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This document lists experimental references added to Nuclear Science References (NSR) during the period April 1, 2010 to June 30, 2010. 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

$^1\text{n}$	2010C003	RADIOACTIVITY $^1\text{n}(\beta^-)$ ; measured $E\gamma$ , $E_p$ , $E(e)$ , $p\gamma$ -coin; deduced branching ratio for radiative decay (inner bremsstrahlung) of neutron in 15-340 keV photon energy range. Monte-Carlo simulations of the spectra. Comparison with theoretical predictions. JOUR PRVCA 81 035503
	2010DY01	NUCLEAR REACTIONS $^2\text{H}(p, 2p)$ , $E=0.5\text{-}2$ GeV; measured angular distribution, acceptances, $\sigma$ and $\sigma(\theta)$ ; deduced missing mass distributions and momentum correlations. Comparison with Migdal-Watson method, DWBA calculations, CD-Bonn NN potential, and one-pion exchange (OPE) model. JOUR PRVCA 81 044001
	2010MA23	NUCLEAR REACTIONS $^2\text{H}(\text{polarized } p, 2p)$ , $E=190$ MeV; measured $E_p$ , $I_p$ , angular correlations, analyzing powers using BINA detector; analyzed analyzing powers for competing channels with Faddeev model. Comparison of two- and three-nucleon potentials. JOUR PYLBB 687 149
	2010QI02	NUCLEAR REACTIONS $^1,2\text{H}$ , $^{12}\text{C}$ , $^{27}\text{Al}$ , $^{63}\text{Cu}$ , $^{197}\text{Au}(e, e'\pi^+)$ , $E<5.8$ GeV; measured yields, differential cross sections as a function of azimuthal angle, and nuclear transparencies versus $Q^2$ . JOUR PRVCA 81 055209
$^1\text{H}$	2008MEZW	NUCLEAR REACTIONS $^1,2\text{H}$ , $^{12}\text{C}$ , $^{16}\text{O}(n, n)$ , $E\approx 95$ MeV; $^1,2\text{H}$ , $^{12}\text{C}$ , $^{16}\text{O}(n, n')$ , $E\approx 95$ MeV; measured $E_n$ , $I_n(\theta)$ , $E_p$ , $I_p(\theta)$ , $E_d$ , $I_d(\theta)$ ; deduced $d\sigma(E)$ , $d\sigma(\theta)$ ; calculated $d\sigma$ using different forces with and without 3N component. Compared to other data and calculations. CONF Nice (Nucl Data for Sci and Technol) Proc,P1039
	2008SAZG	NUCLEAR REACTIONS $^1\text{H}(^8\text{He}, ^8\text{He})$ , $E=71$ MeV / nucleon; $^1\text{H}(^6\text{He}, ^6\text{He})$ , $E=71$ MeV / nucleon; measured $E(\text{particle})$ , $I(\text{particle}, \theta)$ using polarized target; deduced $d\sigma$ , analyzing powers, optical model parameters, proton radius; calculated $d\sigma$ , analyzing powers. Results compared to $p+^6\text{Li}$ reaction at 72 MeV / nucleon. REPT CNS-REP-61,P3,Sakaguchi
	2008YAZP	NUCLEAR REACTIONS $^1\text{H}(^7\text{Be}, ^7\text{Be})$ , $E(\text{cm})\approx 1.5\text{-}6.5$ MeV; $^1\text{H}(^7\text{Be}, ^7\text{Be}')$ , $E(\text{cm})\approx 1.5\text{-}6.5$ MeV; measured reaction products using thick-target method; deduced $\sigma(\theta)$ , $^8\text{B}$ resonance parameters; calculated $d\sigma(E, \theta)$ using R-matrix. REPT CNS-REP-61,P7,Yamaguchi
	2009SUZW	NUCLEAR REACTIONS $^1\text{H}(^{58}\text{Ti}, ^{58}\text{Ti}')$ , $E=40$ MeV / nucleon; measured $A(\text{particle})$ , $Z(\text{particle})$ , $E\gamma$ , $I\gamma$ , $(\text{particle})\gamma$ -coin; deduced $E(2^+)$ . Compared to other Ti and Cr isotopes. REPT RIKEN 2008 Annual,P8,Suzuki
	2009TAZW	NUCLEAR REACTIONS $^1\text{H}(^{32}\text{Mg}, ^{32}\text{Mg}')$ , $E=46.5$ MeV / nucleon; measured $E\gamma$ , $I\gamma(\theta)$ , $\gamma\gamma$ -coin; deduced $\sigma(E, \theta)$ , transferred angular momentum; calculated $\sigma(E, \theta)$ using ECIS97 with KD02 potential. REPT RIKEN 2008 Annual,P6,Takeuchi

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KEYNUMBERS AND KEYWORDS

**A=1 (continued)**

2010C003 RADIOACTIVITY  $^1\text{n}(\beta^-)$ ; measured  $E_\gamma$ ,  $E_p$ ,  $E(e)$ ,  $p\gamma$ -coin; deduced branching ratio for radiative decay (inner bremsstrahlung) of neutron in 15-340 keV photon energy range. Monte-Carlo simulations of the spectra. Comparison with theoretical predictions. JOUR PRVCA 81 035503

**A=2**

$^2\text{n}$  2010BE10 NUCLEAR REACTIONS  $^3\text{H}(d, ^3\text{He})$ ,  $E=36.9$  MeV; measured reaction products; deduced  $\sigma(\theta)$ ,  $\sigma(\theta, E)$ , inclusive spectra. JOUR BRSPPE 74 453

2010QI02 NUCLEAR REACTIONS  $^{1,2}\text{H}$ ,  $^{12}\text{C}$ ,  $^{27}\text{Al}$ ,  $^{63}\text{Cu}$ ,  $^{197}\text{Au}(e, e'\pi^+)$ ,  $E<5.8$  GeV; measured yields, differential cross sections as a function of azimuthal angle, and nuclear transparencies versus  $Q^2$ . JOUR PRVCA 81 055209

2010SI08 NUCLEAR REACTIONS  $^4\text{He}(^6\text{He}, 2\alpha)$ ,  $(^6\text{He}, \alpha t)$ ,  $E=25$  MeV / nucleon; measured reaction products; deduced momentum correlations for quasi-free scattering,  $\sigma$ , cluster structures. JOUR BRSPPE 74 437

$^2\text{H}$  2008MEZW NUCLEAR REACTIONS  $^{1,2}\text{H}$ ,  $^{12}\text{C}$ ,  $^{16}\text{O}(n, n)$ ,  $E\approx 95$  MeV;  $^{1,2}\text{H}$ ,  $^{12}\text{C}$ ,  $^{16}\text{O}(n, n')$ ,  $E\approx 95$  MeV; measured  $E_n$ ,  $\ln(\theta)$ ,  $E_p$ ,  $\text{Ip}(\theta)$ ,  $E_d$ ,  $\text{Id}(\theta)$ ; deduced  $d\sigma(E)$ ,  $d\sigma(\theta)$ ; calculated  $d\sigma$  using different forces with and without 3N component. Compared to other data and calculations. CONF Nice (Nucl Data for Sci and Technol) Proc,P1039

2008SHZM NUCLEAR REACTIONS  $^3\text{He}(p, 2p)$ ,  $E=392$  MeV; measured  $E_p$ ,  $\text{Ip}(\theta)$  using polarized beam on polarized target; deduced spin correlation, analyzing power, momentum distribution of  $^3\text{He}$  proton polarization. REPT CNS-REP-61,P1,Shimizu

2009K0ZT NUCLEAR REACTIONS  $^1\text{H}(^{18}\text{C}, ^{17}\text{C})$ ,  $E=81$  MeV / nucleon;  $^1\text{H}(^{19}\text{C}, ^{18}\text{C})$ ,  $E=68$  MeV / nucleon; measured  $A(\text{particle})$ ,  $Z(\text{particle})$ ,  $E_\gamma$ ,  $I_\gamma$ , (particle) $\gamma$ -coin; deduced  $\sigma(E)$ ; calculated  $\sigma(E, J, \pi)$  using CDCC with shell-model spectroscopic factors with WBP interaction. REPT RIKEN 2008 Annual,P7,Kondo

2010LAZZ NUCLEAR REACTIONS  $^1\text{H}(^8\text{He}, ^6\text{He})$ ,  $E=15.4, 15.6$  MeV / nucleon;  $^1\text{H}(^8\text{He}, ^7\text{He})$ ,  $E=15.4, 15.6$  MeV / nucleon; measured reaction products; deduced  $d\sigma(e)$ ,  $d\sigma(\theta)$ ,  $^6\text{He}$   $E, J, \pi$ , resonances; calculated  $E, J, \pi, d\sigma(\theta)$  using ab-initio / realistic interactions within GFMC (Green Function Monte Carlo), NCSM (No-Core Shell Model), CC and other models. CONF Varenna (Nucl Reaction Mechanisms),Proc,Vol.2,P345

**A=3**

$^3\text{H}$  2010LAZZ NUCLEAR REACTIONS  $^1\text{H}(^8\text{He}, ^6\text{He})$ ,  $E=15.4, 15.6$  MeV / nucleon;  $^1\text{H}(^8\text{He}, ^7\text{He})$ ,  $E=15.4, 15.6$  MeV / nucleon; measured reaction products; deduced  $d\sigma(e)$ ,  $d\sigma(\theta)$ ,  $^6\text{He}$   $E, J, \pi$ , resonances; calculated  $E, J, \pi, d\sigma(\theta)$  using ab-initio / realistic interactions within GFMC (Green Function Monte Carlo), NCSM (No-Core Shell Model), CC and other models. CONF Varenna (Nucl Reaction Mechanisms),Proc,Vol.2,P345

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KEYNUMBERS AND KEYWORDS

**A=3 (continued)**

- 20100T02 RADIOACTIVITY  ${}^3\text{H}(\beta^-)$ ; measured  $I_e$ ,  $E_e$ ; deduced  $\beta$ -spectrum, neutrino mass. Troitsk, Mainz, KATRIN experiments. JOUR HYIND 196 3
- 2010SI08 NUCLEAR REACTIONS  ${}^4\text{He}({}^6\text{He}, 2\alpha)$ ,  $({}^6\text{He}, \alpha t)$ ,  $E=25$  MeV / nucleon; measured reaction products; deduced momentum correlations for quasi-free scattering,  $\sigma$ , cluster structures. JOUR BRSPE 74 437
- 2010YI01 NUCLEAR REACTIONS  ${}^4\text{He}(\text{K}^-, \text{n})$ ,  $E$  at rest; measured  $E_n$ ,  $I_n$ , (particle)(neutron)-coin; deduced upper limit for a strange tribaryon state. JOUR PYLBB 688 43
- ${}^3\text{He}$  2010BY01 NUCLEAR REACTIONS  ${}^2\text{H}(\text{d}, \text{n})$ ,  $(\text{p}, \gamma)$ ,  $E=2.3-6.2, 8.3-10.1$  keV; measured reaction products,  $E_\gamma$ ,  $I_\gamma$ ; deduced  $\sigma$ , S-factors. JOUR BRSPE 74 531
- 20100T02 RADIOACTIVITY  ${}^3\text{H}(\beta^-)$ ; measured  $I_e$ ,  $E_e$ ; deduced  $\beta$ -spectrum, neutrino mass. Troitsk, Mainz, KATRIN experiments. JOUR HYIND 196 3

**A=4**

- ${}^4\text{He}$  2008DEZO NUCLEAR REACTIONS  ${}^6\text{Li}(\text{n}, \text{t})$ ,  $E=0.2-10$  MeV; measured  $E_\alpha$ ,  $I_\alpha(\theta)$ ,  $E_t$ ,  $I_t(\theta)$ ; deduced  $d\sigma(E, \theta)$ ,  $d\sigma(\theta)$ ; calculated  $d\sigma(E, \theta)$ ,  $d\sigma(\theta)$  using R-matrix. Compared also to other data. CONF Nice (Nucl Data for Sci and Technol) Proc,P1243
- 2009J008 NUCLEAR REACTIONS  ${}^4\text{He}({}^{14}\text{C}, {}^{14}\text{C})$ ,  $E=25$  MeV; measured  $\sigma(E, \theta)$ ,  ${}^{18}\text{O}$ ; deduced levels, widths,  $J$ ,  $\pi$  using R-matrix analysis. JOUR ZAANE 42 135
- 2010SE04 NUCLEAR REACTIONS  $\text{C}(\text{d}, \text{d})$ ,  ${}^3\text{He}(\text{d}, \text{p})$ ,  $E=14.8$  MeV; measured deuteron polarization; deduced acquired tensor polarization for deuteron beam. JOUR PRLTA 104 222501

**A=5**

No references found

**A=6**

- ${}^6\text{Li}$  2010AG04 NUCLEAR REACTIONS  ${}^6,7\text{Li}$ ,  ${}^9\text{Be}$ ,  ${}^{12,13}\text{C}$ ,  ${}^{16}\text{O}(\text{K}^-, \pi^-)$ ,  $E$  at rest; measured  $E_p$ ,  $I_p$  from decaying hypernucleus; analyzed reaction mechanism features, final state interactions and decay width ratios. JOUR PYLBB 685 247
- 2010BU03 NUCLEAR REACTIONS  ${}^6\text{Li}(\text{d}, \text{d})$ ,  $(\text{d}, \text{d}')$ ,  $E=25$  MeV; measured  $E_d$ ,  $I_d$  of scattered deuterons; deduced  $\sigma(\theta)$ ,  $J$ ,  $\pi$  of excited states. Optical model, coupled-reaction-channel methods. JOUR PANUE 73 746
- 2010BU04 RADIOACTIVITY  ${}^7\text{Li}$ ,  ${}^9\text{Be}$ ,  ${}^{11}\text{B}$ ,  ${}^{15}\text{N}(\text{p}\pi^-)$ ; measured hypernuclei mesonic weak decay  $\pi^-$  spectra; deduced branching ratios,  $J$ ,  $\pi$ . JOUR IMPEE 19 1109

KEYNUMBERS AND KEYWORDS

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**A=6 (continued)**

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|                 | 2010SU08 | NUCLEAR REACTIONS ${}^7\text{Li}({}^6\text{Li}, {}^7\text{Li})$ , ( ${}^6\text{Li}, {}^6\text{Li}$ ), $E=23.7$ MeV; measured reaction products; deduced $\sigma(\theta)$ , spectroscopic factors. JOUR CPLEE 27 052101  |
| ${}^6\text{Be}$ | 2010PA11 | NUCLEAR REACTIONS ${}^6\text{Li}({}^3\text{He}, t){}^6\text{Be}$ , $E=50$ MeV; measured particle spectra, (particle)(particle)-coin, angular distributions; deduced particle-particle correlations and Dalitz plots for the $\alpha$ -p-p breakup particles from ${}^6\text{Be}$ . Comparison with sequential and 3-body resonance calculations. JOUR PRVCA 81 054308 |

**A=7**

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| ${}^7\text{Li}$ | 2008YAZQ | NUCLEAR REACTIONS ${}^4\text{He}({}^7\text{Li}, \alpha)$ , $E=13.7$ MeV; ${}^4\text{He}({}^7\text{Li}, p)$ , $E=13.7$ MeV; ${}^4\text{He}({}^7\text{Li}, t)$ , $E=13.7$ MeV; measured thick target $E\gamma$ , $I\gamma$ , $E\alpha$ , $I\alpha$ . REPT CNS-REP-61,P5,Yamaguchi        |
|                 | 2010AG04 | NUCLEAR REACTIONS ${}^6,7\text{Li}, {}^9\text{Be}, {}^{12,13}\text{C}, {}^{16}\text{O}(\text{K}^-, \pi^-)$ , $E$ at rest; measured $E_p$ , $I_p$ from decaying hypernucleus; analyzed reaction mechanism features, final state interactions and decay width ratios. JOUR PYLBB 685 247 |
|                 | 2010BU04 | RADIOACTIVITY ${}^7\text{Li}, {}^9\text{Be}, {}^{11}\text{B}, {}^{15}\text{N}(\text{p}\pi^-)$ ; measured hypernuclei mesonic weak decay $\pi^-$ spectra; deduced branching ratios, $J$ , $\pi$ . JOUR IMPEE 19 1109  |
|                 | 2010SU08 | NUCLEAR REACTIONS ${}^7\text{Li}({}^6\text{Li}, {}^7\text{Li})$ , ( ${}^6\text{Li}, {}^6\text{Li}$ ), $E=23.7$ MeV; measured reaction products; deduced $\sigma(\theta)$ , spectroscopic factors. JOUR CPLEE 27 052101   |
|                 | 2010SU08 | NUCLEAR REACTIONS ${}^6\text{Li}(\text{p}, \gamma)$ , ( $\text{n}, \gamma$ ), $E(\text{cm}) < 1.2$ MeV; calculated astrophysical reaction rates, S-factors. DWBA analysis. JOUR CPLEE 27 052101  |
| ${}^7\text{Be}$ | 2010SU08 | NUCLEAR REACTIONS ${}^6\text{Li}(\text{p}, \gamma)$ , ( $\text{n}, \gamma$ ), $E(\text{cm}) < 1.2$ MeV; calculated astrophysical reaction rates, S-factors. DWBA analysis. JOUR CPLEE 27 052101  |

**A=8**

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| ${}^8\text{Li}$ | 2009KAZR | RADIOACTIVITY ${}^8\text{Li}$ [polarized]; measured $I\beta(\theta)$ ; deduced polarization, asymmetry R-coefficient. REPT RIKEN 2008 Annual,P25,Kawamura   |
| ${}^8\text{Be}$ | 2008MUZW | NUCLEAR REACTIONS ${}^9\text{Be}(\text{n}, 2\text{n})$ , $E \approx 14$ MeV; measured $E_n$ , $I_n(\theta)$ , n-n-coin., deduced $d\sigma(\theta)$ . CONF Nice (Nucl Data for Sci and Technol) Proc,P999  |
|                 | 2008YAZQ | NUCLEAR REACTIONS ${}^4\text{He}({}^7\text{Li}, \alpha)$ , $E=13.7$ MeV; ${}^4\text{He}({}^7\text{Li}, p)$ , $E=13.7$ MeV; ${}^4\text{He}({}^7\text{Li}, t)$ , $E=13.7$ MeV; measured thick target $E\gamma$ , $I\gamma$ , $E\alpha$ , $I\alpha$ . REPT CNS-REP-61,P5,Yamaguchi |
|                 | 2010BU04 | RADIOACTIVITY ${}^7\text{Li}, {}^9\text{Be}, {}^{11}\text{B}, {}^{15}\text{N}(\text{p}\pi^-)$ ; measured hypernuclei mesonic weak decay $\pi^-$ spectra; deduced branching ratios, $J$ , $\pi$ . JOUR IMPEE 19 1109   |

KEYNUMBERS AND KEYWORDS

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**A=8 (continued)**

- 2010COZY NUCLEAR REACTIONS  $^{12}\text{C}(\text{p}, \text{p}\alpha)$ ,  $E=100$  MeV; measured  $E_{\text{p}}$ ,  $I_{\text{p}}(\theta)$ ,  $E_{\alpha}$ ,  $I_{\alpha}(\theta)$ ; deduced  $d\sigma(\theta, E_{\text{p}})$ , pair momentum distributions, analyzing power; calculated  $d\sigma$  using DWIA, analyzing power. CONF Varenna (Nucl Reaction Mechanisms), Proc, Vol.2, P317
- 2010R009 NUCLEAR REACTIONS  $^7\text{Li}(^7\text{Li}, \text{t})$ ,  $(^7\text{Li}, \alpha)$ ,  $(^7\text{Li}, ^6\text{He})$ ,  $E=2-16$  MeV; measured reaction products,  $E_{\text{t}}$ ,  $I_{\text{t}}$ ,  $E_{\alpha}$ ,  $I_{\alpha}$ ; deduced yields,  $\sigma$ ,  $\sigma(\theta)$ . Comparison with DWBA analysis. JOUR APOBB 41 845

**A=9**

- $^9\text{Li}$  2008RIZX RADIOACTIVITY  $^9\text{Li}$ ,  $^{17}\text{N}$ ,  $^{87}\text{Br}$ ,  $^{88}\text{Br}(\beta^-)$  [from Pb,  $^{209}\text{Bi}$ , Fe(p, x),  $E=1$  GeV]; measured  $\beta$ -delayed neutron decay. CONF Nice (Nucl Data for Sci and Technol) Proc, P1073
- 2009MIZU NUCLEAR REACTIONS  $^9\text{Be}(^{58}\text{Ni}, ^{58}\text{Cu})$ ,  $E=95$  MeV / nucleon; measured  $E(^{58}\text{Cu})$ ,  $I_{\beta}(\text{t})$ ; deduced  $T_{1/2}$ . REPT RIKEN 2008 Annual, P24, Mihara
- $^9\text{Be}$  2008AZZZ NUCLEAR REACTIONS  $^9\text{Be}(^{42}\text{Si}, ^{42}\text{Si}')$ ,  $E$  not given; measured  $E_{\gamma}$ ,  $I_{\gamma}$ , reaction products;  $^{42}\text{Si}$ ; deduced level energies,  $J$ ,  $\pi$ . CONF Vico Equense (Chang. Facets of Nucl. Struct.) Proc, P39, Azaiez
- 2008RIZX RADIOACTIVITY  $^9\text{Li}$ ,  $^{17}\text{N}$ ,  $^{87}\text{Br}$ ,  $^{88}\text{Br}(\beta^-)$  [from Pb,  $^{209}\text{Bi}$ , Fe(p, x),  $E=1$  GeV]; measured  $\beta$ -delayed neutron decay. CONF Nice (Nucl Data for Sci and Technol) Proc, P1073
- 2010AG04 NUCLEAR REACTIONS  $^{6,7}\text{Li}$ ,  $^9\text{Be}$ ,  $^{12,13}\text{C}$ ,  $^{16}\text{O}(\text{K}^-, \pi^-)$ ,  $E$  at rest; measured  $E_{\text{p}}$ ,  $I_{\text{p}}$  from decaying hypernucleus; analyzed reaction mechanism features, final state interactions and decay width ratios. JOUR PYLBB 685 247
- 2010BU04 RADIOACTIVITY  $^7\text{Li}$ ,  $^9\text{Be}$ ,  $^{11}\text{B}$ ,  $^{15}\text{N}(\text{p}\pi^-)$ ; measured hypernuclei mesonic weak decay  $\pi^-$  spectra; deduced branching ratios,  $J$ ,  $\pi$ . JOUR IMPEE 19 1109
- 2010GA06 NUCLEAR REACTIONS  $^9\text{Be}(^{62}\text{Fe}, ^{62}\text{Fe}')$ ,  $E=73.0$  MeV / nucleon [ $^{62}\text{Fe}$  secondary beam from primary reaction  $^9\text{Be}(^{76}\text{Ge}, \text{X})$ ,  $E=130$  MeV / nucleon],  $^9\text{Be}(^{64}\text{Fe}, ^{64}\text{Fe}')$ ,  $E=67.5$  MeV / nucleon [ $^{64}\text{Fe}$  secondary beam from primary reaction  $^9\text{Be}(^{76}\text{Ge}, \text{X})$ ,  $E=130$  MeV / nucleon],  $^9\text{Be}(^{66}\text{Fe}, ^{66}\text{Fe}')$ ,  $E=82.6$  MeV / nucleon [ $^{66}\text{Fe}$  secondary beam from primary reaction  $^9\text{Be}(^{76}\text{Ge}, \text{X})$ ,  $E=130$  MeV / nucleon],  $^9\text{Be}(^{60}\text{Cr}, ^{60}\text{Cr}')$ ,  $E=80.6$  MeV / nucleon [ $^{60}\text{Cr}$  secondary beam from primary reaction  $^9\text{Be}(^{76}\text{Ge}, \text{X})$ ,  $E=130$  MeV / nucleon],  $^9\text{Be}(^{62}\text{Cr}, ^{62}\text{Cr}')$ ,  $E=74.6$  MeV / nucleon [ $^{62}\text{Cr}$  secondary beam from primary reaction  $^9\text{Be}(^{76}\text{Ge}, \text{X})$ ,  $E=130$  MeV / nucleon],  $^9\text{Be}(^{64}\text{Cr}, ^{64}\text{Cr}')$ ,  $E=87.0$  MeV / nucleon [ $^{64}\text{Cr}$  secondary beam from primary reaction  $^9\text{Be}(^{76}\text{Ge}, \text{X})$ ,  $E=130$  MeV / nucleon]; measured  $E_{\gamma}$ ,  $I_{\gamma}$ , (particle) $\gamma$ -coin,  $\sigma$ .  $^{62,64,66}\text{Fe}$ ,  $^{60,62,64}\text{Cr}$ ; deduced levels,  $J$ ,  $\pi$ . Comparison with large-scale shell-model calculations in different model spaces.  $^9\text{Be}(^{76}\text{Ge}, \text{X})^{62}\text{Fe} / ^{64}\text{Fe} / ^{66}\text{Fe} / ^{60}\text{Cr} / ^{62}\text{Cr} / ^{64}\text{Cr} / ^{65}\text{Mn} / ^{66}\text{Mn} / ^{67}\text{Fe} / ^{69}\text{Co}$ ,  $E=130$  MeV / nucleon; measured yields of secondary ion beams. JOUR PRVCA 81 051304

KEYNUMBERS AND KEYWORDS

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**A=9 (continued)**

- 2010PIZY NUCLEAR REACTIONS  ${}^9\text{Be}({}^6\text{He}, {}^6\text{He})$ ,  $E=16.2$  MeV;  ${}^9\text{Be}({}^7\text{Be}, {}^7\text{Be})$ ,  $E=23.7$  MeV; measured reaction products; deduced  $d\sigma(\theta)$ ; calculated  $d\sigma(\theta)$  using FRESCO optical model code and using CC; deduced potential parameters. CDCC calculations in progress. CONF Varenna (Nucl Reaction Mechanisms),Proc,Vol.2,P337
- 2010R014 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{24}\text{Ne}, n^{23}\text{Ne})$ ,  $({}^{25}\text{Ne}, n^{24}\text{Ne})$ ,  $({}^{26}\text{Ne}, n^{25}\text{Ne})$ ,  $({}^{27}\text{Ne}, n^{26}\text{Ne})$ ,  $({}^{28}\text{Ne}, n^{27}\text{Ne})$ ,  $E=\text{high}$  [from  ${}^9\text{Be}({}^{40}\text{Ar}, X)$ ,  $E=700$  MeV / nucleon]; measured  $\sigma$ , momentum distributions; deduced configurations, neutron separation energy, related features. Secondary radioactive beam at FRS. JOUR PYLBB 687 26
- ${}^9\text{B}$  2008FEZY NUCLEAR REACTIONS  ${}^9\text{Be}(p, n)$ ,  $E=17.4$ ; measured thick target  $E_n$ ,  $I_n$ ;  $\text{Si}(n, x)$ ,  $E$  not given;  $\text{Si}(\gamma, x)$ ,  $E=1173, 1332$  keV;  $\text{Si}(n, x)$ ,  $E=\text{reactor spectrum}$ ; measured common emitter gain; deduced NIEL-scaling factor for Si. CONF Nice (Nucl Data for Sci and Technol) Proc,P1295
- 2010FUZZ NUCLEAR REACTIONS  ${}^9\text{Be}, {}^{23}\text{Na}, {}^{25}\text{Mg}, {}^{42}\text{Ca}, {}^{46}\text{Ti}, {}^{50}\text{Cr}, {}^{54}\text{Fe}, {}^{58}\text{Ni}, {}^{118}\text{Sn}({}^3\text{He}, t)$ ,  $E=140$  MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$ , reaction products; deduced  $d\sigma(E)$ ; GT strength. CONF Varenna (Nucl Reaction Mechanisms),Proc,Vol.1,P39

**A=10**

- ${}^{10}\text{Be}$  2008GEZW NUCLEAR REACTIONS  ${}^9\text{Be}({}^{56}\text{Ti}, {}^{55}\text{Ti})$ ,  $E\approx 400$  MeV / nucleon;  ${}^9\text{Be}({}^{48}\text{Ca}, {}^{47}\text{Ca})$ ,  $E\approx 400$  MeV / nucleon; measured  $E\gamma$ ,  $I\gamma(\theta)$ ,  $\gamma\gamma\text{-coin}$ ,  $A(\text{particle})$ ,  $Q(\text{particle})$ ,  $(\text{particle})\gamma\text{-coin}$ ; deduced  $E$ ,  $J$ ,  $\pi$ ,  $\sigma$ ; calculated knockout  $d\sigma(E)$  using OXBASH code with GXPF1A interaction. Results on CD only. CONF E.Lansing (NS2008),P36,Gernhauser
- 2008YAZQ NUCLEAR REACTIONS  ${}^4\text{He}({}^7\text{Li}, \alpha)$ ,  $E=13.7$  MeV;  ${}^4\text{He}({}^7\text{Li}, p)$ ,  $E=13.7$  MeV;  ${}^4\text{He}({}^7\text{Li}, t)$ ,  $E=13.7$  MeV; measured thick target  $E\gamma$ ,  $I\gamma$ ,  $E\alpha$ ,  $I\alpha$ . REPT CNS-REP-61,P5,Yamaguchi
- 2009SUZV NUCLEAR REACTIONS  ${}^9\text{Be}({}^{18}\text{C}, {}^{17}\text{C})$ ,  $E$  not given; measured  $A(\text{particle})$ ,  $Z(\text{particle})$ ,  $E(\text{particle}, \theta)$ ,  $E\gamma$ ,  $I\gamma(t)$ ,  $(\text{particle})\gamma\text{-coin}$ ; deduced  $T_{1/2}$ ,  $B(M1)$ . REPT RIKEN 2008 Annual,P10,Suzuki
- 2010AM02 NUCLEAR REACTIONS  ${}^1\text{H}({}^{11}\text{Be}, d)$ ,  ${}^2\text{H}({}^{10}\text{Be}, p)$ ,  $({}^{12}\text{B}, d)$ ,  $E=40$  MeV / nucleon; measured reaction products; deduced new kinematics technique. JOUR IMPEE 19 1096
- 2010R009 NUCLEAR REACTIONS  ${}^7\text{Li}({}^7\text{Li}, t)$ ,  $({}^7\text{Li}, \alpha)$ ,  $({}^7\text{Li}, {}^6\text{He})$ ,  $E=2-16$  MeV; measured reaction products,  $E_t$ ,  $I_t$ ,  $E\alpha$ ,  $I\alpha$ ; deduced yields,  $\sigma$ ,  $\sigma(\theta)$ . Comparison with DWBA analysis. JOUR APOBB 41 845
- ${}^{10}\text{B}$  2008RIZV NUCLEAR REACTIONS  ${}^9\text{Be}({}^{44}\text{S}, {}^{43}\text{P})$ ,  $E\approx 92$  MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$ ,  $(\text{particle})\gamma\text{-coin}$ ; deduced  $E$ ,  $J$ ,  $\pi$ , spectroscopic factor, momentum distribution of knocked-out proton,  $\sigma$ . Results on CD only. CONF E.Lansing (NS2008),P12,Riley
- 2010BU04 RADIOACTIVITY  ${}^7\text{Li}$ ,  ${}^9\text{Be}$ ,  ${}^{11}\text{B}$ ,  ${}^{15}\text{N}(p\pi^-)$ ; measured hypernuclei mesonic weak decay  $\pi^-$  spectra; deduced branching ratios,  $J$ ,  $\pi$ . JOUR IMPEE 19 1109

KEYNUMBERS AND KEYWORDS

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**A=11**

<sup>11</sup> Li	2010GU04	NUCLEAR REACTIONS <sup>14</sup> C( $\pi^-$ , pd), ( $\pi^-$ , 2p), E=264 MeV / nucleon; measured reaction products; <sup>11,12</sup> Li; deduced resonance parameters, missing mass spectra. JOUR BRSPE 74 433
<sup>11</sup> Be	2010AM02	NUCLEAR REACTIONS <sup>1</sup> H( <sup>11</sup> Be, d), <sup>2</sup> H( <sup>10</sup> Be, p), ( <sup>12</sup> B, d), E=40 MeV / nucleon; measured reaction products; deduced new kinematics technique. JOUR IMPEE 19 1096
<sup>11</sup> B	2010BE08	RADIOACTIVITY <sup>12</sup> C( $\beta^+$ ), ( $\beta^-$ ), (n), (p), (IT); measured $\gamma$ , particle spectra, limits of half-lives for Pauli-forbidden transitions using Borexino detector. Comparison with previous measurements. Test of Pauli exclusion principle for nucleons in <sup>12</sup> C through search for $\gamma$ , neutron, proton, $\beta^-$ or $\beta^+$ emission in Pauli-forbidden transition from 1p <sub>3/2</sub> -shell nucleons to the filled 1s <sub>1/2</sub> shell in nuclei. JOUR PRVCA 81 034317
	2010BU04	RADIOACTIVITY <sup>7</sup> Li, <sup>9</sup> Be, <sup>11</sup> B, <sup>15</sup> N( $p\pi^-$ ); measured hypernuclei mesonic weak decay $\pi^-$ spectra; deduced branching ratios, J, $\pi$ . JOUR IMPEE 19 1109
	2010GA05	NUCLEAR REACTIONS <sup>13</sup> C(d, $\alpha\gamma$ ), E=15.3 MeV; measured reaction products, E $\gamma$ , I $\gamma$ ; deduced s( $\theta$ ), $\sigma(\theta, E)$ , deuteron cluster pickup, quadrupole deformation parameter. JOUR BRSPE 74 447
	2010KAZZ	NUCLEAR REACTIONS <sup>11</sup> B, <sup>13</sup> C( $\alpha, \alpha'$ ), E=388 MeV; measured E $\alpha$ , I $\alpha(\theta)$ ; deduced d $\sigma(\theta)$ to individual states, B(E0); calculated d $\sigma(\theta)$ using DWBA with parameters from elastic scattering on <sup>12</sup> C. CONF Varenna (Nucl Reaction Mechanisms), Proc, Vol.1, P95
	2010R009	NUCLEAR REACTIONS <sup>7</sup> Li( <sup>7</sup> Li, t), ( <sup>7</sup> Li, $\alpha$ ), ( <sup>7</sup> Li, <sup>6</sup> He), E=2-16 MeV; measured reaction products, Et, It, E $\alpha$ , I $\alpha$ ; deduced yields, $\sigma$ , $\sigma(\theta)$ . Comparison with DWBA analysis. JOUR APOBB 41 845
<sup>11</sup> C	2010BE08	RADIOACTIVITY <sup>12</sup> C( $\beta^+$ ), ( $\beta^-$ ), (n), (p), (IT); measured $\gamma$ , particle spectra, limits of half-lives for Pauli-forbidden transitions using Borexino detector. Comparison with previous measurements. Test of Pauli exclusion principle for nucleons in <sup>12</sup> C through search for $\gamma$ , neutron, proton, $\beta^-$ or $\beta^+$ emission in Pauli-forbidden transition from 1p <sub>3/2</sub> -shell nucleons to the filled 1s <sub>1/2</sub> shell in nuclei. JOUR PRVCA 81 034317
	2010FA04	NUCLEAR REACTIONS <sup>9</sup> Be( <sup>32</sup> Mg, <sup>30</sup> Ne), E=86.7, 99.7 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , and $\sigma$ using SeGA array. <sup>32</sup> Mg beam from <sup>9</sup> Be( <sup>48</sup> Ca, X), E=140 MeV / nucleon. <sup>30</sup> Ne; deduced levels, J, $\pi$ , intruder configuration. <sup>29,31</sup> F; discussed implications for binding energies. <sup>32</sup> Mg; deduced configuration. Comparison with large-scale shell model calculations. JOUR PRVCA 81 041302

**A=12**

<sup>12</sup> Li	2010GU04	NUCLEAR REACTIONS <sup>14</sup> C( $\pi^-$ , pd), ( $\pi^-$ , 2p), E=264 MeV / nucleon; measured reaction products; <sup>11,12</sup> Li; deduced resonance parameters, missing mass spectra. JOUR BRSPE 74 433
<sup>12</sup> B	2010AM02	NUCLEAR REACTIONS <sup>1</sup> H( <sup>11</sup> Be, d), <sup>2</sup> H( <sup>10</sup> Be, p), ( <sup>12</sup> B, d), E=40 MeV / nucleon; measured reaction products; deduced new kinematics technique. JOUR IMPEE 19 1096

**A=12 (continued)**

- 2010BE08 RADIOACTIVITY  $^{12}\text{C}(\beta^+)$ ,  $(\beta^-)$ , (n), (p), (IT); measured  $\gamma$ , particle spectra, limits of half-lives for Pauli-forbidden transitions using Borexino detector. Comparison with previous measurements. Test of Pauli exclusion principle for nucleons in  $^{12}\text{C}$  through search for  $\gamma$ , neutron, proton,  $\beta^-$  or  $\beta^+$  emission in Pauli-forbidden transition from  $1p_{3/2}$ -shell nucleons to the filled  $1s_{1/2}$  shell in nuclei. JOUR PRVCA 81 034317
- 2010QI02 NUCLEAR REACTIONS  $^{1,2}\text{H}$ ,  $^{12}\text{C}$ ,  $^{27}\text{Al}$ ,  $^{63}\text{Cu}$ ,  $^{197}\text{Au}(e, e'\pi^+)$ ,  $E < 5.8$  GeV; measured yields, differential cross sections as a function of azimuthal angle, and nuclear transparencies versus  $Q^2$ . JOUR PRVCA 81 055209
- $^{12}\text{C}$  2008MEZW NUCLEAR REACTIONS  $^{1,2}\text{H}$ ,  $^{12}\text{C}$ ,  $^{16}\text{O}(n, n)$ ,  $E \approx 95$  MeV;  $^{1,2}\text{H}$ ,  $^{12}\text{C}$ ,  $^{16}\text{O}(n, n')$ ,  $E \approx 95$  MeV; measured  $E_n$ ,  $\text{In}(\theta)$ ,  $E_p$ ,  $\text{Ip}(\theta)$ ,  $E_d$ ,  $\text{Id}(\theta)$ ; deduced  $d\sigma(E)$ ,  $d\sigma(\theta)$ ; calculated  $d\sigma$  using different forces with and without 3N component. Compared to other data and calculations. CONF Nice (Nucl Data for Sci and Technol) Proc,P1039
- 2008OHZT NUCLEAR REACTIONS  $^{12}\text{C}$ ,  $^{89}\text{Y}$ ,  $^{208}\text{Pb}(n, n)$ ,  $E = 96$  MeV; measured  $E_n$ ,  $\text{In}(\theta)$ ; deduced  $d\sigma(\theta)$ ; calculated  $d\sigma(\theta)$  using different models.  $^{12}\text{C}(n, n)$   $d\sigma$  compared also to  $^{12}\text{C}(p, p)$ . CONF Nice (Nucl Data for Sci and Technol) Proc,P1023
- 2008PIZW NUCLEAR REACTIONS  $^{12}\text{C}(^{134}\text{Xe}, ^{134}\text{Xe}')$ ,  $E = 435$  MeV; measured  $E_\gamma$ ,  $I_\gamma$ ,  $\gamma$ - $\gamma$ -coin.;  $^{134}\text{Xe}$ ; deduced level energies,  $J$ ,  $\pi$ ,  $B(E2)$ . CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P325,Pietralla
- 2008ZHZZ NUCLEAR REACTIONS  $^{12}\text{C}(^{17}\text{F}, ^{17}\text{F})$ ,  $E$ ; measured  $E(\text{particle})$ ,  $I(\text{particle})$ ; deduced  $^{17}\text{F}$  yield. REPT CNS-REP-61,P13,Zhang
- 2010AG04 NUCLEAR REACTIONS  $^{6,7}\text{Li}$ ,  $^9\text{Be}$ ,  $^{12,13}\text{C}$ ,  $^{16}\text{O}(K^-, \pi^-)$ ,  $E$  at rest; measured  $E_p$ ,  $\text{Ip}$  from decaying hypernucleus; analyzed reaction mechanism features, final state interactions and decay width ratios. JOUR PYLBB 685 247
- 2010AL10 NUCLEAR REACTIONS  $^{13}\text{C}(^{12}\text{C}, ^{13}\text{C})$ ,  $(^{12}\text{C}, ^{12}\text{C})$ ,  $E = 10.6$  MeV / nucleon;  $^{12}\text{C}(^{22}\text{Ne}, ^{22}\text{Ne})$ ,  $(^{22}\text{Ne}, ^{22}\text{Ne}')$ ,  $^{13}\text{C}(^{22}\text{Ne}, ^{22}\text{Ne})$ ,  $(^{22}\text{Ne}, ^{23}\text{Ne})$ ,  $E = 12$  MeV / nucleon; measured particle spectra,  $\sigma$  and  $\sigma(\theta)$ ; deduced optical model parameters and asymptotic normalization coefficients (ANC).  $^{22}\text{Mg}(p, \gamma)$ ; deduced direct and resonant capture rates, and effect on the depletion of  $^{22}\text{Na}$  in O-Ne Novae. JOUR PRVCA 81 035802
- 2010BE08 RADIOACTIVITY  $^{12}\text{C}(\beta^+)$ ,  $(\beta^-)$ , (n), (p), (IT); measured  $\gamma$ , particle spectra, limits of half-lives for Pauli-forbidden transitions using Borexino detector. Comparison with previous measurements. Test of Pauli exclusion principle for nucleons in  $^{12}\text{C}$  through search for  $\gamma$ , neutron, proton,  $\beta^-$  or  $\beta^+$  emission in Pauli-forbidden transition from  $1p_{3/2}$ -shell nucleons to the filled  $1s_{1/2}$  shell in nuclei. JOUR PRVCA 81 034317
- 2010MA26 NUCLEAR REACTIONS  $^{14}\text{N}(p, \gamma)^{15}\text{O}$ ,  $E = 278, 1058$  keV;  $^{15}\text{N}(p, \alpha)^{12}\text{C}$ ,  $E = 430, 897$  keV; measured  $\gamma$ -ray spectra, yield, angular distributions, branching ratio, and resonance strengths.  $^{15}\text{O}$ ; deduced resonances. Comparison with previous measurements. JOUR PRVCA 81 055807

**A=12 (continued)**

- 20100K01 NUCLEAR REACTIONS  $^{12}\text{C}(\text{p}, \text{p}')$ ,  $E=300$  MeV; measured  $E_{\text{p}}$ ,  $I_{\text{p}}$ ,  $\sigma$ ,  $\sigma(\theta)$ ; deduced levels,  $J$ ,  $\pi$ , deformation parameters. Comparison with DWBA calculations and  $\alpha$ -cluster condensation model. JOUR PRVCA 81 054604
- 2010PIZZ NUCLEAR REACTIONS  $^{12}\text{C}(^{124}\text{Xe}, ^{124}\text{Xe}')$ ,  $E\approx 435$  MeV;  $^{12}\text{C}(^{126}\text{Xe}, ^{126}\text{Xe}')$ ,  $E\approx 435$  MeV;  $^{12}\text{C}(^{128}\text{Xe}, ^{128}\text{Xe}')$ ,  $E\approx 435$  MeV;  $^{12}\text{C}(^{130}\text{Xe}, ^{130}\text{Xe}')$ ,  $E\approx 435$  MeV;  $^{12}\text{C}(^{132}\text{Xe}, ^{132}\text{Xe}')$ ,  $E\approx 435$  MeV;  $^{12}\text{C}(^{134}\text{Xe}, ^{134}\text{Xe}')$ ,  $E\approx 435$  MeV; measured Coulomb excitation  $E_{\gamma}$ ,  $I_{\gamma}$ ; deduced  $B(\text{M1})$  transition strength,  $E$ ,  $J$ ,  $\pi$ ; calculated transition strengths; deduced quadrupole-quadrupole proton-neutron interaction,  $^{124}\text{Xe}$   $O(6)$  symmetry breaking. CONF Varenna (Nucl Reaction Mechanisms), Proc, Vol.1, P173
- 2010TA05 RADIOACTIVITY  $^{16}\text{N}(\beta^{-}\alpha)$ ; measured  $E_{\alpha}$ ,  $I_{\alpha}$ ,  $\alpha^{12}\text{C}$ -coin, half-life; deduced  $E1$  component of the  $S$  factor for  $^{12}\text{C}(\alpha, \gamma)^{16}\text{O}$  reaction using a set of twin ionization chambers. R-matrix analysis. Comparison with previous studies. JOUR PRVCA 81 045809
- 2010T003 NUCLEAR REACTIONS  $^{12}\text{C}, ^{28}\text{Si}(\text{p}, \text{p})$ ,  $E=4.9-6.1$  MeV; measured scattered protons; deduced yields, stopping  $\sigma$ , sharp nuclear resonances. JOUR NIMBE 268 1749
- $^{12}\text{N}$  2010BE08 RADIOACTIVITY  $^{12}\text{C}(\beta^{+})$ ,  $(\beta^{-})$ ,  $(\text{n})$ ,  $(\text{p})$ ,  $(\text{IT})$ ; measured  $\gamma$ , particle spectra, limits of half-lives for Pauli-forbidden transitions using Borexino detector. Comparison with previous measurements. Test of Pauli exclusion principle for nucleons in  $^{12}\text{C}$  through search for  $\gamma$ , neutron, proton,  $\beta^{-}$  or  $\beta^{+}$  emission in Pauli-forbidden transition from  $1\text{p}_{3/2}$ -shell nucleons to the filled  $1\text{s}_{1/2}$  shell in nuclei. JOUR PRVCA 81 034317

**A=13**

- $^{13}\text{Be}$  2010K017 NUCLEAR REACTIONS  $^1\text{H}(^{14}\text{Be}, \text{X})^{13}\text{Be}$ ,  $E=69$  MeV / nucleon; measured reaction fragments; deduced  $\sigma$ ,  $\sigma(E)$ , p- and d-wave resonance energies and widths,  $J$ ,  $\pi$ . Comparison with shell model calculations. JOUR PYLBB 690 245
- $^{13}\text{B}$  2010BA06 NUCLEAR REACTIONS  $^{12}\text{B}(\text{d}, \text{p})$ ,  $E=75$  MeV; measured  $E_{\text{p}}$ ,  $I_{\text{p}}$ , recoil ions; deduced  $\sigma(\theta)$ , spectroscopic factors, constrained  $J$ ,  $\pi$ . JOUR PRLTA 104 132501
- $^{13}\text{C}$  2010AG04 NUCLEAR REACTIONS  $^6,7\text{Li}, ^9\text{Be}, ^{12,13}\text{C}, ^{16}\text{O}(\text{K}^{-}, \pi^{-})$ ,  $E$  at rest; measured  $E_{\text{p}}$ ,  $I_{\text{p}}$  from decaying hypernucleus; analyzed reaction mechanism features, final state interactions and decay width ratios. JOUR PYLBB 685 247
- 2010AL10 NUCLEAR REACTIONS  $^{13}\text{C}(^{12}\text{C}, ^{13}\text{C})$ ,  $(^{12}\text{C}, ^{12}\text{C})$ ,  $E=10.6$  MeV / nucleon;  $^{12}\text{C}(^{22}\text{Ne}, ^{22}\text{Ne})$ ,  $(^{22}\text{Ne}, ^{22}\text{Ne}')$ ,  $^{13}\text{C}(^{22}\text{Ne}, ^{22}\text{Ne})$ ,  $(^{22}\text{Ne}, ^{23}\text{Ne})$ ,  $E=12$  MeV / nucleon; measured particle spectra,  $\sigma$  and  $\sigma(\theta)$ ; deduced optical model parameters and asymptotic normalization coefficients (ANC).  $^{22}\text{Mg}(\text{p}, \gamma)$ ; deduced direct and resonant capture rates, and effect on the depletion of  $^{22}\text{Na}$  in O-Ne Novae. JOUR PRVCA 81 035802

KEYNUMBERS AND KEYWORDS

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**A=13 (continued)**

- 2010KAZZ NUCLEAR REACTIONS  $^{11}\text{B}$ ,  $^{13}\text{C}(\alpha, \alpha')$ ,  $E=388$  MeV; measured  $E\alpha$ ,  $I\alpha(\theta)$ ; deduced  $d\sigma(\theta)$  to individual states,  $B(E0)$ ; calculated  $d\sigma(\theta)$  using DWBA with parameters from elastic scattering on  $^{12}\text{C}$ . CONF Varenna (Nucl Reaction Mechanisms), Proc, Vol.1, P95
- 2010ROZZ NUCLEAR REACTIONS  $^9\text{Be}(^6\text{Li}, d)$ ,  $E=25.5$  MeV; measured  $E_d$ ,  $I_d(\theta)$ ; deduced  $d\sigma(\theta)$ ; calculated  $d\sigma(\theta)$  using DWBA code DWUCK5. CONF Varenna (Nucl Reaction Mechanisms), Proc, Vol.2, P331

**A=14**

- $^{14}\text{N}$  2010BU04 RADIOACTIVITY  $^7\text{Li}$ ,  $^9\text{Be}$ ,  $^{11}\text{B}$ ,  $^{15}\text{N}(p\pi^-)$ ; measured hypernuclei mesonic weak decay  $\pi^-$  spectra; deduced branching ratios,  $J$ ,  $\pi$ . JOUR IMPEE 19 1109

**A=15**

- $^{15}\text{C}$  2010CAZX NUCLEAR REACTIONS  $^{13}\text{C}(^{18}\text{O}, ^{16}\text{O})$ ,  $E=84$  MeV; measured  $E(\text{particle})$ ,  $Z(\text{particle})$ ,  $I(\text{particle}, \theta)$ ; deduced  $d\sigma(\theta)$ ,  $^{15}\text{C}$  energies of levels. CONF Varenna (Nucl Reaction Mechanisms), Proc, Vol.1, P187
- $^{15}\text{N}$  2010BU04 RADIOACTIVITY  $^7\text{Li}$ ,  $^9\text{Be}$ ,  $^{11}\text{B}$ ,  $^{15}\text{N}(p\pi^-)$ ; measured hypernuclei mesonic weak decay  $\pi^-$  spectra; deduced branching ratios,  $J$ ,  $\pi$ . JOUR IMPEE 19 1109
- 2010TA05 NUCLEAR REACTIONS  $^2\text{H}(^{15}\text{N}, p)^{15}\text{N} / ^{16}\text{N} / ^{16}\text{O} / ^{20}\text{Ne}$ ,  $E=82$  MeV; measured fragment yields. JOUR PRVCA 81 045809
- $^{15}\text{O}$  2010MA26 NUCLEAR REACTIONS  $^{14}\text{N}(p, \gamma)^{15}\text{O}$ ,  $E=278, 1058$  keV;  $^{15}\text{N}(p, \alpha)^{12}\text{C}$ ,  $E=430, 897$  keV; measured  $\gamma$ -ray spectra, yield, angular distributions, branching ratio, and resonance strengths.  $^{15}\text{O}$ ; deduced resonances. Comparison with previous measurements. JOUR PRVCA 81 055807

**A=16**

- $^{16}\text{B}$  2010SP02 NUCLEAR REACTIONS  $\text{Be}(^{19}\text{C}, pX)^{18}\text{B}$ ,  $E=62$  MeV / nucleon;  $\text{Be}(^{17}\text{C}, pX)^{16}\text{B}$ ,  $E=55$  MeV / nucleon; measured decay energy spectra, (fragment)(neutron)-coin using time of flight technique with Modular Neutron Array (MoNA).  $^{16}\text{B}$ ; deduced ground state energies.  $^{17}\text{B}$ ; deduced level energies,  $J$ ,  $\pi$ .  $^{18}\text{B}$ ; calculated level energies,  $J$ ,  $\pi$ . Comparison with shell model calculations using WBP interaction and other data. Secondary radioactive beam. JOUR PYLBB 683 129
- $^{16}\text{C}$  2008WIZT NUCLEAR REACTIONS  $^9\text{Be}(^{11}\text{B}, 2p)$ ,  $E=50$  MeV;  $^9\text{Be}(^9\text{Be}, 2p)$ ,  $E=40$  MeV; measured  $E_p$ ,  $I_p$ ,  $pp$ -coin,  $E\gamma$ ,  $I\gamma$ ,  $pp\gamma$ -coin,  $pn\gamma$ -coin; deduced  $^{16}\text{O}$   $B(E2)$ ,  $^{18}\text{N}$   $B(M1)$ , low-lying state  $T_{1/2}$ . CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc, P548

KEYNUMBERS AND KEYWORDS

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**A=16 (continued)**

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| $^{16}\text{N}$ | 2010TA05 | RADIOACTIVITY $^{16}\text{N}(\beta^- \alpha)$ ; measured $E\alpha$ , $I\alpha$ , $\alpha^{12}\text{C}$ -coin, half-life; deduced E1 component of the S factor for $^{12}\text{C}(\alpha, \gamma)^{16}\text{O}$ reaction using a set of twin ionization chambers. R-matrix analysis. Comparison with previous studies. JOUR PRVCA 81 045809  |
|                 | 2010TA05 | NUCLEAR REACTIONS $^2\text{H}(^{15}\text{N}, \text{p})^{15}\text{N} / ^{16}\text{N} / ^{16}\text{O} / ^{20}\text{Ne}$ , E=82 MeV; measured fragment yields. JOUR PRVCA 81 045809  |
| $^{16}\text{O}$ | 2008MEZW | NUCLEAR REACTIONS $^1,^2\text{H}$ , $^{12}\text{C}$ , $^{16}\text{O}(\text{n}, \text{n})$ , E $\approx$ 95 MeV; $^1,^2\text{H}$ , $^{12}\text{C}$ , $^{16}\text{O}(\text{n}, \text{n}')$ , E $\approx$ 95 MeV; measured $E_n$ , $I_n(\theta)$ , $E_p$ , $I_p(\theta)$ , $E_d$ , $I_d(\theta)$ ; deduced $d\sigma(E)$ , $d\sigma(\theta)$ ; calculated $d\sigma$ using different forces with and without 3N component. Compared to other data and calculations. CONF Nice (Nucl Data for Sci and Technol) Proc,P1039 |
|                 | 2010AG04 | NUCLEAR REACTIONS $^6,^7\text{Li}$ , $^9\text{Be}$ , $^{12,13}\text{C}$ , $^{16}\text{O}(\text{K}^-, \pi^-)$ , E at rest; measured $E_p$ , $I_p$ from decaying hypernucleus; analyzed reaction mechanism features, final state interactions and decay width ratios. JOUR PYLBB 685 247  |
|                 | 2010GI05 | RADIOACTIVITY $^{18}\text{Ne}(2\text{p})$ [from $\text{Pb}(^{18}\text{Ne}, ^{18}\text{Ne}')$ , E=33 MeV / nucleon]; measured reaction fragments; deduced excitation energy spectrum, J, $\pi$ , two-proton emission, branching ratio. JOUR IMPEE 19 1141  |
|                 | 2010TA05 | NUCLEAR REACTIONS $^2\text{H}(^{15}\text{N}, \text{p})^{15}\text{N} / ^{16}\text{N} / ^{16}\text{O} / ^{20}\text{Ne}$ , E=82 MeV; measured fragment yields. JOUR PRVCA 81 045809  |

**A=17**

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|-----------------|----------|---|
| $^{17}\text{B}$ | 2010SP02 | NUCLEAR REACTIONS $\text{Be}(^{19}\text{C}, \text{pX})^{18}\text{B}$ , E=62 MeV / nucleon; $\text{Be}(^{17}\text{C}, \text{pX})^{16}\text{B}$ , E=55 MeV / nucleon; measured decay energy spectra, (fragment)(neutron)-coin using time of flight technique with Modular Neutron Array (MoNA). $^{16}\text{B}$ ; deduced ground state energies. $^{17}\text{B}$ ; deduced level energies, J, $\pi$ . $^{18}\text{B}$ ; calculated level energies, J, $\pi$ . Comparison with shell model calculations using WBP interaction and other data. Secondary radioactive beam. JOUR PYLBB 683 129 |
| $^{17}\text{C}$ | 2008STZ0 | RADIOACTIVITY $^{17}\text{C}$ ; $^{19}\text{C}$ ; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin; deduced E, J; calculated E, J, $\pi$ using shell model with WBT interaction. REPT ATOMKI 2008 Annual,P20,Stanoiu   |
|                 | 2008STZ0 | NUCLEAR REACTIONS $^{17}\text{C}(\text{p}, \text{p}')$ , E not given; measured reaction products; deduced E, J, $\pi$ . REPT ATOMKI 2008 Annual,P20,Stanoiu   |
| $^{17}\text{N}$ | 2008RIZX | RADIOACTIVITY $^9\text{Li}$ , $^{17}\text{N}$ , $^{87}\text{Br}$ , $^{88}\text{Br}(\beta^-)$ [from $\text{Pb}$ , $^{209}\text{Bi}$ , $\text{Fe}(\text{p}, \text{x})$ , E=1 GeV]; measured $\beta$ -delayed neutron decay. CONF Nice (Nucl Data for Sci and Technol) Proc,P1073  |
| $^{17}\text{O}$ | 2008RIZX | RADIOACTIVITY $^9\text{Li}$ , $^{17}\text{N}$ , $^{87}\text{Br}$ , $^{88}\text{Br}(\beta^-)$ [from $\text{Pb}$ , $^{209}\text{Bi}$ , $\text{Fe}(\text{p}, \text{x})$ , E=1 GeV]; measured $\beta$ -delayed neutron decay. CONF Nice (Nucl Data for Sci and Technol) Proc,P1073  |

KEYNUMBERS AND KEYWORDS

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**A=17 (continued)**

<sup>17</sup>Ne      2008KOYY      RADIOACTIVITY <sup>17</sup>Ne; measured ToF versus field frequency; deduced isotope shift, mass mass excess, charge radius, halo nuclei; calculated mass excess, separation energy, proton, neutron density distribution using FMD; <sup>38</sup>Ca; <sup>26</sup>Al; <sup>80</sup>Zn; <sup>81</sup>Zn; <sup>132</sup>Sn; <sup>134</sup>Sn; measured ToF versus frequency detuning; deduced Q-value, mass excess. Neutrons in <sup>17</sup>Ne spherical, protons cluster-like form. Results on CD only. CONF E.Lansing (NS2008),P20,Kowalska

**A=18**

<sup>18</sup>B      2010SP02      NUCLEAR REACTIONS Be(<sup>19</sup>C, pX)<sup>18</sup>B, E=62 MeV / nucleon; Be(<sup>17</sup>C, pX)<sup>16</sup>B, E=55 MeV / nucleon; measured decay energy spectra, (fragment)(neutron)-coin using time of flight technique with Modular Neutron Array (MoNA). <sup>16</sup>B; deduced ground state energies. <sup>17</sup>B; deduced level energies, J,  $\pi$ . <sup>18</sup>B; calculated level energies, J,  $\pi$ . Comparison with shell model calculations using WBP interaction and other data. Secondary radioactive beam. JOUR PYLBB 683 129

<sup>18</sup>N      2008WIZT      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>11</sup>B, 2p), E=50 MeV; <sup>9</sup>Be(<sup>9</sup>Be, 2p), E=40 MeV; measured Ep, Ip, pp-coin, E $\gamma$ , I $\gamma$ , pp $\gamma$ -coin, pn $\gamma$ -coin; deduced <sup>16</sup>O B(E2), <sup>18</sup>N B(M1), low-lying state T<sub>1/2</sub>. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P548

<sup>18</sup>O      2009J008      NUCLEAR REACTIONS <sup>4</sup>He(<sup>14</sup>C, <sup>14</sup>C), E=25 MeV; measured  $\sigma$ (E,  $\theta$ ). <sup>18</sup>O; deduced levels, widths, J,  $\pi$  using R-matrix analysis. JOUR ZAANE 42 135

            2010GA04      RADIOACTIVITY <sup>18</sup>F(EC) [from <sup>18</sup>O(p, n)]; measured E $\gamma$ , I $\gamma$ , Ee, Ie; deduced T<sub>1/2</sub>. JOUR ARISE 68 1561

            2010NE03      NUCLEAR REACTIONS <sup>17</sup>O(p,  $\gamma$ )<sup>18</sup>O, E=151, 275, 300, 325, 400, 450, 500, 519 keV; measured E $\gamma$ , I $\gamma$ ; deduced levels, total yields,  $\sigma$ , and total S factors. Compared with previous work. JOUR PRVCA 81 045801

<sup>18</sup>F      2010GA04      RADIOACTIVITY <sup>18</sup>F(EC) [from <sup>18</sup>O(p, n)]; measured E $\gamma$ , I $\gamma$ , Ee, Ie; deduced T<sub>1/2</sub>. JOUR ARISE 68 1561

            2010NE03      NUCLEAR REACTIONS <sup>17</sup>O(p,  $\gamma$ )<sup>18</sup>O, E=151, 275, 300, 325, 400, 450, 500, 519 keV; measured E $\gamma$ , I $\gamma$ ; deduced levels, total yields,  $\sigma$ , and total S factors. Compared with previous work. JOUR PRVCA 81 045801

<sup>18</sup>Ne      2008SVZX      RADIOACTIVITY <sup>62</sup>Ga; measured I $\beta$ , E $\gamma$ , I $\gamma$ ,  $\beta\gamma$ -coin,  $\gamma\gamma$ -coin; deduced T<sub>1/2</sub>, log ft, branching ratio; calculated isospin symmetry breaking using shell model; <sup>26</sup>Na( $\beta^-$ ); measured I $\beta$ (t), I $\gamma$ (t); deduced T<sub>1/2</sub>; <sup>18</sup>Ne; measured E $\gamma$ , I $\gamma$ , I $\beta$ (t),  $\beta\gamma$ -coin,  $\gamma\gamma$ -coin; deduced T<sub>1/2</sub>; <sup>38</sup>K; measured I $\beta$ (t); deduced isomer decay, T<sub>1/2</sub>, M3 branching ratio, log ft; <sup>74</sup>Rb; measured decay products; deduced T<sub>1/2</sub>, branching ratio, log ft. Results on CD only. CONF E.Lansing (NS2008),P19,Svensson

            2010GI05      RADIOACTIVITY <sup>18</sup>Ne(2p) [from Pb(<sup>18</sup>Ne, <sup>18</sup>Ne'), E=33 MeV / nucleon]; measured reaction fragments; deduced excitation energy spectrum, J,  $\pi$ , two-proton emission, branching ratio. JOUR IMPEE 19 1141

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KEYNUMBERS AND KEYWORDS

**A=18 (continued)**

2010RAZZ RADIOACTIVITY  $^{18}\text{Ne}$ [from  $^{20}\text{Ne}+^9\text{Be}$  fragmentation at 45 MeV / nucleon]; measured reaction products of proton decay and two-proton decay; deduced  $^{17}\text{F}$ ,  $^{16}\text{O}$  E, J,  $\pi$ , relative momentum spectra and angular distributions in  $^{16}\text{O}+2\text{p}$  system. CONF Varenna (Nucl Reaction Mechanisms),Proc,Vol.1,P283

**A=19**

$^{19}\text{C}$  2008STZO RADIOACTIVITY  $^{17}\text{C}$ ;  $^{19}\text{C}$ ; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin; deduced E, J; calculated E, J,  $\pi$  using shell model with WBT interaction. REPT ATOMKI 2008 Annual,P20,Stanoiu

$^{19}\text{N}$  2008SUZN RADIOACTIVITY  $^{19}\text{N}(\beta^-)$ ;  $^{20}\text{N}(\beta^-)$ ;  $^{22}\text{N}(\beta^-)$ ; measured  $I\beta$ ,  $E\gamma$ ,  $I\gamma(t)$ ,  $\beta\gamma$ -coin,  $\beta$ -delayed En,  $\text{In}(\theta, t)$ ; deduced B(GT) distribution,  $^{22}\text{O}$  new negative parity states;  $^{23}\text{O}(\beta^-)$ ; measured  $E\beta$ ,  $I\beta$ ,  $E\gamma$ ,  $I\gamma$ ,  $\beta\gamma$ -coin,  $\gamma\gamma$ -coin; deduced E, J,  $\pi$ ; calculated E, J,  $\pi$ ,  $E\gamma$ ,  $I\gamma$  using sd-shell model space with USDB interactions; deduced neutron emission probability. Results on CD only. CONF E.Lansing (NS2008),P11,Sumithrarachchi

$^{19}\text{O}$  2008SUZN RADIOACTIVITY  $^{19}\text{N}(\beta^-)$ ;  $^{20}\text{N}(\beta^-)$ ;  $^{22}\text{N}(\beta^-)$ ; measured  $I\beta$ ,  $E\gamma$ ,  $I\gamma(t)$ ,  $\beta\gamma$ -coin,  $\beta$ -delayed En,  $\text{In}(\theta, t)$ ; deduced B(GT) distribution,  $^{22}\text{O}$  new negative parity states;  $^{23}\text{O}(\beta^-)$ ; measured  $E\beta$ ,  $I\beta$ ,  $E\gamma$ ,  $I\gamma$ ,  $\beta\gamma$ -coin,  $\gamma\gamma$ -coin; deduced E, J,  $\pi$ ; calculated E, J,  $\pi$ ,  $E\gamma$ ,  $I\gamma$  using sd-shell model space with USDB interactions; deduced neutron emission probability. Results on CD only. CONF E.Lansing (NS2008),P11,Sumithrarachchi

2010CAZY NUCLEAR REACTIONS  $^{19}\text{F}(^7\text{Li}, ^7\text{Be})$ ,  $E=52.2$  MeV; measured  $E(\text{particle})$ ,  $I(\text{particle}, \theta)$ ; deduced  $d\sigma(\theta)$ . Preliminary. CONF Varenna (Nucl Reaction Mechanisms),Proc,Vol.1,P181

**A=20**

$^{20}\text{N}$  2008SOZT RADIOACTIVITY  $^{20}\text{N}$ ;  $^{22}\text{N}$ ; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin; deduced E, J; calculated E, J,  $\pi$  using shell model with WBT, WBTM interactions. REPT ATOMKI 2008 Annual,P21,Sohler

2008SUZN RADIOACTIVITY  $^{19}\text{N}(\beta^-)$ ;  $^{20}\text{N}(\beta^-)$ ;  $^{22}\text{N}(\beta^-)$ ; measured  $I\beta$ ,  $E\gamma$ ,  $I\gamma(t)$ ,  $\beta\gamma$ -coin,  $\beta$ -delayed En,  $\text{In}(\theta, t)$ ; deduced B(GT) distribution,  $^{22}\text{O}$  new negative parity states;  $^{23}\text{O}(\beta^-)$ ; measured  $E\beta$ ,  $I\beta$ ,  $E\gamma$ ,  $I\gamma$ ,  $\beta\gamma$ -coin,  $\gamma\gamma$ -coin; deduced E, J,  $\pi$ ; calculated E, J,  $\pi$ ,  $E\gamma$ ,  $I\gamma$  using sd-shell model space with USDB interactions; deduced neutron emission probability. Results on CD only. CONF E.Lansing (NS2008),P11,Sumithrarachchi

KEYNUMBERS AND KEYWORDS

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**A=20 (continued)**

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| $^{20}\text{O}$  | 2008SUZN | RADIOACTIVITY $^{19}\text{N}(\beta^-)$ ; $^{20}\text{N}(\beta^-)$ ; $^{22}\text{N}(\beta^-)$ ; measured $I\beta$ , $E\gamma$ , $I\gamma(t)$ , $\beta\gamma$ -coin, $\beta$ -delayed En, $\text{In}(\theta, t)$ ; deduced B(GT) distribution, $^{22}\text{O}$ new negative parity states; $^{23}\text{O}(\beta^-)$ ; measured $E\beta$ , $I\beta$ , $E\gamma$ , $I\gamma$ , $\beta\gamma$ -coin, $\gamma\gamma$ -coin; deduced E, J, $\pi$ ; calculated E, J, $\pi$ , $E\gamma$ , $I\gamma$ using sd-shell model space with USDB interactions; deduced neutron emission probability. Results on CD only. CONF E.Lansing (NS2008),P11,Sumithrarachchi |
| $^{20}\text{Ne}$ | 2010TA05 | NUCLEAR REACTIONS $^2\text{H}(^{15}\text{N}, p)^{15}\text{N} / ^{16}\text{N} / ^{16}\text{O} / ^{20}\text{Ne}$ , $E=82$ MeV; measured fragment yields. JOUR PRVCA 81 045809   |
|                  | 2010ZH15 | RADIOACTIVITY $^{23}\text{Al}$ , $^{22}\text{Mg}(2p)$ [from $^{12}\text{C}(^{23}\text{Al}, X)$ , $(^{22}\text{Mg}, X)$ , $(^{21}\text{Na}, X)$ , $(^{20}\text{Ne}, X)$ , $E=60-70$ MeV / nucleon]; measured decay products; deduced trajectories, di-proton emission. JOUR IMPEE 19 957   |
| $^{20}\text{Na}$ | 2010WR01 | NUCLEAR REACTIONS $^{20}\text{Ne}$ , $^{24}\text{Mg}$ , $^{28}\text{Si}$ , $^{32}\text{S}$ , $^{36}\text{Ar}(^3\text{He}, t)$ , $E=32$ MeV; measured triton spectra using Q3D magnetic spectrograph; deduced levels, Q values, mass excesses. JOUR PRVCA 81 055503  |
|                  | 2010WR01 | ATOMIC MASSES $^{20}\text{Na}$ , $^{24}\text{Al}$ , $^{28}\text{P}$ , $^{32}\text{Cl}$ ; measured mass excesses using $(^3\text{He}, t)$ reaction. $^{36}\text{Ar}(^3\text{He}, t)^{36}\text{K}$ used for calibration. Comparison with AME-2003. JOUR PRVCA 81 055503   |

**A=21**

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| $^{21}\text{Na}$ | 2010ZH15 | RADIOACTIVITY $^{23}\text{Al}$ , $^{22}\text{Mg}(2p)$ [from $^{12}\text{C}(^{23}\text{Al}, X)$ , $(^{22}\text{Mg}, X)$ , $(^{21}\text{Na}, X)$ , $(^{20}\text{Ne}, X)$ , $E=60-70$ MeV / nucleon]; measured decay products; deduced trajectories, di-proton emission. JOUR IMPEE 19 957 |
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**A=22**

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| $^{22}\text{N}$ | 2008SOZT | RADIOACTIVITY $^{20}\text{N}$ ; $^{22}\text{N}$ ; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin; deduced E, J; calculated E, J, $\pi$ using shell model with WBT, WBTM interactions. REPT ATOMKI 2008 Annual,P21,Sohler   |
|                 | 2008SUZN | RADIOACTIVITY $^{19}\text{N}(\beta^-)$ ; $^{20}\text{N}(\beta^-)$ ; $^{22}\text{N}(\beta^-)$ ; measured $I\beta$ , $E\gamma$ , $I\gamma(t)$ , $\beta\gamma$ -coin, $\beta$ -delayed En, $\text{In}(\theta, t)$ ; deduced B(GT) distribution, $^{22}\text{O}$ new negative parity states; $^{23}\text{O}(\beta^-)$ ; measured $E\beta$ , $I\beta$ , $E\gamma$ , $I\gamma$ , $\beta\gamma$ -coin, $\gamma\gamma$ -coin; deduced E, J, $\pi$ ; calculated E, J, $\pi$ , $E\gamma$ , $I\gamma$ using sd-shell model space with USDB interactions; deduced neutron emission probability. Results on CD only. CONF E.Lansing (NS2008),P11,Sumithrarachchi |
| $^{22}\text{O}$ | 2008SUZN | RADIOACTIVITY $^{19}\text{N}(\beta^-)$ ; $^{20}\text{N}(\beta^-)$ ; $^{22}\text{N}(\beta^-)$ ; measured $I\beta$ , $E\gamma$ , $I\gamma(t)$ , $\beta\gamma$ -coin, $\beta$ -delayed En, $\text{In}(\theta, t)$ ; deduced B(GT) distribution, $^{22}\text{O}$ new negative parity states; $^{23}\text{O}(\beta^-)$ ; measured $E\beta$ , $I\beta$ , $E\gamma$ , $I\gamma$ , $\beta\gamma$ -coin, $\gamma\gamma$ -coin; deduced E, J, $\pi$ ; calculated E, J, $\pi$ , $E\gamma$ , $I\gamma$ using sd-shell model space with USDB interactions; deduced neutron emission probability. Results on CD only. CONF E.Lansing (NS2008),P11,Sumithrarachchi |

KEYNUMBERS AND KEYWORDS

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**A=22 (continued)**

<sup>22</sup>Mg      2010ZH15      RADIOACTIVITY <sup>23</sup>Al, <sup>22</sup>Mg(2p) [from <sup>12</sup>C(<sup>23</sup>Al, X), (<sup>22</sup>Mg, X), (<sup>21</sup>Na, X), (<sup>20</sup>Ne, X), E=60-70 MeV / nucleon]; measured decay products; deduced trajectories, di-proton emission. JOUR IMPEE 19 957

**A=23**

<sup>23</sup>O      2008FRZY      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>26</sup>Ne, 2pX)<sup>23</sup>O / <sup>24</sup>O, E=86 MeV / nucleon; measured reaction products; <sup>23</sup>O deduced energy levels, J,  $\pi$  for unbound states. Two-proton knockout reactions. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P23, Frank

2008SUZN      RADIOACTIVITY <sup>19</sup>N( $\beta^-$ ); <sup>20</sup>N( $\beta^-$ ); <sup>22</sup>N( $\beta^-$ ); measured I $\beta$ , E $\gamma$ , I $\gamma$ (t),  $\beta\gamma$ -coin,  $\beta$ -delayed En, In( $\theta$ , t); deduced B(GT) distribution, <sup>22</sup>O new negative parity states; <sup>23</sup>O( $\beta^-$ ); measured E $\beta$ , I $\beta$ , E $\gamma$ , I $\gamma$ ,  $\beta\gamma$ -coin,  $\gamma\gamma$ -coin; deduced E, J,  $\pi$ ; calculated E, J,  $\pi$ , E $\gamma$ , I $\gamma$  using sd-shell model space with USDB interactions; deduced neutron emission probability. Results on CD only. CONF E.Lansing (NS2008),P11,Sumithrarachchi

<sup>23</sup>F      2008SUZN      RADIOACTIVITY <sup>19</sup>N( $\beta^-$ ); <sup>20</sup>N( $\beta^-$ ); <sup>22</sup>N( $\beta^-$ ); measured I $\beta$ , E $\gamma$ , I $\gamma$ (t),  $\beta\gamma$ -coin,  $\beta$ -delayed En, In( $\theta$ , t); deduced B(GT) distribution, <sup>22</sup>O new negative parity states; <sup>23</sup>O( $\beta^-$ ); measured E $\beta$ , I $\beta$ , E $\gamma$ , I $\gamma$ ,  $\beta\gamma$ -coin,  $\gamma\gamma$ -coin; deduced E, J,  $\pi$ ; calculated E, J,  $\pi$ , E $\gamma$ , I $\gamma$  using sd-shell model space with USDB interactions; deduced neutron emission probability. Results on CD only. CONF E.Lansing (NS2008),P11,Sumithrarachchi

<sup>23</sup>Na      2010L005      NUCLEAR REACTIONS <sup>22</sup>Ne, <sup>27</sup>Al(p,  $\gamma$ ), E=400-505 keV; measured E $\gamma$ , I $\gamma$ , yields and resonance strengths. Comparison with previous data. Relevance to of resonance strengths in the <sup>22</sup>Ne(p,  $\gamma$ )<sup>23</sup>Na hydrogen-burning reaction and in the <sup>22</sup>Ne( $\alpha$ ,  $\gamma$ ) s-process neutron-source reactions. JOUR PRVCA 81 055804

<sup>23</sup>Mg      2010FUZZ      NUCLEAR REACTIONS <sup>9</sup>Be, <sup>23</sup>Na, <sup>25</sup>Mg, <sup>42</sup>Ca, <sup>46</sup>Ti, <sup>50</sup>Cr, <sup>54</sup>Fe, <sup>58</sup>Ni, <sup>118</sup>Sn(<sup>3</sup>He, t), E=140 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , reaction products; deduced  $d\sigma(E)$ ; GT strength. CONF Varenna (Nucl Reaction Mechanisms),Proc,Vol.1,P39

<sup>23</sup>Al      2009NAZV      RADIOACTIVITY <sup>23</sup>Al[from <sup>9</sup>Be+<sup>24</sup>Mg at 100 MeV / nucleon]; measured  $\beta$ -NMR from polarized source; deduced electric quadrupole moment. REPT RIKEN 2008 Annual,P23,Nagatomo

2010AL10      NUCLEAR REACTIONS <sup>13</sup>C(<sup>12</sup>C, <sup>13</sup>C), (<sup>12</sup>C, <sup>12</sup>C), E=10.6 MeV / nucleon; <sup>12</sup>C(<sup>22</sup>Ne, <sup>22</sup>Ne), (<sup>22</sup>Ne, <sup>22</sup>Ne'), <sup>13</sup>C(<sup>22</sup>Ne, <sup>22</sup>Ne), (<sup>22</sup>Ne, <sup>23</sup>Ne), E=12 MeV / nucleon; measured particle spectra,  $\sigma$  and  $\sigma(\theta)$ ; deduced optical model parameters and asymptotic normalization coefficients (ANC). <sup>22</sup>Mg(p,  $\gamma$ ); deduced direct and resonant capture rates, and effect on the depletion of <sup>22</sup>Na in O-Ne Novae. JOUR PRVCA 81 035802

2010ZH15      RADIOACTIVITY <sup>23</sup>Al, <sup>22</sup>Mg(2p) [from <sup>12</sup>C(<sup>23</sup>Al, X), (<sup>22</sup>Mg, X), (<sup>21</sup>Na, X), (<sup>20</sup>Ne, X), E=60-70 MeV / nucleon]; measured decay products; deduced trajectories, di-proton emission. JOUR IMPEE 19 957

KEYNUMBERS AND KEYWORDS

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**A=24**

$^{24}\text{O}$	2008FRZY	NUCLEAR REACTIONS $^9\text{Be}(^{26}\text{Ne}, 2\text{pX})^{23}\text{O} / ^{24}\text{O}$ , $E=86$ MeV / nucleon; measured reaction products; $^{23}\text{O}$ deduced energy levels, $J$ , $\pi$ for unbound states. Two-proton knockout reactions. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P23, Frank
$^{24}\text{Na}$	2008BEZI	NUCLEAR REACTIONS $^{27}\text{Al}(\text{d}, \text{p}\alpha)$ , $E\approx 3-22$ MeV; $^{27}\text{Al}(\text{d}, 2\text{p})$ , $E\approx 3-20$ MeV; $^{27}\text{Al}(\text{d}, \text{p})$ , $E\approx 3-20$ MeV; $^{63,65}\text{Cu}(\text{d}, 2\text{n})$ , $E\approx 3-20$ MeV; $^{63}\text{Cu}(\text{d}, \text{p})$ , $E\approx 3-20$ MeV; $^{65}\text{Cu}(\text{d}, 2\text{p})$ , $E\approx 3-20$ MeV; $^{65}\text{Cu}(\text{d}, 3\text{p})$ , $E\approx 3-20$ MeV; measured $E\gamma$ , $I\gamma(\text{t})$ ; deduced $\sigma$ , $T_{1/2}$ . Compared to EXFOR data and Pade fit of Takacs. CONF Nice (Nucl Data for Sci and Technol) Proc,P1003
	2008OCZZ	NUCLEAR REACTIONS $^{27}\text{Al}(\text{d}, \text{x})^{24}\text{Na}$ , $^{51}\text{V}(\text{d}, 4\text{n})$ , $\text{Fe}(\text{d}, \text{x})^{54}\text{Mn}$ , $\text{Fe}(\text{d}, \text{x})^{56}\text{Co}$ , $\text{Ni}(\text{d}, \text{x})^{57}\text{Co}$ , $\text{Cu}(\text{d}, \text{x})^{63}\text{Zn}$ , $\text{Ta}(\text{d}, \text{x})^{180}\text{Ta}$ , $\text{W}(\text{d}, \text{x})^{182}\text{Re}$ , $^{197}\text{Au}(\text{d}, \text{x})^{194}\text{Au}$ , $E=25, 35, 41, 50$ MeV; $\text{Cr}(\text{d}, \text{x})^{48}\text{V}$ , $\text{Cr}(\text{d}, \text{x})^{52}\text{Mn}$ , $^{55}\text{Mn}(\text{d}, \text{x})^{54}\text{Mn}$ , $\text{Ni}(\text{d}, \text{x})^{56}\text{Co}$ , $E=39.5$ MeV; measured $E\gamma$ , $I\gamma$ ; deduced $\sigma$ ; calculated $\sigma$ using TALYS code. Compared to data, ACSELAM data library; also SS316, F82H alloys activities deduced. CONF Nice (Nucl Data for Sci and Technol) Proc,P1011
$^{24}\text{Al}$	2010ER02	NUCLEAR REACTIONS $^{23}\text{Mg}(\text{p}, \gamma)^{24}\text{Al}$ , $E=500$ keV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -, (recoil) $\gamma$ -coin, (recoil) $\gamma(\text{t})$ , thick target yields, resonance strengths; deduced resonance, reaction rates. DRAGON recoil spectrometer. GEANT3 simulations. JOUR PRVCA 81 045808
	2010WR01	NUCLEAR REACTIONS $^{20}\text{Ne}$ , $^{24}\text{Mg}$ , $^{28}\text{Si}$ , $^{32}\text{S}$ , $^{36}\text{Ar}(^3\text{He}, \text{t})$ , $E=32$ MeV; measured triton spectra using Q3D magnetic spectrograph; deduced levels, $Q$ values, mass excesses. JOUR PRVCA 81 055503
	2010WR01	ATOMIC MASSES $^{20}\text{Na}$ , $^{24}\text{Al}$ , $^{28}\text{P}$ , $^{32}\text{Cl}$ ; measured mass excesses using $(^3\text{He}, \text{t})$ reaction. $^{36}\text{Ar}(^3\text{He}, \text{t})^{36}\text{K}$ used for calibration. Comparison with AME-2003. JOUR PRVCA 81 055503

**A=25**

$^{25}\text{Ne}$	2010CA10	NUCLEAR REACTIONS $^2\text{H}(^{24}\text{Ne}, \text{p}\gamma)^{25}\text{Ne}$ , $E=10.6$ MeV / nucleon; measured neutron transfer reaction products, $E\gamma$ , $I\gamma$ , $\text{p-}\gamma$ -coin.; deduced $\sigma(\theta)$ , level energies, $J$ , $\pi$ , orbital momentum, level inversion, $N=16$ shell gap. USD shell model. JOUR PRLTA 104 192501
$^{25}\text{Al}$	2010FUZZ	NUCLEAR REACTIONS $^9\text{Be}$ , $^{23}\text{Na}$ , $^{25}\text{Mg}$ , $^{42}\text{Ca}$ , $^{46}\text{Ti}$ , $^{50}\text{Cr}$ , $^{54}\text{Fe}$ , $^{58}\text{Ni}$ , $^{118}\text{Sn}(^3\text{He}, \text{t})$ , $E=140$ MeV / nucleon; measured $E\gamma$ , $I\gamma$ , reaction products; deduced $d\sigma(E)$ ; GT strength. CONF Varenna (Nucl Reaction Mechanisms),Proc,Vol.1,P39

## A=26

<sup>26</sup> Na	2008SVZX	RADIOACTIVITY <sup>62</sup> Ga; measured I $\beta$ , E $\gamma$ , I $\gamma$ , $\beta\gamma$ -coin, $\gamma\gamma$ -coin; deduced T <sub>1/2</sub> , log ft, branching ratio; calculated isospin symmetry breaking using shell model; <sup>26</sup> Na( $\beta^-$ ); measured I $\beta$ (t), I $\gamma$ (t); deduced T <sub>1/2</sub> ; <sup>18</sup> Ne; measured E $\gamma$ , I $\gamma$ , I $\beta$ (t), $\beta\gamma$ -coin, $\gamma\gamma$ -coin; deduced T <sub>1/2</sub> ; <sup>38</sup> K; measured I $\beta$ (t); deduced isomer decay, T <sub>1/2</sub> , M3 branching ratio, log ft; <sup>74</sup> Rb; measured decay products; deduced T <sub>1/2</sub> , branching ratio, log ft. Results on CD only. CONF E.Lansing (NS2008),P19,Svensson
<sup>26</sup> Mg	2008SVZX	RADIOACTIVITY <sup>62</sup> Ga; measured I $\beta$ , E $\gamma$ , I $\gamma$ , $\beta\gamma$ -coin, $\gamma\gamma$ -coin; deduced T <sub>1/2</sub> , log ft, branching ratio; calculated isospin symmetry breaking using shell model; <sup>26</sup> Na( $\beta^-$ ); measured I $\beta$ (t), I $\gamma$ (t); deduced T <sub>1/2</sub> ; <sup>18</sup> Ne; measured E $\gamma$ , I $\gamma$ , I $\beta$ (t), $\beta\gamma$ -coin, $\gamma\gamma$ -coin; deduced T <sub>1/2</sub> ; <sup>38</sup> K; measured I $\beta$ (t); deduced isomer decay, T <sub>1/2</sub> , M3 branching ratio, log ft; <sup>74</sup> Rb; measured decay products; deduced T <sub>1/2</sub> , branching ratio, log ft. Results on CD only. CONF E.Lansing (NS2008),P19,Svensson
<sup>26</sup> Al	2008KOYY	RADIOACTIVITY <sup>17</sup> Ne; measured ToF versus field frequency; deduced isotope shift, mass mass excess, charge radius, halo nuclei; calculated mass excess, separation energy, proton, neutron density distribution using FMD; <sup>38</sup> Ca; <sup>26</sup> Al; <sup>80</sup> Zn; <sup>81</sup> Zn; <sup>132</sup> Sn; <sup>134</sup> Sn; measured ToF versus frequency detuning; deduced Q-value, mass excess. Neutrons in <sup>17</sup> Ne spherical, protons cluster-like form. Results on CD only. CONF E.Lansing (NS2008),P20,Kowalska
<sup>26</sup> Si	2010KW02	ATOMIC MASSES <sup>26</sup> Si; measured mass using LEBIT Penning trap mass spectrometer. Comparison with other experimental results. JOUR PRVCA 81 058501

## A=27

<sup>27</sup> Mg	2008BEZI	NUCLEAR REACTIONS <sup>27</sup> Al(d, p $\alpha$ ), E $\approx$ 3-22 MeV; <sup>27</sup> Al(d, 2p), E $\approx$ 3-20 MeV; <sup>27</sup> Al(d, p), E $\approx$ 3-20 MeV; <sup>63,65</sup> Cu(d, 2n), E $\approx$ 3-20 MeV; <sup>63</sup> Cu(d, p), E $\approx$ 3-20 MeV; <sup>65</sup> Cu(d, 2p), E $\approx$ 3-20 MeV; <sup>65</sup> Cu(d, 3p), E $\approx$ 3-20 MeV; measured E $\gamma$ , I $\gamma$ (t); deduced $\sigma$ , T <sub>1/2</sub> . Compared to EXFOR data and Pade fit of Takacs. CONF Nice (Nucl Data for Sci and Technol) Proc,P1003
	2010QI02	NUCLEAR REACTIONS <sup>1,2</sup> H, <sup>12</sup> C, <sup>27</sup> Al, <sup>63</sup> Cu, <sup>197</sup> Au(e, e' $\pi^+$ ), E<5.8 GeV; measured yields, differential cross sections as a function of azimuthal angle, and nuclear transparencies versus Q <sup>2</sup> . JOUR PRVCA 81 055209
<sup>27</sup> Al	2010AB06	NUCLEAR REACTIONS <sup>27</sup> Al( <sup>7</sup> Li, <sup>7</sup> Li), E=7-11 MeV; measured reaction products; deduced elastic scattering $\sigma$ , $\sigma(\theta)$ . Optical potentials, comparison with previous experimental data. JOUR NIMBE 268 1793

## A=28

$^{28}\text{Na}$	2008TRZW	RADIOACTIVITY $^{28,29,30}\text{Na}(\beta^-)$ [from $^{48}\text{Ca}$ fragmentation]; measured $E_\gamma$ , $I_\gamma$ , $\gamma\gamma$ -coin, $\beta\gamma$ -coin, (fragment) $\beta\gamma$ -coin, (fragment) $\beta\gamma\gamma$ -coin; deduced E, J, $\pi$ , log ft; calculated E, J, $\pi$ using shell model with USDA interaction, Monte Carlo shell model with SDPF-M interaction. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P525
$^{28}\text{Mg}$	2008STZU	NUCLEAR REACTIONS $\text{Cl}(p, x)^{28}\text{Mg}$ , $E_{2s}\approx 50\text{-}200$ MeV; measured $E_\gamma$ , $I_\gamma$ ; deduced $\sigma$ , thick target yield. CONF Nice (Nucl Data for Sci and Technol) Proc,P1391
	2008TRZW	RADIOACTIVITY $^{28,29,30}\text{Na}(\beta^-)$ [from $^{48}\text{Ca}$ fragmentation]; measured $E_\gamma$ , $I_\gamma$ , $\gamma\gamma$ -coin, $\beta\gamma$ -coin, (fragment) $\beta\gamma$ -coin, (fragment) $\beta\gamma\gamma$ -coin; deduced E, J, $\pi$ , log ft; calculated E, J, $\pi$ using shell model with USDA interaction, Monte Carlo shell model with SDPF-M interaction. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P525
$^{28}\text{Al}$	2008BEZI	NUCLEAR REACTIONS $^{27}\text{Al}(d, p\alpha)$ , $E\approx 3\text{-}22$ MeV; $^{27}\text{Al}(d, 2p)$ , $E\approx 3\text{-}20$ MeV; $^{27}\text{Al}(d, p)$ , $E\approx 3\text{-}20$ MeV; $^{63,65}\text{Cu}(d, 2n)$ , $E\approx 3\text{-}20$ MeV; $^{63}\text{Cu}(d, p)$ , $E\approx 3\text{-}20$ MeV; $^{65}\text{Cu}(d, 2p)$ , $E\approx 3\text{-}20$ MeV; $^{65}\text{Cu}(d, 3p)$ , $E\approx 3\text{-}20$ MeV; measured $E_\gamma$ , $I_\gamma(t)$ ; deduced $\sigma$ , $T_{1/2}$ . Compared to EXFOR data and Pade fit of Takacs. CONF Nice (Nucl Data for Sci and Technol) Proc,P1003
	2008NOZX	NUCLEAR REACTIONS $^{27}\text{Al}(n, n'x)$ , $E=90\text{-}110$ MeV; $^{27}\text{Al}(n, \gamma)$ , $E=90\text{-}110$ MeV; measured $E_n$ , $\ln(\theta)$ , $E_\gamma$ , $I_\gamma(\theta)$ ; deduced $d\sigma(E, \theta)$ ; calculated neutron $d\sigma(E, \theta)$ using PHITS, GNASH, TALYS. CONF Nice (Nucl Data for Sci and Technol) Proc,P1043
$^{28}\text{Si}$	2010K011	NUCLEAR REACTIONS $\text{K}(p, p)$ , $^{27}\text{Al}(p, \gamma)$ $E=3\text{-}5$ MeV; NUCLEAR REACTIONS $^{39}\text{K}(p, \alpha)$ , $E=4\text{-}5$ MeV; measured reaction products, $E_\gamma$ , $I_\gamma$ ; deduced yields, $\sigma(\theta)$ . JOUR NIMBE 268 1797
	2010L005	NUCLEAR REACTIONS $^{22}\text{Ne}$ , $^{27}\text{Al}(p, \gamma)$ , $E=400\text{-}505$ keV; measured $E_\gamma$ , $I_\gamma$ , yields and resonance strengths. Comparison with previous data. Relevance to of resonance strengths in the $^{22}\text{Ne}(p, \gamma)^{23}\text{Na}$ hydrogen-burning reaction and in the $^{22}\text{Ne}(\alpha, \gamma)$ s-process neutron-source reactions. JOUR PRVCA 81 055804
	2010T003	NUCLEAR REACTIONS $^{12}\text{C}$ , $^{28}\text{Si}(p, p)$ , $E=4.9\text{-}6.1$ MeV; measured scattered protons; deduced yields, stopping $\sigma$ , sharp nuclear resonances. JOUR NIMBE 268 1749
$^{28}\text{P}$	2010WR01	NUCLEAR REACTIONS $^{20}\text{Ne}$ , $^{24}\text{Mg}$ , $^{28}\text{Si}$ , $^{32}\text{S}$ , $^{36}\text{Ar}(^3\text{He}, t)$ , $E=32$ MeV; measured triton spectra using Q3D magnetic spectrograph; deduced levels, Q values, mass excesses. JOUR PRVCA 81 055503
	2010WR01	ATOMIC MASSES $^{20}\text{Na}$ , $^{24}\text{Al}$ , $^{28}\text{P}$ , $^{32}\text{Cl}$ ; measured mass excesses using $(^3\text{He}, t)$ reaction. $^{36}\text{Ar}(^3\text{He}, t)^{36}\text{K}$ used for calibration. Comparison with AME-2003. JOUR PRVCA 81 055503
	2010XU03	NUCLEAR REACTIONS $^{197}\text{Au}(^{28}\text{P}, ^{28}\text{P}')$ , $E=46.5$ MeV / nucleon [ $^{28}\text{P}$ secondary beam from $^9\text{Be}(^{32}\text{S}, X)$ , $E=80.4$ MeV / nucleon primary reaction]; measured $E_p$ , $I_p$ , time of flight, $(^{26}\text{Al})(p)(p)$ -coin. $^{28}\text{P}$ ; deduced levels, two-proton emission from excited states. $^9\text{Be}(^{32}\text{S}, X)^{22}\text{Ne} / ^{23}\text{Na} / ^{24}\text{Mg} / ^{25}\text{Al} / ^{26}\text{Al} / ^{27}\text{Si} / ^{28}\text{P} / ^{29}\text{S}$ , $E=80.4$ MeV / nucleon; measured yields. JOUR PRVCA 81 054317

**A=29**

- <sup>29</sup>F      2010FA04      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>32</sup>Mg, <sup>30</sup>Ne), E=86.7, 99.7 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , and  $\sigma$  using SeGA array. <sup>32</sup>Mg beam from <sup>9</sup>Be(<sup>48</sup>Ca, X), E=140 MeV / nucleon. <sup>30</sup>Ne; deduced levels, J,  $\pi$ , intruder configuration. <sup>29,31</sup>F; discussed implications for binding energies. <sup>32</sup>Mg; deduced configuration. Comparison with large-scale shell model calculations. JOUR PRVCA 81 041302
- <sup>29</sup>Na      2008TRZW      RADIOACTIVITY <sup>28,29,30</sup>Na( $\beta^-$ )[from <sup>48</sup>Ca fragmentation]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\beta\gamma$ -coin, (fragment) $\beta\gamma$ -coin, (fragment) $\beta\gamma\gamma$ -coin; deduced E, J,  $\pi$ , log ft; calculated E, J,  $\pi$  using shell model with USDA interaction, Monte Carlo shell model with SDPF-M interaction. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P525
- <sup>29</sup>Mg      2008TRZW      RADIOACTIVITY <sup>28,29,30</sup>Na( $\beta^-$ )[from <sup>48</sup>Ca fragmentation]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\beta\gamma$ -coin, (fragment) $\beta\gamma$ -coin, (fragment) $\beta\gamma\gamma$ -coin; deduced E, J,  $\pi$ , log ft; calculated E, J,  $\pi$  using shell model with USDA interaction, Monte Carlo shell model with SDPF-M interaction. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P525

**A=30**

- <sup>30</sup>Ne      2010FA04      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>32</sup>Mg, <sup>30</sup>Ne), E=86.7, 99.7 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , and  $\sigma$  using SeGA array. <sup>32</sup>Mg beam from <sup>9</sup>Be(<sup>48</sup>Ca, X), E=140 MeV / nucleon. <sup>30</sup>Ne; deduced levels, J,  $\pi$ , intruder configuration. <sup>29,31</sup>F; discussed implications for binding energies. <sup>32</sup>Mg; deduced configuration. Comparison with large-scale shell model calculations. JOUR PRVCA 81 041302
- <sup>30</sup>Na      2008TRZW      RADIOACTIVITY <sup>28,29,30</sup>Na( $\beta^-$ )[from <sup>48</sup>Ca fragmentation]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\beta\gamma$ -coin, (fragment) $\beta\gamma$ -coin, (fragment) $\beta\gamma\gamma$ -coin; deduced E, J,  $\pi$ , log ft; calculated E, J,  $\pi$  using shell model with USDA interaction, Monte Carlo shell model with SDPF-M interaction. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P525
- <sup>30</sup>Mg      2008TRZW      RADIOACTIVITY <sup>28,29,30</sup>Na( $\beta^-$ )[from <sup>48</sup>Ca fragmentation]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\beta\gamma$ -coin, (fragment) $\beta\gamma$ -coin, (fragment) $\beta\gamma\gamma$ -coin; deduced E, J,  $\pi$ , log ft; calculated E, J,  $\pi$  using shell model with USDA interaction, Monte Carlo shell model with SDPF-M interaction. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P525

**A=31**

- <sup>31</sup>F      2010FA04      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>32</sup>Mg, <sup>30</sup>Ne), E=86.7, 99.7 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , and  $\sigma$  using SeGA array. <sup>32</sup>Mg beam from <sup>9</sup>Be(<sup>48</sup>Ca, X), E=140 MeV / nucleon. <sup>30</sup>Ne; deduced levels, J,  $\pi$ , intruder configuration. <sup>29,31</sup>F; discussed implications for binding energies. <sup>32</sup>Mg; deduced configuration. Comparison with large-scale shell model calculations. JOUR PRVCA 81 041302

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KEYNUMBERS AND KEYWORDS

**A=31 (continued)**

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| $^{31}\text{Na}$ | 2010D005 | NUCLEAR REACTIONS C( $^{32}\text{Na}$ , $^{32}\text{Na}'$ ), ( $^{33}\text{Na}$ , $^{33}\text{Na}'$ ), ( $^{32}\text{Na}$ , $^{31}\text{Na}$ ), ( $^{34}\text{Na}$ , $^{33}\text{Na}$ ), E AP 240 MeV / nucleon; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin using DALI2 array. $^{31}\text{Na}$ , $^{32}\text{Na}$ , $^{33}\text{Na}$ ; deduced levels, J, $\pi$ , configurations and relevance to island of inversion nuclei. Comparison with shell-model calculations and level systematics of $^{21,23,25,27,29,31,33}\text{Na}$ nuclei. JOUR PRVCA 81 041305 |
| $^{31}\text{S}$  | 2010D003 | NUCLEAR REACTIONS $^9\text{Be}(^{37}\text{Ca}, \text{X})^{34}\text{Cl}$ / $^{31}\text{S}$ , E=195.7 MeV / nucleon; measured reaction products, $E\gamma$ , $I\gamma$ ; deduced energies, J, $\pi$ , $T_{1/2}$ . $^{40}\text{Ca}$ fragmentation beams. JOUR NIMAE 613 218  |

**A=32**

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| $^{32}\text{Na}$ | 2010D005                 | NUCLEAR REACTIONS C( $^{32}\text{Na}$ , $^{32}\text{Na}'$ ), ( $^{33}\text{Na}$ , $^{33}\text{Na}'$ ), ( $^{32}\text{Na}$ , $^{31}\text{Na}$ ), ( $^{34}\text{Na}$ , $^{33}\text{Na}$ ), E AP 240 MeV / nucleon; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin using DALI2 array. $^{31}\text{Na}$ , $^{32}\text{Na}$ , $^{33}\text{Na}$ ; deduced levels, J, $\pi$ , configurations and relevance to island of inversion nuclei. Comparison with shell-model calculations and level systematics of $^{21,23,25,27,29,31,33}\text{Na}$ nuclei. JOUR PRVCA 81 041305 |
| $^{32}\text{Mg}$ | 2010FA04                 | NUCLEAR REACTIONS $^9\text{Be}(^{32}\text{Mg}$ , $^{30}\text{Ne}$ ), E=86.7, 99.7 MeV / nucleon; measured $E\gamma$ , $I\gamma$ , and $\sigma$ using SeGA array. $^{32}\text{Mg}$ beam from $^9\text{Be}(^{48}\text{Ca}, \text{X})$ , E=140 MeV / nucleon. $^{30}\text{Ne}$ ; deduced levels, J, $\pi$ , intruder configuration. $^{29,31}\text{F}$ ; discussed implications for binding energies. $^{32}\text{Mg}$ ; deduced configuration. Comparison with large-scale shell model calculations. JOUR PRVCA 81 041302   |
| $^{32}\text{Cl}$ | 2010WR01<br><br>2010WR01 | NUCLEAR REACTIONS $^{20}\text{Ne}$ , $^{24}\text{Mg}$ , $^{28}\text{Si}$ , $^{32}\text{S}$ , $^{36}\text{Ar}(^3\text{He}, \text{t})$ , E=32 MeV; measured triton spectra using Q3D magnetic spectrograph; deduced levels, Q values, mass excesses. JOUR PRVCA 81 055503<br><br>ATOMIC MASSES $^{20}\text{Na}$ , $^{24}\text{Al}$ , $^{28}\text{P}$ , $^{32}\text{Cl}$ ; measured mass excesses using ( $^3\text{He}, \text{t}$ ) reaction. $^{36}\text{Ar}(^3\text{He}, \text{t})^{36}\text{K}$ used for calibration. Comparison with AME-2003. JOUR PRVCA 81 055503        |

**A=33**

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| $^{33}\text{Na}$ | 2010D005 | NUCLEAR REACTIONS C( $^{32}\text{Na}$ , $^{32}\text{Na}'$ ), ( $^{33}\text{Na}$ , $^{33}\text{Na}'$ ), ( $^{32}\text{Na}$ , $^{31}\text{Na}$ ), ( $^{34}\text{Na}$ , $^{33}\text{Na}$ ), E AP 240 MeV / nucleon; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin using DALI2 array. $^{31}\text{Na}$ , $^{32}\text{Na}$ , $^{33}\text{Na}$ ; deduced levels, J, $\pi$ , configurations and relevance to island of inversion nuclei. Comparison with shell-model calculations and level systematics of $^{21,23,25,27,29,31,33}\text{Na}$ nuclei. JOUR PRVCA 81 041305 |
| $^{33}\text{Mg}$ | 2010KA05 | NUCLEAR REACTIONS C( $^{33}\text{Mg}$ , $^{32}\text{Mg}$ ), E=898 MeV / nucleon; measured $^{32}\text{Mg}$ fragments using MUSIC setup at GSI, $\sigma$ , longitudinal momentum distribution. $^{33}\text{Mg}$ ; deduced ground state configuration, relevance to 'Island of Inversion'. Monte Carlo shell model (MCSM) calculation with the SDPF-M interaction. $^{33}\text{Mg}$ beam produced in $\text{Be}(^{48}\text{Ca}, \text{X})$ at 1 GeV / nucleon. JOUR PYLBB 685 253   |

KEYNUMBERS AND KEYWORDS

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**A=33 (continued)**

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| <sup>33</sup> Al | 2009NA41 | RADIOACTIVITY <sup>33</sup> Al( $\beta^-$ )[from Be( <sup>36</sup> S, X), E=77.5 MeV / nucleon]; measured $\beta$ -NQR spectra from polarized <sup>33</sup> Al nuclei. LISE spectrometer at GANIL. JOUR ZAANE 42 383                         |
|                  | 2009NA41 | NUCLEAR MOMENTS <sup>33</sup> Al; measured electric quadrupole moment by $\beta$ -ray detected nuclear quadrupole resonance ( $\beta$ -NQR) method. Relevance to 'Island of Inversion'. Polarized <sup>33</sup> Al nuclei. JOUR ZAANE 42 383 |
|                  | 2009UEZZ | RADIOACTIVITY <sup>33</sup> Al( $\beta^-$ )[from <sup>9</sup> Be+ <sup>36</sup> S at 77.5 MeV / nucleon];measured $\beta$ -NMR from polarized source; deduced electric quadrupole moment. REPT RIKEN 2008 Annual,P22,Ueno                    |
| <sup>33</sup> Si | 2009NA41 | RADIOACTIVITY <sup>33</sup> Al( $\beta^-$ )[from Be( <sup>36</sup> S, X), E=77.5 MeV / nucleon]; measured $\beta$ -NQR spectra from polarized <sup>33</sup> Al nuclei. LISE spectrometer at GANIL. JOUR ZAANE 42 383                         |
|                  | 2009UEZZ | RADIOACTIVITY <sup>33</sup> Al( $\beta^-$ )[from <sup>9</sup> Be+ <sup>36</sup> S at 77.5 MeV / nucleon];measured $\beta$ -NMR from polarized source; deduced electric quadrupole moment. REPT RIKEN 2008 Annual,P22,Ueno                    |

**A=34**

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| <sup>34</sup> Si | 2010ZE03 | NUCLEAR REACTIONS <sup>34</sup> P( <sup>7</sup> Li, $\gamma$ <sup>7</sup> Be) <sup>34</sup> Si, E=100 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , $\gamma$ -particle coin.; deduced $\sigma(\theta)$ , $\beta^+$ Gamow-Teller transition strength distribution. Comparison with shell model calculations. JOUR PRLTA 104 212504 |
| <sup>34</sup> S  | 2010WA12 | NUCLEAR REACTIONS <sup>208</sup> Pb( <sup>36</sup> S, X) <sup>34</sup> S / <sup>35</sup> S / <sup>36</sup> S / <sup>37</sup> S / <sup>38</sup> S / <sup>39</sup> S / <sup>40</sup> S / <sup>41</sup> S, E=215 MeV; measured yields. JOUR PRVCA 81 054305  |
| <sup>34</sup> Cl | 2010D003 | NUCLEAR REACTIONS <sup>9</sup> Be( <sup>37</sup> Ca, X) <sup>34</sup> Cl / <sup>31</sup> S, E=195.7 MeV / nucleon; measured reaction products, E $\gamma$ , I $\gamma$ ; deduced energies, J, $\pi$ , T <sub>1/2</sub> . <sup>40</sup> Ca fragmentation beams. JOUR NIMAE 613 218   |

**A=35**

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| <sup>35</sup> S | 2010WA12 | NUCLEAR REACTIONS <sup>208</sup> Pb( <sup>36</sup> S, X) <sup>34</sup> S / <sup>35</sup> S / <sup>36</sup> S / <sup>37</sup> S / <sup>38</sup> S / <sup>39</sup> S / <sup>40</sup> S / <sup>41</sup> S, E=215 MeV; measured yields. JOUR PRVCA 81 054305 |
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**A=36**

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| <sup>36</sup> S | 2008BEZH | NUCLEAR MOMENTS <sup>70</sup> Ge, <sup>68</sup> Zn, <sup>92,94</sup> Zr, <sup>36,38,40</sup> S, <sup>38,40,42</sup> Ar; measured hyperfine spectra, Doppler-shifted $\gamma$ -spectra; deduced g factors. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P49,Benczer-Kolle |
|                 | 2010WA12 | NUCLEAR REACTIONS <sup>208</sup> Pb( <sup>36</sup> S, X) <sup>34</sup> S / <sup>35</sup> S / <sup>36</sup> S / <sup>37</sup> S / <sup>38</sup> S / <sup>39</sup> S / <sup>40</sup> S / <sup>41</sup> S, E=215 MeV; measured yields. JOUR PRVCA 81 054305                         |

KEYNUMBERS AND KEYWORDS

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**A=36 (continued)**

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| $^{36}\text{K}$  | 2010WR01 | NUCLEAR REACTIONS $^{20}\text{Ne}$ , $^{24}\text{Mg}$ , $^{28}\text{Si}$ , $^{32}\text{S}$ , $^{36}\text{Ar}$ ( $^3\text{He}$ , t), E=32 MeV; measured triton spectra using Q3D magnetic spectrograph; deduced levels, Q values, mass excesses. JOUR PRVCA 81 055503                     |
| $^{36}\text{Ca}$ | 2008AZZZ | NUCLEAR REACTIONS $^9\text{Be}$ ( $^{37}\text{Ca}$ , n), E=60 Mev / nucleon; measured $E\gamma$ , $I\gamma$ , reaction products; $^{36}\text{Ca}$ ; deduced level energies, J, $\pi$ . Comparison with $^{36}\text{S}$ . CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P39,Azaiez |

**A=37**

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|-----------------|----------|---|
| $^{37}\text{S}$ | 2010WA12 | NUCLEAR REACTIONS $^{208}\text{Pb}$ ( $^{36}\text{S}$ , X) $^{34}\text{S}$ / $^{35}\text{S}$ / $^{36}\text{S}$ / $^{37}\text{S}$ / $^{38}\text{S}$ / $^{39}\text{S}$ / $^{40}\text{S}$ / $^{41}\text{S}$ , E=215 MeV; measured yields. JOUR PRVCA 81 054305 |
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**A=38**

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| $^{38}\text{S}$  | 2008BEZH | NUCLEAR MOMENTS $^{70}\text{Ge}$ , $^{68}\text{Zn}$ , $^{92,94}\text{Zr}$ , $^{36,38,40}\text{S}$ , $^{38,40,42}\text{Ar}$ ; measured hyperfine spectra, Doppler-shifted $\gamma$ -spectra; deduced g factors. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P49,Benczer-Kolle  |
|                  | 2010WA12 | NUCLEAR REACTIONS $^{208}\text{Pb}$ ( $^{36}\text{S}$ , X), E=215 MeV; measured $E\gamma$ , $I\gamma$ , (particle) $\gamma$ -, $\gamma\gamma$ -coin using PRISMA spectrometer and CLARA array. $^{40}\text{S}$ ; deduced levels, J, $\pi$ , B(E2), configurations. Comparison with previous work and large-scale sd-pf shell model calculations. Systematics of energies of first 2+ and 4+ states and B(E2) for $^{38,40,42,44}\text{S}$ nuclei. $^{38}\text{S}$ ; measured $E\gamma$ , $I\gamma$ . JOUR PRVCA 81 054305  |
|                  | 2010WA12 | NUCLEAR REACTIONS $^{208}\text{Pb}$ ( $^{36}\text{S}$ , X) $^{34}\text{S}$ / $^{35}\text{S}$ / $^{36}\text{S}$ / $^{37}\text{S}$ / $^{38}\text{S}$ / $^{39}\text{S}$ / $^{40}\text{S}$ / $^{41}\text{S}$ , E=215 MeV; measured yields. JOUR PRVCA 81 054305  |
| $^{38}\text{Ar}$ | 2008BEZH | NUCLEAR MOMENTS $^{70}\text{Ge}$ , $^{68}\text{Zn}$ , $^{92,94}\text{Zr}$ , $^{36,38,40}\text{S}$ , $^{38,40,42}\text{Ar}$ ; measured hyperfine spectra, Doppler-shifted $\gamma$ -spectra; deduced g factors. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P49,Benczer-Kolle  |
| $^{38}\text{K}$  | 2008SVZX | RADIOACTIVITY $^{62}\text{Ga}$ ; measured $I\beta$ , $E\gamma$ , $I\gamma$ , $\beta\gamma$ -coin, $\gamma\gamma$ -coin; deduced $T_{1/2}$ , log ft, branching ratio; calculated isospin symmetry breaking using shell model; $^{26}\text{Na}(\beta^-)$ ; measured $I\beta(t)$ , $I\gamma(t)$ ; deduced $T_{1/2}$ ; $^{18}\text{Ne}$ ; measured $E\gamma$ , $I\gamma$ , $I\beta(t)$ , $\beta\gamma$ -coin, $\gamma\gamma$ -coin; deduced $T_{1/2}$ ; $^{38}\text{K}$ ; measured $I\beta(t)$ ; deduced isomer decay, $T_{1/2}$ , M3 branching ratio, log ft; $^{74}\text{Rb}$ ; measured decay products; deduced $T_{1/2}$ , branching ratio, log ft. Results on CD only. CONF E.Lansing (NS2008),P19,Svensson |
| $^{38}\text{Ca}$ | 2008KOYY | RADIOACTIVITY $^{17}\text{Ne}$ ; measured ToF versus field frequency; deduced isotope shift, mass mass excess, charge radius, halo nuclei; calculated mass excess, separation energy, proton, neutron density distribution using FMD; $^{38}\text{Ca}$ ; $^{26}\text{Al}$ ; $^{80}\text{Zn}$ ; $^{81}\text{Zn}$ ; $^{132}\text{Sn}$ ; $^{134}\text{Sn}$ ; measured ToF versus frequency detuning; deduced Q-value, mass excess. Neutrons in $^{17}\text{Ne}$ spherical, protons cluster-like form. Results on CD only. CONF E.Lansing (NS2008),P20,Kowalska  |

KEYNUMBERS AND KEYWORDS

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**A=39**

- <sup>39</sup>S      2010WA12      NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>36</sup>S, X)<sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>39</sup>S / <sup>40</sup>S / <sup>41</sup>S, E=215 MeV; measured yields. JOUR PRVCA 81 054305
- <sup>39</sup>K      2010YA05      NUCLEAR REACTIONS <sup>40</sup>Ca(polarized p, 2p), E=392 MeV; measured E<sub>p</sub>, I<sub>p</sub>, σ, recoil-momentum distributions, and analyzing powers using Grand Raiden spectrometer. <sup>39</sup>K; deduced levels, strength distributions, centroid energies, widths, spectroscopic factors. <sup>40</sup>Ca; deduced spectroscopic factors and strength distributions for the deeply bound orbitals. DWIA analysis. Comparison with predictions of Independent-Particle shell Model. JOUR PRVCA 81 044315

**A=40**

- <sup>40</sup>S      2008BEZH      NUCLEAR MOMENTS <sup>70</sup>Ge, <sup>68</sup>Zn, <sup>92,94</sup>Zr, <sup>36,38,40</sup>S, <sup>38,40,42</sup>Ar; measured hyperfine spectra, Doppler-shifted γ-spectra; deduced g factors. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P49,Benczer-Kolle
- 2010WA12      NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>36</sup>S, X), E=215 MeV; measured E<sub>γ</sub>, I<sub>γ</sub>, (particle)γ-, γγ-coin using PRISMA spectrometer and CLARA array. <sup>40</sup>S; deduced levels, J, π, B(E2), configurations. Comparison with previous work and large-scale sd-pf shell model calculations. Systematics of energies of first 2+ and 4+ states and B(E2) for <sup>38,40,42,44</sup>S nuclei. <sup>38</sup>S; measured E<sub>γ</sub>, I<sub>γ</sub>. JOUR PRVCA 81 054305
- 2010WA12      NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>36</sup>S, X)<sup>34</sup>S / <sup>35</sup>S / <sup>36</sup>S / <sup>37</sup>S / <sup>38</sup>S / <sup>39</sup>S / <sup>40</sup>S / <sup>41</sup>S, E=215 MeV; measured yields. JOUR PRVCA 81 054305
- <sup>40</sup>Ar      2008BEZH      NUCLEAR MOMENTS <sup>70</sup>Ge, <sup>68</sup>Zn, <sup>92,94</sup>Zr, <sup>36,38,40</sup>S, <sup>38,40,42</sup>Ar; measured hyperfine spectra, Doppler-shifted γ-spectra; deduced g factors. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P49,Benczer-Kolle
- 2010ID02      NUCLEAR REACTIONS <sup>26</sup>Mg(<sup>18</sup>O, 2n2p), E=69 MeV; measured E<sub>γ</sub>, I<sub>γ</sub>, γγ-coin, (particle)γ-coin using Gemini-II and Si-Ball detector arrays. <sup>40</sup>Ar; deduced levels, J, π, deformation, related features and lifetimes using DSA; calculated configuration using HFB method. Comparison with <sup>36</sup>Ar and <sup>40</sup>Ca systematics. JOUR PYLBB 686 18
- <sup>40</sup>Ca      2010D003      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>37</sup>Ca, X)<sup>34</sup>Cl / <sup>31</sup>S, E=195.7 MeV / nucleon; measured reaction products, E<sub>γ</sub>, I<sub>γ</sub>; deduced energies, J, π, T<sub>1/2</sub>. <sup>40</sup>Ca fragmentation beams. JOUR NIMAE 613 218
- 2010KR06      NUCLEAR REACTIONS <sup>40,48</sup>Ca(<sup>6</sup>Li, <sup>6</sup>Li), (<sup>6</sup>Li, <sup>6</sup>Li'), E=240 MeV; measured σ, σ(θ); deduced optical model parameters B(E2) for first 2+ states, B(E3) for first 3- states, isoscalar giant-monopole resonance (ISGMR) strength, EWSR. DWBA analysis. Comparison with theoretical calculations using density-dependent double-folding (DDF) model with M3Y-NN effective interaction. JOUR PRVCA 81 044612

KEYNUMBERS AND KEYWORDS

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**A=40 (continued)**

2010YA05      NUCLEAR REACTIONS  $^{40}\text{Ca}$ (polarized p, 2p), E=392 MeV; measured  $E_p$ ,  $I_p$ ,  $\sigma$ , recoil-momentum distributions, and analyzing powers using Grand Raiden spectrometer.  $^{39}\text{K}$ ; deduced levels, strength distributions, centroid energies, widths, spectroscopic factors.  $^{40}\text{Ca}$ ; deduced spectroscopic factors and strength distributions for the deeply bound orbitals. DWIA analysis. Comparison with predictions of Independent-Particle shell Model. JOUR PRVCA 81 044315

**A=41**

$^{41}\text{S}$       2010WA12      NUCLEAR REACTIONS  $^{208}\text{Pb}$ ( $^{36}\text{S}$ , X) $^{34}\text{S}$  /  $^{35}\text{S}$  /  $^{36}\text{S}$  /  $^{37}\text{S}$  /  $^{38}\text{S}$  /  $^{39}\text{S}$  /  $^{40}\text{S}$  /  $^{41}\text{S}$ , E=215 MeV; measured yields. JOUR PRVCA 81 054305

**A=42**

$^{42}\text{Si}$       2008AZZZ      NUCLEAR REACTIONS  $^9\text{Be}$ ( $^{42}\text{Si}$ ,  $^{42}\text{Si}'$ ), E not given; measured  $E_\gamma$ ,  $I_\gamma$ , reaction products;  $^{42}\text{Si}$ ; deduced level energies, J,  $\pi$ . CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P39,Azaiez

$^{42}\text{Ar}$       2008BEZH      NUCLEAR MOMENTS  $^{70}\text{Ge}$ ,  $^{68}\text{Zn}$ ,  $^{92,94}\text{Zr}$ ,  $^{36,38,40}\text{S}$ ,  $^{38,40,42}\text{Ar}$ ; measured hyperfine spectra, Doppler-shifted  $\gamma$ -spectra; deduced g factors. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P49,Benczer-Kolle

$^{42}\text{Sc}$       2010FUZZ      NUCLEAR REACTIONS  $^9\text{Be}$ ,  $^{23}\text{Na}$ ,  $^{25}\text{Mg}$ ,  $^{42}\text{Ca}$ ,  $^{46}\text{Ti}$ ,  $^{50}\text{Cr}$ ,  $^{54}\text{Fe}$ ,  $^{58}\text{Ni}$ ,  $^{118}\text{Sn}$ ( $^3\text{He}$ , t), E=140 MeV / nucleon; measured  $E_\gamma$ ,  $I_\gamma$ , reaction products; deduced  $d\sigma(E)$ ; GT strength. CONF Varenna (Nucl Reaction Mechanisms),Proc,Vol.1,P39

**A=43**

No references found

**A=44**

$^{44}\text{Cl}$       2010DE11      NUCLEAR REACTIONS  $^9\text{Be}$ ( $^{48}\text{Ca}$ , X) $^{44}\text{Cl}$ , E=60 MeV / nucleon; measured  $\beta$ -NMR resonance Larmor frequency; deduced g factor, levels, J,  $\pi$ , configurations. JOUR PRVCA 81 034308

                 2010DE11      NUCLEAR MOMENTS  $^{44}\text{Cl}$ ; measured g factor by Larmor frequency using  $\beta$ -NMR method. Comparison with systematics of  $^{39,41,43,45}\text{Cl}$ ,  $^{46}\text{K}$  and with shell-model calculations. JOUR PRVCA 81 034308

$^{44}\text{Sc}$       2010GA03      NUCLEAR REACTIONS  $\text{Ti}(d, X)^{47}\text{V}$  /  $^{48}\text{V}$  /  $^{44}\text{Sc}$  /  $^{46}\text{Sc}$  /  $^{47}\text{Sc}$  /  $^{48}\text{Sc}$  /  $^{51}\text{Ti}$ , E=3-9 MeV; measured  $E_\gamma$ ,  $I_\gamma$ ; deduced  $\sigma$ ,  $^{47}\text{V}$  /  $^{46}\text{Sc}$  EOB ratio. JOUR NIMBE 268 1392

KEYNUMBERS AND KEYWORDS

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**A=45**

<sup>45</sup>Cr      2008AZZZ      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>37</sup>Ca, n), E=60 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , reaction products; <sup>36</sup>Ca; deduced level energies, J,  $\pi$ . Comparison with <sup>36</sup>S. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P39,Azaiez

**A=46**

<sup>46</sup>Ar      2008FOZV      NUCLEAR REACTIONS <sup>238</sup>U(<sup>48</sup>Ca, X)<sup>51</sup>Ca / <sup>46</sup>Ar, E=330 MeV; measured reaction products, E $\gamma$ , I $\gamma$ ,  $\gamma$ - $\gamma$ -coin.; deduced energy levels, J,  $\pi$ , yrast structures. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P283,Fornal

<sup>46</sup>Sc      2010GA03      NUCLEAR REACTIONS Ti(d, X)<sup>47</sup>V / <sup>48</sup>V / <sup>44</sup>Sc / <sup>46</sup>Sc / <sup>47</sup>Sc / <sup>48</sup>Sc / <sup>51</sup>Ti, E=3-9 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ , <sup>47</sup>V / <sup>46</sup>Sc EOB ratio. JOUR NIMBE 268 1392

<sup>46</sup>V      2008MAZH      NUCLEAR REACTIONS <sup>3</sup>He(<sup>44</sup>Ti, p), E=242 MeV; measured E $p$ , I $p$ ; deduced  $d\sigma(0^+) / d\sigma(1^+)$ . Results on CD only. CONF E.Lansing (NS2008),P6,Macchiavelli

2010FUZZ      NUCLEAR REACTIONS <sup>9</sup>Be, <sup>23</sup>Na, <sup>25</sup>Mg, <sup>42</sup>Ca, <sup>46</sup>Ti, <sup>50</sup>Cr, <sup>54</sup>Fe, <sup>58</sup>Ni, <sup>118</sup>Sn(<sup>3</sup>He, t), E=140 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , reaction products; deduced  $d\sigma(E)$ ; GT strength. CONF Varenna (Nucl Reaction Mechanisms),Proc,Vol.1,P39

<sup>46</sup>Cr      2008WAZP      RADIOACTIVITY <sup>46</sup>Cr; measured  $\beta$ -delayed E $\gamma$ , I $\gamma(t)$ ; deduced <sup>46</sup>Cr, <sup>46</sup>V T<sub>1/2</sub>. REPT CNS-REP-61,P25,Wakabayashi

2009WAZU      RADIOACTIVITY <sup>46</sup>Cr[from <sup>36</sup>Ar+<sup>12</sup>C fusion]; measured E $\beta$ , I $\beta$ , E $\gamma$ , I $\gamma$ , ToF. Further analysis in progress. REPT RIKEN 2008 Annual,P19,Wakabayashi

**A=47**

<sup>47</sup>Sc      2010GA03      NUCLEAR REACTIONS Ti(d, X)<sup>47</sup>V / <sup>48</sup>V / <sup>44</sup>Sc / <sup>46</sup>Sc / <sup>47</sup>Sc / <sup>48</sup>Sc / <sup>51</sup>Ti, E=3-9 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ , <sup>47</sup>V / <sup>46</sup>Sc EOB ratio. JOUR NIMBE 268 1392

<sup>47</sup>V      2010GA03      NUCLEAR REACTIONS Ti(d, X)<sup>47</sup>V / <sup>48</sup>V / <sup>44</sup>Sc / <sup>46</sup>Sc / <sup>47</sup>Sc / <sup>48</sup>Sc / <sup>51</sup>Ti, E=3-9 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ , <sup>47</sup>V / <sup>46</sup>Sc EOB ratio. JOUR NIMBE 268 1392

**A=48**

<sup>48</sup>Ca      2010KR06      NUCLEAR REACTIONS <sup>40,48</sup>Ca(<sup>6</sup>Li, <sup>6</sup>Li), (<sup>6</sup>Li, <sup>6</sup>Li'), E=240 MeV; measured  $\sigma$ ,  $\sigma(\theta)$ ; deduced optical model parameters B(E2) for first 2+ states, B(E3) for first 3- states, isoscalar giant-monopole resonance (ISGMR) strength, EWSR. DWBA analysis. Comparison with theoretical calculations using density-dependent double-folding (DDF) model with M3Y-NN effective interaction. JOUR PRVCA 81 044612

KEYNUMBERS AND KEYWORDS

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**A=48 (continued)**

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| $^{48}\text{Sc}$ | 2010GA03 | NUCLEAR REACTIONS $\text{Ti}(\text{d}, \text{X})^{47}\text{V} / ^{48}\text{V} / ^{44}\text{Sc} / ^{46}\text{Sc} / ^{47}\text{Sc} / ^{48}\text{Sc} / ^{51}\text{Ti}$ , E=3-9 MeV; measured $E_\gamma$ , $I_\gamma$ ; deduced $\sigma$ , $^{47}\text{V} / ^{46}\text{Sc}$ EOB ratio. JOUR NIMBE 268 1392   |
| $^{48}\text{V}$  | 20080CZZ | NUCLEAR REACTIONS $^{27}\text{Al}(\text{d}, \text{x})^{24}\text{Na}$ , $^{51}\text{V}(\text{d}, 4\text{n})$ , $\text{Fe}(\text{d}, \text{x})^{54}\text{Mn}$ , $\text{Fe}(\text{d}, \text{x})^{56}\text{Co}$ , $\text{Ni}(\text{d}, \text{x})^{57}\text{Co}$ , $\text{Cu}(\text{d}, \text{x})^{63}\text{Zn}$ , $\text{Ta}(\text{d}, \text{x})^{180}\text{Ta}$ , $\text{W}(\text{d}, \text{x})^{182}\text{Re}$ , $^{197}\text{Au}(\text{d}, \text{x})^{194}\text{Au}$ , E=25, 35, 41, 50 MeV; $\text{Cr}(\text{d}, \text{x})^{48}\text{V}$ , $\text{Cr}(\text{d}, \text{x})^{52}\text{Mn}$ , $^{55}\text{Mn}(\text{d}, \text{x})^{54}\text{Mn}$ , $\text{Ni}(\text{d}, \text{x})^{56}\text{Co}$ , E=39.5 MeV; measured $E_\gamma$ , $I_\gamma$ ; deduced $\sigma$ ; calculated $\sigma$ using TALYS code. Compared to data, ACSELAM data library; also SS316, F82H alloys activities deduced. CONF Nice (Nucl Data for Sci and Technol) Proc,P1011 |
|                  | 2010GA03 | NUCLEAR REACTIONS $\text{Ti}(\text{d}, \text{X})^{47}\text{V} / ^{48}\text{V} / ^{44}\text{Sc} / ^{46}\text{Sc} / ^{47}\text{Sc} / ^{48}\text{Sc} / ^{51}\text{Ti}$ , E=3-9 MeV; measured $E_\gamma$ , $I_\gamma$ ; deduced $\sigma$ , $^{47}\text{V} / ^{46}\text{Sc}$ EOB ratio. JOUR NIMBE 268 1392   |

**A=49**

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| $^{49}\text{Ca}$ | 2008ZAZX | NUCLEAR REACTIONS $^{48}\text{Ca}(\text{n}, \gamma)$ , E=thermal; measured $E_\gamma$ , $I_\gamma$ ; deduced $\sigma$ . CONF Nice (Nucl Data for Sci and Technol) Proc,P1263   |
| $^{49}\text{Cr}$ | 20080CZZ | NUCLEAR REACTIONS $^{27}\text{Al}(\text{d}, \text{x})^{24}\text{Na}$ , $^{51}\text{V}(\text{d}, 4\text{n})$ , $\text{Fe}(\text{d}, \text{x})^{54}\text{Mn}$ , $\text{Fe}(\text{d}, \text{x})^{56}\text{Co}$ , $\text{Ni}(\text{d}, \text{x})^{57}\text{Co}$ , $\text{Cu}(\text{d}, \text{x})^{63}\text{Zn}$ , $\text{Ta}(\text{d}, \text{x})^{180}\text{Ta}$ , $\text{W}(\text{d}, \text{x})^{182}\text{Re}$ , $^{197}\text{Au}(\text{d}, \text{x})^{194}\text{Au}$ , E=25, 35, 41, 50 MeV; $\text{Cr}(\text{d}, \text{x})^{48}\text{V}$ , $\text{Cr}(\text{d}, \text{x})^{52}\text{Mn}$ , $^{55}\text{Mn}(\text{d}, \text{x})^{54}\text{Mn}$ , $\text{Ni}(\text{d}, \text{x})^{56}\text{Co}$ , E=39.5 MeV; measured $E_\gamma$ , $I_\gamma$ ; deduced $\sigma$ ; calculated $\sigma$ using TALYS code. Compared to data, ACSELAM data library; also SS316, F82H alloys activities deduced. CONF Nice (Nucl Data for Sci and Technol) Proc,P1011 |

**A=50**

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| $^{50}\text{K}$  | 2010DA06 | NUCLEAR REACTIONS $\text{Ni}(^{86}\text{Kr}, \text{X})$ , E=60.5 MeV / nucleon; measured $E_\gamma$ , $I_\gamma$ , (fragment) $\gamma$ -coin, and $\gamma(\text{t})$ . Identification of A and Z by energy-loss, total-kinetic-energy, and time-of-flight measurements. $^{50}\text{K}$ , $^{60}\text{V}$ , $^{62,64}\text{Mn}$ , $^{65,67}\text{Fe}$ , $^{68,70}\text{Co}$ , $^{75}\text{Cu}$ , $^{78}\text{Zn}$ , $^{78}\text{Ga}$ ; deduced isomers, half-lives, J, $\pi$ , multipolarities. $^{69,71,73}\text{Cu}$ ; deduced B(M1), B(E2) values. $^{75}\text{Cu}$ ; deduced levels, J, $\pi$ , and transition rates for proposed level-scheme scenarios and comparisons with shell-model calculations. $^{69,71,73,75,77,79}\text{Cu}$ ; shell model calculations of 1 / 2-, 3 / 2- and 5 / 2-states. JOUR PRVCA 81 034304 |
| $^{50}\text{Mn}$ | 2010CH15 | NUCLEAR REACTIONS $^{50,52}\text{Cr}(\text{p}, \text{n})$ , E=14 MeV; $^{50}\text{Cr}(\text{d}, \text{n})$ , E=13 MeV; $^{55}\text{Mn}(\text{p}, \text{xnp})^{53}\text{Mn} / ^{54}\text{Mn}$ , E=33 MeV; $^{56}\text{Fe}(\text{d}, 2\text{p})$ , E=25 MeV; measured hyperfine spectra; deduced magnetic dipole moments, quadrupole moments, mean-square charge radii, shell closure. Comparison with shell model calculation using GXPF1A interaction. JOUR PYLBB 690 346   |
|                  | 2010FUZZ | NUCLEAR REACTIONS $^9\text{Be}$ , $^{23}\text{Na}$ , $^{25}\text{Mg}$ , $^{42}\text{Ca}$ , $^{46}\text{Ti}$ , $^{50}\text{Cr}$ , $^{54}\text{Fe}$ , $^{58}\text{Ni}$ , $^{118}\text{Sn}(^3\text{He}, \text{t})$ , E=140 MeV / nucleon; measured $E_\gamma$ , $I_\gamma$ , reaction products; deduced $d\sigma(E)$ ; GT strength. CONF Varenna (Nucl Reaction Mechanisms),Proc,Vol.1,P39   |

KEYNUMBERS AND KEYWORDS

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**A=51**

- <sup>51</sup>Ca      2008FOZV      NUCLEAR REACTIONS <sup>238</sup>U(<sup>48</sup>Ca, X)<sup>51</sup>Ca / <sup>46</sup>Ar, E=330 MeV; measured reaction products, E $\gamma$ , I $\gamma$ ,  $\gamma$ - $\gamma$ -coin.; deduced energy levels, J,  $\pi$ , yrast structures. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P283,Fornal
- <sup>51</sup>Ti      2010GA03      NUCLEAR REACTIONS Ti(d, X)<sup>47</sup>V / <sup>48</sup>V / <sup>44</sup>Sc / <sup>46</sup>Sc / <sup>47</sup>Sc / <sup>48</sup>Sc / <sup>51</sup>Ti, E=3-9 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ , <sup>47</sup>V / <sup>46</sup>Sc EOB ratio. JOUR NIMBE 268 1392
- <sup>51</sup>Mn      2010CH15      NUCLEAR REACTIONS <sup>50,52</sup>Cr(p, n), E=14 MeV; <sup>50</sup>Cr(d, n), E=13 MeV;<sup>55</sup>Mn(p, xnp)<sup>53</sup>Mn / <sup>54</sup>Mn, E=33 MeV; <sup>56</sup>Fe(d, 2p), E=25 MeV; measured hyperfine spectra; deduced magnetic dipole moments, quadrupole moments, mean-square charge radii, shell closure. Comparison with shell model calculation using GXPF1A interaction. JOUR PYLBB 690 346

**A=52**

- <sup>52</sup>Mn      2008CZZ      NUCLEAR REACTIONS <sup>27</sup>Al(d, x)<sup>24</sup>Na, <sup>51</sup>V(d, 4n), Fe(d, x)<sup>54</sup>Mn, Fe(d, x)<sup>56</sup>Co, Ni(d, x)<sup>57</sup>Co, Cu(d, x)<sup>63</sup>Zn, Ta(d, x)<sup>180</sup>Ta, W(d, x)<sup>182</sup>Re, <sup>197</sup>Au(d, x)<sup>194</sup>Au, E=25, 35, 41, 50 MeV; Cr(d, x)<sup>48</sup>V, Cr(d, x)<sup>52</sup>Mn, <sup>55</sup>Mn(d, x)<sup>54</sup>Mn, Ni(d, x)<sup>56</sup>Co, E=39.5 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ ; calculated  $\sigma$  using TALYS code. Compared to data, ACSELAM data library; also SS316, F82H alloys activities deduced. CONF Nice (Nucl Data for Sci and Technol) Proc,P1011
- <sup>52</sup>Mn      2010CH15      NUCLEAR REACTIONS <sup>50,52</sup>Cr(p, n), E=14 MeV; <sup>50</sup>Cr(d, n), E=13 MeV;<sup>55</sup>Mn(p, xnp)<sup>53</sup>Mn / <sup>54</sup>Mn, E=33 MeV; <sup>56</sup>Fe(d, 2p), E=25 MeV; measured hyperfine spectra; deduced magnetic dipole moments, quadrupole moments, mean-square charge radii, shell closure. Comparison with shell model calculation using GXPF1A interaction. JOUR PYLBB 690 346

**A=53**

- <sup>53</sup>Mn      2010CH15      NUCLEAR REACTIONS <sup>50,52</sup>Cr(p, n), E=14 MeV; <sup>50</sup>Cr(d, n), E=13 MeV;<sup>55</sup>Mn(p, xnp)<sup>53</sup>Mn / <sup>54</sup>Mn, E=33 MeV; <sup>56</sup>Fe(d, 2p), E=25 MeV; measured hyperfine spectra; deduced magnetic dipole moments, quadrupole moments, mean-square charge radii, shell closure. Comparison with shell model calculation using GXPF1A interaction. JOUR PYLBB 690 346

## A=54

- <sup>54</sup>Mn 20080CZZ NUCLEAR REACTIONS <sup>27</sup>Al(d, x)<sup>24</sup>Na, <sup>51</sup>V(d, 4n), Fe(d, x)<sup>54</sup>Mn, Fe(d, x)<sup>56</sup>Co, Ni(d, x)<sup>57</sup>Co, Cu(d, x)<sup>63</sup>Zn, Ta(d, x)<sup>180</sup>Ta, W(d, x)<sup>182</sup>Re, <sup>197</sup>Au(d, x)<sup>194</sup>Au, E=25, 35, 41, 50 MeV; Cr(d, x)<sup>48</sup>V, Cr(d, x)<sup>52</sup>Mn, <sup>55</sup>Mn(d, x)<sup>54</sup>Mn, Ni(d, x)<sup>56</sup>Co, E=39.5 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ ; calculated  $\sigma$  using TALYS code. Compared to data, ACSELAM data library; also SS316, F82H alloys activities deduced. CONF Nice (Nucl Data for Sci and Technol) Proc,P1011
- 2010CH15 NUCLEAR REACTIONS <sup>50,52</sup>Cr(p, n), E=14 MeV; <sup>50</sup>Cr(d, n), E=13 MeV; <sup>55</sup>Mn(p, xnp)<sup>53</sup>Mn / <sup>54</sup>Mn, E=33 MeV; <sup>56</sup>Fe(d, 2p), E=25 MeV; measured hyperfine spectra; deduced magnetic dipole moments, quadrupole moments, mean-square charge radii, shell closure. Comparison with shell model calculation using GXPF1A interaction. JOUR PYLBB 690 346
- 2010UD01 NUCLEAR REACTIONS <sup>54</sup>Fe, <sup>59</sup>Co, <sup>92</sup>Mo(n, p), E>1.5 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ . JOUR ARISE 68 1656
- <sup>54</sup>Co 2008B0ZG RADIOACTIVITY <sup>54</sup>Ni( $\beta^+$ ); measured <sup>54</sup>Co E $\gamma$ , I $\gamma$ ; <sup>205</sup>Au(EC); measured E(CE), I(CE). CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P83
- 2008FAZZ RADIOACTIVITY <sup>54</sup>Ni(EC); measured E $\gamma$ , I $\gamma$ ,  $\gamma$ - $\gamma$ -coin.; deduced level energies, J,  $\pi$ , isomeric state, T<sub>1/2</sub>. Comparison with <sup>54</sup>Fe. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P65,Fahlander
- 2008G0ZP RADIOACTIVITY <sup>54</sup>Ni( $\beta^+$ ); measured E $\gamma$ , I $\gamma$ ; deduced <sup>54</sup>Ni T<sub>1/2</sub>, GT distribution strength; <sup>62</sup>Ge; <sup>113</sup>In; <sup>190</sup>Ta; measured decay products. Results on CD only. CONF E.Lansing (NS2008),P9,Gorska
- 2010FUZZ NUCLEAR REACTIONS <sup>9</sup>Be, <sup>23</sup>Na, <sup>25</sup>Mg, <sup>42</sup>Ca, <sup>46</sup>Ti, <sup>50</sup>Cr, <sup>54</sup>Fe, <sup>58</sup>Ni, <sup>118</sup>Sn(<sup>3</sup>He, t), E=140 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , reaction products; deduced d $\sigma$ (E); GT strength. CONF Varenna (Nucl Reaction Mechanisms),Proc,Vol.1,P39
- <sup>54</sup>Ni 2008B0ZG RADIOACTIVITY <sup>54</sup>Ni( $\beta^+$ ); measured <sup>54</sup>Co E $\gamma$ , I $\gamma$ ; <sup>205</sup>Au(EC); measured E(CE), I(CE). CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P83
- 2008FAZZ RADIOACTIVITY <sup>54</sup>Ni(EC); measured E $\gamma$ , I $\gamma$ ,  $\gamma$ - $\gamma$ -coin.; deduced level energies, J,  $\pi$ , isomeric state, T<sub>1/2</sub>. Comparison with <sup>54</sup>Fe. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P65,Fahlander
- 2008G0ZP RADIOACTIVITY <sup>54</sup>Ni( $\beta^+$ ); measured E $\gamma$ , I $\gamma$ ; deduced <sup>54</sup>Ni T<sub>1/2</sub>, GT distribution strength; <sup>62</sup>Ge; <sup>113</sup>In; <sup>190</sup>Ta; measured decay products. Results on CD only. CONF E.Lansing (NS2008),P9,Gorska

## A=55

- <sup>55</sup>Ti 2008KRZV NUCLEAR REACTIONS <sup>9</sup>Be(<sup>56</sup>Ti, n)<sup>55</sup>Ti, E=high; measured E $\gamma$ , I $\gamma$ ,  $\gamma$  $\gamma$ -coin, E(fragment); deduced momentum transfer, ground=state single-particle structure; <sup>122,124,126</sup>Cd, <sup>138,140,142,144</sup>Xe( $\gamma$ ,  $\gamma'$ ); measured Coulomb excitation E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin; deduced B(E2). Compared to other data and systematics. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P96

**A=56**

- <sup>56</sup>Mn      2010CH15      NUCLEAR REACTIONS <sup>50,52</sup>Cr(p, n), E=14 MeV; <sup>50</sup>Cr(d, n), E=13 MeV; <sup>55</sup>Mn(p, xnp)<sup>53</sup>Mn / <sup>54</sup>Mn, E=33 MeV; <sup>56</sup>Fe(d, 2p), E=25 MeV; measured hyperfine spectra; deduced magnetic dipole moments, quadrupole moments, mean-square charge radii, shell closure. Comparison with shell model calculation using GXPF1A interaction. JOUR PYLBB 690 346
- <sup>56</sup>Fe      2008NEZY      NUCLEAR REACTIONS <sup>56</sup>Fe, <sup>206</sup>Pb(n, n'γ), E≈1000-19000 keV; measured Eγ, Iγ(θ); deduced σ. Preliminary results. CONF Nice (Nucl Data for Sci and Technol) Proc,P1016
- 2010F001      NUCLEAR REACTIONS <sup>56</sup>Fe(n, n'γ), E=1-250 MeV; measured Eγ, Iγ, γγ-coin using GEANIE array. <sup>56</sup>Fe; deduced levels, J, π. Discussed first 3- state in <sup>56</sup>Fe. JOUR PRVCA 81 037304
- <sup>56</sup>Co      2008OCZZ      NUCLEAR REACTIONS <sup>27</sup>Al(d, x)<sup>24</sup>Na, <sup>51</sup>V(d, 4n), Fe(d, x)<sup>54</sup>Mn, Fe(d, x)<sup>56</sup>Co, Ni(d, x)<sup>57</sup>Co, Cu(d, x)<sup>63</sup>Zn, Ta(d, x)<sup>180</sup>Ta, W(d, x)<sup>182</sup>Re, <sup>197</sup>Au(d, x)<sup>194</sup>Au, E=25, 35, 41, 50 MeV; Cr(d, x)<sup>48</sup>V, Cr(d, x)<sup>52</sup>Mn, <sup>55</sup>Mn(d, x)<sup>54</sup>Mn, Ni(d, x)<sup>56</sup>Co, E=39.5 MeV; measured Eγ, Iγ; deduced σ; calculated σ using TALYS code. Compared to data, ACSELAM data library; also SS316, F82H alloys activities deduced. CONF Nice (Nucl Data for Sci and Technol) Proc,P1011

**A=57**

- <sup>57</sup>Fe      2010RU01      NUCLEAR REACTIONS <sup>28</sup>Si(<sup>32</sup>Si, n2p)<sup>57</sup>Ni, E=130 MeV; measured Eγ, Iγ, γ-γ-coins.; deduced high-spin states, superdeformed rotational bands. Cranked Nilsson-Strutinsky calculations, GAMMASPHERE. JOUR JPGPE 37 075105
- <sup>57</sup>Co      2008DIZR      NUCLEAR REACTIONS Fe(d, x)<sup>57</sup>Co, E≈0-22 MeV; measured Eγ, Iγ; deduced σ; calculated σ using ALICE-IPPE. CONF Nice (Nucl Data for Sci and Technol) Proc,P1375
- 2008OCZZ      NUCLEAR REACTIONS <sup>27</sup>Al(d, x)<sup>24</sup>Na, <sup>51</sup>V(d, 4n), Fe(d, x)<sup>54</sup>Mn, Fe(d, x)<sup>56</sup>Co, Ni(d, x)<sup>57</sup>Co, Cu(d, x)<sup>63</sup>Zn, Ta(d, x)<sup>180</sup>Ta, W(d, x)<sup>182</sup>Re, <sup>197</sup>Au(d, x)<sup>194</sup>Au, E=25, 35, 41, 50 MeV; Cr(d, x)<sup>48</sup>V, Cr(d, x)<sup>52</sup>Mn, <sup>55</sup>Mn(d, x)<sup>54</sup>Mn, Ni(d, x)<sup>56</sup>Co, E=39.5 MeV; measured Eγ, Iγ; deduced σ; calculated σ using TALYS code. Compared to data, ACSELAM data library; also SS316, F82H alloys activities deduced. CONF Nice (Nucl Data for Sci and Technol) Proc,P1011
- <sup>57</sup>Ni      2010RU01      NUCLEAR REACTIONS <sup>28</sup>Si(<sup>32</sup>Si, n2p)<sup>57</sup>Ni, E=130 MeV; measured Eγ, Iγ, γ-γ-coins.; deduced high-spin states, superdeformed rotational bands. Cranked Nilsson-Strutinsky calculations, GAMMASPHERE. JOUR JPGPE 37 075105

**A=58**

- <sup>58</sup>Cu      2010FUZZ      NUCLEAR REACTIONS <sup>9</sup>Be, <sup>23</sup>Na, <sup>25</sup>Mg, <sup>42</sup>Ca, <sup>46</sup>Ti, <sup>50</sup>Cr, <sup>54</sup>Fe, <sup>58</sup>Ni, <sup>118</sup>Sn(<sup>3</sup>He, t), E=140 MeV / nucleon; measured Eγ, Iγ, reaction products; deduced dσ(E); GT strength. CONF Varenna (Nucl Reaction Mechanisms),Proc,Vol.1,P39

KEYNUMBERS AND KEYWORDS

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**A=59**

<sup>59</sup>Fe      2010UD01      NUCLEAR REACTIONS <sup>54</sup>Fe, <sup>59</sup>Co, <sup>92</sup>Mo(n, p), E>1.5 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ . JOUR ARISE 68 1656

**A=60**

<sup>60</sup>V      2010DA06      NUCLEAR REACTIONS Ni(<sup>86</sup>Kr, X), E=60.5 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (fragment) $\gamma$ -coin, and  $\gamma$ (t). Identification of A and Z by energy-loss, total-kinetic-energy, and time-of-flight measurements. <sup>50</sup>K, <sup>60</sup>V, <sup>62,64</sup>Mn, <sup>65,67</sup>Fe, <sup>68,70</sup>Co, <sup>75</sup>Cu, <sup>78</sup>Zn, <sup>78</sup>Ga; deduced isomers, half-lives, J,  $\pi$ , multiplicities. <sup>69,71,73</sup>Cu; deduced B(M1), B(E2) values. <sup>75</sup>Cu; deduced levels, J,  $\pi$ , and transition rates for proposed level-scheme scenarios and comparisons with shell-model calculations. <sup>69,71,73,75,77,79</sup>Cu; shell model calculations of 1 / 2-, 3 / 2- and 5 / 2-states. JOUR PRVCA 81 034304

<sup>60</sup>Cr      2010GA06      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>62</sup>Fe, <sup>62</sup>Fe'), E=73.0 MeV / nucleon [<sup>62</sup>Fe secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>64</sup>Fe, <sup>64</sup>Fe'), E=67.5 MeV / nucleon [<sup>64</sup>Fe secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>66</sup>Fe, <sup>66</sup>Fe'), E=82.6 MeV / nucleon [<sup>66</sup>Fe secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>60</sup>Cr, <sup>60</sup>Cr'), E=80.6 MeV / nucleon [<sup>60</sup>Cr secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>62</sup>Cr, <sup>62</sup>Cr'), E=74.6 MeV / nucleon [<sup>62</sup>Cr secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>64</sup>Cr, <sup>64</sup>Cr'), E=87.0 MeV / nucleon [<sup>64</sup>Cr secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon]; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin,  $\sigma$ . <sup>62,64,66</sup>Fe, <sup>60,62,64</sup>Cr; deduced levels, J,  $\pi$ . Comparison with large-scale shell-model calculations in different model spaces. <sup>9</sup>Be(<sup>76</sup>Ge, X)<sup>62</sup>Fe / <sup>64</sup>Fe / <sup>66</sup>Fe / <sup>60</sup>Cr / <sup>62</sup>Cr / <sup>64</sup>Cr / <sup>65</sup>Mn / <sup>66</sup>Mn / <sup>67</sup>Fe / <sup>69</sup>Co, E=130 MeV / nucleon; measured yields of secondary ion beams. JOUR PRVCA 81 051304

**A=61**

<sup>61</sup>Fe      2010FE01      ATOMIC MASSES <sup>63,64,65,65m,66</sup>Fe, <sup>64,65,66,67,67m</sup>Co; measured cyclotron resonance frequencies and mass excesses using LEBIT Penning-trap mass spectrometer. Comparison with AME-2003 evaluation. <sup>61,63,65,67</sup>Fe; systematics of low-lying levels. Z=24-31, N=35-44; systematics of two-neutron separation energies. JOUR PRVCA 81 044318

**A=61 (continued)**

<sup>61</sup>Cu      2008MEZV      NUCLEAR REACTIONS <sup>209</sup>Bi( $\alpha$ , x), E=28.8, 32.8 MeV; measured E $\gamma$ , I $\gamma$ , E $\alpha$ , I $\alpha$ ; <sup>186</sup>W(p, n), E=7-15 MeV; deduced  $\sigma$ ; calculated  $\sigma$ ; Zn(d, x)<sup>61</sup>Cu, E $\approx$ 3-19 MeV; Zn(d, x)<sup>64</sup>Cu, E $\approx$ 3-19 MeV; Zn(d, x)<sup>66</sup>Ga, E $\approx$ 3-19 MeV; Zn(d, x)<sup>67</sup>Ga, E $\approx$ 3-19 MeV; Zn(d, x)<sup>65</sup>Zn, E $\approx$ 3-19 MeV; Zn(d, x)<sup>69</sup>Zn, E $\approx$ 3-19 MeV; measured E $\gamma$ , I $\gamma$ ; deduced thin target yields; <sup>103</sup>Rh(d, 2n), E $\approx$ 3-20 MeV; <sup>232</sup>Th(p, 3n), E $\approx$ 13-31 MeV; calculated  $\sigma$ . Calculations using EMPIRE II; compared to available data. CONF Nice (Nucl Data for Sci and Technol) Proc,P1403

**A=62**

<sup>62</sup>Cr      2010GA06      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>62</sup>Fe, <sup>62</sup>Fe'), E=73.0 MeV / nucleon [<sup>62</sup>Fe secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>64</sup>Fe, <sup>64</sup>Fe'), E=67.5 MeV / nucleon [<sup>64</sup>Fe secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>66</sup>Fe, <sup>66</sup>Fe'), E=82.6 MeV / nucleon [<sup>66</sup>Fe secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>60</sup>Cr, <sup>60</sup>Cr'), E=80.6 MeV / nucleon [<sup>60</sup>Cr secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>62</sup>Cr, <sup>62</sup>Cr'), E=74.6 MeV / nucleon [<sup>62</sup>Cr secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>64</sup>Cr, <sup>64</sup>Cr'), E=87.0 MeV / nucleon [<sup>64</sup>Cr secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon]; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin,  $\sigma$ . <sup>62,64,66</sup>Fe, <sup>60,62,64</sup>Cr; deduced levels, J,  $\pi$ . Comparison with large-scale shell-model calculations in different model spaces. <sup>9</sup>Be(<sup>76</sup>Ge, X)<sup>62</sup>Fe / <sup>64</sup>Fe / <sup>66</sup>Fe / <sup>60</sup>Cr / <sup>62</sup>Cr / <sup>64</sup>Cr / <sup>65</sup>Mn / <sup>66</sup>Mn / <sup>67</sup>Fe / <sup>69</sup>Co, E=130 MeV / nucleon; measured yields of secondary ion beams. JOUR PRVCA 81 051304

<sup>62</sup>Mn      2010DA06      NUCLEAR REACTIONS Ni(<sup>86</sup>Kr, X), E=60.5 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (fragment) $\gamma$ -coin, and  $\gamma$ (t). Identification of A and Z by energy-loss, total-kinetic-energy, and time-of-flight measurements. <sup>50</sup>K, <sup>60</sup>V, <sup>62,64</sup>Mn, <sup>65,67</sup>Fe, <sup>68,70</sup>Co, <sup>75</sup>Cu, <sup>78</sup>Zn, <sup>78</sup>Ga; deduced isomers, half-lives, J,  $\pi$ , multipolarities. <sup>69,71,73</sup>Cu; deduced B(M1), B(E2) values. <sup>75</sup>Cu; deduced levels, J,  $\pi$ , and transition rates for proposed level-scheme scenarios and comparisons with shell-model calculations. <sup>69,71,73,75,77,79</sup>Cu; shell model calculations of 1 / 2-, 3 / 2- and 5 / 2- states. JOUR PRVCA 81 034304

KEYNUMBERS AND KEYWORDS

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**A=62 (continued)**

$^{62}\text{Fe}$	2010GA06	<p>NUCLEAR REACTIONS <math>^9\text{Be}(^{62}\text{Fe}, ^{62}\text{Fe}')</math>, <math>E=73.0</math> MeV / nucleon [<math>^{62}\text{Fe}</math> secondary beam from primary reaction <math>^9\text{Be}(^{76}\text{Ge}, \text{X})</math>, <math>E=130</math> MeV / nucleon], <math>^9\text{Be}(^{64}\text{Fe}, ^{64}\text{Fe}')</math>, <math>E=67.5</math> MeV / nucleon [<math>^{64}\text{Fe}</math> secondary beam from primary reaction <math>^9\text{Be}(^{76}\text{Ge}, \text{X})</math>, <math>E=130</math> MeV / nucleon], <math>^9\text{Be}(^{66}\text{Fe}, ^{66}\text{Fe}')</math>, <math>E=82.6</math> MeV / nucleon [<math>^{66}\text{Fe}</math> secondary beam from primary reaction <math>^9\text{Be}(^{76}\text{Ge}, \text{X})</math>, <math>E=130</math> MeV / nucleon], <math>^9\text{Be}(^{60}\text{Cr}, ^{60}\text{Cr}')</math>, <math>E=80.6</math> MeV / nucleon [<math>^{60}\text{Cr}</math> secondary beam from primary reaction <math>^9\text{Be}(^{76}\text{Ge}, \text{X})</math>, <math>E=130</math> MeV / nucleon], <math>^9\text{Be}(^{62}\text{Cr}, ^{62}\text{Cr}')</math>, <math>E=74.6</math> MeV / nucleon [<math>^{62}\text{Cr}</math> secondary beam from primary reaction <math>^9\text{Be}(^{76}\text{Ge}, \text{X})</math>, <math>E=130</math> MeV / nucleon], <math>^9\text{Be}(^{64}\text{Cr}, ^{64}\text{Cr}')</math>, <math>E=87.0</math> MeV / nucleon [<math>^{64}\text{Cr}</math> secondary beam from primary reaction <math>^9\text{Be}(^{76}\text{Ge}, \text{X})</math>, <math>E=130</math> MeV / nucleon]; measured <math>E\gamma</math>, <math>I\gamma</math>, (particle)<math>\gamma</math>-coin, <math>\sigma</math>. <math>^{62,64,66}\text{Fe}</math>, <math>^{60,62,64}\text{Cr}</math>; deduced levels, <math>J</math>, <math>\pi</math>. Comparison with large-scale shell-model calculations in different model spaces. <math>^9\text{Be}(^{76}\text{Ge}, \text{X})^{62}\text{Fe} / ^{64}\text{Fe} / ^{66}\text{Fe} / ^{60}\text{Cr} / ^{62}\text{Cr} / ^{64}\text{Cr} / ^{65}\text{Mn} / ^{66}\text{Mn} / ^{67}\text{Fe} / ^{69}\text{Co}</math>, <math>E=130</math> MeV / nucleon; measured yields of secondary ion beams. JOUR PRVCA 81 051304</p>
$^{62}\text{Ga}$	2008SVZX	<p>RADIOACTIVITY <math>^{62}\text{Ga}</math>; measured <math>I\beta</math>, <math>E\gamma</math>, <math>I\gamma</math>, <math>\beta\gamma</math>-coin, <math>\gamma\gamma</math>-coin; deduced <math>T_{1/2}</math>, log ft, branching ratio; calculated isospin symmetry breaking using shell model; <math>^{26}\text{Na}(\beta^-)</math>; measured <math>I\beta(t)</math>, <math>I\gamma(t)</math>; deduced <math>T_{1/2}</math>; <math>^{18}\text{Ne}</math>; measured <math>E\gamma</math>, <math>I\gamma</math>, <math>I\beta(t)</math>, <math>\beta\gamma</math>-coin, <math>\gamma\gamma</math>-coin; deduced <math>T_{1/2}</math>; <math>^{38}\text{K}</math>; measured <math>I\beta(t)</math>; deduced isomer decay, <math>T_{1/2}</math>, M3 branching ratio, log ft; <math>^{74}\text{Rb}</math>; measured decay products; deduced <math>T_{1/2}</math>, branching ratio, log ft. Results on CD only. CONF E.Lansing (NS2008),P19,Svensson</p>
$^{62}\text{Ge}$	2008GOZP	<p>RADIOACTIVITY <math>^{54}\text{Ni}(\beta^+)</math>; measured <math>E\gamma</math>, <math>I\gamma</math>; deduced <math>^{54}\text{Ni}</math> <math>T_{1/2}</math>, GT distribution strength; <math>^{62}\text{Ge}</math>; <math>^{113}\text{In}</math>; <math>^{190}\text{Ta}</math>; measured decay products. Results on CD only. CONF E.Lansing (NS2008),P9,Gorska</p>

**A=63**

$^{63}\text{Fe}$	2010FE01	<p>ATOMIC MASSES <math>^{63,64,65,65m,66}\text{Fe}</math>, <math>^{64,65,66,67,67m}\text{Co}</math>; measured cyclotron resonance frequencies and mass excesses using LEBIT Penning-trap mass spectrometer. Comparison with AME-2003 evaluation. <math>^{61,63,65,67}\text{Fe}</math>; systematics of low-lying levels. <math>Z=24-31</math>, <math>N=35-44</math>; systematics of two-neutron separation energies. JOUR PRVCA 81 044318</p>
$^{63}\text{Ni}$	2010QI02	<p>NUCLEAR REACTIONS <math>^1,2\text{H}</math>, <math>^{12}\text{C}</math>, <math>^{27}\text{Al}</math>, <math>^{63}\text{Cu}</math>, <math>^{197}\text{Au}(e, e'\pi^+)</math>, <math>E&lt;5.8</math> GeV; measured yields, differential cross sections as a function of azimuthal angle, and nuclear transparencies versus <math>Q^2</math>. JOUR PRVCA 81 055209</p>
$^{63}\text{Cu}$	2010DE09	<p>NUCLEAR REACTIONS <math>^{63,65}\text{Cu}(e, e')</math>, <math>E=120, 150, 225</math> MeV; measured <math>Ee</math>, <math>Ie</math>; <math>^{63,65}\text{Cu}</math> deduced level energies, multipolarities, <math>B(E1)</math>, <math>B(E2)</math>, <math>B(E3)</math>. JOUR PANUE 73 395</p>

KEYNUMBERS AND KEYWORDS

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**A=63 (continued)**

- <sup>63</sup>Zn      2008BEZI      NUCLEAR REACTIONS <sup>27</sup>Al(d, pα), E≈3-22 MeV; <sup>27</sup>Al(d, 2p), E≈3-20 MeV; <sup>27</sup>Al(d, p), E≈3-20 MeV; <sup>63,65</sup>Cu(d, 2n), E≈3-20 MeV; <sup>63</sup>Cu(d, p), E≈3-20 MeV; <sup>65</sup>Cu(d, 2p), E≈3-20 MeV; <sup>65</sup>Cu(d, 3p), E≈3-20 MeV; measured Eγ, Iγ(t); deduced σ, T<sub>1/2</sub>. Compared to EXFOR data and Pade fit of Takacs. CONF Nice (Nucl Data for Sci and Technol) Proc,P1003
- 2008OCZZ      NUCLEAR REACTIONS <sup>27</sup>Al(d, x)<sup>24</sup>Na, <sup>51</sup>V(d, 4n), Fe(d, x)<sup>54</sup>Mn, Fe(d, x)<sup>56</sup>Co, Ni(d, x)<sup>57</sup>Co, Cu(d, x)<sup>63</sup>Zn, Ta(d, x)<sup>180</sup>Ta, W(d, x)<sup>182</sup>Re, <sup>197</sup>Au(d, x)<sup>194</sup>Au, E=25, 35, 41, 50 MeV; Cr(d, x)<sup>48</sup>V, Cr(d, x)<sup>52</sup>Mn, <sup>55</sup>Mn(d, x)<sup>54</sup>Mn, Ni(d, x)<sup>56</sup>Co, E=39.5 MeV; measured Eγ, Iγ; deduced σ; calculated σ using TALYS code. Compared to data, ACSELAM data library; also SS316, F82H alloys activities deduced. CONF Nice (Nucl Data for Sci and Technol) Proc,P1011

**A=64**

- <sup>64</sup>Cr      2010GA06      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>62</sup>Fe, <sup>62</sup>Fe'), E=73.0 MeV / nucleon [<sup>62</sup>Fe secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>64</sup>Fe, <sup>64</sup>Fe'), E=67.5 MeV / nucleon [<sup>64</sup>Fe secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>66</sup>Fe, <sup>66</sup>Fe'), E=82.6 MeV / nucleon [<sup>66</sup>Fe secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>60</sup>Cr, <sup>60</sup>Cr'), E=80.6 MeV / nucleon [<sup>60</sup>Cr secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>62</sup>Cr, <sup>62</sup>Cr'), E=74.6 MeV / nucleon [<sup>62</sup>Cr secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>64</sup>Cr, <sup>64</sup>Cr'), E=87.0 MeV / nucleon [<sup>64</sup>Cr secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon]; measured Eγ, Iγ, (particle)γ-coin, σ. <sup>62,64,66</sup>Fe, <sup>60,62,64</sup>Cr; deduced levels, J, π. Comparison with large-scale shell-model calculations in different model spaces. <sup>9</sup>Be(<sup>76</sup>Ge, X)<sup>62</sup>Fe / <sup>64</sup>Fe / <sup>66</sup>Fe / <sup>60</sup>Cr / <sup>62</sup>Cr / <sup>64</sup>Cr / <sup>65</sup>Mn / <sup>66</sup>Mn / <sup>67</sup>Fe / <sup>69</sup>Co, E=130 MeV / nucleon; measured yields of secondary ion beams. JOUR PRVCA 81 051304
- <sup>64</sup>Mn      2010DA06      NUCLEAR REACTIONS Ni(<sup>86</sup>Kr, X), E=60.5 MeV / nucleon; measured Eγ, Iγ, (fragment)γ-coin, and γ(t). Identification of A and Z by energy-loss, total-kinetic-energy, and time-of-flight measurements. <sup>50</sup>K, <sup>60</sup>V, <sup>62,64</sup>Mn, <sup>65,67</sup>Fe, <sup>68,70</sup>Co, <sup>75</sup>Cu, <sup>78</sup>Zn, <sup>78</sup>Ga; deduced isomers, half-lives, J, π, multiplicities. <sup>69,71,73</sup>Cu; deduced B(M1), B(E2) values. <sup>75</sup>Cu; deduced levels, J, π, and transition rates for proposed level-scheme scenarios and comparisons with shell-model calculations. <sup>69,71,73,75,77,79</sup>Cu; shell model calculations of 1 / 2-, 3 / 2- and 5 / 2- states. JOUR PRVCA 81 034304
- <sup>64</sup>Fe      2008KRZV      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>56</sup>Ti, n)<sup>55</sup>Ti, E=high; measured Eγ, Iγ, γγ-coin, E(fragment); deduced momentum transfer, ground=state single-particle structure; <sup>122,124,126</sup>Cd, <sup>138,140,142,144</sup>Xe(γ, γ'); measured Coulomb excitation Eγ, Iγ, (particle)γ-coin; deduced B(E2). Compared to other data and systematics. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P96

A=64 (*continued*)

- 2010FE01 ATOMIC MASSES <sup>63,64,65,65m,66</sup>Fe, <sup>64,65,66,67,67m</sup>Co; measured cyclotron resonance frequencies and mass excesses using LEBIT Penning-trap mass spectrometer. Comparison with AME-2003 evaluation. <sup>61,63,65,67</sup>Fe; systematics of low-lying levels. Z=24-31, N=35-44; systematics of two-neutron separation energies. JOUR PRVCA 81 044318
- 2010GA06 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>62</sup>Fe, <sup>62</sup>Fe'), E=73.0 MeV / nucleon [<sup>62</sup>Fe secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>64</sup>Fe, <sup>64</sup>Fe'), E=67.5 MeV / nucleon [<sup>64</sup>Fe secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>66</sup>Fe, <sup>66</sup>Fe'), E=82.6 MeV / nucleon [<sup>66</sup>Fe secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>60</sup>Cr, <sup>60</sup>Cr'), E=80.6 MeV / nucleon [<sup>60</sup>Cr secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>62</sup>Cr, <sup>62</sup>Cr'), E=74.6 MeV / nucleon [<sup>62</sup>Cr secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>64</sup>Cr, <sup>64</sup>Cr'), E=87.0 MeV / nucleon [<sup>64</sup>Cr secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon]; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin,  $\sigma$ . <sup>62,64,66</sup>Fe, <sup>60,62,64</sup>Cr; deduced levels, J,  $\pi$ . Comparison with large-scale shell-model calculations in different model spaces. <sup>9</sup>Be(<sup>76</sup>Ge, X)<sup>62</sup>Fe / <sup>64</sup>Fe / <sup>66</sup>Fe / <sup>60</sup>Cr / <sup>62</sup>Cr / <sup>64</sup>Cr / <sup>65</sup>Mn / <sup>66</sup>Mn / <sup>67</sup>Fe / <sup>69</sup>Co, E=130 MeV / nucleon; measured yields of secondary ion beams. JOUR PRVCA 81 051304
- <sup>64</sup>Co 2008BEZI NUCLEAR REACTIONS <sup>27</sup>Al(d, p $\alpha$ ), E $\approx$ 3-22 MeV; <sup>27</sup>Al(d, 2p), E $\approx$ 3-20 MeV; <sup>27</sup>Al(d, p), E $\approx$ 3-20 MeV; <sup>63,65</sup>Cu(d, 2n), E $\approx$ 3-20 MeV; <sup>63</sup>Cu(d, p), E $\approx$ 3-20 MeV; <sup>65</sup>Cu(d, 2p), E $\approx$ 3-20 MeV; <sup>65</sup>Cu(d, 3p), E $\approx$ 3-20 MeV; measured E $\gamma$ , I $\gamma$ (t); deduced  $\sigma$ , T<sub>1/2</sub>. Compared to EXFOR data and Pade fit of Takacs. CONF Nice (Nucl Data for Sci and Technol) Proc,P1003
- 2010FE01 ATOMIC MASSES <sup>63,64,65,65m,66</sup>Fe, <sup>64,65,66,67,67m</sup>Co; measured cyclotron resonance frequencies and mass excesses using LEBIT Penning-trap mass spectrometer. Comparison with AME-2003 evaluation. <sup>61,63,65,67</sup>Fe; systematics of low-lying levels. Z=24-31, N=35-44; systematics of two-neutron separation energies. JOUR PRVCA 81 044318
- <sup>64</sup>Cu 2008BEZI NUCLEAR REACTIONS <sup>27</sup>Al(d, p $\alpha$ ), E $\approx$ 3-22 MeV; <sup>27</sup>Al(d, 2p), E $\approx$ 3-20 MeV; <sup>27</sup>Al(d, p), E $\approx$ 3-20 MeV; <sup>63,65</sup>Cu(d, 2n), E $\approx$ 3-20 MeV; <sup>63</sup>Cu(d, p), E $\approx$ 3-20 MeV; <sup>65</sup>Cu(d, 2p), E $\approx$ 3-20 MeV; <sup>65</sup>Cu(d, 3p), E $\approx$ 3-20 MeV; measured E $\gamma$ , I $\gamma$ (t); deduced  $\sigma$ , T<sub>1/2</sub>. Compared to EXFOR data and Pade fit of Takacs. CONF Nice (Nucl Data for Sci and Technol) Proc,P1003
- 2008MEZV NUCLEAR REACTIONS <sup>209</sup>Bi( $\alpha$ , x), E=28.8, 32.8 MeV; measured E $\gamma$ , I $\gamma$ , E $\alpha$ , I $\alpha$ ; <sup>186</sup>W(p, n), E=7-15 MeV; deduced  $\sigma$ ; calculated  $\sigma$ ; Zn(d, x)<sup>61</sup>Cu, E $\approx$ 3-19 MeV; Zn(d, x)<sup>64</sup>Cu, E $\approx$ 3-19 MeV; Zn(d, x)<sup>66</sup>Ga, E $\approx$ 3-19 MeV; Zn(d, x)<sup>67</sup>Ga, E $\approx$ 3-19 MeV; Zn(d, x)<sup>65</sup>Zn, E $\approx$ 3-19 MeV; Zn(d, x)<sup>69</sup>Zn, E $\approx$ 3-19 MeV; measured E $\gamma$ , I $\gamma$ ; deduced thin target yields; <sup>103</sup>Rh(d, 2n), E $\approx$ 3-20 MeV; <sup>232</sup>Th(p, 3n), E $\approx$ 13-31 MeV; calculated  $\sigma$ . Calculations using EMPIRE II; compared to available data. CONF Nice (Nucl Data for Sci and Technol) Proc,P1403

KEYNUMBERS AND KEYWORDS

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**A=64 (continued)**

<sup>64</sup>Zn      2010SC12      NUCLEAR REACTIONS <sup>64</sup>Zn(<sup>9</sup>Be, <sup>9</sup>Be), (<sup>10</sup>Be, <sup>10</sup>Be), (<sup>11</sup>Be, <sup>11</sup>Be), E=29.4, 29.8 MeV; measured reaction products; deduced elastic scattering  $\sigma$ ,  $\sigma(\theta)$ , halo nuclei. JOUR IMPEE 19 1236

**A=65**

<sup>65</sup>Mn      2010GA06      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>62</sup>Fe, <sup>62</sup>Fe'), E=73.0 MeV / nucleon [<sup>62</sup>Fe secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>64</sup>Fe, <sup>64</sup>Fe'), E=67.5 MeV / nucleon [<sup>64</sup>Fe secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>66</sup>Fe, <sup>66</sup>Fe'), E=82.6 MeV / nucleon [<sup>66</sup>Fe secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>60</sup>Cr, <sup>60</sup>Cr'), E=80.6 MeV / nucleon [<sup>60</sup>Cr secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>62</sup>Cr, <sup>62</sup>Cr'), E=74.6 MeV / nucleon [<sup>62</sup>Cr secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>64</sup>Cr, <sup>64</sup>Cr'), E=87.0 MeV / nucleon [<sup>64</sup>Cr secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon]; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin,  $\sigma$ . <sup>62,64,66</sup>Fe, <sup>60,62,64</sup>Cr; deduced levels, J,  $\pi$ . Comparison with large-scale shell-model calculations in different model spaces. <sup>9</sup>Be(<sup>76</sup>Ge, X)<sup>62</sup>Fe / <sup>64</sup>Fe / <sup>66</sup>Fe / <sup>60</sup>Cr / <sup>62</sup>Cr / <sup>64</sup>Cr / <sup>65</sup>Mn / <sup>66</sup>Mn / <sup>67</sup>Fe / <sup>69</sup>Co, E=130 MeV / nucleon; measured yields of secondary ion beams. JOUR PRVCA 81 051304

<sup>65</sup>Fe      2010DA06      NUCLEAR REACTIONS Ni(<sup>86</sup>Kr, X), E=60.5 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (fragment) $\gamma$ -coin, and  $\gamma(t)$ . Identification of A and Z by energy-loss, total-kinetic-energy, and time-of-flight measurements. <sup>50</sup>K, <sup>60</sup>V, <sup>62,64</sup>Mn, <sup>65,67</sup>Fe, <sup>68,70</sup>Co, <sup>75</sup>Cu, <sup>78</sup>Zn, <sup>78</sup>Ga; deduced isomers, half-lives, J,  $\pi$ , multiplicities. <sup>69,71,73</sup>Cu; deduced B(M1), B(E2) values. <sup>75</sup>Cu; deduced levels, J,  $\pi$ , and transition rates for proposed level-scheme scenarios and comparisons with shell-model calculations. <sup>69,71,73,75,77,79</sup>Cu; shell model calculations of 1 / 2-, 3 / 2- and 5 / 2-states. JOUR PRVCA 81 034304

                 2010FE01      ATOMIC MASSES <sup>63,64,65,65m,66</sup>Fe, <sup>64,65,66,67,67m</sup>Co; measured cyclotron resonance frequencies and mass excesses using LEBIT Penning-trap mass spectrometer. Comparison with AME-2003 evaluation. <sup>61,63,65,67</sup>Fe; systematics of low-lying levels. Z=24-31, N=35-44; systematics of two-neutron separation energies. JOUR PRVCA 81 044318

<sup>65</sup>Co      2010FE01      ATOMIC MASSES <sup>63,64,65,65m,66</sup>Fe, <sup>64,65,66,67,67m</sup>Co; measured cyclotron resonance frequencies and mass excesses using LEBIT Penning-trap mass spectrometer. Comparison with AME-2003 evaluation. <sup>61,63,65,67</sup>Fe; systematics of low-lying levels. Z=24-31, N=35-44; systematics of two-neutron separation energies. JOUR PRVCA 81 044318

**A=65 (continued)**

- <sup>65</sup>Ni      2008BEZI      NUCLEAR REACTIONS <sup>27</sup>Al(d, pα), E≈3-22 MeV; <sup>27</sup>Al(d, 2p), E≈3-20 MeV; <sup>27</sup>Al(d, p), E≈3-20 MeV; <sup>63,65</sup>Cu(d, 2n), E≈3-20 MeV; <sup>63</sup>Cu(d, p), E≈3-20 MeV; <sup>65</sup>Cu(d, 2p), E≈3-20 MeV; <sup>65</sup>Cu(d, 3p), E≈3-20 MeV; measured Eγ, Iγ(t); deduced σ, T<sub>1/2</sub>. Compared to EXFOR data and Pade fit of Takacs. CONF Nice (Nucl Data for Sci and Technol) Proc,P1003
- <sup>65</sup>Cu      2010DE09      NUCLEAR REACTIONS <sup>63,65</sup>Cu(e, e'), E=120, 150, 225 MeV; measured Ee, Ie; <sup>63,65</sup>Cu deduced level energies, multipolarities, B(E1), B(E2), B(E3). JOUR PANUE 73 395
- <sup>65</sup>Zn      2008BEZI      NUCLEAR REACTIONS <sup>27</sup>Al(d, pα), E≈3-22 MeV; <sup>27</sup>Al(d, 2p), E≈3-20 MeV; <sup>27</sup>Al(d, p), E≈3-20 MeV; <sup>63,65</sup>Cu(d, 2n), E≈3-20 MeV; <sup>63</sup>Cu(d, p), E≈3-20 MeV; <sup>65</sup>Cu(d, 2p), E≈3-20 MeV; <sup>65</sup>Cu(d, 3p), E≈3-20 MeV; measured Eγ, Iγ(t); deduced σ, T<sub>1/2</sub>. Compared to EXFOR data and Pade fit of Takacs. CONF Nice (Nucl Data for Sci and Technol) Proc,P1003
- 2008MEZV      NUCLEAR REACTIONS <sup>209</sup>Bi(α, x), E=28.8, 32.8 MeV; measured Eγ, Iγ, Eα, Iα; <sup>186</sup>W(p, n), E=7-15 MeV; deduced σ; calculated σ; Zn(d, x)<sup>61</sup>Cu, E≈3-19 MeV; Zn(d, x)<sup>64</sup>Cu, E≈3-19 MeV; Zn(d, x)<sup>66</sup>Ga, E≈3-19 MeV; Zn(d, x)<sup>67</sup>Ga, E≈3-19 MeV; Zn(d, x)<sup>65</sup>Zn, E≈3-19 MeV; Zn(d, x)<sup>69</sup>Zn, E≈3-19 MeV; measured Eγ, Iγ; deduced thin target yields; <sup>103</sup>Rh(d, 2n), E≈3-20 MeV; <sup>232</sup>Th(p, 3n), E≈13-31 MeV; calculated σ. Calculations using EMPIRE II; compared to available data. CONF Nice (Nucl Data for Sci and Technol) Proc,P1403

**A=66**

- <sup>66</sup>Mn      2010GA06      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>62</sup>Fe, <sup>62</sup>Fe'), E=73.0 MeV / nucleon [<sup>62</sup>Fe secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>64</sup>Fe, <sup>64</sup>Fe'), E=67.5 MeV / nucleon [<sup>64</sup>Fe secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>66</sup>Fe, <sup>66</sup>Fe'), E=82.6 MeV / nucleon [<sup>66</sup>Fe secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>60</sup>Cr, <sup>60</sup>Cr'), E=80.6 MeV / nucleon [<sup>60</sup>Cr secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>62</sup>Cr, <sup>62</sup>Cr'), E=74.6 MeV / nucleon [<sup>62</sup>Cr secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>64</sup>Cr, <sup>64</sup>Cr'), E=87.0 MeV / nucleon [<sup>64</sup>Cr secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon]; measured Eγ, Iγ, (particle)γ-coin, σ. <sup>62,64,66</sup>Fe, <sup>60,62,64</sup>Cr; deduced levels, J, π. Comparison with large-scale shell-model calculations in different model spaces. <sup>9</sup>Be(<sup>76</sup>Ge, X)<sup>62</sup>Fe / <sup>64</sup>Fe / <sup>66</sup>Fe / <sup>60</sup>Cr / <sup>62</sup>Cr / <sup>64</sup>Cr / <sup>65</sup>Mn / <sup>66</sup>Mn / <sup>67</sup>Fe / <sup>69</sup>Co, E=130 MeV / nucleon; measured yields of secondary ion beams. JOUR PRVCA 81 051304

A=66 (*continued*)

- <sup>66</sup>Fe      2010FE01      ATOMIC MASSES <sup>63,64,65,65m,66</sup>Fe, <sup>64,65,66,67,67m</sup>Co; measured cyclotron resonance frequencies and mass excesses using LEBIT Penning-trap mass spectrometer. Comparison with AME-2003 evaluation. <sup>61,63,65,67</sup>Fe; systematics of low-lying levels. Z=24-31, N=35-44; systematics of two-neutron separation energies. JOUR PRVCA 81 044318
- 2010GA06      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>62</sup>Fe, <sup>62</sup>Fe'), E=73.0 MeV / nucleon [<sup>62</sup>Fe secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>64</sup>Fe, <sup>64</sup>Fe'), E=67.5 MeV / nucleon [<sup>64</sup>Fe secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>66</sup>Fe, <sup>66</sup>Fe'), E=82.6 MeV / nucleon [<sup>66</sup>Fe secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>60</sup>Cr, <sup>60</sup>Cr'), E=80.6 MeV / nucleon [<sup>60</sup>Cr secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>62</sup>Cr, <sup>62</sup>Cr'), E=74.6 MeV / nucleon [<sup>62</sup>Cr secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>64</sup>Cr, <sup>64</sup>Cr'), E=87.0 MeV / nucleon [<sup>64</sup>Cr secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon]; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin,  $\sigma$ . <sup>62,64,66</sup>Fe, <sup>60,62,64</sup>Cr; deduced levels, J,  $\pi$ . Comparison with large-scale shell-model calculations in different model spaces. <sup>9</sup>Be(<sup>76</sup>Ge, X)<sup>62</sup>Fe / <sup>64</sup>Fe / <sup>66</sup>Fe / <sup>60</sup>Cr / <sup>62</sup>Cr / <sup>64</sup>Cr / <sup>65</sup>Mn / <sup>66</sup>Mn / <sup>67</sup>Fe / <sup>69</sup>Co, E=130 MeV / nucleon; measured yields of secondary ion beams. JOUR PRVCA 81 051304
- <sup>66</sup>Co      2010FE01      ATOMIC MASSES <sup>63,64,65,65m,66</sup>Fe, <sup>64,65,66,67,67m</sup>Co; measured cyclotron resonance frequencies and mass excesses using LEBIT Penning-trap mass spectrometer. Comparison with AME-2003 evaluation. <sup>61,63,65,67</sup>Fe; systematics of low-lying levels. Z=24-31, N=35-44; systematics of two-neutron separation energies. JOUR PRVCA 81 044318
- <sup>66</sup>Ga      2008MEZV      NUCLEAR REACTIONS <sup>209</sup>Bi( $\alpha$ , x), E=28.8, 32.8 MeV; measured E $\gamma$ , I $\gamma$ , E $\alpha$ , I $\alpha$ ; <sup>186</sup>W(p, n), E=7-15 MeV; deduced  $\sigma$ ; calculated  $\sigma$ ; Zn(d, x)<sup>61</sup>Cu, E $\approx$ 3-19 MeV; Zn(d, x)<sup>64</sup>Cu, E $\approx$ 3-19 MeV; Zn(d, x)<sup>66</sup>Ga, E $\approx$ 3-19 MeV; Zn(d, x)<sup>67</sup>Ga, E $\approx$ 3-19 MeV; Zn(d, x)<sup>65</sup>Zn, E $\approx$ 3-19 MeV; Zn(d, x)<sup>69</sup>Zn, E $\approx$ 3-19 MeV; measured E $\gamma$ , I $\gamma$ ; deduced thin target yields; <sup>103</sup>Rh(d, 2n), E $\approx$ 3-20 MeV; <sup>232</sup>Th(p, 3n), E $\approx$ 13-31 MeV; calculated  $\sigma$ . Calculations using EMPIRE II; compared to available data. CONF Nice (Nucl Data for Sci and Technol) Proc,P1403
- 2010HE04      NUCLEAR REACTIONS Cd( $\alpha$ , xn $\alpha$ ), <sup>108</sup>Cd( $\alpha$ , 2n), ( $\alpha$ , p), ( $\alpha$ , np), ( $\alpha$ , 2np), ( $\alpha$ , 3np), <sup>106</sup>Cd( $\alpha$ , np), <sup>109</sup>Cd( $\alpha$ , np), ( $\alpha$ , 3np), <sup>110</sup>Cd( $\alpha$ , n), ( $\alpha$ , p), ( $\alpha$ , 2np), ( $\alpha$ , 3np), <sup>111</sup>Cd( $\alpha$ , p), ( $\alpha$ , np), ( $\alpha$ , 3np), <sup>112</sup>Cd( $\alpha$ , 3n), ( $\alpha$ , p), ( $\alpha$ , np), ( $\alpha$ , 2np), <sup>113</sup>Cd( $\alpha$ , p), ( $\alpha$ , np), ( $\alpha$ , 2np), ( $\alpha$ , 3np), <sup>114</sup>Cd( $\alpha$ , n), ( $\alpha$ , p), ( $\alpha$ , np), ( $\alpha$ , 2np), ( $\alpha$ , 3np), ( $\alpha$ , 4np), ( $\alpha$ , n2p), <sup>116</sup>Cd( $\alpha$ , 3n), ( $\alpha$ , 2np), ( $\alpha$ , 3np), ( $\alpha$ , 3n2p), Cu( $\alpha$ , X)<sup>66</sup>Ga / <sup>67</sup>Ga, E=5-50 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ . Comparison with experimental data, ALICE-IPPE, EMPIRE, GNASH codes. JOUR NIMBE 268 1376

KEYNUMBERS AND KEYWORDS

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**A=66 (continued)**

<sup>66</sup>Ge      2008WEZW      RADIOACTIVITY <sup>66</sup>Ge; <sup>68</sup>Ge; <sup>94</sup>Zr; <sup>120</sup>Te; measured decay products; deduced B(E2), T<sub>1/2</sub>; <sup>140</sup>Nd; measured E $\gamma$ , I $\gamma$ ( $\theta$ ),  $\gamma\gamma$ ( $\theta$ )-coin; deduced E, J,  $\pi$ , mixed-symmetry states. Results on CD only. CONF E.Lansing (NS2008),P23,Werner

**A=67**

<sup>67</sup>Fe      2010DA06      NUCLEAR REACTIONS Ni(<sup>86</sup>Kr, X), E=60.5 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (fragment) $\gamma$ -coin, and  $\gamma$ (t). Identification of A and Z by energy-loss, total-kinetic-energy, and time-of-flight measurements. <sup>50</sup>K, <sup>60</sup>V, <sup>62,64</sup>Mn, <sup>65,67</sup>Fe, <sup>68,70</sup>Co, <sup>75</sup>Cu, <sup>78</sup>Zn, <sup>78</sup>Ga; deduced isomers, half-lives, J,  $\pi$ , multiplicities. <sup>69,71,73</sup>Cu; deduced B(M1), B(E2) values. <sup>75</sup>Cu; deduced levels, J,  $\pi$ , and transition rates for proposed level-scheme scenarios and comparisons with shell-model calculations. <sup>69,71,73,75,77,79</sup>Cu; shell model calculations of 1 / 2-, 3 / 2- and 5 / 2-states. JOUR PRVCA 81 034304

2010FE01      ATOMIC MASSES <sup>63,64,65,65m,66</sup>Fe, <sup>64,65,66,67,67m</sup>Co; measured cyclotron resonance frequencies and mass excesses using LEBIT Penning-trap mass spectrometer. Comparison with AME-2003 evaluation. <sup>61,63,65,67</sup>Fe; systematics of low-lying levels. Z=24-31, N=35-44; systematics of two-neutron separation energies. JOUR PRVCA 81 044318

2010GA06      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>62</sup>Fe, <sup>62</sup>Fe'), E=73.0 MeV / nucleon [<sup>62</sup>Fe secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>64</sup>Fe, <sup>64</sup>Fe'), E=67.5 MeV / nucleon [<sup>64</sup>Fe secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>66</sup>Fe, <sup>66</sup>Fe'), E=82.6 MeV / nucleon [<sup>66</sup>Fe secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>60</sup>Cr, <sup>60</sup>Cr'), E=80.6 MeV / nucleon [<sup>60</sup>Cr secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>62</sup>Cr, <sup>62</sup>Cr'), E=74.6 MeV / nucleon [<sup>62</sup>Cr secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>64</sup>Cr, <sup>64</sup>Cr'), E=87.0 MeV / nucleon [<sup>64</sup>Cr secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon]; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin,  $\sigma$ . <sup>62,64,66</sup>Fe, <sup>60,62,64</sup>Cr; deduced levels, J,  $\pi$ . Comparison with large-scale shell-model calculations in different model spaces. <sup>9</sup>Be(<sup>76</sup>Ge, X)<sup>62</sup>Fe / <sup>64</sup>Fe / <sup>66</sup>Fe / <sup>60</sup>Cr / <sup>62</sup>Cr / <sup>64</sup>Cr / <sup>65</sup>Mn / <sup>66</sup>Mn / <sup>67</sup>Fe / <sup>69</sup>Co, E=130 MeV / nucleon; measured yields of secondary ion beams. JOUR PRVCA 81 051304

<sup>67</sup>Co      2010FE01      ATOMIC MASSES <sup>63,64,65,65m,66</sup>Fe, <sup>64,65,66,67,67m</sup>Co; measured cyclotron resonance frequencies and mass excesses using LEBIT Penning-trap mass spectrometer. Comparison with AME-2003 evaluation. <sup>61,63,65,67</sup>Fe; systematics of low-lying levels. Z=24-31, N=35-44; systematics of two-neutron separation energies. JOUR PRVCA 81 044318

KEYNUMBERS AND KEYWORDS

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**A=67 (continued)**

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| $^{67}\text{Ga}$ | 2008MEZV | NUCLEAR REACTIONS $^{209}\text{Bi}(\alpha, x)$ , $E=28.8, 32.8$ MeV; measured $E\gamma$ , $I\gamma$ , $E\alpha$ , $I\alpha$ ; $^{186}\text{W}(p, n)$ , $E=7-15$ MeV; deduced $\sigma$ ; calculated $\sigma$ ; $\text{Zn}(d, x)^{61}\text{Cu}$ , $E\approx 3-19$ MeV; $\text{Zn}(d, x)^{64}\text{Cu}$ , $E\approx 3-19$ MeV; $\text{Zn}(d, x)^{66}\text{Ga}$ , $E\approx 3-19$ MeV; $\text{Zn}(d, x)^{67}\text{Ga}$ , $E\approx 3-19$ MeV; $\text{Zn}(d, x)^{65}\text{Zn}$ , $E\approx 3-19$ MeV; $\text{Zn}(d, x)^{69}\text{Zn}$ , $E\approx 3-19$ MeV; measured $E\gamma$ , $I\gamma$ ; deduced thin target yields; $^{103}\text{Rh}(d, 2n)$ , $E\approx 3-20$ MeV; $^{232}\text{Th}(p, 3n)$ , $E\approx 13-31$ MeV; calculated $\sigma$ . Calculations using EMPIRE II; compared to available data. CONF Nice (Nucl Data for Sci and Technol) Proc,P1403  |
|                  | 2010CH16 | NUCLEAR REACTIONS $\text{U}(p, X)^{67}\text{Ga} / ^{69}\text{Ga} / ^{71}\text{Ga} / ^{73}\text{Ga} / ^{75}\text{Ga} / ^{77}\text{Ga} / ^{79}\text{Ga} / ^{81}\text{Ga}$ , $E=1.4$ GeV; measured optical hfs spectra; deduced ground J, $\pi$ , magnetic dipole and electric quadrupole moments, anomalous ground state spins. JOUR PRLTA 104 252502   |
|                  | 2010HE04 | NUCLEAR REACTIONS $\text{Cd}(\alpha, xn\alpha)$ , $^{108}\text{Cd}(\alpha, 2n)$ , $(\alpha, p)$ , $(\alpha, np)$ , $(\alpha, 2np)$ , $(\alpha, 3np)$ , $^{106}\text{Cd}(\alpha, np)$ , $^{109}\text{Cd}(\alpha, np)$ , $(\alpha, 3np)$ , $^{110}\text{Cd}(\alpha, n)$ , $(\alpha, p)$ , $(\alpha, 2np)$ , $(\alpha, 3np)$ , $^{111}\text{Cd}(\alpha, p)$ , $(\alpha, np)$ , $(\alpha, 3np)$ , $^{112}\text{Cd}(\alpha, 3n)$ , $(\alpha, p)$ , $(\alpha, np)$ , $(\alpha, 2np)$ , $^{113}\text{Cd}(\alpha, p)$ , $(\alpha, np)$ , $(\alpha, 2np)$ , $(\alpha, 3np)$ , $^{114}\text{Cd}(\alpha, n)$ , $(\alpha, p)$ , $(\alpha, np)$ , $(\alpha, 2np)$ , $(\alpha, 3np)$ , $(\alpha, 4np)$ , $(\alpha, n2p)$ , $^{116}\text{Cd}(\alpha, 3n)$ , $(\alpha, 2np)$ , $(\alpha, 3np)$ , $(\alpha, 3n2p)$ , $\text{Cu}(\alpha, X)^{66}\text{Ga} / ^{67}\text{Ga}$ , $E=5-50$ MeV; measured $E\gamma$ , $I\gamma$ ; deduced $\sigma$ . Comparison with experimental data, ALICE-IPPE, EMPIRE, GNASH codes. JOUR NIMBE 268 1376 |
| $^{67}\text{As}$ | 2008ORZZ | NUCLEAR REACTIONS $^{40}\text{Ca}(^{32}\text{S}, n\alpha)$ , $(^{32}\text{S}, p\alpha)$ , $E=90$ MeV; measured reaction products, $E\gamma$ , $I\gamma$ ; $^{67}\text{As}$ , $^{67}\text{Se}$ ; deduced level energies, J, $\pi$ , $B(E1)T_{1/2}$ . CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P307,Orlandi   |
| $^{67}\text{Se}$ | 2008ORZZ | NUCLEAR REACTIONS $^{40}\text{Ca}(^{32}\text{S}, n\alpha)$ , $(^{32}\text{S}, p\alpha)$ , $E=90$ MeV; measured reaction products, $E\gamma$ , $I\gamma$ ; $^{67}\text{As}$ , $^{67}\text{Se}$ ; deduced level energies, J, $\pi$ , $B(E1)T_{1/2}$ . CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P307,Orlandi   |

**A=68**

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| $^{68}\text{Co}$ | 2010DA06 | NUCLEAR REACTIONS $\text{Ni}(^{86}\text{Kr}, X)$ , $E=60.5$ MeV / nucleon; measured $E\gamma$ , $I\gamma$ , (fragment) $\gamma$ -coin, and $\gamma(t)$ . Identification of A and Z by energy-loss, total-kinetic-energy, and time-of-flight measurements. $^{50}\text{K}$ , $^{60}\text{V}$ , $^{62,64}\text{Mn}$ , $^{65,67}\text{Fe}$ , $^{68,70}\text{Co}$ , $^{75}\text{Cu}$ , $^{78}\text{Zn}$ , $^{78}\text{Ga}$ ; deduced isomers, half-lives, J, $\pi$ , multipolarities. $^{69,71,73}\text{Cu}$ ; deduced $B(M1)$ , $B(E2)$ values. $^{75}\text{Cu}$ ; deduced levels, J, $\pi$ , and transition rates for proposed level-scheme scenarios and comparisons with shell-model calculations. $^{69,71,73,75,77,79}\text{Cu}$ ; shell model calculations of 1 / 2-, 3 / 2- and 5 / 2- states. JOUR PRVCA 81 034304 |
| $^{68}\text{Zn}$ | 2008BEZH | NUCLEAR MOMENTS $^{70}\text{Ge}$ , $^{68}\text{Zn}$ , $^{92,94}\text{Zr}$ , $^{36,38,40}\text{S}$ , $^{38,40,42}\text{Ar}$ ; measured hyperfine spectra, Doppler-shifted $\gamma$ -spectra; deduced g factors. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P49,Benczer-Kolle   |

KEYNUMBERS AND KEYWORDS

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**A=68 (continued)**

<sup>68</sup>Ge      2008WEZW      RADIOACTIVITY <sup>66</sup>Ge; <sup>68</sup>Ge; <sup>94</sup>Zr; <sup>120</sup>Te; measured decay products; deduced B(E2), T<sub>1/2</sub>; <sup>140</sup>Nd; measured E<sub>γ</sub>, I<sub>γ</sub>(θ), γγ(θ)-coin; deduced E, J, π, mixed-symmetry states. Results on CD only. CONF E.Lansing (NS2008),P23,Werner

**A=69**

<sup>69</sup>Co      2010GA06      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>62</sup>Fe, <sup>62</sup>Fe'), E=73.0 MeV / nucleon [<sup>62</sup>Fe secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>64</sup>Fe, <sup>64</sup>Fe'), E=67.5 MeV / nucleon [<sup>64</sup>Fe secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>66</sup>Fe, <sup>66</sup>Fe'), E=82.6 MeV / nucleon [<sup>66</sup>Fe secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>60</sup>Cr, <sup>60</sup>Cr'), E=80.6 MeV / nucleon [<sup>60</sup>Cr secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>62</sup>Cr, <sup>62</sup>Cr'), E=74.6 MeV / nucleon [<sup>62</sup>Cr secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon], <sup>9</sup>Be(<sup>64</sup>Cr, <sup>64</sup>Cr'), E=87.0 MeV / nucleon [<sup>64</sup>Cr secondary beam from primary reaction <sup>9</sup>Be(<sup>76</sup>Ge, X), E=130 MeV / nucleon]; measured E<sub>γ</sub>, I<sub>γ</sub>, (particle)γ-coin, σ. <sup>62,64,66</sup>Fe, <sup>60,62,64</sup>Cr; deduced levels, J, π. Comparison with large-scale shell-model calculations in different model spaces. <sup>9</sup>Be(<sup>76</sup>Ge, X)<sup>62</sup>Fe / <sup>64</sup>Fe / <sup>66</sup>Fe / <sup>60</sup>Cr / <sup>62</sup>Cr / <sup>64</sup>Cr / <sup>65</sup>Mn / <sup>66</sup>Mn / <sup>67</sup>Fe / <sup>69</sup>Co, E=130 MeV / nucleon; measured yields of secondary ion beams. JOUR PRVCA 81 051304

<sup>69</sup>Cu      2010DA06      NUCLEAR REACTIONS Ni(<sup>86</sup>Kr, X), E=60.5 MeV / nucleon; measured E<sub>γ</sub>, I<sub>γ</sub>, (fragment)γ-coin, and γ(t). Identification of A and Z by energy-loss, total-kinetic-energy, and time-of-flight measurements. <sup>50</sup>K, <sup>60</sup>V, <sup>62,64</sup>Mn, <sup>65,67</sup>Fe, <sup>68,70</sup>Co, <sup>75</sup>Cu, <sup>78</sup>Zn, <sup>78</sup>Ga; deduced isomers, half-lives, J, π, multipolarities. <sup>69,71,73</sup>Cu; deduced B(M1), B(E2) values. <sup>75</sup>Cu; deduced levels, J, π, and transition rates for proposed level-scheme scenarios and comparisons with shell-model calculations. <sup>69,71,73,75,77,79</sup>Cu; shell model calculations of 1 / 2-, 3 / 2- and 5 / 2- states. JOUR PRVCA 81 034304

<sup>69</sup>Zn      2008MEZV      NUCLEAR REACTIONS <sup>209</sup>Bi(α, x), E=28.8, 32.8 MeV; measured E<sub>γ</sub>, I<sub>γ</sub>, Eα, Iα; <sup>186</sup>W(p, n), E=7-15 MeV; deduced σ; calculated σ; Zn(d, x)<sup>61</sup>Cu, E≈3-19 MeV; Zn(d, x)<sup>64</sup>Cu, E≈3-19 MeV; Zn(d, x)<sup>66</sup>Ga, E≈3-19 MeV; Zn(d, x)<sup>67</sup>Ga, E≈3-19 MeV; Zn(d, x)<sup>65</sup>Zn, E≈3-19 MeV; Zn(d, x)<sup>69</sup>Zn, E≈3-19 MeV; measured E<sub>γ</sub>, I<sub>γ</sub>; deduced thin target yields; <sup>103</sup>Rh(d, 2n), E≈3-20 MeV; <sup>232</sup>Th(p, 3n), E≈13-31 MeV; calculated σ. Calculations using EMPIRE II; compared to available data. CONF Nice (Nucl Data for Sci and Technol) Proc,P1403

<sup>69</sup>Ga      2010CH16      NUCLEAR REACTIONS U(p, X)<sup>67</sup>Ga / <sup>69</sup>Ga / <sup>71</sup>Ga / <sup>73</sup>Ga / <sup>75</sup>Ga / <sup>77</sup>Ga / <sup>79</sup>Ga / <sup>81</sup>Ga, E=1.4 GeV; measured optical hfs spectra; deduced ground J, π, magnetic dipole and electric quadrupole moments, anomalous ground state spins. JOUR PRLTA 104 252502

KEYNUMBERS AND KEYWORDS

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**A=70**

- <sup>70</sup>Co      2010DA06      NUCLEAR REACTIONS Ni(<sup>86</sup>Kr, X), E=60.5 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (fragment) $\gamma$ -coin, and  $\gamma$ (t). Identification of A and Z by energy-loss, total-kinetic-energy, and time-of-flight measurements. <sup>50</sup>K, <sup>60</sup>V, <sup>62,64</sup>Mn, <sup>65,67</sup>Fe, <sup>68,70</sup>Co, <sup>75</sup>Cu, <sup>78</sup>Zn, <sup>78</sup>Ga; deduced isomers, half-lives, J,  $\pi$ , multipolarities. <sup>69,71,73</sup>Cu; deduced B(M1), B(E2) values. <sup>75</sup>Cu; deduced levels, J,  $\pi$ , and transition rates for proposed level-scheme scenarios and comparisons with shell-model calculations. <sup>69,71,73,75,77,79</sup>Cu; shell model calculations of 1 / 2-, 3 / 2- and 5 / 2-states. JOUR PRVCA 81 034304
- <sup>70</sup>Ni      2008AZZZ      NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>70</sup>Ni, <sup>70</sup>Ni'), (<sup>74</sup>Zn, <sup>74</sup>Zn'), (<sup>76</sup>Ge, <sup>76</sup>Ge'), E=60 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , reaction products; <sup>70</sup>Ni, <sup>74</sup>Zn, <sup>76</sup>Ge; deduced level energies, J,  $\pi$ ,  $\sigma$ , B(E2). CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P39,Azaiez
- <sup>70</sup>Ge      2008BEZH      NUCLEAR MOMENTS <sup>70</sup>Ge, <sup>68</sup>Zn, <sup>92,94</sup>Zr, <sup>36,38,40</sup>S, <sup>38,40,42</sup>Ar; measured hyperfine spectra, Doppler-shifted  $\gamma$ -spectra; deduced g factors. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P49,Benczer-Kolle
- <sup>70</sup>Se      2008LJZZ      NUCLEAR REACTIONS <sup>40</sup>Ca(<sup>36</sup>Ar, 2p $\alpha$ ), E not given; <sup>40</sup>Ca(<sup>36</sup>Ar, 4p), E not given; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin using plunger technique; deduced <sup>70</sup>Se T<sub>1/2</sub>, B(E2), deformation; calculated E, J,  $\pi$ , configuration mixing, shape coexistence. Results on CD only. CONF E.Lansing (NS2008),P8,Ljungvall

**A=71**

- <sup>71</sup>Co      2008RAZV      RADIOACTIVITY <sup>71</sup>Co( $\beta^-$ ), <sup>72</sup>Co( $\beta^-$ ), <sup>73</sup>Co( $\beta^-$ ), <sup>74</sup>Co( $\beta^-$ ), <sup>75</sup>Co( $\beta^-$ )[from <sup>9</sup>Be(<sup>86</sup>Kr, x), E=140 MeV / nucleon fragmentation]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\beta$ -delayed neutron decay; deduced <sup>71,73</sup>Ni E, J,  $\pi$ ; calculated <sup>69,71,73,75,77</sup>Ni E, J,  $\pi$ . CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P679
- <sup>71</sup>Ni      2008RAZV      RADIOACTIVITY <sup>71</sup>Co( $\beta^-$ ), <sup>72</sup>Co( $\beta^-$ ), <sup>73</sup>Co( $\beta^-$ ), <sup>74</sup>Co( $\beta^-$ ), <sup>75</sup>Co( $\beta^-$ )[from <sup>9</sup>Be(<sup>86</sup>Kr, x), E=140 MeV / nucleon fragmentation]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\beta$ -delayed neutron decay; deduced <sup>71,73</sup>Ni E, J,  $\pi$ ; calculated <sup>69,71,73,75,77</sup>Ni E, J,  $\pi$ . CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P679
- <sup>71</sup>Cu      2010DA06      NUCLEAR REACTIONS Ni(<sup>86</sup>Kr, X), E=60.5 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (fragment) $\gamma$ -coin, and  $\gamma$ (t). Identification of A and Z by energy-loss, total-kinetic-energy, and time-of-flight measurements. <sup>50</sup>K, <sup>60</sup>V, <sup>62,64</sup>Mn, <sup>65,67</sup>Fe, <sup>68,70</sup>Co, <sup>75</sup>Cu, <sup>78</sup>Zn, <sup>78</sup>Ga; deduced isomers, half-lives, J,  $\pi$ , multipolarities. <sup>69,71,73</sup>Cu; deduced B(M1), B(E2) values. <sup>75</sup>Cu; deduced levels, J,  $\pi$ , and transition rates for proposed level-scheme scenarios and comparisons with shell-model calculations. <sup>69,71,73,75,77,79</sup>Cu; shell model calculations of 1 / 2-, 3 / 2- and 5 / 2-states. JOUR PRVCA 81 034304
- <sup>71</sup>Ga      2010CH16      NUCLEAR REACTIONS U(p, X)<sup>67</sup>Ga / <sup>69</sup>Ga / <sup>71</sup>Ga / <sup>73</sup>Ga / <sup>75</sup>Ga / <sup>77</sup>Ga / <sup>79</sup>Ga / <sup>81</sup>Ga, E=1.4 GeV; measured optical hfs spectra; deduced ground J,  $\pi$ , magnetic dipole and electric quadrupole moments, anomalous ground state spins. JOUR PRLTA 104 252502

KEYNUMBERS AND KEYWORDS

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**A=71 (continued)**

<sup>71</sup>Kr      2008NAZR      NUCLEAR REACTIONS Ca(<sup>36</sup>Na, np), E=103 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\beta\gamma$ -coin; deduced E, J,  $\pi$ ; Ca(<sup>32</sup>S, x)<sup>71</sup>Kr, E not given; Ca(<sup>33</sup>S, x)<sup>71</sup>Kr, E not given; measured E $\gamma$ , I $\gamma$ . Results on CD only. CONF E.Lansing (NS2008),P4,Nara Singh

**A=72**

<sup>72</sup>Co      2008RAZV      RADIOACTIVITY <sup>71</sup>Co( $\beta^-$ ), <sup>72</sup>Co( $\beta^-$ ), <sup>73</sup>Co( $\beta^-$ ), <sup>74</sup>Co( $\beta^-$ ), <sup>75</sup>Co( $\beta^-$ )[from <sup>9</sup>Be(<sup>86</sup>Kr, x), E=140 MeV / nucleon fragmentation]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\beta$ -delayed neutron decay; deduced <sup>71,73</sup>Ni E, J,  $\pi$ ; calculated <sup>69,71,73,75,77</sup>Ni E, J,  $\pi$ . CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P679

<sup>72</sup>Ni      2008RAZV      RADIOACTIVITY <sup>71</sup>Co( $\beta^-$ ), <sup>72</sup>Co( $\beta^-$ ), <sup>73</sup>Co( $\beta^-$ ), <sup>74</sup>Co( $\beta^-$ ), <sup>75</sup>Co( $\beta^-$ )[from <sup>9</sup>Be(<sup>86</sup>Kr, x), E=140 MeV / nucleon fragmentation]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\beta$ -delayed neutron decay; deduced <sup>71,73</sup>Ni E, J,  $\pi$ ; calculated <sup>69,71,73,75,77</sup>Ni E, J,  $\pi$ . CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P679

<sup>72</sup>Ge      2008STZT      RADIOACTIVITY <sup>98</sup>Mo, <sup>72,76</sup>Ge; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin; deduced attenuation, g-factor. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P379

<sup>72</sup>Se      2008LJZZ      NUCLEAR REACTIONS <sup>40</sup>Ca(<sup>36</sup>Ar, 2p $\alpha$ ), E not given; <sup>40</sup>Ca(<sup>36</sup>Ar, 4p), E not given; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin using plunger technique; deduced <sup>70</sup>Se T<sub>1/2</sub>, B(E2), deformation; calculated E, J,  $\pi$ , configuration mixing, shape coexistence. Results on CD only. CONF E.Lansing (NS2008),P8,Ljungvall

**A=73**

<sup>73</sup>Co      2008RAZV      RADIOACTIVITY <sup>71</sup>Co( $\beta^-$ ), <sup>72</sup>Co( $\beta^-$ ), <sup>73</sup>Co( $\beta^-$ ), <sup>74</sup>Co( $\beta^-$ ), <sup>75</sup>Co( $\beta^-$ )[from <sup>9</sup>Be(<sup>86</sup>Kr, x), E=140 MeV / nucleon fragmentation]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\beta$ -delayed neutron decay; deduced <sup>71,73</sup>Ni E, J,  $\pi$ ; calculated <sup>69,71,73,75,77</sup>Ni E, J,  $\pi$ . CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P679

<sup>73</sup>Ni      2008RAZV      RADIOACTIVITY <sup>71</sup>Co( $\beta^-$ ), <sup>72</sup>Co( $\beta^-$ ), <sup>73</sup>Co( $\beta^-$ ), <sup>74</sup>Co( $\beta^-$ ), <sup>75</sup>Co( $\beta^-$ )[from <sup>9</sup>Be(<sup>86</sup>Kr, x), E=140 MeV / nucleon fragmentation]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\beta$ -delayed neutron decay; deduced <sup>71,73</sup>Ni E, J,  $\pi$ ; calculated <sup>69,71,73,75,77</sup>Ni E, J,  $\pi$ . CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P679

<sup>73</sup>Cu      2010DA06      NUCLEAR REACTIONS Ni(<sup>86</sup>Kr, X), E=60.5 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (fragment) $\gamma$ -coin, and  $\gamma(t)$ . Identification of A and Z by energy-loss, total-kinetic-energy, and time-of-flight measurements. <sup>50</sup>K, <sup>60</sup>V, <sup>62,64</sup>Mn, <sup>65,67</sup>Fe, <sup>68,70</sup>Co, <sup>75</sup>Cu, <sup>78</sup>Zn, <sup>78</sup>Ga; deduced isomers, half-lives, J,  $\pi$ , multiplicities. <sup>69,71,73</sup>Cu; deduced B(M1), B(E2) values. <sup>75</sup>Cu; deduced levels, J,  $\pi$ , and transition rates for proposed level-scheme scenarios and comparisons with shell-model calculations. <sup>69,71,73,75,77,79</sup>Cu; shell model calculations of 1 / 2-, 3 / 2- and 5 / 2-states. JOUR PRVCA 81 034304

KEYNUMBERS AND KEYWORDS

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**A=73 (continued)**

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| $^{73}\text{Ga}$ | 2010CH16 | NUCLEAR REACTIONS $\text{U}(p, X)^{67}\text{Ga} / ^{69}\text{Ga} / ^{71}\text{Ga} / ^{73}\text{Ga} / ^{75}\text{Ga} / ^{77}\text{Ga} / ^{79}\text{Ga} / ^{81}\text{Ga}$ , $E=1.4$ GeV; measured optical hfs spectra; deduced ground J, $\pi$ , magnetic dipole and electric quadrupole moments, anomalous ground state spins. JOUR PRLTA 104 252502   |
| $^{73}\text{Kr}$ | 2010ST05 | NUCLEAR REACTIONS $^{40}\text{Ca}(^{40}\text{Ca}, n2p\alpha)^{73}\text{Kr}$ , $E=185$ MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -, $p\gamma\gamma$ -, $n\gamma\gamma$ -, $\alpha\gamma\gamma$ -coin, DCO using EUROBALL spectrometer. $^{73}\text{Kr}$ ; deduced levels, J, $\pi$ , rotational bands, moment of inertia. Comparison with band structures of $^{75}\text{Kr}$ and $^{77}\text{Kr}$ and with configuration-dependent Cranked Nilsson-Strutinsky calculations. JOUR PRVCA 81 054307 |

**A=74**

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| $^{74}\text{Co}$ | 2008RAZV | RADIOACTIVITY $^{71}\text{Co}(\beta^-)$ , $^{72}\text{Co}(\beta^-)$ , $^{73}\text{Co}(\beta^-)$ , $^{74}\text{Co}(\beta^-)$ , $^{75}\text{Co}(\beta^-)$ [from $^9\text{Be}(^{86}\text{Kr}, x)$ , $E=140$ MeV / nucleon fragmentation]; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, $\beta$ -delayed neutron decay; deduced $^{71,73}\text{Ni}$ E, J, $\pi$ ; calculated $^{69,71,73,75,77}\text{Ni}$ E, J, $\pi$ . CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P679 |
| $^{74}\text{Ni}$ | 2008RAZV | RADIOACTIVITY $^{71}\text{Co}(\beta^-)$ , $^{72}\text{Co}(\beta^-)$ , $^{73}\text{Co}(\beta^-)$ , $^{74}\text{Co}(\beta^-)$ , $^{75}\text{Co}(\beta^-)$ [from $^9\text{Be}(^{86}\text{Kr}, x)$ , $E=140$ MeV / nucleon fragmentation]; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, $\beta$ -delayed neutron decay; deduced $^{71,73}\text{Ni}$ E, J, $\pi$ ; calculated $^{69,71,73,75,77}\text{Ni}$ E, J, $\pi$ . CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P679 |
| $^{74}\text{Zn}$ | 2008AZZZ | NUCLEAR REACTIONS $^{208}\text{Pb}(^{70}\text{Ni}, ^{70}\text{Ni}')$ , $(^{74}\text{Zn}, ^{74}\text{Zn}')$ , $(^{76}\text{Ge}, ^{76}\text{Ge}')$ , $E=60$ MeV / nucleon; measured $E\gamma$ , $I\gamma$ , reaction products; $^{70}\text{Ni}$ , $^{74}\text{Zn}$ , $^{76}\text{Ge}$ ; deduced level energies, J, $\pi$ , $\sigma$ , $B(E2)$ . CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P39,Azaiez  |
| $^{74}\text{Ge}$ | 2010K015 | ATOMIC MASSES $^{74}\text{Ge}$ , $^{74}\text{Se}$ ; measured masses using JYFLTRAP penning trap; deduced Q-value for neutrino-less 2EC decay. JOUR PYLBB 684 17  |
|                  | 2010K015 | RADIOACTIVITY $^{74}\text{Se}(2\text{EC})$ ; deduced Q-value for neutrino-less 2EC decay from atomic mass measurements; calculated $T_{1/2}$ and nuclear matrix elements using QRPA wave functions in a multiple-commutator model. JOUR PYLBB 684 17   |
|                  | 2010M003 | ATOMIC MASSES $^{74,76}\text{Se}$ , $^{74,76}\text{Ge}$ ; measured cyclotron frequencies in a Penning-trap system relative to $^{84}\text{Kr}$ , atomic masses and systematic shifts for ion pairs. Comparisons with previous measurements and with AME-2003. JOUR PRVCA 81 032501   |
|                  | 2010M003 | RADIOACTIVITY $^{74}\text{Se}(2\text{EC})$ , $^{76}\text{Ge}(2\beta^-)$ ; deduced Q values from measured masses. Discussed resonant enhancement for neutrinoless double-electron capture decay of $^{74}\text{Se}$ . JOUR PRVCA 81 032501  |
| $^{74}\text{As}$ | 2008FAZU | RADIOACTIVITY $^{74}\text{As}$ [from $^{74}\text{Ge}(p, n)$ ]; measured $E\gamma$ , $I\gamma$ ; deduced intensity ratio $\beta^-$ -decay and $\beta^+$ / EC-decay. REPT ATOMKI 2008 Annual,P22,Farkas  |
| $^{74}\text{Se}$ | 2010K015 | ATOMIC MASSES $^{74}\text{Ge}$ , $^{74}\text{Se}$ ; measured masses using JYFLTRAP penning trap; deduced Q-value for neutrino-less 2EC decay. JOUR PYLBB 684 17  |

KEYNUMBERS AND KEYWORDS

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**A=74 (continued)**

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| 2010K015         |          | RADIOACTIVITY $^{74}\text{Se}(2\text{EC})$ ; deduced Q-value for neutrino-less 2EC decay from atomic mass measurements; calculated $T_{1/2}$ and nuclear matrix elements using QRPA wave functions in a multiple-commutator model. JOUR PYLBB 684 17   |
| 2010M003         |          | ATOMIC MASSES $^{74,76}\text{Se}$ , $^{74,76}\text{Ge}$ ; measured cyclotron frequencies in a Penning-trap system relative to $^{84}\text{Kr}$ , atomic masses and systematic shifts for ion pairs. Comparisons with previous measurements and with AME-2003. JOUR PRVCA 81 032501   |
| 2010M003         |          | RADIOACTIVITY $^{74}\text{Se}(2\text{EC})$ , $^{76}\text{Ge}(2\beta^-)$ ; deduced Q values from measured masses. Discussed resonant enhancement for neutrinoless double-electron capture decay of $^{74}\text{Se}$ . JOUR PRVCA 81 032501  |
| $^{74}\text{Rb}$ | 2008SVZX | RADIOACTIVITY $^{62}\text{Ga}$ ; measured $I\beta$ , $E\gamma$ , $I\gamma$ , $\beta\gamma$ -coin, $\gamma\gamma$ -coin; deduced $T_{1/2}$ , log ft, branching ratio; calculated isospin symmetry breaking using shell model; $^{26}\text{Na}(\beta^-)$ ; measured $I\beta(t)$ , $I\gamma(t)$ ; deduced $T_{1/2}$ ; $^{18}\text{Ne}$ ; measured $E\gamma$ , $I\gamma$ , $I\beta(t)$ , $\beta\gamma$ -coin, $\gamma\gamma$ -coin; deduced $T_{1/2}$ ; $^{38}\text{K}$ ; measured $I\beta(t)$ ; deduced isomer decay, $T_{1/2}$ , M3 branching ratio, log ft; $^{74}\text{Rb}$ ; measured decay products; deduced $T_{1/2}$ , branching ratio, log ft. Results on CD only. CONF E.Lansing (NS2008),P19,Svensson |

**A=75**

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| $^{75}\text{Co}$ | 2008RAZV | RADIOACTIVITY $^{71}\text{Co}(\beta^-)$ , $^{72}\text{Co}(\beta^-)$ , $^{73}\text{Co}(\beta^-)$ , $^{74}\text{Co}(\beta^-)$ , $^{75}\text{Co}(\beta^-)$ [from $^9\text{Be}(^{86}\text{Kr}, x)$ , $E=140$ MeV / nucleon fragmentation]; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, $\beta$ -delayed neutron decay; deduced $^{71,73}\text{Ni}$ E, J, $\pi$ ; calculated $^{69,71,73,75,77}\text{Ni}$ E, J, $\pi$ . CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P679   |
| $^{75}\text{Ni}$ | 2008RAZV | RADIOACTIVITY $^{71}\text{Co}(\beta^-)$ , $^{72}\text{Co}(\beta^-)$ , $^{73}\text{Co}(\beta^-)$ , $^{74}\text{Co}(\beta^-)$ , $^{75}\text{Co}(\beta^-)$ [from $^9\text{Be}(^{86}\text{Kr}, x)$ , $E=140$ MeV / nucleon fragmentation]; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, $\beta$ -delayed neutron decay; deduced $^{71,73}\text{Ni}$ E, J, $\pi$ ; calculated $^{69,71,73,75,77}\text{Ni}$ E, J, $\pi$ . CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P679   |
| $^{75}\text{Cu}$ | 2010DA06 | NUCLEAR REACTIONS $\text{Ni}(^{86}\text{Kr}, X)$ , $E=60.5$ MeV / nucleon; measured $E\gamma$ , $I\gamma$ , (fragment) $\gamma$ -coin, and $\gamma(t)$ . Identification of A and Z by energy-loss, total-kinetic-energy, and time-of-flight measurements. $^{50}\text{K}$ , $^{60}\text{V}$ , $^{62,64}\text{Mn}$ , $^{65,67}\text{Fe}$ , $^{68,70}\text{Co}$ , $^{75}\text{Cu}$ , $^{78}\text{Zn}$ , $^{78}\text{Ga}$ ; deduced isomers, half-lives, J, $\pi$ , multiplicities. $^{69,71,73}\text{Cu}$ ; deduced B(M1), B(E2) values. $^{75}\text{Cu}$ ; deduced levels, J, $\pi$ , and transition rates for proposed level-scheme scenarios and comparisons with shell-model calculations. $^{69,71,73,75,77,79}\text{Cu}$ ; shell model calculations of 1 / 2-, 3 / 2- and 5 / 2-states. JOUR PRVCA 81 034304 |
| $^{75}\text{Ga}$ | 2010CH16 | NUCLEAR REACTIONS $\text{U}(p, X)^{67}\text{Ga} / ^{69}\text{Ga} / ^{71}\text{Ga} / ^{73}\text{Ga} / ^{75}\text{Ga} / ^{77}\text{Ga} / ^{79}\text{Ga} / ^{81}\text{Ga}$ , $E=1.4$ GeV; measured optical hfs spectra; deduced ground J, $\pi$ , magnetic dipole and electric quadrupole moments, anomalous ground state spins. JOUR PRLTA 104 252502  |

KEYNUMBERS AND KEYWORDS

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**A=76**

<sup>76</sup> Cu	2008ILZZ	RADIOACTIVITY <sup>76</sup> Cu( $\beta^-$ ), <sup>76</sup> Cu( $\beta^-$ ), <sup>77</sup> Cu( $\beta^-$ ), <sup>78</sup> Cu( $\beta^-$ ), <sup>79</sup> Cu( $\beta^-$ )[from U(p, f)]; measured A(particle), Z(particle), E $\gamma$ , I $\gamma$ ; deduced <sup>76,77,78,79</sup> Zn E, J, $\pi$ . CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P687
<sup>76</sup> Zn	2008ILZZ	RADIOACTIVITY <sup>76</sup> Cu( $\beta^-$ ), <sup>76</sup> Cu( $\beta^-$ ), <sup>77</sup> Cu( $\beta^-$ ), <sup>78</sup> Cu( $\beta^-$ ), <sup>79</sup> Cu( $\beta^-$ )[from U(p, f)]; measured A(particle), Z(particle), E $\gamma$ , I $\gamma$ ; deduced <sup>76,77,78,79</sup> Zn E, J, $\pi$ . CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P687
<sup>76</sup> Ge	2008AZZZ	NUCLEAR REACTIONS <sup>208</sup> Pb( <sup>70</sup> Ni, <sup>70</sup> Ni'), ( <sup>74</sup> Zn, <sup>74</sup> Zn'), ( <sup>76</sup> Ge, <sup>76</sup> Ge'), E=60 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , reaction products; <sup>70</sup> Ni, <sup>74</sup> Zn, <sup>76</sup> Ge; deduced level energies, J, $\pi$ , $\sigma$ , B(E2). CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P39,Azaiez
	2008STZT	RADIOACTIVITY <sup>98</sup> Mo, <sup>72,76</sup> Ge; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin; deduced attenuation, g-factor. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P379
	2010M003	ATOMIC MASSES <sup>74,76</sup> Se, <sup>74,76</sup> Ge; measured cyclotron frequencies in a Penning-trap system relative to <sup>84</sup> Kr, atomic masses and systematic shifts for ion pairs. Comparisons with previous measurements and with AME-2003. JOUR PRVCA 81 032501
	2010M003	RADIOACTIVITY <sup>74</sup> Se(2EC), <sup>76</sup> Ge(2 $\beta^-$ ); deduced Q values from measured masses. Discussed resonant enhancement for neutrinoless double-electron capture decay of <sup>74</sup> Se. JOUR PRVCA 81 032501
<sup>76</sup> Se	2010M003	ATOMIC MASSES <sup>74,76</sup> Se, <sup>74,76</sup> Ge; measured cyclotron frequencies in a Penning-trap system relative to <sup>84</sup> Kr, atomic masses and systematic shifts for ion pairs. Comparisons with previous measurements and with AME-2003. JOUR PRVCA 81 032501
	2010M003	RADIOACTIVITY <sup>74</sup> Se(2EC), <sup>76</sup> Ge(2 $\beta^-$ ); deduced Q values from measured masses. Discussed resonant enhancement for neutrinoless double-electron capture decay of <sup>74</sup> Se. JOUR PRVCA 81 032501
<sup>76</sup> Kr	2008TAZI	NUCLEAR REACTIONS Pb(p, x), E=1, 1.4 GeV; Bi(p, x), E=1, 1.4 GeV; measured E $\gamma$ , I $\gamma$ , A(particle) using melted thick target at ISOLDE facility; <sup>76,77,79,85,87,88,89,90</sup> Kr, <sup>111</sup> Cd, <sup>121,124,126</sup> I, <sup>120,121,122,123,125,127,129,131,133</sup> Xe, <sup>184,186,188,190,192,193,195,197,203,205,206</sup> Hg, <sup>204,205,206,207,208,209,210</sup> At; deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069

**A=77**

<sup>77</sup> Cu	2008ILZZ	RADIOACTIVITY <sup>76</sup> Cu( $\beta^-$ ), <sup>76</sup> Cu( $\beta^-$ ), <sup>77</sup> Cu( $\beta^-$ ), <sup>78</sup> Cu( $\beta^-$ ), <sup>79</sup> Cu( $\beta^-$ )[from U(p, f)]; measured A(particle), Z(particle), E $\gamma$ , I $\gamma$ ; deduced <sup>76,77,78,79</sup> Zn E, J, $\pi$ . CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P687
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KEYNUMBERS AND KEYWORDS

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**A=77 (continued)**

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| 2010DA06         |          | NUCLEAR REACTIONS Ni( <sup>86</sup> Kr, X), E=60.5 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (fragment) $\gamma$ -coin, and $\gamma$ (t). Identification of A and Z by energy-loss, total-kinetic-energy, and time-of-flight measurements. <sup>50</sup> K, <sup>60</sup> V, <sup>62,64</sup> Mn, <sup>65,67</sup> Fe, <sup>68,70</sup> Co, <sup>75</sup> Cu, <sup>78</sup> Zn, <sup>78</sup> Ga; deduced isomers, half-lives, J, $\pi$ , multipolarities. <sup>69,71,73</sup> Cu; deduced B(M1), B(E2) values. <sup>75</sup> Cu; deduced levels, J, $\pi$ , and transition rates for proposed level-scheme scenarios and comparisons with shell-model calculations. <sup>69,71,73,75,77,79</sup> Cu; shell model calculations of 1 / 2-, 3 / 2- and 5 / 2- states. JOUR PRVCA 81 034304 |
| <sup>77</sup> Zn | 2008ILZZ | RADIOACTIVITY <sup>76</sup> Cu( $\beta^-$ ), <sup>76</sup> Cu( $\beta^-$ ), <sup>77</sup> Cu( $\beta^-$ ), <sup>78</sup> Cu( $\beta^-$ ), <sup>79</sup> Cu( $\beta^-$ )[from U(p, f)]; measured A(particle), Z(particle), E $\gamma$ , I $\gamma$ ; deduced <sup>76,77,78,79</sup> Zn E, J, $\pi$ . CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P687   |
| <sup>77</sup> Ga | 2010CH16 | NUCLEAR REACTIONS U(p, X) <sup>67</sup> Ga / <sup>69</sup> Ga / <sup>71</sup> Ga / <sup>73</sup> Ga / <sup>75</sup> Ga / <sup>77</sup> Ga / <sup>79</sup> Ga / <sup>81</sup> Ga, E=1.4 GeV; measured optical hfs spectra; deduced ground J, $\pi$ , magnetic dipole and electric quadrupole moments, anomalous ground state spins. JOUR PRLTA 104 252502   |
| <sup>77</sup> Kr | 2008TAZI | NUCLEAR REACTIONS Pb(p, x), E=1, 1.4 GeV; Bi(p, x), E=1, 1.4 GeV; measured E $\gamma$ , I $\gamma$ , A(particle) using melted thick target at ISOLDE facility; <sup>76,77,79,85,87,88,89,90</sup> Kr, <sup>111</sup> Cd, <sup>121,124,126</sup> I, <sup>120,121,122,123,125,127,129,131,133</sup> Xe, <sup>184,186,188,190,192,193,195,197,203,205,206</sup> Hg, <sup>204,205,206,207,208,209,210</sup> At; deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069   |

**A=78**

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| <sup>78</sup> Cu | 2008ILZZ | RADIOACTIVITY <sup>76</sup> Cu( $\beta^-$ ), <sup>76</sup> Cu( $\beta^-$ ), <sup>77</sup> Cu( $\beta^-$ ), <sup>78</sup> Cu( $\beta^-$ ), <sup>79</sup> Cu( $\beta^-$ )[from U(p, f)]; measured A(particle), Z(particle), E $\gamma$ , I $\gamma$ ; deduced <sup>76,77,78,79</sup> Zn E, J, $\pi$ . CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P687   |
| <sup>78</sup> Zn | 2008ILZZ | RADIOACTIVITY <sup>76</sup> Cu( $\beta^-$ ), <sup>76</sup> Cu( $\beta^-$ ), <sup>77</sup> Cu( $\beta^-$ ), <sup>78</sup> Cu( $\beta^-$ ), <sup>79</sup> Cu( $\beta^-$ )[from U(p, f)]; measured A(particle), Z(particle), E $\gamma$ , I $\gamma$ ; deduced <sup>76,77,78,79</sup> Zn E, J, $\pi$ . CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P687   |
|                  | 2010DA06 | NUCLEAR REACTIONS Ni( <sup>86</sup> Kr, X), E=60.5 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (fragment) $\gamma$ -coin, and $\gamma$ (t). Identification of A and Z by energy-loss, total-kinetic-energy, and time-of-flight measurements. <sup>50</sup> K, <sup>60</sup> V, <sup>62,64</sup> Mn, <sup>65,67</sup> Fe, <sup>68,70</sup> Co, <sup>75</sup> Cu, <sup>78</sup> Zn, <sup>78</sup> Ga; deduced isomers, half-lives, J, $\pi$ , multipolarities. <sup>69,71,73</sup> Cu; deduced B(M1), B(E2) values. <sup>75</sup> Cu; deduced levels, J, $\pi$ , and transition rates for proposed level-scheme scenarios and comparisons with shell-model calculations. <sup>69,71,73,75,77,79</sup> Cu; shell model calculations of 1 / 2-, 3 / 2- and 5 / 2- states. JOUR PRVCA 81 034304 |

KEYNUMBERS AND KEYWORDS

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**A=78 (continued)**

<sup>78</sup>Ga      2010DA06      NUCLEAR REACTIONS Ni(<sup>86</sup>Kr, X), E=60.5 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (fragment) $\gamma$ -coin, and  $\gamma$ (t). Identification of A and Z by energy-loss, total-kinetic-energy, and time-of-flight measurements. <sup>50</sup>K, <sup>60</sup>V, <sup>62,64</sup>Mn, <sup>65,67</sup>Fe, <sup>68,70</sup>Co, <sup>75</sup>Cu, <sup>78</sup>Zn, <sup>78</sup>Ga; deduced isomers, half-lives, J,  $\pi$ , multipolarities. <sup>69,71,73</sup>Cu; deduced B(M1), B(E2) values. <sup>75</sup>Cu; deduced levels, J,  $\pi$ , and transition rates for proposed level-scheme scenarios and comparisons with shell-model calculations. <sup>69,71,73,75,77,79</sup>Cu; shell model calculations of 1 / 2-, 3 / 2- and 5 / 2-states. JOUR PRVCA 81 034304

**A=79**

<sup>79</sup>Cu      2008ILZZ      RADIOACTIVITY <sup>76</sup>Cu( $\beta^-$ ), <sup>76</sup>Cu( $\beta^-$ ), <sup>77</sup>Cu( $\beta^-$ ), <sup>78</sup>Cu( $\beta^-$ ), <sup>79</sup>Cu( $\beta^-$ )[from U(p, f)]; measured A(particle), Z(particle), E $\gamma$ , I $\gamma$ ; deduced <sup>76,77,78,79</sup>Zn E, J,  $\pi$ . CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P687

2010DA06      NUCLEAR REACTIONS Ni(<sup>86</sup>Kr, X), E=60.5 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (fragment) $\gamma$ -coin, and  $\gamma$ (t). Identification of A and Z by energy-loss, total-kinetic-energy, and time-of-flight measurements. <sup>50</sup>K, <sup>60</sup>V, <sup>62,64</sup>Mn, <sup>65,67</sup>Fe, <sup>68,70</sup>Co, <sup>75</sup>Cu, <sup>78</sup>Zn, <sup>78</sup>Ga; deduced isomers, half-lives, J,  $\pi$ , multipolarities. <sup>69,71,73</sup>Cu; deduced B(M1), B(E2) values. <sup>75</sup>Cu; deduced levels, J,  $\pi$ , and transition rates for proposed level-scheme scenarios and comparisons with shell-model calculations. <sup>69,71,73,75,77,79</sup>Cu; shell model calculations of 1 / 2-, 3 / 2- and 5 / 2-states. JOUR PRVCA 81 034304

<sup>79</sup>Zn      2008ILZZ      RADIOACTIVITY <sup>76</sup>Cu( $\beta^-$ ), <sup>76</sup>Cu( $\beta^-$ ), <sup>77</sup>Cu( $\beta^-$ ), <sup>78</sup>Cu( $\beta^-$ ), <sup>79</sup>Cu( $\beta^-$ )[from U(p, f)]; measured A(particle), Z(particle), E $\gamma$ , I $\gamma$ ; deduced <sup>76,77,78,79</sup>Zn E, J,  $\pi$ . CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P687

<sup>79</sup>Ga      2010CH16      NUCLEAR REACTIONS U(p, X)<sup>67</sup>Ga / <sup>69</sup>Ga / <sup>71</sup>Ga / <sup>73</sup>Ga / <sup>75</sup>Ga / <sup>77</sup>Ga / <sup>79</sup>Ga / <sup>81</sup>Ga, E=1.4 GeV; measured optical hfs spectra; deduced ground J,  $\pi$ , magnetic dipole and electric quadrupole moments, anomalous ground state spins. JOUR PRLTA 104 252502

<sup>79</sup>Se      2010KI03      NUCLEAR REACTIONS <sup>80</sup>Se( $\gamma$ , n), E=10.5-16 MeV; measured emitted neutrons; deduced  $\sigma$ . Laser-Compton scattering (LCS). JOUR JNSTA 47 367

<sup>79</sup>Kr      2008TAZI      NUCLEAR REACTIONS Pb(p, x), E=1, 1.4 GeV; Bi(p, x), E=1, 1.4 GeV; measured E $\gamma$ , I $\gamma$ , A(particle) using melted thick target at ISOLDE facility; <sup>76,77,79,85,87,88,89,90</sup>Kr, <sup>111</sup>Cd, <sup>121,124,126</sup>I, <sup>120,121,122,123,125,127,129,131,133</sup>Xe, <sup>184,186,188,190,192,193,195,197,203,205,206</sup>Hg, <sup>204,205,206,207,208,209,210</sup>At; deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069

KEYNUMBERS AND KEYWORDS

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**A=80**

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| $^{80}\text{Zn}$ | 2008DEZP | NUCLEAR REACTIONS $^{192}\text{Os}$ , $^{238}\text{U}(^{82}\text{Se}, \text{X})^{81}\text{Ga} / ^{82}\text{Ge} / ^{83}\text{As} / ^{80}\text{Zn}$ , E=460, 505 MeV; measured reaction products, $E\gamma$ , $I\gamma$ , $\gamma$ - $\gamma$ -coin.; deduced level energies, J, $\pi$ . Comparison with shell model calculations. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P73,De Angelis  |
|                  | 2008KOYY | RADIOACTIVITY $^{17}\text{Ne}$ ; measured ToF versus field frequency; deduced isotope shift, mass mass excess, charge radius, halo nuclei; calculated mass excess, separation energy, proton, neutron density distribution using FMD; $^{38}\text{Ca}$ ; $^{26}\text{Al}$ ; $^{80}\text{Zn}$ ; $^{81}\text{Zn}$ ; $^{132}\text{Sn}$ ; $^{134}\text{Sn}$ ; measured ToF versus frequency detuning; deduced Q-value, mass excess. Neutrons in $^{17}\text{Ne}$ spherical, protons cluster-like form. Results on CD only. CONF E.Lansing (NS2008),P20,Kowalska |

**A=81**

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| $^{81}\text{Zn}$ | 2008KOYY | RADIOACTIVITY $^{17}\text{Ne}$ ; measured ToF versus field frequency; deduced isotope shift, mass mass excess, charge radius, halo nuclei; calculated mass excess, separation energy, proton, neutron density distribution using FMD; $^{38}\text{Ca}$ ; $^{26}\text{Al}$ ; $^{80}\text{Zn}$ ; $^{81}\text{Zn}$ ; $^{132}\text{Sn}$ ; $^{134}\text{Sn}$ ; measured ToF versus frequency detuning; deduced Q-value, mass excess. Neutrons in $^{17}\text{Ne}$ spherical, protons cluster-like form. Results on CD only. CONF E.Lansing (NS2008),P20,Kowalska   |
| $^{81}\text{Ga}$ | 2008DEZP | NUCLEAR REACTIONS $^{192}\text{Os}$ , $^{238}\text{U}(^{82}\text{Se}, \text{X})^{81}\text{Ga} / ^{82}\text{Ge} / ^{83}\text{As} / ^{80}\text{Zn}$ , E=460, 505 MeV; measured reaction products, $E\gamma$ , $I\gamma$ , $\gamma$ - $\gamma$ -coin.; deduced level energies, J, $\pi$ . Comparison with shell model calculations. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P73,De Angelis  |
|                  | 2010CH16 | NUCLEAR REACTIONS $\text{U}(p, \text{X})^{67}\text{Ga} / ^{69}\text{Ga} / ^{71}\text{Ga} / ^{73}\text{Ga} / ^{75}\text{Ga} / ^{77}\text{Ga} / ^{79}\text{Ga} / ^{81}\text{Ga}$ , E=1.4 GeV; measured optical hfs spectra; deduced ground J, $\pi$ , magnetic dipole and electric quadrupole moments, anomalous ground state spins. JOUR PRLTA 104 252502  |
| $^{81}\text{Kr}$ | 2010S003 | NUCLEAR REACTIONS $^{170}\text{Er}(^{82}\text{Se}, \text{X})^{168}\text{Dy} / ^{170}\text{Dy}$ , E=460 MeV; measured mass yields, distributions of product nuclei using PRISMA spectrometer, $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -, (particle) $\gamma$ -coin using CLARA HPGe array. $^{168}\text{Dy}$ ; deduced levels, J, $\pi$ , rotational bands, moments of inertia. $^{170}\text{Dy}$ ; deduced 4+ to 2+ transition. $^{170}\text{Er}$ ; measured $E\gamma$ . Z=64-72, N=94-108; systematics of levels and moments of inertia for even-even isotopes, and total Routhian surface calculations. 81,82,83,84,85,86,87,88,89,90Kr, 162,163,164,165,166,167,168,169,170,171Dy; measured yields of complementary beam-like and target-like fragments through 2pxn channels. JOUR PRVCA 81 034310 |

A=82

$^{82}\text{Ge}$	2008DEZP	NUCLEAR REACTIONS $^{192}\text{Os}$ , $^{238}\text{U}(^{82}\text{Se}, \text{X})^{81}\text{Ga} / ^{82}\text{Ge} / ^{83}\text{As} / ^{80}\text{Zn}$ , E=460, 505 MeV; measured reaction products, $E\gamma$ , $I\gamma$ , $\gamma$ - $\gamma$ -coin.; deduced level energies, J, $\pi$ . Comparison with shell model calculations. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P73,De Angelis
	2010WI03	RADIOACTIVITY $^{83,84,85}\text{Ga}(\beta^-)$ , $(\beta^-n)$ [from $^{238}\text{U}(\text{p}, \text{F})$ , E=54 MeV]; measured $E\gamma$ , $I\gamma$ , $\beta\gamma^-$ , $\gamma\gamma^-$ , $\beta n\gamma$ -coin, and half-lives. $^{82,83,84,85}\text{Ge}$ ; deduced level, J, $\pi$ , configurations. $^{82,83,84}\text{Ge}$ , $^{82,83,84}\text{As}$ , $^{83}\text{Se}(\beta^-)$ ; N=28-82, Z=20-50; systematics of neutron single-particle states. Comparison with spherical HFB calculations using the $\text{SKO}_T$ functionals. $^{82,83,84}\text{Ge}$ , $^{82,83,84}\text{As}$ , $^{83}\text{Se}(\beta^-)$ ; measured $E\gamma$ . JOUR PRVCA 81 044303
$^{82}\text{As}$	2010WI03	RADIOACTIVITY $^{83,84,85}\text{Ga}(\beta^-)$ , $(\beta^-n)$ [from $^{238}\text{U}(\text{p}, \text{F})$ , E=54 MeV]; measured $E\gamma$ , $I\gamma$ , $\beta\gamma^-$ , $\gamma\gamma^-$ , $\beta n\gamma$ -coin, and half-lives. $^{82,83,84,85}\text{Ge}$ ; deduced level, J, $\pi$ , configurations. $^{82,83,84}\text{Ge}$ , $^{82,83,84}\text{As}$ , $^{83}\text{Se}(\beta^-)$ ; N=28-82, Z=20-50; systematics of neutron single-particle states. Comparison with spherical HFB calculations using the $\text{SKO}_T$ functionals. $^{82,83,84}\text{Ge}$ , $^{82,83,84}\text{As}$ , $^{83}\text{Se}(\beta^-)$ ; measured $E\gamma$ . JOUR PRVCA 81 044303
$^{82}\text{Se}$	2010WI03	RADIOACTIVITY $^{83,84,85}\text{Ga}(\beta^-)$ , $(\beta^-n)$ [from $^{238}\text{U}(\text{p}, \text{F})$ , E=54 MeV]; measured $E\gamma$ , $I\gamma$ , $\beta\gamma^-$ , $\gamma\gamma^-$ , $\beta n\gamma$ -coin, and half-lives. $^{82,83,84,85}\text{Ge}$ ; deduced level, J, $\pi$ , configurations. $^{82,83,84}\text{Ge}$ , $^{82,83,84}\text{As}$ , $^{83}\text{Se}(\beta^-)$ ; N=28-82, Z=20-50; systematics of neutron single-particle states. Comparison with spherical HFB calculations using the $\text{SKO}_T$ functionals. $^{82,83,84}\text{Ge}$ , $^{82,83,84}\text{As}$ , $^{83}\text{Se}(\beta^-)$ ; measured $E\gamma$ . JOUR PRVCA 81 044303
$^{82}\text{Kr}$	2008LEZK	NUCLEAR REACTIONS $\text{Mg}(\text{p}, ^3\text{He})$ , E=14.7-1600 MeV; $\text{Al}(\text{p}, ^3\text{He})$ , E=41.5-397 MeV; $\text{Si}(\text{p}, ^3\text{He})$ , E=31.3-1600 MeV; $\text{Pb}(\text{p}, ^3\text{He})$ , E=44.2-2595 MeV; $\text{Bi}(\text{p}, ^3\text{He})$ , E=102-2589 MeV; $\text{Bi}(\text{p}, \alpha)$ , E=102-2589 MeV; $\text{Bi}(\text{p}, \text{x})^{82}\text{Kr}$ , E=102-2589 MeV; $\text{Bi}(\text{p}, \text{x})^{85}\text{Kr}$ , E=102-2589 MeV; $\text{Bi}(\text{p}, \text{x})^{130}\text{Xe}$ , E=102-2589 MeV; $\text{Bi}(\text{p}, \text{x})^{131}\text{Xe}$ , E=102-2589 MeV; measured He, Kr, Xe using cryogenic traps; deduced He, Kr, Xe $\sigma$ ; calculated $\sigma$ using INCL4 / ABLA code. Compared to other measurements of similar kind done by the same group. CONF Nice (Nucl Data for Sci and Technol) Proc,P1061
	2010S003	NUCLEAR REACTIONS $^{170}\text{Er}(^{82}\text{Se}, \text{X})^{168}\text{Dy} / ^{170}\text{Dy}$ , E=460 MeV; measured mass yields, distributions of product nuclei using PRISMA spectrometer, $E\gamma$ , $I\gamma$ , $\gamma\gamma^-$ , (particle) $\gamma$ -coin using CLARA HPGe array. $^{168}\text{Dy}$ ; deduced levels, J, $\pi$ , rotational bands, moments of inertia. $^{170}\text{Dy}$ ; deduced 4+ to 2+ transition. $^{170}\text{Er}$ ; measured $E\gamma$ . Z=64-72, N=94-108; systematics of levels and moments of inertia for even-even isotopes, and total Routhian surface calculations. $^{81,82,83,84,85,86,87,88,89,90}\text{Kr}$ , $^{162,163,164,165,166,167,168,169,170,171}\text{Dy}$ ; measured yields of complementary beam-like and target-like fragments through 2pxn channels. JOUR PRVCA 81 034310
$^{82}\text{Rb}$	2010YU03	NUCLEAR REACTIONS $^{60}\text{Ni}(^{27}\text{Al}, \text{n4p})^{82}\text{Rb}$ , E=130 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma$ - $\gamma$ -coin.; deduced g factors. Comparison with semiclassical model calculations. JOUR CPBHA 19 062701

## A=83

$^{83}\text{Ga}$	2008WIZS	RADIOACTIVITY $^{83}\text{Ga}(\beta^-)$ , $^{84}\text{Ga}(\beta^-)$ , $^{85}\text{Ga}(\beta^-)$ [from $^{235}\text{U}+\text{p}$ ]; measured $E_\gamma$ , $I_\gamma$ , $I_\beta$ , $\beta\gamma$ -coin; deduced E, J, $\pi$ , I. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P663
	2010WI03	RADIOACTIVITY $^{83,84,85}\text{Ga}(\beta^-)$ , $(\beta^-n)$ [from $^{238}\text{U}(\text{p}, \text{F})$ , E=54 MeV]; measured $E_\gamma$ , $I_\gamma$ , $\beta\gamma^-$ , $\gamma\gamma^-$ , $\beta n\gamma$ -coin, and half-lives. $^{82,83,84,85}\text{Ge}$ ; deduced level, J, $\pi$ , configurations. $^{82,83,84}\text{Ge}$ , $^{82,83,84}\text{As}$ , $^{83}\text{Se}(\beta^-)$ ; N=28-82, Z=20-50; systematics of neutron single-particle states. Comparison with spherical HFB calculations using the $\text{SKO}_T$ functionals. $^{82,83,84}\text{Ge}$ , $^{82,83,84}\text{As}$ , $^{83}\text{Se}(\beta^-)$ ; measured $E_\gamma$ . JOUR PRVCA 81 044303
$^{83}\text{Ge}$	2008CIZZ	NUCLEAR REACTIONS $^2\text{H}(^{82}\text{Ge}, \text{p})$ , E $\approx$ 4-5 MeV / nucleon; $^2\text{H}(^{84}\text{Se}, \text{p})$ , E $\approx$ 4-5 MeV / nucleon; $^2\text{H}(^{130}\text{Sn}, \text{p})$ , E $\approx$ 4-5 MeV / nucleon; $^2\text{H}(^{132}\text{Sn}, \text{p})$ , E $\approx$ 4-5 MeV / nucleon; $^2\text{H}(^{134}\text{Te}, \text{p})$ , E $\approx$ 4-5 MeV / nucleon; measured $E_p$ , $I_p(\theta)$ ; deduced Q-values, E, J, $\pi$ . Compared with NNDC tables. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P580
	2008WIZS	RADIOACTIVITY $^{83}\text{Ga}(\beta^-)$ , $^{84}\text{Ga}(\beta^-)$ , $^{85}\text{Ga}(\beta^-)$ [from $^{235}\text{U}+\text{p}$ ]; measured $E_\gamma$ , $I_\gamma$ , $I_\beta$ , $\beta\gamma$ -coin; deduced E, J, $\pi$ , I. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P663
	2010WI03	RADIOACTIVITY $^{83,84,85}\text{Ga}(\beta^-)$ , $(\beta^-n)$ [from $^{238}\text{U}(\text{p}, \text{F})$ , E=54 MeV]; measured $E_\gamma$ , $I_\gamma$ , $\beta\gamma^-$ , $\gamma\gamma^-$ , $\beta n\gamma$ -coin, and half-lives. $^{82,83,84,85}\text{Ge}$ ; deduced level, J, $\pi$ , configurations. $^{82,83,84}\text{Ge}$ , $^{82,83,84}\text{As}$ , $^{83}\text{Se}(\beta^-)$ ; N=28-82, Z=20-50; systematics of neutron single-particle states. Comparison with spherical HFB calculations using the $\text{SKO}_T$ functionals. $^{82,83,84}\text{Ge}$ , $^{82,83,84}\text{As}$ , $^{83}\text{Se}(\beta^-)$ ; measured $E_\gamma$ . JOUR PRVCA 81 044303
$^{83}\text{As}$	2008DEZP	NUCLEAR REACTIONS $^{192}\text{Os}$ , $^{238}\text{U}(^{82}\text{Se}, \text{X})^{81}\text{Ga} / ^{82}\text{Ge} / ^{83}\text{As} / ^{80}\text{Zn}$ , E=460, 505 MeV; measured reaction products, $E_\gamma$ , $I_\gamma$ , $\gamma$ - $\gamma$ -coin.;deduced level energies, J, $\pi$ . Comparison with shell model calculations. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P73,De Angelis
	2010WI03	RADIOACTIVITY $^{83,84,85}\text{Ga}(\beta^-)$ , $(\beta^-n)$ [from $^{238}\text{U}(\text{p}, \text{F})$ , E=54 MeV]; measured $E_\gamma$ , $I_\gamma$ , $\beta\gamma^-$ , $\gamma\gamma^-$ , $\beta n\gamma$ -coin, and half-lives. $^{82,83,84,85}\text{Ge}$ ; deduced level, J, $\pi$ , configurations. $^{82,83,84}\text{Ge}$ , $^{82,83,84}\text{As}$ , $^{83}\text{Se}(\beta^-)$ ; N=28-82, Z=20-50; systematics of neutron single-particle states. Comparison with spherical HFB calculations using the $\text{SKO}_T$ functionals. $^{82,83,84}\text{Ge}$ , $^{82,83,84}\text{As}$ , $^{83}\text{Se}(\beta^-)$ ; measured $E_\gamma$ . JOUR PRVCA 81 044303
$^{83}\text{Se}$	2010WI03	RADIOACTIVITY $^{83,84,85}\text{Ga}(\beta^-)$ , $(\beta^-n)$ [from $^{238}\text{U}(\text{p}, \text{F})$ , E=54 MeV]; measured $E_\gamma$ , $I_\gamma$ , $\beta\gamma^-$ , $\gamma\gamma^-$ , $\beta n\gamma$ -coin, and half-lives. $^{82,83,84,85}\text{Ge}$ ; deduced level, J, $\pi$ , configurations. $^{82,83,84}\text{Ge}$ , $^{82,83,84}\text{As}$ , $^{83}\text{Se}(\beta^-)$ ; N=28-82, Z=20-50; systematics of neutron single-particle states. Comparison with spherical HFB calculations using the $\text{SKO}_T$ functionals. $^{82,83,84}\text{Ge}$ , $^{82,83,84}\text{As}$ , $^{83}\text{Se}(\beta^-)$ ; measured $E_\gamma$ . JOUR PRVCA 81 044303

KEYNUMBERS AND KEYWORDS

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**A=83 (continued)**

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| $^{83}\text{Br}$ | 2010WI03 | RADIOACTIVITY $^{83,84,85}\text{Ga}(\beta^-)$ , $(\beta^-n)$ [from $^{238}\text{U}(p, F)$ , E=54 MeV]; measured $E_\gamma$ , $I_\gamma$ , $\beta\gamma$ -, $\gamma\gamma$ -, $\beta n\gamma$ -coin, and half-lives. $^{82,83,84,85}\text{Ge}$ ; deduced level, J, $\pi$ , configurations. $^{82,83,84}\text{Ge}$ , $^{82,83,84}\text{As}$ , $^{83}\text{Se}(\beta^-)$ ; N=28-82, Z=20-50; systematics of neutron single-particle states. Comparison with spherical HFB calculations using the $\text{SKO}_T$ functionals. $^{82,83,84}\text{Ge}$ , $^{82,83,84}\text{As}$ , $^{83}\text{Se}(\beta^-)$ ; measured $E_\gamma$ . JOUR PRVCA 81 044303  |
| $^{83}\text{Kr}$ | 2010LI13 | RADIOACTIVITY $^{83m}\text{Kr}(\text{IT})$ [from $^{83}\text{Rb}(\varepsilon)$ ]; measured $E_\gamma$ , $I_\gamma$ , half-life in liquid argon and neon environments. Discussed applicability of $^{83m}\text{Kr}$ as a calibration source for liquid argon, neon dark matter and solar neutrino detectors. JOUR PRVCA 81 045803  |
|                  | 2010S003 | NUCLEAR REACTIONS $^{170}\text{Er}(^{82}\text{Se}, X)^{168}\text{Dy} / ^{170}\text{Dy}$ , E=460 MeV; measured mass yields, distributions of product nuclei using PRISMA spectrometer, $E_\gamma$ , $I_\gamma$ , $\gamma\gamma$ -, (particle) $\gamma$ -coin using CLARA HPGe array. $^{168}\text{Dy}$ ; deduced levels, J, $\pi$ , rotational bands, moments of inertia. $^{170}\text{Dy}$ ; deduced 4+ to 2+ transition. $^{170}\text{Er}$ ; measured $E_\gamma$ . Z=64-72, N=94-108; systematics of levels and moments of inertia for even-even isotopes, and total Routhian surface calculations. $^{81,82,83,84,85,86,87,88,89,90}\text{Kr}$ , $^{162,163,164,165,166,167,168,169,170,171}\text{Dy}$ ; measured yields of complementary beam-like and target-like fragments through 2pxn channels. JOUR PRVCA 81 034310 |

**A=84**

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| $^{84}\text{Ga}$ | 2008WIZS | RADIOACTIVITY $^{83}\text{Ga}(\beta^-)$ , $^{84}\text{Ga}(\beta^-)$ , $^{85}\text{Ga}(\beta^-)$ [from $^{235}\text{U}+p$ ]; measured $E_\gamma$ , $I_\gamma$ , $I_\beta$ , $\beta\gamma$ -coin; deduced E, J, $\pi$ , I. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P663  |
|                  | 2010WI03 | RADIOACTIVITY $^{83,84,85}\text{Ga}(\beta^-)$ , $(\beta^-n)$ [from $^{238}\text{U}(p, F)$ , E=54 MeV]; measured $E_\gamma$ , $I_\gamma$ , $\beta\gamma$ -, $\gamma\gamma$ -, $\beta n\gamma$ -coin, and half-lives. $^{82,83,84,85}\text{Ge}$ ; deduced level, J, $\pi$ , configurations. $^{82,83,84}\text{Ge}$ , $^{82,83,84}\text{As}$ , $^{83}\text{Se}(\beta^-)$ ; N=28-82, Z=20-50; systematics of neutron single-particle states. Comparison with spherical HFB calculations using the $\text{SKO}_T$ functionals. $^{82,83,84}\text{Ge}$ , $^{82,83,84}\text{As}$ , $^{83}\text{Se}(\beta^-)$ ; measured $E_\gamma$ . JOUR PRVCA 81 044303 |
| $^{84}\text{Ge}$ | 2008WIZS | RADIOACTIVITY $^{83}\text{Ga}(\beta^-)$ , $^{84}\text{Ga}(\beta^-)$ , $^{85}\text{Ga}(\beta^-)$ [from $^{235}\text{U}+p$ ]; measured $E_\gamma$ , $I_\gamma$ , $I_\beta$ , $\beta\gamma$ -coin; deduced E, J, $\pi$ , I. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P663  |
|                  | 2010WI03 | RADIOACTIVITY $^{83,84,85}\text{Ga}(\beta^-)$ , $(\beta^-n)$ [from $^{238}\text{U}(p, F)$ , E=54 MeV]; measured $E_\gamma$ , $I_\gamma$ , $\beta\gamma$ -, $\gamma\gamma$ -, $\beta n\gamma$ -coin, and half-lives. $^{82,83,84,85}\text{Ge}$ ; deduced level, J, $\pi$ , configurations. $^{82,83,84}\text{Ge}$ , $^{82,83,84}\text{As}$ , $^{83}\text{Se}(\beta^-)$ ; N=28-82, Z=20-50; systematics of neutron single-particle states. Comparison with spherical HFB calculations using the $\text{SKO}_T$ functionals. $^{82,83,84}\text{Ge}$ , $^{82,83,84}\text{As}$ , $^{83}\text{Se}(\beta^-)$ ; measured $E_\gamma$ . JOUR PRVCA 81 044303 |

KEYNUMBERS AND KEYWORDS

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**A=84 (continued)**

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| $^{84}\text{As}$ | 2010WI03 | RADIOACTIVITY $^{83,84,85}\text{Ga}(\beta^-)$ , $(\beta^-n)$ [from $^{238}\text{U}(p, F)$ , E=54 MeV]; measured $E\gamma$ , $I\gamma$ , $\beta\gamma^-$ , $\gamma\gamma^-$ , $\beta n\gamma$ -coin, and half-lives. $^{82,83,84,85}\text{Ge}$ ; deduced level, J, $\pi$ , configurations. $^{82,83,84}\text{Ge}$ , $^{82,83,84}\text{As}$ , $^{83}\text{Se}(\beta^-)$ ; N=28-82, Z=20-50; systematics of neutron single-particle states. Comparison with spherical HFB calculations using the $\text{SKO}_T$ functionals. $^{82,83,84}\text{Ge}$ , $^{82,83,84}\text{As}$ , $^{83}\text{Se}(\beta^-)$ ; measured $E\gamma$ . JOUR PRVCA 81 044303   |
| $^{84}\text{Se}$ | 2010WI03 | RADIOACTIVITY $^{83,84,85}\text{Ga}(\beta^-)$ , $(\beta^-n)$ [from $^{238}\text{U}(p, F)$ , E=54 MeV]; measured $E\gamma$ , $I\gamma$ , $\beta\gamma^-$ , $\gamma\gamma^-$ , $\beta n\gamma$ -coin, and half-lives. $^{82,83,84,85}\text{Ge}$ ; deduced level, J, $\pi$ , configurations. $^{82,83,84}\text{Ge}$ , $^{82,83,84}\text{As}$ , $^{83}\text{Se}(\beta^-)$ ; N=28-82, Z=20-50; systematics of neutron single-particle states. Comparison with spherical HFB calculations using the $\text{SKO}_T$ functionals. $^{82,83,84}\text{Ge}$ , $^{82,83,84}\text{As}$ , $^{83}\text{Se}(\beta^-)$ ; measured $E\gamma$ . JOUR PRVCA 81 044303   |
| $^{84}\text{Kr}$ | 2010S003 | NUCLEAR REACTIONS $^{170}\text{Er}(^{82}\text{Se}, X)^{168}\text{Dy} / ^{170}\text{Dy}$ , E=460 MeV; measured mass yields, distributions of product nuclei using PRISMA spectrometer, $E\gamma$ , $I\gamma$ , $\gamma\gamma^-$ , (particle) $\gamma$ -coin using CLARA HPGe array. $^{168}\text{Dy}$ ; deduced levels, J, $\pi$ , rotational bands, moments of inertia. $^{170}\text{Dy}$ ; deduced 4+ to 2+ transition. $^{170}\text{Er}$ ; measured $E\gamma$ . Z=64-72, N=94-108; systematics of levels and moments of inertia for even-even isotopes, and total Routhian surface calculations. $^{81,82,83,84,85,86,87,88,89,90}\text{Kr}$ , $^{162,163,164,165,166,167,168,169,170,171}\text{Dy}$ ; measured yields of complementary beam-like and target-like fragments through 2pxn channels. JOUR PRVCA 81 034310 |

**A=85**

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| $^{85}\text{Ga}$ | 2008WIZS | RADIOACTIVITY $^{83}\text{Ga}(\beta^-)$ , $^{84}\text{Ga}(\beta^-)$ , $^{85}\text{Ga}(\beta^-)$ [from $^{235}\text{U}+p$ ]; measured $E\gamma$ , $I\gamma$ , $I\beta$ , $\beta\gamma$ -coin; deduced E, J, $\pi$ , I. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P663  |
|                  | 2010WI03 | RADIOACTIVITY $^{83,84,85}\text{Ga}(\beta^-)$ , $(\beta^-n)$ [from $^{238}\text{U}(p, F)$ , E=54 MeV]; measured $E\gamma$ , $I\gamma$ , $\beta\gamma^-$ , $\gamma\gamma^-$ , $\beta n\gamma$ -coin, and half-lives. $^{82,83,84,85}\text{Ge}$ ; deduced level, J, $\pi$ , configurations. $^{82,83,84}\text{Ge}$ , $^{82,83,84}\text{As}$ , $^{83}\text{Se}(\beta^-)$ ; N=28-82, Z=20-50; systematics of neutron single-particle states. Comparison with spherical HFB calculations using the $\text{SKO}_T$ functionals. $^{82,83,84}\text{Ge}$ , $^{82,83,84}\text{As}$ , $^{83}\text{Se}(\beta^-)$ ; measured $E\gamma$ . JOUR PRVCA 81 044303 |
| $^{85}\text{Ge}$ | 2008WIZS | RADIOACTIVITY $^{83}\text{Ga}(\beta^-)$ , $^{84}\text{Ga}(\beta^-)$ , $^{85}\text{Ga}(\beta^-)$ [from $^{235}\text{U}+p$ ]; measured $E\gamma$ , $I\gamma$ , $I\beta$ , $\beta\gamma$ -coin; deduced E, J, $\pi$ , I. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P663  |
|                  | 2010WI03 | RADIOACTIVITY $^{83,84,85}\text{Ga}(\beta^-)$ , $(\beta^-n)$ [from $^{238}\text{U}(p, F)$ , E=54 MeV]; measured $E\gamma$ , $I\gamma$ , $\beta\gamma^-$ , $\gamma\gamma^-$ , $\beta n\gamma$ -coin, and half-lives. $^{82,83,84,85}\text{Ge}$ ; deduced level, J, $\pi$ , configurations. $^{82,83,84}\text{Ge}$ , $^{82,83,84}\text{As}$ , $^{83}\text{Se}(\beta^-)$ ; N=28-82, Z=20-50; systematics of neutron single-particle states. Comparison with spherical HFB calculations using the $\text{SKO}_T$ functionals. $^{82,83,84}\text{Ge}$ , $^{82,83,84}\text{As}$ , $^{83}\text{Se}(\beta^-)$ ; measured $E\gamma$ . JOUR PRVCA 81 044303 |

KEYNUMBERS AND KEYWORDS

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**A=85 (continued)**

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| <sup>85</sup> Se | 2008CIZZ | NUCLEAR REACTIONS <sup>2</sup> H( <sup>82</sup> Ge, p), E≈4-5 MeV / nucleon; <sup>2</sup> H( <sup>84</sup> Se, p), E≈4-5 MeV / nucleon; <sup>2</sup> H( <sup>130</sup> Sn, p), E≈4-5 MeV / nucleon; <sup>2</sup> H( <sup>132</sup> Sn, p), E≈4-5 MeV / nucleon; <sup>2</sup> H( <sup>134</sup> Te, p), E≈4-5 MeV / nucleon; measured E <sub>p</sub> , I <sub>p</sub> (θ); deduced Q-values, E, J, π. Compared with NNDC tables. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P580   |
| <sup>85</sup> Kr | 2008LEZK | NUCLEAR REACTIONS Mg(p, <sup>3</sup> He), E=14.7-1600 MeV; Al(p, <sup>3</sup> He), E=41.5-397 MeV; Si(p, <sup>3</sup> He), E=31.3-1600 MeV; Pb(p, <sup>3</sup> He), E=44.2-2595 MeV; Bi(p, <sup>3</sup> He), E=102-2589 MeV; Bi(p, α), E=102-2589 MeV; Bi(p, x) <sup>82</sup> Kr, E=102-2589 MeV; Bi(p, x) <sup>85</sup> Kr, E=102-2589 MeV; Bi(p, x) <sup>130</sup> Xe, E=102-2589 MeV; Bi(p, x) <sup>131</sup> Xe, E=102-2589 MeV; measured He, Kr, Xe using cryogenic traps; deduced He, Kr, Xe σ; calculated σ using INCL4 / ABLA code. Compared to other measurements of similar kind done by the same group. CONF Nice (Nucl Data for Sci and Technol) Proc,P1061  |
|                  | 2008TAZI | NUCLEAR REACTIONS Pb(p, x), E=1, 1.4 GeV; Bi(p, x), E=1, 1.4 GeV; measured E <sub>γ</sub> , I <sub>γ</sub> , A(particle) using melted thick target at ISOLDE facility; <sup>76,77,79,85,87,88,89,90</sup> Kr, <sup>111</sup> Cd, <sup>121,124,126</sup> I, <sup>120,121,122,123,125,127,129,131,133</sup> Xe, <sup>184,186,188,190,192,193,195,197,203,205,206</sup> Hg, <sup>204,205,206,207,208,209,210</sup> At; deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069   |
|                  | 2010S003 | NUCLEAR REACTIONS <sup>170</sup> Er( <sup>82</sup> Se, X) <sup>168</sup> Dy / <sup>170</sup> Dy, E=460 MeV; measured mass yields, distributions of product nuclei using PRISMA spectrometer, E <sub>γ</sub> , I <sub>γ</sub> , γγ-, (particle)γ-coin using CLARA HPGe array. <sup>168</sup> Dy; deduced levels, J, π, rotational bands, moments of inertia. <sup>170</sup> Dy; deduced 4+ to 2+ transition. <sup>170</sup> Er; measured E <sub>γ</sub> . Z=64-72, N=94-108; systematics of levels and moments of inertia for even-even isotopes, and total Routhian surface calculations. <sup>81,82,83,84,85,86,87,88,89,90</sup> Kr, <sup>162,163,164,165,166,167,168,169,170,171</sup> Dy; measured yields of complementary beam-like and target-like fragments through 2pxn channels. JOUR PRVCA 81 034310 |

**A=86**

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| <sup>86</sup> Kr | 2010S003 | NUCLEAR REACTIONS <sup>170</sup> Er( <sup>82</sup> Se, X) <sup>168</sup> Dy / <sup>170</sup> Dy, E=460 MeV; measured mass yields, distributions of product nuclei using PRISMA spectrometer, E <sub>γ</sub> , I <sub>γ</sub> , γγ-, (particle)γ-coin using CLARA HPGe array. <sup>168</sup> Dy; deduced levels, J, π, rotational bands, moments of inertia. <sup>170</sup> Dy; deduced 4+ to 2+ transition. <sup>170</sup> Er; measured E <sub>γ</sub> . Z=64-72, N=94-108; systematics of levels and moments of inertia for even-even isotopes, and total Routhian surface calculations. <sup>81,82,83,84,85,86,87,88,89,90</sup> Kr, <sup>162,163,164,165,166,167,168,169,170,171</sup> Dy; measured yields of complementary beam-like and target-like fragments through 2pxn channels. JOUR PRVCA 81 034310 |
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KEYNUMBERS AND KEYWORDS

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**A=87**

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| <sup>87</sup> Br | 2008RIZX | RADIOACTIVITY <sup>9</sup> Li, <sup>17</sup> N, <sup>87</sup> Br, <sup>88</sup> Br( $\beta^-$ )[from Pb, <sup>209</sup> Bi, Fe(p, x), E=1 GeV]; measured $\beta$ -delayed neutron decay. CONF Nice (Nucl Data for Sci and Technol) Proc,P1073   |
| <sup>87</sup> Kr | 2008RIZX | RADIOACTIVITY <sup>9</sup> Li, <sup>17</sup> N, <sup>87</sup> Br, <sup>88</sup> Br( $\beta^-$ )[from Pb, <sup>209</sup> Bi, Fe(p, x), E=1 GeV]; measured $\beta$ -delayed neutron decay. CONF Nice (Nucl Data for Sci and Technol) Proc,P1073   |
|                  | 2008TAZI | NUCLEAR REACTIONS Pb(p, x), E=1, 1.4 GeV; Bi(p, x), E=1, 1.4 GeV; measured E $\gamma$ , I $\gamma$ , A(particle) using melted thick target at ISOLDE facility; <sup>76,77,79,85,87,88,89,90</sup> Kr, <sup>111</sup> Cd, <sup>121,124,126</sup> I, <sup>120,121,122,123,125,127,129,131,133</sup> Xe, <sup>184,186,188,190,192,193,195,197,203,205,206</sup> Hg, <sup>204,205,206,207,208,209,210</sup> At; deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069  |
|                  | 2010S003 | NUCLEAR REACTIONS <sup>170</sup> Er( <sup>82</sup> Se, X) <sup>168</sup> Dy / <sup>170</sup> Dy, E=460 MeV; measured mass yields, distributions of product nuclei using PRISMA spectrometer, E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -, (particle) $\gamma$ -coin using CLARA HPGe array. <sup>168</sup> Dy; deduced levels, J, $\pi$ , rotational bands, moments of inertia. <sup>170</sup> Dy; deduced 4+ to 2+ transition. <sup>170</sup> Er; measured E $\gamma$ . Z=64-72, N=94-108; systematics of levels and moments of inertia for even-even isotopes, and total Routhian surface calculations. <sup>81,82,83,84,85,86,87,88,89,90</sup> Kr, <sup>162,163,164,165,166,167,168,169,170,171</sup> Dy; measured yields of complementary beam-like and target-like fragments through 2pxn channels. JOUR PRVCA 81 034310 |
| <sup>87</sup> Sr | 2010SE05 | NUCLEAR REACTIONS <sup>90</sup> Zr(n, $\alpha$ ), (n, p), (n, 2n), (n, X) <sup>89m</sup> Y, <sup>91</sup> Zr(n, $n\alpha$ ), (n, p), (n, X) <sup>90m</sup> Y, <sup>92</sup> Zr(n, p), (n, X) <sup>91m</sup> Y, <sup>94</sup> Zr(n, $\alpha$ ), (n, p), (n, X) <sup>93</sup> Y, E=13.1-20.6 MeV; measured $\sigma$ using activation method. Comparison with TALYS calculations. JOUR NUPAB 832 149   |

**A=88**

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| <sup>88</sup> Br | 2008RIZX | RADIOACTIVITY <sup>9</sup> Li, <sup>17</sup> N, <sup>87</sup> Br, <sup>88</sup> Br( $\beta^-$ )[from Pb, <sup>209</sup> Bi, Fe(p, x), E=1 GeV]; measured $\beta$ -delayed neutron decay. CONF Nice (Nucl Data for Sci and Technol) Proc,P1073  |
| <sup>88</sup> Kr | 2008RIZX | RADIOACTIVITY <sup>9</sup> Li, <sup>17</sup> N, <sup>87</sup> Br, <sup>88</sup> Br( $\beta^-$ )[from Pb, <sup>209</sup> Bi, Fe(p, x), E=1 GeV]; measured $\beta$ -delayed neutron decay. CONF Nice (Nucl Data for Sci and Technol) Proc,P1073  |
|                  | 2008TAZI | NUCLEAR REACTIONS Pb(p, x), E=1, 1.4 GeV; Bi(p, x), E=1, 1.4 GeV; measured E $\gamma$ , I $\gamma$ , A(particle) using melted thick target at ISOLDE facility; <sup>76,77,79,85,87,88,89,90</sup> Kr, <sup>111</sup> Cd, <sup>121,124,126</sup> I, <sup>120,121,122,123,125,127,129,131,133</sup> Xe, <sup>184,186,188,190,192,193,195,197,203,205,206</sup> Hg, <sup>204,205,206,207,208,209,210</sup> At; deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069 |

KEYNUMBERS AND KEYWORDS

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**A=88 (continued)**

2010S003 NUCLEAR REACTIONS  $^{170}\text{Er}(^{82}\text{Se}, \text{X})^{168}\text{Dy} / ^{170}\text{Dy}$ ,  $E=460$  MeV; measured mass yields, distributions of product nuclei using PRISMA spectrometer,  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -, (particle) $\gamma$ -coin using CLARA HPGe array.  $^{168}\text{Dy}$ ; deduced levels,  $J$ ,  $\pi$ , rotational bands, moments of inertia.  $^{170}\text{Dy}$ ; deduced 4+ to 2+ transition.  $^{170}\text{Er}$ ; measured  $E\gamma$ .  $Z=64-72$ ,  $N=94-108$ ; systematics of levels and moments of inertia for even-even isotopes, and total Routhian surface calculations.  $^{81,82,83,84,85,86,87,88,89,90}\text{Kr}$ ,  $^{162,163,164,165,166,167,168,169,170,171}\text{Dy}$ ; measured yields of complementary beam-like and target-like fragments through 2pxn channels. JOUR PRVCA 81 034310

**A=89**

$^{89}\text{Kr}$  2008TAZI NUCLEAR REACTIONS  $\text{Pb}(p, x)$ ,  $E=1, 1.4$  GeV;  $\text{Bi}(p, x)$ ,  $E=1, 1.4$  GeV; measured  $E\gamma$ ,  $I\gamma$ ,  $A(\text{particle})$  using melted thick target at ISOLDE facility;  $^{76,77,79,85,87,88,89,90}\text{Kr}$ ,  $^{111}\text{Cd}$ ,  $^{121,124,126}\text{I}$ ,  $^{120,121,122,123,125,127,129,131,133}\text{Xe}$ ,  $^{184,186,188,190,192,193,195,197,203,205,206}\text{Hg}$ ,  $^{204,205,206,207,208,209,210}\text{At}$ ; deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069

2010S003 NUCLEAR REACTIONS  $^{170}\text{Er}(^{82}\text{Se}, \text{X})^{168}\text{Dy} / ^{170}\text{Dy}$ ,  $E=460$  MeV; measured mass yields, distributions of product nuclei using PRISMA spectrometer,  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -, (particle) $\gamma$ -coin using CLARA HPGe array.  $^{168}\text{Dy}$ ; deduced levels,  $J$ ,  $\pi$ , rotational bands, moments of inertia.  $^{170}\text{Dy}$ ; deduced 4+ to 2+ transition.  $^{170}\text{Er}$ ; measured  $E\gamma$ .  $Z=64-72$ ,  $N=94-108$ ; systematics of levels and moments of inertia for even-even isotopes, and total Routhian surface calculations.  $^{81,82,83,84,85,86,87,88,89,90}\text{Kr}$ ,  $^{162,163,164,165,166,167,168,169,170,171}\text{Dy}$ ; measured yields of complementary beam-like and target-like fragments through 2pxn channels. JOUR PRVCA 81 034310

$^{89}\text{Y}$  2008OHZT NUCLEAR REACTIONS  $^{12}\text{C}, ^{89}\text{Y}, ^{208}\text{Pb}(n, n)$ ,  $E=96$  MeV; measured  $E_n$ ,  $\ln(\theta)$ ; deduced  $d\sigma(\theta)$ ; calculated  $d\sigma(\theta)$  using different models.  $^{12}\text{C}(n, n) d\sigma$  compared also to  $^{12}\text{C}(p, p)$ . CONF Nice (Nucl Data for Sci and Technol) Proc,P1023

2010SE05 NUCLEAR REACTIONS  $^{90}\text{Zr}(n, \alpha)$ ,  $(n, p)$ ,  $(n, 2n)$ ,  $(n, X)^{89m}\text{Y}$ ,  $^{91}\text{Zr}(n, n\alpha)$ ,  $(n, p)$ ,  $(n, X)^{90m}\text{Y}$ ,  $^{92}\text{Zr}(n, p)$ ,  $(n, X)^{91m}\text{Y}$ ,  $^{94}\text{Zr}(n, \alpha)$ ,  $(n, p)$ ,  $(n, X)^{93}\text{Y}$ ,  $E=13.1-20.6$  MeV; measured  $\sigma$  using activation method. Comparison with TALYS calculations. JOUR NUPAB 832 149

$^{89}\text{Zr}$  2010SE05 NUCLEAR REACTIONS  $^{90}\text{Zr}(n, \alpha)$ ,  $(n, p)$ ,  $(n, 2n)$ ,  $(n, X)^{89m}\text{Y}$ ,  $^{91}\text{Zr}(n, n\alpha)$ ,  $(n, p)$ ,  $(n, X)^{90m}\text{Y}$ ,  $^{92}\text{Zr}(n, p)$ ,  $(n, X)^{91m}\text{Y}$ ,  $^{94}\text{Zr}(n, \alpha)$ ,  $(n, p)$ ,  $(n, X)^{93}\text{Y}$ ,  $E=13.1-20.6$  MeV; measured  $\sigma$  using activation method. Comparison with TALYS calculations. JOUR NUPAB 832 149

2010ZH08 NUCLEAR REACTIONS  $^{89}\text{Y}(n, \gamma)$ ,  $^{93}\text{Nb}$ ,  $^{90}\text{Zr}(n, 2n)$ ,  $E=13.5-14.6$  MeV; measured  $E\gamma$ ,  $I\gamma$ ; deduced  $\sigma$ . JOUR NIMBE 268 1367

KEYNUMBERS AND KEYWORDS

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**A=90**

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| $^{90}\text{Kr}$ | 2008TAZI | NUCLEAR REACTIONS Pb(p, x), E=1, 1.4 GeV; Bi(p, x), E=1, 1.4 GeV; measured $E\gamma$ , $I\gamma$ , A(particle) using melted thick target at ISOLDE facility; $^{76,77,79,85,87,88,89,90}\text{Kr}$ , $^{111}\text{Cd}$ , $^{121,124,126}\text{I}$ , $^{120,121,122,123,125,127,129,131,133}\text{Xe}$ , $^{184,186,188,190,192,193,195,197,203,205,206}\text{Hg}$ , $^{204,205,206,207,208,209,210}\text{At}$ ;<br>deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069   |
|                  | 2010S003 | NUCLEAR REACTIONS $^{170}\text{Er}(^{82}\text{Se}, X)^{168}\text{Dy}$ / $^{170}\text{Dy}$ , E=460 MeV; measured mass yields, distributions of product nuclei using PRISMA spectrometer, $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -, (particle) $\gamma$ -coin using CLARA HPGe array. $^{168}\text{Dy}$ ; deduced levels, J, $\pi$ , rotational bands, moments of inertia. $^{170}\text{Dy}$ ; deduced 4+ to 2+ transition. $^{170}\text{Er}$ ; measured $E\gamma$ . Z=64-72, N=94-108; systematics of levels and moments of inertia for even-even isotopes, and total Routhian surface calculations. $^{81,82,83,84,85,86,87,88,89,90}\text{Kr}$ , $^{162,163,164,165,166,167,168,169,170,171}\text{Dy}$ ;<br>measured yields of complementary beam-like and target-like fragments through 2pxn channels. JOUR PRVCA 81 034310 |
| $^{90}\text{Rb}$ | 2010VI01 | NUCLEAR REACTIONS $^{235}\text{U}$ , $^{239}\text{Pu}(\gamma, F)^{90}\text{Rb}$ / $^{129}\text{Sb}$ / $^{130}\text{Sb}$ / $^{132}\text{Sb}$ / $^{131}\text{Te}$ / $^{133}\text{Te}$ / $^{134}\text{I}$ / $^{136}\text{I}$ / $^{135}\text{Xe}$ , E=9.6, 9.8 MeV; measured reaction products; deduced isomeric yields, angular momenta. JOUR BRSPE 74 500   |
| $^{90}\text{Y}$  | 2010SE05 | NUCLEAR REACTIONS $^{90}\text{Zr}(n, \alpha)$ , (n, p), (n, 2n), (n, X) $^{89m}\text{Y}$ , $^{91}\text{Zr}(n, n\alpha)$ , (n, p), (n, X) $^{90m}\text{Y}$ , $^{92}\text{Zr}(n, p)$ , (n, X) $^{91m}\text{Y}$ , $^{94}\text{Zr}(n, \alpha)$ , (n, p), (n, X) $^{93}\text{Y}$ , E=13.1-20.6 MeV; measured $\sigma$ using activation method. Comparison with TALYS calculations. JOUR NUPAB 832 149  |
|                  | 2010ZH08 | NUCLEAR REACTIONS $^{89}\text{Y}(n, \gamma)$ , $^{93}\text{Nb}$ , $^{90}\text{Zr}(n, 2n)$ , E=13.5-14.6 MeV; measured $E\gamma$ , $I\gamma$ ; deduced $\sigma$ . JOUR NIMBE 268 1367  |

**A=91**

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| $^{91}\text{Sr}$ | 2010SE05 | NUCLEAR REACTIONS $^{90}\text{Zr}(n, \alpha)$ , (n, p), (n, 2n), (n, X) $^{89m}\text{Y}$ , $^{91}\text{Zr}(n, n\alpha)$ , (n, p), (n, X) $^{90m}\text{Y}$ , $^{92}\text{Zr}(n, p)$ , (n, X) $^{91m}\text{Y}$ , $^{94}\text{Zr}(n, \alpha)$ , (n, p), (n, X) $^{93}\text{Y}$ , E=13.1-20.6 MeV; measured $\sigma$ using activation method. Comparison with TALYS calculations. JOUR NUPAB 832 149 |
| $^{91}\text{Y}$  | 2010SE05 | NUCLEAR REACTIONS $^{90}\text{Zr}(n, \alpha)$ , (n, p), (n, 2n), (n, X) $^{89m}\text{Y}$ , $^{91}\text{Zr}(n, n\alpha)$ , (n, p), (n, X) $^{90m}\text{Y}$ , $^{92}\text{Zr}(n, p)$ , (n, X) $^{91m}\text{Y}$ , $^{94}\text{Zr}(n, \alpha)$ , (n, p), (n, X) $^{93}\text{Y}$ , E=13.1-20.6 MeV; measured $\sigma$ using activation method. Comparison with TALYS calculations. JOUR NUPAB 832 149 |
| $^{91}\text{Zr}$ | 2008TAZG | NUCLEAR REACTIONS $^{90,91,92,93,94,96}\text{Zr}(n, \gamma)$ , $^{139}\text{La}(n, \gamma)$ , E=1 eV-1 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin; deduced average $\sigma$ , capture kernels; calculated $^{90,91,92,94,96}\text{Zr}$ , $^{139}\text{La}$ average $\sigma$ ; using n-TOF and JENDL-3.3 data. CONF Nice (Nucl Data for Sci and Technol) Proc,P1303               |

KEYNUMBERS AND KEYWORDS

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**A=91 (continued)**

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|                  | 2010UT01 | NUCLEAR REACTIONS $^{96}\text{Zr}(\gamma, n)$ , E=8.1-14 MeV; measured $E\gamma$ , $I\gamma$ , En, In, $\sigma$ . Laser Compton-scattered (LCS) beam. Comparisons with previous data and with QRPA and Lorentzian model calculation.   |
|                  |          | $^{90,91,92,93,94,95,96}\text{Zr}(n, \gamma)$ , E=1 keV to 1 MeV; comparison of previous experimental cross sections with calculated values from Hartree-Fock-Bogoliubov (HFB) and quasiparticle random-phase approximation (QRPA). JOUR PRVCA 81 035801   |
| $^{91}\text{Mo}$ | 2008SCZS | NUCLEAR REACTIONS $^{92,94,96,98,100}\text{Mo}(\gamma, \gamma')$ , $(\gamma, n)$ , E<13.2 MeV; measured reaction products; $^{92,94,96,98,100}\text{Mo}$ ; deduced $\sigma$ , dipole-strength distributions. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P355,Schwengner  |
|                  | 2010ER01 | NUCLEAR REACTIONS $^{92,94,96,98,100}\text{Mo}(\gamma, \gamma')$ , E=bremsstrahlung spectrum with endpoints at 13.2 and 13.9 MeV; measured $\gamma$ spectra, $\gamma(\theta)$ , photon yields, photon strength functions. $^{92,94,96,98,100}\text{Mo}(\gamma, n)$ , E<20 MeV bremsstrahlung spectrum; measured $\gamma$ continuum spectra, activation yields, and $\sigma$ ; deduced dipole strength functions, GDR. Comparisons with RIPL-2 database, Lorentzian parametrizations, and calculations using TALYS code. JOUR PRVCA 81 034319 |
| $^{91}\text{Tc}$ | 2008CHZN | NUCLEAR REACTIONS $^{40}\text{Ca}(^{58}\text{Ni}, 2p\alpha)$ , E=240 MeV; $^{40}\text{Ca}(^{58}\text{Ni}, 3p\alpha)$ , E=240 MeV; $^{40}\text{Ca}(^{58}\text{Ni}, 4p)$ , E=240 MeV; measured $E\gamma$ , $I\gamma(\theta, t)$ ; deduced $d\sigma(\theta)$ , f-factors. Results on CD only. CONF E.Lansing (NS2008),P15,Chiara  |

**A=92**

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| $^{92}\text{Y}$  | 2010SE05 | NUCLEAR REACTIONS $^{90}\text{Zr}(n, \alpha)$ , $(n, p)$ , $(n, 2n)$ , $(n, X)^{89m}\text{Y}$ , $^{91}\text{Zr}(n, n\alpha)$ , $(n, p)$ , $(n, X)^{90m}\text{Y}$ , $^{92}\text{Zr}(n, p)$ , $(n, X)^{91m}\text{Y}$ , $^{94}\text{Zr}(n, \alpha)$ , $(n, p)$ , $(n, X)^{93}\text{Y}$ , E=13.1-20.6 MeV; measured $\sigma$ using activation method. Comparision with TALYS calculations. JOUR NUPAB 832 149 |
| $^{92}\text{Zr}$ | 2008BEZH | NUCLEAR MOMENTS $^{70}\text{Ge}$ , $^{68}\text{Zn}$ , $^{92,94}\text{Zr}$ , $^{36,38,40}\text{S}$ , $^{38,40,42}\text{Ar}$ ; measured hyperfine spectra, Doppler-shifted $\gamma$ -spectra; deduced g factors. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P49,Benczer-Kolle   |
|                  | 2008TAZG | NUCLEAR REACTIONS $^{90,91,92,93,94,96}\text{Zr}(n, \gamma)$ , $^{139}\text{La}(n, \gamma)$ , E=1 eV-1 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin; deduced average $\sigma$ , capture kernels; calculated $^{90,91,92,94,96}\text{Zr}$ , $^{139}\text{La}$ average $\sigma$ ; using n-TOF and JENDL-3.3 data. CONF Nice (Nucl Data for Sci and Technol) Proc,P1303                        |
|                  | 2010UT01 | NUCLEAR REACTIONS $^{96}\text{Zr}(\gamma, n)$ , E=8.1-14 MeV; measured $E\gamma$ , $I\gamma$ , En, In, $\sigma$ . Laser Compton-scattered (LCS) beam. Comparisons with previous data and with QRPA and Lorentzian model calculation.  |
|                  |          | $^{90,91,92,93,94,95,96}\text{Zr}(n, \gamma)$ , E=1 keV to 1 MeV; comparison of previous experimental cross sections with calculated values from Hartree-Fock-Bogoliubov (HFB) and quasiparticle random-phase approximation (QRPA). JOUR PRVCA 81 035801  |
| $^{92}\text{Nb}$ | 2010UD01 | NUCLEAR REACTIONS $^{54}\text{Fe}$ , $^{59}\text{Co}$ , $^{92}\text{Mo}(n, p)$ , E>1.5 MeV; measured $E\gamma$ , $I\gamma$ ; deduced $\sigma$ . JOUR ARISE 68 1656  |

KEYNUMBERS AND KEYWORDS

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**A=92 (continued)**

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|                  | 2010ZH08 | NUCLEAR REACTIONS $^{89}\text{Y}(n, \gamma)$ , $^{93}\text{Nb}$ , $^{90}\text{Zr}(n, 2n)$ , $E=13.5-14.6$ MeV; measured $E\gamma$ , $I\gamma$ ; deduced $\sigma$ . JOUR NIMBE 268 1367  |
| $^{92}\text{Mo}$ | 2008SCZS | NUCLEAR REACTIONS $^{92,94,96,98,100}\text{Mo}(\gamma, \gamma')$ , $(\gamma, n)$ , $E<13.2$ MeV; measured reaction products; $^{92,94,96,98,100}\text{Mo}$ ; deduced $\sigma$ , dipole-strength distributions. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P355,Schwengner   |
|                  | 2010ER01 | NUCLEAR REACTIONS $^{92,94,96,98,100}\text{Mo}(\gamma, \gamma')$ , $E=\text{bremsstrahlung}$ spectrum with endpoints at 13.2 and 13.9 MeV; measured $\gamma$ spectra, $\gamma(\theta)$ , photon yields, photon strength functions. $^{92,94,96,98,100}\text{Mo}(\gamma, n)$ , $E<20$ MeV bremsstrahlung spectrum; measured $\gamma$ continuum spectra, activation yields, and $\sigma$ ; deduced dipole strength functions, GDR. Comparisons with RIPL-2 database, Lorentzian parametrizations, and calculations using TALYS code. JOUR PRVCA 81 034319 |
| $^{92}\text{Ru}$ | 2008CHZN | NUCLEAR REACTIONS $^{40}\text{Ca}(^{58}\text{Ni}, 2p\alpha)$ , $E=240$ MeV; $^{40}\text{Ca}(^{58}\text{Ni}, 3p\alpha)$ , $E=240$ MeV; $^{40}\text{Ca}(^{58}\text{Ni}, 4p)$ , $E=240$ MeV; measured $E\gamma$ , $I\gamma(\theta, t)$ ; deduced $d\sigma(\theta)$ , f-factors. Results on CD only. CONF E.Lansing (NS2008),P15,Chiara   |

**A=93**

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| $^{93}\text{Y}$  | 2010SE05 | NUCLEAR REACTIONS $^{90}\text{Zr}(n, \alpha)$ , $(n, p)$ , $(n, 2n)$ , $(n, X)^{89m}\text{Y}$ , $^{91}\text{Zr}(n, n\alpha)$ , $(n, p)$ , $(n, X)^{90m}\text{Y}$ , $^{92}\text{Zr}(n, p)$ , $(n, X)^{91m}\text{Y}$ , $^{94}\text{Zr}(n, \alpha)$ , $(n, p)$ , $(n, X)^{93}\text{Y}$ , $E=13.1-20.6$ MeV; measured $\sigma$ using activation method. Comparison with TALYS calculations. JOUR NUPAB 832 149  |
| $^{93}\text{Zr}$ | 2008TAZG | NUCLEAR REACTIONS $^{90,91,92,93,94,96}\text{Zr}(n, \gamma)$ , $^{139}\text{La}(n, \gamma)$ , $E=1$ eV-1 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin; deduced average $\sigma$ , capture kernels; calculated $^{90,91,92,94,96}\text{Zr}$ , $^{139}\text{La}$ average $\sigma$ ; using n-TOF and JENDL-3.3 data. CONF Nice (Nucl Data for Sci and Technol) Proc,P1303  |
|                  | 2010TA09 | NUCLEAR REACTIONS $^{92}\text{Zr}(n, \gamma)$ , $E=0-40$ keV; measured capture yield. Deduced resonance parameters, and neutron capture $\sigma$ at CERN n_TOF facility. Comparison with previous data. JOUR PRVCA 81 055801  |
|                  | 2010UT01 | NUCLEAR REACTIONS $^{96}\text{Zr}(\gamma, n)$ , $E=8.1-14$ MeV; measured $E\gamma$ , $I\gamma$ , $E_n$ , $I_n$ , $\sigma$ . Laser Compton-scattered (LCS) beam. Comparisons with previous data and with QRPA and Lorentzian model calculation. $^{90,91,92,93,94,95,96}\text{Zr}(n, \gamma)$ , $E=1$ keV to 1 MeV; comparison of previous experimental cross sections with calculated values from Hartree-Fock-Bogoliubov (HFB) and quasiparticle random-phase approximation (QRPA). JOUR PRVCA 81 035801 |
| $^{93}\text{Nb}$ | 2007WA45 | NUCLEAR REACTIONS $^{82}\text{Se}(^{16}\text{O}, 4np)$ , $E=100$ MeV; measured prompt and delayed $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, $\gamma(\theta)$ , DCO ratios; $^{93}\text{Nb}$ ; deduced high-spin levels, $J$ , $\pi$ , isomer $T_{1/2}$ , configurations, $\gamma$ linear polarization. Deformed independent particle model calculations. JOUR JUPSA 76 114202   |

KEYNUMBERS AND KEYWORDS

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**A=93 (continued)**

- <sup>93</sup>Mo      2008SCZS      NUCLEAR REACTIONS <sup>92,94,96,98,100</sup>Mo( $\gamma, \gamma'$ ), ( $\gamma, n$ ), E<13.2 MeV; measured reaction products; <sup>92,94,96,98,100</sup>Mo; deduced  $\sigma$ , dipole-strength distributions. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P355,Schwengner
- 2010ER01      NUCLEAR REACTIONS <sup>92,94,96,98,100</sup>Mo( $\gamma, \gamma'$ ), E=bremsstrahlung spectrum with endpoints at 13.2 and 13.9 MeV; measured  $\gamma$  spectra,  $\gamma(\theta)$ , photon yields, photon strength functions. <sup>92,94,96,98,100</sup>Mo( $\gamma, n$ ), E<20 MeV bremsstrahlung spectrum; measured  $\gamma$  continuum spectra, activation yields, and  $\sigma$ ; deduced dipole strength functions, GDR. Comparisons with RIPL-2 database, Lorentzian parametrizations, and calculations using TALYS code. JOUR PRVCA 81 034319

**A=94**

- <sup>94</sup>Y            2010SE05      NUCLEAR REACTIONS <sup>90</sup>Zr( $n, \alpha$ ), ( $n, p$ ), ( $n, 2n$ ), ( $n, X$ )<sup>89m</sup>Y, <sup>91</sup>Zr( $n, n\alpha$ ), ( $n, p$ ), ( $n, X$ )<sup>90m</sup>Y, <sup>92</sup>Zr( $n, p$ ), ( $n, X$ )<sup>91m</sup>Y, <sup>94</sup>Zr( $n, \alpha$ ), ( $n, p$ ), ( $n, X$ )<sup>93</sup>Y, E=13.1-20.6 MeV; measured  $\sigma$  using activation method. Comparison with TALYS calculations. JOUR NUPAB 832 149
- <sup>94</sup>Zr            2008BEZH      NUCLEAR MOMENTS <sup>70</sup>Ge, <sup>68</sup>Zn, <sup>92,94</sup>Zr, <sup>36,38,40</sup>S, <sup>38,40,42</sup>Ar; measured hyperfine spectra, Doppler-shifted  $\gamma$ -spectra; deduced g factors. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P49,Benczer-Kolle
- 2008TAZG      NUCLEAR REACTIONS <sup>90,91,92,93,94,96</sup>Zr( $n, \gamma$ ), <sup>139</sup>La( $n, \gamma$ ), E=1 eV-1 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin; deduced average  $\sigma$ , capture kernels; calculated <sup>90,91,92,94,96</sup>Zr, <sup>139</sup>La average  $\sigma$ ; using n-TOF and JENDL-3.3 data. CONF Nice (Nucl Data for Sci and Technol) Proc,P1303
- 2008WEZW      RADIOACTIVITY <sup>66</sup>Ge; <sup>68</sup>Ge; <sup>94</sup>Zr; <sup>120</sup>Te; measured decay products; deduced B(E2), T<sub>1/2</sub>; <sup>140</sup>Nd; measured E $\gamma$ , I $\gamma(\theta)$ ,  $\gamma\gamma(\theta)$ -coin; deduced E, J,  $\pi$ , mixed-symmetry states. Results on CD only. CONF E.Lansing (NS2008),P23,Werner
- 2010UT01      NUCLEAR REACTIONS <sup>96</sup>Zr( $\gamma, n$ ), E=8.1-14 MeV; measured E $\gamma$ , I $\gamma$ , En, In,  $\sigma$ . Laser Compton-scattered (LCS) beam. Comparisons with previous data and with QRPA and Lorentzian model calculation. <sup>90,91,92,93,94,95,96</sup>Zr( $n, \gamma$ ), E=1 keV to 1 MeV; comparison of previous experimental cross sections with calculated values from Hartree-Fock-Bogoliubov (HFB) and quasiparticle random-phase approximation (QRPA). JOUR PRVCA 81 035801
- <sup>94</sup>Mo            2008PIZW      NUCLEAR REACTIONS <sup>94</sup>Mo( $e, e'$ ), E=70 MeV; measured reaction products;<sup>94</sup>Mo; deduced level energies, J,  $\pi$ ,  $\sigma(\theta)$ , form factors. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P325,Pietralla
- 2008SCZS      NUCLEAR REACTIONS <sup>92,94,96,98,100</sup>Mo( $\gamma, \gamma'$ ), ( $\gamma, n$ ), E<13.2 MeV; measured reaction products; <sup>92,94,96,98,100</sup>Mo; deduced  $\sigma$ , dipole-strength distributions. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P355,Schwengner

KEYNUMBERS AND KEYWORDS

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**A=94 (continued)**

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| 2010ER01                  | NUCLEAR REACTIONS <sup>92,94,96,98,100</sup> Mo( $\gamma$ , $\gamma'$ ), E=bremsstrahlung spectrum with endpoints at 13.2 and 13.9 MeV; measured $\gamma$ spectra, $\gamma(\theta)$ , photon yields, photon strength functions. <sup>92,94,96,98,100</sup> Mo( $\gamma$ , n), E<20 MeV bremsstrahlung spectrum; measured $\gamma$ continuum spectra, activation yields, and $\sigma$ ; deduced dipole strength functions, GDR. Comparisons with RIPL-2 database, Lorentzian parametrizations, and calculations using TALYS code. JOUR PRVCA 81 034319 |
| <sup>94</sup> Ru 2008CHZN | NUCLEAR REACTIONS <sup>40</sup> Ca( <sup>58</sup> Ni, 2p $\alpha$ ), E=240 MeV; <sup>40</sup> Ca( <sup>58</sup> Ni, 3p $\alpha$ ), E=240 MeV; <sup>40</sup> Ca( <sup>58</sup> Ni, 4p), E=240 MeV; measured E $\gamma$ , I $\gamma$ ( $\theta$ , t); deduced d $\sigma$ ( $\theta$ ), f-factors. Results on CD only. CONF E.Lansing (NS2008),P15,Chiara  |

**A=95**

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| <sup>95</sup> Zr 2008TAZG | NUCLEAR REACTIONS <sup>90,91,92,93,94,96</sup> Zr(n, $\gamma$ ), <sup>139</sup> La(n, $\gamma$ ), E=1 eV-1 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin; deduced average $\sigma$ , capture kernels; calculated <sup>90,91,92,94,96</sup> Zr, <sup>139</sup> La average $\sigma$ ; using n-TOF and JENDL-3.3 data. CONF Nice (Nucl Data for Sci and Technol) Proc,P1303   |
| 2010UT01                  | NUCLEAR REACTIONS <sup>96</sup> Zr( $\gamma$ , n), E=8.1-14 MeV; measured E $\gamma$ , I $\gamma$ , En, In, $\sigma$ . Laser Compton-scattered (LCS) beam. Comparisons with previous data and with QRPA and Lorentzian model calculation. <sup>90,91,92,93,94,95,96</sup> Zr(n, $\gamma$ ), E=1 keV to 1 MeV; comparison of previous experimental cross sections with calculated values from Hartree-Fock-Bogoliubov (HFB) and quasiparticle random-phase approximation (QRPA). JOUR PRVCA 81 035801  |
| <sup>95</sup> Mo 2008SCZS | NUCLEAR REACTIONS <sup>92,94,96,98,100</sup> Mo( $\gamma$ , $\gamma'$ ), ( $\gamma$ , n), E<13.2 MeV; measured reaction products; <sup>92,94,96,98,100</sup> Mo; deduced $\sigma$ , dipole-strength distributions. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P355,Schwengner   |
| 2010ER01                  | NUCLEAR REACTIONS <sup>92,94,96,98,100</sup> Mo( $\gamma$ , $\gamma'$ ), E=bremsstrahlung spectrum with endpoints at 13.2 and 13.9 MeV; measured $\gamma$ spectra, $\gamma(\theta)$ , photon yields, photon strength functions. <sup>92,94,96,98,100</sup> Mo( $\gamma$ , n), E<20 MeV bremsstrahlung spectrum; measured $\gamma$ continuum spectra, activation yields, and $\sigma$ ; deduced dipole strength functions, GDR. Comparisons with RIPL-2 database, Lorentzian parametrizations, and calculations using TALYS code. JOUR PRVCA 81 034319 |

**A=96**

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| <sup>96</sup> Zr 2010UT01 | NUCLEAR REACTIONS <sup>96</sup> Zr( $\gamma$ , n), E=8.1-14 MeV; measured E $\gamma$ , I $\gamma$ , En, In, $\sigma$ . Laser Compton-scattered (LCS) beam. Comparisons with previous data and with QRPA and Lorentzian model calculation. <sup>90,91,92,93,94,95,96</sup> Zr(n, $\gamma$ ), E=1 keV to 1 MeV; comparison of previous experimental cross sections with calculated values from Hartree-Fock-Bogoliubov (HFB) and quasiparticle random-phase approximation (QRPA). JOUR PRVCA 81 035801 |
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KEYNUMBERS AND KEYWORDS

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**A=96 (continued)**

<sup>96</sup> Mo	2008SCZS	NUCLEAR REACTIONS <sup>92,94,96,98,100</sup> Mo( $\gamma, \gamma'$ ), ( $\gamma, n$ ), E<13.2 MeV; measured reaction products; <sup>92,94,96,98,100</sup> Mo; deduced $\sigma$ , dipole-strength distributions. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P355,Schwengner
	2009BE50	RADIOACTIVITY <sup>96</sup> Ru( $2\beta^+$ ), ( $\beta^+EC$ ), ( $2EC$ ); <sup>104</sup> Ru( $2\beta^-$ ); measured E $\gamma$ , I $\gamma$ ; deduced T <sub>1/2</sub> lower limits for various 2 $\beta$ -decay modes, including neutrino-less. HPGe detector at the Gran Sasso National Laboratories. JOUR ZAANE 42 171
	2010ER01	NUCLEAR REACTIONS <sup>92,94,96,98,100</sup> Mo( $\gamma, \gamma'$ ), E=bremsstrahlung spectrum with endpoints at 13.2 and 13.9 MeV; measured $\gamma$ spectra, $\gamma(\theta)$ , photon yields, photon strength functions. <sup>92,94,96,98,100</sup> Mo( $\gamma, n$ ), E<20 MeV bremsstrahlung spectrum; measured $\gamma$ continuum spectra, activation yields, and $\sigma$ ; deduced dipole strength functions, GDR. Comparisons with RIPL-2 database, Lorentzian parametrizations, and calculations using TALYS code. JOUR PRVCA 81 034319
	2010KR05	RADIOACTIVITY <sup>96</sup> Tc( $\beta^+$ ), ( $EC$ )[from <sup>96</sup> Ru( $n, p$ )]; <sup>97</sup> Ru( $\beta^+$ ), ( $EC$ )[from <sup>96</sup> Ru( $n, \gamma$ ), E<1 eV]; <sup>103,105</sup> Ru( $\beta^-$ )[from <sup>102,104</sup> Ru( $n, \gamma$ ), E<1 keV]; <sup>105</sup> Rh( $\beta^-$ )[from <sup>105</sup> Ru( $\beta^-$ )]; measured E $\gamma$ , I $\gamma$ ; deduced I $\beta$ , I $\varepsilon$ , logft; <sup>96</sup> Mo, <sup>97</sup> Tc, <sup>103,105</sup> Rh, <sup>105</sup> Pd; deduced levels. Comparison with previous studies and evaluated data. JOUR PRVCA 81 044310
<sup>96</sup> Tc	2010KR05	RADIOACTIVITY <sup>96</sup> Tc( $\beta^+$ ), ( $EC$ )[from <sup>96</sup> Ru( $n, p$ )]; <sup>97</sup> Ru( $\beta^+$ ), ( $EC$ )[from <sup>96</sup> Ru( $n, \gamma$ ), E<1 eV]; <sup>103,105</sup> Ru( $\beta^-$ )[from <sup>102,104</sup> Ru( $n, \gamma$ ), E<1 keV]; <sup>105</sup> Rh( $\beta^-$ )[from <sup>105</sup> Ru( $\beta^-$ )]; measured E $\gamma$ , I $\gamma$ ; deduced I $\beta$ , I $\varepsilon$ , logft; <sup>96</sup> Mo, <sup>97</sup> Tc, <sup>103,105</sup> Rh, <sup>105</sup> Pd; deduced levels. Comparison with previous studies and evaluated data. JOUR PRVCA 81 044310
<sup>96</sup> Ru	2009BE50	RADIOACTIVITY <sup>96</sup> Ru( $2\beta^+$ ), ( $\beta^+EC$ ), ( $2EC$ ); <sup>104</sup> Ru( $2\beta^-$ ); measured E $\gamma$ , I $\gamma$ ; deduced T <sub>1/2</sub> lower limits for various 2 $\beta$ -decay modes, including neutrino-less. HPGe detector at the Gran Sasso National Laboratories. JOUR ZAANE 42 171
<sup>96</sup> Cd	2008MOZO	RADIOACTIVITY <sup>96</sup> Cd; <sup>98</sup> In; <sup>100</sup> Sn [from RF fragment separator]; measured I $\beta$ (t), E $\gamma$ , I $\gamma$ ; deduced T <sub>1/2</sub> ; <sup>98</sup> In isomer decay. Compared to other data. Results on CD only. CONF E.Lansing (NS2008),P2,Montes

**A=97**

<sup>97</sup> Zr	2008TAZG	NUCLEAR REACTIONS <sup>90,91,92,93,94,96</sup> Zr( $n, \gamma$ ), <sup>139</sup> La( $n, \gamma$ ), E=1 eV-1 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin; deduced average $\sigma$ , capture kernels; calculated <sup>90,91,92,94,96</sup> Zr, <sup>139</sup> La average $\sigma$ ; using n-TOF and JENDL-3.3 data. CONF Nice (Nucl Data for Sci and Technol) Proc,P1303
	2010UT01	NUCLEAR REACTIONS <sup>96</sup> Zr( $\gamma, n$ ), E=8.1-14 MeV; measured E $\gamma$ , I $\gamma$ , En, In, $\sigma$ . Laser Compton-scattered (LCS) beam. Comparisons with previous data and with QRPA and Lorentzian model calculation. <sup>90,91,92,93,94,95,96</sup> Zr( $n, \gamma$ ), E=1 keV to 1 MeV; comparison of previous experimental cross sections with calculated values from Hartree-Fock-Bogoliubov (HFB) and quasiparticle random-phase approximation (QRPA). JOUR PRVCA 81 035801

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**A=97 (continued)**

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| <sup>97</sup> Mo | 2008SCZS | NUCLEAR REACTIONS <sup>92,94,96,98,100</sup> Mo( $\gamma$ , $\gamma'$ ), ( $\gamma$ , n), E<13.2 MeV; measured reaction products; <sup>92,94,96,98,100</sup> Mo; deduced $\sigma$ , dipole-strength distributions. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P355,Schwengner  |
|                  | 2010ER01 | NUCLEAR REACTIONS <sup>92,94,96,98,100</sup> Mo( $\gamma$ , $\gamma'$ ), E=bremsstrahlung spectrum with endpoints at 13.2 and 13.9 MeV; measured $\gamma$ spectra, $\gamma(\theta)$ , photon yields, photon strength functions. <sup>92,94,96,98,100</sup> Mo( $\gamma$ , n), E<20 MeV bremsstrahlung spectrum; measured $\gamma$ continuum spectra, activation yields, and $\sigma$ ; deduced dipole strength functions, GDR. Comparisons with RIPL-2 database, Lorentzian parametrizations, and calculations using TALYS code. JOUR PRVCA 81 034319                          |
| <sup>97</sup> Tc | 2010FOZZ | NUCLEAR REACTIONS <sup>93</sup> Nb( <sup>12</sup> C, <sup>8</sup> Be), E=400 MeV; <sup>197</sup> Au( <sup>12</sup> C, <sup>8</sup> Be), E=400 MeV; measured $E\alpha$ , $I\alpha(\theta)$ , E(particle), I(particle), $\alpha\alpha$ -coin, (particle) $\alpha$ -coin; deduced $d\sigma$ , $d\sigma(\theta)$ , quasi-elastic <sup>8</sup> Be breakup. CONF Varenna (Nucl Reaction Mechanisms),Proc,Vol.2,P545  |
|                  | 2010HA12 | RADIOACTIVITY <sup>198</sup> Au( $\beta^-$ ), <sup>97</sup> Ru(EC) [from <sup>197</sup> Au, Ru(n, $\gamma$ )]; measured $E\gamma$ , $I\gamma$ ; deduced $T_{1/2}$ , lack of temperature-dependent effects at low temperatures. JOUR ARISE 68 1550  |
|                  | 2010KR05 | RADIOACTIVITY <sup>96</sup> Tc( $\beta^+$ ), (EC)[from <sup>96</sup> Ru(n, p)]; <sup>97</sup> Ru( $\beta^+$ ), (EC)[from <sup>96</sup> Ru(n, $\gamma$ ), E<1 eV]; <sup>103,105</sup> Ru( $\beta^-$ )[from <sup>102,104</sup> Ru(n, $\gamma$ ), E<1 keV]; <sup>105</sup> Rh( $\beta^-$ )[from <sup>105</sup> Ru( $\beta^-$ )]; measured $E\gamma$ , $I\gamma$ ; deduced $I\beta$ , $I\epsilon$ , logft; <sup>96</sup> Mo, <sup>97</sup> Tc, <sup>103,105</sup> Rh, <sup>105</sup> Pd; deduced levels. Comparison with previous studies and evaluated data. JOUR PRVCA 81 044310 |
| <sup>97</sup> Ru | 2010HA12 | RADIOACTIVITY <sup>198</sup> Au( $\beta^-$ ), <sup>97</sup> Ru(EC) [from <sup>197</sup> Au, Ru(n, $\gamma$ )]; measured $E\gamma$ , $I\gamma$ ; deduced $T_{1/2}$ , lack of temperature-dependent effects at low temperatures. JOUR ARISE 68 1550  |
|                  | 2010KR05 | RADIOACTIVITY <sup>96</sup> Tc( $\beta^+$ ), (EC)[from <sup>96</sup> Ru(n, p)]; <sup>97</sup> Ru( $\beta^+$ ), (EC)[from <sup>96</sup> Ru(n, $\gamma$ ), E<1 eV]; <sup>103,105</sup> Ru( $\beta^-$ )[from <sup>102,104</sup> Ru(n, $\gamma$ ), E<1 keV]; <sup>105</sup> Rh( $\beta^-$ )[from <sup>105</sup> Ru( $\beta^-$ )]; measured $E\gamma$ , $I\gamma$ ; deduced $I\beta$ , $I\epsilon$ , logft; <sup>96</sup> Mo, <sup>97</sup> Tc, <sup>103,105</sup> Rh, <sup>105</sup> Pd; deduced levels. Comparison with previous studies and evaluated data. JOUR PRVCA 81 044310 |
|                  | 2010KR05 | NUCLEAR REACTIONS <sup>96,102,104</sup> Ru(n, $\gamma$ ), E=thermal and epithermal; measured $E\gamma$ , $I\gamma$ , cross sections and resonance integrals by activation method. Comparison with previous studies. JOUR PRVCA 81 044310   |

**A=98**

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| <sup>98</sup> Mo | 2008SCZS | NUCLEAR REACTIONS <sup>92,94,96,98,100</sup> Mo( $\gamma$ , $\gamma'$ ), ( $\gamma$ , n), E<13.2 MeV; measured reaction products; <sup>92,94,96,98,100</sup> Mo; deduced $\sigma$ , dipole-strength distributions. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P355,Schwengner |
|                  | 2008STZT | RADIOACTIVITY <sup>98</sup> Mo, <sup>72,76</sup> Ge; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin; deduced attenuation, g-factor. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P379   |

KEYNUMBERS AND KEYWORDS

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**A=98 (continued)**

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| 2010ER01                  | NUCLEAR REACTIONS $^{92,94,96,98,100}\text{Mo}(\gamma, \gamma')$ , E=bremsstrahlung spectrum with endpoints at 13.2 and 13.9 MeV; measured $\gamma$ spectra, $\gamma(\theta)$ , photon yields, photon strength functions. $^{92,94,96,98,100}\text{Mo}(\gamma, n)$ , E<20 MeV bremsstrahlung spectrum; measured $\gamma$ continuum spectra, activation yields, and $\sigma$ ; deduced dipole strength functions, GDR. Comparisons with RIPL-2 database, Lorentzian parametrizations, and calculations using TALYS code. JOUR PRVCA 81 034319 |
| $^{98}\text{In}$ 2008MOZO | RADIOACTIVITY $^{96}\text{Cd}$ ; $^{98}\text{In}$ ; $^{100}\text{Sn}$ [from RF fragment separator]; measured $I\beta(t)$ , $E\gamma$ , $I\gamma$ ; deduced $T_{1/2}$ ; $^{98}\text{In}$ isomer decay. Compared to other data. Results on CD only. CONF E.Lansing (NS2008),P2,Montes  |

**A=99**

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| $^{99}\text{Mo}$ 2008SCZS | NUCLEAR REACTIONS $^{92,94,96,98,100}\text{Mo}(\gamma, \gamma')$ , $(\gamma, n)$ , E<13.2 MeV; measured reaction products; $^{92,94,96,98,100}\text{Mo}$ ; deduced $\sigma$ , dipole-strength distributions. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P355,Schwengner  |
| 2010EL02                  | NUCLEAR REACTIONS $^{98}\text{Mo}$ , $^{186}\text{W}$ , $^{197}\text{Au}(n, \gamma)$ , E=thermal; measured $E\gamma$ , $I\gamma$ ; deduced neutron flux, $\sigma$ , resonance integrals. Comparison with available data. JOUR JRNCD 284 321  |
| 2010ER01                  | NUCLEAR REACTIONS $^{92,94,96,98,100}\text{Mo}(\gamma, \gamma')$ , E=bremsstrahlung spectrum with endpoints at 13.2 and 13.9 MeV; measured $\gamma$ spectra, $\gamma(\theta)$ , photon yields, photon strength functions. $^{92,94,96,98,100}\text{Mo}(\gamma, n)$ , E<20 MeV bremsstrahlung spectrum; measured $\gamma$ continuum spectra, activation yields, and $\sigma$ ; deduced dipole strength functions, GDR. Comparisons with RIPL-2 database, Lorentzian parametrizations, and calculations using TALYS code. JOUR PRVCA 81 034319 |

**A=100**

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| $^{100}\text{Mo}$ 2008SCZS | NUCLEAR REACTIONS $^{92,94,96,98,100}\text{Mo}(\gamma, \gamma')$ , $(\gamma, n)$ , E<13.2 MeV; measured reaction products; $^{92,94,96,98,100}\text{Mo}$ ; deduced $\sigma$ , dipole-strength distributions. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P355,Schwengner  |
| 2010ER01                   | NUCLEAR REACTIONS $^{92,94,96,98,100}\text{Mo}(\gamma, \gamma')$ , E=bremsstrahlung spectrum with endpoints at 13.2 and 13.9 MeV; measured $\gamma$ spectra, $\gamma(\theta)$ , photon yields, photon strength functions. $^{92,94,96,98,100}\text{Mo}(\gamma, n)$ , E<20 MeV bremsstrahlung spectrum; measured $\gamma$ continuum spectra, activation yields, and $\sigma$ ; deduced dipole strength functions, GDR. Comparisons with RIPL-2 database, Lorentzian parametrizations, and calculations using TALYS code. JOUR PRVCA 81 034319 |
| $^{100}\text{Rh}$ 2010KH02 | NUCLEAR REACTIONS $\text{Pd}(p, X)^{105}\text{Ag} / ^{106}\text{Ag} / ^{100}\text{Pd} / ^{101}\text{Pd} / ^{100}\text{Rh} / ^{101}\text{Rh} / ^{105}\text{Rh}$ , E<40 MeV; measured $E\gamma$ , $I\gamma$ ; deduced $\sigma$ . Comparison with experimental data, TALYS and ALICE-IPPE codes. JOUR NIMBE 268 2303  |

KEYNUMBERS AND KEYWORDS

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**A=100 (continued)**

$^{100}\text{Pd}$	2010KH02	NUCLEAR REACTIONS $\text{Pd}(p, X)^{105}\text{Ag} / ^{106}\text{Ag} / ^{100}\text{Pd} / ^{101}\text{Pd} / ^{100}\text{Rh} / ^{101}\text{Rh} / ^{105}\text{Rh}$ , $E < 40$ MeV; measured $E\gamma$ , $I\gamma$ ; deduced $\sigma$ . Comparison with experimental data, TALYS and ALICE-IPPE codes. JOUR NIMBE 268 2303
$^{100}\text{Sn}$	2008MOZO	RADIOACTIVITY $^{96}\text{Cd}$ ; $^{98}\text{In}$ ; $^{100}\text{Sn}$ [from RF fragment separator]; measured $I\beta(t)$ , $E\gamma$ , $I\gamma$ ; deduced $T_{1/2}$ ; $^{98}\text{In}$ isomer decay. Compared to other data. Results on CD only. CONF E.Lansing (NS2008),P2,Montes

**A=101**

$^{101}\text{Tc}$	2009Y011	RADIOACTIVITY $^{101}\text{Tc}(\beta^-)$ [from $^{100}\text{Mo}(n, \gamma)^{101}\text{Mo}(\beta^-)$ ]; measured $E\gamma$ , $I\gamma$ ; deduced $T_{1/2}$ , chemical separation of Tc and Mo fraction. JOUR HHHHD 31 193
$^{101}\text{Ru}$	2009Y011	RADIOACTIVITY $^{101}\text{Tc}(\beta^-)$ [from $^{100}\text{Mo}(n, \gamma)^{101}\text{Mo}(\beta^-)$ ]; measured $E\gamma$ , $I\gamma$ ; deduced $T_{1/2}$ , chemical separation of Tc and Mo fraction. JOUR HHHHD 31 193
$^{101}\text{Rh}$	2008SKZX	NUCLEAR REACTIONS $^{101}\text{Ru}(^3\text{He}, x)^{101}\text{Rh}$ , $E \approx 12-34$ MeV; $^{101}\text{Ru}(^3\text{He}, x)^{102}\text{Rh}$ , $E \approx 12-34$ MeV; $^{102}\text{Ru}(^3\text{He}, x)^{101}\text{Rh}$ , $E \approx 18-34$ MeV; $^{102}\text{Ru}(^3\text{He}, x)^{102}\text{Rh}$ , $E \approx 17-34$ MeV; measured $E\gamma$ , $I\gamma$ ; deduced $\sigma$ , thick target yield. CONF Nice (Nucl Data for Sci and Technol) Proc,P1379
	2010KH02	NUCLEAR REACTIONS $\text{Pd}(p, X)^{105}\text{Ag} / ^{106}\text{Ag} / ^{100}\text{Pd} / ^{101}\text{Pd} / ^{100}\text{Rh} / ^{101}\text{Rh} / ^{105}\text{Rh}$ , $E < 40$ MeV; measured $E\gamma$ , $I\gamma$ ; deduced $\sigma$ . Comparison with experimental data, TALYS and ALICE-IPPE codes. JOUR NIMBE 268 2303
$^{101}\text{Pd}$	2010KH02	NUCLEAR REACTIONS $\text{Pd}(p, X)^{105}\text{Ag} / ^{106}\text{Ag} / ^{100}\text{Pd} / ^{101}\text{Pd} / ^{100}\text{Rh} / ^{101}\text{Rh} / ^{105}\text{Rh}$ , $E < 40$ MeV; measured $E\gamma$ , $I\gamma$ ; deduced $\sigma$ . Comparison with experimental data, TALYS and ALICE-IPPE codes. JOUR NIMBE 268 2303
$^{101}\text{Sn}$	2008DAZS	RADIOACTIVITY $^{109}\text{Xe}(\alpha)$ [from $^{54}\text{Fe} + ^{58}\text{Ni} \rightarrow ^{112}\text{Xe} \rightarrow ^{109}\text{Xe} + 3n$ ]; $^{105}\text{Te}(\alpha)$ ; measured $E\gamma$ , $I\gamma$ , $I\alpha$ ; deduced $^{101}\text{Sn}$ E, J, $\pi$ ; calculated $E(d_{5/2})$ , $E(g_{7/2})$ using shell model. Decay chain compared to that of $^{111}\text{Xe} \rightarrow ^{107}\text{Te} \rightarrow ^{103}\text{Sn}$ from other papers. Results on CD only. CONF E.Lansing (NS2008),P3,Darby

**A=102**

$^{102}\text{Rh}$	2008SKZX	NUCLEAR REACTIONS $^{101}\text{Ru}(^3\text{He}, x)^{101}\text{Rh}$ , $E \approx 12-34$ MeV; $^{101}\text{Ru}(^3\text{He}, x)^{102}\text{Rh}$ , $E \approx 12-34$ MeV; $^{102}\text{Ru}(^3\text{He}, x)^{101}\text{Rh}$ , $E \approx 18-34$ MeV; $^{102}\text{Ru}(^3\text{He}, x)^{102}\text{Rh}$ , $E \approx 17-34$ MeV; measured $E\gamma$ , $I\gamma$ ; deduced $\sigma$ , thick target yield. CONF Nice (Nucl Data for Sci and Technol) Proc,P1379
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KEYNUMBERS AND KEYWORDS

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**A=103**

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| $^{103}\text{Ru}$ | 2010KR05 | RADIOACTIVITY $^{96}\text{Tc}(\beta^+)$ , (EC)[from $^{96}\text{Ru}(\text{n}, \text{p})$ ]; $^{97}\text{Ru}(\beta^+)$ , (EC)[from $^{96}\text{Ru}(\text{n}, \gamma)$ , $E < 1$ eV]; $^{103,105}\text{Ru}(\beta^-)$ [from $^{102,104}\text{Ru}(\text{n}, \gamma)$ , $E < 1$ keV]; $^{105}\text{Rh}(\beta^-)$ [from $^{105}\text{Ru}(\beta^-)$ ]; measured $E\gamma$ , $I\gamma$ ; deduced $I\beta$ , $I\epsilon$ , $\log ft$ ; $^{96}\text{Mo}$ , $^{97}\text{Tc}$ , $^{103,105}\text{Rh}$ , $^{105}\text{Pd}$ ; deduced levels. Comparison with previous studies and evaluated data. JOUR PRVCA 81 044310   |
|                   | 2010KR05 | NUCLEAR REACTIONS $^{96,102,104}\text{Ru}(\text{n}, \gamma)$ , $E = \text{thermal}$ and epithermal; measured $E\gamma$ , $I\gamma$ , cross sections and resonance integrals by activation method. Comparison with previous studies. JOUR PRVCA 81 044310  |
| $^{103}\text{Rh}$ | 2010KR05 | RADIOACTIVITY $^{96}\text{Tc}(\beta^+)$ , (EC)[from $^{96}\text{Ru}(\text{n}, \text{p})$ ]; $^{97}\text{Ru}(\beta^+)$ , (EC)[from $^{96}\text{Ru}(\text{n}, \gamma)$ , $E < 1$ eV]; $^{103,105}\text{Ru}(\beta^-)$ [from $^{102,104}\text{Ru}(\text{n}, \gamma)$ , $E < 1$ keV]; $^{105}\text{Rh}(\beta^-)$ [from $^{105}\text{Ru}(\beta^-)$ ]; measured $E\gamma$ , $I\gamma$ ; deduced $I\beta$ , $I\epsilon$ , $\log ft$ ; $^{96}\text{Mo}$ , $^{97}\text{Tc}$ , $^{103,105}\text{Rh}$ , $^{105}\text{Pd}$ ; deduced levels. Comparison with previous studies and evaluated data. JOUR PRVCA 81 044310   |
| $^{103}\text{Pd}$ | 2008MEZV | NUCLEAR REACTIONS $^{209}\text{Bi}(\alpha, \text{x})$ , $E = 28.8, 32.8$ MeV; measured $E\gamma$ , $I\gamma$ , $E\alpha$ , $I\alpha$ ; $^{186}\text{W}(\text{p}, \text{n})$ , $E = 7-15$ MeV; deduced $\sigma$ ; calculated $\sigma$ ; $\text{Zn}(\text{d}, \text{x})^{61}\text{Cu}$ , $E \approx 3-19$ MeV; $\text{Zn}(\text{d}, \text{x})^{64}\text{Cu}$ , $E \approx 3-19$ MeV; $\text{Zn}(\text{d}, \text{x})^{66}\text{Ga}$ , $E \approx 3-19$ MeV; $\text{Zn}(\text{d}, \text{x})^{67}\text{Ga}$ , $E \approx 3-19$ MeV; $\text{Zn}(\text{d}, \text{x})^{65}\text{Zn}$ , $E \approx 3-19$ MeV; $\text{Zn}(\text{d}, \text{x})^{69}\text{Zn}$ , $E \approx 3-19$ MeV; measured $E\gamma$ , $I\gamma$ ; deduced thin target yields; $^{103}\text{Rh}(\text{d}, 2\text{n})$ , $E \approx 3-20$ MeV; $^{232}\text{Th}(\text{p}, 3\text{n})$ , $E \approx 13-31$ MeV; calculated $\sigma$ . Calculations using EMPIRE II; compared to available data. CONF Nice (Nucl Data for Sci and Technol) Proc,P1403 |

**A=104**

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| $^{104}\text{Ru}$ | 2009BE50 | RADIOACTIVITY $^{96}\text{Ru}(2\beta^+)$ , $(\beta^+ \text{EC})$ , $(2\text{EC})$ ; $^{104}\text{Ru}(2\beta^-)$ ; measured $E\gamma$ , $I\gamma$ ; deduced $T_{1/2}$ lower limits for various $2\beta$ -decay modes, including neutrino-less. HPGe detector at the Gran Sasso National Laboratories. JOUR ZAANE 42 171  |
| $^{104}\text{Pd}$ | 2008STZP | NUCLEAR REACTIONS $^{120}\text{Sn}(^{67}\text{Cu}, ^{67}\text{Cu}')$ , $E = 2.99$ MeV / nucleon; $^{120}\text{Sn}(^{69}\text{Cu}, ^{67}\text{Cu}')$ , $E = 2.99$ MeV / nucleon; $^{120}\text{Sn}(^{71}\text{Cu}, ^{67}\text{Cu}')$ , $E = 2.99$ MeV / nucleon; $^{120}\text{Sn}(^{73}\text{Cu}, ^{67}\text{Cu}')$ , $E = 2.99$ MeV / nucleon; $^{104}\text{Pd}(^{67}\text{Cu}, ^{67}\text{Cu}')$ , $E = 2.99$ MeV / nucleon; $^{104}\text{Pd}(^{69}\text{Cu}, ^{67}\text{Cu}')$ , $E = 2.99$ MeV / nucleon; $^{104}\text{Pd}(^{71}\text{Cu}, ^{67}\text{Cu}')$ , $E = 2.99$ MeV / nucleon; $^{104}\text{Pd}(^{73}\text{Cu}, ^{67}\text{Cu}')$ , $E = 2.99$ MeV / nucleon; measured Cu Coulomb excitation $E\gamma$ , $I\gamma(\theta)$ , $\gamma\gamma$ -coin; deduced $E$ , $J$ , $\pi$ , $B(E2)$ . CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P671 |
|                   | 2009BE50 | RADIOACTIVITY $^{96}\text{Ru}(2\beta^+)$ , $(\beta^+ \text{EC})$ , $(2\text{EC})$ ; $^{104}\text{Ru}(2\beta^-)$ ; measured $E\gamma$ , $I\gamma$ ; deduced $T_{1/2}$ lower limits for various $2\beta$ -decay modes, including neutrino-less. HPGe detector at the Gran Sasso National Laboratories. JOUR ZAANE 42 171  |
|                   | 2010G008 | RADIOACTIVITY $^{104}\text{Ag}(\text{EC})$ , $(\beta^+)$ [from $^{104}\text{Cd}(\text{EC})$ , $(\beta^+)$ formed in $\text{Sn}(\text{p}, \text{X})$ , $E = 1.4$ GeV]; measured $E\gamma$ , $I\gamma$ , $E\beta$ , $I\beta$ , $\gamma(\theta)$ . JOUR PRVCA 81 054323  |

KEYNUMBERS AND KEYWORDS

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**A=104 (continued)**

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| $^{104}\text{Ag}$ | 2010G008 | NUCLEAR MOMENTS $^{104m}\text{Ag}$ ; measured resonance frequencies and magnetic moment by nuclear magnetic resonance on oriented nuclei at ISOLDE / CERN. deduced hyperfine field of Ag impurities in Fe. $\beta$ -NMR / ON method. Comparison with magnetic moments of $^{102,104,106,108,110}\text{Ag}$ and shell model calculations. JOUR PRVCA 81 054323   |
|                   | 2010G008 | RADIOACTIVITY $^{104}\text{Ag}(\text{EC})$ , $(\beta^+)$ [from $^{104}\text{Cd}(\text{EC})$ , $(\beta^+)$ formed in $\text{Sn}(\text{p}, \text{X})$ , $E=1.4\text{GeV}$ ]; measured $E\gamma$ , $I\gamma$ , $E\beta$ , $I\beta$ , $\gamma(\theta)$ . JOUR PRVCA 81 054323   |
| $^{104}\text{Cd}$ | 2010ID01 | NUCLEAR REACTIONS $^{58}\text{Ni}(^{52}\text{Cr}, 3\text{p})$ , $E=187\text{ MeV}$ ; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -, (recoil) $\gamma$ -coin, $\gamma(\theta)$ using the JUROGAM array. $^{107}\text{In}$ ; deduced levels, $J$ , $\pi$ , multipolarity, mixing ratios, M1 band and a smooth-terminating band, dynamical moments of inertia, and configurations. Calculated potential energy surfaces. Comparisons with total Routhian surface and cranked Nilsson-Strutinsky calculations, and with systematics of rotational band structures in $^{105}\text{Ag}$ , $^{106}\text{Cd}$ , $^{108}\text{Sn}$ , $^{109}\text{Sb}$ , $^{110}\text{Te}$ and $^{111}\text{I}$ . $^{104}\text{Cd}$ , $^{106}\text{In}$ , $^{107}\text{Sn}$ ; measured $E\gamma$ . JOUR PRVCA 81 034303 |

**A=105**

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| $^{105}\text{Mo}$ | 2008SIZS | RADIOACTIVITY $^{136}\text{Sb}(\beta^-)$ [from $^{241}\text{Pu}(\text{n}, \text{f})$ , $E=\text{thermal}$ ]; measured delayed $E\gamma$ , $I\gamma$ , $E(\text{ce})$ , x-rays; deduced $E$ , $J$ , $\pi$ , $B(E2)$ ; $^{105,107}\text{Mo}$ , $^{107}\text{Tc}(\beta^-)$ [from $^{248}\text{Cm}(\text{SF})$ ]; measured $E\gamma$ , $I\gamma$ , $E(\text{ce})$ ; deduced $E$ , $J$ , $\pi$ , isomer decay, bands; calculated $E$ , $J$ , $\pi$ , isomeric transition using standard BCS. The Sb data compared to calculations of Corragio. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P71                           |
| $^{105}\text{Tc}$ | 2008SIZS | RADIOACTIVITY $^{136}\text{Sb}(\beta^-)$ [from $^{241}\text{Pu}(\text{n}, \text{f})$ , $E=\text{thermal}$ ]; measured delayed $E\gamma$ , $I\gamma$ , $E(\text{ce})$ , x-rays; deduced $E$ , $J$ , $\pi$ , $B(E2)$ ; $^{105,107}\text{Mo}$ , $^{107}\text{Tc}(\beta^-)$ [from $^{248}\text{Cm}(\text{SF})$ ]; measured $E\gamma$ , $I\gamma$ , $E(\text{ce})$ ; deduced $E$ , $J$ , $\pi$ , isomer decay, bands; calculated $E$ , $J$ , $\pi$ , isomeric transition using standard BCS. The Sb data compared to calculations of Corragio. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P71                           |
|                   | 2010LU02 | RADIOACTIVITY $^{252}\text{Cf}(\text{SF})$ ; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, $\gamma\gamma(\theta)$ using Gammasphere. $^{141,144}\text{Cs}$ ; deduced levels, $J$ , $p$ , conversion coefficients, multipolarities, bands, parity doublets, simplex structure, $B(E1)$ / $B(E2)$ , dipole moment. Comparison with level structure of $^{143}\text{Cs}$ and with systematics of adjacent $N=85-92$ nuclei. $^{105,106,107,108}\text{Tc}$ ; measured $E\gamma$ . JOUR NUPAB 838 1   |
| $^{105}\text{Ru}$ | 2010KR05 | RADIOACTIVITY $^{96}\text{Tc}(\beta^+)$ , $(\text{EC})$ [from $^{96}\text{Ru}(\text{n}, \text{p})$ ]; $^{97}\text{Ru}(\beta^+)$ , $(\text{EC})$ [from $^{96}\text{Ru}(\text{n}, \gamma)$ , $E<1\text{ eV}$ ]; $^{103,105}\text{Ru}(\beta^-)$ [from $^{102,104}\text{Ru}(\text{n}, \gamma)$ , $E<1\text{ keV}$ ]; $^{105}\text{Rh}(\beta^-)$ [from $^{105}\text{Ru}(\beta^-)$ ]; measured $E\gamma$ , $I\gamma$ ; deduced $I\beta$ , $I\epsilon$ , $\log ft$ ; $^{96}\text{Mo}$ , $^{97}\text{Tc}$ , $^{103,105}\text{Rh}$ , $^{105}\text{Pd}$ ; deduced levels. Comparison with previous studies and evaluated data. JOUR PRVCA 81 044310 |

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**A=105 (continued)**

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|                   | 2010KR05 | NUCLEAR REACTIONS $^{96,102,104}\text{Ru}(n, \gamma)$ , E=thermal and epithermal; measured $E\gamma$ , $I\gamma$ , cross sections and resonance integrals by activation method. Comparison with previous studies. JOUR PRVCA 81 044310   |
| $^{105}\text{Rh}$ | 2010KH02 | NUCLEAR REACTIONS $\text{Pd}(p, X)^{105}\text{Ag} / ^{106}\text{Ag} / ^{100}\text{Pd} / ^{101}\text{Pd} / ^{100}\text{Rh} / ^{101}\text{Rh} / ^{105}\text{Rh}$ , $E < 40$ MeV; measured $E\gamma$ , $I\gamma$ ; deduced $\sigma$ . Comparison with experimental data, TALYS and ALICE-IPPE codes. JOUR NIMBE 268 2303  |
|                   | 2010KR05 | RADIOACTIVITY $^{96}\text{Tc}(\beta^+)$ , (EC)[from $^{96}\text{Ru}(n, p)$ ]; $^{97}\text{Ru}(\beta^+)$ , (EC)[from $^{96}\text{Ru}(n, \gamma)$ , $E < 1$ eV]; $^{103,105}\text{Ru}(\beta^-)$ [from $^{102,104}\text{Ru}(n, \gamma)$ , $E < 1$ keV]; $^{105}\text{Rh}(\beta^-)$ [from $^{105}\text{Ru}(\beta^-)$ ]; measured $E\gamma$ , $I\gamma$ ; deduced $I\beta$ , $I\epsilon$ , logft; $^{96}\text{Mo}$ , $^{97}\text{Tc}$ , $^{103,105}\text{Rh}$ , $^{105}\text{Pd}$ ; deduced levels. Comparison with previous studies and evaluated data. JOUR PRVCA 81 044310 |
| $^{105}\text{Pd}$ | 2010KR05 | RADIOACTIVITY $^{96}\text{Tc}(\beta^+)$ , (EC)[from $^{96}\text{Ru}(n, p)$ ]; $^{97}\text{Ru}(\beta^+)$ , (EC)[from $^{96}\text{Ru}(n, \gamma)$ , $E < 1$ eV]; $^{103,105}\text{Ru}(\beta^-)$ [from $^{102,104}\text{Ru}(n, \gamma)$ , $E < 1$ keV]; $^{105}\text{Rh}(\beta^-)$ [from $^{105}\text{Ru}(\beta^-)$ ]; measured $E\gamma$ , $I\gamma$ ; deduced $I\beta$ , $I\epsilon$ , logft; $^{96}\text{Mo}$ , $^{97}\text{Tc}$ , $^{103,105}\text{Rh}$ , $^{105}\text{Pd}$ ; deduced levels. Comparison with previous studies and evaluated data. JOUR PRVCA 81 044310 |
| $^{105}\text{Ag}$ | 2010KH02 | NUCLEAR REACTIONS $\text{Pd}(p, X)^{105}\text{Ag} / ^{106}\text{Ag} / ^{100}\text{Pd} / ^{101}\text{Pd} / ^{100}\text{Rh} / ^{101}\text{Rh} / ^{105}\text{Rh}$ , $E < 40$ MeV; measured $E\gamma$ , $I\gamma$ ; deduced $\sigma$ . Comparison with experimental data, TALYS and ALICE-IPPE codes. JOUR NIMBE 268 2303  |
| $^{105}\text{Te}$ | 2008DAZS | RADIOACTIVITY $^{109}\text{Xe}(\alpha)$ [from $^{54}\text{Fe} + ^{58}\text{Ni} \rightarrow ^{112}\text{Xe} \rightarrow ^{109}\text{Xe} + 3n$ ]; $^{105}\text{Te}(\alpha)$ ; measured $E\gamma$ , $I\gamma$ , $I\alpha$ ; deduced $^{101}\text{Sn}$ E, J, $\pi$ ; calculated $E(d_{5/2})$ , $E(g_{7/2})$ using shell model. Decay chain compared to that of $^{111}\text{Xe} \rightarrow ^{107}\text{Te} \rightarrow ^{103}\text{Sn}$ from other papers. Results on CD only. CONF E.Lansing (NS2008),P3,Darby   |

**A=106**

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| $^{106}\text{Mo}$ | 2008HAZH | RADIOACTIVITY $^{252}\text{Cf}(\text{SF})$ ; measured $E\gamma$ , $I\gamma$ , $\gamma\text{-}\gamma\text{-}\gamma\text{-}$ coin.; $^{108,110,112}\text{Ru}$ , $^{106}\text{Mo}$ ; deduced band structures, possible chiral doublets. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P387,Hamilton  |
| $^{106}\text{Tc}$ | 2010LI14 | RADIOACTIVITY $^{252}\text{Cf}(\text{SF})$ ; measured $E\gamma$ , $I\gamma$ , $\gamma\text{-}\gamma\text{-}$ coin, $\gamma\gamma(\theta)$ . $^{142}\text{Cs}$ ; deduced levels, J, $\pi$ , multipolarity, bands, B(E1), B(E2), electric dipole moments. $^{106,107}\text{Tc}$ ; measured $E\gamma$ . Systematics of electric dipole moments for Xe (N=85-88), Cs (N=86-88), Ba (N=85-90), La (N=88, 90), Ce (N=86, 88, 90), Nd (N=86, 88, 90), Sm( N=86, 88). JOUR PRVCA 81 057304                       |
|                   | 2010LU02 | RADIOACTIVITY $^{252}\text{Cf}(\text{SF})$ ; measured $E\gamma$ , $I\gamma$ , $\gamma\text{-}\gamma\text{-}$ coin, $\gamma\gamma(\theta)$ using Gammasphere. $^{141,144}\text{Cs}$ ; deduced levels, J, p, conversion coefficients, multiplicities, bands, parity doublets, simplex structure, B(E1) / B(E2), dipole moment. Comparison with level structure of $^{143}\text{Cs}$ and with systematics of adjacent N=85-92 nuclei. $^{105,106,107,108}\text{Tc}$ ; measured $E\gamma$ . JOUR NUPAB 838 1 |

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**A=106 (continued)**

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| $^{106}\text{Pd}$ | 2008STZP | NUCLEAR REACTIONS $^{120}\text{Sn}(^{67}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{120}\text{Sn}(^{69}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{120}\text{Sn}(^{71}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{120}\text{Sn}(^{73}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{104}\text{Pd}(^{67}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{104}\text{Pd}(^{69}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{104}\text{Pd}(^{71}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{104}\text{Pd}(^{73}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; measured Cu Coulomb excitation $E\gamma$ , $I\gamma(\theta)$ , $\gamma\gamma$ -coin; deduced E, J, $\pi$ , B(E2). CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P671 |
| $^{106}\text{Ag}$ | 2010HE05 | NUCLEAR REACTIONS $^{100}\text{Mo}(^{11}\text{B}, 5n)^{106}\text{Ag}$ , E=60 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin; deduced levels, J, $\pi$ , bands, configuration, shears band. Systematics of shears bands in $^{102}\text{Rh}$ , $^{104,106,108}\text{Ag}$ , $^{108,110,112}\text{In}$ . Comparison with TAC calculations for the dipole band. JOUR PRVCA 81 057301   |
|                   | 2010KH02 | NUCLEAR REACTIONS Pd(p, X) $^{105}\text{Ag}$ / $^{106}\text{Ag}$ / $^{100}\text{Pd}$ / $^{101}\text{Pd}$ / $^{100}\text{Rh}$ / $^{101}\text{Rh}$ / $^{105}\text{Rh}$ , E<40 MeV; measured $E\gamma$ , $I\gamma$ ; deduced $\sigma$ . Comparison with experimental data, TALYS and ALICE-IPPE codes. JOUR NIMBE 268 2303  |
| $^{106}\text{In}$ | 2010ID01 | NUCLEAR REACTIONS $^{58}\text{Ni}(^{52}\text{Cr}, 3p)$ , E=187 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -, (recoil) $\gamma$ -coin, $\gamma(\theta)$ using the JUROGAM array. $^{107}\text{In}$ ; deduced levels, J, $\pi$ , multipolarity, mixing ratios, M1 band and a smooth-terminating band, dynamical moments of inertia, and configurations. Calculated potential energy surfaces. Comparisons with total Routhian surface and cranked Nilsson-Strutinsky calculations, and with systematics of rotational band structures in $^{105}\text{Ag}$ , $^{106}\text{Cd}$ , $^{108}\text{Sn}$ , $^{109}\text{Sb}$ , $^{110}\text{Te}$ and $^{111}\text{I}$ . $^{104}\text{Cd}$ , $^{106}\text{In}$ , $^{107}\text{Sn}$ ; measured $E\gamma$ . JOUR PRVCA 81 034303  |

**A=107**

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| $^{107}\text{Mo}$ | 2008SIZS | RADIOACTIVITY $^{136}\text{Sb}(\beta^-)$ [from $^{241}\text{Pu}(n, f)$ , E=thermal]; measured delayed $E\gamma$ , $I\gamma$ , E(ce), x-rays; deduced E, J, $\pi$ , B(E2); $^{105,107}\text{Mo}$ , $^{107}\text{Tc}(\beta^-)$ [from $^{248}\text{Cm}(\text{SF})$ ]; measured $E\gamma$ , $I\gamma$ , E(ce); deduced E, J, $\pi$ , isomer decay, bands; calculated E, J, $\pi$ , isomeric transition using standard BCS. The Sb data compared to calculations of Corragio. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P71 |
| $^{107}\text{Tc}$ | 2008SIZS | RADIOACTIVITY $^{136}\text{Sb}(\beta^-)$ [from $^{241}\text{Pu}(n, f)$ , E=thermal]; measured delayed $E\gamma$ , $I\gamma$ , E(ce), x-rays; deduced E, J, $\pi$ , B(E2); $^{105,107}\text{Mo}$ , $^{107}\text{Tc}(\beta^-)$ [from $^{248}\text{Cm}(\text{SF})$ ]; measured $E\gamma$ , $I\gamma$ , E(ce); deduced E, J, $\pi$ , isomer decay, bands; calculated E, J, $\pi$ , isomeric transition using standard BCS. The Sb data compared to calculations of Corragio. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P71 |

**A=107 (continued)**

- 2010LI10 RADIOACTIVITY  $^{252}\text{Cf}(\text{SF})$ ; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$  using Gammasphere array.  $^{140}\text{Cs}$ ; deduced levels, J,  $\pi$ , configurations.  $^{107,108,109,110}\text{Tc}$ ; measured  $E\gamma$ . Comparison with level structure of  $^{138}\text{I}$  and with systematics of N=85 isotones of  $^{137}\text{Te}$ ,  $^{138}\text{I}$ ,  $^{139}\text{Xe}$ ,  $^{140}\text{Cs}$ ,  $^{141}\text{Ba}$ ,  $^{145}\text{Nd}$ ,  $^{146}\text{Pm}$ ,  $^{147}\text{Sm}$ ,  $^{148}\text{Eu}$  and  $^{149}\text{Gd}$ . JOUR PRVCA 81 037302
- 2010LI14 RADIOACTIVITY  $^{252}\text{Cf}(\text{SF})$ ; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ .  $^{142}\text{Cs}$ ; deduced levels, J,  $\pi$ , multipolarity, bands, B(E1), B(E2), electric dipole moments.  $^{106,107}\text{Tc}$ ; measured  $E\gamma$ . Systematics of electric dipole moments for Xe (N=85-88), Cs (N=86-88), Ba (N=85-90), La (N=88, 90), Ce (N=86, 88, 90), Nd (N=86, 88, 90), Sm (N=86, 88). JOUR PRVCA 81 057304
- 2010LU02 RADIOACTIVITY  $^{252}\text{Cf}(\text{SF})$ ; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$  using Gammasphere.  $^{141,144}\text{Cs}$ ; deduced levels, J, p, conversion coefficients, multipolarities, bands, parity doublets, simplex structure, B(E1) / B(E2), dipole moment. Comparison with level structure of  $^{143}\text{Cs}$  and with systematics of adjacent N=85-92 nuclei.  $^{105,106,107,108}\text{Tc}$ ; measured  $E\gamma$ . JOUR NUPAB 838 1
- $^{107}\text{Ru}$  2008SIZS RADIOACTIVITY  $^{136}\text{Sb}(\beta^-)$ [from  $^{241}\text{Pu}(n, f)$ , E=thermal]; measured delayed  $E\gamma$ ,  $I\gamma$ , E(ce), x-rays; deduced E, J,  $\pi$ , B(E2);  $^{105,107}\text{Mo}$ ,  $^{107}\text{Tc}(\beta^-)$ [from  $^{248}\text{Cm}(\text{SF})$ ]; measured  $E\gamma$ ,  $I\gamma$ , E(ce); deduced E, J,  $\pi$ , isomer decay, bands; calculated E, J,  $\pi$ , isomeric transition using standard BCS. The Sb data compared to calculations of Corragio. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P71
- $^{107}\text{In}$  2010ID01 NUCLEAR REACTIONS  $^{58}\text{Ni}(^{52}\text{Cr}, 3p)$ , E=187 MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -, (recoil) $\gamma$ -coin,  $\gamma(\theta)$  using the JUROGAM array.  $^{107}\text{In}$ ; deduced levels, J,  $\pi$ , multipolarity, mixing ratios, M1 band and a smooth-terminating band, dynamical moments of inertia, and configurations. Calculated potential energy surfaces. Comparisons with total Routhian surface and cranked Nilsson-Strutinsky calculations, and with systematics of rotational band structures in  $^{105}\text{Ag}$ ,  $^{106}\text{Cd}$ ,  $^{108}\text{Sn}$ ,  $^{109}\text{Sb}$ ,  $^{110}\text{Te}$  and  $^{111}\text{I}$ .  $^{104}\text{Cd}$ ,  $^{106}\text{In}$ ,  $^{107}\text{Sn}$ ; measured  $E\gamma$ . JOUR PRVCA 81 034303
- 2010NE05 NUCLEAR REACTIONS  $^{94}\text{Mo}(^{16}\text{O}, 2n)^{107}\text{In}$ , E=70 MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin, DCO, linear polarization, half-lives by DSAM using INGA array.  $^{107}\text{In}$ ; deduced levels, J,  $\pi$ , multipolarity, bands, B(M1), B(E2), B(M1) / B(E2), Q(t),  $\beta_2$ , configurations, shears band. Comparison with systematics of bands in  $^{105,108}\text{In}$  and with TAC calculations. JOUR PRVCA 81 054322
- $^{107}\text{Sn}$  2010ID01 NUCLEAR REACTIONS  $^{58}\text{Ni}(^{52}\text{Cr}, 3p)$ , E=187 MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -, (recoil) $\gamma$ -coin,  $\gamma(\theta)$  using the JUROGAM array.  $^{107}\text{In}$ ; deduced levels, J,  $\pi$ , multipolarity, mixing ratios, M1 band and a smooth-terminating band, dynamical moments of inertia, and configurations. Calculated potential energy surfaces. Comparisons with total Routhian surface and cranked Nilsson-Strutinsky calculations, and with systematics of rotational band structures in  $^{105}\text{Ag}$ ,  $^{106}\text{Cd}$ ,  $^{108}\text{Sn}$ ,  $^{109}\text{Sb}$ ,  $^{110}\text{Te}$  and  $^{111}\text{I}$ .  $^{104}\text{Cd}$ ,  $^{106}\text{In}$ ,  $^{107}\text{Sn}$ ; measured  $E\gamma$ . JOUR PRVCA 81 034303

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**A=108**

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| $^{108}\text{Tc}$ | 2010LI10 | RADIOACTIVITY $^{252}\text{Cf}(\text{SF})$ ; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, $\gamma\gamma(\theta)$ using Gammasphere array. $^{140}\text{Cs}$ ; deduced levels, J, $\pi$ , configurations. $^{107,108,109,110}\text{Tc}$ ; measured $E\gamma$ . Comparison with level structure of $^{138}\text{I}$ and with systematics of N=85 isotones of $^{137}\text{Te}$ , $^{138}\text{I}$ , $^{139}\text{Xe}$ , $^{140}\text{Cs}$ , $^{141}\text{Ba}$ , $^{145}\text{Nd}$ , $^{146}\text{Pm}$ , $^{147}\text{Sm}$ , $^{148}\text{Eu}$ and $^{149}\text{Gd}$ . JOUR PRVCA 81 037302  |
|                   | 2010LU02 | RADIOACTIVITY $^{252}\text{Cf}(\text{SF})$ ; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, $\gamma\gamma(\theta)$ using Gammasphere. $^{141,144}\text{Cs}$ ; deduced levels, J, p, conversion coefficients, multipolarities, bands, parity doublets, simplex structure, B(E1) / B(E2), dipole moment. Comparison with level structure of $^{143}\text{Cs}$ and with systematics of adjacent N=85-92 nuclei. $^{105,106,107,108}\text{Tc}$ ; measured $E\gamma$ . JOUR NUPAB 838 1  |
| $^{108}\text{Ru}$ | 2008HAZH | RADIOACTIVITY $^{252}\text{Cf}(\text{SF})$ ; measured $E\gamma$ , $I\gamma$ , $\gamma$ - $\gamma$ -coin.; $^{108,110,112}\text{Ru}$ , $^{106}\text{Mo}$ ; deduced band structures, possible chiral doublets. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P387,Hamilton   |
|                   | 2008RAZY | RADIOACTIVITY $^{252}\text{Cf}(\text{SF})$ ; measured $E\gamma$ , $I\gamma$ , $\gamma$ - $\gamma$ -coin.; $^{148}\text{Ce}$ , $^{108}\text{Ru}$ ; deduced angular correlation of $\gamma$ cascades, mixing ratio. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P57,Ramayya  |
| $^{108}\text{Pd}$ | 2008STZP | NUCLEAR REACTIONS $^{120}\text{Sn}(^{67}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{120}\text{Sn}(^{69}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{120}\text{Sn}(^{71}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{120}\text{Sn}(^{73}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{104}\text{Pd}(^{67}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{104}\text{Pd}(^{69}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{104}\text{Pd}(^{71}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{104}\text{Pd}(^{73}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; measured Cu Coulomb excitation $E\gamma$ , $I\gamma(\theta)$ , $\gamma\gamma$ -coin; deduced E, J, $\pi$ , B(E2). CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P671  |
| $^{108}\text{Cd}$ | 2010R015 | NUCLEAR REACTIONS $^{100}\text{Mo}(^{13}\text{C}, 5n)^{108}\text{Cd}$ , E=65 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, half-lives by DSAM. $^{108}\text{Cd}$ ; deduced levels, J, $\pi$ , multipolarity, shears band, band crossing, B(M1), B(E2), shears angle. Comparison with systematics of B(M1) values in $^{110}\text{Cd}$ . JOUR PRVCA 81 054311  |
| $^{108}\text{In}$ | 2010HE04 | NUCLEAR REACTIONS $\text{Cd}(\alpha, xn\alpha)$ , $^{108}\text{Cd}(\alpha, 2n)$ , $(\alpha, p)$ , $(\alpha, np)$ , $(\alpha, 2np)$ , $(\alpha, 3np)$ , $^{106}\text{Cd}(\alpha, np)$ , $^{109}\text{Cd}(\alpha, np)$ , $(\alpha, 3np)$ , $^{110}\text{Cd}(\alpha, n)$ , $(\alpha, p)$ , $(\alpha, 2np)$ , $(\alpha, 3np)$ , $^{111}\text{Cd}(\alpha, p)$ , $(\alpha, np)$ , $(\alpha, 3np)$ , $^{112}\text{Cd}(\alpha, 3n)$ , $(\alpha, p)$ , $(\alpha, np)$ , $(\alpha, 2np)$ , $^{113}\text{Cd}(\alpha, p)$ , $(\alpha, np)$ , $(\alpha, 2np)$ , $(\alpha, 3np)$ , $^{114}\text{Cd}(\alpha, n)$ , $(\alpha, p)$ , $(\alpha, np)$ , $(\alpha, 2np)$ , $(\alpha, 3np)$ , $(\alpha, 4np)$ , $(\alpha, n2p)$ , $^{116}\text{Cd}(\alpha, 3n)$ , $(\alpha, 2np)$ , $(\alpha, 3np)$ , $(\alpha, 3n2p)$ , $\text{Cu}(\alpha, X)^{66}\text{Ga} / ^{67}\text{Ga}$ , E=5-50 MeV; measured $E\gamma$ , $I\gamma$ ; deduced $\sigma$ . Comparison with experimental data, ALICE-IPPE, EMPIRE, GNASH codes. JOUR NIMBE 268 1376 |

**A=109**

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| $^{109}\text{Tc}$ | 2010GU07 | RADIOACTIVITY $^{252}\text{Cf}(\text{SF})$ ; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma\gamma$ -coin.; $^{109}\text{Tc}$ ; deduced level scheme, high spin states, yrast bands interpretation. Cranked shell model calculations. JOUR CPLEE 27 062501 |
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**A=109 (continued)**

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| 2010LI10          | RADIOACTIVITY $^{252}\text{Cf}(\text{SF})$ ; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, $\gamma\gamma(\theta)$ using Gammasphere array. $^{140}\text{Cs}$ ; deduced levels, J, $\pi$ , configurations. $^{107,108,109,110}\text{Tc}$ ; measured $E\gamma$ . Comparison with level structure of $^{138}\text{I}$ and with systematics of N=85 isotones of $^{137}\text{Te}$ , $^{138}\text{I}$ , $^{139}\text{Xe}$ , $^{140}\text{Cs}$ , $^{141}\text{Ba}$ , $^{145}\text{Nd}$ , $^{146}\text{Pm}$ , $^{147}\text{Sm}$ , $^{148}\text{Eu}$ and $^{149}\text{Gd}$ . JOUR PRVCA 81 037302   |
| $^{109}\text{In}$ | 2010HE04 NUCLEAR REACTIONS $\text{Cd}(\alpha, xn\alpha)$ , $^{108}\text{Cd}(\alpha, 2n)$ , $(\alpha, p)$ , $(\alpha, np)$ , $(\alpha, 2np)$ , $(\alpha, 3np)$ , $^{106}\text{Cd}(\alpha, np)$ , $^{109}\text{Cd}(\alpha, np)$ , $(\alpha, 3np)$ , $^{110}\text{Cd}(\alpha, n)$ , $(\alpha, p)$ , $(\alpha, 2np)$ , $(\alpha, 3np)$ , $^{111}\text{Cd}(\alpha, p)$ , $(\alpha, np)$ , $(\alpha, 3np)$ , $^{112}\text{Cd}(\alpha, 3n)$ , $(\alpha, p)$ , $(\alpha, np)$ , $(\alpha, 2np)$ , $^{113}\text{Cd}(\alpha, p)$ , $(\alpha, np)$ , $(\alpha, 2np)$ , $(\alpha, 3np)$ , $^{114}\text{Cd}(\alpha, n)$ , $(\alpha, p)$ , $(\alpha, np)$ , $(\alpha, 2np)$ , $(\alpha, 3np)$ , $(\alpha, 4np)$ , $(\alpha, n2p)$ , $^{116}\text{Cd}(\alpha, 3n)$ , $(\alpha, 2np)$ , $(\alpha, 3np)$ , $(\alpha, 3n2p)$ , $\text{Cu}(\alpha, X)^{66}\text{Ga} / ^{67}\text{Ga}$ , E=5-50 MeV; measured $E\gamma$ , $I\gamma$ ; deduced $\sigma$ . Comparison with experimental data, ALICE-IPPE, EMPIRE, GNASH codes. JOUR NIMBE 268 1376 |
| $^{109}\text{Xe}$ | 2008DAZS RADIOACTIVITY $^{109}\text{Xe}(\alpha)$ [from $^{54}\text{Fe}+^{58}\text{Ni}\rightarrow^{112}\text{Xe}\rightarrow^{109}\text{Xe}+3n$ ]; $^{105}\text{Te}(\alpha)$ ; measured $E\gamma$ , $I\gamma$ , $I\alpha$ ; deduced $^{101}\text{Sn}$ E, J, $\pi$ ; calculated $E(d_{5/2})$ , $E(g_{7/2})$ using shell model. Decay chain compared to that of $^{111}\text{Xe}\rightarrow^{107}\text{Te}\rightarrow^{103}\text{Sn}$ from other papers. Results on CD only. CONF E.Lansing (NS2008),P3,Darby  |

**A=110**

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| $^{110}\text{Tc}$ | 2010LI10 RADIOACTIVITY $^{252}\text{Cf}(\text{SF})$ ; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, $\gamma\gamma(\theta)$ using Gammasphere array. $^{140}\text{Cs}$ ; deduced levels, J, $\pi$ , configurations. $^{107,108,109,110}\text{Tc}$ ; measured $E\gamma$ . Comparison with level structure of $^{138}\text{I}$ and with systematics of N=85 isotones of $^{137}\text{Te}$ , $^{138}\text{I}$ , $^{139}\text{Xe}$ , $^{140}\text{Cs}$ , $^{141}\text{Ba}$ , $^{145}\text{Nd}$ , $^{146}\text{Pm}$ , $^{147}\text{Sm}$ , $^{148}\text{Eu}$ and $^{149}\text{Gd}$ . JOUR PRVCA 81 037302   |
| $^{110}\text{Ru}$ | 2008HAZH RADIOACTIVITY $^{252}\text{Cf}(\text{SF})$ ; measured $E\gamma$ , $I\gamma$ , $\gamma$ - $\gamma$ -coin.; $^{108,110,112}\text{Ru}$ , $^{106}\text{Mo}$ ; deduced band structures, possible chiral doublets. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P387,Hamilton  |
| $^{110}\text{Pd}$ | 2008STZP NUCLEAR REACTIONS $^{120}\text{Sn}(^{67}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{120}\text{Sn}(^{69}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{120}\text{Sn}(^{71}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{120}\text{Sn}(^{73}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{104}\text{Pd}(^{67}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{104}\text{Pd}(^{69}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{104}\text{Pd}(^{71}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{104}\text{Pd}(^{73}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; measured Cu Coulomb excitation $E\gamma$ , $I\gamma(\theta)$ , $\gamma\gamma$ -coin; deduced E, J, $\pi$ , B(E2). CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P671 |

KEYNUMBERS AND KEYWORDS

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**A=110 (continued)**

- <sup>110</sup>In      2010HE04      NUCLEAR REACTIONS Cd( $\alpha$ , xn $\alpha$ ), <sup>108</sup>Cd( $\alpha$ , 2n), ( $\alpha$ , p), ( $\alpha$ , np), ( $\alpha$ , 2np), ( $\alpha$ , 3np), <sup>106</sup>Cd( $\alpha$ , np), <sup>109</sup>Cd( $\alpha$ , np), ( $\alpha$ , 3np), <sup>110</sup>Cd( $\alpha$ , n), ( $\alpha$ , p), ( $\alpha$ , 2np), ( $\alpha$ , 3np), <sup>111</sup>Cd( $\alpha$ , p), ( $\alpha$ , np), ( $\alpha$ , 3np), <sup>112</sup>Cd( $\alpha$ , 3n), ( $\alpha$ , p), ( $\alpha$ , np), ( $\alpha$ , 2np), <sup>113</sup>Cd( $\alpha$ , p), ( $\alpha$ , np), ( $\alpha$ , 2np), ( $\alpha$ , 3np), <sup>114</sup>Cd( $\alpha$ , n), ( $\alpha$ , p), ( $\alpha$ , np), ( $\alpha$ , 2np), ( $\alpha$ , 3np), ( $\alpha$ , 4np), ( $\alpha$ , n2p), <sup>116</sup>Cd( $\alpha$ , 3n), ( $\alpha$ , 2np), ( $\alpha$ , 3np), ( $\alpha$ , 3n2p), Cu( $\alpha$ , X)<sup>66</sup>Ga / <sup>67</sup>Ga, E=5-50 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ . Comparison with experimental data, ALICE-IPPE, EMPIRE, GNASH codes. JOUR NIMBE 268 1376
- <sup>110</sup>Sn      2010HE04      NUCLEAR REACTIONS Cd( $\alpha$ , xn $\alpha$ ), <sup>108</sup>Cd( $\alpha$ , 2n), ( $\alpha$ , p), ( $\alpha$ , np), ( $\alpha$ , 2np), ( $\alpha$ , 3np), <sup>106</sup>Cd( $\alpha$ , np), <sup>109</sup>Cd( $\alpha$ , np), ( $\alpha$ , 3np), <sup>110</sup>Cd( $\alpha$ , n), ( $\alpha$ , p), ( $\alpha$ , 2np), ( $\alpha$ , 3np), <sup>111</sup>Cd( $\alpha$ , p), ( $\alpha$ , np), ( $\alpha$ , 3np), <sup>112</sup>Cd( $\alpha$ , 3n), ( $\alpha$ , p), ( $\alpha$ , np), ( $\alpha$ , 2np), <sup>113</sup>Cd( $\alpha$ , p), ( $\alpha$ , np), ( $\alpha$ , 2np), ( $\alpha$ , 3np), <sup>114</sup>Cd( $\alpha$ , n), ( $\alpha$ , p), ( $\alpha$ , np), ( $\alpha$ , 2np), ( $\alpha$ , 3np), ( $\alpha$ , 4np), ( $\alpha$ , n2p), <sup>116</sup>Cd( $\alpha$ , 3n), ( $\alpha$ , 2np), ( $\alpha$ , 3np), ( $\alpha$ , 3n2p), Cu( $\alpha$ , X)<sup>66</sup>Ga / <sup>67</sup>Ga, E=5-50 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ . Comparison with experimental data, ALICE-IPPE, EMPIRE, GNASH codes. JOUR NIMBE 268 1376

**A=111**

- <sup>111</sup>Cd      2008TAZI      NUCLEAR REACTIONS Pb(p, x), E=1, 1.4 GeV; Bi(p, x), E=1, 1.4 GeV; measured E $\gamma$ , I $\gamma$ , A(particle) using melted thick target at ISOLDE facility; <sup>76,77,79,85,87,88,89,90</sup>Kr, <sup>111</sup>Cd, <sup>121,124,126</sup>I, <sup>120,121,122,123,125,127,129,131,133</sup>Xe, <sup>184,186,188,190,192,193,195,197,203,205,206</sup>Hg, <sup>204,205,206,207,208,209,210</sup>At; deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069
- <sup>111</sup>In      2010HE04      NUCLEAR REACTIONS Cd( $\alpha$ , xn $\alpha$ ), <sup>108</sup>Cd( $\alpha$ , 2n), ( $\alpha$ , p), ( $\alpha$ , np), ( $\alpha$ , 2np), ( $\alpha$ , 3np), <sup>106</sup>Cd( $\alpha$ , np), <sup>109</sup>Cd( $\alpha$ , np), ( $\alpha$ , 3np), <sup>110</sup>Cd( $\alpha$ , n), ( $\alpha$ , p), ( $\alpha$ , 2np), ( $\alpha$ , 3np), <sup>111</sup>Cd( $\alpha$ , p), ( $\alpha$ , np), ( $\alpha$ , 3np), <sup>112</sup>Cd( $\alpha$ , 3n), ( $\alpha$ , p), ( $\alpha$ , np), ( $\alpha$ , 2np), <sup>113</sup>Cd( $\alpha$ , p), ( $\alpha$ , np), ( $\alpha$ , 2np), ( $\alpha$ , 3np), <sup>114</sup>Cd( $\alpha$ , n), ( $\alpha$ , p), ( $\alpha$ , np), ( $\alpha$ , 2np), ( $\alpha$ , 3np), ( $\alpha$ , 4np), ( $\alpha$ , n2p), <sup>116</sup>Cd( $\alpha$ , 3n), ( $\alpha$ , 2np), ( $\alpha$ , 3np), ( $\alpha$ , 3n2p), Cu( $\alpha$ , X)<sup>66</sup>Ga / <sup>67</sup>Ga, E=5-50 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ . Comparison with experimental data, ALICE-IPPE, EMPIRE, GNASH codes. JOUR NIMBE 268 1376

**A=112**

- <sup>112</sup>Ru      2008HAZH      RADIOACTIVITY <sup>252</sup>Cf(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma$ - $\gamma$ - $\gamma$ -coin.; <sup>108,110,112</sup>Ru, <sup>106</sup>Mo; deduced band structures, possible chiral doublets. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P387,Hamilton

KEYNUMBERS AND KEYWORDS

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**A=112 (continued)**

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| $^{112}\text{Ag}$ | 2010BR02 | ATOMIC MASSES $^{112,114,115,116,117,118,119,120,121,122,123,124}\text{Ag}$ ,<br>$^{114,120,122,123,124,126,128}\text{Cd}$ ; measured cyclotron frequencies relative to<br>$^{133}\text{Cs}$ , and mass excesses using ISOLTRAP Penning trap spectrometer;<br>deduced excitation energies of the isomers; evaluated mass excesses;<br>two-neutron separate energies, and proton-neutron interaction strength<br>$\delta V_{pn}$ . Comparison with previous data and AME-2003. JOUR PRVCA<br>81 034313   |
| $^{112}\text{Sn}$ | 2008BOZK | NUCLEAR REACTIONS $^{112,124}\text{Sn}(\gamma, \gamma')$ ; measured levels, J, $\pi$ ;<br>evaluated energy weighted sum rule. Monoenergetic linearly polarized<br>beam. THESIS M Boswell, University of North Carolina  |
|                   | 2008VOZV | NUCLEAR REACTIONS $^{112,116,120,124}\text{Sn}(\gamma, \gamma')$ , E=5.5-9.5<br>MeV; measured $E\gamma$ , $I\gamma$ ; $^{112,116,120,124}\text{Sn}$ ; deduced B(E1) strength<br>distributions. CONF Vico Equense(Chang.Facets of Nucl.Struct.)<br>Proc,P335,Von Neumann-  |
|                   | 2010LI07 | NUCLEAR REACTIONS $^{112,114,116,118,120,122,124}\text{Sn}(\alpha, \alpha')$ , E=386<br>MeV; measured $E\alpha$ , $I\alpha$ , excitation energies, $\sigma(\theta)$ , $\sigma$ , angular<br>distributions, differential cross section as function of excitation energy;<br>deduced strengths distributions, widths and EWSR for isoscalar giant<br>monopole resonance (ISGMR), isoscalar giant-dipole resonance<br>(ISGDR), isoscalar giant quadrupole resonance (ISGQR), and<br>high-energy octupole resonance (HEOR). Comparisons with theoretical<br>predictions. JOUR PRVCA 81 034309 |

**A=113**

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| $^{113}\text{In}$ | 2008GOZP | RADIOACTIVITY $^{54}\text{Ni}(\beta^+)$ ; measured $E\gamma$ , $I\gamma$ ; deduced $^{54}\text{Ni}$ $T_{1/2}$ , GT<br>distribution strength; $^{62}\text{Ge}$ ; $^{113}\text{In}$ ; $^{190}\text{Ta}$ ; measured decay products.<br>Results on CD only. CONF E.Lansing (NS2008),P9,Gorska   |
|                   | 2010HE04 | NUCLEAR REACTIONS $\text{Cd}(\alpha, xn\alpha)$ , $^{108}\text{Cd}(\alpha, 2n)$ , $(\alpha, p)$ , $(\alpha, np)$ ,<br>$(\alpha, 2np)$ , $(\alpha, 3np)$ , $^{106}\text{Cd}(\alpha, np)$ , $^{109}\text{Cd}(\alpha, np)$ , $(\alpha, 3np)$ , $^{110}\text{Cd}(\alpha, n)$ ,<br>$(\alpha, p)$ , $(\alpha, 2np)$ , $(\alpha, 3np)$ , $^{111}\text{Cd}(\alpha, p)$ , $(\alpha, np)$ , $(\alpha, 3np)$ , $^{112}\text{Cd}(\alpha, 3n)$ ,<br>$(\alpha, p)$ , $(\alpha, np)$ , $(\alpha, 2np)$ , $^{113}\text{Cd}(\alpha, p)$ , $(\alpha, np)$ , $(\alpha, 2np)$ , $(\alpha, 3np)$ ,<br>$^{114}\text{Cd}(\alpha, n)$ , $(\alpha, p)$ , $(\alpha, np)$ , $(\alpha, 2np)$ , $(\alpha, 3np)$ , $(\alpha, 4np)$ , $(\alpha, n2p)$ ,<br>$^{116}\text{Cd}(\alpha, 3n)$ , $(\alpha, 2np)$ , $(\alpha, 3np)$ , $(\alpha, 3n2p)$ , $\text{Cu}(\alpha, X)^{66}\text{Ga} / ^{67}\text{Ga}$ ,<br>E=5-50 MeV; measured $E\gamma$ , $I\gamma$ ; deduced $\sigma$ . Comparison with<br>experimental data, ALICE-IPPE, EMPIRE, GNASH codes. JOUR<br>NIMBE 268 1376 |
| $^{113}\text{Sn}$ | 2010HE04 | NUCLEAR REACTIONS $\text{Cd}(\alpha, xn\alpha)$ , $^{108}\text{Cd}(\alpha, 2n)$ , $(\alpha, p)$ , $(\alpha, np)$ ,<br>$(\alpha, 2np)$ , $(\alpha, 3np)$ , $^{106}\text{Cd}(\alpha, np)$ , $^{109}\text{Cd}(\alpha, np)$ , $(\alpha, 3np)$ , $^{110}\text{Cd}(\alpha, n)$ ,<br>$(\alpha, p)$ , $(\alpha, 2np)$ , $(\alpha, 3np)$ , $^{111}\text{Cd}(\alpha, p)$ , $(\alpha, np)$ , $(\alpha, 3np)$ , $^{112}\text{Cd}(\alpha, 3n)$ ,<br>$(\alpha, p)$ , $(\alpha, np)$ , $(\alpha, 2np)$ , $^{113}\text{Cd}(\alpha, p)$ , $(\alpha, np)$ , $(\alpha, 2np)$ , $(\alpha, 3np)$ ,<br>$^{114}\text{Cd}(\alpha, n)$ , $(\alpha, p)$ , $(\alpha, np)$ , $(\alpha, 2np)$ , $(\alpha, 3np)$ , $(\alpha, 4np)$ , $(\alpha, n2p)$ ,<br>$^{116}\text{Cd}(\alpha, 3n)$ , $(\alpha, 2np)$ , $(\alpha, 3np)$ , $(\alpha, 3n2p)$ , $\text{Cu}(\alpha, X)^{66}\text{Ga} / ^{67}\text{Ga}$ ,<br>E=5-50 MeV; measured $E\gamma$ , $I\gamma$ ; deduced $\sigma$ . Comparison with<br>experimental data, ALICE-IPPE, EMPIRE, GNASH codes. JOUR<br>NIMBE 268 1376 |

## A=114

- $^{114}\text{Ag}$  2010BR02 ATOMIC MASSES  $^{112,114,115,116,117,118,119,120,121,122,123,124}\text{Ag}$ ,  $^{114,120,122,123,124,126,128}\text{Cd}$ ; measured cyclotron frequencies relative to  $^{133}\text{Cs}$ , and mass excesses using ISOLTRAP Penning trap spectrometer; deduced excitation energies of the isomers; evaluated mass excesses; two-neutron separate energies, and proton-neutron interaction strength  $\delta V_{pn}$ . Comparison with previous data and AME-2003. JOUR PRVCA 81 034313
- $^{114}\text{Cd}$  2010BR02 ATOMIC MASSES  $^{112,114,115,116,117,118,119,120,121,122,123,124}\text{Ag}$ ,  $^{114,120,122,123,124,126,128}\text{Cd}$ ; measured cyclotron frequencies relative to  $^{133}\text{Cs}$ , and mass excesses using ISOLTRAP Penning trap spectrometer; deduced excitation energies of the isomers; evaluated mass excesses; two-neutron separate energies, and proton-neutron interaction strength  $\delta V_{pn}$ . Comparison with previous data and AME-2003. JOUR PRVCA 81 034313
- $^{114}\text{In}$  2010HE04 NUCLEAR REACTIONS  $\text{Cd}(\alpha, xn\alpha)$ ,  $^{108}\text{Cd}(\alpha, 2n)$ ,  $(\alpha, p)$ ,  $(\alpha, np)$ ,  $(\alpha, 2np)$ ,  $(\alpha, 3np)$ ,  $^{106}\text{Cd}(\alpha, np)$ ,  $^{109}\text{Cd}(\alpha, np)$ ,  $(\alpha, 3np)$ ,  $^{110}\text{Cd}(\alpha, n)$ ,  $(\alpha, p)$ ,  $(\alpha, 2np)$ ,  $(\alpha, 3np)$ ,  $^{111}\text{Cd}(\alpha, p)$ ,  $(\alpha, np)$ ,  $(\alpha, 3np)$ ,  $^{112}\text{Cd}(\alpha, 3n)$ ,  $(\alpha, p)$ ,  $(\alpha, np)$ ,  $(\alpha, 2np)$ ,  $^{113}\text{Cd}(\alpha, p)$ ,  $(\alpha, np)$ ,  $(\alpha, 2np)$ ,  $(\alpha, 3np)$ ,  $^{114}\text{Cd}(\alpha, n)$ ,  $(\alpha, p)$ ,  $(\alpha, np)$ ,  $(\alpha, 2np)$ ,  $(\alpha, 3np)$ ,  $(\alpha, 4np)$ ,  $(\alpha, n2p)$ ,  $^{116}\text{Cd}(\alpha, 3n)$ ,  $(\alpha, 2np)$ ,  $(\alpha, 3np)$ ,  $(\alpha, 3n2p)$ ,  $\text{Cu}(\alpha, X)^{66}\text{Ga} / ^{67}\text{Ga}$ ,  $E=5-50$  MeV; measured  $E\gamma$ ,  $I\gamma$ ; deduced  $\sigma$ . Comparison with experimental data, ALICE-IPPE, EMPIRE, GNASH codes. JOUR NIMBE 268 1376
- $^{114}\text{Sn}$  2010LI07 NUCLEAR REACTIONS  $^{112,114,116,118,120,122,124}\text{Sn}(\alpha, \alpha')$ ,  $E=386$  MeV; measured  $E\alpha$ ,  $I\alpha$ , excitation energies,  $\sigma(\theta)$ ,  $\sigma$ , angular distributions, differential cross section as function of excitation energy; deduced strengths distributions, widths and EWSR for isoscalar giant monopole resonance (ISGMR), isoscalar giant-dipole resonance (ISGDR), isoscalar giant quadrupole resonance (ISGQR), and high-energy octupole resonance (HEOR). Comparisons with theoretical predictions. JOUR PRVCA 81 034309

## A=115

- $^{115}\text{Ag}$  2010BR02 ATOMIC MASSES  $^{112,114,115,116,117,118,119,120,121,122,123,124}\text{Ag}$ ,  $^{114,120,122,123,124,126,128}\text{Cd}$ ; measured cyclotron frequencies relative to  $^{133}\text{Cs}$ , and mass excesses using ISOLTRAP Penning trap spectrometer; deduced excitation energies of the isomers; evaluated mass excesses; two-neutron separate energies, and proton-neutron interaction strength  $\delta V_{pn}$ . Comparison with previous data and AME-2003. JOUR PRVCA 81 034313

**A=115 (continued)**

- <sup>115</sup>Cd      2010HE04      NUCLEAR REACTIONS Cd( $\alpha$ , xn $\alpha$ ), <sup>108</sup>Cd( $\alpha$ , 2n), ( $\alpha$ , p), ( $\alpha$ , np), ( $\alpha$ , 2np), ( $\alpha$ , 3np), <sup>106</sup>Cd( $\alpha$ , np), <sup>109</sup>Cd( $\alpha$ , np), ( $\alpha$ , 3np), <sup>110</sup>Cd( $\alpha$ , n), ( $\alpha$ , p), ( $\alpha$ , 2np), ( $\alpha$ , 3np), <sup>111</sup>Cd( $\alpha$ , p), ( $\alpha$ , np), ( $\alpha$ , 3np), <sup>112</sup>Cd( $\alpha$ , 3n), ( $\alpha$ , p), ( $\alpha$ , np), ( $\alpha$ , 2np), <sup>113</sup>Cd( $\alpha$ , p), ( $\alpha$ , np), ( $\alpha$ , 2np), ( $\alpha$ , 3np), <sup>114</sup>Cd( $\alpha$ , n), ( $\alpha$ , p), ( $\alpha$ , np), ( $\alpha$ , 2np), ( $\alpha$ , 3np), ( $\alpha$ , 4np), ( $\alpha$ , n2p), <sup>116</sup>Cd( $\alpha$ , 3n), ( $\alpha$ , 2np), ( $\alpha$ , 3np), ( $\alpha$ , 3n2p), Cu( $\alpha$ , X)<sup>66</sup>Ga / <sup>67</sup>Ga, E=5-50 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ . Comparison with experimental data, ALICE-IPPE, EMPIRE, GNASH codes. JOUR NIMBE 268 1376
- <sup>115</sup>In      2010HE04      NUCLEAR REACTIONS Cd( $\alpha$ , xn $\alpha$ ), <sup>108</sup>Cd( $\alpha$ , 2n), ( $\alpha$ , p), ( $\alpha$ , np), ( $\alpha$ , 2np), ( $\alpha$ , 3np), <sup>106</sup>Cd( $\alpha$ , np), <sup>109</sup>Cd( $\alpha$ , np), ( $\alpha$ , 3np), <sup>110</sup>Cd( $\alpha$ , n), ( $\alpha$ , p), ( $\alpha$ , 2np), ( $\alpha$ , 3np), <sup>111</sup>Cd( $\alpha$ , p), ( $\alpha$ , np), ( $\alpha$ , 3np), <sup>112</sup>Cd( $\alpha$ , 3n), ( $\alpha$ , p), ( $\alpha$ , np), ( $\alpha$ , 2np), <sup>113</sup>Cd( $\alpha$ , p), ( $\alpha$ , np), ( $\alpha$ , 2np), ( $\alpha$ , 3np), <sup>114</sup>Cd( $\alpha$ , n), ( $\alpha$ , p), ( $\alpha$ , np), ( $\alpha$ , 2np), ( $\alpha$ , 3np), ( $\alpha$ , 4np), ( $\alpha$ , n2p), <sup>116</sup>Cd( $\alpha$ , 3n), ( $\alpha$ , 2np), ( $\alpha$ , 3np), ( $\alpha$ , 3n2p), Cu( $\alpha$ , X)<sup>66</sup>Ga / <sup>67</sup>Ga, E=5-50 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ . Comparison with experimental data, ALICE-IPPE, EMPIRE, GNASH codes. JOUR NIMBE 268 1376

**A=116**

- <sup>116</sup>Ag      2010BR02      ATOMIC MASSES <sup>112,114,115,116,117,118,119,120,121,122,123,124</sup>Ag, <sup>114,120,122,123,124,126,128</sup>Cd; measured cyclotron frequencies relative to <sup>133</sup>Cs, and mass excesses using ISOLTRAP Penning trap spectrometer; deduced excitation energies of the isomers; evaluated mass excesses; two-neutron separate energies, and proton-neutron interaction strength  $\delta V_{pn}$ . Comparison with previous data and AME-2003. JOUR PRVCA 81 034313
- <sup>116</sup>In      2010HE04      NUCLEAR REACTIONS Cd( $\alpha$ , xn $\alpha$ ), <sup>108</sup>Cd( $\alpha$ , 2n), ( $\alpha$ , p), ( $\alpha$ , np), ( $\alpha$ , 2np), ( $\alpha$ , 3np), <sup>106</sup>Cd( $\alpha$ , np), <sup>109</sup>Cd( $\alpha$ , np), ( $\alpha$ , 3np), <sup>110</sup>Cd( $\alpha$ , n), ( $\alpha$ , p), ( $\alpha$ , 2np), ( $\alpha$ , 3np), <sup>111</sup>Cd( $\alpha$ , p), ( $\alpha$ , np), ( $\alpha$ , 3np), <sup>112</sup>Cd( $\alpha$ , 3n), ( $\alpha$ , p), ( $\alpha$ , np), ( $\alpha$ , 2np), <sup>113</sup>Cd( $\alpha$ , p), ( $\alpha$ , np), ( $\alpha$ , 2np), ( $\alpha$ , 3np), <sup>114</sup>Cd( $\alpha$ , n), ( $\alpha$ , p), ( $\alpha$ , np), ( $\alpha$ , 2np), ( $\alpha$ , 3np), ( $\alpha$ , 4np), ( $\alpha$ , n2p), <sup>116</sup>Cd( $\alpha$ , 3n), ( $\alpha$ , 2np), ( $\alpha$ , 3np), ( $\alpha$ , 3n2p), Cu( $\alpha$ , X)<sup>66</sup>Ga / <sup>67</sup>Ga, E=5-50 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ . Comparison with experimental data, ALICE-IPPE, EMPIRE, GNASH codes. JOUR NIMBE 268 1376
- <sup>116</sup>Sn      2008VOZV      NUCLEAR REACTIONS <sup>112,116,120,124</sup>Sn( $\gamma$ ,  $\gamma'$ ), E=5.5-9.5 MeV; measured E $\gamma$ , I $\gamma$ ; <sup>112,116,120,124</sup>Sn; deduced B(E1) strength distributions. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P335,Von Neumann-

**A=116 (continued)**

2010LI07 NUCLEAR REACTIONS  $^{112,114,116,118,120,122,124}\text{Sn}(\alpha, \alpha')$ ,  $E=386$  MeV; measured  $E\alpha$ ,  $I\alpha$ , excitation energies,  $\sigma(\theta)$ ,  $\sigma$ , angular distributions, differential cross section as function of excitation energy; deduced strengths distributions, widths and EWSR for isoscalar giant monopole resonance (ISGMR), isoscalar giant-dipole resonance (ISGDR), isoscalar giant quadrupole resonance (ISGQR), and high-energy octupole resonance (HEOR). Comparisons with theoretical predictions. JOUR PRVCA 81 034309

**A=117**

$^{117}\text{Ag}$  2010BR02 ATOMIC MASSES  $^{112,114,115,116,117,118,119,120,121,122,123,124}\text{Ag}$ ,  $^{114,120,122,123,124,126,128}\text{Cd}$ ; measured cyclotron frequencies relative to  $^{133}\text{Cs}$ , and mass excesses using ISOLTRAP Penning trap spectrometer; deduced excitation energies of the isomers; evaluated mass excesses; two-neutron separate energies, and proton-neutron interaction strength  $\delta V_{pn}$ . Comparison with previous data and AME-2003. JOUR PRVCA 81 034313

$^{117}\text{In}$  2010HE04 NUCLEAR REACTIONS  $\text{Cd}(\alpha, xn\alpha)$ ,  $^{108}\text{Cd}(\alpha, 2n)$ ,  $(\alpha, p)$ ,  $(\alpha, np)$ ,  $(\alpha, 2np)$ ,  $(\alpha, 3np)$ ,  $^{106}\text{Cd}(\alpha, np)$ ,  $^{109}\text{Cd}(\alpha, np)$ ,  $(\alpha, 3np)$ ,  $^{110}\text{Cd}(\alpha, n)$ ,  $(\alpha, p)$ ,  $(\alpha, 2np)$ ,  $(\alpha, 3np)$ ,  $^{111}\text{Cd}(\alpha, p)$ ,  $(\alpha, np)$ ,  $(\alpha, 3np)$ ,  $^{112}\text{Cd}(\alpha, 3n)$ ,  $(\alpha, p)$ ,  $(\alpha, np)$ ,  $(\alpha, 2np)$ ,  $^{113}\text{Cd}(\alpha, p)$ ,  $(\alpha, np)$ ,  $(\alpha, 2np)$ ,  $(\alpha, 3np)$ ,  $^{114}\text{Cd}(\alpha, n)$ ,  $(\alpha, p)$ ,  $(\alpha, np)$ ,  $(\alpha, 2np)$ ,  $(\alpha, 3np)$ ,  $(\alpha, 4np)$ ,  $(\alpha, n2p)$ ,  $^{116}\text{Cd}(\alpha, 3n)$ ,  $(\alpha, 2np)$ ,  $(\alpha, 3np)$ ,  $(\alpha, 3n2p)$ ,  $\text{Cu}(\alpha, X)^{66}\text{Ga} / ^{67}\text{Ga}$ ,  $E=5-50$  MeV; measured  $E\gamma$ ,  $I\gamma$ ; deduced  $\sigma$ . Comparison with experimental data, ALICE-IPPE, EMPIRE, GNASH codes. JOUR NIMBE 268 1376

$^{117}\text{Sn}$  2010HE04 NUCLEAR REACTIONS  $\text{Cd}(\alpha, xn\alpha)$ ,  $^{108}\text{Cd}(\alpha, 2n)$ ,  $(\alpha, p)$ ,  $(\alpha, np)$ ,  $(\alpha, 2np)$ ,  $(\alpha, 3np)$ ,  $^{106}\text{Cd}(\alpha, np)$ ,  $^{109}\text{Cd}(\alpha, np)$ ,  $(\alpha, 3np)$ ,  $^{110}\text{Cd}(\alpha, n)$ ,  $(\alpha, p)$ ,  $(\alpha, 2np)$ ,  $(\alpha, 3np)$ ,  $^{111}\text{Cd}(\alpha, p)$ ,  $(\alpha, np)$ ,  $(\alpha, 3np)$ ,  $^{112}\text{Cd}(\alpha, 3n)$ ,  $(\alpha, p)$ ,  $(\alpha, np)$ ,  $(\alpha, 2np)$ ,  $^{113}\text{Cd}(\alpha, p)$ ,  $(\alpha, np)$ ,  $(\alpha, 2np)$ ,  $(\alpha, 3np)$ ,  $^{114}\text{Cd}(\alpha, n)$ ,  $(\alpha, p)$ ,  $(\alpha, np)$ ,  $(\alpha, 2np)$ ,  $(\alpha, 3np)$ ,  $(\alpha, 4np)$ ,  $(\alpha, n2p)$ ,  $^{116}\text{Cd}(\alpha, 3n)$ ,  $(\alpha, 2np)$ ,  $(\alpha, 3np)$ ,  $(\alpha, 3n2p)$ ,  $\text{Cu}(\alpha, X)^{66}\text{Ga} / ^{67}\text{Ga}$ ,  $E=5-50$  MeV; measured  $E\gamma$ ,  $I\gamma$ ; deduced  $\sigma$ . Comparison with experimental data, ALICE-IPPE, EMPIRE, GNASH codes. JOUR NIMBE 268 1376

**A=118**

$^{118}\text{Ag}$  2010BR02 ATOMIC MASSES  $^{112,114,115,116,117,118,119,120,121,122,123,124}\text{Ag}$ ,  $^{114,120,122,123,124,126,128}\text{Cd}$ ; measured cyclotron frequencies relative to  $^{133}\text{Cs}$ , and mass excesses using ISOLTRAP Penning trap spectrometer; deduced excitation energies of the isomers; evaluated mass excesses; two-neutron separate energies, and proton-neutron interaction strength  $\delta V_{pn}$ . Comparison with previous data and AME-2003. JOUR PRVCA 81 034313

KEYNUMBERS AND KEYWORDS

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**A=118 (continued)**

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| $^{118}\text{Sn}$ | 2008GUZM | NUCLEAR REACTIONS $^{120}\text{Sn}(p, t)$ , $E=21$ MeV; measured reaction products; deduced $\sigma(\theta)$ for transitions to $^{118}\text{Sn}$ levels. Comparison with DWBA calculations. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P315,Guazzoni  |
|                   | 2010LI07 | NUCLEAR REACTIONS $^{112,114,116,118,120,122,124}\text{Sn}(\alpha, \alpha')$ , $E=386$ MeV; measured $E\alpha$ , $I\alpha$ , excitation energies, $\sigma(\theta)$ , $\sigma$ , angular distributions, differential cross section as function of excitation energy; deduced strengths distributions, widths and EWSR for isoscalar giant monopole resonance (ISGMR), isoscalar giant-dipole resonance (ISGDR), isoscalar giant quadrupole resonance (ISGQR), and high-energy octupole resonance (HEOR). Comparisons with theoretical predictions. JOUR PRVCA 81 034309 |
| $^{118}\text{Sb}$ | 2010FUZZ | NUCLEAR REACTIONS $^9\text{Be}$ , $^{23}\text{Na}$ , $^{25}\text{Mg}$ , $^{42}\text{Ca}$ , $^{46}\text{Ti}$ , $^{50}\text{Cr}$ , $^{54}\text{Fe}$ , $^{58}\text{Ni}$ , $^{118}\text{Sn}(^3\text{He}, t)$ , $E=140$ MeV / nucleon; measured $E\gamma$ , $I\gamma$ , reaction products; deduced $d\sigma(E)$ ; GT strength. CONF Varenna (Nucl Reaction Mechanisms),Proc,Vol.1,P39   |

**A=119**

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|-------------------|----------|---|
| $^{119}\text{Ag}$ | 2010BR02 | ATOMIC MASSES $^{112,114,115,116,117,118,119,120,121,122,123,124}\text{Ag}$ , $^{114,120,122,123,124,126,128}\text{Cd}$ ; measured cyclotron frequencies relative to $^{133}\text{Cs}$ , and mass excesses using ISOLTRAP Penning trap spectrometer; deduced excitation energies of the isomers; evaluated mass excesses; two-neutron separate energies, and proton-neutron interaction strength $\delta V_{pn}$ . Comparison with previous data and AME-2003. JOUR PRVCA 81 034313 |
| $^{119}\text{Sb}$ | 2008GUZL | NUCLEAR REACTIONS $^{121}\text{Sb}(p, t)$ , $E=21$ MeV; measured reaction products; deduced $\sigma(\theta)$ for transitions to $^{119}\text{Sb}$ levels. Comparison with DWBA calculations. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P371,Guazzoni   |

**A=120**

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|-------------------|----------|---|
| $^{120}\text{Ag}$ | 2010BR02 | ATOMIC MASSES $^{112,114,115,116,117,118,119,120,121,122,123,124}\text{Ag}$ , $^{114,120,122,123,124,126,128}\text{Cd}$ ; measured cyclotron frequencies relative to $^{133}\text{Cs}$ , and mass excesses using ISOLTRAP Penning trap spectrometer; deduced excitation energies of the isomers; evaluated mass excesses; two-neutron separate energies, and proton-neutron interaction strength $\delta V_{pn}$ . Comparison with previous data and AME-2003. JOUR PRVCA 81 034313 |
| $^{120}\text{Cd}$ | 2010BR02 | ATOMIC MASSES $^{112,114,115,116,117,118,119,120,121,122,123,124}\text{Ag}$ , $^{114,120,122,123,124,126,128}\text{Cd}$ ; measured cyclotron frequencies relative to $^{133}\text{Cs}$ , and mass excesses using ISOLTRAP Penning trap spectrometer; deduced excitation energies of the isomers; evaluated mass excesses; two-neutron separate energies, and proton-neutron interaction strength $\delta V_{pn}$ . Comparison with previous data and AME-2003. JOUR PRVCA 81 034313 |

KEYNUMBERS AND KEYWORDS

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**A=120 (continued)**

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|-------------------|----------|--|
| $^{120}\text{Sn}$ | 2008STZP | NUCLEAR REACTIONS $^{120}\text{Sn}(^{67}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{120}\text{Sn}(^{69}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{120}\text{Sn}(^{71}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{120}\text{Sn}(^{73}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{104}\text{Pd}(^{67}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{104}\text{Pd}(^{69}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{104}\text{Pd}(^{71}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{104}\text{Pd}(^{73}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; measured Cu Coulomb excitation $E\gamma$ , $I\gamma(\theta)$ , $\gamma\gamma$ -coin; deduced E, J, $\pi$ , B(E2). CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P671 |
|                   | 2008VOZV | NUCLEAR REACTIONS $^{112,116,120,124}\text{Sn}(\gamma, \gamma')$ , E=5.5-9.5 MeV; measured $E\gamma$ , $I\gamma$ ; $^{112,116,120,124}\text{Sn}$ ; deduced B(E1) strength distributions. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P335,Von Neumann-  |
|                   | 2010LI07 | NUCLEAR REACTIONS $^{112,114,116,118,120,122,124}\text{Sn}(\alpha, \alpha')$ , E=386 MeV; measured $E\alpha$ , $I\alpha$ , excitation energies, $\sigma(\theta)$ , $\sigma$ , angular distributions, differential cross section as function of excitation energy; deduced strengths distributions, widths and EWSR for isoscalar giant monopole resonance (ISGMR), isoscalar giant-dipole resonance (ISGDR), isoscalar giant quadrupole resonance (ISGQR), and high-energy octupole resonance (HEOR). Comparisons with theoretical predictions. JOUR PRVCA 81 034309   |
| $^{120}\text{Te}$ | 2008WEZW | RADIOACTIVITY $^{66}\text{Ge}$ ; $^{68}\text{Ge}$ ; $^{94}\text{Zr}$ ; $^{120}\text{Te}$ ; measured decay products; deduced B(E2), $T_{1/2}$ ; $^{140}\text{Nd}$ ; measured $E\gamma$ , $I\gamma(\theta)$ , $\gamma\gamma(\theta)$ -coin; deduced E, J, $\pi$ , mixed-symmetry states. Results on CD only. CONF E.Lansing (NS2008),P23,Werner  |
| $^{120}\text{Xe}$ | 2008TAZI | NUCLEAR REACTIONS Pb(p, x), E=1, 1.4 GeV; Bi(p, x), E=1, 1.4 GeV; measured $E\gamma$ , $I\gamma$ , A(particle) using melted thick target at ISOLDE facility; $^{76,77,79,85,87,88,89,90}\text{Kr}$ , $^{111}\text{Cd}$ , $^{121,124,126}\text{I}$ , $^{120,121,122,123,125,127,129,131,133}\text{Xe}$ , $^{184,186,188,190,192,193,195,197,203,205,206}\text{Hg}$ , $^{204,205,206,207,208,209,210}\text{At}$ ; deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069   |

**A=121**

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|-------------------|----------|---|
| $^{121}\text{Ag}$ | 2010BR02 | ATOMIC MASSES $^{112,114,115,116,117,118,119,120,121,122,123,124}\text{Ag}$ , $^{114,120,122,123,124,126,128}\text{Cd}$ ; measured cyclotron frequencies relative to $^{133}\text{Cs}$ , and mass excesses using ISOLTRAP Penning trap spectrometer; deduced excitation energies of the isomers; evaluated mass excesses; two-neutron separate energies, and proton-neutron interaction strength $\delta V_{pn}$ . Comparison with previous data and AME-2003. JOUR PRVCA 81 034313 |
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KEYNUMBERS AND KEYWORDS

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**A=121 (continued)**

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|-------------------|----------|---|
| $^{121}\text{I}$  | 2008TAZI | NUCLEAR REACTIONS Pb(p, x), E=1, 1.4 GeV; Bi(p, x), E=1, 1.4 GeV; measured $E\gamma$ , $I\gamma$ , A(particle) using melted thick target at ISOLDE facility; $^{76,77,79,85,87,88,89,90}\text{Kr}$ , $^{111}\text{Cd}$ , $^{121,124,126}\text{I}$ , $^{120,121,122,123,125,127,129,131,133}\text{Xe}$ , $^{184,186,188,190,192,193,195,197,203,205,206}\text{Hg}$ , $^{204,205,206,207,208,209,210}\text{At}$ ;<br>deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069 |
| $^{121}\text{Xe}$ | 2008TAZI | NUCLEAR REACTIONS Pb(p, x), E=1, 1.4 GeV; Bi(p, x), E=1, 1.4 GeV; measured $E\gamma$ , $I\gamma$ , A(particle) using melted thick target at ISOLDE facility; $^{76,77,79,85,87,88,89,90}\text{Kr}$ , $^{111}\text{Cd}$ , $^{121,124,126}\text{I}$ , $^{120,121,122,123,125,127,129,131,133}\text{Xe}$ , $^{184,186,188,190,192,193,195,197,203,205,206}\text{Hg}$ , $^{204,205,206,207,208,209,210}\text{At}$ ;<br>deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069 |

**A=122**

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|-------------------|----------|--|
| $^{122}\text{Ag}$ | 2010BR02 | ATOMIC MASSES $^{112,114,115,116,117,118,119,120,121,122,123,124}\text{Ag}$ , $^{114,120,122,123,124,126,128}\text{Cd}$ ; measured cyclotron frequencies relative to $^{133}\text{Cs}$ , and mass excesses using ISOLTRAP Penning trap spectrometer; deduced excitation energies of the isomers; evaluated mass excesses; two-neutron separate energies, and proton-neutron interaction strength $\delta V_{pn}$ . Comparison with previous data and AME-2003. JOUR PRVCA 81 034313  |
| $^{122}\text{Cd}$ | 2008KRZV | NUCLEAR REACTIONS $^9\text{Be}(^{56}\text{Ti}, n)^{55}\text{Ti}$ , E=high; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, E(fragment); deduced momentum transfer, ground=state single-particle structure; $^{122,124,126}\text{Cd}$ , $^{138,140,142,144}\text{Xe}(\gamma, \gamma')$ ; measured Coulomb excitation $E\gamma$ , $I\gamma$ , (particle) $\gamma$ -coin; deduced B(E2). Compared to other data and systematics. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P96   |
|                   | 2010BR02 | ATOMIC MASSES $^{112,114,115,116,117,118,119,120,121,122,123,124}\text{Ag}$ , $^{114,120,122,123,124,126,128}\text{Cd}$ ; measured cyclotron frequencies relative to $^{133}\text{Cs}$ , and mass excesses using ISOLTRAP Penning trap spectrometer; deduced excitation energies of the isomers; evaluated mass excesses; two-neutron separate energies, and proton-neutron interaction strength $\delta V_{pn}$ . Comparison with previous data and AME-2003. JOUR PRVCA 81 034313  |
| $^{122}\text{Sn}$ | 2008STZP | NUCLEAR REACTIONS $^{120}\text{Sn}(^{67}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{120}\text{Sn}(^{69}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{120}\text{Sn}(^{71}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{120}\text{Sn}(^{73}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{104}\text{Pd}(^{67}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{104}\text{Pd}(^{69}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{104}\text{Pd}(^{71}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{104}\text{Pd}(^{73}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; measured Cu Coulomb excitation $E\gamma$ , $I\gamma(\theta)$ , $\gamma\gamma$ -coin; deduced E, J, $\pi$ , B(E2). CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P671 |

KEYNUMBERS AND KEYWORDS

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**A=122 (continued)**

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|-------------------|-------------------|--|
| 2010LI07          | NUCLEAR REACTIONS | <sup>112,114,116,118,120,122,124</sup> Sn( $\alpha$ , $\alpha'$ ), E=386 MeV; measured $E\alpha$ , $I\alpha$ , excitation energies, $\sigma(\theta)$ , $\sigma$ , angular distributions, differential cross section as function of excitation energy; deduced strengths distributions, widths and EWSR for isoscalar giant monopole resonance (ISGMR), isoscalar giant-dipole resonance (ISGDR), isoscalar giant quadrupole resonance (ISGQR), and high-energy octupole resonance (HEOR). Comparisons with theoretical predictions. JOUR PRVCA 81 034309                               |
| <sup>122</sup> Te | 2010MI04          | NUCLEAR REACTIONS <sup>119</sup> Sn( $\alpha$ , $n\gamma$ ) <sup>122</sup> Te, E=15 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, angular distributions, half-lives by Doppler shift attenuation method. <sup>122</sup> Te; deduced levels, J, $\pi$ , transition strengths with Monte Carlo simulations. JOUR PRVCA 81 034314   |
| <sup>122</sup> Xe | 2008TAZI          | NUCLEAR REACTIONS Pb(p, x), E=1, 1.4 GeV; Bi(p, x), E=1, 1.4 GeV; measured $E\gamma$ , $I\gamma$ , A(particle) using melted thick target at ISOLDE facility; <sup>76,77,79,85,87,88,89,90</sup> Kr, <sup>111</sup> Cd, <sup>121,124,126</sup> I, <sup>120,121,122,123,125,127,129,131,133</sup> Xe, <sup>184,186,188,190,192,193,195,197,203,205,206</sup> Hg, <sup>204,205,206,207,208,209,210</sup> At; deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069 |

**A=123**

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|-------------------|----------|--|
| <sup>123</sup> Ag | 2010BR02 | ATOMIC MASSES <sup>112,114,115,116,117,118,119,120,121,122,123,124</sup> Ag, <sup>114,120,122,123,124,126,128</sup> Cd; measured cyclotron frequencies relative to <sup>133</sup> Cs, and mass excesses using ISOLTRAP Penning trap spectrometer; deduced excitation energies of the isomers; evaluated mass excesses; two-neutron separate energies, and proton-neutron interaction strength $\delta V_{pn}$ . Comparison with previous data and AME-2003. JOUR PRVCA 81 034313   |
| <sup>123</sup> Cd | 2010BR02 | ATOMIC MASSES <sup>112,114,115,116,117,118,119,120,121,122,123,124</sup> Ag, <sup>114,120,122,123,124,126,128</sup> Cd; measured cyclotron frequencies relative to <sup>133</sup> Cs, and mass excesses using ISOLTRAP Penning trap spectrometer; deduced excitation energies of the isomers; evaluated mass excesses; two-neutron separate energies, and proton-neutron interaction strength $\delta V_{pn}$ . Comparison with previous data and AME-2003. JOUR PRVCA 81 034313   |
| <sup>123</sup> Xe | 2008TAZI | NUCLEAR REACTIONS Pb(p, x), E=1, 1.4 GeV; Bi(p, x), E=1, 1.4 GeV; measured $E\gamma$ , $I\gamma$ , A(particle) using melted thick target at ISOLDE facility; <sup>76,77,79,85,87,88,89,90</sup> Kr, <sup>111</sup> Cd, <sup>121,124,126</sup> I, <sup>120,121,122,123,125,127,129,131,133</sup> Xe, <sup>184,186,188,190,192,193,195,197,203,205,206</sup> Hg, <sup>204,205,206,207,208,209,210</sup> At; deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069 |

## A=124

$^{124}\text{Ag}$	2010BR02	ATOMIC MASSES $^{112,114,115,116,117,118,119,120,121,122,123,124}\text{Ag}$ , $^{114,120,122,123,124,126,128}\text{Cd}$ ; measured cyclotron frequencies relative to $^{133}\text{Cs}$ , and mass excesses using ISOLTRAP Penning trap spectrometer; deduced excitation energies of the isomers; evaluated mass excesses; two-neutron separate energies, and proton-neutron interaction strength $\delta V_{pn}$ . Comparison with previous data and AME-2003. JOUR PRVCA 81 034313
$^{124}\text{Cd}$	2008KRZV	NUCLEAR REACTIONS $^9\text{Be}(^{56}\text{Ti}, n)^{55}\text{Ti}$ , E=high; measured $E_\gamma$ , $I_\gamma$ , $\gamma\gamma$ -coin, E(fragment); deduced momentum transfer, ground=state single-particle structure; $^{122,124,126}\text{Cd}$ , $^{138,140,142,144}\text{Xe}(\gamma, \gamma')$ ; measured Coulomb excitation $E_\gamma$ , $I_\gamma$ , (particle) $\gamma$ -coin; deduced B(E2). Compared to other data and systematics. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P96
	2010BR02	ATOMIC MASSES $^{112,114,115,116,117,118,119,120,121,122,123,124}\text{Ag}$ , $^{114,120,122,123,124,126,128}\text{Cd}$ ; measured cyclotron frequencies relative to $^{133}\text{Cs}$ , and mass excesses using ISOLTRAP Penning trap spectrometer; deduced excitation energies of the isomers; evaluated mass excesses; two-neutron separate energies, and proton-neutron interaction strength $\delta V_{pn}$ . Comparison with previous data and AME-2003. JOUR PRVCA 81 034313
$^{124}\text{Sn}$	2008BOZK	NUCLEAR REACTIONS $^{112,124}\text{Sn}(\gamma, \gamma')$ ; measured levels, J, $\pi$ ; evaluated energy weighted sum rule. Monoenergetic linearly polarized beam. THESIS M Boswell, University of North Carolina
	2008STZP	NUCLEAR REACTIONS $^{120}\text{Sn}(^{67}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{120}\text{Sn}(^{69}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{120}\text{Sn}(^{71}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{120}\text{Sn}(^{73}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{104}\text{Pd}(^{67}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{104}\text{Pd}(^{69}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{104}\text{Pd}(^{71}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; $^{104}\text{Pd}(^{73}\text{Cu}, ^{67}\text{Cu}')$ , E=2.99 MeV / nucleon; measured Cu Coulomb excitation $E_\gamma$ , $I_\gamma(\theta)$ , $\gamma\gamma$ -coin; deduced E, J, $\pi$ , B(E2). CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P671
	2008VOZV	NUCLEAR REACTIONS $^{112,116,120,124}\text{Sn}(\gamma, \gamma')$ , E=5.5-9.5 MeV; measured $E_\gamma$ , $I_\gamma$ ; $^{112,116,120,124}\text{Sn}$ ; deduced B(E1) strength distributions. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P335,Von Neumann-
	2010LI07	NUCLEAR REACTIONS $^{112,114,116,118,120,122,124}\text{Sn}(\alpha, \alpha')$ , E=386 MeV; measured $E_\alpha$ , $I_\alpha$ , excitation energies, $\sigma(\theta)$ , $\sigma$ , angular distributions, differential cross section as function of excitation energy; deduced strengths distributions, widths and EWSR for isoscalar giant monopole resonance (ISGMR), isoscalar giant-dipole resonance (ISGDR), isoscalar giant quadrupole resonance (ISGQR), and high-energy octupole resonance (HEOR). Comparisons with theoretical predictions. JOUR PRVCA 81 034309
$^{124}\text{Sb}$	2010PA07	RADIOACTIVITY $^{124}\text{Sb}(\beta^-)$ [from $\text{Sb}(n, X)$ ]; measured $E_\gamma$ , $I_\gamma$ , $E_e$ , $I_e$ ; deduced precise value for $T_{1/2}$ . JOUR ARISE 68 1555
$^{124}\text{Te}$	2010PA07	RADIOACTIVITY $^{124}\text{Sb}(\beta^-)$ [from $\text{Sb}(n, X)$ ]; measured $E_\gamma$ , $I_\gamma$ , $E_e$ , $I_e$ ; deduced precise value for $T_{1/2}$ . JOUR ARISE 68 1555

KEYNUMBERS AND KEYWORDS

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**A=124 (continued)**

<sup>124</sup>I      2008TAZI      NUCLEAR REACTIONS Pb(p, x), E=1, 1.4 GeV; Bi(p, x), E=1, 1.4 GeV; measured E $\gamma$ , I $\gamma$ , A(particle) using melted thick target at ISOLDE facility; <sup>76,77,79,85,87,88,89,90</sup>Kr, <sup>111</sup>Cd, <sup>121,124,126</sup>I, <sup>120,121,122,123,125,127,129,131,133</sup>Xe, <sup>184,186,188,190,192,193,195,197,203,205,206</sup>Hg, <sup>204,205,206,207,208,209,210</sup>At; deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069

**A=125**

<sup>125</sup>Pd      2008MOZQ      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>238</sup>U, f), E=345 MeV / nucleon; measured A / Z ratio; deduced Z=46 yields distribution, evidence for <sup>125</sup>Pd. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P145

<sup>125</sup>Xe      2008TAZI      NUCLEAR REACTIONS Pb(p, x), E=1, 1.4 GeV; Bi(p, x), E=1, 1.4 GeV; measured E $\gamma$ , I $\gamma$ , A(particle) using melted thick target at ISOLDE facility; <sup>76,77,79,85,87,88,89,90</sup>Kr, <sup>111</sup>Cd, <sup>121,124,126</sup>I, <sup>120,121,122,123,125,127,129,131,133</sup>Xe, <sup>184,186,188,190,192,193,195,197,203,205,206</sup>Hg, <sup>204,205,206,207,208,209,210</sup>At; deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069

**A=126**

<sup>126</sup>Cd      2008KRZV      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>56</sup>Ti, n)<sup>55</sup>Ti, E=high; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, E(fragment); deduced momentum transfer, ground=state single-particle structure; <sup>122,124,126</sup>Cd, <sup>138,140,142,144</sup>Xe( $\gamma$ ,  $\gamma'$ ); measured Coulomb excitation E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin; deduced B(E2). Compared to other data and systematics. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P96

2010BR02      ATOMIC MASSES <sup>112,114,115,116,117,118,119,120,121,122,123,124</sup>Ag, <sup>114,120,122,123,124,126,128</sup>Cd; measured cyclotron frequencies relative to <sup>133</sup>Cs, and mass excesses using ISOLTRAP Penning trap spectrometer; deduced excitation energies of the isomers; evaluated mass excesses; two-neutron separate energies, and proton-neutron interaction strength  $\delta V_{pn}$ . Comparison with previous data and AME-2003. JOUR PRVCA 81 034313

<sup>126</sup>Sn      2008STZP      NUCLEAR REACTIONS <sup>120</sup>Sn(<sup>67</sup>Cu, <sup>67</sup>Cu'), E=2.99 MeV / nucleon; <sup>120</sup>Sn(<sup>69</sup>Cu, <sup>67</sup>Cu'), E=2.99 MeV / nucleon; <sup>120</sup>Sn(<sup>71</sup>Cu, <sup>67</sup>Cu'), E=2.99 MeV / nucleon; <sup>120</sup>Sn(<sup>73</sup>Cu, <sup>67</sup>Cu'), E=2.99 MeV / nucleon; <sup>104</sup>Pd(<sup>67</sup>Cu, <sup>67</sup>Cu'), E=2.99 MeV / nucleon; <sup>104</sup>Pd(<sup>69</sup>Cu, <sup>67</sup>Cu'), E=2.99 MeV / nucleon; <sup>104</sup>Pd(<sup>71</sup>Cu, <sup>67</sup>Cu'), E=2.99 MeV / nucleon; <sup>104</sup>Pd(<sup>73</sup>Cu, <sup>67</sup>Cu'), E=2.99 MeV / nucleon; measured Cu Coulomb excitation E $\gamma$ , I $\gamma$ ( $\theta$ ),  $\gamma\gamma$ -coin; deduced E, J,  $\pi$ , B(E2). CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P671

KEYNUMBERS AND KEYWORDS

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**A=126 (continued)**

	2010FE02	RADIOACTIVITY $^{126}\text{Sn}$ , $^{126}\text{Sb}(\beta^-)$ ; measured $E_\gamma$ , $I_\gamma$ ; deduced absolute and relative photon emission, energy levels, $K\beta / K\alpha$ intensity ratio for Sb x-rays. JOUR ARISE 68 1571
	2010IL01	NUCLEAR REACTIONS $^9\text{Be}(^{238}\text{U}, \text{F})$ , $E=750$ MeV / nucleon; measured $E_\gamma$ , $I_\gamma$ , $\gamma\gamma$ -coin, half-lives. $^{126}\text{Sn}$ ; deduced levels, $J$ , $\pi$ , $g$ factor. Comparison with shell model calculations and adjacent isotope systematics. JOUR PYLBB 687 305
$^{126}\text{Sb}$	2010FE02	RADIOACTIVITY $^{126}\text{Sn}$ , $^{126}\text{Sb}(\beta^-)$ ; measured $E_\gamma$ , $I_\gamma$ ; deduced absolute and relative photon emission, energy levels, $K\beta / K\alpha$ intensity ratio for Sb x-rays. JOUR ARISE 68 1571
$^{126}\text{Te}$	2010FE02	RADIOACTIVITY $^{126}\text{Sn}$ , $^{126}\text{Sb}(\beta^-)$ ; measured $E_\gamma$ , $I_\gamma$ ; deduced absolute and relative photon emission, energy levels, $K\beta / K\alpha$ intensity ratio for Sb x-rays. JOUR ARISE 68 1571
$^{126}\text{I}$	2008TAZI	NUCLEAR REACTIONS $\text{Pb}(p, x)$ , $E=1, 1.4$ GeV; $\text{Bi}(p, x)$ , $E=1, 1.4$ GeV; measured $E_\gamma$ , $I_\gamma$ , $A(\text{particle})$ using melted thick target at ISOLDE facility; $^{76,77,79,85,87,88,89,90}\text{Kr}$ , $^{111}\text{Cd}$ , $^{121,124,126}\text{I}$ , $^{120,121,122,123,125,127,129,131,133}\text{Xe}$ , $^{184,186,188,190,192,193,195,197,203,205,206}\text{Hg}$ , $^{204,205,206,207,208,209,210}\text{At}$ ; deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069

**A=127**

$^{127}\text{Sb}$	2009WA24	NUCLEAR REACTIONS $^{176}\text{Yb}$ , $^{176}\text{Lu}$ , $^{186}\text{W}(^{136}\text{Xe}, X)^{127}\text{Sb}$ , $E=6.0-6.2$ MeV / nucleon; measured $E_\gamma$ , $I_\gamma$ , $\gamma\gamma$ -coin, $\gamma(\theta)$ , $\gamma(t)$ , $T_{1/2}$ using Gammasphere array. $^{127}\text{Sb}$ ; deduced levels, $J$ , $\pi$ , $T_{1/2}$ , $\delta$ , $B(E2)$ , $B(E3)$ , $B(M2)$ , internal conversion coefficients. Comparison with shell model and systematics for adjacent isotopes. JOUR ZAANE 42 163
$^{127}\text{Xe}$	2008TAZI	NUCLEAR REACTIONS $\text{Pb}(p, x)$ , $E=1, 1.4$ GeV; $\text{Bi}(p, x)$ , $E=1, 1.4$ GeV; measured $E_\gamma$ , $I_\gamma$ , $A(\text{particle})$ using melted thick target at ISOLDE facility; $^{76,77,79,85,87,88,89,90}\text{Kr}$ , $^{111}\text{Cd}$ , $^{121,124,126}\text{I}$ , $^{120,121,122,123,125,127,129,131,133}\text{Xe}$ , $^{184,186,188,190,192,193,195,197,203,205,206}\text{Hg}$ , $^{204,205,206,207,208,209,210}\text{At}$ ; deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069

**A=128**

$^{128}\text{Cd}$	2010BR02	ATOMIC MASSES $^{112,114,115,116,117,118,119,120,121,122,123,124}\text{Ag}$ , $^{114,120,122,123,124,126,128}\text{Cd}$ ; measured cyclotron frequencies relative to $^{133}\text{Cs}$ , and mass excesses using ISOLTRAP Penning trap spectrometer; deduced excitation energies of the isomers; evaluated mass excesses; two-neutron separate energies, and proton-neutron interaction strength $\delta V_{pn}$ . Comparison with previous data and AME-2003. JOUR PRVCA 81 034313
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**A=129**

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| $^{129}\text{Sb}$ | 2010VI01 | NUCLEAR REACTIONS $^{235}\text{U}$ , $^{239}\text{Pu}(\gamma, \text{F})^{90}\text{Rb} / ^{129}\text{Sb} / ^{130}\text{Sb} / ^{132}\text{Sb} / ^{131}\text{Te} / ^{133}\text{Te} / ^{134}\text{I} / ^{136}\text{I} / ^{135}\text{Xe}$ , E=9.6, 9.8 MeV; measured reaction products; deduced isomeric yields, angular momenta. JOUR BRSPE 74 500   |
| $^{129}\text{Xe}$ | 2008TAZI | NUCLEAR REACTIONS Pb(p, x), E=1, 1.4 GeV; Bi(p, x), E=1, 1.4 GeV; measured $E\gamma$ , $I\gamma$ , A(particle) using melted thick target at ISOLDE facility; $^{76,77,79,85,87,88,89,90}\text{Kr}$ , $^{111}\text{Cd}$ , $^{121,124,126}\text{I}$ , $^{120,121,122,123,125,127,129,131,133}\text{Xe}$ , $^{184,186,188,190,192,193,195,197,203,205,206}\text{Hg}$ , $^{204,205,206,207,208,209,210}\text{At}$ ; deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069 |

**A=130**

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| $^{130}\text{Cd}$ | 2008PFZZ | NUCLEAR REACTIONS $^9\text{Be}(^{136}\text{Xe}, x)^{130}\text{Cd}$ , E=750 MeV / nucleon; $^9\text{Be}(^{238}\text{U}, \text{f})$ , E=650 MeV / nucleon; measured Z(fragment), A(fragment), $E\gamma$ , $I\gamma(t)$ , (fragment) $\gamma$ -coin; $^{130}\text{Cd}$ deduced E, J, $\pi$ , isomer decay $T_{1/2}$ . CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P557   |
| $^{130}\text{Sb}$ | 2010VI01 | NUCLEAR REACTIONS $^{235}\text{U}$ , $^{239}\text{Pu}(\gamma, \text{F})^{90}\text{Rb} / ^{129}\text{Sb} / ^{130}\text{Sb} / ^{132}\text{Sb} / ^{131}\text{Te} / ^{133}\text{Te} / ^{134}\text{I} / ^{136}\text{I} / ^{135}\text{Xe}$ , E=9.6, 9.8 MeV; measured reaction products; deduced isomeric yields, angular momenta. JOUR BRSPE 74 500  |
| $^{130}\text{I}$  | 2008BEZL | NUCLEAR REACTIONS $^{129}\text{I}(n, \gamma)$ , E=thermal; measured $E\gamma$ , $I\gamma$ ; deduced $\sigma$ , branching isomer / ground state. CONF Nice (Nucl Data for Sci and Technol) Proc,P631   |
|                   | 2008BEZL | RADIOACTIVITY $^{130}\text{I}(\beta^-)$ [from $^{129}\text{I}(n, \gamma)$ ]; measured $E\gamma$ , $I\gamma$ ; deduced decay constant isomer, ground state. CONF Nice (Nucl Data for Sci and Technol) Proc,P631  |
| $^{130}\text{Xe}$ | 2008BEZL | RADIOACTIVITY $^{130}\text{I}(\beta^-)$ [from $^{129}\text{I}(n, \gamma)$ ]; measured $E\gamma$ , $I\gamma$ ; deduced decay constant isomer, ground state. CONF Nice (Nucl Data for Sci and Technol) Proc,P631  |
|                   | 2008LEZK | NUCLEAR REACTIONS Mg(p, $^3\text{He}$ ), E=14.7-1600 MeV; Al(p, $^3\text{He}$ ), E=41.5-397 MeV; Si(p, $^3\text{He}$ ), E=31.3-1600 MeV; Pb(p, $^3\text{He}$ ), E=44.2-2595 MeV; Bi(p, $^3\text{He}$ ), E=102-2589 MeV; Bi(p, $\alpha$ ), E=102-2589 MeV; Bi(p, x) $^{82}\text{Kr}$ , E=102-2589 MeV; Bi(p, x) $^{85}\text{Kr}$ , E=102-2589 MeV; Bi(p, x) $^{130}\text{Xe}$ , E=102-2589 MeV; Bi(p, x) $^{131}\text{Xe}$ , E=102-2589 MeV; measured He, Kr, Xe using cryogenic traps; deduced He, Kr, Xe $\sigma$ ; calculated $\sigma$ using INCL4 / ABLA code. Compared to other measurements of similar kind done by the same group. CONF Nice (Nucl Data for Sci and Technol) Proc,P1061 |

KEYNUMBERS AND KEYWORDS

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**A=131**

$^{131}\text{Sn}$	2008CIZZ	NUCLEAR REACTIONS $^2\text{H}(^{82}\text{Ge}, \text{p})$ , $E \approx 4\text{-}5$ MeV / nucleon; $^2\text{H}(^{84}\text{Se}, \text{p})$ , $E \approx 4\text{-}5$ MeV / nucleon; $^2\text{H}(^{130}\text{Sn}, \text{p})$ , $E \approx 4\text{-}5$ MeV / nucleon; $^2\text{H}(^{132}\text{Sn}, \text{p})$ , $E \approx 4\text{-}5$ MeV / nucleon; $^2\text{H}(^{134}\text{Te}, \text{p})$ , $E \approx 4\text{-}5$ MeV / nucleon; measured $E_p$ , $I_p(\theta)$ ; deduced Q-values, E, J, $\pi$ . Compared with NNDC tables. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P580
$^{131}\text{Te}$	2010VI01	NUCLEAR REACTIONS $^{235}\text{U}$ , $^{239}\text{Pu}(\gamma, \text{F})^{90}\text{Rb} / ^{129}\text{Sb} / ^{130}\text{Sb} / ^{132}\text{Sb} / ^{131}\text{Te} / ^{133}\text{Te} / ^{134}\text{I} / ^{136}\text{I} / ^{135}\text{Xe}$ , $E=9.6, 9.8$ MeV; measured reaction products; deduced isomeric yields, angular momenta. JOUR BRSPE 74 500
$^{131}\text{Xe}$	2008LEZK	NUCLEAR REACTIONS $\text{Mg}(\text{p}, ^3\text{He})$ , $E=14.7\text{-}1600$ MeV; $\text{Al}(\text{p}, ^3\text{He})$ , $E=41.5\text{-}397$ MeV; $\text{Si}(\text{p}, ^3\text{He})$ , $E=31.3\text{-}1600$ MeV; $\text{Pb}(\text{p}, ^3\text{He})$ , $E=44.2\text{-}2595$ MeV; $\text{Bi}(\text{p}, ^3\text{He})$ , $E=102\text{-}2589$ MeV; $\text{Bi}(\text{p}, \alpha)$ , $E=102\text{-}2589$ MeV; $\text{Bi}(\text{p}, \text{x})^{82}\text{Kr}$ , $E=102\text{-}2589$ MeV; $\text{Bi}(\text{p}, \text{x})^{85}\text{Kr}$ , $E=102\text{-}2589$ MeV; $\text{Bi}(\text{p}, \text{x})^{130}\text{Xe}$ , $E=102\text{-}2589$ MeV; $\text{Bi}(\text{p}, \text{x})^{131}\text{Xe}$ , $E=102\text{-}2589$ MeV; measured He, Kr, Xe using cryogenic traps; deduced He, Kr, Xe $\sigma$ ; calculated $\sigma$ using INCL4 / ABLA code. Compared to other measurements of similar kind done by the same group. CONF Nice (Nucl Data for Sci and Technol) Proc,P1061
	2008TAZI	NUCLEAR REACTIONS $\text{Pb}(\text{p}, \text{x})$ , $E=1, 1.4$ GeV; $\text{Bi}(\text{p}, \text{x})$ , $E=1, 1.4$ GeV; measured $E_\gamma$ , $I_\gamma$ , $A(\text{particle})$ using melted thick target at ISOLDE facility; $^{76,77,79,85,87,88,89,90}\text{Kr}$ , $^{111}\text{Cd}$ , $^{121,124,126}\text{I}$ , $^{120,121,122,123,125,127,129,131,133}\text{Xe}$ , $^{184,186,188,190,192,193,195,197,203,205,206}\text{Hg}$ , $^{204,205,206,207,208,209,210}\text{At}$ ; deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069

**A=132**

$^{132}\text{Sn}$	2008KOYY	RADIOACTIVITY $^{17}\text{Ne}$ ; measured ToF versus field frequency; deduced isotope shift, mass mass excess, charge radius, halo nuclei; calculated mass excess, separation energy, proton, neutron density distribution using FMD; $^{38}\text{Ca}$ ; $^{26}\text{Al}$ ; $^{80}\text{Zn}$ ; $^{81}\text{Zn}$ ; $^{132}\text{Sn}$ ; $^{134}\text{Sn}$ ; measured ToF versus frequency detuning; deduced Q-value, mass excess. Neutrons in $^{17}\text{Ne}$ spherical, protons cluster-like form. Results on CD only. CONF E.Lansing (NS2008),P20,Kowalska
$^{132}\text{Sb}$	2010VI01	NUCLEAR REACTIONS $^{235}\text{U}$ , $^{239}\text{Pu}(\gamma, \text{F})^{90}\text{Rb} / ^{129}\text{Sb} / ^{130}\text{Sb} / ^{132}\text{Sb} / ^{131}\text{Te} / ^{133}\text{Te} / ^{134}\text{I} / ^{136}\text{I} / ^{135}\text{Xe}$ , $E=9.6, 9.8$ MeV; measured reaction products; deduced isomeric yields, angular momenta. JOUR BRSPE 74 500

KEYNUMBERS AND KEYWORDS

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**A=133**

$^{133}\text{Sn}$	2008CIZZ	NUCLEAR REACTIONS $^2\text{H}(^{82}\text{Ge}, \text{p})$ , $E \approx 4\text{-}5$ MeV / nucleon; $^2\text{H}(^{84}\text{Se}, \text{p})$ , $E \approx 4\text{-}5$ MeV / nucleon; $^2\text{H}(^{130}\text{Sn}, \text{p})$ , $E \approx 4\text{-}5$ MeV / nucleon; $^2\text{H}(^{132}\text{Sn}, \text{p})$ , $E \approx 4\text{-}5$ MeV / nucleon; $^2\text{H}(^{134}\text{Te}, \text{p})$ , $E \approx 4\text{-}5$ MeV / nucleon; measured $E_p$ , $I_p(\theta)$ ; deduced Q-values, E, J, $\pi$ . Compared with NNDC tables. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P580
	2010J003	NUCLEAR REACTIONS $^{132}\text{Sn}(\text{d}, \text{p})$ , $E=630$ MeV; measured $E_p$ , $I_p$ ; deduced proton $\sigma(\theta)$ , Q-value spectrum, properties of single-particle states in $^{133}\text{Sn}$ , magic nature of $^{132}\text{Sn}$ . DWBA and FRESKO calculations. JOUR NATUA 465 454
$^{133}\text{Sb}$	2010SU11	NUCLEAR REACTIONS $^9\text{Be}(^{238}\text{U}, \text{F})^{133}\text{Sb}$ , $E=411$ MeV / nucleon; measured mass, survival time in FRS using IMS technique. $^{133}\text{Sb}$ ; deduced isomeric level energy, $T_{1/2}$ , J, $\pi$ . JOUR PYLBB 688 294
$^{133}\text{Te}$	2010VI01	NUCLEAR REACTIONS $^{235}\text{U}$ , $^{239}\text{Pu}(\gamma, \text{F})^{90}\text{Rb} / ^{129}\text{Sb} / ^{130}\text{Sb} / ^{132}\text{Sb} / ^{131}\text{Te} / ^{133}\text{Te} / ^{134}\text{I} / ^{136}\text{I} / ^{135}\text{Xe}$ , $E=9.6, 9.8$ MeV; measured reaction products; deduced isomeric yields, angular momenta. JOUR BRSPE 74 500
$^{133}\text{Xe}$	2008TAZI	NUCLEAR REACTIONS $\text{Pb}(\text{p}, \text{x})$ , $E=1, 1.4$ GeV; $\text{Bi}(\text{p}, \text{x})$ , $E=1, 1.4$ GeV; measured $E_\gamma$ , $I_\gamma$ , A(particle) using melted thick target at ISOLDE facility; $^{76,77,79,85,87,88,89,90}\text{Kr}$ , $^{111}\text{Cd}$ , $^{121,124,126}\text{I}$ , $^{120,121,122,123,125,127,129,131,133}\text{Xe}$ , $^{184,186,188,190,192,193,195,197,203,205,206}\text{Hg}$ , $^{204,205,206,207,208,209,210}\text{At}$ ; deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069

**A=134**

$^{134}\text{Sn}$	2008KOYY	RADIOACTIVITY $^{17}\text{Ne}$ ; measured ToF versus field frequency; deduced isotope shift, mass mass excess, charge radius, halo nuclei; calculated mass excess, separation energy, proton, neutron density distribution using FMD; $^{38}\text{Ca}$ ; $^{26}\text{Al}$ ; $^{80}\text{Zn}$ ; $^{81}\text{Zn}$ ; $^{132}\text{Sn}$ ; $^{134}\text{Sn}$ ; measured ToF versus frequency detuning; deduced Q-value, mass excess. Neutrons in $^{17}\text{Ne}$ spherical, protons cluster-like form. Results on CD only. CONF E.Lansing (NS2008),P20,Kowalska
$^{134}\text{Sb}$	2008MAZL	RADIOACTIVITY $^{136}\text{Sn}$ , $^{136}\text{Sb}$ , $^{136}\text{Te}(\beta^-)$ ; measured $\beta$ -delayed neutron decay, $E_\gamma$ , $I_\gamma$ ; $^{134,135}\text{Sb}$ , $^{136}\text{Te}$ ; deduced level energies, J, $\pi$ , $B(E_\lambda)$ , $T_{1/2}$ . CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P263,Mach
$^{134}\text{I}$	2010VI01	NUCLEAR REACTIONS $^{235}\text{U}$ , $^{239}\text{Pu}(\gamma, \text{F})^{90}\text{Rb} / ^{129}\text{Sb} / ^{130}\text{Sb} / ^{132}\text{Sb} / ^{131}\text{Te} / ^{133}\text{Te} / ^{134}\text{I} / ^{136}\text{I} / ^{135}\text{Xe}$ , $E=9.6, 9.8$ MeV; measured reaction products; deduced isomeric yields, angular momenta. JOUR BRSPE 74 500
$^{134}\text{Xe}$	2008PIZW	NUCLEAR REACTIONS $^{12}\text{C}(^{134}\text{Xe}, ^{134}\text{Xe}')$ , $E=435$ MeV; measured $E_\gamma$ , $I_\gamma$ , $\gamma$ - $\gamma$ -coin.; $^{134}\text{Xe}$ ; deduced level energies, J, $\pi$ , $B(E2)$ . CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P325,Pietralla

KEYNUMBERS AND KEYWORDS

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**A=135**

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| $^{135}\text{Sb}$ | 2008MAZL | RADIOACTIVITY $^{136}\text{Sn}$ , $^{136}\text{Sb}$ , $^{136}\text{Te}(\beta^-)$ ; measured $\beta$ -delayed neutron decay, $E\gamma$ , $I\gamma$ ; $^{134,135}\text{Sb}$ , $^{136}\text{Te}$ ; deduced level energies, J, $\pi$ , $B(E\lambda)$ , $T_{1/2}$ . CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P263,Mach   |
| $^{135}\text{Te}$ | 2008CIZZ | NUCLEAR REACTIONS $^2\text{H}(^{82}\text{Ge}, \text{p})$ , $E\approx 4\text{-}5$ MeV / nucleon; $^2\text{H}(^{84}\text{Se}, \text{p})$ , $E\approx 4\text{-}5$ MeV / nucleon; $^2\text{H}(^{130}\text{Sn}, \text{p})$ , $E\approx 4\text{-}5$ MeV / nucleon; $^2\text{H}(^{132}\text{Sn}, \text{p})$ , $E\approx 4\text{-}5$ MeV / nucleon; $^2\text{H}(^{134}\text{Te}, \text{p})$ , $E\approx 4\text{-}5$ MeV / nucleon; measured $E_p$ , $I_p(\theta)$ ; deduced Q-values, E, J, $\pi$ . Compared with NNDC tables. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P580 |
| $^{135}\text{Xe}$ | 2010VI01 | NUCLEAR REACTIONS $^{235}\text{U}$ , $^{239}\text{Pu}(\gamma, \text{F})^{90}\text{Rb}$ / $^{129}\text{Sb}$ / $^{130}\text{Sb}$ / $^{132}\text{Sb}$ / $^{131}\text{Te}$ / $^{133}\text{Te}$ / $^{134}\text{I}$ / $^{136}\text{I}$ / $^{135}\text{Xe}$ , $E=9.6, 9.8$ MeV; measured reaction products; deduced isomeric yields, angular momenta. JOUR BRSPE 74 500  |
| $^{135}\text{Nd}$ | 2008MUZV | NUCLEAR REACTIONS $^{100}\text{Mo}(^{40}\text{Ar}, 5\text{n})$ , $E=175$ MeV; $^{100}\text{Mo}(^{40}\text{Ar}, 4\text{n})$ , E not given; measured $E\gamma$ , $I\gamma(\theta)$ , $\gamma\gamma$ -coin; deduced E, J, $\pi$ , bands, $B(M1)$ , $B(E2)$ , yrast; calculated splitting of chiral bands using TAC (tilted-axis cranking) with RPA. Results on CD only. CONF E.Lansing (NS2008),P26,Mukhopadhyay   |

**A=136**

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| $^{136}\text{Sn}$ | 2008MAZL | RADIOACTIVITY $^{136}\text{Sn}$ , $^{136}\text{Sb}$ , $^{136}\text{Te}(\beta^-)$ ; measured $\beta$ -delayed neutron decay, $E\gamma$ , $I\gamma$ ; $^{134,135}\text{Sb}$ , $^{136}\text{Te}$ ; deduced level energies, J, $\pi$ , $B(E\lambda)$ , $T_{1/2}$ . CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P263,Mach   |
| $^{136}\text{Sb}$ | 2008MAZL | RADIOACTIVITY $^{136}\text{Sn}$ , $^{136}\text{Sb}$ , $^{136}\text{Te}(\beta^-)$ ; measured $\beta$ -delayed neutron decay, $E\gamma$ , $I\gamma$ ; $^{134,135}\text{Sb}$ , $^{136}\text{Te}$ ; deduced level energies, J, $\pi$ , $B(E\lambda)$ , $T_{1/2}$ . CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P263,Mach   |
|                   | 2008SIZS | RADIOACTIVITY $^{136}\text{Sb}(\beta^-)$ [from $^{241}\text{Pu}(\text{n}, \text{f})$ , $E=\text{thermal}$ ]; measured delayed $E\gamma$ , $I\gamma$ , $E(\text{ce})$ , x-rays; deduced E, J, $\pi$ , $B(E2)$ ; $^{105,107}\text{Mo}$ , $^{107}\text{Tc}(\beta^-)$ [from $^{248}\text{Cm}(\text{SF})$ ]; measured $E\gamma$ , $I\gamma$ , $E(\text{ce})$ ; deduced E, J, $\pi$ , isomer decay, bands; calculated E, J, $\pi$ , isomeric transition using standard BCS. The Sb data compared to calculations of Corragio. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P71 |
| $^{136}\text{Te}$ | 2008MAZL | RADIOACTIVITY $^{136}\text{Sn}$ , $^{136}\text{Sb}$ , $^{136}\text{Te}(\beta^-)$ ; measured $\beta$ -delayed neutron decay, $E\gamma$ , $I\gamma$ ; $^{134,135}\text{Sb}$ , $^{136}\text{Te}$ ; deduced level energies, J, $\pi$ , $B(E\lambda)$ , $T_{1/2}$ . CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P263,Mach   |
|                   | 2008SIZS | RADIOACTIVITY $^{136}\text{Sb}(\beta^-)$ [from $^{241}\text{Pu}(\text{n}, \text{f})$ , $E=\text{thermal}$ ]; measured delayed $E\gamma$ , $I\gamma$ , $E(\text{ce})$ , x-rays; deduced E, J, $\pi$ , $B(E2)$ ; $^{105,107}\text{Mo}$ , $^{107}\text{Tc}(\beta^-)$ [from $^{248}\text{Cm}(\text{SF})$ ]; measured $E\gamma$ , $I\gamma$ , $E(\text{ce})$ ; deduced E, J, $\pi$ , isomer decay, bands; calculated E, J, $\pi$ , isomeric transition using standard BCS. The Sb data compared to calculations of Corragio. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P71 |

KEYNUMBERS AND KEYWORDS

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**A=136 (continued)**

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| $^{136}\text{I}$  | 2008MAZL | RADIOACTIVITY $^{136}\text{Sn}$ , $^{136}\text{Sb}$ , $^{136}\text{Te}(\beta^-)$ ; measured $\beta$ -delayed neutron decay, $E\gamma$ , $I\gamma$ ; $^{134,135}\text{Sb}$ , $^{136}\text{Te}$ ; deduced level energies, J, $\pi$ , $B(E\lambda)$ , $T_{1/2}$ . CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P263,Mach  |
|                   | 2010VI01 | NUCLEAR REACTIONS $^{235}\text{U}$ , $^{239}\text{Pu}(\gamma, F)^{90}\text{Rb}$ / $^{129}\text{Sb}$ / $^{130}\text{Sb}$ / $^{132}\text{Sb}$ / $^{131}\text{Te}$ / $^{133}\text{Te}$ / $^{134}\text{I}$ / $^{136}\text{I}$ / $^{135}\text{Xe}$ , $E=9.6, 9.8$ MeV; measured reaction products; deduced isomeric yields, angular momenta. JOUR BRSPE 74 500  |
| $^{136}\text{Xe}$ | 2008SAZL | NUCLEAR REACTIONS $^{136}\text{Xe}$ , $^{138}\text{Ba}$ , $^{140}\text{Ce}$ , $^{142}\text{Nd}$ , $^{144}\text{Sm}(\gamma, \gamma')$ , ( $\alpha, \alpha\gamma$ ), $E<100$ MeV; measured reaction products; $^{136}\text{Xe}$ , $^{138}\text{Ba}$ , $^{140}\text{Ce}$ , $^{142}\text{Nd}$ , $^{144}\text{Sm}$ ; deduced E1 strength distribution, $B(E1)$ . CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P345,Savran |
| $^{136}\text{Nd}$ | 2008MUZV | NUCLEAR REACTIONS $^{100}\text{Mo}(^{40}\text{Ar}, 5n)$ , $E=175$ MeV; $^{100}\text{Mo}(^{40}\text{Ar}, 4n)$ , $E$ not given; measured $E\gamma$ , $I\gamma(\theta)$ , $\gamma\gamma$ -coin; deduced E, J, $\pi$ , bands, $B(M1)$ , $B(E2)$ , yrast; calculated splitting of chiral bands using TAC (tilted-axis cranking) with RPA. Results on CD only. CONF E.Lansing (NS2008),P26,Mukhopadhyay                            |

**A=137**

No references found

**A=138**

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| $^{138}\text{Xe}$ | 2008KRZV | NUCLEAR REACTIONS $^9\text{Be}(^{56}\text{Ti}, n)^{55}\text{Ti}$ , $E=\text{high}$ ; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, $E(\text{fragment})$ ; deduced momentum transfer, ground=state single-particle structure; $^{122,124,126}\text{Cd}$ , $^{138,140,142,144}\text{Xe}(\gamma, \gamma')$ ; measured Coulomb excitation $E\gamma$ , $I\gamma$ , (particle) $\gamma$ -coin; deduced $B(E2)$ . Compared to other data and systematics. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P96 |
| $^{138}\text{Ba}$ | 2008SAZL | NUCLEAR REACTIONS $^{136}\text{Xe}$ , $^{138}\text{Ba}$ , $^{140}\text{Ce}$ , $^{142}\text{Nd}$ , $^{144}\text{Sm}(\gamma, \gamma')$ , ( $\alpha, \alpha\gamma$ ), $E<100$ MeV; measured reaction products; $^{136}\text{Xe}$ , $^{138}\text{Ba}$ , $^{140}\text{Ce}$ , $^{142}\text{Nd}$ , $^{144}\text{Sm}$ ; deduced E1 strength distribution, $B(E1)$ . CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P345,Savran  |

**A=139**

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| $^{139}\text{Pm}$ | 2008DHZZ | NUCLEAR REACTIONS $^{116}\text{Cd}(^{27}\text{Al}, 4n)$ , $E=120$ MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin; deduced $^{139}\text{Pm}$ E, J, $\pi$ , quadrupole moment. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P489 |
|                   | 2010ZH12 | NUCLEAR REACTIONS $^{116}\text{Cd}(^{27}\text{Al}, 4n)$ , $E=120$ MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin., DCO; $^{139}\text{Pm}$ ; deduced levels, J, $\pi$ , bands, and possible magnetic rotational bands. JOUR CPCHC 34 456             |

KEYNUMBERS AND KEYWORDS

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**A=140**

- <sup>140</sup>Xe      2008KRZV      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>56</sup>Ti, n)<sup>55</sup>Ti, E=high; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, E(fragment); deduced momentum transfer, ground=state single-particle structure; <sup>122,124,126</sup>Cd, <sup>138,140,142,144</sup>Xe( $\gamma$ ,  $\gamma'$ ); measured Coulomb excitation E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin; deduced B(E2). Compared to other data and systematics. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P96
- <sup>140</sup>Cs      2010LI10      RADIOACTIVITY <sup>252</sup>Cf(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$  using Gammasphere array. <sup>140</sup>Cs; deduced levels, J,  $\pi$ , configurations. <sup>107,108,109,110</sup>Tc; measured E $\gamma$ . Comparison with level structure of <sup>138</sup>I and with systematics of N=85 isotones of <sup>137</sup>Te, <sup>138</sup>I, <sup>139</sup>Xe, <sup>140</sup>Cs, <sup>141</sup>Ba, <sup>145</sup>Nd, <sup>146</sup>Pm, <sup>147</sup>Sm, <sup>148</sup>Eu and <sup>149</sup>Gd. JOUR PRVCA 81 037302
- <sup>140</sup>La      2008IGZX      NUCLEAR REACTIONS <sup>139</sup>La(n,  $\gamma$ ), E $\approx$ 10-100 keV; <sup>139</sup>La(n,  $\gamma$ ), E<00-650 keV; measured E $\gamma$ , I $\gamma$ ; deduced capture  $\sigma$ . Compared to other data, JENDL-3.3, ENDF / B-VI, ENDF / B-VII. CONF Nice (Nucl Data for Sci and Technol) Proc,P1299
- 2008TAZG      NUCLEAR REACTIONS <sup>90,91,92,93,94,96</sup>Zr(n,  $\gamma$ ), <sup>139</sup>La(n,  $\gamma$ ), E=1 eV-1 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin; deduced average  $\sigma$ , capture kernels; calculated <sup>90,91,92,94,96</sup>Zr, <sup>139</sup>La average  $\sigma$ ; using n-TOF and JENDL-3.3 data. CONF Nice (Nucl Data for Sci and Technol) Proc,P1303
- <sup>140</sup>Ce      2008SAZL      NUCLEAR REACTIONS <sup>136</sup>Xe, <sup>138</sup>Ba, <sup>140</sup>Ce, <sup>142</sup>Nd, <sup>144</sup>Sm( $\gamma$ ,  $\gamma'$ ), ( $\alpha$ ,  $\alpha\gamma$ ), E<100 MeV; measured reaction products; <sup>136</sup>Xe, <sup>138</sup>Ba, <sup>140</sup>Ce, <sup>142</sup>Nd, <sup>144</sup>Sm; deduced E1 strength distribution, B(E1). CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P345,Savran
- <sup>140</sup>Nd      2008WEZW      RADIOACTIVITY <sup>66</sup>Ge; <sup>68</sup>Ge; <sup>94</sup>Zr; <sup>120</sup>Te; measured decay products; deduced B(E2), T<sub>1/2</sub>; <sup>140</sup>Nd; measured E $\gamma$ , I $\gamma(\theta)$ ,  $\gamma\gamma(\theta)$ -coin; deduced E, J,  $\pi$ , mixed-symmetry states. Results on CD only. CONF E.Lansing (NS2008),P23,Werner
- 2010NA12      NUCLEAR REACTIONS <sup>144</sup>Sm( $\gamma$ , n), ( $\gamma$ , p), ( $\gamma$ ,  $\alpha$ ), E<20 MeV bremsstrahlung; measured E $\gamma$ , I $\gamma$ , yields,  $\sigma(E)$  using activation method. Comparison with Hauser-Feshbach statistical models calculations using NON-SMOKER code. JOUR PRVCA 81 055806

**A=141**

- <sup>141</sup>Cs      2010LU02      RADIOACTIVITY <sup>252</sup>Cf(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$  using Gammasphere. <sup>141,144</sup>Cs; deduced levels, J, p, conversion coefficients, multipolarities, bands, parity doublets, simplex structure, B(E1) / B(E2), dipole moment. Comparison with level structure of <sup>143</sup>Cs and with systematics of adjacent N=85-92 nuclei. <sup>105,106,107,108</sup>Tc; measured E $\gamma$ . JOUR NUPAB 838 1

KEYNUMBERS AND KEYWORDS

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**A=142**

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| $^{142}\text{Xe}$ | 2008KRZV | NUCLEAR REACTIONS $^9\text{Be}(^{56}\text{Ti}, \text{n})^{55}\text{Ti}$ , E=high; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, E(fragment); deduced momentum transfer, ground=state single-particle structure; $^{122,124,126}\text{Cd}$ , $^{138,140,142,144}\text{Xe}(\gamma, \gamma')$ ; measured Coulomb excitation $E\gamma$ , $I\gamma$ , (particle) $\gamma$ -coin; deduced B(E2). Compared to other data and systematics. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P96                                      |
| $^{142}\text{Cs}$ | 2010LI14 | RADIOACTIVITY $^{252}\text{Cf}(\text{SF})$ ; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, $\gamma\gamma(\theta)$ . $^{142}\text{Cs}$ ; deduced levels, J, $\pi$ , multipolarity, bands, B(E1), B(E2), electric dipole moments. $^{106,107}\text{Tc}$ ; measured $E\gamma$ . Systematics of electric dipole moments for Xe (N=85-88), Cs (N=86-88), Ba (N=85-90), La (N=88, 90), Ce (N=86, 88, 90), Nd (N=86, 88, 90), Sm( N=86, 88). JOUR PRVCA 81 057304  |
| $^{142}\text{Nd}$ | 2008SAZL | NUCLEAR REACTIONS $^{136}\text{Xe}$ , $^{138}\text{Ba}$ , $^{140}\text{Ce}$ , $^{142}\text{Nd}$ , $^{144}\text{Sm}(\gamma, \gamma')$ , ( $\alpha$ , $\alpha\gamma$ ), E<100 MeV;measured reaction products; $^{136}\text{Xe}$ , $^{138}\text{Ba}$ , $^{140}\text{Ce}$ , $^{142}\text{Nd}$ , $^{144}\text{Sm}$ ; deduced E1 strength distribution, B(E1). CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P345,Savran  |
| $^{142}\text{Gd}$ | 2010MA20 | RADIOACTIVITY $^{145}\text{Er}(\text{ECp})$ , ( $\beta^+\text{p}$ )[from $^{58}\text{Ni}(^{92}\text{Mo}, 3\text{n}2\text{p})$ , E=383 MeV; $^{147}\text{Er}(\text{ECp})$ , ( $\beta^+\text{p}$ )[from $^{58}\text{Ni}(^{92}\text{Mo}, \text{n}2\text{p})$ , E=383 MeV]; measured $E\gamma$ , $\text{p}\gamma$ -, $\gamma\gamma$ -coin, half-lives. $^{144,146}\text{Dy}$ ; deduced levels, J, $\pi$ . $^{143,145}\text{Dy}$ , $^{146}\text{Ho}(\text{ECp})$ , ( $\beta^+\text{p}$ ); measured $\text{p}\gamma$ -coin, $E\gamma$ . JOUR PRVCA 81 047301 |

**A=143**

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| $^{143}\text{Pm}$ | 2010NA12 | NUCLEAR REACTIONS $^{144}\text{Sm}(\gamma, \text{n})$ , ( $\gamma, \text{p}$ ), ( $\gamma, \alpha$ ), E<20 MeV bremsstrahlung; measured $E\gamma$ , $I\gamma$ , yields, $\sigma(\text{E})$ using activation method. Comparison with Hauser-Feshbach statistical models calculations using NON-SMOKER code. JOUR PRVCA 81 055806  |
| $^{143}\text{Sm}$ | 2010NA12 | NUCLEAR REACTIONS $^{144}\text{Sm}(\gamma, \text{n})$ , ( $\gamma, \text{p}$ ), ( $\gamma, \alpha$ ), E<20 MeV bremsstrahlung; measured $E\gamma$ , $I\gamma$ , yields, $\sigma(\text{E})$ using activation method. Comparison with Hauser-Feshbach statistical models calculations using NON-SMOKER code. JOUR PRVCA 81 055806  |
| $^{143}\text{Dy}$ | 2010MA20 | RADIOACTIVITY $^{145}\text{Er}(\text{ECp})$ , ( $\beta^+\text{p}$ )[from $^{58}\text{Ni}(^{92}\text{Mo}, 3\text{n}2\text{p})$ , E=383 MeV; $^{147}\text{Er}(\text{ECp})$ , ( $\beta^+\text{p}$ )[from $^{58}\text{Ni}(^{92}\text{Mo}, \text{n}2\text{p})$ , E=383 MeV]; measured $E\gamma$ , $\text{p}\gamma$ -, $\gamma\gamma$ -coin, half-lives. $^{144,146}\text{Dy}$ ; deduced levels, J, $\pi$ . $^{143,145}\text{Dy}$ , $^{146}\text{Ho}(\text{ECp})$ , ( $\beta^+\text{p}$ ); measured $\text{p}\gamma$ -coin, $E\gamma$ . JOUR PRVCA 81 047301 |

**A=144**

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| $^{144}\text{Xe}$ | 2008KRZV | NUCLEAR REACTIONS $^9\text{Be}(^{56}\text{Ti}, \text{n})^{55}\text{Ti}$ , E=high; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, E(fragment); deduced momentum transfer, ground=state single-particle structure; $^{122,124,126}\text{Cd}$ , $^{138,140,142,144}\text{Xe}(\gamma, \gamma')$ ; measured Coulomb excitation $E\gamma$ , $I\gamma$ , (particle) $\gamma$ -coin; deduced B(E2). Compared to other data and systematics. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P96 |
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**A=144 (continued)**

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| $^{144}\text{Cs}$ | 2008JOZW | RADIOACTIVITY $^{252}\text{Cf}(\text{SF})$ ; measured $E\gamma$ , $I\gamma$ , $\gamma$ - $\gamma$ - $\gamma$ -coin.; $^{144}\text{Cs}$ ; deduced energy levels. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P395,Jones  |
|                   | 2010LU02 | RADIOACTIVITY $^{252}\text{Cf}(\text{SF})$ ; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, $\gamma\gamma(\theta)$ using Gammasphere. $^{141,144}\text{Cs}$ ; deduced levels, J, p, conversion coefficients, multipolarities, bands, parity doublets, simplex structure, B(E1) / B(E2), dipole moment. Comparison with level structure of $^{143}\text{Cs}$ and with systematics of adjacent N=85-92 nuclei. $^{105,106,107,108}\text{Tc}$ ; measured $E\gamma$ . JOUR NUPAB 838 1   |
| $^{144}\text{Sm}$ | 2008SAZL | NUCLEAR REACTIONS $^{136}\text{Xe}$ , $^{138}\text{Ba}$ , $^{140}\text{Ce}$ , $^{142}\text{Nd}$ , $^{144}\text{Sm}(\gamma, \gamma')$ , ( $\alpha$ , $\alpha\gamma$ ), $E < 100$ MeV; measured reaction products; $^{136}\text{Xe}$ , $^{138}\text{Ba}$ , $^{140}\text{Ce}$ , $^{142}\text{Nd}$ , $^{144}\text{Sm}$ ; deduced E1 strength distribution, B(E1). CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P345,Savran   |
| $^{144}\text{Gd}$ | 2010MA20 | RADIOACTIVITY $^{145}\text{Er}(\text{ECp})$ , ( $\beta^+\text{p}$ )[from $^{58}\text{Ni}(^{92}\text{Mo}, 3\text{n}2\text{p})$ , $E=383$ MeV; $^{147}\text{Er}(\text{ECp})$ , ( $\beta^+\text{p}$ )[from $^{58}\text{Ni}(^{92}\text{Mo}, \text{n}2\text{p})$ , $E=383$ MeV]; measured $E\gamma$ , $\text{p}\gamma$ -, $\gamma\gamma$ -coin, half-lives. $^{144,146}\text{Dy}$ ; deduced levels, J, $\pi$ . $^{143,145}\text{Dy}$ , $^{146}\text{Ho}(\text{ECp})$ , ( $\beta^+\text{p}$ ); measured $\text{p}\gamma$ -coin, $E\gamma$ . JOUR PRVCA 81 047301 |
| $^{144}\text{Dy}$ | 2010MA20 | RADIOACTIVITY $^{145}\text{Er}(\text{ECp})$ , ( $\beta^+\text{p}$ )[from $^{58}\text{Ni}(^{92}\text{Mo}, 3\text{n}2\text{p})$ , $E=383$ MeV; $^{147}\text{Er}(\text{ECp})$ , ( $\beta^+\text{p}$ )[from $^{58}\text{Ni}(^{92}\text{Mo}, \text{n}2\text{p})$ , $E=383$ MeV]; measured $E\gamma$ , $\text{p}\gamma$ -, $\gamma\gamma$ -coin, half-lives. $^{144,146}\text{Dy}$ ; deduced levels, J, $\pi$ . $^{143,145}\text{Dy}$ , $^{146}\text{Ho}(\text{ECp})$ , ( $\beta^+\text{p}$ ); measured $\text{p}\gamma$ -coin, $E\gamma$ . JOUR PRVCA 81 047301 |
|                   | 2010PR04 | NUCLEAR REACTIONS $^{92}\text{Mo}(^{54}\text{Fe}, 2\text{p})^{144}\text{Dy}$ , $E=226$ MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, DCO, half-lives by RDDS using JUROGAM array. $^{144}\text{Dy}$ ; deduced levels, J, $\pi$ , multipolarity, bands, B(M1), B(E2), B(M1) / B(E2), Q(t), $\beta_2$ , configurations, magnetic-dipole shears bands. Comparison with systematics of bands in $^{142}\text{Gd}$ , $^{143}\text{Tb}$ , $^{145,146}\text{Dy}$ and with cranked shell-model (CSM) calculations. JOUR PRVCA 81 054320              |

**A=145**

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| $^{145}\text{Tb}$ | 2010MA20 | RADIOACTIVITY $^{145}\text{Er}(\text{ECp})$ , ( $\beta^+\text{p}$ )[from $^{58}\text{Ni}(^{92}\text{Mo}, 3\text{n}2\text{p})$ , $E=383$ MeV; $^{147}\text{Er}(\text{ECp})$ , ( $\beta^+\text{p}$ )[from $^{58}\text{Ni}(^{92}\text{Mo}, \text{n}2\text{p})$ , $E=383$ MeV]; measured $E\gamma$ , $\text{p}\gamma$ -, $\gamma\gamma$ -coin, half-lives. $^{144,146}\text{Dy}$ ; deduced levels, J, $\pi$ . $^{143,145}\text{Dy}$ , $^{146}\text{Ho}(\text{ECp})$ , ( $\beta^+\text{p}$ ); measured $\text{p}\gamma$ -coin, $E\gamma$ . JOUR PRVCA 81 047301 |
| $^{145}\text{Dy}$ | 2010MA20 | RADIOACTIVITY $^{145}\text{Er}(\text{ECp})$ , ( $\beta^+\text{p}$ )[from $^{58}\text{Ni}(^{92}\text{Mo}, 3\text{n}2\text{p})$ , $E=383$ MeV; $^{147}\text{Er}(\text{ECp})$ , ( $\beta^+\text{p}$ )[from $^{58}\text{Ni}(^{92}\text{Mo}, \text{n}2\text{p})$ , $E=383$ MeV]; measured $E\gamma$ , $\text{p}\gamma$ -, $\gamma\gamma$ -coin, half-lives. $^{144,146}\text{Dy}$ ; deduced levels, J, $\pi$ . $^{143,145}\text{Dy}$ , $^{146}\text{Ho}(\text{ECp})$ , ( $\beta^+\text{p}$ ); measured $\text{p}\gamma$ -coin, $E\gamma$ . JOUR PRVCA 81 047301 |
| $^{145}\text{Er}$ | 2010MA20 | RADIOACTIVITY $^{145}\text{Er}(\text{ECp})$ , ( $\beta^+\text{p}$ )[from $^{58}\text{Ni}(^{92}\text{Mo}, 3\text{n}2\text{p})$ , $E=383$ MeV; $^{147}\text{Er}(\text{ECp})$ , ( $\beta^+\text{p}$ )[from $^{58}\text{Ni}(^{92}\text{Mo}, \text{n}2\text{p})$ , $E=383$ MeV]; measured $E\gamma$ , $\text{p}\gamma$ -, $\gamma\gamma$ -coin, half-lives. $^{144,146}\text{Dy}$ ; deduced levels, J, $\pi$ . $^{143,145}\text{Dy}$ , $^{146}\text{Ho}(\text{ECp})$ , ( $\beta^+\text{p}$ ); measured $\text{p}\gamma$ -coin, $E\gamma$ . JOUR PRVCA 81 047301 |

KEYNUMBERS AND KEYWORDS

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**A=146**

- <sup>146</sup>Gd      2010CA08      NUCLEAR REACTIONS <sup>144</sup>Sm( $\alpha$ , 2n), E=26.3 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin  $\gamma(\theta)$ , and linear polarization of  $\gamma$  rays. <sup>146</sup>Gd; deduced levels, J,  $\pi$ , multipolarity, and two-phonon octupole excitations. JOUR PRVCA 81 031301
- <sup>146</sup>Dy      2010MA20      RADIOACTIVITY <sup>145</sup>Er(ECp), ( $\beta^+$ p)[from <sup>58</sup>Ni(<sup>92</sup>Mo, 3n2p), E=383 MeV; <sup>147</sup>Er(ECp), ( $\beta^+$ p)[from <sup>58</sup>Ni(<sup>92</sup>Mo, n2p), E=383 MeV]; measured E $\gamma$ , p $\gamma$ -,  $\gamma\gamma$ -coin, half-lives. <sup>144,146</sup>Dy; deduced levels, J,  $\pi$ . <sup>143,145</sup>Dy, <sup>146</sup>Ho(ECp), ( $\beta^+$ p); measured p $\gamma$ -coin, E $\gamma$ . JOUR PRVCA 81 047301
- 2010MA27      RADIOACTIVITY <sup>147</sup>Er( $\beta^+$ p) [from <sup>58</sup>Ni(<sup>92</sup>Mo, X), E=383 MeV]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin.,  $\gamma$ -particle coin.; <sup>147</sup>Er, <sup>146</sup>Dy deduced T<sub>1/2</sub>. JOUR CPLEE 27 062104
- <sup>146</sup>Ho      2010MA20      RADIOACTIVITY <sup>145</sup>Er(ECp), ( $\beta^+$ p)[from <sup>58</sup>Ni(<sup>92</sup>Mo, 3n2p), E=383 MeV; <sup>147</sup>Er(ECp), ( $\beta^+$ p)[from <sup>58</sup>Ni(<sup>92</sup>Mo, n2p), E=383 MeV]; measured E $\gamma$ , p $\gamma$ -,  $\gamma\gamma$ -coin, half-lives. <sup>144,146</sup>Dy; deduced levels, J,  $\pi$ . <sup>143,145</sup>Dy, <sup>146</sup>Ho(ECp), ( $\beta^+$ p); measured p $\gamma$ -coin, E $\gamma$ . JOUR PRVCA 81 047301

**A=147**

- <sup>147</sup>Er      2010MA27      RADIOACTIVITY <sup>147</sup>Er( $\beta^+$ p) [from <sup>58</sup>Ni(<sup>92</sup>Mo, X), E=383 MeV]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin.,  $\gamma$ -particle coin.; <sup>147</sup>Er, <sup>146</sup>Dy deduced T<sub>1/2</sub>. JOUR CPLEE 27 062104

**A=148**

- <sup>148</sup>Ce      2008RAZY      RADIOACTIVITY <sup>252</sup>Cf(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma$ - $\gamma$ -coin.; <sup>148</sup>Ce, <sup>108</sup>Ru; deduced angular correlation of  $\gamma$  cascades, mixing ratio. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P57,Ramayya
- <sup>148</sup>Ho      2010K012      NUCLEAR REACTIONS <sup>112</sup>Sn(<sup>40</sup>Ar, 3np), (<sup>40</sup>Ar, 2np), E=202, 206, 232 MeV; <sup>114</sup>Sn(<sup>40</sup>Ar, 4np), (<sup>40</sup>Ar, 5np), E=202, 206, 232 MeV; measured E $\gamma$ , I $\gamma$ , ce,  $\gamma(\theta)$ ,  $\gamma\gamma$ -, e $\gamma$ -coin,  $\gamma\gamma(t)$ , isomer half-lives using OSIRIS-II array. <sup>148,149</sup>Ho; deduced levels, J,  $\pi$ , multipolarities, and configurations. Comparison with shell model calculations. JOUR PRVCA 81 044305

**A=149**

- <sup>149</sup>Ho      2010K012      NUCLEAR REACTIONS <sup>112</sup>Sn(<sup>40</sup>Ar, 3np), (<sup>40</sup>Ar, 2np), E=202, 206, 232 MeV; <sup>114</sup>Sn(<sup>40</sup>Ar, 4np), (<sup>40</sup>Ar, 5np), E=202, 206, 232 MeV; measured E $\gamma$ , I $\gamma$ , ce,  $\gamma(\theta)$ ,  $\gamma\gamma$ -, e $\gamma$ -coin,  $\gamma\gamma(t)$ , isomer half-lives using OSIRIS-II array. <sup>148,149</sup>Ho; deduced levels, J,  $\pi$ , multipolarities, and configurations. Comparison with shell model calculations. JOUR PRVCA 81 044305

KEYNUMBERS AND KEYWORDS

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**A=150**

No references found

**A=151**

- <sup>151</sup>Tb      2008LEZG      NUCLEAR REACTIONS <sup>170</sup>Er(<sup>30</sup>Si, 4n), E=148 MeV; <sup>130</sup>Te(<sup>27</sup>Al, 6n), E=155 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin; deduced E, J,  $\pi$ , superdeformation, yrast, superdeformed band; calculated E1 transition strength, simulated superdeformed bands population, yrast. Results on CD only. CONF E.Lansing (NS2008),P38,Leoni
- 2008LEZL      NUCLEAR REACTIONS <sup>130</sup>Te(<sup>27</sup>Al, X)<sup>151</sup>Tb, E=155 MeV; <sup>170</sup>Er(<sup>30</sup>Si, 4n)<sup>196</sup>Pb, E=150 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma$ - $\gamma$ -coin.; deduced number of discrete excited bands. Comparison with cranked shell model calculations. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P403,Leoni

**A=152**

- <sup>152</sup>Gd      2010CH06      NUCLEAR REACTIONS <sup>124</sup>Sn(<sup>28</sup>Si, X)<sup>152</sup>Gd, E=185 MeV; measured E $\gamma$ , I $\gamma$ , evaporation residues; deduced GDR centroid energies and widths for compound nucleus, discrepancy with earlier measurements, damping processes for Giant Dipole Resonance width. JOUR JPGPE 37 055105
- <sup>152</sup>Yb      2008ESZW      RADIOACTIVITY <sup>152</sup>Yb; measured E $\gamma$ , I $\gamma$ , X-rays;X-rays $\gamma$ -coin using TAS (Total Absorption Spectroscopy); deduced <sup>152</sup>Tm 482 keV level feeding. Attention: Incorrect scale in the figure (MeV instead of keV)! REPT ATOMKI 2008 Annual,P23,Estevez

**A=153**

No references found

**A=154**

- <sup>154</sup>Gd      2010SC06      NUCLEAR REACTIONS <sup>154,156,158</sup>Gd(p, p' $\gamma$ ), E=22 MeV; measured E $\gamma$ , I $\gamma$ , proton spectra,  $\gamma$ -ray emission probabilities using STARS / LiBerACE array. <sup>155,157</sup>Gd(n,  $\gamma$ ), E=0.01-4 MeV; deduced  $\sigma$  by surrogate reaction method using Weisskopf-Ewing and ratio approximations. JOUR PRVCA 81 034608

**A=155**

No references found

**A=156**

- <sup>156</sup>Gd 2010JE02 NUCLEAR REACTIONS <sup>155</sup>Gd(n,  $\gamma$ ), E not given; measured E $\gamma$ , I $\gamma$ ; <sup>156</sup>Gd; deduced energy levels, J,  $\pi$ , transition lifetime, B(E2), B(E1), quadrupole moments, odd-spin negative parity band. GAMS4 / 5 Bragg spectrometers. JOUR PRLTA 104 222502
- 2010SC06 NUCLEAR REACTIONS <sup>154,156,158</sup>Gd(p, p' $\gamma$ ), E=22 MeV; measured E $\gamma$ , I $\gamma$ , proton spectra,  $\gamma$ -ray emission probabilities using STARS / LiBerACE array. <sup>155,157</sup>Gd(n,  $\gamma$ ), E=0.01-4 MeV; deduced  $\sigma$  by surrogate reaction method using Weisskopf-Ewing and ratio approximations. JOUR PRVCA 81 034608

**A=157**

- <sup>157</sup>Ta 2010BI03 RADIOACTIVITY <sup>161</sup>Os( $\alpha$ ), <sup>157</sup>W( $\beta^+$ ); measured decay products; deduced T<sub>1/2</sub>,  $\beta$ -branching. Comparison with shell model calculations. JOUR PYLBB 690 15
- <sup>157</sup>W 2010BI03 RADIOACTIVITY <sup>161</sup>Os( $\alpha$ ), <sup>157</sup>W( $\beta^+$ ); measured decay products; deduced T<sub>1/2</sub>,  $\beta$ -branching. Comparison with shell model calculations. JOUR PYLBB 690 15

**A=158**

- <sup>158</sup>Gd 2010SC06 NUCLEAR REACTIONS <sup>154,156,158</sup>Gd(p, p' $\gamma$ ), E=22 MeV; measured E $\gamma$ , I $\gamma$ , proton spectra,  $\gamma$ -ray emission probabilities using STARS / LiBerACE array. <sup>155,157</sup>Gd(n,  $\gamma$ ), E=0.01-4 MeV; deduced  $\sigma$  by surrogate reaction method using Weisskopf-Ewing and ratio approximations. JOUR PRVCA 81 034608

**A=159**

No references found

**A=160**

- <sup>160</sup>Dy 2010G009 NUCLEAR REACTIONS <sup>161,162,163</sup>Dy(<sup>3</sup>He, <sup>3</sup>He'), (<sup>3</sup>He,  $\alpha$ ), E=45 MeV; <sup>164</sup>Dy(<sup>3</sup>He, <sup>3</sup>He'), E=38 MeV; measured E $\gamma$ , I $\gamma$ . <sup>160,161,163</sup>Dy(n,  $\gamma$ ), E<600 keV; deduced  $\sigma$  using the external surrogate ratio method (SRM). JOUR PRVCA 81 054606

**A=161**

- <sup>161</sup>Dy 2010G009 NUCLEAR REACTIONS <sup>161,162,163</sup>Dy(<sup>3</sup>He, <sup>3</sup>He'), (<sup>3</sup>He,  $\alpha$ ), E=45 MeV; <sup>164</sup>Dy(<sup>3</sup>He, <sup>3</sup>He'), E=38 MeV; measured E $\gamma$ , I $\gamma$ . <sup>160,161,163</sup>Dy(n,  $\gamma$ ), E<600 keV; deduced  $\sigma$  using the external surrogate ratio method (SRM). JOUR PRVCA 81 054606

KEYNUMBERS AND KEYWORDS

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**A=161 (continued)**

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|-------------------|----------|--|
| $^{161}\text{Os}$ | 2010BI03 | NUCLEAR REACTIONS $^{106}\text{Cd}(^{58}\text{Ni}, 3n)$ , E=290, 310 MeV; measured reaction products; deduced $\alpha$ spectra, $\alpha$ -branching, $T_{1/2}$ , fine structure, ground state J, $\pi$ . JOUR PYLBB 690 15 |
|                   | 2010BI03 | RADIOACTIVITY $^{161}\text{Os}(\alpha)$ , $^{157}\text{W}(\beta^+)$ ; measured decay products; deduced $T_{1/2}$ , $\beta$ -branching. Comparison with shell model calculations. JOUR PYLBB 690 15                         |

**A=162**

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|-------------------|----------|--|
| $^{162}\text{Dy}$ | 2010G009 | NUCLEAR REACTIONS $^{161,162,163}\text{Dy}(^3\text{He}, ^3\text{He}')$ , $(^3\text{He}, \alpha)$ , E=45 MeV; $^{164}\text{Dy}(^3\text{He}, ^3\text{He}')$ , E=38 MeV; measured $E\gamma$ , $I\gamma$ . $^{160,161,163}\text{Dy}(n, \gamma)$ , E<600 keV; deduced $\sigma$ using the external surrogate ratio method (SRM). JOUR PRVCA 81 054606  |
|                   | 2010S003 | NUCLEAR REACTIONS $^{170}\text{Er}(^{82}\text{Se}, X)^{168}\text{Dy} / ^{170}\text{Dy}$ , E=460 MeV; measured mass yields, distributions of product nuclei using PRISMA spectrometer, $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -, (particle) $\gamma$ -coin using CLARA HPGe array. $^{168}\text{Dy}$ ; deduced levels, J, $\pi$ , rotational bands, moments of inertia. $^{170}\text{Dy}$ ; deduced 4+ to 2+ transition. $^{170}\text{Er}$ ; measured $E\gamma$ . Z=64-72, N=94-108; systematics of levels and moments of inertia for even-even isotopes, and total Routhian surface calculations. 81,82,83,84,85,86,87,88,89,90Kr, 162,163,164,165,166,167,168,169,170,171Dy; measured yields of complementary beam-like and target-like fragments through 2pxn channels. JOUR PRVCA 81 034310 |

**A=163**

- |                   |          |  |
|-------------------|----------|--|
| $^{163}\text{Dy}$ | 2010G009 | NUCLEAR REACTIONS $^{161,162,163}\text{Dy}(^3\text{He}, ^3\text{He}')$ , $(^3\text{He}, \alpha)$ , E=45 MeV; $^{164}\text{Dy}(^3\text{He}, ^3\text{He}')$ , E=38 MeV; measured $E\gamma$ , $I\gamma$ . $^{160,161,163}\text{Dy}(n, \gamma)$ , E<600 keV; deduced $\sigma$ using the external surrogate ratio method (SRM). JOUR PRVCA 81 054606  |
|                   | 2010S003 | NUCLEAR REACTIONS $^{170}\text{Er}(^{82}\text{Se}, X)^{168}\text{Dy} / ^{170}\text{Dy}$ , E=460 MeV; measured mass yields, distributions of product nuclei using PRISMA spectrometer, $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -, (particle) $\gamma$ -coin using CLARA HPGe array. $^{168}\text{Dy}$ ; deduced levels, J, $\pi$ , rotational bands, moments of inertia. $^{170}\text{Dy}$ ; deduced 4+ to 2+ transition. $^{170}\text{Er}$ ; measured $E\gamma$ . Z=64-72, N=94-108; systematics of levels and moments of inertia for even-even isotopes, and total Routhian surface calculations. 81,82,83,84,85,86,87,88,89,90Kr, 162,163,164,165,166,167,168,169,170,171Dy; measured yields of complementary beam-like and target-like fragments through 2pxn channels. JOUR PRVCA 81 034310 |

KEYNUMBERS AND KEYWORDS

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**A=164**

- <sup>164</sup>Dy    2010G009    NUCLEAR REACTIONS <sup>161,162,163</sup>Dy(<sup>3</sup>He, <sup>3</sup>He'), (<sup>3</sup>He, α), E=45 MeV; <sup>164</sup>Dy(<sup>3</sup>He, <sup>3</sup>He'), E=38 MeV; measured Eγ, Iγ. <sup>160,161,163</sup>Dy(n, γ), E<600 keV; deduced σ using the external surrogate ratio method (SRM). JOUR PRVCA 81 054606
- 2010S003    NUCLEAR REACTIONS <sup>170</sup>Er(<sup>82</sup>Se, X)<sup>168</sup>Dy / <sup>170</sup>Dy, E=460 MeV; measured mass yields, distributions of product nuclei using PRISMA spectrometer, Eγ, Iγ, γγ-, (particle)γ-coin using CLARA HPGe array. <sup>168</sup>Dy; deduced levels, J, π, rotational bands, moments of inertia. <sup>170</sup>Dy; deduced 4+ to 2+ transition. <sup>170</sup>Er; measured Eγ. Z=64-72, N=94-108; systematics of levels and moments of inertia for even-even isotopes, and total Routhian surface calculations. <sup>81,82,83,84,85,86,87,88,89,90</sup>Kr, <sup>162,163,164,165,166,167,168,169,170,171</sup>Dy; measured yields of complementary beam-like and target-like fragments through 2pxn channels. JOUR PRVCA 81 034310

**A=165**

- <sup>165</sup>Dy    2010S003    NUCLEAR REACTIONS <sup>170</sup>Er(<sup>82</sup>Se, X)<sup>168</sup>Dy / <sup>170</sup>Dy, E=460 MeV; measured mass yields, distributions of product nuclei using PRISMA spectrometer, Eγ, Iγ, γγ-, (particle)γ-coin using CLARA HPGe array. <sup>168</sup>Dy; deduced levels, J, π, rotational bands, moments of inertia. <sup>170</sup>Dy; deduced 4+ to 2+ transition. <sup>170</sup>Er; measured Eγ. Z=64-72, N=94-108; systematics of levels and moments of inertia for even-even isotopes, and total Routhian surface calculations. <sup>81,82,83,84,85,86,87,88,89,90</sup>Kr, <sup>162,163,164,165,166,167,168,169,170,171</sup>Dy; measured yields of complementary beam-like and target-like fragments through 2pxn channels. JOUR PRVCA 81 034310
- <sup>165</sup>Er    2009WA23    NUCLEAR REACTIONS <sup>160</sup>Gd(<sup>9</sup>Be, 4n), E=42, 45 MeV; measured Eγ, Iγ, γγ-coin; <sup>165</sup>Er; deduced levels, J, π, bands, B(E1), octupole deformation. JOUR CPCHC 33 629

**A=166**

- <sup>166</sup>Dy    2010S003    NUCLEAR REACTIONS <sup>170</sup>Er(<sup>82</sup>Se, X)<sup>168</sup>Dy / <sup>170</sup>Dy, E=460 MeV; measured mass yields, distributions of product nuclei using PRISMA spectrometer, Eγ, Iγ, γγ-, (particle)γ-coin using CLARA HPGe array. <sup>168</sup>Dy; deduced levels, J, π, rotational bands, moments of inertia. <sup>170</sup>Dy; deduced 4+ to 2+ transition. <sup>170</sup>Er; measured Eγ. Z=64-72, N=94-108; systematics of levels and moments of inertia for even-even isotopes, and total Routhian surface calculations. <sup>81,82,83,84,85,86,87,88,89,90</sup>Kr, <sup>162,163,164,165,166,167,168,169,170,171</sup>Dy; measured yields of complementary beam-like and target-like fragments through 2pxn channels. JOUR PRVCA 81 034310

KEYNUMBERS AND KEYWORDS

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**A=167**

$^{167}\text{Dy}$       2010S003      NUCLEAR REACTIONS  $^{170}\text{Er}(^{82}\text{Se}, \text{X})^{168}\text{Dy} / ^{170}\text{Dy}$ , E=460 MeV; measured mass yields, distributions of product nuclei using PRISMA spectrometer,  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -, (particle) $\gamma$ -coin using CLARA HPGe array.  $^{168}\text{Dy}$ ; deduced levels, J,  $\pi$ , rotational bands, moments of inertia.  $^{170}\text{Dy}$ ; deduced 4+ to 2+ transition.  $^{170}\text{Er}$ ; measured  $E\gamma$ . Z=64-72, N=94-108; systematics of levels and moments of inertia for even-even isotopes, and total Routhian surface calculations. 81,82,83,84,85,86,87,88,89,90Kr, 162,163,164,165,166,167,168,169,170,171Dy; measured yields of complementary beam-like and target-like fragments through 2pxn channels. JOUR PRVCA 81 034310

**A=168**

$^{168}\text{Dy}$       2010S003      NUCLEAR REACTIONS  $^{170}\text{Er}(^{82}\text{Se}, \text{X})^{168}\text{Dy} / ^{170}\text{Dy}$ , E=460 MeV; measured mass yields, distributions of product nuclei using PRISMA spectrometer,  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -, (particle) $\gamma$ -coin using CLARA HPGe array.  $^{168}\text{Dy}$ ; deduced levels, J,  $\pi$ , rotational bands, moments of inertia.  $^{170}\text{Dy}$ ; deduced 4+ to 2+ transition.  $^{170}\text{Er}$ ; measured  $E\gamma$ . Z=64-72, N=94-108; systematics of levels and moments of inertia for even-even isotopes, and total Routhian surface calculations. 81,82,83,84,85,86,87,88,89,90Kr, 162,163,164,165,166,167,168,169,170,171Dy; measured yields of complementary beam-like and target-like fragments through 2pxn channels. JOUR PRVCA 81 034310

$^{168}\text{Er}$       2010DR02      NUCLEAR REACTIONS  $^{170}\text{Er}(^{136}\text{Xe}, \text{X})^{168}\text{Er} / ^{170}\text{Er} / ^{172}\text{Er}$ , E=830 MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ ,  $\gamma\gamma(t)$ , and isomer half-lives using Gammasphere array.  $^{168,170,172}\text{Er}$ ; deduced levels, J,  $\pi$ , rotational bands, multipolarities, B(E1), B(M1), B(E2), K-hindrance factors, configurations, quasiparticle structures, and  $g_K$ - $g_R$ . JOUR PRVCA 81 054313

**A=169**

$^{169}\text{Dy}$       2010S003      NUCLEAR REACTIONS  $^{170}\text{Er}(^{82}\text{Se}, \text{X})^{168}\text{Dy} / ^{170}\text{Dy}$ , E=460 MeV; measured mass yields, distributions of product nuclei using PRISMA spectrometer,  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -, (particle) $\gamma$ -coin using CLARA HPGe array.  $^{168}\text{Dy}$ ; deduced levels, J,  $\pi$ , rotational bands, moments of inertia.  $^{170}\text{Dy}$ ; deduced 4+ to 2+ transition.  $^{170}\text{Er}$ ; measured  $E\gamma$ . Z=64-72, N=94-108; systematics of levels and moments of inertia for even-even isotopes, and total Routhian surface calculations. 81,82,83,84,85,86,87,88,89,90Kr, 162,163,164,165,166,167,168,169,170,171Dy; measured yields of complementary beam-like and target-like fragments through 2pxn channels. JOUR PRVCA 81 034310

$^{169}\text{Yb}$       2008KIZP      NUCLEAR REACTIONS  $\text{Er}(\alpha, \text{x})^{169}\text{Yb}$ , E $\approx$ 0-36 MeV;  $\text{Yb}(\alpha, \text{x})^{169}\text{Yb}$ , E $\approx$ 18-38 MeV;  $\text{Yb}(\alpha, \text{x})^{177}\text{Lu}$ , E $\approx$ 8-38 MeV; measured  $E\gamma$ ,  $I\gamma$ ; deduced  $\sigma$ , yields; calculated  $\sigma$  using ALICE-IPPE. Compared to other data. CONF Nice (Nucl Data for Sci and Technol) Proc,P1371

**A=170**

- <sup>170</sup>Dy 2010S003 NUCLEAR REACTIONS <sup>170</sup>Er(<sup>82</sup>Se, X)<sup>168</sup>Dy / <sup>170</sup>Dy, E=460 MeV; measured mass yields, distributions of product nuclei using PRISMA spectrometer, E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, (particle) $\gamma$ -coin using CLARA HPGe array. <sup>168</sup>Dy; deduced levels, J,  $\pi$ , rotational bands, moments of inertia. <sup>170</sup>Dy; deduced 4+ to 2+ transition. <sup>170</sup>Er; measured E $\gamma$ . Z=64-72, N=94-108; systematics of levels and moments of inertia for even-even isotopes, and total Routhian surface calculations. 81,82,83,84,85,86,87,88,89,90Kr, 162,163,164,165,166,167,168,169,170,171Dy; measured yields of complementary beam-like and target-like fragments through 2pxn channels. JOUR PRVCA 81 034310
- <sup>170</sup>Er 2010DR02 NUCLEAR REACTIONS <sup>170</sup>Er(<sup>136</sup>Xe, X)<sup>168</sup>Er / <sup>170</sup>Er / <sup>172</sup>Er, E=830 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ ,  $\gamma\gamma$ (t), and isomer half-lives using Gammasphere array. <sup>168,170,172</sup>Er; deduced levels, J,  $\pi$ , rotational bands, multipolarities, B(E1), B(M1), B(E2), K-hindrance factors, configurations, quasiparticle structures, and  $g_K$ - $g_R$ . JOUR PRVCA 81 054313
- 2010S003 NUCLEAR REACTIONS <sup>170</sup>Er(<sup>82</sup>Se, X)<sup>168</sup>Dy / <sup>170</sup>Dy, E=460 MeV; measured mass yields, distributions of product nuclei using PRISMA spectrometer, E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, (particle) $\gamma$ -coin using CLARA HPGe array. <sup>168</sup>Dy; deduced levels, J,  $\pi$ , rotational bands, moments of inertia. <sup>170</sup>Dy; deduced 4+ to 2+ transition. <sup>170</sup>Er; measured E $\gamma$ . Z=64-72, N=94-108; systematics of levels and moments of inertia for even-even isotopes, and total Routhian surface calculations. 81,82,83,84,85,86,87,88,89,90Kr, 162,163,164,165,166,167,168,169,170,171Dy; measured yields of complementary beam-like and target-like fragments through 2pxn channels. JOUR PRVCA 81 034310

**A=171**

- <sup>171</sup>Dy 2010S003 NUCLEAR REACTIONS <sup>170</sup>Er(<sup>82</sup>Se, X)<sup>168</sup>Dy / <sup>170</sup>Dy, E=460 MeV; measured mass yields, distributions of product nuclei using PRISMA spectrometer, E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, (particle) $\gamma$ -coin using CLARA HPGe array. <sup>168</sup>Dy; deduced levels, J,  $\pi$ , rotational bands, moments of inertia. <sup>170</sup>Dy; deduced 4+ to 2+ transition. <sup>170</sup>Er; measured E $\gamma$ . Z=64-72, N=94-108; systematics of levels and moments of inertia for even-even isotopes, and total Routhian surface calculations. 81,82,83,84,85,86,87,88,89,90Kr, 162,163,164,165,166,167,168,169,170,171Dy; measured yields of complementary beam-like and target-like fragments through 2pxn channels. JOUR PRVCA 81 034310

**A=172**

<sup>172</sup>Er      2010DR02      NUCLEAR REACTIONS <sup>170</sup>Er(<sup>136</sup>Xe, X)<sup>168</sup>Er / <sup>170</sup>Er / <sup>172</sup>Er, E=830 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ ,  $\gamma\gamma(t)$ , and isomer half-lives using Gammasphere array. <sup>168,170,172</sup>Er; deduced levels, J,  $\pi$ , rotational bands, multipolarities, B(E1), B(M1), B(E2), K-hindrance factors, configurations, quasiparticle structures, and  $g_{K-gR}$ . JOUR PRVCA 81 054313

**A=173**

No references found

**A=174**

No references found

**A=175**

No references found

**A=176**

No references found

**A=177**

<sup>177</sup>Lu      2008KIZP      NUCLEAR REACTIONS Er( $\alpha$ , x)<sup>169</sup>Yb, E $\approx$ 0-36 MeV; Yb( $\alpha$ , x)<sup>169</sup>Yb, E $\approx$ 18-38 MeV; Yb( $\alpha$ , x)<sup>177</sup>Lu, E $\approx$ 8-38 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ , yields; calculated  $\sigma$  using ALICE-IPPE. Compared to other data. CONF Nice (Nucl Data for Sci and Technol) Proc,P1371

**A=178**

No references found

**A=179**

No references found

**A=180**

<sup>180</sup>Ta      20080CZZ      NUCLEAR REACTIONS <sup>27</sup>Al(d, x)<sup>24</sup>Na, <sup>51</sup>V(d, 4n), Fe(d, x)<sup>54</sup>Mn, Fe(d, x)<sup>56</sup>Co, Ni(d, x)<sup>57</sup>Co, Cu(d, x)<sup>63</sup>Zn, Ta(d, x)<sup>180</sup>Ta, W(d, x)<sup>182</sup>Re, <sup>197</sup>Au(d, x)<sup>194</sup>Au, E=25, 35, 41, 50 MeV; Cr(d, x)<sup>48</sup>V, Cr(d, x)<sup>52</sup>Mn, <sup>55</sup>Mn(d, x)<sup>54</sup>Mn, Ni(d, x)<sup>56</sup>Co, E=39.5 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ ; calculated  $\sigma$  using TALYS code. Compared to data, ACSELAM data library; also SS316, F82H alloys activities deduced. CONF Nice (Nucl Data for Sci and Technol) Proc,P1011

**A=181**

No references found

**A=182**

<sup>182</sup>Re      20080CZZ      NUCLEAR REACTIONS <sup>27</sup>Al(d, x)<sup>24</sup>Na, <sup>51</sup>V(d, 4n), Fe(d, x)<sup>54</sup>Mn, Fe(d, x)<sup>56</sup>Co, Ni(d, x)<sup>57</sup>Co, Cu(d, x)<sup>63</sup>Zn, Ta(d, x)<sup>180</sup>Ta, W(d, x)<sup>182</sup>Re, <sup>197</sup>Au(d, x)<sup>194</sup>Au, E=25, 35, 41, 50 MeV; Cr(d, x)<sup>48</sup>V, Cr(d, x)<sup>52</sup>Mn, <sup>55</sup>Mn(d, x)<sup>54</sup>Mn, Ni(d, x)<sup>56</sup>Co, E=39.5 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ ; calculated  $\sigma$  using TALYS code. Compared to data, ACSELAM data library; also SS316, F82H alloys activities deduced. CONF Nice (Nucl Data for Sci and Technol) Proc,P1011

**A=183**

No references found

**A=184**

<sup>184</sup>Hg      2008TAZI      NUCLEAR REACTIONS Pb(p, x), E=1, 1.4 GeV; Bi(p, x), E=1, 1.4 GeV; measured E $\gamma$ , I $\gamma$ , A(particle) using melted thick target at ISOLDE facility; <sup>76,77,79,85,87,88,89,90</sup>Kr, <sup>111</sup>Cd, <sup>121,124,126</sup>I, <sup>120,121,122,123,125,127,129,131,133</sup>Xe, <sup>184,186,188,190,192,193,195,197,203,205,206</sup>Hg, <sup>204,205,206,207,208,209,210</sup>At; deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069

**A=185**

No references found

KEYNUMBERS AND KEYWORDS

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**A=186**

- <sup>186</sup>Re      2008MEZV      NUCLEAR REACTIONS <sup>209</sup>Bi( $\alpha$ , x), E=28.8, 32.8 MeV; measured E $\gamma$ , I $\gamma$ , E $\alpha$ , I $\alpha$ ; <sup>186</sup>W(p, n), E=7-15 MeV; deduced  $\sigma$ ; calculated  $\sigma$ ; Zn(d, x)<sup>61</sup>Cu, E $\approx$ 3-19 MeV; Zn(d, x)<sup>64</sup>Cu, E $\approx$ 3-19 MeV; Zn(d, x)<sup>66</sup>Ga, E $\approx$ 3-19 MeV; Zn(d, x)<sup>67</sup>Ga, E $\approx$ 3-19 MeV; Zn(d, x)<sup>65</sup>Zn, E $\approx$ 3-19 MeV; Zn(d, x)<sup>69</sup>Zn, E $\approx$ 3-19 MeV; measured E $\gamma$ , I $\gamma$ ; deduced thin target yields; <sup>103</sup>Rh(d, 2n), E $\approx$ 3-20 MeV; <sup>232</sup>Th(p, 3n), E $\approx$ 13-31 MeV; calculated  $\sigma$ . Calculations using EMPIRE II; compared to available data. CONF Nice (Nucl Data for Sci and Technol) Proc,P1403
- <sup>186</sup>Ir      2010SI10      NUCLEAR REACTIONS <sup>181</sup>Ta(<sup>16</sup>O, X)<sup>186</sup>Ir / <sup>190</sup>Au / <sup>191</sup>Au / <sup>192</sup>Au / <sup>191</sup>Hg / <sup>192</sup>Hg / <sup>193</sup>Hg / <sup>192</sup>Tl / <sup>193</sup>Tl / <sup>194</sup>Tl, E=81, 90, 96 MeV; measured E $\gamma$ , I $\gamma$ , forward recoil range distributions (RRD); deduced incomplete fusion fractions. Comparison with break-up fusion (BUF) model. JOUR PRVCA 81 054607
- <sup>186</sup>Hg      2008TAZI      NUCLEAR REACTIONS Pb(p, x), E=1, 1.4 GeV; Bi(p, x), E=1, 1.4 GeV; measured E $\gamma$ , I $\gamma$ , A(particle) using melted thick target at ISOLDE facility; <sup>76,77,79,85,87,88,89,90</sup>Kr, <sup>111</sup>Cd, <sup>121,124,126</sup>I, <sup>120,121,122,123,125,127,129,131,133</sup>Xe, <sup>184,186,188,190,192,193,195,197,203,205,206</sup>Hg, <sup>204,205,206,207,208,209,210</sup>At; deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069

**A=187**

- <sup>187</sup>W      2010EL02      NUCLEAR REACTIONS <sup>98</sup>Mo, <sup>186</sup>W, <sup>197</sup>Au(n,  $\gamma$ ), E=thermal; measured E $\gamma$ , I $\gamma$ ; deduced neutron flux,  $\sigma$ , resonance integrals. Comparison with available data. JOUR JRNCD 284 321
- <sup>187</sup>Os      2008MOZR      NUCLEAR REACTIONS <sup>187</sup>Os(n, n'), E=30 keV; measured En, In; deduced  $\sigma$ ; calculated  $\sigma$ . Compared to other data below 70 keV. CONF Nice (Nucl Data for Sci and Technol) Proc,P1307
- <sup>187</sup>Ir      2010M009      NUCLEAR REACTIONS <sup>186</sup>W(<sup>7</sup>Li, 6n)<sup>187</sup>Ir, E=59 MeV; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -,  $\gamma\gamma$ -coin, DCO, delayed  $\gamma$  rays, half-lives using GASP array. <sup>187</sup>Ir; deduced levels, J,  $\pi$ , rotational bands, multiquasiparticle high-K states, configurations. Comparison with systematics of bands in <sup>181,183,185</sup>Ir, <sup>182,184,186</sup>Os. JOUR PRVCA 81 054304

**A=188**

- <sup>188</sup>Hg      2008TAZI      NUCLEAR REACTIONS Pb(p, x), E=1, 1.4 GeV; Bi(p, x), E=1, 1.4 GeV; measured E $\gamma$ , I $\gamma$ , A(particle) using melted thick target at ISOLDE facility; <sup>76,77,79,85,87,88,89,90</sup>Kr, <sup>111</sup>Cd, <sup>121,124,126</sup>I, <sup>120,121,122,123,125,127,129,131,133</sup>Xe, <sup>184,186,188,190,192,193,195,197,203,205,206</sup>Hg, <sup>204,205,206,207,208,209,210</sup>At; deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069

KEYNUMBERS AND KEYWORDS

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**A=189**

No references found

**A=190**

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| $^{190}\text{Ta}$ | 2008GOZP | RADIOACTIVITY $^{54}\text{Ni}(\beta^+)$ ; measured $E_\gamma$ , $I_\gamma$ ; deduced $^{54}\text{Ni}$ $T_{1/2}$ , GT distribution strength; $^{62}\text{Ge}$ ; $^{113}\text{In}$ ; $^{190}\text{Ta}$ ; measured decay products.   |
| $^{190}\text{Au}$ | 2010SI10 | RESULTS on CD only. CONF E.Lansing (NS2008),P9,Gorska<br>NUCLEAR REACTIONS $^{181}\text{Ta}(^{16}\text{O}, \text{X})^{186}\text{Ir} / ^{190}\text{Au} / ^{191}\text{Au} / ^{192}\text{Au} / ^{191}\text{Hg} / ^{192}\text{Hg} / ^{193}\text{Hg} / ^{192}\text{Tl} / ^{193}\text{Tl} / ^{194}\text{Tl}$ , $E=81, 90, 96$ MeV; measured $E_\gamma$ , $I_\gamma$ , forward recoil range distributions (RRD); deduced incomplete fusion fractions. Comparison with break-up fusion (BUF) model. JOUR PRVCA 81 054607  |
| $^{190}\text{Hg}$ | 2008TAZI | NUCLEAR REACTIONS $\text{Pb}(p, x)$ , $E=1, 1.4$ GeV; $\text{Bi}(p, x)$ , $E=1, 1.4$ GeV; measured $E_\gamma$ , $I_\gamma$ , $A(\text{particle})$ using melted thick target at ISOLDE facility; $^{76,77,79,85,87,88,89,90}\text{Kr}$ , $^{111}\text{Cd}$ , $^{121,124,126}\text{I}$ , $^{120,121,122,123,125,127,129,131,133}\text{Xe}$ , $^{184,186,188,190,192,193,195,197,203,205,206}\text{Hg}$ , $^{204,205,206,207,208,209,210}\text{At}$ ;<br>deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. |
|                   | 2010WI02 | CONF Nice (Nucl Data for Sci and Technol) Proc,P1069<br>NUCLEAR REACTIONS $^{160}\text{Gd}(^{34}\text{S}, 4n)$ , $E=156$ MeV; measured $E_\gamma$ , $I_\gamma$ , $\gamma\gamma$ -coin.; $^{190}\text{Hg}$ deduced energy and $J$ of superdeformed and normal states, two-proton separation energies, critical tests of nuclear models. JOUR PRLTA 104 162501  |

**A=191**

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| $^{191}\text{Au}$ | 2010SI10 | NUCLEAR REACTIONS $^{181}\text{Ta}(^{16}\text{O}, \text{X})^{186}\text{Ir} / ^{190}\text{Au} / ^{191}\text{Au} / ^{192}\text{Au} / ^{191}\text{Hg} / ^{192}\text{Hg} / ^{193}\text{Hg} / ^{192}\text{Tl} / ^{193}\text{Tl} / ^{194}\text{Tl}$ , $E=81, 90, 96$ MeV; measured $E_\gamma$ , $I_\gamma$ , forward recoil range distributions (RRD); deduced incomplete fusion fractions. Comparison with break-up fusion (BUF) model. JOUR PRVCA 81 054607 |
| $^{191}\text{Hg}$ | 2010SI10 | NUCLEAR REACTIONS $^{181}\text{Ta}(^{16}\text{O}, \text{X})^{186}\text{Ir} / ^{190}\text{Au} / ^{191}\text{Au} / ^{192}\text{Au} / ^{191}\text{Hg} / ^{192}\text{Hg} / ^{193}\text{Hg} / ^{192}\text{Tl} / ^{193}\text{Tl} / ^{194}\text{Tl}$ , $E=81, 90, 96$ MeV; measured $E_\gamma$ , $I_\gamma$ , forward recoil range distributions (RRD); deduced incomplete fusion fractions. Comparison with break-up fusion (BUF) model. JOUR PRVCA 81 054607 |

**A=192**

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| $^{192}\text{Au}$ | 2010SI10 | NUCLEAR REACTIONS $^{181}\text{Ta}(^{16}\text{O}, \text{X})^{186}\text{Ir} / ^{190}\text{Au} / ^{191}\text{Au} / ^{192}\text{Au} / ^{191}\text{Hg} / ^{192}\text{Hg} / ^{193}\text{Hg} / ^{192}\text{Tl} / ^{193}\text{Tl} / ^{194}\text{Tl}$ , $E=81, 90, 96$ MeV; measured $E_\gamma$ , $I_\gamma$ , forward recoil range distributions (RRD); deduced incomplete fusion fractions. Comparison with break-up fusion (BUF) model. JOUR PRVCA 81 054607 |
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KEYNUMBERS AND KEYWORDS

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**A=192 (continued)**

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| $^{192}\text{Hg}$ | 2008TAZI | NUCLEAR REACTIONS Pb(p, x), E=1, 1.4 GeV; Bi(p, x), E=1, 1.4 GeV; measured $E\gamma$ , $I\gamma$ , A(particle) using melted thick target at ISOLDE facility; $^{76,77,79,85,87,88,89,90}\text{Kr}$ , $^{111}\text{Cd}$ , $^{121,124,126}\text{I}$ , $^{120,121,122,123,125,127,129,131,133}\text{Xe}$ , $^{184,186,188,190,192,193,195,197,203,205,206}\text{Hg}$ , $^{204,205,206,207,208,209,210}\text{At}$ ; deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069 |
|                   | 2010SI10 | NUCLEAR REACTIONS $^{181}\text{Ta}(^{16}\text{O}, \text{X})^{186}\text{Ir} / ^{190}\text{Au} / ^{191}\text{Au} / ^{192}\text{Au} / ^{191}\text{Hg} / ^{192}\text{Hg} / ^{193}\text{Hg} / ^{192}\text{Tl} / ^{193}\text{Tl} / ^{194}\text{Tl}$ , E=81, 90, 96 MeV; measured $E\gamma$ , $I\gamma$ , forward recoil range distributions (RRD); deduced incomplete fusion fractions. Comparison with break-up fusion (BUF) model. JOUR PRVCA 81 054607  |
| $^{192}\text{Tl}$ | 2010SI10 | NUCLEAR REACTIONS $^{181}\text{Ta}(^{16}\text{O}, \text{X})^{186}\text{Ir} / ^{190}\text{Au} / ^{191}\text{Au} / ^{192}\text{Au} / ^{191}\text{Hg} / ^{192}\text{Hg} / ^{193}\text{Hg} / ^{192}\text{Tl} / ^{193}\text{Tl} / ^{194}\text{Tl}$ , E=81, 90, 96 MeV; measured $E\gamma$ , $I\gamma$ , forward recoil range distributions (RRD); deduced incomplete fusion fractions. Comparison with break-up fusion (BUF) model. JOUR PRVCA 81 054607  |

**A=193**

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| $^{193}\text{Hg}$ | 2008SZZZ | NUCLEAR REACTIONS $^{197}\text{Au}(p, n)$ , E $\approx$ 5-65 MeV; $^{197}\text{Au}(p, pn)$ , E $\approx$ 15-65 MeV; $^{197}\text{Au}(p, 3n)$ , E $\approx$ 20-65 MeV; $^{197}\text{Au}(p, p3n)$ , E $\approx$ 25-65 MeV; $^{197}\text{Au}(p, 5n)$ , E $\approx$ 35-65 MeV; measured $E\gamma$ , $I\gamma$ ; deduced $\sigma$ . Compared to other data. CONF Nice (Nucl Data for Sci and Technol) Proc,P1259  |
|                   | 2008TAZI | NUCLEAR REACTIONS Pb(p, x), E=1, 1.4 GeV; Bi(p, x), E=1, 1.4 GeV; measured $E\gamma$ , $I\gamma$ , A(particle) using melted thick target at ISOLDE facility; $^{76,77,79,85,87,88,89,90}\text{Kr}$ , $^{111}\text{Cd}$ , $^{121,124,126}\text{I}$ , $^{120,121,122,123,125,127,129,131,133}\text{Xe}$ , $^{184,186,188,190,192,193,195,197,203,205,206}\text{Hg}$ , $^{204,205,206,207,208,209,210}\text{At}$ ; deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069 |
|                   | 2010SI10 | NUCLEAR REACTIONS $^{181}\text{Ta}(^{16}\text{O}, \text{X})^{186}\text{Ir} / ^{190}\text{Au} / ^{191}\text{Au} / ^{192}\text{Au} / ^{191}\text{Hg} / ^{192}\text{Hg} / ^{193}\text{Hg} / ^{192}\text{Tl} / ^{193}\text{Tl} / ^{194}\text{Tl}$ , E=81, 90, 96 MeV; measured $E\gamma$ , $I\gamma$ , forward recoil range distributions (RRD); deduced incomplete fusion fractions. Comparison with break-up fusion (BUF) model. JOUR PRVCA 81 054607  |
| $^{193}\text{Tl}$ | 2010SI10 | NUCLEAR REACTIONS $^{181}\text{Ta}(^{16}\text{O}, \text{X})^{186}\text{Ir} / ^{190}\text{Au} / ^{191}\text{Au} / ^{192}\text{Au} / ^{191}\text{Hg} / ^{192}\text{Hg} / ^{193}\text{Hg} / ^{192}\text{Tl} / ^{193}\text{Tl} / ^{194}\text{Tl}$ , E=81, 90, 96 MeV; measured $E\gamma$ , $I\gamma$ , forward recoil range distributions (RRD); deduced incomplete fusion fractions. Comparison with break-up fusion (BUF) model. JOUR PRVCA 81 054607  |

**A=194**

- <sup>194</sup>Au    20080CZZ    NUCLEAR REACTIONS <sup>27</sup>Al(d, x)<sup>24</sup>Na, <sup>51</sup>V(d, 4n), Fe(d, x)<sup>54</sup>Mn, Fe(d, x)<sup>56</sup>Co, Ni(d, x)<sup>57</sup>Co, Cu(d, x)<sup>63</sup>Zn, Ta(d, x)<sup>180</sup>Ta, W(d, x)<sup>182</sup>Re, <sup>197</sup>Au(d, x)<sup>194</sup>Au, E=25, 35, 41, 50 MeV; Cr(d, x)<sup>48</sup>V, Cr(d, x)<sup>52</sup>Mn, <sup>55</sup>Mn(d, x)<sup>54</sup>Mn, Ni(d, x)<sup>56</sup>Co, E=39.5 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ ; calculated  $\sigma$  using TALYS code. Compared to data, ACSELAM data library; also SS316, F82H alloys activities deduced. CONF Nice (Nucl Data for Sci and Technol) Proc,P1011
- 2008SZZZ    NUCLEAR REACTIONS <sup>197</sup>Au(p, n), E $\approx$ 5-65 MeV; <sup>197</sup>Au(p, pn), E $\approx$ 15-65 MeV; <sup>197</sup>Au(p, 3n), E $\approx$ 20-65 MeV; <sup>197</sup>Au(p, p3n), E $\approx$ 25-65 MeV; <sup>197</sup>Au(p, 5n), E $\approx$ 35-65 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ . Compared to other data. CONF Nice (Nucl Data for Sci and Technol) Proc,P1259
- <sup>194</sup>Tl    2010SI10    NUCLEAR REACTIONS <sup>181</sup>Ta(<sup>16</sup>O, X)<sup>186</sup>Ir / <sup>190</sup>Au / <sup>191</sup>Au / <sup>192</sup>Au / <sup>191</sup>Hg / <sup>192</sup>Hg / <sup>193</sup>Hg / <sup>192</sup>Tl / <sup>193</sup>Tl / <sup>194</sup>Tl, E=81, 90, 96 MeV; measured E $\gamma$ , I $\gamma$ , forward recoil range distributions (RRD); deduced incomplete fusion fractions. Comparison with break-up fusion (BUF) model. JOUR PRVCA 81 054607

**A=195**

- <sup>195</sup>Hg    2008SZZZ    NUCLEAR REACTIONS <sup>197</sup>Au(p, n), E $\approx$ 5-65 MeV; <sup>197</sup>Au(p, pn), E $\approx$ 15-65 MeV; <sup>197</sup>Au(p, 3n), E $\approx$ 20-65 MeV; <sup>197</sup>Au(p, p3n), E $\approx$ 25-65 MeV; <sup>197</sup>Au(p, 5n), E $\approx$ 35-65 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ . Compared to other data. CONF Nice (Nucl Data for Sci and Technol) Proc,P1259
- 2008TAZI    NUCLEAR REACTIONS Pb(p, x), E=1, 1.4 GeV; Bi(p, x), E=1, 1.4 GeV; measured E $\gamma$ , I $\gamma$ , A(particle) using melted thick target at ISOLDE facility; <sup>76,77,79,85,87,88,89,90</sup>Kr, <sup>111</sup>Cd, <sup>121,124,126</sup>I, <sup>120,121,122,123,125,127,129,131,133</sup>Xe, <sup>184,186,188,190,192,193,195,197,203,205,206</sup>Hg, <sup>204,205,206,207,208,209,210</sup>At; deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069

**A=196**

- <sup>196</sup>Au    2008SZZZ    NUCLEAR REACTIONS <sup>197</sup>Au(p, n), E $\approx$ 5-65 MeV; <sup>197</sup>Au(p, pn), E $\approx$ 15-65 MeV; <sup>197</sup>Au(p, 3n), E $\approx$ 20-65 MeV; <sup>197</sup>Au(p, p3n), E $\approx$ 25-65 MeV; <sup>197</sup>Au(p, 5n), E $\approx$ 35-65 MeV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ . Compared to other data. CONF Nice (Nucl Data for Sci and Technol) Proc,P1259
- <sup>196</sup>Pb    2008LEZG    NUCLEAR REACTIONS <sup>170</sup>Er(<sup>30</sup>Si, 4n), E=148 MeV; <sup>130</sup>Te(<sup>27</sup>Al, 6n), E=155 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin; deduced E, J,  $\pi$ , superdeformation, yrast, superdeformed band; calculated E1 transition strength, simulated superdeformed bands population, yrast. Results on CD only. CONF E.Lansing (NS2008),P38,Leoni

KEYNUMBERS AND KEYWORDS

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**A=196 (continued)**

2008LEZL NUCLEAR REACTIONS  $^{130}\text{Te}(^{27}\text{Al}, \text{X})^{151}\text{Tb}$ ,  $E=155$  MeV;  $^{170}\text{Er}(^{30}\text{Si}, 4n)^{196}\text{Pb}$ ,  $E=150$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma$ - $\gamma$ -coin.; deduced number of discrete excited bands. Comparison with cranked shell model calculations. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P403,Leoni

**A=197**

$^{197}\text{Pt}$  2010QI02 NUCLEAR REACTIONS  $^{1,2}\text{H}$ ,  $^{12}\text{C}$ ,  $^{27}\text{Al}$ ,  $^{63}\text{Cu}$ ,  $^{197}\text{Au}(e, e'\pi^+)$ ,  $E<5.8$  GeV; measured yields, differential cross sections as a function of azimuthal angle, and nuclear transparencies versus  $Q^2$ . JOUR PRVCA 81 055209

$^{197}\text{Au}$  2010XU03 NUCLEAR REACTIONS  $^{197}\text{Au}(^{28}\text{P}, ^{28}\text{P}')$ ,  $E=46.5$  MeV / nucleon [ $^{28}\text{P}$  secondary beam from  $^9\text{Be}(^{32}\text{S}, \text{X})$ ,  $E=80.4$  MeV / nucleon primary reaction]; measured  $E_p$ ,  $I_p$ , time of flight,  $(^{26}\text{Al})(p)(p)$ -coin.  $^{28}\text{P}$ ; deduced levels, two-proton emission from excited states.  $^9\text{Be}(^{32}\text{S}, \text{X})^{22}\text{Ne} / ^{23}\text{Na} / ^{24}\text{Mg} / ^{25}\text{Al} / ^{26}\text{Al} / ^{27}\text{Si} / ^{28}\text{P} / ^{29}\text{S}$ ,  $E=80.4$  MeV / nucleon; measured yields. JOUR PRVCA 81 054317

$^{197}\text{Hg}$  2008SZZZ NUCLEAR REACTIONS  $^{197}\text{Au}(p, n)$ ,  $E\approx 5-65$  MeV;  $^{197}\text{Au}(p, pn)$ ,  $E\approx 15-65$  MeV;  $^{197}\text{Au}(p, 3n)$ ,  $E\approx 20-65$  MeV;  $^{197}\text{Au}(p, p3n)$ ,  $E\approx 25-65$  MeV;  $^{197}\text{Au}(p, 5n)$ ,  $E\approx 35-65$  MeV; measured  $E\gamma$ ,  $I\gamma$ ; deduced  $\sigma$ . Compared to other data. CONF Nice (Nucl Data for Sci and Technol) Proc,P1259

2008TAZI NUCLEAR REACTIONS  $\text{Pb}(p, x)$ ,  $E=1, 1.4$  GeV;  $\text{Bi}(p, x)$ ,  $E=1, 1.4$  GeV; measured  $E\gamma$ ,  $I\gamma$ ,  $A(\text{particle})$  using melted thick target at ISOLDE facility;  $^{76,77,79,85,87,88,89,90}\text{Kr}$ ,  $^{111}\text{Cd}$ ,  $^{121,124,126}\text{I}$ ,  $^{120,121,122,123,125,127,129,131,133}\text{Xe}$ ,  $^{184,186,188,190,192,193,195,197,203,205,206}\text{Hg}$ ,  $^{204,205,206,207,208,209,210}\text{At}$ ; deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069

**A=198**

$^{198}\text{Au}$  2008MAZJ NUCLEAR REACTIONS  $^{197}\text{Au}(n, \gamma)$ ,  $E\approx 0-750$  eV; measured  $E\gamma$ ,  $I\gamma$  at n-TOF; calculated  $\sigma$  using SAMMY; deduced  $\sigma$ , R-matrix resonance parameters. Cross-sections compared to ENDF / B-VII. CONF Nice (Nucl Data for Sci and Technol) Proc,P1265

2010EL02 NUCLEAR REACTIONS  $^{98}\text{Mo}$ ,  $^{186}\text{W}$ ,  $^{197}\text{Au}(n, \gamma)$ ,  $E=\text{thermal}$ ; measured  $E\gamma$ ,  $I\gamma$ ; deduced neutron flux,  $\sigma$ , resonance integrals. Comparison with available data. JOUR JRNCD 284 321

2010HA12 RADIOACTIVITY  $^{198}\text{Au}(\beta^-)$ ,  $^{97}\text{Ru}(\text{EC})$  [from  $^{197}\text{Au}$ ,  $\text{Ru}(n, \gamma)$ ]; measured  $E\gamma$ ,  $I\gamma$ ; deduced  $T_{1/2}$ , lack of temperature-dependent effects at low temperatures. JOUR ARISE 68 1550

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KEYNUMBERS AND KEYWORDS

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**A=198** (*continued*)

- 2010MA18 NUCLEAR REACTIONS  $^{197}\text{Au}(n, \gamma)$ ,  $E=0-5.1$  keV; measured  $E_n$ ,  $I_n$ , neutron resonance strengths, capture yields, resonances, resonance parameters, response functions at n\_TOF facility. C6D6 and the total absorption  $4\pi$  BaF<sub>2</sub> detector arrays. R-matrix analysis. Comparison with evaluated data for neutron resonances. JOUR PRVCA 81 044616
- 2010M006 RADIOACTIVITY  $^{198}\text{Au}(\beta^-)$  [from  $^{197}\text{Au}(n, \gamma)$ ,  $E=\text{thermal}$ ]; measured  $E_\gamma$ ,  $I_\gamma$ ,  $E_e$ ,  $I_e$ ; deduced  $\beta$ -branching, x-rays and  $\gamma$ -rays emission probabilities. JOUR ARISE 68 1566
- $^{198}\text{Hg}$  2010HA12 RADIOACTIVITY  $^{198}\text{Au}(\beta^-)$ ,  $^{97}\text{Ru}(\text{EC})$  [from  $^{197}\text{Au}$ ,  $\text{Ru}(n, \gamma)$ ]; measured  $E_\gamma$ ,  $I_\gamma$ ; deduced  $T_{1/2}$ , lack of temperature-dependent effects at low temperatures. JOUR ARISE 68 1550
- 2010M006 RADIOACTIVITY  $^{198}\text{Au}(\beta^-)$  [from  $^{197}\text{Au}(n, \gamma)$ ,  $E=\text{thermal}$ ]; measured  $E_\gamma$ ,  $I_\gamma$ ,  $E_e$ ,  $I_e$ ; deduced  $\beta$ -branching, x-rays and  $\gamma$ -rays emission probabilities. JOUR ARISE 68 1566
- $^{198}\text{Tl}$  2008LAZP NUCLEAR REACTIONS  $^{197}\text{Au}(\alpha, 3n)$ ,  $E=40$  MeV; measured  $E_\gamma$ ,  $I_\gamma(\theta)$ ,  $\gamma\gamma$ -coin,  $E(e)$ ,  $I(e)$ ,  $(e)\gamma$ -coin, linear polarization; deduced  $^{198}\text{Tl}$  E, J,  $\pi$ , bands, B(E2), B(M1), yrast; calculated deformation, bands using two quasiparticles plus triaxial rotor. Results on CD only. CONF E.Lansing (NS2008),P25,Lawrie

**A=199**

No references found

**A=200**

No references found

**A=201**

- $^{201}\text{Tl}$  2010FOZZ NUCLEAR REACTIONS  $^{93}\text{Nb}(^{12}\text{C}, ^8\text{Be})$ ,  $E=400$  MeV;  $^{197}\text{Au}(^{12}\text{C}, ^8\text{Be})$ ,  $E=400$  MeV; measured  $E\alpha$ ,  $I\alpha(\theta)$ ,  $E(\text{particle})$ ,  $I(\text{particle})$ ,  $\alpha\alpha$ -coin,  $(\text{particle})\alpha$ -coin; deduced  $d\sigma$ ,  $d\sigma(\theta)$ , quasi-elastic  $^8\text{Be}$  breakup. CONF Varenna (Nucl Reaction Mechanisms),Proc,Vol.2,P545

**A=202**

No references found

**A=203**

<sup>203</sup>Hg      2008TAZI      NUCLEAR REACTIONS Pb(p, x), E=1, 1.4 GeV; Bi(p, x), E=1, 1.4 GeV; measured E $\gamma$ , I $\gamma$ , A(particle) using melted thick target at ISOLDE facility; <sup>76,77,79,85,87,88,89,90</sup>Kr, <sup>111</sup>Cd, <sup>121,124,126</sup>I, <sup>120,121,122,123,125,127,129,131,133</sup>Xe, <sup>184,186,188,190,192,193,195,197,203,205,206</sup>Hg, <sup>204,205,206,207,208,209,210</sup>At; deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069

**A=204**

<sup>204</sup>At      2008TAZI      NUCLEAR REACTIONS Pb(p, x), E=1, 1.4 GeV; Bi(p, x), E=1, 1.4 GeV; measured E $\gamma$ , I $\gamma$ , A(particle) using melted thick target at ISOLDE facility; <sup>76,77,79,85,87,88,89,90</sup>Kr, <sup>111</sup>Cd, <sup>121,124,126</sup>I, <sup>120,121,122,123,125,127,129,131,133</sup>Xe, <sup>184,186,188,190,192,193,195,197,203,205,206</sup>Hg, <sup>204,205,206,207,208,209,210</sup>At; deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069

**A=205**

<sup>205</sup>Pt      2008BOZG      RADIOACTIVITY <sup>54</sup>Ni( $\beta^+$ ); measured <sup>54</sup>Co E $\gamma$ , I $\gamma$ ; <sup>205</sup>Au(EC); measured E(CE), I(CE). CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P83

<sup>205</sup>Au      2008BOZG      RADIOACTIVITY <sup>54</sup>Ni( $\beta^+$ ); measured <sup>54</sup>Co E $\gamma$ , I $\gamma$ ; <sup>205</sup>Au(EC); measured E(CE), I(CE). CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P83

<sup>205</sup>Hg      2008TAZI      NUCLEAR REACTIONS Pb(p, x), E=1, 1.4 GeV; Bi(p, x), E=1, 1.4 GeV; measured E $\gamma$ , I $\gamma$ , A(particle) using melted thick target at ISOLDE facility; <sup>76,77,79,85,87,88,89,90</sup>Kr, <sup>111</sup>Cd, <sup>121,124,126</sup>I, <sup>120,121,122,123,125,127,129,131,133</sup>Xe, <sup>184,186,188,190,192,193,195,197,203,205,206</sup>Hg, <sup>204,205,206,207,208,209,210</sup>At; deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069

<sup>205</sup>Pb      2008DOZU      NUCLEAR REACTIONS <sup>204,206,207</sup>Pb, <sup>209</sup>Bi(n,  $\gamma$ ), E $\approx$ 4-50 keV; measured E $\gamma$ , I $\gamma$ ; deduced  $\sigma$ ; s-process abundances. Compared to older data. CONF Nice (Nucl Data for Sci and Technol) Proc,P1311

<sup>205</sup>At      2008TAZI      NUCLEAR REACTIONS Pb(p, x), E=1, 1.4 GeV; Bi(p, x), E=1, 1.4 GeV; measured E $\gamma$ , I $\gamma$ , A(particle) using melted thick target at ISOLDE facility; <sup>76,77,79,85,87,88,89,90</sup>Kr, <sup>111</sup>Cd, <sup>121,124,126</sup>I, <sup>120,121,122,123,125,127,129,131,133</sup>Xe, <sup>184,186,188,190,192,193,195,197,203,205,206</sup>Hg, <sup>204,205,206,207,208,209,210</sup>At; deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069

KEYNUMBERS AND KEYWORDS

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**A=206**

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| $^{206}\text{Hg}$ | 2008TAZI | <p>NUCLEAR REACTIONS Pb(p, x), E=1, 1.4 GeV; Bi(p, x), E=1, 1.4 GeV; measured <math>E\gamma</math>, <math>I\gamma</math>, A(particle) using melted thick target at ISOLDE facility; <math>^{76,77,79,85,87,88,89,90}\text{Kr}</math>, <math>^{111}\text{Cd}</math>, <math>^{121,124,126}\text{I}</math>, <math>^{120,121,122,123,125,127,129,131,133}\text{Xe}</math>, <math>^{184,186,188,190,192,193,195,197,203,205,206}\text{Hg}</math>, <math>^{204,205,206,207,208,209,210}\text{At}</math>;</p> <p>deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069</p> |
| $^{206}\text{Pb}$ | 2008BIZV | <p>RADIOACTIVITY <math>^{210}\text{Po}(\alpha)</math>[from <math>^{209}\text{Bi}(n, \gamma)</math>], <math>^{211}\text{Po}(\alpha)</math>; measured <math>E\alpha</math>, <math>I\alpha</math>; deduced abundance contributions for the s-process at <math>kT=30</math> keV. CONF Nice (Nucl Data for Sci and Technol) Proc,P1333</p>  |
|                   | 2008BOZJ | <p>RADIOACTIVITY <math>^{210}\text{Po}(\alpha)</math>; measured <math>E\gamma</math>, <math>I\gamma</math>, <math>E\alpha</math>, <math>I\alpha</math>; deduced differential <math>\gamma</math>-emission probabilities. Comparison with model calculations of bremsstrahlung. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P523,Boie</p>  |
|                   | 2008NEZY | <p>NUCLEAR REACTIONS <math>^{56}\text{Fe}</math>, <math>^{206}\text{Pb}(n, n'\gamma)</math>, <math>E\approx 1000-19000</math> keV; measured <math>E\gamma</math>, <math>I\gamma(\theta)</math>; deduced <math>\sigma</math>. Preliminary results. CONF Nice (Nucl Data for Sci and Technol) Proc,P1016</p>   |
| $^{206}\text{At}$ | 2008TAZI | <p>NUCLEAR REACTIONS Pb(p, x), E=1, 1.4 GeV; Bi(p, x), E=1, 1.4 GeV; measured <math>E\gamma</math>, <math>I\gamma</math>, A(particle) using melted thick target at ISOLDE facility; <math>^{76,77,79,85,87,88,89,90}\text{Kr}</math>, <math>^{111}\text{Cd}</math>, <math>^{121,124,126}\text{I}</math>, <math>^{120,121,122,123,125,127,129,131,133}\text{Xe}</math>, <math>^{184,186,188,190,192,193,195,197,203,205,206}\text{Hg}</math>, <math>^{204,205,206,207,208,209,210}\text{At}</math>;</p> <p>deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069</p> |

**A=207**

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| $^{207}\text{Pb}$ | 2008BIZV | <p>RADIOACTIVITY <math>^{210}\text{Po}(\alpha)</math>[from <math>^{209}\text{Bi}(n, \gamma)</math>], <math>^{211}\text{Po}(\alpha)</math>; measured <math>E\alpha</math>, <math>I\alpha</math>; deduced abundance contributions for the s-process at <math>kT=30</math> keV. CONF Nice (Nucl Data for Sci and Technol) Proc,P1333</p>  |
|                   | 2008DOZU | <p>NUCLEAR REACTIONS <math>^{204,206,207}\text{Pb}</math>, <math>^{209}\text{Bi}(n, \gamma)</math>, <math>E\approx 4-50</math> keV; measured <math>E\gamma</math>, <math>I\gamma</math>; deduced <math>\sigma</math>; s-process abundances. Compared to older data. CONF Nice (Nucl Data for Sci and Technol) Proc,P1311</p>   |
| $^{207}\text{At}$ | 2008TAZI | <p>NUCLEAR REACTIONS Pb(p, x), E=1, 1.4 GeV; Bi(p, x), E=1, 1.4 GeV; measured <math>E\gamma</math>, <math>I\gamma</math>, A(particle) using melted thick target at ISOLDE facility; <math>^{76,77,79,85,87,88,89,90}\text{Kr}</math>, <math>^{111}\text{Cd}</math>, <math>^{121,124,126}\text{I}</math>, <math>^{120,121,122,123,125,127,129,131,133}\text{Xe}</math>, <math>^{184,186,188,190,192,193,195,197,203,205,206}\text{Hg}</math>, <math>^{204,205,206,207,208,209,210}\text{At}</math>;</p> <p>deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069</p> |

KEYNUMBERS AND KEYWORDS

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**A=208**

$^{208}\text{Pb}$	2008AZZZ	NUCLEAR REACTIONS $^{208}\text{Pb}(^{70}\text{Ni}, ^{70}\text{Ni}')$ , ( $^{74}\text{Zn}, ^{74}\text{Zn}'$ ), ( $^{76}\text{Ge}, ^{76}\text{Ge}'$ ), E=60 MeV / nucleon; measured $E\gamma$ , $I\gamma$ , reaction products; $^{70}\text{Ni}$ , $^{74}\text{Zn}$ , $^{76}\text{Ge}$ ; deduced level energies, J, $\pi$ , $\sigma$ , B(E2). CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P39,Azaiez	
	2008DOZU	NUCLEAR REACTIONS $^{204,206,207}\text{Pb}$ , $^{209}\text{Bi}(n, \gamma)$ , E $\approx$ 4-50 keV; measured $E\gamma$ , $I\gamma$ ; deduced $\sigma$ ; s-process abundances. Compared to older data. CONF Nice (Nucl Data for Sci and Technol) Proc,P1311	
	2008GOZT	NUCLEAR REACTIONS $^{208}\text{Pb}(p, p')$ , E=11-18 MeV; measured reaction products; $^{209}\text{Bi}$ ; deduced isobaric analog resonance states, $\sigma$ , configuration mixing. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P547,Gomez	
	2008OHZT	NUCLEAR REACTIONS $^{12}\text{C}$ , $^{89}\text{Y}$ , $^{208}\text{Pb}(n, n)$ , E=96 MeV; measured $E_n$ , $\ln(\theta)$ ; deduced $d\sigma(\theta)$ ; calculated $d\sigma(\theta)$ using different models. $^{12}\text{C}(n, n)$ $d\sigma$ compared also to $^{12}\text{C}(p, p)$ . CONF Nice (Nucl Data for Sci and Technol) Proc,P1023	
	2008VOZV	NUCLEAR REACTIONS $^{208}\text{Pb}(p, p')$ , E=295 MeV; measured reaction products;deduced $\sigma(\theta)$ , $\sigma(\theta, E)$ , B(E1). CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P335,Von Neumann-	
	2010SC11	NUCLEAR REACTIONS $^{208}\text{Pb}(\gamma, \gamma')$ , E=9-15 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma(\theta)$ , linear polarization, integrated cross sections. $^{208}\text{Pb}$ ; deduced levels, J, $\pi$ , widths, B(E1). Comparison with shell model and QRPA calculations. JOUR PRVCA 81 054315	
	2010SE03	NUCLEAR REACTIONS $^{207,208}\text{Pb}$ , $\text{Pb}(n, \gamma)$ , E=20, 41, 74 keV; measured neutron TOF, $E\gamma$ , $I\gamma$ ; deduced $\sigma$ . JOUR NIMAE 618 153	
	2010YU02	NUCLEAR REACTIONS $^{208}\text{Pb}$ , $^{209}\text{Bi}(^9\text{Be}, ^9\text{Be})$ , E=37-50 MeV; measured reaction products; deduced $\sigma(\theta)$ , optical potential parameters. JOUR JPGPE 37 075108	
	$^{208}\text{At}$	2008TAZI	NUCLEAR REACTIONS $\text{Pb}(p, x)$ , E=1, 1.4 GeV; $\text{Bi}(p, x)$ , E=1, 1.4 GeV; measured $E\gamma$ , $I\gamma$ , A(particle) using melted thick target at ISOLDE facility; $^{76,77,79,85,87,88,89,90}\text{Kr}$ , $^{111}\text{Cd}$ , $^{121,124,126}\text{I}$ , $^{120,121,122,123,125,127,129,131,133}\text{Xe}$ , $^{184,186,188,190,192,193,195,197,203,205,206}\text{Hg}$ , $^{204,205,206,207,208,209,210}\text{At}$ ; deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069

**A=209**

$^{209}\text{Pb}$	2010SE03	NUCLEAR REACTIONS $^{207,208}\text{Pb}$ , $\text{Pb}(n, \gamma)$ , E=20, 41, 74 keV; measured neutron TOF, $E\gamma$ , $I\gamma$ ; deduced $\sigma$ . JOUR NIMAE 618 153
	2008GOZT	NUCLEAR REACTIONS $^{208}\text{Pb}(p, p')$ , E=11-18 MeV; measured reaction products; $^{209}\text{Bi}$ ; deduced isobaric analog resonance states, $\sigma$ , configuration mixing. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P547,Gomez
$^{209}\text{Bi}$	2009TOZX	NUCLEAR REACTIONS $^{208}\text{Pb}(^{31}\text{Cl}, ^{30}\text{S})$ , E not given; measured E(particle), $\theta(\text{particle})$ , $E_p$ , $I_p(\theta)$ , $E\gamma$ , $I\gamma$ , (particle) $\theta$ -coin. Analysis in progress. REPT RIKEN 2008 Annual,P11,Togano

KEYNUMBERS AND KEYWORDS

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**A=209 (continued)**

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| 2010YU02          |          | NUCLEAR REACTIONS $^{208}\text{Pb}$ , $^{209}\text{Bi}(^9\text{Be}, ^9\text{Be})$ , $E=37\text{-}50$ MeV; measured reaction products; deduced $\sigma(\theta)$ , optical potential parameters. JOUR JPGPE 37 075108   |
| $^{209}\text{At}$ | 2008TAZI | NUCLEAR REACTIONS $\text{Pb}(p, x)$ , $E=1, 1.4$ GeV; $\text{Bi}(p, x)$ , $E=1, 1.4$ GeV; measured $E\gamma$ , $I\gamma$ , $A(\text{particle})$ using melted thick target at ISOLDE facility; $^{76,77,79,85,87,88,89,90}\text{Kr}$ , $^{111}\text{Cd}$ , $^{121,124,126}\text{I}$ , $^{120,121,122,123,125,127,129,131,133}\text{Xe}$ , $^{184,186,188,190,192,193,195,197,203,205,206}\text{Hg}$ , $^{204,205,206,207,208,209,210}\text{At}$ ; deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069 |

**A=210**

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|-------------------|----------|---|
| $^{210}\text{Bi}$ | 2008BIZV | NUCLEAR REACTIONS $^{209}\text{Bi}(n, \gamma)$ , $E=\text{low}$ ; measured $E\alpha$ , $I\alpha$ ; deduced $\sigma$ . CONF Nice (Nucl Data for Sci and Technol) Proc,P1333  |
|                   | 2008DOZU | NUCLEAR REACTIONS $^{204,206,207}\text{Pb}$ , $^{209}\text{Bi}(n, \gamma)$ , $E\approx 4\text{-}50$ keV; measured $E\gamma$ , $I\gamma$ ; deduced $\sigma$ ; s-process abundances. Compared to older data. CONF Nice (Nucl Data for Sci and Technol) Proc,P1311   |
| $^{210}\text{Po}$ | 2008BIZV | RADIOACTIVITY $^{210}\text{Po}(\alpha)$ [from $^{209}\text{Bi}(n, \gamma)$ ], $^{211}\text{Po}(\alpha)$ ; measured $E\alpha$ , $I\alpha$ ; deduced abundance contributions for the s-process at $kT=30$ keV. CONF Nice (Nucl Data for Sci and Technol) Proc,P1333   |
|                   | 2008BOZJ | RADIOACTIVITY $^{210}\text{Po}(\alpha)$ ; measured $E\gamma$ , $I\gamma$ , $E\alpha$ , $I\alpha$ ; deduced differential $\gamma$ -emission probabilities. Comparison with model calculations of bremsstrahlung. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P523,Boie  |
| $^{210}\text{At}$ | 2008TAZI | NUCLEAR REACTIONS $\text{Pb}(p, x)$ , $E=1, 1.4$ GeV; $\text{Bi}(p, x)$ , $E=1, 1.4$ GeV; measured $E\gamma$ , $I\gamma$ , $A(\text{particle})$ using melted thick target at ISOLDE facility; $^{76,77,79,85,87,88,89,90}\text{Kr}$ , $^{111}\text{Cd}$ , $^{121,124,126}\text{I}$ , $^{120,121,122,123,125,127,129,131,133}\text{Xe}$ , $^{184,186,188,190,192,193,195,197,203,205,206}\text{Hg}$ , $^{204,205,206,207,208,209,210}\text{At}$ ; deduced thick target yields temperature dependence 250-600 centigrade; calculated using FLUKA, MCNPX with INCL4 / ABLA. CONF Nice (Nucl Data for Sci and Technol) Proc,P1069 |
| $^{210}\text{Rn}$ | 2010PR05 | NUCLEAR REACTIONS $^{186}\text{W}(^{24}\text{Mg}, X)^{210}\text{Rn}$ , $E=111\text{-}125$ MeV; $^{194}\text{Pt}(^{16}\text{O}, X)^{210}\text{Rn}$ , $E=75\text{-}102$ MeV; measured fission fragment mass ratio distributions and mass ratio widths. Comparison with coupled-channel calculations. JOUR PRVCA 81 054608   |

**A=211**

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| $^{211}\text{Po}$ | 2008BIZV | RADIOACTIVITY $^{210}\text{Po}(\alpha)$ [from $^{209}\text{Bi}(n, \gamma)$ ], $^{211}\text{Po}(\alpha)$ ; measured $E\alpha$ , $I\alpha$ ; deduced abundance contributions for the s-process at $kT=30$ keV. CONF Nice (Nucl Data for Sci and Technol) Proc,P1333 |
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**A=212**

No references found

**A=213**

No references found

**A=214**

No references found

**A=215**

No references found

**A=216**

No references found

**A=217**

No references found

**A=218**

No references found

**A=219**

No references found

**A=220**

No references found

**A=221**

No references found

KEYNUMBERS AND KEYWORDS

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**A=222**

No references found

**A=223**

<sup>223</sup>Ac      2010GUZZ      RADIOACTIVITY <sup>223</sup>Ac[from <sup>232</sup>Th(p, 6n)<sup>227</sup>Pa-><sup>223</sup>Ac+ $\alpha$  at cyclotron energy]; measured cluster decay; deduced branching ratios relative to  $\alpha$ -decay. Found <sup>14</sup>C clusters, but no <sup>15</sup>N ones. CONF Varenna (Nucl Reaction Mechanisms),Proc,Vol.2,P307

**A=224**

No references found

**A=225**

No references found

**A=226**

No references found

**A=227**

No references found

**A=228**

<sup>228</sup>Th      2008KEZX      NUCLEAR REACTIONS <sup>232</sup>Th(n, 5n), E=29-42 MeV; measured E $\gamma$ , I $\gamma$ ( $\theta$ ); deduced  $\sigma$ ,  $\sigma_\gamma$ (discrete transitions); calculated  $\sigma$  using TALYS code. CONF Nice (Nucl Data for Sci and Technol) Proc,P1019

**A=229**

No references found

**A=230**

<sup>230</sup>Pa 2008MEZV NUCLEAR REACTIONS <sup>209</sup>Bi( $\alpha$ , x), E=28.8, 32.8 MeV; measured E $\gamma$ , I $\gamma$ , E $\alpha$ , I $\alpha$ ; <sup>186</sup>W(p, n), E=7-15 MeV; deduced  $\sigma$ ; calculated  $\sigma$ ; Zn(d, x)<sup>61</sup>Cu, E $\approx$ 3-19 MeV; Zn(d, x)<sup>64</sup>Cu, E $\approx$ 3-19 MeV; Zn(d, x)<sup>66</sup>Ga, E $\approx$ 3-19 MeV; Zn(d, x)<sup>67</sup>Ga, E $\approx$ 3-19 MeV; Zn(d, x)<sup>65</sup>Zn, E $\approx$ 3-19 MeV; Zn(d, x)<sup>69</sup>Zn, E $\approx$ 3-19 MeV; measured E $\gamma$ , I $\gamma$ ; deduced thin target yields; <sup>103</sup>Rh(d, 2n), E $\approx$ 3-20 MeV; <sup>232</sup>Th(p, 3n), E $\approx$ 13-31 MeV; calculated  $\sigma$ . Calculations using EMPIRE II; compared to available data. CONF Nice (Nucl Data for Sci and Technol) Proc,P1403

**A=231**

No references found

**A=232**

<sup>232</sup>Th 2010YE02 NUCLEAR REACTIONS <sup>235</sup>U( $\gamma$ ,  $\gamma'$ ) E=3.5, 4.4 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma(\theta)$ , integrated cross sections of  $\gamma$  rays. <sup>235</sup>U; deduced levels, B(M1), B(E1) strengths. <sup>232</sup>Th, <sup>235,236,238</sup>U; systematics of M1 strength functions. JOUR PRVCA 81 044309

**A=233**

<sup>233</sup>Th 2008BRZW NUCLEAR REACTIONS <sup>232</sup>Th, <sup>233</sup>Pa, <sup>234,235</sup>U, <sup>241,242</sup>Am, <sup>244</sup>Cm, <sup>237</sup>Np, <sup>238</sup>Pu(n,  $\gamma$ ), E=reactor spectrum; <sup>242</sup>Am, <sup>245</sup>Cm(n, f), E=reactor spectrum; measured E $\gamma$ , I $\gamma$ , E $\alpha$ , I $\alpha$ , A(fragment); deduced average  $\sigma$ ,  $\sigma(E=25.3\text{meV})$ . CONF Nice (Nucl Data for Sci and Technol) Proc,P619

**A=234**

<sup>234</sup>Pa 2008BRZW NUCLEAR REACTIONS <sup>232</sup>Th, <sup>233</sup>Pa, <sup>234,235</sup>U, <sup>241,242</sup>Am, <sup>244</sup>Cm, <sup>237</sup>Np, <sup>238</sup>Pu(n,  $\gamma$ ), E=reactor spectrum; <sup>242</sup>Am, <sup>245</sup>Cm(n, f), E=reactor spectrum; measured E $\gamma$ , I $\gamma$ , E $\alpha$ , I $\alpha$ , A(fragment); deduced average  $\sigma$ ,  $\sigma(E=25.3\text{meV})$ . CONF Nice (Nucl Data for Sci and Technol) Proc,P619

**A=235**

<sup>235</sup>U 2008BRZW NUCLEAR REACTIONS <sup>232</sup>Th, <sup>233</sup>Pa, <sup>234,235</sup>U, <sup>241,242</sup>Am, <sup>244</sup>Cm, <sup>237</sup>Np, <sup>238</sup>Pu(n,  $\gamma$ ), E=reactor spectrum; <sup>242</sup>Am, <sup>245</sup>Cm(n, f), E=reactor spectrum; measured E $\gamma$ , I $\gamma$ , E $\alpha$ , I $\alpha$ , A(fragment); deduced average  $\sigma$ ,  $\sigma(E=25.3\text{meV})$ . CONF Nice (Nucl Data for Sci and Technol) Proc,P619

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KEYNUMBERS AND KEYWORDS

**A=235** (*continued*)

2010YE02 NUCLEAR REACTIONS  $^{235}\text{U}(\gamma, \gamma')$  E=3.5, 4.4 MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma(\theta)$ , integrated cross sections of  $\gamma$  rays.  $^{235}\text{U}$ ; deduced levels, B(M1), B(E1) strengths.  $^{232}\text{Th}$ ,  $^{235,236,238}\text{U}$ ; systematics of M1 strength functions. JOUR PRVCA 81 044309

**A=236**

$^{236}\text{U}$  2008BRZW NUCLEAR REACTIONS  $^{232}\text{Th}$ ,  $^{233}\text{Pa}$ ,  $^{234,235}\text{U}$ ,  $^{241,242}\text{Am}$ ,  $^{244}\text{Cm}$ ,  $^{237}\text{Np}$ ,  $^{238}\text{Pu}(n, \gamma)$ , E=reactor spectrum;  $^{242}\text{Am}$ ,  $^{245}\text{Cm}(n, f)$ , E=reactor spectrum; measured  $E\gamma$ ,  $I\gamma$ ,  $E\alpha$ ,  $I\alpha$ , A(fragment); deduced average  $\sigma$ ,  $\sigma(E=25.3\text{meV})$ . CONF Nice (Nucl Data for Sci and Technol) Proc,P619

2008JAZV NUCLEAR REACTIONS  $^{235}\text{U}(n, \gamma)$ , E $\approx$ thermal-500 keV;  $^{235}\text{U}(n, f)$ E $\approx$ thermal-500 keV;  $^{242}\text{Am}(n, f)$ , E $\approx$ 3.5-10000 eV; measured  $E\gamma$ ,  $I\gamma$ , E(fragment), I(fragment); deduced (cluster)- $\gamma$ -multiplicity, total and average  $E\gamma$ . Compared to SF results; DANCE, PPAC fission-tagging detector;  $^{242}\text{Am}$  isomeric state. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P440

2010YE02 NUCLEAR REACTIONS  $^{235}\text{U}(\gamma, \gamma')$  E=3.5, 4.4 MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma(\theta)$ , integrated cross sections of  $\gamma$  rays.  $^{235}\text{U}$ ; deduced levels, B(M1), B(E1) strengths.  $^{232}\text{Th}$ ,  $^{235,236,238}\text{U}$ ; systematics of M1 strength functions. JOUR PRVCA 81 044309

**A=237**

No references found

**A=238**

$^{238}\text{U}$  2009KAZT RADIOACTIVITY  $^{238}\text{U}(\text{SF})$ [from in-flight fission at 345 MeV / nucleon]; measured A(fragment), Z(fragment),  $E\gamma$ ,  $I\gamma(t)$ ,  $\gamma\gamma$ -coin; deduced  $^{94,95}\text{Br}$  isomeric transition  $T_{1/2}$ . REPT RIKEN 2008 Annual,Pxv,Kameda

2010YE02 NUCLEAR REACTIONS  $^{235}\text{U}(\gamma, \gamma')$  E=3.5, 4.4 MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma(\theta)$ , integrated cross sections of  $\gamma$  rays.  $^{235}\text{U}$ ; deduced levels, B(M1), B(E1) strengths.  $^{232}\text{Th}$ ,  $^{235,236,238}\text{U}$ ; systematics of M1 strength functions. JOUR PRVCA 81 044309

2010ZH09 NUCLEAR REACTIONS  $^{238}\text{U}(^{207}\text{Pb}, ^{207}\text{Pb}')$ , E=1400 MeV; measured  $E\gamma$ ,  $\gamma\gamma$ -coin using Gammasphere array, unsafe Coulomb excitation.  $^{238}\text{U}$ ; deduced levels, J,  $\pi$ , bands, Routhians, double-octupole phonon excitation. Comparison with band structures in  $^{240}\text{Pu}$ . JOUR PRVCA 81 041306

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KEYNUMBERS AND KEYWORDS

**A=238 (continued)**

$^{238}\text{Np}$	2008BRZW	NUCLEAR REACTIONS $^{232}\text{Th}$ , $^{233}\text{Pa}$ , $^{234,235}\text{U}$ , $^{241,242}\text{Am}$ , $^{244}\text{Cm}$ , $^{237}\text{Np}$ , $^{238}\text{Pu}(n, \gamma)$ , E=reactor spectrum; $^{242}\text{Am}$ , $^{245}\text{Cm}(n, f)$ , E=reactor spectrum; measured $E\gamma$ , $I\gamma$ , $E\alpha$ , $I\alpha$ , A(fragment); deduced average $\sigma$ , $\sigma(E=25.3\text{meV})$ . CONF Nice (Nucl Data for Sci and Technol) Proc,P619
	2008GUZN	NUCLEAR REACTIONS $^{237}\text{Np}$ , $^{240}\text{Pu}(n, \gamma)$ , E=1 eV-2 keV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin.; deduced yield, $\sigma$ , average resonance width. Compared to other data, ENDF / B-VII, JEFF-3.1, JENDL-3.3. Other data from transmission measurements. CONF Nice (Nucl Data for Sci and Technol) Proc,P627
	2008KRZU	NUCLEAR REACTIONS $^{238}\text{U}(^{48}\text{Ca}, ^{48}\text{K})$ , E=330 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, (particle) $\gamma$ -coin; deduced $^{48}\text{K}$ E, J, $\pi$ . CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P531

**A=239**

$^{239}\text{U}$	2008GRZS	RADIOACTIVITY $^{239}\text{U}(\beta^-)$ [from $^{238}\text{U}(n, \gamma)$ ]; measured $E\gamma$ , $I\gamma(t)$ ;deduced $\gamma$ intensities; X-ray intensities. Compared to literature. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P264
$^{239}\text{Np}$	2008GRZS	RADIOACTIVITY $^{239}\text{U}(\beta^-)$ [from $^{238}\text{U}(n, \gamma)$ ]; measured $E\gamma$ , $I\gamma(t)$ ;deduced $\gamma$ intensities; X-ray intensities. Compared to literature. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P264
$^{239}\text{Pu}$	2008BRZW	NUCLEAR REACTIONS $^{232}\text{Th}$ , $^{233}\text{Pa}$ , $^{234,235}\text{U}$ , $^{241,242}\text{Am}$ , $^{244}\text{Cm}$ , $^{237}\text{Np}$ , $^{238}\text{Pu}(n, \gamma)$ , E=reactor spectrum; $^{242}\text{Am}$ , $^{245}\text{Cm}(n, f)$ , E=reactor spectrum; measured $E\gamma$ , $I\gamma$ , $E\alpha$ , $I\alpha$ , A(fragment); deduced average $\sigma$ , $\sigma(E=25.3\text{meV})$ . CONF Nice (Nucl Data for Sci and Technol) Proc,P619

**A=240**

$^{240}\text{Pu}$	2008KOZK	NUCLEAR REACTIONS $^{240}\text{Pu}(n, n')$ , E $\approx$ 0.95-1.15 eV; $^{242}\text{Pu}(n, n')$ , E $\approx$ 2.45-2.85 eV; measured $E_n$ , $I_n$ ; deduced resonance width. Studied effect of temperature. CONF Nice (Nucl Data for Sci and Technol) Proc,P623
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**A=241**

$^{241}\text{Pu}$	2008GUZN	NUCLEAR REACTIONS $^{237}\text{Np}$ , $^{240}\text{Pu}(n, \gamma)$ , E=1 eV-2 keV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin.; deduced yield, $\sigma$ , average resonance width. Compared to other data, ENDF / B-VII, JEFF-3.1, JENDL-3.3. Other data from transmission measurements. CONF Nice (Nucl Data for Sci and Technol) Proc,P627
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**A=242**

- <sup>242</sup>Pu      2008KOZK      NUCLEAR REACTIONS <sup>240</sup>Pu(n, n'), E≈0.95-1.15 eV; <sup>242</sup>Pu(n, n'), E≈2.45-2.85 eV; measured En, In; deduced resonance width. Studied effect of temperature. CONF Nice (Nucl Data for Sci and Technol) Proc,P623
- <sup>242</sup>Am      2008BRZW      NUCLEAR REACTIONS <sup>232</sup>Th, <sup>233</sup>Pa, <sup>234,235</sup>U, <sup>241,242</sup>Am, <sup>244</sup>Cm, <sup>237</sup>Np, <sup>238</sup>Pu(n, γ), E=reactor spectrum; <sup>242</sup>Am, <sup>245</sup>Cm(n, f), E=reactor spectrum; measured Eγ, Iγ, Eα, Iα, A(fragment); deduced average σ, σ(E=25.3meV). CONF Nice (Nucl Data for Sci and Technol) Proc,P619

**A=243**

- <sup>243</sup>Am      2008BRZW      NUCLEAR REACTIONS <sup>232</sup>Th, <sup>233</sup>Pa, <sup>234,235</sup>U, <sup>241,242</sup>Am, <sup>244</sup>Cm, <sup>237</sup>Np, <sup>238</sup>Pu(n, γ), E=reactor spectrum; <sup>242</sup>Am, <sup>245</sup>Cm(n, f), E=reactor spectrum; measured Eγ, Iγ, Eα, Iα, A(fragment); deduced average σ, σ(E=25.3meV). CONF Nice (Nucl Data for Sci and Technol) Proc,P619

**A=244**

No references found

**A=245**

- <sup>245</sup>Cm      2008BRZW      NUCLEAR REACTIONS <sup>232</sup>Th, <sup>233</sup>Pa, <sup>234,235</sup>U, <sup>241,242</sup>Am, <sup>244</sup>Cm, <sup>237</sup>Np, <sup>238</sup>Pu(n, γ), E=reactor spectrum; <sup>242</sup>Am, <sup>245</sup>Cm(n, f), E=reactor spectrum; measured Eγ, Iγ, Eα, Iα, A(fragment); deduced average σ, σ(E=25.3meV). CONF Nice (Nucl Data for Sci and Technol) Proc,P619

**A=246**

- <sup>246</sup>Cm      2008TAZE      NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>48</sup>Ca, x)<sup>254</sup>No, E not given; <sup>206</sup>Pb(<sup>48</sup>Ca, x)<sup>252</sup>No, E not given; <sup>204</sup>Hg(<sup>48</sup>Ca, x)<sup>250</sup>Fm, E not given; <sup>248</sup>Cm(<sup>209</sup>Bi, x)<sup>248</sup>Cm, E not given; <sup>248</sup>Cm(<sup>209</sup>Bi, x)<sup>246</sup>Cm, E not given; measured Eγ, Iγ(t), I(ce); deduced K-isomer decay, T<sub>1/2</sub>, 2qp configurations. Compared to calculations of the same group (another presentation at the conference). CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P105

**A=247**

No references found

KEYNUMBERS AND KEYWORDS

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**A=248**

- <sup>248</sup>Cm    2008TAZE    NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>48</sup>Ca, x)<sup>254</sup>No, E not given; <sup>206</sup>Pb(<sup>48</sup>Ca, x)<sup>252</sup>No, E not given; <sup>204</sup>Hg(<sup>48</sup>Ca, x)<sup>250</sup>Fm, E not given; <sup>248</sup>Cm(<sup>209</sup>Bi, x)<sup>248</sup>Cm, E not given; <sup>248</sup>Cm(<sup>209</sup>Bi, x)<sup>246</sup>Cm, E not given; measured E $\gamma$ , I $\gamma$ (t), I(ce); deduced K-isomer decay, T<sub>1/2</sub>, 2qp configurations. Compared to calculations of the same group (another presentation at the conference). CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P105
- <sup>248</sup>Cf    2010TA10    NUCLEAR REACTIONS <sup>249,250,251</sup>Cf(<sup>18</sup>O, <sup>16</sup>O), (<sup>18</sup>O, n<sup>16</sup>O), (<sup>18</sup>O, <sup>17</sup>O), (<sup>18</sup>O, n<sup>17</sup>O), (<sup>18</sup>O, <sup>18</sup>O), (<sup>18</sup>O, n<sup>18</sup>O), (<sup>18</sup>O, n<sup>18</sup>O), , E=153 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, (particle) $\gamma$ -coin. <sup>248,250,252</sup>Cf; deduced levels, J,  $\pi$ , ground-state rotational bands, moments of inertia. Radioactive Cf target with 63% <sup>249</sup>Cf, 13% <sup>250</sup>Cf, 24% <sup>251</sup>Cf. JOUR PRVCA 81 057303

**A=249**

- <sup>249</sup>Cf    2010TA10    NUCLEAR REACTIONS <sup>249,250,251</sup>Cf(<sup>18</sup>O, <sup>16</sup>O), (<sup>18</sup>O, n<sup>16</sup>O), (<sup>18</sup>O, <sup>17</sup>O), (<sup>18</sup>O, n<sup>17</sup>O), (<sup>18</sup>O, <sup>18</sup>O), (<sup>18</sup>O, n<sup>18</sup>O), (<sup>18</sup>O, n<sup>18</sup>O), , E=153 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, (particle) $\gamma$ -coin. <sup>248,250,252</sup>Cf; deduced levels, J,  $\pi$ , ground-state rotational bands, moments of inertia. Radioactive Cf target with 63% <sup>249</sup>Cf, 13% <sup>250</sup>Cf, 24% <sup>251</sup>Cf. JOUR PRVCA 81 057303

**A=250**

- <sup>250</sup>Bk    2010GU05    NUCLEAR MOMENTS <sup>253,254</sup>Es, <sup>255</sup>Fm, <sup>250</sup>Bk; measured hyperfine spectra, angular distributions of  $\alpha$  particles and  $\gamma$ -rays; deduced magnetic moments. JOUR BRSPE 74 535
- <sup>250</sup>Cf    2010TA10    NUCLEAR REACTIONS <sup>249,250,251</sup>Cf(<sup>18</sup>O, <sup>16</sup>O), (<sup>18</sup>O, n<sup>16</sup>O), (<sup>18</sup>O, <sup>17</sup>O), (<sup>18</sup>O, n<sup>17</sup>O), (<sup>18</sup>O, <sup>18</sup>O), (<sup>18</sup>O, n<sup>18</sup>O), (<sup>18</sup>O, n<sup>18</sup>O), , E=153 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, (particle) $\gamma$ -coin. <sup>248,250,252</sup>Cf; deduced levels, J,  $\pi$ , ground-state rotational bands, moments of inertia. Radioactive Cf target with 63% <sup>249</sup>Cf, 13% <sup>250</sup>Cf, 24% <sup>251</sup>Cf. JOUR PRVCA 81 057303
- <sup>250</sup>Fm    2008TAZE    NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>48</sup>Ca, x)<sup>254</sup>No, E not given; <sup>206</sup>Pb(<sup>48</sup>Ca, x)<sup>252</sup>No, E not given; <sup>204</sup>Hg(<sup>48</sup>Ca, x)<sup>250</sup>Fm, E not given; <sup>248</sup>Cm(<sup>209</sup>Bi, x)<sup>248</sup>Cm, E not given; <sup>248</sup>Cm(<sup>209</sup>Bi, x)<sup>246</sup>Cm, E not given; measured E $\gamma$ , I $\gamma$ (t), I(ce); deduced K-isomer decay, T<sub>1/2</sub>, 2qp configurations. Compared to calculations of the same group (another presentation at the conference). CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P105

**A=251**

- <sup>251</sup>Cf 2010TA10 NUCLEAR REACTIONS <sup>249,250,251</sup>Cf(<sup>18</sup>O, <sup>16</sup>O), (<sup>18</sup>O, n<sup>16</sup>O), (<sup>18</sup>O, <sup>17</sup>O), (<sup>18</sup>O, n<sup>17</sup>O), (<sup>18</sup>O, <sup>18</sup>O), (<sup>18</sup>O, n<sup>18</sup>O), (<sup>18</sup>O, n<sup>18</sup>O), , E=153 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, (particle) $\gamma$ -coin. <sup>248,250,252</sup>Cf; deduced levels, J,  $\pi$ , ground-state rotational bands, moments of inertia. Radioactive Cf target with 63% <sup>249</sup>Cf, 13% <sup>250</sup>Cf, 24% <sup>251</sup>Cf. JOUR PRVCA 81 057303
- <sup>251</sup>Md 2008JEZZ RADIOACTIVITY <sup>256</sup>Rf[from <sup>208</sup>Pb(<sup>50</sup>Ti, 2n), E=243 MeV]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, E(e), I(e), (e)(e)-coin, (e) $\gamma$ -coin, particle- $\gamma$ -coin; deduced E, J,  $\pi$ , isomeric transitions; calculated E, J,  $\pi$ ; <sup>255</sup>Lr( $\alpha$ )[from <sup>209</sup>Bi(<sup>48</sup>Ca, 2n)]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, E(e), I(e), E $\alpha$ , I $\alpha$ , (e) $\alpha$ -coin, (e) $\gamma$ -coin, X-rays, particle- $\gamma$ -coin; deduced <sup>255</sup>Lr E, J,  $\pi$ , rotational band, isomer decay T<sub>1/2</sub>, moment of inertia. Results on CD only. CONF E.Lansing (NS2008),P29,Jeppesen

**A=252**

- <sup>252</sup>Cf 2008BLZX RADIOACTIVITY <sup>252</sup>Cf(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin; deduced  $\gamma$  multiplicity distribution. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P200
- 2008DAZT RADIOACTIVITY <sup>252</sup>Cf(SF); measured E $\gamma$ , I $\gamma$ ( $\theta$ ),  $\gamma\gamma$ -coin; deduced <sup>100,102</sup>Zr, <sup>104,106,108</sup>Mo, <sup>146,148</sup>Ce T<sub>1/2</sub>, g-factor. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P363
- 2008GOZQ RADIOACTIVITY <sup>252</sup>Cf(SF); measured E $\gamma$ , I $\gamma$ ( $\theta$ ),  $\gamma\gamma$ -coin; deduced <sup>142</sup>Xe, <sup>152</sup>Nd angular correlations, g-factor, <sup>114</sup>Pd mixing ratio, <sup>108,110</sup>Ru E, J,  $\pi$ . CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P607
- 2008HAZD RADIOACTIVITY <sup>252</sup>Cf(SF); calculated average neutron energy, neutron multiplicity in coin with fragment mass. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P401
- 2008HAZH RADIOACTIVITY <sup>252</sup>Cf(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ - $\gamma$ -coin.; <sup>108,110,112</sup>Ru, <sup>106</sup>Mo; deduced band structures, possible chiral doublets. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P387,Hamilton
- 2008JAZV RADIOACTIVITY <sup>252</sup>Cf(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, (cluster) $\gamma$ -coin; deduced (cluster)- $\gamma$ -multiplicity, total and average E $\gamma$ . CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P440
- 2008JOZV RADIOACTIVITY <sup>252</sup>Cf(SF); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ - $\gamma$ -coin.; <sup>144</sup>Cs; deduced energy levels. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P395,Jones
- 2008LUZV RADIOACTIVITY <sup>252</sup>Cf(SF); measured E $\gamma$ , I $\gamma$ ; deduced <sup>110,111</sup>Tc E, J,  $\pi$ ; calculated <sup>110,111</sup>Tc E, J,  $\pi$ , deformation parameters ( $\epsilon_2$ ,  $\gamma$ ) using RTRP model. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P709
- 2008LUZX RADIOACTIVITY <sup>252</sup>Cf(SF); measured E $\gamma$ , I $\gamma$ ( $\theta$ ),  $\gamma\gamma$ ( $\theta$ )-coin; <sup>110,112</sup>Ru deduced E, J,  $\pi$ , bands, moment of inertia. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P593

KEYNUMBERS AND KEYWORDS

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**A=252 (continued)**

- 2008LUZY RADIOACTIVITY  $^{252}\text{Cf}(\text{SF})$ ; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin; deduced  $^{137,138}\text{Cs}$  E, J,  $\pi$ , Cs, N=82, N=83 yrast states,  $^{138}\text{Cs}$  internal conversion coefficients,  $\gamma$ -multipolarity. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P65
- 2008ORZY RADIOACTIVITY  $^{252}\text{Cf}(\text{SF})$ ; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin; deduced  $^{100,101,102}\text{Zr}$ ,  $^{102,103,104,105,106,108}\text{Mo}$  g-factor; calculated g-factor using IBA2. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P355
- 2008RAZY RADIOACTIVITY  $^{252}\text{Cf}(\text{SF})$ ; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma$ - $\gamma$ -coin.;  $^{148}\text{Ce}$ ,  $^{108}\text{Ru}$ ; deduced angular correlation of  $\gamma$  cascades, mixing ratio. CONF Vico Equense(Chang.Facets of Nucl.Struct.) Proc,P57,Ramayya
- 2008ZHYZ RADIOACTIVITY  $^{252}\text{Cf}(\text{SF})$ ; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin; deduced  $^{105,108}\text{Mo}$ ,  $^{112}\text{Ru}$  E, J,  $\pi$ , bands, yrast. Compared to other Mo isotopes. CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P612
- 2010ER04 RADIOACTIVITY  $^{252}\text{Cf}(\text{SF})$ ; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin., neutron- $\gamma$ -coin.; deduced high-energy bremsstrahlung emission during spontaneous fission, energy spectrum of photons. JOUR IMPEE 19 1183
- 2010GU07 RADIOACTIVITY  $^{252}\text{Cf}(\text{SF})$ ; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma\gamma$ -coin.;  $^{109}\text{Tc}$ ; deduced level scheme, high spin states, yrast bands interpretation. Cranked shell model calculations. JOUR CPLEE 27 062501
- 2010LI10 RADIOACTIVITY  $^{252}\text{Cf}(\text{SF})$ ; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$  using Gammasphere array.  $^{140}\text{Cs}$ ; deduced levels, J,  $\pi$ , configurations.  $^{107,108,109,110}\text{Tc}$ ; measured  $E\gamma$ . Comparison with level structure of  $^{138}\text{I}$  and with systematics of N=85 isotones of  $^{137}\text{Te}$ ,  $^{138}\text{I}$ ,  $^{139}\text{Xe}$ ,  $^{140}\text{Cs}$ ,  $^{141}\text{Ba}$ ,  $^{145}\text{Nd}$ ,  $^{146}\text{Pm}$ ,  $^{147}\text{Sm}$ ,  $^{148}\text{Eu}$  and  $^{149}\text{Gd}$ . JOUR PRVCA 81 037302
- 2010LI14 RADIOACTIVITY  $^{252}\text{Cf}(\text{SF})$ ; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ .  $^{142}\text{Cs}$ ; deduced levels, J,  $\pi$ , multipolarity, bands, B(E1), B(E2), electric dipole moments.  $^{106,107}\text{Tc}$ ; measured  $E\gamma$ . Systematics of electric dipole moments for Xe (N=85-88), Cs (N=86-88), Ba (N=85-90), La (N=88, 90), Ce (N=86, 88, 90), Nd (N=86, 88, 90), Sm( N=86, 88). JOUR PRVCA 81 057304
- 2010LU02 RADIOACTIVITY  $^{252}\text{Cf}(\text{SF})$ ; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$  using Gammasphere.  $^{141,144}\text{Cs}$ ; deduced levels, J, p, conversion coefficients, multipolarities, bands, parity doublets, simplex structure, B(E1) / B(E2), dipole moment. Comparison with level structure of  $^{143}\text{Cs}$  and with systematics of adjacent N=85-92 nuclei.  $^{105,106,107,108}\text{Tc}$ ; measured  $E\gamma$ . JOUR NUPAB 838 1
- 2010PA08 RADIOACTIVITY  $^{252}\text{Cf}(\text{SF})$ ; measured decay products; deduced tripartition in fission. JOUR IMPEE 19 718
- 2010PA15 RADIOACTIVITY  $^{252}\text{Cf}(\text{SF})$ ; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin.; deduced photon yields, energy spectrum, the width of the giant dipole resonance (GDR). Comparison with thermal shape fluctuation model (TSFM). JOUR PYLBB 690 473

KEYNUMBERS AND KEYWORDS

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**A=252 (continued)**

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| 2010TA10          | NUCLEAR REACTIONS $^{249,250,251}\text{Cf}(^{18}\text{O}, ^{16}\text{O}), (^{18}\text{O}, \text{n}^{16}\text{O}), (^{18}\text{O}, ^{17}\text{O}), (^{18}\text{O}, \text{n}^{17}\text{O}), (^{18}\text{O}, ^{18}\text{O}), (^{18}\text{O}, \text{n}^{18}\text{O}), (^{18}\text{O}, \text{n}^{18}\text{O}), , \text{E}=153$ MeV; measured $E\gamma, I\gamma, \gamma\gamma-$ , (particle) $\gamma$ -coin. $^{248,250,252}\text{Cf}$ ; deduced levels, J, $\pi$ , ground-state rotational bands, moments of inertia. Radioactive Cf target with 63% $^{249}\text{Cf}$ , 13% $^{250}\text{Cf}$ , 24% $^{251}\text{Cf}$ . JOUR PRVCA 81 057303  |
| $^{252}\text{No}$ | 2008ROZX RADIOACTIVITY $^{252}\text{No}$ ; measured $E\gamma, I\gamma(\text{t})$ ; deduced rotational band, isomeric decay; $^{256}\text{Rf}(\text{SF})$ ; measured decay products; deduced isomeric transition, $T_{1/2}$ ; N=150; calculated E, J, $\pi$ , mass excess using Woods-Saxon and density functional with Skyrme interactions. Density functional does not describe gaps at Z=100 and N=152. Results on CD only. CONF E.Lansing (NS2008),P30,Robinson  |
| 2008TAZE          | NUCLEAR REACTIONS $^{208}\text{Pb}(^{48}\text{Ca}, \text{x})^{254}\text{No}$ , E not given; $^{206}\text{Pb}(^{48}\text{Ca}, \text{x})^{252}\text{No}$ , E not given; $^{204}\text{Hg}(^{48}\text{Ca}, \text{x})^{250}\text{Fm}$ , E not given; $^{248}\text{Cm}(^{209}\text{Bi}, \text{x})^{248}\text{Cm}$ , E not given; $^{248}\text{Cm}(^{209}\text{Bi}, \text{x})^{246}\text{Cm}$ , E not given; measured $E\gamma, I\gamma(\text{t}), I(\text{ce})$ ; deduced K-isomer decay, $T_{1/2}$ , 2qp configurations. Compared to calculations of the same group (another presentation at the conference). CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P105 |
| 2010BL03          | ATOMIC MASSES $^{252,253,254}\text{No}$ ; measured cyclotron resonance curves; deduced masses. JOUR HYIND 196 225   |
| 2010BL04          | ATOMIC MASSES $^{252,253,254}\text{No}$ ; measured masses by Penning-trap method at GSI, using $^{133}\text{Cs}$ as standard. JOUR NATUA 463 785  |

**A=253**

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| $^{253}\text{Cf}$ | 2010TA10 NUCLEAR REACTIONS $^{249,250,251}\text{Cf}(^{18}\text{O}, ^{16}\text{O}), (^{18}\text{O}, \text{n}^{16}\text{O}), (^{18}\text{O}, ^{17}\text{O}), (^{18}\text{O}, \text{n}^{17}\text{O}), (^{18}\text{O}, ^{18}\text{O}), (^{18}\text{O}, \text{n}^{18}\text{O}), (^{18}\text{O}, \text{n}^{18}\text{O}), , \text{E}=153$ MeV; measured $E\gamma, I\gamma, \gamma\gamma-$ , (particle) $\gamma$ -coin. $^{248,250,252}\text{Cf}$ ; deduced levels, J, $\pi$ , ground-state rotational bands, moments of inertia. Radioactive Cf target with 63% $^{249}\text{Cf}$ , 13% $^{250}\text{Cf}$ , 24% $^{251}\text{Cf}$ . JOUR PRVCA 81 057303 |
| $^{253}\text{Es}$ | 2010GU05 NUCLEAR MOMENTS $^{253,254}\text{Es}, ^{255}\text{Fm}, ^{250}\text{Bk}$ ; measured hyperfine spectra, angular distributions of $\alpha$ particles and $\gamma$ -rays; deduced magnetic moments. JOUR BRSPE 74 535  |
| $^{253}\text{No}$ | 2010BL03 ATOMIC MASSES $^{252,253,254}\text{No}$ ; measured cyclotron resonance curves; deduced masses. JOUR HYIND 196 225  |
| 2010BL04          | ATOMIC MASSES $^{252,253,254}\text{No}$ ; measured masses by Penning-trap method at GSI, using $^{133}\text{Cs}$ as standard. JOUR NATUA 463 785  |

**A=254**

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| $^{254}\text{Es}$ | 2010GU05 NUCLEAR MOMENTS $^{253,254}\text{Es}, ^{255}\text{Fm}, ^{250}\text{Bk}$ ; measured hyperfine spectra, angular distributions of $\alpha$ particles and $\gamma$ -rays; deduced magnetic moments. JOUR BRSPE 74 535 |
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KEYNUMBERS AND KEYWORDS

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**A=254 (continued)**

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| $^{254}\text{No}$ | 2008TAZE | NUCLEAR REACTIONS $^{208}\text{Pb}(^{48}\text{Ca}, x)^{254}\text{No}$ , E not given; $^{206}\text{Pb}(^{48}\text{Ca}, x)^{252}\text{No}$ , E not given; $^{204}\text{Hg}(^{48}\text{Ca}, x)^{250}\text{Fm}$ , E not given; $^{248}\text{Cm}(^{209}\text{Bi}, x)^{248}\text{Cm}$ , E not given; $^{248}\text{Cm}(^{209}\text{Bi}, x)^{246}\text{Cm}$ , E not given; measured $E\gamma$ , $I\gamma(t)$ , $I(\text{ce})$ ; deduced K-isomer decay, $T_{1/2}$ , 2qp configurations. Compared to calculations of the same group (another presentation at the conference). CONF Sanibel (Fission and Properties of Neutron-Rich Nuclei) Proc,P105 |
|                   | 2010BL03 | ATOMIC MASSES $^{252,253,254}\text{No}$ ; measured cyclotron resonance curves; deduced masses. JOUR HYIND 196 225   |
|                   | 2010BL04 | ATOMIC MASSES $^{252,253,254}\text{No}$ ; measured masses by Penning-trap method at GSI, using $^{133}\text{Cs}$ as standard. JOUR NATUA 463 785  |
|                   | 2010CL01 | RADIOACTIVITY $^{254}\text{No}(\text{IT})$ [from $^{208}\text{Pb}(^{48}\text{Ca}, 2n)$ , $E=221$ MeV]; measured $E\gamma$ , $I\gamma$ , $\gamma$ -particle-coin.; deduced J, $\pi$ , level energies, rotational bands, decay of isomer state. JOUR PYLBB 690 19   |

**A=255**

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|-------------------|----------|--|
| $^{255}\text{Fm}$ | 2010GU05 | NUCLEAR MOMENTS $^{253,254}\text{Es}$ , $^{255}\text{Fm}$ , $^{250}\text{Bk}$ ; measured hyperfine spectra, angular distributions of $\alpha$ particles and $\gamma$ -rays; deduced magnetic moments. JOUR BRSPPE 74 535   |
| $^{255}\text{Lr}$ | 2008JEZZ | RADIOACTIVITY $^{256}\text{Rf}$ [from $^{208}\text{Pb}(^{50}\text{Ti}, 2n)$ , $E=243$ MeV]; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, $E(e)$ , $I(e)$ , $(e)(e)$ -coin, $(e)\gamma$ -coin, particle- $\gamma$ -coin; deduced E, J, $\pi$ , isomeric transitions; calculated E, J, $\pi$ ; $^{255}\text{Lr}(\alpha)$ [from $^{209}\text{Bi}(^{48}\text{Ca}, 2n)$ ]; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, $E(e)$ , $I(e)$ , $E\alpha$ , $I\alpha$ , $(e)\alpha$ -coin, $(e)\gamma$ -coin, X-rays, particle- $\gamma$ -coin; deduced $^{255}\text{Lr}$ E, J, $\pi$ , rotational band, isomer decay $T_{1/2}$ , moment of inertia. Results on CD only. CONF E.Lansing (NS2008),P29,Jeppesen |

**A=256**

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| $^{256}\text{Rf}$ | 2008JEZZ | RADIOACTIVITY $^{256}\text{Rf}$ [from $^{208}\text{Pb}(^{50}\text{Ti}, 2n)$ , $E=243$ MeV]; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, $E(e)$ , $I(e)$ , $(e)(e)$ -coin, $(e)\gamma$ -coin, particle- $\gamma$ -coin; deduced E, J, $\pi$ , isomeric transitions; calculated E, J, $\pi$ ; $^{255}\text{Lr}(\alpha)$ [from $^{209}\text{Bi}(^{48}\text{Ca}, 2n)$ ]; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, $E(e)$ , $I(e)$ , $E\alpha$ , $I\alpha$ , $(e)\alpha$ -coin, $(e)\gamma$ -coin, X-rays, particle- $\gamma$ -coin; deduced $^{255}\text{Lr}$ E, J, $\pi$ , rotational band, isomer decay $T_{1/2}$ , moment of inertia. Results on CD only. CONF E.Lansing (NS2008),P29,Jeppesen |
|                   | 2008ROZX | RADIOACTIVITY $^{252}\text{No}$ ; measured $E\gamma$ , $I\gamma(t)$ ; deduced rotational band, isomeric decay; $^{256}\text{Rf}(\text{SF})$ ; measured decay products; deduced isomeric transition, $T_{1/2}$ ; $N=150$ ; calculated E, J, $\pi$ , mass excess using Woods-Saxon and density functional with Skyrme interactions. Density functional does not describe gaps at $Z=100$ and $N=152$ . Results on CD only. CONF E.Lansing (NS2008),P30,Robinson  |

**A=256** (*continued*)

2009SAZV RADIOACTIVITY  $^{264}\text{Hs}(\alpha)$ [from  $^{208}\text{Pb}(^{58}\text{Fe}, 2n)$ ,  $E=227.2$  MeV and  $^{207}\text{Pb}(^{58}\text{Fe}, n)$ ,  $E=220.5$  MeV]; measured  $E\alpha$ ; deduced  $\sigma$ ,  $T_{1/2}$ ;  $^{260}\text{Sg}$ [from  $^{264}\text{Hs}$ ];  $^{256}\text{Rf}$ [from  $^{260}\text{Sg}$ ]; measured decay products; deduced  $T_{1/2}$ . Two half-lives for each of  $^{260}\text{Sg}$  and  $^{256}\text{Rf}$ . REPT RIKEN 2008 Annual,P16,Sato

**A=257**

No references found

**A=258**

No references found

**A=259**

No references found

**A=260**

$^{260}\text{Sg}$  2009SAZV RADIOACTIVITY  $^{264}\text{Hs}(\alpha)$ [from  $^{208}\text{Pb}(^{58}\text{Fe}, 2n)$ ,  $E=227.2$  MeV and  $^{207}\text{Pb}(^{58}\text{Fe}, n)$ ,  $E=220.5$  MeV]; measured  $E\alpha$ ; deduced  $\sigma$ ,  $T_{1/2}$ ;  $^{260}\text{Sg}$ [from  $^{264}\text{Hs}$ ];  $^{256}\text{Rf}$ [from  $^{260}\text{Sg}$ ]; measured decay products; deduced  $T_{1/2}$ . Two half-lives for each of  $^{260}\text{Sg}$  and  $^{256}\text{Rf}$ . REPT RIKEN 2008 Annual,P16,Sato

**A=261**

No references found

**A=262**

No references found

**A=263**

$^{263}\text{Hs}$  2009KAZU NUCLEAR REACTIONS  $^{206}\text{Pb}(^{58}\text{Fe}, n)$ ,  $E=287.7$  MeV;  $^{208}\text{Pb}(^{56}\text{Fe}, n)$ ,  $E=280.4$  MeV; measured reaction products; deduced  $^{263}\text{Hs}$   $T_{1/2}$ ,  $\sigma$ , decay chain  $^{263}\text{Hs}(\alpha)\rightarrow^{259}\text{Sg}(\alpha)\rightarrow^{255}\text{Rf}(\alpha)$ . REPT RIKEN 2008 Annual,Pxiii,Kaji

**A=264**

<sup>264</sup>Hs      2009SAZV      RADIOACTIVITY <sup>264</sup>Hs( $\alpha$ )[from <sup>208</sup>Pb(<sup>58</sup>Fe, 2n), E=227.2 MeV and <sup>207</sup>Pb(<sup>58</sup>Fe, n), E=220.5 MeV]; measured E $\alpha$ ; deduced  $\sigma$ , T<sub>1/2</sub>; <sup>260</sup>Sg[from <sup>264</sup>Hs]; <sup>256</sup>Rf[from <sup>260</sup>Sg]; measured decay products; deduced T<sub>1/2</sub>. Two half-lives for each of <sup>260</sup>Sg and <sup>256</sup>Rf. REPT RIKEN 2008 Annual,P16,Sato

**A=265**

No references found

**A=266**

<sup>266</sup>Bh      2009MOZU      NUCLEAR REACTIONS <sup>248</sup>Cm(<sup>23</sup>Na, f), E=126, 130, 132 MeV; <sup>248</sup>Cm(<sup>23</sup>Na, 5n), E=126, 130, 132 MeV; measured A(fragment), Z(fragment), E $\alpha$ , I $\alpha$ ,  $\alpha\alpha$ -coin, (fragment) $\alpha$ -coin; deduced <sup>262</sup>Db, <sup>266,267</sup>Bh T<sub>1/2</sub>. Confirmed decay chain of <sup>278</sup>A=113. Full version in J. Phys. Soc. Jpn. 78 (2009), 064201. REPT RIKEN 2008 Annual,Pi,Morita

**A=267**

No references found

**A=268**

No references found

**A=269**

No references found

**A=270**

<sup>270</sup>Db      2010G01      RADIOACTIVITY <sup>293,294</sup>117, <sup>289,290</sup>115, <sup>285,286</sup>113, <sup>282</sup>Rg, <sup>278</sup>Mt, <sup>274</sup>Bh( $\alpha$ ); measured E $\alpha$ , I $\alpha$ , and half-lives. <sup>270</sup>Db, <sup>281</sup>Rg(SF); measured TKE, and T<sub>1/2</sub>. JOUR PRLTA 104 142502

**A=271**

No references found

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**A=272**

No references found

**A=273**

No references found

**A=274**

<sup>274</sup>Bh      20100G01      RADIOACTIVITY <sup>293,294</sup>117, <sup>289,290</sup>115, <sup>285,286</sup>113, <sup>282</sup>Rg, <sup>278</sup>Mt, <sup>274</sup>Bh( $\alpha$ ); measured  $E\alpha$ ,  $I\alpha$ , and half-lives. <sup>270</sup>Db, <sup>281</sup>Rg(SF); measured TKE, and  $T_{1/2}$ . JOUR PRLTA 104 142502

**A=275**

No references found

**A=276**

No references found

**A=277**

<sup>277</sup>Hs      2010DU06      RADIOACTIVITY <sup>288,289</sup>114, <sup>285</sup>112( $\alpha$ ), <sup>281</sup>Ds( $\alpha$ ), <sup>284</sup>112, <sup>281</sup>Ds, <sup>277</sup>Hs(SF); measured reaction products,  $E\alpha$ ,  $I\alpha$ ; deduced  $\alpha$ -decay chains,  $T_{1/2}$ . JOUR PRLTA 104 252701

**A=278**

<sup>278</sup>Mt      20100G01      RADIOACTIVITY <sup>293,294</sup>117, <sup>289,290</sup>115, <sup>285,286</sup>113, <sup>282</sup>Rg, <sup>278</sup>Mt, <sup>274</sup>Bh( $\alpha$ ); measured  $E\alpha$ ,  $I\alpha$ , and half-lives. <sup>270</sup>Db, <sup>281</sup>Rg(SF); measured TKE, and  $T_{1/2}$ . JOUR PRLTA 104 142502

**A=279**

No references found

**A=280**

No references found

KEYNUMBERS AND KEYWORDS

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**A=281**

- <sup>281</sup>Ds      2010DU06      RADIOACTIVITY <sup>288,289</sup>114, <sup>285</sup>112( $\alpha$ ), <sup>281</sup>Ds( $\alpha$ ), <sup>284</sup>112, <sup>281</sup>Ds, <sup>277</sup>Hs(SF); measured reaction products, E $\alpha$ , I $\alpha$ ; deduced  $\alpha$ -decay chains, T<sub>1/2</sub>. JOUR PRLTA 104 252701
- <sup>281</sup>Rg      2010G01      RADIOACTIVITY <sup>293,294</sup>117, <sup>289,290</sup>115, <sup>285,286</sup>113, <sup>282</sup>Rg, <sup>278</sup>Mt, <sup>274</sup>Bh( $\alpha$ ); measured E $\alpha$ , I $\alpha$ , and half-lives. <sup>270</sup>Db, <sup>281</sup>Rg(SF); measured TKE, and T<sub>1/2</sub>. JOUR PRLTA 104 142502

**A=282**

- <sup>282</sup>Rg      2010G01      RADIOACTIVITY <sup>293,294</sup>117, <sup>289,290</sup>115, <sup>285,286</sup>113, <sup>282</sup>Rg, <sup>278</sup>Mt, <sup>274</sup>Bh( $\alpha$ ); measured E $\alpha$ , I $\alpha$ , and half-lives. <sup>270</sup>Db, <sup>281</sup>Rg(SF); measured TKE, and T<sub>1/2</sub>. JOUR PRLTA 104 142502

**A=283**

No references found

**A=284**

- <sup>284</sup>112      2010DU06      RADIOACTIVITY <sup>288,289</sup>114, <sup>285</sup>112( $\alpha$ ), <sup>281</sup>Ds( $\alpha$ ), <sup>284</sup>112, <sup>281</sup>Ds, <sup>277</sup>Hs(SF); measured reaction products, E $\alpha$ , I $\alpha$ ; deduced  $\alpha$ -decay chains, T<sub>1/2</sub>. JOUR PRLTA 104 252701

**A=285**

- <sup>285</sup>112      2010DU06      RADIOACTIVITY <sup>288,289</sup>114, <sup>285</sup>112( $\alpha$ ), <sup>281</sup>Ds( $\alpha$ ), <sup>284</sup>112, <sup>281</sup>Ds, <sup>277</sup>Hs(SF); measured reaction products, E $\alpha$ , I $\alpha$ ; deduced  $\alpha$ -decay chains, T<sub>1/2</sub>. JOUR PRLTA 104 252701
- <sup>285</sup>113      2010G01      RADIOACTIVITY <sup>293,294</sup>117, <sup>289,290</sup>115, <sup>285,286</sup>113, <sup>282</sup>Rg, <sup>278</sup>Mt, <sup>274</sup>Bh( $\alpha$ ); measured E $\alpha$ , I $\alpha$ , and half-lives. <sup>270</sup>Db, <sup>281</sup>Rg(SF); measured TKE, and T<sub>1/2</sub>. JOUR PRLTA 104 142502

**A=286**

- <sup>286</sup>113      2010G01      RADIOACTIVITY <sup>293,294</sup>117, <sup>289,290</sup>115, <sup>285,286</sup>113, <sup>282</sup>Rg, <sup>278</sup>Mt, <sup>274</sup>Bh( $\alpha$ ); measured E $\alpha$ , I $\alpha$ , and half-lives. <sup>270</sup>Db, <sup>281</sup>Rg(SF); measured TKE, and T<sub>1/2</sub>. JOUR PRLTA 104 142502

**A=287**

No references found

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**A=288**

- <sup>288</sup>114 2010DU06 NUCLEAR REACTIONS <sup>244</sup>Pu(<sup>48</sup>Ca, 3n)<sup>289</sup>114, <sup>244</sup>Pu(<sup>48</sup>Ca, 4n)<sup>288</sup>114, E=259.4, 254.6 MeV; measured reaction products, E $\alpha$ , I $\alpha$ ; deduced  $\sigma$ ,  $\alpha$ -decay chains, T<sub>1/2</sub>. JOUR PRLTA 104 252701
- 2010DU06 RADIOACTIVITY <sup>288,289</sup>114, <sup>285</sup>112( $\alpha$ ), <sup>281</sup>Ds( $\alpha$ ), <sup>284</sup>112, <sup>281</sup>Ds, <sup>277</sup>Hs(SF); measured reaction products, E $\alpha$ , I $\alpha$ ; deduced  $\alpha$ -decay chains, T<sub>1/2</sub>. JOUR PRLTA 104 252701

**A=289**

- <sup>289</sup>114 2010DU06 NUCLEAR REACTIONS <sup>244</sup>Pu(<sup>48</sup>Ca, 3n)<sup>289</sup>114, <sup>244</sup>Pu(<sup>48</sup>Ca, 4n)<sup>288</sup>114, E=259.4, 254.6 MeV; measured reaction products, E $\alpha$ , I $\alpha$ ; deduced  $\sigma$ ,  $\alpha$ -decay chains, T<sub>1/2</sub>. JOUR PRLTA 104 252701
- 2010DU06 RADIOACTIVITY <sup>288,289</sup>114, <sup>285</sup>112( $\alpha$ ), <sup>281</sup>Ds( $\alpha$ ), <sup>284</sup>112, <sup>281</sup>Ds, <sup>277</sup>Hs(SF); measured reaction products, E $\alpha$ , I $\alpha$ ; deduced  $\alpha$ -decay chains, T<sub>1/2</sub>. JOUR PRLTA 104 252701
- <sup>289</sup>115 2010G01 RADIOACTIVITY <sup>293,294</sup>117, <sup>289,290</sup>115, <sup>285,286</sup>113, <sup>282</sup>Rg, <sup>278</sup>Mt, <sup>274</sup>Bh( $\alpha$ ); measured E $\alpha$ , I $\alpha$ , and half-lives. <sup>270</sup>Db, <sup>281</sup>Rg(SF); measured TKE, and T<sub>1/2</sub>. JOUR PRLTA 104 142502

**A=290**

- <sup>290</sup>115 2010G01 RADIOACTIVITY <sup>293,294</sup>117, <sup>289,290</sup>115, <sup>285,286</sup>113, <sup>282</sup>Rg, <sup>278</sup>Mt, <sup>274</sup>Bh( $\alpha$ ); measured E $\alpha$ , I $\alpha$ , and half-lives. <sup>270</sup>Db, <sup>281</sup>Rg(SF); measured TKE, and T<sub>1/2</sub>. JOUR PRLTA 104 142502

**A=291**

No references found

**A=292**

No references found

**A=293**

- <sup>293</sup>117 2010G01 NUCLEAR REACTIONS <sup>249</sup>Bk(<sup>48</sup>Ca, 4n), E=252 MeV; <sup>249</sup>Bk(<sup>48</sup>Ca, 3n), E=247 MeV; measured E $\alpha$ , I $\alpha$ ,  $\alpha$ - $\alpha$  correlations. <sup>293,294</sup>117; deduced  $\sigma$ , decay chains, T<sub>1/2</sub>. JOUR PRLTA 104 142502
- 2010G01 RADIOACTIVITY <sup>293,294</sup>117, <sup>289,290</sup>115, <sup>285,286</sup>113, <sup>282</sup>Rg, <sup>278</sup>Mt, <sup>274</sup>Bh( $\alpha$ ); measured E $\alpha$ , I $\alpha$ , and half-lives. <sup>270</sup>Db, <sup>281</sup>Rg(SF); measured TKE, and T<sub>1/2</sub>. JOUR PRLTA 104 142502

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**A=294**

<sup>294</sup>117      20100G01      NUCLEAR REACTIONS <sup>249</sup>Bk(<sup>48</sup>Ca, 4n), E=252 MeV; <sup>249</sup>Bk(<sup>48</sup>Ca, 3n) , E=247 MeV;measured E $\alpha$ , I $\alpha$ ,  $\alpha$ - $\alpha$  correlations. <sup>293,294</sup>117; deduced  $\sigma$ , decay chains, T<sub>1/2</sub>. JOUR PRLTA 104 142502

                 20100G01      RADIOACTIVITY <sup>293,294</sup>117, <sup>289,290</sup>115, <sup>285,286</sup>113, <sup>282</sup>Rg, <sup>278</sup>Mt, <sup>274</sup>Bh( $\alpha$ ); measured E $\alpha$ , I $\alpha$ , and half-lives. <sup>270</sup>Db, <sup>281</sup>Rg(SF); measured TKE, and T<sub>1/2</sub>. JOUR PRLTA 104 142502

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