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This document lists experimental references added to Nuclear Science References (NSR) during the period July 1, 2009 to September 30, 2009. The first section lists keynumbers and keywords sorted by mass and nuclide. The second section lists all references, ordered by keynumber.

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## Keynumbers and Keywords

## A=1

$^1n$	2007IMZX	NUCLEAR REACTIONS $^2\text{H}(p, 2p)n$ , $E = 9.5$ MeV; measured $E_p$ , $I_p$ . REPT TUNL-XLVI,P64,Imig
	2007MAYY	NUCLEAR REACTIONS $^2\text{H}(p, 2p)$ , $E=250$ MeV; measured $E_p$ , $I_p$ , $E_d$ , $I_d$ ; deduced $A_y$ , $\sigma(E)$ , $\sigma(\theta)$ ; calculated $A_y$ . Missing mass spectra. Incident protons polarized to 70%. Preliminary results only. REPT CNS-REP-76,P25,Maeda
	2009SE05	NUCLEAR REACTIONS $^1\text{H}(\text{polarized } d, 2p)$ , $E=135$ MeV / nucleon; measured $E_p$ , $I_p$ , polarization transfer coefficients and vector analyzing powers of outgoing proton. Comparison with calculations using three-nucleon Faddeev equation. JOUR PRVCA 79 054008
$^1\text{H}$	2007BLZW	NUCLEAR REACTIONS $^2\text{H}(\gamma, n)$ , $E = 14, 16$ MeV; measured $I_n$ , $E_n$ ; deduced p-wave transition matrix element amplitudes. Comparison with SAPM calculations. REPT TUNL-XLVI,P92,Blackston
	2007ELZU	NUCLEAR REACTIONS $^1\text{H}(^{28}\text{Ne}, ^{28}\text{Ne}')$ , $^1\text{H}(^{28}\text{Ne}, ^{27}\text{Ne})$ , $E$ not given; measured $E_\gamma$ , $I_\gamma$ , particle- $\gamma$ -coin. REPT RIKEN 2006 Annual,P11,Elekes
	2007ELZV	NUCLEAR REACTIONS $^1\text{H}(^{30}\text{Na}, ^{30}\text{Na}')$ , $^1\text{H}(^{31}\text{Na}, ^{31}\text{Na}')$ , $^1\text{H}(^{33}\text{Mg}, ^{33}\text{Mg}')$ , $^1\text{H}(^{34}\text{Mg}, ^{34}\text{Mg}')$ , $E \approx 50$ MeV / nucleon; measured $I_\gamma$ , $E_\gamma$ , particle- $\gamma$ -coin.; deduced deformation. REPT RIKEN 2006 Annual,P7,Elekes
	2007INZZ	NUCLEAR REACTIONS $^1\text{H}(^{30}\text{Ne}, ^{30}\text{Ne}')$ , $E \approx 44$ MeV / nucleon; measured $E_\gamma$ , $I_\gamma$ , particle- $\gamma$ coin., $\gamma\gamma$ -coin.; deduced $\gamma$ peak at 799 keV. REPT RIKEN 2006 Annual,P9,Inafuku
	2007K0ZN	NUCLEAR REACTIONS $^1\text{H}(^{14}\text{Be}, n^{12}\text{Be})$ , $^1\text{H}(^{14}\text{Be}, 2n^{12}\text{Be})$ , $E=69$ MeV / nucleon; measured $E_n$ , $I_n$ , $E(\text{particle})$ , $I(\text{particle})$ ; deduced $\sigma$ . REPT RIKEN 2006 Annual,P27,Kondo
	2007MIZO	NUCLEAR REACTIONS $^1\text{H}(^{36}\text{Mg}, ^{36}\text{Mg}')$ , $E$ not given; measured $E_\gamma$ , <i>Inullg</i> . Data are subject of analysis. REPT RIKEN 2006 Annual,P8,Michimasa
	2007SAZP	NUCLEAR REACTIONS $^1\text{H}(^{14}\text{Be}, n^{13}\text{Be})$ , $E=70$ MeV / nucleon; measured $E_n$ , $I_n$ , $E(\text{particle})$ , $I(\text{particle})$ ; deduced $\sigma(\theta)$ . REPT RIKEN 2006 Annual,P26,Satou
	2007SAZQ	NUCLEAR REACTIONS $^1\text{H}(^6\text{He}, ^6\text{He})$ , $E=71$ MeV / nucleon; measured $E(\text{particle})$ , $I(\text{particle})$ , polarization; deduced $\sigma(\theta)$ , analyzing power. Compared with other data and calculations. REPT RIKEN 2006 Annual,P24,Sakaguchi
	2007SAZR	NUCLEAR REACTIONS $^1\text{H}(^6\text{He}, ^6\text{He})$ , $E=71$ MeV / nucleon; measured $E_p$ , $I_p$ ; deduced $\sigma(\theta)$ , $A_y$ ; analyzed $A_y$ using optical model; deduced parameters. Polarization of the target: average 13.8%, maximum 20.4%. REPT CNS-REP-76,P29,Sakaguchi
	2007TAZK	NUCLEAR REACTIONS $^1\text{H}(^{32}\text{Mg}, ^{32}\text{Mg}')$ , $E$ not given; measured $E_\gamma$ , $I_\gamma$ , particle- $\gamma$ -coin., $\theta(\text{particle})$ , $I(\text{particle})$ ; deduced $\sigma(\theta)$ ; calculated $\sigma(\theta)$ using ECIS97 code. REPT RIKEN 2006 Annual,P5,Takeuchi
	2007TAZL	NUCLEAR REACTIONS $^1\text{H}(^{60}\text{Cr}, ^{60}\text{Cr}')$ , $^1\text{H}(^{62}\text{Cr}, ^{62}\text{Cr}')$ , $E$ not given; measured $E_\gamma$ , $I_\gamma$ , $\gamma\gamma$ -coin.; deduced $\sigma(2_1^+$ -g.s.), $\beta_2$ . REPT RIKEN 2006 Annual,Pii,Takeshita

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- 2007TEZW NUCLEAR REACTIONS  $^1\text{H}(^{20}\text{O}, ^{20}\text{O}')$ ,  $E=300$  MeV / nucleon; measured  $E(\text{particle})$ ,  $I(\text{particle})$  using thin solid hydrogen target. REPT RIKEN 2006 Annual,P18,Terashima
- 2007YAZP NUCLEAR REACTIONS  $^1\text{H}(^7\text{Be}, ^7\text{Be})$ ,  $E=53.8$  MeV; measured  $E_p$ ,  $I_p$ ; deduced excitation function. S-factor to be deduced in future. REPT RIKEN 2006 Annual,P29,Yamaguchi
- 2008AHZZ NUCLEAR REACTIONS  $^2\text{H}(\gamma, n)$ ,  $E=2.44, 3.5, 4$  MeV; measured  $E_n$ ,  $I_n$ ; deduced fore-aft asymmetry, coefficients of Legendre polynomials,  $\sigma(\theta)$  not normalized and compared to older data and theoretical calculations. REPT TUNL-XLII,P98,Ahmed
- 2008ELZX NUCLEAR REACTIONS  $^2\text{H}(^{22}\text{O}, ^{23}\text{O})$ ,  $E=34$  MeV / nucleon; measured  $E_n$ ,  $I_n$ ,  $\theta_n$ ,  $E_p$ ,  $I_p$ ; deduced  $J$ ,  $\pi$  of the lowest states. Evidence for disappearance of  $N=20$  shell closure at  $Z=8$ . REPT RIKEN 2007 Annual,P11,Elekes
- 2008KAZR NUCLEAR REACTIONS  $^1\text{H}(^{74}\text{Ni}, ^{74}\text{Ni}')$ ,  $E=81$  MeV / nucleon; measured  $E_\gamma$ ,  $I_\gamma$ ; deduced  $\beta_2$ ,  $\sigma(2^+)$ ; calculated  $\sigma$  using DWBA. Compared to data for Ni isotopes. REPT RIKEN 2007 Annual,P12,Kanno
- 2008MIZW NUCLEAR REACTIONS  $^1\text{H}(^{36}\text{Mg}, ^{34}\text{Mg})$ ,  $^1\text{H}(^{36}\text{Mg}, ^{35}\text{Mg})$ ,  $^1\text{H}(^{36}\text{Mg}, ^{36}\text{Mg}')$ ,  $E$  not given; measured  $E_\gamma$ ,  $I_\gamma$ , particle- $\gamma$ -coin. REPT RIKEN 2007 Annual,P9,Michimasa
- 2008SAZT NUCLEAR REACTIONS  $^1\text{H}(^8\text{He}, ^8\text{He})$ ,  $E=71$  MeV / nucleon; measured  $I_p$ ,  $\theta(p)$ ,  $I(\text{particle})$ ,  $\theta(\text{particle})$  on polarized solid proton target. Analyzing power and  $\sigma$  to be deduced in future. REPT RIKEN 2007 Annual,P22,Sakaguchi
- 2009AB15 NUCLEAR REACTIONS  $\text{Be}(\text{C}, \text{X})^1\text{H} / ^2\text{H} / ^3\text{H} / ^3\text{He} / ^4\text{He} / ^6\text{He} / ^8\text{He}$ ,  $E=301.6$  MeV / nucleon; measured fragment distributions, momenta; deduced yields,  $\sigma(\theta, p)$ . JOUR BRSPE 73 716
- 2009GU17 NUCLEAR REACTIONS  $^9\text{Be}(\pi^-, p)$ ,  $^{12}\text{C}(\pi^-, t)$ ,  $(\pi^-, d)$ ,  $(\pi^-, ^3\text{He})$ ,  $(\pi^-, pd)$ ,  $(\pi^-, 2d)$ ,  $(\pi^-, 2t)$ ,  $^{10}\text{B}(\pi^-, t\alpha)$ ,  $^{11}\text{B}(\pi^-, ^3\text{He}^7\text{H})$ ,  $E$  at rest; $^{4,5,6,7}\text{H}$ ; measured missing-mass spectra; deduced level structures in  $^{4,5,6}\text{H}$ , evidence for  $^7\text{H}$ . JOUR PPNU 40 558
- 2009TA08 NUCLEAR REACTIONS  $^1\text{H}(^{32}\text{Mg}, ^{32}\text{Mg}')$ ,  $E=46.5$  MeV / nucleon; measured  $E_\gamma$ ,  $I_\gamma$ , scattered particle spectra,  $\sigma$ ,  $\sigma(\theta)$ .  $^{32}\text{Mg}$ ; deduced levels,  $J$ ,  $\pi$ , deformation lengths, rms radii. Coupled-channel analysis of angular distribution cross sections.  $^{24,26,28,30,32,34}\text{Mg}$ ; level systematics. JOUR PRVCA 79 054319
- 2009TAZZ NUCLEAR REACTIONS  $^1\text{H}(^{32}\text{Mg}, ^{32}\text{Mg}')$ ,  $E=46.5$  MeV / nucleon; measured  $E_\gamma$ ,  $I_\gamma$ ,  $\gamma\gamma$ -, (particle) $\gamma$ -coin,  $\sigma(\theta)$ .  $^{32}\text{Mg}$ ; deduced level energies,  $J$ ,  $\pi$ . REPT RIKEN-NC-NP-32,Takeuchi

**A=2**

- $^2\text{H}$  2007ELZT NUCLEAR REACTIONS  $^2\text{H}(^{22}\text{O}, ^{22}\text{O}')$ ,  $E=34$  MeV / nucleon; measured  $E_\gamma$ ,  $I_\gamma$ , particle- $\gamma$ -coin.; calculated  $\sigma$ ; deduced  $\beta_M$  deformation. REPT RIKEN 2006 Annual,P17,Elekes

**A=2 (continued)**

- 2007ELZU NUCLEAR REACTIONS  $^1\text{H}(^{28}\text{Ne}, ^{28}\text{Ne}')$ ,  $^1\text{H}(^{28}\text{Ne}, ^{27}\text{Ne})$ , E not given; measured  $E\gamma$ ,  $I\gamma$ , particle- $\gamma$ -coin. REPT RIKEN 2006 Annual,P11,Elekes
- 2007KHZS NUCLEAR REACTIONS  $^1\text{H}(^6\text{He}, n\alpha)$ ,  $E=70$  MeV;  $^1\text{H}(^6\text{Li}, \alpha p)$ , E not given; measured  $E\alpha$ ,  $E_n$ ,  $E_p$ ,  $E_d$ , particle-particle-coin. Strong di-neutron correlation, solid H target, backward scattering. REPT RIKEN 2006 Annual,P22,Khai
- 2007KOZN NUCLEAR REACTIONS  $^1\text{H}(^{14}\text{Be}, n^{12}\text{Be})$ ,  $^1\text{H}(^{14}\text{Be}, 2n^{12}\text{Be})$ ,  $E=69$  MeV / nucleon; measured  $E_n$ ,  $I_n$ ,  $E(\text{particle})$ ,  $I(\text{particle})$ ; deduced  $\sigma$ . REPT RIKEN 2006 Annual,P27,Kondo
- 2008HAZT NUCLEAR REACTIONS  $^1\text{H}(^{20}\text{C}, ^{18}\text{C})$ ,  $^1\text{H}(^{20}\text{C}, ^{19}\text{C})$ ,  $E\approx 40$  MeV / nucleon; measured  $E(\text{particle})$ ,  $I(\text{particle})$ ; deduced longitudinal momentum distribution. REPT RIKEN 2007 Annual,P16,Hashizume
- 2008KOZT NUCLEAR REACTIONS  $^1\text{H}(^{18}\text{C}, ^{17}\text{C})$ ,  $E\approx 80$  MeV / nucleon;  $^1\text{H}(^{19}\text{C}, ^{18}\text{C})$ ,  $E\approx 70$  MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin.; deduced transverse momentum distribution. REPT RIKEN 2007 Annual,P8,Kondo
- 2008MIZW NUCLEAR REACTIONS  $^1\text{H}(^{36}\text{Mg}, ^{34}\text{Mg})$ ,  $^1\text{H}(^{36}\text{Mg}, ^{35}\text{Mg})$ ,  $^1\text{H}(^{36}\text{Mg}, ^{36}\text{Mg}')$ , E not given; measured  $E\gamma$ ,  $I\gamma$ , particle- $\gamma$ -coin. REPT RIKEN 2007 Annual,P9,Michimasa
- 2008NIZY NUCLEAR REACTIONS  $^2\text{H}(^8\text{He}, ^8\text{He}')$ ,  $E=42$  MeV / nucleon; measured  $E(\text{particle})$ ,  $I(\text{particle})$ ,  $E_t$ ,  $I_t$ ,  $E_n$ ,  $I_n$ . Further analysis in progress. REPT RIKEN 2007 Annual,P15,Nikolskii
- 2009AB15 NUCLEAR REACTIONS  $\text{Be}(C, X)^1\text{H} / ^2\text{H} / ^3\text{H} / ^3\text{He} / ^4\text{He} / ^6\text{He} / ^8\text{He}$ ,  $E=301.6$  MeV / nucleon; measured fragment distributions, momenta; deduced yields,  $\sigma(\theta, p)$ . JOUR BRSPE 73 716
- 2009DI02 NUCLEAR REACTIONS  $^2\text{H}(p, p)$ ,  $E=1.8-3.2$  MeV; measured  $E\pi$ ,  $I\pi$ ,  $s(\theta)$ . JOUR NIMBE 267 2341
- $^2\text{He}$  2007PEZT NUCLEAR REACTIONS  $^3\text{He}(\gamma, n)$ ,  $E = 12.8$  MeV; measured  $E_n$ ,  $I_n$ . Comparison with GEANT4 calculations. REPT TUNL-XLVI,P94,Perdue

**A=3**

- $^3\text{H}$  2007MIZN NUCLEAR REACTIONS  $^4\text{He}(^{22}\text{O}, ^{23}\text{F})$ ,  $^4\text{He}(^{23}\text{F}, ^{23}\text{F}')$ ,  $^4\text{He}(^{24}\text{F}, ^{23}\text{F})$ ,  $^4\text{He}(^{25}\text{Ne}, ^{23}\text{F})$ , E not given; measured  $E\gamma$ ,  $I\gamma$ , particle- $\gamma$ -coin.; deduced level properties  $J$ ,  $\pi$ ,  $\gamma$  decay scheme. REPT RIKEN 2006 Annual,P10,Michimasa
- 20070TZZ NUCLEAR REACTIONS  $^4\text{He}(^{12}\text{Be}, ^{13}\text{B})$ ,  $E=50$  MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$ , particle- $\gamma$ -coin.; deduced  $\sigma(\theta)$ ; calculated  $\sigma(\theta)$  using DWBA with shell-model code OXBASH; deduced deformation of excited states. REPT CNS-REP-76,P17,Ota
- 2008HAZT NUCLEAR REACTIONS  $^1\text{H}(^{20}\text{C}, ^{18}\text{C})$ ,  $^1\text{H}(^{20}\text{C}, ^{19}\text{C})$ ,  $E\approx 40$  MeV / nucleon; measured  $E(\text{particle})$ ,  $I(\text{particle})$ ; deduced longitudinal momentum distribution. REPT RIKEN 2007 Annual,P16,Hashizume
- 2008MIZW NUCLEAR REACTIONS  $^1\text{H}(^{36}\text{Mg}, ^{34}\text{Mg})$ ,  $^1\text{H}(^{36}\text{Mg}, ^{35}\text{Mg})$ ,  $^1\text{H}(^{36}\text{Mg}, ^{36}\text{Mg}')$ , E not given; measured  $E\gamma$ ,  $I\gamma$ , particle- $\gamma$ -coin. REPT RIKEN 2007 Annual,P9,Michimasa

**A=3 (continued)**

- 2009AB15 NUCLEAR REACTIONS Be(C, X)<sup>1</sup>H / <sup>2</sup>H / <sup>3</sup>H / <sup>3</sup>He / <sup>4</sup>He / <sup>6</sup>He / <sup>8</sup>He, E=301.6 MeV / nucleon; measured fragment distributions, momenta; deduced yields,  $\sigma(\theta, p)$ . JOUR BRSPE 73 716
- 2009GU17 NUCLEAR REACTIONS <sup>9</sup>Be( $\pi^-$ , p), <sup>12</sup>C( $\pi^-$ , t), ( $\pi^-$ , d), ( $\pi^-$ ,<sup>3</sup>He), ( $\pi^-$ , pd), ( $\pi^-$ , 2d), ( $\pi^-$ , 2t), <sup>10</sup>B( $\pi^-$ , t $\alpha$ ), <sup>11</sup>B( $\pi^-$ ,<sup>3</sup>He<sup>7</sup>H), E at rest;<sup>4,5,6,7</sup>H; measured missing-mass spectra; deduced level structures in <sup>4,5,6</sup>H, evidence for <sup>7</sup>H. JOUR PPNU 40 558
- <sup>3</sup>He 2009AB15 NUCLEAR REACTIONS Be(C, X)<sup>1</sup>H / <sup>2</sup>H / <sup>3</sup>H / <sup>3</sup>He / <sup>4</sup>He / <sup>6</sup>He / <sup>8</sup>He, E=301.6 MeV / nucleon; measured fragment distributions, momenta; deduced yields,  $\sigma(\theta, p)$ . JOUR BRSPE 73 716

**A=4**

- <sup>4</sup>n 2007NIZW NUCLEAR REACTIONS <sup>2</sup>H(<sup>8</sup>He, t), <sup>2</sup>H(<sup>8</sup>He,  $\alpha$ ), <sup>2</sup>H(<sup>8</sup>He, <sup>6</sup>Li), <sup>2</sup>H(<sup>8</sup>He, d $\alpha$ ), <sup>2</sup>H(<sup>8</sup>He, t), E $\approx$ 42 MeV / nucleon;<sup>2</sup>H(<sup>12</sup>Be, <sup>3</sup>He), <sup>2</sup>H(<sup>12</sup>Be, <sup>6</sup>Li), <sup>2</sup>H(<sup>12</sup>Be, d $\alpha$ ), <sup>2</sup>H(<sup>12</sup>Be, t), E $\approx$ 71 MeV / nucleon; measured E(particle), I(particle), particle-particle-coin. REPT RIKEN 2006 Annual,P21,Nikolskii
- <sup>4</sup>H 2008GUZU NUCLEAR REACTIONS <sup>11</sup>B( $\pi^-$ , t $\alpha$ ), ( $\pi^-$ , t<sup>3</sup>He), <sup>10</sup>B( $\pi^-$ , d $\alpha$ ), E at rest; measured missing-mass spectra. <sup>4</sup>H, <sup>5</sup>H; deduced excited state energies. LAMPF, two-channel spectrometer. CONF Moscow,P80,Gurov
- 2009GU17 NUCLEAR REACTIONS <sup>9</sup>Be( $\pi^-$ , p), <sup>12</sup>C( $\pi^-$ , t), ( $\pi^-$ , d), ( $\pi^-$ ,<sup>3</sup>He), ( $\pi^-$ , pd), ( $\pi^-$ , 2d), ( $\pi^-$ , 2t), <sup>10</sup>B( $\pi^-$ , t $\alpha$ ), <sup>11</sup>B( $\pi^-$ ,<sup>3</sup>He<sup>7</sup>H), E at rest;<sup>4,5,6,7</sup>H; measured missing-mass spectra; deduced level structures in <sup>4,5,6</sup>H, evidence for <sup>7</sup>H. JOUR PPNU 40 558
- <sup>4</sup>He 2007MIZN NUCLEAR REACTIONS <sup>4</sup>He(<sup>22</sup>O, <sup>23</sup>F), <sup>4</sup>He(<sup>23</sup>F, <sup>23</sup>F'), <sup>4</sup>He(<sup>24</sup>F, <sup>23</sup>F), <sup>4</sup>He(<sup>25</sup>Ne, <sup>23</sup>F), E not given; measured E $\gamma$ , I $\gamma$ , particle- $\gamma$ -coin.; deduced level properties J,  $\pi$ ,  $\gamma$  decay scheme. REPT RIKEN 2006 Annual,P10,Michimasa
- 2009AB15 NUCLEAR REACTIONS Be(C, X)<sup>1</sup>H / <sup>2</sup>H / <sup>3</sup>H / <sup>3</sup>He / <sup>4</sup>He / <sup>6</sup>He / <sup>8</sup>He, E=301.6 MeV / nucleon; measured fragment distributions, momenta; deduced yields,  $\sigma(\theta, p)$ . JOUR BRSPE 73 716
- 2009GR07 RADIOACTIVITY <sup>6</sup>Be, <sup>45</sup>Fe(2p); measured energy and angular correlation distributions. JOUR PYLBB 677 30
- 2009KE03 NUCLEAR REACTIONS <sup>2</sup>H(d, 2 $\pi^0$ ), (d,  $\pi^+\pi^-$ ), E=712, 1029 MeV; measured  $\sigma(\theta)$ , invariant mass spectra, energy spectra and other reaction observables. Comparison with simplified  $\Delta\Delta$  model and earlier results. JOUR NUPAB 825 71

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- <sup>5</sup>H 2008GUZU NUCLEAR REACTIONS <sup>11</sup>B( $\pi^-$ , t $\alpha$ ), ( $\pi^-$ , t<sup>3</sup>He), <sup>10</sup>B( $\pi^-$ , d $\alpha$ ), E at rest; measured missing-mass spectra. <sup>4</sup>H, <sup>5</sup>H; deduced excited state energies. LAMPF, two-channel spectrometer. CONF Moscow,P80,Gurov

**A=5 (continued)**

- 2009GU17 NUCLEAR REACTIONS  ${}^9\text{Be}(\pi^-, \text{p})$ ,  ${}^{12}\text{C}(\pi^-, \text{t})$ ,  $(\pi^-, \text{d})$ ,  $(\pi^-, {}^3\text{He})$ ,  $(\pi^-, \text{pd})$ ,  $(\pi^-, 2\text{d})$ ,  $(\pi^-, 2\text{t})$ ,  ${}^{10}\text{B}(\pi^-, \text{t}\alpha)$ ,  ${}^{11}\text{B}(\pi^-, {}^3\text{He}^7\text{H})$ , E at rest; ${}^{4,5,6,7}\text{H}$ ; measured missing-mass spectra; deduced level structures in  ${}^{4,5,6}\text{H}$ , evidence for  ${}^7\text{H}$ . JOUR PPNU 40 558
- ${}^5\text{He}$  2007MIZN NUCLEAR REACTIONS  ${}^4\text{He}({}^{22}\text{O}, {}^{23}\text{F})$ ,  ${}^4\text{He}({}^{23}\text{F}, {}^{23}\text{F}')$ ,  ${}^4\text{He}({}^{24}\text{F}, {}^{23}\text{F})$ ,  ${}^4\text{He}({}^{25}\text{Ne}, {}^{23}\text{F})$ , E not given; measured  $\text{E}\gamma$ ,  $\text{I}\gamma$ , particle- $\gamma$ -coin.; deduced level properties J,  $\pi$ ,  $\gamma$  decay scheme. REPT RIKEN 2006 Annual,P10,Michimasa
- 2008AKZZ NUCLEAR REACTIONS  ${}^6\text{Li}(\gamma, \text{p})$ , E not given; measured En, In; deduced  $\sigma(\theta)$ . CONF Cappadocia (Nuclear Physics and Astrophysics),P270,Akkurt

**A=6**

- ${}^6\text{H}$  2007NIZW NUCLEAR REACTIONS  ${}^2\text{H}({}^8\text{He}, \text{t})$ ,  ${}^2\text{H}({}^8\text{He}, \alpha)$ ,  ${}^2\text{H}({}^8\text{He}, {}^6\text{Li})$ ,  ${}^2\text{H}({}^8\text{He}, \text{d}\alpha)$ ,  ${}^2\text{H}({}^8\text{He}, \text{t})$ ,  $\text{E}\approx 42$  MeV / nucleon;  ${}^2\text{H}({}^{12}\text{Be}, {}^3\text{He})$ ,  ${}^2\text{H}({}^{12}\text{Be}, {}^6\text{Li})$ ,  ${}^2\text{H}({}^{12}\text{Be}, \text{d}\alpha)$ ,  ${}^2\text{H}({}^{12}\text{Be}, \text{t})$ ,  $\text{E}\approx 71$  MeV / nucleon; measured E(particle), I(particle), particle-particle-coin. REPT RIKEN 2006 Annual,P21,Nikolskii
- 2009GU17 NUCLEAR REACTIONS  ${}^9\text{Be}(\pi^-, \text{p})$ ,  ${}^{12}\text{C}(\pi^-, \text{t})$ ,  $(\pi^-, \text{d})$ ,  $(\pi^-, {}^3\text{He})$ ,  $(\pi^-, \text{pd})$ ,  $(\pi^-, 2\text{d})$ ,  $(\pi^-, 2\text{t})$ ,  ${}^{10}\text{B}(\pi^-, \text{t}\alpha)$ ,  ${}^{11}\text{B}(\pi^-, {}^3\text{He}^7\text{H})$ , E at rest; ${}^{4,5,6,7}\text{H}$ ; measured missing-mass spectra; deduced level structures in  ${}^{4,5,6}\text{H}$ , evidence for  ${}^7\text{H}$ . JOUR PPNU 40 558
- ${}^6\text{He}$  2009AB15 NUCLEAR REACTIONS  $\text{Be}(\text{C}, \text{X}){}^1\text{H} / {}^2\text{H} / {}^3\text{H} / {}^3\text{He} / {}^4\text{He} / {}^6\text{He} / {}^8\text{He}$ ,  $\text{E}=301.6$  MeV / nucleon; measured fragment distributions, momenta; deduced yields,  $\sigma(\theta, \text{p})$ . JOUR BRSPE 73 716
- ${}^6\text{Li}$  2007MIZN NUCLEAR REACTIONS  ${}^4\text{He}({}^{22}\text{O}, {}^{23}\text{F})$ ,  ${}^4\text{He}({}^{23}\text{F}, {}^{23}\text{F}')$ ,  ${}^4\text{He}({}^{24}\text{F}, {}^{23}\text{F})$ ,  ${}^4\text{He}({}^{25}\text{Ne}, {}^{23}\text{F})$ , E not given; measured  $\text{E}\gamma$ ,  $\text{I}\gamma$ , particle- $\gamma$ -coin.; deduced level properties J,  $\pi$ ,  $\gamma$  decay scheme. REPT RIKEN 2006 Annual,P10,Michimasa
- 2008BUZV NUCLEAR REACTIONS  ${}^{6,7}\text{Li}(\text{p}, \text{p})$ ,  $(\text{d}, \text{d})$ ,  $({}^3\text{He}, {}^3\text{He})$ ,  $(\alpha, \alpha)$ ,  $\text{E}=72$  MeV; measured  $\sigma(\theta)$ . CONF Cappadocia (Nuclear Physics and Astrophysics),P203,Burtebayev
- 2009GU17 NUCLEAR REACTIONS  ${}^9\text{Be}(\pi^-, \text{p})$ ,  ${}^{12}\text{C}(\pi^-, \text{t})$ ,  $(\pi^-, \text{d})$ ,  $(\pi^-, {}^3\text{He})$ ,  $(\pi^-, \text{pd})$ ,  $(\pi^-, 2\text{d})$ ,  $(\pi^-, 2\text{t})$ ,  ${}^{10}\text{B}(\pi^-, \text{t}\alpha)$ ,  ${}^{11}\text{B}(\pi^-, {}^3\text{He}^7\text{H})$ , E at rest; ${}^{4,5,6,7}\text{H}$ ; measured missing-mass spectra; deduced level structures in  ${}^{4,5,6}\text{H}$ , evidence for  ${}^7\text{H}$ . JOUR PPNU 40 558
- 2009R010 NUCLEAR REACTIONS  ${}^7\text{Li}({}^{10}\text{B}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^7\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B}$ ,  $\text{E}=51$  MeV; measured particle spectra.  ${}^7\text{Li}({}^{10}\text{B}, {}^9\text{Be})$ ,  $\text{E}=51$  MeV;  ${}^{10}\text{Be}({}^7\text{Li}, {}^9\text{Be})$ ,  $\text{E}=24$  MeV; measured  ${}^9\text{Be}$  spectra,  $\sigma(\theta)$ , analysis by coupled-reaction-channels method using optical potentials of Woods-Saxon type.  ${}^8\text{Be}$ ; deduced levels, J,  $\pi$ . JOUR PRVCA 79 054609
- ${}^6\text{Be}$  2009GR07 RADIOACTIVITY  ${}^6\text{Be}$ ,  ${}^{45}\text{Fe}(2\text{p})$ ; measured energy and angular correlation distributions. JOUR PYLBB 677 30

## A=7

- ${}^7\text{H}$  2009GU17 NUCLEAR REACTIONS  ${}^9\text{Be}(\pi^-, \text{p})$ ,  ${}^{12}\text{C}(\pi^-, \text{t})$ ,  $(\pi^-, \text{d})$ ,  $(\pi^-, {}^3\text{He})$ ,  $(\pi^-, \text{pd})$ ,  $(\pi^-, 2\text{d})$ ,  $(\pi^-, 2\text{t})$ ,  ${}^{10}\text{B}(\pi^-, \text{t}\alpha)$ ,  ${}^{11}\text{B}(\pi^-, {}^3\text{He}{}^7\text{H})$ , E at rest; ${}^{4,5,6,7}\text{H}$ ; measured missing-mass spectra; deduced level structures in  ${}^{4,5,6}\text{H}$ , evidence for  ${}^7\text{H}$ . JOUR PPNUE 40 558
- ${}^7\text{He}$  2007NIZW NUCLEAR REACTIONS  ${}^2\text{H}({}^8\text{He}, \text{t})$ ,  ${}^2\text{H}({}^8\text{He}, \alpha)$ ,  ${}^2\text{H}({}^8\text{He}, {}^6\text{Li})$ ,  ${}^2\text{H}({}^8\text{He}, \text{d}\alpha)$ ,  ${}^2\text{H}({}^8\text{He}, \text{t})$ ,  $E \approx 42$  MeV / nucleon;  ${}^2\text{H}({}^{12}\text{Be}, {}^3\text{He})$ ,  ${}^2\text{H}({}^{12}\text{Be}, {}^6\text{Li})$ ,  ${}^2\text{H}({}^{12}\text{Be}, \text{d}\alpha)$ ,  ${}^2\text{H}({}^{12}\text{Be}, \text{t})$ ,  $E \approx 71$  MeV / nucleon; measured E(particle), I(particle), particle-particle-coin. REPT RIKEN 2006 Annual,P21,Nikolskii
- 2008NIZZ NUCLEAR REACTIONS  ${}^2\text{H}({}^8\text{He}, \text{t})$ ,  $E=42$  MeV / nucleon;  ${}^2\text{H}({}^{12}\text{Be}, \text{t})$ ,  $E=71$  MeV / nucleon; measured Et, It, particle-particle-coin.; deduced J,  $\pi$  of some levels. REPT RIKEN 2007 Annual,P14,Nikolskii
- ${}^7\text{Li}$  2008BUZV NUCLEAR REACTIONS  ${}^6,7\text{Li}(\text{p}, \text{p})$ ,  $(\text{d}, \text{d})$ ,  $({}^3\text{He}, {}^3\text{He})$ ,  $(\alpha, \alpha)$ ,  $E=72$  MeV; measured  $\sigma(\theta)$ . CONF Cappadocia (Nuclear Physics and Astrophysics),P203,Burtebayev
- 2009R010 NUCLEAR REACTIONS  ${}^7\text{Li}({}^{10}\text{B}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^7\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B}$ ,  $E=51$  MeV; measured particle spectra.  ${}^7\text{Li}({}^{10}\text{B}, {}^9\text{Be})$ ,  $E=51$  MeV;  ${}^{10}\text{Be}({}^7\text{Li}, {}^9\text{Be})$ ,  $E=24$  MeV; measured  ${}^9\text{Be}$  spectra,  $\sigma(\theta)$ , analysis by coupled-reaction-channels method using optical potentials of Woods-Saxon type.  ${}^8\text{Be}$ ; deduced levels, J,  $\pi$ . JOUR PRVCA 79 054609
- ${}^7\text{Be}$  2007GYZY NUCLEAR REACTIONS  ${}^3\text{He}(\alpha, \gamma)$ ,  $E(\text{cm}) = 93, 106, 170$  keV; measured  $E\gamma$ ,  $I\gamma$ ; deduced  $\sigma$ , s-factor, reaction rate uncertainty. REPT ATOMKI 2007 Annual,P21,Gyurky
- 2009R010 NUCLEAR REACTIONS  ${}^7\text{Li}({}^{10}\text{B}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^7\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B}$ ,  $E=51$  MeV; measured particle spectra.  ${}^7\text{Li}({}^{10}\text{B}, {}^9\text{Be})$ ,  $E=51$  MeV;  ${}^{10}\text{Be}({}^7\text{Li}, {}^9\text{Be})$ ,  $E=24$  MeV; measured  ${}^9\text{Be}$  spectra,  $\sigma(\theta)$ , analysis by coupled-reaction-channels method using optical potentials of Woods-Saxon type.  ${}^8\text{Be}$ ; deduced levels, J,  $\pi$ . JOUR PRVCA 79 054609

## A=8

- ${}^8\text{He}$  2007NIZW NUCLEAR REACTIONS  ${}^2\text{H}({}^8\text{He}, \text{t})$ ,  ${}^2\text{H}({}^8\text{He}, \alpha)$ ,  ${}^2\text{H}({}^8\text{He}, {}^6\text{Li})$ ,  ${}^2\text{H}({}^8\text{He}, \text{d}\alpha)$ ,  ${}^2\text{H}({}^8\text{He}, \text{t})$ ,  $E \approx 42$  MeV / nucleon;  ${}^2\text{H}({}^{12}\text{Be}, {}^3\text{He})$ ,  ${}^2\text{H}({}^{12}\text{Be}, {}^6\text{Li})$ ,  ${}^2\text{H}({}^{12}\text{Be}, \text{d}\alpha)$ ,  ${}^2\text{H}({}^{12}\text{Be}, \text{t})$ ,  $E \approx 71$  MeV / nucleon; measured E(particle), I(particle), particle-particle-coin. REPT RIKEN 2006 Annual,P21,Nikolskii
- 2009AB15 NUCLEAR REACTIONS  $\text{Be}(\text{C}, \text{X}){}^1\text{H} / {}^2\text{H} / {}^3\text{H} / {}^3\text{He} / {}^4\text{He} / {}^6\text{He} / {}^8\text{He}$ ,  $E=301.6$  MeV / nucleon; measured fragment distributions, momenta; deduced yields,  $\sigma(\theta, \text{p})$ . JOUR BRSPE 73 716
- 2009CH29 NUCLEAR REACTIONS  ${}^3\text{H}({}^6\text{He}, \text{p})$ ,  ${}^3\text{H}({}^8\text{He}, \text{p})$ ,  $E=25$  MeV; measured mass spectrum; deduced J,  $\pi$ , level energies. JOUR APOBB 40 899
- 2009GU17 NUCLEAR REACTIONS  ${}^9\text{Be}(\pi^-, \text{p})$ ,  ${}^{12}\text{C}(\pi^-, \text{t})$ ,  $(\pi^-, \text{d})$ ,  $(\pi^-, {}^3\text{He})$ ,  $(\pi^-, \text{pd})$ ,  $(\pi^-, 2\text{d})$ ,  $(\pi^-, 2\text{t})$ ,  ${}^{10}\text{B}(\pi^-, \text{t}\alpha)$ ,  ${}^{11}\text{B}(\pi^-, {}^3\text{He}{}^7\text{H})$ , E at rest; ${}^{4,5,6,7}\text{H}$ ; measured missing-mass spectra; deduced level structures in  ${}^{4,5,6}\text{H}$ , evidence for  ${}^7\text{H}$ . JOUR PPNUE 40 558

**A=8 (continued)**

- <sup>8</sup>Li      2009GU17      NUCLEAR REACTIONS <sup>9</sup>Be( $\pi^-$ , p), <sup>12</sup>C( $\pi^-$ , t), ( $\pi^-$ , d), ( $\pi^-$ ,<sup>3</sup>He), ( $\pi^-$ , pd), ( $\pi^-$ , 2d), ( $\pi^-$ , 2t), <sup>10</sup>B( $\pi^-$ , t $\alpha$ ), <sup>11</sup>B( $\pi^-$ ,<sup>3</sup>He<sup>7</sup>H), E at rest;<sup>4,5,6,7</sup>H; measured missing-mass spectra; deduced level structures in <sup>4,5,6</sup>H, evidence for <sup>7</sup>H. JOUR PPNU 40 558
- 2009R010      NUCLEAR REACTIONS <sup>7</sup>Li(<sup>10</sup>B, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>7</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>10</sup>B / <sup>11</sup>B, E=51 MeV; measured particle spectra. <sup>7</sup>Li(<sup>10</sup>B, <sup>9</sup>Be), E=51 MeV; <sup>10</sup>Be(<sup>7</sup>Li, <sup>9</sup>Be), E=24 MeV; measured <sup>9</sup>Be spectra,  $\sigma(\theta)$ , analysis by coupled-reaction-channels method using optical potentials of Woods-Saxon type. <sup>8</sup>Be; deduced levels, J,  $\pi$ . JOUR PRVCA 79 054609
- <sup>8</sup>Be      2007FRZT      NUCLEAR REACTIONS <sup>11</sup>B(p,  $\alpha$ ), E = 1.2-2.74 MeV; measured E $\alpha$ , I $\alpha$ ; deduced  $\sigma(\theta)$  at resonances. REPT TUNL-XLVI,P72,France
- 2008ARZU      NUCLEAR REACTIONS <sup>9</sup>Be( $\gamma$ , n), E=1.55-5 MeV; measured E $\gamma$ , I $\gamma$ , E<sub>n</sub>, I<sub>n</sub> at 36 different energies. Data to be analyzed. REPT TUNL-XLII,P118,Arnold
- 2009MA21      NUCLEAR REACTIONS <sup>12</sup>C(polarized p, p $\alpha$ )<sup>8</sup>Be, E=100 MeV; measured particle spectra, (particle)(particle)-coin,  $\sigma$ ,  $\sigma(\theta)$ , vector analyzing powers; deduced energy sharing cross sections with different optical potential model parameters and spectroscopic factors. Distorted-wave impulse approximation (DWIA) analysis. JOUR PRVCA 79 054612
- 2009R010      NUCLEAR REACTIONS <sup>7</sup>Li(<sup>10</sup>B, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>7</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>10</sup>B / <sup>11</sup>B, E=51 MeV; measured particle spectra. <sup>7</sup>Li(<sup>10</sup>B, <sup>9</sup>Be), E=51 MeV; <sup>10</sup>Be(<sup>7</sup>Li, <sup>9</sup>Be), E=24 MeV; measured <sup>9</sup>Be spectra,  $\sigma(\theta)$ , analysis by coupled-reaction-channels method using optical potentials of Woods-Saxon type. <sup>8</sup>Be; deduced levels, J,  $\pi$ . JOUR PRVCA 79 054609

**A=9**

- <sup>9</sup>Li      2009GU17      NUCLEAR REACTIONS <sup>9</sup>Be( $\pi^-$ , p), <sup>12</sup>C( $\pi^-$ , t), ( $\pi^-$ , d), ( $\pi^-$ ,<sup>3</sup>He), ( $\pi^-$ , pd), ( $\pi^-$ , 2d), ( $\pi^-$ , 2t), <sup>10</sup>B( $\pi^-$ , t $\alpha$ ), <sup>11</sup>B( $\pi^-$ ,<sup>3</sup>He<sup>7</sup>H), E at rest;<sup>4,5,6,7</sup>H; measured missing-mass spectra; deduced level structures in <sup>4,5,6</sup>H, evidence for <sup>7</sup>H. JOUR PPNU 40 558
- <sup>9</sup>Be      20080NZZ      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>18</sup>C, <sup>18</sup>C'), E=72, 79 MeV / nucleon; <sup>9</sup>Be(<sup>16</sup>C, <sup>16</sup>C'), E=40, 72, 79 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ; deduced T<sub>1/2</sub>, B(E2). RSM concept. REPT RIKEN 2007 Annual,P10,Ong
- 2009GU17      NUCLEAR REACTIONS <sup>9</sup>Be( $\pi^-$ , p), <sup>12</sup>C( $\pi^-$ , t), ( $\pi^-$ , d), ( $\pi^-$ ,<sup>3</sup>He), ( $\pi^-$ , pd), ( $\pi^-$ , 2d), ( $\pi^-$ , 2t), <sup>10</sup>B( $\pi^-$ , t $\alpha$ ), <sup>11</sup>B( $\pi^-$ ,<sup>3</sup>He<sup>7</sup>H), E at rest;<sup>4,5,6,7</sup>H; measured missing-mass spectra; deduced level structures in <sup>4,5,6</sup>H, evidence for <sup>7</sup>H. JOUR PPNU 40 558
- 2009R010      NUCLEAR REACTIONS <sup>7</sup>Li(<sup>10</sup>B, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>7</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>10</sup>B / <sup>11</sup>B, E=51 MeV; measured particle spectra. <sup>7</sup>Li(<sup>10</sup>B, <sup>9</sup>Be), E=51 MeV; <sup>10</sup>Be(<sup>7</sup>Li, <sup>9</sup>Be), E=24 MeV; measured <sup>9</sup>Be spectra,  $\sigma(\theta)$ , analysis by coupled-reaction-channels method using optical potentials of Woods-Saxon type. <sup>8</sup>Be; deduced levels, J,  $\pi$ . JOUR PRVCA 79 054609



**A=9 (continued)**

- <sup>9</sup>B      2009TR03      NUCLEAR REACTIONS <sup>66</sup>Zn(<sup>19</sup>F, X)Li / Be / B / C / N / O, E=65, 85, 95, 112 MeV; measured spectra of projectile-like fragments and scattered beam particles,  $\sigma$ ,  $\sigma(\theta)$ ; deduced transmission coefficients, probability for complete fusion, transfer probabilities and optical model parameters. <sup>66</sup>Zn(<sup>19</sup>F, X)<sup>9</sup>B / <sup>10</sup>B / <sup>11</sup>B / <sup>12</sup>C / <sup>13</sup>C / <sup>14</sup>C / <sup>13</sup>N / <sup>14</sup>N / <sup>15</sup>N / <sup>16</sup>O / <sup>17</sup>O / <sup>18</sup>O, E=61, 82, 92 MeV; deduced slope parameter  $\alpha$ . Comparison with sum-rule model calculations and with data from <sup>89</sup>Y(<sup>19</sup>F, X) reaction. JOUR PRVCA 79 064604

**A=10**

- <sup>10</sup>He      2009CH29      NUCLEAR REACTIONS <sup>3</sup>H(<sup>6</sup>He, p), <sup>3</sup>H(<sup>8</sup>He, p), E=25 MeV; measured mass spectrum; deduced J,  $\pi$ , level energies. JOUR APOBB 40 899
- <sup>10</sup>Be      2008MAZP      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>48</sup>Ca, <sup>47</sup>Ca), <sup>9</sup>Be(<sup>56</sup>Ti, <sup>55</sup>Ti), E=high; measured E $\gamma$ , I $\gamma$ , E(<sup>47</sup>Ca), E(<sup>55</sup>Ti); deduced momentum distribution. REPT MLL 2007 Annual,P6,Maierbeck
- 2009GU17      NUCLEAR REACTIONS <sup>9</sup>Be( $\pi^-$ , p), <sup>12</sup>C( $\pi^-$ , t), ( $\pi^-$ , d), ( $\pi^-$ ,<sup>3</sup>He), ( $\pi^-$ , pd), ( $\pi^-$ , 2d), ( $\pi^-$ , 2t), <sup>10</sup>B( $\pi^-$ , t $\alpha$ ), <sup>11</sup>B( $\pi^-$ ,<sup>3</sup>He<sup>7</sup>H), E at rest;<sup>4,5,6,7</sup>H; measured missing-mass spectra; deduced level structures in <sup>4,5,6</sup>H, evidence for <sup>7</sup>H. JOUR PPNU 40 558
- 2009RI04      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>45</sup>Cl, <sup>44</sup>Cl), E=99.6 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin and parallel momentum distributions. <sup>44</sup>Cl; deduced levels, J,  $\pi$ , half-life, cross section. One-neutron knockout reaction. Comparison with shell model calculations. JOUR PRVCA 79 051303
- 2009R010      NUCLEAR REACTIONS <sup>7</sup>Li(<sup>10</sup>B, X)<sup>6</sup>Li / <sup>7</sup>Li / <sup>8</sup>Li / <sup>7</sup>Be / <sup>9</sup>Be / <sup>10</sup>Be / <sup>10</sup>B / <sup>11</sup>B, E=51 MeV; measured particle spectra. <sup>7</sup>Li(<sup>10</sup>B, <sup>9</sup>Be), E=51 MeV; <sup>10</sup>Be(<sup>7</sup>Li, <sup>9</sup>Be), E=24 MeV; measured <sup>9</sup>Be spectra,  $\sigma(\theta)$ , analysis by coupled-reaction-channels method using optical potentials of Woods-Saxon type. <sup>8</sup>Be; deduced levels, J,  $\pi$ . JOUR PRVCA 79 054609
- <sup>10</sup>B      2008UR03      NUCLEAR REACTIONS <sup>11</sup>B(<sup>3</sup>He,  $\alpha$ ), E=15 MeV; measured reaction products; deduced Q-value spectra, isobaric analogue states. JOUR IMPEE 17 2345
- 2009CH38      NUCLEAR REACTIONS Be, C(<sup>10</sup>C, X), E=10.7 MeV / nucleon; measured fragment spectra,  $\sigma(\theta)$ , proton-proton angular correlations, widths,  $\sigma$ , energy distributions of diproton, sequential two-proton, 2p+2 $\alpha$ , p+3 $\alpha$  and other cluster particle-decay modes from ground and excited resonant states. <sup>10</sup>B, <sup>10</sup>C, <sup>13</sup>N; deduced levels, J,  $\pi$ , resonances, particle decay modes. Resonance-decay spectroscopic techniques. Monte Carlo analysis of energy distributions. Comparison with two-proton decay modes from <sup>6</sup>Be and <sup>45</sup>Fe. JOUR PRVCA 80 024306

**A=10 (continued)**

- 2009R010 NUCLEAR REACTIONS  ${}^7\text{Li}({}^{10}\text{B}, \text{X}){}^6\text{Li} / {}^7\text{Li} / {}^8\text{Li} / {}^7\text{Be} / {}^9\text{Be} / {}^{10}\text{Be} / {}^{10}\text{B} / {}^{11}\text{B}$ , E=51 MeV; measured particle spectra.  ${}^7\text{Li}({}^{10}\text{B}, {}^9\text{Be})$ , E=51 MeV;  ${}^{10}\text{Be}({}^7\text{Li}, {}^9\text{Be})$ , E=24 MeV; measured  ${}^9\text{Be}$  spectra,  $\sigma(\theta)$ , analysis by coupled-reaction-channels method using optical potentials of Woods-Saxon type.  ${}^8\text{Be}$ ; deduced levels, J,  $\pi$ . JOUR PRVCA 79 054609
- 2009TR03 NUCLEAR REACTIONS  ${}^{66}\text{Zn}({}^{19}\text{F}, \text{X})\text{Li} / \text{Be} / \text{B} / \text{C} / \text{N} / \text{O}$ , E=65, 85, 95, 112 MeV; measured spectra of projectile-like fragments and scattered beam particles,  $\sigma$ ,  $\sigma(\theta)$ ; deduced transmission coefficients, probability for complete fusion, transfer probabilities and optical model parameters.  ${}^{66}\text{Zn}({}^{19}\text{F}, \text{X}){}^9\text{B} / {}^{10}\text{B} / {}^{11}\text{B} / {}^{12}\text{C} / {}^{13}\text{C} / {}^{14}\text{C} / {}^{13}\text{N} / {}^{14}\text{N} / {}^{15}\text{N} / {}^{16}\text{O} / {}^{17}\text{O} / {}^{18}\text{O}$ , E=61, 82, 92 MeV; deduced slope parameter  $\alpha$ . Comparison with sum-rule model calculations and with data from  ${}^{89}\text{Y}({}^{19}\text{F}, \text{X})$  reaction. JOUR PRVCA 79 064604
- ${}^{10}\text{C}$  2008SHZV NUCLEAR REACTIONS  ${}^9\text{B}({}^{18}\text{O}, {}^{17}\text{N})$ , E not given; measured  $I\beta$ ,  $\theta(\beta)$ ,  $\beta$  decay asymmetry from polarized  ${}^{17}\text{N}$  using  $\beta$ -NMR technique. REPT RIKEN 2007 Annual,P23,Shimada
- 2009CH38 NUCLEAR REACTIONS  $\text{Be}, \text{C}({}^{10}\text{C}, \text{X})$ , E=10.7 MeV / nucleon; measured fragment spectra,  $\sigma(\theta)$ , proton-proton angular correlations, widths,  $\sigma$ , energy distributions of diproton, sequential two-proton,  $2p+2\alpha$ ,  $p+3\alpha$  and other cluster particle-decay modes from ground and excited resonant states.  ${}^{10}\text{B}$ ,  ${}^{10}\text{C}$ ,  ${}^{13}\text{N}$ ; deduced levels, J,  $\pi$ , resonances, particle decay modes. Resonance-decay spectroscopic techniques. Monte Carlo analysis of energy distributions. Comparison with two-proton decay modes from  ${}^6\text{Be}$  and  ${}^{45}\text{Fe}$ . JOUR PRVCA 80 024306
- 2009GR07 NUCLEAR REACTIONS  ${}^1\text{H}({}^{10}\text{B}, \text{n})$ , E not given;  $\text{Ni}({}^{58}\text{Ni}, \text{X}){}^{45}\text{Fe}$ , E=161 MeV / nucleon; measured  $E_p$ ,  $I_p$ ,  $E_\alpha$ ,  $I_\alpha$ , product energy and angular correlation distributions in a kinematically complete experiment. Comparison with three-body cluster model. JOUR PYLBB 677 30

**A=11**

- ${}^{11}\text{Li}$  2007NIZW NUCLEAR REACTIONS  ${}^2\text{H}({}^8\text{He}, \text{t})$ ,  ${}^2\text{H}({}^8\text{He}, \alpha)$ ,  ${}^2\text{H}({}^8\text{He}, {}^6\text{Li})$ ,  ${}^2\text{H}({}^8\text{He}, \text{d}\alpha)$ ,  ${}^2\text{H}({}^8\text{He}, \text{t})$ , E $\approx$ 42 MeV / nucleon;  ${}^2\text{H}({}^{12}\text{Be}, {}^3\text{He})$ ,  ${}^2\text{H}({}^{12}\text{Be}, {}^6\text{Li})$ ,  ${}^2\text{H}({}^{12}\text{Be}, \text{d}\alpha)$ ,  ${}^2\text{H}({}^{12}\text{Be}, \text{t})$ , E $\approx$ 71 MeV / nucleon; measured  $E(\text{particle})$ ,  $I(\text{particle})$ , particle-particle-coin. REPT RIKEN 2006 Annual,P21,Nikolskii
- 2008NAZY NUCLEAR REACTIONS  $\text{Pb}({}^{11}\text{Li}, 2\text{n}{}^9\text{Li})$ , E=70 MeV / nucleon; measured neutron-neutron correlations.  ${}^{11}\text{Li}$ ; deduced B(E1) distribution. CONF Cappadocia (Nuclear Physics and Astrophysics),P88,Nakamura
- 2009GA24 ATOMIC MASSES  ${}^{11}\text{Li}$ ; measured mass and two-neutron separation energy.  ${}^{11,12}\text{Be}$ ; measured mass. Mistral spectrometer at Isolde. Comparison with various models and other data. JOUR NUPAB 826 1

A=11 (*continued*)

- 2009MA31 RADIOACTIVITY  $^{11}\text{Li}(\beta^-)$  [from Ta(p, X), E=1.4 GeV]; measured  $E\beta$ ,  $I\beta$ ,  $E\alpha$ ,  $I\alpha$ , (charged-particle)(charged-particle)-coin in a kinematically complete experiment; deduced B(GT).  $^{11}\text{Be}$ ; deduced level energy, J,  $\pi$  using Monte Carlo. Comparison with shell model calculations. JOUR PYLBB 677 255
- $^{11}\text{Be}$  2007NIZW NUCLEAR REACTIONS  $^2\text{H}(^8\text{He}, t)$ ,  $^2\text{H}(^8\text{He}, \alpha)$ ,  $^2\text{H}(^8\text{He}, ^6\text{Li})$ ,  $^2\text{H}(^8\text{He}, d\alpha)$ ,  $^2\text{H}(^8\text{He}, t)$ ,  $E\approx 42$  MeV / nucleon;  $^2\text{H}(^{12}\text{Be}, ^3\text{He})$ ,  $^2\text{H}(^{12}\text{Be}, ^6\text{Li})$ ,  $^2\text{H}(^{12}\text{Be}, d\alpha)$ ,  $^2\text{H}(^{12}\text{Be}, t)$ ,  $E\approx 71$  MeV / nucleon; measured  $E(\text{particle})$ ,  $I(\text{particle})$ , particle-particle-coin. REPT RIKEN 2006 Annual,P21,Nikolskii
- 2008CAZX NUCLEAR REACTIONS  $^{11}\text{B}$ ,  $^{15}\text{N}$ ,  $^{19}\text{F}(^7\text{Li}, ^7\text{Be})$ ,  $E \sim 8$  MeV / nucleon; measured single-particle states, excitation energy spectra. CONF Cappadocia (Nuclear Physics and Astrophysics),P249,Cavallaro
- 2008NIZZ NUCLEAR REACTIONS  $^2\text{H}(^8\text{He}, t)$ ,  $E=42$  MeV / nucleon;  $^2\text{H}(^{12}\text{Be}, t)$ ,  $E=71$  MeV / nucleon; measured  $E_t$ ,  $I_t$ , particle-particle-coin.; deduced J,  $\pi$  of some levels. REPT RIKEN 2007 Annual,P14,Nikolskii
- 2009GA24 ATOMIC MASSES  $^{11}\text{Li}$ ; measured mass and two-neutron separation energy.  $^{11,12}\text{Be}$ ; measured mass. Mistral spectrometer at Isolde. Comparison with various models and other data. JOUR NUPAB 826 1
- 2009MA31 RADIOACTIVITY  $^{11}\text{Li}(\beta^-)$  [from Ta(p, X), E=1.4 GeV]; measured  $E\beta$ ,  $I\beta$ ,  $E\alpha$ ,  $I\alpha$ , (charged-particle)(charged-particle)-coin in a kinematically complete experiment; deduced B(GT).  $^{11}\text{Be}$ ; deduced level energy, J,  $\pi$  using Monte Carlo. Comparison with shell model calculations. JOUR PYLBB 677 255
- $^{11}\text{B}$  2008KA44 NUCLEAR REACTIONS  $^{11}\text{B}$ ,  $^{13}\text{C}(\alpha, \alpha)$ ,  $E=388$  MeV; measured  $E\alpha$ ,  $I\alpha$ ; deduced  $\sigma(\theta)$ , B(E0). Comparison with DWBA calculations. JOUR IMPEE 17 2071
- 2008RUZX NUCLEAR REACTIONS  $^{11}\text{B}(\gamma, \gamma')$ , E not given; measured  $I\gamma$ ,  $E\gamma$  at different angles using HI $\gamma$ S facility; deduced asymmetry,  $\delta$  for transitions at 4.444, 5.019 and 8.916 MeV. REPT TUNL-XLII,P114,Rusev
- 2009GA19 NUCLEAR REACTIONS  $^{13}\text{C}(d, \alpha)$ ,  $E=15.3$  MeV; measured  $E\alpha$ ,  $I\alpha$ ; deduced  $\sigma(\theta)$ , formation of excited states in  $^{11}\text{B}$ . Comparison with calculations, optical potential parameters. JOUR BRSPE 73 806
- 2009LI27 NUCLEAR REACTIONS  $^{12}\text{C}(^6\text{He}, ^7\text{Li})$ ,  $E = 34.6$  MeV; measured  $\sigma(\theta)$ . comparison with DWBA calculation. JOUR CPLEE 26 072401
- 2009R010 NUCLEAR REACTIONS  $^7\text{Li}(^{10}\text{B}, X)^6\text{Li} / ^7\text{Li} / ^8\text{Li} / ^7\text{Be} / ^9\text{Be} / ^{10}\text{Be} / ^{10}\text{B} / ^{11}\text{B}$ ,  $E=51$  MeV; measured particle spectra.  $^7\text{Li}(^{10}\text{B}, ^9\text{Be})$ ,  $E=51$  MeV;  $^{10}\text{Be}(^7\text{Li}, ^9\text{Be})$ ,  $E=24$  MeV; measured  $^9\text{Be}$  spectra,  $\sigma(\theta)$ , analysis by coupled-reaction-channels method using optical potentials of Woods-Saxon type.  $^8\text{Be}$ ; deduced levels, J,  $\pi$ . JOUR PRVCA 79 054609

**A=11 (continued)**

- 2009TR03 NUCLEAR REACTIONS  $^{66}\text{Zn}(^{19}\text{F}, \text{X})\text{Li} / \text{Be} / \text{B} / \text{C} / \text{N} / \text{O}$ , E=65, 85, 95, 112 MeV; measured spectra of projectile-like fragments and scattered beam particles,  $\sigma$ ,  $\sigma(\theta)$ ; deduced transmission coefficients, probability for complete fusion, transfer probabilities and optical model parameters.  $^{66}\text{Zn}(^{19}\text{F}, \text{X})^9\text{B} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O}$ , E=61, 82, 92 MeV; deduced slope parameter  $\alpha$ . Comparison with sum-rule model calculations and with data from  $^{89}\text{Y}(^{19}\text{F}, \text{X})$  reaction. JOUR PRVCA 79 064604
- <sup>11</sup>C 2007STZR NUCLEAR REACTIONS  $^{10}\text{B}(\text{d}, \text{n})$ , E < 160 keV; measured In; deduced  $\sigma$ , s-factor. REPT TUNL-XLVI,P70,Stave

**A=12**

- <sup>12</sup>Be 2008B037 NUCLEAR REACTIONS  $^{14}\text{C}(^{12}\text{C}, ^{14}\text{O})$ ,  $^{10}\text{Be}(^{14}\text{N}, ^{12}\text{N})$ ,  $^9\text{Be}(^{12}\text{C}, ^9\text{C})$ , ( $^{15}\text{N}, ^{12}\text{N}$ ), E=231, 216, 231, 240 MeV; measured reaction products; deduced  $^{12}\text{Be}$  energy levels, J,  $\pi$ . JOUR IMPEE 17 2067
- 2009GA24 ATOMIC MASSES  $^{11}\text{Li}$ ; measured mass and two-neutron separation energy.  $^{11,12}\text{Be}$ ; measured mass. Mistral spectrometer at Isolde. Comparison with various models and other data. JOUR NUPAB 826 1
- <sup>12</sup>B 2008HY03 NUCLEAR REACTIONS  $^1\text{H}(^{12}\text{C}, \text{X})^{12}\text{N}$ ,  $^2\text{H}(^{11}\text{B}, \text{X})^{12}\text{B}$ , E not given; measured  $E\alpha$ ,  $I\alpha$ ; deduced branching ratios, Gamow-Teller transition strengths. JOUR IMPEE 17 2182
- 2009HY01 NUCLEAR REACTIONS  $^1\text{H}(^{12}\text{C}, \text{n})$ ,  $^2\text{H}(^{11}\text{B}, \text{p})$ ,  $^{12}\text{C}(\text{p}, \text{n})$ ,  $^{11}\text{B}(\text{d}, \text{p})$ , E not given; measured  $E\gamma$ ,  $I\gamma$ ,  $E\alpha$ ,  $I\alpha$ ,  $\gamma\alpha$ -coin,  $\alpha\alpha$ -coin, decay spectra; deduced branching ratio, log ft, B(GT) to various  $^{12}\text{C}$  states. Comparison with no-core shell model calculations. JOUR PYLBB 678 459
- 2009HY01 RADIOACTIVITY  $^{12}\text{B}(\beta^-)$ ,  $^{12}\text{N}(\beta^+)$ ; deduced branching ratio, log ft, B(GT) to various  $^{12}\text{C}$  states. Comparison with no-core shell model calculations. JOUR PYLBB 678 459
- <sup>12</sup>C 2008GAZV NUCLEAR REACTIONS  $^{16}\text{O}(\gamma, \alpha)$ , E=9.55 MeV; measured  $E\alpha$ ,  $I\alpha$  using O-TPC detector at HI $\gamma$ S. REPT TUNL-XLII,P116,Gai
- 2008GR22 NUCLEAR REACTIONS  $^{12}\text{C}$ ,  $^{48}\text{Ti}$ ,  $^{58,64}\text{Ni}(\text{d}, \text{d}')$ , E=37 MeV; measured  $E\text{d}$ ,  $I\text{d}$ ; deduced  $\sigma(\text{E}, \theta)$ , excitation of electric giant resonances. JOUR PANUE 71 1711
- 2009AH01 NUCLEAR REACTIONS  $^{12}\text{C}(^{134}\text{Xe}, ^{134}\text{Xe}')$ , E=435 MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin using DSA technique and the Gammasphere array.  $^{134}\text{Xe}$ ; deduced levels, J,  $\pi$ ,  $\delta$ , B(E2), B(M1), related properties. Systematics of N=80, 82 isotones discussed. JOUR PYLBB 679 19
- 2009FA07 NUCLEAR REACTIONS  $^{12}\text{C}(^{16}\text{C}, ^{16}\text{C})$ , E=47.5 MeV / nucleon; measured energy and angular distributions of reaction products; deduced  $\sigma(\theta)$ , optical potential parameters. Coupled-channels calculations. JOUR CPLEE 26 082501
- 2009HY01 RADIOACTIVITY  $^{12}\text{B}(\beta^-)$ ,  $^{12}\text{N}(\beta^+)$ ; deduced branching ratio, log ft, B(GT) to various  $^{12}\text{C}$  states. Comparison with no-core shell model calculations. JOUR PYLBB 678 459

**A=12 (continued)**

- 2009TA13 NUCLEAR REACTIONS  $^{12}\text{C}$ ,  $^{26}\text{Mg}$ ,  $^{28}\text{Si}$ ,  $^{48}\text{Ca}$ ,  $^{58,64}\text{Ni}$ ,  $^{208}\text{Pb}(\text{p}, \text{p}')$ ,  $E=295$  MeV; measured  $E_p$ ,  $I_p$ ,  $\sigma(\theta)$ ; deduced level energies. Systematic study of M1 and E1 excitations. JOUR NIMAE 605 326
- 2009TI02 NUCLEAR REACTIONS  $^{12}\text{C}(\alpha, \alpha)$ ,  $E=2.6-8.2$  MeV; measured  $E_\alpha$ ,  $I_\alpha$ ,  $\sigma(\theta)$ ; deduced phase shifts using R-matrix analysis.  $^{16}\text{O}$ ; deduced levels, resonances,  $\alpha$ -widths. Application to  $^{12}\text{C}(\alpha, \gamma)^{16}\text{O}$  reaction of astrophysical interest. JOUR PRVCA 79 055803
- 2009TR03 NUCLEAR REACTIONS  $^{66}\text{Zn}(^{19}\text{F}, \text{X})\text{Li} / \text{Be} / \text{B} / \text{C} / \text{N} / \text{O}$ ,  $E=65, 85, 95, 112$  MeV; measured spectra of projectile-like fragments and scattered beam particles,  $\sigma$ ,  $\sigma(\theta)$ ; deduced transmission coefficients, probability for complete fusion, transfer probabilities and optical model parameters.  $^{66}\text{Zn}(^{19}\text{F}, \text{X})^9\text{B} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O}$ ,  $E=61, 82, 92$  MeV; deduced slope parameter  $\alpha$ . Comparison with sum-rule model calculations and with data from  $^{89}\text{Y}(^{19}\text{F}, \text{X})$  reaction. JOUR PRVCA 79 064604
- $^{12}\text{N}$  2008HY03 NUCLEAR REACTIONS  $^1\text{H}(^{12}\text{C}, \text{X})^{12}\text{N}$ ,  $^2\text{H}(^{11}\text{B}, \text{X})^{12}\text{B}$ ,  $E$  not given; measured  $E_\alpha$ ,  $I_\alpha$ ; deduced branching ratios, Gamow-Teller transition strengths. JOUR IMPEE 17 2182
- 2009D012 NUCLEAR REACTIONS  $^{12}\text{C}(\text{p-bar}, \text{n-bar})^{12}\text{N}$ ,  $E=296$  MeV; measured neutron spectra by time-of-flight method,  $\sigma(\theta)$ ,  $A_y$  and other polarization observables.  $^{12}\text{N}$ ; deduced levels,  $J$ ,  $\pi$ . Comparison with distorted wave impulse approximation (DWIA) calculations using random-phase approximation (RPA) response functions. JOUR PRVCA 80 024319
- 2009HY01 NUCLEAR REACTIONS  $^1\text{H}(^{12}\text{C}, \text{n})$ ,  $^2\text{H}(^{11}\text{B}, \text{p})$ ,  $^{12}\text{C}(\text{p}, \text{n})$ ,  $^{11}\text{B}(\text{d}, \text{p})$ ,  $E$  not given; measured  $E_\gamma$ ,  $I_\gamma$ ,  $E_\alpha$ ,  $I_\alpha$ ,  $\gamma\alpha$ -coin,  $\alpha\alpha$ -coin, decay spectra; deduced branching ratio, log ft,  $B(\text{GT})$  to various  $^{12}\text{C}$  states. Comparison with no-core shell model calculations. JOUR PYLBB 678 459
- 2009HY01 RADIOACTIVITY  $^{12}\text{B}(\beta^-)$ ,  $^{12}\text{N}(\beta^+)$ ; deduced branching ratio, log ft,  $B(\text{GT})$  to various  $^{12}\text{C}$  states. Comparison with no-core shell model calculations. JOUR PYLBB 678 459

**A=13**

- $^{13}\text{B}$  2009GU23 NUCLEAR REACTIONS  $^{13}\text{C}(\text{t}, ^3\text{He})$ ,  $E=115$  MeV / nucleon; measured  $^3\text{He}$  spectra,  $\sigma(\theta)$ ; deduced Gamow-Teller strengths for dipole transitions.  $^{13}\text{B}$ ; deduced levels,  $J$ ,  $\pi$ . Comparison with shell-model calculations using WBT and WBP interactions. JOUR PRVCA 80 024305
- $^{13}\text{C}$  2007SAZS NUCLEAR REACTIONS  $^{13}\text{C}(\alpha, \alpha')$ ,  $\text{C}(\alpha, \alpha')$ ,  $E=400$  MeV; measured  $E_\alpha$ ,  $I_\alpha$ ; deduced  $\sigma(\theta)$ ,  $B(\text{E}0)$ ,  $B(\text{E}2)$ , level properties:  $J$ ,  $\pi$ ; calculated  $\sigma(\theta)$ ,  $B(\text{E}0)$ ,  $B(\text{E}2)$ , level properties:  $J$ ,  $\pi$  using shell model. REPT CNS-REP-76,P27,Sasamoto
- 2008KA44 NUCLEAR REACTIONS  $^{11}\text{B}$ ,  $^{13}\text{C}(\alpha, \alpha)$ ,  $E=388$  MeV; measured  $E_\alpha$ ,  $I_\alpha$ ; deduced  $\sigma(\theta)$ ,  $B(\text{E}0)$ . Comparison with DWBA calculations. JOUR IMPEE 17 2071

**A=13 (continued)**

- 2009TR03 NUCLEAR REACTIONS  $^{66}\text{Zn}(^{19}\text{F}, \text{X})\text{Li} / \text{Be} / \text{B} / \text{C} / \text{N} / \text{O}$ , E=65, 85, 95, 112 MeV; measured spectra of projectile-like fragments and scattered beam particles,  $\sigma$ ,  $\sigma(\theta)$ ; deduced transmission coefficients, probability for complete fusion, transfer probabilities and optical model parameters.  $^{66}\text{Zn}(^{19}\text{F}, \text{X})^9\text{B} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O}$ , E=61, 82, 92 MeV; deduced slope parameter  $\alpha$ . Comparison with sum-rule model calculations and with data from  $^{89}\text{Y}(^{19}\text{F}, \text{X})$  reaction. JOUR PRVCA 79 064604
- $^{13}\text{N}$  2009CH38 NUCLEAR REACTIONS  $\text{Be}$ ,  $\text{C}(^{10}\text{C}, \text{X})$ , E=10.7 MeV / nucleon; measured fragment spectra,  $\sigma(\theta)$ , proton-proton angular correlations, widths,  $\sigma$ , energy distributions of diproton, sequential two-proton,  $2\text{p}+2\alpha$ ,  $\text{p}+3\alpha$  and other cluster particle-decay modes from ground and excited resonant states.  $^{10}\text{B}$ ,  $^{10}\text{C}$ ,  $^{13}\text{N}$ ; deduced levels, J,  $\pi$ , resonances, particle decay modes. Resonance-decay spectroscopic techniques. Monte Carlo analysis of energy distributions. Comparison with two-proton decay modes from  $^6\text{Be}$  and  $^{45}\text{Fe}$ . JOUR PRVCA 80 024306
- 2009TR03 NUCLEAR REACTIONS  $^{66}\text{Zn}(^{19}\text{F}, \text{X})\text{Li} / \text{Be} / \text{B} / \text{C} / \text{N} / \text{O}$ , E=65, 85, 95, 112 MeV; measured spectra of projectile-like fragments and scattered beam particles,  $\sigma$ ,  $\sigma(\theta)$ ; deduced transmission coefficients, probability for complete fusion, transfer probabilities and optical model parameters.  $^{66}\text{Zn}(^{19}\text{F}, \text{X})^9\text{B} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O}$ , E=61, 82, 92 MeV; deduced slope parameter  $\alpha$ . Comparison with sum-rule model calculations and with data from  $^{89}\text{Y}(^{19}\text{F}, \text{X})$  reaction. JOUR PRVCA 79 064604

**A=14**

- $^{14}\text{C}$  2009TR03 NUCLEAR REACTIONS  $^{66}\text{Zn}(^{19}\text{F}, \text{X})\text{Li} / \text{Be} / \text{B} / \text{C} / \text{N} / \text{O}$ , E=65, 85, 95, 112 MeV; measured spectra of projectile-like fragments and scattered beam particles,  $\sigma$ ,  $\sigma(\theta)$ ; deduced transmission coefficients, probability for complete fusion, transfer probabilities and optical model parameters.  $^{66}\text{Zn}(^{19}\text{F}, \text{X})^9\text{B} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O}$ , E=61, 82, 92 MeV; deduced slope parameter  $\alpha$ . Comparison with sum-rule model calculations and with data from  $^{89}\text{Y}(^{19}\text{F}, \text{X})$  reaction. JOUR PRVCA 79 064604
- $^{14}\text{N}$  2007NEZX NUCLEAR REACTIONS  $^{17}\text{O}(\text{p}, \alpha)$ ,  $^{18}\text{O}(\text{p}, \alpha)$ , E = 1, 3 MeV; measured  $E\alpha$ ,  $I\alpha$ ; deduced excitation functions, resonances. Comparison with GEANT4 simulations. REPT TUNL-XLVI,P32,Newton
- 2009M016 NUCLEAR REACTIONS  $^{18}\text{F}$ ,  $^{17}\text{O}(\text{p}, \alpha)$ , E=3.27 MeV; measured  $E\alpha$ ,  $I\alpha$ ; deduced resonance energy and strength. JOUR APOBB 40 699

**A=14 (continued)**

2009TR03 NUCLEAR REACTIONS  $^{66}\text{Zn}(^{19}\text{F}, \text{X})\text{Li} / \text{Be} / \text{B} / \text{C} / \text{N} / \text{O}$ ,  $E=65, 85, 95, 112$  MeV; measured spectra of projectile-like fragments and scattered beam particles,  $\sigma, \sigma(\theta)$ ; deduced transmission coefficients, probability for complete fusion, transfer probabilities and optical model parameters.  $^{66}\text{Zn}(^{19}\text{F}, \text{X})^9\text{B} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O}$ ,  $E=61, 82, 92$  MeV; deduced slope parameter  $\alpha$ . Comparison with sum-rule model calculations and with data from  $^{89}\text{Y}(^{19}\text{F}, \text{X})$  reaction. JOUR PRVCA 79 064604

**A=15**

$^{15}\text{C}$  2008CAZX NUCLEAR REACTIONS  $^{11}\text{B}, ^{15}\text{N}, ^{19}\text{F}(^7\text{Li}, ^7\text{Be})$ ,  $E \sim 8$  MeV / nucleon; measured single-particle states, excitation energy spectra. CONF Cappadocia (Nuclear Physics and Astrophysics), P249, Cavallaro

$^{15}\text{N}$  2007NEZX NUCLEAR REACTIONS  $^{17}\text{O}(\text{p}, \alpha), ^{18}\text{O}(\text{p}, \alpha)$ ,  $E = 1, 3$  MeV; measured  $E\alpha, I\alpha$ ; deduced excitation functions, resonances. Comparison with GEANT4 simulations. REPT TUNL-XLVI, P32, Newton

2009TR03 NUCLEAR REACTIONS  $^{66}\text{Zn}(^{19}\text{F}, \text{X})\text{Li} / \text{Be} / \text{B} / \text{C} / \text{N} / \text{O}$ ,  $E=65, 85, 95, 112$  MeV; measured spectra of projectile-like fragments and scattered beam particles,  $\sigma, \sigma(\theta)$ ; deduced transmission coefficients, probability for complete fusion, transfer probabilities and optical model parameters.  $^{66}\text{Zn}(^{19}\text{F}, \text{X})^9\text{B} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O}$ ,  $E=61, 82, 92$  MeV; deduced slope parameter  $\alpha$ . Comparison with sum-rule model calculations and with data from  $^{89}\text{Y}(^{19}\text{F}, \text{X})$  reaction. JOUR PRVCA 79 064604

$^{15}\text{O}$  2007FUZW NUCLEAR REACTIONS  $^{14}\text{N}(\text{p}, \gamma)$ ,  $E(\text{cm}) = 70-480$  keV; measured  $E\gamma, I\gamma$ ; deduced s-factor, ground state contributions. REPT ATOMKI 2007 Annual, P22, Fulop

2009M016 NUCLEAR REACTIONS  $^{18}\text{F}, ^{17}\text{O}(\text{p}, \alpha)$ ,  $E=3.27$  MeV; measured  $E\alpha, I\alpha$ ; deduced resonance energy and strength. JOUR APOBB 40 699

2009MU07 NUCLEAR REACTIONS  $^1\text{H}(^{18}\text{F}, \alpha), (^{18}\text{F}, \text{p})$ ,  $E=1.750$  MeV / nucleon; measured particle spectra,  $\sigma, ^{19}\text{Ne}$ ; deduced levels,  $J, \pi$ , resonances,  $\alpha$  widths, proton widths. R-matrix analysis.  $^{18}\text{F}(\text{p}, \alpha)^{15}\text{O}$ ; deduced reaction rates. JOUR PRVCA 79 058801

$^{15}\text{F}$  2009MU09 NUCLEAR REACTIONS  $^9\text{Be}(^{17}\text{Ne}, \text{X})^{16}\text{Ne} / ^{15}\text{F}$ ,  $E=450$  MeV / nucleon; measured particle spectra, (particle)(proton)( $\theta$ ), (particle)(proton)(proton)( $\theta$ ), and widths.  $^{15}\text{F}, ^{16}\text{Ne}$ ; deduced levels,  $J, \pi$ . JOUR PRVCA 79 061301

**A=16**

$^{16}\text{O}$  2007W0ZY NUCLEAR REACTIONS  $^{13}\text{C}(\alpha, \text{n})$ ,  $E < 5.4$  MeV; measured  $E\alpha, I\alpha$ ; deduced  $\sigma$ , absolute normalized neutron  $\sigma(\theta)$ . REPT TUNL-XLVI, P18, Wood

**A=16 (continued)**

- 2008BE38 NUCLEAR REACTIONS  $^{12}\text{C}(^{24}\text{Mg}, \text{X})^{16}\text{O} / ^{20}\text{Ne}$ , E=130 MeV; measured  $E\gamma$ ,  $I\gamma$ , particle- $\gamma$ -coin.; deduced energy levels, J,  $\pi$ , level scheme. JOUR IMPEE 17 2049
- 2009TI02 NUCLEAR REACTIONS  $^{12}\text{C}(\alpha, \alpha)$ , E=2.6-8.2 MeV; measured  $E\alpha$ ,  $I\alpha$ ,  $\sigma(\theta)$ ; deduced phase shifts using R-matrix analysis.  $^{16}\text{O}$ ; deduced levels, resonances,  $\alpha$ -widths. Application to  $^{12}\text{C}(\alpha, \gamma)^{16}\text{O}$  reaction of astrophysical interest. JOUR PRVCA 79 055803
- 2009TR03 NUCLEAR REACTIONS  $^{66}\text{Zn}(^{19}\text{F}, \text{X})\text{Li} / \text{Be} / \text{B} / \text{C} / \text{N} / \text{O}$ , E=65, 85, 95, 112 MeV; measured spectra of projectile-like fragments and scattered beam particles,  $\sigma$ ,  $\sigma(\theta)$ ; deduced transmission coefficients, probability for complete fusion, transfer probabilities and optical model parameters.  $^{66}\text{Zn}(^{19}\text{F}, \text{X})^9\text{B} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O}$ , E=61, 82, 92 MeV; deduced slope parameter  $\alpha$ . Comparison with sum-rule model calculations and with data from  $^{89}\text{Y}(^{19}\text{F}, \text{X})$  reaction. JOUR PRVCA 79 064604
- $^{16}\text{Ne}$  2009MU09 NUCLEAR REACTIONS  $^9\text{Be}(^{17}\text{Ne}, \text{X})^{16}\text{Ne} / ^{15}\text{F}$ , E=450 MeV / nucleon; measured particle spectra, (particle)(proton)( $\theta$ ), (particle)(proton)(proton)( $\theta$ ), and widths.  $^{15}\text{F}$ ,  $^{16}\text{Ne}$ ; deduced levels, J,  $\pi$ . JOUR PRVCA 79 061301

**A=17**

- $^{17}\text{O}$  2009TR03 NUCLEAR REACTIONS  $^{66}\text{Zn}(^{19}\text{F}, \text{X})\text{Li} / \text{Be} / \text{B} / \text{C} / \text{N} / \text{O}$ , E=65, 85, 95, 112 MeV; measured spectra of projectile-like fragments and scattered beam particles,  $\sigma$ ,  $\sigma(\theta)$ ; deduced transmission coefficients, probability for complete fusion, transfer probabilities and optical model parameters.  $^{66}\text{Zn}(^{19}\text{F}, \text{X})^9\text{B} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O}$ , E=61, 82, 92 MeV; deduced slope parameter  $\alpha$ . Comparison with sum-rule model calculations and with data from  $^{89}\text{Y}(^{19}\text{F}, \text{X})$  reaction. JOUR PRVCA 79 064604

**A=18**

- $^{18}\text{O}$  2009TR03 NUCLEAR REACTIONS  $^{66}\text{Zn}(^{19}\text{F}, \text{X})\text{Li} / \text{Be} / \text{B} / \text{C} / \text{N} / \text{O}$ , E=65, 85, 95, 112 MeV; measured spectra of projectile-like fragments and scattered beam particles,  $\sigma$ ,  $\sigma(\theta)$ ; deduced transmission coefficients, probability for complete fusion, transfer probabilities and optical model parameters.  $^{66}\text{Zn}(^{19}\text{F}, \text{X})^9\text{B} / ^{10}\text{B} / ^{11}\text{B} / ^{12}\text{C} / ^{13}\text{C} / ^{14}\text{C} / ^{13}\text{N} / ^{14}\text{N} / ^{15}\text{N} / ^{16}\text{O} / ^{17}\text{O} / ^{18}\text{O}$ , E=61, 82, 92 MeV; deduced slope parameter  $\alpha$ . Comparison with sum-rule model calculations and with data from  $^{89}\text{Y}(^{19}\text{F}, \text{X})$  reaction. JOUR PRVCA 79 064604
- $^{18}\text{F}$  2009LE23 NUCLEAR REACTIONS  $^{21}\text{Ne}(\text{p}, \alpha)^{18}\text{F}$ , E=2.3-4.0 MeV; measured  $E\gamma$ ,  $I\gamma$ , decay curves, half-lives; deduced reaction yields and  $\sigma$  by R-matrix analysis.  $^{18}\text{F}(\alpha, \text{p})^{21}\text{Ne}$ , E=0.5-2.1 MeV; deduced  $\sigma$  and reaction rates. Comparison with Hauser-Feshbach calculations. Discussed implications for astrophysical r-process and evolution of elemental abundances in supernovae. JOUR PRVCA 80 025805



**A=18 (continued)**

2009MU07 NUCLEAR REACTIONS  $^1\text{H}(^{18}\text{F}, \alpha)$ ,  $(^{18}\text{F}, \text{p})$ ,  $E=1.750$  MeV / nucleon; measured particle spectra,  $\sigma$ .  $^{19}\text{Ne}$ ; deduced levels,  $J$ ,  $\pi$ , resonances,  $\alpha$  widths, proton widths. R-matrix analysis.  $^{18}\text{F}(\text{p}, \alpha)^{15}\text{O}$ ; deduced reaction rates. JOUR PRVCA 79 058801

**A=19**

$^{19}\text{O}$  2008CAZX NUCLEAR REACTIONS  $^{11}\text{B}$ ,  $^{15}\text{N}$ ,  $^{19}\text{F}(^7\text{Li}, ^7\text{Be})$ ,  $E \sim 8$  MeV / nucleon; measured single-particle states, excitation energy spectra. CONF Cappadocia (Nuclear Physics and Astrophysics), P249, Cavallaro

$^{19}\text{F}$  2008NOZZ NUCLEAR REACTIONS  $^{238}\text{U}(\alpha, \text{X})$ ,  $E=62$  MeV;  $^{19}\text{F}$ ,  $^{25}\text{Mg}$ ,  $^{32}\text{S}$ ,  $^{34}\text{S}$ ,  $^{88}\text{Sr}$ ,  $^{103}\text{Rh}$ ; measured  $E\gamma$ ,  $I\gamma$ ; deduced neutron clusters. Activation method, Ge detector. CONF Moscow, P74, Novatsky

$^{19}\text{Ne}$  2009MU07 NUCLEAR REACTIONS  $^1\text{H}(^{18}\text{F}, \alpha)$ ,  $(^{18}\text{F}, \text{p})$ ,  $E=1.750$  MeV / nucleon; measured particle spectra,  $\sigma$ .  $^{19}\text{Ne}$ ; deduced levels,  $J$ ,  $\pi$ , resonances,  $\alpha$  widths, proton widths. R-matrix analysis.  $^{18}\text{F}(\text{p}, \alpha)^{15}\text{O}$ ; deduced reaction rates. JOUR PRVCA 79 058801

2009TA09 NUCLEAR REACTIONS  $^{19}\text{F}(^3\text{He}, \text{t})$ ,  $E=24$  MeV; measured triton spectra,  $t\alpha$ -coin,  $\alpha(\theta)$ ,  $\alpha$ -decay branching ratios.  $^{19}\text{Ne}$ ; deduced levels,  $J$ ,  $\pi$ ,  $\alpha$ -unbound resonances.  $^{15}\text{O}(\alpha, \gamma)$ ; deduced reaction rates versus temperature. JOUR PRVCA 79 055805

**A=20**

$^{20}\text{F}$  2008NAZX RADIOACTIVITY  $^{20}\text{F}(\beta^-)$ ; measured  $E\beta$ ,  $I\beta$ ,  $\theta(\beta)$ ,  $E\gamma$ ,  $I\gamma$ ,  $\theta(\gamma)$  from aligned nuclei; calculated effect of delayed  $\gamma$  rays. Analysis of G parity in progress. REPT RIKEN 2007 Annual, P18, Nagatomo

$^{20}\text{Ne}$  2008BE38 NUCLEAR REACTIONS  $^{12}\text{C}(^{24}\text{Mg}, \text{X})^{16}\text{O} / ^{20}\text{Ne}$ ,  $E=130$  MeV; measured  $E\gamma$ ,  $I\gamma$ , particle- $\gamma$ -coin.; deduced energy levels,  $J$ ,  $\pi$ , level scheme. JOUR IMPEE 17 2049

2008NAZX RADIOACTIVITY  $^{20}\text{F}(\beta^-)$ ; measured  $E\beta$ ,  $I\beta$ ,  $\theta(\beta)$ ,  $E\gamma$ ,  $I\gamma$ ,  $\theta(\gamma)$  from aligned nuclei; calculated effect of delayed  $\gamma$  rays. Analysis of G parity in progress. REPT RIKEN 2007 Annual, P18, Nagatomo

**A=21**

$^{21}\text{Ne}$  2009LE23 NUCLEAR REACTIONS  $^{21}\text{Ne}(\text{p}, \alpha)^{18}\text{F}$ ,  $E=2.3-4.0$  MeV; measured  $E\gamma$ ,  $I\gamma$ , decay curves, half-lives; deduced reaction yields and  $\sigma$  by R-matrix analysis.  $^{18}\text{F}(\alpha, \text{p})^{21}\text{Ne}$ ,  $E=0.5-2.1$  MeV; deduced  $\sigma$  and reaction rates. Comparison with Hauser-Feshbach calculations. Discussed implications for astrophysical r-process and evolution of elemental abundances in supernovae. JOUR PRVCA 80 025805

$^{21}\text{Na}$  2009CH28 NUCLEAR REACTIONS  $^{24}\text{Mg}(\text{p}, \text{t})$ ,  $E=41, 41.5$  MeV; measured triton spectra,  $\sigma(\theta)$ .  $^{22}\text{Mg}$ ; deduced levels,  $J$ ,  $\pi$ . DWBA analysis of  $\sigma(\theta)$  data.  $^{18}\text{Ne}(\alpha, \text{p})^{21}\text{Na}$ ; deduced reaction rates versus temperature. JOUR PRVCA 79 055804

**A=21 (continued)**

- 2009HE12 NUCLEAR REACTIONS  $p(^{21}\text{Na}, p)^{22}\text{Mg}$ ,  $E=4.0$  MeV / nucleon; measured  $E_p$ ,  $\sigma(\theta)$ . $^{22}\text{Mg}$ ; deduced levels,  $J$ ,  $\pi$ , resonances, widths and resonance parameters. R-matrix analysis of  $\sigma(\theta)$  data with SAMMY-M6-BETA code.  $^{18}\text{Ne}(\alpha, p)^{21}\text{Na}$ ,  $E$  not given; deduced astrophysical resonance reaction rates. $^{22}\text{Mg}$ ,  $^{22}\text{Ne}$ ; comparison of level systematics of mirror nuclei. JOUR PRVCA 80 015801
- $^{21}\text{Mg}$  2009KR05 NUCLEAR MOMENTS  $^{21}\text{Mg}$  [from  $\text{Si}(p, X)$ ,  $E=1.4$  GeV]; measured hfs; deduced ground state spin, g-factor,  $\mu$  using collinear laser spectroscopy and NMR; calculated  $J$ ,  $\pi$ , configuration. Comparison with shell model calculations and discussed  $^{21}\text{F}$  and other mirror pairs. JOUR PYLBB 678 465

**A=22**

- $^{22}\text{N}$  2009ST20 NUCLEAR REACTIONS  $\text{Be}(^{26}\text{F}, X)^{22}\text{N}$ ,  $E=85$  MeV / nucleon; measured  $E_n$  and (fragment)(neutron)-coin spectrum.  $^{22}\text{N}$ ; deduced levels,  $J$ ,  $\pi$ . Level systematics of  $N=14$ ,  $15$  C, N and O isotones. Comparison with shell-model calculations using WBTM and WBPM interactions. JOUR PRVCA 80 021302
- $^{22}\text{Ne}$  2009SI18 RADIOACTIVITY  $^{22}\text{Na}(\beta^+)$ ; measured  $E_\gamma$ ,  $I_\gamma$ ,  $\gamma\gamma$ -coin.; deduced no evidence of correlations or pattern formation. JOUR EULEE 87 32001
- 2009US01 NUCLEAR REACTIONS  $^{22}\text{Ne}(p, p')$ ,  $E=1623, 1721, 1803, 1835$  keV; measured  $I_\gamma$ ,  $E_\gamma$ ; deduced  $B(M1)$ , deformation parameters;  $^{22}\text{Ne}(p, \gamma)$ ,  $E=1590-1850$  keV; measured  $I_\gamma$ ,  $E_\gamma$ ; deduced excitation function, rotational bands. Bands with  $K^\pi=(3 / 2)^+$  and  $K^\pi=(1 / 2)^+$ . Compared with calculations within Nilsson model. JOUR IMPEE 18 1084
- $^{22}\text{Na}$  2009SI18 RADIOACTIVITY  $^{22}\text{Na}(\beta^+)$ ; measured  $E_\gamma$ ,  $I_\gamma$ ,  $\gamma\gamma$ -coin.; deduced no evidence of correlations or pattern formation. JOUR EULEE 87 32001
- $^{22}\text{Mg}$  2009CH28 NUCLEAR REACTIONS  $^{24}\text{Mg}(p, t)$ ,  $E=41, 41.5$  MeV; measured triton spectra,  $\sigma(\theta)$ .  $^{22}\text{Mg}$ ; deduced levels,  $J$ ,  $\pi$ . DWBA analysis of  $\sigma(\theta)$  data.  $^{18}\text{Ne}(\alpha, p)^{21}\text{Na}$ ; deduced reaction rates versus temperature. JOUR PRVCA 79 055804
- 2009HE12 NUCLEAR REACTIONS  $p(^{21}\text{Na}, p)^{22}\text{Mg}$ ,  $E=4.0$  MeV / nucleon; measured  $E_p$ ,  $\sigma(\theta)$ . $^{22}\text{Mg}$ ; deduced levels,  $J$ ,  $\pi$ , resonances, widths and resonance parameters. R-matrix analysis of  $\sigma(\theta)$  data with SAMMY-M6-BETA code.  $^{18}\text{Ne}(\alpha, p)^{21}\text{Na}$ ,  $E$  not given; deduced astrophysical resonance reaction rates. $^{22}\text{Mg}$ ,  $^{22}\text{Ne}$ ; comparison of level systematics of mirror nuclei. JOUR PRVCA 80 015801

**A=23**

- $^{23}\text{O}$  2007ELZW NUCLEAR REACTIONS  $^{40}\text{Ar}(^9\text{Be}, X)$ ,  $E = 94$  MeV / nucleon;  $^{23}\text{O}$ ; measured  $E_p$ ,  $I_p$ ; deduced  $E_n$ ,  $I_n$ , excitation energy spectrum. REPT ATOMKI 2007 Annual,P23,Elekes

**A=23 (continued)**

<sup>23</sup>Na 2009US01 NUCLEAR REACTIONS <sup>22</sup>Ne(p, p'), E=1623, 1721, 1803, 1835 keV; measured I $\gamma$ , E $\gamma$ ; deduced B(M1), deformation parameters; <sup>22</sup>Ne(p,  $\gamma$ ), E=1590-1850 keV; measured I $\gamma$ , E $\gamma$ ; deduced excitation function, rotational bands. Bands with K $\pi$ =(3 / 2)<sup>+</sup> and K $\pi$ =(1 / 2)<sup>+</sup>. Compared with calculations within Nilsson model. JOUR IMPEE 18 1084

**A=24**

<sup>24</sup>Na 2009LU09 NUCLEAR REACTIONS <sup>181</sup>Ta(n, n' $\alpha$ ), (n, t), (n, d), (n,  $\alpha$ ), (n, p), (n, 2n)<sup>177</sup>Lu / <sup>179</sup>Hf / <sup>180</sup>Hf / <sup>178</sup>Lu / <sup>181</sup>Hf / <sup>180</sup>Ta, E=13.5, 14.1, 14.5, 14.7 MeV; measured E $\gamma$ , I $\gamma$ ,  $\sigma$ . <sup>27</sup>Al(n,  $\alpha$ )<sup>24</sup>Na, E=13.5, 14.1, 14.5, 14.7 MeV; measured  $\sigma$ , used as monitor reaction. JOUR PRVCA 79 057603

<sup>24</sup>Mg 2008LE27 NUCLEAR REACTIONS <sup>12</sup>C(<sup>12</sup>C,  $\gamma$ ), <sup>12</sup>C(<sup>16</sup>O,  $\gamma$ ), E=9-12 MeV; measured E $\gamma$ , I $\gamma$ , particle- $\gamma$ -coin; deduced feeding states, J,  $\pi$ , energy levels. JOUR IMPEE 17 2044

2008MA56 NUCLEAR REACTIONS <sup>12</sup>C(<sup>12</sup>C,  $\gamma$ ), E=16.25 MeV; measured E $\gamma$ , I $\gamma$ , particle- $\gamma$ -coin. JOUR IMPEE 17 2040

2009CH33 NUCLEAR REACTIONS <sup>24</sup>Mg, <sup>28</sup>Si(<sup>6</sup>Li, <sup>6</sup>Li), (<sup>6</sup>Li, <sup>6</sup>Li'), E=240 MeV; measured particle spectra,  $\sigma$  and  $\sigma(\theta)$ ; deduced optical potential model parameters using two folding model potentials and a Woods-Saxon potential. <sup>24</sup>Mg, <sup>28</sup>Si; deduced E0, E1, E2 and E3 giant resonance strength distributions, multipole parameters, B(E2) and B(E3) probabilities for first 2+ and 3- states. Comparisons with distorted-wave Born approximation (DWBA) calculations and earlier  $\alpha$  scattering and <sup>6</sup>Li scattering data. JOUR PRVCA 80 014312

2009TA08 NUCLEAR REACTIONS <sup>1</sup>H(<sup>32</sup>Mg, <sup>32</sup>Mg'), E=46.5 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , scattered particle spectra,  $\sigma$ ,  $\sigma(\theta)$ . <sup>32</sup>Mg; deduced levels, J,  $\pi$ , deformation lengths, rms radii. Coupled-channel analysis of angular distribution cross sections. <sup>24,26,28,30,32,34</sup>Mg; level systematics. JOUR PRVCA 79 054319

<sup>24</sup>Al 2009ICZZ RADIOACTIVITY <sup>24</sup>Si( $\beta^+$ ); measured delayed Ep, E $\gamma$ ; deduced  $\beta$ -branching, log ft; deduced J,  $\pi$ ,  $\beta^+$ -decay of <sup>24</sup>Al. Compared with mirror  $\beta$ -decay of <sup>24</sup>Ne. REPT RIKEN-NC-NP-35, Ichikawa

<sup>24</sup>Si 2009ICZZ RADIOACTIVITY <sup>24</sup>Si( $\beta^+$ ); measured delayed Ep, E $\gamma$ ; deduced  $\beta$ -branching, log ft; deduced J,  $\pi$ ,  $\beta^+$ -decay of <sup>24</sup>Al. Compared with mirror  $\beta$ -decay of <sup>24</sup>Ne. REPT RIKEN-NC-NP-35, Ichikawa

**A=25**

<sup>25</sup>Mg 2008N0ZZ NUCLEAR REACTIONS <sup>238</sup>U( $\alpha$ , X), E=62 MeV; <sup>19</sup>F, <sup>25</sup>Mg, <sup>32</sup>S, <sup>34</sup>S, <sup>88</sup>Sr, <sup>103</sup>Rh; measured E $\gamma$ , I $\gamma$ ; deduced neutron clusters. Activation method, Ge detector. CONF Moscow, P74, Novatsky

<sup>25</sup>Al 2007CHZK NUCLEAR REACTIONS <sup>1</sup>H(<sup>25</sup>Al, p), E $\approx$ 3.4 MeV / nucleon; measured Ep, Ip. Future analysis will give information on J,  $\pi$ . REPT CNS-REP-76, P5, Chen

**A=26**

- <sup>26</sup>Mg      2008LOZY      NUCLEAR REACTIONS <sup>26</sup>Mg( $\gamma$ ,  $\gamma'$ ), E=11.3 MeV; measured E $\gamma$ , I $\gamma$  using linearly polarized beam on excited target-compound nucleus of <sup>22</sup>Ne( $\alpha$ , n); deduced  $\pi$  of excited states. State at 11154 keV is not natural parity state. REPT TUNL-XLII,P120,Longland
- 2009TA08      NUCLEAR REACTIONS <sup>1</sup>H(<sup>32</sup>Mg, <sup>32</sup>Mg'), E=46.5 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , scattered particle spectra,  $\sigma$ ,  $\sigma(\theta)$ . <sup>32</sup>Mg; deduced levels, J,  $\pi$ , deformation lengths, rms radii. Coupled-channel analysis of angular distribution cross sections. <sup>24,26,28,30,32,34</sup>Mg; level systematics. JOUR PRVCA 79 054319
- 2009TA13      NUCLEAR REACTIONS <sup>12</sup>C, <sup>26</sup>Mg, <sup>28</sup>Si, <sup>48</sup>Ca, <sup>58,64</sup>Ni, <sup>208</sup>Pb(p, p'), E=295 MeV; measured E $p$ , I $p$ ,  $\sigma(\theta)$ ; deduced level energies. Systematic study of M1 and E1 excitations. JOUR NIMAE 605 326
- <sup>26</sup>Al      2008LAZV      NUCLEAR REACTIONS Mg(<sup>3</sup>He, X)<sup>26</sup>Al, Ca(<sup>3</sup>He, X)<sup>36</sup>Cl, E=15-36 MeV; measured <sup>26</sup>Al / <sup>27</sup>Al and <sup>36</sup>Cl / Cl ratio using accelerator mass spectrometry; deduced  $\sigma$ . Compared with TALYS calculation. REPT MLL 2007 Annual,P31,Lachner
- <sup>26</sup>Si      2007KWZU      NUCLEAR REACTIONS <sup>28</sup>Si( $\alpha$ , <sup>6</sup>He), E=120 MeV; measured E $\gamma$ , I $\gamma$ , E(particle), I(particle),  $\theta$ (particle) using QDD type magnetic spectrograph; deduced 5918 keV state, some candidates for unnatural parity states in <sup>26</sup>Si. REPT RIKEN 2006 Annual,P15,Kwon
- 2007KWZV      NUCLEAR REACTIONS <sup>28</sup>Si( $\alpha$ , <sup>6</sup>He), E=120 MeV; measured E(<sup>6</sup>He), I(<sup>6</sup>He),  $\theta$ (<sup>6</sup>He); deduced states in <sup>26</sup>Si. No spin and parity determined. REPT CNS-REP-76,P3,Kwon

**A=27**

- <sup>27</sup>Si      2009LI29      RADIOACTIVITY <sup>29</sup>S(2p); measured (<sup>29</sup>S)(p)(p)-coin; deduced branching ratios of two proton and <sup>2</sup>He cluster decay modes from excited states. JOUR PRVCA 80 014310

**A=28**

- <sup>28</sup>Mg      2009TA08      NUCLEAR REACTIONS <sup>1</sup>H(<sup>32</sup>Mg, <sup>32</sup>Mg'), E=46.5 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , scattered particle spectra,  $\sigma$ ,  $\sigma(\theta)$ . <sup>32</sup>Mg; deduced levels, J,  $\pi$ , deformation lengths, rms radii. Coupled-channel analysis of angular distribution cross sections. <sup>24,26,28,30,32,34</sup>Mg; level systematics. JOUR PRVCA 79 054319
- <sup>28</sup>Si      2008LE27      NUCLEAR REACTIONS <sup>12</sup>C(<sup>12</sup>C,  $\gamma$ ), <sup>12</sup>C(<sup>16</sup>O,  $\gamma$ ), E=9-12 MeV; measured E $\gamma$ , I $\gamma$ , particle- $\gamma$ -coin; deduced feeding states, J,  $\pi$ , energy levels. JOUR IMPEE 17 2044

**A=28 (continued)**

- 2009CH33 NUCLEAR REACTIONS  $^{24}\text{Mg}$ ,  $^{28}\text{Si}(^6\text{Li}, ^6\text{Li})$ ,  $(^6\text{Li}, ^6\text{Li}')$ ,  $E=240$  MeV; measured particle spectra,  $\sigma$  and  $\sigma(\theta)$ ; deduced optical potential model parameters using two folding model potentials and a Woods-Saxon potential.  $^{24}\text{Mg}$ ,  $^{28}\text{Si}$ ; deduced E0, E1, E2 and E3 giant resonance strength distributions, multipole parameters, B(E2) and B(E3) probabilities for first 2+ and 3- states. Comparisons with distorted-wave Born approximation (DWBA) calculations and earlier  $\alpha$  scattering and  $^6\text{Li}$  scattering data. JOUR PRVCA 80 014312
- 2009TA13 NUCLEAR REACTIONS  $^{12}\text{C}$ ,  $^{26}\text{Mg}$ ,  $^{28}\text{Si}$ ,  $^{48}\text{Ca}$ ,  $^{58,64}\text{Ni}$ ,  $^{208}\text{Pb}(p, p')$ ,  $E=295$  MeV; measured  $E_p$ ,  $I_p$ ,  $\sigma(\theta)$ ; deduced level energies. Systematic study of M1 and E1 excitations. JOUR NIMAE 605 326
- 2009ZE01 NUCLEAR REACTIONS  $^{28}\text{Si}(^6\text{Li}, ^6\text{Li})$ ,  $E=5-11$  MeV; measured excitation functions,  $\sigma$ , and barrier distributions. Comparison with coupled channel calculations. JOUR PRVCA 80 017601

**A=29**

- $^{29}\text{S}$  2009LI29 NUCLEAR REACTIONS  $^{197}\text{Au}(^{29}\text{S}, ^{29}\text{S}')$ ,  $E=49.2$  MeV / nucleon; measured particle spectra by  $\Delta E$ -tof,  $(^{29}\text{S})(p)(p)$ -coin.  $^{29}\text{S}$ ; deduced excitation spectrum, two proton and  $^2\text{He}$  cluster decay branching ratios. JOUR PRVCA 80 014310
- 2009LI29 RADIOACTIVITY  $^{29}\text{S}(2p)$ ; measured  $(^{29}\text{S})(p)(p)$ -coin; deduced branching ratios of two proton and  $^2\text{He}$  cluster decay modes from excited states. JOUR PRVCA 80 014310

**A=30**

- $^{30}\text{Na}$  2009SC11 RADIOACTIVITY  $^{30}\text{Na}(\beta^-)$ ; measured  $E_\gamma$ ,  $I_\gamma$ ; deduced J,  $\pi$ , monopole strength, partial E0 lifetime. Comparison with beyond mean field calculations. JOUR PRLTA 103 012501
- $^{30}\text{Mg}$  2008SCZX RADIOACTIVITY  $^{30}\text{Mg}(\beta^-)$ [from  $^{30}\text{Na}$ ]; measured  $I_\beta$ ,  $E_\beta$ ,  $\beta\beta$ -coin, conversion electrons; deduced B(E0), B(E2); analyzed B(E0), B(E2). Deduced mixing amplitude between shape-coexisting  $0^+$  states,  $^{30}\text{Mg}$  g.s. deformation. REPT MLL 2007 Annual,P4,Schwerdtfeger
- 2009SC11 RADIOACTIVITY  $^{30}\text{Na}(\beta^-)$ ; measured  $E_\gamma$ ,  $I_\gamma$ ; deduced J,  $\pi$ , monopole strength, partial E0 lifetime. Comparison with beyond mean field calculations. JOUR PRLTA 103 012501
- 2009TA08 NUCLEAR REACTIONS  $^1\text{H}(^{32}\text{Mg}, ^{32}\text{Mg}')$ ,  $E=46.5$  MeV / nucleon; measured  $E_\gamma$ ,  $I_\gamma$ , scattered particle spectra,  $\sigma$ ,  $\sigma(\theta)$ .  $^{32}\text{Mg}$ ; deduced levels, J,  $\pi$ , deformation lengths, rms radii. Coupled-channel analysis of angular distribution cross sections.  $^{24,26,28,30,32,34}\text{Mg}$ ; level systematics. JOUR PRVCA 79 054319
- $^{30}\text{Al}$  2008SCZX RADIOACTIVITY  $^{30}\text{Mg}(\beta^-)$ [from  $^{30}\text{Na}$ ]; measured  $I_\beta$ ,  $E_\beta$ ,  $\beta\beta$ -coin, conversion electrons; deduced B(E0), B(E2); analyzed B(E0), B(E2). Deduced mixing amplitude between shape-coexisting  $0^+$  states,  $^{30}\text{Mg}$  g.s. deformation. REPT MLL 2007 Annual,P4,Schwerdtfeger

**A=31**

- <sup>31</sup>Mg 2009MI12 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>32</sup>Al, X), E=91 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma(\theta)$ ,  $\sigma$ , parallel momentum distributions. <sup>31</sup>Mg; deduced levels, J,  $\pi$ . Comparison with USD and AMD+GCM shell-model calculations and discussed relevance to "island of inversion". JOUR PRVCA 79 054306
- <sup>31</sup>Al 2007NAZL RADIOACTIVITY <sup>31</sup>Al( $\beta^-$ ); measured  $\beta^-$ -decay asymmetry using  $\beta$ -NMR technique; deduced electric quadrupole moment. REPT RIKEN 2006 Annual,P12,Nagae
- 2009DE25 RADIOACTIVITY <sup>31</sup>Al( $\beta^-$ ); measured electric quadrupole coupling constant; deduced quadrupole moment, proton effective charge using two  $\beta$ -NQR techniques. Comparison with shell model. Quadrupole systematics in nearby nuclei discussed. JOUR PYLBB 678 344
- <sup>31</sup>Si 2007NAZL RADIOACTIVITY <sup>31</sup>Al( $\beta^-$ ); measured  $\beta^-$ -decay asymmetry using  $\beta$ -NMR technique; deduced electric quadrupole moment. REPT RIKEN 2006 Annual,P12,Nagae
- 2009DE25 RADIOACTIVITY <sup>31</sup>Al( $\beta^-$ ); measured electric quadrupole coupling constant; deduced quadrupole moment, proton effective charge using two  $\beta$ -NQR techniques. Comparison with shell model. Quadrupole systematics in nearby nuclei discussed. JOUR PYLBB 678 344

**A=32**

- <sup>32</sup>Ne 2009D010 NUCLEAR REACTIONS C(<sup>32</sup>Ne, <sup>32</sup>Ne'), E=226 MeV / nucleon; <sup>32</sup>Ne; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin following projectile Coulomb excitation; deduced level energy, J,  $\pi$ . Secondary beams from <sup>48</sup>Ca fragmentation. JOUR PRLTA 103 032501
- <sup>32</sup>Mg 2008TAZU NUCLEAR REACTIONS <sup>32</sup>Mg( $\gamma$ ,  $\gamma'$ ), E not given; measured E $\gamma$ , I $\gamma$  using Coulomb excitation; deduced d $\sigma(\theta)$ , B(E2),  $\beta_2$ ,  $\beta_4$ ; calculated d $\sigma(\theta)$  using CC code ECIS97 with KD02 optical model parameters. Compared to data; symmetric rotational model for two-step transitions, one-step hexadecapole model, harmonic vibrational model. REPT RIKEN 2007 Annual,Pxvi,Takeuchi
- 2009TA08 NUCLEAR REACTIONS <sup>1</sup>H(<sup>32</sup>Mg, <sup>32</sup>Mg'), E=46.5 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , scattered particle spectra,  $\sigma$ ,  $\sigma(\theta)$ . <sup>32</sup>Mg; deduced levels, J,  $\pi$ , deformation lengths, rms radii. Coupled-channel analysis of angular distribution cross sections. <sup>24,26,28,30,32,34</sup>Mg; level systematics. JOUR PRVCA 79 054319
- 2009TAZZ NUCLEAR REACTIONS <sup>1</sup>H(<sup>32</sup>Mg, <sup>32</sup>Mg'), E=46.5 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, (particle) $\gamma$ -coin,  $\sigma(\theta)$ . <sup>32</sup>Mg; deduced level energies, J,  $\pi$ . REPT RIKEN-NC-NP-32,Takeuchi
- <sup>32</sup>Al 2007KAZK RADIOACTIVITY <sup>32</sup>Al( $\beta^-$ ); measured  $\beta^-$ -decay asymmetry using  $\beta$ -NMR technique; deduced electric quadrupole moment. Compared to other Al isotopes. REPT RIKEN 2006 Annual,Piii,Kameda
- 2007TAZJ RADIOACTIVITY <sup>32</sup>Al( $\beta^-$ ); measured isomer decay, E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. using time differential perturbed angular distribution method; deduced T<sub>1/2</sub>, g-factor. REPT RIKEN 2006 Annual,P13,Takase

**A=32 (continued)**

- 2008KAZQ RADIOACTIVITY  $^{32}\text{Al}$ ; measured  $E\gamma$ ,  $I\gamma$  from spin aligned  $^{32}\text{Al}$ ; deduced isomer decay ratio,  $T_{1/2}$ . Time differential perturbed angular distribution method. REPT RIKEN 2007 Annual,P17,Kameda
- $^{32}\text{Si}$  2007KAZK RADIOACTIVITY  $^{32}\text{Al}(\beta^-)$ ; measured  $\beta^-$ -decay asymmetry using  $\beta$ -NMR technique; deduced electric quadrupole moment. Compared to other Al isotopes. REPT RIKEN 2006 Annual,Piii,Kameda
- 2007TAZJ RADIOACTIVITY  $^{32}\text{Al}(\beta^-)$ ; measured isomer decay,  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin. using time differential perturbed angular distribution method; deduced  $T_{1/2}$ , g-factor. REPT RIKEN 2006 Annual,P13,Takase
- $^{32}\text{S}$  2008NOZZ NUCLEAR REACTIONS  $^{238}\text{U}(\alpha, X)$ ,  $E=62$  MeV;  $^{19}\text{F}$ ,  $^{25}\text{Mg}$ ,  $^{32}\text{S}$ ,  $^{34}\text{S}$ ,  $^{88}\text{Sr}$ ,  $^{103}\text{Rh}$ ; measured  $E\gamma$ ,  $I\gamma$ ; deduced neutron clusters. Activation method, Ge detector. CONF Moscow,P74,Novatsky

**A=33**

No references found

**A=34**

- $^{34}\text{Mg}$  2009TA08 NUCLEAR REACTIONS  $^1\text{H}(^{32}\text{Mg}, ^{32}\text{Mg}')$ ,  $E=46.5$  MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$ , scattered particle spectra,  $\sigma$ ,  $\sigma(\theta)$ .  $^{32}\text{Mg}$ ; deduced levels,  $J$ ,  $\pi$ , deformation lengths, rms radii.Coupled-channel analysis of angular distribution cross sections.  $^{24,26,28,30,32,34}\text{Mg}$ ; level systematics. JOUR PRVCA 79 054319
- $^{34}\text{P}$  2009BE26 NUCLEAR REACTIONS  $^{18}\text{O}(^{18}\text{O}, np)$ ,  $E=20, 24, 25, 30, 44$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -,  $p\gamma$ -coin,  $\gamma(\theta)$ , DSA and half-lives.  $^{34}\text{P}$ ; deduced levels,  $J$ ,  $\pi$ , multipolarities, transition strengths and configurations. Island of inversion. Comparison with shell-model calculations using a modified WBP interaction. JOUR PRVCA 80 014302
- $^{34}\text{S}$  2008NOZZ NUCLEAR REACTIONS  $^{238}\text{U}(\alpha, X)$ ,  $E=62$  MeV;  $^{19}\text{F}$ ,  $^{25}\text{Mg}$ ,  $^{32}\text{S}$ ,  $^{34}\text{S}$ ,  $^{88}\text{Sr}$ ,  $^{103}\text{Rh}$ ; measured  $E\gamma$ ,  $I\gamma$ ; deduced neutron clusters. Activation method, Ge detector. CONF Moscow,P74,Novatsky
- $^{34}\text{Cl}$  2009PA28 NUCLEAR REACTIONS  $^{34}\text{S}(^3\text{He}, t)$ ,  $E=25$  MeV; measured triton spectra,  $\sigma(\theta)$ .  $^{34}\text{Cl}$ ; deduced levels, resonances and resonance parameters.  $^{33}\text{S}(p, \gamma)$ ,  $E$  not given; deduced thermonuclear reaction rates. Comparison with previous experimental data. JOUR PRVCA 80 015802

**A=35**

No references found

**A=36**

- <sup>36</sup>S      2007LIZO      NUCLEAR REACTIONS <sup>24</sup>Mg(<sup>18</sup>O, 2pα), E=70 MeV; measured Eγ, Iγ, γγ-coin., deduced high-spin states in <sup>33</sup>P, <sup>34</sup>S, <sup>35</sup>Cl, <sup>38</sup>Ar, <sup>39</sup>K. REPT CNS-REP-76,P21,Liu
- <sup>36</sup>Cl      2008LAZV      NUCLEAR REACTIONS Mg(<sup>3</sup>He, X)<sup>26</sup>Al, Ca(<sup>3</sup>He, X)<sup>36</sup>Cl, E=15-36 MeV; measured <sup>26</sup>Al / <sup>27</sup>Al and <sup>36</sup>Cl / Cl ratio using accelerator mass spectrometry; deduced σ. Compared with TALYS calculation. REPT MLL 2007 Annual,P31,Lachner

**A=37**

- <sup>37</sup>Ar      2008SA44      NUCLEAR REACTIONS <sup>24</sup>Mg(<sup>24</sup>Mg, X)<sup>48</sup>Cr / <sup>45</sup>Ti / <sup>44</sup>Sc / <sup>42</sup>Ca / <sup>41</sup>K / <sup>41</sup>Ca / <sup>39</sup>K / <sup>38</sup>Ar / <sup>37</sup>Ar, E=45.7 MeV; measured Eγ, Iγ, γγ-, particle-γ-coin.; deduced <sup>48</sup>Cr population mechanism, molecular resonances. JOUR IMPEE 17 2029

**A=38**

- <sup>38</sup>Ar      2008SA44      NUCLEAR REACTIONS <sup>24</sup>Mg(<sup>24</sup>Mg, X)<sup>48</sup>Cr / <sup>45</sup>Ti / <sup>44</sup>Sc / <sup>42</sup>Ca / <sup>41</sup>K / <sup>41</sup>Ca / <sup>39</sup>K / <sup>38</sup>Ar / <sup>37</sup>Ar, E=45.7 MeV; measured Eγ, Iγ, γγ-, particle-γ-coin.; deduced <sup>48</sup>Cr population mechanism, molecular resonances. JOUR IMPEE 17 2029

**A=39**

- <sup>39</sup>K      2008SA44      NUCLEAR REACTIONS <sup>24</sup>Mg(<sup>24</sup>Mg, X)<sup>48</sup>Cr / <sup>45</sup>Ti / <sup>44</sup>Sc / <sup>42</sup>Ca / <sup>41</sup>K / <sup>41</sup>Ca / <sup>39</sup>K / <sup>38</sup>Ar / <sup>37</sup>Ar, E=45.7 MeV; measured Eγ, Iγ, γγ-, particle-γ-coin.; deduced <sup>48</sup>Cr population mechanism, molecular resonances. JOUR IMPEE 17 2029

**A=40**

No references found

**A=41**

- <sup>41</sup>Si      2007S0ZY      NUCLEAR REACTIONS <sup>48</sup>Ca(<sup>12</sup>C, X), E = 60 MeV / nucleon; <sup>41</sup>Si; measured Eγ, Iγ; deduced level energy. REPT ATOMKI 2007 Annual,P24,Sohler
- <sup>41</sup>K      2008SA44      NUCLEAR REACTIONS <sup>24</sup>Mg(<sup>24</sup>Mg, X)<sup>48</sup>Cr / <sup>45</sup>Ti / <sup>44</sup>Sc / <sup>42</sup>Ca / <sup>41</sup>K / <sup>41</sup>Ca / <sup>39</sup>K / <sup>38</sup>Ar / <sup>37</sup>Ar, E=45.7 MeV; measured Eγ, Iγ, γγ-, particle-γ-coin.; deduced <sup>48</sup>Cr population mechanism, molecular resonances. JOUR IMPEE 17 2029



**A=41 (continued)**

- <sup>41</sup>Ca      2008SA44      NUCLEAR REACTIONS <sup>24</sup>Mg(<sup>24</sup>Mg, X)<sup>48</sup>Cr / <sup>45</sup>Ti / <sup>44</sup>Sc / <sup>42</sup>Ca / <sup>41</sup>K / <sup>41</sup>Ca / <sup>39</sup>K / <sup>38</sup>Ar / <sup>37</sup>Ar, E=45.7 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, particle- $\gamma$ -coin.; deduced <sup>48</sup>Cr population mechanism, molecular resonances. JOUR IMPEE 17 2029
- 2009DI04      NUCLEAR REACTIONS <sup>40</sup>Ca(n,  $\gamma$ ), E<106 keV; measured  $\sigma$ ,  $\sigma(E)$  using activation technique and accelerator mass spectrometry; deduced Maxwellian averaged cross sections. Neutrons from <sup>7</sup>Li(p, n)<sup>7</sup>Be reaction at E(p)=1912 keV. <sup>197</sup>Au(n,  $\gamma$ ), E<106 keV; measured  $\sigma$  and used as a standard. Comparison with previous experimental data and theoretical predictions. JOUR PRVCA 79 065805

**A=42**

- <sup>42</sup>P      2008DAZY      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>48</sup>Ca, X), E=60 MeV / nucleon;<sup>43</sup>S, <sup>42</sup>P; measured excitation energy, gyromagnetic factor; deduced T<sub>1/2</sub>. CONF Cappadocia (Nuclear Physics and Astrophysics), P293, Daugas
- <sup>42</sup>Ca      2008SA44      NUCLEAR REACTIONS <sup>24</sup>Mg(<sup>24</sup>Mg, X)<sup>48</sup>Cr / <sup>45</sup>Ti / <sup>44</sup>Sc / <sup>42</sup>Ca / <sup>41</sup>K / <sup>41</sup>Ca / <sup>39</sup>K / <sup>38</sup>Ar / <sup>37</sup>Ar, E=45.7 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, particle- $\gamma$ -coin.; deduced <sup>48</sup>Cr population mechanism, molecular resonances. JOUR IMPEE 17 2029

**A=43**

- <sup>43</sup>S      2008DAZY      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>48</sup>Ca, X), E=60 MeV / nucleon;<sup>43</sup>S, <sup>42</sup>P; measured excitation energy, gyromagnetic factor; deduced T<sub>1/2</sub>. CONF Cappadocia (Nuclear Physics and Astrophysics), P293, Daugas
- <sup>43</sup>Cr      2009GR07      RADIOACTIVITY <sup>6</sup>Be, <sup>45</sup>Fe(2p); measured energy and angular correlation distributions. JOUR PYLBB 677 30

**A=44**

- <sup>44</sup>Cl      2009RI04      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>45</sup>Cl, <sup>44</sup>Cl), E=99.6 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin and parallel momentum distributions. <sup>44</sup>Cl; deduced levels, J,  $\pi$ , half-life, cross section. One-neutron knockout reaction. Comparison with shell model calculations. JOUR PRVCA 79 051303
- <sup>44</sup>Ar      2009ME05      NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>48</sup>Ca, X), E=310 MeV; <sup>50</sup>Ca, <sup>51</sup>Sc, <sup>44,45,46</sup>Ar; measured E $\gamma$ , I $\gamma$ ; deduced lifetime, B(E2). JOUR APOBB 40 485
- 2009ZI01      NUCLEAR REACTIONS <sup>109</sup>Ag(<sup>44</sup>Ar, <sup>44</sup>Ar'), E=2.68 MeV / nucleon; <sup>208</sup>Pb(<sup>44</sup>Ar, <sup>44</sup>Ar'), E=3.68 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin,  $\gamma$  yields. <sup>44</sup>Ar; deduced levels, B(E2) matrix elements, spectroscopic quadrupole moments. Comparisons with experimental data for neighboring A=42-46 Ar, S and Si nuclides and GCM(GOA), AMPGCM, and Shell model calculations. JOUR PRVCA 80 014317

**A=44 (continued)**

<sup>44</sup>Sc 2008SA44 NUCLEAR REACTIONS <sup>24</sup>Mg(<sup>24</sup>Mg, X)<sup>48</sup>Cr / <sup>45</sup>Ti / <sup>44</sup>Sc / <sup>42</sup>Ca / <sup>41</sup>K / <sup>41</sup>Ca / <sup>39</sup>K / <sup>38</sup>Ar / <sup>37</sup>Ar, E=45.7 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma^-$ , particle- $\gamma$ -coin.; deduced <sup>48</sup>Cr population mechanism, molecular resonances. JOUR IMPEE 17 2029

**A=45**

<sup>45</sup>Ar 2009ME05 NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>48</sup>Ca, X), E=310 MeV; <sup>50</sup>Ca, <sup>51</sup>Sc, <sup>44,45,46</sup>Ar; measured E $\gamma$ , I $\gamma$ ; deduced lifetime, B(E2). JOUR APOBB 40 485

<sup>45</sup>Ti 2008SA44 NUCLEAR REACTIONS <sup>24</sup>Mg(<sup>24</sup>Mg, X)<sup>48</sup>Cr / <sup>45</sup>Ti / <sup>44</sup>Sc / <sup>42</sup>Ca / <sup>41</sup>K / <sup>41</sup>Ca / <sup>39</sup>K / <sup>38</sup>Ar / <sup>37</sup>Ar, E=45.7 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma^-$ , particle- $\gamma$ -coin.; deduced <sup>48</sup>Cr population mechanism, molecular resonances. JOUR IMPEE 17 2029

<sup>45</sup>Fe 2009GR07 NUCLEAR REACTIONS <sup>1</sup>H(<sup>10</sup>B, n), E not given; Ni(<sup>58</sup>Ni, X)<sup>45</sup>Fe, E=161 MeV / nucleon; measured E $p$ , I $p$ , E $\alpha$ , I $\alpha$ , product energy and angular correlation distributions in a kinematically complete experiment. Comparison with three-body cluster model. JOUR PYLBB 677 30

2009GR07 RADIOACTIVITY <sup>6</sup>Be, <sup>45</sup>Fe(2p); measured energy and angular correlation distributions. JOUR PYLBB 677 30

**A=46**

<sup>46</sup>Ar 2007NIZX NUCLEAR REACTIONS <sup>9</sup>Be(<sup>46</sup>Ar, xn)<sup>49,50,51</sup>Ti, E=2-8 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ; deduced level properties: J,  $\pi$ . <sup>46</sup>Ar beam from fragmentation of 64 MeV / nucleon <sup>48</sup>Ca. REPT CNS-REP-76,P23,Niikura

2009ME05 NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>48</sup>Ca, X), E=310 MeV; <sup>50</sup>Ca, <sup>51</sup>Sc, <sup>44,45,46</sup>Ar; measured E $\gamma$ , I $\gamma$ ; deduced lifetime, B(E2). JOUR APOBB 40 485

<sup>46</sup>Ca 2008VAZW NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>48</sup>Ca, X), E=310 MeV; <sup>46</sup>Ca; measured E $\gamma$ , I $\gamma$ ; deduced lifetime, B(E2). CONF Cappadocia (Nuclear Physics and Astrophysics),P197,Valiente-Dobon

**A=47**

No references found

**A=48**

<sup>48</sup>Ca 2008K0ZV RADIOACTIVITY <sup>48</sup>Ca, <sup>82</sup>Se, <sup>96</sup>Zr, <sup>100</sup>Mo, <sup>116</sup>Cd, <sup>130</sup>Te, <sup>150</sup>Nd( $2\beta^-$ ); measured  $0\nu 2\beta^-$ -decay  $T_{1/2}$  lower limits,  $2\nu 2\beta^-$ -decay  $T_{1/2}$ . CONF Moscow,P203,Kochetov

**A=48 (continued)**

- 2009TA13 NUCLEAR REACTIONS  $^{12}\text{C}$ ,  $^{26}\text{Mg}$ ,  $^{28}\text{Si}$ ,  $^{48}\text{Ca}$ ,  $^{58,64}\text{Ni}$ ,  $^{208}\text{Pb}(p, p')$ ,  
E=295 MeV; measured  $E_p$ ,  $I_p$ ,  $\sigma(\theta)$ ; deduced level energies. Systematic  
study of M1 and E1 excitations. JOUR NIMAE 605 326
- $^{48}\text{Sc}$  2009YA07 NUCLEAR REACTIONS  $^{48}\text{Ca}(p, n)$ ,  $^{48}\text{Ti}(n, p)$ , E=300 MeV;  
measured  $E_p$ ,  $I_p$ ,  $E_n$ ,  $I_n$ ; deduced  $\sigma(E, \theta)$ , Gamow-Teller strengths.  
Comparison with GXPF1A shell model. JOUR PRLTA 103 012503
- $^{48}\text{Ti}$  2008GR22 NUCLEAR REACTIONS  $^{12}\text{C}$ ,  $^{48}\text{Ti}$ ,  $^{58,64}\text{Ni}(d, d')$ , E=37 MeV;  
measured  $E_d$ ,  $I_d$ ; deduced  $\sigma(E, \theta)$ , excitation of electric giant  
resonances. JOUR PANUE 71 1711
- 2008K0ZV RADIOACTIVITY  $^{48}\text{Ca}$ ,  $^{82}\text{Se}$ ,  $^{96}\text{Zr}$ ,  $^{100}\text{Mo}$ ,  $^{116}\text{Cd}$ ,  $^{130}\text{Te}$ ,  $^{150}\text{Nd}(2\beta^-)$ ;  
measured  $0\nu 2\beta^-$ -decay  $T_{1/2}$  lower limits,  $2\nu 2\beta^-$ -decay  $T_{1/2}$ . CONF  
Moscow,P203,Kochetov
- $^{48}\text{Cr}$  2008SA44 NUCLEAR REACTIONS  $^{24}\text{Mg}(^{24}\text{Mg}, X)^{48}\text{Cr} / ^{45}\text{Ti} / ^{44}\text{Sc} / ^{42}\text{Ca} /$   
 $^{41}\text{K} / ^{41}\text{Ca} / ^{39}\text{K} / ^{38}\text{Ar} / ^{37}\text{Ar}$ , E=45.7 MeV; measured  $E_\gamma$ ,  $I_\gamma$ ,  $\gamma\gamma^-$ ,  
particle- $\gamma$ -coin.; deduced  $^{48}\text{Cr}$  population mechanism, molecular  
resonances. JOUR IMPEE 17 2029

**A=49**

- $^{49}\text{V}$  2009BR06 NUCLEAR REACTIONS  $^9\text{Be}(^{56}\text{Ni}, X)^{49}\text{Fe} / ^{49}\text{V} / ^{53}\text{Ni} / ^{53}\text{Mn}$ , E  
not given; measured  $E_\gamma$ ,  $I_\gamma$ , (particle) $\gamma$ -coin.  $^{49}\text{Fe}$ ,  $^{53}\text{Ni}$ ; deduced  
levels,  $J$ ,  $\pi$ . JOUR PRVCA 80 011306
- $^{49}\text{Fe}$  2009BR06 NUCLEAR REACTIONS  $^9\text{Be}(^{56}\text{Ni}, X)^{49}\text{Fe} / ^{49}\text{V} / ^{53}\text{Ni} / ^{53}\text{Mn}$ , E  
not given; measured  $E_\gamma$ ,  $I_\gamma$ , (particle) $\gamma$ -coin.  $^{49}\text{Fe}$ ,  $^{53}\text{Ni}$ ; deduced  
levels,  $J$ ,  $\pi$ . JOUR PRVCA 80 011306

**A=50**

- $^{50}\text{K}$  2009CR03 RADIOACTIVITY  $^{54}\text{Sc}$ ,  $^{50}\text{K}$ ,  $^{53}\text{Ca}(\beta^-)$ ;measured  $E_\gamma$ ,  $I_\gamma$ ;deduced level  
scheme,  $J\pi$ , isomeric transitions. JOUR APOBB 40 481
- $^{50}\text{Ca}$  2008KRZW NUCLEAR REACTIONS  $^{86}\text{Kr}(^9\text{Be}, X)$ ,  $^{124}\text{Xe}(^9\text{Be}, X)$ , E=500, 1000  
MeV / nucleon;  $^{50}\text{Ca}$ ,  $^{56}\text{Ti}$ ,  $^{100}\text{Sn}$ ; measured  $E_\gamma$ ,  $I_\gamma$ ; deduced angular  
momentum values, spectroscopic factors. CONF Cappadocia (Nuclear  
Physics and Astrophysics),P52,Krucken
- 2009CR03 RADIOACTIVITY  $^{54}\text{Sc}$ ,  $^{50}\text{K}$ ,  $^{53}\text{Ca}(\beta^-)$ ;measured  $E_\gamma$ ,  $I_\gamma$ ;deduced level  
scheme,  $J\pi$ , isomeric transitions. JOUR APOBB 40 481
- 2009ME05 NUCLEAR REACTIONS  $^{208}\text{Pb}(^{48}\text{Ca}, X)$ , E=310 MeV;  $^{50}\text{Ca}$ ,  $^{51}\text{Sc}$ ,  
 $^{44,45,46}\text{Ar}$ ; measured  $E_\gamma$ ,  $I_\gamma$ ; deduced lifetime, B(E2). JOUR APOBB  
40 485
- 2009VA06 NUCLEAR REACTIONS  $^{208}\text{Pb}(^{48}\text{Ca}, ^{50}\text{Ca})$ , ( $^{48}\text{Ca}$ ,  $^{51}\text{Sc}$ ), E=310  
MeV; measured  $E_\gamma$ ,  $I_\gamma$ , half-lives for first excited states using DSAM.  
 $^{50}\text{Ca}$ ,  $^{51}\text{Sc}$ ; deduced B(E2). JOUR PRLTA 102 242502

**A=51**

- <sup>51</sup>Sc 2009ME05 NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>48</sup>Ca, X), E=310 MeV; <sup>50</sup>Ca, <sup>51</sup>Sc, <sup>44,45,46</sup>Ar; measured E $\gamma$ , I $\gamma$ ; deduced lifetime, B(E2). JOUR APOBB 40 485
- 2009VA06 NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>48</sup>Ca, <sup>50</sup>Ca), (<sup>48</sup>Ca, <sup>51</sup>Sc), E=310 MeV; measured E $\gamma$ , I $\gamma$ , half-lives for first excited states using DSAM. <sup>50</sup>Ca, <sup>51</sup>Sc; deduced B(E2). JOUR PRLTA 102 242502
- <sup>51</sup>Mn 2007SZZY NUCLEAR REACTIONS V(<sup>3</sup>He, X)<sup>51</sup>Mn / <sup>52</sup>Mn, E < 40 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ . REPT ATOMKI 2007 Annual,P69,Szelecsenyi

**A=52**

- <sup>52</sup>Sc 2009ZH23 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>48</sup>Ca, X)<sup>52</sup>Ti / <sup>52</sup>Sc / <sup>55</sup>V / <sup>55</sup>Cr, E=172 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, angular distributions, half-lives by DSAM. <sup>52</sup>Ti; deduced levels, J,  $\pi$ . Comparison with full fp shell-model calculations using GXPF1A, FPD6, and KB3G effective interactions. JOUR PRVCA 80 024318
- 2009ZH23 RADIOACTIVITY <sup>52</sup>Sc( $\beta^-$ )[from <sup>9</sup>Be(<sup>48</sup>Ca, X), E=172 MeV]; measured E $\gamma$ , I $\gamma$  and  $\gamma\gamma$ -coin. <sup>52</sup>Ti; deduced levels, J,  $\pi$ . JOUR PRVCA 80 024318
- <sup>52</sup>Ti 2009ZH23 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>48</sup>Ca, X)<sup>52</sup>Ti / <sup>52</sup>Sc / <sup>55</sup>V / <sup>55</sup>Cr, E=172 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, angular distributions, half-lives by DSAM. <sup>52</sup>Ti; deduced levels, J,  $\pi$ . Comparison with full fp shell-model calculations using GXPF1A, FPD6, and KB3G effective interactions. JOUR PRVCA 80 024318
- 2009ZH23 RADIOACTIVITY <sup>52</sup>Sc( $\beta^-$ )[from <sup>9</sup>Be(<sup>48</sup>Ca, X), E=172 MeV]; measured E $\gamma$ , I $\gamma$  and  $\gamma\gamma$ -coin. <sup>52</sup>Ti; deduced levels, J,  $\pi$ . JOUR PRVCA 80 024318
- <sup>52</sup>Mn 2007SZZY NUCLEAR REACTIONS V(<sup>3</sup>He, X)<sup>51</sup>Mn / <sup>52</sup>Mn, E < 40 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ . REPT ATOMKI 2007 Annual,P69,Szelecsenyi

**A=53**

- <sup>53</sup>Ca 2009CR03 RADIOACTIVITY <sup>54</sup>Sc, <sup>50</sup>K, <sup>53</sup>Ca( $\beta^-$ ); measured E $\gamma$ , I $\gamma$ ; deduced level scheme, J $\pi$ , isomeric transitions. JOUR APOBB 40 481
- <sup>53</sup>Sc 2009CR03 RADIOACTIVITY <sup>54</sup>Sc, <sup>50</sup>K, <sup>53</sup>Ca( $\beta^-$ ); measured E $\gamma$ , I $\gamma$ ; deduced level scheme, J $\pi$ , isomeric transitions. JOUR APOBB 40 481
- <sup>53</sup>V 2008LUZZ NUCLEAR REACTIONS <sup>238</sup>U(<sup>64</sup>Ni, X), (<sup>70</sup>Zn, X), E=400, 460 MeV; <sup>53,55,57</sup>V, <sup>57,59,61,63</sup>Mn, <sup>61,63,65</sup>Fe; measured E $\gamma$ , I $\gamma$ ; deduced J,  $\pi$ , level scheme, deformation. Comparison with shell model calculations. CONF Cappadocia (Nuclear Physics and Astrophysics),P160,Lunardi
- <sup>53</sup>Mn 2009BR06 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>56</sup>Ni, X)<sup>49</sup>Fe / <sup>49</sup>V / <sup>53</sup>Ni / <sup>53</sup>Mn, E not given; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin. <sup>49</sup>Fe, <sup>53</sup>Ni; deduced levels, J,  $\pi$ . JOUR PRVCA 80 011306

**A=53 (continued)**

<sup>53</sup>Ni 2009BR06 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>56</sup>Ni, X)<sup>49</sup>Fe / <sup>49</sup>V / <sup>53</sup>Ni / <sup>53</sup>Mn, E not given; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin. <sup>49</sup>Fe, <sup>53</sup>Ni; deduced levels, J,  $\pi$ . JOUR PRVCA 80 011306

**A=54**

<sup>54</sup>Sc 2009CR03 RADIOACTIVITY <sup>54</sup>Sc, <sup>50</sup>K, <sup>53</sup>Ca( $\beta^-$ ); measured E $\gamma$ , I $\gamma$ ; deduced level scheme, J $\pi$ , isomeric transitions. JOUR APOBB 40 481

<sup>54</sup>Ti 2009CR03 RADIOACTIVITY <sup>54</sup>Sc, <sup>50</sup>K, <sup>53</sup>Ca( $\beta^-$ ); measured E $\gamma$ , I $\gamma$ ; deduced level scheme, J $\pi$ , isomeric transitions. JOUR APOBB 40 481

<sup>54</sup>Cr 2009CR02 RADIOACTIVITY <sup>61</sup>Cr( $\beta^-$ ) [from Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -,  $\beta\gamma$ -coin, half-life. <sup>61</sup>Mn; deduced levels, J,  $\pi$ . <sup>54,56,58,60,62</sup>Cr, <sup>56,58,60,62,64,66,68</sup>Fe, <sup>58,60,62,64,66,68,70</sup>Ni, <sup>57,59,61,63</sup>Mn; level systematics and shell-model calculations. JOUR PRVCA 79 054320

<sup>54</sup>Mn 2008ADZX RADIOACTIVITY <sup>54</sup>Mn; measured T<sub>1/2</sub>. compared with adopted value. REPT Univ Washington Annual 2008,P53,Adelberger

<sup>54</sup>Fe 2009J003 NUCLEAR REACTIONS <sup>28</sup>Si(<sup>36</sup>Ar, 2p $\alpha$ ), E=136, 143, 148 MeV; measured E $\gamma$ , I $\gamma$ , Ep, Ip, E $\alpha$ , (particle) $\gamma$ -, n $\gamma$ -, p $\gamma$ -,  $\alpha\gamma$ -,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , DCO. <sup>58</sup>Ni; deduced levels, J,  $\pi$ , multipolarity, mixing ratio, bands and configurations. <sup>57</sup>Co, <sup>54</sup>Fe; deduced levels, J,  $\pi$  from prompt proton and  $\alpha$  emission from <sup>58</sup>Ni high-spin states. Comparison with large-scale shell model and cranked Nilsson-Strutinsky calculations. JOUR PRVCA 80 014321

<sup>54</sup>Co 2008FUZW NUCLEAR REACTIONS <sup>54</sup>Fe(<sup>3</sup>He, t), (<sup>3</sup>He, 3N), E=140 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ,  $\beta\gamma$ -coin.; deduced absolute values of Gamow-Teller transition strengths B(GT). CONF Cappadocia (Nuclear Physics and Astrophysics),P3,Fujita

**A=55**

<sup>55</sup>V 2008LUZZ NUCLEAR REACTIONS <sup>238</sup>U(<sup>64</sup>Ni, X), (<sup>70</sup>Zn, X), E=400, 460 MeV; <sup>53,55,57</sup>V, <sup>57,59,61,63</sup>Mn, <sup>61,63,65</sup>Fe; measured E $\gamma$ , I $\gamma$ ; deduced J,  $\pi$ , level scheme, deformation. Comparison with shell model calculations. CONF Cappadocia (Nuclear Physics and Astrophysics),P160,Lunardi

2009ZH23 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>48</sup>Ca, X)<sup>52</sup>Ti / <sup>52</sup>Sc / <sup>55</sup>V / <sup>55</sup>Cr, E=172 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, angular distributions, half-lives by DSAM. <sup>52</sup>Ti; deduced levels, J,  $\pi$ . Comparison with full fp shell-model calculations using GXPF1A, FPD6, and KB3G effective interactions. JOUR PRVCA 80 024318

<sup>55</sup>Cr 2009ZH23 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>48</sup>Ca, X)<sup>52</sup>Ti / <sup>52</sup>Sc / <sup>55</sup>V / <sup>55</sup>Cr, E=172 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, angular distributions, half-lives by DSAM. <sup>52</sup>Ti; deduced levels, J,  $\pi$ . Comparison with full fp shell-model calculations using GXPF1A, FPD6, and KB3G effective interactions. JOUR PRVCA 80 024318

**A=55 (continued)**

- <sup>55</sup>Fe 2009MA32 NUCLEAR REACTIONS <sup>54</sup>Fe(polarized d, p), E=14 MeV; measured reaction product spectra,  $\sigma(\theta)$ , analyzing power. <sup>55</sup>Fe; deduced levels, J,  $\pi$ , spectroscopic factors. DWBA analysis. Role of cross-shell excitation discussed. Comparison with shell model. JOUR ZAANE 40 35
- <sup>55</sup>Co 2009BE22 RADIOACTIVITY <sup>55</sup>Ni( $\beta^+$ )[from <sup>9</sup>Be(<sup>58</sup>Ni, X), E=160 MeV / nucleon]; measured  $\beta$  asymmetry from spin polarized <sup>55</sup>Ni ions, deduced g-factor. JOUR PRVCA 79 064305
- 2009BE22 NUCLEAR MOMENTS <sup>55</sup>Ni; measured g-factor by  $\beta$ -NMR method; deduced magnetic moment. <sup>55</sup>Ni, <sup>55</sup>Co; comparison of measured magnetic moments with shell-model calculations in full fp shell using GXPF1 interaction. JOUR PRVCA 79 064305
- <sup>55</sup>Ni 2009BE22 RADIOACTIVITY <sup>55</sup>Ni( $\beta^+$ )[from <sup>9</sup>Be(<sup>58</sup>Ni, X), E=160 MeV / nucleon]; measured  $\beta$  asymmetry from spin polarized <sup>55</sup>Ni ions, deduced g-factor. JOUR PRVCA 79 064305
- 2009BE22 NUCLEAR MOMENTS <sup>55</sup>Ni; measured g-factor by  $\beta$ -NMR method; deduced magnetic moment. <sup>55</sup>Ni, <sup>55</sup>Co; comparison of measured magnetic moments with shell-model calculations in full fp shell using GXPF1 interaction. JOUR PRVCA 79 064305

**A=56**

- <sup>56</sup>Ti 2008KRZW NUCLEAR REACTIONS <sup>86</sup>Kr(<sup>9</sup>Be, X), <sup>124</sup>Xe(<sup>9</sup>Be, X), E=500, 1000 MeV / nucleon; <sup>50</sup>Ca, <sup>56</sup>Ti, <sup>100</sup>Sn; measured E $\gamma$ , I $\gamma$ ; deduced angular momentum values, spectroscopic factors. CONF Cappadocia (Nuclear Physics and Astrophysics),P52,Krucken
- <sup>56</sup>Cr 2009CR02 RADIOACTIVITY <sup>61</sup>Cr( $\beta^-$ )[from Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma^-$ ,  $\beta\gamma$ -coin, half-life. <sup>61</sup>Mn; deduced levels, J,  $\pi$ . <sup>54,56,58,60,62</sup>Cr, <sup>56,58,60,62,64,66,68</sup>Fe, <sup>58,60,62,64,66,68,70</sup>Ni, <sup>57,59,61,63</sup>Mn; level systematics and shell-model calculations. JOUR PRVCA 79 054320
- <sup>56</sup>Fe 2009CR02 RADIOACTIVITY <sup>61</sup>Cr( $\beta^-$ )[from Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma^-$ ,  $\beta\gamma$ -coin, half-life. <sup>61</sup>Mn; deduced levels, J,  $\pi$ . <sup>54,56,58,60,62</sup>Cr, <sup>56,58,60,62,64,66,68</sup>Fe, <sup>58,60,62,64,66,68,70</sup>Ni, <sup>57,59,61,63</sup>Mn; level systematics and shell-model calculations. JOUR PRVCA 79 054320

**A=57**

- <sup>57</sup>Sc 2009CR02 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>76</sup>Ge, X)<sup>57</sup>Sc / <sup>58</sup>Ti / <sup>59</sup>Ti / <sup>59</sup>V / <sup>60</sup>V / <sup>60</sup>Cr / <sup>61</sup>Cr / <sup>62</sup>Cr / <sup>62</sup>Mn / <sup>63</sup>Mn, E=130 MeV / nucleon; measured yields. JOUR PRVCA 79 054320
- <sup>57</sup>V 2008LUZZ NUCLEAR REACTIONS <sup>238</sup>U(<sup>64</sup>Ni, X), (<sup>70</sup>Zn, X), E=400, 460 MeV; <sup>53,55,57</sup>V, <sup>57,59,61,63</sup>Mn, <sup>61,63,65</sup>Fe; measured E $\gamma$ , I $\gamma$ ; deduced J,  $\pi$ , level scheme, deformation. Comparison with shell model calculations. CONF Cappadocia (Nuclear Physics and Astrophysics),P160,Lunardi

**A=57 (continued)**

- <sup>57</sup>Mn 2008LUZZ NUCLEAR REACTIONS <sup>238</sup>U(<sup>64</sup>Ni, X), (<sup>70</sup>Zn, X), E=400, 460 MeV; <sup>53,55,57</sup>V, <sup>57,59,61,63</sup>Mn, <sup>61,63,65</sup>Fe; measured E $\gamma$ , I $\gamma$ ; deduced J,  $\pi$ , level scheme, deformation. Comparison with shell model calculations. CONF Cappadocia (Nuclear Physics and Astrophysics), P160, Lunardi
- 2009CR02 RADIOACTIVITY <sup>61</sup>Cr( $\beta^-$ ) [from Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma^-$ ,  $\beta\gamma$ -coin, half-life. <sup>61</sup>Mn; deduced levels, J,  $\pi$ . <sup>54,56,58,60,62</sup>Cr, <sup>56,58,60,62,64,66,68</sup>Fe, <sup>58,60,62,64,66,68,70</sup>Ni, <sup>57,59,61,63</sup>Mn; level systematics and shell-model calculations. JOUR PRVCA 79 054320
- <sup>57</sup>Co 2009J003 NUCLEAR REACTIONS <sup>28</sup>Si(<sup>36</sup>Ar, 2p $\alpha$ ), E=136, 143, 148 MeV; measured E $\gamma$ , I $\gamma$ , Ep, Ip, E $\alpha$ , (particle) $\gamma^-$ , n $\gamma^-$ , p $\gamma^-$ ,  $\alpha\gamma^-$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , DCO. <sup>58</sup>Ni; deduced levels, J,  $\pi$ , multipolarity, mixing ratio, bands and configurations. <sup>57</sup>Co, <sup>54</sup>Fe; deduced levels, J,  $\pi$  from prompt proton and  $\alpha$  emission from <sup>58</sup>Ni high-spin states. Comparison with large-scale shell model and cranked Nilsson-Strutinsky calculations. JOUR PRVCA 80 014321
- <sup>57</sup>Cu 2009C014 NUCLEAR MOMENTS <sup>57,59,63,65</sup>Cu; measured hyperfine spectra and parameters; deduced nuclear magnetic dipole moments. Comparison with GXPF1 shell model calculations. JOUR PRLTA 103 102501

**A=58**

- <sup>58</sup>Ti 2009CR02 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>76</sup>Ge, X) <sup>57</sup>Sc / <sup>58</sup>Ti / <sup>59</sup>Ti / <sup>59</sup>V / <sup>60</sup>V / <sup>60</sup>Cr / <sup>61</sup>Cr / <sup>62</sup>Cr / <sup>62</sup>Mn / <sup>63</sup>Mn, E=130 MeV / nucleon; measured yields. JOUR PRVCA 79 054320
- <sup>58</sup>Cr 2009CR02 RADIOACTIVITY <sup>61</sup>Cr( $\beta^-$ ) [from Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma^-$ ,  $\beta\gamma$ -coin, half-life. <sup>61</sup>Mn; deduced levels, J,  $\pi$ . <sup>54,56,58,60,62</sup>Cr, <sup>56,58,60,62,64,66,68</sup>Fe, <sup>58,60,62,64,66,68,70</sup>Ni, <sup>57,59,61,63</sup>Mn; level systematics and shell-model calculations. JOUR PRVCA 79 054320
- <sup>58</sup>Fe 2009CR02 RADIOACTIVITY <sup>61</sup>Cr( $\beta^-$ ) [from Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma^-$ ,  $\beta\gamma$ -coin, half-life. <sup>61</sup>Mn; deduced levels, J,  $\pi$ . <sup>54,56,58,60,62</sup>Cr, <sup>56,58,60,62,64,66,68</sup>Fe, <sup>58,60,62,64,66,68,70</sup>Ni, <sup>57,59,61,63</sup>Mn; level systematics and shell-model calculations. JOUR PRVCA 79 054320
- <sup>58</sup>Ni 2008GR22 NUCLEAR REACTIONS <sup>12</sup>C, <sup>48</sup>Ti, <sup>58,64</sup>Ni(d, d'), E=37 MeV; measured Ed, Id; deduced  $\sigma(E, \theta)$ , excitation of electric giant resonances. JOUR PANUE 71 1711
- 2009CR02 RADIOACTIVITY <sup>61</sup>Cr( $\beta^-$ ) [from Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma^-$ ,  $\beta\gamma$ -coin, half-life. <sup>61</sup>Mn; deduced levels, J,  $\pi$ . <sup>54,56,58,60,62</sup>Cr, <sup>56,58,60,62,64,66,68</sup>Fe, <sup>58,60,62,64,66,68,70</sup>Ni, <sup>57,59,61,63</sup>Mn; level systematics and shell-model calculations. JOUR PRVCA 79 054320

**A=58 (continued)**

- 2009J003 NUCLEAR REACTIONS  $^{28}\text{Si}(^{36}\text{Ar}, 2p\alpha)$ ,  $E=136, 143, 148$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $E_p$ ,  $I_p$ ,  $E\alpha$ , (particle) $\gamma^-$ ,  $n\gamma^-$ ,  $p\gamma^-$ ,  $\alpha\gamma^-$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , DCO.  $^{58}\text{Ni}$ ; deduced levels,  $J$ ,  $\pi$ , multipolarity, mixing ratio, bands and configurations.  $^{57}\text{Co}$ ,  $^{54}\text{Fe}$ ; deduced levels,  $J$ ,  $\pi$  from prompt proton and  $\alpha$  emission from  $^{58}\text{Ni}$  high-spin states. Comparison with large-scale shell model and cranked Nilsson-Strutinsky calculations. JOUR PRVCA 80 014321
- 2009TA13 NUCLEAR REACTIONS  $^{12}\text{C}$ ,  $^{26}\text{Mg}$ ,  $^{28}\text{Si}$ ,  $^{48}\text{Ca}$ ,  $^{58,64}\text{Ni}$ ,  $^{208}\text{Pb}(p, p')$ ,  $E=295$  MeV; measured  $E_p$ ,  $I_p$ ,  $\sigma(\theta)$ ; deduced level energies. Systematic study of M1 and E1 excitations. JOUR NIMAE 605 326

**A=59**

- $^{59}\text{Ti}$  2009CR02 NUCLEAR REACTIONS  $^9\text{Be}(^{76}\text{Ge}, X)^{57}\text{Sc} / ^{58}\text{Ti} / ^{59}\text{Ti} / ^{59}\text{V} / ^{60}\text{V} / ^{60}\text{Cr} / ^{61}\text{Cr} / ^{62}\text{Cr} / ^{62}\text{Mn} / ^{63}\text{Mn}$ ,  $E=130$  MeV / nucleon; measured yields. JOUR PRVCA 79 054320
- $^{59}\text{V}$  2009CR02 NUCLEAR REACTIONS  $^9\text{Be}(^{76}\text{Ge}, X)^{57}\text{Sc} / ^{58}\text{Ti} / ^{59}\text{Ti} / ^{59}\text{V} / ^{60}\text{V} / ^{60}\text{Cr} / ^{61}\text{Cr} / ^{62}\text{Cr} / ^{62}\text{Mn} / ^{63}\text{Mn}$ ,  $E=130$  MeV / nucleon; measured yields. JOUR PRVCA 79 054320
- $^{59}\text{Mn}$  2008LUZZ NUCLEAR REACTIONS  $^{238}\text{U}(^{64}\text{Ni}, X)$ ,  $(^{70}\text{Zn}, X)$ ,  $E=400, 460$  MeV;  $^{53,55,57}\text{V}$ ,  $^{57,59,61,63}\text{Mn}$ ,  $^{61,63,65}\text{Fe}$ ; measured  $E\gamma$ ,  $I\gamma$ ; deduced  $J$ ,  $\pi$ , level scheme, deformation. Comparison with shell model calculations. CONF Cappadocia (Nuclear Physics and Astrophysics), P160, Lunardi
- 2009CR02 RADIOACTIVITY  $^{61}\text{Cr}(\beta^-)$ [from  $\text{Be}(^{76}\text{Ge}, X)$ ,  $E=130$  MeV / nucleon]; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma^-$ ,  $\beta\gamma$ -coin, half-life.  $^{61}\text{Mn}$ ; deduced levels,  $J$ ,  $\pi$ .  $^{54,56,58,60,62}\text{Cr}$ ,  $^{56,58,60,62,64,66,68}\text{Fe}$ ,  $^{58,60,62,64,66,68,70}\text{Ni}$ ,  $^{57,59,61,63}\text{Mn}$ ; level systematics and shell-model calculations. JOUR PRVCA 79 054320
- $^{59}\text{Cu}$  2009C014 NUCLEAR MOMENTS  $^{57,59,63,65}\text{Cu}$ ; measured hyperfine spectra and parameters; deduced nuclear magnetic dipole moments. Comparison with GXPF1 shell model calculations. JOUR PRLTA 103 102501

**A=60**

- $^{60}\text{V}$  2009CR02 NUCLEAR REACTIONS  $^9\text{Be}(^{76}\text{Ge}, X)^{57}\text{Sc} / ^{58}\text{Ti} / ^{59}\text{Ti} / ^{59}\text{V} / ^{60}\text{V} / ^{60}\text{Cr} / ^{61}\text{Cr} / ^{62}\text{Cr} / ^{62}\text{Mn} / ^{63}\text{Mn}$ ,  $E=130$  MeV / nucleon; measured yields. JOUR PRVCA 79 054320
- $^{60}\text{Cr}$  2009CR02 RADIOACTIVITY  $^{61}\text{Cr}(\beta^-)$ [from  $\text{Be}(^{76}\text{Ge}, X)$ ,  $E=130$  MeV / nucleon]; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma^-$ ,  $\beta\gamma$ -coin, half-life.  $^{61}\text{Mn}$ ; deduced levels,  $J$ ,  $\pi$ .  $^{54,56,58,60,62}\text{Cr}$ ,  $^{56,58,60,62,64,66,68}\text{Fe}$ ,  $^{58,60,62,64,66,68,70}\text{Ni}$ ,  $^{57,59,61,63}\text{Mn}$ ; level systematics and shell-model calculations. JOUR PRVCA 79 054320
- 2009CR02 NUCLEAR REACTIONS  $^9\text{Be}(^{76}\text{Ge}, X)^{57}\text{Sc} / ^{58}\text{Ti} / ^{59}\text{Ti} / ^{59}\text{V} / ^{60}\text{V} / ^{60}\text{Cr} / ^{61}\text{Cr} / ^{62}\text{Cr} / ^{62}\text{Mn} / ^{63}\text{Mn}$ ,  $E=130$  MeV / nucleon; measured yields. JOUR PRVCA 79 054320



**A=60 (continued)**

- <sup>60</sup>Mn 2009F005 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>238</sup>U, X)<sup>60m</sup>Mn / <sup>78m</sup>Ga / <sup>82m</sup>Ga / <sup>92m</sup>Br / <sup>95m</sup>Rb / <sup>98m</sup>Rb / <sup>92m</sup>Y / <sup>101m</sup>Y / <sup>112m</sup>Tc, E=80 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, isomer half-lives. <sup>60</sup>Mn, <sup>78,82</sup>Ga, <sup>92</sup>Br, <sup>95,98</sup>Rb, <sup>92,101</sup>Y, <sup>112</sup>Tc; deduced levels, J,  $\pi$ . <sup>66m</sup>Cu, <sup>78m</sup>Zn, <sup>88m</sup>Br, <sup>95m</sup>Kr, <sup>96m</sup>Rb, <sup>97m,100m</sup>Sr, <sup>99m</sup>Mo, <sup>121m</sup>Pd, <sup>124m</sup>Sn, <sup>125m</sup>Xe; measured E $\gamma$  and half-lives. <sup>91,92,93</sup>Y; measured E $\gamma$ . JOUR PRVCA 79 064318
- <sup>60</sup>Fe 2009CR02 RADIOACTIVITY <sup>61</sup>Cr( $\beta^-$ )[from Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -,  $\beta\gamma$ -coin, half-life. <sup>61</sup>Mn; deduced levels, J,  $\pi$ . <sup>54,56,58,60,62</sup>Cr, <sup>56,58,60,62,64,66,68</sup>Fe, <sup>58,60,62,64,66,68,70</sup>Ni, <sup>57,59,61,63</sup>Mn; level systematics and shell-model calculations. JOUR PRVCA 79 054320
- 2009RU08 RADIOACTIVITY <sup>60</sup>Fe( $\beta^-$ ); measured E $\gamma$ ,  $\gamma$ ; deduced T<sub>1/2</sub>. JOUR PRLTA 103 072502
- <sup>60</sup>Co 2009RU08 RADIOACTIVITY <sup>60</sup>Fe( $\beta^-$ ); measured E $\gamma$ ,  $\gamma$ ; deduced T<sub>1/2</sub>. JOUR PRLTA 103 072502
- <sup>60</sup>Ni 2009CR02 RADIOACTIVITY <sup>61</sup>Cr( $\beta^-$ )[from Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -,  $\beta\gamma$ -coin, half-life. <sup>61</sup>Mn; deduced levels, J,  $\pi$ . <sup>54,56,58,60,62</sup>Cr, <sup>56,58,60,62,64,66,68</sup>Fe, <sup>58,60,62,64,66,68,70</sup>Ni, <sup>57,59,61,63</sup>Mn; level systematics and shell-model calculations. JOUR PRVCA 79 054320

**A=61**

- <sup>61</sup>Cr 2009CR02 RADIOACTIVITY <sup>61</sup>Cr( $\beta^-$ )[from Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -,  $\beta\gamma$ -coin, half-life. <sup>61</sup>Mn; deduced levels, J,  $\pi$ . <sup>54,56,58,60,62</sup>Cr, <sup>56,58,60,62,64,66,68</sup>Fe, <sup>58,60,62,64,66,68,70</sup>Ni, <sup>57,59,61,63</sup>Mn; level systematics and shell-model calculations. JOUR PRVCA 79 054320
- 2009CR02 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>76</sup>Ge, X)<sup>57</sup>Sc / <sup>58</sup>Ti / <sup>59</sup>Ti / <sup>59</sup>V / <sup>60</sup>V / <sup>60</sup>Cr / <sup>61</sup>Cr / <sup>62</sup>Cr / <sup>62</sup>Mn / <sup>63</sup>Mn, E=130 MeV / nucleon; measured yields. JOUR PRVCA 79 054320
- <sup>61</sup>Mn 2008LUZZ NUCLEAR REACTIONS <sup>238</sup>U(<sup>64</sup>Ni, X), (<sup>70</sup>Zn, X), E=400, 460 MeV; <sup>53,55,57</sup>V, <sup>57,59,61,63</sup>Mn, <sup>61,63,65</sup>Fe; measured E $\gamma$ , I $\gamma$ ; deduced J,  $\pi$ , level scheme, deformation. Comparison with shell model calculations. CONF Cappadocia (Nuclear Physics and Astrophysics), P160, Lunardi
- 2009CR02 RADIOACTIVITY <sup>61</sup>Cr( $\beta^-$ )[from Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -,  $\beta\gamma$ -coin, half-life. <sup>61</sup>Mn; deduced levels, J,  $\pi$ . <sup>54,56,58,60,62</sup>Cr, <sup>56,58,60,62,64,66,68</sup>Fe, <sup>58,60,62,64,66,68,70</sup>Ni, <sup>57,59,61,63</sup>Mn; level systematics and shell-model calculations. JOUR PRVCA 79 054320
- <sup>61</sup>Fe 2008LUZZ NUCLEAR REACTIONS <sup>238</sup>U(<sup>64</sup>Ni, X), (<sup>70</sup>Zn, X), E=400, 460 MeV; <sup>53,55,57</sup>V, <sup>57,59,61,63</sup>Mn, <sup>61,63,65</sup>Fe; measured E $\gamma$ , I $\gamma$ ; deduced J,  $\pi$ , level scheme, deformation. Comparison with shell model calculations. CONF Cappadocia (Nuclear Physics and Astrophysics), P160, Lunardi

**A=61 (continued)**

- <sup>61</sup>Cu 2008ANZZ NUCLEAR REACTIONS <sup>28</sup>Si(<sup>36</sup>Ar, X), E=142, 143, 148 MeV; <sup>61</sup>Cu, <sup>61</sup>Zn; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ ,  $\gamma\gamma\gamma$ -coin.; deduced level scheme, energies, J,  $\pi$ . Cranked Nilsson-Strutinsky calculations. CONF Cappadocia (Nuclear Physics and Astrophysics),P211,Andersson
- <sup>61</sup>Zn 2008ANZZ NUCLEAR REACTIONS <sup>28</sup>Si(<sup>36</sup>Ar, X), E=142, 143, 148 MeV; <sup>61</sup>Cu, <sup>61</sup>Zn; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ ,  $\gamma\gamma\gamma$ -coin.; deduced level scheme, energies, J,  $\pi$ . Cranked Nilsson-Strutinsky calculations. CONF Cappadocia (Nuclear Physics and Astrophysics),P211,Andersson

**A=62**

- <sup>62</sup>Cr 2009CR02 RADIOACTIVITY <sup>61</sup>Cr( $\beta^-$ )[from Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -,  $\beta\gamma$ -coin, half-life. <sup>61</sup>Mn; deduced levels, J,  $\pi$ . <sup>54,56,58,60,62</sup>Cr, <sup>56,58,60,62,64,66,68</sup>Fe, <sup>58,60,62,64,66,68,70</sup>Ni, <sup>57,59,61,63</sup>Mn; level systematics and shell-model calculations. JOUR PRVCA 79 054320
- 2009CR02 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>76</sup>Ge, X)<sup>57</sup>Sc / <sup>58</sup>Ti / <sup>59</sup>Ti / <sup>59</sup>V / <sup>60</sup>V / <sup>60</sup>Cr / <sup>61</sup>Cr / <sup>62</sup>Cr / <sup>62</sup>Mn / <sup>63</sup>Mn, E=130 MeV / nucleon; measured yields. JOUR PRVCA 79 054320
- <sup>62</sup>Mn 2009CR02 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>76</sup>Ge, X)<sup>57</sup>Sc / <sup>58</sup>Ti / <sup>59</sup>Ti / <sup>59</sup>V / <sup>60</sup>V / <sup>60</sup>Cr / <sup>61</sup>Cr / <sup>62</sup>Cr / <sup>62</sup>Mn / <sup>63</sup>Mn, E=130 MeV / nucleon; measured yields. JOUR PRVCA 79 054320
- <sup>62</sup>Fe 2009CR02 RADIOACTIVITY <sup>61</sup>Cr( $\beta^-$ )[from Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -,  $\beta\gamma$ -coin, half-life. <sup>61</sup>Mn; deduced levels, J,  $\pi$ . <sup>54,56,58,60,62</sup>Cr, <sup>56,58,60,62,64,66,68</sup>Fe, <sup>58,60,62,64,66,68,70</sup>Ni, <sup>57,59,61,63</sup>Mn; level systematics and shell-model calculations. JOUR PRVCA 79 054320
- <sup>62</sup>Ni 2009CR02 RADIOACTIVITY <sup>61</sup>Cr( $\beta^-$ )[from Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -,  $\beta\gamma$ -coin, half-life. <sup>61</sup>Mn; deduced levels, J,  $\pi$ . <sup>54,56,58,60,62</sup>Cr, <sup>56,58,60,62,64,66,68</sup>Fe, <sup>58,60,62,64,66,68,70</sup>Ni, <sup>57,59,61,63</sup>Mn; level systematics and shell-model calculations. JOUR PRVCA 79 054320

**A=63**

- <sup>63</sup>Mn 2008LUZZ NUCLEAR REACTIONS <sup>238</sup>U(<sup>64</sup>Ni, X), (<sup>70</sup>Zn, X), E=400, 460 MeV; <sup>53,55,57</sup>V, <sup>57,59,61,63</sup>Mn, <sup>61,63,65</sup>Fe; measured E $\gamma$ , I $\gamma$ ; deduced J,  $\pi$ , level scheme, deformation. Comparison with shell model calculations. CONF Cappadocia (Nuclear Physics and Astrophysics),P160,Lunardi
- 2009CR02 RADIOACTIVITY <sup>61</sup>Cr( $\beta^-$ )[from Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -,  $\beta\gamma$ -coin, half-life. <sup>61</sup>Mn; deduced levels, J,  $\pi$ . <sup>54,56,58,60,62</sup>Cr, <sup>56,58,60,62,64,66,68</sup>Fe, <sup>58,60,62,64,66,68,70</sup>Ni, <sup>57,59,61,63</sup>Mn; level systematics and shell-model calculations. JOUR PRVCA 79 054320
- 2009CR02 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>76</sup>Ge, X)<sup>57</sup>Sc / <sup>58</sup>Ti / <sup>59</sup>Ti / <sup>59</sup>V / <sup>60</sup>V / <sup>60</sup>Cr / <sup>61</sup>Cr / <sup>62</sup>Cr / <sup>62</sup>Mn / <sup>63</sup>Mn, E=130 MeV / nucleon; measured yields. JOUR PRVCA 79 054320

**A=63 (continued)**

- 2009MA22 RADIOACTIVITY  $^{63}\text{Mn}(\beta^-)$ ; measured  $E_\gamma$ ,  $I_\gamma$ ; deduced level scheme,  $J\pi$ ,  $T_{1/2}$ ,  $B(M1)$ . JOUR APOBB 40 477
- $^{63}\text{Fe}$  2008LUZZ NUCLEAR REACTIONS  $^{238}\text{U}(^{64}\text{Ni}, X)$ ,  $(^{70}\text{Zn}, X)$ ,  $E=400, 460$  MeV;  $^{53,55,57}\text{V}$ ,  $^{57,59,61,63}\text{Mn}$ ,  $^{61,63,65}\text{Fe}$ ; measured  $E_\gamma$ ,  $I_\gamma$ ; deduced  $J$ ,  $\pi$ , level scheme, deformation. Comparison with shell model calculations. CONF Cappadocia (Nuclear Physics and Astrophysics), P160, Lunardi
- 2009MA22 RADIOACTIVITY  $^{63}\text{Mn}(\beta^-)$ ; measured  $E_\gamma$ ,  $I_\gamma$ ; deduced level scheme,  $J\pi$ ,  $T_{1/2}$ ,  $B(M1)$ . JOUR APOBB 40 477
- $^{63}\text{Ni}$  2008DIZX NUCLEAR REACTIONS  $^{62}\text{Ni}(n, \gamma)$ ,  $E=\text{low}$ ; measured  $I_\gamma$ ,  $E_\gamma$  using activation method plus accelerator mass spectrometry; deduced  $\sigma$ . Compared with older data. REPT MLL 2007 Annual, P27, Dillmann
- $^{63}\text{Cu}$  2009C014 NUCLEAR MOMENTS  $^{57,59,63,65}\text{Cu}$ ; measured hyperfine spectra and parameters; deduced nuclear magnetic dipole moments. Comparison with GXPF1 shell model calculations. JOUR PRLTA 103 102501

**A=64**

- $^{64}\text{Fe}$  2009CR02 RADIOACTIVITY  $^{61}\text{Cr}(\beta^-)$  [from  $\text{Be}(^{76}\text{Ge}, X)$ ,  $E=130$  MeV / nucleon]; measured  $E_\gamma$ ,  $I_\gamma$ ,  $\gamma\gamma$ -,  $\beta\gamma$ -coin, half-life.  $^{61}\text{Mn}$ ; deduced levels,  $J$ ,  $\pi$ .  $^{54,56,58,60,62}\text{Cr}$ ,  $^{56,58,60,62,64,66,68}\text{Fe}$ ,  $^{58,60,62,64,66,68,70}\text{Ni}$ ,  $^{57,59,61,63}\text{Mn}$ ; level systematics and shell-model calculations. JOUR PRVCA 79 054320
- $^{64}\text{Ni}$  2008GR22 NUCLEAR REACTIONS  $^{12}\text{C}$ ,  $^{48}\text{Ti}$ ,  $^{58,64}\text{Ni}(d, d')$ ,  $E=37$  MeV; measured  $E_d$ ,  $I_d$ ; deduced  $\sigma(E, \theta)$ , excitation of electric giant resonances. JOUR PANUE 71 1711
- 2009BE27 RADIOACTIVITY  $^{64}\text{Zn}(2\text{EC})$ ,  $(\beta^+ \text{EC})$ ;  $^{70}\text{Zn}$ ,  $^{186}\text{W}(2\beta^-)$ ;  $^{180}\text{W}(2\text{EC})$ ; measured  $E_\gamma$ ,  $I_\gamma$ ; deduced  $T_{1/2}$  lower limits for various  $2\beta$ -decay modes.  $\text{ZnWO}_4$  crystal scintillator at the Gran Sasso National Laboratories. JOUR NUPAB 826 256
- 2009CR02 RADIOACTIVITY  $^{61}\text{Cr}(\beta^-)$  [from  $\text{Be}(^{76}\text{Ge}, X)$ ,  $E=130$  MeV / nucleon]; measured  $E_\gamma$ ,  $I_\gamma$ ,  $\gamma\gamma$ -,  $\beta\gamma$ -coin, half-life.  $^{61}\text{Mn}$ ; deduced levels,  $J$ ,  $\pi$ .  $^{54,56,58,60,62}\text{Cr}$ ,  $^{56,58,60,62,64,66,68}\text{Fe}$ ,  $^{58,60,62,64,66,68,70}\text{Ni}$ ,  $^{57,59,61,63}\text{Mn}$ ; level systematics and shell-model calculations. JOUR PRVCA 79 054320
- 2009DA16 RADIOACTIVITY  $^{64}\text{Zn}$ ,  $^{106}\text{Cd}$ ,  $^{120}\text{Te}(2\text{EC})$ ,  $(2\beta^+)$ ;  $^{114,116}\text{Cd}$ ,  $^{128}\text{Te}$ ,  $^{130}\text{Te}(2\beta^-)$ ; measured  $E_\gamma$ ,  $I_\gamma$ ; deduced half-life limits for neutrinoless double-beta decay. Comparison with previous experimental data. JOUR PRVCA 80 025502
- 2009TA13 NUCLEAR REACTIONS  $^{12}\text{C}$ ,  $^{26}\text{Mg}$ ,  $^{28}\text{Si}$ ,  $^{48}\text{Ca}$ ,  $^{58,64}\text{Ni}$ ,  $^{208}\text{Pb}(p, p')$ ,  $E=295$  MeV; measured  $E_p$ ,  $I_p$ ,  $\sigma(\theta)$ ; deduced level energies. Systematic study of M1 and E1 excitations. JOUR NIMAE 605 326
- $^{64}\text{Cu}$  2009HI08 NUCLEAR REACTIONS  $^{64}\text{Zn}(t, ^3\text{He})$ ,  $E=115$  MeV / nucleon; measured particle spectra,  $\sigma(\theta)$  and Gamow-Teller strength distributions; deduced electron capture rate on  $^{64}\text{Zn}$  as a function of stellar temperature. Comparison with shell model calculations and experimental data from  $^{64}\text{Zn}(d, ^2\text{He})$  reaction. JOUR PRVCA 80 014313

**A=64 (continued)**

- 2009P007 NUCLEAR REACTIONS  $^{64}\text{Ni}(^3\text{He}, t)$ ,  $E=140$  MeV / nucleon; measured triton spectra,  $\sigma$ ,  $\sigma(\theta)$ , L.  $^{64}\text{Cu}$ ; deduced levels, J,  $\pi$ , Gamow-Teller strengths, and Gamow-Teller Giant resonance. Comparison with Ikeda sum rule predictions. JOUR PRVCA 79 064312
- $^{64}\text{Zn}$  2009BE27 RADIOACTIVITY  $^{64}\text{Zn}(2\text{EC})$ ,  $(\beta^+\text{EC})$ ;  $^{70}\text{Zn}$ ,  $^{186}\text{W}(2\beta^-)$ ;  $^{180}\text{W}(2\text{EC})$ ; measured  $E\gamma$ ,  $I\gamma$ ; deduced  $T_{1/2}$  lower limits for various  $2\beta$ -decay modes.  $\text{ZnWO}_4$  crystal scintillator at the Gran Sasso National Laboratories. JOUR NUPAB 826 256
- 2009DA16 RADIOACTIVITY  $^{64}\text{Zn}$ ,  $^{106}\text{Cd}$ ,  $^{120}\text{Te}(2\text{EC})$ ,  $(2\beta^+)$ ;  $^{114,116}\text{Cd}$ ,  $^{128}\text{Te}$ ,  $^{130}\text{Te}(2\beta^-)$ ; measured  $E\gamma$ ,  $I\gamma$ ; deduced half-life limits for neutrinoless double-beta decay. Comparison with previous experimental data. JOUR PRVCA 80 025502

**A=65**

- $^{65}\text{Fe}$  2008LUZZ NUCLEAR REACTIONS  $^{238}\text{U}(^{64}\text{Ni}, X)$ ,  $(^{70}\text{Zn}, X)$ ,  $E=400, 460$  MeV;  $^{53,55,57}\text{V}$ ,  $^{57,59,61,63}\text{Mn}$ ,  $^{61,63,65}\text{Fe}$ ; measured  $E\gamma$ ,  $I\gamma$ ; deduced J,  $\pi$ , level scheme, deformation. Comparison with shell model calculations. CONF Cappadocia (Nuclear Physics and Astrophysics), P160, Lunardi
- $^{65}\text{Cu}$  2009C014 NUCLEAR MOMENTS  $^{57,59,63,65}\text{Cu}$ ; measured hyperfine spectra and parameters; deduced nuclear magnetic dipole moments. Comparison with GXPF1 shell model calculations. JOUR PRLTA 103 102501

**A=66**

- $^{66}\text{Fe}$  2009CR02 RADIOACTIVITY  $^{61}\text{Cr}(\beta^-)$ [from  $\text{Be}(^{76}\text{Ge}, X)$ ,  $E=130$  MeV / nucleon]; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -,  $\beta\gamma$ -coin, half-life.  $^{61}\text{Mn}$ ; deduced levels, J,  $\pi$ .  $^{54,56,58,60,62}\text{Cr}$ ,  $^{56,58,60,62,64,66,68}\text{Fe}$ ,  $^{58,60,62,64,66,68,70}\text{Ni}$ ,  $^{57,59,61,63}\text{Mn}$ ; level systematics and shell-model calculations. JOUR PRVCA 79 054320
- $^{66}\text{Ni}$  2009CR02 RADIOACTIVITY  $^{61}\text{Cr}(\beta^-)$ [from  $\text{Be}(^{76}\text{Ge}, X)$ ,  $E=130$  MeV / nucleon]; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -,  $\beta\gamma$ -coin, half-life.  $^{61}\text{Mn}$ ; deduced levels, J,  $\pi$ .  $^{54,56,58,60,62}\text{Cr}$ ,  $^{56,58,60,62,64,66,68}\text{Fe}$ ,  $^{58,60,62,64,66,68,70}\text{Ni}$ ,  $^{57,59,61,63}\text{Mn}$ ; level systematics and shell-model calculations. JOUR PRVCA 79 054320
- $^{66}\text{Cu}$  2009F005 NUCLEAR REACTIONS  $^9\text{Be}(^{238}\text{U}, X)$   $^{60m}\text{Mn}$  /  $^{78m}\text{Ga}$  /  $^{82m}\text{Ga}$  /  $^{92m}\text{Br}$  /  $^{95m}\text{Rb}$  /  $^{98m}\text{Rb}$  /  $^{92m}\text{Y}$  /  $^{101m}\text{Y}$  /  $^{112m}\text{Tc}$ ,  $E=80$  MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin, isomer half-lives.  $^{60}\text{Mn}$ ,  $^{78,82}\text{Ga}$ ,  $^{92}\text{Br}$ ,  $^{95,98}\text{Rb}$ ,  $^{92,101}\text{Y}$ ,  $^{112}\text{Tc}$ ; deduced levels, J,  $\pi$ .  $^{66m}\text{Cu}$ ,  $^{78m}\text{Zn}$ ,  $^{88m}\text{Br}$ ,  $^{95m}\text{Kr}$ ,  $^{96m}\text{Rb}$ ,  $^{97m,100m}\text{Sr}$ ,  $^{99m}\text{Mo}$ ,  $^{121m}\text{Pd}$ ,  $^{124m}\text{Sn}$ ,  $^{125m}\text{Xe}$ ; measured  $E\gamma$  and half-lives.  $^{91,92,93}\text{Y}$ ; measured  $E\gamma$ . JOUR PRVCA 79 064318

**A=67**

- <sup>67</sup>Cu 2009BH06 NUCLEAR REACTIONS <sup>67</sup>Zn, <sup>92</sup>Mo(n, p), <sup>98</sup>Mo(n,  $\gamma$ ), E=1.6, 3.7 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ . Comparison with EMPIRE-2.19 model code. JOUR NSENA 163 175
- <sup>67</sup>As 2009OR02 NUCLEAR REACTIONS <sup>40</sup>Ca(<sup>32</sup>S,  $\alpha$ p), (<sup>32</sup>S,  $\alpha$ n), E=90 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin., particle- $\gamma\gamma$ -coin.; deduced partial level schemes, lifetimes of the excited states, B(E1), B(M2), isovector and isoscalar components of electromagnetic transition amplitudes. JOUR PRLTA 103 052501
- <sup>67</sup>Se 2009OR02 NUCLEAR REACTIONS <sup>40</sup>Ca(<sup>32</sup>S,  $\alpha$ p), (<sup>32</sup>S,  $\alpha$ n), E=90 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin., particle- $\gamma\gamma$ -coin.; deduced partial level schemes, lifetimes of the excited states, B(E1), B(M2), isovector and isoscalar components of electromagnetic transition amplitudes. JOUR PRLTA 103 052501

**A=68**

- <sup>68</sup>Fe 2009CR02 RADIOACTIVITY <sup>61</sup>Cr( $\beta^-$ )[from Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -,  $\beta\gamma$ -coin, half-life. <sup>61</sup>Mn; deduced levels, J,  $\pi$ . <sup>54,56,58,60,62</sup>Cr, <sup>56,58,60,62,64,66,68</sup>Fe, <sup>58,60,62,64,66,68,70</sup>Ni, <sup>57,59,61,63</sup>Mn; level systematics and shell-model calculations. JOUR PRVCA 79 054320
- <sup>68</sup>Ni 2009CR02 RADIOACTIVITY <sup>61</sup>Cr( $\beta^-$ )[from Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -,  $\beta\gamma$ -coin, half-life. <sup>61</sup>Mn; deduced levels, J,  $\pi$ . <sup>54,56,58,60,62</sup>Cr, <sup>56,58,60,62,64,66,68</sup>Fe, <sup>58,60,62,64,66,68,70</sup>Ni, <sup>57,59,61,63</sup>Mn; level systematics and shell-model calculations. JOUR PRVCA 79 054320

**A=69**

- <sup>69</sup>As 2009BA30 NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>14</sup>N, 2pn), E=37-52 MeV; measured E $\gamma$ , I $\gamma$ , n- $\gamma$ , n- $\gamma\gamma$ -coin., I $\gamma$ ( $\theta$ ), linear polarization; <sup>69</sup>As deduced levels, J,  $\pi$ ,  $\delta$ . Enriched <sup>58</sup>Ni target. JOUR RJPHE 54 467

**A=70**

- <sup>70</sup>Ni 2009CR02 RADIOACTIVITY <sup>61</sup>Cr( $\beta^-$ )[from Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -,  $\beta\gamma$ -coin, half-life. <sup>61</sup>Mn; deduced levels, J,  $\pi$ . <sup>54,56,58,60,62</sup>Cr, <sup>56,58,60,62,64,66,68</sup>Fe, <sup>58,60,62,64,66,68,70</sup>Ni, <sup>57,59,61,63</sup>Mn; level systematics and shell-model calculations. JOUR PRVCA 79 054320
- <sup>70</sup>Zn 2009BE27 RADIOACTIVITY <sup>64</sup>Zn(2EC), ( $\beta^+$ EC); <sup>70</sup>Zn, <sup>186</sup>W(2 $\beta^-$ ); <sup>180</sup>W(2EC); measured E $\gamma$ , I $\gamma$ ; deduced T<sub>1/2</sub> lower limits for various 2 $\beta$ -decay modes. ZnWO<sub>4</sub> crystal scintillator at the Gran Sasso National Laboratories. JOUR NUPAB 826 256

**A=70 (continued)**

- 2009MU06 NUCLEAR REACTIONS  $^{12}\text{C}(^{70}\text{Zn}, \text{X})$ ,  $E=180\text{-}200$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin, (particle) $\gamma$ -coin,  $\gamma\gamma(\theta)$ , half-lives and spin precessions in a magnetic field.  $^{70}\text{Zn}$ ; deduced levels,  $J$ ,  $\pi$ . Comparison with large-scale shell-model calculations. JOUR PRVCA 79 054310
- 2009MU06 NUCLEAR MOMENTS  $^{70}\text{Zn}$ ; measured g factors by projectile Coulomb excitation in inverse kinematics combined with transient magnetic field. Comparison with shell-model calculations. JOUR PRVCA 79 054310
- $^{70}\text{Ge}$  2009BE27 RADIOACTIVITY  $^{64}\text{Zn}(2\text{EC})$ ,  $(\beta^+\text{EC})$ ;  $^{70}\text{Zn}$ ,  $^{186}\text{W}(2\beta^-)$ ;  $^{180}\text{W}(2\text{EC})$ ; measured  $E\gamma$ ,  $I\gamma$ ; deduced  $T_{1/2}$  lower limits for various  $2\beta$ -decay modes.  $\text{ZnWO}_4$  crystal scintillator at the Gran Sasso National Laboratories. JOUR NUPAB 826 256

**A=71**

- $^{71}\text{Ga}$  2009ST12 NUCLEAR REACTIONS  $^{238}\text{U}(^{76}\text{Ge}, \text{X})$ ,  $E=530$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin.  $^{71,73,75,77}\text{Ga}$ ; deduced levels,  $J$ ,  $\pi$ . Discussed level systematics of  $A=65\text{-}77$ , odd- $A$  Ga and Cu nuclides. JOUR PRVCA 79 064302
- $^{71}\text{Ge}$  2009AB16 NUCLEAR REACTIONS  $^{71}\text{Ga}(\nu, e)$ ,  $E=\text{spectrum}$ ; measured neutrino capture rates using  $^{37}\text{Ar}$  neutrino source and radioactive decay of extracted  $^{71}\text{Ge}$ . SAGE experiment. JOUR PRVCA 80 015807

**A=72**

No references found

**A=73**

- $^{73}\text{Ga}$  2009ST12 NUCLEAR REACTIONS  $^{238}\text{U}(^{76}\text{Ge}, \text{X})$ ,  $E=530$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin.  $^{71,73,75,77}\text{Ga}$ ; deduced levels,  $J$ ,  $\pi$ . Discussed level systematics of  $A=65\text{-}77$ , odd- $A$  Ga and Cu nuclides. JOUR PRVCA 79 064302

**A=74**

No references found

**A=75**

- $^{75}\text{Cu}$  2009GR06 RADIOACTIVITY  $^{75,76,77,78,79}\text{Cu}$ ,  $^{79,80,81}\text{Zn}$ ,  $^{83,84,85}\text{Ga}(\beta^-)$ ; measured  $E\gamma$ ,  $I\gamma$ ; deduced level scheme,  $J\pi$ . JOUR APOBB 40 447
- $^{75}\text{Zn}$  2009GR06 RADIOACTIVITY  $^{75,76,77,78,79}\text{Cu}$ ,  $^{79,80,81}\text{Zn}$ ,  $^{83,84,85}\text{Ga}(\beta^-)$ ; measured  $E\gamma$ ,  $I\gamma$ ; deduced level scheme,  $J\pi$ . JOUR APOBB 40 447

**A=75 (continued)**

- <sup>75</sup>Ga 2009ST12 NUCLEAR REACTIONS <sup>238</sup>U(<sup>76</sup>Ge, X), E=530 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>71,73,75,77</sup>Ga; deduced levels, J,  $\pi$ . Discussed level systematics of A=65-77, odd-A Ga and Cu nuclides. JOUR PRVCA 79 064302
- <sup>75</sup>Ge 2009MA35 NUCLEAR REACTIONS <sup>74,76</sup>Ge, <sup>75</sup>As(n,  $\gamma$ ), E<106 keV; measured E $\gamma$ , I $\gamma$ ,  $\sigma$ ; deduced Maxwellian averaged  $\sigma$  for thermal energies from 5 to 100 keV. Neutrons from <sup>7</sup>Li(p, n), E=1912 keV reaction. <sup>197</sup>Au(n,  $\gamma$ ), E<106 keV; measured  $\sigma$  and used as a standard. Estimated background contributions for  $\gamma$ -ray studies of double  $\beta$  decay of <sup>76</sup>Ge. JOUR PRVCA 79 065802

**A=76**

- <sup>76</sup>Cu 2009GR06 RADIOACTIVITY <sup>75,76,77,78,79</sup>Cu, <sup>79,80,81</sup>Zn, <sup>83,84,85</sup>Ga( $\beta^-$ ); measured E $\gamma$ , I $\gamma$ ; deduced level scheme, J $\pi$ . JOUR APOBB 40 447
- <sup>76</sup>Zn 2009GR06 RADIOACTIVITY <sup>75,76,77,78,79</sup>Cu, <sup>79,80,81</sup>Zn, <sup>83,84,85</sup>Ga( $\beta^-$ ); measured E $\gamma$ , I $\gamma$ ; deduced level scheme, J $\pi$ . JOUR APOBB 40 447
- <sup>76</sup>As 2009MA35 NUCLEAR REACTIONS <sup>74,76</sup>Ge, <sup>75</sup>As(n,  $\gamma$ ), E<106 keV; measured E $\gamma$ , I $\gamma$ ,  $\sigma$ ; deduced Maxwellian averaged  $\sigma$  for thermal energies from 5 to 100 keV. Neutrons from <sup>7</sup>Li(p, n), E=1912 keV reaction. <sup>197</sup>Au(n,  $\gamma$ ), E<106 keV; measured  $\sigma$  and used as a standard. Estimated background contributions for  $\gamma$ -ray studies of double  $\beta$  decay of <sup>76</sup>Ge. JOUR PRVCA 79 065802

**A=77**

- <sup>77</sup>Cu 2009GR06 RADIOACTIVITY <sup>75,76,77,78,79</sup>Cu, <sup>79,80,81</sup>Zn, <sup>83,84,85</sup>Ga( $\beta^-$ ); measured E $\gamma$ , I $\gamma$ ; deduced level scheme, J $\pi$ . JOUR APOBB 40 447
- <sup>77</sup>Zn 2009GR06 RADIOACTIVITY <sup>75,76,77,78,79</sup>Cu, <sup>79,80,81</sup>Zn, <sup>83,84,85</sup>Ga( $\beta^-$ ); measured E $\gamma$ , I $\gamma$ ; deduced level scheme, J $\pi$ . JOUR APOBB 40 447
- <sup>77</sup>Ga 2009ST12 NUCLEAR REACTIONS <sup>238</sup>U(<sup>76</sup>Ge, X), E=530 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>71,73,75,77</sup>Ga; deduced levels, J,  $\pi$ . Discussed level systematics of A=65-77, odd-A Ga and Cu nuclides. JOUR PRVCA 79 064302
- <sup>77</sup>Ge 2009KA22 NUCLEAR REACTIONS <sup>76</sup>Ge(<sup>13</sup>C, <sup>12</sup>C), E=27-36 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma(\theta)$ , relative  $\sigma$ . <sup>77</sup>Ge; deduced levels, J,  $\pi$ , multipolarity. Comparison of measured  $\sigma$  with DWBA calculations. JOUR PRVCA 80 017301
- 2009MA35 NUCLEAR REACTIONS <sup>74,76</sup>Ge, <sup>75</sup>As(n,  $\gamma$ ), E<106 keV; measured E $\gamma$ , I $\gamma$ ,  $\sigma$ ; deduced Maxwellian averaged  $\sigma$  for thermal energies from 5 to 100 keV. Neutrons from <sup>7</sup>Li(p, n), E=1912 keV reaction. <sup>197</sup>Au(n,  $\gamma$ ), E<106 keV; measured  $\sigma$  and used as a standard. Estimated background contributions for  $\gamma$ -ray studies of double  $\beta$  decay of <sup>76</sup>Ge. JOUR PRVCA 79 065802

**A=77 (continued)**

2009ME06 NUCLEAR REACTIONS  $^{76}\text{Ge}(n, \gamma)$ , E=cold; measured  $E\gamma$ ,  $I\gamma$ ; deduced thermal  $\sigma$  to ground and isomeric states. Activation technique with HPGe detectors. Comparison with other data. JOUR ZAANE 40 61

**A=78**

$^{78}\text{Cu}$  2009GR06 RADIOACTIVITY  $^{75,76,77,78,79}\text{Cu}$ ,  $^{79,80,81}\text{Zn}$ ,  $^{83,84,85}\text{Ga}(\beta^-)$ ; measured  $E\gamma$ ,  $I\gamma$ ; deduced level scheme,  $J\pi$ . JOUR APOBB 40 447

$^{78}\text{Zn}$  2009F005 NUCLEAR REACTIONS  $^9\text{Be}(^{238}\text{U}, \text{X})^{60m}\text{Mn} / ^{78m}\text{Ga} / ^{82m}\text{Ga} / ^{92m}\text{Br} / ^{95m}\text{Rb} / ^{98m}\text{Rb} / ^{92m}\text{Y} / ^{101m}\text{Y} / ^{112m}\text{Tc}$ , E=80 MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin, isomer half-lives.  $^{60}\text{Mn}$ ,  $^{78,82}\text{Ga}$ ,  $^{92}\text{Br}$ ,  $^{95,98}\text{Rb}$ ,  $^{92,101}\text{Y}$ ,  $^{112}\text{Tc}$ ; deduced levels,  $J, \pi$ .  $^{66m}\text{Cu}$ ,  $^{78m}\text{Zn}$ ,  $^{88m}\text{Br}$ ,  $^{95m}\text{Kr}$ ,  $^{96m}\text{Rb}$ ,  $^{97m,100m}\text{Sr}$ ,  $^{99m}\text{Mo}$ ,  $^{121m}\text{Pd}$ ,  $^{124m}\text{Sn}$ ,  $^{125m}\text{Xe}$ ; measured  $E\gamma$  and half-lives.  $^{91,92,93}\text{Y}$ ; measured  $E\gamma$ . JOUR PRVCA 79 064318

2009GR06 RADIOACTIVITY  $^{75,76,77,78,79}\text{Cu}$ ,  $^{79,80,81}\text{Zn}$ ,  $^{83,84,85}\text{Ga}(\beta^-)$ ; measured  $E\gamma$ ,  $I\gamma$ ; deduced level scheme,  $J\pi$ . JOUR APOBB 40 447

$^{78}\text{Ga}$  2009F005 NUCLEAR REACTIONS  $^9\text{Be}(^{238}\text{U}, \text{X})^{60m}\text{Mn} / ^{78m}\text{Ga} / ^{82m}\text{Ga} / ^{92m}\text{Br} / ^{95m}\text{Rb} / ^{98m}\text{Rb} / ^{92m}\text{Y} / ^{101m}\text{Y} / ^{112m}\text{Tc}$ , E=80 MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin, isomer half-lives.  $^{60}\text{Mn}$ ,  $^{78,82}\text{Ga}$ ,  $^{92}\text{Br}$ ,  $^{95,98}\text{Rb}$ ,  $^{92,101}\text{Y}$ ,  $^{112}\text{Tc}$ ; deduced levels,  $J, \pi$ .  $^{66m}\text{Cu}$ ,  $^{78m}\text{Zn}$ ,  $^{88m}\text{Br}$ ,  $^{95m}\text{Kr}$ ,  $^{96m}\text{Rb}$ ,  $^{97m,100m}\text{Sr}$ ,  $^{99m}\text{Mo}$ ,  $^{121m}\text{Pd}$ ,  $^{124m}\text{Sn}$ ,  $^{125m}\text{Xe}$ ; measured  $E\gamma$  and half-lives.  $^{91,92,93}\text{Y}$ ; measured  $E\gamma$ . JOUR PRVCA 79 064318

**A=79**

$^{79}\text{Cu}$  2009GR06 RADIOACTIVITY  $^{75,76,77,78,79}\text{Cu}$ ,  $^{79,80,81}\text{Zn}$ ,  $^{83,84,85}\text{Ga}(\beta^-)$ ; measured  $E\gamma$ ,  $I\gamma$ ; deduced level scheme,  $J\pi$ . JOUR APOBB 40 447

$^{79}\text{Zn}$  2009GR06 RADIOACTIVITY  $^{75,76,77,78,79}\text{Cu}$ ,  $^{79,80,81}\text{Zn}$ ,  $^{83,84,85}\text{Ga}(\beta^-)$ ; measured  $E\gamma$ ,  $I\gamma$ ; deduced level scheme,  $J\pi$ . JOUR APOBB 40 447

$^{79}\text{Ga}$  2009GR06 RADIOACTIVITY  $^{75,76,77,78,79}\text{Cu}$ ,  $^{79,80,81}\text{Zn}$ ,  $^{83,84,85}\text{Ga}(\beta^-)$ ; measured  $E\gamma$ ,  $I\gamma$ ; deduced level scheme,  $J\pi$ . JOUR APOBB 40 447

**A=80**

$^{80}\text{Zn}$  2009GR06 RADIOACTIVITY  $^{75,76,77,78,79}\text{Cu}$ ,  $^{79,80,81}\text{Zn}$ ,  $^{83,84,85}\text{Ga}(\beta^-)$ ; measured  $E\gamma$ ,  $I\gamma$ ; deduced level scheme,  $J\pi$ . JOUR APOBB 40 447

$^{80}\text{Ga}$  2009GR06 RADIOACTIVITY  $^{75,76,77,78,79}\text{Cu}$ ,  $^{79,80,81}\text{Zn}$ ,  $^{83,84,85}\text{Ga}(\beta^-)$ ; measured  $E\gamma$ ,  $I\gamma$ ; deduced level scheme,  $J\pi$ . JOUR APOBB 40 447

$^{80}\text{Br}$  2008PAZS NUCLEAR REACTIONS  $^{81}\text{Br}$ ,  $^{86}\text{Sr}(\gamma, n)$ , E=13-30 MeV; measured  $E\gamma$ ,  $I\gamma$ ;  $^{80}\text{Br}$ ,  $^{85}\text{Sr}$ ; deduced isomeric yield ratios. Betatron, activation method, Ge(Li) detector. CONF Moscow,P156,Palvanov



**A=81**

- <sup>81</sup>Zn 2009GR06 RADIOACTIVITY <sup>75,76,77,78,79</sup>Cu, <sup>79,80,81</sup>Zn, <sup>83,84,85</sup>Ga( $\beta^-$ );  
measured E $\gamma$ , I $\gamma$ ; deduced level scheme, J $\pi$ . JOUR APOBB 40 447
- <sup>81</sup>Ga 2008SAZU NUCLEAR REACTIONS <sup>238</sup>U(<sup>82</sup>Se, X), E=505, 515 MeV; <sup>83</sup>As, <sup>82</sup>Ge,  
<sup>81</sup>Ga; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin.; deduced J,  $\pi$ . Comparison with shell  
model calculations. CONF Cappadocia (Nuclear Physics and  
Astrophysics),P298,Sahin
- 2009GR06 RADIOACTIVITY <sup>75,76,77,78,79</sup>Cu, <sup>79,80,81</sup>Zn, <sup>83,84,85</sup>Ga( $\beta^-$ );  
measured E $\gamma$ , I $\gamma$ ; deduced level scheme, J $\pi$ . JOUR APOBB 40 447

**A=82**

- <sup>82</sup>Ga 2009F005 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>238</sup>U, X) <sup>60m</sup>Mn / <sup>78m</sup>Ga / <sup>82m</sup>Ga /  
<sup>92m</sup>Br / <sup>95m</sup>Rb / <sup>98m</sup>Rb / <sup>92m</sup>Y / <sup>101m</sup>Y / <sup>112m</sup>Tc, E=80 MeV /  
nucleon; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, isomer half-lives. <sup>60</sup>Mn, <sup>78,82</sup>Ga,  
<sup>92</sup>Br, <sup>95,98</sup>Rb, <sup>92,101</sup>Y, <sup>112</sup>Tc; deduced levels, J,  $\pi$ . <sup>66m</sup>Cu, <sup>78m</sup>Zn,  
<sup>88m</sup>Br, <sup>95m</sup>Kr, <sup>96m</sup>Rb, <sup>97m,100m</sup>Sr, <sup>99m</sup>Mo, <sup>121m</sup>Pd, <sup>124m</sup>Sn, <sup>125m</sup>Xe;  
measured E $\gamma$  and half-lives. <sup>91,92,93</sup>Y; measured E $\gamma$ . JOUR PRVCA 79  
064318
- <sup>82</sup>Ge 2008SAZU NUCLEAR REACTIONS <sup>238</sup>U(<sup>82</sup>Se, X), E=505, 515 MeV; <sup>83</sup>As, <sup>82</sup>Ge,  
<sup>81</sup>Ga; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin.; deduced J,  $\pi$ . Comparison with shell  
model calculations. CONF Cappadocia (Nuclear Physics and  
Astrophysics),P298,Sahin
- <sup>82</sup>Se 2008K0ZV RADIOACTIVITY <sup>48</sup>Ca, <sup>82</sup>Se, <sup>96</sup>Zr, <sup>100</sup>Mo, <sup>116</sup>Cd, <sup>130</sup>Te, <sup>150</sup>Nd( $2\beta^-$ );  
measured  $0\nu$   $2\beta^-$ -decay T<sub>1/2</sub> lower limits,  $2\nu$   $2\beta^-$ -decay T<sub>1/2</sub>. CONF  
Moscow,P203,Kochetov
- <sup>82</sup>Kr 2008K0ZV RADIOACTIVITY <sup>48</sup>Ca, <sup>82</sup>Se, <sup>96</sup>Zr, <sup>100</sup>Mo, <sup>116</sup>Cd, <sup>130</sup>Te, <sup>150</sup>Nd( $2\beta^-$ );  
measured  $0\nu$   $2\beta^-$ -decay T<sub>1/2</sub> lower limits,  $2\nu$   $2\beta^-$ -decay T<sub>1/2</sub>. CONF  
Moscow,P203,Kochetov

**A=83**

- <sup>83</sup>Ga 2009GR06 RADIOACTIVITY <sup>75,76,77,78,79</sup>Cu, <sup>79,80,81</sup>Zn, <sup>83,84,85</sup>Ga( $\beta^-$ );  
measured E $\gamma$ , I $\gamma$ ; deduced level scheme, J $\pi$ . JOUR APOBB 40 447
- <sup>83</sup>Ge 2008LEZV RADIOACTIVITY <sup>84</sup>Ga( $\beta^-$ ), <sup>84</sup>Ga( $\beta^-n$ );measured E $\gamma$ , I $\gamma$ ,  $\beta\gamma$ -coin.  
Comparison with HFB+GCM calculations. REPT arXiv:0810.3890v1  
[nucl-ex]
- 2009GR06 RADIOACTIVITY <sup>75,76,77,78,79</sup>Cu, <sup>79,80,81</sup>Zn, <sup>83,84,85</sup>Ga( $\beta^-$ );  
measured E $\gamma$ , I $\gamma$ ; deduced level scheme, J $\pi$ . JOUR APOBB 40 447
- 2009LEZZ RADIOACTIVITY <sup>84</sup>Ga( $\beta^-$ ), ( $\beta^-n$ ); measured E $\gamma$ , I $\gamma$ ,  $\beta\gamma$ -coin.;  
deduced isomeric states, energy levels, J,  $\pi$ , collectivity. Comparison  
with HFB+GCM calculations. PREPRINT Lebois,7/15/2009
- <sup>83</sup>As 2008SAZU NUCLEAR REACTIONS <sup>238</sup>U(<sup>82</sup>Se, X), E=505, 515 MeV; <sup>83</sup>As, <sup>82</sup>Ge,  
<sup>81</sup>Ga; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin.; deduced J,  $\pi$ . Comparison with shell  
model calculations. CONF Cappadocia (Nuclear Physics and  
Astrophysics),P298,Sahin

## A=84

<sup>84</sup> Ga	2008LEZV	RADIOACTIVITY <sup>84</sup> Ga( $\beta^-$ ), <sup>84</sup> Ga( $\beta^-n$ );measured E $\gamma$ , I $\gamma$ , $\beta\gamma$ -coin. Comparison with HFB+GCM calculations. REPT arXiv:0810.3890v1 [nucl-ex]
	2008WIZZ	RADIOACTIVITY <sup>84</sup> Ga, <sup>84</sup> Ge( $\beta^-$ ) [from <sup>235</sup> U(p, F)]; measured E $\gamma$ , I $\gamma$ , $\beta\gamma$ -coin.; deduced <sup>84</sup> Ge, <sup>84</sup> As level scheme, J, $\pi$ , <sup>84</sup> Ga delayed-neutron emission probabilities. CONF Sanibel(Fission and Properties of Neutron-Rich Nuclei) Proc,P663
	2009GR06	RADIOACTIVITY <sup>75,76,77,78,79</sup> Cu, <sup>79,80,81</sup> Zn, <sup>83,84,85</sup> Ga( $\beta^-$ ); measured E $\gamma$ , I $\gamma$ ; deduced level scheme, J $\pi$ . JOUR APOBB 40 447
	2009LEZZ	RADIOACTIVITY <sup>84</sup> Ga( $\beta^-$ ), ( $\beta^-n$ ); measured E $\gamma$ , I $\gamma$ , $\beta\gamma$ -coin.; deduced isomeric states, energy levels, J, $\pi$ , collectivity. Comparison with HFB+GCM calculations. PREPRINT Lebois,7/15/2009
<sup>84</sup> Ge	2008LEZV	RADIOACTIVITY <sup>84</sup> Ga( $\beta^-$ ), <sup>84</sup> Ga( $\beta^-n$ );measured E $\gamma$ , I $\gamma$ , $\beta\gamma$ -coin. Comparison with HFB+GCM calculations. REPT arXiv:0810.3890v1 [nucl-ex]
	2008WIZZ	RADIOACTIVITY <sup>84</sup> Ga, <sup>84</sup> Ge( $\beta^-$ ) [from <sup>235</sup> U(p, F)]; measured E $\gamma$ , I $\gamma$ , $\beta\gamma$ -coin.; deduced <sup>84</sup> Ge, <sup>84</sup> As level scheme, J, $\pi$ , <sup>84</sup> Ga delayed-neutron emission probabilities. CONF Sanibel(Fission and Properties of Neutron-Rich Nuclei) Proc,P663
	2009GR06	RADIOACTIVITY <sup>75,76,77,78,79</sup> Cu, <sup>79,80,81</sup> Zn, <sup>83,84,85</sup> Ga( $\beta^-$ ); measured E $\gamma$ , I $\gamma$ ; deduced level scheme, J $\pi$ . JOUR APOBB 40 447
	2009LEZZ	RADIOACTIVITY <sup>84</sup> Ga( $\beta^-$ ), ( $\beta^-n$ ); measured E $\gamma$ , I $\gamma$ , $\beta\gamma$ -coin.; deduced isomeric states, energy levels, J, $\pi$ , collectivity. Comparison with HFB+GCM calculations. PREPRINT Lebois,7/15/2009
<sup>84</sup> As	2008WIZZ	RADIOACTIVITY <sup>84</sup> Ga, <sup>84</sup> Ge( $\beta^-$ ) [from <sup>235</sup> U(p, F)]; measured E $\gamma$ , I $\gamma$ , $\beta\gamma$ -coin.; deduced <sup>84</sup> Ge, <sup>84</sup> As level scheme, J, $\pi$ , <sup>84</sup> Ga delayed-neutron emission probabilities. CONF Sanibel(Fission and Properties of Neutron-Rich Nuclei) Proc,P663
<sup>84</sup> Br	2008VIZY	NUCLEAR REACTIONS <sup>232</sup> Th, <sup>238</sup> U( $\gamma$ , f), E=8.5 MeV; measured E $\gamma$ , I $\gamma$ ; <sup>84</sup> Br, <sup>132</sup> Sb, <sup>133</sup> Te, <sup>135</sup> Xe; deduced isomer yield ratios. Microtron, activation method. CONF Moscow,P134,Vishnevsky
	2009VI03	NUCLEAR REACTIONS <sup>232</sup> Th, <sup>238</sup> U( $\gamma$ , F) <sup>84</sup> Br / <sup>132</sup> Sb / <sup>133</sup> Te / <sup>135</sup> Xe, E<8.5 MeV; measured E $\gamma$ , I $\gamma$ ; deduced mean angular momenta of fission fragments, isomeric yield ratios. JOUR BRSPE 73 733
<sup>84</sup> Rb	2008ZHYZ	NUCLEAR REACTIONS <sup>85,87</sup> Rb( $\gamma$ , n), E=10-18 MeV; measured E $\gamma$ , I $\gamma$ ; <sup>84,86</sup> Rb; deduced isomer yield ratios. CONF Moscow,P133,Zheltonozhsky

## A=85

<sup>85</sup> Ga	2009GR06	RADIOACTIVITY <sup>75,76,77,78,79</sup> Cu, <sup>79,80,81</sup> Zn, <sup>83,84,85</sup> Ga( $\beta^-$ ); measured E $\gamma$ , I $\gamma$ ; deduced level scheme, J $\pi$ . JOUR APOBB 40 447
<sup>85</sup> Ge	2009GR06	RADIOACTIVITY <sup>75,76,77,78,79</sup> Cu, <sup>79,80,81</sup> Zn, <sup>83,84,85</sup> Ga( $\beta^-$ ); measured E $\gamma$ , I $\gamma$ ; deduced level scheme, J $\pi$ . JOUR APOBB 40 447
<sup>85</sup> Sr	2007KIZX	NUCLEAR REACTIONS <sup>85</sup> Rb(p, n), E=2.2-4 MeV; measured $\beta\gamma$ -coin., E $\gamma$ , I $\gamma$ ; deduced $\sigma$ , s-factor. Comparison with NON-SMOKER code calculation. REPT ATOMKI 2007 Annual,P25,Kiss

**A=85 (continued)**

- 2008PAZS NUCLEAR REACTIONS  $^{81}\text{Br}$ ,  $^{86}\text{Sr}(\gamma, n)$ , E=13-30 MeV; measured  $E\gamma$ ,  $I\gamma$ ;  $^{80}\text{Br}$ ,  $^{85}\text{Sr}$ ; deduced isomeric yield ratios. Betatron, activation method, Ge(Li) detector. CONF Moscow, P156, Palvanov
- $^{85}\text{Nb}$  2009EL08 NUCLEAR REACTIONS  $^{92}\text{Mo}(p, X)^{85}\text{Nb} / ^{86}\text{Nb} / ^{87}\text{Nb} / ^{88}\text{Nb} / ^{89}\text{Nb} / ^{90}\text{Nb} / ^{91}\text{Nb}$ , E=62 MeV;  $^{106}\text{Cd}(p, X)^{101}\text{In} / ^{102}\text{In} / ^{103}\text{In} / ^{104}\text{In} / ^{105}\text{In} / ^{106}\text{In} / ^{107}\text{In} / ^{108}\text{In} / ^{109}\text{In}$ , E=62 MeV; measured yields; deduced production  $\sigma$ . Enriched target. JOUR ZAANE 40 1

**A=86**

- $^{86}\text{Rb}$  2008ZHYZ NUCLEAR REACTIONS  $^{85,87}\text{Rb}(\gamma, n)$ , E=10-18 MeV; measured  $E\gamma$ ,  $I\gamma$ ;  $^{84,86}\text{Rb}$ ; deduced isomer yield ratios. CONF Moscow, P133, Zheltonozhsky
- $^{86}\text{Nb}$  2009EL08 NUCLEAR REACTIONS  $^{92}\text{Mo}(p, X)^{85}\text{Nb} / ^{86}\text{Nb} / ^{87}\text{Nb} / ^{88}\text{Nb} / ^{89}\text{Nb} / ^{90}\text{Nb} / ^{91}\text{Nb}$ , E=62 MeV;  $^{106}\text{Cd}(p, X)^{101}\text{In} / ^{102}\text{In} / ^{103}\text{In} / ^{104}\text{In} / ^{105}\text{In} / ^{106}\text{In} / ^{107}\text{In} / ^{108}\text{In} / ^{109}\text{In}$ , E=62 MeV; measured yields; deduced production  $\sigma$ . Enriched target. JOUR ZAANE 40 1

**A=87**

- $^{87}\text{Nb}$  2009EL08 NUCLEAR REACTIONS  $^{92}\text{Mo}(p, X)^{85}\text{Nb} / ^{86}\text{Nb} / ^{87}\text{Nb} / ^{88}\text{Nb} / ^{89}\text{Nb} / ^{90}\text{Nb} / ^{91}\text{Nb}$ , E=62 MeV;  $^{106}\text{Cd}(p, X)^{101}\text{In} / ^{102}\text{In} / ^{103}\text{In} / ^{104}\text{In} / ^{105}\text{In} / ^{106}\text{In} / ^{107}\text{In} / ^{108}\text{In} / ^{109}\text{In}$ , E=62 MeV; measured yields; deduced production  $\sigma$ . Enriched target. JOUR ZAANE 40 1

**A=88**

- $^{88}\text{Br}$  2009F005 NUCLEAR REACTIONS  $^9\text{Be}(^{238}\text{U}, X)^{60m}\text{Mn} / ^{78m}\text{Ga} / ^{82m}\text{Ga} / ^{92m}\text{Br} / ^{95m}\text{Rb} / ^{98m}\text{Rb} / ^{92m}\text{Y} / ^{101m}\text{Y} / ^{112m}\text{Tc}$ , E=80 MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin, isomer half-lives.  $^{60}\text{Mn}$ ,  $^{78,82}\text{Ga}$ ,  $^{92}\text{Br}$ ,  $^{95,98}\text{Rb}$ ,  $^{92,101}\text{Y}$ ,  $^{112}\text{Tc}$ ; deduced levels, J,  $\pi$ .  $^{66m}\text{Cu}$ ,  $^{78m}\text{Zn}$ ,  $^{88m}\text{Br}$ ,  $^{95m}\text{Kr}$ ,  $^{96m}\text{Rb}$ ,  $^{97m,100m}\text{Sr}$ ,  $^{99m}\text{Mo}$ ,  $^{121m}\text{Pd}$ ,  $^{124m}\text{Sn}$ ,  $^{125m}\text{Xe}$ ; measured  $E\gamma$  and half-lives.  $^{91,92,93}\text{Y}$ ; measured  $E\gamma$ . JOUR PRVCA 79 064318
- $^{88}\text{Sr}$  2008N0ZZ NUCLEAR REACTIONS  $^{238}\text{U}(\alpha, X)$ , E=62 MeV;  $^{19}\text{F}$ ,  $^{25}\text{Mg}$ ,  $^{32}\text{S}$ ,  $^{34}\text{S}$ ,  $^{88}\text{Sr}$ ,  $^{103}\text{Rh}$ ; measured  $E\gamma$ ,  $I\gamma$ ; deduced neutron clusters. Activation method, Ge detector. CONF Moscow, P74, Novatsky
- $^{88}\text{Y}$  2009M01 NUCLEAR REACTIONS  $^{89}\text{Y}(p, n)$ ,  $(p, 2n)$ ,  $(p, pn)$ , E < 17.7 MeV; measured activation sample  $E\gamma$ ,  $I\gamma$ ; deduced reaction  $\sigma$ . Comparison with ALICE-IPPE code. JOUR RAACA 97 467
- $^{88}\text{Zr}$  2009M01 NUCLEAR REACTIONS  $^{89}\text{Y}(p, n)$ ,  $(p, 2n)$ ,  $(p, pn)$ , E < 17.7 MeV; measured activation sample  $E\gamma$ ,  $I\gamma$ ; deduced reaction  $\sigma$ . Comparison with ALICE-IPPE code. JOUR RAACA 97 467
- 2009PA21 NUCLEAR REACTIONS  $^{89}\text{Y}(p, 2n)$ , E=17 MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin. JOUR APOBB 40 647

**A=88 (continued)**

<sup>88</sup>Nb 2009EL08 NUCLEAR REACTIONS <sup>92</sup>Mo(p, X)<sup>85</sup>Nb / <sup>86</sup>Nb / <sup>87</sup>Nb / <sup>88</sup>Nb / <sup>89</sup>Nb / <sup>90</sup>Nb / <sup>91</sup>Nb, E=62 MeV; <sup>106</sup>Cd(p, X)<sup>101</sup>In / <sup>102</sup>In / <sup>103</sup>In / <sup>104</sup>In / <sup>105</sup>In / <sup>106</sup>In / <sup>107</sup>In / <sup>108</sup>In / <sup>109</sup>In, E=62 MeV; measured yields; deduced production  $\sigma$ . Enriched target. JOUR ZAANE 40 1

**A=89**

<sup>89</sup>Rb 2009PA20 NUCLEAR REACTIONS <sup>208</sup>Pb, <sup>238</sup>U(<sup>48</sup>Ca, X), <sup>238</sup>U(<sup>64</sup>Ni, X), E=305, 330, 430 MeV;<sup>89,91</sup>Rb; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin; deduced J,  $\pi$ , level scheme, T<sub>1/2</sub>. JOUR APOBB 40 629

<sup>89</sup>Zr 2009OM01 NUCLEAR REACTIONS <sup>89</sup>Y(p, n), (p, 2n), (p, pn), E < 17.7 MeV; measured activation sample E $\gamma$ , I $\gamma$ ; deduced reaction  $\sigma$ . Comparison with ALICE-IPPE code. JOUR RAACA 97 467

<sup>89</sup>Nb 2009EL08 NUCLEAR REACTIONS <sup>92</sup>Mo(p, X)<sup>85</sup>Nb / <sup>86</sup>Nb / <sup>87</sup>Nb / <sup>88</sup>Nb / <sup>89</sup>Nb / <sup>90</sup>Nb / <sup>91</sup>Nb, E=62 MeV; <sup>106</sup>Cd(p, X)<sup>101</sup>In / <sup>102</sup>In / <sup>103</sup>In / <sup>104</sup>In / <sup>105</sup>In / <sup>106</sup>In / <sup>107</sup>In / <sup>108</sup>In / <sup>109</sup>In, E=62 MeV; measured yields; deduced production  $\sigma$ . Enriched target. JOUR ZAANE 40 1

**A=90**

<sup>90</sup>Zr 2008RUZY NUCLEAR REACTIONS <sup>90</sup>Zr( $\gamma$ ,  $\gamma'$ ), E=7-10 MeV; measured I $\gamma$ , E $\gamma$  using HPGe of HI $\gamma$ S facility with 100% linearly polarized beams; deduced M1 transition strengths. Compared to shell model predictions. REPT TUNL-XLII,P112,Rusev

2008SCZW RADIOACTIVITY <sup>90</sup>Zr(IT)[from <sup>90</sup>Y( $\beta^-$ )]; measured  $\beta\gamma$ -coin., I(X-rays); deduced T<sub>1/2</sub>, B(E0). REPT MLL 2007 Annual,P7,Schwerdtfeger

<sup>90</sup>Nb 2009EL08 NUCLEAR REACTIONS <sup>92</sup>Mo(p, X)<sup>85</sup>Nb / <sup>86</sup>Nb / <sup>87</sup>Nb / <sup>88</sup>Nb / <sup>89</sup>Nb / <sup>90</sup>Nb / <sup>91</sup>Nb, E=62 MeV; <sup>106</sup>Cd(p, X)<sup>101</sup>In / <sup>102</sup>In / <sup>103</sup>In / <sup>104</sup>In / <sup>105</sup>In / <sup>106</sup>In / <sup>107</sup>In / <sup>108</sup>In / <sup>109</sup>In, E=62 MeV; measured yields; deduced production  $\sigma$ . Enriched target. JOUR ZAANE 40 1

**A=91**

<sup>91</sup>Rb 2009PA20 NUCLEAR REACTIONS <sup>208</sup>Pb, <sup>238</sup>U(<sup>48</sup>Ca, X), <sup>238</sup>U(<sup>64</sup>Ni, X), E=305, 330, 430 MeV;<sup>89,91</sup>Rb; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin; deduced J,  $\pi$ , level scheme, T<sub>1/2</sub>. JOUR APOBB 40 629

<sup>91</sup>Y 2009F005 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>238</sup>U, X)<sup>60m</sup>Mn / <sup>78m</sup>Ga / <sup>82m</sup>Ga / <sup>92m</sup>Br / <sup>95m</sup>Rb / <sup>98m</sup>Rb / <sup>92m</sup>Y / <sup>101m</sup>Y / <sup>112m</sup>Tc, E=80 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, isomer half-lives. <sup>60</sup>Mn, <sup>78,82</sup>Ga, <sup>92</sup>Br, <sup>95,98</sup>Rb, <sup>92,101</sup>Y, <sup>112</sup>Tc; deduced levels, J,  $\pi$ . <sup>66m</sup>Cu, <sup>78m</sup>Zn, <sup>88m</sup>Br, <sup>95m</sup>Kr, <sup>96m</sup>Rb, <sup>97m,100m</sup>Sr, <sup>99m</sup>Mo, <sup>121m</sup>Pd, <sup>124m</sup>Sn, <sup>125m</sup>Xe; measured E $\gamma$  and half-lives. <sup>91,92,93</sup>Y; measured E $\gamma$ . JOUR PRVCA 79 064318

**A=91 (continued)**

<sup>91</sup>Nb 2009EL08 NUCLEAR REACTIONS <sup>92</sup>Mo(p, X)<sup>85</sup>Nb / <sup>86</sup>Nb / <sup>87</sup>Nb / <sup>88</sup>Nb / <sup>89</sup>Nb / <sup>90</sup>Nb / <sup>91</sup>Nb, E=62 MeV; <sup>106</sup>Cd(p, X)<sup>101</sup>In / <sup>102</sup>In / <sup>103</sup>In / <sup>104</sup>In / <sup>105</sup>In / <sup>106</sup>In / <sup>107</sup>In / <sup>108</sup>In / <sup>109</sup>In, E=62 MeV; measured yields; deduced production  $\sigma$ . Enriched target. JOUR ZAANE 40 1

**A=92**

<sup>92</sup>Br 2009F005 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>238</sup>U, X)<sup>60m</sup>Mn / <sup>78m</sup>Ga / <sup>82m</sup>Ga / <sup>92m</sup>Br / <sup>95m</sup>Rb / <sup>98m</sup>Rb / <sup>92m</sup>Y / <sup>101m</sup>Y / <sup>112m</sup>Tc, E=80 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, isomer half-lives. <sup>60</sup>Mn, <sup>78,82</sup>Ga, <sup>92</sup>Br, <sup>95,98</sup>Rb, <sup>92,101</sup>Y, <sup>112</sup>Tc; deduced levels, J,  $\pi$ . <sup>66m</sup>Cu, <sup>78m</sup>Zn, <sup>88m</sup>Br, <sup>95m</sup>Kr, <sup>96m</sup>Rb, <sup>97m,100m</sup>Sr, <sup>99m</sup>Mo, <sup>121m</sup>Pd, <sup>124m</sup>Sn, <sup>125m</sup>Xe; measured E $\gamma$  and half-lives. <sup>91,92,93</sup>Y; measured E $\gamma$ . JOUR PRVCA 79 064318

<sup>92</sup>Y 2009F005 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>238</sup>U, X)<sup>60m</sup>Mn / <sup>78m</sup>Ga / <sup>82m</sup>Ga / <sup>92m</sup>Br / <sup>95m</sup>Rb / <sup>98m</sup>Rb / <sup>92m</sup>Y / <sup>101m</sup>Y / <sup>112m</sup>Tc, E=80 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, isomer half-lives. <sup>60</sup>Mn, <sup>78,82</sup>Ga, <sup>92</sup>Br, <sup>95,98</sup>Rb, <sup>92,101</sup>Y, <sup>112</sup>Tc; deduced levels, J,  $\pi$ . <sup>66m</sup>Cu, <sup>78m</sup>Zn, <sup>88m</sup>Br, <sup>95m</sup>Kr, <sup>96m</sup>Rb, <sup>97m,100m</sup>Sr, <sup>99m</sup>Mo, <sup>121m</sup>Pd, <sup>124m</sup>Sn, <sup>125m</sup>Xe; measured E $\gamma$  and half-lives. <sup>91,92,93</sup>Y; measured E $\gamma$ . JOUR PRVCA 79 064318

<sup>92</sup>Nb 2009BH06 NUCLEAR REACTIONS <sup>67</sup>Zn, <sup>92</sup>Mo(n, p), <sup>98</sup>Mo(n,  $\gamma$ ), E=1.6, 3.7 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ . Comparison with EMPIRE-2.19 model code. JOUR NSENA 163 175

<sup>92</sup>Mo 2009RU05 NUCLEAR REACTIONS <sup>92,94,96,98,100</sup>Mo( $\gamma$ ,  $\gamma'$ ), E=4-13 MeV; measured E $\gamma$ , I $\gamma$ , absolute photoabsorption  $\sigma$ . Comparison with QRPA calculations. JOUR PRVCA 79 061302

**A=93**

<sup>93</sup>Y 2009F005 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>238</sup>U, X)<sup>60m</sup>Mn / <sup>78m</sup>Ga / <sup>82m</sup>Ga / <sup>92m</sup>Br / <sup>95m</sup>Rb / <sup>98m</sup>Rb / <sup>92m</sup>Y / <sup>101m</sup>Y / <sup>112m</sup>Tc, E=80 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, isomer half-lives. <sup>60</sup>Mn, <sup>78,82</sup>Ga, <sup>92</sup>Br, <sup>95,98</sup>Rb, <sup>92,101</sup>Y, <sup>112</sup>Tc; deduced levels, J,  $\pi$ . <sup>66m</sup>Cu, <sup>78m</sup>Zn, <sup>88m</sup>Br, <sup>95m</sup>Kr, <sup>96m</sup>Rb, <sup>97m,100m</sup>Sr, <sup>99m</sup>Mo, <sup>121m</sup>Pd, <sup>124m</sup>Sn, <sup>125m</sup>Xe; measured E $\gamma$  and half-lives. <sup>91,92,93</sup>Y; measured E $\gamma$ . JOUR PRVCA 79 064318

**A=94**

<sup>94</sup>Zr 2008ELZY NUCLEAR REACTIONS <sup>94</sup>Zr(n, n' $\gamma$ ), E $\approx$ 3 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin.; deduced B(E2), B(M1). Signatures of mixed-symmetry multiplet and of anomalous behavior of  $4_2^+$  state. REPT TUNL-XLII,P88,Elhami

**A=94 (continued)**

- <sup>94</sup>Mo 2009RU05 NUCLEAR REACTIONS <sup>92,94,96,98,100</sup>Mo( $\gamma$ ,  $\gamma'$ ), E=4-13 MeV; measured E $\gamma$ , I $\gamma$ , absolute photoabsorption  $\sigma$ . Comparison with QRPA calculations. JOUR PRVCA 79 061302

**A=95**

- <sup>95</sup>Kr 2009F005 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>238</sup>U, X)<sup>60m</sup>Mn / <sup>78m</sup>Ga / <sup>82m</sup>Ga / <sup>92m</sup>Br / <sup>95m</sup>Rb / <sup>98m</sup>Rb / <sup>92m</sup>Y / <sup>101m</sup>Y / <sup>112m</sup>Tc, E=80 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, isomer half-lives. <sup>60</sup>Mn, <sup>78,82</sup>Ga, <sup>92</sup>Br, <sup>95,98</sup>Rb, <sup>92,101</sup>Y, <sup>112</sup>Tc; deduced levels, J,  $\pi$ . <sup>66m</sup>Cu, <sup>78m</sup>Zn, <sup>88m</sup>Br, <sup>95m</sup>Kr, <sup>96m</sup>Rb, <sup>97m,100m</sup>Sr, <sup>99m</sup>Mo, <sup>121m</sup>Pd, <sup>124m</sup>Sn, <sup>125m</sup>Xe; measured E $\gamma$  and half-lives. <sup>91,92,93</sup>Y; measured E $\gamma$ . JOUR PRVCA 79 064318
- <sup>95</sup>Rb 2009F005 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>238</sup>U, X)<sup>60m</sup>Mn / <sup>78m</sup>Ga / <sup>82m</sup>Ga / <sup>92m</sup>Br / <sup>95m</sup>Rb / <sup>98m</sup>Rb / <sup>92m</sup>Y / <sup>101m</sup>Y / <sup>112m</sup>Tc, E=80 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, isomer half-lives. <sup>60</sup>Mn, <sup>78,82</sup>Ga, <sup>92</sup>Br, <sup>95,98</sup>Rb, <sup>92,101</sup>Y, <sup>112</sup>Tc; deduced levels, J,  $\pi$ . <sup>66m</sup>Cu, <sup>78m</sup>Zn, <sup>88m</sup>Br, <sup>95m</sup>Kr, <sup>96m</sup>Rb, <sup>97m,100m</sup>Sr, <sup>99m</sup>Mo, <sup>121m</sup>Pd, <sup>124m</sup>Sn, <sup>125m</sup>Xe; measured E $\gamma$  and half-lives. <sup>91,92,93</sup>Y; measured E $\gamma$ . JOUR PRVCA 79 064318

**A=96**

- <sup>96</sup>Kr 2009MA47 NUCLEAR REACTIONS <sup>238</sup>U(<sup>136</sup>Xe, X)<sup>96</sup>Kr / <sup>98</sup>Sr / <sup>100</sup>Zr, E=954 MeV; measured E $\gamma$ , I $\gamma$ , (fission fragment) $\gamma$ -,  $\gamma\gamma$ -coin. <sup>96</sup>Kr; deduced levels, J,  $\pi$  and quadrupole deformation. Systematics of first 2+ states, ratios of energies of first 2+ and 4+ states, quadrupole deformation parameter for even-even nuclei in N=38-64, Z=36-44 region. Comparison with various theoretical model calculations. JOUR PRVCA 80 021301
- <sup>96</sup>Rb 2009F005 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>238</sup>U, X)<sup>60m</sup>Mn / <sup>78m</sup>Ga / <sup>82m</sup>Ga / <sup>92m</sup>Br / <sup>95m</sup>Rb / <sup>98m</sup>Rb / <sup>92m</sup>Y / <sup>101m</sup>Y / <sup>112m</sup>Tc, E=80 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, isomer half-lives. <sup>60</sup>Mn, <sup>78,82</sup>Ga, <sup>92</sup>Br, <sup>95,98</sup>Rb, <sup>92,101</sup>Y, <sup>112</sup>Tc; deduced levels, J,  $\pi$ . <sup>66m</sup>Cu, <sup>78m</sup>Zn, <sup>88m</sup>Br, <sup>95m</sup>Kr, <sup>96m</sup>Rb, <sup>97m,100m</sup>Sr, <sup>99m</sup>Mo, <sup>121m</sup>Pd, <sup>124m</sup>Sn, <sup>125m</sup>Xe; measured E $\gamma$  and half-lives. <sup>91,92,93</sup>Y; measured E $\gamma$ . JOUR PRVCA 79 064318
- <sup>96</sup>Zr 2008K0ZV RADIOACTIVITY <sup>48</sup>Ca, <sup>82</sup>Se, <sup>96</sup>Zr, <sup>100</sup>Mo, <sup>116</sup>Cd, <sup>130</sup>Te, <sup>150</sup>Nd( $2\beta^-$ ); measured  $0\nu$   $2\beta^-$ -decay  $T_{1/2}$  lower limits,  $2\nu$   $2\beta^-$ -decay  $T_{1/2}$ . CONF Moscow,P203,Kochetov
- <sup>96</sup>Mo 2008K0ZV RADIOACTIVITY <sup>48</sup>Ca, <sup>82</sup>Se, <sup>96</sup>Zr, <sup>100</sup>Mo, <sup>116</sup>Cd, <sup>130</sup>Te, <sup>150</sup>Nd( $2\beta^-$ ); measured  $0\nu$   $2\beta^-$ -decay  $T_{1/2}$  lower limits,  $2\nu$   $2\beta^-$ -decay  $T_{1/2}$ . CONF Moscow,P203,Kochetov
- 2009RU05 NUCLEAR REACTIONS <sup>92,94,96,98,100</sup>Mo( $\gamma$ ,  $\gamma'$ ), E=4-13 MeV; measured E $\gamma$ , I $\gamma$ , absolute photoabsorption  $\sigma$ . Comparison with QRPA calculations. JOUR PRVCA 79 061302

## A=97

- <sup>97</sup>Sr 2009F005 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>238</sup>U, X)<sup>60m</sup>Mn / <sup>78m</sup>Ga / <sup>82m</sup>Ga / <sup>92m</sup>Br / <sup>95m</sup>Rb / <sup>98m</sup>Rb / <sup>92m</sup>Y / <sup>101m</sup>Y / <sup>112m</sup>Tc, E=80 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, isomer half-lives. <sup>60</sup>Mn, <sup>78,82</sup>Ga, <sup>92</sup>Br, <sup>95,98</sup>Rb, <sup>92,101</sup>Y, <sup>112</sup>Tc; deduced levels, J,  $\pi$ . <sup>66m</sup>Cu, <sup>78m</sup>Zn, <sup>88m</sup>Br, <sup>95m</sup>Kr, <sup>96m</sup>Rb, <sup>97m,100m</sup>Sr, <sup>99m</sup>Mo, <sup>121m</sup>Pd, <sup>124m</sup>Sn, <sup>125m</sup>Xe; measured E $\gamma$  and half-lives. <sup>91,92,93</sup>Y; measured E $\gamma$ . JOUR PRVCA 79 064318
- <sup>97</sup>Y 2009MA40 RADIOACTIVITY <sup>97m</sup>Y( $\beta^-$ ); measured I $\beta$ ,  $\beta\gamma$  from high-spin isomer. JOUR PRVCA 80 017302
- <sup>97</sup>Zr 2009MA26 NUCLEAR REACTIONS <sup>238</sup>U(<sup>48</sup>Ca, X), E=330 MeV; <sup>97</sup>Zr; measured E $\gamma$ , I $\gamma$ , delayed  $\gamma\gamma$ -coin; deduced J,  $\pi$ , level scheme, yrast structure. JOUR APOBB 40 633
- 2009MA40 NUCLEAR REACTIONS <sup>238</sup>U(<sup>48</sup>Ca, X), E=330 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>97</sup>Zr; deduced levels, J,  $\pi$ . Comparison with shell-model calculations. JOUR PRVCA 80 017302
- 2009MA40 RADIOACTIVITY <sup>97m</sup>Y( $\beta^-$ ); measured I $\beta$ ,  $\beta\gamma$  from high-spin isomer. JOUR PRVCA 80 017302
- <sup>97</sup>Pd 2009EL08 ATOMIC MASSES <sup>97,98,99,101</sup>Pd, <sup>100</sup>Ag, <sup>101,102,103,104,105</sup>Cd, <sup>102,104</sup>In; measured masses using the JYFLTRAP Penning trap mass spectrometer. Comparison with evaluated values and data. JOUR ZAANE 40 1

## A=98

- <sup>98</sup>Rb 2009F005 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>238</sup>U, X)<sup>60m</sup>Mn / <sup>78m</sup>Ga / <sup>82m</sup>Ga / <sup>92m</sup>Br / <sup>95m</sup>Rb / <sup>98m</sup>Rb / <sup>92m</sup>Y / <sup>101m</sup>Y / <sup>112m</sup>Tc, E=80 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, isomer half-lives. <sup>60</sup>Mn, <sup>78,82</sup>Ga, <sup>92</sup>Br, <sup>95,98</sup>Rb, <sup>92,101</sup>Y, <sup>112</sup>Tc; deduced levels, J,  $\pi$ . <sup>66m</sup>Cu, <sup>78m</sup>Zn, <sup>88m</sup>Br, <sup>95m</sup>Kr, <sup>96m</sup>Rb, <sup>97m,100m</sup>Sr, <sup>99m</sup>Mo, <sup>121m</sup>Pd, <sup>124m</sup>Sn, <sup>125m</sup>Xe; measured E $\gamma$  and half-lives. <sup>91,92,93</sup>Y; measured E $\gamma$ . JOUR PRVCA 79 064318
- <sup>98</sup>Sr 2009MA47 NUCLEAR REACTIONS <sup>238</sup>U(<sup>136</sup>Xe, X)<sup>96</sup>Kr / <sup>98</sup>Sr / <sup>100</sup>Zr, E=954 MeV; measured E $\gamma$ , I $\gamma$ , (fission fragment) $\gamma^-$ ,  $\gamma\gamma$ -coin. <sup>96</sup>Kr; deduced levels, J,  $\pi$  and quadrupole deformation. Systematics of first 2+ states, ratios of energies of first 2+ and 4+ states, quadrupole deformation parameter for even-even nuclei in N=38-64, Z=36-44 region. Comparison with various theoretical model calculations. JOUR PRVCA 80 021301
- <sup>98</sup>Mo 2009RU05 NUCLEAR REACTIONS <sup>92,94,96,98,100</sup>Mo( $\gamma$ ,  $\gamma'$ ), E=4-13 MeV; measured E $\gamma$ , I $\gamma$ , absolute photoabsorption  $\sigma$ . Comparison with QRPA calculations. JOUR PRVCA 79 061302
- <sup>98</sup>Pd 2009EL08 ATOMIC MASSES <sup>97,98,99,101</sup>Pd, <sup>100</sup>Ag, <sup>101,102,103,104,105</sup>Cd, <sup>102,104</sup>In; measured masses using the JYFLTRAP Penning trap mass spectrometer. Comparison with evaluated values and data. JOUR ZAANE 40 1

## A=99

- <sup>99</sup>Zr 2009UR03 RADIOACTIVITY <sup>248</sup>Cm(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>103</sup>Zr; deduced levels, J,  $\pi$ , bands. <sup>100,102,104</sup>Zr, <sup>142,143,144</sup>Ba; measured E $\gamma$ . <sup>100,101,102,103,104</sup>Zr; deduced mass correlations in fission of <sup>248</sup>Cm. <sup>99,101,103</sup>Zr; systematics of neutron configurations. Comparison of <sup>103</sup>Zr levels with quasiparticle plus rotor model calculations. JOUR PRVCA 79 067301
- <sup>99</sup>Mo 2009BH06 NUCLEAR REACTIONS <sup>67</sup>Zn, <sup>92</sup>Mo(n, p), <sup>98</sup>Mo(n,  $\gamma$ ), E=1.6, 3.7 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ . Comparison with EMPIRE-2.19 model code. JOUR NSENA 163 175
- 2009F005 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>238</sup>U, X)<sup>60m</sup>Mn / <sup>78m</sup>Ga / <sup>82m</sup>Ga / <sup>92m</sup>Br / <sup>95m</sup>Rb / <sup>98m</sup>Rb / <sup>92m</sup>Y / <sup>101m</sup>Y / <sup>112m</sup>Tc, E=80 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, isomer half-lives. <sup>60</sup>Mn, <sup>78,82</sup>Ga, <sup>92</sup>Br, <sup>95,98</sup>Rb, <sup>92,101</sup>Y, <sup>112</sup>Tc; deduced levels, J,  $\pi$ . <sup>66m</sup>Cu, <sup>78m</sup>Zn, <sup>88m</sup>Br, <sup>95m</sup>Kr, <sup>96m</sup>Rb, <sup>97m,100m</sup>Sr, <sup>99m</sup>Mo, <sup>121m</sup>Pd, <sup>124m</sup>Sn, <sup>125m</sup>Xe; measured E $\gamma$  and half-lives. <sup>91,92,93</sup>Y; measured E $\gamma$ . JOUR PRVCA 79 064318
- 2009RA16 NUCLEAR REACTIONS <sup>97</sup>Mo(t, p), E=12 MeV; measured Ep, Ip; deduced  $\sigma$ ,  $\sigma(\theta)$ , level energies, J,  $\pi$ . Comparison with DWBA calculations. JOUR IMPEE 18 1483
- <sup>99</sup>Pd 2009EL08 ATOMIC MASSES <sup>97,98,99,101</sup>Pd, <sup>100</sup>Ag, <sup>101,102,103,104,105</sup>Cd, <sup>102,104</sup>In; measured masses using the JYFLTRAP Penning trap mass spectrometer. Comparison with evaluated values and data. JOUR ZAANE 40 1

## A=100

- <sup>100</sup>Sr 2009F005 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>238</sup>U, X)<sup>60m</sup>Mn / <sup>78m</sup>Ga / <sup>82m</sup>Ga / <sup>92m</sup>Br / <sup>95m</sup>Rb / <sup>98m</sup>Rb / <sup>92m</sup>Y / <sup>101m</sup>Y / <sup>112m</sup>Tc, E=80 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, isomer half-lives. <sup>60</sup>Mn, <sup>78,82</sup>Ga, <sup>92</sup>Br, <sup>95,98</sup>Rb, <sup>92,101</sup>Y, <sup>112</sup>Tc; deduced levels, J,  $\pi$ . <sup>66m</sup>Cu, <sup>78m</sup>Zn, <sup>88m</sup>Br, <sup>95m</sup>Kr, <sup>96m</sup>Rb, <sup>97m,100m</sup>Sr, <sup>99m</sup>Mo, <sup>121m</sup>Pd, <sup>124m</sup>Sn, <sup>125m</sup>Xe; measured E $\gamma$  and half-lives. <sup>91,92,93</sup>Y; measured E $\gamma$ . JOUR PRVCA 79 064318
- <sup>100</sup>Zr 2009MA47 NUCLEAR REACTIONS <sup>238</sup>U(<sup>136</sup>Xe, X)<sup>96</sup>Kr / <sup>98</sup>Sr / <sup>100</sup>Zr, E=954 MeV; measured E $\gamma$ , I $\gamma$ , (fission fragment) $\gamma$ -,  $\gamma\gamma$ -coin. <sup>96</sup>Kr; deduced levels, J,  $\pi$  and quadrupole deformation. Systematics of first 2+ states, ratios of energies of first 2+ and 4+ states, quadrupole deformation parameter for even-even nuclei in N=38-64, Z=36-44 region. Comparison with various theoretical model calculations. JOUR PRVCA 80 021301
- 2009UR03 RADIOACTIVITY <sup>248</sup>Cm(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>103</sup>Zr; deduced levels, J,  $\pi$ , bands. <sup>100,102,104</sup>Zr, <sup>142,143,144</sup>Ba; measured E $\gamma$ . <sup>100,101,102,103,104</sup>Zr; deduced mass correlations in fission of <sup>248</sup>Cm. <sup>99,101,103</sup>Zr; systematics of neutron configurations. Comparison of <sup>103</sup>Zr levels with quasiparticle plus rotor model calculations. JOUR PRVCA 79 067301



**A=100 (continued)**

- <sup>100</sup>Nb 2009LU11 RADIOACTIVITY <sup>252</sup>Cf(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin using Gammasphere array. <sup>100</sup>Nb, <sup>148</sup>La; deduced ICCs, high-spin levels, J,  $\pi$ , rotational bands, multipolarities, shape coexistence and configurations. JOUR NUPAB 825 1
- <sup>100</sup>Mo 2008K0ZV RADIOACTIVITY <sup>48</sup>Ca, <sup>82</sup>Se, <sup>96</sup>Zr, <sup>100</sup>Mo, <sup>116</sup>Cd, <sup>130</sup>Te, <sup>150</sup>Nd( $2\beta^-$ ); measured  $0\nu 2\beta^-$ -decay T<sub>1/2</sub> lower limits,  $2\nu 2\beta^-$ -decay T<sub>1/2</sub>. CONF Moscow,P203,Kochetov
- 2009RU05 NUCLEAR REACTIONS <sup>92,94,96,98,100</sup>Mo( $\gamma, \gamma'$ ), E=4-13 MeV; measured E $\gamma$ , I $\gamma$ , absolute photoabsorption  $\sigma$ . Comparison with QRPA calculations. JOUR PRVCA 79 061302
- <sup>100</sup>Ru 2008K0ZV RADIOACTIVITY <sup>48</sup>Ca, <sup>82</sup>Se, <sup>96</sup>Zr, <sup>100</sup>Mo, <sup>116</sup>Cd, <sup>130</sup>Te, <sup>150</sup>Nd( $2\beta^-$ ); measured  $0\nu 2\beta^-$ -decay T<sub>1/2</sub> lower limits,  $2\nu 2\beta^-$ -decay T<sub>1/2</sub>. CONF Moscow,P203,Kochetov
- <sup>100</sup>Ag 2009EL08 ATOMIC MASSES <sup>97,98,99,101</sup>Pd, <sup>100</sup>Ag, <sup>101,102,103,104,105</sup>Cd, <sup>102,104</sup>In; measured masses using the JYFLTRAP Penning trap mass spectrometer. Comparison with evaluated values and data. JOUR ZAANE 40 1
- <sup>100</sup>Sn 2008KRZW NUCLEAR REACTIONS <sup>86</sup>Kr(<sup>9</sup>Be, X), <sup>124</sup>Xe(<sup>9</sup>Be, X), E=500, 1000 MeV / nucleon; <sup>50</sup>Ca, <sup>56</sup>Ti, <sup>100</sup>Sn; measured E $\gamma$ , I $\gamma$ ; deduced angular momentum values, spectroscopic factors. CONF Cappadocia (Nuclear Physics and Astrophysics),P52,Krucken

**A=101**

- <sup>101</sup>Y 2009F005 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>238</sup>U, X)<sup>60m</sup>Mn / <sup>78m</sup>Ga / <sup>82m</sup>Ga / <sup>92m</sup>Br / <sup>95m</sup>Rb / <sup>98m</sup>Rb / <sup>92m</sup>Y / <sup>101m</sup>Y / <sup>112m</sup>Tc, E=80 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, isomer half-lives. <sup>60</sup>Mn, <sup>78,82</sup>Ga, <sup>92</sup>Br, <sup>95,98</sup>Rb, <sup>92,101</sup>Y, <sup>112</sup>Tc; deduced levels, J,  $\pi$ . <sup>66m</sup>Cu, <sup>78m</sup>Zn, <sup>88m</sup>Br, <sup>95m</sup>Kr, <sup>96m</sup>Rb, <sup>97m,100m</sup>Sr, <sup>99m</sup>Mo, <sup>121m</sup>Pd, <sup>124m</sup>Sn, <sup>125m</sup>Xe; measured E $\gamma$  and half-lives. <sup>91,92,93</sup>Y; measured E $\gamma$ . JOUR PRVCA 79 064318
- <sup>101</sup>Zr 2009G018 RADIOACTIVITY <sup>252</sup>Cf(SF); measured  $\gamma\gamma(\theta)$ . <sup>101</sup>Zr, <sup>103,105,107</sup>Mo, <sup>109,111</sup>Ru; deduced levels, J,  $\pi$ , mixing ratios. Comparison of mixing ratios with predictions of the particle-axial-rotor model for various single-particle states. JOUR PRVCA 80 014318
- 2009UR03 RADIOACTIVITY <sup>248</sup>Cm(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>103</sup>Zr; deduced levels, J,  $\pi$ , bands. <sup>100,102,104</sup>Zr, <sup>142,143,144</sup>Ba; measured E $\gamma$ . <sup>100,101,102,103,104</sup>Zr; deduced mass correlations in fission of <sup>248</sup>Cm. <sup>99,101,103</sup>Zr; systematics of neutron configurations. Comparison of <sup>103</sup>Zr levels with quasiparticle plus rotor model calculations. JOUR PRVCA 79 067301
- <sup>101</sup>Rh 2009MI16 NUCLEAR REACTIONS <sup>93</sup>Nb(<sup>12</sup>C, X), E=45 MeV; <sup>89</sup>Y(<sup>12</sup>C, X), (<sup>16</sup>O, X), E=40, 54 MeV; <sup>105</sup>Ag, <sup>101</sup>Rh; measured E $\gamma$ , I $\gamma$ , E $\alpha$ , I $\alpha$ , Ep, Ip, particle- $\gamma$ -coin.; deduced  $\gamma$ -ray multiplicity gated by proton and  $\alpha$  particle, proton spectra, broad structures. JOUR JPGPE 36 095103

**A=101 (continued)**

- <sup>101</sup>Pd 2009EL08 ATOMIC MASSES <sup>97,98,99,101</sup>Pd, <sup>100</sup>Ag, <sup>101,102,103,104,105</sup>Cd, <sup>102,104</sup>In; measured masses using the JYFLTRAP Penning trap mass spectrometer. Comparison with evaluated values and data. JOUR ZAANE 40 1
- <sup>101</sup>Cd 2009EL08 ATOMIC MASSES <sup>97,98,99,101</sup>Pd, <sup>100</sup>Ag, <sup>101,102,103,104,105</sup>Cd, <sup>102,104</sup>In; measured masses using the JYFLTRAP Penning trap mass spectrometer. Comparison with evaluated values and data. JOUR ZAANE 40 1
- <sup>101</sup>In 2009EL08 NUCLEAR REACTIONS <sup>92</sup>Mo(p, X)<sup>85</sup>Nb / <sup>86</sup>Nb / <sup>87</sup>Nb / <sup>88</sup>Nb / <sup>89</sup>Nb / <sup>90</sup>Nb / <sup>91</sup>Nb, E=62 MeV; <sup>106</sup>Cd(p, X)<sup>101</sup>In / <sup>102</sup>In / <sup>103</sup>In / <sup>104</sup>In / <sup>105</sup>In / <sup>106</sup>In / <sup>107</sup>In / <sup>108</sup>In / <sup>109</sup>In, E=62 MeV; measured yields; deduced production  $\sigma$ . Enriched target. JOUR ZAANE 40 1
- <sup>101</sup>Sn 2009SE06 NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>46</sup>Ti, 3n), E=192 MeV; measured E $\gamma$ , I $\gamma$ ,  $\beta$ -delayed Ep, Ip. Comparison with shell model calculations. JOUR APOBB 40 621

**A=102**

- <sup>102</sup>Zr 2009UR03 RADIOACTIVITY <sup>248</sup>Cm(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>103</sup>Zr; deduced levels, J,  $\pi$ , bands. <sup>100,102,104</sup>Zr, <sup>142,143,144</sup>Ba; measured E $\gamma$ . <sup>100,101,102,103,104</sup>Zr; deduced mass correlations in fission of <sup>248</sup>Cm. <sup>99,101,103</sup>Zr; systematics of neutron configurations. Comparison of <sup>103</sup>Zr levels with quasiparticle plus rotor model calculations. JOUR PRVCA 79 067301
- <sup>102</sup>Cd 2009EL08 ATOMIC MASSES <sup>97,98,99,101</sup>Pd, <sup>100</sup>Ag, <sup>101,102,103,104,105</sup>Cd, <sup>102,104</sup>In; measured masses using the JYFLTRAP Penning trap mass spectrometer. Comparison with evaluated values and data. JOUR ZAANE 40 1
- <sup>102</sup>In 2009EL08 ATOMIC MASSES <sup>97,98,99,101</sup>Pd, <sup>100</sup>Ag, <sup>101,102,103,104,105</sup>Cd, <sup>102,104</sup>In; measured masses using the JYFLTRAP Penning trap mass spectrometer. Comparison with evaluated values and data. JOUR ZAANE 40 1
- 2009EL08 NUCLEAR REACTIONS <sup>92</sup>Mo(p, X)<sup>85</sup>Nb / <sup>86</sup>Nb / <sup>87</sup>Nb / <sup>88</sup>Nb / <sup>89</sup>Nb / <sup>90</sup>Nb / <sup>91</sup>Nb, E=62 MeV; <sup>106</sup>Cd(p, X)<sup>101</sup>In / <sup>102</sup>In / <sup>103</sup>In / <sup>104</sup>In / <sup>105</sup>In / <sup>106</sup>In / <sup>107</sup>In / <sup>108</sup>In / <sup>109</sup>In, E=62 MeV; measured yields; deduced production  $\sigma$ . Enriched target. JOUR ZAANE 40 1

**A=103**

- <sup>103</sup>Zr 2009UR03 RADIOACTIVITY <sup>248</sup>Cm(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>103</sup>Zr; deduced levels, J,  $\pi$ , bands. <sup>100,102,104</sup>Zr, <sup>142,143,144</sup>Ba; measured E $\gamma$ . <sup>100,101,102,103,104</sup>Zr; deduced mass correlations in fission of <sup>248</sup>Cm. <sup>99,101,103</sup>Zr; systematics of neutron configurations. Comparison of <sup>103</sup>Zr levels with quasiparticle plus rotor model calculations. JOUR PRVCA 79 067301

**A=103 (continued)**

- <sup>103</sup>Nb 2009WA10 RADIOACTIVITY <sup>252</sup>Cf(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin using Gammasphere array. <sup>103</sup>Nb; deduced high-spin levels, J,  $\pi$ , vibrational band structure. JOUR PYLBB 675 420
- <sup>103</sup>Mo 2009G018 RADIOACTIVITY <sup>252</sup>Cf(SF); measured  $\gamma\gamma(\theta)$ . <sup>101</sup>Zr, <sup>103,105,107</sup>Mo, <sup>109,111</sup>Ru; deduced levels, J,  $\pi$ , mixing ratios. Comparison of mixing ratios with predictions of the particle-axial-rotor model for various single-particle states. JOUR PRVCA 80 014318
- <sup>103</sup>Rh 2008N0ZZ NUCLEAR REACTIONS <sup>238</sup>U( $\alpha$ , X), E=62 MeV; <sup>19</sup>F, <sup>25</sup>Mg, <sup>32</sup>S, <sup>34</sup>S, <sup>88</sup>Sr, <sup>103</sup>Rh; measured E $\gamma$ , I $\gamma$ ; deduced neutron clusters. Activation method, Ge detector. CONF Moscow,P74,Novatsky
- <sup>103</sup>Pd 2009TA10 NUCLEAR REACTIONS Pd(p, X)<sup>103</sup>Ag, Cd(p, X)<sup>103</sup>Ag, <sup>103</sup>Rh(d, 2n), E<70 meV; measured E $\gamma$ , I $\gamma$ , excitation functions using stacked foil activation technique. Compared results to model calculations. JOUR ARISE 67 1574
- <sup>103</sup>Ag 2009TA10 NUCLEAR REACTIONS Pd(p, X)<sup>103</sup>Ag, Cd(p, X)<sup>103</sup>Ag, <sup>103</sup>Rh(d, 2n), E<70 meV; measured E $\gamma$ , I $\gamma$ , excitation functions using stacked foil activation technique. Compared results to model calculations. JOUR ARISE 67 1574
- <sup>103</sup>Cd 2009EL08 ATOMIC MASSES <sup>97,98,99,101</sup>Pd, <sup>100</sup>Ag, <sup>101,102,103,104,105</sup>Cd, <sup>102,104</sup>In; measured masses using the JYFLTRAP Penning trap mass spectrometer. Comparison with evaluated values and data. JOUR ZAANE 40 1
- <sup>103</sup>In 2009EL08 NUCLEAR REACTIONS <sup>92</sup>Mo(p, X)<sup>85</sup>Nb / <sup>86</sup>Nb / <sup>87</sup>Nb / <sup>88</sup>Nb / <sup>89</sup>Nb / <sup>90</sup>Nb / <sup>91</sup>Nb, E=62 MeV; <sup>106</sup>Cd(p, X)<sup>101</sup>In / <sup>102</sup>In / <sup>103</sup>In / <sup>104</sup>In / <sup>105</sup>In / <sup>106</sup>In / <sup>107</sup>In / <sup>108</sup>In / <sup>109</sup>In, E=62 MeV; measured yields; deduced production  $\sigma$ . Enriched target. JOUR ZAANE 40 1

**A=104**

- <sup>104</sup>Zr 2009UR03 RADIOACTIVITY <sup>248</sup>Cm(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>103</sup>Zr; deduced levels, J,  $\pi$ , bands. <sup>100,102,104</sup>Zr, <sup>142,143,144</sup>Ba; measured E $\gamma$ . <sup>100,101,102,103,104</sup>Zr; deduced mass correlations in fission of <sup>248</sup>Cm. <sup>99,101,103</sup>Zr; systematics of neutron configurations. Comparison of <sup>103</sup>Zr levels with quasiparticle plus rotor model calculations. JOUR PRVCA 79 067301
- <sup>104</sup>Mo 2009GU11 RADIOACTIVITY <sup>252</sup>Cf(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>106,107</sup>Tc; deduced levels, J,  $\pi$ , bands, configurations, moments of inertia. <sup>104,105</sup>Mo, <sup>105,106</sup>Tc; systematics of alignments and moments of inertia. JOUR PRVCA 79 054317
- <sup>104</sup>Pd 2007S0ZX NUCLEAR REACTIONS <sup>96</sup>Zr(<sup>13</sup>C, 5N), E=51, 58 MeV; <sup>104</sup>Pd; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma\gamma$ -coin.; deduced high-spin bands. REPT ATOMKI 2007 Annual,P26,Sohler
- <sup>104</sup>Cd 2009EL08 ATOMIC MASSES <sup>97,98,99,101</sup>Pd, <sup>100</sup>Ag, <sup>101,102,103,104,105</sup>Cd, <sup>102,104</sup>In; measured masses using the JYFLTRAP Penning trap mass spectrometer. Comparison with evaluated values and data. JOUR ZAANE 40 1

**A=104 (continued)**

- <sup>104</sup>In 2009EL08 ATOMIC MASSES <sup>97,98,99,101</sup>Pd, <sup>100</sup>Ag, <sup>101,102,103,104,105</sup>Cd, <sup>102,104</sup>In; measured masses using the JYFLTRAP Penning trap mass spectrometer. Comparison with evaluated values and data. JOUR ZAANE 40 1
- 2009EL08 NUCLEAR REACTIONS <sup>92</sup>Mo(p, X)<sup>85</sup>Nb / <sup>86</sup>Nb / <sup>87</sup>Nb / <sup>88</sup>Nb / <sup>89</sup>Nb / <sup>90</sup>Nb / <sup>91</sup>Nb, E=62 MeV; <sup>106</sup>Cd(p, X)<sup>101</sup>In / <sup>102</sup>In / <sup>103</sup>In / <sup>104</sup>In / <sup>105</sup>In / <sup>106</sup>In / <sup>107</sup>In / <sup>108</sup>In / <sup>109</sup>In, E=62 MeV; measured yields; deduced production  $\sigma$ . Enriched target. JOUR ZAANE 40 1
- <sup>104</sup>Sn 2009EL07 ATOMIC MASSES <sup>104,105,106,107,108</sup>Sn, <sup>106,107,108,109,110</sup>Sb, <sup>108,109</sup>Te, <sup>111</sup>I; Measured atomic masses using JYFLTRAP Penning-trap spectrometer; deduced single-proton separation energy. Comparison with AME2003 evaluation. JOUR PRLTA 102 252501

**A=105**

- <sup>105</sup>Mo 2009G018 RADIOACTIVITY <sup>252</sup>Cf(SF); measured  $\gamma\gamma(\theta)$ . <sup>101</sup>Zr, <sup>103,105,107</sup>Mo, <sup>109,111</sup>Ru; deduced levels, J,  $\pi$ , mixing ratios. Comparison of mixing ratios with predictions of the particle-axial-rotor model for various single-particle states. JOUR PRVCA 80 014318
- 2009GU11 RADIOACTIVITY <sup>252</sup>Cf(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>106,107</sup>Tc; deduced levels, J,  $\pi$ , bands, configurations, moments of inertia. <sup>104,105</sup>Mo, <sup>105,106</sup>Tc; systematics of alignments and moments of inertia. JOUR PRVCA 79 054317
- <sup>105</sup>Tc 2009GU11 RADIOACTIVITY <sup>252</sup>Cf(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>106,107</sup>Tc; deduced levels, J,  $\pi$ , bands, configurations, moments of inertia. <sup>104,105</sup>Mo, <sup>105,106</sup>Tc; systematics of alignments and moments of inertia. JOUR PRVCA 79 054317
- <sup>105</sup>Ag 2009MI16 NUCLEAR REACTIONS <sup>93</sup>Nb(<sup>12</sup>C, X), E=45 MeV; <sup>89</sup>Y(<sup>12</sup>C, X), (<sup>16</sup>O, X), E=40, 54 MeV; <sup>105</sup>Ag, <sup>101</sup>Rh; measured E $\gamma$ , I $\gamma$ , E $\alpha$ , I $\alpha$ , Ep, Ip, particle- $\gamma$ -coin.; deduced  $\gamma$ -ray multiplicity gated by proton and  $\alpha$  particle, proton spectra, broad structures. JOUR JPGPE 36 095103
- <sup>105</sup>Cd 2009EL08 ATOMIC MASSES <sup>97,98,99,101</sup>Pd, <sup>100</sup>Ag, <sup>101,102,103,104,105</sup>Cd, <sup>102,104</sup>In; measured masses using the JYFLTRAP Penning trap mass spectrometer. Comparison with evaluated values and data. JOUR ZAANE 40 1
- <sup>105</sup>In 2009EL08 NUCLEAR REACTIONS <sup>92</sup>Mo(p, X)<sup>85</sup>Nb / <sup>86</sup>Nb / <sup>87</sup>Nb / <sup>88</sup>Nb / <sup>89</sup>Nb / <sup>90</sup>Nb / <sup>91</sup>Nb, E=62 MeV; <sup>106</sup>Cd(p, X)<sup>101</sup>In / <sup>102</sup>In / <sup>103</sup>In / <sup>104</sup>In / <sup>105</sup>In / <sup>106</sup>In / <sup>107</sup>In / <sup>108</sup>In / <sup>109</sup>In, E=62 MeV; measured yields; deduced production  $\sigma$ . Enriched target. JOUR ZAANE 40 1
- <sup>105</sup>Sn 2009EL07 ATOMIC MASSES <sup>104,105,106,107,108</sup>Sn, <sup>106,107,108,109,110</sup>Sb, <sup>108,109</sup>Te, <sup>111</sup>I; Measured atomic masses using JYFLTRAP Penning-trap spectrometer; deduced single-proton separation energy. Comparison with AME2003 evaluation. JOUR PRLTA 102 252501

**A=106**

- <sup>106</sup>Tc 2009GU11 RADIOACTIVITY <sup>252</sup>Cf(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>106,107</sup>Tc; deduced levels, J,  $\pi$ , bands, configurations, moments of inertia. <sup>104,105</sup>Mo, <sup>105,106</sup>Tc; systematics of alignments and moments of inertia. JOUR PRVCA 79 054317
- <sup>106</sup>Pd 2008RUZZ RADIOACTIVITY <sup>106</sup>Cd(2EC); measured  $2\nu$  two-ec-decay T<sub>1/2</sub> lower limit. The Telescope Germanium Vertical (TGV-2) spectrometer. CONF Moscow,P193,Rukhadze
- 2009DA16 RADIOACTIVITY <sup>64</sup>Zn, <sup>106</sup>Cd, <sup>120</sup>Te(2EC), ( $2\beta^+$ ); <sup>114,116</sup>Cd, <sup>128</sup>Te, <sup>130</sup>Te( $2\beta^-$ ); measured E $\gamma$ , I $\gamma$ ; deduced half-life limits for neutrinoless double-beta decay. Comparison with previous experimental data. JOUR PRVCA 80 025502
- 2009RU07 RADIOACTIVITY <sup>106</sup>Cd(2EC); measured E $\gamma$ , I $\gamma$ ; deduced 2EC-decay T<sub>1/2</sub> limits. TGV-2 spectrometer. JOUR BRSPE 73 741
- <sup>106</sup>Cd 2008RUZZ RADIOACTIVITY <sup>106</sup>Cd(2EC); measured  $2\nu$  two-ec-decay T<sub>1/2</sub> lower limit. The Telescope Germanium Vertical (TGV-2) spectrometer. CONF Moscow,P193,Rukhadze
- 2009DA16 RADIOACTIVITY <sup>64</sup>Zn, <sup>106</sup>Cd, <sup>120</sup>Te(2EC), ( $2\beta^+$ ); <sup>114,116</sup>Cd, <sup>128</sup>Te, <sup>130</sup>Te( $2\beta^-$ ); measured E $\gamma$ , I $\gamma$ ; deduced half-life limits for neutrinoless double-beta decay. Comparison with previous experimental data. JOUR PRVCA 80 025502
- 2009RU07 RADIOACTIVITY <sup>106</sup>Cd(2EC); measured E $\gamma$ , I $\gamma$ ; deduced 2EC-decay T<sub>1/2</sub> limits. TGV-2 spectrometer. JOUR BRSPE 73 741
- <sup>106</sup>In 2009DE20 NUCLEAR REACTIONS <sup>78</sup>Se(<sup>32</sup>S, 3np), E=125 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ ,  $\gamma$ (linear polarization). <sup>106</sup>In; deduced levels, J,  $\pi$ , bands, and configurations. Comparisons with projected deformed Hartree-Fock calculations. JOUR PRVCA 79 067304
- 2009EL08 NUCLEAR REACTIONS <sup>92</sup>Mo(p, X)<sup>85</sup>Nb / <sup>86</sup>Nb / <sup>87</sup>Nb / <sup>88</sup>Nb / <sup>89</sup>Nb / <sup>90</sup>Nb / <sup>91</sup>Nb, E=62 MeV; <sup>106</sup>Cd(p, X)<sup>101</sup>In / <sup>102</sup>In / <sup>103</sup>In / <sup>104</sup>In / <sup>105</sup>In / <sup>106</sup>In / <sup>107</sup>In / <sup>108</sup>In / <sup>109</sup>In, E=62 MeV; measured yields; deduced production  $\sigma$ . Enriched target. JOUR ZAANE 40 1
- <sup>106</sup>Sn 2009EL07 ATOMIC MASSES <sup>104,105,106,107,108</sup>Sn, <sup>106,107,108,109,110</sup>Sb, <sup>108,109</sup>Te, <sup>111</sup>I; Measured atomic masses using JYFLTRAP Penning-trap spectrometer;deduced single-proton separation energy. Comparison with AME2003 evaluation. JOUR PRLTA 102 252501
- <sup>106</sup>Sb 2009EL07 ATOMIC MASSES <sup>104,105,106,107,108</sup>Sn, <sup>106,107,108,109,110</sup>Sb, <sup>108,109</sup>Te, <sup>111</sup>I; Measured atomic masses using JYFLTRAP Penning-trap spectrometer;deduced single-proton separation energy. Comparison with AME2003 evaluation. JOUR PRLTA 102 252501

**A=107**

- <sup>107</sup>Mo 2009G018 RADIOACTIVITY <sup>252</sup>Cf(SF); measured  $\gamma\gamma(\theta)$ . <sup>101</sup>Zr, <sup>103,105,107</sup>Mo, <sup>109,111</sup>Ru; deduced levels, J,  $\pi$ , mixing ratios. Comparison of mixing ratios with predictions of the particle-axial-rotor model for various single-particle states. JOUR PRVCA 80 014318

**A=107 (continued)**

- <sup>107</sup>Tc 2009GU11 RADIOACTIVITY <sup>252</sup>Cf(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>106,107</sup>Tc; deduced levels, J,  $\pi$ , bands, configurations, moments of inertia. <sup>104,105</sup>Mo, <sup>105,106</sup>Tc; systematics of alignments and moments of inertia. JOUR PRVCA 79 054317
- 2009GU20 RADIOACTIVITY <sup>252</sup>Cf(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin.; <sup>107</sup>Tc; deduced levels, J,  $\pi$ , high-spin states, bands. Comparison with g-factor calculations. JOUR CPLEE 26 092502
- <sup>107</sup>Cd 2007IDZY NUCLEAR REACTIONS <sup>96</sup>Zr(<sup>20</sup>Ne, p6n), <sup>96</sup>Zr(<sup>20</sup>Ne,  $\alpha$ 5n), E=130 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\alpha$ -coin,  $\gamma$ p-coin. REPT CNS-REP-76,P13,Ideguchi
- <sup>107</sup>In 2009EL08 NUCLEAR REACTIONS <sup>92</sup>Mo(p, X)<sup>85</sup>Nb / <sup>86</sup>Nb / <sup>87</sup>Nb / <sup>88</sup>Nb / <sup>89</sup>Nb / <sup>90</sup>Nb / <sup>91</sup>Nb, E=62 MeV; <sup>106</sup>Cd(p, X)<sup>101</sup>In / <sup>102</sup>In / <sup>103</sup>In / <sup>104</sup>In / <sup>105</sup>In / <sup>106</sup>In / <sup>107</sup>In / <sup>108</sup>In / <sup>109</sup>In, E=62 MeV; measured yields; deduced production  $\sigma$ . Enriched target. JOUR ZAANE 40 1
- <sup>107</sup>Sn 2009EL07 ATOMIC MASSES <sup>104,105,106,107,108</sup>Sn, <sup>106,107,108,109,110</sup>Sb, <sup>108,109</sup>Te, <sup>111</sup>I; Measured atomic masses using JYFLTRAP Penning-trap spectrometer; deduced single-proton separation energy. Comparison with AME2003 evaluation. JOUR PRLTA 102 252501
- <sup>107</sup>Sb 2009EL07 ATOMIC MASSES <sup>104,105,106,107,108</sup>Sn, <sup>106,107,108,109,110</sup>Sb, <sup>108,109</sup>Te, <sup>111</sup>I; Measured atomic masses using JYFLTRAP Penning-trap spectrometer; deduced single-proton separation energy. Comparison with AME2003 evaluation. JOUR PRLTA 102 252501

**A=108**

- <sup>108</sup>In 2009EL08 NUCLEAR REACTIONS <sup>92</sup>Mo(p, X)<sup>85</sup>Nb / <sup>86</sup>Nb / <sup>87</sup>Nb / <sup>88</sup>Nb / <sup>89</sup>Nb / <sup>90</sup>Nb / <sup>91</sup>Nb, E=62 MeV; <sup>106</sup>Cd(p, X)<sup>101</sup>In / <sup>102</sup>In / <sup>103</sup>In / <sup>104</sup>In / <sup>105</sup>In / <sup>106</sup>In / <sup>107</sup>In / <sup>108</sup>In / <sup>109</sup>In, E=62 MeV; measured yields; deduced production  $\sigma$ . Enriched target. JOUR ZAANE 40 1
- <sup>108</sup>Sn 2009EL07 ATOMIC MASSES <sup>104,105,106,107,108</sup>Sn, <sup>106,107,108,109,110</sup>Sb, <sup>108,109</sup>Te, <sup>111</sup>I; Measured atomic masses using JYFLTRAP Penning-trap spectrometer; deduced single-proton separation energy. Comparison with AME2003 evaluation. JOUR PRLTA 102 252501
- <sup>108</sup>Sb 2009EL07 ATOMIC MASSES <sup>104,105,106,107,108</sup>Sn, <sup>106,107,108,109,110</sup>Sb, <sup>108,109</sup>Te, <sup>111</sup>I; Measured atomic masses using JYFLTRAP Penning-trap spectrometer; deduced single-proton separation energy. Comparison with AME2003 evaluation. JOUR PRLTA 102 252501
- <sup>108</sup>Te 2009EL07 ATOMIC MASSES <sup>104,105,106,107,108</sup>Sn, <sup>106,107,108,109,110</sup>Sb, <sup>108,109</sup>Te, <sup>111</sup>I; Measured atomic masses using JYFLTRAP Penning-trap spectrometer; deduced single-proton separation energy. Comparison with AME2003 evaluation. JOUR PRLTA 102 252501

## A=109

<sup>109</sup> Ru	2009G018	RADIOACTIVITY <sup>252</sup> Cf(SF); measured $\gamma\gamma(\theta)$ . <sup>101</sup> Zr, <sup>103,105,107</sup> Mo, <sup>109,111</sup> Ru; deduced levels, J, $\pi$ , mixing ratios. Comparison of mixing ratios with predictions of the particle-axial-rotor model for various single-particle states. JOUR PRVCA 80 014318
<sup>109</sup> Ag	2007TIZZ	NUCLEAR REACTIONS <sup>96</sup> Zr( <sup>18</sup> C, p4N), E not given; <sup>109</sup> Ag; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin.; deduced level scheme. REPT ATOMKI 2007 Annual,P27,Timar
	2009ZI01	NUCLEAR REACTIONS <sup>109</sup> Ag( <sup>44</sup> Ar, <sup>44</sup> Ar'), E=2.68 MeV / nucleon; <sup>208</sup> Pb( <sup>44</sup> Ar, <sup>44</sup> Ar'), E=3.68 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin, $\gamma$ yields. <sup>44</sup> Ar; deduced levels, B(E2) matrix elements, spectroscopic quadrupole moments. Comparisons with experimental data for neighboring A=42-46 Ar, S and Si nuclides and GCM(GOA), AMPGCM, and Shell model calculations. JOUR PRVCA 80 014317
<sup>109</sup> Cd	2009RA17	RADIOACTIVITY <sup>109</sup> In, <sup>110</sup> Sn(EC) [from Nb( <sup>20</sup> Ne, X), E=150 MeV]; measured E $\gamma$ , I $\gamma$ , T <sub>1/2</sub> in different media and observed media-dependent change in T <sub>1/2</sub> . Discussed observed effect in terms of electron-density calculations. JOUR PYLBB 679 106
<sup>109</sup> In	2007IDZY	NUCLEAR REACTIONS <sup>96</sup> Zr( <sup>20</sup> Ne, p6n), <sup>96</sup> Zr( <sup>20</sup> Ne, $\alpha$ 5n), E=130 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\alpha$ -coin, $\gamma$ p-coin. REPT CNS-REP-76,P13,Ideguchi
	2007ZHZX	NUCLEAR REACTIONS <sup>96</sup> Zr( <sup>20</sup> Ne, p6n), E= $\approx$ 6.5 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin., $\pi\gamma$ -coin., $\alpha\gamma$ -coin; deduced $\sigma$ , high-spin states of <sup>109</sup> In; calculated $\sigma$ using statistical CASCADE code. REPT CNS-REP-76,P19,Zheng
	2009EL08	NUCLEAR REACTIONS <sup>92</sup> Mo(p, X) <sup>85</sup> Nb / <sup>86</sup> Nb / <sup>87</sup> Nb / <sup>88</sup> Nb / <sup>89</sup> Nb / <sup>90</sup> Nb / <sup>91</sup> Nb, E=62 MeV; <sup>106</sup> Cd(p, X) <sup>101</sup> In / <sup>102</sup> In / <sup>103</sup> In / <sup>104</sup> In / <sup>105</sup> In / <sup>106</sup> In / <sup>107</sup> In / <sup>108</sup> In / <sup>109</sup> In, E=62 MeV; measured yields; deduced production $\sigma$ . Enriched target. JOUR ZAANE 40 1
	2009RA17	RADIOACTIVITY <sup>109</sup> In, <sup>110</sup> Sn(EC) [from Nb( <sup>20</sup> Ne, X), E=150 MeV]; measured E $\gamma$ , I $\gamma$ , T <sub>1/2</sub> in different media and observed media-dependent change in T <sub>1/2</sub> . Discussed observed effect in terms of electron-density calculations. JOUR PYLBB 679 106
<sup>109</sup> Sn	2009BA31	NUCLEAR REACTIONS <sup>109</sup> Sn( $\gamma$ , $\gamma$ ), E=23.87 keV; measured Mossbauer absorption spectrum in resonant environment; deduced no effect on T <sub>1/2</sub> value. JOUR BRSPE 73 731
<sup>109</sup> Sb	2009EL07	ATOMIC MASSES <sup>104,105,106,107,108</sup> Sn, <sup>106,107,108,109,110</sup> Sb, <sup>108,109</sup> Te, <sup>111</sup> I; Measured atomic masses using JYFLTRAP Penning-trap spectrometer;deduced single-proton separation energy. Comparison with AME2003 evaluation. JOUR PRLTA 102 252501
<sup>109</sup> Te	2009EL07	ATOMIC MASSES <sup>104,105,106,107,108</sup> Sn, <sup>106,107,108,109,110</sup> Sb, <sup>108,109</sup> Te, <sup>111</sup> I; Measured atomic masses using JYFLTRAP Penning-trap spectrometer;deduced single-proton separation energy. Comparison with AME2003 evaluation. JOUR PRLTA 102 252501

**A=110**

- <sup>110</sup>Cd 2009SU09 NUCLEAR REACTIONS <sup>92</sup>Mo(<sup>56</sup>Fe, 2n2p), E=280 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma(\theta)$ . <sup>144</sup>Dy; deduced levels, J,  $\pi$ , multipolarity, B(M1), B(E2), configurations, magnetic and antimagnetic rotational bands. A=136-146, even-A Ce, Nd, Sm, Gd, Tb, Dy; level systematics. <sup>110</sup>Cd, <sup>144</sup>Dy; discussed comparison of magnetic and antimagnetic rotors. JOUR PRVCA 79 064321
- <sup>110</sup>In 2009RA17 RADIOACTIVITY <sup>109</sup>In, <sup>110</sup>Sn(EC) [from Nb(<sup>20</sup>Ne, X), E=150 MeV]; measured E $\gamma$ , I $\gamma$ , T<sub>1/2</sub> in different media and observed media-dependent change in T<sub>1/2</sub>. Discussed observed effect in terms of electron-density calculations. JOUR PYLBB 679 106
- <sup>110</sup>Sn 2009RA17 RADIOACTIVITY <sup>109</sup>In, <sup>110</sup>Sn(EC) [from Nb(<sup>20</sup>Ne, X), E=150 MeV]; measured E $\gamma$ , I $\gamma$ , T<sub>1/2</sub> in different media and observed media-dependent change in T<sub>1/2</sub>. Discussed observed effect in terms of electron-density calculations. JOUR PYLBB 679 106
- <sup>110</sup>Sb 2009EL07 ATOMIC MASSES <sup>104,105,106,107,108</sup>Sn, <sup>106,107,108,109,110</sup>Sb, <sup>108,109</sup>Te, <sup>111</sup>I; Measured atomic masses using JYFLTRAP Penning-trap spectrometer; deduced single-proton separation energy. Comparison with AME2003 evaluation. JOUR PRLTA 102 252501

**A=111**

- <sup>111</sup>Ru 2009G018 RADIOACTIVITY <sup>252</sup>Cf(SF); measured  $\gamma\gamma(\theta)$ . <sup>101</sup>Zr, <sup>103,105,107</sup>Mo, <sup>109,111</sup>Ru; deduced levels, J,  $\pi$ , mixing ratios. Comparison of mixing ratios with predictions of the particle-axial-rotor model for various single-particle states. JOUR PRVCA 80 014318
- <sup>111</sup>Rh 2009LI25 RADIOACTIVITY <sup>252</sup>Cf(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ . <sup>134</sup>I; deduced levels, J,  $\pi$ , yrast states. <sup>111,112,113</sup>Rh; measured E $\gamma$ ,  $\gamma\gamma$ -coin. Discussed systematics of yrast levels in Iodine nuclides. JOUR PRVCA 79 067303
- <sup>111</sup>I 2009EL07 ATOMIC MASSES <sup>104,105,106,107,108</sup>Sn, <sup>106,107,108,109,110</sup>Sb, <sup>108,109</sup>Te, <sup>111</sup>I; Measured atomic masses using JYFLTRAP Penning-trap spectrometer; deduced single-proton separation energy. Comparison with AME2003 evaluation. JOUR PRLTA 102 252501

**A=112**

- <sup>112</sup>Tc 2009F005 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>238</sup>U, X)<sup>60m</sup>Mn / <sup>78m</sup>Ga / <sup>82m</sup>Ga / <sup>92m</sup>Br / <sup>95m</sup>Rb / <sup>98m</sup>Rb / <sup>92m</sup>Y / <sup>101m</sup>Y / <sup>112m</sup>Tc, E=80 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, isomer half-lives. <sup>60</sup>Mn, <sup>78,82</sup>Ga, <sup>92</sup>Br, <sup>95,98</sup>Rb, <sup>92,101</sup>Y, <sup>112</sup>Tc; deduced levels, J,  $\pi$ . <sup>66m</sup>Cu, <sup>78m</sup>Zn, <sup>88m</sup>Br, <sup>95m</sup>Kr, <sup>96m</sup>Rb, <sup>97m,100m</sup>Sr, <sup>99m</sup>Mo, <sup>121m</sup>Pd, <sup>124m</sup>Sn, <sup>125m</sup>Xe; measured E $\gamma$  and half-lives. <sup>91,92,93</sup>Y; measured E $\gamma$ . JOUR PRVCA 79 064318
- <sup>112</sup>Rh 2009LI25 RADIOACTIVITY <sup>252</sup>Cf(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ . <sup>134</sup>I; deduced levels, J,  $\pi$ , yrast states. <sup>111,112,113</sup>Rh; measured E $\gamma$ ,  $\gamma\gamma$ -coin. Discussed systematics of yrast levels in Iodine nuclides. JOUR PRVCA 79 067303



**A=112 (continued)**

- <sup>112</sup>Sn 2008V0ZX NUCLEAR REACTIONS <sup>112,120</sup>Sn( $\gamma$ ,  $\gamma'$ ), E < 9.5 MeV; measured E $\gamma$ , I $\gamma$ ; deduced B(E1) distribution. <sup>208</sup>Pb(p, p'), E=295 MeV; measured E $p$ , I $p$ ; deduced B(E1) distribution. CONF Cappadocia (Nuclear Physics and Astrophysics),P124,von Neumann-Co
- 2009RA11 ATOMIC MASSES <sup>112</sup>Sn; Measured atomic masses using precision cryogenic Penning-trap spectrometer; Deduced Q-value for 2 $\beta$ -decay. JOUR PRLTA 103 042501

**A=113**

- <sup>113</sup>Rh 2009LI25 RADIOACTIVITY <sup>252</sup>Cf(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ . <sup>134</sup>I; deduced levels, J,  $\pi$ , yrast states. <sup>111,112,113</sup>Rh; measured E $\gamma$ ,  $\gamma\gamma$ -coin. Discussed systematics of yrast levels in Iodine nuclides. JOUR PRVCA 79 067303

**A=114**

- <sup>114</sup>Cd 2009DA16 RADIOACTIVITY <sup>64</sup>Zn, <sup>106</sup>Cd, <sup>120</sup>Te(2EC), (2 $\beta^+$ ); <sup>114,116</sup>Cd, <sup>128</sup>Te, <sup>130</sup>Te(2 $\beta^-$ ); measured E $\gamma$ , I $\gamma$ ; deduced half-life limits for neutrinoless double-beta decay. Comparison with previous experimental data. JOUR PRVCA 80 025502
- 2009K014 NUCLEAR REACTIONS <sup>113</sup>Cd(n,  $\gamma$ ), E not given; measured neutron transmission; deduced resonance parameters. JOUR NIMBE 267 2345
- <sup>114</sup>Sn 2009DA16 RADIOACTIVITY <sup>64</sup>Zn, <sup>106</sup>Cd, <sup>120</sup>Te(2EC), (2 $\beta^+$ ); <sup>114,116</sup>Cd, <sup>128</sup>Te, <sup>130</sup>Te(2 $\beta^-$ ); measured E $\gamma$ , I $\gamma$ ; deduced half-life limits for neutrinoless double-beta decay. Comparison with previous experimental data. JOUR PRVCA 80 025502

**A=115**

No references found

**A=116**

- <sup>116</sup>Cd 2008K0ZV RADIOACTIVITY <sup>48</sup>Ca, <sup>82</sup>Se, <sup>96</sup>Zr, <sup>100</sup>Mo, <sup>116</sup>Cd, <sup>130</sup>Te, <sup>150</sup>Nd(2 $\beta^-$ ); measured 0 $\nu$  2 $\beta^-$ -decay T<sub>1/2</sub> lower limits, 2 $\nu$  2 $\beta^-$ -decay T<sub>1/2</sub>. CONF Moscow,P203,Kochetov
- 2009DA16 RADIOACTIVITY <sup>64</sup>Zn, <sup>106</sup>Cd, <sup>120</sup>Te(2EC), (2 $\beta^+$ ); <sup>114,116</sup>Cd, <sup>128</sup>Te, <sup>130</sup>Te(2 $\beta^-$ ); measured E $\gamma$ , I $\gamma$ ; deduced half-life limits for neutrinoless double-beta decay. Comparison with previous experimental data. JOUR PRVCA 80 025502
- <sup>116</sup>In 2009TA11 NUCLEAR REACTIONS <sup>115</sup>In(n,  $\gamma$ ), E=1.45 eV; measured E $\gamma$ , I $\gamma$ , yields for prompt emissions. JOUR ARISE 67 1711

**A=116 (continued)**

- <sup>116</sup>Sn    2008GUZS    NUCLEAR REACTIONS <sup>118</sup>Sn(p, t), E=24.6 MeV; measured Et, It; deduced  $\sigma$  to individual states, J,  $\pi$ ; calculated using DWBA. REPT MLL 2007 Annual,P9,Guzaaoni
- 2008KOZV    RADIOACTIVITY <sup>48</sup>Ca, <sup>82</sup>Se, <sup>96</sup>Zr, <sup>100</sup>Mo, <sup>116</sup>Cd, <sup>130</sup>Te, <sup>150</sup>Nd( $2\beta^-$ ); measured  $0\nu 2\beta^-$ -decay  $T_{1/2}$  lower limits,  $2\nu 2\beta^-$ -decay  $T_{1/2}$ . CONF Moscow,P203,Kochetov
- 2009DA16    RADIOACTIVITY <sup>64</sup>Zn, <sup>106</sup>Cd, <sup>120</sup>Te(2EC), ( $2\beta^+$ ); <sup>114,116</sup>Cd, <sup>128</sup>Te, <sup>130</sup>Te( $2\beta^-$ ); measured  $E\gamma$ ,  $I\gamma$ ; deduced half-life limits for neutrinoless double-beta decay. Comparison with previous experimental data. JOUR PRVCA 80 025502
- <sup>116</sup>Sb    2009YA08    NUCLEAR REACTIONS <sup>113</sup>In( $\alpha$ ,  $\gamma$ ), ( $\alpha$ , n)<sup>116</sup>Sb / <sup>116m</sup>Sb / <sup>117</sup>Sb, E(cm)=8.66-13.64 MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\sigma$ , astrophysical S factors. Comparison with statistical model calculations. JOUR PRVCA 79 065801

**A=117**

- <sup>117</sup>In    2008GUZT    NUCLEAR REACTIONS <sup>120,121</sup>Sn(p,  $\alpha$ ), E=23 MeV; measured  $E\alpha$ ,  $I\alpha$  using polarized protons; deduced  $\sigma(\theta)$ ,  $A_y(\theta)$ . REPT MLL 2007 Annual,P8,Guzaaoni
- <sup>117</sup>Sb    2007YAZQ    NUCLEAR REACTIONS <sup>113</sup>In( $\alpha$ ,  $\gamma$ ), E = 8-12 MeV; measured induced activity,  $E\gamma$ ,  $I\gamma$ ; deduced  $\sigma$ . REPT ATOMKI 2007 Annual,P28,Yalcin
- 2009YA08    NUCLEAR REACTIONS <sup>113</sup>In( $\alpha$ ,  $\gamma$ ), ( $\alpha$ , n)<sup>116</sup>Sb / <sup>116m</sup>Sb / <sup>117</sup>Sb, E(cm)=8.66-13.64 MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\sigma$ , astrophysical S factors. Comparison with statistical model calculations. JOUR PRVCA 79 065801

**A=118**

- <sup>118</sup>In    2008GUZT    NUCLEAR REACTIONS <sup>120,121</sup>Sn(p,  $\alpha$ ), E=23 MeV; measured  $E\alpha$ ,  $I\alpha$  using polarized protons; deduced  $\sigma(\theta)$ ,  $A_y(\theta)$ . REPT MLL 2007 Annual,P8,Guzaaoni

**A=119**

- <sup>119</sup>Te    2008PAZU    NUCLEAR REACTIONS <sup>120,130</sup>Te( $\gamma$ , n), E = 12-35 MeV; measured  $E\gamma$ ,  $I\gamma$ . <sup>119,129</sup>Te; deduced isomeric yield ratios. Betatron, activation method, Ge(Li) detector. CONF Moscow,P154,Palvanov

**A=120**

- <sup>120</sup>Sn 2008V0ZX NUCLEAR REACTIONS <sup>112,120</sup>Sn( $\gamma$ ,  $\gamma'$ ), E < 9.5 MeV; measured E $\gamma$ , I $\gamma$ ; deduced B(E1) distribution. <sup>208</sup>Pb(p, p'), E=295 MeV; measured Ep, Ip; deduced B(E1) distribution. CONF Cappadocia (Nuclear Physics and Astrophysics),P124,von Neumann-Co
- 2009DA16 RADIOACTIVITY <sup>64</sup>Zn, <sup>106</sup>Cd, <sup>120</sup>Te(2EC), ( $2\beta^+$ ); <sup>114,116</sup>Cd, <sup>128</sup>Te, <sup>130</sup>Te( $2\beta^-$ ); measured E $\gamma$ , I $\gamma$ ; deduced half-life limits for neutrinoless double-beta decay. Comparison with previous experimental data. JOUR PRVCA 80 025502
- 2009SC19 ATOMIC MASSES <sup>128,129,130,131,132</sup>Xe, <sup>120,128,130</sup>Te, <sup>120</sup>Sn; measured mass differences of <sup>120</sup>Te-<sup>120</sup>Sn, <sup>128</sup>Te-<sup>128</sup>Xe, <sup>130</sup>Te-<sup>130</sup>Xe and <sup>132</sup>Xe-<sup>129</sup>Xe pairs using Penning Trap mass spectrometer. JOUR PRVCA 80 025501
- 2009SC19 RADIOACTIVITY <sup>120</sup>Te( $2\beta^+$ ); <sup>128,130</sup>Te( $2\beta^-$ ); measured parent-daughter mass differences by Penning-trap spectrometer; deduced Q values. JOUR PRVCA 80 025501
- <sup>120</sup>Te 2009DA16 RADIOACTIVITY <sup>64</sup>Zn, <sup>106</sup>Cd, <sup>120</sup>Te(2EC), ( $2\beta^+$ ); <sup>114,116</sup>Cd, <sup>128</sup>Te, <sup>130</sup>Te( $2\beta^-$ ); measured E $\gamma$ , I $\gamma$ ; deduced half-life limits for neutrinoless double-beta decay. Comparison with previous experimental data. JOUR PRVCA 80 025502
- 2009SC19 ATOMIC MASSES <sup>128,129,130,131,132</sup>Xe, <sup>120,128,130</sup>Te, <sup>120</sup>Sn; measured mass differences of <sup>120</sup>Te-<sup>120</sup>Sn, <sup>128</sup>Te-<sup>128</sup>Xe, <sup>130</sup>Te-<sup>130</sup>Xe and <sup>132</sup>Xe-<sup>129</sup>Xe pairs using Penning Trap mass spectrometer. JOUR PRVCA 80 025501
- 2009SC19 RADIOACTIVITY <sup>120</sup>Te( $2\beta^+$ ); <sup>128,130</sup>Te( $2\beta^-$ ); measured parent-daughter mass differences by Penning-trap spectrometer; deduced Q values. JOUR PRVCA 80 025501

**A=121**

- <sup>121</sup>Pd 2009F005 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>238</sup>U, X)<sup>60m</sup>Mn / <sup>78m</sup>Ga / <sup>82m</sup>Ga / <sup>92m</sup>Br / <sup>95m</sup>Rb / <sup>98m</sup>Rb / <sup>92m</sup>Y / <sup>101m</sup>Y / <sup>112m</sup>Tc, E=80 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, isomer half-lives. <sup>60</sup>Mn, <sup>78,82</sup>Ga, <sup>92</sup>Br, <sup>95,98</sup>Rb, <sup>92,101</sup>Y, <sup>112</sup>Tc; deduced levels, J,  $\pi$ . <sup>66m</sup>Cu, <sup>78m</sup>Zn, <sup>88m</sup>Br, <sup>95m</sup>Kr, <sup>96m</sup>Rb, <sup>97m,100m</sup>Sr, <sup>99m</sup>Mo, <sup>121m</sup>Pd, <sup>124m</sup>Sn, <sup>125m</sup>Xe; measured E $\gamma$  and half-lives. <sup>91,92,93</sup>Y; measured E $\gamma$ . JOUR PRVCA 79 064318
- <sup>121</sup>Xe 2007BEZQ NUCLEAR REACTIONS <sup>64</sup>Ni(<sup>64</sup>Ni,  $\alpha$ 3n), E not given; <sup>121</sup>Xe; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -,  $\gamma\gamma\gamma\mp$ coin.; deduced level scheme. Comparison with Nilsson-Strutinsky calculations. REPT ATOMKI 2007 Annual,P29,Berek

**A=122**

- <sup>122</sup>Sn 2008GUZR NUCLEAR REACTIONS <sup>124</sup>Sn(p, t), E=25 MeV; measured Et, It; deduced J,  $\pi$ ,  $\sigma$ (J,  $\pi$ ). REPT MLL 2007 Annual,P12,Guazzoni

**A=122 (continued)**

- <sup>122</sup>Te 2009IV02 RADIOACTIVITY <sup>140,142</sup>Pm, <sup>122</sup>I(EC), ( $\beta^+$ ); measured number of daughter ions, time modulation; deduced interference of two massive neutrino eigenstates. JOUR PRLTA 103 062502
- <sup>122</sup>I 2009IV02 RADIOACTIVITY <sup>140,142</sup>Pm, <sup>122</sup>I(EC), ( $\beta^+$ ); measured number of daughter ions, time modulation; deduced interference of two massive neutrino eigenstates. JOUR PRLTA 103 062502

**A=123**

No references found

**A=124**

- <sup>124</sup>Sn 2009F005 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>238</sup>U, X)<sup>60m</sup>Mn / <sup>78m</sup>Ga / <sup>82m</sup>Ga / <sup>92m</sup>Br / <sup>95m</sup>Rb / <sup>98m</sup>Rb / <sup>92m</sup>Y / <sup>101m</sup>Y / <sup>112m</sup>Tc, E=80 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, isomer half-lives. <sup>60</sup>Mn, <sup>78,82</sup>Ga, <sup>92</sup>Br, <sup>95,98</sup>Rb, <sup>92,101</sup>Y, <sup>112</sup>Tc; deduced levels, J,  $\pi$ . <sup>66m</sup>Cu, <sup>78m</sup>Zn, <sup>88m</sup>Br, <sup>95m</sup>Kr, <sup>96m</sup>Rb, <sup>97m,100m</sup>Sr, <sup>99m</sup>Mo, <sup>121m</sup>Pd, <sup>124m</sup>Sn, <sup>125m</sup>Xe; measured E $\gamma$  and half-lives. <sup>91,92,93</sup>Y; measured E $\gamma$ . JOUR PRVCA 79 064318
- 2009HW02 RADIOACTIVITY <sup>124</sup>Sn( $2\beta^-$ ); measured summed electron energy spectrum; deduced  $0\nu\beta\beta$ -decay  $T_{1/2}$  lower limits. JOUR APHYE 31 412
- <sup>124</sup>Te 2009HW02 RADIOACTIVITY <sup>124</sup>Sn( $2\beta^-$ ); measured summed electron energy spectrum; deduced  $0\nu\beta\beta$ -decay  $T_{1/2}$  lower limits. JOUR APHYE 31 412

**A=125**

- <sup>125</sup>Xe 2009F005 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>238</sup>U, X)<sup>60m</sup>Mn / <sup>78m</sup>Ga / <sup>82m</sup>Ga / <sup>92m</sup>Br / <sup>95m</sup>Rb / <sup>98m</sup>Rb / <sup>92m</sup>Y / <sup>101m</sup>Y / <sup>112m</sup>Tc, E=80 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, isomer half-lives. <sup>60</sup>Mn, <sup>78,82</sup>Ga, <sup>92</sup>Br, <sup>95,98</sup>Rb, <sup>92,101</sup>Y, <sup>112</sup>Tc; deduced levels, J,  $\pi$ . <sup>66m</sup>Cu, <sup>78m</sup>Zn, <sup>88m</sup>Br, <sup>95m</sup>Kr, <sup>96m</sup>Rb, <sup>97m,100m</sup>Sr, <sup>99m</sup>Mo, <sup>121m</sup>Pd, <sup>124m</sup>Sn, <sup>125m</sup>Xe; measured E $\gamma$  and half-lives. <sup>91,92,93</sup>Y; measured E $\gamma$ . JOUR PRVCA 79 064318

**A=126**

- <sup>126</sup>Cd 2009JU02 NUCLEAR REACTIONS <sup>136</sup>Xe(Be, X), <sup>238</sup>U(Be, X), E=650, 750 MeV / nucleon, <sup>126,128,130</sup>Cd; measured E $\gamma$ , I $\gamma$ ; deduced J $\pi$ . Beyond mean field calculations, Gogny force. JOUR APOBB 40 427

**A=127**

- <sup>127</sup>Cd 2009AR04 RADIOACTIVITY <sup>127,129,131</sup>Cd( $\beta^-$ ); measured  $I_\gamma$ ,  $E_\gamma$ ; deduced  $J\pi$ , level scheme. Comparison with calculations. JOUR APOBB 40 437
- <sup>127</sup>In 2009AR04 RADIOACTIVITY <sup>127,129,131</sup>Cd( $\beta^-$ ); measured  $I_\gamma$ ,  $E_\gamma$ ; deduced  $J\pi$ , level scheme. Comparison with calculations. JOUR APOBB 40 437
- <sup>127</sup>Pm 2008STZX NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>76</sup>Kr, X), E=4.34 MeV / nucleon; <sup>130</sup>Nd, <sup>131</sup>Pm, <sup>129</sup>Pm, <sup>127</sup>Pm, <sup>128</sup>Nd; measured  $E_\gamma$ ,  $I_\gamma$ ,  $\gamma\gamma$ -coin. CONF Cappadocia (Nuclear Physics and Astrophysics),P166,Stezowski

**A=128**

- <sup>128</sup>Cd 2009JU02 NUCLEAR REACTIONS <sup>136</sup>Xe(Be, X), <sup>238</sup>U(Be, X), E=650, 750 MeV / nucleon; <sup>126,128,130</sup>Cd; measured  $E_\gamma$ ,  $I_\gamma$ ; deduced  $J\pi$ . Beyond mean field calculations, Gogny force. JOUR APOBB 40 427
- <sup>128</sup>Te 2009DA16 RADIOACTIVITY <sup>64</sup>Zn, <sup>106</sup>Cd, <sup>120</sup>Te(2EC), ( $2\beta^+$ ); <sup>114,116</sup>Cd, <sup>128</sup>Te, <sup>130</sup>Te( $2\beta^-$ ); measured  $E_\gamma$ ,  $I_\gamma$ ; deduced half-life limits for neutrinoless double-beta decay. Comparison with previous experimental data. JOUR PRVCA 80 025502
- 2009SC19 ATOMIC MASSES <sup>128,129,130,131,132</sup>Xe, <sup>120,128,130</sup>Te, <sup>120</sup>Sn; measured mass differences of <sup>120</sup>Te-<sup>120</sup>Sn, <sup>128</sup>Te-<sup>128</sup>Xe, <sup>130</sup>Te-<sup>130</sup>Xe and <sup>132</sup>Xe-<sup>129</sup>Xe pairs using Penning Trap mass spectrometer. JOUR PRVCA 80 025501
- 2009SC19 RADIOACTIVITY <sup>120</sup>Te( $2\beta^+$ ); <sup>128,130</sup>Te( $2\beta^-$ ); measured parent-daughter mass differences by Penning-trap spectrometer; deduced Q values. JOUR PRVCA 80 025501
- <sup>128</sup>Xe 2009DA16 RADIOACTIVITY <sup>64</sup>Zn, <sup>106</sup>Cd, <sup>120</sup>Te(2EC), ( $2\beta^+$ ); <sup>114,116</sup>Cd, <sup>128</sup>Te, <sup>130</sup>Te( $2\beta^-$ ); measured  $E_\gamma$ ,  $I_\gamma$ ; deduced half-life limits for neutrinoless double-beta decay. Comparison with previous experimental data. JOUR PRVCA 80 025502
- 2009SC19 ATOMIC MASSES <sup>128,129,130,131,132</sup>Xe, <sup>120,128,130</sup>Te, <sup>120</sup>Sn; measured mass differences of <sup>120</sup>Te-<sup>120</sup>Sn, <sup>128</sup>Te-<sup>128</sup>Xe, <sup>130</sup>Te-<sup>130</sup>Xe and <sup>132</sup>Xe-<sup>129</sup>Xe pairs using Penning Trap mass spectrometer. JOUR PRVCA 80 025501
- 2009SC19 RADIOACTIVITY <sup>120</sup>Te( $2\beta^+$ ); <sup>128,130</sup>Te( $2\beta^-$ ); measured parent-daughter mass differences by Penning-trap spectrometer; deduced Q values. JOUR PRVCA 80 025501
- <sup>128</sup>Ba 2008XU09 RADIOACTIVITY <sup>153</sup>Er, <sup>157</sup>Yb, <sup>209</sup>Fr, <sup>128</sup>Ce, <sup>130</sup>Ce, <sup>128</sup>Pr, <sup>130</sup>Pm, <sup>140</sup>Tb( $\beta^+$ EC); measured x-rays,  $E_\gamma$ ,  $I_\gamma$ ,  $x\gamma$ -coin.,  $x\gamma\gamma$ -coin.; deduced J,  $\pi$ , level energies. JOUR IMPEE 17 S01 1
- 2009PA25 NUCLEAR REACTIONS <sup>130</sup>Ba(p, t), E=25 MeV; measured triton spectra,  $\sigma(\theta)$ . <sup>128</sup>Ba; deduced levels, J,  $\pi$ . Comparison of excitation energies and  $\gamma$ -ray transition probabilities with IBA model calculations. JOUR PRVCA 79 064323
- <sup>128</sup>La 2008XU09 RADIOACTIVITY <sup>153</sup>Er, <sup>157</sup>Yb, <sup>209</sup>Fr, <sup>128</sup>Ce, <sup>130</sup>Ce, <sup>128</sup>Pr, <sup>130</sup>Pm, <sup>140</sup>Tb( $\beta^+$ EC); measured x-rays,  $E_\gamma$ ,  $I_\gamma$ ,  $x\gamma$ -coin.,  $x\gamma\gamma$ -coin.; deduced J,  $\pi$ , level energies. JOUR IMPEE 17 S01 1
- <sup>128</sup>Ce 2008XU09 RADIOACTIVITY <sup>153</sup>Er, <sup>157</sup>Yb, <sup>209</sup>Fr, <sup>128</sup>Ce, <sup>130</sup>Ce, <sup>128</sup>Pr, <sup>130</sup>Pm, <sup>140</sup>Tb( $\beta^+$ EC); measured x-rays,  $E_\gamma$ ,  $I_\gamma$ ,  $x\gamma$ -coin.,  $x\gamma\gamma$ -coin.; deduced J,  $\pi$ , level energies. JOUR IMPEE 17 S01 1

**A=128 (continued)**

- <sup>128</sup>Pr 2008XU09 RADIOACTIVITY <sup>153</sup>Er, <sup>157</sup>Yb, <sup>209</sup>Fr, <sup>128</sup>Ce, <sup>130</sup>Ce, <sup>128</sup>Pr, <sup>130</sup>Pm, <sup>140</sup>Tb( $\beta^+$ EC); measured x-rays, E $\gamma$ , I $\gamma$ , x $\gamma$ -coin., x $\gamma\gamma$ -coin.; deduced J,  $\pi$ , level energies. JOUR IMPEE 17 S01 1
- <sup>128</sup>Nd 2008STZX NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>76</sup>Kr, X), E=4.34 MeV / nucleon; <sup>130</sup>Nd, <sup>131</sup>Pm, <sup>129</sup>Pm, <sup>127</sup>Pm, <sup>128</sup>Nd; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. CONF Cappadocia (Nuclear Physics and Astrophysics),P166,Stezowski

**A=129**

- <sup>129</sup>Cd 2009AR04 RADIOACTIVITY <sup>127,129,131</sup>Cd( $\beta^-$ ); measured I $\gamma$ , E $\gamma$ ; deduced J $\pi$ , level scheme. Comparison with calculations. JOUR APOBB 40 437
- <sup>129</sup>In 2009AR04 RADIOACTIVITY <sup>127,129,131</sup>Cd( $\beta^-$ ); measured I $\gamma$ , E $\gamma$ ; deduced J $\pi$ , level scheme. Comparison with calculations. JOUR APOBB 40 437
- <sup>129</sup>Te 2008PAZU NUCLEAR REACTIONS <sup>120,130</sup>Te( $\gamma$ , n), E = 12-35 MeV; measured E $\gamma$ , I $\gamma$ . <sup>119,129</sup>Te; deduced isomeric yield ratios. Betatron, activation method, Ge(Li) detector. CONF Moscow,P154,Palvanov
- <sup>129</sup>Xe 2009SC19 ATOMIC MASSES <sup>128,129,130,131,132</sup>Xe, <sup>120,128,130</sup>Te, <sup>120</sup>Sn; measured mass differences of <sup>120</sup>Te-<sup>120</sup>Sn, <sup>128</sup>Te-<sup>128</sup>Xe, <sup>130</sup>Te-<sup>130</sup>Xe and <sup>132</sup>Xe-<sup>129</sup>Xe pairs using Penning Trap mass spectrometer. JOUR PRVCA 80 025501
- <sup>129</sup>Cs 2009ZH20 NUCLEAR REACTIONS <sup>122</sup>Sn(<sup>11</sup>B, 4n), E=55-60 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin.; deduced band structure. Comparison with cranked shell-model calculations. JOUR CPLEE 26 092301
- <sup>129</sup>Pm 2008STZX NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>76</sup>Kr, X), E=4.34 MeV / nucleon; <sup>130</sup>Nd, <sup>131</sup>Pm, <sup>129</sup>Pm, <sup>127</sup>Pm, <sup>128</sup>Nd; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. CONF Cappadocia (Nuclear Physics and Astrophysics),P166,Stezowski

**A=130**

- <sup>130</sup>Cd 2009JU02 NUCLEAR REACTIONS <sup>136</sup>Xe(Be, X), <sup>238</sup>U(Be, X), E=650, 750 MeV / nucleon; <sup>126,128,130</sup>Cd; measured E $\gamma$ , I $\gamma$ ; deduced J $\pi$ . Beyond mean field calculations, Gogny force. JOUR APOBB 40 427
- <sup>130</sup>Te 2008K0ZV RADIOACTIVITY <sup>48</sup>Ca, <sup>82</sup>Se, <sup>96</sup>Zr, <sup>100</sup>Mo, <sup>116</sup>Cd, <sup>130</sup>Te, <sup>150</sup>Nd( $2\beta^-$ ); measured  $0\nu$   $2\beta^-$ -decay T<sub>1/2</sub> lower limits,  $2\nu$   $2\beta^-$ -decay T<sub>1/2</sub>. CONF Moscow,P203,Kochetov
- 2009DA16 RADIOACTIVITY <sup>64</sup>Zn, <sup>106</sup>Cd, <sup>120</sup>Te(2EC), ( $2\beta^+$ ); <sup>114,116</sup>Cd, <sup>128</sup>Te, <sup>130</sup>Te( $2\beta^-$ ); measured E $\gamma$ , I $\gamma$ ; deduced half-life limits for neutrinoless double-beta decay. Comparison with previous experimental data. JOUR PRVCA 80 025502
- 2009SC19 ATOMIC MASSES <sup>128,129,130,131,132</sup>Xe, <sup>120,128,130</sup>Te, <sup>120</sup>Sn; measured mass differences of <sup>120</sup>Te-<sup>120</sup>Sn, <sup>128</sup>Te-<sup>128</sup>Xe, <sup>130</sup>Te-<sup>130</sup>Xe and <sup>132</sup>Xe-<sup>129</sup>Xe pairs using Penning Trap mass spectrometer. JOUR PRVCA 80 025501
- 2009SC19 RADIOACTIVITY <sup>120</sup>Te( $2\beta^+$ ); <sup>128,130</sup>Te( $2\beta^-$ ); measured parent-daughter mass differences by Penning-trap spectrometer; deduced Q values. JOUR PRVCA 80 025501

**A=130 (continued)**

- <sup>130</sup>Xe 2008K0ZV RADIOACTIVITY <sup>48</sup>Ca, <sup>82</sup>Se, <sup>96</sup>Zr, <sup>100</sup>Mo, <sup>116</sup>Cd, <sup>130</sup>Te, <sup>150</sup>Nd( $2\beta^-$ ); measured  $0\nu 2\beta^-$ -decay  $T_{1/2}$  lower limits,  $2\nu 2\beta^-$ -decay  $T_{1/2}$ . CONF Moscow,P203,Kochetov
- 2009DA16 RADIOACTIVITY <sup>64</sup>Zn, <sup>106</sup>Cd, <sup>120</sup>Te(2EC), ( $2\beta^+$ ); <sup>114,116</sup>Cd, <sup>128</sup>Te, <sup>130</sup>Te( $2\beta^-$ ); measured  $E\gamma$ ,  $I\gamma$ ; deduced half-life limits for neutrinoless double-beta decay. Comparison with previous experimental data. JOUR PRVCA 80 025502
- 2009SC19 ATOMIC MASSES <sup>128,129,130,131,132</sup>Xe, <sup>120,128,130</sup>Te, <sup>120</sup>Sn; measured mass differences of <sup>120</sup>Te-<sup>120</sup>Sn, <sup>128</sup>Te-<sup>128</sup>Xe, <sup>130</sup>Te-<sup>130</sup>Xe and <sup>132</sup>Xe-<sup>129</sup>Xe pairs using Penning Trap mass spectrometer. JOUR PRVCA 80 025501
- 2009SC19 RADIOACTIVITY <sup>120</sup>Te( $2\beta^+$ ); <sup>128,130</sup>Te( $2\beta^-$ ); measured parent-daughter mass differences by Penning-trap spectrometer; deduced Q values. JOUR PRVCA 80 025501
- <sup>130</sup>Ba 2008SUZU NUCLEAR REACTIONS <sup>132</sup>Ba(p, t), E=25 MeV; measured Et, It; deduced J,  $\pi$ ,  $\sigma(\theta, J, \pi)$ . REPT MLL 2007 Annual,P13,Suliman
- 2008XU09 RADIOACTIVITY <sup>153</sup>Er, <sup>157</sup>Yb, <sup>209</sup>Fr, <sup>128</sup>Ce, <sup>130</sup>Ce, <sup>128</sup>Pr, <sup>130</sup>Pm, <sup>140</sup>Tb( $\beta^+$ EC); measured x-rays,  $E\gamma$ ,  $I\gamma$ ,  $x\gamma$ -coin.,  $x\gamma\gamma$ -coin.; deduced J,  $\pi$ , level energies. JOUR IMPEE 17 S01 1
- <sup>130</sup>Ce 2008XU09 RADIOACTIVITY <sup>153</sup>Er, <sup>157</sup>Yb, <sup>209</sup>Fr, <sup>128</sup>Ce, <sup>130</sup>Ce, <sup>128</sup>Pr, <sup>130</sup>Pm, <sup>140</sup>Tb( $\beta^+$ EC); measured x-rays,  $E\gamma$ ,  $I\gamma$ ,  $x\gamma$ -coin.,  $x\gamma\gamma$ -coin.; deduced J,  $\pi$ , level energies. JOUR IMPEE 17 S01 1
- <sup>130</sup>Pr 2008XU09 RADIOACTIVITY <sup>153</sup>Er, <sup>157</sup>Yb, <sup>209</sup>Fr, <sup>128</sup>Ce, <sup>130</sup>Ce, <sup>128</sup>Pr, <sup>130</sup>Pm, <sup>140</sup>Tb( $\beta^+$ EC); measured x-rays,  $E\gamma$ ,  $I\gamma$ ,  $x\gamma$ -coin.,  $x\gamma\gamma$ -coin.; deduced J,  $\pi$ , level energies. JOUR IMPEE 17 S01 1
- <sup>130</sup>Nd 2008STZX NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>76</sup>Kr, X), E=4.34 MeV / nucleon; <sup>130</sup>Nd, <sup>131</sup>Pm, <sup>129</sup>Pm, <sup>127</sup>Pm, <sup>128</sup>Nd; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin. CONF Cappadocia (Nuclear Physics and Astrophysics),P166,Stezowski
- <sup>130</sup>Pm 2008XU09 RADIOACTIVITY <sup>153</sup>Er, <sup>157</sup>Yb, <sup>209</sup>Fr, <sup>128</sup>Ce, <sup>130</sup>Ce, <sup>128</sup>Pr, <sup>130</sup>Pm, <sup>140</sup>Tb( $\beta^+$ EC); measured x-rays,  $E\gamma$ ,  $I\gamma$ ,  $x\gamma$ -coin.,  $x\gamma\gamma$ -coin.; deduced J,  $\pi$ , level energies. JOUR IMPEE 17 S01 1

**A=131**

- <sup>131</sup>Cd 2009AR04 RADIOACTIVITY <sup>127,129,131</sup>Cd( $\beta^-$ ); measured  $I\gamma$ ,  $E\gamma$ ; deduced J $\pi$ , level scheme. Comparison with calculations. JOUR APOBB 40 437
- <sup>131</sup>In 2009AR04 RADIOACTIVITY <sup>127,129,131</sup>Cd( $\beta^-$ ); measured  $I\gamma$ ,  $E\gamma$ ; deduced J $\pi$ , level scheme. Comparison with calculations. JOUR APOBB 40 437
- <sup>131</sup>I 2009WA11 NUCLEAR REACTIONS <sup>176</sup>Yb, <sup>176</sup>Lu, <sup>186</sup>W, <sup>192</sup>Os(<sup>136</sup>Xe, X)<sup>131</sup>I / <sup>133</sup>I, E=820-840 MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , and isomer half-lives. <sup>131,133</sup>I; deduced levels, J,  $\pi$ , mixing ratios, conversion coefficients, and multipolarities. Z=50-53, N=78-80; systematics of B(E2) rates for isomer decays. Comparison with shell-model calculations. JOUR PRVCA 79 064311
- <sup>131</sup>Xe 2009SC19 ATOMIC MASSES <sup>128,129,130,131,132</sup>Xe, <sup>120,128,130</sup>Te, <sup>120</sup>Sn; measured mass differences of <sup>120</sup>Te-<sup>120</sup>Sn, <sup>128</sup>Te-<sup>128</sup>Xe, <sup>130</sup>Te-<sup>130</sup>Xe and <sup>132</sup>Xe-<sup>129</sup>Xe pairs using Penning Trap mass spectrometer. JOUR PRVCA 80 025501

**A=131 (continued)**

- <sup>131</sup>Cs 2009TA19 NUCLEAR REACTIONS <sup>131</sup>Xe(p, n), E < 35 MeV; measured activation x-rays; deduced excitation functions for production of <sup>131</sup>Cs. Comparison with ALICE-IPPE and EMPIRE-II codes. JOUR ARISE 67 1751
- <sup>131</sup>Ba 2008SUZT NUCLEAR REACTIONS <sup>132</sup>Ba(d, p), <sup>132</sup>Ba(d, t), E=24 MeV; measured E<sub>p</sub>, I<sub>p</sub>, E<sub>t</sub>, I<sub>t</sub>; deduced  $\sigma(\theta, J, \pi)$ . REPT MLL 2007 Annual,P14,Suliman
- <sup>131</sup>Pm 2008STZX NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>76</sup>Kr, X), E=4.34 MeV / nucleon; <sup>130</sup>Nd, <sup>131</sup>Pm, <sup>129</sup>Pm, <sup>127</sup>Pm, <sup>128</sup>Nd; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. CONF Cappadocia (Nuclear Physics and Astrophysics),P166,Stezowski

**A=132**

- <sup>132</sup>Sb 2008VIZY NUCLEAR REACTIONS <sup>232</sup>Th, <sup>238</sup>U( $\gamma$ , f), E=8.5 MeV; measured E $\gamma$ , I $\gamma$ ; <sup>84</sup>Br, <sup>132</sup>Sb, <sup>133</sup>Te, <sup>135</sup>Xe; deduced isomer yield ratios. Microtron, activation method. CONF Moscow,P134,Vishnevsky
- 2009VI03 NUCLEAR REACTIONS <sup>232</sup>Th, <sup>238</sup>U( $\gamma$ , F)<sup>84</sup>Br / <sup>132</sup>Sb / <sup>133</sup>Te / <sup>135</sup>Xe, E<8.5 MeV; measured E $\gamma$ , I $\gamma$ ; deduced mean angular momenta of fission fragments, isomeric yield ratios. JOUR BRSPE 73 733
- <sup>132</sup>Xe 2009SC19 ATOMIC MASSES <sup>128,129,130,131,132</sup>Xe, <sup>120,128,130</sup>Te, <sup>120</sup>Sn; measured mass differences of <sup>120</sup>Te-<sup>120</sup>Sn, <sup>128</sup>Te-<sup>128</sup>Xe, <sup>130</sup>Te-<sup>130</sup>Xe and <sup>132</sup>Xe-<sup>129</sup>Xe pairs using Penning Trap mass spectrometer. JOUR PRVCA 80 025501
- <sup>132</sup>La 2007TIZY NUCLEAR REACTIONS <sup>100</sup>Mo(<sup>36</sup>S, p3N), E=160 MeV; <sup>132</sup>La; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma\gamma$ -coin.; deduced level scheme. REPT ATOMKI 2007 Annual,P30,Timar

**A=133**

- <sup>133</sup>Te 2008VIZY NUCLEAR REACTIONS <sup>232</sup>Th, <sup>238</sup>U( $\gamma$ , f), E=8.5 MeV; measured E $\gamma$ , I $\gamma$ ; <sup>84</sup>Br, <sup>132</sup>Sb, <sup>133</sup>Te, <sup>135</sup>Xe; deduced isomer yield ratios. Microtron, activation method. CONF Moscow,P134,Vishnevsky
- 2009VI03 NUCLEAR REACTIONS <sup>232</sup>Th, <sup>238</sup>U( $\gamma$ , F)<sup>84</sup>Br / <sup>132</sup>Sb / <sup>133</sup>Te / <sup>135</sup>Xe, E<8.5 MeV; measured E $\gamma$ , I $\gamma$ ; deduced mean angular momenta of fission fragments, isomeric yield ratios. JOUR BRSPE 73 733
- <sup>133</sup>I 2009WA11 NUCLEAR REACTIONS <sup>176</sup>Yb, <sup>176</sup>Lu, <sup>186</sup>W, <sup>192</sup>Os(<sup>136</sup>Xe, X)<sup>131</sup>I / <sup>133</sup>I, E=820-840 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , and isomer half-lives. <sup>131,133</sup>I; deduced levels, J,  $\pi$ , mixing ratios, conversion coefficients, and multipolarities. Z=50-53, N=78-80; systematics of B(E2) rates for isomer decays. Comparison with shell-model calculations. JOUR PRVCA 79 064311
- <sup>133</sup>Ba 2008SUZT NUCLEAR REACTIONS <sup>132</sup>Ba(d, p), <sup>132</sup>Ba(d, t), E=24 MeV; measured E<sub>p</sub>, I<sub>p</sub>, E<sub>t</sub>, I<sub>t</sub>; deduced  $\sigma(\theta, J, \pi)$ . REPT MLL 2007 Annual,P14,Suliman



**A=134**

- <sup>134</sup>I      2009LI25      RADIOACTIVITY <sup>252</sup>Cf(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ . <sup>134</sup>I; deduced levels, J,  $\pi$ , yrast states. <sup>111,112,113</sup>Rh; measured E $\gamma$ ,  $\gamma\gamma$ -coin. Discussed systematics of yrast levels in Iodine nuclides. JOUR PRVCA 79 067303
- 2009MA23      NUCLEAR REACTIONS <sup>96</sup>Zr(<sup>124</sup>Sn, X), <sup>136</sup>Xe(<sup>208</sup>Pb, X), E=500, 930 MeV; <sup>136</sup>Cs, <sup>134</sup>I; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. JOUR APOBB 40 489
- <sup>134</sup>Xe      2009AH01      NUCLEAR REACTIONS <sup>12</sup>C(<sup>134</sup>Xe, <sup>134</sup>Xe'), E=435 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin using DSA technique and the Gammasphere array. <sup>134</sup>Xe; deduced levels, J,  $\pi$ ,  $\delta$ , B(E2), B(M1), related properties. Systematics of N=80, 82 isotones discussed. JOUR PYLBB 679 19
- <sup>134</sup>Pm      2009CU02      NUCLEAR REACTIONS <sup>92</sup>Mo(<sup>54</sup>Fe, n3p2 $\alpha$ ), E=305, 315 MeV; measured E $\gamma$ , I $\gamma$ , (recoil) $\gamma$ -,  $\gamma\gamma$ -coin, half-life, prompt and delayed  $\gamma$  rays. <sup>134</sup>Pm; deduced levels, J,  $\pi$ , isomer, configurations. Recoil-isomer tagging method. E1 transition strength systematics of even-A (A=126-148) Te, Pm, Eu, Tb, Ho and Dy nuclei. JOUR PRVCA 80 024303

**A=135**

- <sup>135</sup>Xe      2008VIZY      NUCLEAR REACTIONS <sup>232</sup>Th, <sup>238</sup>U( $\gamma$ , f), E=8.5 MeV; measured E $\gamma$ , I $\gamma$ ; <sup>84</sup>Br, <sup>132</sup>Sb, <sup>133</sup>Te, <sup>135</sup>Xe; deduced isomer yield ratios. Microtron, activation method. CONF Moscow,P134,Vishnevsky
- 2009VI03      NUCLEAR REACTIONS <sup>232</sup>Th, <sup>238</sup>U( $\gamma$ , F)<sup>84</sup>Br / <sup>132</sup>Sb / <sup>133</sup>Te / <sup>135</sup>Xe, E<8.5 MeV; measured E $\gamma$ , I $\gamma$ ; deduced mean angular momenta of fission fragments, isomeric yield ratios. JOUR BRSPe 73 733

**A=136**

- <sup>136</sup>Cs      2008WIZY      RADIOACTIVITY <sup>136</sup>Cs(IT); measured I $\gamma$ , E $\gamma$ , I(ce), E(ce) from isomeric 518 keV state; deduced T<sub>1/2</sub>, B(E3), conversion coefficients. REPT MLL 2007 Annual,P15,Wimmer
- 2009MA23      NUCLEAR REACTIONS <sup>96</sup>Zr(<sup>124</sup>Sn, X), <sup>136</sup>Xe(<sup>208</sup>Pb, X), E=500, 930 MeV; <sup>136</sup>Cs, <sup>134</sup>I; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. JOUR APOBB 40 489
- <sup>136</sup>Ba      2009BE20      RADIOACTIVITY <sup>136,138</sup>Ce(2 $\beta^+$ ), (2EC); measured E $\gamma$ , I $\gamma$ ; deduced T<sub>1/2</sub> lower limits. CeCl<sub>3</sub> scintillator. JOUR NUPAB 824 101
- <sup>136</sup>Ce      2009BE20      RADIOACTIVITY <sup>136,138</sup>Ce(2 $\beta^+$ ), (2EC); measured E $\gamma$ , I $\gamma$ ; deduced T<sub>1/2</sub> lower limits. CeCl<sub>3</sub> scintillator. JOUR NUPAB 824 101

**A=137**

- <sup>137</sup>Ba      2008XXZZ      NUCLEAR REACTIONS <sup>138</sup>Ba, <sup>140</sup>Ce, <sup>142</sup>Nd, <sup>144</sup>Sm( $\gamma$ , n), E=11-16 MeV; measured E $\gamma$ , I $\gamma$  using HI $\gamma$ S; deduced transitions and isomers. REPT TUNL-XLII,P108,Tonchev

**A=138**

- <sup>138</sup>Ba 2007T0ZX NUCLEAR REACTIONS <sup>138</sup>Ba( $\gamma$ ,  $\gamma$ ), E = 5.5-8.5 MeV; measured E $\gamma$ , I $\gamma$ ; deduced E1 and M1 excitations. Comparison with theoretical predictions. REPT TUNL-XLVI,P102.Tonchev
- 2009BE20 RADIOACTIVITY <sup>136,138</sup>Ce( $2\beta^+$ ), (2EC); measured E $\gamma$ , I $\gamma$ ; deduced T<sub>1/2</sub> lower limits. CeCl<sub>3</sub> scintillator. JOUR NUPAB 824 101
- <sup>138</sup>Ce 2009BE20 RADIOACTIVITY <sup>136,138</sup>Ce( $2\beta^+$ ), (2EC); measured E $\gamma$ , I $\gamma$ ; deduced T<sub>1/2</sub> lower limits. CeCl<sub>3</sub> scintillator. JOUR NUPAB 824 101
- 2009BH04 NUCLEAR REACTIONS <sup>130</sup>Te(<sup>12</sup>C, 4n), E=65 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>138</sup>Ce; deduced levels, J,  $\pi$ , band configurations. Comparison with shell model and Total Routhian Surface calculations. JOUR NUPAB 825 16

**A=139**

- <sup>139</sup>Ce 2008XXZZ NUCLEAR REACTIONS <sup>138</sup>Ba, <sup>140</sup>Ce, <sup>142</sup>Nd, <sup>144</sup>Sm( $\gamma$ , n), E=11-16 MeV; measured E $\gamma$ , I $\gamma$  using HI $\gamma$ S; deduced transitions and isomers. REPT TUNL-XLII,P108,Tonchev
- 2009CH26 NUCLEAR REACTIONS <sup>130</sup>Te(<sup>12</sup>C, 3n), E=65 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ ,  $\gamma\gamma(\theta)$ ,  $\gamma(\text{lin pol})$ . <sup>139</sup>Ce; deduced levels, J,  $\pi$ , configurations, multipolarities, bands. <sup>139,140</sup>Ce; level systematics. Comparison with large-basis shell-model and cranked Nilsson-Strutinsky (CNS) calculations. JOUR PRVCA 79 054332
- <sup>139</sup>Pm 2009DH01 NUCLEAR REACTIONS <sup>116</sup>Cd(<sup>27</sup>Al, 4n), E=120 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , DCO. <sup>139</sup>Pm; deduced levels, J,  $\pi$ , bands, magnetic rotational bands, B(M1) and B(E2). Comparison with tilted axis cranking calculations. JOUR PRVCA 80 014320

**A=140**

- <sup>140</sup>Ce 2009CH26 NUCLEAR REACTIONS <sup>130</sup>Te(<sup>12</sup>C, 3n), E=65 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ ,  $\gamma\gamma(\theta)$ ,  $\gamma(\text{lin pol})$ . <sup>139</sup>Ce; deduced levels, J,  $\pi$ , configurations, multipolarities, bands. <sup>139,140</sup>Ce; level systematics. Comparison with large-basis shell-model and cranked Nilsson-Strutinsky (CNS) calculations. JOUR PRVCA 79 054332
- <sup>140</sup>Nd 2009IV02 RADIOACTIVITY <sup>140,142</sup>Pm, <sup>122</sup>I(EC), ( $\beta^+$ ); measured number of daughter ions, time modulation; deduced interference of two massive neutrino eigenstates. JOUR PRLTA 103 062502
- <sup>140</sup>Pm 2009IV02 RADIOACTIVITY <sup>140,142</sup>Pm, <sup>122</sup>I(EC), ( $\beta^+$ ); measured number of daughter ions, time modulation; deduced interference of two massive neutrino eigenstates. JOUR PRLTA 103 062502
- <sup>140</sup>Eu 2008XU09 RADIOACTIVITY <sup>153</sup>Er, <sup>157</sup>Yb, <sup>209</sup>Fr, <sup>128</sup>Ce, <sup>130</sup>Ce, <sup>128</sup>Pr, <sup>130</sup>Pm, <sup>140</sup>Tb( $\beta^+$ EC); measured x-rays, E $\gamma$ , I $\gamma$ , x $\gamma$ -coin., x $\gamma\gamma$ -coin.; deduced J,  $\pi$ , level energies. JOUR IMPEE 17 S01 1
- <sup>140</sup>Tb 2008XU09 RADIOACTIVITY <sup>153</sup>Er, <sup>157</sup>Yb, <sup>209</sup>Fr, <sup>128</sup>Ce, <sup>130</sup>Ce, <sup>128</sup>Pr, <sup>130</sup>Pm, <sup>140</sup>Tb( $\beta^+$ EC); measured x-rays, E $\gamma$ , I $\gamma$ , x $\gamma$ -coin., x $\gamma\gamma$ -coin.; deduced J,  $\pi$ , level energies. JOUR IMPEE 17 S01 1

**A=141**

- <sup>141</sup>Nd 2007ANZX NUCLEAR REACTIONS <sup>142,150</sup>Nd( $\gamma$ , n), E = 7.4-13.3 MeV; measured In; deduced  $\sigma$ . REPT TUNL-XLVI,P42,Angell
- 2008XXZZ NUCLEAR REACTIONS <sup>138</sup>Ba, <sup>140</sup>Ce, <sup>142</sup>Nd, <sup>144</sup>Sm( $\gamma$ , n), E=11-16 MeV; measured E $\gamma$ , I $\gamma$  using HI $\gamma$ S; deduced transitions and isomers. REPT TUNL-XLII,P108,Tonchev

**A=142**

- <sup>142</sup>Ba 2009UR03 RADIOACTIVITY <sup>248</sup>Cm(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>103</sup>Zr; deduced levels, J,  $\pi$ , bands. <sup>100,102,104</sup>Zr, <sup>142,143,144</sup>Ba; measured E $\gamma$ . <sup>100,101,102,103,104</sup>Zr; deduced mass correlations in fission of <sup>248</sup>Cm. <sup>99,101,103</sup>Zr; systematics of neutron configurations. Comparison of <sup>103</sup>Zr levels with quasiparticle plus rotor model calculations. JOUR PRVCA 79 067301
- <sup>142</sup>Ce 2009WI09 RADIOACTIVITY <sup>142</sup>Pr(EC), ( $\beta^+$ ) [from <sup>9</sup>Be(<sup>152</sup>Sm, X), E=607.4 MeV / nucleon]; measured Schottky frequency spectra of ions in a storage ring; deduced T<sub>1/2</sub>. JOUR PYLBB 679 36
- <sup>142</sup>Pr 2009WI09 RADIOACTIVITY <sup>142</sup>Pr(EC), ( $\beta^+$ ) [from <sup>9</sup>Be(<sup>152</sup>Sm, X), E=607.4 MeV / nucleon]; measured Schottky frequency spectra of ions in a storage ring; deduced T<sub>1/2</sub>. JOUR PYLBB 679 36
- <sup>142</sup>Nd 2008ANZY NUCLEAR REACTIONS <sup>142</sup>Nd( $\gamma$ ,  $\gamma'$ ), E=3.4-9.7 MeV; <sup>150</sup>Nd( $\gamma$ ,  $\gamma'$ ), E=5.6-7.2 MeV; measured I $\gamma$ , E $\gamma$  using nuclear resonance fluorescence; deduced  $\sigma$ ,  $\gamma$  dipole strength function. REPT TUNL-XLII,P110,Angell
- 2009IV02 RADIOACTIVITY <sup>140,142</sup>Pm, <sup>122</sup>I(EC), ( $\beta^+$ ); measured number of daughter ions, time modulation; deduced interference of two massive neutrino eigenstates. JOUR PRLTA 103 062502
- <sup>142</sup>Pm 2009IV02 RADIOACTIVITY <sup>140,142</sup>Pm, <sup>122</sup>I(EC), ( $\beta^+$ ); measured number of daughter ions, time modulation; deduced interference of two massive neutrino eigenstates. JOUR PRLTA 103 062502

**A=143**

- <sup>143</sup>Ba 2009UR03 RADIOACTIVITY <sup>248</sup>Cm(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>103</sup>Zr; deduced levels, J,  $\pi$ , bands. <sup>100,102,104</sup>Zr, <sup>142,143,144</sup>Ba; measured E $\gamma$ . <sup>100,101,102,103,104</sup>Zr; deduced mass correlations in fission of <sup>248</sup>Cm. <sup>99,101,103</sup>Zr; systematics of neutron configurations. Comparison of <sup>103</sup>Zr levels with quasiparticle plus rotor model calculations. JOUR PRVCA 79 067301
- <sup>143</sup>Nd 2009K015 RADIOACTIVITY <sup>147</sup>Sm( $\alpha$ ); measured E $\alpha$ , I $\alpha$ , half-life. Direct counting method. JOUR ARISE 67 1702
- <sup>143</sup>Sm 2008PAZT NUCLEAR REACTIONS <sup>144</sup>Sm( $\gamma$ , n), E = 10-35 MeV; measured E $\gamma$ , I $\gamma$ ; <sup>143</sup>Sm; deduced isomeric yield ratios. Betatron, activation method, Ge(Li) detector. CONF Moscow,P155,Palvanov
- 2008XXZZ NUCLEAR REACTIONS <sup>138</sup>Ba, <sup>140</sup>Ce, <sup>142</sup>Nd, <sup>144</sup>Sm( $\gamma$ , n), E=11-16 MeV; measured E $\gamma$ , I $\gamma$  using HI $\gamma$ S; deduced transitions and isomers. REPT TUNL-XLII,P108,Tonchev

**A=144**

- <sup>144</sup>Ba 2009UR03 RADIOACTIVITY <sup>248</sup>Cm(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>103</sup>Zr; deduced levels, J,  $\pi$ , bands. <sup>100,102,104</sup>Zr, <sup>142,143,144</sup>Ba; measured E $\gamma$ . <sup>100,101,102,103,104</sup>Zr; deduced mass correlations in fission of <sup>248</sup>Cm. <sup>99,101,103</sup>Zr; systematics of neutron configurations. Comparison of <sup>103</sup>Zr levels with quasiparticle plus rotor model calculations. JOUR PRVCA 79 067301
- <sup>144</sup>Dy 2009SU09 NUCLEAR REACTIONS <sup>92</sup>Mo(<sup>56</sup>Fe, 2n2p), E=280 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma(\theta)$ . <sup>144</sup>Dy; deduced levels, J,  $\pi$ , multipolarity, B(M1), B(E2), configurations, magnetic and antimagnetic rotational bands. A=136-146, even-A Ce, Nd, Sm, Gd, Tb, Dy; level systematics. <sup>110</sup>Cd, <sup>144</sup>Dy; discussed comparison of magnetic and antimagnetic rotors. JOUR PRVCA 79 064321

**A=145**

No references found

**A=146**

No references found

**A=147**

- <sup>147</sup>Sm 2009K015 RADIOACTIVITY <sup>147</sup>Sm( $\alpha$ ); measured E $\alpha$ , I $\alpha$ , half-life. Direct counting method. JOUR ARISE 67 1702
- <sup>147</sup>Tb 2009RA08 NUCLEAR REACTIONS <sup>144</sup>Sm(<sup>6</sup>Li, 2n), (<sup>6</sup>Li, 3n), E=20-40 MeV; measured E $\gamma$ , I $\gamma$ , cross sections. <sup>159</sup>Tb, <sup>165</sup>Ho(<sup>7</sup>Li, X), <sup>162</sup>Dy( $\alpha$ , X), <sup>160</sup>Gd(<sup>12</sup>C, X), E not given; discussed systematics of reactions. Comparison with coupled channel calculations. JOUR PRVCA 79 051601

**A=148**

- <sup>148</sup>La 2009LU11 RADIOACTIVITY <sup>252</sup>Cf(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin using Gammasphere array. <sup>100</sup>Nb, <sup>148</sup>La; deduced ICCs, high-spin levels, J,  $\pi$ , rotational bands, multipolarities, shape coexistence and configurations. JOUR NUPAB 825 1
- <sup>148</sup>Tb 2007ESZX NUCLEAR REACTIONS <sup>96</sup>Ru(<sup>58</sup>Ni, 2p)<sup>152</sup>Tm / <sup>148</sup>Tb / <sup>152</sup>Yb, E=4.53 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , X-ray  $\gamma$ -coin. Total absorption spectroscopy. REPT ATOMKI 2007 Annual, P31, Estevez
- 2009RA08 NUCLEAR REACTIONS <sup>144</sup>Sm(<sup>6</sup>Li, 2n), (<sup>6</sup>Li, 3n), E=20-40 MeV; measured E $\gamma$ , I $\gamma$ , cross sections. <sup>159</sup>Tb, <sup>165</sup>Ho(<sup>7</sup>Li, X), <sup>162</sup>Dy( $\alpha$ , X), <sup>160</sup>Gd(<sup>12</sup>C, X), E not given; discussed systematics of reactions. Comparison with coupled channel calculations. JOUR PRVCA 79 051601

**A=149**

<sup>149</sup>Nd 2007ANZX NUCLEAR REACTIONS <sup>142,150</sup>Nd( $\gamma$ , n), E = 7.4-13.3 MeV; measured In; deduced  $\sigma$ . REPT TUNL-XLVI,P42,Angell

**A=150**

<sup>150</sup>Nd 2007KIZW RADIOACTIVITY <sup>150</sup>Nd( $2\beta^-$ ); measured E $\gamma$ , I $\gamma$ . REPT TUNL-XLVI,P22,Kidd  
 2008ANZY NUCLEAR REACTIONS <sup>142</sup>Nd( $\gamma$ ,  $\gamma'$ ), E=3.4-9.7 MeV; <sup>150</sup>Nd( $\gamma$ ,  $\gamma'$ ), E=5.6-7.2 MeV; measured I $\gamma$ , E $\gamma$  using nuclear resonance fluorescence; deduced  $\sigma$ ,  $\gamma$  dipole strength function. REPT TUNL-XLII,P110,Angell  
 2008K0ZV RADIOACTIVITY <sup>48</sup>Ca, <sup>82</sup>Se, <sup>96</sup>Zr, <sup>100</sup>Mo, <sup>116</sup>Cd, <sup>130</sup>Te, <sup>150</sup>Nd( $2\beta^-$ ); measured  $0\nu$   $2\beta^-$ -decay T<sub>1/2</sub> lower limits,  $2\nu$   $2\beta^-$ -decay T<sub>1/2</sub>. CONF Moscow,P203,Kochetov

<sup>150</sup>Sm 2007KIZW RADIOACTIVITY <sup>150</sup>Nd( $2\beta^-$ ); measured E $\gamma$ , I $\gamma$ . REPT TUNL-XLVI,P22,Kidd  
 2008K0ZV RADIOACTIVITY <sup>48</sup>Ca, <sup>82</sup>Se, <sup>96</sup>Zr, <sup>100</sup>Mo, <sup>116</sup>Cd, <sup>130</sup>Te, <sup>150</sup>Nd( $2\beta^-$ ); measured  $0\nu$   $2\beta^-$ -decay T<sub>1/2</sub> lower limits,  $2\nu$   $2\beta^-$ -decay T<sub>1/2</sub>. CONF Moscow,P203,Kochetov

**A=151**

<sup>151</sup>Tb 2009LE18 NUCLEAR REACTIONS <sup>130</sup>Te(<sup>27</sup>Al, 6n)<sup>151</sup>Tb, E=155 MeV; <sup>170</sup>Er(<sup>30</sup>Si, 4n)<sup>196</sup>Pb, E=148 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma$  multiplicity, quasicontinuum  $\gamma$ -ray spectra; deduced Monte Carlo simulation of  $\gamma$  decay based on microscopically calculated levels, E2 decay probabilities, potential barriers between normal and superdeformed wells and collective mass parameters. <sup>151</sup>Tb, <sup>196</sup>Pb; deduced normal and superdeformed bands, and E1 strength functions. Comparison with cranked shell-model calculations. JOUR PRVCA 79 064306

**A=152**

<sup>152</sup>Sm 2009GA21 NUCLEAR REACTIONS <sup>152</sup>Sm(n, n $\gamma$ ), E=1.2-3.0 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin.; deduced negative-parity band structures, J,  $\pi$ , B(E1), B(E2). Comparison with interacting boson model. JOUR PRLTA 103 062501  
 2009LI23 NUCLEAR REACTIONS <sup>152,154</sup>Sm, <sup>184</sup>W, <sup>196</sup>Pt, <sup>208</sup>Pb(<sup>16</sup>O, <sup>16</sup>O), E=36-80 MeV; measured particle spectra,  $\sigma$  as a function of beam energy; deduced diffuseness parameters using single-channel and coupled-channels calculations. JOUR PRVCA 79 064603

<sup>152</sup>Tm 2007ESZX NUCLEAR REACTIONS <sup>96</sup>Ru(<sup>58</sup>Ni, 2p)<sup>152</sup>Tm / <sup>148</sup>Tb / <sup>152</sup>Yb, E=4.53 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , X-ray  $\gamma$ -coin. Total absorption spectroscopy. REPT ATOMKI 2007 Annual,P31,Estevez

**A=152 (continued)**

<sup>152</sup>Yb 2007ESZX NUCLEAR REACTIONS <sup>96</sup>Ru(<sup>58</sup>Ni, 2p)<sup>152</sup>Tm / <sup>148</sup>Tb / <sup>152</sup>Yb, E=4.53 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , X-ray  $\gamma$ -coin. Total absorption spectroscopy. REPT ATOMKI 2007 Annual,P31,Estevez

**A=153**

<sup>153</sup>Gd 2009LU16 NUCLEAR REACTIONS <sup>158</sup>Dy(n, p), <sup>156</sup>Dy(n,  $\alpha$ ), <sup>160</sup>Dy(n, p), E = 14.7 MeV; measured E $\gamma$ , I $\gamma$  from neutron activation; deduced  $\sigma$  and their uncertainties. Comparison with nuclear model calculations. JOUR ARISE 67 1892

<sup>153</sup>Dy 2008XU09 RADIOACTIVITY <sup>153</sup>Er, <sup>157</sup>Yb, <sup>209</sup>Fr, <sup>128</sup>Ce, <sup>130</sup>Ce, <sup>128</sup>Pr, <sup>130</sup>Pm, <sup>140</sup>Tb( $\beta^+$ EC); measured x-rays, E $\gamma$ , I $\gamma$ , x $\gamma$ -coin., x $\gamma\gamma$ -coin.; deduced J,  $\pi$ , level energies. JOUR IMPEE 17 S01 1

<sup>153</sup>Er 2008XU09 RADIOACTIVITY <sup>153</sup>Er, <sup>157</sup>Yb, <sup>209</sup>Fr, <sup>128</sup>Ce, <sup>130</sup>Ce, <sup>128</sup>Pr, <sup>130</sup>Pm, <sup>140</sup>Tb( $\beta^+$ EC); measured x-rays, E $\gamma$ , I $\gamma$ , x $\gamma$ -coin., x $\gamma\gamma$ -coin.; deduced J,  $\pi$ , level energies. JOUR IMPEE 17 S01 1

**A=154**

<sup>154</sup>Nd 2009SI21 NUCLEAR REACTIONS <sup>239</sup>Pu(n, X)<sup>154</sup>Nd, E=thermal; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, half-lives. <sup>154</sup>Nd; deduced levels, J,  $\pi$ , isomer, bands and configurations. Comparison with QPRM calculations. JOUR PRVCA 80 024304

<sup>154</sup>Sm 2008WIZX NUCLEAR REACTIONS <sup>154</sup>Sm, <sup>166</sup>Er( $\gamma$ ,  $\gamma'$ ), E not given; measured I $\gamma$ , E $\gamma$ , I(ce), E(ce) populated via Coulomb excitation; deduced monopole transition strength, B(E2), deformation. REPT MLL 2007 Annual,P16,Wimmer

2009LI23 NUCLEAR REACTIONS <sup>152,154</sup>Sm, <sup>184</sup>W, <sup>196</sup>Pt, <sup>208</sup>Pb(<sup>16</sup>O, <sup>16</sup>O), E=36-80 MeV; measured particle spectra,  $\sigma$  as a function of beam energy; deduced diffuseness parameters using single-channel and coupled-channels calculations. JOUR PRVCA 79 064603

**A=155**

No references found

**A=156**

<sup>156</sup>Nd 2009SI21 RADIOACTIVITY <sup>252</sup>Cf(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, half-lives. <sup>156</sup>Nd, <sup>156,158,160</sup>Sm; deduced levels, J,  $\pi$ , isomers, bands and configurations. Comparison with QPRM calculations. JOUR PRVCA 80 024304

**A=156 (continued)**

- <sup>156</sup>Sm 2009SI21 RADIOACTIVITY <sup>252</sup>Cf(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, half-lives. <sup>156</sup>Nd, <sup>156,158,160</sup>Sm; deduced levels, J,  $\pi$ , isomers, bands and configurations. Comparison with QPRM calculations. JOUR PRVCA 80 024304
- <sup>156</sup>Gd 2009D008 NUCLEAR REACTIONS <sup>154</sup>Sm( $\alpha$ , 2n), E=27 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin; deduced B(E2) / B(E1). JOUR APOBB 40 725
- <sup>156</sup>Dy 2008VAZU RADIOACTIVITY <sup>156,158,160</sup>Ho(EC); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, ce, ICC; <sup>156,158,160</sup>Dy; deduced levels with J $\pi$ =0<sup>+</sup>,  $\rho^2$ , Rasmussen parameters. ISOL-YaSNAPP-2 facility. CONF Moscow,P88,Vaganov
- <sup>156</sup>Ho 2008VAZU RADIOACTIVITY <sup>156,158,160</sup>Ho(EC); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, ce, ICC; <sup>156,158,160</sup>Dy; deduced levels with J $\pi$ =0<sup>+</sup>,  $\rho^2$ , Rasmussen parameters. ISOL-YaSNAPP-2 facility. CONF Moscow,P88,Vaganov
- <sup>156</sup>Er 2008SIZW NUCLEAR REACTIONS <sup>114</sup>Cd(<sup>48</sup>Ca, X)<sup>156</sup>Er / <sup>157</sup>Er / <sup>158</sup>Er, E=215 MeV; <sup>116</sup>Cd(<sup>48</sup>Ca, X)<sup>159</sup>Er / <sup>160</sup>Er, E=215 MeV; measured E $\gamma$ , I $\gamma$ . CONF Cappadocia (Nuclear Physics and Astrophysics),P136,Simpson

**A=157**

- <sup>157</sup>Er 2008SIZW NUCLEAR REACTIONS <sup>114</sup>Cd(<sup>48</sup>Ca, X)<sup>156</sup>Er / <sup>157</sup>Er / <sup>158</sup>Er, E=215 MeV; <sup>116</sup>Cd(<sup>48</sup>Ca, X)<sup>159</sup>Er / <sup>160</sup>Er, E=215 MeV; measured E $\gamma$ , I $\gamma$ . CONF Cappadocia (Nuclear Physics and Astrophysics),P136,Simpson
- 2008XU09 RADIOACTIVITY <sup>153</sup>Er, <sup>157</sup>Yb, <sup>209</sup>Fr, <sup>128</sup>Ce, <sup>130</sup>Ce, <sup>128</sup>Pr, <sup>130</sup>Pm, <sup>140</sup>Tb( $\beta^+$ EC); measured x-rays, E $\gamma$ , I $\gamma$ , x $\gamma$ -coin., x $\gamma\gamma$ -coin.; deduced J,  $\pi$ , level energies. JOUR IMPEE 17 S01 1
- <sup>157</sup>Tm 2008VAZV RADIOACTIVITY <sup>157</sup>Yb(EC) [from W(p, X), E not given]; measured E $\gamma$ , I $\gamma$ , ce, ICC, E $\alpha$ , I $\alpha$ ; <sup>157</sup>Tm, <sup>157</sup>Yb; deduced levels, J $\pi$ , Q-value. CONF Moscow,P87,Vaganov
- <sup>157</sup>Yb 2008VAZV RADIOACTIVITY <sup>157</sup>Yb(EC) [from W(p, X), E not given]; measured E $\gamma$ , I $\gamma$ , ce, ICC, E $\alpha$ , I $\alpha$ ; <sup>157</sup>Tm, <sup>157</sup>Yb; deduced levels, J $\pi$ , Q-value. CONF Moscow,P87,Vaganov
- 2008XU09 RADIOACTIVITY <sup>153</sup>Er, <sup>157</sup>Yb, <sup>209</sup>Fr, <sup>128</sup>Ce, <sup>130</sup>Ce, <sup>128</sup>Pr, <sup>130</sup>Pm, <sup>140</sup>Tb( $\beta^+$ EC); measured x-rays, E $\gamma$ , I $\gamma$ , x $\gamma$ -coin., x $\gamma\gamma$ -coin.; deduced J,  $\pi$ , level energies. JOUR IMPEE 17 S01 1
- <sup>157</sup>W 2008PAZV NUCLEAR REACTIONS <sup>106</sup>Cd(<sup>58</sup>Ni, 3N), E=290, 300, 310 MeV; <sup>161</sup>Os, <sup>157</sup>W; measured E $\alpha$ , I $\alpha$ , E $\gamma$ , I $\gamma$ ; deduced T<sub>1/2</sub>. CONF Cappadocia (Nuclear Physics and Astrophysics),P172,Page

**A=158**

- <sup>158</sup>Sm 2009SI21 RADIOACTIVITY <sup>252</sup>Cf(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, half-lives. <sup>156</sup>Nd, <sup>156,158,160</sup>Sm; deduced levels, J,  $\pi$ , isomers, bands and configurations. Comparison with QPRM calculations. JOUR PRVCA 80 024304
- <sup>158</sup>Tb 2009LU16 NUCLEAR REACTIONS <sup>158</sup>Dy(n, p), <sup>156</sup>Dy(n,  $\alpha$ ), <sup>160</sup>Dy(n, p), E = 14.7 MeV; measured E $\gamma$ , I $\gamma$  from neutron activation; deduced  $\sigma$  and their uncertainties. Comparison with nuclear model calculations. JOUR ARISE 67 1892

**A=158 (continued)**

<sup>158</sup> Dy	2008VAZU	RADIOACTIVITY <sup>156,158,160</sup> Ho(EC); measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin, ce, ICC; <sup>156,158,160</sup> Dy; deduced levels with J $\pi$ =0 <sup>+</sup> , $\rho^2$ , Rasmussen parameters. ISOL-YaSNAPP-2 facility. CONF Moscow,P88,Vaganov
<sup>158</sup> Ho	2008VAZU	RADIOACTIVITY <sup>156,158,160</sup> Ho(EC); measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin, ce, ICC; <sup>156,158,160</sup> Dy; deduced levels with J $\pi$ =0 <sup>+</sup> , $\rho^2$ , Rasmussen parameters. ISOL-YaSNAPP-2 facility. CONF Moscow,P88,Vaganov
<sup>158</sup> Er	2008SIZW	NUCLEAR REACTIONS <sup>114</sup> Cd( <sup>48</sup> Ca, X) <sup>156</sup> Er / <sup>157</sup> Er / <sup>158</sup> Er, E=215 MeV; <sup>116</sup> Cd( <sup>48</sup> Ca, X) <sup>159</sup> Er / <sup>160</sup> Er, E=215 MeV; measured E $\gamma$ , I $\gamma$ . CONF Cappadocia (Nuclear Physics and Astrophysics),P136,Simpson
<sup>158</sup> Hf	2009D02	RADIOACTIVITY <sup>162,163,164</sup> W, <sup>167,168</sup> Os, <sup>168,169</sup> Ir, <sup>168,169,170</sup> Pt( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . JOUR PRVCA 79 064309

**A=159**

<sup>159</sup> Ho	2008IBZZ	RADIOACTIVITY <sup>159,161</sup> Er(EC); measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin, ce; <sup>159,161</sup> Ho; deduced levels, rotational band. HPGe-detectors, mini-orange magnetic spectrometer. CONF Moscow,P91,Ibraheem
<sup>159</sup> Er	2008IBZZ	RADIOACTIVITY <sup>159,161</sup> Er(EC); measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin, ce; <sup>159,161</sup> Ho; deduced levels, rotational band. HPGe-detectors, mini-orange magnetic spectrometer. CONF Moscow,P91,Ibraheem
	2008SIZW	NUCLEAR REACTIONS <sup>114</sup> Cd( <sup>48</sup> Ca, X) <sup>156</sup> Er / <sup>157</sup> Er / <sup>158</sup> Er, E=215 MeV; <sup>116</sup> Cd( <sup>48</sup> Ca, X) <sup>159</sup> Er / <sup>160</sup> Er, E=215 MeV; measured E $\gamma$ , I $\gamma$ . CONF Cappadocia (Nuclear Physics and Astrophysics),P136,Simpson
<sup>159</sup> Hf	2009D02	RADIOACTIVITY <sup>162,163,164</sup> W, <sup>167,168</sup> Os, <sup>168,169</sup> Ir, <sup>168,169,170</sup> Pt( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . JOUR PRVCA 79 064309

**A=160**

<sup>160</sup> Sm	2009SI21	RADIOACTIVITY <sup>252</sup> Cf(SF); measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin, half-lives. <sup>156</sup> Nd, <sup>156,158,160</sup> Sm; deduced levels, J, $\pi$ , isomers, bands and configurations. Comparison with QPRM calculations. JOUR PRVCA 80 024304
<sup>160</sup> Tb	2009LU16	NUCLEAR REACTIONS <sup>158</sup> Dy(n, p), <sup>156</sup> Dy(n, $\alpha$ ), <sup>160</sup> Dy(n, p), E = 14.7 MeV; measured E $\gamma$ , I $\gamma$ from neutron activation; deduced $\sigma$ and their uncertainties. Comparison with nuclear model calculations. JOUR ARISE 67 1892
<sup>160</sup> Dy	2008VAZU	RADIOACTIVITY <sup>156,158,160</sup> Ho(EC); measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin, ce, ICC; <sup>156,158,160</sup> Dy; deduced levels with J $\pi$ =0 <sup>+</sup> , $\rho^2$ , Rasmussen parameters. ISOL-YaSNAPP-2 facility. CONF Moscow,P88,Vaganov
<sup>160</sup> Ho	2008VAZU	RADIOACTIVITY <sup>156,158,160</sup> Ho(EC); measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin, ce, ICC; <sup>156,158,160</sup> Dy; deduced levels with J $\pi$ =0 <sup>+</sup> , $\rho^2$ , Rasmussen parameters. ISOL-YaSNAPP-2 facility. CONF Moscow,P88,Vaganov
<sup>160</sup> Er	2008SIZW	NUCLEAR REACTIONS <sup>114</sup> Cd( <sup>48</sup> Ca, X) <sup>156</sup> Er / <sup>157</sup> Er / <sup>158</sup> Er, E=215 MeV; <sup>116</sup> Cd( <sup>48</sup> Ca, X) <sup>159</sup> Er / <sup>160</sup> Er, E=215 MeV; measured E $\gamma$ , I $\gamma$ . CONF Cappadocia (Nuclear Physics and Astrophysics),P136,Simpson



**A=160 (continued)**

- <sup>160</sup>Tm 2008LU17 NUCLEAR REACTIONS <sup>146</sup>Nd(<sup>19</sup>F, 5n), E=102 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin.; deduced J,  $\pi$ , high-spin states, level scheme. JOUR IMPEE 17 S01 21
- <sup>160</sup>Hf 2009D02 RADIOACTIVITY <sup>162,163,164</sup>W, <sup>167,168</sup>Os, <sup>168,169</sup>Ir, <sup>168,169,170</sup>Pt( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . JOUR PRVCA 79 064309

**A=161**

- <sup>161</sup>Ho 2008IBZZ RADIOACTIVITY <sup>159,161</sup>Er(EC); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, ce; <sup>159,161</sup>Ho; deduced levels, rotational band. HPGe-detectors, mini-orange magnetic spectrometer. CONF Moscow,P91,Ibraheem
- <sup>161</sup>Er 2008IBZZ RADIOACTIVITY <sup>159,161</sup>Er(EC); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, ce; <sup>159,161</sup>Ho; deduced levels, rotational band. HPGe-detectors, mini-orange magnetic spectrometer. CONF Moscow,P91,Ibraheem
- <sup>161</sup>Os 2008PAZV NUCLEAR REACTIONS <sup>106</sup>Cd(<sup>58</sup>Ni, 3N), E=290, 300, 310 MeV; <sup>161</sup>Os, <sup>157</sup>W; measured E $\alpha$ , I $\alpha$ , E $\gamma$ , I $\gamma$ ; deduced T<sub>1/2</sub>. CONF Cappadocia (Nuclear Physics and Astrophysics),P172,Page

**A=162**

- <sup>162</sup>Dy 2009NY01 NUCLEAR REACTIONS <sup>163,164</sup>Dy(<sup>3</sup>He,  $\alpha$ ), (<sup>3</sup>He, <sup>3</sup>He'), E not given; measured E $\gamma$ , I $\gamma$ , E $\alpha$ , I $\alpha$ ; deduced level densities,  $\gamma$ -ray strength functions, pygmy resonance. JOUR APOBB 40 593
- <sup>162</sup>W 2009D02 RADIOACTIVITY <sup>162,163,164</sup>W, <sup>167,168</sup>Os, <sup>168,169</sup>Ir, <sup>168,169,170</sup>Pt( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . JOUR PRVCA 79 064309

**A=163**

- <sup>163</sup>Dy 2009NY01 NUCLEAR REACTIONS <sup>163,164</sup>Dy(<sup>3</sup>He,  $\alpha$ ), (<sup>3</sup>He, <sup>3</sup>He'), E not given; measured E $\gamma$ , I $\gamma$ , E $\alpha$ , I $\alpha$ ; deduced level densities,  $\gamma$ -ray strength functions, pygmy resonance. JOUR APOBB 40 593
- <sup>163</sup>W 2008J0ZX NUCLEAR REACTIONS <sup>106</sup>Cd(<sup>60</sup>Ni, X), E=270 MeV; <sup>163</sup>Re, <sup>163</sup>W; measured E $\gamma$ , I $\gamma$ ; deduced yrast bands. CONF Cappadocia (Nuclear Physics and Astrophysics),P154,Joss
- 2009G016 RADIOACTIVITY <sup>167,168</sup>Os, <sup>167,168,169</sup>Ir, <sup>168,169,170</sup>Pt( $\alpha$ ); measured E $\alpha$ . JOUR PRVCA 79 064314
- 2009D02 RADIOACTIVITY <sup>162,163,164</sup>W, <sup>167,168</sup>Os, <sup>168,169</sup>Ir, <sup>168,169,170</sup>Pt( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . JOUR PRVCA 79 064309
- <sup>163</sup>Re 2008J0ZX NUCLEAR REACTIONS <sup>106</sup>Cd(<sup>60</sup>Ni, X), E=270 MeV; <sup>163</sup>Re, <sup>163</sup>W; measured E $\gamma$ , I $\gamma$ ; deduced yrast bands. CONF Cappadocia (Nuclear Physics and Astrophysics),P154,Joss
- 2009G016 RADIOACTIVITY <sup>167,168</sup>Os, <sup>167,168,169</sup>Ir, <sup>168,169,170</sup>Pt( $\alpha$ ); measured E $\alpha$ . JOUR PRVCA 79 064314

**A=164**

- <sup>164</sup>Dy 2009NY01 NUCLEAR REACTIONS <sup>163,164</sup>Dy(<sup>3</sup>He, α), (<sup>3</sup>He, <sup>3</sup>He'), E not given; measured Eγ, Iγ, Eα, Iα; deduced level densities, γ-ray strength functions, pygmy resonance. JOUR APOBB 40 593
- <sup>164</sup>W 2009G016 RADIOACTIVITY <sup>167,168</sup>Os, <sup>167,168,169</sup>Ir, <sup>168,169,170</sup>Pt(α); measured Eα. JOUR PRVCA 79 064314
- 2009D02 RADIOACTIVITY <sup>162,163,164</sup>W, <sup>167,168</sup>Os, <sup>168,169</sup>Ir, <sup>168,169,170</sup>Pt(α); measured Eα, Iα. JOUR PRVCA 79 064309
- <sup>164</sup>Re 2009G016 RADIOACTIVITY <sup>167,168</sup>Os, <sup>167,168,169</sup>Ir, <sup>168,169,170</sup>Pt(α); measured Eα. JOUR PRVCA 79 064314
- 2009D02 RADIOACTIVITY <sup>162,163,164</sup>W, <sup>167,168</sup>Os, <sup>168,169</sup>Ir, <sup>168,169,170</sup>Pt(α); measured Eα, Iα. JOUR PRVCA 79 064309
- <sup>164</sup>Os 2009G016 RADIOACTIVITY <sup>167,168</sup>Os, <sup>167,168,169</sup>Ir, <sup>168,169,170</sup>Pt(α); measured Eα. JOUR PRVCA 79 064314
- 2009D02 RADIOACTIVITY <sup>162,163,164</sup>W, <sup>167,168</sup>Os, <sup>168,169</sup>Ir, <sup>168,169,170</sup>Pt(α); measured Eα, Iα. JOUR PRVCA 79 064309

**A=165**

- <sup>165</sup>Tm 2009TA16 NUCLEAR REACTIONS Y(p, xn)<sup>167</sup>Lu / <sup>170</sup>Lu / <sup>171</sup>Lu / <sup>172</sup>Lu / <sup>173</sup>Lu, Y(p, X)<sup>166</sup>Yb / <sup>175</sup>Yb, Y(p, X)<sup>165</sup>Tm / <sup>166</sup>Tm / <sup>167</sup>Tm / <sup>168</sup>Tm / <sup>172</sup>Tm / <sup>173</sup>Tm, E<70 MeV; measured Eγ, Iγ; deduced σ(E). Comparison with ALICE-IPPE model code. JOUR NIMBE 267 2789
- <sup>165</sup>Re 2009G016 RADIOACTIVITY <sup>167,168</sup>Os, <sup>167,168,169</sup>Ir, <sup>168,169,170</sup>Pt(α); measured Eα. JOUR PRVCA 79 064314
- 2009D02 RADIOACTIVITY <sup>162,163,164</sup>W, <sup>167,168</sup>Os, <sup>168,169</sup>Ir, <sup>168,169,170</sup>Pt(α); measured Eα, Iα. JOUR PRVCA 79 064309
- <sup>165</sup>Os 2009G016 RADIOACTIVITY <sup>167,168</sup>Os, <sup>167,168,169</sup>Ir, <sup>168,169,170</sup>Pt(α); measured Eα. JOUR PRVCA 79 064314
- 2009D02 RADIOACTIVITY <sup>162,163,164</sup>W, <sup>167,168</sup>Os, <sup>168,169</sup>Ir, <sup>168,169,170</sup>Pt(α); measured Eα, Iα. JOUR PRVCA 79 064309

**A=166**

- <sup>166</sup>Er 2008WIZX NUCLEAR REACTIONS <sup>154</sup>Sm, <sup>166</sup>Er(γ, γ'), E not given; measured Iγ, Eγ, I(ce), E(ce) populated via Coulomb excitation; deduced monopole transition strength, B(E2), deformation. REPT MLL 2007 Annual, P16, Wimmer
- <sup>166</sup>Tm 2009SI10 NUCLEAR REACTIONS <sup>165</sup>Ho(<sup>20</sup>Ne, 2np), (<sup>20</sup>Ne, 3np), (<sup>20</sup>Ne, α), (<sup>20</sup>Ne, 2nα), (<sup>20</sup>Ne, 3npα), (<sup>20</sup>Ne, 4npα), (<sup>20</sup>Ne, 6npα), (<sup>20</sup>Ne, n2pα), (<sup>20</sup>Ne, 2α), (<sup>20</sup>Ne, n2α), (<sup>20</sup>Ne, 2n2α), (<sup>20</sup>Ne, 3n2α), (<sup>20</sup>Ne, 4n2α), (<sup>20</sup>Ne, 3np2α), (<sup>20</sup>Ne, 3n4α), E=164 MeV; measured Eγ, Iγ, yields, forward recoil range distributions and relative contributions of complete and incomplete fusion channels. JOUR PRVCA 79 054601
- 2009TA16 NUCLEAR REACTIONS Y(p, xn)<sup>167</sup>Lu / <sup>170</sup>Lu / <sup>171</sup>Lu / <sup>172</sup>Lu / <sup>173</sup>Lu, Y(p, X)<sup>166</sup>Yb / <sup>175</sup>Yb, Y(p, X)<sup>165</sup>Tm / <sup>166</sup>Tm / <sup>167</sup>Tm / <sup>168</sup>Tm / <sup>172</sup>Tm / <sup>173</sup>Tm, E<70 MeV; measured Eγ, Iγ; deduced σ(E). Comparison with ALICE-IPPE model code. JOUR NIMBE 267 2789

**A=166 (continued)**

- <sup>166</sup>Yb 2009TA16 NUCLEAR REACTIONS Y(p, xn)<sup>167</sup>Lu / <sup>170</sup>Lu / <sup>171</sup>Lu / <sup>172</sup>Lu / <sup>173</sup>Lu, Y(p, X)<sup>166</sup>Yb / <sup>175</sup>Yb, Y(p, X)<sup>165</sup>Tm / <sup>166</sup>Tm / <sup>167</sup>Tm / <sup>168</sup>Tm / <sup>172</sup>Tm / <sup>173</sup>Tm, E<70 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ (E). Comparison with ALICE-IPPE model code. JOUR NIMBE 267 2789
- <sup>166</sup>Os 2009G016 RADIOACTIVITY <sup>167,168</sup>Os, <sup>167,168,169</sup>Ir, <sup>168,169,170</sup>Pt( $\alpha$ ); measured E $\alpha$ . JOUR PRVCA 79 064314
- 2009D02 RADIOACTIVITY <sup>162,163,164</sup>W, <sup>167,168</sup>Os, <sup>168,169</sup>Ir, <sup>168,169,170</sup>Pt( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . JOUR PRVCA 79 064309

**A=167**

- <sup>167</sup>Tm 2009TA16 NUCLEAR REACTIONS Y(p, xn)<sup>167</sup>Lu / <sup>170</sup>Lu / <sup>171</sup>Lu / <sup>172</sup>Lu / <sup>173</sup>Lu, Y(p, X)<sup>166</sup>Yb / <sup>175</sup>Yb, Y(p, X)<sup>165</sup>Tm / <sup>166</sup>Tm / <sup>167</sup>Tm / <sup>168</sup>Tm / <sup>172</sup>Tm / <sup>173</sup>Tm, E<70 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ (E). Comparison with ALICE-IPPE model code. JOUR NIMBE 267 2789
- <sup>167</sup>Lu 2009TA16 NUCLEAR REACTIONS Y(p, xn)<sup>167</sup>Lu / <sup>170</sup>Lu / <sup>171</sup>Lu / <sup>172</sup>Lu / <sup>173</sup>Lu, Y(p, X)<sup>166</sup>Yb / <sup>175</sup>Yb, Y(p, X)<sup>165</sup>Tm / <sup>166</sup>Tm / <sup>167</sup>Tm / <sup>168</sup>Tm / <sup>172</sup>Tm / <sup>173</sup>Tm, E<70 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ (E). Comparison with ALICE-IPPE model code. JOUR NIMBE 267 2789
- <sup>167</sup>Os 2009G016 RADIOACTIVITY <sup>167,168</sup>Os, <sup>167,168,169</sup>Ir, <sup>168,169,170</sup>Pt( $\alpha$ ); measured E $\alpha$ . JOUR PRVCA 79 064314
- 2009D02 NUCLEAR REACTIONS <sup>92</sup>Mo(<sup>78</sup>Kr, n2p), E=335, 357, 365 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma$ ( $\theta$ ), and half-lives by recoil-distance method. <sup>167</sup>Os; deduced levels, J,  $\pi$ , bands, and multipolarity. <sup>168</sup>Os; deduced levels. Recoil-decay tagging technique. A=161-173, odd-A Yb, Hf, W and Os; systematics of experimental aligned momentum as a function of rotational frequency. Z=64-78, N=91; systematics of yrast states. Comparison with cranked shell-model calculations. JOUR PRVCA 79 064309
- 2009D02 RADIOACTIVITY <sup>162,163,164</sup>W, <sup>167,168</sup>Os, <sup>168,169</sup>Ir, <sup>168,169,170</sup>Pt( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . JOUR PRVCA 79 064309
- 2009SA27 RADIOACTIVITY <sup>172</sup>Hg( $\alpha$ ); measured E $\alpha$ , I $\alpha$ , half-life. <sup>171,172</sup>Pt, <sup>172</sup>Au, <sup>173</sup>Hg( $\alpha$ ); measured E $\alpha$ . JOUR PRVCA 79 064315
- <sup>167</sup>Ir 2009G016 RADIOACTIVITY <sup>167,168</sup>Os, <sup>167,168,169</sup>Ir, <sup>168,169,170</sup>Pt( $\alpha$ ); measured E $\alpha$ . JOUR PRVCA 79 064314

**A=168**

- <sup>168</sup>Dy 2008S0ZZ NUCLEAR REACTIONS <sup>170</sup>Er(<sup>82</sup>Se, X), E=460MeV; <sup>168</sup>Dy; measured I $\gamma$ , E $\gamma$ ,  $\gamma\gamma$ -coin; deduced J,  $\pi$ , rotational bands. REPT arXiv:0903.3819v1 [nucl-ex]
- <sup>168</sup>Tm 2009TA16 NUCLEAR REACTIONS Y(p, xn)<sup>167</sup>Lu / <sup>170</sup>Lu / <sup>171</sup>Lu / <sup>172</sup>Lu / <sup>173</sup>Lu, Y(p, X)<sup>166</sup>Yb / <sup>175</sup>Yb, Y(p, X)<sup>165</sup>Tm / <sup>166</sup>Tm / <sup>167</sup>Tm / <sup>168</sup>Tm / <sup>172</sup>Tm / <sup>173</sup>Tm, E<70 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ (E). Comparison with ALICE-IPPE model code. JOUR NIMBE 267 2789
- <sup>168</sup>Os 2009G016 RADIOACTIVITY <sup>167,168</sup>Os, <sup>167,168,169</sup>Ir, <sup>168,169,170</sup>Pt( $\alpha$ ); measured E $\alpha$ . JOUR PRVCA 79 064314

**A=168 (continued)**

- 20090D01 RADIOACTIVITY  $^{175}\text{Hg}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ , half-life.  $^{172,174,175}\text{Pt}$ ,  $^{174,175}\text{Au}$ ,  $^{175,176}\text{Hg}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ . JOUR PRVCA 79 051304
- 20090D02 NUCLEAR REACTIONS  $^{92}\text{Mo}(^{78}\text{Kr}, n2p)$ ,  $E=335, 357, 365$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma(\theta)$ , and half-lives by recoil-distance method.  $^{167}\text{Os}$ ; deduced levels,  $J$ ,  $\pi$ , bands, and multipolarity.  $^{168}\text{Os}$ ; deduced levels. Recoil-decay tagging technique.  $A=161-173$ , odd- $A$  Yb, Hf, W and Os; systematics of experimental aligned momentum as a function of rotational frequency.  $Z=64-78$ ,  $N=91$ ; systematics of yrast states. Comparison with cranked shell-model calculations. JOUR PRVCA 79 064309
- 20090D02 RADIOACTIVITY  $^{162,163,164}\text{W}$ ,  $^{167,168}\text{Os}$ ,  $^{168,169}\text{Ir}$ ,  $^{168,169,170}\text{Pt}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ . JOUR PRVCA 79 064309
- 2009SA27 RADIOACTIVITY  $^{172}\text{Hg}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ , half-life.  $^{171,172}\text{Pt}$ ,  $^{172}\text{Au}$ ,  $^{173}\text{Hg}(\alpha)$ ; measured  $E\alpha$ . JOUR PRVCA 79 064315
- $^{168}\text{Ir}$  2009G016 RADIOACTIVITY  $^{167,168}\text{Os}$ ,  $^{167,168,169}\text{Ir}$ ,  $^{168,169,170}\text{Pt}(\alpha)$ ; measured  $E\alpha$ . JOUR PRVCA 79 064314
- 20090D02 RADIOACTIVITY  $^{162,163,164}\text{W}$ ,  $^{167,168}\text{Os}$ ,  $^{168,169}\text{Ir}$ ,  $^{168,169,170}\text{Pt}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ . JOUR PRVCA 79 064309
- 2009SA27 RADIOACTIVITY  $^{172}\text{Hg}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ , half-life.  $^{171,172}\text{Pt}$ ,  $^{172}\text{Au}$ ,  $^{173}\text{Hg}(\alpha)$ ; measured  $E\alpha$ . JOUR PRVCA 79 064315
- $^{168}\text{Pt}$  2009G016 NUCLEAR REACTIONS  $^{92}\text{Mo}(^{78}\text{Kr}, 2n)$ ,  $E=335$  MeV;  $^{94}\text{Mo}(^{78}\text{Kr}, 3n)$ ,  $E=348$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin.  $^{168,169}\text{Pt}$ ; deduced levels,  $J$ ,  $\pi$ , bands. Recoil-decay tagging technique. Comparison with interacting boson model calculations.  $A=168-202$ ,  $Z=78$ ; systematics of  $E(4+) / E(2+)$ . JOUR PRVCA 79 064314
- 2009G016 RADIOACTIVITY  $^{167,168}\text{Os}$ ,  $^{167,168,169}\text{Ir}$ ,  $^{168,169,170}\text{Pt}(\alpha)$ ; measured  $E\alpha$ . JOUR PRVCA 79 064314
- 20090D02 RADIOACTIVITY  $^{162,163,164}\text{W}$ ,  $^{167,168}\text{Os}$ ,  $^{168,169}\text{Ir}$ ,  $^{168,169,170}\text{Pt}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ . JOUR PRVCA 79 064309
- 2009SA27 RADIOACTIVITY  $^{172}\text{Hg}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ , half-life.  $^{171,172}\text{Pt}$ ,  $^{172}\text{Au}$ ,  $^{173}\text{Hg}(\alpha)$ ; measured  $E\alpha$ . JOUR PRVCA 79 064315

**A=169**

- $^{169}\text{Lu}$  2009TA17 NUCLEAR REACTIONS  $Y(p, xn)^{169}\text{Lu}$ ,  $E<70$  MeV; measured  $E\gamma$ ,  $I\gamma$ ; deduced  $\sigma(E)$ . Comparison with ALICE-IPPE model code. JOUR NIMBE 267 2802
- $^{169}\text{Ir}$  2009G016 RADIOACTIVITY  $^{167,168}\text{Os}$ ,  $^{167,168,169}\text{Ir}$ ,  $^{168,169,170}\text{Pt}(\alpha)$ ; measured  $E\alpha$ . JOUR PRVCA 79 064314
- 20090D02 RADIOACTIVITY  $^{162,163,164}\text{W}$ ,  $^{167,168}\text{Os}$ ,  $^{168,169}\text{Ir}$ ,  $^{168,169,170}\text{Pt}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ . JOUR PRVCA 79 064309
- $^{169}\text{Pt}$  2009G016 NUCLEAR REACTIONS  $^{92}\text{Mo}(^{78}\text{Kr}, 2n)$ ,  $E=335$  MeV;  $^{94}\text{Mo}(^{78}\text{Kr}, 3n)$ ,  $E=348$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin.  $^{168,169}\text{Pt}$ ; deduced levels,  $J$ ,  $\pi$ , bands. Recoil-decay tagging technique. Comparison with interacting boson model calculations.  $A=168-202$ ,  $Z=78$ ; systematics of  $E(4+) / E(2+)$ . JOUR PRVCA 79 064314
- 2009G016 RADIOACTIVITY  $^{167,168}\text{Os}$ ,  $^{167,168,169}\text{Ir}$ ,  $^{168,169,170}\text{Pt}(\alpha)$ ; measured  $E\alpha$ . JOUR PRVCA 79 064314

**A=169 (continued)**

- 20090D02 RADIOACTIVITY  $^{162,163,164}\text{W}$ ,  $^{167,168}\text{Os}$ ,  $^{168,169}\text{Ir}$ ,  $^{168,169,170}\text{Pt}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ . JOUR PRVCA 79 064309
- 2009SA27 RADIOACTIVITY  $^{172}\text{Hg}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ , half-life.  $^{171,172}\text{Pt}$ ,  $^{172}\text{Au}$ ,  $^{173}\text{Hg}(\alpha)$ ; measured  $E\alpha$ . JOUR PRVCA 79 064315

**A=170**

- $^{170}\text{Lu}$  2009TA16 NUCLEAR REACTIONS  $\text{Y}(\text{p}, \text{xn})^{167}\text{Lu} / ^{170}\text{Lu} / ^{171}\text{Lu} / ^{172}\text{Lu} / ^{173}\text{Lu}$ ,  $\text{Y}(\text{p}, \text{X})^{166}\text{Yb} / ^{175}\text{Yb}$ ,  $\text{Y}(\text{p}, \text{X})^{165}\text{Tm} / ^{166}\text{Tm} / ^{167}\text{Tm} / ^{168}\text{Tm} / ^{172}\text{Tm} / ^{173}\text{Tm}$ ,  $E < 70$  MeV; measured  $E\gamma$ ,  $I\gamma$ ; deduced  $\sigma(E)$ . Comparison with ALICE-IPPE model code. JOUR NIMBE 267 2789
- $^{170}\text{Os}$  20090D01 RADIOACTIVITY  $^{175}\text{Hg}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ , half-life.  $^{172,174,175}\text{Pt}$ ,  $^{174,175}\text{Au}$ ,  $^{175,176}\text{Hg}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ . JOUR PRVCA 79 051304
- $^{170}\text{Ir}$  20090D01 RADIOACTIVITY  $^{175}\text{Hg}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ , half-life.  $^{172,174,175}\text{Pt}$ ,  $^{174,175}\text{Au}$ ,  $^{175,176}\text{Hg}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ . JOUR PRVCA 79 051304
- $^{170}\text{Pt}$  2009G016 RADIOACTIVITY  $^{167,168}\text{Os}$ ,  $^{167,168,169}\text{Ir}$ ,  $^{168,169,170}\text{Pt}(\alpha)$ ; measured  $E\alpha$ . JOUR PRVCA 79 064314
- 20090D02 RADIOACTIVITY  $^{162,163,164}\text{W}$ ,  $^{167,168}\text{Os}$ ,  $^{168,169}\text{Ir}$ ,  $^{168,169,170}\text{Pt}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ . JOUR PRVCA 79 064309

**A=171**

- $^{171}\text{Lu}$  2009GU24 NUCLEAR REACTIONS  $^{169}\text{Tm}(^{16}\text{O}, \text{X})^{171}\text{Lu} / ^{172}\text{Lu} / ^{171}\text{Hf} / ^{175}\text{Hf} / ^{181}\text{Re} / ^{181}\text{Os} / ^{182}\text{Os} / ^{182}\text{Ir}$ ,  $E = 76, 81$  MeV; measured  $\sigma$ , angular distributions, forward recoil ranges and most probable recoil ranges. JOUR PRVCA 80 024613
- 2009TA16 NUCLEAR REACTIONS  $\text{Y}(\text{p}, \text{xn})^{167}\text{Lu} / ^{170}\text{Lu} / ^{171}\text{Lu} / ^{172}\text{Lu} / ^{173}\text{Lu}$ ,  $\text{Y}(\text{p}, \text{X})^{166}\text{Yb} / ^{175}\text{Yb}$ ,  $\text{Y}(\text{p}, \text{X})^{165}\text{Tm} / ^{166}\text{Tm} / ^{167}\text{Tm} / ^{168}\text{Tm} / ^{172}\text{Tm} / ^{173}\text{Tm}$ ,  $E < 70$  MeV; measured  $E\gamma$ ,  $I\gamma$ ; deduced  $\sigma(E)$ . Comparison with ALICE-IPPE model code. JOUR NIMBE 267 2789
- $^{171}\text{Hf}$  2009GU24 NUCLEAR REACTIONS  $^{169}\text{Tm}(^{16}\text{O}, \text{X})^{171}\text{Lu} / ^{172}\text{Lu} / ^{171}\text{Hf} / ^{175}\text{Hf} / ^{181}\text{Re} / ^{181}\text{Os} / ^{182}\text{Os} / ^{182}\text{Ir}$ ,  $E = 76, 81$  MeV; measured  $\sigma$ , angular distributions, forward recoil ranges and most probable recoil ranges. JOUR PRVCA 80 024613
- $^{171}\text{Os}$  20090D01 RADIOACTIVITY  $^{175}\text{Hg}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ , half-life.  $^{172,174,175}\text{Pt}$ ,  $^{174,175}\text{Au}$ ,  $^{175,176}\text{Hg}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ . JOUR PRVCA 79 051304
- $^{171}\text{Ir}$  20090D01 RADIOACTIVITY  $^{175}\text{Hg}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ , half-life.  $^{172,174,175}\text{Pt}$ ,  $^{174,175}\text{Au}$ ,  $^{175,176}\text{Hg}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ . JOUR PRVCA 79 051304
- $^{171}\text{Pt}$  20090D01 RADIOACTIVITY  $^{175}\text{Hg}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ , half-life.  $^{172,174,175}\text{Pt}$ ,  $^{174,175}\text{Au}$ ,  $^{175,176}\text{Hg}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ . JOUR PRVCA 79 051304
- 2009SA27 RADIOACTIVITY  $^{172}\text{Hg}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ , half-life.  $^{171,172}\text{Pt}$ ,  $^{172}\text{Au}$ ,  $^{173}\text{Hg}(\alpha)$ ; measured  $E\alpha$ . JOUR PRVCA 79 064315

**A=172**

- <sup>172</sup>Tm 2009TA16 NUCLEAR REACTIONS Y(p, xn)<sup>167</sup>Lu / <sup>170</sup>Lu / <sup>171</sup>Lu / <sup>172</sup>Lu / <sup>173</sup>Lu, Y(p, X)<sup>166</sup>Yb / <sup>175</sup>Yb, Y(p, X)<sup>165</sup>Tm / <sup>166</sup>Tm / <sup>167</sup>Tm / <sup>168</sup>Tm / <sup>172</sup>Tm / <sup>173</sup>Tm, E<70 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ (E). Comparison with ALICE-IPPE model code. JOUR NIMBE 267 2789
- <sup>172</sup>Lu 2009GU24 NUCLEAR REACTIONS <sup>169</sup>Tm(<sup>16</sup>O, X)<sup>171</sup>Lu / <sup>172</sup>Lu / <sup>171</sup>Hf / <sup>175</sup>Hf / <sup>181</sup>Re / <sup>181</sup>Os / <sup>182</sup>Os / <sup>182</sup>Ir, E=76, 81 MeV; measured  $\sigma$ , angular distributions, forward recoil ranges and most probable recoil ranges. JOUR PRVCA 80 024613
- 2009TA16 NUCLEAR REACTIONS Y(p, xn)<sup>167</sup>Lu / <sup>170</sup>Lu / <sup>171</sup>Lu / <sup>172</sup>Lu / <sup>173</sup>Lu, Y(p, X)<sup>166</sup>Yb / <sup>175</sup>Yb, Y(p, X)<sup>165</sup>Tm / <sup>166</sup>Tm / <sup>167</sup>Tm / <sup>168</sup>Tm / <sup>172</sup>Tm / <sup>173</sup>Tm, E<70 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ (E). Comparison with ALICE-IPPE model code. JOUR NIMBE 267 2789
- <sup>172</sup>Pt 2009OD01 RADIOACTIVITY <sup>175</sup>Hg( $\alpha$ ); measured E $\alpha$ , I $\alpha$ , half-life. <sup>172,174,175</sup>Pt, <sup>174,175</sup>Au, <sup>175,176</sup>Hg( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . JOUR PRVCA 79 051304
- 2009SA27 RADIOACTIVITY <sup>172</sup>Hg( $\alpha$ ); measured E $\alpha$ , I $\alpha$ , half-life. <sup>171,172</sup>Pt, <sup>172</sup>Au, <sup>173</sup>Hg( $\alpha$ ); measured E $\alpha$ . JOUR PRVCA 79 064315
- <sup>172</sup>Au 2009SA27 RADIOACTIVITY <sup>172</sup>Hg( $\alpha$ ); measured E $\alpha$ , I $\alpha$ , half-life. <sup>171,172</sup>Pt, <sup>172</sup>Au, <sup>173</sup>Hg( $\alpha$ ); measured E $\alpha$ . JOUR PRVCA 79 064315
- <sup>172</sup>Hg 2009SA27 NUCLEAR REACTIONS <sup>96</sup>Ru(<sup>78</sup>Kr, 2n), E=337-355 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>172</sup>Hg; deduced levels, J,  $\pi$ . Recoil-decay tagging technique. <sup>172,173,174</sup>Hg; calculated total Routhian surfaces. A=168-206, Z=78, 80; systematics of 2+, 4+ and 6+ states. Comparison with quasiparticle random phase approximation calculations. JOUR PRVCA 79 064315
- 2009SA27 RADIOACTIVITY <sup>172</sup>Hg( $\alpha$ ); measured E $\alpha$ , I $\alpha$ , half-life. <sup>171,172</sup>Pt, <sup>172</sup>Au, <sup>173</sup>Hg( $\alpha$ ); measured E $\alpha$ . JOUR PRVCA 79 064315

**A=173**

- <sup>173</sup>Tm 2009TA16 NUCLEAR REACTIONS Y(p, xn)<sup>167</sup>Lu / <sup>170</sup>Lu / <sup>171</sup>Lu / <sup>172</sup>Lu / <sup>173</sup>Lu, Y(p, X)<sup>166</sup>Yb / <sup>175</sup>Yb, Y(p, X)<sup>165</sup>Tm / <sup>166</sup>Tm / <sup>167</sup>Tm / <sup>168</sup>Tm / <sup>172</sup>Tm / <sup>173</sup>Tm, E<70 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ (E). Comparison with ALICE-IPPE model code. JOUR NIMBE 267 2789
- <sup>173</sup>Lu 2009TA16 NUCLEAR REACTIONS Y(p, xn)<sup>167</sup>Lu / <sup>170</sup>Lu / <sup>171</sup>Lu / <sup>172</sup>Lu / <sup>173</sup>Lu, Y(p, X)<sup>166</sup>Yb / <sup>175</sup>Yb, Y(p, X)<sup>165</sup>Tm / <sup>166</sup>Tm / <sup>167</sup>Tm / <sup>168</sup>Tm / <sup>172</sup>Tm / <sup>173</sup>Tm, E<70 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ (E). Comparison with ALICE-IPPE model code. JOUR NIMBE 267 2789
- <sup>173</sup>Hf 2009SI10 NUCLEAR REACTIONS <sup>165</sup>Ho(<sup>20</sup>Ne, 2np), (<sup>20</sup>Ne, 3np), (<sup>20</sup>Ne,  $\alpha$ ), (<sup>20</sup>Ne, 2n $\alpha$ ), (<sup>20</sup>Ne, 3np $\alpha$ ), (<sup>20</sup>Ne, 4np $\alpha$ ), (<sup>20</sup>Ne, 6np $\alpha$ ), (<sup>20</sup>Ne, n2p $\alpha$ ), (<sup>20</sup>Ne, 2 $\alpha$ ), (<sup>20</sup>Ne, n2 $\alpha$ ), (<sup>20</sup>Ne, 2n2 $\alpha$ ), (<sup>20</sup>Ne, 3n2 $\alpha$ ), (<sup>20</sup>Ne, 4n2 $\alpha$ ), (<sup>20</sup>Ne, 3np2 $\alpha$ ), (<sup>20</sup>Ne, 3n4 $\alpha$ ), E=164 MeV; measured E $\gamma$ , I $\gamma$ , yields, forward recoil range distributions and relative contributions of complete and incomplete fusion channels. JOUR PRVCA 79 054601

**A=173 (continued)**

- <sup>173</sup>Ta 2009SI10 NUCLEAR REACTIONS <sup>165</sup>Ho(<sup>20</sup>Ne, 2np), (<sup>20</sup>Ne, 3np), (<sup>20</sup>Ne, α), (<sup>20</sup>Ne, 2nα), (<sup>20</sup>Ne, 3npα), (<sup>20</sup>Ne, 4npα), (<sup>20</sup>Ne, 6npα), (<sup>20</sup>Ne, n2pα), (<sup>20</sup>Ne, 2α), (<sup>20</sup>Ne, n2α), (<sup>20</sup>Ne, 2n2α), (<sup>20</sup>Ne, 3n2α), (<sup>20</sup>Ne, 4n2α), (<sup>20</sup>Ne, 3np2α), (<sup>20</sup>Ne, 3n4α), E=164 MeV; measured Eγ, Iγ, yields, forward recoil range distributions and relative contributions of complete and incomplete fusion channels. JOUR PRVCA 79 054601
- <sup>173</sup>Ir 2009AN14 RADIOACTIVITY <sup>181</sup>Tl, <sup>177</sup>Au(α) [from <sup>144</sup>Sm(<sup>40</sup>Ca, 2np)]; measured Eα, Iα, Eγ, Iγ, γγ-, αγ-coin, α-α correlations and half-lives; deduced branching ratios and hindrance factors. <sup>173</sup>Ir, <sup>177</sup>Au, <sup>181</sup>Tl; deduced levels, J, π, isomers. <sup>173</sup>Ir, <sup>173m</sup>Ir, <sup>177</sup>Au, <sup>177m</sup>Au, <sup>181</sup>Tl, <sup>181m</sup>Tl, <sup>185</sup>Bi; deduced mass excesses. Level energy systematics of odd-A Tl isotopes. JOUR PRVCA 80 024302
- <sup>173</sup>Hg 2009SA27 NUCLEAR REACTIONS <sup>96</sup>Ru(<sup>78</sup>Kr, 2n), E=337-355 MeV; measured Eγ, Iγ, γγ-coin. <sup>172</sup>Hg; deduced levels, J, π. Recoil-decay tagging technique. <sup>172,173,174</sup>Hg; calculated total Routhian surfaces. A=168-206, Z=78, 80; systematics of 2+, 4+ and 6+ states. Comparison with quasiparticle random phase approximation calculations. JOUR PRVCA 79 064315
- 2009SA27 RADIOACTIVITY <sup>172</sup>Hg(α); measured Eα, Iα, half-life. <sup>171,172</sup>Pt, <sup>172</sup>Au, <sup>173</sup>Hg(α); measured Eα. JOUR PRVCA 79 064315

**A=174**

- <sup>174</sup>Er 2009DR06 NUCLEAR REACTIONS <sup>176</sup>Yb(<sup>136</sup>Xe, X), E=840 MeV; measured Eγ, Iγ, γγ-coin, isomer half-life. <sup>174</sup>Er; deduced levels, J, π, E1 hindrance factors, configurations. Discussed systematics of E1 hindrance factors and E(4+) / E(2+) for even-even Er, Yb, Hf, W, Os, Pt, Hg and Pb nuclides. K-mixing calculations in the framework of particle-rotor model. JOUR PRVCA 79 061303
- <sup>174</sup>Lu 2009K019 NUCLEAR REACTIONS Lu, <sup>176</sup>Lu(<sup>136</sup>Xe, X), E not given; measured Eγ, Iγ, γγ-coin and half-lives. <sup>174</sup>Lu; deduced levels, J, π, isomers, conversion coefficients, multipolarity, transition probabilities, configurations, hindrance factors, rotational bands, band alignments and multi-quasiparticle intrinsic states. JOUR PRVCA 80 014304
- <sup>174</sup>Ta 2009SI10 NUCLEAR REACTIONS <sup>165</sup>Ho(<sup>20</sup>Ne, 2np), (<sup>20</sup>Ne, 3np), (<sup>20</sup>Ne, α), (<sup>20</sup>Ne, 2nα), (<sup>20</sup>Ne, 3npα), (<sup>20</sup>Ne, 4npα), (<sup>20</sup>Ne, 6npα), (<sup>20</sup>Ne, n2pα), (<sup>20</sup>Ne, 2α), (<sup>20</sup>Ne, n2α), (<sup>20</sup>Ne, 2n2α), (<sup>20</sup>Ne, 3n2α), (<sup>20</sup>Ne, 4n2α), (<sup>20</sup>Ne, 3np2α), (<sup>20</sup>Ne, 3n4α), E=164 MeV; measured Eγ, Iγ, yields, forward recoil range distributions and relative contributions of complete and incomplete fusion channels. JOUR PRVCA 79 054601
- <sup>174</sup>W 2009SI10 NUCLEAR REACTIONS <sup>165</sup>Ho(<sup>20</sup>Ne, 2np), (<sup>20</sup>Ne, 3np), (<sup>20</sup>Ne, α), (<sup>20</sup>Ne, 2nα), (<sup>20</sup>Ne, 3npα), (<sup>20</sup>Ne, 4npα), (<sup>20</sup>Ne, 6npα), (<sup>20</sup>Ne, n2pα), (<sup>20</sup>Ne, 2α), (<sup>20</sup>Ne, n2α), (<sup>20</sup>Ne, 2n2α), (<sup>20</sup>Ne, 3n2α), (<sup>20</sup>Ne, 4n2α), (<sup>20</sup>Ne, 3np2α), (<sup>20</sup>Ne, 3n4α), E=164 MeV; measured Eγ, Iγ, yields, forward recoil range distributions and relative contributions of complete and incomplete fusion channels. JOUR PRVCA 79 054601
- <sup>174</sup>Pt 2009D01 RADIOACTIVITY <sup>175</sup>Hg(α); measured Eα, Iα, half-life. <sup>172,174,175</sup>Pt, <sup>174,175</sup>Au, <sup>175,176</sup>Hg(α); measured Eα, Iα. JOUR PRVCA 79 051304

**A=174 (continued)**

- <sup>174</sup>Au 20090D01 RADIOACTIVITY <sup>175</sup>Hg( $\alpha$ ); measured E $\alpha$ , I $\alpha$ , half-life. <sup>172,174,175</sup>Pt, <sup>174,175</sup>Au, <sup>175,176</sup>Hg( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . JOUR PRVCA 79 051304
- <sup>174</sup>Hg 20090D01 NUCLEAR REACTIONS <sup>92</sup>Mo(<sup>86</sup>Sr, 3n), E=403 MeV; measured E $\gamma$ , I $\gamma$ , ce, E $\alpha$ , I $\alpha$ , (recoil) $\alpha^-$ ,  $\gamma\alpha^-$ , (ce) $\alpha$ -coin, half-life. <sup>175</sup>Hg; deduced levels, J,  $\pi$ , isomer, bands and moments of inertia. Recoil-decay tagging technique. <sup>174,175,176,177,178,179</sup>Hg; level systematics. JOUR PRVCA 79 051304
- 2009SA27 NUCLEAR REACTIONS <sup>96</sup>Ru(<sup>78</sup>Kr, 2n), E=337-355 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>172</sup>Hg; deduced levels, J,  $\pi$ . Recoil-decay tagging technique. <sup>172,173,174</sup>Hg; calculated total Routhian surfaces. A=168-206, Z=78, 80; systematics of 2+, 4+ and 6+ states. Comparison with quasiparticle random phase approximation calculations. JOUR PRVCA 79 064315

**A=175**

- <sup>175</sup>Yb 2009TA16 NUCLEAR REACTIONS Y(p, xn)<sup>167</sup>Lu / <sup>170</sup>Lu / <sup>171</sup>Lu / <sup>172</sup>Lu / <sup>173</sup>Lu, Y(p, X)<sup>166</sup>Yb / <sup>175</sup>Yb, Y(p, X)<sup>165</sup>Tm / <sup>166</sup>Tm / <sup>167</sup>Tm / <sup>168</sup>Tm / <sup>172</sup>Tm / <sup>173</sup>Tm, E<70 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma(E)$ . Comparison with ALICE-IPPE model code. JOUR NIMBE 267 2789
- <sup>175</sup>Hf 2009GU24 NUCLEAR REACTIONS <sup>169</sup>Tm(<sup>16</sup>O, X)<sup>171</sup>Lu / <sup>172</sup>Lu / <sup>171</sup>Hf / <sup>175</sup>Hf / <sup>181</sup>Re / <sup>181</sup>Os / <sup>182</sup>Os / <sup>182</sup>Ir, E=76, 81 MeV; measured  $\sigma$ , angular distributions, forward recoil ranges and most probable recoil ranges. JOUR PRVCA 80 024613
- <sup>175</sup>Ta 2009SI10 NUCLEAR REACTIONS <sup>165</sup>Ho(<sup>20</sup>Ne, 2np), (<sup>20</sup>Ne, 3np), (<sup>20</sup>Ne,  $\alpha$ ), (<sup>20</sup>Ne, 2n $\alpha$ ), (<sup>20</sup>Ne, 3np $\alpha$ ), (<sup>20</sup>Ne, 4np $\alpha$ ), (<sup>20</sup>Ne, 6np $\alpha$ ), (<sup>20</sup>Ne, n2p $\alpha$ ), (<sup>20</sup>Ne, 2 $\alpha$ ), (<sup>20</sup>Ne, n2 $\alpha$ ), (<sup>20</sup>Ne, 2n2 $\alpha$ ), (<sup>20</sup>Ne, 3n2 $\alpha$ ), (<sup>20</sup>Ne, 4n2 $\alpha$ ), (<sup>20</sup>Ne, 3np2 $\alpha$ ), (<sup>20</sup>Ne, 3n4 $\alpha$ ), E=164 MeV; measured E $\gamma$ , I $\gamma$ , yields, forward recoil range distributions and relative contributions of complete and incomplete fusion channels. JOUR PRVCA 79 054601
- <sup>175</sup>Pt 20090D01 RADIOACTIVITY <sup>175</sup>Hg( $\alpha$ ); measured E $\alpha$ , I $\alpha$ , half-life. <sup>172,174,175</sup>Pt, <sup>174,175</sup>Au, <sup>175,176</sup>Hg( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . JOUR PRVCA 79 051304
- <sup>175</sup>Au 20090D01 RADIOACTIVITY <sup>175</sup>Hg( $\alpha$ ); measured E $\alpha$ , I $\alpha$ , half-life. <sup>172,174,175</sup>Pt, <sup>174,175</sup>Au, <sup>175,176</sup>Hg( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . JOUR PRVCA 79 051304
- <sup>175</sup>Hg 20090D01 NUCLEAR REACTIONS <sup>92</sup>Mo(<sup>86</sup>Sr, 3n), E=403 MeV; measured E $\gamma$ , I $\gamma$ , ce, E $\alpha$ , I $\alpha$ , (recoil) $\alpha^-$ ,  $\gamma\alpha^-$ , (ce) $\alpha$ -coin, half-life. <sup>175</sup>Hg; deduced levels, J,  $\pi$ , isomer, bands and moments of inertia. Recoil-decay tagging technique. <sup>174,175,176,177,178,179</sup>Hg; level systematics. JOUR PRVCA 79 051304
- 20090D01 RADIOACTIVITY <sup>175</sup>Hg( $\alpha$ ); measured E $\alpha$ , I $\alpha$ , half-life. <sup>172,174,175</sup>Pt, <sup>174,175</sup>Au, <sup>175,176</sup>Hg( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . JOUR PRVCA 79 051304



## A=176

- <sup>176</sup>Ta 2009SI10 NUCLEAR REACTIONS <sup>165</sup>Ho(<sup>20</sup>Ne, 2np), (<sup>20</sup>Ne, 3np), (<sup>20</sup>Ne, α), (<sup>20</sup>Ne, 2nα), (<sup>20</sup>Ne, 3npα), (<sup>20</sup>Ne, 4npα), (<sup>20</sup>Ne, 6npα), (<sup>20</sup>Ne, n2pα), (<sup>20</sup>Ne, 2α), (<sup>20</sup>Ne, n2α), (<sup>20</sup>Ne, 2n2α), (<sup>20</sup>Ne, 3n2α), (<sup>20</sup>Ne, 4n2α), (<sup>20</sup>Ne, 3np2α), (<sup>20</sup>Ne, 3n4α), E=164 MeV; measured Eγ, Iγ, yields, forward recoil range distributions and relative contributions of complete and incomplete fusion channels. JOUR PRVCA 79 054601
- <sup>176</sup>W 2009SI10 NUCLEAR REACTIONS <sup>165</sup>Ho(<sup>20</sup>Ne, 2np), (<sup>20</sup>Ne, 3np), (<sup>20</sup>Ne, α), (<sup>20</sup>Ne, 2nα), (<sup>20</sup>Ne, 3npα), (<sup>20</sup>Ne, 4npα), (<sup>20</sup>Ne, 6npα), (<sup>20</sup>Ne, n2pα), (<sup>20</sup>Ne, 2α), (<sup>20</sup>Ne, n2α), (<sup>20</sup>Ne, 2n2α), (<sup>20</sup>Ne, 3n2α), (<sup>20</sup>Ne, 4n2α), (<sup>20</sup>Ne, 3np2α), (<sup>20</sup>Ne, 3n4α), E=164 MeV; measured Eγ, Iγ, yields, forward recoil range distributions and relative contributions of complete and incomplete fusion channels. JOUR PRVCA 79 054601
- <sup>176</sup>Hg 2009D01 NUCLEAR REACTIONS <sup>92</sup>Mo(<sup>86</sup>Sr, 3n), E=403 MeV; measured Eγ, Iγ, ce, Eα, Iα, (recoil)α-, γα-, (ce)α-coin, half-life. <sup>175</sup>Hg; deduced levels, J, π, isomer, bands and moments of inertia. Recoil-decay tagging technique. <sup>174,175,176,177,178,179</sup>Hg; level systematics. JOUR PRVCA 79 051304
- 2009D01 RADIOACTIVITY <sup>175</sup>Hg(α); measured Eα, Iα, half-life. <sup>172,174,175</sup>Pt, <sup>174,175</sup>Au, <sup>175,176</sup>Hg(α); measured Eα, Iα. JOUR PRVCA 79 051304

## A=177

- <sup>177</sup>Lu 2009LU09 NUCLEAR REACTIONS <sup>181</sup>Ta(n, n'α), (n, t), (n, d), (n, α), (n, p), (n, 2n)<sup>177</sup>Lu / <sup>179</sup>Hf / <sup>180</sup>Hf / <sup>178</sup>Lu / <sup>181</sup>Hf / <sup>180</sup>Ta, E=13.5, 14.1, 14.5, 14.7 MeV; measured Eγ, Iγ, σ. <sup>27</sup>Al(n, α)<sup>24</sup>Na, E=13.5, 14.1, 14.5, 14.7 MeV; measured σ, used as monitor reaction. JOUR PRVCA 79 057603
- <sup>177</sup>Ta 2009SI10 NUCLEAR REACTIONS <sup>165</sup>Ho(<sup>20</sup>Ne, 2np), (<sup>20</sup>Ne, 3np), (<sup>20</sup>Ne, α), (<sup>20</sup>Ne, 2nα), (<sup>20</sup>Ne, 3npα), (<sup>20</sup>Ne, 4npα), (<sup>20</sup>Ne, 6npα), (<sup>20</sup>Ne, n2pα), (<sup>20</sup>Ne, 2α), (<sup>20</sup>Ne, n2α), (<sup>20</sup>Ne, 2n2α), (<sup>20</sup>Ne, 3n2α), (<sup>20</sup>Ne, 4n2α), (<sup>20</sup>Ne, 3np2α), (<sup>20</sup>Ne, 3n4α), E=164 MeV; measured Eγ, Iγ, yields, forward recoil range distributions and relative contributions of complete and incomplete fusion channels. JOUR PRVCA 79 054601
- <sup>177</sup>W 2009SI10 NUCLEAR REACTIONS <sup>165</sup>Ho(<sup>20</sup>Ne, 2np), (<sup>20</sup>Ne, 3np), (<sup>20</sup>Ne, α), (<sup>20</sup>Ne, 2nα), (<sup>20</sup>Ne, 3npα), (<sup>20</sup>Ne, 4npα), (<sup>20</sup>Ne, 6npα), (<sup>20</sup>Ne, n2pα), (<sup>20</sup>Ne, 2α), (<sup>20</sup>Ne, n2α), (<sup>20</sup>Ne, 2n2α), (<sup>20</sup>Ne, 3n2α), (<sup>20</sup>Ne, 4n2α), (<sup>20</sup>Ne, 3np2α), (<sup>20</sup>Ne, 3n4α), E=164 MeV; measured Eγ, Iγ, yields, forward recoil range distributions and relative contributions of complete and incomplete fusion channels. JOUR PRVCA 79 054601
- <sup>177</sup>Au 2009AN14 RADIOACTIVITY <sup>181</sup>Tl, <sup>177</sup>Au(α) [from <sup>144</sup>Sm(<sup>40</sup>Ca, 2np)]; measured Eα, Iα, Eγ, Iγ, γγ-, αγ-coin, α-α correlations and half-lives; deduced branching ratios and hindrance factors. <sup>173</sup>Ir, <sup>177</sup>Au, <sup>181</sup>Tl; deduced levels, J, π, isomers. <sup>173</sup>Ir, <sup>173m</sup>Ir, <sup>177</sup>Au, <sup>177m</sup>Au, <sup>181</sup>Tl, <sup>181m</sup>Tl, <sup>185</sup>Bi; deduced mass excesses. Level energy systematics of odd-A Tl isotopes. JOUR PRVCA 80 024302

**A=177 (continued)**

<sup>177</sup>Hg 2009D01 NUCLEAR REACTIONS <sup>92</sup>Mo(<sup>86</sup>Sr, 3n), E=403 MeV; measured E $\gamma$ , I $\gamma$ , ce, E $\alpha$ , I $\alpha$ , (recoil) $\alpha^-$ ,  $\gamma\alpha^-$ , (ce) $\alpha$ -coin, half-life. <sup>175</sup>Hg; deduced levels, J,  $\pi$ , isomer, bands and moments of inertia. Recoil-decay tagging technique. <sup>174,175,176,177,178,179</sup>Hg; level systematics. JOUR PRVCA 79 051304

**A=178**

<sup>178</sup>Lu 2009LU09 NUCLEAR REACTIONS <sup>181</sup>Ta(n, n' $\alpha$ ), (n, t), (n, d), (n,  $\alpha$ ), (n, p), (n, 2n)<sup>177</sup>Lu / <sup>179</sup>Hf / <sup>180</sup>Hf / <sup>178</sup>Lu / <sup>181</sup>Hf / <sup>180</sup>Ta, E=13.5, 14.1, 14.5, 14.7 MeV; measured E $\gamma$ , I $\gamma$ ,  $\sigma$ . <sup>27</sup>Al(n,  $\alpha$ )<sup>24</sup>Na, E=13.5, 14.1, 14.5, 14.7 MeV; measured  $\sigma$ , used as monitor reaction. JOUR PRVCA 79 057603

<sup>178</sup>Hf 2008ZHZZ RADIOACTIVITY <sup>178</sup>Hf(IT) [from <sup>181</sup>Ta( $\alpha$ ,  $\alpha$ p2n), E not given]; measured E $\gamma$ , I $\gamma$ , x-rays, conversion electrons. CONF Moscow,P81,Zheltonozhsky

<sup>178</sup>Ta 2009SI10 NUCLEAR REACTIONS <sup>165</sup>Ho(<sup>20</sup>Ne, 2np), (<sup>20</sup>Ne, 3np), (<sup>20</sup>Ne,  $\alpha$ ), (<sup>20</sup>Ne, 2n $\alpha$ ), (<sup>20</sup>Ne, 3np $\alpha$ ), (<sup>20</sup>Ne, 4np $\alpha$ ), (<sup>20</sup>Ne, 6np $\alpha$ ), (<sup>20</sup>Ne, n2p $\alpha$ ), (<sup>20</sup>Ne, 2 $\alpha$ ), (<sup>20</sup>Ne, n2 $\alpha$ ), (<sup>20</sup>Ne, 2n2 $\alpha$ ), (<sup>20</sup>Ne, 3n2 $\alpha$ ), (<sup>20</sup>Ne, 4n2 $\alpha$ ), (<sup>20</sup>Ne, 3np2 $\alpha$ ), (<sup>20</sup>Ne, 3n4 $\alpha$ ), E=164 MeV; measured E $\gamma$ , I $\gamma$ , yields, forward recoil range distributions and relative contributions of complete and incomplete fusion channels. JOUR PRVCA 79 054601

<sup>178</sup>Hg 2009D01 NUCLEAR REACTIONS <sup>92</sup>Mo(<sup>86</sup>Sr, 3n), E=403 MeV; measured E $\gamma$ , I $\gamma$ , ce, E $\alpha$ , I $\alpha$ , (recoil) $\alpha^-$ ,  $\gamma\alpha^-$ , (ce) $\alpha$ -coin, half-life. <sup>175</sup>Hg; deduced levels, J,  $\pi$ , isomer, bands and moments of inertia. Recoil-decay tagging technique. <sup>174,175,176,177,178,179</sup>Hg; level systematics. JOUR PRVCA 79 051304

**A=179**

<sup>179</sup>Hf 2009LU09 NUCLEAR REACTIONS <sup>181</sup>Ta(n, n' $\alpha$ ), (n, t), (n, d), (n,  $\alpha$ ), (n, p), (n, 2n)<sup>177</sup>Lu / <sup>179</sup>Hf / <sup>180</sup>Hf / <sup>178</sup>Lu / <sup>181</sup>Hf / <sup>180</sup>Ta, E=13.5, 14.1, 14.5, 14.7 MeV; measured E $\gamma$ , I $\gamma$ ,  $\sigma$ . <sup>27</sup>Al(n,  $\alpha$ )<sup>24</sup>Na, E=13.5, 14.1, 14.5, 14.7 MeV; measured  $\sigma$ , used as monitor reaction. JOUR PRVCA 79 057603

<sup>179</sup>Re 2009SI10 NUCLEAR REACTIONS <sup>165</sup>Ho(<sup>20</sup>Ne, 2np), (<sup>20</sup>Ne, 3np), (<sup>20</sup>Ne,  $\alpha$ ), (<sup>20</sup>Ne, 2n $\alpha$ ), (<sup>20</sup>Ne, 3np $\alpha$ ), (<sup>20</sup>Ne, 4np $\alpha$ ), (<sup>20</sup>Ne, 6np $\alpha$ ), (<sup>20</sup>Ne, n2p $\alpha$ ), (<sup>20</sup>Ne, 2 $\alpha$ ), (<sup>20</sup>Ne, n2 $\alpha$ ), (<sup>20</sup>Ne, 2n2 $\alpha$ ), (<sup>20</sup>Ne, 3n2 $\alpha$ ), (<sup>20</sup>Ne, 4n2 $\alpha$ ), (<sup>20</sup>Ne, 3np2 $\alpha$ ), (<sup>20</sup>Ne, 3n4 $\alpha$ ), E=164 MeV; measured E $\gamma$ , I $\gamma$ , yields, forward recoil range distributions and relative contributions of complete and incomplete fusion channels. JOUR PRVCA 79 054601

<sup>179</sup>Hg 2009D01 NUCLEAR REACTIONS <sup>92</sup>Mo(<sup>86</sup>Sr, 3n), E=403 MeV; measured E $\gamma$ , I $\gamma$ , ce, E $\alpha$ , I $\alpha$ , (recoil) $\alpha^-$ ,  $\gamma\alpha^-$ , (ce) $\alpha$ -coin, half-life. <sup>175</sup>Hg; deduced levels, J,  $\pi$ , isomer, bands and moments of inertia. Recoil-decay tagging technique. <sup>174,175,176,177,178,179</sup>Hg; level systematics. JOUR PRVCA 79 051304

**A=180**

- <sup>180</sup>Hf 2009BE27 RADIOACTIVITY <sup>64</sup>Zn(2EC), ( $\beta^+$ EC); <sup>70</sup>Zn, <sup>186</sup>W(2 $\beta^-$ ); <sup>180</sup>W(2EC); measured E $\gamma$ , I $\gamma$ ; deduced T<sub>1/2</sub> lower limits for various 2 $\beta$ -decay modes. ZnWO<sub>4</sub> crystal scintillator at the Gran Sasso National Laboratories. JOUR NUPAB 826 256
- 2009LU09 NUCLEAR REACTIONS <sup>181</sup>Ta(n, n' $\alpha$ ), (n, t), (n, d), (n,  $\alpha$ ), (n, p), (n, 2n)<sup>177</sup>Lu / <sup>179</sup>Hf / <sup>180</sup>Hf / <sup>178</sup>Lu / <sup>181</sup>Hf / <sup>180</sup>Ta, E=13.5, 14.1, 14.5, 14.7 MeV; measured E $\gamma$ , I $\gamma$ ,  $\sigma$ . <sup>27</sup>Al(n,  $\alpha$ )<sup>24</sup>Na, E=13.5, 14.1, 14.5, 14.7 MeV; measured  $\sigma$ , used as monitor reaction. JOUR PRVCA 79 057603
- <sup>180</sup>Ta 2009LU09 NUCLEAR REACTIONS <sup>181</sup>Ta(n, n' $\alpha$ ), (n, t), (n, d), (n,  $\alpha$ ), (n, p), (n, 2n)<sup>177</sup>Lu / <sup>179</sup>Hf / <sup>180</sup>Hf / <sup>178</sup>Lu / <sup>181</sup>Hf / <sup>180</sup>Ta, E=13.5, 14.1, 14.5, 14.7 MeV; measured E $\gamma$ , I $\gamma$ ,  $\sigma$ . <sup>27</sup>Al(n,  $\alpha$ )<sup>24</sup>Na, E=13.5, 14.1, 14.5, 14.7 MeV; measured  $\sigma$ , used as monitor reaction. JOUR PRVCA 79 057603
- <sup>180</sup>W 2009BE27 RADIOACTIVITY <sup>64</sup>Zn(2EC), ( $\beta^+$ EC); <sup>70</sup>Zn, <sup>186</sup>W(2 $\beta^-$ ); <sup>180</sup>W(2EC); measured E $\gamma$ , I $\gamma$ ; deduced T<sub>1/2</sub> lower limits for various 2 $\beta$ -decay modes. ZnWO<sub>4</sub> crystal scintillator at the Gran Sasso National Laboratories. JOUR NUPAB 826 256
- <sup>180</sup>Hg 2009GR09 NUCLEAR REACTIONS <sup>94</sup>Mo(<sup>88</sup>Sr, 2n), E=300 MeV; <sup>96</sup>Mo(<sup>88</sup>Sr, 2n), E=310 MeV; measured E $\gamma$ , I $\gamma$ ,  $\alpha\gamma$ -,  $\gamma\gamma$ -coin, half-lives by recoil-distance Doppler shift method. <sup>180,182</sup>Hg; deduced levels, J,  $\pi$ , B(E2), quadrupole moments and deformation parameters. Recoil-decay tagging (RDT) method. Comparisons with systematics of even-even Hg nuclides from A=176-206 and A=186, 188 Pb nuclides. JOUR PRVCA 80 014324

**A=181**

- <sup>181</sup>Hf 2009LU09 NUCLEAR REACTIONS <sup>181</sup>Ta(n, n' $\alpha$ ), (n, t), (n, d), (n,  $\alpha$ ), (n, p), (n, 2n)<sup>177</sup>Lu / <sup>179</sup>Hf / <sup>180</sup>Hf / <sup>178</sup>Lu / <sup>181</sup>Hf / <sup>180</sup>Ta, E=13.5, 14.1, 14.5, 14.7 MeV; measured E $\gamma$ , I $\gamma$ ,  $\sigma$ . <sup>27</sup>Al(n,  $\alpha$ )<sup>24</sup>Na, E=13.5, 14.1, 14.5, 14.7 MeV; measured  $\sigma$ , used as monitor reaction. JOUR PRVCA 79 057603
- <sup>181</sup>Re 2009GU24 NUCLEAR REACTIONS <sup>169</sup>Tm(<sup>16</sup>O, X)<sup>171</sup>Lu / <sup>172</sup>Lu / <sup>171</sup>Hf / <sup>175</sup>Hf / <sup>181</sup>Re / <sup>181</sup>Os / <sup>182</sup>Os / <sup>182</sup>Ir, E=76, 81 MeV; measured  $\sigma$ , angular distributions, forward recoil ranges and most probable recoil ranges. JOUR PRVCA 80 024613
- 2009SI10 NUCLEAR REACTIONS <sup>165</sup>Ho(<sup>20</sup>Ne, 2np), (<sup>20</sup>Ne, 3np), (<sup>20</sup>Ne,  $\alpha$ ), (<sup>20</sup>Ne, 2n $\alpha$ ), (<sup>20</sup>Ne, 3np $\alpha$ ), (<sup>20</sup>Ne, 4np $\alpha$ ), (<sup>20</sup>Ne, 6np $\alpha$ ), (<sup>20</sup>Ne, n2p $\alpha$ ), (<sup>20</sup>Ne, 2 $\alpha$ ), (<sup>20</sup>Ne, n2 $\alpha$ ), (<sup>20</sup>Ne, 2n2 $\alpha$ ), (<sup>20</sup>Ne, 3n2 $\alpha$ ), (<sup>20</sup>Ne, 4n2 $\alpha$ ), (<sup>20</sup>Ne, 3np2 $\alpha$ ), (<sup>20</sup>Ne, 3n4 $\alpha$ ), E=164 MeV; measured E $\gamma$ , I $\gamma$ , yields, forward recoil range distributions and relative contributions of complete and incomplete fusion channels. JOUR PRVCA 79 054601
- <sup>181</sup>Os 2009GU24 NUCLEAR REACTIONS <sup>169</sup>Tm(<sup>16</sup>O, X)<sup>171</sup>Lu / <sup>172</sup>Lu / <sup>171</sup>Hf / <sup>175</sup>Hf / <sup>181</sup>Re / <sup>181</sup>Os / <sup>182</sup>Os / <sup>182</sup>Ir, E=76, 81 MeV; measured  $\sigma$ , angular distributions, forward recoil ranges and most probable recoil ranges. JOUR PRVCA 80 024613

**A=181 (continued)**

- 2009SI10 NUCLEAR REACTIONS  $^{165}\text{Ho}(^{20}\text{Ne}, 2\text{np})$ ,  $(^{20}\text{Ne}, 3\text{np})$ ,  $(^{20}\text{Ne}, \alpha)$ ,  $(^{20}\text{Ne}, 2\text{n}\alpha)$ ,  $(^{20}\text{Ne}, 3\text{np}\alpha)$ ,  $(^{20}\text{Ne}, 4\text{np}\alpha)$ ,  $(^{20}\text{Ne}, 6\text{np}\alpha)$ ,  $(^{20}\text{Ne}, \text{n}2\text{p}\alpha)$ ,  $(^{20}\text{Ne}, 2\alpha)$ ,  $(^{20}\text{Ne}, \text{n}2\alpha)$ ,  $(^{20}\text{Ne}, 2\text{n}2\alpha)$ ,  $(^{20}\text{Ne}, 3\text{n}2\alpha)$ ,  $(^{20}\text{Ne}, 4\text{n}2\alpha)$ ,  $(^{20}\text{Ne}, 3\text{np}2\alpha)$ ,  $(^{20}\text{Ne}, 3\text{n}4\alpha)$ , E=164 MeV; measured  $E\gamma$ ,  $I\gamma$ , yields, forward recoil range distributions and relative contributions of complete and incomplete fusion channels. JOUR PRVCA 79 054601
- $^{181}\text{Tl}$  2009AN14 RADIOACTIVITY  $^{181}\text{Tl}$ ,  $^{177}\text{Au}(\alpha)$  [from  $^{144}\text{Sm}(^{40}\text{Ca}, 2\text{np})$ ]; measured  $E\alpha$ ,  $I\alpha$ ,  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -,  $\alpha\gamma$ -coin,  $\alpha$ - $\alpha$  correlations and half-lives; deduced branching ratios and hindrance factors.  $^{173}\text{Ir}$ ,  $^{177}\text{Au}$ ,  $^{181}\text{Tl}$ ; deduced levels, J,  $\pi$ , isomers.  $^{173}\text{Ir}$ ,  $^{173\text{m}}\text{Ir}$ ,  $^{177}\text{Au}$ ,  $^{177\text{m}}\text{Au}$ ,  $^{181}\text{Tl}$ ,  $^{181\text{m}}\text{Tl}$ ,  $^{185}\text{Bi}$ ; deduced mass excesses. Level energy systematics of odd-A Tl isotopes. JOUR PRVCA 80 024302

**A=182**

- $^{182}\text{W}$  2008LEZS NUCLEAR REACTIONS  $^{230,232,234}\text{Th}$ ,  $^{184,186}\text{W}(\text{p}, \text{t})$ , E not given; measured Et, It; deduced Q-values. CONF Moscow,P78,Levon
- $^{182}\text{Os}$  2009GU24 NUCLEAR REACTIONS  $^{169}\text{Tm}(^{16}\text{O}, \text{X})^{171}\text{Lu} / ^{172}\text{Lu} / ^{171}\text{Hf} / ^{175}\text{Hf} / ^{181}\text{Re} / ^{181}\text{Os} / ^{182}\text{Os} / ^{182}\text{Ir}$ , E=76, 81 MeV; measured  $\sigma$ , angular distributions, forward recoil ranges and most probable recoil ranges. JOUR PRVCA 80 024613
- 2009SI10 NUCLEAR REACTIONS  $^{165}\text{Ho}(^{20}\text{Ne}, 2\text{np})$ ,  $(^{20}\text{Ne}, 3\text{np})$ ,  $(^{20}\text{Ne}, \alpha)$ ,  $(^{20}\text{Ne}, 2\text{n}\alpha)$ ,  $(^{20}\text{Ne}, 3\text{np}\alpha)$ ,  $(^{20}\text{Ne}, 4\text{np}\alpha)$ ,  $(^{20}\text{Ne}, 6\text{np}\alpha)$ ,  $(^{20}\text{Ne}, \text{n}2\text{p}\alpha)$ ,  $(^{20}\text{Ne}, 2\alpha)$ ,  $(^{20}\text{Ne}, \text{n}2\alpha)$ ,  $(^{20}\text{Ne}, 2\text{n}2\alpha)$ ,  $(^{20}\text{Ne}, 3\text{n}2\alpha)$ ,  $(^{20}\text{Ne}, 4\text{n}2\alpha)$ ,  $(^{20}\text{Ne}, 3\text{np}2\alpha)$ ,  $(^{20}\text{Ne}, 3\text{n}4\alpha)$ , E=164 MeV; measured  $E\gamma$ ,  $I\gamma$ , yields, forward recoil range distributions and relative contributions of complete and incomplete fusion channels. JOUR PRVCA 79 054601
- $^{182}\text{Ir}$  2009GU24 NUCLEAR REACTIONS  $^{169}\text{Tm}(^{16}\text{O}, \text{X})^{171}\text{Lu} / ^{172}\text{Lu} / ^{171}\text{Hf} / ^{175}\text{Hf} / ^{181}\text{Re} / ^{181}\text{Os} / ^{182}\text{Os} / ^{182}\text{Ir}$ , E=76, 81 MeV; measured  $\sigma$ , angular distributions, forward recoil ranges and most probable recoil ranges. JOUR PRVCA 80 024613
- $^{182}\text{Hg}$  2009GR09 NUCLEAR REACTIONS  $^{94}\text{Mo}(^{88}\text{Sr}, 2\text{n})$ , E=300 MeV;  $^{96}\text{Mo}(^{88}\text{Sr}, 2\text{n})$ , E=310 MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\alpha\gamma$ -,  $\gamma\gamma$ -coin, half-lives by recoil-distance Doppler shift method.  $^{180,182}\text{Hg}$ ; deduced levels, J,  $\pi$ , B(E2), quadrupole moments and deformation parameters. Recoil-decay tagging (RDT) method. Comparisons with systematics of even-even Hg nuclides from A=176-206 and A=186, 188 Pb nuclides. JOUR PRVCA 80 014324

**A=183**

No references found

**A=184**

- <sup>184</sup>W 2008LEZS NUCLEAR REACTIONS <sup>230,232,234</sup>Th, <sup>184,186</sup>W(p, t), E not given; measured Et, It; deduced Q-values. CONF Moscow,P78,Levon
- 2009LI23 NUCLEAR REACTIONS <sup>152,154</sup>Sm, <sup>184</sup>W, <sup>196</sup>Pt, <sup>208</sup>Pb(<sup>16</sup>O, <sup>16</sup>O), E=36-80 MeV; measured particle spectra,  $\sigma$  as a function of beam energy; deduced diffuseness parameters using single-channel and coupled-channels calculations. JOUR PRVCA 79 064603

**A=185**

- <sup>185</sup>Ta 2009LA17 NUCLEAR REACTIONS <sup>186</sup>W(<sup>136</sup>Xe, X)<sup>185</sup>Ta, E=840 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin and half-lives. <sup>185</sup>Ta; deduced levels, J,  $\pi$ , isomer, mixing ratios, bands and configurations, transition rates and other rotational-model characteristics, K-allowed E1 and K-forbidden transitions. JOUR PRVCA 80 024321
- <sup>185</sup>W 2009MA48 NUCLEAR REACTIONS <sup>184,186</sup>W(n,  $\gamma$ ), E=thermal; measured E $\gamma$ , I $\gamma$ ;  $\sigma$  by activation technique. Comparisons with previous measurements and theoretical predictions. Discussed astrophysical implications. JOUR PRVCA 80 025804
- <sup>185</sup>Bi 2009AN14 RADIOACTIVITY <sup>181</sup>Tl, <sup>177</sup>Au( $\alpha$ ) [from <sup>144</sup>Sm(<sup>40</sup>Ca, 2np)]; measured E $\alpha$ , I $\alpha$ , E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -,  $\alpha\gamma$ -coin,  $\alpha$ - $\alpha$  correlations and half-lives; deduced branching ratios and hindrance factors. <sup>173</sup>Ir, <sup>177</sup>Au, <sup>181</sup>Tl; deduced levels, J,  $\pi$ , isomers. <sup>173</sup>Ir, <sup>173m</sup>Ir, <sup>177</sup>Au, <sup>177m</sup>Au, <sup>181</sup>Tl, <sup>181m</sup>Tl, <sup>185</sup>Bi; deduced mass excesses. Level energy systematics of odd-A Tl isotopes. JOUR PRVCA 80 024302

**A=186**

- <sup>186</sup>W 2009BE27 RADIOACTIVITY <sup>64</sup>Zn(2EC), ( $\beta^+$ EC); <sup>70</sup>Zn, <sup>186</sup>W( $2\beta^-$ ); <sup>180</sup>W(2EC); measured E $\gamma$ , I $\gamma$ ; deduced T<sub>1/2</sub> lower limits for various  $2\beta$ -decay modes. ZnWO<sub>4</sub> crystal scintillator at the Gran Sasso National Laboratories. JOUR NUPAB 826 256
- <sup>186</sup>Re 2007MAYZ NUCLEAR REACTIONS <sup>187</sup>Re(n, 2n $\gamma$ ), E=12 MeV; measured E $\gamma$ , I $\gamma$ . REPT TUNL-XLVI,P40,Masters
- 2009WH01 NUCLEAR REACTIONS <sup>187</sup>Re(p, d), E=21 MeV; measured Ed, Id; deduced energy levels, J,  $\pi$ . Comparison with calculations, Q3D magnetic spectrograph. JOUR JPGPE 36 095102
- <sup>186</sup>Os 2008PHZY NUCLEAR REACTIONS <sup>185,187</sup>Re(<sup>3</sup>He, d), E=30 MeV; measured Id, Ed; deduced  $\sigma(\theta, J, \pi)$ ; calculated  $\sigma(\theta, J, \pi)$  using DWBA code DWUCK4; extracted structure of  $4_3^+$  states in <sup>186,188</sup>Os. REPT MLL 2007 Annual,P17,Phillips
- 2009BE27 RADIOACTIVITY <sup>64</sup>Zn(2EC), ( $\beta^+$ EC); <sup>70</sup>Zn, <sup>186</sup>W( $2\beta^-$ ); <sup>180</sup>W(2EC); measured E $\gamma$ , I $\gamma$ ; deduced T<sub>1/2</sub> lower limits for various  $2\beta$ -decay modes. ZnWO<sub>4</sub> crystal scintillator at the Gran Sasso National Laboratories. JOUR NUPAB 826 256

**A=186 (continued)**

- <sup>186</sup>Tl 2009AN11 RADIOACTIVITY <sup>194,194m</sup>At( $\alpha$ ), <sup>190,190m</sup>Bi( $\alpha$ )[from <sup>141</sup>Pr(<sup>56</sup>Fe, 3n), E=259 MeV]; measured E $\alpha$ , I $\alpha$ , E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -,  $\alpha\gamma$ -coin, isomer half-lives, recoil- $\alpha$ - $\alpha$  correlations. <sup>190</sup>Bi, <sup>194</sup>At; deduced levels, J,  $\pi$ , multipolarity, hindrance factors, configurations. <sup>193</sup>Po, <sup>193,195</sup>At( $\alpha$ ); measured E $\alpha$ . JOUR PRVCA 79 064320

**A=187**

- <sup>187</sup>W 2009MA48 NUCLEAR REACTIONS <sup>184,186</sup>W(n,  $\gamma$ ), E=thermal; measured E $\gamma$ , I $\gamma$ ;  $\sigma$  by activation technique. Comparisons with previous measurements and theoretical predictions. Discussed astrophysical implications. JOUR PRVCA 80 025804

**A=188**

- <sup>188</sup>Ta 2009AL16 RADIOACTIVITY <sup>188</sup>Ta, <sup>190,191</sup>W, <sup>192,193</sup>Re, <sup>189</sup>Ta(IT), <sup>188</sup>Ta( $\beta^-$ ); measured E $\gamma$ , I $\gamma$ ,  $\beta\gamma$ -coin., isomeric states. JOUR APOBB 40 875
- <sup>188</sup>W 2009AL16 RADIOACTIVITY <sup>188</sup>Ta, <sup>190,191</sup>W, <sup>192,193</sup>Re, <sup>189</sup>Ta(IT), <sup>188</sup>Ta( $\beta^-$ ); measured E $\gamma$ , I $\gamma$ ,  $\beta\gamma$ -coin., isomeric states. JOUR APOBB 40 875
- <sup>188</sup>Re 2009SH28 RADIOACTIVITY <sup>188</sup>Re( $\beta^-$ ); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin.; deduced quadrupole deformation and triaxiality parameters. Comparison with Hartree-Fock-Bogoliubov, total Routhian surface calculations. JOUR IMPEE 18 1603
- <sup>188</sup>Os 2008PHZY NUCLEAR REACTIONS <sup>185,187</sup>Re(<sup>3</sup>He, d), E=30 MeV; measured Id, Ed; deduced  $\sigma(\theta, J, \pi)$ ; calculated  $\sigma(\theta, J, \pi)$  using DWBA code DWUCK4; extracted structure of  $4_3^+$  states in <sup>186,188</sup>Os. REPT MLL 2007 Annual,P17,Phillips
- 2009MA24 NUCLEAR REACTIONS <sup>12</sup>C(<sup>180</sup>Hf, X), E=65 MeV; measured E $\gamma$ , I $\gamma$ ; <sup>188</sup>Os, <sup>192</sup>Pt; deduced giant dipole resonance strength distributions. JOUR APOBB 40 545
- 2009SH28 RADIOACTIVITY <sup>188</sup>Re( $\beta^-$ ); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin.; deduced quadrupole deformation and triaxiality parameters. Comparison with Hartree-Fock-Bogoliubov, total Routhian surface calculations. JOUR IMPEE 18 1603

**A=189**

- <sup>189</sup>Ta 2009AL16 RADIOACTIVITY <sup>188</sup>Ta, <sup>190,191</sup>W, <sup>192,193</sup>Re, <sup>189</sup>Ta(IT), <sup>188</sup>Ta( $\beta^-$ ); measured E $\gamma$ , I $\gamma$ ,  $\beta\gamma$ -coin., isomeric states. JOUR APOBB 40 875

**A=189 (continued)**

- 2009ST16 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{208}\text{Pb}, \text{X}){}^{189}\text{Ta}$ ;  ${}^9\text{Be}({}^{208}\text{Pb}, \text{X}){}^{191}\text{W}$ ;  ${}^9\text{Be}({}^{208}\text{Pb}, \text{X}){}^{193}\text{Os}$ ;  ${}^9\text{Be}({}^{208}\text{Pb}, \text{X}){}^{197}\text{Os}$ ;  ${}^9\text{Be}({}^{208}\text{Pb}, \text{X}){}^{198}\text{Os}$ ;  ${}^9\text{Be}({}^{208}\text{Pb}, \text{X}){}^{199}\text{Os}$ ;  ${}^9\text{Be}({}^{208}\text{Pb}, \text{X}){}^{196}\text{Re}$ ;  ${}^9\text{Be}({}^{208}\text{Pb}, \text{X}){}^{195}\text{Ir}$ ;  ${}^9\text{Be}({}^{208}\text{Pb}, \text{X}){}^{199}\text{Ir}$ ;  ${}^9\text{Be}({}^{208}\text{Pb}, \text{X}){}^{200}\text{Ir}$ ;  ${}^9\text{Be}({}^{208}\text{Pb}, \text{X}){}^{201}\text{Ir}$ ;  ${}^9\text{Be}({}^{208}\text{Pb}, \text{X}){}^{202}\text{Ir}$ ;  ${}^9\text{Be}({}^{208}\text{Pb}, \text{X}){}^{203}\text{Ir}$ ;  ${}^9\text{Be}({}^{208}\text{Pb}, \text{X}){}^{197}\text{Pt}$ ;  ${}^9\text{Be}({}^{208}\text{Pb}, \text{X}){}^{199}\text{Pt}$ ;  ${}^9\text{Be}({}^{208}\text{Pb}, \text{X}){}^{203}\text{Pt}$ ;  ${}^9\text{Be}({}^{208}\text{Pb}, \text{X}){}^{204}\text{Pt}$ ;  ${}^9\text{Be}({}^{208}\text{Pb}, \text{X}){}^{201}\text{Au}$ ;  ${}^9\text{Be}({}^{208}\text{Pb}, \text{X}){}^{202}\text{Au}$ ;  ${}^9\text{Be}({}^{208}\text{Pb}, \text{X}){}^{204}\text{Au}$ ;  ${}^9\text{Be}({}^{208}\text{Pb}, \text{X}){}^{205}\text{Au}$ ;  ${}^9\text{Be}({}^{208}\text{Pb}, \text{X}){}^{204}\text{Hg}$ ;  ${}^9\text{Be}({}^{208}\text{Pb}, \text{X}){}^{205}\text{Hg}$ , E=1 GeV / nucleon; measured delayed  $\text{I}\gamma$ ,  $\text{E}\gamma$ , isomer decay. JOUR IMPEE 18 1002
- ${}^{189}\text{Pb}$  2009AN11 RADIOACTIVITY  ${}^{194,194m}\text{At}(\alpha)$ ,  ${}^{190,190m}\text{Bi}(\alpha)$ [from  ${}^{141}\text{Pr}({}^{56}\text{Fe}, 3\text{n})$ , E=259 MeV]; measured  $\text{E}\alpha$ ,  $\text{I}\alpha$ ,  $\text{E}\gamma$ ,  $\text{I}\gamma$ ,  $\gamma\gamma$ -,  $\alpha\gamma$ -coin, isomer half-lives, recoil- $\alpha$ - $\alpha$  correlations.  ${}^{190}\text{Bi}$ ,  ${}^{194}\text{At}$ ; deduced levels, J,  $\pi$ , multipolarity, hindrance factors, configurations.  ${}^{193}\text{Po}$ ,  ${}^{193,195}\text{At}(\alpha)$ ; measured  $\text{E}\alpha$ . JOUR PRVCA 79 064320
- ${}^{189}\text{Bi}$  2009AN11 RADIOACTIVITY  ${}^{194,194m}\text{At}(\alpha)$ ,  ${}^{190,190m}\text{Bi}(\alpha)$ [from  ${}^{141}\text{Pr}({}^{56}\text{Fe}, 3\text{n})$ , E=259 MeV]; measured  $\text{E}\alpha$ ,  $\text{I}\alpha$ ,  $\text{E}\gamma$ ,  $\text{I}\gamma$ ,  $\gamma\gamma$ -,  $\alpha\gamma$ -coin, isomer half-lives, recoil- $\alpha$ - $\alpha$  correlations.  ${}^{190}\text{Bi}$ ,  ${}^{194}\text{At}$ ; deduced levels, J,  $\pi$ , multipolarity, hindrance factors, configurations.  ${}^{193}\text{Po}$ ,  ${}^{193,195}\text{At}(\alpha)$ ; measured  $\text{E}\alpha$ . JOUR PRVCA 79 064320

**A=190**

- ${}^{190}\text{W}$  2009AL16 RADIOACTIVITY  ${}^{188}\text{Ta}$ ,  ${}^{190,191}\text{W}$ ,  ${}^{192,193}\text{Re}$ ,  ${}^{189}\text{Ta}(\text{IT})$ ,  ${}^{188}\text{Ta}(\beta^-)$ ; measured  $\text{E}\gamma$ ,  $\text{I}\gamma$ ,  $\beta\gamma$ -coin., isomeric states. JOUR APOBB 40 875
- 2009FA06 NUCLEAR REACTIONS  $\text{Be}({}^{208}\text{Pb}, \text{X})$ , E=1 GeV / nucleon;  ${}^{190}\text{W}$ ; measured  $\text{I}\gamma$ ,  $\text{E}\gamma$ ,  $\gamma\gamma$ -coin; deduced J,  $\pi$ ,  $\text{T}_{1/2}$ . Blocked BCS calculations. JOUR APOBB 40 885
- ${}^{190}\text{Ir}$  2009HA13 NUCLEAR REACTIONS  ${}^{191,193}\text{Ir}$ ,  ${}^{192}\text{Os}(\gamma, \text{n}){}^{190}\text{Ir}$  /  ${}^{191}\text{Os}$  /  ${}^{191m}\text{Os}$  /  ${}^{192}\text{Ir}$ , E=7600-9900 keV; measured  $\text{E}\gamma$ ,  $\text{I}\gamma$  from radioactive decays of  ${}^{190}\text{Ir}$ ,  ${}^{191}\text{Os}$ ,  ${}^{191m}\text{Os}$  and  ${}^{192}\text{Ir}$ ; deduced yields and  $\sigma$ . Comparison with calculated using NON-SMOKER<sup>WEB</sup> and TALYS codes. JOUR PRVCA 79 055807
- ${}^{190}\text{Au}$  2009SI16 NUCLEAR REACTIONS  ${}^{181}\text{Ta}({}^{16}\text{O}, 3\text{n})$ ,  $({}^{16}\text{O}, 4\text{n})$ ,  $({}^{16}\text{O}, 5\text{n})$ ,  $({}^{16}\text{O}, 3\text{np})$ ,  $({}^{16}\text{O}, 4\text{np})$ ,  $({}^{16}\text{O}, 5\text{np})$ ,  $({}^{16}\text{O}, \text{n}\alpha)$ ,  $({}^{16}\text{O}, 2\text{n}\alpha)$ ,  $({}^{16}\text{O}, 3\text{n}\alpha)$   ${}^{190}\text{Au}$  /  ${}^{191}\text{Au}$  /  ${}^{192}\text{Au}$  /  ${}^{191}\text{Hg}$  /  ${}^{191m}\text{Hg}$  /  ${}^{192}\text{Hg}$  /  ${}^{193}\text{Hg}$  /  ${}^{193m}\text{Hg}$  /  ${}^{192}\text{Tl}$  /  ${}^{192m}\text{Tl}$  /  ${}^{193}\text{Tl}$  /  ${}^{193m}\text{Tl}$  /  ${}^{194}\text{Tl}$  /  ${}^{194m}\text{Tl}$ , E=76-100 MeV; measured  $\text{E}\gamma$ ,  $\text{I}\gamma$ ,  $\sigma$ , and excitation functions; deduced fraction of incomplete fusion. Comparison with experimental data for other reactions with  ${}^{16}\text{O}$  and  ${}^{12}\text{C}$  projectiles and with PACE4 predictions. JOUR PRVCA 80 014601
- ${}^{190}\text{Bi}$  2009AN11 RADIOACTIVITY  ${}^{194,194m}\text{At}(\alpha)$ ,  ${}^{190,190m}\text{Bi}(\alpha)$ [from  ${}^{141}\text{Pr}({}^{56}\text{Fe}, 3\text{n})$ , E=259 MeV]; measured  $\text{E}\alpha$ ,  $\text{I}\alpha$ ,  $\text{E}\gamma$ ,  $\text{I}\gamma$ ,  $\gamma\gamma$ -,  $\alpha\gamma$ -coin, isomer half-lives, recoil- $\alpha$ - $\alpha$  correlations.  ${}^{190}\text{Bi}$ ,  ${}^{194}\text{At}$ ; deduced levels, J,  $\pi$ , multipolarity, hindrance factors, configurations.  ${}^{193}\text{Po}$ ,  ${}^{193,195}\text{At}(\alpha)$ ; measured  $\text{E}\alpha$ . JOUR PRVCA 79 064320

## A=191

- <sup>191</sup>W 2009AL16 RADIOACTIVITY <sup>188</sup>Ta, <sup>190,191</sup>W, <sup>192,193</sup>Re, <sup>189</sup>Ta(IT), <sup>188</sup>Ta( $\beta^-$ ); measured E $\gamma$ , I $\gamma$ ,  $\beta\gamma$ -coin., isomeric states. JOUR APOBB 40 875
- 2009ST16 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>189</sup>Ta; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>191</sup>W; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>193</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>198</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>196</sup>Re; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>195</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>200</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Hg; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Hg, E=1 GeV / nucleon; measured delayed I $\gamma$ , E $\gamma$ , isomer decay. JOUR IMPEE 18 1002
- <sup>191</sup>Os 2009HA13 NUCLEAR REACTIONS <sup>191,193</sup>Ir, <sup>192</sup>Os( $\gamma$ , n)<sup>190</sup>Ir / <sup>191</sup>Os / <sup>191m</sup>Os / <sup>192</sup>Ir, E=7600-9900 keV; measured E $\gamma$ , I $\gamma$  from radioactive decays of <sup>190</sup>Ir, <sup>191</sup>Os, <sup>191m</sup>Os and <sup>192</sup>Ir; deduced yields and  $\sigma$ . Comparison with calculated using NON-SMOKER<sup>WEB</sup> and TALYS codes. JOUR PRVCA 79 055807
- <sup>191</sup>Au 2009SI16 NUCLEAR REACTIONS <sup>181</sup>Ta(<sup>16</sup>O, 3n), (<sup>16</sup>O, 4n), (<sup>16</sup>O, 5n), (<sup>16</sup>O, 3np), (<sup>16</sup>O, 4np), (<sup>16</sup>O, 5np), (<sup>16</sup>O, n $\alpha$ ), (<sup>16</sup>O, 2n $\alpha$ ), (<sup>16</sup>O, 3n $\alpha$ )<sup>190</sup>Au / <sup>191</sup>Au / <sup>192</sup>Au / <sup>191</sup>Hg / <sup>191m</sup>Hg / <sup>192</sup>Hg / <sup>193</sup>Hg / <sup>193m</sup>Hg / <sup>192</sup>Tl / <sup>192m</sup>Tl / <sup>193</sup>Tl / <sup>193m</sup>Tl / <sup>194</sup>Tl / <sup>194m</sup>Tl, E=76-100 MeV; measured E $\gamma$ , I $\gamma$ ,  $\sigma$ , and excitation functions; deduced fraction of incomplete fusion. Comparison with experimental data for other reactions with <sup>16</sup>O and <sup>12</sup>C projectiles and with PACE4 predictions. JOUR PRVCA 80 014601
- <sup>191</sup>Hg 2009SI16 NUCLEAR REACTIONS <sup>181</sup>Ta(<sup>16</sup>O, 3n), (<sup>16</sup>O, 4n), (<sup>16</sup>O, 5n), (<sup>16</sup>O, 3np), (<sup>16</sup>O, 4np), (<sup>16</sup>O, 5np), (<sup>16</sup>O, n $\alpha$ ), (<sup>16</sup>O, 2n $\alpha$ ), (<sup>16</sup>O, 3n $\alpha$ )<sup>190</sup>Au / <sup>191</sup>Au / <sup>192</sup>Au / <sup>191</sup>Hg / <sup>191m</sup>Hg / <sup>192</sup>Hg / <sup>193</sup>Hg / <sup>193m</sup>Hg / <sup>192</sup>Tl / <sup>192m</sup>Tl / <sup>193</sup>Tl / <sup>193m</sup>Tl / <sup>194</sup>Tl / <sup>194m</sup>Tl, E=76-100 MeV; measured E $\gamma$ , I $\gamma$ ,  $\sigma$ , and excitation functions; deduced fraction of incomplete fusion. Comparison with experimental data for other reactions with <sup>16</sup>O and <sup>12</sup>C projectiles and with PACE4 predictions. JOUR PRVCA 80 014601
- <sup>191</sup>Bi 2009AN11 RADIOACTIVITY <sup>194,194m</sup>At( $\alpha$ ), <sup>190,190m</sup>Bi( $\alpha$ ) [from <sup>141</sup>Pr(<sup>56</sup>Fe, 3n), E=259 MeV]; measured E $\alpha$ , I $\alpha$ , E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -,  $\alpha\gamma$ -coin, isomer half-lives, recoil- $\alpha$ - $\alpha$  correlations. <sup>190</sup>Bi, <sup>194</sup>At; deduced levels, J,  $\pi$ , multipolarity, hindrance factors, configurations. <sup>193</sup>Po, <sup>193,195</sup>At( $\alpha$ ); measured E $\alpha$ . JOUR PRVCA 79 064320

## A=192

- <sup>192</sup>Re 2009AL16 RADIOACTIVITY <sup>188</sup>Ta, <sup>190,191</sup>W, <sup>192,193</sup>Re, <sup>189</sup>Ta(IT), <sup>188</sup>Ta( $\beta^-$ ); measured E $\gamma$ , I $\gamma$ ,  $\beta\gamma$ -coin., isomeric states. JOUR APOBB 40 875
- <sup>192</sup>Ir 2009HA13 NUCLEAR REACTIONS <sup>191,193</sup>Ir, <sup>192</sup>Os( $\gamma$ , n)<sup>190</sup>Ir / <sup>191</sup>Os / <sup>191m</sup>Os / <sup>192</sup>Ir, E=7600-9900 keV; measured E $\gamma$ , I $\gamma$  from radioactive decays of <sup>190</sup>Ir, <sup>191</sup>Os, <sup>191m</sup>Os and <sup>192</sup>Ir; deduced yields and  $\sigma$ . Comparison with calculated using NON-SMOKER<sup>WEB</sup> and TALYS codes. JOUR PRVCA 79 055807



**A=192 (continued)**

- <sup>192</sup>Pt 2009MA24 NUCLEAR REACTIONS <sup>12</sup>C(<sup>180</sup>Hf, X), E=65 MeV; measured E $\gamma$ , I $\gamma$ ; <sup>188</sup>Os, <sup>192</sup>Pt; deduced giant dipole resonance strength distributions. JOUR APOBB 40 545
- <sup>192</sup>Au 2009SI16 NUCLEAR REACTIONS <sup>181</sup>Ta(<sup>16</sup>O, 3n), (<sup>16</sup>O, 4n), (<sup>16</sup>O, 5n), (<sup>16</sup>O, 3np), (<sup>16</sup>O, 4np), (<sup>16</sup>O, 5np), (<sup>16</sup>O, n $\alpha$ ), (<sup>16</sup>O, 2n $\alpha$ ), (<sup>16</sup>O, 3n $\alpha$ )<sup>190</sup>Au / <sup>191</sup>Au / <sup>192</sup>Au / <sup>191</sup>Hg / <sup>191m</sup>Hg / <sup>192</sup>Hg / <sup>193</sup>Hg / <sup>193m</sup>Hg / <sup>192</sup>Tl / <sup>192m</sup>Tl / <sup>193</sup>Tl / <sup>193m</sup>Tl / <sup>194</sup>Tl / <sup>194m</sup>Tl, E=76-100 MeV; measured E $\gamma$ , I $\gamma$ ,  $\sigma$ , and excitation functions; deduced fraction of incomplete fusion. Comparison with experimental data for other reactions with <sup>16</sup>O and <sup>12</sup>C projectiles and with PACE4 predictions. JOUR PRVCA 80 014601
- <sup>192</sup>Hg 2009SI16 NUCLEAR REACTIONS <sup>181</sup>Ta(<sup>16</sup>O, 3n), (<sup>16</sup>O, 4n), (<sup>16</sup>O, 5n), (<sup>16</sup>O, 3np), (<sup>16</sup>O, 4np), (<sup>16</sup>O, 5np), (<sup>16</sup>O, n $\alpha$ ), (<sup>16</sup>O, 2n $\alpha$ ), (<sup>16</sup>O, 3n $\alpha$ )<sup>190</sup>Au / <sup>191</sup>Au / <sup>192</sup>Au / <sup>191</sup>Hg / <sup>191m</sup>Hg / <sup>192</sup>Hg / <sup>193</sup>Hg / <sup>193m</sup>Hg / <sup>192</sup>Tl / <sup>192m</sup>Tl / <sup>193</sup>Tl / <sup>193m</sup>Tl / <sup>194</sup>Tl / <sup>194m</sup>Tl, E=76-100 MeV; measured E $\gamma$ , I $\gamma$ ,  $\sigma$ , and excitation functions; deduced fraction of incomplete fusion. Comparison with experimental data for other reactions with <sup>16</sup>O and <sup>12</sup>C projectiles and with PACE4 predictions. JOUR PRVCA 80 014601
- <sup>192</sup>Tl 2009SI16 NUCLEAR REACTIONS <sup>181</sup>Ta(<sup>16</sup>O, 3n), (<sup>16</sup>O, 4n), (<sup>16</sup>O, 5n), (<sup>16</sup>O, 3np), (<sup>16</sup>O, 4np), (<sup>16</sup>O, 5np), (<sup>16</sup>O, n $\alpha$ ), (<sup>16</sup>O, 2n $\alpha$ ), (<sup>16</sup>O, 3n $\alpha$ )<sup>190</sup>Au / <sup>191</sup>Au / <sup>192</sup>Au / <sup>191</sup>Hg / <sup>191m</sup>Hg / <sup>192</sup>Hg / <sup>193</sup>Hg / <sup>193m</sup>Hg / <sup>192</sup>Tl / <sup>192m</sup>Tl / <sup>193</sup>Tl / <sup>193m</sup>Tl / <sup>194</sup>Tl / <sup>194m</sup>Tl, E=76-100 MeV; measured E $\gamma$ , I $\gamma$ ,  $\sigma$ , and excitation functions; deduced fraction of incomplete fusion. Comparison with experimental data for other reactions with <sup>16</sup>O and <sup>12</sup>C projectiles and with PACE4 predictions. JOUR PRVCA 80 014601

**A=193**

- <sup>193</sup>Re 2009AL16 RADIOACTIVITY <sup>188</sup>Ta, <sup>190,191</sup>W, <sup>192,193</sup>Re, <sup>189</sup>Ta(IT), <sup>188</sup>Ta( $\beta^-$ ); measured E $\gamma$ , I $\gamma$ ,  $\beta\gamma$ -coin., isomeric states. JOUR APOBB 40 875
- <sup>193</sup>Os 2009ST16 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>189</sup>Ta; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>191</sup>W; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>193</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>198</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>196</sup>Re; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>195</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>200</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Hg; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Hg, E=1 GeV / nucleon; measured delayed I $\gamma$ , E $\gamma$ , isomer decay. JOUR IMPEE 18 1002

**A=193 (continued)**

- <sup>193</sup>Hg 2009SI16 NUCLEAR REACTIONS <sup>181</sup>Ta(<sup>16</sup>O, 3n), (<sup>16</sup>O, 4n), (<sup>16</sup>O, 5n), (<sup>16</sup>O, 3np), (<sup>16</sup>O, 4np), (<sup>16</sup>O, 5np), (<sup>16</sup>O, nα), (<sup>16</sup>O, 2nα), (<sup>16</sup>O, 3nα)<sup>190</sup>Au / <sup>191</sup>Au / <sup>192</sup>Au / <sup>191</sup>Hg / <sup>191m</sup>Hg / <sup>192</sup>Hg / <sup>193</sup>Hg / <sup>193m</sup>Hg / <sup>192</sup>Tl / <sup>192m</sup>Tl / <sup>193</sup>Tl / <sup>193m</sup>Tl / <sup>194</sup>Tl / <sup>194m</sup>Tl, E=76-100 MeV; measured Eγ, Iγ, σ, and excitation functions; deduced fraction of incomplete fusion. Comparison with experimental data for other reactions with <sup>16</sup>O and <sup>12</sup>C projectiles and with PACE4 predictions. JOUR PRVCA 80 014601
- <sup>193</sup>Tl 2009SI16 NUCLEAR REACTIONS <sup>181</sup>Ta(<sup>16</sup>O, 3n), (<sup>16</sup>O, 4n), (<sup>16</sup>O, 5n), (<sup>16</sup>O, 3np), (<sup>16</sup>O, 4np), (<sup>16</sup>O, 5np), (<sup>16</sup>O, nα), (<sup>16</sup>O, 2nα), (<sup>16</sup>O, 3nα)<sup>190</sup>Au / <sup>191</sup>Au / <sup>192</sup>Au / <sup>191</sup>Hg / <sup>191m</sup>Hg / <sup>192</sup>Hg / <sup>193</sup>Hg / <sup>193m</sup>Hg / <sup>192</sup>Tl / <sup>192m</sup>Tl / <sup>193</sup>Tl / <sup>193m</sup>Tl / <sup>194</sup>Tl / <sup>194m</sup>Tl, E=76-100 MeV; measured Eγ, Iγ, σ, and excitation functions; deduced fraction of incomplete fusion. Comparison with experimental data for other reactions with <sup>16</sup>O and <sup>12</sup>C projectiles and with PACE4 predictions. JOUR PRVCA 80 014601
- <sup>193</sup>Po 2009AN11 NUCLEAR REACTIONS <sup>141</sup>Pr(<sup>56</sup>Fe, xn)<sup>193</sup>Po / <sup>193m</sup>Po / <sup>193</sup>At / <sup>194</sup>At / <sup>194m</sup>At / <sup>195</sup>At, E=259 MeV]; measured Eα, Iα, recoil-α-α and α-γ correlations. JOUR PRVCA 79 064320
- 2009AN11 RADIOACTIVITY <sup>194,194m</sup>At(α), <sup>190,190m</sup>Bi(α)[from <sup>141</sup>Pr(<sup>56</sup>Fe, 3n), E=259 MeV]; measured Eα, Iα, Eγ, Iγ, γγ-, αγ-coin, isomer half-lives, recoil-α-α correlations. <sup>190</sup>Bi, <sup>194</sup>At; deduced levels, J, π, multipolarity, hindrance factors, configurations. <sup>193</sup>Po, <sup>193,195</sup>At(α); measured Eα. JOUR PRVCA 79 064320
- <sup>193</sup>At 2009AN11 NUCLEAR REACTIONS <sup>141</sup>Pr(<sup>56</sup>Fe, xn)<sup>193</sup>Po / <sup>193m</sup>Po / <sup>193</sup>At / <sup>194</sup>At / <sup>194m</sup>At / <sup>195</sup>At, E=259 MeV]; measured Eα, Iα, recoil-α-α and α-γ correlations. JOUR PRVCA 79 064320
- 2009AN11 RADIOACTIVITY <sup>194,194m</sup>At(α), <sup>190,190m</sup>Bi(α)[from <sup>141</sup>Pr(<sup>56</sup>Fe, 3n), E=259 MeV]; measured Eα, Iα, Eγ, Iγ, γγ-, αγ-coin, isomer half-lives, recoil-α-α correlations. <sup>190</sup>Bi, <sup>194</sup>At; deduced levels, J, π, multipolarity, hindrance factors, configurations. <sup>193</sup>Po, <sup>193,195</sup>At(α); measured Eα. JOUR PRVCA 79 064320

**A=194**

- <sup>194</sup>Tl 2009MA27 NUCLEAR REACTIONS <sup>181</sup>Ta(<sup>18</sup>O, 5n), E=91, 93 MeV; measured Eγ, Iγ, γγ-coin; deduced J, π, band structure, B(M1) / B(E2). JOUR APOBB 40 657
- 2009SI16 NUCLEAR REACTIONS <sup>181</sup>Ta(<sup>16</sup>O, 3n), (<sup>16</sup>O, 4n), (<sup>16</sup>O, 5n), (<sup>16</sup>O, 3np), (<sup>16</sup>O, 4np), (<sup>16</sup>O, 5np), (<sup>16</sup>O, nα), (<sup>16</sup>O, 2nα), (<sup>16</sup>O, 3nα)<sup>190</sup>Au / <sup>191</sup>Au / <sup>192</sup>Au / <sup>191</sup>Hg / <sup>191m</sup>Hg / <sup>192</sup>Hg / <sup>193</sup>Hg / <sup>193m</sup>Hg / <sup>192</sup>Tl / <sup>192m</sup>Tl / <sup>193</sup>Tl / <sup>193m</sup>Tl / <sup>194</sup>Tl / <sup>194m</sup>Tl, E=76-100 MeV; measured Eγ, Iγ, σ, and excitation functions; deduced fraction of incomplete fusion. Comparison with experimental data for other reactions with <sup>16</sup>O and <sup>12</sup>C projectiles and with PACE4 predictions. JOUR PRVCA 80 014601

**A=194 (continued)**

- <sup>194</sup>At    2009AN11    NUCLEAR REACTIONS <sup>141</sup>Pr(<sup>56</sup>Fe, xn)<sup>193</sup>Po / <sup>193m</sup>Po / <sup>193</sup>At / <sup>194</sup>At / <sup>194m</sup>At / <sup>195</sup>At, E=259 MeV]; measured E $\alpha$ , I $\alpha$ , recoil- $\alpha$ - $\alpha$  and  $\alpha$ - $\gamma$  correlations. JOUR PRVCA 79 064320
- 2009AN11    RADIOACTIVITY <sup>194,194m</sup>At( $\alpha$ ), <sup>190,190m</sup>Bi( $\alpha$ )[from <sup>141</sup>Pr(<sup>56</sup>Fe, 3n), E=259 MeV]; measured E $\alpha$ , I $\alpha$ , E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -,  $\alpha\gamma$ -coin, isomer half-lives, recoil- $\alpha$ - $\alpha$  correlations. <sup>190</sup>Bi, <sup>194</sup>At; deduced levels, J,  $\pi$ , multipolarity, hindrance factors, configurations. <sup>193</sup>Po, <sup>193,195</sup>At( $\alpha$ ); measured E $\alpha$ . JOUR PRVCA 79 064320

**A=195**

- <sup>195</sup>Ir    2009ST16    NUCLEAR REACTIONS <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>189</sup>Ta; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>191</sup>W; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>193</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>198</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>196</sup>Re; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>195</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>200</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Hg; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Hg, E=1 GeV / nucleon; measured delayed I $\gamma$ , E $\gamma$ , isomer decay. JOUR IMPEE 18 1002
- <sup>195</sup>At    2009AN11    NUCLEAR REACTIONS <sup>141</sup>Pr(<sup>56</sup>Fe, xn)<sup>193</sup>Po / <sup>193m</sup>Po / <sup>193</sup>At / <sup>194</sup>At / <sup>194m</sup>At / <sup>195</sup>At, E=259 MeV]; measured E $\alpha$ , I $\alpha$ , recoil- $\alpha$ - $\alpha$  and  $\alpha$ - $\gamma$  correlations. JOUR PRVCA 79 064320
- 2009AN11    RADIOACTIVITY <sup>194,194m</sup>At( $\alpha$ ), <sup>190,190m</sup>Bi( $\alpha$ )[from <sup>141</sup>Pr(<sup>56</sup>Fe, 3n), E=259 MeV]; measured E $\alpha$ , I $\alpha$ , E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -,  $\alpha\gamma$ -coin, isomer half-lives, recoil- $\alpha$ - $\alpha$  correlations. <sup>190</sup>Bi, <sup>194</sup>At; deduced levels, J,  $\pi$ , multipolarity, hindrance factors, configurations. <sup>193</sup>Po, <sup>193,195</sup>At( $\alpha$ ); measured E $\alpha$ . JOUR PRVCA 79 064320

**A=196**

- <sup>196</sup>Re    2009ST16    NUCLEAR REACTIONS <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>189</sup>Ta; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>191</sup>W; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>193</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>198</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>196</sup>Re; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>195</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>200</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Hg; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Hg, E=1 GeV / nucleon; measured delayed I $\gamma$ , E $\gamma$ , isomer decay. JOUR IMPEE 18 1002
- <sup>196</sup>Pt    2009LI23    NUCLEAR REACTIONS <sup>152,154</sup>Sm, <sup>184</sup>W, <sup>196</sup>Pt, <sup>208</sup>Pb(<sup>16</sup>O, <sup>16</sup>O), E=36-80 MeV; measured particle spectra,  $\sigma$  as a function of beam energy; deduced diffuseness parameters using single-channel and coupled-channels calculations. JOUR PRVCA 79 064603

**A=196 (continued)**

- <sup>196</sup>Au 2008PE32 NUCLEAR REACTIONS <sup>206</sup>Pb(<sup>6</sup>He, 2n), <sup>208</sup>Pb( $\alpha$ , 2n), E=60.3 MeV; <sup>197</sup>Au(<sup>6</sup>He, X), <sup>198</sup>Pt(d, X), E not given; <sup>196,198,199</sup>Au; measured reaction products; deduced excitation functions. JOUR IMPEE 17 2349
- 2008VIZZ NUCLEAR REACTIONS Au(d, 2n), (n, 2n), (d, p), Ed=4.5-7.5 MeV, En=14.6 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, x $\gamma$ -coin; <sup>197</sup>Hg, <sup>196,198</sup>Au; deduced isomer yield ratios. CONF Moscow,P132,Vishnevsky
- <sup>196</sup>Pb 2009LE18 NUCLEAR REACTIONS <sup>130</sup>Te(<sup>27</sup>Al, 6n)<sup>151</sup>Tb, E=155 MeV; <sup>170</sup>Er(<sup>30</sup>Si, 4n)<sup>196</sup>Pb, E=148 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma$  multiplicity, quasicontinuum  $\gamma$ -ray spectra; deduced Monte Carlo simulation of  $\gamma$  decay based on microscopically calculated levels, E2 decay probabilities, potential barriers between normal and superdeformed wells and collective mass parameters. <sup>151</sup>Tb, <sup>196</sup>Pb; deduced normal and superdeformed bands, and E1 strength functions. Comparison with cranked shell-model calculations. JOUR PRVCA 79 064306
- <sup>196</sup>Po 2009GR08 NUCLEAR REACTIONS <sup>113</sup>Cd(<sup>86</sup>Kr, 3n), E=382 MeV; measured E $\gamma$ , I $\gamma$ , half-lives using the recoil distance Doppler-shift technique. <sup>196</sup>Po; deduced levels, J,  $\pi$ , B(E2), transition quadrupole moments and deformation parameters. Comparison with configuration mixing calculations of angular momentum projected mean-field states. JOUR PRVCA 80 014323

**A=197**

- <sup>197</sup>Os 2009ST16 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>189</sup>Ta; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>191</sup>W; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>193</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>198</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>196</sup>Re; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>195</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>200</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Hg; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Hg, E=1 GeV / nucleon; measured delayed I $\gamma$ , E $\gamma$ , isomer decay. JOUR IMPEE 18 1002
- <sup>197</sup>Pt 2009ST16 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>189</sup>Ta; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>191</sup>W; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>193</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>198</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>196</sup>Re; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>195</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>200</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Hg; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Hg, E=1 GeV / nucleon; measured delayed I $\gamma$ , E $\gamma$ , isomer decay. JOUR IMPEE 18 1002
- <sup>197</sup>Au 2007SUZP NUCLEAR REACTIONS <sup>197</sup>Au(<sup>32</sup>Mg, <sup>32</sup>Mg'), E=26 MeV / nucleon; measured I $\gamma$ , E $\gamma$ ; deduced B(E2). Recoil distance method; GRAPE detector array. REPT RIKEN 2006 Annual,P6,Suzuki

**A=197 (continued)**

- 2008KIZW RADIOACTIVITY  $^{197}\text{Hg}(\text{EC})$  [from  $^{197}\text{Au}(\text{d}, 2\text{n})$ ,  $E=7$  MeV]; measured  $E\gamma$ ,  $I\gamma$ , x-rays;  $^{197}\text{Au}$ ; deduced level energy. CONF Moscow,P86,Kirischuk
- 2009LI29 NUCLEAR REACTIONS  $^{197}\text{Au}(^{29}\text{S}, ^{29}\text{S}')$ ,  $E=49.2$  MeV / nucleon; measured particle spectra by  $\Delta E$ -tof,  $(^{29}\text{S})(\text{p})(\text{p})$ -coin.  $^{29}\text{S}$ ; deduced excitation spectrum, two proton and  $^2\text{He}$  cluster decay branching ratios. JOUR PRVCA 80 014310
- $^{197}\text{Hg}$  2008KIZW RADIOACTIVITY  $^{197}\text{Hg}(\text{EC})$  [from  $^{197}\text{Au}(\text{d}, 2\text{n})$ ,  $E=7$  MeV]; measured  $E\gamma$ ,  $I\gamma$ , x-rays;  $^{197}\text{Au}$ ; deduced level energy. CONF Moscow,P86,Kirischuk
- 2008VIZZ NUCLEAR REACTIONS  $\text{Au}(\text{d}, 2\text{n})$ ,  $(\text{n}, 2\text{n})$ ,  $(\text{d}, \text{p})$ ,  $E_{\text{d}}=4.5-7.5$  MeV,  $E_{\text{n}}=14.6$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma^-$ ,  $x\gamma$ -coin;  $^{197}\text{Hg}$ ,  $^{196,198}\text{Au}$ ; deduced isomer yield ratios. CONF Moscow,P132,Vishnevsky

**A=198**

- $^{198}\text{Os}$  2009ST16 NUCLEAR REACTIONS  $^9\text{Be}(^{208}\text{Pb}, \text{X})^{189}\text{Ta}$ ;  $^9\text{Be}(^{208}\text{Pb}, \text{X})^{191}\text{W}$ ;  $^9\text{Be}(^{208}\text{Pb}, \text{X})^{193}\text{Os}$ ;  $^9\text{Be}(^{208}\text{Pb}, \text{X})^{197}\text{Os}$ ;  $^9\text{Be}(^{208}\text{Pb}, \text{X})^{198}\text{Os}$ ;  $^9\text{Be}(^{208}\text{Pb}, \text{X})^{199}\text{Os}$ ;  $^9\text{Be}(^{208}\text{Pb}, \text{X})^{196}\text{Re}$ ;  $^9\text{Be}(^{208}\text{Pb}, \text{X})^{195}\text{Ir}$ ;  $^9\text{Be}(^{208}\text{Pb}, \text{X})^{199}\text{Ir}$ ;  $^9\text{Be}(^{208}\text{Pb}, \text{X})^{200}\text{Ir}$ ;  $^9\text{Be}(^{208}\text{Pb}, \text{X})^{201}\text{Ir}$ ;  $^9\text{Be}(^{208}\text{Pb}, \text{X})^{202}\text{Ir}$ ;  $^9\text{Be}(^{208}\text{Pb}, \text{X})^{203}\text{Ir}$ ;  $^9\text{Be}(^{208}\text{Pb}, \text{X})^{197}\text{Pt}$ ;  $^9\text{Be}(^{208}\text{Pb}, \text{X})^{199}\text{Pt}$ ;  $^9\text{Be}(^{208}\text{Pb}, \text{X})^{203}\text{Pt}$ ;  $^9\text{Be}(^{208}\text{Pb}, \text{X})^{204}\text{Pt}$ ;  $^9\text{Be}(^{208}\text{Pb}, \text{X})^{201}\text{Au}$ ;  $^9\text{Be}(^{208}\text{Pb}, \text{X})^{202}\text{Au}$ ;  $^9\text{Be}(^{208}\text{Pb}, \text{X})^{204}\text{Au}$ ;  $^9\text{Be}(^{208}\text{Pb}, \text{X})^{205}\text{Au}$ ;  $^9\text{Be}(^{208}\text{Pb}, \text{X})^{204}\text{Hg}$ ;  $^9\text{Be}(^{208}\text{Pb}, \text{X})^{205}\text{Hg}$ ,  $E=1$  GeV / nucleon; measured delayed  $I\gamma$ ,  $E\gamma$ , isomer decay. JOUR IMPEE 18 1002
- $^{198}\text{Au}$  2008PE32 NUCLEAR REACTIONS  $^{206}\text{Pb}(^6\text{He}, 2\text{n})$ ,  $^{208}\text{Pb}(\alpha, 2\text{n})$ ,  $E=60.3$  MeV;  $^{197}\text{Au}(^6\text{He}, \text{X})$ ,  $^{198}\text{Pt}(\text{d}, \text{X})$ ,  $E$  not given;  $^{196,198,199}\text{Au}$ ; measured reaction products; deduced excitation functions. JOUR IMPEE 17 2349
- 2008VIZZ NUCLEAR REACTIONS  $\text{Au}(\text{d}, 2\text{n})$ ,  $(\text{n}, 2\text{n})$ ,  $(\text{d}, \text{p})$ ,  $E_{\text{d}}=4.5-7.5$  MeV,  $E_{\text{n}}=14.6$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma^-$ ,  $x\gamma$ -coin;  $^{197}\text{Hg}$ ,  $^{196,198}\text{Au}$ ; deduced isomer yield ratios. CONF Moscow,P132,Vishnevsky
- 2009DI04 NUCLEAR REACTIONS  $^{40}\text{Ca}(\text{n}, \gamma)$ ,  $E<106$  keV; measured  $\sigma$ ,  $\sigma(E)$  using activation technique and accelerator mass spectrometry; deduced Maxwellian averaged cross sections. Neutrons from  $^7\text{Li}(\text{p}, \text{n})^7\text{Be}$  reaction at  $E(\text{p})=1912$  keV.  $^{197}\text{Au}(\text{n}, \gamma)$ ,  $E<106$  keV; measured  $\sigma$  and used as a standard. Comparison with previous experimental data and theoretical predictions. JOUR PRVCA 79 065805
- 2009MA35 NUCLEAR REACTIONS  $^{74,76}\text{Ge}$ ,  $^{75}\text{As}(\text{n}, \gamma)$ ,  $E<106$  keV; measured  $E\gamma$ ,  $I\gamma$ ,  $\sigma$ ; deduced Maxwellian averaged  $\sigma$  for thermal energies from 5 to 100 keV. Neutrons from  $^7\text{Li}(\text{p}, \text{n})$ ,  $E=1912$  keV reaction.  $^{197}\text{Au}(\text{n}, \gamma)$ ,  $E<106$  keV; measured  $\sigma$  and used as a standard. Estimated background contributions for  $\gamma$ -ray studies of double  $\beta$  decay of  $^{76}\text{Ge}$ . JOUR PRVCA 79 065802

**A=198 (continued)**

- <sup>198</sup>Hg 2009BE18 NUCLEAR REACTIONS <sup>196</sup>Pt( $\alpha$ , 2n), E=25 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ . <sup>198</sup>Hg; deduced levels, J,  $\pi$ , mixing ratios. Comparison with calculations using interacting boson fermion fermion (IBFFA) model and interacting boson (IBA-2) model. JOUR PRVCA 79 054307

**A=199**

- <sup>199</sup>Os 2009ST16 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>189</sup>Ta; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>191</sup>W; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>193</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>198</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>196</sup>Re; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>195</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>200</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Hg; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Hg, E=1 GeV / nucleon; measured delayed I $\gamma$ , E $\gamma$ , isomer decay. JOUR IMPEE 18 1002
- <sup>199</sup>Ir 2009ST16 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>189</sup>Ta; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>191</sup>W; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>193</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>198</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>196</sup>Re; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>195</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>200</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Hg; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Hg, E=1 GeV / nucleon; measured delayed I $\gamma$ , E $\gamma$ , isomer decay. JOUR IMPEE 18 1002
- <sup>199</sup>Pt 2009ST16 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>189</sup>Ta; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>191</sup>W; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>193</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>198</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>196</sup>Re; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>195</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>200</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Hg; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Hg, E=1 GeV / nucleon; measured delayed I $\gamma$ , E $\gamma$ , isomer decay. JOUR IMPEE 18 1002
- <sup>199</sup>Au 2008PE32 NUCLEAR REACTIONS <sup>206</sup>Pb(<sup>6</sup>He, 2n), <sup>208</sup>Pb( $\alpha$ , 2n), E=60.3 MeV; <sup>197</sup>Au(<sup>6</sup>He, X), <sup>198</sup>Pt(d, X), E not given; <sup>196,198,199</sup>Au; measured reaction products; deduced excitation functions. JOUR IMPEE 17 2349

**A=200**

<sup>200</sup>Ir      2009ST16      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>189</sup>Ta;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>191</sup>W;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>193</sup>Os;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Os;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>198</sup>Os;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Os;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>196</sup>Re;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>195</sup>Ir;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Ir;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>200</sup>Ir;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Ir;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Ir;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Ir;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Pt;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Pt;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Pt;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Pt;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Au;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Au;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Au;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Au;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Hg;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Hg, E=1 GeV / nucleon; measured delayed I $\gamma$ , E $\gamma$ , isomer decay. JOUR IMPEE 18 1002

**A=201**

<sup>201</sup>Ir      2009ST16      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>189</sup>Ta;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>191</sup>W;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>193</sup>Os;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Os;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>198</sup>Os;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Os;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>196</sup>Re;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>195</sup>Ir;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Ir;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>200</sup>Ir;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Ir;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Ir;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Ir;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Pt;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Pt;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Pt;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Pt;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Au;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Au;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Au;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Au;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Hg;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Hg, E=1 GeV / nucleon; measured delayed I $\gamma$ , E $\gamma$ , isomer decay. JOUR IMPEE 18 1002

<sup>201</sup>Au      2009ST16      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>189</sup>Ta;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>191</sup>W;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>193</sup>Os;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Os;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>198</sup>Os;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Os;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>196</sup>Re;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>195</sup>Ir;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Ir;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>200</sup>Ir;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Ir;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Ir;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Ir;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Pt;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Pt;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Pt;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Pt;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Au;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Au;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Au;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Au;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Hg;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Hg, E=1 GeV / nucleon; measured delayed I $\gamma$ , E $\gamma$ , isomer decay. JOUR IMPEE 18 1002

**A=202**

<sup>202</sup>Ir      2009ST16      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>189</sup>Ta;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>191</sup>W;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>193</sup>Os;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Os;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>198</sup>Os;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Os;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>196</sup>Re;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>195</sup>Ir;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Ir;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>200</sup>Ir;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Ir;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Ir;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Ir;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Pt;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Pt;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Pt;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Pt;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Au;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Au;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Au;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Au;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Hg;<sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Hg, E=1 GeV / nucleon; measured delayed I $\gamma$ , E $\gamma$ , isomer decay. JOUR IMPEE 18 1002

**A=202 (continued)**

- <sup>202</sup>Au 2009ST16 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>189</sup>Ta; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>191</sup>W; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>193</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>198</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>196</sup>Re; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>195</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>200</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Hg; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Hg, E=1 GeV / nucleon; measured delayed I $\gamma$ , E $\gamma$ , isomer decay. JOUR IMPEE 18 1002
- <sup>202</sup>Pb 2009SE10 NUCLEAR REACTIONS <sup>204</sup>Pb(n, n' $\gamma$ ), (n, 2n), (n, 3n)<sup>202m</sup>Pb / <sup>203</sup>Pb / <sup>203m</sup>Pb / <sup>204m</sup>Pb, E=14-21 MeV; <sup>206</sup>Pb(n, 3n), (n,  $\alpha$ )<sup>203</sup>Hg / <sup>204m</sup>Pb, E=14-21 MeV; <sup>208</sup>Pb(n, p)<sup>208</sup>Tl, E=14-21 MeV; measured E $\gamma$ , I $\gamma$  and  $\sigma$ . Comparison with TALYS and STAPRE model calculations. JOUR PRVCA 80 024610
- <sup>202</sup>Bi 2008ERZY NUCLEAR REACTIONS <sup>209</sup>Bi( $\gamma$ , 2n), ( $\gamma$ , 3n), ( $\gamma$ , 4n), ( $\gamma$ , 5n), ( $\gamma$ , 6n), ( $\gamma$ , 7n), E<67.7 MeV; measured E $\gamma$ , I $\gamma$  of residuals; deduced  $\sigma$  integrated yields. Activation technique. CONF Moscow, P125, Ermakov

**A=203**

- <sup>203</sup>Ir 2009ST16 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>189</sup>Ta; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>191</sup>W; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>193</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>198</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>196</sup>Re; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>195</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>200</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Hg; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Hg, E=1 GeV / nucleon; measured delayed I $\gamma$ , E $\gamma$ , isomer decay. JOUR IMPEE 18 1002
- <sup>203</sup>Pt 2009ST16 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>189</sup>Ta; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>191</sup>W; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>193</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>198</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>196</sup>Re; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>195</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>200</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Hg; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Hg, E=1 GeV / nucleon; measured delayed I $\gamma$ , E $\gamma$ , isomer decay. JOUR IMPEE 18 1002
- <sup>203</sup>Hg 2009SE10 NUCLEAR REACTIONS <sup>204</sup>Pb(n, n' $\gamma$ ), (n, 2n), (n, 3n)<sup>202m</sup>Pb / <sup>203</sup>Pb / <sup>203m</sup>Pb / <sup>204m</sup>Pb, E=14-21 MeV; <sup>206</sup>Pb(n, 3n), (n,  $\alpha$ )<sup>203</sup>Hg / <sup>204m</sup>Pb, E=14-21 MeV; <sup>208</sup>Pb(n, p)<sup>208</sup>Tl, E=14-21 MeV; measured E $\gamma$ , I $\gamma$  and  $\sigma$ . Comparison with TALYS and STAPRE model calculations. JOUR PRVCA 80 024610



**A=203 (continued)**

- <sup>203</sup>Pb 2009SE10 NUCLEAR REACTIONS <sup>204</sup>Pb(n, n'γ), (n, 2n), (n, 3n)<sup>202m</sup>Pb / <sup>203</sup>Pb / <sup>203m</sup>Pb / <sup>204m</sup>Pb, E=14-21 MeV; <sup>206</sup>Pb(n, 3n), (n, α)<sup>203</sup>Hg / <sup>204m</sup>Pb, E=14-21 MeV; <sup>208</sup>Pb(n, p)<sup>208</sup>Tl, E=14-21 MeV; measured Eγ, Iγ and σ. Comparison with TALYS and STAPRE model calculations. JOUR PRVCA 80 024610
- <sup>203</sup>Bi 2008ERZY NUCLEAR REACTIONS <sup>209</sup>Bi(γ, 2n), (γ, 3n), (γ, 4n), (γ, 5n), (γ, 6n), (γ, 7n), E<67.7 MeV; measured Eγ, Iγ of residuals; deduced σ integrated yields. Activation technique. CONF Moscow, P125, Ermakov

**A=204**

- <sup>204</sup>Pt 2009M017 RADIOACTIVITY <sup>204</sup>Pt(β<sup>-</sup>); measured delayed βγ-coin., Eγ, Iγ. deduced T<sub>1/2</sub>. JOUR APOBB 40 867
- 2009ST16 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>189</sup>Ta; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>191</sup>W; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>193</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>198</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>196</sup>Re; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>195</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>200</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Hg; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Hg, E=1 GeV / nucleon; measured delayed Iγ, Eγ, isomer decay. JOUR IMPEE 18 1002
- <sup>204</sup>Au 2009M017 RADIOACTIVITY <sup>204</sup>Pt(β<sup>-</sup>); measured delayed βγ-coin., Eγ, Iγ. deduced T<sub>1/2</sub>. JOUR APOBB 40 867
- 2009ST16 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>189</sup>Ta; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>191</sup>W; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>193</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>198</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>196</sup>Re; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>195</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>200</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Hg; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Hg, E=1 GeV / nucleon; measured delayed Iγ, Eγ, isomer decay. JOUR IMPEE 18 1002
- <sup>204</sup>Hg 2009ST16 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>189</sup>Ta; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>191</sup>W; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>193</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>198</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>196</sup>Re; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>195</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>200</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Hg; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Hg, E=1 GeV / nucleon; measured delayed Iγ, Eγ, isomer decay. JOUR IMPEE 18 1002

**A=204 (continued)**

- <sup>204</sup>Pb 2009DR05 RADIOACTIVITY <sup>268</sup>Db, <sup>268</sup>Rf( $\alpha$ ), (SF); measured E $\alpha$ , I $\alpha$  and SF events. <sup>212</sup>Bi, <sup>208,210,212,216</sup>Po, <sup>220</sup>Rn, <sup>224</sup>Ra, <sup>228,230</sup>Th, <sup>231</sup>Pa, <sup>237</sup>Np, <sup>238,239,240,241,242</sup>Pu, <sup>241,243</sup>Am, <sup>243,244</sup>Cm( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . JOUR PRVCA 79 054605
- 2009SE10 NUCLEAR REACTIONS <sup>204</sup>Pb(n, n' $\gamma$ ), (n, 2n), (n, 3n)<sup>202m</sup>Pb / <sup>203</sup>Pb / <sup>203m</sup>Pb / <sup>204m</sup>Pb, E=14-21 MeV; <sup>206</sup>Pb(n, 3n), (n,  $\alpha$ )<sup>203</sup>Hg / <sup>204m</sup>Pb, E=14-21 MeV; <sup>208</sup>Pb(n, p)<sup>208</sup>Tl, E=14-21 MeV; measured E $\gamma$ , I $\gamma$  and  $\sigma$ . Comparison with TALYS and STAPRE model calculations. JOUR PRVCA 80 024610
- <sup>204</sup>Bi 2008ERZY NUCLEAR REACTIONS <sup>209</sup>Bi( $\gamma$ , 2n), ( $\gamma$ , 3n), ( $\gamma$ , 4n), ( $\gamma$ , 5n), ( $\gamma$ , 6n), ( $\gamma$ , 7n), E<67.7 MeV; measured E $\gamma$ , I $\gamma$  of residuals; deduced  $\sigma$  integrated yields. Activation technique. CONF Moscow,P125,Ermakov

**A=205**

- <sup>205</sup>Au 2009ST16 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>189</sup>Ta; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>191</sup>W; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>193</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>198</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>196</sup>Re; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>195</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>200</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Hg; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Hg, E=1 GeV / nucleon; measured delayed I $\gamma$ , E $\gamma$ , isomer decay. JOUR IMPEE 18 1002
- <sup>205</sup>Hg 2009ST16 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>189</sup>Ta; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>191</sup>W; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>193</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>198</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Os; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>196</sup>Re; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>195</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>200</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Ir; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>197</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>199</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>203</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Pt; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>201</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>202</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Au; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>204</sup>Hg; <sup>9</sup>Be(<sup>208</sup>Pb, X)<sup>205</sup>Hg, E=1 GeV / nucleon; measured delayed I $\gamma$ , E $\gamma$ , isomer decay. JOUR IMPEE 18 1002
- <sup>205</sup>Tl 2009VA06 NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>48</sup>Ca, <sup>50</sup>Ca), (<sup>48</sup>Ca, <sup>51</sup>Sc), E=310 MeV; measured E $\gamma$ , I $\gamma$ , half-lives for first excited states using DSAM. <sup>50</sup>Ca, <sup>51</sup>Sc; deduced B(E2). JOUR PRLTA 102 242502
- <sup>205</sup>Bi 2008ERZY NUCLEAR REACTIONS <sup>209</sup>Bi( $\gamma$ , 2n), ( $\gamma$ , 3n), ( $\gamma$ , 4n), ( $\gamma$ , 5n), ( $\gamma$ , 6n), ( $\gamma$ , 7n), E<67.7 MeV; measured E $\gamma$ , I $\gamma$  of residuals; deduced  $\sigma$  integrated yields. Activation technique. CONF Moscow,P125,Ermakov

## A=206

- <sup>206</sup>Pb 2009DR05 RADIOACTIVITY <sup>268</sup>Db, <sup>268</sup>Rf( $\alpha$ ), (SF); measured E $\alpha$ , I $\alpha$  and SF events. <sup>212</sup>Bi, <sup>208,210,212,216</sup>Po, <sup>220</sup>Rn, <sup>224</sup>Ra, <sup>228,230</sup>Th, <sup>231</sup>Pa, <sup>237</sup>Np, <sup>238,239,240,241,242</sup>Pu, <sup>241,243</sup>Am, <sup>243,244</sup>Cm( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . JOUR PRVCA 79 054605
- 2009VA06 NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>48</sup>Ca, <sup>50</sup>Ca), (<sup>48</sup>Ca, <sup>51</sup>Sc), E=310 MeV; measured E $\gamma$ , I $\gamma$ , half-lives for first excited states using DSAM. <sup>50</sup>Ca, <sup>51</sup>Sc; deduced B(E2). JOUR PRLTA 102 242502
- <sup>206</sup>Bi 2008ERZY NUCLEAR REACTIONS <sup>209</sup>Bi( $\gamma$ , 2n), ( $\gamma$ , 3n), ( $\gamma$ , 4n), ( $\gamma$ , 5n), ( $\gamma$ , 6n), ( $\gamma$ , 7n), E<67.7 MeV; measured E $\gamma$ , I $\gamma$  of residuals; deduced  $\sigma$  integrated yields. Activation technique. CONF Moscow, P125, Ermakov

## A=207

- <sup>207</sup>Bi 2008ERZY NUCLEAR REACTIONS <sup>209</sup>Bi( $\gamma$ , 2n), ( $\gamma$ , 3n), ( $\gamma$ , 4n), ( $\gamma$ , 5n), ( $\gamma$ , 6n), ( $\gamma$ , 7n), E<67.7 MeV; measured E $\gamma$ , I $\gamma$  of residuals; deduced  $\sigma$  integrated yields. Activation technique. CONF Moscow, P125, Ermakov

## A=208

- <sup>208</sup>Hg 2009AL15 RADIOACTIVITY <sup>208</sup>Hg, <sup>209</sup>Tl(IT); measured E $\gamma$ , I $\gamma$ , isomeric states. Comparison with shell model calculation. JOUR APOBB 40 871
- <sup>208</sup>Tl 2009DR05 RADIOACTIVITY <sup>268</sup>Db, <sup>268</sup>Rf( $\alpha$ ), (SF); measured E $\alpha$ , I $\alpha$  and SF events. <sup>212</sup>Bi, <sup>208,210,212,216</sup>Po, <sup>220</sup>Rn, <sup>224</sup>Ra, <sup>228,230</sup>Th, <sup>231</sup>Pa, <sup>237</sup>Np, <sup>238,239,240,241,242</sup>Pu, <sup>241,243</sup>Am, <sup>243,244</sup>Cm( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . JOUR PRVCA 79 054605
- 2009SE10 NUCLEAR REACTIONS <sup>204</sup>Pb(n, n' $\gamma$ ), (n, 2n), (n, 3n)<sup>202m</sup>Pb / <sup>203</sup>Pb / <sup>203m</sup>Pb / <sup>204m</sup>Pb, E=14-21 MeV; <sup>206</sup>Pb(n, 3n), (n,  $\alpha$ )<sup>203</sup>Hg / <sup>204m</sup>Pb, E=14-21 MeV; <sup>208</sup>Pb(n, p)<sup>208</sup>Tl, E=14-21 MeV; measured E $\gamma$ , I $\gamma$  and  $\sigma$ . Comparison with TALYS and STAPRE model calculations. JOUR PRVCA 80 024610
- <sup>208</sup>Pb 2007T0ZV NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>27</sup>P, p<sup>26</sup>Si), E not given; measured E $\gamma$ , I $\gamma$ , E(particle), I(particle), particle- $\gamma$ -coin. Coulomb dissociation, nuclear astrophysics. REPT RIKEN 2006 Annual, P14, Togano
- 2008M0ZY RADIOACTIVITY <sup>212</sup>Po( $\alpha$ ) [from <sup>228</sup>Th decay]; measured T<sub>1/2</sub>. CONF Moscow, P55, Morozov
- 2008T0ZX NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>27</sup>P, p<sup>26</sup>Si), E not given; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$  for <sup>26</sup>Si(p,  $\gamma$ ). REPT RIKEN 2007 Annual, P7, Togano
- 2008V0ZX NUCLEAR REACTIONS <sup>112,120</sup>Sn( $\gamma$ ,  $\gamma'$ ), E < 9.5 MeV; measured E $\gamma$ , I $\gamma$ ; deduced B(E1) distribution. <sup>208</sup>Pb(p, p'), E=295 MeV; measured Ep, Ip; deduced B(E1) distribution. CONF Cappadocia (Nuclear Physics and Astrophysics), P124, von Neumann-Co
- 2009DR05 RADIOACTIVITY <sup>268</sup>Db, <sup>268</sup>Rf( $\alpha$ ), (SF); measured E $\alpha$ , I $\alpha$  and SF events. <sup>212</sup>Bi, <sup>208,210,212,216</sup>Po, <sup>220</sup>Rn, <sup>224</sup>Ra, <sup>228,230</sup>Th, <sup>231</sup>Pa, <sup>237</sup>Np, <sup>238,239,240,241,242</sup>Pu, <sup>241,243</sup>Am, <sup>243,244</sup>Cm( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . JOUR PRVCA 79 054605

**A=208 (continued)**

- 2009LI23 NUCLEAR REACTIONS  $^{152,154}\text{Sm}$ ,  $^{184}\text{W}$ ,  $^{196}\text{Pt}$ ,  $^{208}\text{Pb}(^{16}\text{O}, ^{16}\text{O})$ ,  
E=36-80 MeV; measured particle spectra,  $\sigma$  as a function of beam  
energy; deduced diffuseness parameters using single-channel and  
coupled-channels calculations. JOUR PRVCA 79 064603
- 2009TA13 NUCLEAR REACTIONS  $^{12}\text{C}$ ,  $^{26}\text{Mg}$ ,  $^{28}\text{Si}$ ,  $^{48}\text{Ca}$ ,  $^{58,64}\text{Ni}$ ,  $^{208}\text{Pb}(p, p')$ ,  
E=295 MeV; measured  $E_p$ ,  $I_p$ ,  $\sigma(\theta)$ ; deduced level energies. Systematic  
study of M1 and E1 excitations. JOUR NIMAE 605 326
- 2009ZI01 NUCLEAR REACTIONS  $^{109}\text{Ag}(^{44}\text{Ar}, ^{44}\text{Ar}')$ , E=2.68 MeV / nucleon;  
 $^{208}\text{Pb}(^{44}\text{Ar}, ^{44}\text{Ar}')$ , E=3.68 MeV / nucleon; measured  $E_\gamma$ ,  $I_\gamma$ ,  
(particle) $\gamma$ -coin,  $\gamma$  yields.  $^{44}\text{Ar}$ ; deduced levels, B(E2) matrix elements,  
spectroscopic quadrupole moments. Comparisons with experimental  
data for neighboring A=42-46 Ar, S and Si nuclides and GCM(GOA),  
AMPGCM, and Shell model calculations. JOUR PRVCA 80 014317
- $^{208}\text{Po}$  2009DR05 RADIOACTIVITY  $^{268}\text{Db}$ ,  $^{268}\text{Rf}(\alpha)$ , (SF); measured  $E_\alpha$ ,  $I_\alpha$  and SF  
events.  $^{212}\text{Bi}$ ,  $^{208,210,212,216}\text{Po}$ ,  $^{220}\text{Rn}$ ,  $^{224}\text{Ra}$ ,  $^{228,230}\text{Th}$ ,  $^{231}\text{Pa}$ ,  $^{237}\text{Np}$ ,  
 $^{238,239,240,241,242}\text{Pu}$ ,  $^{241,243}\text{Am}$ ,  $^{243,244}\text{Cm}(\alpha)$ ; measured  $E_\alpha$ ,  $I_\alpha$ . JOUR  
PRVCA 79 054605

**A=209**

- $^{209}\text{Tl}$  2009AL15 RADIOACTIVITY  $^{208}\text{Hg}$ ,  $^{209}\text{Tl}(\text{IT})$ ; measured  $E_\gamma$ ,  $I_\gamma$ , isomeric  
states. Comparison with shell model calculation. JOUR APOBB 40 871
- $^{209}\text{Bi}$  2007MAYX NUCLEAR REACTIONS  $^{209}\text{Bi}(^6\text{He}, ^6\text{He})$ , E=19, 22.5 MeV; measured  
E(particle), I(particle); deduced  $\sigma(\theta)$ ; calculated  $\sigma(\theta)$  using four-body  
extension to continuum-discretized coupled channel method. Four-body  
contribution necessary. REPT RIKEN 2006 Annual, P43, Matsumoto
- $^{209}\text{At}$  2008XU09 RADIOACTIVITY  $^{153}\text{Er}$ ,  $^{157}\text{Yb}$ ,  $^{209}\text{Fr}$ ,  $^{128}\text{Ce}$ ,  $^{130}\text{Ce}$ ,  $^{128}\text{Pr}$ ,  $^{130}\text{Pm}$ ,  
 $^{140}\text{Tb}(\beta^+\text{EC})$ ; measured x-rays,  $E_\gamma$ ,  $I_\gamma$ ,  $x\gamma$ -coin.,  $x\gamma\gamma$ -coin.; deduced J,  
 $\pi$ , level energies. JOUR IMPEE 17 S01 1
- 2009BA28 RADIOACTIVITY  $^{209,210,211}\text{At}$ ,  $^{213}\text{Rn}(\text{IT})$ ; measured  $E_\gamma$ ,  $I_\gamma$ . JOUR  
APOBB 40 889
- $^{209}\text{Fr}$  2008XU09 RADIOACTIVITY  $^{153}\text{Er}$ ,  $^{157}\text{Yb}$ ,  $^{209}\text{Fr}$ ,  $^{128}\text{Ce}$ ,  $^{130}\text{Ce}$ ,  $^{128}\text{Pr}$ ,  $^{130}\text{Pm}$ ,  
 $^{140}\text{Tb}(\beta^+\text{EC})$ ; measured x-rays,  $E_\gamma$ ,  $I_\gamma$ ,  $x\gamma$ -coin.,  $x\gamma\gamma$ -coin.; deduced J,  
 $\pi$ , level energies. JOUR IMPEE 17 S01 1
- 2009DR04 NUCLEAR REACTIONS  $^{197}\text{Au}(^{16}\text{O}, 4n)$ , E=88-95 MeV; measured  
 $E_\gamma$ ,  $I_\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma(\theta)$ ,  $\gamma(t)$ , conversion electrons, half-lives.  $^{209}\text{Fr}$ ;  
deduced levels, J,  $\pi$ , isomers, multipolarities, internal conversion  
coefficients, transition strengths, configurations.  $^{209,211,213}\text{Fr}$ ;  
systematics of yrast states. Comparison with shell-model predictions.  
JOUR PRVCA 79 054313

**A=210**

- $^{210}\text{Po}$  2008PE32 NUCLEAR REACTIONS  $^{206}\text{Pb}(^6\text{He}, 2n)$ ,  $^{208}\text{Pb}(\alpha, 2n)$ , E=60.3  
MeV;  $^{197}\text{Au}(^6\text{He}, X)$ ,  $^{198}\text{Pt}(d, X)$ , E not given;  $^{196,198,199}\text{Au}$ ; measured  
reaction products; deduced excitation functions. JOUR IMPEE 17  
2349

**A=210 (continued)**

- 2009DR05 RADIOACTIVITY  $^{268}\text{Db}$ ,  $^{268}\text{Rf}(\alpha)$ , (SF); measured  $E\alpha$ ,  $I\alpha$  and SF events.  $^{212}\text{Bi}$ ,  $^{208,210,212,216}\text{Po}$ ,  $^{220}\text{Rn}$ ,  $^{224}\text{Ra}$ ,  $^{228,230}\text{Th}$ ,  $^{231}\text{Pa}$ ,  $^{237}\text{Np}$ ,  $^{238,239,240,241,242}\text{Pu}$ ,  $^{241,243}\text{Am}$ ,  $^{243,244}\text{Cm}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ . JOUR PRVCA 79 054605
- $^{210}\text{At}$  2009BA28 RADIOACTIVITY  $^{209,210,211}\text{At}$ ,  $^{213}\text{Rn}(\text{IT})$ ; measured  $E\gamma$ ,  $I\gamma$ . JOUR APOBB 40 889

**A=211**

- $^{211}\text{Po}$  2009SA26 NUCLEAR REACTIONS  $^{209}\text{Bi}({}^6\text{Li}, \alpha)$ ,  $E=36, 40$  MeV; measured  $E\alpha$ ,  $I\alpha$ ,  $E_d$ ,  $I_d$ , (charged-particle)(charged-particle)-coin,  $\sigma$ ,  $\sigma(\theta)$ ; deduced reaction mechanism features. Comparison with coupled-channel calculations. JOUR PYLBB 677 139
- $^{211}\text{At}$  2009BA28 RADIOACTIVITY  $^{209,210,211}\text{At}$ ,  $^{213}\text{Rn}(\text{IT})$ ; measured  $E\gamma$ ,  $I\gamma$ . JOUR APOBB 40 889
- $^{211}\text{Rn}$  2009GH04 NUCLEAR REACTIONS  $^{232}\text{Th}({}^{14}\text{N}, \text{X})^{246}\text{Bk}$ ,  $E(\text{cm})=77.3$  MeV;  $^{235}\text{U}({}^{11}\text{B}, \text{X})^{246}\text{Bk}$ ,  $E$  not given; measured mass and velocity distribution of fission fragments from the decay of compound nucleus  $^{246}\text{Bk}$  near and above the Coulomb barrier.  $^{197}\text{Au}({}^{14}\text{N}, \text{X})^{211}\text{Rn}$ ,  $E$  not given; measured mass distribution of fission fragments from compound nucleus and used as a reference for reactions producing  $^{246}\text{Bk}$  compound nucleus. JOUR PRVCA 79 054607
- $^{211}\text{Fr}$  2009DR04 NUCLEAR REACTIONS  $^{197}\text{Au}({}^{16}\text{O}, 4n)$ ,  $E=88-95$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma(\theta)$ ,  $\gamma(t)$ , conversion electrons, half-lives.  $^{209}\text{Fr}$ ; deduced levels,  $J$ ,  $\pi$ , isomers, multipolarities, internal conversion coefficients, transition strengths, configurations.  $^{209,211,213}\text{Fr}$ ; systematics of yrast states. Comparison with shell-model predictions. JOUR PRVCA 79 054313

**A=212**

- $^{212}\text{Pb}$  2009DR05 RADIOACTIVITY  $^{268}\text{Db}$ ,  $^{268}\text{Rf}(\alpha)$ , (SF); measured  $E\alpha$ ,  $I\alpha$  and SF events.  $^{212}\text{Bi}$ ,  $^{208,210,212,216}\text{Po}$ ,  $^{220}\text{Rn}$ ,  $^{224}\text{Ra}$ ,  $^{228,230}\text{Th}$ ,  $^{231}\text{Pa}$ ,  $^{237}\text{Np}$ ,  $^{238,239,240,241,242}\text{Pu}$ ,  $^{241,243}\text{Am}$ ,  $^{243,244}\text{Cm}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ . JOUR PRVCA 79 054605
- $^{212}\text{Bi}$  2009DR05 RADIOACTIVITY  $^{268}\text{Db}$ ,  $^{268}\text{Rf}(\alpha)$ , (SF); measured  $E\alpha$ ,  $I\alpha$  and SF events.  $^{212}\text{Bi}$ ,  $^{208,210,212,216}\text{Po}$ ,  $^{220}\text{Rn}$ ,  $^{224}\text{Ra}$ ,  $^{228,230}\text{Th}$ ,  $^{231}\text{Pa}$ ,  $^{237}\text{Np}$ ,  $^{238,239,240,241,242}\text{Pu}$ ,  $^{241,243}\text{Am}$ ,  $^{243,244}\text{Cm}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ . JOUR PRVCA 79 054605
- $^{212}\text{Po}$  2008M0ZY RADIOACTIVITY  $^{212}\text{Po}(\alpha)$  [from  $^{228}\text{Th}$  decay]; measured  $T_{1/2}$ . CONF Moscow,P55,Morozov
- 2009DR05 RADIOACTIVITY  $^{268}\text{Db}$ ,  $^{268}\text{Rf}(\alpha)$ , (SF); measured  $E\alpha$ ,  $I\alpha$  and SF events.  $^{212}\text{Bi}$ ,  $^{208,210,212,216}\text{Po}$ ,  $^{220}\text{Rn}$ ,  $^{224}\text{Ra}$ ,  $^{228,230}\text{Th}$ ,  $^{231}\text{Pa}$ ,  $^{237}\text{Np}$ ,  $^{238,239,240,241,242}\text{Pu}$ ,  $^{241,243}\text{Am}$ ,  $^{243,244}\text{Cm}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ . JOUR PRVCA 79 054605

**A=213**

- <sup>213</sup>Rn 2009BA28 RADIOACTIVITY <sup>209,210,211</sup>At, <sup>213</sup>Rn(IT); measured E $\gamma$ , I $\gamma$ . JOUR APOBB 40 889
- <sup>213</sup>Fr 2008HE19 NUCLEAR REACTIONS <sup>206</sup>Pb(<sup>25</sup>Mg, X)<sup>214</sup>Ra / <sup>213</sup>Fr, E=5.9, 8.7 MeV / nucleon; measured reaction product velocity distributions; deduced fusion-evaporation and quasi-fission reaction mechanisms. JOUR IMPEE 17 2231
- 2009DR04 NUCLEAR REACTIONS <sup>197</sup>Au(<sup>16</sup>O, 4n), E=88-95 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma(\theta)$ ,  $\gamma(t)$ , conversion electrons, half-lives. <sup>209</sup>Fr; deduced levels, J,  $\pi$ , isomers, multipolarities, internal conversion coefficients, transition strengths, configurations. <sup>209,211,213</sup>Fr; systematics of yrast states. Comparison with shell-model predictions. JOUR PRVCA 79 054313

**A=214**

- <sup>214</sup>Ra 2008HE19 NUCLEAR REACTIONS <sup>206</sup>Pb(<sup>25</sup>Mg, X)<sup>214</sup>Ra / <sup>213</sup>Fr, E=5.9, 8.7 MeV / nucleon; measured reaction product velocity distributions; deduced fusion-evaporation and quasi-fission reaction mechanisms. JOUR IMPEE 17 2231

**A=215**

- <sup>215</sup>Fr 2009AP03 NUCLEAR REACTIONS <sup>197</sup>Au(<sup>18</sup>O, X)<sup>215</sup>Fr, E=77.7-96.7 MeV; <sup>204</sup>Pb(<sup>11</sup>B, X)<sup>215</sup>Fr, E=51.5-63.5 MeV; measured fission fragment angular distributions and anisotropies of the <sup>215</sup>Fr compound nucleus; deduced fission excitation functions, fusion barrier distributions. Comparison with standard saddle-point statistical model (SSPSM) calculations. JOUR PRVCA 80 024603

**A=216**

- <sup>216</sup>Po 2009DR05 RADIOACTIVITY <sup>268</sup>Db, <sup>268</sup>Rf( $\alpha$ ), (SF); measured E $\alpha$ , I $\alpha$  and SF events. <sup>212</sup>Bi, <sup>208,210,212,216</sup>Po, <sup>220</sup>Rn, <sup>224</sup>Ra, <sup>228,230</sup>Th, <sup>231</sup>Pa, <sup>237</sup>Np, <sup>238,239,240,241,242</sup>Pu, <sup>241,243</sup>Am, <sup>243,244</sup>Cm( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . JOUR PRVCA 79 054605

**A=217**

No references found

**A=218**

No references found

**A=219**

<sup>219</sup>Th 2009RE09 NUCLEAR REACTIONS <sup>198</sup>Pt(<sup>26</sup>Mg, 5n), E=128 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma$ (linear pol). <sup>219</sup>Th; deduced levels, J,  $\pi$ , bands and Quadrupole-octupole collectivity. Comparison with level structure of <sup>217</sup>Ra. JOUR PRVCA 80 011304

**A=220**

<sup>220</sup>Rn 2009DR05 RADIOACTIVITY <sup>268</sup>Db, <sup>268</sup>Rf( $\alpha$ ), (SF); measured E $\alpha$ , I $\alpha$  and SF events. <sup>212</sup>Bi, <sup>208,210,212,216</sup>Po, <sup>220</sup>Rn, <sup>224</sup>Ra, <sup>228,230</sup>Th, <sup>231</sup>Pa, <sup>237</sup>Np, <sup>238,239,240,241,242</sup>Pu, <sup>241,243</sup>Am, <sup>243,244</sup>Cm( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . JOUR PRVCA 79 054605

**A=221**

No references found

**A=222**

No references found

**A=223**

No references found

**A=224**

<sup>224</sup>Ra 2009DR05 RADIOACTIVITY <sup>268</sup>Db, <sup>268</sup>Rf( $\alpha$ ), (SF); measured E $\alpha$ , I $\alpha$  and SF events. <sup>212</sup>Bi, <sup>208,210,212,216</sup>Po, <sup>220</sup>Rn, <sup>224</sup>Ra, <sup>228,230</sup>Th, <sup>231</sup>Pa, <sup>237</sup>Np, <sup>238,239,240,241,242</sup>Pu, <sup>241,243</sup>Am, <sup>243,244</sup>Cm( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . JOUR PRVCA 79 054605

**A=225**

No references found

**A=226**

<sup>226</sup>Ra 2009DR05 RADIOACTIVITY <sup>268</sup>Db, <sup>268</sup>Rf( $\alpha$ ), (SF); measured E $\alpha$ , I $\alpha$  and SF events. <sup>212</sup>Bi, <sup>208,210,212,216</sup>Po, <sup>220</sup>Rn, <sup>224</sup>Ra, <sup>228,230</sup>Th, <sup>231</sup>Pa, <sup>237</sup>Np, <sup>238,239,240,241,242</sup>Pu, <sup>241,243</sup>Am, <sup>243,244</sup>Cm( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . JOUR PRVCA 79 054605

**A=227**

<sup>227</sup>Ac 2009DR05 RADIOACTIVITY <sup>268</sup>Db, <sup>268</sup>Rf( $\alpha$ ), (SF); measured E $\alpha$ , I $\alpha$  and SF events. <sup>212</sup>Bi, <sup>208,210,212,216</sup>Po, <sup>220</sup>Rn, <sup>224</sup>Ra, <sup>228,230</sup>Th, <sup>231</sup>Pa, <sup>237</sup>Np, <sup>238,239,240,241,242</sup>Pu, <sup>241,243</sup>Am, <sup>243,244</sup>Cm( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . JOUR PRVCA 79 054605

**A=228**

<sup>228</sup>Th 2008LEZS NUCLEAR REACTIONS <sup>230,232,234</sup>Th, <sup>184,186</sup>W(p, t), E not given; measured Et, It; deduced Q-values. CONF Moscow,P78,Levon  
2009DR05 RADIOACTIVITY <sup>268</sup>Db, <sup>268</sup>Rf( $\alpha$ ), (SF); measured E $\alpha$ , I $\alpha$  and SF events. <sup>212</sup>Bi, <sup>208,210,212,216</sup>Po, <sup>220</sup>Rn, <sup>224</sup>Ra, <sup>228,230</sup>Th, <sup>231</sup>Pa, <sup>237</sup>Np, <sup>238,239,240,241,242</sup>Pu, <sup>241,243</sup>Am, <sup>243,244</sup>Cm( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . JOUR PRVCA 79 054605

**A=229**

No references found

**A=230**

<sup>230</sup>Th 2008LEZS NUCLEAR REACTIONS <sup>230,232,234</sup>Th, <sup>184,186</sup>W(p, t), E not given; measured Et, It; deduced Q-values. CONF Moscow,P78,Levon  
2009DR05 RADIOACTIVITY <sup>268</sup>Db, <sup>268</sup>Rf( $\alpha$ ), (SF); measured E $\alpha$ , I $\alpha$  and SF events. <sup>212</sup>Bi, <sup>208,210,212,216</sup>Po, <sup>220</sup>Rn, <sup>224</sup>Ra, <sup>228,230</sup>Th, <sup>231</sup>Pa, <sup>237</sup>Np, <sup>238,239,240,241,242</sup>Pu, <sup>241,243</sup>Am, <sup>243,244</sup>Cm( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . JOUR PRVCA 79 054605  
<sup>230</sup>Pa 2008K0ZU NUCLEAR REACTIONS <sup>231</sup>Pa(d, p), <sup>231</sup>Pa(d, t), E=22 MeV; measured Ep, Ip, Et, It using polarized d beam and Q3D spectrometer; deduced  $\sigma(\theta, J, \pi)$ . REPT MLL 2007 Annual,P20,Kotthaus

**A=231**

<sup>231</sup>Pa 2009DR05 RADIOACTIVITY <sup>268</sup>Db, <sup>268</sup>Rf( $\alpha$ ), (SF); measured E $\alpha$ , I $\alpha$  and SF events. <sup>212</sup>Bi, <sup>208,210,212,216</sup>Po, <sup>220</sup>Rn, <sup>224</sup>Ra, <sup>228,230</sup>Th, <sup>231</sup>Pa, <sup>237</sup>Np, <sup>238,239,240,241,242</sup>Pu, <sup>241,243</sup>Am, <sup>243,244</sup>Cm( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . JOUR PRVCA 79 054605

**A=232**

<sup>232</sup>Th 2008DEZV NUCLEAR REACTIONS <sup>232</sup>Th(n, n' $\gamma$ ), E=fast; measured E $\gamma$ , I $\gamma(\theta)$ ; <sup>232</sup>Th; deduced  $\delta$ , rotational bands. CONF Moscow,P83,Demidov  
2008LEZS NUCLEAR REACTIONS <sup>230,232,234</sup>Th, <sup>184,186</sup>W(p, t), E not given; measured Et, It; deduced Q-values. CONF Moscow,P78,Levon



**A=232 (continued)**

- <sup>232</sup>Pa 2008K0ZU NUCLEAR REACTIONS <sup>231</sup>Pa(d, p), <sup>231</sup>Pa(d, t), E=22 MeV; measured E<sub>p</sub>, I<sub>p</sub>, E<sub>t</sub>, I<sub>t</sub> using polarized d beam and Q3D spectrometer; deduced  $\sigma(\theta, J, \pi)$ . REPT MLL 2007 Annual,P20,Kotthaus
- <sup>232</sup>U 2007CSZZ NUCLEAR REACTIONS <sup>231</sup>Pa(<sup>3</sup>He, dF), E=38.1 MeV; <sup>232</sup>U; measured fission fragments; deduced  $\sigma(q)$ , fission probability spectrum, triple-humped fission barrier. Comparison with JWKB calculations. REPT ATOMKI 2007 Annual,P32,Csige
- 2009CS01 NUCLEAR REACTIONS <sup>231</sup>Pa(<sup>3</sup>He, dF), E=38.1 MeV; measured E<sub>d</sub>, (fission)(deuteron)-coin, angular distribution of fission fragments and fission probability. <sup>232</sup>U; deduced barrier parameters, hyperdeformed fission resonances, third potential well and rotational band parameters. JOUR PRVCA 80 011301

**A=233**

- <sup>233</sup>Th 2007CSZY NUCLEAR REACTIONS <sup>232</sup>Th(d, pF), E=13 MeV; <sup>233</sup>Th; measured fission fragments; deduced  $\sigma(q)$ , fission probability spectrum. Comparison with previous results. REPT ATOMKI 2007 Annual,P33,Csatlos
- <sup>233</sup>Pa 2009DR05 RADIOACTIVITY <sup>268</sup>Db, <sup>268</sup>Rf( $\alpha$ ), (SF); measured E $\alpha$ , I $\alpha$  and SF events. <sup>212</sup>Bi, <sup>208,210,212,216</sup>Po, <sup>220</sup>Rn, <sup>224</sup>Ra, <sup>228,230</sup>Th, <sup>231</sup>Pa, <sup>237</sup>Np, <sup>238,239,240,241,242</sup>Pu, <sup>241,243</sup>Am, <sup>243,244</sup>Cm( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . JOUR PRVCA 79 054605

**A=234**

- <sup>234</sup>U 2007HUZW NUCLEAR REACTIONS <sup>235,238</sup>U(n, 2n $\gamma$ ), E = 6-14 MeV; measured E $\gamma$ ,  $\gamma$ ; deduced partial  $\sigma$ . REPT TUNL-XLVI,P88,Hutcheson
- 2008HUZW NUCLEAR REACTIONS <sup>235,238</sup>U(n, n' $\gamma$ ), <sup>235,238</sup>U(n, 2n $\gamma$ ), E=5-14MeV; measured E $\gamma$ , I $\gamma$  using clover and planar HPGe; deduced excitation function.compared with Hauser-Feshbach model (codes GNASH and TALYS). REPT TUNL-XLII,P84,Hutcheson
- 2009DR05 RADIOACTIVITY <sup>268</sup>Db, <sup>268</sup>Rf( $\alpha$ ), (SF); measured E $\alpha$ , I $\alpha$  and SF events. <sup>212</sup>Bi, <sup>208,210,212,216</sup>Po, <sup>220</sup>Rn, <sup>224</sup>Ra, <sup>228,230</sup>Th, <sup>231</sup>Pa, <sup>237</sup>Np, <sup>238,239,240,241,242</sup>Pu, <sup>241,243</sup>Am, <sup>243,244</sup>Cm( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . JOUR PRVCA 79 054605

**A=235**

- <sup>235</sup>U 2008HUZW NUCLEAR REACTIONS <sup>235,238</sup>U(n, n' $\gamma$ ), <sup>235,238</sup>U(n, 2n $\gamma$ ), E=5-14MeV; measured E $\gamma$ , I $\gamma$  using clover and planar HPGe; deduced excitation function.compared with Hauser-Feshbach model (codes GNASH and TALYS). REPT TUNL-XLII,P84,Hutcheson

**A=235 (continued)**

2009DR05 RADIOACTIVITY  $^{268}\text{Db}$ ,  $^{268}\text{Rf}(\alpha)$ , (SF); measured  $E\alpha$ ,  $I\alpha$  and SF events.  $^{212}\text{Bi}$ ,  $^{208,210,212,216}\text{Po}$ ,  $^{220}\text{Rn}$ ,  $^{224}\text{Ra}$ ,  $^{228,230}\text{Th}$ ,  $^{231}\text{Pa}$ ,  $^{237}\text{Np}$ ,  $^{238,239,240,241,242}\text{Pu}$ ,  $^{241,243}\text{Am}$ ,  $^{243,244}\text{Cm}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ . JOUR PRVCA 79 054605

**A=236**

$^{236}\text{U}$  2009AL13 NUCLEAR REACTIONS  $^{235}\text{U}(\text{d}, \text{p}\gamma)$ ,  $(\text{d}, \text{pf})$ ,  $E=21$  MeV; measured  $E\gamma$ ,  $I\gamma$ , proton spectra, fission spectra,  $\sigma$ . Internal surrogate ratio method (ISRM). Model-independent method used for measurement of  $\gamma$ -channel yield. JOUR PRVCA 79 054610

2009DR05 RADIOACTIVITY  $^{268}\text{Db}$ ,  $^{268}\text{Rf}(\alpha)$ , (SF); measured  $E\alpha$ ,  $I\alpha$  and SF events.  $^{212}\text{Bi}$ ,  $^{208,210,212,216}\text{Po}$ ,  $^{220}\text{Rn}$ ,  $^{224}\text{Ra}$ ,  $^{228,230}\text{Th}$ ,  $^{231}\text{Pa}$ ,  $^{237}\text{Np}$ ,  $^{238,239,240,241,242}\text{Pu}$ ,  $^{241,243}\text{Am}$ ,  $^{243,244}\text{Cm}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ . JOUR PRVCA 79 054605

**A=237**

$^{237}\text{U}$  2007HUZW NUCLEAR REACTIONS  $^{235,238}\text{U}(\text{n}, 2\text{n}\gamma)$ ,  $E = 6-14$  MeV; measured  $E\gamma$ ,  $\gamma$ ; deduced partial  $\sigma$ . REPT TUNL-XLVI,P88,Hutcheson

2008HUZW NUCLEAR REACTIONS  $^{235,238}\text{U}(\text{n}, \text{n}'\gamma)$ ,  $^{235,238}\text{U}(\text{n}, 2\text{n}\gamma)$ ,  $E=5-14\text{MeV}$ ; measured  $E\gamma$ ,  $I\gamma$  using clover and planar HPGe; deduced excitation function.compared with Hauser-Feshbach model (codes GNASH and TALYS). REPT TUNL-XLII,P84,Hutcheson

2009DR05 RADIOACTIVITY  $^{268}\text{Db}$ ,  $^{268}\text{Rf}(\alpha)$ , (SF); measured  $E\alpha$ ,  $I\alpha$  and SF events.  $^{212}\text{Bi}$ ,  $^{208,210,212,216}\text{Po}$ ,  $^{220}\text{Rn}$ ,  $^{224}\text{Ra}$ ,  $^{228,230}\text{Th}$ ,  $^{231}\text{Pa}$ ,  $^{237}\text{Np}$ ,  $^{238,239,240,241,242}\text{Pu}$ ,  $^{241,243}\text{Am}$ ,  $^{243,244}\text{Cm}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ . JOUR PRVCA 79 054605

2009HU09 NUCLEAR REACTIONS  $^{238}\text{U}(\text{n}, \text{n}'\gamma)$ ,  $(\text{n}, 2\text{n}\gamma)$ ,  $E=5-14$  MeV; measured  $E\gamma$ , yields,  $\sigma$  and excitation functions. Comparison with existing data and calculations using the GNASH and TALYS Hauser-Feshbach statistical-model codes. JOUR PRVCA 80 014603

$^{237}\text{Np}$  2009DR05 RADIOACTIVITY  $^{268}\text{Db}$ ,  $^{268}\text{Rf}(\alpha)$ , (SF); measured  $E\alpha$ ,  $I\alpha$  and SF events.  $^{212}\text{Bi}$ ,  $^{208,210,212,216}\text{Po}$ ,  $^{220}\text{Rn}$ ,  $^{224}\text{Ra}$ ,  $^{228,230}\text{Th}$ ,  $^{231}\text{Pa}$ ,  $^{237}\text{Np}$ ,  $^{238,239,240,241,242}\text{Pu}$ ,  $^{241,243}\text{Am}$ ,  $^{243,244}\text{Cm}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ . JOUR PRVCA 79 054605

$^{237}\text{Pu}$  2008M0ZW NUCLEAR REACTIONS  $^{235}\text{U}(\alpha, 2\text{n})$ ,  $E$  not given; measured  $I\gamma$ ,  $E\gamma$ ; deduced  $^{237}\text{Pu}$   $J$ ,  $\pi$ , isomers, deformation, magic neutron number  $N=146$ . REPT MLL 2007 Annual,P22,Morgan

**A=238**

$^{238}\text{U}$  2008HAZV NUCLEAR REACTIONS  $^{238}\text{U}(\gamma, \gamma')$ ,  $E=2.94-4.40$  MeV; measured  $E\gamma$ ,  $I\gamma$ ; deduced level properties, resonance widths. REPT TUNL-XLII,P122,Hammond

**A=238 (continued)**

- 2008HUZW NUCLEAR REACTIONS  $^{235,238}\text{U}(n, n'\gamma)$ ,  $^{235,238}\text{U}(n, 2n\gamma)$ ,  
E=5-14MeV; measured  $E\gamma$ ,  $I\gamma$  using clover and planar HPGe; deduced  
excitation function.compared with Hauser-Feshbach model (codes  
GNASH and TALYS). REPT TUNL-XLII,P84,Hutcheson
- 2009DR05 RADIOACTIVITY  $^{268}\text{Db}$ ,  $^{268}\text{Rf}(\alpha)$ , (SF); measured  $E\alpha$ ,  $I\alpha$  and SF  
events.  $^{212}\text{Bi}$ ,  $^{208,210,212,216}\text{Po}$ ,  $^{220}\text{Rn}$ ,  $^{224}\text{Ra}$ ,  $^{228,230}\text{Th}$ ,  $^{231}\text{Pa}$ ,  $^{237}\text{Np}$ ,  
 $^{238,239,240,241,242}\text{Pu}$ ,  $^{241,243}\text{Am}$ ,  $^{243,244}\text{Cm}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ . JOUR  
PRVCA 79 054605
- 2009HU09 NUCLEAR REACTIONS  $^{238}\text{U}(n, n'\gamma)$ ,  $(n, 2n\gamma)$ , E=5-14 MeV;  
measured  $E\gamma$ , yields,  $\sigma$  and excitation functions. Comparison with  
existing data and calculations using the GNASH and TALYS  
Hauser-Feshbach statistical-model codes. JOUR PRVCA 80 014603
- $^{238}\text{Pu}$  2009DR05 RADIOACTIVITY  $^{268}\text{Db}$ ,  $^{268}\text{Rf}(\alpha)$ , (SF); measured  $E\alpha$ ,  $I\alpha$  and SF  
events.  $^{212}\text{Bi}$ ,  $^{208,210,212,216}\text{Po}$ ,  $^{220}\text{Rn}$ ,  $^{224}\text{Ra}$ ,  $^{228,230}\text{Th}$ ,  $^{231}\text{Pa}$ ,  $^{237}\text{Np}$ ,  
 $^{238,239,240,241,242}\text{Pu}$ ,  $^{241,243}\text{Am}$ ,  $^{243,244}\text{Cm}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ . JOUR  
PRVCA 79 054605

**A=239**

- $^{239}\text{Np}$  2009DR05 RADIOACTIVITY  $^{268}\text{Db}$ ,  $^{268}\text{Rf}(\alpha)$ , (SF); measured  $E\alpha$ ,  $I\alpha$  and SF  
events.  $^{212}\text{Bi}$ ,  $^{208,210,212,216}\text{Po}$ ,  $^{220}\text{Rn}$ ,  $^{224}\text{Ra}$ ,  $^{228,230}\text{Th}$ ,  $^{231}\text{Pa}$ ,  $^{237}\text{Np}$ ,  
 $^{238,239,240,241,242}\text{Pu}$ ,  $^{241,243}\text{Am}$ ,  $^{243,244}\text{Cm}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ . JOUR  
PRVCA 79 054605
- $^{239}\text{Pu}$  2009DR05 RADIOACTIVITY  $^{268}\text{Db}$ ,  $^{268}\text{Rf}(\alpha)$ , (SF); measured  $E\alpha$ ,  $I\alpha$  and SF  
events.  $^{212}\text{Bi}$ ,  $^{208,210,212,216}\text{Po}$ ,  $^{220}\text{Rn}$ ,  $^{224}\text{Ra}$ ,  $^{228,230}\text{Th}$ ,  $^{231}\text{Pa}$ ,  $^{237}\text{Np}$ ,  
 $^{238,239,240,241,242}\text{Pu}$ ,  $^{241,243}\text{Am}$ ,  $^{243,244}\text{Cm}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ . JOUR  
PRVCA 79 054605

**A=240**

- $^{240}\text{Pu}$  2009DR05 RADIOACTIVITY  $^{268}\text{Db}$ ,  $^{268}\text{Rf}(\alpha)$ , (SF); measured  $E\alpha$ ,  $I\alpha$  and SF  
events.  $^{212}\text{Bi}$ ,  $^{208,210,212,216}\text{Po}$ ,  $^{220}\text{Rn}$ ,  $^{224}\text{Ra}$ ,  $^{228,230}\text{Th}$ ,  $^{231}\text{Pa}$ ,  $^{237}\text{Np}$ ,  
 $^{238,239,240,241,242}\text{Pu}$ ,  $^{241,243}\text{Am}$ ,  $^{243,244}\text{Cm}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ . JOUR  
PRVCA 79 054605
- $^{240}\text{Am}$  2007T0ZY NUCLEAR REACTIONS  $^{241}\text{Am}(n, 2n)$ , E = 7.6 - 14.5 MeV;  
measured  $E\gamma$ ,  $\gamma$ , neutron activation; deduced  $\sigma$ . Comparison with  
evaluated libraries. REPT TUNL-XLVI,P86,Tonchev
- 2008T0ZY NUCLEAR REACTIONS  $^{241}\text{Am}(\gamma, n)$ ,  $E \approx$  threshold-16 MeV;  
measured  $I\gamma$ ,  $E\gamma$ ; deduced  $\sigma$  using activation technique. Compared to  
GNASH calculation. REPT TUNL-XLII,P124,Tonchev

**A=241**

- <sup>241</sup>Pu 2009DR05 RADIOACTIVITY <sup>268</sup>Db, <sup>268</sup>Rf( $\alpha$ ), (SF); measured E $\alpha$ , I $\alpha$  and SF events. <sup>212</sup>Bi, <sup>208,210,212,216</sup>Po, <sup>220</sup>Rn, <sup>224</sup>Ra, <sup>228,230</sup>Th, <sup>231</sup>Pa, <sup>237</sup>Np, <sup>238,239,240,241,242</sup>Pu, <sup>241,243</sup>Am, <sup>243,244</sup>Cm( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . JOUR PRVCA 79 054605
- <sup>241</sup>Am 2009DR05 RADIOACTIVITY <sup>268</sup>Db, <sup>268</sup>Rf( $\alpha$ ), (SF); measured E $\alpha$ , I $\alpha$  and SF events. <sup>212</sup>Bi, <sup>208,210,212,216</sup>Po, <sup>220</sup>Rn, <sup>224</sup>Ra, <sup>228,230</sup>Th, <sup>231</sup>Pa, <sup>237</sup>Np, <sup>238,239,240,241,242</sup>Pu, <sup>241,243</sup>Am, <sup>243,244</sup>Cm( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . JOUR PRVCA 79 054605

**A=242**

- <sup>242</sup>Pu 2009DR05 RADIOACTIVITY <sup>268</sup>Db, <sup>268</sup>Rf( $\alpha$ ), (SF); measured E $\alpha$ , I $\alpha$  and SF events. <sup>212</sup>Bi, <sup>208,210,212,216</sup>Po, <sup>220</sup>Rn, <sup>224</sup>Ra, <sup>228,230</sup>Th, <sup>231</sup>Pa, <sup>237</sup>Np, <sup>238,239,240,241,242</sup>Pu, <sup>241,243</sup>Am, <sup>243,244</sup>Cm( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . JOUR PRVCA 79 054605

**A=243**

- <sup>243</sup>Am 2009DR05 RADIOACTIVITY <sup>268</sup>Db, <sup>268</sup>Rf( $\alpha$ ), (SF); measured E $\alpha$ , I $\alpha$  and SF events. <sup>212</sup>Bi, <sup>208,210,212,216</sup>Po, <sup>220</sup>Rn, <sup>224</sup>Ra, <sup>228,230</sup>Th, <sup>231</sup>Pa, <sup>237</sup>Np, <sup>238,239,240,241,242</sup>Pu, <sup>241,243</sup>Am, <sup>243,244</sup>Cm( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . JOUR PRVCA 79 054605
- <sup>243</sup>Cm 2009DR05 RADIOACTIVITY <sup>268</sup>Db, <sup>268</sup>Rf( $\alpha$ ), (SF); measured E $\alpha$ , I $\alpha$  and SF events. <sup>212</sup>Bi, <sup>208,210,212,216</sup>Po, <sup>220</sup>Rn, <sup>224</sup>Ra, <sup>228,230</sup>Th, <sup>231</sup>Pa, <sup>237</sup>Np, <sup>238,239,240,241,242</sup>Pu, <sup>241,243</sup>Am, <sup>243,244</sup>Cm( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . JOUR PRVCA 79 054605

**A=244**

- <sup>244</sup>Cm 2009DR05 RADIOACTIVITY <sup>268</sup>Db, <sup>268</sup>Rf( $\alpha$ ), (SF); measured E $\alpha$ , I $\alpha$  and SF events. <sup>212</sup>Bi, <sup>208,210,212,216</sup>Po, <sup>220</sup>Rn, <sup>224</sup>Ra, <sup>228,230</sup>Th, <sup>231</sup>Pa, <sup>237</sup>Np, <sup>238,239,240,241,242</sup>Pu, <sup>241,243</sup>Am, <sup>243,244</sup>Cm( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . JOUR PRVCA 79 054605

**A=245**

No references found

**A=246**

- <sup>246</sup>Bk 2009GH04 NUCLEAR REACTIONS <sup>232</sup>Th(<sup>14</sup>N, X)<sup>246</sup>Bk, E(cm)=77.3 MeV; <sup>235</sup>U(<sup>11</sup>B, X)<sup>246</sup>Bk, E not given; measured mass and velocity distribution of fission fragments from the decay of compound nucleus <sup>246</sup>Bk near and above the Coulomb barrier. <sup>197</sup>Au(<sup>14</sup>N, X)<sup>211</sup>Rn, E not given; measured mass distribution of fission fragments from compound nucleus and used as a reference for reactions producing <sup>246</sup>Bk compound nucleus. JOUR PRVCA 79 054607

**A=247**

No references found

**A=248**

- <sup>248</sup>Cm 2009UR03 RADIOACTIVITY <sup>248</sup>Cm(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>103</sup>Zr; deduced levels, J,  $\pi$ , bands. <sup>100,102,104</sup>Zr, <sup>142,143,144</sup>Ba; measured E $\gamma$ . <sup>100,101,102,103,104</sup>Zr; deduced mass correlations in fission of <sup>248</sup>Cm. <sup>99,101,103</sup>Zr; systematics of neutron configurations. Comparison of <sup>103</sup>Zr levels with quasiparticle plus rotor model calculations. JOUR PRVCA 79 067301

**A=249**

- <sup>249</sup>Bk 2009SE09 RADIOACTIVITY <sup>253,254</sup>Es, <sup>255</sup>Fm( $\alpha$ ); measured E $\alpha$ , I $\alpha$ ,  $\alpha(\theta)$ . <sup>250</sup>Bk( $\beta^-$ ); measured  $\gamma(\theta)$ . JOUR PRVCA 79 064322
- <sup>249</sup>Fm 2009QI04 RADIOACTIVITY <sup>257</sup>Rf( $\alpha$ )(EC)(SF), <sup>257m</sup>Rf( $\alpha$ )(EC), <sup>257</sup>Lr( $\alpha$ ), <sup>256</sup>Rf(SF), <sup>253</sup>No( $\alpha$ )(EC); measured E $\alpha$ , I $\alpha$ , E $\gamma$ , fission events, (ce) $\alpha$ -coin, half-lives, and fission branching ratios. <sup>253</sup>No; deduced levels, J,  $\pi$ ,  $\alpha$  hindrance factors, and configurations. JOUR PRVCA 79 064319

**A=250**

- <sup>250</sup>Bk 2009SE09 NUCLEAR MOMENTS <sup>254</sup>Es, <sup>250</sup>Bk; measured magnetic dipole moment using low temperature nuclear orientation (LTNO) and hyperfine fields in an iron host-lattice. Comparison with deformed single-particle model calculations. JOUR PRVCA 79 064322
- 2009SE09 RADIOACTIVITY <sup>253,254</sup>Es, <sup>255</sup>Fm( $\alpha$ ); measured E $\alpha$ , I $\alpha$ ,  $\alpha(\theta)$ . <sup>250</sup>Bk( $\beta^-$ ); measured  $\gamma(\theta)$ . JOUR PRVCA 79 064322
- <sup>250</sup>Cf 2009SE09 RADIOACTIVITY <sup>253,254</sup>Es, <sup>255</sup>Fm( $\alpha$ ); measured E $\alpha$ , I $\alpha$ ,  $\alpha(\theta)$ . <sup>250</sup>Bk( $\beta^-$ ); measured  $\gamma(\theta)$ . JOUR PRVCA 79 064322

**A=251**

<sup>251</sup>Cf 2009SE09 RADIOACTIVITY <sup>253,254</sup>Es, <sup>255</sup>Fm( $\alpha$ ); measured  $E\alpha$ ,  $I\alpha$ ,  $\alpha(\theta)$ .  
<sup>250</sup>Bk( $\beta^-$ ); measured  $\gamma(\theta)$ . JOUR PRVCA 79 064322

**A=252**

<sup>252</sup>Cf 2009G018 RADIOACTIVITY <sup>252</sup>Cf(SF); measured  $\gamma\gamma(\theta)$ . <sup>101</sup>Zr, <sup>103,105,107</sup>Mo,  
<sup>109,111</sup>Ru; deduced levels, J,  $\pi$ , mixing ratios. Comparison of mixing  
ratios with predictions of the particle-axial-rotor model for various  
single-particle states. JOUR PRVCA 80 014318

2009GU11 RADIOACTIVITY <sup>252</sup>Cf(SF); measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin. <sup>106,107</sup>Tc;  
deduced levels, J,  $\pi$ , bands, configurations, moments of inertia.  
<sup>104,105</sup>Mo, <sup>105,106</sup>Tc; systematics of alignments and moments of inertia.  
JOUR PRVCA 79 054317

2009GU20 RADIOACTIVITY <sup>252</sup>Cf(SF); measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin.; <sup>107</sup>Tc;  
deduced levels, J,  $\pi$ , high-spin states, bands. Comparison with g-factor  
calculations. JOUR CPLEE 26 092502

2009LI25 RADIOACTIVITY <sup>252</sup>Cf(SF); measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ . <sup>134</sup>I;  
deduced levels, J,  $\pi$ , yrast states. <sup>111,112,113</sup>Rh; measured  $E\gamma$ ,  $\gamma\gamma$ -coin.  
Discussed systematics of yrast levels in Iodine nuclides. JOUR PRVCA  
79 067303

2009LU11 RADIOACTIVITY <sup>252</sup>Cf(SF); measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin using  
Gammasphere array. <sup>100</sup>Nb, <sup>148</sup>La; deduced ICCs, high-spin levels, J,  
 $\pi$ , rotational bands, multipolarities, shape coexistence and  
configurations. JOUR NUPAB 825 1

2009SI21 RADIOACTIVITY <sup>252</sup>Cf(SF); measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin, half-lives.  
<sup>156</sup>Nd, <sup>156,158,160</sup>Sm; deduced levels, J,  $\pi$ , isomers, bands and  
configurations. Comparison with QPRM calculations. JOUR PRVCA  
80 024304

2009WA10 RADIOACTIVITY <sup>252</sup>Cf(SF); measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin using  
Gammasphere array. <sup>103</sup>Nb; deduced high-spin levels, J,  $\pi$ , vibrational  
band structure. JOUR PYLBB 675 420

**A=253**

<sup>253</sup>Es 2009SE09 RADIOACTIVITY <sup>253,254</sup>Es, <sup>255</sup>Fm( $\alpha$ ); measured  $E\alpha$ ,  $I\alpha$ ,  $\alpha(\theta)$ .  
<sup>250</sup>Bk( $\beta^-$ ); measured  $\gamma(\theta)$ . JOUR PRVCA 79 064322

<sup>253</sup>Md 2009QI04 RADIOACTIVITY <sup>257</sup>Rf( $\alpha$ )(EC)(SF), <sup>257m</sup>Rf( $\alpha$ )(EC), <sup>257</sup>Lr( $\alpha$ ),  
<sup>256</sup>Rf(SF), <sup>253</sup>No( $\alpha$ )(EC); measured  $E\alpha$ ,  $I\alpha$ ,  $E\gamma$ , fission events,  
(ce) $\alpha$ -coin, half-lives, and fission branching ratios. <sup>253</sup>No; deduced  
levels, J,  $\pi$ ,  $\alpha$  hindrance factors, and configurations. JOUR PRVCA 79  
064319

<sup>253</sup>No 2009QI04 RADIOACTIVITY <sup>257</sup>Rf( $\alpha$ )(EC)(SF), <sup>257m</sup>Rf( $\alpha$ )(EC), <sup>257</sup>Lr( $\alpha$ ),  
<sup>256</sup>Rf(SF), <sup>253</sup>No( $\alpha$ )(EC); measured  $E\alpha$ ,  $I\alpha$ ,  $E\gamma$ , fission events,  
(ce) $\alpha$ -coin, half-lives, and fission branching ratios. <sup>253</sup>No; deduced  
levels, J,  $\pi$ ,  $\alpha$  hindrance factors, and configurations. JOUR PRVCA 79  
064319

**A=254**

- <sup>254</sup>Es 2009SE09 NUCLEAR MOMENTS <sup>254</sup>Es, <sup>250</sup>Bk; measured magnetic dipole moment using low temperature nuclear orientation (LTNO) and hyperfine fields in an iron host-lattice. Comparison with deformed single-particle model calculations. JOUR PRVCA 79 064322
- 2009SE09 RADIOACTIVITY <sup>253,254</sup>Es, <sup>255</sup>Fm( $\alpha$ ); measured  $E\alpha$ ,  $I\alpha$ ,  $\alpha(\theta)$ . <sup>250</sup>Bk( $\beta^-$ ); measured  $\gamma(\theta)$ . JOUR PRVCA 79 064322

**A=255**

- <sup>255</sup>Fm 2009SE09 RADIOACTIVITY <sup>253,254</sup>Es, <sup>255</sup>Fm( $\alpha$ ); measured  $E\alpha$ ,  $I\alpha$ ,  $\alpha(\theta)$ . <sup>250</sup>Bk( $\beta^-$ ); measured  $\gamma(\theta)$ . JOUR PRVCA 79 064322
- <sup>255</sup>No 2008HAZU NUCLEAR REACTIONS <sup>238</sup>U(<sup>22</sup>Ne, 5n), E=113.8 MeV; measured  $E\alpha$ ,  $I\alpha$  using MANON rotating wheel system; deduced <sup>255</sup>No  $T_{1/2}$ . REPT RIKEN 2007 Annual,Pxii,Haba

**A=256**

- <sup>256</sup>Rf 2009QI04 RADIOACTIVITY <sup>257</sup>Rf( $\alpha$ )(EC)(SF), <sup>257m</sup>Rf( $\alpha$ )(EC), <sup>257</sup>Lr( $\alpha$ ), <sup>256</sup>Rf(SF), <sup>253</sup>No( $\alpha$ )(EC); measured  $E\alpha$ ,  $I\alpha$ ,  $E\gamma$ , fission events, (ce) $\alpha$ -coin, half-lives, and fission branching ratios. <sup>253</sup>No; deduced levels, J,  $\pi$ ,  $\alpha$  hindrance factors, and configurations. JOUR PRVCA 79 064319

**A=257**

- <sup>257</sup>Lr 2009QI04 RADIOACTIVITY <sup>257</sup>Rf( $\alpha$ )(EC)(SF), <sup>257m</sup>Rf( $\alpha$ )(EC), <sup>257</sup>Lr( $\alpha$ ), <sup>256</sup>Rf(SF), <sup>253</sup>No( $\alpha$ )(EC); measured  $E\alpha$ ,  $I\alpha$ ,  $E\gamma$ , fission events, (ce) $\alpha$ -coin, half-lives, and fission branching ratios. <sup>253</sup>No; deduced levels, J,  $\pi$ ,  $\alpha$  hindrance factors, and configurations. JOUR PRVCA 79 064319
- <sup>257</sup>Rf 2009QI04 NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>50</sup>Ti, n), E=233 MeV; measured  $E\alpha$ ,  $I\alpha$ , ce, fission events correlated with evaporation residues,  $E\gamma$ ,  $I\gamma$ , (ce) $\alpha$ -, (ce) $\gamma$ -coin, isomer half-lives, (evaporation residues)-ce- $\alpha$ - $\alpha$  correlations. <sup>257</sup>Rf; deduced levels, J,  $\pi$ , configurations. <sup>257</sup>Rf; calculated excitation energies of 1-qp states and rotational bands built on 1-qp and 3-qp bandheads. A=245-257, odd-A Pu, Cm, Cf, Fm, No, Rf; Nilsson orbital systematics. JOUR PRVCA 79 064319
- 2009QI04 RADIOACTIVITY <sup>257</sup>Rf( $\alpha$ )(EC)(SF), <sup>257m</sup>Rf( $\alpha$ )(EC), <sup>257</sup>Lr( $\alpha$ ), <sup>256</sup>Rf(SF), <sup>253</sup>No( $\alpha$ )(EC); measured  $E\alpha$ ,  $I\alpha$ ,  $E\gamma$ , fission events, (ce) $\alpha$ -coin, half-lives, and fission branching ratios. <sup>253</sup>No; deduced levels, J,  $\pi$ ,  $\alpha$  hindrance factors, and configurations. JOUR PRVCA 79 064319

**A=258**

No references found

**A=259**

No references found

**A=260**

No references found

**A=261**

No references found

**A=262**

$^{262}\text{Db}$	2009M012	RADIOACTIVITY $^{266}\text{Bh}(\alpha)$ ; measured $E\alpha$ , $I\alpha$ . JOUR JUPSA 78 064201
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**A=263**

No references found

**A=264**

$^{264}\text{No}$	2009DR05	RADIOACTIVITY $^{268}\text{Db}$ , $^{268}\text{Rf}(\alpha)$ , (SF); measured $E\alpha$ , $I\alpha$ and SF events. $^{212}\text{Bi}$ , $^{208,210,212,216}\text{Po}$ , $^{220}\text{Rn}$ , $^{224}\text{Ra}$ , $^{228,230}\text{Th}$ , $^{231}\text{Pa}$ , $^{237}\text{Np}$ , $^{238,239,240,241,242}\text{Pu}$ , $^{241,243}\text{Am}$ , $^{243,244}\text{Cm}(\alpha)$ ; measured $E\alpha$ , $I\alpha$ . JOUR PRVCA 79 054605
$^{264}\text{Lr}$	2009DR05	RADIOACTIVITY $^{268}\text{Db}$ , $^{268}\text{Rf}(\alpha)$ , (SF); measured $E\alpha$ , $I\alpha$ and SF events. $^{212}\text{Bi}$ , $^{208,210,212,216}\text{Po}$ , $^{220}\text{Rn}$ , $^{224}\text{Ra}$ , $^{228,230}\text{Th}$ , $^{231}\text{Pa}$ , $^{237}\text{Np}$ , $^{238,239,240,241,242}\text{Pu}$ , $^{241,243}\text{Am}$ , $^{243,244}\text{Cm}(\alpha)$ ; measured $E\alpha$ , $I\alpha$ . JOUR PRVCA 79 054605

**A=265**

No references found



**A=266**

- <sup>266</sup>Bh 2009M012 NUCLEAR REACTIONS <sup>248</sup>Cm(<sup>23</sup>Na, 4n), (<sup>23</sup>Na, 5n), E=126, 130, 132 MeV; measured yields. JOUR JUPSA 78 064201
- 2009M012 RADIOACTIVITY <sup>266</sup>Bh( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . JOUR JUPSA 78 064201

**A=267**

- <sup>267</sup>Bh 2009M012 NUCLEAR REACTIONS <sup>248</sup>Cm(<sup>23</sup>Na, 4n), (<sup>23</sup>Na, 5n), E=126, 130, 132 MeV; measured yields. JOUR JUPSA 78 064201

**A=268**

- <sup>268</sup>Rf 2009DR05 RADIOACTIVITY <sup>268</sup>Db, <sup>268</sup>Rf( $\alpha$ ), (SF); measured E $\alpha$ , I $\alpha$  and SF events. <sup>212</sup>Bi, <sup>208,210,212,216</sup>Po, <sup>220</sup>Rn, <sup>224</sup>Ra, <sup>228,230</sup>Th, <sup>231</sup>Pa, <sup>237</sup>Np, <sup>238,239,240,241,242</sup>Pu, <sup>241,243</sup>Am, <sup>243,244</sup>Cm( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . JOUR PRVCA 79 054605
- <sup>268</sup>Db 2009DR05 RADIOACTIVITY <sup>268</sup>Db, <sup>268</sup>Rf( $\alpha$ ), (SF); measured E $\alpha$ , I $\alpha$  and SF events. <sup>212</sup>Bi, <sup>208,210,212,216</sup>Po, <sup>220</sup>Rn, <sup>224</sup>Ra, <sup>228,230</sup>Th, <sup>231</sup>Pa, <sup>237</sup>Np, <sup>238,239,240,241,242</sup>Pu, <sup>241,243</sup>Am, <sup>243,244</sup>Cm( $\alpha$ ); measured E $\alpha$ , I $\alpha$ . JOUR PRVCA 79 054605

**A=269**

No references found

**A=270**

No references found

**A=271**

No references found

**A=272**

No references found

**A=273**

No references found

**A=274**

No references found

**A=275**

No references found

**A=276**

No references found

**A=277**

No references found

**A=278**

No references found

**A=279**

No references found

**A=280**

No references found

**A=281**

No references found

**A=282**

No references found

**A=283**

No references found

**A=284**

No references found

**A=285**

No references found

**A=286**

No references found

**A=287**

No references found

**A=288**

<sup>288</sup> 115	2009DR05	NUCLEAR REACTIONS $^{243}\text{Am}(^{48}\text{Ca}, 3\text{n})^{288}\text{115}$ , E not given; measured delayed $\alpha$ and SF events from Db and Rf activities formed in successive decays of $^{288}\text{115}$ . Confirmed synthesis of Z=115 element reported in earlier studies. JOUR PRVCA 79 054605
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