACTIONS $\text{Er}(d, x)^{163}\text{Tm} / ^{165}\text{Tm} / ^{166}\text{Tm} / ^{167}\text{Tm} / ^{168}\text{Tm} / ^{170}\text{Tm} / ^{171}\text{Er}$ , $E < 40$ MeV; measured excitation functions and cross section using stacked foil activation technique. Compared results to model calculations. JOUR NIMBE 259 829 |
|                   | 2007YU02 | NUCLEAR REACTIONS $^{170}\text{Er}(n, \gamma)$ , $E = \text{thermal}$ ; measured $E\gamma$ , $I\gamma$ . Deduced cross section and resonance integral. JOUR PRVCA 76 034610  |
| $^{171}\text{Tm}$ | 2007TS10 | RADIOACTIVITY $^{171}\text{Tm}(\beta^-)$ ; measured $E\gamma$ , $I\gamma$ , multipolarity, linear polarization of Mossbauer $\gamma$ -ray, test of time-reversal symmetry. JOUR PRVCA 76 045503  |
| $^{171}\text{Yb}$ | 2007TS10 | RADIOACTIVITY $^{171}\text{Tm}(\beta^-)$ ; measured $E\gamma$ , $I\gamma$ , multipolarity, linear polarization of Mossbauer $\gamma$ -ray, test of time-reversal symmetry. JOUR PRVCA 76 045503  |

**A=172**

No references found

**A=173**

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| $^{173}\text{Lu}$ | 2007TI03 | NUCLEAR REACTIONS $\text{Pb}$ , $^{208}\text{Pb}$ , $^{209}\text{Bi}(p, X)^7\text{Be} / ^{24}\text{Na} / ^{59}\text{Fe} / ^{86}\text{Rb} / ^{101m}\text{Rh} / ^{173}\text{Lu} / ^{190}\text{Ir} / ^{192}\text{Ir} / ^{196}\text{Au} / ^{199}\text{Tl} / ^{200}\text{Tl} / ^{203}\text{Pb}$ , $E = 0.04\text{-}2.6$ GeV; measured excitation functions. Comparison with model predictions and previous data. JOUR PRAMC 68 289 |
| $^{173}\text{Hf}$ | 2007VL01 | NUCLEAR REACTIONS $^{72,74}\text{Ge}(n, \alpha)$ , $^{72,73}\text{Ge}(n, p)$ , $^{174,176}\text{Hf}(n, 2n)$ , $E \approx 8\text{-}11.5$ MeV; measured $\sigma$ . Activation method, comparison with previous results. JOUR JRNCD 272 219  |

**A=174**

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| $^{174}\text{Yb}$ | 2007KA27 | RADIOACTIVITY $^{178}\text{Hf}(\alpha)$ ; measured partial half lives and hindrance factors. JOUR PRVCA 75 057301  |
| $^{174}\text{Re}$ | 2007ZH21 | NUCLEAR REACTIONS $^{152}\text{Sm}(^{27}\text{Al}, 5n)$ , $E = 140$ MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin. $^{174}\text{Re}$ deduced high-spin levels, $J$ , $\pi$ , identified new rotational band. JOUR CPLEE 24 1203 |

**A=175**

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|-------------------|----------|--|
| $^{175}\text{Hf}$ | 2007VL01 | NUCLEAR REACTIONS $^{72,74}\text{Ge}(n, \alpha)$ , $^{72,73}\text{Ge}(n, p)$ , $^{174,176}\text{Hf}(n, 2n)$ , $E \approx 8\text{-}11.5$ MeV; measured $\sigma$ . Activation method, comparison with previous results. JOUR JRNCD 272 219 |
|                   | 2007V002 | NUCLEAR REACTIONS $^{174,180,182}\text{Hf}(n, \gamma)$ , $E = \text{spectrum}$ ; measured capture $\sigma$ ; deduced Maxwellian averaged $\sigma$ , stellar enhancement factors. Comparison with model predictions. JOUR PRVCA 75 015804 |

KEYNUMBERS AND KEYWORDS

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**A=176**

- <sup>176</sup>Yb    2007BI14    NUCLEAR MOMENTS <sup>97m</sup>Y, <sup>176,176m</sup>Yb, <sup>178,178m</sup>Hf; measured isomer shifts,  $\mu$ , quadrupole moments, radii; deduced hyperfine structure coefficients. Laser spectroscopy. JOUR PYLBB 645 330
- <sup>176</sup>Lu    2007WA08    NUCLEAR REACTIONS <sup>176</sup>Lu( $\gamma$ ,  $\gamma'$ ), E=2.3, 3.1 MeV bremsstrahlung; measured E $\gamma$ , I $\gamma$ . <sup>176</sup>Lu deduced transitions, B(M1), B(E1), strength distribution. JOUR PRVCA 75 034301

**A=177**

- <sup>177</sup>Lu    2007WIZZ    NUCLEAR REACTIONS <sup>176m</sup>Lu(n,  $\gamma$ ), E=spectrum; measured cross section using activation technique. CONF Geneva(NIC-IX) 186
- <sup>177</sup>Hf    2007SI30    NUCLEAR REACTIONS <sup>159</sup>Tb(<sup>16</sup>O, X)<sup>166</sup>Tm / <sup>167</sup>Yb / <sup>167</sup>Lu / <sup>168m</sup>Lu, E $\approx$ 90 MeV; <sup>169</sup>Tm(<sup>16</sup>O, X)<sup>177</sup>Hf / <sup>178</sup>Ta / <sup>177</sup>W / <sup>177</sup>Re / <sup>179</sup>Re, E $\approx$ 87 MeV; measured E $\gamma$ , I $\gamma$ ; deduced (in-)complete fusion evaporation residue yields,  $\sigma$ , T<sub>1/2</sub>, recoil range distributions. JOUR ZAANE 34 29
- <sup>177</sup>Ta    2007SH15    NUCLEAR REACTIONS <sup>232</sup>Th(n,  $\gamma$ ), (n, 2n), <sup>197</sup>Au(n,  $\gamma$ ), (n,  $\alpha$ ), (n, 2n), (n, 4n), (n, 6n), (n, 7n), (n, 8n), (n, 6np), <sup>59</sup>Co(n,  $\alpha$ ), (n, 2n), (n, 4n), (n, 5n), <sup>181</sup>Ta(n,  $\gamma$ ), (n, 2n), (n, 4n), (n, 5n), (n, np), E=spectrum; measured spectrum-averaged  $\sigma$ . Spallation neutrons from proton-induced reaction. JOUR PRAMC 68 307
- <sup>177</sup>W    2007SI30    NUCLEAR REACTIONS <sup>159</sup>Tb(<sup>16</sup>O, X)<sup>166</sup>Tm / <sup>167</sup>Yb / <sup>167</sup>Lu / <sup>168m</sup>Lu, E $\approx$ 90 MeV; <sup>169</sup>Tm(<sup>16</sup>O, X)<sup>177</sup>Hf / <sup>178</sup>Ta / <sup>177</sup>W / <sup>177</sup>Re / <sup>179</sup>Re, E $\approx$ 87 MeV; measured E $\gamma$ , I $\gamma$ ; deduced (in-)complete fusion evaporation residue yields,  $\sigma$ , T<sub>1/2</sub>, recoil range distributions. JOUR ZAANE 34 29
- <sup>177</sup>Re    2007SI30    NUCLEAR REACTIONS <sup>159</sup>Tb(<sup>16</sup>O, X)<sup>166</sup>Tm / <sup>167</sup>Yb / <sup>167</sup>Lu / <sup>168m</sup>Lu, E $\approx$ 90 MeV; <sup>169</sup>Tm(<sup>16</sup>O, X)<sup>177</sup>Hf / <sup>178</sup>Ta / <sup>177</sup>W / <sup>177</sup>Re / <sup>179</sup>Re, E $\approx$ 87 MeV; measured E $\gamma$ , I $\gamma$ ; deduced (in-)complete fusion evaporation residue yields,  $\sigma$ , T<sub>1/2</sub>, recoil range distributions. JOUR ZAANE 34 29

**A=178**

- <sup>178</sup>Lu    2007G038    NUCLEAR REACTIONS <sup>181</sup>Ta( $\gamma$ , n2p), E < 1.2 GeV; measured E $\gamma$ , I $\gamma$ , from isomer decay, production cross section. JOUR UKPJA 52 823
- <sup>178</sup>Hf    2007BI14    NUCLEAR MOMENTS <sup>97m</sup>Y, <sup>176,176m</sup>Yb, <sup>178,178m</sup>Hf; measured isomer shifts,  $\mu$ , quadrupole moments, radii; deduced hyperfine structure coefficients. Laser spectroscopy. JOUR PYLBB 645 330
- 2007EG02    NUCLEAR REACTIONS <sup>91</sup>Zr, <sup>116,118,119,120,122,124</sup>Sn, <sup>143</sup>Nd, <sup>177</sup>Hf(n,  $\gamma$ );E=thermal; measured E $\gamma$ , I $\gamma$ , cross sections. JOUR ARISE 65 1290
- 2007HA05    NUCLEAR REACTIONS <sup>178</sup>Hf(<sup>136</sup>Xe, <sup>136</sup>Xe'), E=650 MeV; measured prompt and delayed E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, (particle) $\gamma$ -coin following Coulomb excitation. Ta(<sup>178</sup>Hf, <sup>178</sup>Hf'), E  $\approx$  700-850 MeV; measured isomer production  $\sigma$ . <sup>178</sup>Hf deduced levels, J,  $\pi$ , rotational bands, transition matrix elements, K-mixing features. Gammasphere, Chico arrays. JOUR PRVCA 75 034308

KEYNUMBERS AND KEYWORDS

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**A=178 (continued)**

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|                   | 2007KA27 | RADIOACTIVITY $^{178}\text{Hf}(\alpha)$ ; measured partial half lives and hindrance factors. JOUR PRVCA 75 057301  |
|                   | 2007K043 | NUCLEAR REACTIONS $^{160}\text{Gd}(^{18}\text{O}, \text{X})^{178}\text{Hf}$ , E=79-156 MeV; measured $E\alpha$ , $E\gamma$ , particle $\gamma$ -coinc. Deduced total cross sections for xn channels. Compared results to model calculations. JOUR PRVCA 75 064611  |
|                   | 2007LA14 | RADIOACTIVITY $^{178}\text{Ta}(\text{EC})$ [from $^{179}\text{Hf}(\text{p}, 2\text{n})$ ]; measured $E\gamma$ , $I\gamma$ and internal conversion electron spectra. $^{178}\text{Hf}$ deduced energy of the $8_2^-$ level. JOUR BRSPPE 71 441  |
|                   | 2007LA33 | RADIOACTIVITY $^{178}\text{Ta}(\text{EC})$ [from $^{175}\text{Lu}(\alpha, \text{n})$ , E=18 MeV]; measured $\beta$ -delayed $E\gamma$ , $I\gamma$ , second forbidden ft values. JOUR UKPJA 52 826  |
|                   | 2007LAZW | RADIOACTIVITY $^{178}\text{Ta}(\text{EC})$ [from $^{175}\text{Lu}(\alpha, \text{n})$ , E=18 MeV]; measured $E\gamma$ , $I\gamma$ ; $^{178}\text{Hf}$ deduced levels, calculated log ft. CONF Voronezh(Nucleus-2007),Contrib,P109,Lashko  |
| $^{178}\text{Ta}$ | 2007LA14 | RADIOACTIVITY $^{178}\text{Ta}(\text{EC})$ [from $^{179}\text{Hf}(\text{p}, 2\text{n})$ ]; measured $E\gamma$ , $I\gamma$ and internal conversion electron spectra. $^{178}\text{Hf}$ deduced energy of the $8_2^-$ level. JOUR BRSPPE 71 441  |
|                   | 2007LA33 | RADIOACTIVITY $^{178}\text{Ta}(\text{EC})$ [from $^{175}\text{Lu}(\alpha, \text{n})$ , E=18 MeV]; measured $\beta$ -delayed $E\gamma$ , $I\gamma$ , second forbidden ft values. JOUR UKPJA 52 826  |
|                   | 2007LAZW | RADIOACTIVITY $^{178}\text{Ta}(\text{EC})$ [from $^{175}\text{Lu}(\alpha, \text{n})$ , E=18 MeV]; measured $E\gamma$ , $I\gamma$ ; $^{178}\text{Hf}$ deduced levels, calculated log ft. CONF Voronezh(Nucleus-2007),Contrib,P109,Lashko  |
|                   | 2007SH15 | NUCLEAR REACTIONS $^{232}\text{Th}(\text{n}, \gamma)$ , $(\text{n}, 2\text{n})$ , $^{197}\text{Au}(\text{n}, \gamma)$ , $(\text{n}, \alpha)$ , $(\text{n}, 2\text{n})$ , $(\text{n}, 4\text{n})$ , $(\text{n}, 6\text{n})$ , $(\text{n}, 7\text{n})$ , $(\text{n}, 8\text{n})$ , $(\text{n}, 6\text{np})$ , $^{59}\text{Co}(\text{n}, \alpha)$ , $(\text{n}, 2\text{n})$ , $(\text{n}, 4\text{n})$ , $(\text{n}, 5\text{n})$ , $^{181}\text{Ta}(\text{n}, \gamma)$ , $(\text{n}, 2\text{n})$ , $(\text{n}, 4\text{n})$ , $(\text{n}, 5\text{n})$ , $(\text{n}, \text{np})$ , E=spectrum; measured spectrum-averaged $\sigma$ . Spallation neutrons from proton-induced reaction. JOUR PRAMC 68 307 |
|                   | 2007SI30 | NUCLEAR REACTIONS $^{159}\text{Tb}(^{16}\text{O}, \text{X})^{166}\text{Tm} / ^{167}\text{Yb} / ^{167}\text{Lu} / ^{168\text{m}}\text{Lu}$ , E $\approx$ 90 MeV; $^{169}\text{Tm}(^{16}\text{O}, \text{X})^{177}\text{Hf} / ^{178}\text{Ta} / ^{177}\text{W} / ^{177}\text{Re} / ^{179}\text{Re}$ , E $\approx$ 87 MeV; measured $E\gamma$ , $I\gamma$ ; deduced (in-)complete fusion evaporation residue yields, $\sigma$ , $T_{1/2}$ , recoil range distributions. JOUR ZAANE 34 29   |

**A=179**

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| $^{179}\text{Re}$ | 2007SI30 | NUCLEAR REACTIONS $^{159}\text{Tb}(^{16}\text{O}, \text{X})^{166}\text{Tm} / ^{167}\text{Yb} / ^{167}\text{Lu} / ^{168\text{m}}\text{Lu}$ , E $\approx$ 90 MeV; $^{169}\text{Tm}(^{16}\text{O}, \text{X})^{177}\text{Hf} / ^{178}\text{Ta} / ^{177}\text{W} / ^{177}\text{Re} / ^{179}\text{Re}$ , E $\approx$ 87 MeV; measured $E\gamma$ , $I\gamma$ ; deduced (in-)complete fusion evaporation residue yields, $\sigma$ , $T_{1/2}$ , recoil range distributions. JOUR ZAANE 34 29 |
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KEYNUMBERS AND KEYWORDS

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**A=180**

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| $^{180}\text{Hf}$ | 2007NG03 | NUCLEAR REACTIONS $^{180}\text{Hf}(^{136}\text{Xe}, \text{X})^{180}\text{Hf} / ^{182}\text{Hf}$ , E=750 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -, (particle) $\gamma$ -coin. $^{180,182}\text{Hf}$ deduced levels, J, $\pi$ , rotational and vibrational bands features. Gammasphere, Chico arrays. JOUR PRVCA 75 034305  |
|                   | 2007SH15 | NUCLEAR REACTIONS $^{232}\text{Th}(n, \gamma)$ , (n, 2n), $^{197}\text{Au}(n, \gamma)$ , (n, $\alpha$ ), (n, 2n), (n, 4n), (n, 6n), (n, 7n), (n, 8n), (n, 6np), $^{59}\text{Co}(n, \alpha)$ , (n, 2n), (n, 4n), (n, 5n), $^{181}\text{Ta}(n, \gamma)$ , (n, 2n), (n, 4n), (n, 5n), (n, np), E=spectrum; measured spectrum-averaged $\sigma$ . Spallation neutrons from proton-induced reaction. JOUR PRAMC 68 307 |
|                   | 2007ST20 | RADIOACTIVITY $^{180}\text{Hf}(\text{IT})$ ; measured $E\gamma$ , $I\gamma$ , angular distributions and mixing ratio. Deduced presence of irregular E2 admixture in the isomeric transition. JOUR PRVCA 76 025502   |
|                   | 2007STZY | RADIOACTIVITY $^{180}\text{Hf}(\text{IT})$ ; measured $E\gamma$ , $I\gamma$ , angular distribution and multipole mixing ratio. PREPRINT arXiv:0707.1061v1 [nucl-ex]   |
|                   | 2007ZAZX | RADIOACTIVITY $^{180}\text{Hf}(\text{IT})$ ; measured $E\gamma$ , $I\gamma$ , angular distribution. Deduced multipole mixing ratio. CONF Bormio (XLV Winter Meeting) Proc,P348  |
| $^{180}\text{Ta}$ | 2007BY02 | NUCLEAR REACTIONS $^{138}\text{Ba}$ , $^{180}\text{Hf}(^3\text{He}, \text{t})$ , E=140 MeV / nucleon; measured particle spectra. $^{138}\text{La}$ , $^{180}\text{Ta}$ deduced Gamow-Teller strength distributions. Implications for stellar nucleosynthesis discussed. JOUR PRLTA 98 082501  |
|                   | 2007G0ZZ | NUCLEAR REACTIONS $^{181}\text{Ta}(\gamma, n)$ , E=9-13 MeV; measured partial and total photoneutron cross sections. CONF Geneva(NIC-IX) 253  |
|                   | 2007SH15 | NUCLEAR REACTIONS $^{232}\text{Th}(n, \gamma)$ , (n, 2n), $^{197}\text{Au}(n, \gamma)$ , (n, $\alpha$ ), (n, 2n), (n, 4n), (n, 6n), (n, 7n), (n, 8n), (n, 6np), $^{59}\text{Co}(n, \alpha)$ , (n, 2n), (n, 4n), (n, 5n), $^{181}\text{Ta}(n, \gamma)$ , (n, 2n), (n, 4n), (n, 5n), (n, np), E=spectrum; measured spectrum-averaged $\sigma$ . Spallation neutrons from proton-induced reaction. JOUR PRAMC 68 307 |

**A=181**

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| $^{181}\text{Hf}$ | 2007V002 | NUCLEAR REACTIONS $^{174,180,182}\text{Hf}(n, \gamma)$ , E=spectrum; measured capture $\sigma$ ; deduced Maxwellian averaged $\sigma$ , stellar enhancement factors. Comparison with model predictions. JOUR PRVCA 75 015804   |
| $^{181}\text{W}$  | 2007KAZY | NUCLEAR REACTIONS $^{180}\text{W}(n, \gamma)$ , E=thermal; measured capture $\sigma$ . $^{180,184,186}\text{W}(n, \gamma)$ , E=thermal; measured delayed $E\gamma$ , $I\gamma$ ; deduced production rate. Use of $^{181}\text{W}$ as neutrino source discussed. PREPRINT arXiv:0704.3042v2 [nucl-ex] |
| $^{181}\text{Re}$ | 2007KHZZ | NUCLEAR REACTIONS $\text{W}(p, \text{X})^{181}\text{Re} / ^{182}\text{Re} / ^{182m}\text{Re} / ^{183}\text{Re} / ^{184}\text{Re} / ^{186}\text{Re} / ^{183}\text{Ta} / ^{184}\text{Ta}$ , E=6.6-40 MeV; measured excitation functions. Stacked-foil activation. PREPRINT nucl-ex/0703035,3/23/2007   |
|                   | 2007LA01 | NUCLEAR REACTIONS $\text{W}(p, \text{xn})^{181}\text{Re} / ^{182}\text{Re} / ^{182m}\text{Re} / ^{183}\text{Re} / ^{184}\text{Re} / ^{186}\text{Re}$ , E=6-17.6 MeV; measured production $\sigma$ . Stacked-foil activation technique. JOUR ARISE 65 345   |

KEYNUMBERS AND KEYWORDS

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**A=182**

$^{182}\text{Hf}$	2007NG03	NUCLEAR REACTIONS $^{180}\text{Hf}(^{136}\text{Xe}, \text{X})^{180}\text{Hf} / ^{182}\text{Hf}$ , E=750 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -, (particle) $\gamma$ -coin. $^{180,182}\text{Hf}$ deduced levels, J, $\pi$ , rotational and vibrational bands features. Gammasphere, Chico arrays. JOUR PRVCA 75 034305
$^{182}\text{Ta}$	2007SH15	NUCLEAR REACTIONS $^{232}\text{Th}(n, \gamma)$ , (n, 2n), $^{197}\text{Au}(n, \gamma)$ , (n, $\alpha$ ), (n, 2n), (n, 4n), (n, 6n), (n, 7n), (n, 8n), (n, 6np), $^{59}\text{Co}(n, \alpha)$ , (n, 2n), (n, 4n), (n, 5n), $^{181}\text{Ta}(n, \gamma)$ , (n, 2n), (n, 4n), (n, 5n), (n, np), E=spectrum; measured spectrum-averaged $\sigma$ . Spallation neutrons from proton-induced reaction. JOUR PRAMC 68 307
	2007TR10	NUCLEAR REACTIONS $^{92}\text{Zr}$ , $^{183}\text{W}(\gamma, p)$ , E=10-25 MeV; measured $E\gamma$ , $I\gamma$ . Deduced isomeric ratios. JOUR PPNLA 4 397
$^{182}\text{Re}$	2007KHZZ	NUCLEAR REACTIONS $\text{W}(p, \text{X})^{181}\text{Re} / ^{182}\text{Re} / ^{182m}\text{Re} / ^{183}\text{Re} / ^{184}\text{Re} / ^{186}\text{Re} / ^{183}\text{Ta} / ^{184}\text{Ta}$ , E=6.6-40 MeV; measured excitation functions. Stacked-foil activation. PREPRINT nucl-ex/0703035,3/23/2007
	2007LA01	NUCLEAR REACTIONS $\text{W}(p, \text{xn})^{181}\text{Re} / ^{182}\text{Re} / ^{182m}\text{Re} / ^{183}\text{Re} / ^{184}\text{Re} / ^{186}\text{Re}$ , E=6-17.6 MeV; measured production $\sigma$ . Stacked-foil activation technique. JOUR ARISE 65 345
$^{182}\text{Os}$	2007CA04	RADIOACTIVITY $^{182}\text{Ir}(\beta^+)$ , (EC) [from $\text{Pt}(p, \text{xn})$ and subsequent decay]; measured $E\gamma$ , $I\gamma$ , $E(\text{ce})$ , $I(\text{ce})$ ; deduced log ft. $^{182}\text{Os}$ deduced levels, J, $\pi$ , ICC. Level systematics in neighboring isotopes discussed. JOUR ZAANE 31 141
$^{182}\text{Ir}$	2006VE10	NUCLEAR MOMENTS $^{182,183,184,185,186,186m,187,188,189,191,193}\text{Ir}$ ; measured hfs, isotope shift; deduced $\mu$ , quadrupole moments, radii, $\beta_2$ . Laser spectroscopy. JOUR ZAANE 30 489
	2007CA04	RADIOACTIVITY $^{182}\text{Ir}(\beta^+)$ , (EC) [from $\text{Pt}(p, \text{xn})$ and subsequent decay]; measured $E\gamma$ , $I\gamma$ , $E(\text{ce})$ , $I(\text{ce})$ ; deduced log ft. $^{182}\text{Os}$ deduced levels, J, $\pi$ , ICC. Level systematics in neighboring isotopes discussed. JOUR ZAANE 31 141
	2007H020	RADIOACTIVITY $^{182}\text{Pt}(\beta^+)$ , (EC); measured delayed $E\gamma$ , $I\gamma$ , $E_e$ , (electron) $\gamma$ -coinc. $^{182}\text{Ir}$ deduced levels, J, $\pi$ , multipolarity. Compared results to model calculations. JOUR ZAANE 33 193
$^{182}\text{Pt}$	2007H020	RADIOACTIVITY $^{182}\text{Pt}(\beta^+)$ , (EC); measured delayed $E\gamma$ , $I\gamma$ , $E_e$ , (electron) $\gamma$ -coinc. $^{182}\text{Ir}$ deduced levels, J, $\pi$ , multipolarity. Compared results to model calculations. JOUR ZAANE 33 193
$^{182}\text{Pb}$	2006SE18	NUCLEAR MOMENTS $^{182,183,184,185,186,187,188,189,190}\text{Pb}$ ; measured hfs, isotope shifts; deduced charge radii. Resonance ionization spectroscopy. JOUR HYIND 171 225

**A=183**

$^{183}\text{Hf}$	2007V002	NUCLEAR REACTIONS $^{174,180,182}\text{Hf}(n, \gamma)$ , E=spectrum; measured capture $\sigma$ ; deduced Maxwellian averaged $\sigma$ , stellar enhancement factors. Comparison with model predictions. JOUR PRVCA 75 015804
$^{183}\text{Ta}$	2007KHZZ	NUCLEAR REACTIONS $\text{W}(p, \text{X})^{181}\text{Re} / ^{182}\text{Re} / ^{182m}\text{Re} / ^{183}\text{Re} / ^{184}\text{Re} / ^{186}\text{Re} / ^{183}\text{Ta} / ^{184}\text{Ta}$ , E=6.6-40 MeV; measured excitation functions. Stacked-foil activation. PREPRINT nucl-ex/0703035,3/23/2007

KEYNUMBERS AND KEYWORDS

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**A=183** (*continued*)

$^{183}\text{Re}$	2007KHZZ	NUCLEAR REACTIONS W(p, X) $^{181}\text{Re} / ^{182}\text{Re} / ^{182m}\text{Re} / ^{183}\text{Re} / ^{184}\text{Re} / ^{186}\text{Re} / ^{183}\text{Ta} / ^{184}\text{Ta}$ , E=6.6-40 MeV; measured excitation functions. Stacked-foil activation. PREPRINT nucl-ex/0703035,3/23/2007
	2007LA01	NUCLEAR REACTIONS W(p, xn) $^{181}\text{Re} / ^{182}\text{Re} / ^{182m}\text{Re} / ^{183}\text{Re} / ^{184}\text{Re} / ^{186}\text{Re}$ , E=6-17.6 MeV; measured production $\sigma$ . Stacked-foil activation technique. JOUR ARISE 65 345
$^{183}\text{Ir}$	2006VE10	NUCLEAR MOMENTS $^{182,183,184,185,186,186m,187,188,189,191,193}\text{Ir}$ ; measured hfs, isotope shift; deduced $\mu$ , quadrupole moments, radii, $\beta_2$ . Laser spectroscopy. JOUR ZAANE 30 489
$^{183}\text{Pb}$	2006SE18	NUCLEAR MOMENTS $^{182,183,184,185,186,187,188,189,190}\text{Pb}$ ; measured hfs, isotope shifts; deduced charge radii. Resonance ionization spectroscopy. JOUR HYIND 171 225

**A=184**

$^{184}\text{Ta}$	2007KHZZ	NUCLEAR REACTIONS W(p, X) $^{181}\text{Re} / ^{182}\text{Re} / ^{182m}\text{Re} / ^{183}\text{Re} / ^{184}\text{Re} / ^{186}\text{Re} / ^{183}\text{Ta} / ^{184}\text{Ta}$ , E=6.6-40 MeV; measured excitation functions. Stacked-foil activation. PREPRINT nucl-ex/0703035,3/23/2007
$^{184}\text{W}$	2006HA51	RADIOACTIVITY $^{184,184m}\text{Re}(\text{EC})$ , ( $\beta^+$ ) [from $^{185}\text{Re}(\gamma, n)$ ]; measured $E\gamma$ , $I\gamma$ , $T_{1/2}$ . $^{184}\text{W}$ deduced transitions. JOUR PRVCA 74 065802
$^{184}\text{Re}$	2006HA51	RADIOACTIVITY $^{184,184m}\text{Re}(\text{EC})$ , ( $\beta^+$ ) [from $^{185}\text{Re}(\gamma, n)$ ]; measured $E\gamma$ , $I\gamma$ , $T_{1/2}$ . $^{184}\text{W}$ deduced transitions. JOUR PRVCA 74 065802
	2006HA51	NUCLEAR REACTIONS $^{185}\text{Re}(\gamma, n)$ , E $\approx$ 2-20 MeV; measured $\beta$ -delayed $E\gamma$ , $I\gamma$ ; deduced isomer yield ratio. JOUR PRVCA 74 065802
	2007KHZZ	NUCLEAR REACTIONS W(p, X) $^{181}\text{Re} / ^{182}\text{Re} / ^{182m}\text{Re} / ^{183}\text{Re} / ^{184}\text{Re} / ^{186}\text{Re} / ^{183}\text{Ta} / ^{184}\text{Ta}$ , E=6.6-40 MeV; measured excitation functions. Stacked-foil activation. PREPRINT nucl-ex/0703035,3/23/2007
	2007LA01	NUCLEAR REACTIONS W(p, xn) $^{181}\text{Re} / ^{182}\text{Re} / ^{182m}\text{Re} / ^{183}\text{Re} / ^{184}\text{Re} / ^{186}\text{Re}$ , E=6-17.6 MeV; measured production $\sigma$ . Stacked-foil activation technique. JOUR ARISE 65 345
$^{184}\text{Os}$	2006AV09	NUCLEAR MOMENTS $^{184,186,187,188,189,190,192}\text{Os}$ ; measured hfs, isotope shifts. Laser spectroscopy. JOUR HYIND 171 217
$^{184}\text{Ir}$	2006VE10	NUCLEAR MOMENTS $^{182,183,184,185,186,186m,187,188,189,191,193}\text{Ir}$ ; measured hfs, isotope shift; deduced $\mu$ , quadrupole moments, radii, $\beta_2$ . Laser spectroscopy. JOUR ZAANE 30 489
$^{184}\text{Pb}$	2006SE18	NUCLEAR MOMENTS $^{182,183,184,185,186,187,188,189,190}\text{Pb}$ ; measured hfs, isotope shifts; deduced charge radii. Resonance ionization spectroscopy. JOUR HYIND 171 225
	2007KNZZ	NUCLEAR REACTIONS $^{144,154}\text{Sm}(^{48}\text{Ca}, \gamma)$ , ( $^{40}\text{Ca}, \gamma)$ , E=163-252 MeV; measured fission fragment mass, energy distributions and $\sigma$ . CONF Khanty-Mansiysk (Exotic Nuclei) Proc, P185



KEYNUMBERS AND KEYWORDS

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**A=185**

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| $^{185}\text{Ta}$ | 2007SH42 | NUCLEAR REACTIONS $^{186}\text{W}(^{18}\text{O}, ^{19}\text{F})$ , E=180 MeV; measured $E\gamma$ , $I\gamma$ , (particle) $\gamma$ -coin, $\gamma\gamma$ -coin. $^{185}\text{Ta}$ deduced levels, J, $\pi$ . JOUR ZAANE 34 1   |
| $^{185}\text{W}$  | 2007KAZY | NUCLEAR REACTIONS $^{180}\text{W}(n, \gamma)$ , E=thermal; measured capture $\sigma$ . $^{180,184,186}\text{W}(n, \gamma)$ , E=thermal; measured delayed $E\gamma$ , $I\gamma$ ; deduced production rate. Use of $^{181}\text{W}$ as neutrino source discussed. PREPRINT arXiv:0704.3042v2 [nucl-ex] |
| $^{185}\text{Ir}$ | 2006VE10 | NUCLEAR MOMENTS $^{182,183,184,185,186,186m,187,188,189,191,193}\text{Ir}$ ; measured hfs, isotope shift; deduced $\mu$ , quadrupole moments, radii, $\beta_2$ . Laser spectroscopy. JOUR ZAANE 30 489   |
| $^{185}\text{Pb}$ | 2006SE18 | NUCLEAR MOMENTS $^{182,183,184,185,186,187,188,189,190}\text{Pb}$ ; measured hfs, isotope shifts; deduced charge radii. Resonance ionization spectroscopy. JOUR HYIND 171 225  |

**A=186**

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| $^{186}\text{Re}$ | 2007KHZZ | NUCLEAR REACTIONS $\text{W}(p, X)^{181}\text{Re} / ^{182}\text{Re} / ^{182m}\text{Re} / ^{183}\text{Re} / ^{184}\text{Re} / ^{186}\text{Re} / ^{183}\text{Ta} / ^{184}\text{Ta}$ , E=6.6-40 MeV; measured excitation functions. Stacked-foil activation. PREPRINT nucl-ex/0703035,3/23/2007  |
|                   | 2007LA01 | NUCLEAR REACTIONS $\text{W}(p, xn)^{181}\text{Re} / ^{182}\text{Re} / ^{182m}\text{Re} / ^{183}\text{Re} / ^{184}\text{Re} / ^{186}\text{Re}$ , E=6-17.6 MeV; measured production $\sigma$ . Stacked-foil activation technique. JOUR ARISE 65 345  |
|                   | 2007TA30 | NUCLEAR REACTIONS $^{186}\text{W}(p, n)$ , E < 30 MeV; measured cross sections and excitation function using the activation technique. Compared results to existing data and model calculations. JOUR NIMBE 264 389  |
| $^{186}\text{Os}$ | 2006AV09 | NUCLEAR MOMENTS $^{184,186,187,188,189,190,192}\text{Os}$ ; measured hfs, isotope shifts. Laser spectroscopy. JOUR HYIND 171 217   |
| $^{186}\text{Ir}$ | 2006VE10 | NUCLEAR MOMENTS $^{182,183,184,185,186,186m,187,188,189,191,193}\text{Ir}$ ; measured hfs, isotope shift; deduced $\mu$ , quadrupole moments, radii, $\beta_2$ . Laser spectroscopy. JOUR ZAANE 30 489   |
| $^{186}\text{Pb}$ | 2006ANZT | RADIOACTIVITY $^{194}\text{Rn}$ , $^{190}\text{Po}(\alpha)$ [from $^{144}\text{Sm}(^{52}\text{Cr}, 2n)$ ]; measured $E\alpha$ , $T_{1/2}$ . REPT GSI 2006-1,P196,Andreyev  |
|                   | 2006SE18 | NUCLEAR MOMENTS $^{182,183,184,185,186,187,188,189,190}\text{Pb}$ ; measured hfs, isotope shifts; deduced charge radii. Resonance ionization spectroscopy. JOUR HYIND 171 225  |
|                   | 2007PA05 | NUCLEAR REACTIONS $^{106}\text{Pd}(^{83}\text{Kr}, 3n)$ , E=355 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -, (recoil) $\gamma$ -coin. $^{186}\text{Pb}$ deduced levels, J, $\pi$ , rotational and vibrational bands, deformation. Recoil-decay tagging, interacting boson model and mean-field model calculations. JOUR PRVCA 75 014302 |

## A=187

- <sup>187</sup>W 2007KAZY NUCLEAR REACTIONS <sup>180</sup>W(n,  $\gamma$ ), E=thermal; measured capture  $\sigma$ . <sup>180,184,186</sup>W(n,  $\gamma$ ), E=thermal; measured delayed E $\gamma$ , I $\gamma$ ; deduced production rate. Use of <sup>181</sup>W as neutrino source discussed. PREPRINT arXiv:0704.3042v2 [nucl-ex]
- 2007KI03 NUCLEAR REACTIONS <sup>63</sup>Cu, <sup>186</sup>W(n,  $\gamma$ ), E=1-2 MeV; measured capture  $\sigma$ . JOUR JRNC D 271 553
- <sup>187</sup>Os 2006AV09 NUCLEAR MOMENTS <sup>184,186,187,188,189,190,192</sup>Os; measured hfs, isotope shifts. Laser spectroscopy. JOUR HYIND 171 217
- 2007HU17 NUCLEAR REACTIONS <sup>186,188,189,190</sup>Os(n,  $\gamma$ ), E=spectrum; measured correlated isotopic anomalies. Deduced neutron capture cross section ratios relevant to the astrophysical S-process. JOUR ASJOA 664 L59
- 2007M017 NUCLEAR REACTIONS <sup>186,187,188</sup>Os(n,  $\gamma$ ), E=1 eV to 1 MeV; measured cross section at the CERN n\_TOF facility. <sup>187</sup>Os(n, n'), E=30 keV; measured inelastic scattering cross section. JOUR PPNPD 59 165
- 2007SE07 NUCLEAR REACTIONS <sup>186,187,189</sup>Os(n,  $\gamma$ ), E=5-90 keV; measured E $\gamma$ , I $\gamma$ , neutron capture cross sections. JOUR PRVCA 76 022802
- 2007SEZY NUCLEAR REACTIONS <sup>186,187,189</sup>Os(n,  $\gamma$ ), E=low; measured prompt  $\gamma$  ray, cross sections. <sup>187</sup>Os(n, n'), E=10-70 keV; measured cross sections. CONF Geneva(NIC-IX) 054
- <sup>187</sup>Ir 2006VE10 NUCLEAR MOMENTS <sup>182,183,184,185,186,186m,187,188,189,191,193</sup>Ir; measured hfs, isotope shift; deduced  $\mu$ , quadrupole moments, radii,  $\beta_2$ . Laser spectroscopy. JOUR ZAANE 30 489
- <sup>187</sup>Pt 2007CAZV NUCLEAR REACTIONS <sup>181</sup>Ta(<sup>11</sup>B, 5n), E=71 MeV; measured E $\gamma$ , I $\gamma$ . <sup>187</sup>Pt deduced high spin levels, J,  $\pi$ , shape coexistence. CONF Iguazu(Nuclear Physics and Applications) Proc,P448,Cardona
- 2007ZH09 NUCLEAR REACTIONS <sup>173</sup>Yb(<sup>18</sup>O, 4n), E=78, 85 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>187</sup>Pt deduced high-spin levels, J,  $\pi$ , configurations, B(M1) / B(E2). Comparison with model predictions. JOUR PRVCA 75 034314
- <sup>187</sup>Pb 2006SE18 NUCLEAR MOMENTS <sup>182,183,184,185,186,187,188,189,190</sup>Pb; measured hfs, isotope shifts; deduced charge radii. Resonance ionization spectroscopy. JOUR HYIND 171 225
- <sup>187</sup>Po 2007AN19 NUCLEAR REACTIONS <sup>144</sup>Sm(<sup>46</sup>Ti, 3n)<sup>187</sup>Po, E=224 MeV; <sup>144</sup>Sm(<sup>52</sup>Cr, X)<sup>193,194</sup>Rn, E=232, 252 meV; measured E $\alpha$ . <sup>187</sup>Po, <sup>193,194</sup>Rn deduced levels. JOUR APOBB 38 1557

## A=188

- <sup>188</sup>Os 2006AV09 NUCLEAR MOMENTS <sup>184,186,187,188,189,190,192</sup>Os; measured hfs, isotope shifts. Laser spectroscopy. JOUR HYIND 171 217
- 2006M040 NUCLEAR REACTIONS <sup>192</sup>Os(<sup>82</sup>Se, X)<sup>188</sup>Os / <sup>190</sup>Os, E=460 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>188,190</sup>Os deduced high-spin levels, J,  $\pi$ . GASP array. JOUR IMPEE 15 1797
- 2007MA43 NUCLEAR REACTIONS <sup>176</sup>Yb(<sup>12</sup>C, F), E=65, 84 MeV; measured E $\gamma$ , I $\gamma$ , angular anisotropy from GDR decay. <sup>188</sup>Os deduced shape parameters. JOUR APOBB 38 1463

KEYNUMBERS AND KEYWORDS

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**A=188 (continued)**

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|                   | 2007M017 | NUCLEAR REACTIONS $^{186,187,188}\text{Os}(n, \gamma)$ , E=1 eV to 1 MeV; measured cross section at the CERN n_TOF facility. $^{187}\text{Os}(n, n')$ , E=30 keV; measured inelastic scattering cross section. JOUR PPNPD 59 165 |
|                   | 2007SE07 | NUCLEAR REACTIONS $^{186,187,189}\text{Os}(n, \gamma)$ , E=5-90 keV; measured $E\gamma$ , $I\gamma$ , neutron capture cross sections. JOUR PRVCA 76 022802   |
|                   | 2007SEZY | NUCLEAR REACTIONS $^{186,187,189}\text{Os}(n, \gamma)$ , E=low; measured prompt $\gamma$ ray, cross sections. $^{187}\text{Os}(n, n')$ , E=10-70 keV; measured cross sections. CONF Geneva(NIC-IX) 054                           |
| $^{188}\text{Ir}$ | 2006VE10 | NUCLEAR MOMENTS $^{182,183,184,185,186,186m,187,188,189,191,193}\text{Ir}$ ; measured hfs, isotope shift; deduced $\mu$ , quadrupole moments, radii, $\beta_2$ . Laser spectroscopy. JOUR ZAANE 30 489                           |
| $^{188}\text{Pb}$ | 2006SE18 | NUCLEAR MOMENTS $^{182,183,184,185,186,187,188,189,190}\text{Pb}$ ; measured hfs, isotope shifts; deduced charge radii. Resonance ionization spectroscopy. JOUR HYIND 171 225  |

**A=189**

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| $^{189}\text{Os}$ | 2006AV09 | NUCLEAR MOMENTS $^{184,186,187,188,189,190,192}\text{Os}$ ; measured hfs, isotope shifts. Laser spectroscopy. JOUR HYIND 171 217  |
|                   | 2007HU17 | NUCLEAR REACTIONS $^{186,188,189,190}\text{Os}(n, \gamma)$ , E=spectrum; measured correlated isotopic anomalies. Deduced neutron capture cross section ratios relevant to the astrophysical S-process. JOUR ASJOA 664 L59   |
|                   | 2007M017 | NUCLEAR REACTIONS $^{186,187,188}\text{Os}(n, \gamma)$ , E=1 eV to 1 MeV; measured cross section at the CERN n_TOF facility. $^{187}\text{Os}(n, n')$ , E=30 keV; measured inelastic scattering cross section. JOUR PPNPD 59 165  |
| $^{189}\text{Ir}$ | 2006VE10 | NUCLEAR MOMENTS $^{182,183,184,185,186,186m,187,188,189,191,193}\text{Ir}$ ; measured hfs, isotope shift; deduced $\mu$ , quadrupole moments, radii, $\beta_2$ . Laser spectroscopy. JOUR ZAANE 30 489  |
|                   | 2007ZHZZ | NUCLEAR REACTIONS $^{190}\text{Ir}(\gamma, n)$ , $^{196}\text{Au}(\gamma, n)$ , E(end point)=12.0, 12.5, 14.5, 22 MeV; $^{197}\text{Au}(n, \gamma)$ E=thermal, slow; measured $E\gamma$ , $I\gamma$ ; $^{190m,190g}\text{Ir}$ , $^{196m,196g}\text{Au}$ deduced $\sigma_m / \sigma_g$ ; $^{197m,197g}\text{Au}$ deduced $\sigma_m / \sigma_m + \sigma_g$ . Microtron, betatron, reactor, activation method, NaI(Tl), Ge detectors. CONF Voronezh(Nucleus-2007),Contrib,P136,Zheltonozhsky |
| $^{189}\text{Tl}$ | 2007CH41 | NUCLEAR REACTIONS $^{165}\text{Ho}(^{28}\text{Si}, 4n)^{189}\text{Tl}$ , E=138 MeV; measured $E\gamma$ , $I\gamma$ , lifetimes of high spin states using recoil distance measurement technique. Deduced transition quadrupole moment and deformation parameters. JOUR PRVCA 75 054323   |
| $^{189}\text{Pb}$ | 2006SE18 | NUCLEAR MOMENTS $^{182,183,184,185,186,187,188,189,190}\text{Pb}$ ; measured hfs, isotope shifts; deduced charge radii. Resonance ionization spectroscopy. JOUR HYIND 171 225   |
| $^{189}\text{Po}$ | 2006AN36 | RADIOACTIVITY $^{193,194}\text{Rn}(\alpha)$ [from $^{144}\text{Sm}(^{52}\text{Cr}, xn)$ ]; measured $E\alpha$ , $I\alpha$ , $T_{1/2}$ ; deduced deformation effects. JOUR PRVCA 74 064303   |

KEYNUMBERS AND KEYWORDS

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**A=190**

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| <sup>190</sup> Os | 2006AV09 | NUCLEAR MOMENTS <sup>184,186,187,188,189,190,192</sup> Os; measured hfs, isotope shifts. Laser spectroscopy. JOUR HYIND 171 217   |
|                   | 2006M040 | NUCLEAR REACTIONS <sup>192</sup> Os( <sup>82</sup> Se, X) <sup>188</sup> Os / <sup>190</sup> Os, E=460 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin. <sup>188,190</sup> Os deduced high-spin levels, J, $\pi$ . GASP array. JOUR IMPEE 15 1797  |
|                   | 2007HU17 | NUCLEAR REACTIONS <sup>186,188,189,190</sup> Os(n, $\gamma$ ), E=spectrum; measured correlated isotopic anomalies. Deduced neutron capture cross section ratios relevant to the astrophysical S-process. JOUR ASJOA 664 L59   |
|                   | 2007SE07 | NUCLEAR REACTIONS <sup>186,187,189</sup> Os(n, $\gamma$ ), E=5-90 keV; measured E $\gamma$ , I $\gamma$ , neutron capture cross sections. JOUR PRVCA 76 022802  |
|                   | 2007SEZY | NUCLEAR REACTIONS <sup>186,187,189</sup> Os(n, $\gamma$ ), E=low; measured prompt $\gamma$ ray, cross sections. <sup>187</sup> Os(n, n'), E=10-70 keV; measured cross sections. CONF Geneva(NIC-IX) 054   |
| <sup>190</sup> Ir | 2007PA14 | NUCLEAR REACTIONS <sup>191</sup> Ir(n, 2n), E=10.0-11.3 MeV; measured activation $\sigma$ , isomer ratio. Comparison with statistical model predictions. JOUR PRVCA 75 034607   |
|                   | 2007TI03 | NUCLEAR REACTIONS Pb, <sup>208</sup> Pb, <sup>209</sup> Bi(p, X) <sup>7</sup> Be / <sup>24</sup> Na / <sup>59</sup> Fe / <sup>86</sup> Rb / <sup>101m</sup> Rh / <sup>173</sup> Lu / <sup>190</sup> Ir / <sup>192</sup> Ir / <sup>196</sup> Au / <sup>199</sup> Tl / <sup>200</sup> Tl / <sup>203</sup> Pb, E=0.04-2.6 GeV; measured excitation functions. Comparison with model predictions and previous data. JOUR PRAMC 68 289 |
| <sup>190</sup> Au | 2007SH15 | NUCLEAR REACTIONS <sup>232</sup> Th(n, $\gamma$ ), (n, 2n), <sup>197</sup> Au(n, $\gamma$ ), (n, $\alpha$ ), (n, 2n), (n, 4n), (n, 6n), (n, 7n), (n, 8n), (n, 6np), <sup>59</sup> Co(n, $\alpha$ ), (n, 2n), (n, 4n), (n, 5n), <sup>181</sup> Ta(n, $\gamma$ ), (n, 2n), (n, 4n), (n, 5n), (n, np), E=spectrum; measured spectrum-averaged $\sigma$ . Spallation neutrons from proton-induced reaction. JOUR PRAMC 68 307         |
| <sup>190</sup> Hg | 2006LE44 | NUCLEAR REACTIONS <sup>188,190,192</sup> Pt( $\alpha$ , 2n) <sup>190,192,194</sup> Pt, E=27 MeV; measured g-factors of isomeric states using integral perturbed angular distribution of $\gamma$ -rays in an external magnetic field of 2.9T. JOUR BRSPE 70 1822  |
| <sup>190</sup> Pb | 2006SE18 | NUCLEAR MOMENTS <sup>182,183,184,185,186,187,188,189,190</sup> Pb; measured hfs, isotope shifts; deduced charge radii. Resonance ionization spectroscopy. JOUR HYIND 171 225  |
| <sup>190</sup> Po | 2006AN36 | RADIOACTIVITY <sup>193,194</sup> Rn( $\alpha$ ) [from <sup>144</sup> Sm( <sup>52</sup> Cr, xn)]; measured E $\alpha$ , I $\alpha$ , T <sub>1/2</sub> ; deduced deformation effects. JOUR PRVCA 74 064303  |
|                   | 2006ANZT | RADIOACTIVITY <sup>194</sup> Rn, <sup>190</sup> Po( $\alpha$ ) [from <sup>144</sup> Sm( <sup>52</sup> Cr, 2n)]; measured E $\alpha$ , T <sub>1/2</sub> . REPT GSI 2006-1,P196,Andreyev  |

**A=191**

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| <sup>191</sup> Os | 2007HU17 | NUCLEAR REACTIONS <sup>186,188,189,190</sup> Os(n, $\gamma$ ), E=spectrum; measured correlated isotopic anomalies. Deduced neutron capture cross section ratios relevant to the astrophysical S-process. JOUR ASJOA 664 L59 |
| <sup>191</sup> Ir | 2006VE10 | NUCLEAR MOMENTS <sup>182,183,184,185,186,186m,187,188,189,191,193</sup> Ir; measured hfs, isotope shift; deduced $\mu$ , quadrupole moments, radii, $\beta_2$ . Laser spectroscopy. JOUR ZAANE 30 489                       |

KEYNUMBERS AND KEYWORDS

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**A=191 (continued)**

	2007LA18	RADIOACTIVITY $^{191}\text{Pt}(\text{EC})$ ; measured $E_\gamma$ , $I_\gamma$ . $^{191}\text{Ir}$ deduced level energies. JOUR BRSPE 71 742
	2007LAZX	RADIOACTIVITY $^{191}\text{Pt}(\text{EC})$ ; measured $E_\gamma$ ; $^{191}\text{Ir}$ deduced levels. CONF Voronezh(Nucleus-2007),Contrib,P108,Lashko
$^{191}\text{Pt}$	2007LA18	RADIOACTIVITY $^{191}\text{Pt}(\text{EC})$ ; measured $E_\gamma$ , $I_\gamma$ . $^{191}\text{Ir}$ deduced level energies. JOUR BRSPE 71 742
	2007LAZX	RADIOACTIVITY $^{191}\text{Pt}(\text{EC})$ ; measured $E_\gamma$ ; $^{191}\text{Ir}$ deduced levels. CONF Voronezh(Nucleus-2007),Contrib,P108,Lashko
	2007SH15	NUCLEAR REACTIONS $^{232}\text{Th}(n, \gamma)$ , $(n, 2n)$ , $^{197}\text{Au}(n, \gamma)$ , $(n, \alpha)$ , $(n, 2n)$ , $(n, 4n)$ , $(n, 6n)$ , $(n, 7n)$ , $(n, 8n)$ , $(n, 6np)$ , $^{59}\text{Co}(n, \alpha)$ , $(n, 2n)$ , $(n, 4n)$ , $(n, 5n)$ , $^{181}\text{Ta}(n, \gamma)$ , $(n, 2n)$ , $(n, 4n)$ , $(n, 5n)$ , $(n, np)$ , E=spectrum; measured spectrum-averaged $\sigma$ . Spallation neutrons from proton-induced reaction. JOUR PRAMC 68 307
$^{191}\text{Au}$	2007OK05	NUCLEAR REACTIONS $^{186}\text{W}(^{11}\text{B}, 4n)$ , $(^{11}\text{B}, 4np)$ , $(^{11}\text{B}, 6n)$ , E=68 MeV; measured $E_\gamma$ , $I_\gamma$ , $\gamma\gamma$ -coin, $\gamma\gamma(\theta)$ , linear polarization. $^{191,193}\text{Au}$ , $^{192}\text{Pt}$ deduced levels, J, $\pi$ ; calculated deformation parameters using Particle-Plus-Triaxial Rotor model. JOUR PRVCA 76 044315
	2007SH15	NUCLEAR REACTIONS $^{232}\text{Th}(n, \gamma)$ , $(n, 2n)$ , $^{197}\text{Au}(n, \gamma)$ , $(n, \alpha)$ , $(n, 2n)$ , $(n, 4n)$ , $(n, 6n)$ , $(n, 7n)$ , $(n, 8n)$ , $(n, 6np)$ , $^{59}\text{Co}(n, \alpha)$ , $(n, 2n)$ , $(n, 4n)$ , $(n, 5n)$ , $^{181}\text{Ta}(n, \gamma)$ , $(n, 2n)$ , $(n, 4n)$ , $(n, 5n)$ , $(n, np)$ , E=spectrum; measured spectrum-averaged $\sigma$ . Spallation neutrons from proton-induced reaction. JOUR PRAMC 68 307

**A=192**

$^{192}\text{Os}$	2006AV09	NUCLEAR MOMENTS $^{184,186,187,188,189,190,192}\text{Os}$ ; measured hfs, isotope shifts. Laser spectroscopy. JOUR HYIND 171 217
$^{192}\text{Ir}$	2007TA28	NUCLEAR REACTIONS $^{192}\text{Os}(d, 2n)$ , $(d, p)$ , E < 21 MeV; measured $E_\gamma$ , $I_\gamma$ , cross sections and excitation functions using stacked foil activation. Compared results to model calculations. JOUR ARISE 65 1215
	2007TI03	NUCLEAR REACTIONS Pb, $^{208}\text{Pb}$ , $^{209}\text{Bi}(p, X)^7\text{Be} / ^{24}\text{Na} / ^{59}\text{Fe} / ^{86}\text{Rb} / ^{101m}\text{Rh} / ^{173}\text{Lu} / ^{190}\text{Ir} / ^{192}\text{Ir} / ^{196}\text{Au} / ^{199}\text{Tl} / ^{200}\text{Tl} / ^{203}\text{Pb}$ , E=0.04-2.6 GeV; measured excitation functions. Comparison with model predictions and previous data. JOUR PRAMC 68 289
$^{192}\text{Pt}$	2007OK05	NUCLEAR REACTIONS $^{186}\text{W}(^{11}\text{B}, 4n)$ , $(^{11}\text{B}, 4np)$ , $(^{11}\text{B}, 6n)$ , E=68 MeV; measured $E_\gamma$ , $I_\gamma$ , $\gamma\gamma$ -coin, $\gamma\gamma(\theta)$ , linear polarization. $^{191,193}\text{Au}$ , $^{192}\text{Pt}$ deduced levels, J, $\pi$ ; calculated deformation parameters using Particle-Plus-Triaxial Rotor model. JOUR PRVCA 76 044315
$^{192}\text{Au}$	2007SH15	NUCLEAR REACTIONS $^{232}\text{Th}(n, \gamma)$ , $(n, 2n)$ , $^{197}\text{Au}(n, \gamma)$ , $(n, \alpha)$ , $(n, 2n)$ , $(n, 4n)$ , $(n, 6n)$ , $(n, 7n)$ , $(n, 8n)$ , $(n, 6np)$ , $^{59}\text{Co}(n, \alpha)$ , $(n, 2n)$ , $(n, 4n)$ , $(n, 5n)$ , $^{181}\text{Ta}(n, \gamma)$ , $(n, 2n)$ , $(n, 4n)$ , $(n, 5n)$ , $(n, np)$ , E=spectrum; measured spectrum-averaged $\sigma$ . Spallation neutrons from proton-induced reaction. JOUR PRAMC 68 307
$^{192}\text{Hg}$	2006LE44	NUCLEAR REACTIONS $^{188,190,192}\text{Pt}(\alpha, 2n)^{190,192,194}\text{Pt}$ , E=27 MeV; measured g-factors of isomeric states using integral perturbed angular distribution of $\gamma$ -rays in an external magnetic field of 2.9T. JOUR BRSPE 70 1822

KEYNUMBERS AND KEYWORDS

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**A=192 (continued)**

- <sup>192</sup>Pb    2007I001    NUCLEAR REACTIONS <sup>168</sup>Er(<sup>28</sup>Si, 4n)<sup>192</sup>Pb, <sup>170</sup>Er(<sup>29</sup>Si, 5n)<sup>170</sup>Er, E not given; measured E $\gamma$ , I $\gamma$ ( $\theta$ , E, t). <sup>192,194</sup>Pb deduced quadrupole moments of isomeric states using the TDPAD method. JOUR APOBB 38 1249
- 2007I003    NUCLEAR REACTIONS <sup>168</sup>Er(<sup>28</sup>Si, 4n), <sup>170</sup>Er(<sup>28</sup>Si, 5n), E=143 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, time differential perturbed angular distributions, lifetimes. <sup>192</sup>Pb, <sup>194</sup>Pb deduced levels, J,  $\pi$ , spectroscopic quadrupole moments. JOUR PYLBB 650 141
- 2007KNZZ    NUCLEAR REACTIONS <sup>144,154</sup>Sm(<sup>48</sup>Ca,  $\gamma$ ), (<sup>40</sup>Ca,  $\gamma$ ), E=163-252 MeV; measured fission fragment mass, energy distributions and  $\sigma$ . CONF Khanty-Mansiysk (Exotic Nuclei) Proc, P185

**A=193**

- <sup>193</sup>Os    2007TA28    NUCLEAR REACTIONS <sup>192</sup>Os(d, 2n), (d, p), E < 21 MeV; measured E $\gamma$ , I $\gamma$ , cross sections and excitation functions using stacked foil activation. Compared results to model calculations. JOUR ARISE 65 1215
- 2007ZAZZ    RADIOACTIVITY <sup>193</sup>Os( $\beta^-$ ); measured E $\gamma$ ,  $\gamma\gamma$  angular correlation. <sup>193</sup>Ir deduced multipole mixing ratio. CONF Iguazu(Nuclear Physics and Applications) Proc,P442,Zahn
- <sup>193</sup>Ir    2006VE10    NUCLEAR MOMENTS <sup>182,183,184,185,186,186m,187,188,189,191,193</sup>Ir; measured hfs, isotope shift; deduced  $\mu$ , quadrupole moments, radii,  $\beta_2$ . Laser spectroscopy. JOUR ZAANE 30 489
- 2007TAZW    NUCLEAR REACTIONS <sup>139</sup>La, <sup>152</sup>Sm, <sup>192,193</sup>Ir(n,  $\gamma$ ), E=55, 144 keV; measured cross sections relative to <sup>197</sup>Au. CONF Tokai-mura (Nuclear Data) Proc,PV.02,Tan
- 2007ZAZZ    RADIOACTIVITY <sup>193</sup>Os( $\beta^-$ ); measured E $\gamma$ ,  $\gamma\gamma$  angular correlation. <sup>193</sup>Ir deduced multipole mixing ratio. CONF Iguazu(Nuclear Physics and Applications) Proc,P442,Zahn
- <sup>193</sup>Au    2007OK05    NUCLEAR REACTIONS <sup>186</sup>W(<sup>11</sup>B, 4n), (<sup>11</sup>B, 4np), (<sup>11</sup>B, 6n), E=68 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma$ ( $\theta$ ), linear polarization.<sup>191,193</sup>Au, <sup>192</sup>Pt deduced levels, J,  $\pi$ ; calculated deformation parameters using Particle-Plus-Triaxial Rotor model. JOUR PRVCA 76 044315
- <sup>193</sup>Pb    2007I003    NUCLEAR REACTIONS <sup>168</sup>Er(<sup>28</sup>Si, 4n), <sup>170</sup>Er(<sup>28</sup>Si, 5n), E=143 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, time differential perturbed angular distributions, lifetimes. <sup>192</sup>Pb, <sup>194</sup>Pb deduced levels, J,  $\pi$ , spectroscopic quadrupole moments. JOUR PYLBB 650 141
- <sup>193</sup>Rn    2006AN36    RADIOACTIVITY <sup>193,194</sup>Rn( $\alpha$ ) [from <sup>144</sup>Sm(<sup>52</sup>Cr, xn)]; measured E $\alpha$ , I $\alpha$ , T<sub>1/2</sub>; deduced deformation effects. JOUR PRVCA 74 064303
- 2006AN36    NUCLEAR REACTIONS <sup>144</sup>Sm(<sup>52</sup>Cr, 2n), (<sup>52</sup>Cr, 3n), E=231-252 MeV; measured production  $\sigma$ . Velocity filter. JOUR PRVCA 74 064303
- 2006ANZT    NUCLEAR REACTIONS <sup>144</sup>Sm(<sup>52</sup>Cr, 2n), (<sup>52</sup>Cr, 3n), E=230 MeV; measured E $\gamma$ , I $\gamma$ , delayed E $\alpha$ , (recoil) $\alpha$ -coin. REPT GSI 2006-1,P196,Andreyev
- 2007AN19    NUCLEAR REACTIONS <sup>144</sup>Sm(<sup>46</sup>Ti, 3n)<sup>187</sup>Po, E=224 MeV; <sup>144</sup>Sm(<sup>52</sup>Cr, X)<sup>193,194</sup>Rn, E=232, 252 meV; measured E $\alpha$ . <sup>187</sup>Po, <sup>193,194</sup>Rn deduced levels. JOUR APOBB 38 1557



## A=194

- <sup>194</sup>Re 2007KUZZ RADIOACTIVITY <sup>194,195,196</sup>Re, <sup>198,202</sup>Ir [from <sup>208</sup>Pb fragmentation]; measured T<sub>1/2</sub>. Comparison with model predictions. CONF Geneva(NIC-IX) 008
- <sup>194</sup>Ir 2007SH15 NUCLEAR REACTIONS <sup>232</sup>Th(n, γ), (n, 2n), <sup>197</sup>Au(n, γ), (n, α), (n, 2n), (n, 4n), (n, 6n), (n, 7n), (n, 8n), (n, 6np), <sup>59</sup>Co(n, α), (n, 2n), (n, 4n), (n, 5n), <sup>181</sup>Ta(n, γ), (n, 2n), (n, 4n), (n, 5n), (n, np), E=spectrum; measured spectrum-averaged σ. Spallation neutrons from proton-induced reaction. JOUR PRAMC 68 307
- 2007TAZW NUCLEAR REACTIONS <sup>139</sup>La, <sup>152</sup>Sm, <sup>192,193</sup>Ir(n, γ), E=55, 144 keV; measured cross sections relative to <sup>197</sup>Au. CONF Tokai-mura (Nuclear Data) Proc,PV.02,Tan
- <sup>194</sup>Pt 2007ME09 NUCLEAR REACTIONS <sup>127</sup>I(μ<sup>-</sup>, ν), (μ<sup>-</sup>, nν), (μ<sup>-</sup>, 2nν), (μ<sup>-</sup>, 3nν), (μ<sup>-</sup>, 4nν), (μ<sup>-</sup>, 5nν), (μ<sup>-</sup>, 6nν), E at rest; <sup>197</sup>Au(μ<sup>-</sup>, nν), (μ<sup>-</sup>, 3nν), E at rest; <sup>209</sup>Bi(μ<sup>-</sup>, nν), (μ<sup>-</sup>, 2nν), (μ<sup>-</sup>, 3nν), (μ<sup>-</sup>, 4nν), (μ<sup>-</sup>, 5nν), E at rest; measured Eγ, Iγ, X-ray spectra. JOUR PRVCA 75 045501
- <sup>194</sup>Au 2007PE02 NUCLEAR REACTIONS <sup>197</sup>Au(<sup>6</sup>He, 2n), (<sup>6</sup>He, 3n), (<sup>6</sup>He, 4n), (<sup>6</sup>He, 5n), (<sup>6</sup>He, 6n), (<sup>6</sup>He, 7n), E ≈ 10-70 MeV; <sup>206</sup>Pb(<sup>6</sup>He, 2n), E ≈ 10-26 MeV; <sup>197</sup>Au(<sup>6</sup>He, X)<sup>194</sup>Au / <sup>196</sup>Au / <sup>198</sup>Au, E ≈ 10-70 MeV; measured excitation functions. Comparison with model predictions. JOUR ZAANE 31 185
- 2007SH15 NUCLEAR REACTIONS <sup>232</sup>Th(n, γ), (n, 2n), <sup>197</sup>Au(n, γ), (n, α), (n, 2n), (n, 4n), (n, 6n), (n, 7n), (n, 8n), (n, 6np), <sup>59</sup>Co(n, α), (n, 2n), (n, 4n), (n, 5n), <sup>181</sup>Ta(n, γ), (n, 2n), (n, 4n), (n, 5n), (n, np), E=spectrum; measured spectrum-averaged σ. Spallation neutrons from proton-induced reaction. JOUR PRAMC 68 307
- <sup>194</sup>Hg 2006LE44 NUCLEAR REACTIONS <sup>188,190,192</sup>Pt(α, 2n)<sup>190,192,194</sup>Pt, E=27 MeV; measured g-factors of isomeric states using integral perturbed angular distribution of γ-rays in an external magnetic field of 2.9T. JOUR BRSPE 70 1822
- <sup>194</sup>Pb 2007I001 NUCLEAR REACTIONS <sup>168</sup>Er(<sup>28</sup>Si, 4n)<sup>192</sup>Pb, <sup>170</sup>Er(<sup>29</sup>Si, 5n)<sup>170</sup>Er, E not given; measured Eγ, Iγ(θ, E, t). <sup>192,194</sup>Pb deduced quadrupole moments of isomeric states using the TDPAD method. JOUR APOBB 38 1249
- 2007I003 NUCLEAR REACTIONS <sup>168</sup>Er(<sup>28</sup>Si, 4n), <sup>170</sup>Er(<sup>28</sup>Si, 5n), E=143 MeV; measured Eγ, Iγ, γγ-coin, time differential perturbed angular distributions, lifetimes. <sup>192</sup>Pb, <sup>194</sup>Pb deduced levels, J, π, spectroscopic quadrupole moments. JOUR PYLBB 650 141
- 2007KNZZ NUCLEAR REACTIONS <sup>144,154</sup>Sm(<sup>48</sup>Ca, γ), (<sup>40</sup>Ca, γ), E=163-252 MeV; measured fission fragment mass, energy distributions and σ. CONF Khanty-Mansiysk (Exotic Nuclei) Proc, P185
- <sup>194</sup>Rn 2006AN36 RADIOACTIVITY <sup>193,194</sup>Rn(α) [from <sup>144</sup>Sm(<sup>52</sup>Cr, xn)]; measured Eα, Iα, T<sub>1/2</sub>; deduced deformation effects. JOUR PRVCA 74 064303
- 2006AN36 NUCLEAR REACTIONS <sup>144</sup>Sm(<sup>52</sup>Cr, 2n), (<sup>52</sup>Cr, 3n), E=231-252 MeV; measured production σ. Velocity filter. JOUR PRVCA 74 064303
- 2006ANZT NUCLEAR REACTIONS <sup>144</sup>Sm(<sup>52</sup>Cr, 2n), (<sup>52</sup>Cr, 3n), E=230 MeV; measured Eγ, Iγ, delayed Eα, (recoil)α-coin. REPT GSI 2006-1,P196,Andreyev



KEYNUMBERS AND KEYWORDS

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**A=194 (continued)**

- 2006ANZT RADIOACTIVITY  $^{194}\text{Rn}$ ,  $^{190}\text{Po}(\alpha)$  [from  $^{144}\text{Sm}(^{52}\text{Cr}, 2n)$ ]; measured  $E\alpha$ ,  $T_{1/2}$ . REPT GSI 2006-1,P196,Andreyev
- 2007AN19 NUCLEAR REACTIONS  $^{144}\text{Sm}(^{46}\text{Ti}, 3n)^{187}\text{Po}$ ,  $E=224$  MeV;  $^{144}\text{Sm}(^{52}\text{Cr}, X)^{193,194}\text{Rn}$ ,  $E=232, 252$  meV; measured  $E\alpha$ .  $^{187}\text{Po}$ ,  $^{193,194}\text{Rn}$  deduced levels. JOUR APOBB 38 1557

**A=195**

- $^{195}\text{Re}$  2007KUZZ RADIOACTIVITY  $^{194,195,196}\text{Re}$ ,  $^{198,202}\text{Ir}$  [from  $^{208}\text{Pb}$  fragmentation]; measured  $T_{1/2}$ . Comparison with model predictions. CONF Geneva(NIC-IX) 008
- $^{195}\text{Pt}$  2006BI19 NUCLEAR REACTIONS  $^{113}\text{In}$ ,  $^{195}\text{Pt}$ ,  $^{199}\text{Hg}(\gamma, \gamma')$ ,  $E=4-12$  MeV; measured isomer production  $\sigma$ . JOUR BRSPE 70 292
- $^{195}\text{Au}$  2007ZHZZ NUCLEAR REACTIONS  $^{190}\text{Ir}(\gamma, n)$ ,  $^{196}\text{Au}(\gamma, n)$ ,  $E(\text{end point})=12.0, 12.5, 14.5, 22$  MeV;  $^{197}\text{Au}(n, \gamma)$   $E=\text{thermal, slow}$ ; measured  $E\gamma$ ,  $I\gamma$ ;  $^{190m,190g}\text{Ir}$ ,  $^{196m,196g}\text{Au}$  deduced  $\sigma_m / \sigma_g$ ;  $^{197m,197g}\text{Au}$  deduced  $\sigma_m / \sigma_m + \sigma_g$ . Microtron, betatron, reactor, activation method, NaI(Tl), Ge detectors. CONF Voronezh(Nucleus-2007),Contrib,P136,Zheltonozhsky

**A=196**

- $^{196}\text{Re}$  2007KUZZ RADIOACTIVITY  $^{194,195,196}\text{Re}$ ,  $^{198,202}\text{Ir}$  [from  $^{208}\text{Pb}$  fragmentation]; measured  $T_{1/2}$ . Comparison with model predictions. CONF Geneva(NIC-IX) 008
- $^{196}\text{Pt}$  2007ME09 NUCLEAR REACTIONS  $^{127}\text{I}(\mu^-, \nu)$ ,  $(\mu^-, n\nu)$ ,  $(\mu^-, 2n\nu)$ ,  $(\mu^-, 3n\nu)$ ,  $(\mu^-, 4n\nu)$ ,  $(\mu^-, 5n\nu)$ ,  $(\mu^-, 6n\nu)$ ,  $E$  at rest;  $^{197}\text{Au}(\mu^-, n\nu)$ ,  $(\mu^-, 3n\nu)$ ,  $E$  at rest;  $^{209}\text{Bi}(\mu^-, n\nu)$ ,  $(\mu^-, 2n\nu)$ ,  $(\mu^-, 3n\nu)$ ,  $(\mu^-, 4n\nu)$ ,  $(\mu^-, 5n\nu)$ ,  $E$  at rest; measured  $E\gamma$ ,  $I\gamma$ , X-ray spectra. JOUR PRVCA 75 045501
- 2007PE28 NUCLEAR REACTIONS  $^{196}\text{Pt}(d, 2n)$ ,  $E=12.2$  MeV; measured  $E\gamma$ ,  $I\gamma$ .  $^{196}\text{Pt}$  deduced levels  $T_{1/2}$ ,  $B(E1)$ ,  $B(E2)$ ,  $B(M1)$  using centroid shift analysis. JOUR NUPAB 796 1
- $^{196}\text{Au}$  2006PE37 NUCLEAR REACTIONS  $^{197}\text{Au}(^6\text{He}, 2n)$ ,  $(^6\text{He}, 3n)$ ,  $(^6\text{He}, 4n)$ ,  $(^6\text{He}, 5n)$ ,  $(^6\text{He}, 6n)$ ,  $(^6\text{He}, 7n)$ ,  $E \approx 10-70$  MeV;  $^{206}\text{Pb}(^6\text{He}, 2n)$ ,  $E \approx 10-26$  MeV;  $^{197}\text{Au}(^6\text{He}, X)^{196}\text{Au} / ^{198}\text{Au} / ^{199}\text{Au}$ ,  $E \approx 10-70$  MeV; measured excitation functions. Comparison with model predictions. JOUR PPNLA 3 362
- 2007HA24 NUCLEAR REACTIONS  $^{152}\text{Sm}$ ,  $^{197}\text{Au}(\gamma, n)$ ,  $E=8.3-12.4$  MeV; measured cross sections. JOUR JNSTA 44 938
- 2007KU25 NUCLEAR REACTIONS  $^{197}\text{Au}(^6\text{He}, X)^{196}\text{Au} / ^{198}\text{Au} / ^{196}\text{Tl} / ^{198}\text{Tl}$ ,  $E=7-60$  MeV; measured  $E\gamma$ ,  $I\gamma$ , cross sections, and excitation functions using stacked foil technique. JOUR JPGPE 34 2297
- 2007KUZX NUCLEAR REACTIONS  $^{197}\text{Au}(\alpha, xn)$ ,  $(\alpha, n\alpha)$ ,  $(\alpha, 2np)$ ,  $E=14-36$  MeV; measured excitation functions using stacked foil activation. CONF Khanty-Mansiysk (Exotic Nuclei) Proc, P196

**A=196 (continued)**

- 2007PE02 NUCLEAR REACTIONS  $^{197}\text{Au}(^6\text{He}, 2n)$ ,  $(^6\text{He}, 3n)$ ,  $(^6\text{He}, 4n)$ ,  $(^6\text{He}, 5n)$ ,  $(^6\text{He}, 6n)$ ,  $(^6\text{He}, 7n)$ ,  $E \approx 10\text{-}70$  MeV;  $^{206}\text{Pb}(^6\text{He}, 2n)$ ,  $E \approx 10\text{-}26$  MeV;  $^{197}\text{Au}(^6\text{He}, X)^{194}\text{Au} / ^{196}\text{Au} / ^{198}\text{Au}$ ,  $E \approx 10\text{-}70$  MeV; measured excitation functions. Comparison with model predictions. JOUR ZAANE 31 185
- 2007PE28 NUCLEAR REACTIONS  $^{196}\text{Pt}(d, 2n)$ ,  $E=12.2$  MeV; measured  $E\gamma$ ,  $I\gamma$ .  $^{196}\text{Pt}$  deduced levels  $T_{1/2}$ ,  $B(E1)$ ,  $B(E2)$ ,  $B(M1)$  using centroid shift analysis. JOUR NUPAB 796 1
- 2007SH15 NUCLEAR REACTIONS  $^{232}\text{Th}(n, \gamma)$ ,  $(n, 2n)$ ,  $^{197}\text{Au}(n, \gamma)$ ,  $(n, \alpha)$ ,  $(n, 2n)$ ,  $(n, 4n)$ ,  $(n, 6n)$ ,  $(n, 7n)$ ,  $(n, 8n)$ ,  $(n, 6np)$ ,  $^{59}\text{Co}(n, \alpha)$ ,  $(n, 2n)$ ,  $(n, 4n)$ ,  $(n, 5n)$ ,  $^{181}\text{Ta}(n, \gamma)$ ,  $(n, 2n)$ ,  $(n, 4n)$ ,  $(n, 5n)$ ,  $(n, np)$ ,  $E=\text{spectrum}$ ; measured spectrum-averaged  $\sigma$ . Spallation neutrons from proton-induced reaction. JOUR PRAMC 68 307
- 2007TI03 NUCLEAR REACTIONS  $\text{Pb}$ ,  $^{208}\text{Pb}$ ,  $^{209}\text{Bi}(p, X)^7\text{Be} / ^{24}\text{Na} / ^{59}\text{Fe} / ^{86}\text{Rb} / ^{101m}\text{Rh} / ^{173}\text{Lu} / ^{190}\text{Ir} / ^{192}\text{Ir} / ^{196}\text{Au} / ^{199}\text{Tl} / ^{200}\text{Tl} / ^{203}\text{Pb}$ ,  $E=0.04\text{-}2.6$  GeV; measured excitation functions. Comparison with model predictions and previous data. JOUR PRAMC 68 289
- $^{196}\text{Tl}$  2006PE37 NUCLEAR REACTIONS  $^{197}\text{Au}(^6\text{He}, 2n)$ ,  $(^6\text{He}, 3n)$ ,  $(^6\text{He}, 4n)$ ,  $(^6\text{He}, 5n)$ ,  $(^6\text{He}, 6n)$ ,  $(^6\text{He}, 7n)$ ,  $E \approx 10\text{-}70$  MeV;  $^{206}\text{Pb}(^6\text{He}, 2n)$ ,  $E \approx 10\text{-}26$  MeV;  $^{197}\text{Au}(^6\text{He}, X)^{196}\text{Au} / ^{198}\text{Au} / ^{199}\text{Au}$ ,  $E \approx 10\text{-}70$  MeV; measured excitation functions. Comparison with model predictions. JOUR PPNLA 3 362
- 2007KU25 NUCLEAR REACTIONS  $^{197}\text{Au}(^6\text{He}, X)^{196}\text{Au} / ^{198}\text{Au} / ^{196}\text{Tl} / ^{198}\text{Tl}$ ,  $E=7\text{-}60$  MeV; measured  $E\gamma$ ,  $I\gamma$ , cross sections, and excitation functions using stacked foil technique. JOUR JPGPE 34 2297
- 2007PE02 NUCLEAR REACTIONS  $^{197}\text{Au}(^6\text{He}, 2n)$ ,  $(^6\text{He}, 3n)$ ,  $(^6\text{He}, 4n)$ ,  $(^6\text{He}, 5n)$ ,  $(^6\text{He}, 6n)$ ,  $(^6\text{He}, 7n)$ ,  $E \approx 10\text{-}70$  MeV;  $^{206}\text{Pb}(^6\text{He}, 2n)$ ,  $E \approx 10\text{-}26$  MeV;  $^{197}\text{Au}(^6\text{He}, X)^{194}\text{Au} / ^{196}\text{Au} / ^{198}\text{Au}$ ,  $E \approx 10\text{-}70$  MeV; measured excitation functions. Comparison with model predictions. JOUR ZAANE 31 185

**A=197**

- $^{197}\text{Au}$  2007SM01 NUCLEAR REACTIONS  $^{197}\text{Au}(n, n)$ ,  $E \approx 4.5\text{-}10.0$  MeV; measured  $\sigma(\theta)$ . Optical-statistical, dispersion, and coupled-channels model analysis. JOUR NSENA 155 74
- 2007VA22 NUCLEAR REACTIONS  $^{197}\text{Au}(^{106}\text{Sn}, ^{106}\text{Sn}')$ ,  $(^{108}\text{Sn}, ^{108}\text{Sn}')$ ,  $(^{110}\text{Sn}, ^{110}\text{sn}')$ ,  $(^{112}\text{Sn}, ^{112}\text{Sn}')$ ,  $E=78\text{-}81$  MeV; measured  $E\gamma$ ,  $I\gamma$ , (particle) $\gamma$ -coinc from projectile coulomb excitation.  $^{106,108,110,112}\text{Sn}$  deduced  $B(E2)$ . JOUR PRLTA 99 162501
- $^{197}\text{Tl}$  2006PE37 NUCLEAR REACTIONS  $^{197}\text{Au}(^6\text{He}, 2n)$ ,  $(^6\text{He}, 3n)$ ,  $(^6\text{He}, 4n)$ ,  $(^6\text{He}, 5n)$ ,  $(^6\text{He}, 6n)$ ,  $(^6\text{He}, 7n)$ ,  $E \approx 10\text{-}70$  MeV;  $^{206}\text{Pb}(^6\text{He}, 2n)$ ,  $E \approx 10\text{-}26$  MeV;  $^{197}\text{Au}(^6\text{He}, X)^{196}\text{Au} / ^{198}\text{Au} / ^{199}\text{Au}$ ,  $E \approx 10\text{-}70$  MeV; measured excitation functions. Comparison with model predictions. JOUR PPNLA 3 362

**A=197 (continued)**

- 2007PE02 NUCLEAR REACTIONS  $^{197}\text{Au}(^6\text{He}, 2\text{n}), (^6\text{He}, 3\text{n}), (^6\text{He}, 4\text{n}), (^6\text{He}, 5\text{n}), (^6\text{He}, 6\text{n}), (^6\text{He}, 7\text{n}), E \approx 10\text{-}70 \text{ MeV}; ^{206}\text{Pb}(^6\text{He}, 2\text{n}), E \approx 10\text{-}26 \text{ MeV}; ^{197}\text{Au}(^6\text{He}, \text{X})^{194}\text{Au} / ^{196}\text{Au} / ^{198}\text{Au}, E \approx 10\text{-}70 \text{ MeV};$  measured excitation functions. Comparison with model predictions. JOUR ZAANE 31 185
- 2007SI28 NUCLEAR REACTIONS  $^{181}\text{Ta}(^{16}\text{O}, \text{F}), E=105, 110, 115 \text{ MeV}; ^{178}\text{Hf}(^{19}\text{F}, \text{F}), E=108, 113, 118 \text{ MeV};$  measured neutron spectra, neutron multiplicities, angular momentum, dissipation strengths as function of excitation energies.  $^{197}\text{Tl}$ ; deduced compound nucleus fission channels. JOUR PRVCA 76 044610
- $^{197}\text{Bi}$  2007MU07 NUCLEAR REACTIONS  $^{109}\text{Ag}(^{88}\text{Kr}, \gamma), ^{109}\text{Ag}(^{92}\text{Kr}, \gamma); E=2.2 \text{ MeV} / \text{nucleon};$  measured  $E\gamma, I\gamma,$  (particle) $\gamma$ -coinc using MINIBALL. Deduced B(E2). JOUR PPNPD 59 361

**A=198**

- $^{198}\text{Ir}$  2007KUZZ RADIOACTIVITY  $^{194,195,196}\text{Re}, ^{198,202}\text{Ir}$  [from  $^{208}\text{Pb}$  fragmentation]; measured  $T_{1/2}$ . Comparison with model predictions. CONF Geneva(NIC-IX) 008
- $^{198}\text{Au}$  2006PE37 NUCLEAR REACTIONS  $^{197}\text{Au}(^6\text{He}, 2\text{n}), (^6\text{He}, 3\text{n}), (^6\text{He}, 4\text{n}), (^6\text{He}, 5\text{n}), (^6\text{He}, 6\text{n}), (^6\text{He}, 7\text{n}), E \approx 10\text{-}70 \text{ MeV}; ^{206}\text{Pb}(^6\text{He}, 2\text{n}), E \approx 10\text{-}26 \text{ MeV}; ^{197}\text{Au}(^6\text{He}, \text{X})^{196}\text{Au} / ^{198}\text{Au} / ^{199}\text{Au}, E \approx 10\text{-}70 \text{ MeV};$  measured excitation functions. Comparison with model predictions. JOUR PPNLA 3 362
- 2007KU25 NUCLEAR REACTIONS  $^{197}\text{Au}(^6\text{He}, \text{X})^{196}\text{Au} / ^{198}\text{Au} / ^{196}\text{Tl} / ^{198}\text{Tl}, E=7\text{-}60 \text{ MeV};$  measured  $E\gamma, I\gamma,$  cross sections, and excitation functions using stacked foil technique. JOUR JPGPE 34 2297
- 2007PE02 NUCLEAR REACTIONS  $^{197}\text{Au}(^6\text{He}, 2\text{n}), (^6\text{He}, 3\text{n}), (^6\text{He}, 4\text{n}), (^6\text{He}, 5\text{n}), (^6\text{He}, 6\text{n}), (^6\text{He}, 7\text{n}), E \approx 10\text{-}70 \text{ MeV}; ^{206}\text{Pb}(^6\text{He}, 2\text{n}), E \approx 10\text{-}26 \text{ MeV}; ^{197}\text{Au}(^6\text{He}, \text{X})^{194}\text{Au} / ^{196}\text{Au} / ^{198}\text{Au}, E \approx 10\text{-}70 \text{ MeV};$  measured excitation functions. Comparison with model predictions. JOUR ZAANE 31 185
- 2007SH15 NUCLEAR REACTIONS  $^{232}\text{Th}(n, \gamma), (n, 2n), ^{197}\text{Au}(n, \gamma), (n, \alpha), (n, 2n), (n, 4n), (n, 6n), (n, 7n), (n, 8n), (n, 6np), ^{59}\text{Co}(n, \alpha), (n, 2n), (n, 4n), (n, 5n), ^{181}\text{Ta}(n, \gamma), (n, 2n), (n, 4n), (n, 5n), (n, np), E=\text{spectrum};$  measured spectrum-averaged  $\sigma$ . Spallation neutrons from proton-induced reaction. JOUR PRAMC 68 307
- 2007SP01 RADIOACTIVITY  $^{198}\text{Au}(\beta^-)$ ; measured  $T_{1/2}$  for source in metallic environment; deduced temperature dependence. JOUR ZAANE 31 203
- 2007ZHZZ NUCLEAR REACTIONS  $^{190}\text{Ir}(\gamma, n), ^{196}\text{Au}(\gamma, n), E(\text{end point})=12.0, 12.5, 14.5, 22 \text{ MeV}; ^{197}\text{Au}(n, \gamma) E=\text{thermal, slow};$  measured  $E\gamma, I\gamma; ^{190m,190g}\text{Ir}, ^{196m,196g}\text{Au}$  deduced  $\sigma_m / \sigma_g; ^{197m,197g}\text{Au}$  deduced  $\sigma_m / \sigma_m + \sigma_g$ . Microtron, betatron, reactor, activation method, NaI(Tl), Ge detectors. CONF Voronezh(Nucleus-2007),Contrib,P136,Zheltonozhsky
- $^{198}\text{Hg}$  2007KUZX NUCLEAR REACTIONS  $^{197}\text{Au}(\alpha, xn), (\alpha, n\alpha), (\alpha, 2np), E=14\text{-}36 \text{ MeV};$  measured excitation functions using stacked foil activation. CONF Khanty-Mansiysk (Exotic Nuclei) Proc, P196

KEYNUMBERS AND KEYWORDS

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**A=198 (continued)**

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| 2007SP01          |          | RADIOACTIVITY $^{198}\text{Au}(\beta^-)$ ; measured $T_{1/2}$ for source in metallic environment; deduced temperature dependence. JOUR ZAANE 31 203  |
| $^{198}\text{Tl}$ | 2006PE37 | NUCLEAR REACTIONS $^{197}\text{Au}({}^6\text{He}, 2n)$ , $({}^6\text{He}, 3n)$ , $({}^6\text{He}, 4n)$ , $({}^6\text{He}, 5n)$ , $({}^6\text{He}, 6n)$ , $({}^6\text{He}, 7n)$ , $E \approx 10\text{-}70$ MeV; $^{206}\text{Pb}({}^6\text{He}, 2n)$ , $E \approx 10\text{-}26$ MeV; $^{197}\text{Au}({}^6\text{He}, X)^{196}\text{Au} / ^{198}\text{Au} / ^{199}\text{Au}$ , $E \approx 10\text{-}70$ MeV; measured excitation functions. Comparison with model predictions. JOUR PPNLA 3 362  |
|                   | 2007KU09 | NUCLEAR REACTIONS $^{197}\text{Au}(\alpha, n)$ , $(\alpha, 2n)$ , $(\alpha, 3n)$ , $E=14\text{-}36$ MeV; measured $E\gamma$ , $I\gamma$ . Deduced excitation functions using stack activation technique. JOUR PANUE 70 613   |
|                   | 2007KU25 | NUCLEAR REACTIONS $^{197}\text{Au}({}^6\text{He}, X)^{196}\text{Au} / ^{198}\text{Au} / ^{196}\text{Tl} / ^{198}\text{Tl}$ , $E=7\text{-}60$ MeV; measured $E\gamma$ , $I\gamma$ , cross sections, and excitation functions using stacked foil technique. JOUR JPGPE 34 2297   |
|                   | 2007LA22 | NUCLEAR REACTIONS $^{197}\text{Au}(\alpha, 3n)^{198}\text{Tl}$ , $E=40$ MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coinc. $^{198}\text{Tl}$ deduced levels, $J$ , $\pi$ . JOUR APOBB 38 1417  |
|                   | 2007PE02 | NUCLEAR REACTIONS $^{197}\text{Au}({}^6\text{He}, 2n)$ , $({}^6\text{He}, 3n)$ , $({}^6\text{He}, 4n)$ , $({}^6\text{He}, 5n)$ , $({}^6\text{He}, 6n)$ , $({}^6\text{He}, 7n)$ , $E \approx 10\text{-}70$ MeV; $^{206}\text{Pb}({}^6\text{He}, 2n)$ , $E \approx 10\text{-}26$ MeV; $^{197}\text{Au}({}^6\text{He}, X)^{194}\text{Au} / ^{196}\text{Au} / ^{198}\text{Au}$ , $E \approx 10\text{-}70$ MeV; measured excitation functions. Comparison with model predictions. JOUR ZAANE 31 185 |

**A=199**

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|-------------------|----------|---|
| $^{199}\text{Au}$ | 2006PE37 | NUCLEAR REACTIONS $^{197}\text{Au}({}^6\text{He}, 2n)$ , $({}^6\text{He}, 3n)$ , $({}^6\text{He}, 4n)$ , $({}^6\text{He}, 5n)$ , $({}^6\text{He}, 6n)$ , $({}^6\text{He}, 7n)$ , $E \approx 10\text{-}70$ MeV; $^{206}\text{Pb}({}^6\text{He}, 2n)$ , $E \approx 10\text{-}26$ MeV; $^{197}\text{Au}({}^6\text{He}, X)^{196}\text{Au} / ^{198}\text{Au} / ^{199}\text{Au}$ , $E \approx 10\text{-}70$ MeV; measured excitation functions. Comparison with model predictions. JOUR PPNLA 3 362 |
| $^{199}\text{Hg}$ | 2006BI19 | NUCLEAR REACTIONS $^{113}\text{In}$ , $^{195}\text{Pt}$ , $^{199}\text{Hg}(\gamma, \gamma')$ , $E=4\text{-}12$ MeV; measured isomer production $\sigma$ . JOUR BRSPE 70 292   |
| $^{199}\text{Tl}$ | 2006PE37 | NUCLEAR REACTIONS $^{197}\text{Au}({}^6\text{He}, 2n)$ , $({}^6\text{He}, 3n)$ , $({}^6\text{He}, 4n)$ , $({}^6\text{He}, 5n)$ , $({}^6\text{He}, 6n)$ , $({}^6\text{He}, 7n)$ , $E \approx 10\text{-}70$ MeV; $^{206}\text{Pb}({}^6\text{He}, 2n)$ , $E \approx 10\text{-}26$ MeV; $^{197}\text{Au}({}^6\text{He}, X)^{196}\text{Au} / ^{198}\text{Au} / ^{199}\text{Au}$ , $E \approx 10\text{-}70$ MeV; measured excitation functions. Comparison with model predictions. JOUR PPNLA 3 362 |
|                   | 2007AS04 | NUCLEAR REACTIONS $^{203}\text{Tl}(\gamma, n)$ , $(\gamma, 2n)$ , $(\gamma, 3n)$ , $(\gamma, 4n)$ , $E\gamma=50$ MeV Bremsstrahlung; measured photonuclear cross sections by detecting $\gamma$ -ray spectra from the residual activity of the irradiated sample. JOUR BRSPE 71 332   |
|                   | 2007BA04 | NUCLEAR REACTIONS $^{197}\text{Au}(\alpha, \gamma)$ , $(\alpha, 2n)$ , $E=17.9\text{-}23.9$ MeV; $^{197}\text{Au}(\alpha, n)$ , $E=13.4\text{-}23.9$ MeV; measured $\sigma$ . $^{64}\text{Zn}(\alpha, \gamma)$ , $E=7\text{-}14$ MeV; $^{63}\text{Cu}(\alpha, \gamma)$ , $E=7$ MeV; measured thick target yields. Activation technique, comparison with model predictions. JOUR PRVCA 75 015802   |
|                   | 2007KU09 | NUCLEAR REACTIONS $^{197}\text{Au}(\alpha, n)$ , $(\alpha, 2n)$ , $(\alpha, 3n)$ , $E=14\text{-}36$ MeV; measured $E\gamma$ , $I\gamma$ . Deduced excitation functions using stack activation technique. JOUR PANUE 70 613  |

KEYNUMBERS AND KEYWORDS

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**A=199 (continued)**

- 2007PE02 NUCLEAR REACTIONS  $^{197}\text{Au}(^6\text{He}, 2n)$ ,  $(^6\text{He}, 3n)$ ,  $(^6\text{He}, 4n)$ ,  $(^6\text{He}, 5n)$ ,  $(^6\text{He}, 6n)$ ,  $(^6\text{He}, 7n)$ ,  $E \approx 10\text{-}70$  MeV;  $^{206}\text{Pb}(^6\text{He}, 2n)$ ,  $E \approx 10\text{-}26$  MeV;  $^{197}\text{Au}(^6\text{He}, X)^{194}\text{Au} / ^{196}\text{Au} / ^{198}\text{Au}$ ,  $E \approx 10\text{-}70$  MeV; measured excitation functions. Comparison with model predictions. JOUR ZAANE 31 185
- 2007TI03 NUCLEAR REACTIONS Pb,  $^{208}\text{Pb}$ ,  $^{209}\text{Bi}(p, X)^7\text{Be} / ^{24}\text{Na} / ^{59}\text{Fe} / ^{86}\text{Rb} / ^{101m}\text{Rh} / ^{173}\text{Lu} / ^{190}\text{Ir} / ^{192}\text{Ir} / ^{196}\text{Au} / ^{199}\text{Tl} / ^{200}\text{Tl} / ^{203}\text{Pb}$ ,  $E=0.04\text{-}2.6$  GeV; measured excitation functions. Comparison with model predictions and previous data. JOUR PRAMC 68 289

**A=200**

- $^{200}\text{Tl}$  2006PE37 NUCLEAR REACTIONS  $^{197}\text{Au}(^6\text{He}, 2n)$ ,  $(^6\text{He}, 3n)$ ,  $(^6\text{He}, 4n)$ ,  $(^6\text{He}, 5n)$ ,  $(^6\text{He}, 6n)$ ,  $(^6\text{He}, 7n)$ ,  $E \approx 10\text{-}70$  MeV;  $^{206}\text{Pb}(^6\text{He}, 2n)$ ,  $E \approx 10\text{-}26$  MeV;  $^{197}\text{Au}(^6\text{He}, X)^{196}\text{Au} / ^{198}\text{Au} / ^{199}\text{Au}$ ,  $E \approx 10\text{-}70$  MeV; measured excitation functions. Comparison with model predictions. JOUR PPNLA 3 362
- 2007AS04 NUCLEAR REACTIONS  $^{203}\text{Tl}(\gamma, n)$ ,  $(\gamma, 2n)$ ,  $(\gamma, 3n)$ ,  $(\gamma, 4n)$ ,  $E_\gamma=50$  MeV Bremsstrahlung; measured photonuclear cross sections by detecting  $\gamma$ -ray spectra from the residual activity of the irradiated sample. JOUR BRSPE 71 332
- 2007BA04 NUCLEAR REACTIONS  $^{197}\text{Au}(\alpha, \gamma)$ ,  $(\alpha, 2n)$ ,  $E=17.9\text{-}23.9$  MeV;  $^{197}\text{Au}(\alpha, n)$ ,  $E=13.4\text{-}23.9$  MeV; measured  $\sigma$ .  $^{64}\text{Zn}(\alpha, \gamma)$ ,  $E=7\text{-}14$  MeV;  $^{63}\text{Cu}(\alpha, \gamma)$ ,  $E=7$  MeV; measured thick target yields. Activation technique, comparison with model predictions. JOUR PRVCA 75 015802
- 2007KU09 NUCLEAR REACTIONS  $^{197}\text{Au}(\alpha, n)$ ,  $(\alpha, 2n)$ ,  $(\alpha, 3n)$ ,  $E=14\text{-}36$  MeV; measured  $E_\gamma$ ,  $I_\gamma$ . Deduced excitation functions using stack activation technique. JOUR PANUE 70 613
- 2007PE02 NUCLEAR REACTIONS  $^{197}\text{Au}(^6\text{He}, 2n)$ ,  $(^6\text{He}, 3n)$ ,  $(^6\text{He}, 4n)$ ,  $(^6\text{He}, 5n)$ ,  $(^6\text{He}, 6n)$ ,  $(^6\text{He}, 7n)$ ,  $E \approx 10\text{-}70$  MeV;  $^{206}\text{Pb}(^6\text{He}, 2n)$ ,  $E \approx 10\text{-}26$  MeV;  $^{197}\text{Au}(^6\text{He}, X)^{194}\text{Au} / ^{196}\text{Au} / ^{198}\text{Au}$ ,  $E \approx 10\text{-}70$  MeV; measured excitation functions. Comparison with model predictions. JOUR ZAANE 31 185
- 2007TI03 NUCLEAR REACTIONS Pb,  $^{208}\text{Pb}$ ,  $^{209}\text{Bi}(p, X)^7\text{Be} / ^{24}\text{Na} / ^{59}\text{Fe} / ^{86}\text{Rb} / ^{101m}\text{Rh} / ^{173}\text{Lu} / ^{190}\text{Ir} / ^{192}\text{Ir} / ^{196}\text{Au} / ^{199}\text{Tl} / ^{200}\text{Tl} / ^{203}\text{Pb}$ ,  $E=0.04\text{-}2.6$  GeV; measured excitation functions. Comparison with model predictions and previous data. JOUR PRAMC 68 289

**A=201**

- $^{201}\text{Hg}$  2007ME12 RADIOACTIVITY  $^{201}\text{Hg}$ [from  $^{201}\text{Tl}(\text{EC})$ ]; measured  $E_\gamma$ ,  $I_\gamma$ ,  $e\gamma$ -coinc,  $T_{1/2}$  of the first excited state.  $^{201}\text{Hg}$  deduced B(M1) and B(E2). JOUR PRVCA 75 064306

KEYNUMBERS AND KEYWORDS

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**A=201 (continued)**

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|-------------------|----------|--|
|                   | 2007YA02 | RADIOACTIVITY $^{51}\text{Cr}$ , $^{55}\text{Fe}$ , $^{67}\text{Ga}$ , $^{111}\text{In}$ , $^{133}\text{Ba}$ , $^{201}\text{Tl}(\text{EC})$ ; $^{99m}\text{Tc}(\text{IT})$ , $(\beta^-)$ ; $^{131}\text{I}$ , $^{133}\text{Xe}$ , $^{137}\text{Cs}(\beta^-)$ ; $^{226}\text{Ra}(\alpha)$ ; measured K X-ray intensity ratios following decay and photoionization. JOUR NIMBE 254 182   |
| $^{201}\text{Tl}$ | 2006PE37 | NUCLEAR REACTIONS $^{197}\text{Au}(\text{}^6\text{He}, 2\text{n})$ , $(\text{}^6\text{He}, 3\text{n})$ , $(\text{}^6\text{He}, 4\text{n})$ , $(\text{}^6\text{He}, 5\text{n})$ , $(\text{}^6\text{He}, 6\text{n})$ , $(\text{}^6\text{He}, 7\text{n})$ , $E \approx 10\text{-}70$ MeV; $^{206}\text{Pb}(\text{}^6\text{He}, 2\text{n})$ , $E \approx 10\text{-}26$ MeV; $^{197}\text{Au}(\text{}^6\text{He}, \text{X})^{196}\text{Au} / ^{198}\text{Au} / ^{199}\text{Au}$ , $E \approx 10\text{-}70$ MeV; measured excitation functions. Comparison with model predictions. JOUR PPNLA 3 362  |
|                   | 2007AS04 | NUCLEAR REACTIONS $^{203}\text{Tl}(\gamma, \text{n})$ , $(\gamma, 2\text{n})$ , $(\gamma, 3\text{n})$ , $(\gamma, 4\text{n})$ , $E\gamma=50$ MeV Bremsstrahlung; measured photonuclear cross sections by detecting $\gamma$ -ray spectra from the residual activity of the irradiated sample. JOUR BRSPE 71 332  |
|                   | 2007BA04 | NUCLEAR REACTIONS $^{197}\text{Au}(\alpha, \gamma)$ , $(\alpha, 2\text{n})$ , $E=17.9\text{-}23.9$ MeV; $^{197}\text{Au}(\alpha, \text{n})$ , $E=13.4\text{-}23.9$ MeV; measured $\sigma$ . $^{64}\text{Zn}(\alpha, \gamma)$ , $E=7\text{-}14$ MeV; $^{63}\text{Cu}(\alpha, \gamma)$ , $E=7$ MeV; measured thick target yields. Activation technique, comparison with model predictions. JOUR PRVCA 75 015802  |
|                   | 2007PE02 | NUCLEAR REACTIONS $^{197}\text{Au}(\text{}^6\text{He}, 2\text{n})$ , $(\text{}^6\text{He}, 3\text{n})$ , $(\text{}^6\text{He}, 4\text{n})$ , $(\text{}^6\text{He}, 5\text{n})$ , $(\text{}^6\text{He}, 6\text{n})$ , $(\text{}^6\text{He}, 7\text{n})$ , $E \approx 10\text{-}70$ MeV; $^{206}\text{Pb}(\text{}^6\text{He}, 2\text{n})$ , $E \approx 10\text{-}26$ MeV; $^{197}\text{Au}(\text{}^6\text{He}, \text{X})^{194}\text{Au} / ^{196}\text{Au} / ^{198}\text{Au}$ , $E \approx 10\text{-}70$ MeV; measured excitation functions. Comparison with model predictions. JOUR ZAANE 31 185 |
|                   | 2007YA02 | RADIOACTIVITY $^{51}\text{Cr}$ , $^{55}\text{Fe}$ , $^{67}\text{Ga}$ , $^{111}\text{In}$ , $^{133}\text{Ba}$ , $^{201}\text{Tl}(\text{EC})$ ; $^{99m}\text{Tc}(\text{IT})$ , $(\beta^-)$ ; $^{131}\text{I}$ , $^{133}\text{Xe}$ , $^{137}\text{Cs}(\beta^-)$ ; $^{226}\text{Ra}(\alpha)$ ; measured K X-ray intensity ratios following decay and photoionization. JOUR NIMBE 254 182   |
| $^{201}\text{Pb}$ | 2007AL13 | NUCLEAR REACTIONS $\text{Tl}(\text{p}, \text{X})^{201}\text{Pb} / ^{202m}\text{Pb} / ^{203}\text{Pb} / ^{204m}\text{Pb}$ , $E \approx 6\text{-}27$ MeV; measured excitation functions; deduced integral yields. Stacked foil activation technique. JOUR RAACA 95 127   |
| $^{201}\text{Bi}$ | 2007MU07 | NUCLEAR REACTIONS $^{109}\text{Ag}(\text{}^{88}\text{Kr}, \gamma)$ , $^{109}\text{Ag}(\text{}^{92}\text{Kr}, \gamma)$ ; $E=2.2$ MeV / nucleon; measured $E\gamma$ , $I\gamma$ , (particle) $\gamma$ -coinc using MINIBALL. Deduced B(E2). JOUR PPNPD 59 361  |

**A=202**

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|-------------------|----------|---|
| $^{202}\text{Ir}$ | 2007KUZZ | RADIOACTIVITY $^{194,195,196}\text{Re}$ , $^{198,202}\text{Ir}$ [from $^{208}\text{Pb}$ fragmentation]; measured $T_{1/2}$ . Comparison with model predictions. CONF Geneva(NIC-IX) 008   |
| $^{202}\text{Tl}$ | 2007AS04 | NUCLEAR REACTIONS $^{203}\text{Tl}(\gamma, \text{n})$ , $(\gamma, 2\text{n})$ , $(\gamma, 3\text{n})$ , $(\gamma, 4\text{n})$ , $E\gamma=50$ MeV Bremsstrahlung; measured photonuclear cross sections by detecting $\gamma$ -ray spectra from the residual activity of the irradiated sample. JOUR BRSPE 71 332 |
|                   | 2007F006 | NUCLEAR REACTIONS $^{203}\text{Tl}(\text{n}, 2\text{n}\gamma)$ , $E=0.6\text{-}250$ MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coinc, and excitation functions. $^{202}\text{Tl}$ deduced levels, J, $\pi$ . JOUR PRVCA 76 014302  |

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KEYNUMBERS AND KEYWORDS

**A=202 (continued)**

- <sup>202</sup>Pb    2007AL13    NUCLEAR REACTIONS Tl(p, X)<sup>201</sup>Pb / <sup>202m</sup>Pb / <sup>203</sup>Pb / <sup>204m</sup>Pb, E ≈ 6-27 MeV; measured excitation functions; deduced integral yields. Stacked foil activation technique. JOUR RAACA 95 127
- 2007KNZZ    NUCLEAR REACTIONS <sup>144,154</sup>Sm(<sup>48</sup>Ca, γ), (<sup>40</sup>Ca, γ), E=163-252 MeV; measured fission fragment mass, energy distributions and σ. CONF Khanty-Mansiysk (Exotic Nuclei) Proc, P185

**A=203**

- <sup>203</sup>Pb    2007AL13    NUCLEAR REACTIONS Tl(p, X)<sup>201</sup>Pb / <sup>202m</sup>Pb / <sup>203</sup>Pb / <sup>204m</sup>Pb, E ≈ 6-27 MeV; measured excitation functions; deduced integral yields. Stacked foil activation technique. JOUR RAACA 95 127
- 2007TI03    NUCLEAR REACTIONS Pb, <sup>208</sup>Pb, <sup>209</sup>Bi(p, X)<sup>7</sup>Be / <sup>24</sup>Na / <sup>59</sup>Fe / <sup>86</sup>Rb / <sup>101m</sup>Rh / <sup>173</sup>Lu / <sup>190</sup>Ir / <sup>192</sup>Ir / <sup>196</sup>Au / <sup>199</sup>Tl / <sup>200</sup>Tl / <sup>203</sup>Pb, E=0.04-2.6 GeV; measured excitation functions. Comparison with model predictions and previous data. JOUR PRAMC 68 289

**A=204**

- <sup>204</sup>Pb    2007AL13    NUCLEAR REACTIONS Tl(p, X)<sup>201</sup>Pb / <sup>202m</sup>Pb / <sup>203</sup>Pb / <sup>204m</sup>Pb, E ≈ 6-27 MeV; measured excitation functions; deduced integral yields. Stacked foil activation technique. JOUR RAACA 95 127
- 2007ME09    NUCLEAR REACTIONS <sup>127</sup>I(μ<sup>-</sup>, ν), (μ<sup>-</sup>, nν), (μ<sup>-</sup>, 2nν), (μ<sup>-</sup>, 3nν), (μ<sup>-</sup>, 4nν), (μ<sup>-</sup>, 5nν), (μ<sup>-</sup>, 6nν), E at rest; <sup>197</sup>Au(μ<sup>-</sup>, nν), (μ<sup>-</sup>, 3nν), E at rest; <sup>209</sup>Bi(μ<sup>-</sup>, nν), (μ<sup>-</sup>, 2nν), (μ<sup>-</sup>, 3nν), (μ<sup>-</sup>, 4nν), (μ<sup>-</sup>, 5nν), E at rest; measured Eγ, Iγ, X-ray spectra. JOUR PRVCA 75 045501

**A=205**

- <sup>205</sup>Pb    2006ARZX    NUCLEAR REACTIONS <sup>27</sup>Al(n, α), E=14 MeV; <sup>144</sup>Sm, <sup>206,208</sup>Pb(n, 2n), E=14 MeV; measured isomer production σ. REPT JAEA-Conf 2006-009,P89,Arakita
- 2007C007    RADIOACTIVITY <sup>209</sup>Po(α); measured decay rates from standard source; deduced possible error in previously published T<sub>1/2</sub>. JOUR ARISE 65 728
- 2007D002    NUCLEAR REACTIONS <sup>204</sup>Pb(n, γ), E=0.001-440 keV; measured capture σ; deduced resonance parameters. JOUR PRVCA 75 015806
- 2007ME09    NUCLEAR REACTIONS <sup>127</sup>I(μ<sup>-</sup>, ν), (μ<sup>-</sup>, nν), (μ<sup>-</sup>, 2nν), (μ<sup>-</sup>, 3nν), (μ<sup>-</sup>, 4nν), (μ<sup>-</sup>, 5nν), (μ<sup>-</sup>, 6nν), E at rest; <sup>197</sup>Au(μ<sup>-</sup>, nν), (μ<sup>-</sup>, 3nν), E at rest; <sup>209</sup>Bi(μ<sup>-</sup>, nν), (μ<sup>-</sup>, 2nν), (μ<sup>-</sup>, 3nν), (μ<sup>-</sup>, 4nν), (μ<sup>-</sup>, 5nν), E at rest; measured Eγ, Iγ, X-ray spectra. JOUR PRVCA 75 045501



KEYNUMBERS AND KEYWORDS

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**A=206**

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| $^{206}\text{Pb}$ | 2007B022 | RADIOACTIVITY $^{210}\text{Po}(\alpha)$ ; measured $E\alpha$ , $E\gamma$ , $\alpha\gamma$ -coinc. Deduced differential bremsstrahlung emission probability. JOUR PRLTA 99 022505   |
|                   | 2007B024 | NUCLEAR REACTIONS $^{206}\text{Pb}(n, n')$ , $(n, \gamma)$ , $E=1-620$ keV; measured $E_n$ , $E\gamma$ , and yields. Deduced resonance parameters. JOUR PRVCA 76 014605  |
|                   | 2007B0ZZ | RADIOACTIVITY $^{210}\text{Po}(\alpha)$ ; measured $E\gamma$ , $I\gamma$ , $\alpha\gamma$ -coinc for bremsstrahlung photons. Deduced differential emission probability and angular correlations PREPRINT arXiv:0706.2109v1 [nucl-ex]   |
|                   | 2007MA58 | NUCLEAR REACTIONS $^{27}\text{Al}$ , $^{127}\text{I}$ , $^{206,207,208}\text{Pb}(n, n'\gamma)$ , $E$ not give; $^{10}\text{B}(\alpha, p\gamma)$ , $E=2.27$ MeV; $^9\text{Be}(\alpha, n\gamma)$ , $E=2.27$ MeV; measured yields. JOUR PRVCA 76 022801   |
|                   | 2007ME09 | NUCLEAR REACTIONS $^{127}\text{I}(\mu^-, \nu)$ , $(\mu^-, n\nu)$ , $(\mu^-, 2n\nu)$ , $(\mu^-, 3n\nu)$ , $(\mu^-, 4n\nu)$ , $(\mu^-, 5n\nu)$ , $(\mu^-, 6n\nu)$ , $E$ at rest; $^{197}\text{Au}(\mu^-, n\nu)$ , $(\mu^-, 3n\nu)$ , $E$ at rest; $^{209}\text{Bi}(\mu^-, n\nu)$ , $(\mu^-, 2n\nu)$ , $(\mu^-, 3n\nu)$ , $(\mu^-, 4n\nu)$ , $(\mu^-, 5n\nu)$ , $E$ at rest; measured $E\gamma$ , $I\gamma$ , X-ray spectra. JOUR PRVCA 75 045501 |
|                   | 2007RA22 | RADIOACTIVITY $^{210}\text{Po}(\alpha)$ ; measured $E\alpha$ , $I\alpha$ , $T_{1/2}$ as a function of temperature by implanting Po ions in cooled metallic copper. JOUR ZAANE 32 51  |
| $^{206}\text{Fr}$ | 2007HA29 | NUCLEAR REACTIONS $^{169}\text{Tm}(^{40}\text{Ar}, 3n)$ , $E=170$ MeV; $^{208}\text{Pb}(^{40}\text{Ar}, 3n)$ , $E=199$ MeV; $^{238}\text{U}(^{22}\text{Ne}, 5n)$ , $E=105.9-120.9$ MeV; $^{248}\text{Cm}(^{18}\text{O}, 5n)$ , $E=94.4$ MeV; measured $E\alpha$ , $I\alpha$ , superheavy element production yields using a gas filled recoil separator. JOUR ZDDNE 45 81   |

**A=207**

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|-------------------|----------|---|
| $^{207}\text{Tl}$ | 2006MAZU | RADIOACTIVITY $^{207}\text{Tl}(\beta^-)$ ; measured decay constant for bound-state beta decay. Schottky analysis. REPT GSI 2006-1,P143,Maier  |
| $^{207}\text{Pb}$ | 2006ARZX | NUCLEAR REACTIONS $^{27}\text{Al}(n, \alpha)$ , $E=14$ MeV; $^{144}\text{Sm}$ , $^{206,208}\text{Pb}(n, 2n)$ , $E=14$ MeV; measured isomer production $\sigma$ . REPT JAEA-Conf 2006-009,P89,Arakita  |
|                   | 2006MAZU | RADIOACTIVITY $^{207}\text{Tl}(\beta^-)$ ; measured decay constant for bound-state beta decay. Schottky analysis. REPT GSI 2006-1,P143,Maier  |
|                   | 2007B024 | NUCLEAR REACTIONS $^{206}\text{Pb}(n, n')$ , $(n, \gamma)$ , $E=1-620$ keV; measured $E_n$ , $E\gamma$ , and yields. Deduced resonance parameters. JOUR PRVCA 76 014605   |
|                   | 2007D018 | NUCLEAR REACTIONS $^{206}\text{Pb}(n, \gamma)$ , $E<1$ MeV; measured $E\gamma$ , $I\gamma$ ; $^{207}\text{Pb}$ deduced levels, $J$ , $\pi$ , resonance parameters, reaction cross sections. CERN n_TOF facility. JOUR PRVCA 76 045805   |
|                   | 2007D0ZY | NUCLEAR REACTIONS $^{206}\text{Pb}(n, \gamma)$ , $E=0.001-600$ keV; measured $E\gamma$ , $I\gamma$ , yields. Deduced resonance parameters and maxwellian averaged cross sections. PREPRINT arXiv:0707.3679v1 [nucl-ex]  |
|                   | 2007HU02 | NUCLEAR REACTIONS $^{90}\text{Zr}$ , $^{116}\text{Sn}$ , $^{208}\text{Pb}(\alpha, \alpha')$ , $(\alpha, n\alpha)$ , $E=200$ MeV; measured $E\gamma$ , $E\alpha$ , $E_n$ , $\sigma(E, \theta)$ . $^{90}\text{Zr}$ , $^{116}\text{Sn}$ , $^{208}\text{Pb}$ deduced isoscalar GDR neutron decay features. JOUR PRVCA 75 014606 |

**A=207 (continued)**

- 2007HU16 NUCLEAR REACTIONS  $^{90}\text{Zr}$ ,  $^{116}\text{Sn}$ ,  $^{208}\text{Pb}(\alpha, \alpha'n)$ , E=200 MeV; measured measured  $\sigma$ , angular distributions. Deduced ISGDR direct-decay branching ratios. JOUR APOBB 38 1479
- 2007HU20 NUCLEAR REACTIONS  $^{90}\text{Zr}$ ,  $^{116}\text{Sn}$ ,  $^{208}\text{Pb}(\alpha, \alpha'n)$ , E=200 MeV; measured  $\sigma$  and angular distributions.  $^{90}\text{Zr}$ ,  $^{116}\text{Sn}$ ,  $^{208}\text{Pb}$  deduced branching ratios for direct and statistical neutron decay of isoscalar giant dipole resonance. JOUR PANUE 70 1407
- 2007MA58 NUCLEAR REACTIONS  $^{27}\text{Al}$ ,  $^{127}\text{I}$ ,  $^{206,207,208}\text{Pb}(n, n'\gamma)$ , E not give;  $^{10}\text{B}(\alpha, p\gamma)$ , E=2.27 MeV;  $^9\text{Be}(\alpha, n\gamma)$ , E=2.27 MeV; measured yields. JOUR PRVCA 76 022801
- 2007ME09 NUCLEAR REACTIONS  $^{127}\text{I}(\mu^-, \nu)$ ,  $(\mu^-, n\nu)$ ,  $(\mu^-, 2n\nu)$ ,  $(\mu^-, 3n\nu)$ ,  $(\mu^-, 4n\nu)$ ,  $(\mu^-, 5n\nu)$ ,  $(\mu^-, 6n\nu)$ , E at rest;  $^{197}\text{Au}(\mu^-, n\nu)$ ,  $(\mu^-, 3n\nu)$ , E at rest;  $^{209}\text{Bi}(\mu^-, n\nu)$ ,  $(\mu^-, 2n\nu)$ ,  $(\mu^-, 3n\nu)$ ,  $(\mu^-, 4n\nu)$ ,  $(\mu^-, 5n\nu)$ , E at rest; measured  $E\gamma$ ,  $I\gamma$ , X-ray spectra. JOUR PRVCA 75 045501
- 2007W006 NUCLEAR REACTIONS  $^{90}\text{Zr}$ ,  $^{116}\text{Sn}$ ,  $^{208}\text{Pb}(\alpha, \alpha')$ ,  $(\alpha, n\alpha)$ , E=200 MeV; measured  $E\gamma$ ,  $E\alpha$ ,  $E_n$ ,  $\sigma(E, \theta)$ , excitation energy spectra.  $^{90}\text{Zr}$ ,  $^{116}\text{Sn}$ ,  $^{208}\text{Pb}$  deduced isoscalar GDR neutron decay features.  $^{140}\text{Ce}(\alpha, \alpha\gamma)$ , E=136 MeV; measured  $E\gamma$ ,  $E\alpha$ .  $^{140}\text{Ce}$  deduced E1 strength distribution. JOUR NUPAB 788 27c

**A=208**

- $^{208}\text{Pb}$  2007BL10 NUCLEAR REACTIONS  $^{12}\text{C}$ ,  $^{208}\text{Pb}(n, n)$ , E=96 MeV; Fe, Pb, U(n, pX), (n, dX), (n, tX), E=96 MeV; measured  $\sigma(\theta)$ .  $^{181}\text{Ta}$ , W,  $^{197}\text{Au}$ , Pb,  $^{208}\text{Pb}(n, F)$ , E=20-200 MeV; measured fission  $\sigma$ . Cu(n, X) $^{56}\text{Co}$ , E=50-180 MeV; measured  $\sigma$ . JOUR PRAMC 68 269
- 2007G0ZV NUCLEAR REACTIONS  $^{208}\text{Pb}(^{23}\text{Al}, p^{22}\text{Mg})$ , E=48.4 MeV / nucleon; measured particle energies, emission angles,  $E\gamma$ ,  $I\gamma$ , (particle) $\gamma$ -coinc.  $\sigma$ .  $^{22}\text{Mg}(p, \gamma)$ ; deduced reaction rate. REPT RIKEN-NC-NP-14,Gomi
- 2007HE01 NUCLEAR REACTIONS  $^{207}\text{Pb}(d, p)$ ,  $E^*=5.2-5.7$  MeV; measured  $E_p$ ,  $\sigma(\theta)$ .  $^{208}\text{Pb}$  deduced  $0^-$  states level energies, configuration, spectroscopic factors, mixing strength. JOUR PRVCA 75 024312
- 2007HEZZ NUCLEAR REACTIONS  $^{207}\text{Pb}(d, p)$ ,  $E^*=5.2-5.7$  MeV; measured  $E_p$ ,  $\sigma(\theta)$ .  $^{208}\text{Pb}$  deduced  $0^-$  states level energies, spectroscopic factors, mixing strength. PREPRINT Heusler,1/23/2007
- 2007HU02 NUCLEAR REACTIONS  $^{90}\text{Zr}$ ,  $^{116}\text{Sn}$ ,  $^{208}\text{Pb}(\alpha, \alpha')$ ,  $(\alpha, n\alpha)$ , E=200 MeV; measured  $E\gamma$ ,  $E\alpha$ ,  $E_n$ ,  $\sigma(E, \theta)$ .  $^{90}\text{Zr}$ ,  $^{116}\text{Sn}$ ,  $^{208}\text{Pb}$  deduced isoscalar GDR neutron decay features. JOUR PRVCA 75 014606
- 2007HU20 NUCLEAR REACTIONS  $^{90}\text{Zr}$ ,  $^{116}\text{Sn}$ ,  $^{208}\text{Pb}(\alpha, \alpha'n)$ , E=200 MeV; measured  $\sigma$  and angular distributions.  $^{90}\text{Zr}$ ,  $^{116}\text{Sn}$ ,  $^{208}\text{Pb}$  deduced branching ratios for direct and statistical neutron decay of isoscalar giant dipole resonance. JOUR PANUE 70 1407

A=208 (*continued*)

- 2007KL05 NUCLEAR REACTIONS Be( $^{238}\text{U}$ , X), E=550 MeV / nucleon; measured fragment yields.  $^{12}\text{C}$ ,  $^{208}\text{Pb}$ ( $^{129}\text{Sn}$ , X), ( $^{130}\text{Sn}$ , X), ( $^{131}\text{Sn}$ , X), ( $^{132}\text{Sn}$ , X), ( $^{133}\text{Sn}$ , X), E $\approx$  500 MeV / nucleon; measured En, E $\gamma$ , n $\gamma$ -coin; deduced electromagnetic dissociation  $\sigma$ (E).  $^{129,130,131,132,133}\text{Sn}$  deduced dipole strength distributions, B(E1), pygmy and giant dipole resonance parameters. Comparison with RPA calculations.  $^{40,44,48}\text{Ca}$ ,  $^{116,124}\text{Sn}$ ,  $^{138}\text{Ba}$ ,  $^{140}\text{Ce}$ ,  $^{142}\text{Nd}$ ,  $^{144}\text{Sm}$ ,  $^{208}\text{Pb}$ ( $\gamma$ ,  $\gamma'$ ), E not given; analyzed E $\gamma$ , I $\gamma$ .  $^{40,44,48}\text{Ca}$ ,  $^{116,124}\text{Sn}$ ,  $^{138}\text{Ba}$ ,  $^{140}\text{Ce}$ ,  $^{142}\text{Nd}$ ,  $^{144}\text{Sm}$ ,  $^{208}\text{Pb}$  deduced B(E1). JOUR NUPAB 788 145c
- 2007KLZZ NUCLEAR REACTIONS  $^{208}\text{Pb}$ ,  $^{209}\text{Bi}$ (p-bar, X), E at 106 MeV / c; measured X-ray spectra from decay of antiprotonic atoms.  $^{208}\text{Pb}$ ,  $^{209}\text{Bi}$  deduced neutron density distributions, radii. PREPRINT nucl-ex/0702016,2/9/2007
- 2007KUZY NUCLEAR REACTIONS  $^{208}\text{Pb}$ ( $^{152}\text{Sm}$ ,  $^{152}\text{Sm}'$ ), E=652 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coinc.  $^{152}\text{Sm}$ , deduced level energies, J,  $\pi$ , B(E2). PREPRINT arXiv.0706.4129v2 [nucl-ex]
- 2007LI43 NUCLEAR REACTIONS  $^{152}\text{Sm}$ ( $^{16}\text{O}$ ,  $^{16}\text{O}$ ), ( $^{16}\text{O}$ ,  $^{16}\text{O}'$ ), ( $^{16}\text{O}$ , X), E(cm)=45-70 MeV; measured  $\sigma$ ( $\theta=156$ ,  $\theta=160$ ,  $\theta=164$ ), evaporation residue  $\sigma$  for boron, carbon, nitrogen and oxygen isotopes; deduced reaction mechanism features.  $^{208}\text{Pb}$ ( $^6\text{Li}$ ,  $^6\text{Li}$ ), ( $^6\text{Li}$ ,  $^6\text{Li}'$ ), ( $^6\text{Li}$ , X), ( $^7\text{Li}$ ,  $^7\text{Li}$ ), ( $^7\text{Li}$ ,  $^7\text{Li}'$ ), ( $^7\text{Li}$ , X), E(cm)=18-42 MeV;  $^{90,96}\text{Zr}$ ( $^{32}\text{S}$ , X), E(cm)=60-95 MeV; measured  $\sigma$ ; deduced reaction mechanism features.  $^{208}\text{Pb}$ ( $^6\text{Li}$ ,  $^6\text{Li}$ ), E(cm)=26-40 MeV; measured fusion  $\sigma$ ; deduced reaction mechanism features. Comparison with coupled-channels model. JOUR NUPAB 787 281c
- 2007MA58 NUCLEAR REACTIONS  $^{27}\text{Al}$ ,  $^{127}\text{I}$ ,  $^{206,207,208}\text{Pb}$ (n, n' $\gamma$ ), E not give;  $^{10}\text{B}$ ( $\alpha$ , p $\gamma$ ), E=2.27 MeV;  $^9\text{Be}$ ( $\alpha$ , n $\gamma$ ), E=2.27 MeV; measured yields. JOUR PRVCA 76 022801
- 2007ME09 NUCLEAR REACTIONS  $^{127}\text{I}$ ( $\mu^-$ ,  $\nu$ ), ( $\mu^-$ ,  $n\nu$ ), ( $\mu^-$ ,  $2n\nu$ ), ( $\mu^-$ ,  $3n\nu$ ), ( $\mu^-$ ,  $4n\nu$ ), ( $\mu^-$ ,  $5n\nu$ ), ( $\mu^-$ ,  $6n\nu$ ), E at rest;  $^{197}\text{Au}$ ( $\mu^-$ ,  $n\nu$ ), ( $\mu^-$ ,  $3n\nu$ ), E at rest;  $^{209}\text{Bi}$ ( $\mu^-$ ,  $n\nu$ ), ( $\mu^-$ ,  $2n\nu$ ), ( $\mu^-$ ,  $3n\nu$ ), ( $\mu^-$ ,  $4n\nu$ ), ( $\mu^-$ ,  $5n\nu$ ), E at rest; measured E $\gamma$ , I $\gamma$ , X-ray spectra. JOUR PRVCA 75 045501
- 2007SU18 NUCLEAR REACTIONS  $^{208}\text{Pb}$ ( $^{11}\text{Be}$ ,  $^{11}\text{Be}'$ ), E=38.6 MeV / nucleon; measured Coulomb excitation  $\sigma$ .  $^{11}\text{Be}$  deduced B(E1) strengths; calculated  $\sigma$ . Extended continuum discretized coupled channels method. Comparison with previous data. JOUR PYLBB 650 124
- 2007W006 NUCLEAR REACTIONS  $^{90}\text{Zr}$ ,  $^{116}\text{Sn}$ ,  $^{208}\text{Pb}$ ( $\alpha$ ,  $\alpha'$ ), ( $\alpha$ , n $\alpha$ ), E=200 MeV; measured E $\gamma$ , E $\alpha$ , En,  $\sigma$ (E,  $\theta$ ), excitation energy spectra.  $^{90}\text{Zr}$ ,  $^{116}\text{Sn}$ ,  $^{208}\text{Pb}$  deduced isoscalar GDR neutron decay features.  $^{140}\text{Ce}$ ( $\alpha$ ,  $\alpha\gamma$ ), E=136 MeV; measured E $\gamma$ , E $\alpha$ .  $^{140}\text{Ce}$  deduced E1 strength distribution. JOUR NUPAB 788 27c
- $^{208}\text{Bi}$  2007ZE06 NUCLEAR REACTIONS  $^{12,13}\text{C}$ ,  $^{18}\text{O}$ ,  $^{26}\text{Mg}$ ,  $^{58}\text{Ni}$ ,  $^{60}\text{Ni}$ ,  $^{90}\text{Zr}$ ,  $^{118}\text{Sn}$ ,  $^{208}\text{Pb}$ ( $^3\text{He}$ , t), E=420 MeV; measured triton spectra and cross sections. Deduced B(GT). JOUR PRLTA 99 202501
- 2007ZEZZ NUCLEAR REACTIONS  $^{12,13}\text{C}$ ,  $^{18}\text{O}$ ,  $^{26}\text{Mg}$ ,  $^{58}\text{Ni}$ ,  $^{60}\text{Ni}$ ,  $^{90}\text{Zr}$ ,  $^{118}\text{Sn}$ ,  $^{208}\text{Pb}$ ( $^3\text{He}$ , t), E=420 MeV; measured triton spectra and cross sections. Deduced B(GT). PREPRINT arXiv:0707.2840v1 [nucl-ex]

**A=209**

- <sup>209</sup>Bi 2006M042 NUCLEAR MOMENTS <sup>209</sup>Bi; measured hfs. Resonance ionization spectroscopy. JOUR HYIND 171 135
- 2007KLZZ NUCLEAR REACTIONS <sup>208</sup>Pb, <sup>209</sup>Bi(p-bar, X), E at 106 MeV / c; measured X-ray spectra from decay of antiprotonic atoms. <sup>208</sup>Pb, <sup>209</sup>Bi deduced neutron density distributions, radii. PREPRINT nucl-ex/0702016,2/9/2007
- 2007K023 NUCLEAR REACTIONS <sup>209</sup>Bi(<sup>6</sup>He, 2n $\alpha$ ), E=22.5 MeV; measured En, E $\alpha$ , n $\alpha$ -coin,  $\sigma(\theta)$ ; deduced reaction mechanism features. <sup>6</sup>He level deduced B(E2). JOUR PRVCA 75 031302
- <sup>209</sup>Po 2007C007 RADIOACTIVITY <sup>209</sup>Po( $\alpha$ ); measured decay rates from standard source; deduced possible error in previously published T<sub>1/2</sub>. JOUR ARISE 65 728
- <sup>209</sup>At 2007TA17 RADIOACTIVITY <sup>209</sup>Rn(EC); measured E $\gamma$ , I $\gamma$ , polarization and relaxation. JOUR NIMAE 579 472
- <sup>209</sup>Rn 2006KU26 RADIOACTIVITY <sup>213,213m,214,214m</sup>Ra( $\alpha$ ) [from <sup>170</sup>Er(<sup>48</sup>Ca, xn), (<sup>50</sup>Ti, 3n) and subsequent decay]; measured E $\gamma$ , E $\alpha$ ,  $\alpha\gamma$ -,  $\gamma\gamma$ -coin, T<sub>1/2</sub>. <sup>209,210</sup>Rn deduced levels, J,  $\pi$ , ICC. Velocity filter. JOUR ZAANE 30 551
- 2007TA17 RADIOACTIVITY <sup>209</sup>Rn(EC); measured E $\gamma$ , I $\gamma$ , polarization and relaxation. JOUR NIMAE 579 472

**A=210**

- <sup>210</sup>Pb 2007ES06 NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>6</sup>He,  $\alpha$ ), E=14, 16, 18, 22 MeV; measured E $\alpha$ , I $\alpha$ ,  $\sigma(E, \theta)$ ; deduced reaction mechanism features using DWBA analysis. JOUR NUPAB 792 2
- <sup>210</sup>Bi 2007BIZY NUCLEAR REACTIONS <sup>209</sup>Bi(n,  $\gamma$ ), E=spectrum; measured cross section. CONF Geneva(NIC-IX) 077
- 2007ST08 NUCLEAR REACTIONS <sup>209</sup>Bi(n,  $\gamma$ )<sup>210m</sup>Bi, E=thermal; measured cross section using accelerator mass spectrometry. JOUR NIMBE 259 739
- <sup>210</sup>Po 2006PE37 NUCLEAR REACTIONS <sup>197</sup>Au(<sup>6</sup>He, 2n), (<sup>6</sup>He, 3n), (<sup>6</sup>He, 4n), (<sup>6</sup>He, 5n), (<sup>6</sup>He, 6n), (<sup>6</sup>He, 7n), E  $\approx$  10-70 MeV; <sup>206</sup>Pb(<sup>6</sup>He, 2n), E  $\approx$  10-26 MeV; <sup>197</sup>Au(<sup>6</sup>He, X)<sup>196</sup>Au / <sup>198</sup>Au / <sup>199</sup>Au, E  $\approx$  10-70 MeV; measured excitation functions. Comparison with model predictions. JOUR PPNLA 3 362
- 2007B022 RADIOACTIVITY <sup>210</sup>Po( $\alpha$ ); measured E $\alpha$ , E $\gamma$ ,  $\alpha\gamma$ -coinc. Deduced differential bremsstrahlung emission probability. JOUR PRLTA 99 022505
- 2007B0ZZ RADIOACTIVITY <sup>210</sup>Po( $\alpha$ ); measured E $\gamma$ , I $\gamma$ ,  $\alpha\gamma$ -coinc for bremsstrahlung photons. Deduced differential emission probability.and angular correlations PREPRINT arXiv:0706.2109v1 [nucl-ex]
- 2007PE02 NUCLEAR REACTIONS <sup>197</sup>Au(<sup>6</sup>He, 2n), (<sup>6</sup>He, 3n), (<sup>6</sup>He, 4n), (<sup>6</sup>He, 5n), (<sup>6</sup>He, 6n), (<sup>6</sup>He, 7n), E  $\approx$  10-70 MeV; <sup>206</sup>Pb(<sup>6</sup>He, 2n), E  $\approx$  10-26 MeV; <sup>197</sup>Au(<sup>6</sup>He, X)<sup>194</sup>Au / <sup>196</sup>Au / <sup>198</sup>Au, E  $\approx$  10-70 MeV; measured excitation functions. Comparison with model predictions. JOUR ZAANE 31 185

KEYNUMBERS AND KEYWORDS

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**A=210 (continued)**

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|-------------------|----------|---|
| 2007RA22          |          | RADIOACTIVITY $^{210}\text{Po}(\alpha)$ ; measured $E\alpha$ , $I\alpha$ , $T_{1/2}$ as a function of temperature by implanting Po ions in cooled metallic copper. JOUR ZAANE 32 51   |
| $^{210}\text{Rn}$ | 2006KU26 | RADIOACTIVITY $^{213,213m,214,214m}\text{Ra}(\alpha)$ [from $^{170}\text{Er}(^{48}\text{Ca}, xn)$ , ( $^{50}\text{Ti}, 3n$ ) and subsequent decay]; measured $E\gamma$ , $E\alpha$ , $\alpha\gamma$ -, $\gamma\gamma$ -coin, $T_{1/2}$ . $^{209,210}\text{Rn}$ deduced levels, J, $\pi$ , ICC. Velocity filter. JOUR ZAANE 30 551 |

**A=211**

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|-------------------|----------|--|
| $^{211}\text{Po}$ | 2006GA40 | NUCLEAR REACTIONS $^{209}\text{Bi}(^6\text{Li}, X)^{212}\text{At}$ , $E=28-48$ MeV; $^{209}\text{Bi}(^7\text{Li}, X)^{212}\text{At} / ^{211}\text{Po}$ , $E=26-52$ MeV; $^{208}\text{Pb}(^9\text{Be}, X)^{211}\text{Po}$ , $E=36-51$ MeV; measured ground and isomeric state $\sigma$ ; deduced angular momentum distribution, related reaction mechanism features. JOUR PRVCA 74 064615 |
| $^{211}\text{Th}$ | 2007MA57 | ATOMIC MASSES $^{211,213,217,218}\text{Th}$ ; measured masses and relative abundances using inductively coupled plasma sector field mass spectrometry. JOUR PRVCA 76 021303  |

**A=212**

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|-------------------|----------|--|
| $^{212}\text{At}$ | 2006GA40 | NUCLEAR REACTIONS $^{209}\text{Bi}(^6\text{Li}, X)^{212}\text{At}$ , $E=28-48$ MeV; $^{209}\text{Bi}(^7\text{Li}, X)^{212}\text{At} / ^{211}\text{Po}$ , $E=26-52$ MeV; $^{208}\text{Pb}(^9\text{Be}, X)^{211}\text{Po}$ , $E=36-51$ MeV; measured ground and isomeric state $\sigma$ ; deduced angular momentum distribution, related reaction mechanism features. JOUR PRVCA 74 064615 |
|-------------------|----------|--|

**A=213**

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|-------------------|----------|---|
| $^{213}\text{Ra}$ | 2006KU26 | RADIOACTIVITY $^{213,213m,214,214m}\text{Ra}(\alpha)$ [from $^{170}\text{Er}(^{48}\text{Ca}, xn)$ , ( $^{50}\text{Ti}, 3n$ ) and subsequent decay]; measured $E\gamma$ , $E\alpha$ , $\alpha\gamma$ -, $\gamma\gamma$ -coin, $T_{1/2}$ . $^{209,210}\text{Rn}$ deduced levels, J, $\pi$ , ICC. Velocity filter. JOUR ZAANE 30 551 |
| $^{213}\text{Th}$ | 2007MA57 | ATOMIC MASSES $^{211,213,217,218}\text{Th}$ ; measured masses and relative abundances using inductively coupled plasma sector field mass spectrometry. JOUR PRVCA 76 021303   |

**A=214**

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|-------------------|----------|---|
| $^{214}\text{Ra}$ | 2006KU26 | RADIOACTIVITY $^{213,213m,214,214m}\text{Ra}(\alpha)$ [from $^{170}\text{Er}(^{48}\text{Ca}, xn)$ , ( $^{50}\text{Ti}, 3n$ ) and subsequent decay]; measured $E\gamma$ , $E\alpha$ , $\alpha\gamma$ -, $\gamma\gamma$ -coin, $T_{1/2}$ . $^{209,210}\text{Rn}$ deduced levels, J, $\pi$ , ICC. Velocity filter. JOUR ZAANE 30 551 |
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KEYNUMBERS AND KEYWORDS

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**A=214 (continued)**

<sup>214</sup>Th 2007LE14 RADIOACTIVITY <sup>218,219</sup>U( $\alpha$ ) [from <sup>182</sup>W(<sup>40</sup>Ar, X)]; measured E $\alpha$ , T<sub>1/2</sub>. Deduced hindrance factors and reduced widths. JOUR PRVCA 75 054307

**A=215**

<sup>215</sup>Rn 2007DEZV NUCLEAR REACTIONS <sup>207</sup>Pb(<sup>18</sup>O, 2n2 $\alpha$ ), E=93 MeV; measured E $\gamma$ , E $\alpha$ ,  $\gamma\gamma\alpha$  coincidences. <sup>215</sup>Rn deduced high spin states, octupole instability. GASP, ISIS arrays. CONF Iguazu(Nuclear Physics and Applications) Proc,P450,Debray

<sup>215</sup>Th 2007LE14 RADIOACTIVITY <sup>218,219</sup>U( $\alpha$ ) [from <sup>182</sup>W(<sup>40</sup>Ar, X)]; measured E $\alpha$ , T<sub>1/2</sub>. Deduced hindrance factors and reduced widths. JOUR PRVCA 75 054307

**A=216**

No references found

**A=217**

<sup>217</sup>At 2007JE07 RADIOACTIVITY <sup>221</sup>Fr( $\alpha$ ); measured E $\alpha$ , I $\alpha$ , T<sub>1/2</sub> implanted in a number of materials. JOUR ZAANE 32 31

<sup>217</sup>Th 2007MA57 ATOMIC MASSES <sup>211,213,217,218</sup>Th; measured masses and relative abundances using inductively coupled plasma sector field mass spectrometry. JOUR PRVCA 76 021303

**A=218**

<sup>218</sup>Th 2007MA57 ATOMIC MASSES <sup>211,213,217,218</sup>Th; measured masses and relative abundances using inductively coupled plasma sector field mass spectrometry. JOUR PRVCA 76 021303

<sup>218</sup>U 2007LE14 RADIOACTIVITY <sup>218,219</sup>U( $\alpha$ ) [from <sup>182</sup>W(<sup>40</sup>Ar, X)]; measured E $\alpha$ , T<sub>1/2</sub>. Deduced hindrance factors and reduced widths. JOUR PRVCA 75 054307

**A=219**

<sup>219</sup>Th 2007RE14 NUCLEAR REACTIONS <sup>198</sup>Pt(<sup>26</sup>Mg, X)<sup>224</sup>Th, E=128 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coinc, (particle) $\gamma$ -coinc. <sup>219,220</sup>Th deduced levels, J,  $\pi$ . JOUR APOBB 38 1547

<sup>219</sup>U 2007LE14 RADIOACTIVITY <sup>218,219</sup>U( $\alpha$ ) [from <sup>182</sup>W(<sup>40</sup>Ar, X)]; measured E $\alpha$ , T<sub>1/2</sub>. Deduced hindrance factors and reduced widths. JOUR PRVCA 75 054307

KEYNUMBERS AND KEYWORDS

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**A=220**

<sup>220</sup>Th 2007RE14 NUCLEAR REACTIONS <sup>198</sup>Pt(<sup>26</sup>Mg, X)<sup>224</sup>Th, E=128 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coinc, (particle) $\gamma$ -coinc. <sup>219,220</sup>Th deduced levels, J,  $\pi$ . JOUR APOBB 38 1547

**A=221**

<sup>221</sup>Fr 2007JE07 RADIOACTIVITY <sup>221</sup>Fr( $\alpha$ ); measured E $\alpha$ , I $\alpha$ , T<sub>1/2</sub> implanted in a number of materials. JOUR ZAANE 32 31

**A=222**

<sup>222</sup>Rn 2007YA02 RADIOACTIVITY <sup>51</sup>Cr, <sup>55</sup>Fe, <sup>67</sup>Ga, <sup>111</sup>In, <sup>133</sup>Ba, <sup>201</sup>Tl(EC); <sup>99m</sup>Tc(IT), ( $\beta^-$ ); <sup>131</sup>I, <sup>133</sup>Xe, <sup>137</sup>Cs( $\beta^-$ ); <sup>226</sup>Ra( $\alpha$ ); measured K X-ray intensity ratios following decay and photoionization. JOUR NIMBE 254 182

**A=223**

No references found

**A=224**

<sup>224</sup>Th 2007RE14 NUCLEAR REACTIONS <sup>198</sup>Pt(<sup>26</sup>Mg, X)<sup>224</sup>Th, E=128 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coinc, (particle) $\gamma$ -coinc. <sup>219,220</sup>Th deduced levels, J,  $\pi$ . JOUR APOBB 38 1547

**A=225**

<sup>225</sup>Ra 2007GU05 NUCLEAR MOMENTS <sup>225</sup>Ra; measured hfs. Laser trapping. JOUR PRLTA 98 093001

**A=226**

<sup>226</sup>Ra 2007YA02 RADIOACTIVITY <sup>51</sup>Cr, <sup>55</sup>Fe, <sup>67</sup>Ga, <sup>111</sup>In, <sup>133</sup>Ba, <sup>201</sup>Tl(EC); <sup>99m</sup>Tc(IT), ( $\beta^-$ ); <sup>131</sup>I, <sup>133</sup>Xe, <sup>137</sup>Cs( $\beta^-$ ); <sup>226</sup>Ra( $\alpha$ ); measured K X-ray intensity ratios following decay and photoionization. JOUR NIMBE 254 182

**A=227**

No references found



**A=228**

No references found

**A=229**

<sup>229</sup>Th      2007BE16      RADIOACTIVITY <sup>233</sup>U( $\alpha$ ); measured E $\gamma$ , I $\gamma$ . <sup>229</sup>Th deduced excited state energy. JOUR PRLTA 98 142501

**A=230**

No references found

**A=231**

<sup>231</sup>Th      2007SH15      NUCLEAR REACTIONS <sup>232</sup>Th(n,  $\gamma$ ), (n, 2n), <sup>197</sup>Au(n,  $\gamma$ ), (n,  $\alpha$ ), (n, 2n), (n, 4n), (n, 6n), (n, 7n), (n, 8n), (n, 6np), <sup>59</sup>Co(n,  $\alpha$ ), (n, 2n), (n, 4n), (n, 5n), <sup>181</sup>Ta(n,  $\gamma$ ), (n, 2n), (n, 4n), (n, 5n), (n, np), E=spectrum; measured spectrum-averaged  $\sigma$ . Spallation neutrons from proton-induced reaction. JOUR PRAMC 68 307

**A=232**

No references found

**A=233**

<sup>233</sup>Th      2007NE11      NUCLEAR REACTIONS <sup>232</sup>Th(n,  $\gamma$ ), E=1.3-1.8 MeV; measured E $\gamma$ , I $\gamma$  from fission fragments. Deduced fission fragment yields. JOUR ZAANE 32 165

                 2007NE11      RADIOACTIVITY <sup>233</sup>Th; measured E $\gamma$ , I $\gamma$  from fission fragments. Deduced evidence for existence of hyperdeformed octupole shapes. JOUR ZAANE 32 165

                 2007SH15      NUCLEAR REACTIONS <sup>232</sup>Th(n,  $\gamma$ ), (n, 2n), <sup>197</sup>Au(n,  $\gamma$ ), (n,  $\alpha$ ), (n, 2n), (n, 4n), (n, 6n), (n, 7n), (n, 8n), (n, 6np), <sup>59</sup>Co(n,  $\alpha$ ), (n, 2n), (n, 4n), (n, 5n), <sup>181</sup>Ta(n,  $\gamma$ ), (n, 2n), (n, 4n), (n, 5n), (n, np), E=spectrum; measured spectrum-averaged  $\sigma$ . Spallation neutrons from proton-induced reaction. JOUR PRAMC 68 307

<sup>233</sup>Pa      2006HA53      RADIOACTIVITY <sup>233</sup>Pa, <sup>238</sup>Np( $\beta^-$ ); measured E $\gamma$ , I $\gamma$ ; deduced  $\gamma$ -ray emission probabilities. JOUR JNSTA 43 1289

<sup>233</sup>U      2006HA53      RADIOACTIVITY <sup>233</sup>Pa, <sup>238</sup>Np( $\beta^-$ ); measured E $\gamma$ , I $\gamma$ ; deduced  $\gamma$ -ray emission probabilities. JOUR JNSTA 43 1289

                 2007BE16      RADIOACTIVITY <sup>233</sup>U( $\alpha$ ); measured E $\gamma$ , I $\gamma$ . <sup>229</sup>Th deduced excited state energy. JOUR PRLTA 98 142501

KEYNUMBERS AND KEYWORDS

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**A=234**

No references found

**A=235**

<sup>235</sup>U      20070B02      NUCLEAR REACTIONS <sup>234</sup>U(n,  $\gamma$ )<sup>235</sup>U, E=0.95, 1.27 MeV; measured delayed fission fragment spectra from the decay of the shape isomer, isomeric fission T<sub>1/2</sub> and cross section. JOUR PRLTA 99 042502

**A=236**

<sup>236</sup>Th      2007IS09      NUCLEAR REACTIONS <sup>238</sup>U(<sup>18</sup>O, <sup>20</sup>Ne), E=200 MeV; <sup>244</sup>Pu(<sup>16</sup>O, <sup>20</sup>Ne), E=162 MeV; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coinc. <sup>236</sup>Th, <sup>242</sup>U deduced levels, J,  $\pi$ . JOUR PRVCA 76 011303

            2007XU04      NUCLEAR REACTIONS <sup>238</sup>U(<sup>18</sup>O, <sup>20</sup>Ne), E=60 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ . JOUR JRNCD 272 227

<sup>236</sup>U      2007AH05      RADIOACTIVITY <sup>244</sup>Cm, <sup>240</sup>Pu( $\alpha$ ); measured E $\alpha$ , I $\alpha$  and T<sub>1/2</sub>. JOUR NIMAE 579 458

            2007BR16      NUCLEAR REACTIONS <sup>235</sup>U, <sup>252</sup>Cf(n,  $\gamma$ ), (n, X), E < 18 eV; measured E $\gamma$ , I $\gamma$ , fission fragments. Deduced cross sections. JOUR NIMBE 261 986

**A=237**

No references found

**A=238**

<sup>238</sup>Np      2006HA53      RADIOACTIVITY <sup>233</sup>Pa, <sup>238</sup>Np( $\beta^-$ ); measured E $\gamma$ , I $\gamma$ ; deduced  $\gamma$ -ray emission probabilities. JOUR JNSTA 43 1289

            2006HA53      NUCLEAR REACTIONS <sup>237</sup>Np(n,  $\gamma$ ), E=thermal; analyzed decay data; deduced thermal capture  $\sigma$ . JOUR JNSTA 43 1289

<sup>238</sup>Pu      2006HA53      RADIOACTIVITY <sup>233</sup>Pa, <sup>238</sup>Np( $\beta^-$ ); measured E $\gamma$ , I $\gamma$ ; deduced  $\gamma$ -ray emission probabilities. JOUR JNSTA 43 1289

<sup>238</sup>Cm      2006QIZZ      NUCLEAR REACTIONS <sup>232</sup>Th(<sup>12</sup>C, 4n), (<sup>12</sup>C, 6n), E=70, 74 MeV; measured delayed E $\alpha$ . <sup>239</sup>Cm deduced upper limit on  $\alpha$ -decay branching ratio. REPT GSI 2006-1,P197,Qin

**A=239**

<sup>239</sup>Np      2007AG02      RADIOACTIVITY <sup>243</sup>Am( $\alpha$ ); measured E $\alpha$ , T<sub>1/2</sub>. Relative activity method. JOUR NIMAE 571 663

KEYNUMBERS AND KEYWORDS

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**A=239 (continued)**

<sup>239</sup>Cm    2006QIZZ    NUCLEAR REACTIONS <sup>232</sup>Th(<sup>12</sup>C, 4n), (<sup>12</sup>C, 6n), E=70, 74 MeV; measured delayed E $\alpha$ . <sup>239</sup>Cm deduced upper limit on  $\alpha$ -decay branching ratio. REPT GSI 2006-1,P197,Qin

**A=240**

<sup>240</sup>U    2006AG15    RADIOACTIVITY <sup>244</sup>Pu( $\alpha$ ); measured E $\alpha$ , T<sub>1/2</sub>. Thermal ionization mass spectrometry, relative activity method. JOUR RAACA 94 397

2007IS09    NUCLEAR REACTIONS <sup>238</sup>U(<sup>18</sup>O, <sup>20</sup>Ne), E=200 MeV; <sup>244</sup>Pu(<sup>16</sup>O, <sup>20</sup>Ne), E=162 MeV; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coinc. <sup>236</sup>Th, <sup>242</sup>U deduced levels, J,  $\pi$ . JOUR PRVCA 76 011303

2007IS11    NUCLEAR REACTIONS U(<sup>18</sup>O, <sup>16</sup>O)<sup>240</sup>U, E=200 MeV; <sup>244</sup>Pu(<sup>18</sup>O, <sup>16</sup>O)<sup>246</sup>Pu, E=200 MeV; <sup>248</sup>Cm(<sup>18</sup>O, <sup>16</sup>O), e=200 MeV; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coinc. <sup>240</sup>U, <sup>246</sup>Pu, <sup>250</sup>Cm deduced levels, J,  $\pi$ , moments of inertia. JOUR PANUE 70 1457

<sup>240</sup>Pu    2007AH05    RADIOACTIVITY <sup>244</sup>Cm, <sup>240</sup>Pu( $\alpha$ ); measured E $\alpha$ , I $\alpha$  and T<sub>1/2</sub>. JOUR NIMAE 579 458

2007BU19    RADIOACTIVITY <sup>240</sup>Pu(SF); measured E $\gamma$ , I $\gamma$  from fission products. Deduced fission product yields. JOUR AENGA 102 232

<sup>240</sup>Am    2007PE07    NUCLEAR REACTIONS <sup>241</sup>Am(n, 2n), E=8.8-11.1 MeV; measured  $\sigma$ . Activation method. Comparison with model predictions, previous results. JOUR JRNC D 272 223

<sup>240</sup>Cm    2006QIZZ    NUCLEAR REACTIONS <sup>232</sup>Th(<sup>12</sup>C, 4n), (<sup>12</sup>C, 6n), E=70, 74 MeV; measured delayed E $\alpha$ . <sup>239</sup>Cm deduced upper limit on  $\alpha$ -decay branching ratio. REPT GSI 2006-1,P197,Qin

<sup>240</sup>Cf    2007HI04    NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>32</sup>S, X)<sup>240</sup>Cf, <sup>206</sup>Pb(<sup>34</sup>S, X)<sup>240</sup>Cf, <sup>204</sup>Pb(<sup>36</sup>S, X)<sup>240</sup>Cf, E=152-212 MeV; measured  $\sigma$ , fusion excitation functions, fission anisotropies. Deduced fusion barrier energy systematics. JOUR PRVCA 75 054603

**A=241**

No references found

**A=242**

<sup>242</sup>U    2007IS09    NUCLEAR REACTIONS <sup>238</sup>U(<sup>18</sup>O, <sup>20</sup>Ne), E=200 MeV; <sup>244</sup>Pu(<sup>16</sup>O, <sup>20</sup>Ne), E=162 MeV; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coinc. <sup>236</sup>Th, <sup>242</sup>U deduced levels, J,  $\pi$ . JOUR PRVCA 76 011303

<sup>242</sup>Pu    2007K001    RADIOACTIVITY <sup>246</sup>Cm, <sup>250</sup>Cf( $\alpha$ ); measured E $\alpha$ , I $\alpha$ , T<sub>1/2</sub>; deduced  $\alpha$ -emission probabilities. Comparison with previous results. JOUR ARISE 65 335

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KEYNUMBERS AND KEYWORDS

**A=243**

- <sup>243</sup>Am 2007AG02 RADIOACTIVITY <sup>243</sup>Am( $\alpha$ ); measured  $E\alpha$ ,  $T_{1/2}$ . Relative activity method. JOUR NIMAE 571 663
- <sup>243</sup>Cf 2006HE27 RADIOACTIVITY <sup>255</sup>Rf, <sup>251</sup>No, <sup>247</sup>Fm( $\alpha$ ) [from <sup>207</sup>Pb(<sup>50</sup>Ti, 2n), <sup>206</sup>Pb(<sup>48</sup>Ca, 3n), and subsequent decay]; measured  $E\gamma$ ,  $E\alpha$ ,  $\alpha\gamma$ -,  $\gamma\gamma$ -coin. <sup>243</sup>Cf, <sup>247</sup>Fm, <sup>251</sup>No deduced levels, J,  $\pi$ , ICC, isomeric states features. Velocity filter. JOUR ZAANE 30 561

**A=244**

- <sup>244</sup>Pu 2006AG15 RADIOACTIVITY <sup>244</sup>Pu( $\alpha$ ); measured  $E\alpha$ ,  $T_{1/2}$ . Thermal ionization mass spectrometry, relative activity method. JOUR RAACA 94 397
- <sup>244</sup>Am 2006OH06 NUCLEAR REACTIONS <sup>243</sup>Am(n,  $\gamma$ ), E=thermal; measured effective capture  $\sigma$ . Activation technique, comparison with previous results. JOUR JNSTA 43 1441
- <sup>244</sup>Cm 2007AH05 RADIOACTIVITY <sup>244</sup>Cm, <sup>240</sup>Pu( $\alpha$ ); measured  $E\alpha$ ,  $I\alpha$  and  $T_{1/2}$ . JOUR NIMAE 579 458

**A=245**

- <sup>245</sup>Fm 2007HA29 NUCLEAR REACTIONS <sup>169</sup>Tm(<sup>40</sup>Ar, 3n), E=170 MeV; <sup>208</sup>Pb(<sup>40</sup>Ar, 3n), E=199 MeV; <sup>238</sup>U(<sup>22</sup>Ne, 5n), E=105.9-120.9 MeV; <sup>248</sup>Cm(<sup>18</sup>O, 5n), E=94.4 MeV; measured  $E\alpha$ ,  $I\alpha$ , superheavy element production yields using a gas filled recoil separator. JOUR ZDDNE 45 81

**A=246**

- <sup>246</sup>Pu 2007IS11 NUCLEAR REACTIONS U(<sup>18</sup>O, <sup>16</sup>O)<sup>240</sup>U, E=200 MeV; <sup>244</sup>Pu(<sup>18</sup>O, <sup>16</sup>O)<sup>246</sup>Pu, E=200 MeV; <sup>248</sup>Cm(<sup>18</sup>O, <sup>16</sup>O), e=200 MeV; measured  $E\gamma$ ,  $I\gamma$ , (particle) $\gamma$ -coinc. <sup>240</sup>U, <sup>246</sup>Pu, <sup>250</sup>Cm deduced levels, J,  $\pi$ , moments of inertia. JOUR PANUE 70 1457
- <sup>246</sup>Cm 2007K001 RADIOACTIVITY <sup>246</sup>Cm, <sup>250</sup>Cf( $\alpha$ ); measured  $E\alpha$ ,  $I\alpha$ ,  $T_{1/2}$ ; deduced  $\alpha$ -emission probabilities. Comparison with previous results. JOUR ARISE 65 335

**A=247**

- <sup>247</sup>Fm 2006HE27 RADIOACTIVITY <sup>255</sup>Rf, <sup>251</sup>No, <sup>247</sup>Fm( $\alpha$ ) [from <sup>207</sup>Pb(<sup>50</sup>Ti, 2n), <sup>206</sup>Pb(<sup>48</sup>Ca, 3n), and subsequent decay]; measured  $E\gamma$ ,  $E\alpha$ ,  $\alpha\gamma$ -,  $\gamma\gamma$ -coin. <sup>243</sup>Cf, <sup>247</sup>Fm, <sup>251</sup>No deduced levels, J,  $\pi$ , ICC, isomeric states features. Velocity filter. JOUR ZAANE 30 561

KEYNUMBERS AND KEYWORDS

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**A=248**

<sup>248</sup>Cm    2006PI14    RADIOACTIVITY <sup>248</sup>Cm(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>105</sup>Mo deduced levels, J,  $\pi$ , rotational bands, configurations, triaxial deformation. Eurogam2 array. JOUR PRVCA 74 064304

**A=249**

<sup>249</sup>Bk    2007SE08    RADIOACTIVITY <sup>253</sup>Es( $\alpha$ ); measured T<sub>1/2</sub> at low temperatures. JOUR PRVCA 76 024304

<sup>249</sup>Fm    2007L011    RADIOACTIVITY <sup>253</sup>No( $\alpha$ ) [from <sup>207</sup>Bi(<sup>48</sup>Ca, 2n) and subsequent decay]; measured E $\alpha$ , E $\gamma$ , E(ce),  $\alpha\gamma$ -,  $\alpha$ (ce)-coin, T<sub>1/2</sub>. <sup>253</sup>No deduced levels, J,  $\pi$ , configurations. JOUR ZAANE 32 245

**A=250**

<sup>250</sup>Cm    2006IS07    NUCLEAR REACTIONS <sup>248</sup>Cm(<sup>18</sup>O, <sup>16</sup>O), E=162 MeV; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin. <sup>250</sup>Cm deduced levels, J,  $\pi$ . JOUR JUPSA 75 043201

          2007IS11    NUCLEAR REACTIONS U(<sup>18</sup>O, <sup>16</sup>O)<sup>240</sup>U, E=200 MeV; <sup>244</sup>Pu(<sup>18</sup>O, <sup>16</sup>O)<sup>246</sup>Pu, E=200 MeV; <sup>248</sup>Cm(<sup>18</sup>O, <sup>16</sup>O), e=200 MeV; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coinc. <sup>240</sup>U, <sup>246</sup>Pu, <sup>250</sup>Cm deduced levels, J,  $\pi$ , moments of inertia. JOUR PANUE 70 1457

<sup>250</sup>Bk    2006GU32    RADIOACTIVITY <sup>254</sup>Es( $\alpha$ ); <sup>250</sup>Bk( $\beta^-$ ); measured E $\alpha$ , E $\gamma$ , angular distribution for decay from oriented sources. JOUR BRSPÉ 70 282

<sup>250</sup>Cf    2006GU32    RADIOACTIVITY <sup>254</sup>Es( $\alpha$ ); <sup>250</sup>Bk( $\beta^-$ ); measured E $\alpha$ , E $\gamma$ , angular distribution for decay from oriented sources. JOUR BRSPÉ 70 282

          2007K001    RADIOACTIVITY <sup>246</sup>Cm, <sup>250</sup>Cf( $\alpha$ ); measured E $\alpha$ , I $\alpha$ , T<sub>1/2</sub>; deduced  $\alpha$ -emission probabilities. Comparison with previous results. JOUR ARISE 65 335

**A=251**

<sup>251</sup>Md    2007CH26    NUCLEAR REACTIONS <sup>205</sup>Tl(<sup>48</sup>Ca, 2n), E=211, 214, 217 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, (recoil) $\gamma$ -coin; deduced  $\sigma$ . <sup>251</sup>Md deduced high-spin levels, J,  $\pi$ , configurations. Jurogam array, recoil-decay tagging. JOUR PRLTA 98 132503

<sup>251</sup>No    2006HE27    RADIOACTIVITY <sup>255</sup>Rf, <sup>251</sup>No, <sup>247</sup>Fm( $\alpha$ ) [from <sup>207</sup>Pb(<sup>50</sup>Ti, 2n), <sup>206</sup>Pb(<sup>48</sup>Ca, 3n), and subsequent decay]; measured E $\gamma$ , E $\alpha$ ,  $\alpha\gamma$ -,  $\gamma\gamma$ -coin. <sup>243</sup>Cf, <sup>247</sup>Fm, <sup>251</sup>No deduced levels, J,  $\pi$ , ICC, isomeric states features. Velocity filter. JOUR ZAANE 30 561

          2007OG05    NUCLEAR REACTIONS <sup>208</sup>Pb, <sup>209</sup>Bi(<sup>48</sup>Ca, n), (<sup>50</sup>Ti, n), (<sup>54</sup>Cr, n), (<sup>58</sup>Fe, n), (<sup>62</sup>Ni, n), (<sup>64</sup>Ni, n), (<sup>70</sup>Zn, n), E not given; analyzed  $\sigma$ . <sup>233</sup>U, <sup>237</sup>Np, <sup>244</sup>Pu, <sup>248</sup>Cm, <sup>249</sup>Cf(<sup>22</sup>Ne, 4n), (<sup>26</sup>Mg, 4n), (<sup>36</sup>S, 5n), (<sup>48</sup>Ca, 4n), E not given; measured E $\alpha$ ,  $\alpha\alpha$ -coin following residual nucleus decay; analyzed  $\sigma$ ; deduced reaction mechanism features, hindrance and survivability. Comparison with other data. JOUR NUPAB 787 343c

KEYNUMBERS AND KEYWORDS

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**A=252**

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| $^{252}\text{Cf}$ | 2007DI09 | RADIOACTIVITY $^{252}\text{Cf}(\text{SF})$ ; measured $E_\gamma$ , $I_\gamma$ , $\gamma\gamma$ -coin using the Gammasphere array. $^{108}\text{Mo}$ deduced level energies, J, $\pi$ . JOUR CPLEE 24 1517  |
|                   | 2007G021 | RADIOACTIVITY $^{252}\text{Cf}(\text{SF})$ ; measured $E_\gamma$ , $I_\gamma$ , $\gamma\gamma$ -coin, fission fragment and light charged particle yields. $^{108,110,112}\text{Ru}$ deduced levels, J, $\pi$ . $^{104}\text{Zr}$ , $^{106}\text{Mo}$ , $^{148}\text{Ce}(\text{IT})$ ; measured $T_{1/2}$ , B(E2). Gammasphere array. JOUR NUPAB 787 231c |
|                   | 2007GR08 | RADIOACTIVITY $^{252}\text{Cf}(\text{SF})$ ; measured fission fragment energy distributions using a hybrid semiconductor detector. JOUR NIMAE 574 472  |
|                   | 2007LI21 | RADIOACTIVITY $^{252}\text{Cf}(\text{SF})$ ; measured $E_\gamma$ , $I_\gamma$ , $\gamma\gamma$ -coin. $^{137,138}\text{Cs}$ deduced high-spin levels, J, $\pi$ , configurations. Gammasphere array, comparison with shell model predictions. JOUR PRVCA 75 044314  |
|                   | 2007PRZZ | RADIOACTIVITY $^{252}\text{Cf}(\text{SF})$ ; measured neutron energies and correlations. CONF Khanty-Mansiysk (Exotic Nuclei) Proc, P179   |
|                   | 2007ZH24 | RADIOACTIVITY $^{252}\text{Cf}(\text{SF})$ ; measured $E_\gamma$ , $I_\gamma$ , $\gamma\gamma$ -coin with Gammasphere. A=99-114; deduced new band structures and significant extensions of previously known bands. JOUR PPNPD 59 329   |
| $^{252}\text{No}$ | 2006SUZW | NUCLEAR REACTIONS $^{206,208}\text{Pb}(^{48}\text{Ca}, 2n)$ , E not given; measured prompt and delayed $E_\gamma$ , $I_\gamma$ , (X-ray) $\gamma$ -coin. $^{252}\text{No}$ deduced levels, J, $\pi$ , isomeric states $T_{1/2}$ . REPT GSI 2006-1,P194,Sulignano   |
|                   | 2007SU19 | NUCLEAR REACTIONS $^{206}\text{Pb}(^{48}\text{Ca}, 2n)^{252}\text{No}$ , E(cm)=173.6-177 MeV; measured $E_\gamma$ , $I_\gamma$ , $\gamma\gamma$ -coin. $^{252}\text{No}$ deduced levels, J, $\pi$ . JOUR ZAANE 33 327  |

**A=253**

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|-------------------|----------|--|
| $^{253}\text{Cf}$ | 2007BR16 | NUCLEAR REACTIONS $^{235}\text{U}$ , $^{252}\text{Cf}(n, \gamma)$ , (n, X), E < 18 eV; measured $E_\gamma$ , $I_\gamma$ , fission fragments. Deduced cross sections. JOUR NIMBE 261 986  |
| $^{253}\text{Es}$ | 2007SE08 | RADIOACTIVITY $^{253}\text{Es}(\alpha)$ ; measured $T_{1/2}$ at low temperatures. JOUR PRVCA 76 024304   |
| $^{253}\text{No}$ | 2007L011 | NUCLEAR REACTIONS $^{207}\text{Pb}(^{48}\text{Ca}, 2n)$ , E~217 MeV; measured $E_\alpha$ , $E_\gamma$ , E(ce) with the Gabriela detector. $^{253}\text{No}$ deduced levels, J, $\pi$ , configurations. JOUR ZAANE 32 245   |
|                   | 2007L011 | RADIOACTIVITY $^{253}\text{No}(\alpha)$ [from $^{207}\text{Bi}(^{48}\text{Ca}, 2n)$ and subsequent decay]; measured $E_\alpha$ , $E_\gamma$ , E(ce), $\alpha\gamma$ -, $\alpha(\text{ce})$ -coin, $T_{1/2}$ . $^{253}\text{No}$ deduced levels, J, $\pi$ , configurations. JOUR ZAANE 32 245 |

**A=254**

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|-------------------|----------|--|
| $^{254}\text{Es}$ | 2006GU32 | RADIOACTIVITY $^{254}\text{Es}(\alpha)$ ; $^{250}\text{Bk}(\beta^-)$ ; measured $E_\alpha$ , $E_\gamma$ , angular distribution for decay from oriented sources. JOUR BRSPPE 70 282   |
| $^{254}\text{No}$ | 2006SUZW | NUCLEAR REACTIONS $^{206,208}\text{Pb}(^{48}\text{Ca}, 2n)$ , E not given; measured prompt and delayed $E_\gamma$ , $I_\gamma$ , (X-ray) $\gamma$ -coin. $^{252}\text{No}$ deduced levels, J, $\pi$ , isomeric states $T_{1/2}$ . REPT GSI 2006-1,P194,Sulignano |

**A=255**

- <sup>255</sup>No    2007HA29    NUCLEAR REACTIONS <sup>169</sup>Tm(<sup>40</sup>Ar, 3n), E=170 MeV; <sup>208</sup>Pb(<sup>40</sup>Ar, 3n), E=199 MeV; <sup>238</sup>U(<sup>22</sup>Ne, 5n), E=105.9-120.9 MeV; <sup>248</sup>Cm(<sup>18</sup>O, 5n), E=94.4 MeV; measured E $\alpha$ , I $\alpha$ , superheavy element production yields using a gas filled recoil separator. JOUR ZDDNE 45 81
- 2007OG05    NUCLEAR REACTIONS <sup>208</sup>Pb, <sup>209</sup>Bi(<sup>48</sup>Ca, n), (<sup>50</sup>Ti, n), (<sup>54</sup>Cr, n), (<sup>58</sup>Fe, n), (<sup>62</sup>Ni, n), (<sup>64</sup>Ni, n), (<sup>70</sup>Zn, n), E not given; analyzed  $\sigma$ . <sup>233</sup>U, <sup>237</sup>Np, <sup>244</sup>Pu, <sup>248</sup>Cm, <sup>249</sup>Cf(<sup>22</sup>Ne, 4n), (<sup>26</sup>Mg, 4n), (<sup>36</sup>S, 5n), (<sup>48</sup>Ca, 4n), E not given; measured E $\alpha$ ,  $\alpha\alpha$ -coin following residual nucleus decay; analyzed  $\sigma$ ; deduced reaction mechanism features, hindrance and survivability. Comparison with other data. JOUR NUPAB 787 343c
- <sup>255</sup>Lr    2007OG05    NUCLEAR REACTIONS <sup>208</sup>Pb, <sup>209</sup>Bi(<sup>48</sup>Ca, n), (<sup>50</sup>Ti, n), (<sup>54</sup>Cr, n), (<sup>58</sup>Fe, n), (<sup>62</sup>Ni, n), (<sup>64</sup>Ni, n), (<sup>70</sup>Zn, n), E not given; analyzed  $\sigma$ . <sup>233</sup>U, <sup>237</sup>Np, <sup>244</sup>Pu, <sup>248</sup>Cm, <sup>249</sup>Cf(<sup>22</sup>Ne, 4n), (<sup>26</sup>Mg, 4n), (<sup>36</sup>S, 5n), (<sup>48</sup>Ca, 4n), E not given; measured E $\alpha$ ,  $\alpha\alpha$ -coin following residual nucleus decay; analyzed  $\sigma$ ; deduced reaction mechanism features, hindrance and survivability. Comparison with other data. JOUR NUPAB 787 343c
- <sup>255</sup>Rf    2006HE27    RADIOACTIVITY <sup>255</sup>Rf, <sup>251</sup>No, <sup>247</sup>Fm( $\alpha$ ) [from <sup>207</sup>Pb(<sup>50</sup>Ti, 2n), <sup>206</sup>Pb(<sup>48</sup>Ca, 3n), and subsequent decay]; measured E $\gamma$ , E $\alpha$ ,  $\alpha\gamma$ -,  $\gamma\gamma$ -coin. <sup>243</sup>Cf, <sup>247</sup>Fm, <sup>251</sup>No deduced levels, J,  $\pi$ , ICC, isomeric states features. Velocity filter. JOUR ZAANE 30 561
- 2007OG05    NUCLEAR REACTIONS <sup>208</sup>Pb, <sup>209</sup>Bi(<sup>48</sup>Ca, n), (<sup>50</sup>Ti, n), (<sup>54</sup>Cr, n), (<sup>58</sup>Fe, n), (<sup>62</sup>Ni, n), (<sup>64</sup>Ni, n), (<sup>70</sup>Zn, n), E not given; analyzed  $\sigma$ . <sup>233</sup>U, <sup>237</sup>Np, <sup>244</sup>Pu, <sup>248</sup>Cm, <sup>249</sup>Cf(<sup>22</sup>Ne, 4n), (<sup>26</sup>Mg, 4n), (<sup>36</sup>S, 5n), (<sup>48</sup>Ca, 4n), E not given; measured E $\alpha$ ,  $\alpha\alpha$ -coin following residual nucleus decay; analyzed  $\sigma$ ; deduced reaction mechanism features, hindrance and survivability. Comparison with other data. JOUR NUPAB 787 343c

**A=256**

- <sup>256</sup>Lr    2007OG05    NUCLEAR REACTIONS <sup>208</sup>Pb, <sup>209</sup>Bi(<sup>48</sup>Ca, n), (<sup>50</sup>Ti, n), (<sup>54</sup>Cr, n), (<sup>58</sup>Fe, n), (<sup>62</sup>Ni, n), (<sup>64</sup>Ni, n), (<sup>70</sup>Zn, n), E not given; analyzed  $\sigma$ . <sup>233</sup>U, <sup>237</sup>Np, <sup>244</sup>Pu, <sup>248</sup>Cm, <sup>249</sup>Cf(<sup>22</sup>Ne, 4n), (<sup>26</sup>Mg, 4n), (<sup>36</sup>S, 5n), (<sup>48</sup>Ca, 4n), E not given; measured E $\alpha$ ,  $\alpha\alpha$ -coin following residual nucleus decay; analyzed  $\sigma$ ; deduced reaction mechanism features, hindrance and survivability. Comparison with other data. JOUR NUPAB 787 343c

**A=257**

- <sup>257</sup>Rf    2007OG05    NUCLEAR REACTIONS <sup>208</sup>Pb, <sup>209</sup>Bi(<sup>48</sup>Ca, n), (<sup>50</sup>Ti, n), (<sup>54</sup>Cr, n), (<sup>58</sup>Fe, n), (<sup>62</sup>Ni, n), (<sup>64</sup>Ni, n), (<sup>70</sup>Zn, n), E not given; analyzed  $\sigma$ . <sup>233</sup>U, <sup>237</sup>Np, <sup>244</sup>Pu, <sup>248</sup>Cm, <sup>249</sup>Cf(<sup>22</sup>Ne, 4n), (<sup>26</sup>Mg, 4n), (<sup>36</sup>S, 5n), (<sup>48</sup>Ca, 4n), E not given; measured E $\alpha$ ,  $\alpha\alpha$ -coin following residual nucleus decay; analyzed  $\sigma$ ; deduced reaction mechanism features, hindrance and survivability. Comparison with other data. JOUR NUPAB 787 343c



KEYNUMBERS AND KEYWORDS

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**A=258**

<sup>258</sup>Db      20070G05      NUCLEAR REACTIONS <sup>208</sup>Pb, <sup>209</sup>Bi(<sup>48</sup>Ca, n), (<sup>50</sup>Ti, n), (<sup>54</sup>Cr, n), (<sup>58</sup>Fe, n), (<sup>62</sup>Ni, n), (<sup>64</sup>Ni, n), (<sup>70</sup>Zn, n), E not given; analyzed  $\sigma$ . <sup>233</sup>U, <sup>237</sup>Np, <sup>244</sup>Pu, <sup>248</sup>Cm, <sup>249</sup>Cf(<sup>22</sup>Ne, 4n), (<sup>26</sup>Mg, 4n), (<sup>36</sup>S, 5n), (<sup>48</sup>Ca, 4n), E not given; measured  $E\alpha$ ,  $\alpha\alpha$ -coin following residual nucleus decay; analyzed  $\sigma$ ; deduced reaction mechanism features, hindrance and survivability. Comparison with other data. JOUR NUPAB 787 343c

**A=259**

<sup>259</sup>Db      20070G05      NUCLEAR REACTIONS <sup>208</sup>Pb, <sup>209</sup>Bi(<sup>48</sup>Ca, n), (<sup>50</sup>Ti, n), (<sup>54</sup>Cr, n), (<sup>58</sup>Fe, n), (<sup>62</sup>Ni, n), (<sup>64</sup>Ni, n), (<sup>70</sup>Zn, n), E not given; analyzed  $\sigma$ . <sup>233</sup>U, <sup>237</sup>Np, <sup>244</sup>Pu, <sup>248</sup>Cm, <sup>249</sup>Cf(<sup>22</sup>Ne, 4n), (<sup>26</sup>Mg, 4n), (<sup>36</sup>S, 5n), (<sup>48</sup>Ca, 4n), E not given; measured  $E\alpha$ ,  $\alpha\alpha$ -coin following residual nucleus decay; analyzed  $\sigma$ ; deduced reaction mechanism features, hindrance and survivability. Comparison with other data. JOUR NUPAB 787 343c

**A=260**

No references found

**A=261**

<sup>261</sup>Rf      2007HA29      NUCLEAR REACTIONS <sup>169</sup>Tm(<sup>40</sup>Ar, 3n), E=170 MeV; <sup>208</sup>Pb(<sup>40</sup>Ar, 3n), E=199 MeV; <sup>238</sup>U(<sup>22</sup>Ne, 5n), E=105.9-120.9 MeV; <sup>248</sup>Cm(<sup>18</sup>O, 5n), E=94.4 MeV; measured  $E\alpha$ ,  $I\alpha$ , superheavy element production yields using a gas filled recoil separator. JOUR ZDDNE 45 81

2007M009      RADIOACTIVITY <sup>277</sup>112, <sup>273</sup>Ds, <sup>269</sup>Hs, <sup>265</sup>Sg( $\alpha$ ) [from <sup>208</sup>Pb(<sup>70</sup>Zn, n) and subsequent decay]; measured  $E\alpha$ ,  $T_{1/2}$ . Gas-filled separator. JOUR JUPSA 76 043201

2007M0ZZ      RADIOACTIVITY <sup>277</sup>112, <sup>273</sup>Ds, <sup>269</sup>Hs, <sup>265</sup>Sg( $\alpha$ ) [from <sup>208</sup>Pb(<sup>70</sup>Zn, n) and subsequent decay]; measured  $E\alpha$ ,  $T_{1/2}$ . REPT RIKEN-NC-NP-2, Morita

<sup>261</sup>Sg      20070G05      NUCLEAR REACTIONS <sup>208</sup>Pb, <sup>209</sup>Bi(<sup>48</sup>Ca, n), (<sup>50</sup>Ti, n), (<sup>54</sup>Cr, n), (<sup>58</sup>Fe, n), (<sup>62</sup>Ni, n), (<sup>64</sup>Ni, n), (<sup>70</sup>Zn, n), E not given; analyzed  $\sigma$ . <sup>233</sup>U, <sup>237</sup>Np, <sup>244</sup>Pu, <sup>248</sup>Cm, <sup>249</sup>Cf(<sup>22</sup>Ne, 4n), (<sup>26</sup>Mg, 4n), (<sup>36</sup>S, 5n), (<sup>48</sup>Ca, 4n), E not given; measured  $E\alpha$ ,  $\alpha\alpha$ -coin following residual nucleus decay; analyzed  $\sigma$ ; deduced reaction mechanism features, hindrance and survivability. Comparison with other data. JOUR NUPAB 787 343c

2007ST12      NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>54</sup>Cr, X)<sup>261</sup>sg, e=4.70-5.17 MeV / nucleon; measured  $E\gamma$ , EX,  $E\alpha$ ,  $\alpha\gamma$ -coinc. <sup>261</sup>Sg deduced levels, J,  $\pi$ . JOUR APOBB 38 1561

KEYNUMBERS AND KEYWORDS

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**A=262**

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| $^{262}\text{Lr}$ | 20070G05 | RADIOACTIVITY $^{266,267,268}\text{Db}$ , $^{269,271}\text{Sg}$ , $^{270,272}\text{Bh}$ , $^{275}\text{Hs}$ , $^{274,275,276}\text{Mt}$ , $^{279,281}\text{Ds}$ , $^{278,279,280}\text{Rg}$ , $^{283,284,285}\text{112}$ , $^{280,281,282,283,284}\text{113}$ , $^{286,287,288,289}\text{114}$ , $^{287,288}\text{115}$ , $^{290,291,292,293}\text{116}$ , $^{294}\text{118}(\alpha)$ ; measured $E\alpha$ , $T_{1/2}$ . $^{267}\text{Rf}$ , $^{271}\text{Sg}$ , $^{279,281}\text{Ds}$ , $^{282,283,284,285}\text{112}$ , $^{286,288}\text{114}(\text{SF})$ ; measured $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c  |
| $^{262}\text{Rf}$ | 20070G05 | NUCLEAR REACTIONS $^{208}\text{Pb}$ , $^{209}\text{Bi}$ ( $^{48}\text{Ca}$ , n), ( $^{50}\text{Ti}$ , n), ( $^{54}\text{Cr}$ , n), ( $^{58}\text{Fe}$ , n), ( $^{62}\text{Ni}$ , n), ( $^{64}\text{Ni}$ , n), ( $^{70}\text{Zn}$ , n), E not given; analyzed $\sigma$ . $^{233}\text{U}$ , $^{237}\text{Np}$ , $^{244}\text{Pu}$ , $^{248}\text{Cm}$ , $^{249}\text{Cf}$ ( $^{22}\text{Ne}$ , 4n), ( $^{26}\text{Mg}$ , 4n), ( $^{36}\text{S}$ , 5n), ( $^{48}\text{Ca}$ , 4n), E not given; measured $E\alpha$ , $\alpha\alpha$ -coin following residual nucleus decay; analyzed $\sigma$ ; deduced reaction mechanism features, hindrance and survivability. Comparison with other data. JOUR NUPAB 787 343c |
| $^{262}\text{Db}$ | 2007MOZY | RADIOACTIVITY $^{278}\text{113}$ , $^{274}\text{Rg}$ , $^{270}\text{Mt}$ , $^{266}\text{Bh}(\alpha)$ [from $^{209}\text{Bi}$ ( $^{70}\text{Zn}$ , n) and subsequent decay]; measured $E\alpha$ , $T_{1/2}$ . REPT<br>RIKEN-NC-NP-3, Morita   |
| $^{262}\text{Bh}$ | 20070G05 | NUCLEAR REACTIONS $^{208}\text{Pb}$ , $^{209}\text{Bi}$ ( $^{48}\text{Ca}$ , n), ( $^{50}\text{Ti}$ , n), ( $^{54}\text{Cr}$ , n), ( $^{58}\text{Fe}$ , n), ( $^{62}\text{Ni}$ , n), ( $^{64}\text{Ni}$ , n), ( $^{70}\text{Zn}$ , n), E not given; analyzed $\sigma$ . $^{233}\text{U}$ , $^{237}\text{Np}$ , $^{244}\text{Pu}$ , $^{248}\text{Cm}$ , $^{249}\text{Cf}$ ( $^{22}\text{Ne}$ , 4n), ( $^{26}\text{Mg}$ , 4n), ( $^{36}\text{S}$ , 5n), ( $^{48}\text{Ca}$ , 4n), E not given; measured $E\alpha$ , $\alpha\alpha$ -coin following residual nucleus decay; analyzed $\sigma$ ; deduced reaction mechanism features, hindrance and survivability. Comparison with other data. JOUR NUPAB 787 343c |

**A=263**

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| $^{263}\text{Lr}$ | 20070G05 | RADIOACTIVITY $^{266,267,268}\text{Db}$ , $^{269,271}\text{Sg}$ , $^{270,272}\text{Bh}$ , $^{275}\text{Hs}$ , $^{274,275,276}\text{Mt}$ , $^{279,281}\text{Ds}$ , $^{278,279,280}\text{Rg}$ , $^{283,284,285}\text{112}$ , $^{280,281,282,283,284}\text{113}$ , $^{286,287,288,289}\text{114}$ , $^{287,288}\text{115}$ , $^{290,291,292,293}\text{116}$ , $^{294}\text{118}(\alpha)$ ; measured $E\alpha$ , $T_{1/2}$ . $^{267}\text{Rf}$ , $^{271}\text{Sg}$ , $^{279,281}\text{Ds}$ , $^{282,283,284,285}\text{112}$ , $^{286,288}\text{114}(\text{SF})$ ; measured $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c |
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**A=264**

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| $^{264}\text{Lr}$ | 20070G05 | RADIOACTIVITY $^{266,267,268}\text{Db}$ , $^{269,271}\text{Sg}$ , $^{270,272}\text{Bh}$ , $^{275}\text{Hs}$ , $^{274,275,276}\text{Mt}$ , $^{279,281}\text{Ds}$ , $^{278,279,280}\text{Rg}$ , $^{283,284,285}\text{112}$ , $^{280,281,282,283,284}\text{113}$ , $^{286,287,288,289}\text{114}$ , $^{287,288}\text{115}$ , $^{290,291,292,293}\text{116}$ , $^{294}\text{118}(\alpha)$ ; measured $E\alpha$ , $T_{1/2}$ . $^{267}\text{Rf}$ , $^{271}\text{Sg}$ , $^{279,281}\text{Ds}$ , $^{282,283,284,285}\text{112}$ , $^{286,288}\text{114}(\text{SF})$ ; measured $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c  |
| $^{264}\text{Hs}$ | 20070G05 | NUCLEAR REACTIONS $^{208}\text{Pb}$ , $^{209}\text{Bi}$ ( $^{48}\text{Ca}$ , n), ( $^{50}\text{Ti}$ , n), ( $^{54}\text{Cr}$ , n), ( $^{58}\text{Fe}$ , n), ( $^{62}\text{Ni}$ , n), ( $^{64}\text{Ni}$ , n), ( $^{70}\text{Zn}$ , n), E not given; analyzed $\sigma$ . $^{233}\text{U}$ , $^{237}\text{Np}$ , $^{244}\text{Pu}$ , $^{248}\text{Cm}$ , $^{249}\text{Cf}$ ( $^{22}\text{Ne}$ , 4n), ( $^{26}\text{Mg}$ , 4n), ( $^{36}\text{S}$ , 5n), ( $^{48}\text{Ca}$ , 4n), E not given; measured $E\alpha$ , $\alpha\alpha$ -coin following residual nucleus decay; analyzed $\sigma$ ; deduced reaction mechanism features, hindrance and survivability. Comparison with other data. JOUR NUPAB 787 343c |

KEYNUMBERS AND KEYWORDS

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**A=265**

$^{265}\text{Rf}$	20070G05	RADIOACTIVITY $^{266,267,268}\text{Db}$ , $^{269,271}\text{Sg}$ , $^{270,272}\text{Bh}$ , $^{275}\text{Hs}$ , $^{274,275,276}\text{Mt}$ , $^{279,281}\text{Ds}$ , $^{278,279,280}\text{Rg}$ , $^{283,284,285}\text{112}$ , $^{280,281,282,283,284}\text{113}$ , $^{286,287,288,289}\text{114}$ , $^{287,288}\text{115}$ , $^{290,291,292,293}\text{116}$ , $^{294}\text{118}(\alpha)$ ; measured $E\alpha$ , $T_{1/2}$ . $^{267}\text{Rf}$ , $^{271}\text{Sg}$ , $^{279,281}\text{Ds}$ , $^{282,283,284,285}\text{112}$ , $^{286,288}\text{114}(\text{SF})$ ; measured $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c
$^{265}\text{Sg}$	2007M009	RADIOACTIVITY $^{277}\text{112}$ , $^{273}\text{Ds}$ , $^{269}\text{Hs}$ , $^{265}\text{Sg}(\alpha)$ [from $^{208}\text{Pb}(\text{}^{70}\text{Zn}, \text{n})$ and subsequent decay]; measured $E\alpha$ , $T_{1/2}$ . Gas-filled separator. JOUR JUPSA 76 043201
	2007M0ZZ	RADIOACTIVITY $^{277}\text{112}$ , $^{273}\text{Ds}$ , $^{269}\text{Hs}$ , $^{265}\text{Sg}(\alpha)$ [from $^{208}\text{Pb}(\text{}^{70}\text{Zn}, \text{n})$ and subsequent decay]; measured $E\alpha$ , $T_{1/2}$ . REPT RIKEN-NC-NP-2,Morita
$^{265}\text{Hs}$	20070G05	NUCLEAR REACTIONS $^{208}\text{Pb}$ , $^{209}\text{Bi}(\text{}^{48}\text{Ca}, \text{n})$ , $(\text{}^{50}\text{Ti}, \text{n})$ , $(\text{}^{54}\text{Cr}, \text{n})$ , $(\text{}^{58}\text{Fe}, \text{n})$ , $(\text{}^{62}\text{Ni}, \text{n})$ , $(\text{}^{64}\text{Ni}, \text{n})$ , $(\text{}^{70}\text{Zn}, \text{n})$ , E not given; analyzed $\sigma$ . $^{233}\text{U}$ , $^{237}\text{Np}$ , $^{244}\text{Pu}$ , $^{248}\text{Cm}$ , $^{249}\text{Cf}(\text{}^{22}\text{Ne}, 4\text{n})$ , $(\text{}^{26}\text{Mg}, 4\text{n})$ , $(\text{}^{36}\text{S}, 5\text{n})$ , $(\text{}^{48}\text{Ca}, 4\text{n})$ , E not given; measured $E\alpha$ , $\alpha\alpha$ -coin following residual nucleus decay; analyzed $\sigma$ ; deduced reaction mechanism features, hindrance and survivability. Comparison with other data. JOUR NUPAB 787 343c

**A=266**

$^{266}\text{Db}$	20070G05	RADIOACTIVITY $^{266,267,268}\text{Db}$ , $^{269,271}\text{Sg}$ , $^{270,272}\text{Bh}$ , $^{275}\text{Hs}$ , $^{274,275,276}\text{Mt}$ , $^{279,281}\text{Ds}$ , $^{278,279,280}\text{Rg}$ , $^{283,284,285}\text{112}$ , $^{280,281,282,283,284}\text{113}$ , $^{286,287,288,289}\text{114}$ , $^{287,288}\text{115}$ , $^{290,291,292,293}\text{116}$ , $^{294}\text{118}(\alpha)$ ; measured $E\alpha$ , $T_{1/2}$ . $^{267}\text{Rf}$ , $^{271}\text{Sg}$ , $^{279,281}\text{Ds}$ , $^{282,283,284,285}\text{112}$ , $^{286,288}\text{114}(\text{SF})$ ; measured $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c
$^{266}\text{Sg}$	20070G05	NUCLEAR REACTIONS $^{208}\text{Pb}$ , $^{209}\text{Bi}(\text{}^{48}\text{Ca}, \text{n})$ , $(\text{}^{50}\text{Ti}, \text{n})$ , $(\text{}^{54}\text{Cr}, \text{n})$ , $(\text{}^{58}\text{Fe}, \text{n})$ , $(\text{}^{62}\text{Ni}, \text{n})$ , $(\text{}^{64}\text{Ni}, \text{n})$ , $(\text{}^{70}\text{Zn}, \text{n})$ , E not given; analyzed $\sigma$ . $^{233}\text{U}$ , $^{237}\text{Np}$ , $^{244}\text{Pu}$ , $^{248}\text{Cm}$ , $^{249}\text{Cf}(\text{}^{22}\text{Ne}, 4\text{n})$ , $(\text{}^{26}\text{Mg}, 4\text{n})$ , $(\text{}^{36}\text{S}, 5\text{n})$ , $(\text{}^{48}\text{Ca}, 4\text{n})$ , E not given; measured $E\alpha$ , $\alpha\alpha$ -coin following residual nucleus decay; analyzed $\sigma$ ; deduced reaction mechanism features, hindrance and survivability. Comparison with other data. JOUR NUPAB 787 343c
$^{266}\text{Bh}$	2007M0ZY	RADIOACTIVITY $^{278}\text{113}$ , $^{274}\text{Rg}$ , $^{270}\text{Mt}$ , $^{266}\text{Bh}(\alpha)$ [from $^{209}\text{Bi}(\text{}^{70}\text{Zn}, \text{n})$ and subsequent decay]; measured $E\alpha$ , $T_{1/2}$ . REPT RIKEN-NC-NP-3,Morita
$^{266}\text{Mt}$	20070G05	NUCLEAR REACTIONS $^{208}\text{Pb}$ , $^{209}\text{Bi}(\text{}^{48}\text{Ca}, \text{n})$ , $(\text{}^{50}\text{Ti}, \text{n})$ , $(\text{}^{54}\text{Cr}, \text{n})$ , $(\text{}^{58}\text{Fe}, \text{n})$ , $(\text{}^{62}\text{Ni}, \text{n})$ , $(\text{}^{64}\text{Ni}, \text{n})$ , $(\text{}^{70}\text{Zn}, \text{n})$ , E not given; analyzed $\sigma$ . $^{233}\text{U}$ , $^{237}\text{Np}$ , $^{244}\text{Pu}$ , $^{248}\text{Cm}$ , $^{249}\text{Cf}(\text{}^{22}\text{Ne}, 4\text{n})$ , $(\text{}^{26}\text{Mg}, 4\text{n})$ , $(\text{}^{36}\text{S}, 5\text{n})$ , $(\text{}^{48}\text{Ca}, 4\text{n})$ , E not given; measured $E\alpha$ , $\alpha\alpha$ -coin following residual nucleus decay; analyzed $\sigma$ ; deduced reaction mechanism features, hindrance and survivability. Comparison with other data. JOUR NUPAB 787 343c



KEYNUMBERS AND KEYWORDS

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**A=269 (continued)**

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| 2007MOZZ                   | RADIOACTIVITY $^{277}112$ , $^{273}\text{Ds}$ , $^{269}\text{Hs}$ , $^{265}\text{Sg}(\alpha)$ [from $^{208}\text{Pb}(^{70}\text{Zn}, n)$ and subsequent decay]; measured $E\alpha$ , $T_{1/2}$ . REPT<br>RIKEN-NC-NP-2, Morita  |
| $^{269}\text{Ds}$ 2007OG05 | NUCLEAR REACTIONS $^{208}\text{Pb}$ , $^{209}\text{Bi}(^{48}\text{Ca}, n)$ , $(^{50}\text{Ti}, n)$ , $(^{54}\text{Cr}, n)$ , $(^{58}\text{Fe}, n)$ , $(^{62}\text{Ni}, n)$ , $(^{64}\text{Ni}, n)$ , $(^{70}\text{Zn}, n)$ , E not given; analyzed $\sigma$ . $^{233}\text{U}$ , $^{237}\text{Np}$ , $^{244}\text{Pu}$ , $^{248}\text{Cm}$ , $^{249}\text{Cf}(^{22}\text{Ne}, 4n)$ , $(^{26}\text{Mg}, 4n)$ , $(^{36}\text{S}, 5n)$ , $(^{48}\text{Ca}, 4n)$ , E not given; measured $E\alpha$ , $\alpha\alpha$ -coin following residual nucleus decay; analyzed $\sigma$ ; deduced reaction mechanism features, hindrance and survivability. Comparison with other data. JOUR NUPAB 787 343c |

**A=270**

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| $^{270}\text{Bh}$ 2007OG05 | RADIOACTIVITY $^{266,267,268}\text{Db}$ , $^{269,271}\text{Sg}$ , $^{270,272}\text{Bh}$ , $^{275}\text{Hs}$ , $^{274,275,276}\text{Mt}$ , $^{279,281}\text{Ds}$ , $^{278,279,280}\text{Rg}$ , $^{283,284,285}112$ , $^{280,281,282,283,284}113$ , $^{286,287,288,289}114$ , $^{287,288}115$ , $^{290,291,292,293}116$ , $^{294}118(\alpha)$ ; measured $E\alpha$ , $T_{1/2}$ . $^{267}\text{Rf}$ , $^{271}\text{Sg}$ , $^{279,281}\text{Ds}$ , $^{282,283,284,285}112$ , $^{286,288}114(\text{SF})$ ; measured $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c   |
| $^{270}\text{Hs}$ 2007OG05 | NUCLEAR REACTIONS $^{208}\text{Pb}$ , $^{209}\text{Bi}(^{48}\text{Ca}, n)$ , $(^{50}\text{Ti}, n)$ , $(^{54}\text{Cr}, n)$ , $(^{58}\text{Fe}, n)$ , $(^{62}\text{Ni}, n)$ , $(^{64}\text{Ni}, n)$ , $(^{70}\text{Zn}, n)$ , E not given; analyzed $\sigma$ . $^{233}\text{U}$ , $^{237}\text{Np}$ , $^{244}\text{Pu}$ , $^{248}\text{Cm}$ , $^{249}\text{Cf}(^{22}\text{Ne}, 4n)$ , $(^{26}\text{Mg}, 4n)$ , $(^{36}\text{S}, 5n)$ , $(^{48}\text{Ca}, 4n)$ , E not given; measured $E\alpha$ , $\alpha\alpha$ -coin following residual nucleus decay; analyzed $\sigma$ ; deduced reaction mechanism features, hindrance and survivability. Comparison with other data. JOUR NUPAB 787 343c |
| $^{270}\text{Mt}$ 2007MOZY | RADIOACTIVITY $^{278}113$ , $^{274}\text{Rg}$ , $^{270}\text{Mt}$ , $^{266}\text{Bh}(\alpha)$ [from $^{209}\text{Bi}(^{70}\text{Zn}, n)$ and subsequent decay]; measured $E\alpha$ , $T_{1/2}$ . REPT<br>RIKEN-NC-NP-3, Morita  |
| $^{270}\text{Rg}$ 2007OG05 | NUCLEAR REACTIONS $^{208}\text{Pb}$ , $^{209}\text{Bi}(^{48}\text{Ca}, n)$ , $(^{50}\text{Ti}, n)$ , $(^{54}\text{Cr}, n)$ , $(^{58}\text{Fe}, n)$ , $(^{62}\text{Ni}, n)$ , $(^{64}\text{Ni}, n)$ , $(^{70}\text{Zn}, n)$ , E not given; analyzed $\sigma$ . $^{233}\text{U}$ , $^{237}\text{Np}$ , $^{244}\text{Pu}$ , $^{248}\text{Cm}$ , $^{249}\text{Cf}(^{22}\text{Ne}, 4n)$ , $(^{26}\text{Mg}, 4n)$ , $(^{36}\text{S}, 5n)$ , $(^{48}\text{Ca}, 4n)$ , E not given; measured $E\alpha$ , $\alpha\alpha$ -coin following residual nucleus decay; analyzed $\sigma$ ; deduced reaction mechanism features, hindrance and survivability. Comparison with other data. JOUR NUPAB 787 343c |

**A=271**

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| $^{271}\text{Sg}$ 2007OG05 | RADIOACTIVITY $^{266,267,268}\text{Db}$ , $^{269,271}\text{Sg}$ , $^{270,272}\text{Bh}$ , $^{275}\text{Hs}$ , $^{274,275,276}\text{Mt}$ , $^{279,281}\text{Ds}$ , $^{278,279,280}\text{Rg}$ , $^{283,284,285}112$ , $^{280,281,282,283,284}113$ , $^{286,287,288,289}114$ , $^{287,288}115$ , $^{290,291,292,293}116$ , $^{294}118(\alpha)$ ; measured $E\alpha$ , $T_{1/2}$ . $^{267}\text{Rf}$ , $^{271}\text{Sg}$ , $^{279,281}\text{Ds}$ , $^{282,283,284,285}112$ , $^{286,288}114(\text{SF})$ ; measured $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c |
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**A=271 (continued)**

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| $^{271}\text{Bh}$ | 20070G05 | RADIOACTIVITY $^{266,267,268}\text{Db}$ , $^{269,271}\text{Sg}$ , $^{270,272}\text{Bh}$ , $^{275}\text{Hs}$ , $^{274,275,276}\text{Mt}$ , $^{279,281}\text{Ds}$ , $^{278,279,280}\text{Rg}$ , $^{283,284,285}\text{112}$ , $^{280,281,282,283,284}\text{113}$ , $^{286,287,288,289}\text{114}$ , $^{287,288}\text{115}$ , $^{290,291,292,293}\text{116}$ , $^{294}\text{118}(\alpha)$ ; measured $E\alpha$ , $T_{1/2}$ . $^{267}\text{Rf}$ , $^{271}\text{Sg}$ , $^{279,281}\text{Ds}$ , $^{282,283,284,285}\text{112}$ , $^{286,288}\text{114}(\text{SF})$ ; measured $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c  |
| $^{271}\text{Ds}$ | 20070G05 | NUCLEAR REACTIONS $^{208}\text{Pb}$ , $^{209}\text{Bi}$ ( $^{48}\text{Ca}$ , n), ( $^{50}\text{Ti}$ , n), ( $^{54}\text{Cr}$ , n), ( $^{58}\text{Fe}$ , n), ( $^{62}\text{Ni}$ , n), ( $^{64}\text{Ni}$ , n), ( $^{70}\text{Zn}$ , n), E not given; analyzed $\sigma$ . $^{233}\text{U}$ , $^{237}\text{Np}$ , $^{244}\text{Pu}$ , $^{248}\text{Cm}$ , $^{249}\text{Cf}$ ( $^{22}\text{Ne}$ , 4n), ( $^{26}\text{Mg}$ , 4n), ( $^{36}\text{S}$ , 5n), ( $^{48}\text{Ca}$ , 4n), E not given; measured $E\alpha$ , $\alpha\alpha$ -coin following residual nucleus decay; analyzed $\sigma$ ; deduced reaction mechanism features, hindrance and survivability. Comparison with other data. JOUR NUPAB 787 343c |

**A=272**

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| $^{272}\text{Bh}$ | 20070G05 | RADIOACTIVITY $^{266,267,268}\text{Db}$ , $^{269,271}\text{Sg}$ , $^{270,272}\text{Bh}$ , $^{275}\text{Hs}$ , $^{274,275,276}\text{Mt}$ , $^{279,281}\text{Ds}$ , $^{278,279,280}\text{Rg}$ , $^{283,284,285}\text{112}$ , $^{280,281,282,283,284}\text{113}$ , $^{286,287,288,289}\text{114}$ , $^{287,288}\text{115}$ , $^{290,291,292,293}\text{116}$ , $^{294}\text{118}(\alpha)$ ; measured $E\alpha$ , $T_{1/2}$ . $^{267}\text{Rf}$ , $^{271}\text{Sg}$ , $^{279,281}\text{Ds}$ , $^{282,283,284,285}\text{112}$ , $^{286,288}\text{114}(\text{SF})$ ; measured $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c  |
|                   | 2007ST18 | RADIOACTIVITY $^{268}\text{Db}(\text{SF})$ ; $^{272}\text{Bh}$ , $^{276}\text{Mt}$ , $^{280}\text{Rg}$ , $^{284}\text{113}$ , $^{288}\text{115}(\alpha)$ ; measured $E\alpha$ , E(fragment), $T_{1/2}$ . JOUR NUPAB 787 388c   |
| $^{272}\text{Rg}$ | 20070G05 | NUCLEAR REACTIONS $^{208}\text{Pb}$ , $^{209}\text{Bi}$ ( $^{48}\text{Ca}$ , n), ( $^{50}\text{Ti}$ , n), ( $^{54}\text{Cr}$ , n), ( $^{58}\text{Fe}$ , n), ( $^{62}\text{Ni}$ , n), ( $^{64}\text{Ni}$ , n), ( $^{70}\text{Zn}$ , n), E not given; analyzed $\sigma$ . $^{233}\text{U}$ , $^{237}\text{Np}$ , $^{244}\text{Pu}$ , $^{248}\text{Cm}$ , $^{249}\text{Cf}$ ( $^{22}\text{Ne}$ , 4n), ( $^{26}\text{Mg}$ , 4n), ( $^{36}\text{S}$ , 5n), ( $^{48}\text{Ca}$ , 4n), E not given; measured $E\alpha$ , $\alpha\alpha$ -coin following residual nucleus decay; analyzed $\sigma$ ; deduced reaction mechanism features, hindrance and survivability. Comparison with other data. JOUR NUPAB 787 343c |

**A=273**

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| $^{273}\text{Ds}$ | 2007M009 | RADIOACTIVITY $^{277}\text{112}$ , $^{273}\text{Ds}$ , $^{269}\text{Hs}$ , $^{265}\text{Sg}(\alpha)$ [from $^{208}\text{Pb}$ ( $^{70}\text{Zn}$ , n) and subsequent decay]; measured $E\alpha$ , $T_{1/2}$ . Gas-filled separator. JOUR JUPSA 76 043201 |
|                   | 2007M0ZZ | RADIOACTIVITY $^{277}\text{112}$ , $^{273}\text{Ds}$ , $^{269}\text{Hs}$ , $^{265}\text{Sg}(\alpha)$ [from $^{208}\text{Pb}$ ( $^{70}\text{Zn}$ , n) and subsequent decay]; measured $E\alpha$ , $T_{1/2}$ . REPT RIKEN-NC-NP-2, Morita                 |

KEYNUMBERS AND KEYWORDS

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**A=274**

$^{274}\text{Mt}$	20070G05	RADIOACTIVITY $^{266,267,268}\text{Db}$ , $^{269,271}\text{Sg}$ , $^{270,272}\text{Bh}$ , $^{275}\text{Hs}$ , $^{274,275,276}\text{Mt}$ , $^{279,281}\text{Ds}$ , $^{278,279,280}\text{Rg}$ , $^{283,284,285}\text{112}$ , $^{280,281,282,283,284}\text{113}$ , $^{286,287,288,289}\text{114}$ , $^{287,288}\text{115}$ , $^{290,291,292,293}\text{116}$ , $^{294}\text{118}(\alpha)$ ; measured $E\alpha$ , $T_{1/2}$ . $^{267}\text{Rf}$ , $^{271}\text{Sg}$ , $^{279,281}\text{Ds}$ , $^{282,283,284,285}\text{112}$ , $^{286,288}\text{114}(\text{SF})$ ; measured $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c
$^{274}\text{Rg}$	2007MOZY	RADIOACTIVITY $^{278}\text{113}$ , $^{274}\text{Rg}$ , $^{270}\text{Mt}$ , $^{266}\text{Bh}(\alpha)$ [from $^{209}\text{Bi}(\text{}^{70}\text{Zn}, n)$ and subsequent decay]; measured $E\alpha$ , $T_{1/2}$ . REPT RIKEN-NC-NP-3, Morita

**A=275**

$^{275}\text{Hs}$	20070G05	RADIOACTIVITY $^{266,267,268}\text{Db}$ , $^{269,271}\text{Sg}$ , $^{270,272}\text{Bh}$ , $^{275}\text{Hs}$ , $^{274,275,276}\text{Mt}$ , $^{279,281}\text{Ds}$ , $^{278,279,280}\text{Rg}$ , $^{283,284,285}\text{112}$ , $^{280,281,282,283,284}\text{113}$ , $^{286,287,288,289}\text{114}$ , $^{287,288}\text{115}$ , $^{290,291,292,293}\text{116}$ , $^{294}\text{118}(\alpha)$ ; measured $E\alpha$ , $T_{1/2}$ . $^{267}\text{Rf}$ , $^{271}\text{Sg}$ , $^{279,281}\text{Ds}$ , $^{282,283,284,285}\text{112}$ , $^{286,288}\text{114}(\text{SF})$ ; measured $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c
$^{275}\text{Mt}$	20070G05	RADIOACTIVITY $^{266,267,268}\text{Db}$ , $^{269,271}\text{Sg}$ , $^{270,272}\text{Bh}$ , $^{275}\text{Hs}$ , $^{274,275,276}\text{Mt}$ , $^{279,281}\text{Ds}$ , $^{278,279,280}\text{Rg}$ , $^{283,284,285}\text{112}$ , $^{280,281,282,283,284}\text{113}$ , $^{286,287,288,289}\text{114}$ , $^{287,288}\text{115}$ , $^{290,291,292,293}\text{116}$ , $^{294}\text{118}(\alpha)$ ; measured $E\alpha$ , $T_{1/2}$ . $^{267}\text{Rf}$ , $^{271}\text{Sg}$ , $^{279,281}\text{Ds}$ , $^{282,283,284,285}\text{112}$ , $^{286,288}\text{114}(\text{SF})$ ; measured $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c
$^{275}\text{Ds}$	20070G05	NUCLEAR REACTIONS $^{208}\text{Pb}$ , $^{209}\text{Bi}(\text{}^{48}\text{Ca}, n)$ , $(\text{}^{50}\text{Ti}, n)$ , $(\text{}^{54}\text{Cr}, n)$ , $(\text{}^{58}\text{Fe}, n)$ , $(\text{}^{62}\text{Ni}, n)$ , $(\text{}^{64}\text{Ni}, n)$ , $(\text{}^{70}\text{Zn}, n)$ , E not given; analyzed $\sigma$ . $^{233}\text{U}$ , $^{237}\text{Np}$ , $^{244}\text{Pu}$ , $^{248}\text{Cm}$ , $^{249}\text{Cf}(\text{}^{22}\text{Ne}, 4n)$ , $(\text{}^{26}\text{Mg}, 4n)$ , $(\text{}^{36}\text{S}, 5n)$ , $(\text{}^{48}\text{Ca}, 4n)$ , E not given; measured $E\alpha$ , $\alpha\alpha$ -coin following residual nucleus decay; analyzed $\sigma$ ; deduced reaction mechanism features, hindrance and survivability. Comparison with other data. JOUR NUPAB 787 343c

**A=276**

$^{276}\text{Mt}$	20070G05	RADIOACTIVITY $^{266,267,268}\text{Db}$ , $^{269,271}\text{Sg}$ , $^{270,272}\text{Bh}$ , $^{275}\text{Hs}$ , $^{274,275,276}\text{Mt}$ , $^{279,281}\text{Ds}$ , $^{278,279,280}\text{Rg}$ , $^{283,284,285}\text{112}$ , $^{280,281,282,283,284}\text{113}$ , $^{286,287,288,289}\text{114}$ , $^{287,288}\text{115}$ , $^{290,291,292,293}\text{116}$ , $^{294}\text{118}(\alpha)$ ; measured $E\alpha$ , $T_{1/2}$ . $^{267}\text{Rf}$ , $^{271}\text{Sg}$ , $^{279,281}\text{Ds}$ , $^{282,283,284,285}\text{112}$ , $^{286,288}\text{114}(\text{SF})$ ; measured $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c
	2007ST18	RADIOACTIVITY $^{268}\text{Db}(\text{SF})$ ; $^{272}\text{Bh}$ , $^{276}\text{Mt}$ , $^{280}\text{Rg}$ , $^{284}\text{113}$ , $^{288}\text{115}(\alpha)$ ; measured $E\alpha$ , E(fragment), $T_{1/2}$ . JOUR NUPAB 787 388c
$^{276}\text{Rg}$	20070G05	RADIOACTIVITY $^{266,267,268}\text{Db}$ , $^{269,271}\text{Sg}$ , $^{270,272}\text{Bh}$ , $^{275}\text{Hs}$ , $^{274,275,276}\text{Mt}$ , $^{279,281}\text{Ds}$ , $^{278,279,280}\text{Rg}$ , $^{283,284,285}\text{112}$ , $^{280,281,282,283,284}\text{113}$ , $^{286,287,288,289}\text{114}$ , $^{287,288}\text{115}$ , $^{290,291,292,293}\text{116}$ , $^{294}\text{118}(\alpha)$ ; measured $E\alpha$ , $T_{1/2}$ . $^{267}\text{Rf}$ , $^{271}\text{Sg}$ , $^{279,281}\text{Ds}$ , $^{282,283,284,285}\text{112}$ , $^{286,288}\text{114}(\text{SF})$ ; measured $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c



KEYNUMBERS AND KEYWORDS

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**A=277**

$^{277}\text{Hs}$	20070G05	RADIOACTIVITY $^{266,267,268}\text{Db}$ , $^{269,271}\text{Sg}$ , $^{270,272}\text{Bh}$ , $^{275}\text{Hs}$ , $^{274,275,276}\text{Mt}$ , $^{279,281}\text{Ds}$ , $^{278,279,280}\text{Rg}$ , $^{283,284,285}\text{112}$ , $^{280,281,282,283,284}\text{113}$ , $^{286,287,288,289}\text{114}$ , $^{287,288}\text{115}$ , $^{290,291,292,293}\text{116}$ , $^{294}\text{118}(\alpha)$ ; measured $E\alpha$ , $T_{1/2}$ . $^{267}\text{Rf}$ , $^{271}\text{Sg}$ , $^{279,281}\text{Ds}$ , $^{282,283,284,285}\text{112}$ , $^{286,288}\text{114}(\text{SF})$ ; measured $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c
$^{277}\text{Rg}$	20070G05	RADIOACTIVITY $^{266,267,268}\text{Db}$ , $^{269,271}\text{Sg}$ , $^{270,272}\text{Bh}$ , $^{275}\text{Hs}$ , $^{274,275,276}\text{Mt}$ , $^{279,281}\text{Ds}$ , $^{278,279,280}\text{Rg}$ , $^{283,284,285}\text{112}$ , $^{280,281,282,283,284}\text{113}$ , $^{286,287,288,289}\text{114}$ , $^{287,288}\text{115}$ , $^{290,291,292,293}\text{116}$ , $^{294}\text{118}(\alpha)$ ; measured $E\alpha$ , $T_{1/2}$ . $^{267}\text{Rf}$ , $^{271}\text{Sg}$ , $^{279,281}\text{Ds}$ , $^{282,283,284,285}\text{112}$ , $^{286,288}\text{114}(\text{SF})$ ; measured $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c
$^{277}\text{112}$	2007M009	NUCLEAR REACTIONS $^{208}\text{Pb}(\text{}^{70}\text{Zn}, \text{n})$ , $E=349.5$ MeV; measured delayed $E\alpha$ , $\alpha\alpha$ -, (recoil) $\alpha$ -coin; deduced production $\sigma$ . Gas-filled separator. JOUR JUPSA 76 043201
	2007M009	RADIOACTIVITY $^{277}\text{112}$ , $^{273}\text{Ds}$ , $^{269}\text{Hs}$ , $^{265}\text{Sg}(\alpha)$ [from $^{208}\text{Pb}(\text{}^{70}\text{Zn}, \text{n})$ and subsequent decay]; measured $E\alpha$ , $T_{1/2}$ . Gas-filled separator. JOUR JUPSA 76 043201
	2007MOZZ	NUCLEAR REACTIONS $^{208}\text{Pb}(\text{}^{70}\text{Zn}, \text{n})$ , $E=349.5$ MeV; measured delayed $E\alpha$ , $\alpha\alpha$ -, (recoil) $\alpha$ -coin; deduced production $\sigma$ . REPT RIKEN-NC-NP-2,Morita
	2007MOZZ	RADIOACTIVITY $^{277}\text{112}$ , $^{273}\text{Ds}$ , $^{269}\text{Hs}$ , $^{265}\text{Sg}(\alpha)$ [from $^{208}\text{Pb}(\text{}^{70}\text{Zn}, \text{n})$ and subsequent decay]; measured $E\alpha$ , $T_{1/2}$ . REPT RIKEN-NC-NP-2,Morita
	20070G05	NUCLEAR REACTIONS $^{208}\text{Pb}$ , $^{209}\text{Bi}(\text{}^{48}\text{Ca}, \text{n})$ , $(\text{}^{50}\text{Ti}, \text{n})$ , $(\text{}^{54}\text{Cr}, \text{n})$ , $(\text{}^{58}\text{Fe}, \text{n})$ , $(\text{}^{62}\text{Ni}, \text{n})$ , $(\text{}^{64}\text{Ni}, \text{n})$ , $(\text{}^{70}\text{Zn}, \text{n})$ , $E$ not given; analyzed $\sigma$ . $^{233}\text{U}$ , $^{237}\text{Np}$ , $^{244}\text{Pu}$ , $^{248}\text{Cm}$ , $^{249}\text{Cf}(\text{}^{22}\text{Ne}, 4\text{n})$ , $(\text{}^{26}\text{Mg}, 4\text{n})$ , $(\text{}^{36}\text{S}, 5\text{n})$ , $(\text{}^{48}\text{Ca}, 4\text{n})$ , $E$ not given; measured $E\alpha$ , $\alpha\alpha$ -coin following residual nucleus decay; analyzed $\sigma$ ; deduced reaction mechanism features, hindrance and survivability. Comparison with other data. JOUR NUPAB 787 343c

**A=278**

$^{278}\text{Rg}$	20070G05	RADIOACTIVITY $^{266,267,268}\text{Db}$ , $^{269,271}\text{Sg}$ , $^{270,272}\text{Bh}$ , $^{275}\text{Hs}$ , $^{274,275,276}\text{Mt}$ , $^{279,281}\text{Ds}$ , $^{278,279,280}\text{Rg}$ , $^{283,284,285}\text{112}$ , $^{280,281,282,283,284}\text{113}$ , $^{286,287,288,289}\text{114}$ , $^{287,288}\text{115}$ , $^{290,291,292,293}\text{116}$ , $^{294}\text{118}(\alpha)$ ; measured $E\alpha$ , $T_{1/2}$ . $^{267}\text{Rf}$ , $^{271}\text{Sg}$ , $^{279,281}\text{Ds}$ , $^{282,283,284,285}\text{112}$ , $^{286,288}\text{114}(\text{SF})$ ; measured $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c
$^{278}\text{113}$	2007MOZY	NUCLEAR REACTIONS $^{209}\text{Bi}(\text{}^{70}\text{Zn}, \text{n})$ , $E=353$ MeV; measured delayed $E\alpha$ , $\alpha\alpha$ -, (recoil) $\alpha$ -coin; deduced production $\sigma$ . REPT RIKEN-NC-NP-3,Morita
	2007MOZY	RADIOACTIVITY $^{278}\text{113}$ , $^{274}\text{Rg}$ , $^{270}\text{Mt}$ , $^{266}\text{Bh}(\alpha)$ [from $^{209}\text{Bi}(\text{}^{70}\text{Zn}, \text{n})$ and subsequent decay]; measured $E\alpha$ , $T_{1/2}$ . REPT RIKEN-NC-NP-3,Morita

KEYNUMBERS AND KEYWORDS

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**A=278 (continued)**

20070G05 NUCLEAR REACTIONS  $^{208}\text{Pb}$ ,  $^{209}\text{Bi}$ ( $^{48}\text{Ca}$ , n), ( $^{50}\text{Ti}$ , n), ( $^{54}\text{Cr}$ , n), ( $^{58}\text{Fe}$ , n), ( $^{62}\text{Ni}$ , n), ( $^{64}\text{Ni}$ , n), ( $^{70}\text{Zn}$ , n), E not given; analyzed  $\sigma$ .  $^{233}\text{U}$ ,  $^{237}\text{Np}$ ,  $^{244}\text{Pu}$ ,  $^{248}\text{Cm}$ ,  $^{249}\text{Cf}$ ( $^{22}\text{Ne}$ , 4n), ( $^{26}\text{Mg}$ , 4n), ( $^{36}\text{S}$ , 5n), ( $^{48}\text{Ca}$ , 4n), E not given; measured  $E\alpha$ ,  $\alpha\alpha$ -coin following residual nucleus decay; analyzed  $\sigma$ ; deduced reaction mechanism features, hindrance and survivability. Comparison with other data. JOUR NUPAB 787 343c

**A=279**

$^{279}\text{Ds}$  2007EI02 RADIOACTIVITY  $^{283}112(\alpha)$ ;  $^{287}114(\alpha)$ , (SF); measured  $E\alpha$ , E(fragment),  $T_{1/2}$ . JOUR NUPAB 787 373c

2007H018 RADIOACTIVITY  $^{283}112(\alpha)$ , (SF) [from  $^{238}\text{U}$ ( $^{48}\text{Ca}$ , X)]; measured  $E\alpha$ , (recoil) $\alpha$ -coin,  $T_{1/2}$ . JOUR ZAANE 32 251

20070G05 RADIOACTIVITY  $^{266,267,268}\text{Db}$ ,  $^{269,271}\text{Sg}$ ,  $^{270,272}\text{Bh}$ ,  $^{275}\text{Hs}$ ,  $^{274,275,276}\text{Mt}$ ,  $^{279,281}\text{Ds}$ ,  $^{278,279,280}\text{Rg}$ ,  $^{283,284,285}112$ ,  $^{280,281,282,283,284}113$ ,  $^{286,287,288,289}114$ ,  $^{287,288}115$ ,  $^{290,291,292,293}116$ ,  $^{294}118(\alpha)$ ; measured  $E\alpha$ ,  $T_{1/2}$ .  $^{267}\text{Rf}$ ,  $^{271}\text{Sg}$ ,  $^{279,281}\text{Ds}$ ,  $^{282,283,284,285}112$ ,  $^{286,288}114(\text{SF})$ ; measured  $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c

$^{279}\text{Rg}$  20070G05 RADIOACTIVITY  $^{266,267,268}\text{Db}$ ,  $^{269,271}\text{Sg}$ ,  $^{270,272}\text{Bh}$ ,  $^{275}\text{Hs}$ ,  $^{274,275,276}\text{Mt}$ ,  $^{279,281}\text{Ds}$ ,  $^{278,279,280}\text{Rg}$ ,  $^{283,284,285}112$ ,  $^{280,281,282,283,284}113$ ,  $^{286,287,288,289}114$ ,  $^{287,288}115$ ,  $^{290,291,292,293}116$ ,  $^{294}118(\alpha)$ ; measured  $E\alpha$ ,  $T_{1/2}$ .  $^{267}\text{Rf}$ ,  $^{271}\text{Sg}$ ,  $^{279,281}\text{Ds}$ ,  $^{282,283,284,285}112$ ,  $^{286,288}114(\text{SF})$ ; measured  $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c

$^{279}112$  20070G05 NUCLEAR REACTIONS  $^{208}\text{Pb}$ ,  $^{209}\text{Bi}$ ( $^{48}\text{Ca}$ , n), ( $^{50}\text{Ti}$ , n), ( $^{54}\text{Cr}$ , n), ( $^{58}\text{Fe}$ , n), ( $^{62}\text{Ni}$ , n), ( $^{64}\text{Ni}$ , n), ( $^{70}\text{Zn}$ , n), E not given; analyzed  $\sigma$ .  $^{233}\text{U}$ ,  $^{237}\text{Np}$ ,  $^{244}\text{Pu}$ ,  $^{248}\text{Cm}$ ,  $^{249}\text{Cf}$ ( $^{22}\text{Ne}$ , 4n), ( $^{26}\text{Mg}$ , 4n), ( $^{36}\text{S}$ , 5n), ( $^{48}\text{Ca}$ , 4n), E not given; measured  $E\alpha$ ,  $\alpha\alpha$ -coin following residual nucleus decay; analyzed  $\sigma$ ; deduced reaction mechanism features, hindrance and survivability. Comparison with other data. JOUR NUPAB 787 343c

**A=280**

$^{280}\text{Ds}$  20070G05 RADIOACTIVITY  $^{266,267,268}\text{Db}$ ,  $^{269,271}\text{Sg}$ ,  $^{270,272}\text{Bh}$ ,  $^{275}\text{Hs}$ ,  $^{274,275,276}\text{Mt}$ ,  $^{279,281}\text{Ds}$ ,  $^{278,279,280}\text{Rg}$ ,  $^{283,284,285}112$ ,  $^{280,281,282,283,284}113$ ,  $^{286,287,288,289}114$ ,  $^{287,288}115$ ,  $^{290,291,292,293}116$ ,  $^{294}118(\alpha)$ ; measured  $E\alpha$ ,  $T_{1/2}$ .  $^{267}\text{Rf}$ ,  $^{271}\text{Sg}$ ,  $^{279,281}\text{Ds}$ ,  $^{282,283,284,285}112$ ,  $^{286,288}114(\text{SF})$ ; measured  $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c

$^{280}\text{Rg}$  20070G05 RADIOACTIVITY  $^{266,267,268}\text{Db}$ ,  $^{269,271}\text{Sg}$ ,  $^{270,272}\text{Bh}$ ,  $^{275}\text{Hs}$ ,  $^{274,275,276}\text{Mt}$ ,  $^{279,281}\text{Ds}$ ,  $^{278,279,280}\text{Rg}$ ,  $^{283,284,285}112$ ,  $^{280,281,282,283,284}113$ ,  $^{286,287,288,289}114$ ,  $^{287,288}115$ ,  $^{290,291,292,293}116$ ,  $^{294}118(\alpha)$ ; measured  $E\alpha$ ,  $T_{1/2}$ .  $^{267}\text{Rf}$ ,  $^{271}\text{Sg}$ ,  $^{279,281}\text{Ds}$ ,  $^{282,283,284,285}112$ ,  $^{286,288}114(\text{SF})$ ; measured  $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c

KEYNUMBERS AND KEYWORDS

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**A=280 (continued)**

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| 2007ST18           | RADIOACTIVITY <sup>268</sup> Db(SF); <sup>272</sup> Bh, <sup>276</sup> Mt, <sup>280</sup> Rg, <sup>284</sup> 113, <sup>288</sup> 115( $\alpha$ ); measured E $\alpha$ , E(fragment), T <sub>1/2</sub> . JOUR NUPAB 787 388c  |
| <sup>280</sup> 113 | 2007OG05 RADIOACTIVITY <sup>266,267,268</sup> Db, <sup>269,271</sup> Sg, <sup>270,272</sup> Bh, <sup>275</sup> Hs, <sup>274,275,276</sup> Mt, <sup>279,281</sup> Ds, <sup>278,279,280</sup> Rg, <sup>283,284,285</sup> 112, <sup>280,281,282,283,284</sup> 113, <sup>286,287,288,289</sup> 114, <sup>287,288</sup> 115, <sup>290,291,292,293</sup> 116, <sup>294</sup> 118( $\alpha$ ); measured E $\alpha$ , T <sub>1/2</sub> . <sup>267</sup> Rf, <sup>271</sup> Sg, <sup>279,281</sup> Ds, <sup>282,283,284,285</sup> 112, <sup>286,288</sup> 114(SF); measured T <sub>1/2</sub> . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c                               |
| <sup>280</sup> 114 | 2007OG05 NUCLEAR REACTIONS <sup>208</sup> Pb, <sup>209</sup> Bi( <sup>48</sup> Ca, n), ( <sup>50</sup> Ti, n), ( <sup>54</sup> Cr, n), ( <sup>58</sup> Fe, n), ( <sup>62</sup> Ni, n), ( <sup>64</sup> Ni, n), ( <sup>70</sup> Zn, n), E not given; analyzed $\sigma$ . <sup>233</sup> U, <sup>237</sup> Np, <sup>244</sup> Pu, <sup>248</sup> Cm, <sup>249</sup> Cf( <sup>22</sup> Ne, 4n), ( <sup>26</sup> Mg, 4n), ( <sup>36</sup> S, 5n), ( <sup>48</sup> Ca, 4n), E not given; measured E $\alpha$ , $\alpha\alpha$ -coin following residual nucleus decay; analyzed $\sigma$ ; deduced reaction mechanism features, hindrance and survivability. Comparison with other data. JOUR NUPAB 787 343c |

**A=281**

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| <sup>281</sup> Ds  | 2007OG05 RADIOACTIVITY <sup>266,267,268</sup> Db, <sup>269,271</sup> Sg, <sup>270,272</sup> Bh, <sup>275</sup> Hs, <sup>274,275,276</sup> Mt, <sup>279,281</sup> Ds, <sup>278,279,280</sup> Rg, <sup>283,284,285</sup> 112, <sup>280,281,282,283,284</sup> 113, <sup>286,287,288,289</sup> 114, <sup>287,288</sup> 115, <sup>290,291,292,293</sup> 116, <sup>294</sup> 118( $\alpha$ ); measured E $\alpha$ , T <sub>1/2</sub> . <sup>267</sup> Rf, <sup>271</sup> Sg, <sup>279,281</sup> Ds, <sup>282,283,284,285</sup> 112, <sup>286,288</sup> 114(SF); measured T <sub>1/2</sub> . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c                               |
| <sup>281</sup> 113 | 2007OG05 NUCLEAR REACTIONS <sup>208</sup> Pb, <sup>209</sup> Bi( <sup>48</sup> Ca, n), ( <sup>50</sup> Ti, n), ( <sup>54</sup> Cr, n), ( <sup>58</sup> Fe, n), ( <sup>62</sup> Ni, n), ( <sup>64</sup> Ni, n), ( <sup>70</sup> Zn, n), E not given; analyzed $\sigma$ . <sup>233</sup> U, <sup>237</sup> Np, <sup>244</sup> Pu, <sup>248</sup> Cm, <sup>249</sup> Cf( <sup>22</sup> Ne, 4n), ( <sup>26</sup> Mg, 4n), ( <sup>36</sup> S, 5n), ( <sup>48</sup> Ca, 4n), E not given; measured E $\alpha$ , $\alpha\alpha$ -coin following residual nucleus decay; analyzed $\sigma$ ; deduced reaction mechanism features, hindrance and survivability. Comparison with other data. JOUR NUPAB 787 343c |
|                    | 2007OG05 RADIOACTIVITY <sup>266,267,268</sup> Db, <sup>269,271</sup> Sg, <sup>270,272</sup> Bh, <sup>275</sup> Hs, <sup>274,275,276</sup> Mt, <sup>279,281</sup> Ds, <sup>278,279,280</sup> Rg, <sup>283,284,285</sup> 112, <sup>280,281,282,283,284</sup> 113, <sup>286,287,288,289</sup> 114, <sup>287,288</sup> 115, <sup>290,291,292,293</sup> 116, <sup>294</sup> 118( $\alpha$ ); measured E $\alpha$ , T <sub>1/2</sub> . <sup>267</sup> Rf, <sup>271</sup> Sg, <sup>279,281</sup> Ds, <sup>282,283,284,285</sup> 112, <sup>286,288</sup> 114(SF); measured T <sub>1/2</sub> . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c                               |

**A=282**

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| <sup>282</sup> 112 | 2007OG05 RADIOACTIVITY <sup>266,267,268</sup> Db, <sup>269,271</sup> Sg, <sup>270,272</sup> Bh, <sup>275</sup> Hs, <sup>274,275,276</sup> Mt, <sup>279,281</sup> Ds, <sup>278,279,280</sup> Rg, <sup>283,284,285</sup> 112, <sup>280,281,282,283,284</sup> 113, <sup>286,287,288,289</sup> 114, <sup>287,288</sup> 115, <sup>290,291,292,293</sup> 116, <sup>294</sup> 118( $\alpha$ ); measured E $\alpha$ , T <sub>1/2</sub> . <sup>267</sup> Rf, <sup>271</sup> Sg, <sup>279,281</sup> Ds, <sup>282,283,284,285</sup> 112, <sup>286,288</sup> 114(SF); measured T <sub>1/2</sub> . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c |
| <sup>282</sup> 113 | 2007OG02 NUCLEAR REACTIONS <sup>237</sup> Np( <sup>48</sup> Ca, 3n) <sup>282</sup> 113, E=244 MeV; measured E $\alpha$ , production cross section and T <sub>1/2</sub> . JOUR PRVCA 76 011601  |

KEYNUMBERS AND KEYWORDS

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**A=282 (continued)**

20070G05 RADIOACTIVITY <sup>266,267,268</sup>Db, <sup>269,271</sup>Sg, <sup>270,272</sup>Bh, <sup>275</sup>Hs, <sup>274,275,276</sup>Mt, <sup>279,281</sup>Ds, <sup>278,279,280</sup>Rg, <sup>283,284,285</sup>112, <sup>280,281,282,283,284</sup>113, <sup>286,287,288,289</sup>114, <sup>287,288</sup>115, <sup>290,291,292,293</sup>116, <sup>294</sup>118( $\alpha$ ); measured  $E\alpha$ ,  $T_{1/2}$ . <sup>267</sup>Rf, <sup>271</sup>Sg, <sup>279,281</sup>Ds, <sup>282,283,284,285</sup>112, <sup>286,288</sup>114(SF); measured  $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c

**A=283**

<sup>283</sup>112 2006EI01 NUCLEAR REACTIONS <sup>238</sup>U(<sup>48</sup>Ca, X), E=231, 235 MeV; measured delayed fission,  $E\alpha$ , (fission) $\alpha$ -coin; deduced no evidence for <sup>283</sup>112. Thermochromatography. JOUR RAACA 94 181

2006HOZX NUCLEAR REACTIONS <sup>238</sup>U(<sup>48</sup>Ca, X), E=233-239 MeV; measured delayed fission fragment spectra; deduced evidence for <sup>283</sup>112. REPT GSI 2006-1,P191,Hofmann

2007EI02 NUCLEAR REACTIONS <sup>238</sup>U(<sup>48</sup>Ca, 3n), <sup>242</sup>Pu(<sup>48</sup>Ca, 3n), E=237 MeV; measured super heavy element yield,  $E\alpha$ ,  $I\alpha$ ; analyzed production  $\sigma$ . JOUR NUPAB 787 373c

2007EI02 RADIOACTIVITY <sup>283</sup>112( $\alpha$ ); <sup>287</sup>114( $\alpha$ ), (SF); measured  $E\alpha$ , E(fragment),  $T_{1/2}$ . JOUR NUPAB 787 373c

2007H018 RADIOACTIVITY <sup>283</sup>112( $\alpha$ ), (SF) [from <sup>238</sup>U(<sup>48</sup>Ca, X)]; measured  $E\alpha$ , (recoil) $\alpha$ -coin,  $T_{1/2}$ . JOUR ZAANE 32 251

20070G05 RADIOACTIVITY <sup>266,267,268</sup>Db, <sup>269,271</sup>Sg, <sup>270,272</sup>Bh, <sup>275</sup>Hs, <sup>274,275,276</sup>Mt, <sup>279,281</sup>Ds, <sup>278,279,280</sup>Rg, <sup>283,284,285</sup>112, <sup>280,281,282,283,284</sup>113, <sup>286,287,288,289</sup>114, <sup>287,288</sup>115, <sup>290,291,292,293</sup>116, <sup>294</sup>118( $\alpha$ ); measured  $E\alpha$ ,  $T_{1/2}$ . <sup>267</sup>Rf, <sup>271</sup>Sg, <sup>279,281</sup>Ds, <sup>282,283,284,285</sup>112, <sup>286,288</sup>114(SF); measured  $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c

2007ST18 NUCLEAR REACTIONS <sup>238</sup>U(<sup>48</sup>Ca, 3n), E=247 MeV; measured super heavy element yield,  $E\alpha$ ,  $I\alpha$ ; analyzed production  $\sigma$ . Detailed chemical analysis procedure given. JOUR NUPAB 787 388c

<sup>283</sup>113 20070G05 RADIOACTIVITY <sup>266,267,268</sup>Db, <sup>269,271</sup>Sg, <sup>270,272</sup>Bh, <sup>275</sup>Hs, <sup>274,275,276</sup>Mt, <sup>279,281</sup>Ds, <sup>278,279,280</sup>Rg, <sup>283,284,285</sup>112, <sup>280,281,282,283,284</sup>113, <sup>286,287,288,289</sup>114, <sup>287,288</sup>115, <sup>290,291,292,293</sup>116, <sup>294</sup>118( $\alpha$ ); measured  $E\alpha$ ,  $T_{1/2}$ . <sup>267</sup>Rf, <sup>271</sup>Sg, <sup>279,281</sup>Ds, <sup>282,283,284,285</sup>112, <sup>286,288</sup>114(SF); measured  $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c

**A=284**

<sup>284</sup>112 20070G05 RADIOACTIVITY <sup>266,267,268</sup>Db, <sup>269,271</sup>Sg, <sup>270,272</sup>Bh, <sup>275</sup>Hs, <sup>274,275,276</sup>Mt, <sup>279,281</sup>Ds, <sup>278,279,280</sup>Rg, <sup>283,284,285</sup>112, <sup>280,281,282,283,284</sup>113, <sup>286,287,288,289</sup>114, <sup>287,288</sup>115, <sup>290,291,292,293</sup>116, <sup>294</sup>118( $\alpha$ ); measured  $E\alpha$ ,  $T_{1/2}$ . <sup>267</sup>Rf, <sup>271</sup>Sg, <sup>279,281</sup>Ds, <sup>282,283,284,285</sup>112, <sup>286,288</sup>114(SF); measured  $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c

KEYNUMBERS AND KEYWORDS

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**A=284 (continued)**

- <sup>284</sup>113      20070G05      RADIOACTIVITY <sup>266,267,268</sup>Db, <sup>269,271</sup>Sg, <sup>270,272</sup>Bh, <sup>275</sup>Hs, <sup>274,275,276</sup>Mt, <sup>279,281</sup>Ds, <sup>278,279,280</sup>Rg, <sup>283,284,285</sup>112, <sup>280,281,282,283,284</sup>113, <sup>286,287,288,289</sup>114, <sup>287,288</sup>115, <sup>290,291,292,293</sup>116, <sup>294</sup>118( $\alpha$ ); measured  $E\alpha$ ,  $T_{1/2}$ . <sup>267</sup>Rf, <sup>271</sup>Sg, <sup>279,281</sup>Ds, <sup>282,283,284,285</sup>112, <sup>286,288</sup>114(SF); measured  $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c
- 2007ST18      RADIOACTIVITY <sup>268</sup>Db(SF); <sup>272</sup>Bh, <sup>276</sup>Mt, <sup>280</sup>Rg, <sup>284</sup>113, <sup>288</sup>115( $\alpha$ ); measured  $E\alpha$ , E(fragment),  $T_{1/2}$ . JOUR NUPAB 787 388c

**A=285**

- <sup>285</sup>112      20070G05      RADIOACTIVITY <sup>266,267,268</sup>Db, <sup>269,271</sup>Sg, <sup>270,272</sup>Bh, <sup>275</sup>Hs, <sup>274,275,276</sup>Mt, <sup>279,281</sup>Ds, <sup>278,279,280</sup>Rg, <sup>283,284,285</sup>112, <sup>280,281,282,283,284</sup>113, <sup>286,287,288,289</sup>114, <sup>287,288</sup>115, <sup>290,291,292,293</sup>116, <sup>294</sup>118( $\alpha$ ); measured  $E\alpha$ ,  $T_{1/2}$ . <sup>267</sup>Rf, <sup>271</sup>Sg, <sup>279,281</sup>Ds, <sup>282,283,284,285</sup>112, <sup>286,288</sup>114(SF); measured  $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c

**A=286**

- <sup>286</sup>112      2007H018      NUCLEAR REACTIONS <sup>238</sup>U(<sup>48</sup>Ca, X), E=233.3-239.3 MeV; measured  $\sigma$ ,  $E\alpha$ , (recoil) $\alpha$ -coin following residual nucleus decay; deduced evidence for <sup>286</sup>112. JOUR ZAANE 32 251
- <sup>286</sup>114      20070G05      RADIOACTIVITY <sup>266,267,268</sup>Db, <sup>269,271</sup>Sg, <sup>270,272</sup>Bh, <sup>275</sup>Hs, <sup>274,275,276</sup>Mt, <sup>279,281</sup>Ds, <sup>278,279,280</sup>Rg, <sup>283,284,285</sup>112, <sup>280,281,282,283,284</sup>113, <sup>286,287,288,289</sup>114, <sup>287,288</sup>115, <sup>290,291,292,293</sup>116, <sup>294</sup>118( $\alpha$ ); measured  $E\alpha$ ,  $T_{1/2}$ . <sup>267</sup>Rf, <sup>271</sup>Sg, <sup>279,281</sup>Ds, <sup>282,283,284,285</sup>112, <sup>286,288</sup>114(SF); measured  $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c

**A=287**

- <sup>287</sup>114      2007EI02      NUCLEAR REACTIONS <sup>238</sup>U(<sup>48</sup>Ca, 3n), <sup>242</sup>Pu(<sup>48</sup>Ca, 3n), E=237 MeV; measured super heavy element yield,  $E\alpha$ ,  $I\alpha$ ; analyzed production  $\sigma$ . JOUR NUPAB 787 373c
- 2007EI02      RADIOACTIVITY <sup>283</sup>112( $\alpha$ ); <sup>287</sup>114( $\alpha$ ), (SF); measured  $E\alpha$ , E(fragment),  $T_{1/2}$ . JOUR NUPAB 787 373c
- 20070G05      RADIOACTIVITY <sup>266,267,268</sup>Db, <sup>269,271</sup>Sg, <sup>270,272</sup>Bh, <sup>275</sup>Hs, <sup>274,275,276</sup>Mt, <sup>279,281</sup>Ds, <sup>278,279,280</sup>Rg, <sup>283,284,285</sup>112, <sup>280,281,282,283,284</sup>113, <sup>286,287,288,289</sup>114, <sup>287,288</sup>115, <sup>290,291,292,293</sup>116, <sup>294</sup>118( $\alpha$ ); measured  $E\alpha$ ,  $T_{1/2}$ . <sup>267</sup>Rf, <sup>271</sup>Sg, <sup>279,281</sup>Ds, <sup>282,283,284,285</sup>112, <sup>286,288</sup>114(SF); measured  $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c

KEYNUMBERS AND KEYWORDS

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**A=287 (continued)**

<sup>287</sup>115      20070G05      RADIOACTIVITY <sup>266,267,268</sup>Db, <sup>269,271</sup>Sg, <sup>270,272</sup>Bh, <sup>275</sup>Hs, <sup>274,275,276</sup>Mt, <sup>279,281</sup>Ds, <sup>278,279,280</sup>Rg, <sup>283,284,285</sup>112, <sup>280,281,282,283,284</sup>113, <sup>286,287,288,289</sup>114, <sup>287,288</sup>115, <sup>290,291,292,293</sup>116, <sup>294</sup>118( $\alpha$ ); measured  $E\alpha$ ,  $T_{1/2}$ . <sup>267</sup>Rf, <sup>271</sup>Sg, <sup>279,281</sup>Ds, <sup>282,283,284,285</sup>112, <sup>286,288</sup>114(SF); measured  $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c

**A=288**

<sup>288</sup>114      20070G05      NUCLEAR REACTIONS <sup>208</sup>Pb, <sup>209</sup>Bi(<sup>48</sup>Ca, n), (<sup>50</sup>Ti, n), (<sup>54</sup>Cr, n), (<sup>58</sup>Fe, n), (<sup>62</sup>Ni, n), (<sup>64</sup>Ni, n), (<sup>70</sup>Zn, n), E not given; analyzed  $\sigma$ . <sup>233</sup>U, <sup>237</sup>Np, <sup>244</sup>Pu, <sup>248</sup>Cm, <sup>249</sup>Cf(<sup>22</sup>Ne, 4n), (<sup>26</sup>Mg, 4n), (<sup>36</sup>S, 5n), (<sup>48</sup>Ca, 4n), E not given; measured  $E\alpha$ ,  $\alpha\alpha$ -coin following residual nucleus decay; analyzed  $\sigma$ ; deduced reaction mechanism features, hindrance and survivability. Comparison with other data. JOUR NUPAB 787 343c

20070G05      RADIOACTIVITY <sup>266,267,268</sup>Db, <sup>269,271</sup>Sg, <sup>270,272</sup>Bh, <sup>275</sup>Hs, <sup>274,275,276</sup>Mt, <sup>279,281</sup>Ds, <sup>278,279,280</sup>Rg, <sup>283,284,285</sup>112, <sup>280,281,282,283,284</sup>113, <sup>286,287,288,289</sup>114, <sup>287,288</sup>115, <sup>290,291,292,293</sup>116, <sup>294</sup>118( $\alpha$ ); measured  $E\alpha$ ,  $T_{1/2}$ . <sup>267</sup>Rf, <sup>271</sup>Sg, <sup>279,281</sup>Ds, <sup>282,283,284,285</sup>112, <sup>286,288</sup>114(SF); measured  $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c

<sup>288</sup>115      20070G05      RADIOACTIVITY <sup>266,267,268</sup>Db, <sup>269,271</sup>Sg, <sup>270,272</sup>Bh, <sup>275</sup>Hs, <sup>274,275,276</sup>Mt, <sup>279,281</sup>Ds, <sup>278,279,280</sup>Rg, <sup>283,284,285</sup>112, <sup>280,281,282,283,284</sup>113, <sup>286,287,288,289</sup>114, <sup>287,288</sup>115, <sup>290,291,292,293</sup>116, <sup>294</sup>118( $\alpha$ ); measured  $E\alpha$ ,  $T_{1/2}$ . <sup>267</sup>Rf, <sup>271</sup>Sg, <sup>279,281</sup>Ds, <sup>282,283,284,285</sup>112, <sup>286,288</sup>114(SF); measured  $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c

2007ST18      RADIOACTIVITY <sup>268</sup>Db(SF); <sup>272</sup>Bh, <sup>276</sup>Mt, <sup>280</sup>Rg, <sup>284</sup>113, <sup>288</sup>115( $\alpha$ ); measured  $E\alpha$ , E(fragment),  $T_{1/2}$ . JOUR NUPAB 787 388c

**A=289**

<sup>289</sup>114      20070G05      RADIOACTIVITY <sup>266,267,268</sup>Db, <sup>269,271</sup>Sg, <sup>270,272</sup>Bh, <sup>275</sup>Hs, <sup>274,275,276</sup>Mt, <sup>279,281</sup>Ds, <sup>278,279,280</sup>Rg, <sup>283,284,285</sup>112, <sup>280,281,282,283,284</sup>113, <sup>286,287,288,289</sup>114, <sup>287,288</sup>115, <sup>290,291,292,293</sup>116, <sup>294</sup>118( $\alpha$ ); measured  $E\alpha$ ,  $T_{1/2}$ . <sup>267</sup>Rf, <sup>271</sup>Sg, <sup>279,281</sup>Ds, <sup>282,283,284,285</sup>112, <sup>286,288</sup>114(SF); measured  $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c

**A=290**

- <sup>290</sup>116 20070G05 RADIOACTIVITY <sup>266,267,268</sup>Db, <sup>269,271</sup>Sg, <sup>270,272</sup>Bh, <sup>275</sup>Hs, <sup>274,275,276</sup>Mt, <sup>279,281</sup>Ds, <sup>278,279,280</sup>Rg, <sup>283,284,285</sup>112, <sup>280,281,282,283,284</sup>113, <sup>286,287,288,289</sup>114, <sup>287,288</sup>115, <sup>290,291,292,293</sup>116, <sup>294</sup>118( $\alpha$ ); measured  $E\alpha$ ,  $T_{1/2}$ . <sup>267</sup>Rf, <sup>271</sup>Sg, <sup>279,281</sup>Ds, <sup>282,283,284,285</sup>112, <sup>286,288</sup>114(SF); measured  $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c

**A=291**

- <sup>291</sup>116 20070G05 RADIOACTIVITY <sup>266,267,268</sup>Db, <sup>269,271</sup>Sg, <sup>270,272</sup>Bh, <sup>275</sup>Hs, <sup>274,275,276</sup>Mt, <sup>279,281</sup>Ds, <sup>278,279,280</sup>Rg, <sup>283,284,285</sup>112, <sup>280,281,282,283,284</sup>113, <sup>286,287,288,289</sup>114, <sup>287,288</sup>115, <sup>290,291,292,293</sup>116, <sup>294</sup>118( $\alpha$ ); measured  $E\alpha$ ,  $T_{1/2}$ . <sup>267</sup>Rf, <sup>271</sup>Sg, <sup>279,281</sup>Ds, <sup>282,283,284,285</sup>112, <sup>286,288</sup>114(SF); measured  $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c

**A=292**

- <sup>292</sup>116 20070G05 NUCLEAR REACTIONS <sup>208</sup>Pb, <sup>209</sup>Bi(<sup>48</sup>Ca, n), (<sup>50</sup>Ti, n), (<sup>54</sup>Cr, n), (<sup>58</sup>Fe, n), (<sup>62</sup>Ni, n), (<sup>64</sup>Ni, n), (<sup>70</sup>Zn, n), E not given; analyzed  $\sigma$ . <sup>233</sup>U, <sup>237</sup>Np, <sup>244</sup>Pu, <sup>248</sup>Cm, <sup>249</sup>Cf(<sup>22</sup>Ne, 4n), (<sup>26</sup>Mg, 4n), (<sup>36</sup>S, 5n), (<sup>48</sup>Ca, 4n), E not given; measured  $E\alpha$ ,  $\alpha\alpha$ -coin following residual nucleus decay; analyzed  $\sigma$ ; deduced reaction mechanism features, hindrance and survivability. Comparison with other data. JOUR NUPAB 787 343c
- 20070G05 RADIOACTIVITY <sup>266,267,268</sup>Db, <sup>269,271</sup>Sg, <sup>270,272</sup>Bh, <sup>275</sup>Hs, <sup>274,275,276</sup>Mt, <sup>279,281</sup>Ds, <sup>278,279,280</sup>Rg, <sup>283,284,285</sup>112, <sup>280,281,282,283,284</sup>113, <sup>286,287,288,289</sup>114, <sup>287,288</sup>115, <sup>290,291,292,293</sup>116, <sup>294</sup>118( $\alpha$ ); measured  $E\alpha$ ,  $T_{1/2}$ . <sup>267</sup>Rf, <sup>271</sup>Sg, <sup>279,281</sup>Ds, <sup>282,283,284,285</sup>112, <sup>286,288</sup>114(SF); measured  $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c

**A=293**

- <sup>293</sup>116 20070G05 RADIOACTIVITY <sup>266,267,268</sup>Db, <sup>269,271</sup>Sg, <sup>270,272</sup>Bh, <sup>275</sup>Hs, <sup>274,275,276</sup>Mt, <sup>279,281</sup>Ds, <sup>278,279,280</sup>Rg, <sup>283,284,285</sup>112, <sup>280,281,282,283,284</sup>113, <sup>286,287,288,289</sup>114, <sup>287,288</sup>115, <sup>290,291,292,293</sup>116, <sup>294</sup>118( $\alpha$ ); measured  $E\alpha$ ,  $T_{1/2}$ . <sup>267</sup>Rf, <sup>271</sup>Sg, <sup>279,281</sup>Ds, <sup>282,283,284,285</sup>112, <sup>286,288</sup>114(SF); measured  $T_{1/2}$ . Comparison with model predictions. Comparison with other data. JOUR NUPAB 787 343c
- <sup>293</sup>118 20070G05 NUCLEAR REACTIONS <sup>208</sup>Pb, <sup>209</sup>Bi(<sup>48</sup>Ca, n), (<sup>50</sup>Ti, n), (<sup>54</sup>Cr, n), (<sup>58</sup>Fe, n), (<sup>62</sup>Ni, n), (<sup>64</sup>Ni, n), (<sup>70</sup>Zn, n), E not given; analyzed  $\sigma$ . <sup>233</sup>U, <sup>237</sup>Np, <sup>244</sup>Pu, <sup>248</sup>Cm, <sup>249</sup>Cf(<sup>22</sup>Ne, 4n), (<sup>26</sup>Mg, 4n), (<sup>36</sup>S, 5n), (<sup>48</sup>Ca, 4n), E not given; measured  $E\alpha$ ,  $\alpha\alpha$ -coin following residual nucleus decay; analyzed  $\sigma$ ; deduced reaction mechanism features, hindrance and survivability. Comparison with other data. JOUR NUPAB 787 343c



KEYNUMBERS AND KEYWORDS

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**A=294**

<sup>294</sup>118      20070G05      RADIOACTIVITY <sup>266,267,268</sup>Db, <sup>269,271</sup>Sg, <sup>270,272</sup>Bh, <sup>275</sup>Hs,  
<sup>274,275,276</sup>Mt, <sup>279,281</sup>Ds, <sup>278,279,280</sup>Rg, <sup>283,284,285</sup>112,  
<sup>280,281,282,283,284</sup>113, <sup>286,287,288,289</sup>114, <sup>287,288</sup>115, <sup>290,291,292,293</sup>116,  
<sup>294</sup>118( $\alpha$ ); measured  $E\alpha$ ,  $T_{1/2}$ . <sup>267</sup>Rf, <sup>271</sup>Sg, <sup>279,281</sup>Ds, <sup>282,283,284,285</sup>112,  
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