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## Keynumbers and Keywords

### A=1

<sup>1</sup> n	2006AB56	NUCLEAR REACTIONS <sup>1</sup> H(p, $\pi^+$ ), (p, p $\pi^+$ ), (p, p $\pi^0$ ), E at 0.95 GeV / c; measured $\sigma$ , $\sigma(E, \theta)$ . Comparison with previous results and model predictions. JOUR ZAANE 30 443
	2006AH05	NUCLEAR REACTIONS <sup>1</sup> H(polarized $\gamma$ , $\pi^+$ ), E=450-790 MeV; measured $\sigma$ , $\sigma(\theta)$ , polarization observables. JOUR PRVCA 74 045204
	2006BA58	NUCLEAR MOMENTS <sup>1</sup> n; measured upper limit for neutron electric dipole moment. JOUR PRLTA 97 131801
	2006KI13	NUCLEAR REACTIONS <sup>1</sup> H(polarized d, 2p), E=130 MeV; measured $\sigma(\theta)$ ; deduced Coulomb effects. Comparison with coupled-channel model. JOUR PYLBB 641 23
	2006K040	NUCLEAR REACTIONS <sup>3</sup> H(d, n), E=350 keV; measured En. <sup>19</sup> F, <sup>27</sup> Al(n, pX), (n, dX), (n, tX), (n, $\alpha$ X), E=14 MeV; measured particle spectra, $\sigma(\theta)$ . <sup>1</sup> H(n, p), E=14 MeV; measured $\sigma(\theta)$ . Application to fusion reactor modeling discussed. JOUR NIMAE 568 723
	2006NI13	RADIOACTIVITY <sup>1</sup> n( $\beta^-$ ); measured $E\gamma$ , $\beta\gamma$ -, (proton) $\gamma$ -coin; deduced branching ratio for radiative decay. JOUR NATUA 444 1059
	2006WA25	NUCLEAR REACTIONS <sup>1</sup> H( $\nu$ , $\pi^+$ ), E=0.5-1.4 GeV; measured $\sigma$ . JOUR NPBSE 159 50
<sup>1</sup> H	2006AB42	NUCLEAR REACTIONS <sup>1</sup> H(d, 2p $\pi^-$ ), E=759 MeV; measured Ep, En, angular distributions; deduced quasifree reaction features. JOUR ZAANE 29 353
	2006AB56	NUCLEAR REACTIONS <sup>1</sup> H(p, $\pi^+$ ), (p, p $\pi^+$ ), (p, p $\pi^0$ ), E at 0.95 GeV / c; measured $\sigma$ , $\sigma(E, \theta)$ . Comparison with previous results and model predictions. JOUR ZAANE 30 443
	2006BE48	NUCLEAR REACTIONS <sup>1</sup> H(polarized $\gamma$ , $\pi^0$ ), E=144-168, 280, 300, 320, 340, 360, 380 MeV; measured $\sigma$ , photon asymmetry. <sup>1</sup> H( $\gamma$ , X), E=620-820 MeV; measured invariant mass spectra, $\eta$ production $\sigma$ . JOUR ZAANE 28 s01 173
	2006B029	NUCLEAR REACTIONS <sup>1</sup> H(e, e'), E=570-670 MeV; measured $\sigma(E, \theta)$ , response functions. <sup>1</sup> H deduced polarizability radii. Virtual Compton scattering. JOUR PRLTA 97 212001
	2006DH03	NUCLEAR REACTIONS <sup>1,2</sup> H(polarized e, e'X), E=1.6, 5.7 GeV; measured virtual photon asymmetry; deduced quark polarizations. <sup>1,2</sup> H deduced polarized structure function. Polarized target, comparison with other results, model predictions. JOUR PYLBB 641 11
	2006DH04	NUCLEAR REACTIONS <sup>1</sup> H(polarized e, e'), E not given; measured electron spectra, (recoil)e-coin, missing mass spectra, $\sigma(\theta)$ ; deduced polarizabilities, structure functions. Comparison with theory. JOUR ZAANE 28 s01 117
	2006FU12	NUCLEAR REACTIONS <sup>1</sup> H(polarized e, e), E=high; measured asymmetries; deduced strange quark contribution to electromagnetic form factors. JOUR NPBSE 159 121
	2006J009	NUCLEAR REACTIONS <sup>1</sup> H(polarized e, e), E at 5.755 GeV / c; measured beam-target asymmetry. <sup>1</sup> H deduced ratio of electric to magnetic form factor. JOUR PRVCA 74 035201

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

2006LY01	NUCLEAR REACTIONS $^1n(\nu, \mu^-)$ , E $\approx$ 4-100 GeV; measured quasielastic $\sigma$ . Comparison with previous results. JOUR PANUE 69 1876
2006MA64	NUCLEAR REACTIONS $^2H(p, dK^+K^-)$ , E=2.65 GeV; measured deuteron spectrum, kaon pair invariant mass spectra, angular distributions. $^1n(p, X)$ , E $\approx$ threshold; deduced $\phi$ meson production $\sigma$ , $\sigma(\theta)$ . JOUR PRLTA 97 142301
2006MA66	NUCLEAR REACTIONS $^1H(p, e^-e')$ , E=570.4, 854.3 MeV; measured electron spectra, asymmetry; deduced electric, magnetic form factors. Comparison with Standard Model calculations. JOUR ZAANE 28 s01 107
2006MAZW	NUCLEAR REACTIONS $^1H(d, d)$ , E=130, 180 MeV; measured vector and tensor analyzing powers. Comparison with model predictions. PREPRINT nucl-ex/0611027,11/15/2006
2006NI13	RADIOACTIVITY $^1n(\beta^-)$ ; measured $E\gamma$ , $\beta\gamma$ -, (proton) $\gamma$ -coin; deduced branching ratio for radiative decay. JOUR NATUA 444 1059
2006SA38	NUCLEAR REACTIONS $^1H(n, n)$ , E=194 MeV; measured backscattering $\sigma(\theta)$ . Comparison with previous results. JOUR PRVCA 74 044003

**A=2**

$^2H$	2006AB56	NUCLEAR REACTIONS $^1H(p, \pi^+)$ , $(p, p\pi^+)$ , $(p, p\pi^0)$ , E at 0.95 GeV / c; measured $\sigma$ , $\sigma(E, \theta)$ . Comparison with previous results and model predictions. JOUR ZAANE 30 443
	2006CUZZ	NUCLEAR REACTIONS $^7Li(^7Li, ^{11}B)$ , $(^7Li, ^{12}B)$ , E=58 MeV; $^{12}C(^7Li, ^{10}B)$ , E=58 MeV; measured particle spectra; deduced excitation energy spectra. $^{10,11,12}B$ deduced relative yields for $\alpha+Li$ and $H+Be$ decay channels from excited states. CONF San Servolo(Fusion06),Proc,P160
	2006DH03	NUCLEAR REACTIONS $^{1,2}H(p, e^-e'X)$ , E=1.6, 5.7 GeV; measured virtual photon asymmetry; deduced quark polarizations. $^{1,2}H$ deduced polarized structure function. Polarized target, comparison with other results, model predictions. JOUR PYLBB 641 11
	2006TUZZ	NUCLEAR REACTIONS $^7Li(^3He, 2\alpha)$ , E=33 MeV; measured $E\alpha$ , $\alpha\alpha$ -coin. $^7Li(p, 2\alpha)$ , E(cm)=0.2-7 MeV; deduced $\sigma$ . Trojan Horse method. CONF Isle of Kos (FINUSTAR),Proc,P309

**A=3**

$^3H$	2006CUZZ	NUCLEAR REACTIONS $^7Li(^7Li, ^{11}B)$ , $(^7Li, ^{12}B)$ , E=58 MeV; $^{12}C(^7Li, ^{10}B)$ , E=58 MeV; measured particle spectra; deduced excitation energy spectra. $^{10,11,12}B$ deduced relative yields for $\alpha+Li$ and $H+Be$ decay channels from excited states. CONF San Servolo(Fusion06),Proc,P160
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**KEYNUMBERS AND KEYWORDS**

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**A=3 (*continued*)**

	2006ZH29	NUCLEAR REACTIONS $^2\text{H}(\text{d}, \gamma)$ , (d, p), E=20 keV; measured Ep, $E\gamma$ , branching ratio. $^2\text{H}(\text{d}, \gamma)$ , E=low; deduced astrophysical S-factor. JOUR CPLEE 23 2703
$^3\text{He}$	2006FI06	NUCLEAR REACTIONS $^3\text{He}(\text{p}, \text{p})$ , (polarized p, p), E=0.99, 1.59, 2.24, 3.11, 4.02 MeV; measured $\sigma(\theta)$ , $Ay(\theta)$ . Four-body variational calculations with realistic two- and three-body interactions. JOUR PRVCA 74 034001
	2006HU16	NUCLEAR REACTIONS $^{1,2}\text{H}$ , $^3\text{He}(\text{n}, \text{n})$ , E=low; measured scattering amplitudes. JOUR PHYBE 385-386 1365
	2006SKZX	NUCLEAR REACTIONS $^2\text{H}(\text{p}, 2\pi^0)$ , (p, $\pi^+\pi^-$ ), E=0.895 MeV; $^1\text{H}(\text{p}, 2\pi^0)$ , E=1.0, 1.1, 1.2 GeV; measured invariant mass spectra; deduced low-mass enhancement features. PREPRINT nucl-ex/0612016,12/11/2006
	2006SMZZ	NUCLEAR REACTIONS $^1\text{H}(\text{d}, \text{X})^3\text{He}$ , E at 3.095-3.180 GeV / c; measured missing mass spectra, excitation functions for neutral pion and $\eta$ production. PREPRINT nucl-ex/0612009,12/08/2006

**A=4**

	2006BU18	NUCLEAR REACTIONS $^4\text{He}(\text{e}, \text{e}')$ , E=91, 114, 133, 150, 166, 200, 262 MeV; measured longitudinal response functions; deduced Coulomb sum. Comparison with model predictions. JOUR PYLBB 641 156
	2006K040	NUCLEAR REACTIONS $^3\text{H}(\text{d}, \text{n})$ , E=350 keV; measured En. $^{19}\text{F}$ , $^{27}\text{Al}(\text{n}, \text{pX})$ , (n, dX), (n, tX), (n, $\alpha\text{X}$ ), E=14 MeV; measured particle spectra, $\sigma(\theta)$ . $^1\text{H}(\text{n}, \text{p})$ , E=14 MeV; measured $\sigma(\theta)$ . Application to fusion reactor modeling discussed. JOUR NIMAE 568 723
	2006MI30	NUCLEAR REACTIONS $^{6,7}\text{Li}(\text{He}, \text{X})$ , E=18 MeV; $^6\text{Li}(\text{He}, \text{dHe})$ , E=18 MeV; measured charged particle spectra, coincidences; deduced quasi-free scattering off clusters in target nuclei. JOUR EULEE 76 801
	2006YE03	NUCLEAR REACTIONS $^9\text{Be}(\text{He}, \text{He})$ , ( $^6\text{He}, ^5\text{He}$ ), ( $^6\text{He}, \alpha$ ), E=25 MeV / nucleon; measured recoil spectra, $\sigma(\theta)$ ; deduced optical model parameters. $^3\text{H}(\text{Ne}, ^{16}\text{F})$ , E=5 MeV / nucleon; calculated $\sigma(\theta)$ . JOUR IMPEE 15 1465
	2006ZH29	NUCLEAR REACTIONS $^2\text{H}(\text{d}, \gamma)$ , (d, p), E=20 keV; measured Ep, $E\gamma$ , branching ratio. $^2\text{H}(\text{d}, \gamma)$ , E=low; deduced astrophysical S-factor. JOUR CPLEE 23 2703

**A=5**

	2006SOZZ	NUCLEAR REACTIONS $^7\text{Li}(\text{Be}, \text{t}2\alpha)$ , E=55, 70 MeV; measured particle spectra; deduced excitation energy spectra. $^{11}\text{B}$ deduced excited state decay features. CONF San Servolo(Fusion06),Proc,P171
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**A=6**

<sup>6</sup> He	2006AN21	NUCLEAR REACTIONS <sup>4</sup> He(d, $\pi^+$ ), E=217.3, 218.2, 224.1 MeV; measured particle spectra, $\sigma$ , $\sigma(\theta)$ , anisotropies. <sup>6</sup> He deduced halo features. JOUR NUPAB 779 47
<sup>6</sup> Li	2005AB30	NUCLEAR REACTIONS <sup>6,7</sup> Li( $\pi^-$ , dX), ( $\pi^-$ , tX), E at 0.72, 0.88 GeV / c; measured particle spectra, missing mass. <sup>6,7</sup> Li deduced cluster features. JOUR BRSPE 69 1812
	2005GE14	NUCLEAR REACTIONS <sup>9</sup> Be(p, $\alpha$ ), E=1.96-2.4 MeV; measured $E\gamma$ , $I\gamma$ , $\sigma$ . JOUR BRSPE 69 1819
	2006HAZV	NUCLEAR REACTIONS <sup>208</sup> Pb( <sup>6</sup> Li, d $\alpha$ ), E=150 MeV / nucleon; measured deuteron and $\alpha$ spectra, angular distributions. <sup>2</sup> H( $\alpha$ , $\gamma$ ), $E(cm) \approx 0-1.5$ MeV; deduced astrophysical S-factors. CONF Isle of Kos (FINUSTAR),Proc,P21
	2006MIZY	NUCLEAR REACTIONS <sup>6,7</sup> Li, <sup>12</sup> C( <sup>6</sup> He, <sup>6</sup> He), E=17.9 MeV; <sup>6</sup> Li( <sup>6</sup> He, $\alpha$ ), E=17.9 MeV; measured $\sigma(\theta)$ . <sup>7</sup> Li( <sup>6</sup> He, n $\alpha$ ), ( <sup>6</sup> He, 2n $\alpha$ ), ( <sup>6</sup> He, 3n $\alpha$ ), E=17.9 MeV; measured excitation energy spectra. Comparison with model predictions. CONF San Servolo(Fusion06),Proc,P154

**A=7**

<sup>7</sup> He	2006GU22	NUCLEAR REACTIONS <sup>9</sup> Be( $\pi^-$ , 2pX), E at rest; measured Ep, missing mass spectra. <sup>7</sup> He deduced possible resonance energies, widths. JOUR PANUE 69 1448
<sup>7</sup> Li	2006WUZZ	NUCLEAR REACTIONS <sup>2</sup> H( <sup>8</sup> Li, p), E=76 MeV; <sup>2</sup> H( <sup>6</sup> He, p), E=69 MeV; measured Ep, $\sigma(\theta)$ . <sup>9</sup> Li, <sup>7</sup> He deduced level energies, spectroscopic factors. CONF Isle of Kos (FINUSTAR),Proc,P332
	2005AB30	NUCLEAR REACTIONS <sup>6,7</sup> Li( $\pi^-$ , dX), ( $\pi^-$ , tX), E at 0.72, 0.88 GeV / c; measured particle spectra, missing mass. <sup>6,7</sup> Li deduced cluster features. JOUR BRSPE 69 1812
	2006MIZY	NUCLEAR REACTIONS <sup>6,7</sup> Li, <sup>12</sup> C( <sup>6</sup> He, <sup>6</sup> He), E=17.9 MeV; <sup>6</sup> Li( <sup>6</sup> He, $\alpha$ ), E=17.9 MeV; measured $\sigma(\theta)$ . <sup>7</sup> Li( <sup>6</sup> He, n $\alpha$ ), ( <sup>6</sup> He, 2n $\alpha$ ), ( <sup>6</sup> He, 3n $\alpha$ ), E=17.9 MeV; measured excitation energy spectra. Comparison with model predictions. CONF San Servolo(Fusion06),Proc,P154
	2006NIZU	RADIOACTIVITY <sup>7</sup> Be(EC); measured T <sub>1/2</sub> for source in various host materials; deduced no environmental dependence. PREPRINT nucl-ex/0612003,12/3/2006
<sup>7</sup> Be	2006BAZT	NUCLEAR REACTIONS <sup>112,118,120,124</sup> Sn( <sup>12</sup> C, X) <sup>7</sup> Be / <sup>22</sup> Na / <sup>24</sup> Na / <sup>28</sup> Mg / <sup>38</sup> S / <sup>39</sup> Cl / <sup>42</sup> K / <sup>43</sup> K / <sup>43</sup> Sc / <sup>44m</sup> Sc / <sup>46</sup> Sc / <sup>48</sup> Sc / <sup>48</sup> V / <sup>52</sup> Mn / <sup>56</sup> Mn, E=2200 MeV / nucleon; <sup>112,118,120,124</sup> Sn(p, X) <sup>7</sup> Be / <sup>22</sup> Na / <sup>24</sup> Na / <sup>28</sup> Mg / <sup>38</sup> S / <sup>39</sup> Cl / <sup>42</sup> K / <sup>43</sup> K / <sup>43</sup> Sc / <sup>44m</sup> Sc / <sup>46</sup> Sc / <sup>48</sup> Sc / <sup>48</sup> V / <sup>52</sup> Mn / <sup>56</sup> Mn, E=3650 MeV; measured production $\sigma(^{12}\text{C})$ , relative yields. Nuclotron, HPGe detector. CONF Sarov(Nucleus-2006),Contrib,P151,Balabekyan
	2006NIZU	RADIOACTIVITY <sup>7</sup> Be(EC); measured T <sub>1/2</sub> for source in various host materials; deduced no environmental dependence. PREPRINT nucl-ex/0612003,12/3/2006

**KEYNUMBERS AND KEYWORDS**

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**A=8**

<sup>8</sup> Li	2006MIZY	NUCLEAR REACTIONS <sup>6,7</sup> Li, <sup>12</sup> C( <sup>6</sup> He, <sup>6</sup> He), E=17.9 MeV; <sup>6</sup> Li( <sup>6</sup> He, $\alpha$ ), E=17.9 MeV; measured $\sigma(\theta)$ . <sup>7</sup> Li( <sup>6</sup> He, n $\alpha$ ), ( <sup>6</sup> He, 2n $\alpha$ ), ( <sup>6</sup> He, 3n $\alpha$ ), E=17.9 MeV; measured excitation energy spectra. Comparison with model predictions. CONF San Servolo(Fusion06),Proc,P154
<sup>8</sup> Be	2006DIZY	NUCLEAR REACTIONS <sup>4</sup> He( $\alpha$ , $\gamma$ ), E(cm) $\approx$ 0.6-2.5 MeV; measured E $\gamma$ , (recoil) $\gamma$ -coin. CONF Isle of Kos (FINUSTAR),Proc,P378
	2006FR16	NUCLEAR REACTIONS <sup>12</sup> C( <sup>18</sup> O, 2 $\alpha$ <sup>14</sup> C), E=140 MeV; measured particle spectra. <sup>22</sup> Ne deduced level energies, possible cluster structure. JOUR JPGPE 32 2235
<sup>8</sup> B	2006ROZY	NUCLEAR REACTIONS <sup>1</sup> H( <sup>8</sup> B, p), E(cm)=0.5-3.2 MeV; measured Ep, $\sigma(\theta)$ . <sup>9</sup> C deduced resonance energies, widths, J, $\pi$ . Thick target, R-matrix analysis, continuum shell model calculations. PREPRINT nucl-ex/0609044,9/28/2006

**A=9**

<sup>9</sup> Li	2006B032	RADIOACTIVITY <sup>9</sup> Li( $\beta^-$ ); measured E $\alpha$ , En following daughter nucleus decay. <sup>9</sup> Be deduced levels, J, $\pi$ , widths, decay branching ratios. JOUR PHSTB T125 103
	2006WUZZ	NUCLEAR REACTIONS <sup>2</sup> H( <sup>8</sup> Li, p), E=76 MeV; <sup>2</sup> H( <sup>6</sup> He, p), E=69 MeV; measured Ep, $\sigma(\theta)$ . <sup>9</sup> Li, <sup>7</sup> He deduced level energies, spectroscopic factors. CONF Isle of Kos (FINUSTAR),Proc,P332
<sup>9</sup> Be	2006B032	RADIOACTIVITY <sup>9</sup> Li( $\beta^-$ ); measured E $\alpha$ , En following daughter nucleus decay. <sup>9</sup> Be deduced levels, J, $\pi$ , widths, decay branching ratios. JOUR PHSTB T125 103
	2006CUZZ	NUCLEAR REACTIONS <sup>7</sup> Li( <sup>7</sup> Li, <sup>11</sup> B), ( <sup>7</sup> Li, <sup>12</sup> B), E=58 MeV; <sup>12</sup> C( <sup>7</sup> Li, <sup>10</sup> B), E=58 MeV; measured particle spectra; deduced excitation energy spectra. <sup>10,11,12</sup> B deduced relative yields for $\alpha$ +Li and H+Be decay channels from excited states. CONF San Servolo(Fusion06),Proc,P160
	2006YE03	NUCLEAR REACTIONS <sup>9</sup> Be( <sup>6</sup> He, <sup>6</sup> He), ( <sup>6</sup> He, <sup>5</sup> He), ( <sup>6</sup> He, $\alpha$ ), E=25 MeV / nucleon; measured recoil spectra, $\sigma(\theta)$ ; deduced optical model parameters. <sup>3</sup> H( <sup>17</sup> Ne, <sup>16</sup> F), E=5 MeV / nucleon; calculated $\sigma(\theta)$ . JOUR IMPEE 15 1465
<sup>9</sup> C	2006ROZY	NUCLEAR REACTIONS <sup>1</sup> H( <sup>8</sup> B, p), E(cm)=0.5-3.2 MeV; measured Ep, $\sigma(\theta)$ . <sup>9</sup> C deduced resonance energies, widths, J, $\pi$ . Thick target, R-matrix analysis, continuum shell model calculations. PREPRINT nucl-ex/0609044,9/28/2006

**A=10**

<sup>10</sup> Be	2006SZ06	NUCLEAR REACTIONS <sup>12</sup> C( <sup>16</sup> O, <sup>16</sup> O'), ( <sup>16</sup> O, <sup>15</sup> O), ( <sup>16</sup> O, <sup>14</sup> N), E=62-124 MeV; <sup>12</sup> C( <sup>18</sup> O, <sup>18</sup> O'), ( <sup>18</sup> O, <sup>17</sup> O), ( <sup>18</sup> O, <sup>16</sup> O), ( <sup>18</sup> O, <sup>15</sup> N), ( <sup>18</sup> O, <sup>19</sup> F), ( <sup>18</sup> O, <sup>20</sup> Ne), E=66-120 MeV; measured particle spectra, $\sigma(E, \theta)$ , $\sigma$ ; deduced reaction mechanism features. JOUR NUPAB 779 21
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**A=10 (*continued*)**

	2006YE03	NUCLEAR REACTIONS ${}^9\text{Be}({}^6\text{He}, {}^6\text{He})$ , $({}^6\text{He}, {}^5\text{He})$ , $({}^6\text{He}, \alpha)$ , E=25 MeV / nucleon; measured recoil spectra, $\sigma(\theta)$ ; deduced optical model parameters. ${}^3\text{H}({}^{17}\text{Ne}, {}^{16}\text{F})$ , E=5 MeV / nucleon; calculated $\sigma(\theta)$ . JOUR IMPEE 15 1465
${}^{10}\text{B}$	2006CUZZ	NUCLEAR REACTIONS ${}^7\text{Li}({}^7\text{Li}, {}^{11}\text{B})$ , $({}^7\text{Li}, {}^{12}\text{B})$ , E=58 MeV; ${}^{12}\text{C}({}^7\text{Li}, {}^{10}\text{B})$ , E=58 MeV; measured particle spectra; deduced excitation energy spectra. ${}^{10,11,12}\text{B}$ deduced relative yields for $\alpha+\text{Li}$ and $\text{H}+\text{Be}$ decay channels from excited states. CONF San Servolo(Fusion06),Proc,P160
	2006SZ07	NUCLEAR REACTIONS ${}^6\text{Li}$ , ${}^{11}\text{B}$ , ${}^{16}\text{O}$ , ${}^{19}\text{F}(\text{d}, \text{p}\gamma)$ , E=0.6-2 MeV; ${}^9\text{Be}(\text{d}, n\gamma)$ , , E=0.6-2 MeV; measured $E_\gamma$ , $I_\gamma$ ; deduced $\gamma$ -ray production $\sigma$ , thin target yields. JOUR NIMBE 251 343
${}^{10}\text{C}$	2006ANZV	NUCLEAR REACTIONS ${}^{1,2}\text{H}({}^{10}\text{C}, \text{p})$ , E=25.5 MeV; measured Ep, $\sigma(\theta)$ . ${}^{11}\text{N}$ deduced resonance energies, widths. ${}^{12}\text{O}$ deduced upper limit for two-proton decay width. CONF Isle of Kos (FINUSTAR),Proc,P360

**A=11**

${}^{11}\text{Li}$	2006NA39	NUCLEAR REACTIONS Pb( ${}^{11}\text{Li}$ , 2n ${}^9\text{Li}$ ), E=70 MeV / nucleon; measured relative energy spectra. ${}^{11}\text{Li}$ deduced B(E1) distribution, neutron-neutron correlation in ground state. JOUR PHSTB T125 96
${}^{11}\text{Be}$	2006YE03	NUCLEAR REACTIONS ${}^9\text{Be}({}^6\text{He}, {}^6\text{He})$ , $({}^6\text{He}, {}^5\text{He})$ , $({}^6\text{He}, \alpha)$ , E=25 MeV / nucleon; measured recoil spectra, $\sigma(\theta)$ ; deduced optical model parameters. ${}^3\text{H}({}^{17}\text{Ne}, {}^{16}\text{F})$ , E=5 MeV / nucleon; calculated $\sigma(\theta)$ . JOUR IMPEE 15 1465
${}^{11}\text{B}$	2006CUZZ	NUCLEAR REACTIONS ${}^7\text{Li}({}^7\text{Li}, {}^{11}\text{B})$ , $({}^7\text{Li}, {}^{12}\text{B})$ , E=58 MeV; ${}^{12}\text{C}({}^7\text{Li}, {}^{10}\text{B})$ , E=58 MeV; measured particle spectra; deduced excitation energy spectra. ${}^{10,11,12}\text{B}$ deduced relative yields for $\alpha+\text{Li}$ and $\text{H}+\text{Be}$ decay channels from excited states. CONF San Servolo(Fusion06),Proc,P160
	2006SOZZ	NUCLEAR REACTIONS ${}^7\text{Li}({}^9\text{Be}, t2\alpha)$ , E=55, 70 MeV; measured particle spectra; deduced excitation energy spectra. ${}^{11}\text{B}$ deduced excited state decay features. CONF San Servolo(Fusion06),Proc,P171
	2006SZ06	NUCLEAR REACTIONS ${}^{12}\text{C}({}^{16}\text{O}, {}^{16}\text{O}')$ , $({}^{16}\text{O}, {}^{15}\text{O})$ , $({}^{16}\text{O}, {}^{14}\text{N})$ , E=62-124 MeV; ${}^{12}\text{C}({}^{18}\text{O}, {}^{18}\text{O}')$ , $({}^{18}\text{O}, {}^{17}\text{O})$ , $({}^{18}\text{O}, {}^{16}\text{O})$ , $({}^{18}\text{O}, {}^{15}\text{N})$ , $({}^{18}\text{O}, {}^{19}\text{F})$ , $({}^{18}\text{O}, {}^{20}\text{Ne})$ , E=66-120 MeV; measured particle spectra, $\sigma(E, \theta)$ , $\sigma$ ; deduced reaction mechanism features. JOUR NUPAB 779 21
${}^{11}\text{C}$	2006ANZV	NUCLEAR REACTIONS ${}^{1,2}\text{H}({}^{10}\text{C}, \text{p})$ , E=25.5 MeV; measured Ep, $\sigma(\theta)$ . ${}^{11}\text{N}$ deduced resonance energies, widths. ${}^{12}\text{O}$ deduced upper limit for two-proton decay width. CONF Isle of Kos (FINUSTAR),Proc,P360
	2006BA66	NUCLEAR REACTIONS ${}^{12}\text{C}(\mu, \mu\text{n})$ , E=low; measured production rate due to cosmic muon flux. JOUR PRVCA 74 045805

**KEYNUMBERS AND KEYWORDS**

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**A=11 (*continued*)**

<sup>11</sup>N      2006ANZV      NUCLEAR REACTIONS <sup>1,2</sup>H(<sup>10</sup>C, p), E=25.5 MeV; measured Ep,  $\sigma(\theta)$ . <sup>11</sup>N deduced resonance energies, widths. <sup>12</sup>O deduced upper limit for two-proton decay width. CONF Isle of Kos (FINUSTAR), Proc, P360

**A=12**

<sup>12</sup>B      2006CUZZ      NUCLEAR REACTIONS <sup>7</sup>Li(<sup>7</sup>Li, <sup>11</sup>B), (<sup>7</sup>Li, <sup>12</sup>B), E=58 MeV; <sup>12</sup>C(<sup>7</sup>Li, <sup>10</sup>B), E=58 MeV; measured particle spectra; deduced excitation energy spectra. <sup>10,11,12</sup>B deduced relative yields for  $\alpha$ +Li and H+Be decay channels from excited states. CONF San Servolo(Fusion06), Proc, P160

<sup>12</sup>C      2005MB12      NUCLEAR REACTIONS <sup>12</sup>C(<sup>6</sup>Li, <sup>6</sup>Li), (<sup>6</sup>Li, <sup>6</sup>Li'), E=63 MeV; measured  $\sigma(\theta)$ ; deduced optical model parameters. <sup>12</sup>C, <sup>16</sup>O, <sup>24</sup>Mg, <sup>28</sup>Si, <sup>40</sup>Ca, <sup>60</sup>Ni, <sup>90</sup>Zr, <sup>124</sup>Sn, <sup>208</sup>Pb(<sup>6</sup>Li, <sup>6</sup>Li), E ≈ 50-90 MeV; calculated  $\sigma(\theta)$ . JOUR BRSPE 69 1761

2006KI14      NUCLEAR REACTIONS <sup>12</sup>C( $\pi^+$ , K $^+$ ), E at 1.05 GeV / c; measured excitation energy spectra, Ep, En, np-, nn-coin, angular correlations. <sup>12</sup>C deduced hypernucleus nonmesonic weak decay widths. JOUR PYLBB 641 28

2006MIZY      NUCLEAR REACTIONS <sup>6,7</sup>Li, <sup>12</sup>C(<sup>6</sup>He, <sup>6</sup>He), E=17.9 MeV; <sup>6</sup>Li(<sup>6</sup>He,  $\alpha$ ), E=17.9 MeV; measured  $\sigma(\theta)$ . <sup>7</sup>Li(<sup>6</sup>He, n $\alpha$ ), (<sup>6</sup>He, 2n $\alpha$ ), (<sup>6</sup>He, 3n $\alpha$ ), E=17.9 MeV; measured excitation energy spectra. Comparison with model predictions. CONF San Servolo(Fusion06), Proc, P154

2006SZ06      NUCLEAR REACTIONS <sup>12</sup>C(<sup>16</sup>O, <sup>16</sup>O'), (<sup>16</sup>O, <sup>15</sup>O), (<sup>16</sup>O, <sup>14</sup>N), E=62-124 MeV; <sup>12</sup>C(<sup>18</sup>O, <sup>18</sup>O'), (<sup>18</sup>O, <sup>17</sup>O), (<sup>18</sup>O, <sup>16</sup>O), (<sup>18</sup>O, <sup>15</sup>N), (<sup>18</sup>O, <sup>19</sup>F), (<sup>18</sup>O, <sup>20</sup>Ne), E=66-120 MeV; measured particle spectra,  $\sigma(E, \theta)$ ,  $\sigma$ ; deduced reaction mechanism features. JOUR NUPAB 779 21

<sup>12</sup>O      2006ANZV      NUCLEAR REACTIONS <sup>1,2</sup>H(<sup>10</sup>C, p), E=25.5 MeV; measured Ep,  $\sigma(\theta)$ . <sup>11</sup>N deduced resonance energies, widths. <sup>12</sup>O deduced upper limit for two-proton decay width. CONF Isle of Kos (FINUSTAR), Proc, P360

**A=13**

<sup>13</sup>C      2006SZ06      NUCLEAR REACTIONS <sup>12</sup>C(<sup>16</sup>O, <sup>16</sup>O'), (<sup>16</sup>O, <sup>15</sup>O), (<sup>16</sup>O, <sup>14</sup>N), E=62-124 MeV; <sup>12</sup>C(<sup>18</sup>O, <sup>18</sup>O'), (<sup>18</sup>O, <sup>17</sup>O), (<sup>18</sup>O, <sup>16</sup>O), (<sup>18</sup>O, <sup>15</sup>N), (<sup>18</sup>O, <sup>19</sup>F), (<sup>18</sup>O, <sup>20</sup>Ne), E=66-120 MeV; measured particle spectra,  $\sigma(E, \theta)$ ,  $\sigma$ ; deduced reaction mechanism features. JOUR NUPAB 779 21

**A=14**

<sup>14</sup> C	2006SZ06	NUCLEAR REACTIONS $^{12}\text{C}(^{16}\text{O}, ^{16}\text{O}')$ , $(^{16}\text{O}, ^{15}\text{O})$ , $(^{16}\text{O}, ^{14}\text{N})$ , E=62-124 MeV; $^{12}\text{C}(^{18}\text{O}, ^{18}\text{O}')$ , $(^{18}\text{O}, ^{17}\text{O})$ , $(^{18}\text{O}, ^{16}\text{O})$ , $(^{18}\text{O}, ^{15}\text{N})$ , $(^{18}\text{O}, ^{19}\text{F})$ , $(^{18}\text{O}, ^{20}\text{Ne})$ , E=66-120 MeV; measured particle spectra, $\sigma(E, \theta)$ , $\sigma$ ; deduced reaction mechanism features. JOUR NUPAB 779 21
<sup>14</sup> N	2006CHZV	NUCLEAR REACTIONS $^{14}\text{N}(\alpha, \gamma)$ , E=1775 keV; measured $E\gamma$ , $I\gamma$ , DSA. $^{18}\text{F}$ deduced level energy, $T_{1/2}$ . $^{17}\text{O}(\text{p}, \alpha)$ , E ≈ 194-201 keV; measured $E\alpha$ , $\sigma(\theta)$ ; deduced resonance parameters. $^{17}\text{O}(\text{p}, \gamma)$ , E=192.7, 196.5; measured activation yields; deduced resonance features. Astrophysical implications discussed. CONF Isle of Kos (FINUSTAR), Proc, P304
	2006MI22	NUCLEAR REACTIONS $^2\text{H}, ^{16}\text{O}(\text{e}, \text{e}'\text{np})$ , E=855 MeV; measured particle spectra. $^{14}\text{N}$ deduced excited states. JOUR ZAANE 29 261
	2006SE14	NUCLEAR MOMENTS $^{14}\text{N}$ ; measured NQR spectra in picolinic, nicotinic, isonicotinic and dinicotinic acids. JOUR CMPHC 331 131
	2006SK05	NUCLEAR REACTIONS $^{13}\text{C}(\text{p}, \gamma)$ , E ≈ 1.7476 MeV; measured resonance $\gamma$ -ray yields for target implanted in crystal; deduced orientation effects. JOUR ZAANE 29 383
	2006SZ06	NUCLEAR REACTIONS $^{12}\text{C}(^{16}\text{O}, ^{16}\text{O}')$ , $(^{16}\text{O}, ^{15}\text{O})$ , $(^{16}\text{O}, ^{14}\text{N})$ , E=62-124 MeV; $^{12}\text{C}(^{18}\text{O}, ^{18}\text{O}')$ , $(^{18}\text{O}, ^{17}\text{O})$ , $(^{18}\text{O}, ^{16}\text{O})$ , $(^{18}\text{O}, ^{15}\text{N})$ , $(^{18}\text{O}, ^{19}\text{F})$ , $(^{18}\text{O}, ^{20}\text{Ne})$ , E=66-120 MeV; measured particle spectra, $\sigma(E, \theta)$ , $\sigma$ ; deduced reaction mechanism features. JOUR NUPAB 779 21
<sup>14</sup> O	2006LI48	NUCLEAR REACTIONS $^2\text{H}(^{13}\text{N}, \text{n})$ , E(cm)=8.9 MeV; measured $\sigma(\theta)$ ; deduced asymptotic normalization coefficient. $^{13}\text{N}(\text{p}, \gamma)$ , E(cm)=0-1.0 MeV; deduced astrophysical S-factors, reaction rate. JOUR PRVCA 74 035801

**A=15**

<sup>15</sup> N	2006ISZW	NUCLEAR REACTIONS $^4\text{He}(^{12}\text{B}, \text{n})$ , E(cm)=1.0-3.7 MeV; measured $\sigma$ . $^{12}\text{B}(\alpha, \text{n})$ , E(cm)=1.0-3.7 MeV; deduced excitation function. REPT JAEA-Review 2006-029, P45, Ishiyama
	2006SZ06	NUCLEAR REACTIONS $^{12}\text{C}(^{16}\text{O}, ^{16}\text{O}')$ , $(^{16}\text{O}, ^{15}\text{O})$ , $(^{16}\text{O}, ^{14}\text{N})$ , E=62-124 MeV; $^{12}\text{C}(^{18}\text{O}, ^{18}\text{O}')$ , $(^{18}\text{O}, ^{17}\text{O})$ , $(^{18}\text{O}, ^{16}\text{O})$ , $(^{18}\text{O}, ^{15}\text{N})$ , $(^{18}\text{O}, ^{19}\text{F})$ , $(^{18}\text{O}, ^{20}\text{Ne})$ , E=66-120 MeV; measured particle spectra, $\sigma(E, \theta)$ , $\sigma$ ; deduced reaction mechanism features. JOUR NUPAB 779 21
<sup>15</sup> O	2006BE50	NUCLEAR REACTIONS $^{14}\text{N}(\text{p}, \gamma)$ , E=70-228 keV; measured $E\gamma$ , $\sigma$ ; deduced astrophysical S-factor, resonance strength. JOUR NUPAB 779 297

KEYNUMBERS AND KEYWORDS

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**A=16**

<sup>16</sup> O	2006J011	NUCLEAR REACTIONS ${}^6\text{Li}({}^{13}\text{C}, \text{d})$ , E=8.0, 8.5 MeV; measured deuteron spectra, $\sigma(E, \theta)$ ; deduced asymptotic normalization coefficient for subthreshold resonance. ${}^{13}\text{C}(\alpha, \text{n})$ , E $\approx$ 0-1 MeV; deduced astrophysical S-factor, reaction rates. JOUR PRLTA 97 192701
	2006MA81	NUCLEAR REACTIONS ${}^4\text{He}({}^{12}\text{C}, \gamma)$ , E(cm)=2.22-5.42 MeV; measured $E_\gamma, I_\gamma$ , (particle) $\gamma$ -coin; deduced $\sigma$ , astrophysical S-factor. Recoil separator. JOUR PRLTA 97 242503
	2006ME26	NUCLEAR REACTIONS ${}^2\text{H}, {}^{12}\text{C}, {}^{16}\text{O}(\text{n}, \text{n}), (\text{n}, \text{n}')$ , E=95 MeV; measured $\sigma(E, \theta)$ ; deduced three-nucleon force effects, recoil kerma coefficients. JOUR PRVCA 74 054002
	2006WAZY	NUCLEAR REACTIONS ${}^{16}\text{O}(\alpha, \alpha')$ , E=400 MeV; measured $E\alpha, \sigma(E, \theta)$ . ${}^{16}\text{O}$ deduced possible $\alpha$ -cluster condensed state. PREPRINT nucl-ex/0611021, 11/13/2006

**A=17**

<sup>17</sup> N	2006KH08	NUCLEAR REACTIONS Si( ${}^{17}\text{N}, \text{X}$ ), ( ${}^{18}\text{N}, \text{X}$ ), ( ${}^{19}\text{N}, \text{X}$ ), ( ${}^{20}\text{N}, \text{X}$ ), ( ${}^{21}\text{N}, \text{X}$ ), ( ${}^{22}\text{N}, \text{X}$ ), ( ${}^{19}\text{O}, \text{X}$ ), ( ${}^{20}\text{O}, \text{X}$ ), ( ${}^{21}\text{O}, \text{X}$ ), ( ${}^{22}\text{O}, \text{X}$ ), ( ${}^{23}\text{O}, \text{X}$ ), ( ${}^{24}\text{O}, \text{X}$ ), ( ${}^{21}\text{F}, \text{X}$ ), ( ${}^{22}\text{F}, \text{X}$ ), ( ${}^{23}\text{F}, \text{X}$ ), ( ${}^{24}\text{F}, \text{X}$ ), ( ${}^{25}\text{F}, \text{X}$ ), ( ${}^{26}\text{F}, \text{X}$ ), ( ${}^{27}\text{F}, \text{X}$ ), ( ${}^{23}\text{Ne}, \text{X}$ ), ( ${}^{24}\text{Ne}, \text{X}$ ), ( ${}^{25}\text{Ne}, \text{X}$ ), ( ${}^{26}\text{Ne}, \text{X}$ ), ( ${}^{27}\text{Ne}, \text{X}$ ), ( ${}^{28}\text{Ne}, \text{X}$ ), ( ${}^{29}\text{Ne}, \text{X}$ ), ( ${}^{30}\text{Ne}, \text{X}$ ), ( ${}^{26}\text{Na}, \text{X}$ ), ( ${}^{27}\text{Na}, \text{X}$ ), ( ${}^{28}\text{Na}, \text{X}$ ), ( ${}^{29}\text{Na}, \text{X}$ ), ( ${}^{30}\text{Na}, \text{X}$ ), ( ${}^{31}\text{Na}, \text{X}$ ), ( ${}^{32}\text{Na}, \text{X}$ ), ( ${}^{33}\text{Na}, \text{X}$ ), ( ${}^{28}\text{Mg}, \text{X}$ ), ( ${}^{29}\text{Mg}, \text{X}$ ), ( ${}^{30}\text{Mg}, \text{X}$ ), ( ${}^{31}\text{Mg}, \text{X}$ ), ( ${}^{32}\text{Mg}, \text{X}$ ), ( ${}^{33}\text{Mg}, \text{X}$ ), ( ${}^{34}\text{Mg}, \text{X}$ ), ( ${}^{35}\text{Mg}, \text{X}$ ), ( ${}^{31}\text{Al}, \text{X}$ ), ( ${}^{32}\text{Al}, \text{X}$ ), ( ${}^{33}\text{Al}, \text{X}$ ), ( ${}^{34}\text{Al}, \text{X}$ ), ( ${}^{35}\text{Al}, \text{X}$ ), ( ${}^{36}\text{Al}, \text{X}$ ), ( ${}^{37}\text{Al}, \text{X}$ ), ( ${}^{38}\text{Al}, \text{X}$ ), ( ${}^{33}\text{Si}, \text{X}$ ), ( ${}^{34}\text{Si}, \text{X}$ ), ( ${}^{35}\text{Si}, \text{X}$ ), ( ${}^{36}\text{Si}, \text{X}$ ), ( ${}^{37}\text{Si}, \text{X}$ ), ( ${}^{38}\text{Si}, \text{X}$ ), ( ${}^{39}\text{Si}, \text{X}$ ), ( ${}^{40}\text{Si}, \text{X}$ ), ( ${}^{36}\text{P}, \text{X}$ ), ( ${}^{37}\text{P}, \text{X}$ ), ( ${}^{38}\text{P}, \text{X}$ ), ( ${}^{39}\text{P}, \text{X}$ ), ( ${}^{40}\text{P}, \text{X}$ ), ( ${}^{41}\text{P}, \text{X}$ ), ( ${}^{42}\text{P}, \text{X}$ ), ( ${}^{39}\text{S}, \text{X}$ ), ( ${}^{40}\text{S}, \text{X}$ ), ( ${}^{41}\text{S}, \text{X}$ ), ( ${}^{42}\text{S}, \text{X}$ ), ( ${}^{43}\text{S}, \text{X}$ ), ( ${}^{44}\text{S}, \text{X}$ ), ( ${}^{42}\text{Cl}, \text{X}$ ), ( ${}^{43}\text{Cl}, \text{X}$ ), ( ${}^{44}\text{Cl}, \text{X}$ ), ( ${}^{45}\text{Cl}, \text{X}$ ), ( ${}^{45}\text{Ar}, \text{X}$ ), ( ${}^{46}\text{Ar}, \text{X}$ ), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, F, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, Mg, 31, 32, 33, 34, 35, 36, 37, 38, Al, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, P, 39, 40, 41, 42, 43, 44, S, 42, 43, 44, 45, Cl, 45, 46, Ar; deduced radii, isospin dependence. ${}^{35}\text{Mg}$ , ${}^{44}\text{S}$ ; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
<sup>17</sup> O	2006J011	NUCLEAR REACTIONS ${}^6\text{Li}({}^{13}\text{C}, \text{d})$ , E=8.0, 8.5 MeV; measured deuteron spectra, $\sigma(E, \theta)$ ; deduced asymptotic normalization coefficient for subthreshold resonance. ${}^{13}\text{C}(\alpha, \text{n})$ , E $\approx$ 0-1 MeV; deduced astrophysical S-factor, reaction rates. JOUR PRLTA 97 192701
<sup>17</sup> F	2006DEZU	NUCLEAR REACTIONS ${}^1\text{H}({}^{18}\text{O}, \text{p})$ , ( ${}^{18}\text{Ne}, \text{p}$ ), E(cm)=800-6000 keV; measured excitation function, $\sigma(\theta=180^\circ)$ . ${}^1\text{H}({}^{18}\text{Ne}, 2\text{p})$ , E(cm)=800-6000 keV; measured proton spectra, pp-coin. ${}^{19}\text{Na}$ deduced levels, proton decay features. CONF Isle of Kos (FINUSTAR), Proc, P129
<sup>17</sup> Ne	2006HEZS	ATOMIC MASSES ${}^{17,19}\text{Ne}$ ; measured masses. Triple-trap mass spectrometer. CONF Isle of Kos (FINUSTAR), Proc, P152

## A=18

<sup>18</sup> N	2006KH08	NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F, 23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,Na, 28,29,30,31,32,33,34,35,Mg, 31,32,33,34,35,36,37,38,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P, 39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
<sup>18</sup> O	2006DEZU	NUCLEAR REACTIONS <sup>1</sup> H( <sup>18</sup> O, p), ( <sup>18</sup> Ne, p), E(cm)=800-6000 keV; measured excitation function, $\sigma(\theta=180^\circ)$ . <sup>1</sup> H( <sup>18</sup> Ne, 2p), E(cm)=800-6000 keV; measured proton spectra, pp-coin. <sup>19</sup> Na deduced levels, proton decay features. CONF Isle of Kos (FINUSTAR), Proc, P129
	2007GA01	RADIOACTIVITY <sup>18</sup> F, <sup>22</sup> Na( $\beta^+$ ); measured E $\gamma$ , I $\gamma$ ; deduced activity. JOUR NIMAE 570 84
<sup>18</sup> F	2006CHZV	NUCLEAR REACTIONS <sup>14</sup> N( $\alpha$ , $\gamma$ ), E=1775 keV; measured E $\gamma$ , I $\gamma$ , DSA. <sup>18</sup> F deduced level energy, T <sub>1/2</sub> . <sup>17</sup> O(p, $\alpha$ ), E $\approx$ 194-201 keV; measured E $\alpha$ , $\sigma(\theta)$ ; deduced resonance parameters. <sup>17</sup> O(p, $\gamma$ ), E=192.7, 196.5; measured activation yields; deduced resonance features. Astrophysical implications discussed. CONF Isle of Kos (FINUSTAR), Proc, P304
	2007GA01	RADIOACTIVITY <sup>18</sup> F, <sup>22</sup> Na( $\beta^+$ ); measured E $\gamma$ , I $\gamma$ ; deduced activity. JOUR NIMAE 570 84
<sup>18</sup> Ne	2006DEZU	NUCLEAR REACTIONS <sup>1</sup> H( <sup>18</sup> O, p), ( <sup>18</sup> Ne, p), E(cm)=800-6000 keV; measured excitation function, $\sigma(\theta=180^\circ)$ . <sup>1</sup> H( <sup>18</sup> Ne, 2p), E(cm)=800-6000 keV; measured proton spectra, pp-coin. <sup>19</sup> Na deduced levels, proton decay features. CONF Isle of Kos (FINUSTAR), Proc, P129
	2006SKZY	NUCLEAR REACTIONS <sup>1</sup> H( <sup>18</sup> Ne, p), E(cm)=0.5-2.7 MeV; measured $\sigma(\theta)$ , excitation functions. <sup>19</sup> Na deduced resonance energy, J, $\pi$ . R-matrix and potential model analysis. PREPRINT nucl-ex/0609040, 9/26/2006

**A=19**

<sup>19</sup> N	2006KH08	NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F, 23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,Na, 28,29,30,31,32,33,34,35,Mg, 31,32,33,34,35,36,37,38,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P, 39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
<sup>19</sup> O	2006KH08	NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F, 23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,Na, 28,29,30,31,32,33,34,35,Mg, 31,32,33,34,35,36,37,38,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P, 39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
<sup>19</sup> Ne	2006HEZS	ATOMIC MASSES <sup>17,19</sup> Ne; measured masses. Triple-trap mass spectrometer. CONF Isle of Kos (FINUSTAR), Proc, P152
	2006KA50	NUCLEAR REACTIONS <sup>3</sup> He( <sup>20</sup> Ne, $\alpha$ ), E=34 MeV; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin, DSA. <sup>19</sup> Ne level deduced T <sub>1/2</sub> , decay width. JOUR PRVCA 74 045803
<sup>19</sup> Na	2006ACZY	NUCLEAR REACTIONS <sup>1</sup> H, C( <sup>18</sup> Ne, p), E=66 MeV; measured Ep following elastic and inelastic scattering. <sup>19</sup> Na deduced excited states. CONF Isle of Kos (FINUSTAR), Proc, P374

**A=19 (continued)**

2006DEZU	NUCLEAR REACTIONS $^1\text{H}(^{18}\text{O}, \text{p})$ , $(^{18}\text{Ne}, \text{p})$ , E(cm)=800-6000 keV; measured excitation function, $\sigma(\theta=180^\circ)$ . $^1\text{H}(^{18}\text{Ne}, 2\text{p})$ , E(cm)=800-6000 keV; measured proton spectra, pp-coin. $^{19}\text{Na}$ deduced levels, proton decay features. CONF Isle of Kos (FINUSTAR), Proc, P129
2006SKZY	NUCLEAR REACTIONS $^1\text{H}(^{18}\text{Ne}, \text{p})$ , E(cm)=0.5-2.7 MeV; measured $\sigma(\theta)$ , excitation functions. $^{19}\text{Na}$ deduced resonance energy, J, $\pi$ . R-matrix and potential model analysis. PREPRINT nucl-ex/0609040, 9/26/2006

**A=20**

$^{20}\text{N}$	2006KH08	NUCLEAR REACTIONS Si( $^{17}\text{N}$ , X), ( $^{18}\text{N}$ , X), ( $^{19}\text{N}$ , X), ( $^{20}\text{N}$ , X), ( $^{21}\text{N}$ , X), ( $^{22}\text{N}$ , X), ( $^{19}\text{O}$ , X), ( $^{20}\text{O}$ , X), ( $^{21}\text{O}$ , X), ( $^{22}\text{O}$ , X), ( $^{23}\text{O}$ , X), ( $^{24}\text{O}$ , X), ( $^{21}\text{F}$ , X), ( $^{22}\text{F}$ , X), ( $^{23}\text{F}$ , X), ( $^{24}\text{F}$ , X), ( $^{25}\text{F}$ , X), ( $^{26}\text{F}$ , X), ( $^{27}\text{F}$ , X), ( $^{23}\text{Ne}$ , X), ( $^{24}\text{Ne}$ , X), ( $^{25}\text{Ne}$ , X), ( $^{26}\text{Ne}$ , X), ( $^{27}\text{Ne}$ , X), ( $^{28}\text{Ne}$ , X), ( $^{29}\text{Ne}$ , X), ( $^{30}\text{Ne}$ , X), ( $^{26}\text{Na}$ , X), ( $^{27}\text{Na}$ , X), ( $^{28}\text{Na}$ , X), ( $^{29}\text{Na}$ , X), ( $^{30}\text{Na}$ , X), ( $^{31}\text{Na}$ , X), ( $^{32}\text{Na}$ , X), ( $^{33}\text{Na}$ , X), ( $^{28}\text{Mg}$ , X), ( $^{29}\text{Mg}$ , X), ( $^{30}\text{Mg}$ , X), ( $^{31}\text{Mg}$ , X), ( $^{32}\text{Mg}$ , X), ( $^{33}\text{Mg}$ , X), ( $^{34}\text{Mg}$ , X), ( $^{35}\text{Mg}$ , X), ( $^{31}\text{Al}$ , X), ( $^{32}\text{Al}$ , X), ( $^{33}\text{Al}$ , X), ( $^{34}\text{Al}$ , X), ( $^{35}\text{Al}$ , X), ( $^{36}\text{Al}$ , X), ( $^{37}\text{Al}$ , X), ( $^{38}\text{Al}$ , X), ( $^{33}\text{Si}$ , X), ( $^{34}\text{Si}$ , X), ( $^{35}\text{Si}$ , X), ( $^{36}\text{Si}$ , X), ( $^{37}\text{Si}$ , X), ( $^{38}\text{Si}$ , X), ( $^{39}\text{Si}$ , X), ( $^{40}\text{Si}$ , X), ( $^{36}\text{P}$ , X), ( $^{37}\text{P}$ , X), ( $^{38}\text{P}$ , X), ( $^{39}\text{P}$ , X), ( $^{40}\text{P}$ , X), ( $^{41}\text{P}$ , X), ( $^{42}\text{P}$ , X), ( $^{39}\text{S}$ , X), ( $^{40}\text{S}$ , X), ( $^{41}\text{S}$ , X), ( $^{42}\text{S}$ , X), ( $^{43}\text{S}$ , X), ( $^{44}\text{S}$ , X), ( $^{42}\text{Cl}$ , X), ( $^{43}\text{Cl}$ , X), ( $^{44}\text{Cl}$ , X), ( $^{45}\text{Cl}$ , X), ( $^{45}\text{Ar}$ , X), ( $^{46}\text{Ar}$ , X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46 N, O, F, Ne, Na, Mg, Al, Si, P, S, Cl, Ar; deduced radii, isospin dependence. $^{35}\text{Mg}$ , $^{44}\text{S}$ ; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
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## KEYNUMBERS AND KEYWORDS

### A=20 (*continued*)

$^{20}\text{O}$	2006KH08	NUCLEAR REACTIONS $\text{Si}({}^{17}\text{N}, \text{X})$ , $({}^{18}\text{N}, \text{X})$ , $({}^{19}\text{N}, \text{X})$ , $({}^{20}\text{N}, \text{X})$ , $({}^{21}\text{N}, \text{X})$ , $({}^{22}\text{N}, \text{X})$ , $({}^{19}\text{O}, \text{X})$ , $({}^{20}\text{O}, \text{X})$ , $({}^{21}\text{O}, \text{X})$ , $({}^{22}\text{O}, \text{X})$ , $({}^{23}\text{O}, \text{X})$ , $({}^{24}\text{O}, \text{X})$ , $({}^{21}\text{F}, \text{X})$ , $({}^{22}\text{F}, \text{X})$ , $({}^{23}\text{F}, \text{X})$ , $({}^{24}\text{F}, \text{X})$ , $({}^{25}\text{F}, \text{X})$ , $({}^{26}\text{F}, \text{X})$ , $({}^{27}\text{F}, \text{X})$ , $({}^{23}\text{Ne}, \text{X})$ , $({}^{24}\text{Ne}, \text{X})$ , $({}^{25}\text{Ne}, \text{X})$ , $({}^{26}\text{Ne}, \text{X})$ , $({}^{27}\text{Ne}, \text{X})$ , $({}^{28}\text{Ne}, \text{X})$ , $({}^{29}\text{Ne}, \text{X})$ , $({}^{30}\text{Ne}, \text{X})$ , $({}^{31}\text{Na}, \text{X})$ , $({}^{32}\text{Na}, \text{X})$ , $({}^{33}\text{Na}, \text{X})$ , $({}^{28}\text{Mg}, \text{X})$ , $({}^{29}\text{Mg}, \text{X})$ , $({}^{30}\text{Mg}, \text{X})$ , $({}^{31}\text{Mg}, \text{X})$ , $({}^{32}\text{Mg}, \text{X})$ , $({}^{33}\text{Mg}, \text{X})$ , $({}^{34}\text{Mg}, \text{X})$ , $({}^{35}\text{Mg}, \text{X})$ , $({}^{31}\text{Al}, \text{X})$ , $({}^{32}\text{Al}, \text{X})$ , $({}^{33}\text{Al}, \text{X})$ , $({}^{34}\text{Al}, \text{X})$ , $({}^{35}\text{Al}, \text{X})$ , $({}^{36}\text{Al}, \text{X})$ , $({}^{37}\text{Al}, \text{X})$ , $({}^{38}\text{Al}, \text{X})$ , $({}^{33}\text{Si}, \text{X})$ , $({}^{34}\text{Si}, \text{X})$ , $({}^{35}\text{Si}, \text{X})$ , $({}^{36}\text{Si}, \text{X})$ , $({}^{37}\text{Si}, \text{X})$ , $({}^{38}\text{Si}, \text{X})$ , $({}^{39}\text{Si}, \text{X})$ , $({}^{40}\text{Si}, \text{X})$ , $({}^{36}\text{P}, \text{X})$ , $({}^{37}\text{P}, \text{X})$ , $({}^{38}\text{P}, \text{X})$ , $({}^{39}\text{P}, \text{X})$ , $({}^{40}\text{P}, \text{X})$ , $({}^{41}\text{P}, \text{X})$ , $({}^{42}\text{P}, \text{X})$ , $({}^{39}\text{S}, \text{X})$ , $({}^{40}\text{S}, \text{X})$ , $({}^{41}\text{S}, \text{X})$ , $({}^{42}\text{S}, \text{X})$ , $({}^{43}\text{S}, \text{X})$ , $({}^{44}\text{S}, \text{X})$ , $({}^{42}\text{Cl}, \text{X})$ , $({}^{43}\text{Cl}, \text{X})$ , $({}^{44}\text{Cl}, \text{X})$ , $({}^{45}\text{Cl}, \text{X})$ , $({}^{45}\text{Ar}, \text{X})$ , $({}^{46}\text{Ar}, \text{X})$ , $E=30\text{-}65 \text{ MeV / nucleon}$ ; measured energy-integrated reaction $\sigma$ . $17, 18, 19, 20, 21, 22\text{N}$ , $19, 20, 21, 22, 23, 24\text{O}$ , $21, 22, 23, 24, 25, 26, 27\text{F}$ , $23, 24, 25, 26, 27, 28, 29, 30\text{Ne}$ , $26, 27, 28, 29, 30, 31, 32, 33\text{Na}$ , $28, 29, 30, 31, 32, 33, 34, 35\text{Mg}$ , $31, 32, 33, 34, 35, 36, 37, 38\text{Al}$ , $33, 34, 35, 36, 37, 38, 39, 40\text{Si}$ , $36, 37, 38, 39, 40, 41, 42\text{P}$ , $39, 40, 41, 42, 43, 44\text{S}$ , $42, 43, 44, 45\text{Cl}$ , $45, 46\text{Ar}$ ; deduced radii, isospin dependence. ${}^{35}\text{Mg}$ , ${}^{44}\text{S}$ ; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
$^{20}\text{F}$	2006SZ07	NUCLEAR REACTIONS ${}^6\text{Li}$ , ${}^{11}\text{B}$ , ${}^{16}\text{O}$ , ${}^{19}\text{F(d, p}\gamma)$ , $E=0.6\text{-}2 \text{ MeV}$ ; ${}^9\text{Be(d, n}\gamma)$ , $E=0.6\text{-}2 \text{ MeV}$ ; measured $E\gamma$ , $I\gamma$ ; deduced $\gamma$ -ray production $\sigma$ , thin target yields. JOUR NIMBE 251 343
$^{20}\text{Ne}$	2006BA64	NUCLEAR REACTIONS ${}^{12}\text{C}({}^{12}\text{C}, \alpha)$ , $({}^{12}\text{C}, \text{p})$ , $({}^{12}\text{C}, \text{n})$ , $E(\text{cm})=2.25\text{-}6.01 \text{ MeV}$ ; measured $E\gamma$ , $I\gamma$ ; deduced $\sigma$ , astrophysical S-factors. JOUR NUPAB 779 318

A=21

<sup>21</sup>N 2006KH08 NUCLEAR REACTIONS Si(<sup>17</sup>N, X), (<sup>18</sup>N, X), (<sup>19</sup>N, X), (<sup>20</sup>N, X), (<sup>21</sup>N, X), (<sup>22</sup>N, X), (<sup>19</sup>O, X), (<sup>20</sup>O, X), (<sup>21</sup>O, X), (<sup>22</sup>O, X), (<sup>23</sup>O, X), (<sup>24</sup>O, X), (<sup>21</sup>F, X), (<sup>22</sup>F, X), (<sup>23</sup>F, X), (<sup>24</sup>F, X), (<sup>25</sup>F, X), (<sup>26</sup>F, X), (<sup>27</sup>F, X), (<sup>23</sup>Ne, X), (<sup>24</sup>Ne, X), (<sup>25</sup>Ne, X), (<sup>26</sup>Ne, X), (<sup>27</sup>Ne, X), (<sup>28</sup>Ne, X), (<sup>29</sup>Ne, X), (<sup>30</sup>Ne, X), (<sup>26</sup>Na, X), (<sup>27</sup>Na, X), (<sup>28</sup>Na, X), (<sup>29</sup>Na, X), (<sup>30</sup>Na, X), (<sup>31</sup>Na, X), (<sup>32</sup>Na, X), (<sup>33</sup>Na, X), (<sup>28</sup>Mg, X), (<sup>29</sup>Mg, X), (<sup>30</sup>Mg, X), (<sup>31</sup>Mg, X), (<sup>32</sup>Mg, X), (<sup>33</sup>Mg, X), (<sup>34</sup>Mg, X), (<sup>35</sup>Mg, X), (<sup>31</sup>Al, X), (<sup>32</sup>Al, X), (<sup>33</sup>Al, X), (<sup>34</sup>Al, X), (<sup>35</sup>Al, X), (<sup>36</sup>Al, X), (<sup>37</sup>Al, X), (<sup>38</sup>Al, X), (<sup>33</sup>Si, X), (<sup>34</sup>Si, X), (<sup>35</sup>Si, X), (<sup>36</sup>Si, X), (<sup>37</sup>Si, X), (<sup>38</sup>Si, X), (<sup>39</sup>Si, X), (<sup>40</sup>Si, X), (<sup>36</sup>P, X), (<sup>37</sup>P, X), (<sup>38</sup>P, X), (<sup>39</sup>P, X), (<sup>40</sup>P, X), (<sup>41</sup>P, X), (<sup>42</sup>P, X), (<sup>39</sup>S, X), (<sup>40</sup>S, X), (<sup>41</sup>S, X), (<sup>42</sup>S, X), (<sup>43</sup>S, X), (<sup>44</sup>S, X), (<sup>42</sup>Cl, X), (<sup>43</sup>Cl, X), (<sup>44</sup>Cl, X), (<sup>45</sup>Cl, X), (<sup>45</sup>Ar, X), (<sup>46</sup>Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction  $\sigma$ .  
<sup>17,18,19,20,21,22</sup>N, <sup>19,20,21,22,23,24</sup>O, <sup>21,22,23,24,25,26,27</sup>F, <sup>23,24,25,26,27,28,29,30</sup>Ne, <sup>26,27,28,29,30,31,32,33</sup>Na, <sup>28,29,30,31,32,33,34,35</sup>Mg, <sup>31,32,33,34,35,36,37,38</sup>Al, <sup>33,34,35,36,37,38,39,40</sup>Si, <sup>36,37,38,39,40,41,42</sup>P, <sup>39,40,41,42,43,44</sup>S, <sup>42,43,44,45</sup>Cl, <sup>45,46</sup>Ar; deduced radii, isospin dependence. <sup>35</sup>Mg, <sup>44</sup>S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1

### A=21 (*continued*)

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| <sup>21</sup> O | 2006KH08 | NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ .<br>17,18,19,20,21,22N, 19,20,21,22,23,24O, 21,22,23,24,25,26,27F,<br>23,24,25,26,27,28,29,30Ne, 26,27,28,29,30,31,32,33,34,35Mg,<br>31,32,33,34,35,36,37,38Al, 33,34,35,36,37,38,39,40,41,42P,<br>39,40,41,42,43,44S, 42,43,44,45Cl, 45,46Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1 |
| <sup>21</sup> F | 2006KH08 | NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ .<br>17,18,19,20,21,22N, 19,20,21,22,23,24O, 21,22,23,24,25,26,27F,<br>23,24,25,26,27,28,29,30Ne, 26,27,28,29,30,31,32,33,34,35Mg,<br>31,32,33,34,35,36,37,38Al, 33,34,35,36,37,38,39,40,41,42P,<br>39,40,41,42,43,44S, 42,43,44,45Cl, 45,46Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1 |

## KEYNUMBERS AND KEYWORDS

A=22

<sup>22</sup> N	2006KH08	NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22N, 19,20,21,22,23,24O, 21,22,23,24,25,26,27F, 23,24,25,26,27,28,29,30Ne, 26,27,28,29,30,31,32,33,34,35Mg, 31,32,33,34,35,36,37,38Al, 33,34,35,36,37,38,39,40,41,42P, 39,40,41,42,43,44S, 42,43,44,45Cl, 45,46Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
<sup>22</sup> O	2006KH08	NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22N, 19,20,21,22,23,24O, 21,22,23,24,25,26,27F, 23,24,25,26,27,28,29,30Ne, 26,27,28,29,30,31,32,33,34,35Mg, 31,32,33,34,35,36,37,38Al, 33,34,35,36,37,38,39,40,41,42P, 39,40,41,42,43,44S, 42,43,44,45Cl, 45,46Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1

**A=22 (*continued*)**

<sup>22</sup> F	2006KH08	NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F, 23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,34,35,Mg, 31,32,33,34,35,36,37,38,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P, 39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
<sup>22</sup> Ne	2006FR16	NUCLEAR REACTIONS <sup>12</sup> C( <sup>18</sup> O, $2\alpha$ <sup>14</sup> C), E=140 MeV; measured particle spectra. <sup>22</sup> Ne deduced level energies, possible cluster structure. JOUR JPGPE 32 2235
	2006INZZ	RADIOACTIVITY <sup>22</sup> Na(EC); measured Auger spectrum; deduced E, RI of KL <sub>1</sub> L <sub>1</sub> , KL <sub>1</sub> L <sub>2</sub> , KL <sub>1</sub> L <sub>2,3</sub> , KL <sub>2</sub> L <sub>2</sub> , KL <sub>2</sub> L <sub>3</sub> Auger groups. Electrostatic spectrometer. CONF Sarov(Nucleus-2006),Contrib,P77,Inoyatov
	2007GA01	RADIOACTIVITY <sup>18</sup> F, <sup>22</sup> Na( $\beta^+$ ); measured E $\gamma$ , I $\gamma$ ; deduced activity. JOUR NIMAE 570 84
<sup>22</sup> Na	2006BAZT	NUCLEAR REACTIONS <sup>112,118,120,124</sup> Sn( <sup>12</sup> C, X) <sup>7</sup> Be / <sup>22</sup> Na / <sup>24</sup> Na / <sup>28</sup> Mg / <sup>38</sup> S / <sup>39</sup> Cl / <sup>42</sup> K / <sup>43</sup> K / <sup>43</sup> Sc / <sup>44m</sup> Sc / <sup>46</sup> Sc / <sup>48</sup> Sc / <sup>48</sup> V / <sup>52</sup> Mn / <sup>56</sup> Mn, E=2200 MeV / nucleon; <sup>112,118,120,124</sup> Sn(p, X) <sup>7</sup> Be / <sup>22</sup> Na / <sup>24</sup> Na / <sup>28</sup> Mg / <sup>38</sup> S / <sup>39</sup> Cl / <sup>42</sup> K / <sup>43</sup> K / <sup>43</sup> Sc / <sup>44m</sup> Sc / <sup>46</sup> Sc / <sup>48</sup> Sc / <sup>48</sup> V / <sup>52</sup> Mn / <sup>56</sup> Mn, E=3650 MeV; measured production $\sigma$ ( <sup>12</sup> C), relative yields. Nuclotron, HPGe detector. CONF Sarov(Nucleus-2006),Contrib,P151,Balabekyan
	2006IA03	RADIOACTIVITY <sup>23</sup> Al( $\beta^+$ ), ( $\beta^+$ p) [from <sup>1</sup> H( <sup>24</sup> Mg, X)]; measured E $\gamma$ , I $\gamma$ , $\beta\gamma$ -coin, T <sub>1/2</sub> ; deduced log ft. <sup>23</sup> Mg deduced levels, J, $\pi$ , IAS. <sup>23</sup> Al deduced ground-state J, $\pi$ . Astrophysical implications discussed. JOUR PRVCA 74 045810
	2006INZZ	RADIOACTIVITY <sup>22</sup> Na(EC); measured Auger spectrum; deduced E, RI of KL <sub>1</sub> L <sub>1</sub> , KL <sub>1</sub> L <sub>2</sub> , KL <sub>1</sub> L <sub>2,3</sub> , KL <sub>2</sub> L <sub>2</sub> , KL <sub>2</sub> L <sub>3</sub> Auger groups. Electrostatic spectrometer. CONF Sarov(Nucleus-2006),Contrib,P77,Inoyatov
	2007GA01	RADIOACTIVITY <sup>18</sup> F, <sup>22</sup> Na( $\beta^+$ ); measured E $\gamma$ , I $\gamma$ ; deduced activity. JOUR NIMAE 570 84

## KEYNUMBERS AND KEYWORDS

A=23

<sup>23</sup> O	2006KH08	NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F, 23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,34,35,Mg, 31,32,33,34,35,36,37,38,38,39,40,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P, 39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
<sup>23</sup> F	2006KH08	NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F, 23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,34,35,Mg, 31,32,33,34,35,36,37,38,38,39,40,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P, 39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1

**A=23 (continued)**

$^{23}\text{Ne}$	2006KH08	NUCLEAR REACTIONS $\text{Si}(^{17}\text{N}, \text{X})$ , $(^{18}\text{N}, \text{X})$ , $(^{19}\text{N}, \text{X})$ , $(^{20}\text{N}, \text{X})$ , $(^{21}\text{N}, \text{X})$ , $(^{22}\text{N}, \text{X})$ , $(^{19}\text{O}, \text{X})$ , $(^{20}\text{O}, \text{X})$ , $(^{21}\text{O}, \text{X})$ , $(^{22}\text{O}, \text{X})$ , $(^{23}\text{O}, \text{X})$ , $(^{24}\text{O}, \text{X})$ , $(^{21}\text{F}, \text{X})$ , $(^{22}\text{F}, \text{X})$ , $(^{23}\text{F}, \text{X})$ , $(^{24}\text{F}, \text{X})$ , $(^{25}\text{F}, \text{X})$ , $(^{26}\text{F}, \text{X})$ , $(^{27}\text{F}, \text{X})$ , $(^{23}\text{Ne}, \text{X})$ , $(^{24}\text{Ne}, \text{X})$ , $(^{25}\text{Ne}, \text{X})$ , $(^{26}\text{Ne}, \text{X})$ , $(^{27}\text{Ne}, \text{X})$ , $(^{28}\text{Ne}, \text{X})$ , $(^{29}\text{Ne}, \text{X})$ , $(^{30}\text{Ne}, \text{X})$ , $(^{26}\text{Na}, \text{X})$ , $(^{27}\text{Na}, \text{X})$ , $(^{28}\text{Na}, \text{X})$ , $(^{29}\text{Na}, \text{X})$ , $(^{30}\text{Na}, \text{X})$ , $(^{31}\text{Na}, \text{X})$ , $(^{32}\text{Na}, \text{X})$ , $(^{33}\text{Na}, \text{X})$ , $(^{28}\text{Mg}, \text{X})$ , $(^{29}\text{Mg}, \text{X})$ , $(^{30}\text{Mg}, \text{X})$ , $(^{31}\text{Mg}, \text{X})$ , $(^{32}\text{Mg}, \text{X})$ , $(^{33}\text{Mg}, \text{X})$ , $(^{34}\text{Mg}, \text{X})$ , $(^{35}\text{Mg}, \text{X})$ , $(^{31}\text{Al}, \text{X})$ , $(^{32}\text{Al}, \text{X})$ , $(^{33}\text{Al}, \text{X})$ , $(^{34}\text{Al}, \text{X})$ , $(^{35}\text{Al}, \text{X})$ , $(^{36}\text{Al}, \text{X})$ , $(^{37}\text{Al}, \text{X})$ , $(^{38}\text{Al}, \text{X})$ , $(^{33}\text{Si}, \text{X})$ , $(^{34}\text{Si}, \text{X})$ , $(^{35}\text{Si}, \text{X})$ , $(^{36}\text{Si}, \text{X})$ , $(^{37}\text{Si}, \text{X})$ , $(^{38}\text{Si}, \text{X})$ , $(^{39}\text{Si}, \text{X})$ , $(^{40}\text{Si}, \text{X})$ , $(^{36}\text{P}, \text{X})$ , $(^{37}\text{P}, \text{X})$ , $(^{38}\text{P}, \text{X})$ , $(^{39}\text{P}, \text{X})$ , $(^{40}\text{P}, \text{X})$ , $(^{41}\text{P}, \text{X})$ , $(^{42}\text{P}, \text{X})$ , $(^{39}\text{S}, \text{X})$ , $(^{40}\text{S}, \text{X})$ , $(^{41}\text{S}, \text{X})$ , $(^{42}\text{S}, \text{X})$ , $(^{43}\text{S}, \text{X})$ , $(^{44}\text{S}, \text{X})$ , $(^{42}\text{Cl}, \text{X})$ , $(^{43}\text{Cl}, \text{X})$ , $(^{44}\text{Cl}, \text{X})$ , $(^{45}\text{Cl}, \text{X})$ , $(^{45}\text{Ar}, \text{X})$ , $(^{46}\text{Ar}, \text{X})$ , $E=30\text{-}65 \text{ MeV / nucleon}$ ; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45.
$^{23}\text{Na}$	2006BA64	NUCLEAR REACTIONS $^{12}\text{C}(^{12}\text{C}, \alpha)$ , $(^{12}\text{C}, \text{p})$ , $(^{12}\text{C}, \text{n})$ , $E(\text{cm})=2.25\text{-}6.01 \text{ MeV}$ ; measured $E\gamma$ , $I\gamma$ ; deduced $\sigma$ , astrophysical S-factors. JOUR NUPAB 779 318
$^{23}\text{Mg}$	2006BA64	NUCLEAR REACTIONS $^{12}\text{C}(^{12}\text{C}, \alpha)$ , $(^{12}\text{C}, \text{p})$ , $(^{12}\text{C}, \text{n})$ , $E(\text{cm})=2.25\text{-}6.01 \text{ MeV}$ ; measured $E\gamma$ , $I\gamma$ ; deduced $\sigma$ , astrophysical S-factors. JOUR NUPAB 779 318
	2006IA03	RADIOACTIVITY $^{23}\text{Al}(\beta^+)$ , $(\beta^+\text{p})$ [from $^1\text{H}(^{24}\text{Mg}, \text{X})$ ]; measured $E\gamma$ , $I\gamma$ , $\beta\gamma$ -coin, $T_{1/2}$ ; deduced log ft. $^{23}\text{Mg}$ deduced levels, $J$ , $\pi$ , IAS. $^{23}\text{Al}$ deduced ground-state $J$ , $\pi$ . Astrophysical implications discussed. JOUR PRVCA 74 045810
$^{23}\text{Al}$	2006IA03	RADIOACTIVITY $^{23}\text{Al}(\beta^+)$ , $(\beta^+\text{p})$ [from $^1\text{H}(^{24}\text{Mg}, \text{X})$ ]; measured $E\gamma$ , $I\gamma$ , $\beta\gamma$ -coin, $T_{1/2}$ ; deduced log ft. $^{23}\text{Mg}$ deduced levels, $J$ , $\pi$ , IAS. $^{23}\text{Al}$ deduced ground-state $J$ , $\pi$ . Astrophysical implications discussed. JOUR PRVCA 74 045810

## KEYNUMBERS AND KEYWORDS

A=24

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|------------------|----------|--|
| <sup>24</sup> O  | 2006KH08 | NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ .<br>17,18,19,20,21,22, <sup>22</sup> N, 19,20,21,22,23, <sup>24</sup> O, 21,22,23,24,25,26, <sup>27</sup> F, 23,24,25,26,27,28,29,30Ne, 26,27,28,29,30,31,32,33Na, 28,29,30,31,32,33,34,35Mg, 31,32,33,34,35,36,37,38Al, 33,34,35,36,37,38,39,40Si, 36,37,38,39,40,41,42P, 39,40,41,42,43,44S, 42,43,44,45Cl, 45,46Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1 |
| <sup>24</sup> F  | 2006KH08 | NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ .<br>17,18,19,20,21,22, <sup>22</sup> N, 19,20,21,22,23, <sup>24</sup> O, 21,22,23,24,25,26, <sup>27</sup> F, 23,24,25,26,27,28,29,30Ne, 26,27,28,29,30,31,32,33Na, 28,29,30,31,32,33,34,35Mg, 31,32,33,34,35,36,37,38Al, 33,34,35,36,37,38,39,40Si, 36,37,38,39,40,41,42P, 39,40,41,42,43,44S, 42,43,44,45Cl, 45,46Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1 |
| <sup>24</sup> Ne | 2006BEZP | NUCLEAR REACTIONS <sup>208</sup> Pb( <sup>24</sup> Ne, X), E=7.9 MeV / nucleon; measured fragments isotopic yields, E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin. <sup>24,25</sup> Ne deduced transitions. CONF San Servolo(Fusion06),Proc,P49  |

**A=24 (*continued*)**

2006KH08	NUCLEAR REACTIONS Si( $^{17}\text{N}$ , X), ( $^{18}\text{N}$ , X), ( $^{19}\text{N}$ , X), ( $^{20}\text{N}$ , X), ( $^{21}\text{N}$ , X), ( $^{22}\text{N}$ , X), ( $^{19}\text{O}$ , X), ( $^{20}\text{O}$ , X), ( $^{21}\text{O}$ , X), ( $^{22}\text{O}$ , X), ( $^{23}\text{O}$ , X), ( $^{24}\text{O}$ , X), ( $^{21}\text{F}$ , X), ( $^{22}\text{F}$ , X), ( $^{23}\text{F}$ , X), ( $^{24}\text{F}$ , X), ( $^{25}\text{F}$ , X), ( $^{26}\text{F}$ , X), ( $^{27}\text{F}$ , X), ( $^{23}\text{Ne}$ , X), ( $^{24}\text{Ne}$ , X), ( $^{25}\text{Ne}$ , X), ( $^{26}\text{Ne}$ , X), ( $^{27}\text{Ne}$ , X), ( $^{28}\text{Ne}$ , X), ( $^{29}\text{Ne}$ , X), ( $^{30}\text{Ne}$ , X), ( $^{26}\text{Na}$ , X), ( $^{27}\text{Na}$ , X), ( $^{28}\text{Na}$ , X), ( $^{29}\text{Na}$ , X), ( $^{30}\text{Na}$ , X), ( $^{31}\text{Na}$ , X), ( $^{32}\text{Na}$ , X), ( $^{33}\text{Na}$ , X), ( $^{28}\text{Mg}$ , X), ( $^{29}\text{Mg}$ , X), ( $^{30}\text{Mg}$ , X), ( $^{31}\text{Mg}$ , X), ( $^{32}\text{Mg}$ , X), ( $^{33}\text{Mg}$ , X), ( $^{34}\text{Mg}$ , X), ( $^{35}\text{Mg}$ , X), ( $^{31}\text{Al}$ , X), ( $^{32}\text{Al}$ , X), ( $^{33}\text{Al}$ , X), ( $^{34}\text{Al}$ , X), ( $^{35}\text{Al}$ , X), ( $^{36}\text{Al}$ , X), ( $^{37}\text{Al}$ , X), ( $^{38}\text{Al}$ , X), ( $^{33}\text{Si}$ , X), ( $^{34}\text{Si}$ , X), ( $^{35}\text{Si}$ , X), ( $^{36}\text{Si}$ , X), ( $^{37}\text{Si}$ , X), ( $^{38}\text{Si}$ , X), ( $^{39}\text{Si}$ , X), ( $^{40}\text{Si}$ , X), ( $^{36}\text{P}$ , X), ( $^{37}\text{P}$ , X), ( $^{38}\text{P}$ , X), ( $^{39}\text{P}$ , X), ( $^{40}\text{P}$ , X), ( $^{41}\text{P}$ , X), ( $^{42}\text{P}$ , X), ( $^{39}\text{S}$ , X), ( $^{40}\text{S}$ , X), ( $^{41}\text{S}$ , X), ( $^{42}\text{S}$ , X), ( $^{43}\text{S}$ , X), ( $^{44}\text{S}$ , X), ( $^{42}\text{Cl}$ , X), ( $^{43}\text{Cl}$ , X), ( $^{44}\text{Cl}$ , X), ( $^{45}\text{Cl}$ , X), ( $^{45}\text{Ar}$ , X), ( $^{46}\text{Ar}$ , X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22, $\text{N}$ , 19,20,21,22,23,24, $\text{O}$ , 21,22,23,24,25,26,27, $\text{F}$ , 23,24,25,26,27,28,29,30, $\text{Ne}$ , 26,27,28,29,30,31,32,33, $\text{Na}$ , 28,29,30,31,32,33,34,35, $\text{Mg}$ , 31,32,33,34,35,36,37,38, $\text{Al}$ , 33,34,35,36,37,38,39,40, $\text{Si}$ , 36,37,38,39,40,41,42, $\text{P}$ , 39,40,41,42,43,44, $\text{S}$ , 42,43,44,45, $\text{Cl}$ , 45,46, $\text{Ar}$ ; deduced radii, isospin dependence. $^{35}\text{Mg}$ , $^{44}\text{S}$ ; deduced possible halo structure or large deformation. JOUR NUPAB 780 1	
$^{24}\text{Na}$	2006BAZT	NUCLEAR REACTIONS $^{112,118,120,124}\text{Sn}$ ( $^{12}\text{C}$ , X) $^7\text{Be}$ / $^{22}\text{Na}$ / $^{24}\text{Na}$ / $^{28}\text{Mg}$ / $^{38}\text{S}$ / $^{39}\text{Cl}$ / $^{42}\text{K}$ / $^{43}\text{K}$ / $^{43}\text{Sc}$ / $^{44m}\text{Sc}$ / $^{46}\text{Sc}$ / $^{48}\text{Sc}$ / $^{48}\text{V}$ / $^{52}\text{Mn}$ / $^{56}\text{Mn}$ , E=2200 MeV / nucleon; $^{112,118,120,124}\text{Sn}$ (p, X) $^7\text{Be}$ / $^{22}\text{Na}$ / $^{24}\text{Na}$ / $^{28}\text{Mg}$ / $^{38}\text{S}$ / $^{39}\text{Cl}$ / $^{42}\text{K}$ / $^{43}\text{K}$ / $^{43}\text{Sc}$ / $^{44m}\text{Sc}$ / $^{46}\text{Sc}$ / $^{48}\text{Sc}$ / $^{48}\text{V}$ / $^{52}\text{Mn}$ / $^{56}\text{Mn}$ , E=3650 MeV; measured production $\sigma(^{12}\text{C})$ , relative yields. Nuclotron, HPGe detector. CONF Sarov(Nucleus-2006),Contrib,P151,Balabekyan
$^{24}\text{Mg}$	2006SAZT	NUCLEAR REACTIONS $^{24}\text{Mg}$ ( $^{24}\text{Mg}$ , X), E(cm)=45.7 MeV; measured fragment charge distributions. $^{24}\text{Mg}$ ( $^{24}\text{Mg}$ , $^{24}\text{Mg}'$ ), E(cm)=45.7 MeV; measured $E\gamma$ , $I\gamma$ , (particle) $\gamma$ -coin; deduced molecular resonance features, feeding of $^{24}\text{Mg}$ excited states. CONF San Servolo(Fusion06),Proc,P165

## KEYNUMBERS AND KEYWORDS

A=25

<sup>25</sup> F	2006KH08	NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F, 23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,Na, 28,29,30,31,32,33,34,35,Mg, 31,32,33,34,35,36,37,38,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P, 39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
<sup>25</sup> Ne	2006BEZP	NUCLEAR REACTIONS <sup>208</sup> Pb( <sup>24</sup> Ne, X), E=7.9 MeV / nucleon; measured fragments isotopic yields, E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin. <sup>24,25</sup> Ne deduced transitions. CONF San Servolo(Fusion06),Proc,P49
	2006FEZZ	NUCLEAR REACTIONS <sup>2</sup> H( <sup>24</sup> Ne, p), E=10 MeV / nucleon; measured particle spectra, $\sigma(\theta)$ . <sup>25</sup> Ne deduced levels, J, $\pi$ . CONF Isle of Kos (FINUSTAR),Proc,P347
	2006KH08	NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F, 23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,Na, 28,29,30,31,32,33,34,35,Mg, 31,32,33,34,35,36,37,38,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P, 39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
	2006LEZT	NUCLEAR REACTIONS <sup>2</sup> H( <sup>24</sup> Ne, p), E=10 MeV / nucleon; measured Ep, E $\gamma$ , p $\gamma$ -coin, $\sigma(\theta)$ . <sup>25</sup> Ne deduced levels, J, $\pi$ . Tiara, Exogam arrays, Vamos spectrometer. CONF San Servolo(Fusion06),Proc,P285

**A=25 (*continued*)**

<sup>25</sup>Al      2006FU15      NUCLEAR REACTIONS <sup>25</sup>Mg(<sup>3</sup>He, t), E=140 MeV / nucleon; measured triton spectra,  $\sigma(\theta=0^\circ)$ . <sup>25</sup>Al deduced levels, J,  $\pi$ , B(GT), rotational band. Comparison with mirror states in <sup>25</sup>Mg. JOUR PHSTB T125 194

**A=26**

<sup>26</sup>F      2006KH08      NUCLEAR REACTIONS Si(<sup>17</sup>N, X), (<sup>18</sup>N, X), (<sup>19</sup>N, X), (<sup>20</sup>N, X), (<sup>21</sup>N, X), (<sup>22</sup>N, X), (<sup>19</sup>O, X), (<sup>20</sup>O, X), (<sup>21</sup>O, X), (<sup>22</sup>O, X), (<sup>23</sup>O, X), (<sup>24</sup>O, X), (<sup>21</sup>F, X), (<sup>22</sup>F, X), (<sup>23</sup>F, X), (<sup>24</sup>F, X), (<sup>25</sup>F, X), (<sup>26</sup>F, X), (<sup>27</sup>F, X), (<sup>23</sup>Ne, X), (<sup>24</sup>Ne, X), (<sup>25</sup>Ne, X), (<sup>26</sup>Ne, X), (<sup>27</sup>Ne, X), (<sup>28</sup>Ne, X), (<sup>29</sup>Ne, X), (<sup>30</sup>Ne, X), (<sup>26</sup>Na, X), (<sup>27</sup>Na, X), (<sup>28</sup>Na, X), (<sup>29</sup>Na, X), (<sup>30</sup>Na, X), (<sup>31</sup>Na, X), (<sup>32</sup>Na, X), (<sup>33</sup>Na, X), (<sup>28</sup>Mg, X), (<sup>29</sup>Mg, X), (<sup>30</sup>Mg, X), (<sup>31</sup>Mg, X), (<sup>32</sup>Mg, X), (<sup>33</sup>Mg, X), (<sup>34</sup>Mg, X), (<sup>35</sup>Mg, X), (<sup>31</sup>Al, X), (<sup>32</sup>Al, X), (<sup>33</sup>Al, X), (<sup>34</sup>Al, X), (<sup>35</sup>Al, X), (<sup>36</sup>Al, X), (<sup>37</sup>Al, X), (<sup>38</sup>Al, X), (<sup>33</sup>Si, X), (<sup>34</sup>Si, X), (<sup>35</sup>Si, X), (<sup>36</sup>Si, X), (<sup>37</sup>Si, X), (<sup>38</sup>Si, X), (<sup>39</sup>Si, X), (<sup>40</sup>Si, X), (<sup>36</sup>P, X), (<sup>37</sup>P, X), (<sup>38</sup>P, X), (<sup>39</sup>P, X), (<sup>40</sup>P, X), (<sup>41</sup>P, X), (<sup>42</sup>P, X), (<sup>39</sup>S, X), (<sup>40</sup>S, X), (<sup>41</sup>S, X), (<sup>42</sup>S, X), (<sup>43</sup>S, X), (<sup>44</sup>S, X), (<sup>42</sup>Cl, X), (<sup>43</sup>Cl, X), (<sup>44</sup>Cl, X), (<sup>45</sup>Cl, X), (<sup>45</sup>Ar, X), (<sup>46</sup>Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction  $\sigma$ .  
 17,18,19,20,21,22N, 19,20,21,22,23,24O, 21,22,23,24,25,26,27F,  
 23,24,25,26,27,28,29,30Ne, 26,27,28,29,30,31,32,33Na, 28,29,30,31,32,33,34,35Mg,  
 31,32,33,34,35,36,37,38Al, 33,34,35,36,37,38,39,40Si, 36,37,38,39,40,41,42P,  
 39,40,41,42,43,44S, 42,43,44,45Cl, 45,46Ar; deduced radii, isospin dependence. <sup>35</sup>Mg, <sup>44</sup>S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1

<sup>26</sup>Ne      2006KH08      NUCLEAR REACTIONS Si(<sup>17</sup>N, X), (<sup>18</sup>N, X), (<sup>19</sup>N, X), (<sup>20</sup>N, X), (<sup>21</sup>N, X), (<sup>22</sup>N, X), (<sup>19</sup>O, X), (<sup>20</sup>O, X), (<sup>21</sup>O, X), (<sup>22</sup>O, X), (<sup>23</sup>O, X), (<sup>24</sup>O, X), (<sup>21</sup>F, X), (<sup>22</sup>F, X), (<sup>23</sup>F, X), (<sup>24</sup>F, X), (<sup>25</sup>F, X), (<sup>26</sup>F, X), (<sup>27</sup>F, X), (<sup>23</sup>Ne, X), (<sup>24</sup>Ne, X), (<sup>25</sup>Ne, X), (<sup>26</sup>Ne, X), (<sup>27</sup>Ne, X), (<sup>28</sup>Ne, X), (<sup>29</sup>Ne, X), (<sup>30</sup>Ne, X), (<sup>26</sup>Na, X), (<sup>27</sup>Na, X), (<sup>28</sup>Na, X), (<sup>29</sup>Na, X), (<sup>30</sup>Na, X), (<sup>31</sup>Na, X), (<sup>32</sup>Na, X), (<sup>33</sup>Na, X), (<sup>28</sup>Mg, X), (<sup>29</sup>Mg, X), (<sup>30</sup>Mg, X), (<sup>31</sup>Mg, X), (<sup>32</sup>Mg, X), (<sup>33</sup>Mg, X), (<sup>34</sup>Mg, X), (<sup>35</sup>Mg, X), (<sup>31</sup>Al, X), (<sup>32</sup>Al, X), (<sup>33</sup>Al, X), (<sup>34</sup>Al, X), (<sup>35</sup>Al, X), (<sup>36</sup>Al, X), (<sup>37</sup>Al, X), (<sup>38</sup>Al, X), (<sup>33</sup>Si, X), (<sup>34</sup>Si, X), (<sup>35</sup>Si, X), (<sup>36</sup>Si, X), (<sup>37</sup>Si, X), (<sup>38</sup>Si, X), (<sup>39</sup>Si, X), (<sup>40</sup>Si, X), (<sup>36</sup>P, X), (<sup>37</sup>P, X), (<sup>38</sup>P, X), (<sup>39</sup>P, X), (<sup>40</sup>P, X), (<sup>41</sup>P, X), (<sup>42</sup>P, X), (<sup>39</sup>S, X), (<sup>40</sup>S, X), (<sup>41</sup>S, X), (<sup>42</sup>S, X), (<sup>43</sup>S, X), (<sup>44</sup>S, X), (<sup>42</sup>Cl, X), (<sup>43</sup>Cl, X), (<sup>44</sup>Cl, X), (<sup>45</sup>Cl, X), (<sup>45</sup>Ar, X), (<sup>46</sup>Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction  $\sigma$ .  
 17,18,19,20,21,22N, 19,20,21,22,23,24O, 21,22,23,24,25,26,27F,  
 23,24,25,26,27,28,29,30Ne, 26,27,28,29,30,31,32,33Na, 28,29,30,31,32,33,34,35Mg,  
 31,32,33,34,35,36,37,38Al, 33,34,35,36,37,38,39,40Si, 36,37,38,39,40,41,42P,  
 39,40,41,42,43,44S, 42,43,44,45Cl, 45,46Ar; deduced radii, isospin dependence. <sup>35</sup>Mg, <sup>44</sup>S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1

## KEYNUMBERS AND KEYWORDS

## A=26 (*continued*)

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| $^{26}\text{Na}$ | 2006KH08 | NUCLEAR REACTIONS $\text{Si}(\text{N}, \text{X})$ , $(\text{O}, \text{X})$ , $(\text{F}, \text{X})$ , $(\text{Ne}, \text{X})$ , $(\text{Mg}, \text{X})$ , $(\text{Al}, \text{X})$ , $(\text{S}, \text{X})$ , $(\text{Cl}, \text{X})$ ; measured energy-integrated reaction cross sections $\sigma$ .<br>E=30-65 MeV / nucleon; deduced radii, isospin dependence. $^{35}\text{Mg}$ , $^{44}\text{S}$ ; deduced possible halo structure or large deformation. JOUR NUPAB 780 1 |
| $^{26}\text{Al}$ | 2006ER08 | ATOMIC MASSES $^{26m}\text{Al}$ , $^{42}\text{Sc}$ , $^{46}\text{V}$ ; measured masses; deduced Q(EC). Comparison with previous results, implications for CKM matrix element discussed. JOUR PRLTA 97 232501  |
| $^{26}\text{Si}$ | 2006BA65 | NUCLEAR REACTIONS $^{28}\text{Si}(\text{p}, \text{t})$ , $(\text{p}, \text{d})$ , E=40 MeV; measured particle spectra, angular distributions. $^{26}\text{Si}$ level deduced $J, \pi$ . $^{25}\text{Al}(\text{p}, \gamma)$ , E=low; deduced astrophysical reaction rate. JOUR PRVCA 74 045804   |

A=27

- <sup>27</sup>F 2006KH08 NUCLEAR REACTIONS Si(<sup>17</sup>N, X), (<sup>18</sup>N, X), (<sup>19</sup>N, X), (<sup>20</sup>N, X), (<sup>21</sup>N, X), (<sup>22</sup>N, X), (<sup>19</sup>O, X), (<sup>20</sup>O, X), (<sup>21</sup>O, X), (<sup>22</sup>O, X), (<sup>23</sup>O, X), (<sup>24</sup>O, X), (<sup>21</sup>F, X), (<sup>22</sup>F, X), (<sup>23</sup>F, X), (<sup>24</sup>F, X), (<sup>25</sup>F, X), (<sup>26</sup>F, X), (<sup>27</sup>F, X), (<sup>23</sup>Ne, X), (<sup>24</sup>Ne, X), (<sup>25</sup>Ne, X), (<sup>26</sup>Ne, X), (<sup>27</sup>Ne, X), (<sup>28</sup>Ne, X), (<sup>29</sup>Ne, X), (<sup>30</sup>Ne, X), (<sup>26</sup>Na, X), (<sup>27</sup>Na, X), (<sup>28</sup>Na, X), (<sup>29</sup>Na, X), (<sup>30</sup>Na, X), (<sup>31</sup>Na, X), (<sup>32</sup>Na, X), (<sup>33</sup>Na, X), (<sup>28</sup>Mg, X), (<sup>29</sup>Mg, X), (<sup>30</sup>Mg, X), (<sup>31</sup>Mg, X), (<sup>32</sup>Mg, X), (<sup>33</sup>Mg, X), (<sup>34</sup>Mg, X), (<sup>35</sup>Mg, X), (<sup>31</sup>Al, X), (<sup>32</sup>Al, X), (<sup>33</sup>Al, X), (<sup>34</sup>Al, X), (<sup>35</sup>Al, X), (<sup>36</sup>Al, X), (<sup>37</sup>Al, X), (<sup>38</sup>Al, X), (<sup>33</sup>Si, X), (<sup>34</sup>Si, X), (<sup>35</sup>Si, X), (<sup>36</sup>Si, X), (<sup>37</sup>Si, X), (<sup>38</sup>Si, X), (<sup>39</sup>Si, X), (<sup>40</sup>Si, X), (<sup>36</sup>P, X), (<sup>37</sup>P, X), (<sup>38</sup>P, X), (<sup>39</sup>P, X), (<sup>40</sup>P, X), (<sup>41</sup>P, X), (<sup>42</sup>P, X), (<sup>39</sup>S, X), (<sup>40</sup>S, X), (<sup>41</sup>S, X), (<sup>42</sup>S, X), (<sup>43</sup>S, X), (<sup>44</sup>S, X), (<sup>42</sup>Cl, X), (<sup>43</sup>Cl, X), (<sup>44</sup>Cl, X), (<sup>45</sup>Cl, X), (<sup>45</sup>Ar, X), (<sup>46</sup>Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction  $\sigma$ .  
<sup>17,18,19,20,21,22</sup>N, <sup>19,20,21,22,23,24</sup>O, <sup>21,22,23,24,25,26,27</sup>F, <sup>23,24,25,26,27,28,29,30</sup>Ne, <sup>26,27,28,29,30,31,32,33</sup>Na, <sup>28,29,30,31,32,33,34,35</sup>Mg, <sup>31,32,33,34,35,36,37,38</sup>Al, <sup>33,34,35,36,37,38,39,40</sup>Si, <sup>36,37,38,39,40,41,42</sup>P, <sup>39,40,41,42,43,44</sup>S, <sup>42,43,44,45</sup>Cl, <sup>45,46</sup>Ar; deduced radii, isospin dependence. <sup>35</sup>Mg, <sup>44</sup>S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1

**A=27 (continued)**

$^{27}\text{Ne}$	2006KH08	NUCLEAR REACTIONS $\text{Si}(^{17}\text{N}, \text{X})$ , $(^{18}\text{N}, \text{X})$ , $(^{19}\text{N}, \text{X})$ , $(^{20}\text{N}, \text{X})$ , $(^{21}\text{N}, \text{X})$ , $(^{22}\text{N}, \text{X})$ , $(^{19}\text{O}, \text{X})$ , $(^{20}\text{O}, \text{X})$ , $(^{21}\text{O}, \text{X})$ , $(^{22}\text{O}, \text{X})$ , $(^{23}\text{O}, \text{X})$ , $(^{24}\text{O}, \text{X})$ , $(^{21}\text{F}, \text{X})$ , $(^{22}\text{F}, \text{X})$ , $(^{23}\text{F}, \text{X})$ , $(^{24}\text{F}, \text{X})$ , $(^{25}\text{F}, \text{X})$ , $(^{26}\text{F}, \text{X})$ , $(^{27}\text{F}, \text{X})$ , $(^{23}\text{Ne}, \text{X})$ , $(^{24}\text{Ne}, \text{X})$ , $(^{25}\text{Ne}, \text{X})$ , $(^{26}\text{Ne}, \text{X})$ , $(^{27}\text{Ne}, \text{X})$ , $(^{28}\text{Ne}, \text{X})$ , $(^{29}\text{Ne}, \text{X})$ , $(^{30}\text{Ne}, \text{X})$ , $(^{26}\text{Na}, \text{X})$ , $(^{27}\text{Na}, \text{X})$ , $(^{28}\text{Na}, \text{X})$ , $(^{29}\text{Na}, \text{X})$ , $(^{30}\text{Na}, \text{X})$ , $(^{31}\text{Na}, \text{X})$ , $(^{32}\text{Na}, \text{X})$ , $(^{33}\text{Na}, \text{X})$ , $(^{28}\text{Mg}, \text{X})$ , $(^{29}\text{Mg}, \text{X})$ , $(^{30}\text{Mg}, \text{X})$ , $(^{31}\text{Mg}, \text{X})$ , $(^{32}\text{Mg}, \text{X})$ , $(^{33}\text{Mg}, \text{X})$ , $(^{34}\text{Mg}, \text{X})$ , $(^{35}\text{Mg}, \text{X})$ , $(^{31}\text{Al}, \text{X})$ , $(^{32}\text{Al}, \text{X})$ , $(^{33}\text{Al}, \text{X})$ , $(^{34}\text{Al}, \text{X})$ , $(^{35}\text{Al}, \text{X})$ , $(^{36}\text{Al}, \text{X})$ , $(^{37}\text{Al}, \text{X})$ , $(^{38}\text{Al}, \text{X})$ , $(^{33}\text{Si}, \text{X})$ , $(^{34}\text{Si}, \text{X})$ , $(^{35}\text{Si}, \text{X})$ , $(^{36}\text{Si}, \text{X})$ , $(^{37}\text{Si}, \text{X})$ , $(^{38}\text{Si}, \text{X})$ , $(^{39}\text{Si}, \text{X})$ , $(^{40}\text{Si}, \text{X})$ , $(^{36}\text{P}, \text{X})$ , $(^{37}\text{P}, \text{X})$ , $(^{38}\text{P}, \text{X})$ , $(^{39}\text{P}, \text{X})$ , $(^{40}\text{P}, \text{X})$ , $(^{41}\text{P}, \text{X})$ , $(^{42}\text{P}, \text{X})$ , $(^{39}\text{S}, \text{X})$ , $(^{40}\text{S}, \text{X})$ , $(^{41}\text{S}, \text{X})$ , $(^{42}\text{S}, \text{X})$ , $(^{43}\text{S}, \text{X})$ , $(^{44}\text{S}, \text{X})$ , $(^{42}\text{Cl}, \text{X})$ , $(^{43}\text{Cl}, \text{X})$ , $(^{44}\text{Cl}, \text{X})$ , $(^{45}\text{Cl}, \text{X})$ , $(^{45}\text{Ar}, \text{X})$ , $(^{46}\text{Ar}, \text{X})$ , $E=30\text{-}65 \text{ MeV / nucleon}$ ; measured energy-integrated reaction $\sigma$ . $^{17,18,19,20,21,22}\text{N}$ , $^{19,20,21,22,23,24}\text{O}$ , $^{21,22,23,24,25,26,27}\text{F}$ , $^{23,24,25,26,27,28,29,30}\text{Ne}$ , $^{26,27,28,29,30,31,32,33}\text{Na}$ , $^{28,29,30,31,32,33,34,35}\text{Mg}$ , $^{31,32,33,34,35,36,37,38}\text{Al}$ , $^{33,34,35,36,37,38,39,40}\text{Si}$ , $^{36,37,38,39,40,41,42}\text{P}$ , $^{39,40,41,42,43,44}\text{S}$ , $^{42,43,44,45}\text{Cl}$ , $^{45,46}\text{Ar}$ ; deduced radii, isospin dependence. $^{35}\text{Mg}$ , $^{44}\text{S}$ ; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
$^{27}\text{Na}$	2006KH08	NUCLEAR REACTIONS $^2\text{H}(^{26}\text{Ne}, \text{p})$ , $E=9.7 \text{ MeV / nucleon}$ ; measured $E\gamma$ , $I\gamma$ , (charged-particle) $\gamma$ -coin, $\sigma(E)$ . $^{27}\text{Ne}$ deduced levels, $J, \pi$ , spectroscopic factor. CONF Isle of Kos (FINUSTAR), Proc, P177
$^{27}\text{Na}$	2006OBZZ	NUCLEAR REACTIONS $^{2\text{H}}(^{26}\text{Ne}, \text{p})$ , $E=9.7 \text{ MeV / nucleon}$ ; measured $E\gamma$ , $I\gamma$ , (charged-particle) $\gamma$ -coin, $\sigma(E)$ . $^{27}\text{Ne}$ deduced levels, $J, \pi$ , spectroscopic factor. CONF Isle of Kos (FINUSTAR), Proc, P177
$^{27}\text{Al}$	2006BEZM	NUCLEAR REACTIONS $^{27}\text{Al}(^6\text{He}, ^6\text{He})$ , $E=9.5, 11.0, 12.0, 13.4 \text{ MeV}$ ; measured $\sigma(\theta)$ . $^{27}\text{Al}(^6\text{He}, \text{X})$ , $(^6\text{Li}, \text{X})$ , $(^7\text{Li}, \text{X})$ , $(^9\text{Be}, \text{X})$ , $(^{16}\text{O}, \text{X})$ , $E(\text{cm}) \approx 0.7\text{-}2.6 \text{ MeV}$ ; analyzed data; deduced reduced reaction $\sigma$ . Comparisons with model predictions. PREPRINT <a href="http://nucl-ex/0612002">nucl-ex/0612002</a> , 12/2/2006

**A=27 (*continued*)**

2006LEZU	NUCLEAR REACTIONS $^{27}\text{Al}$ ( $^6\text{He}$ , $^6\text{He}$ ), E=9.5, 11.0, 12.0, 13.4 MeV; measured $\sigma(\theta)$ . $^{27}\text{Al}$ ( $^6\text{He}$ , X), ( $^6\text{Li}$ , X), ( $^7\text{Li}$ , X), ( $^9\text{Be}$ , X), ( $^{16}\text{O}$ , X), E(cm) $\approx$ 0.7-2.6 MeV; analyzed data; deduced reduced reaction $\sigma$ . Comparisons with model predictions. CONF San Servolo(Fusion06).Proc,P102
2006T011	NUCLEAR MOMENTS $^{27}\text{Al}$ ; measured NQR and NMR spectra in $\text{CeAl}_2$ . JOUR JCOME 18 10413
$^{27}\text{Si}$	2006BA65 NUCLEAR REACTIONS $^{28}\text{Si}$ (p, t), (p, d), E=40 MeV; measured particle spectra, angular distributions. $^{26}\text{Si}$ level deduced $J$ , $\pi$ . $^{25}\text{Al}$ (p, $\gamma$ ), E=low; deduced astrophysical reaction rate. JOUR PRVCA 74 045804

**A=28**

$^{28}\text{Ne}$	2006KH08 NUCLEAR REACTIONS Si( $^{17}\text{N}$ , X), ( $^{18}\text{N}$ , X), ( $^{19}\text{N}$ , X), ( $^{20}\text{N}$ , X), ( $^{21}\text{N}$ , X), ( $^{22}\text{N}$ , X), ( $^{19}\text{O}$ , X), ( $^{20}\text{O}$ , X), ( $^{21}\text{O}$ , X), ( $^{22}\text{O}$ , X), ( $^{23}\text{O}$ , X), ( $^{24}\text{O}$ , X), ( $^{21}\text{F}$ , X), ( $^{22}\text{F}$ , X), ( $^{23}\text{F}$ , X), ( $^{24}\text{F}$ , X), ( $^{25}\text{F}$ , X), ( $^{26}\text{F}$ , X), ( $^{27}\text{F}$ , X), ( $^{23}\text{Ne}$ , X), ( $^{24}\text{Ne}$ , X), ( $^{25}\text{Ne}$ , X), ( $^{26}\text{Ne}$ , X), ( $^{27}\text{Ne}$ , X), ( $^{28}\text{Ne}$ , X), ( $^{29}\text{Ne}$ , X), ( $^{30}\text{Ne}$ , X), ( $^{26}\text{Na}$ , X), ( $^{27}\text{Na}$ , X), ( $^{28}\text{Na}$ , X), ( $^{29}\text{Na}$ , X), ( $^{30}\text{Na}$ , X), ( $^{31}\text{Na}$ , X), ( $^{32}\text{Na}$ , X), ( $^{33}\text{Na}$ , X), ( $^{28}\text{Mg}$ , X), ( $^{29}\text{Mg}$ , X), ( $^{30}\text{Mg}$ , X), ( $^{31}\text{Mg}$ , X), ( $^{32}\text{Mg}$ , X), ( $^{33}\text{Mg}$ , X), ( $^{34}\text{Mg}$ , X), ( $^{35}\text{Mg}$ , X), ( $^{31}\text{Al}$ , X), ( $^{32}\text{Al}$ , X), ( $^{33}\text{Al}$ , X), ( $^{34}\text{Al}$ , X), ( $^{35}\text{Al}$ , X), ( $^{36}\text{Al}$ , X), ( $^{37}\text{Al}$ , X), ( $^{38}\text{Al}$ , X), ( $^{33}\text{Si}$ , X), ( $^{34}\text{Si}$ , X), ( $^{35}\text{Si}$ , X), ( $^{36}\text{Si}$ , X), ( $^{37}\text{Si}$ , X), ( $^{38}\text{Si}$ , X), ( $^{39}\text{Si}$ , X), ( $^{40}\text{Si}$ , X), ( $^{36}\text{P}$ , X), ( $^{37}\text{P}$ , X), ( $^{38}\text{P}$ , X), ( $^{39}\text{P}$ , X), ( $^{40}\text{P}$ , X), ( $^{41}\text{P}$ , X), ( $^{42}\text{P}$ , X), ( $^{39}\text{S}$ , X), ( $^{40}\text{S}$ , X), ( $^{41}\text{S}$ , X), ( $^{42}\text{S}$ , X), ( $^{43}\text{S}$ , X), ( $^{44}\text{S}$ , X), ( $^{42}\text{Cl}$ , X), ( $^{43}\text{Cl}$ , X), ( $^{44}\text{Cl}$ , X), ( $^{45}\text{Cl}$ , X), ( $^{45}\text{Ar}$ , X), ( $^{46}\text{Ar}$ , X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22 $\text{N}$ , 19,20,21,22,23,24 $\text{O}$ , 21,22,23,24,25,26,27 $\text{F}$ , 23,24,25,26,27,28,29,30 $\text{Ne}$ , 26,27,28,29,30,31,32,33 $\text{Na}$ , 28,29,30,31,32,33,34,35 $\text{Mg}$ , 31,32,33,34,35,36,37,38 $\text{Al}$ , 33,34,35,36,37,38,39,40 $\text{Si}$ , 36,37,38,39,40,41,42 $\text{P}$ , 39,40,41,42,43,44 $\text{S}$ , 42,43,44,45 $\text{Cl}$ , 45,46 $\text{Ar}$ ; deduced radii, isospin dependence. $^{35}\text{Mg}$ , $^{44}\text{S}$ ; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
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**A=28 (*continued*)**

<sup>28</sup> Na	2006KH08	NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F, 23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,Na, 28,29,30,31,32,33,34,35,Mg, 31,32,33,34,35,36,37,38,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P, 39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
<sup>28</sup> Mg	2006BAZT	NUCLEAR REACTIONS <sup>112,118,120,124</sup> Sn( <sup>12</sup> C, X) <sup>7</sup> Be / <sup>22</sup> Na / <sup>24</sup> Na / <sup>28</sup> Mg / <sup>38</sup> S / <sup>39</sup> Cl / <sup>42</sup> K / <sup>43</sup> K / <sup>43</sup> Sc / <sup>44m</sup> Sc / <sup>46</sup> Sc / <sup>48</sup> Sc / <sup>48</sup> V / <sup>52</sup> Mn / <sup>56</sup> Mn, E=2200 MeV / nucleon; <sup>112,118,120,124</sup> Sn(p, X) <sup>7</sup> Be / <sup>22</sup> Na / <sup>24</sup> Na / <sup>28</sup> Mg / <sup>38</sup> S / <sup>39</sup> Cl / <sup>42</sup> K / <sup>43</sup> K / <sup>43</sup> Sc / <sup>44m</sup> Sc / <sup>46</sup> Sc / <sup>48</sup> Sc / <sup>48</sup> V / <sup>52</sup> Mn / <sup>56</sup> Mn, E=3650 MeV; measured production $\sigma(^{12}\text{C})$ , relative yields. Nuclotron, HPGe detector. CONF Sarov(Nucleus-2006),Contrib,P151,Balabekyan
	2006KH08	NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F, 23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,Na, 28,29,30,31,32,33,34,35,Mg, 31,32,33,34,35,36,37,38,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P, 39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1

## KEYNUMBERS AND KEYWORDS

A=29

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|------------------|----------|---|
| <sup>29</sup> Ne | 2006KH08 | NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ .<br>17,18,19,20,21,22N, 19,20,21,22,23,24O, 21,22,23,24,25,26,27F,<br>23,24,25,26,27,28,29,30Ne, 26,27,28,29,30,31,32,33Na, 28,29,30,31,32,33,34,35Mg,<br>31,32,33,34,35,36,37,38Al, 33,34,35,36,37,38,39,40Si, 36,37,38,39,40,41,42P,<br>39,40,41,42,43,44S, 42,43,44,45Cl, 45,46Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1 |
| <sup>29</sup> Na | 2006KH08 | NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ .<br>17,18,19,20,21,22N, 19,20,21,22,23,24O, 21,22,23,24,25,26,27F,<br>23,24,25,26,27,28,29,30Ne, 26,27,28,29,30,31,32,33Na, 28,29,30,31,32,33,34,35Mg,<br>31,32,33,34,35,36,37,38Al, 33,34,35,36,37,38,39,40Si, 36,37,38,39,40,41,42P,<br>39,40,41,42,43,44S, 42,43,44,45Cl, 45,46Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1 |

## KEYNUMBERS AND KEYWORDS

## A=29 (*continued*)

$^{29}\text{Mg}$	2006KH08	NUCLEAR REACTIONS $\text{Si}(^{17}\text{N}, \text{X})$ , $(^{18}\text{N}, \text{X})$ , $(^{19}\text{N}, \text{X})$ , $(^{20}\text{N}, \text{X})$ , $(^{21}\text{N}, \text{X})$ , $(^{22}\text{N}, \text{X})$ , $(^{19}\text{O}, \text{X})$ , $(^{20}\text{O}, \text{X})$ , $(^{21}\text{O}, \text{X})$ , $(^{22}\text{O}, \text{X})$ , $(^{23}\text{O}, \text{X})$ , $(^{24}\text{O}, \text{X})$ , $(^{21}\text{F}, \text{X})$ , $(^{22}\text{F}, \text{X})$ , $(^{23}\text{F}, \text{X})$ , $(^{24}\text{F}, \text{X})$ , $(^{25}\text{F}, \text{X})$ , $(^{26}\text{F}, \text{X})$ , $(^{27}\text{F}, \text{X})$ , $(^{23}\text{Ne}, \text{X})$ , $(^{24}\text{Ne}, \text{X})$ , $(^{25}\text{Ne}, \text{X})$ , $(^{26}\text{Ne}, \text{X})$ , $(^{27}\text{Ne}, \text{X})$ , $(^{28}\text{Ne}, \text{X})$ , $(^{29}\text{Ne}, \text{X})$ , $(^{30}\text{Ne}, \text{X})$ , $(^{26}\text{Na}, \text{X})$ , $(^{27}\text{Na}, \text{X})$ , $(^{28}\text{Na}, \text{X})$ , $(^{29}\text{Na}, \text{X})$ , $(^{30}\text{Na}, \text{X})$ , $(^{31}\text{Na}, \text{X})$ , $(^{32}\text{Na}, \text{X})$ , $(^{33}\text{Na}, \text{X})$ , $(^{28}\text{Mg}, \text{X})$ , $(^{29}\text{Mg}, \text{X})$ , $(^{30}\text{Mg}, \text{X})$ , $(^{31}\text{Mg}, \text{X})$ , $(^{32}\text{Mg}, \text{X})$ , $(^{33}\text{Mg}, \text{X})$ , $(^{34}\text{Mg}, \text{X})$ , $(^{35}\text{Mg}, \text{X})$ , $(^{31}\text{Al}, \text{X})$ , $(^{32}\text{Al}, \text{X})$ , $(^{33}\text{Al}, \text{X})$ , $(^{34}\text{Al}, \text{X})$ , $(^{35}\text{Al}, \text{X})$ , $(^{36}\text{Al}, \text{X})$ , $(^{37}\text{Al}, \text{X})$ , $(^{38}\text{Al}, \text{X})$ , $(^{33}\text{Si}, \text{X})$ , $(^{34}\text{Si}, \text{X})$ , $(^{35}\text{Si}, \text{X})$ , $(^{36}\text{Si}, \text{X})$ , $(^{37}\text{Si}, \text{X})$ , $(^{38}\text{Si}, \text{X})$ , $(^{39}\text{Si}, \text{X})$ , $(^{40}\text{Si}, \text{X})$ , $(^{36}\text{P}, \text{X})$ , $(^{37}\text{P}, \text{X})$ , $(^{38}\text{P}, \text{X})$ , $(^{39}\text{P}, \text{X})$ , $(^{40}\text{P}, \text{X})$ , $(^{41}\text{P}, \text{X})$ , $(^{42}\text{P}, \text{X})$ , $(^{39}\text{S}, \text{X})$ , $(^{40}\text{S}, \text{X})$ , $(^{41}\text{S}, \text{X})$ , $(^{42}\text{S}, \text{X})$ , $(^{43}\text{S}, \text{X})$ , $(^{44}\text{S}, \text{X})$ , $(^{42}\text{Cl}, \text{X})$ , $(^{43}\text{Cl}, \text{X})$ , $(^{44}\text{Cl}, \text{X})$ , $(^{45}\text{Cl}, \text{X})$ , $(^{45}\text{Ar}, \text{X})$ , $(^{46}\text{Ar}, \text{X})$ , $E=30\text{--}65 \text{ MeV/nucleon}$ ; measured energy-integrated reaction $\sigma$ .
$^{29}\text{Si}$	2006BU16	$^{17,18,19,20,21,22}\text{N}$ , $^{19,20,21,22,23,24}\text{O}$ , $^{21,22,23,24,25,26,27}\text{F}$ , $^{23,24,25,26,27,28,29,30}\text{Ne}$ , $^{26,27,28,29,30,31,32,33}\text{Na}$ , $^{28,29,30,31,32,33,34,35}\text{Mg}$ , $^{31,32,33,34,35,36,37,38}\text{Al}$ , $^{33,34,35,36,37,38,39,40}\text{Si}$ , $^{36,37,38,39,40,41,42}\text{P}$ , $^{39,40,41,42,43,44}\text{S}$ , $^{42,43,44,45}\text{Cl}$ , $^{45,46}\text{Ar}$ ; deduced radii, isospin dependence. $^{35}\text{Mg}$ , $^{44}\text{S}$ ; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
$^{29}\text{Si}$	2006BU16	NUCLEAR MOMENTS $^{29}\text{Si}$ ; measured hfs in amorphous silicon dioxide. Electron paramagnetic resonance. JOUR PRLTA 97 135502

A=30

<sup>30</sup>Ne 2006KH08 NUCLEAR REACTIONS Si(<sup>17</sup>N, X), (<sup>18</sup>N, X), (<sup>19</sup>N, X), (<sup>20</sup>N, X), (<sup>21</sup>N, X), (<sup>22</sup>N, X), (<sup>19</sup>O, X), (<sup>20</sup>O, X), (<sup>21</sup>O, X), (<sup>22</sup>O, X), (<sup>23</sup>O, X), (<sup>24</sup>O, X), (<sup>21</sup>F, X), (<sup>22</sup>F, X), (<sup>23</sup>F, X), (<sup>24</sup>F, X), (<sup>25</sup>F, X), (<sup>26</sup>F, X), (<sup>27</sup>F, X), (<sup>23</sup>Ne, X), (<sup>24</sup>Ne, X), (<sup>25</sup>Ne, X), (<sup>26</sup>Ne, X), (<sup>27</sup>Ne, X), (<sup>28</sup>Ne, X), (<sup>29</sup>Ne, X), (<sup>30</sup>Ne, X), (<sup>26</sup>Na, X), (<sup>27</sup>Na, X), (<sup>28</sup>Na, X), (<sup>29</sup>Na, X), (<sup>30</sup>Na, X), (<sup>31</sup>Na, X), (<sup>32</sup>Na, X), (<sup>33</sup>Na, X), (<sup>28</sup>Mg, X), (<sup>29</sup>Mg, X), (<sup>30</sup>Mg, X), (<sup>31</sup>Mg, X), (<sup>32</sup>Mg, X), (<sup>33</sup>Mg, X), (<sup>34</sup>Mg, X), (<sup>35</sup>Mg, X), (<sup>31</sup>Al, X), (<sup>32</sup>Al, X), (<sup>33</sup>Al, X), (<sup>34</sup>Al, X), (<sup>35</sup>Al, X), (<sup>36</sup>Al, X), (<sup>37</sup>Al, X), (<sup>38</sup>Al, X), (<sup>33</sup>Si, X), (<sup>34</sup>Si, X), (<sup>35</sup>Si, X), (<sup>36</sup>Si, X), (<sup>37</sup>Si, X), (<sup>38</sup>Si, X), (<sup>39</sup>Si, X), (<sup>40</sup>Si, X), (<sup>36</sup>P, X), (<sup>37</sup>P, X), (<sup>38</sup>P, X), (<sup>39</sup>P, X), (<sup>40</sup>P, X), (<sup>41</sup>P, X), (<sup>42</sup>P, X), (<sup>39</sup>S, X), (<sup>40</sup>S, X), (<sup>41</sup>S, X), (<sup>42</sup>S, X), (<sup>43</sup>S, X), (<sup>44</sup>S, X), (<sup>42</sup>Cl, X), (<sup>43</sup>Cl, X), (<sup>44</sup>Cl, X), (<sup>45</sup>Cl, X), (<sup>45</sup>Ar, X), (<sup>46</sup>Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction  $\sigma$ .  
 17,18,19,20,21,22N, 19,20,21,22,23,24O, 21,22,23,24,25,26,27F,  
 23,24,25,26,27,28,29,30Ne, 26,27,28,29,30,31,32,33Na, 28,29,30,31,32,33,34,35Mg,  
 31,32,33,34,35,36,37,38Al, 33,34,35,36,37,38,39,40Si, 36,37,38,39,40,41,42P,  
 39,40,41,42,43,44S, 42,43,44,45Cl, 45,46Ar; deduced radii, isospin  
 dependence. <sup>35</sup>Mg, <sup>44</sup>S; deduced possible halo structure or large  
 deformation. JOUR NUPAB 780 1

**A=30 (*continued*)**

<sup>30</sup> Na	2006KH08	NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F, 23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,Na, 28,29,30,31,32,33,34,35,Mg, 31,32,33,34,35,36,37,38,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P, 39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
2006SCZW		RADIOACTIVITY <sup>30</sup> Na( $\beta^-$ ); measured E $\gamma$ , I $\gamma$ , E(ce), I(ce). <sup>30</sup> Mg deduced E0 transition strength. REPT MLL 2005 Annual, P5,Schwerdtfeger
<sup>30</sup> Mg	2006KH08	NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F, 23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,Na, 28,29,30,31,32,33,34,35,Mg, 31,32,33,34,35,36,37,38,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P, 39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
2006SCZW		RADIOACTIVITY <sup>30</sup> Na( $\beta^-$ ); measured E $\gamma$ , I $\gamma$ , E(ce), I(ce). <sup>30</sup> Mg deduced E0 transition strength. REPT MLL 2005 Annual, P5,Schwerdtfeger

**A=31**

<sup>31</sup> Na	2006KH08	NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F, 23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,Na, 28,29,30,31,32,33,34,35,Mg, 31,32,33,34,35,36,37,38,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P, 39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
<sup>31</sup> Mg	2006KH08	NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F, 23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,Na, 28,29,30,31,32,33,34,35,Mg, 31,32,33,34,35,36,37,38,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P, 39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1

KEYNUMBERS AND KEYWORDS

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**A=31 (continued)**

- <sup>31</sup>Al      2006KH08      NUCLEAR REACTIONS Si(<sup>17</sup>N, X), (<sup>18</sup>N, X), (<sup>19</sup>N, X), (<sup>20</sup>N, X), (<sup>21</sup>N, X), (<sup>22</sup>N, X), (<sup>19</sup>O, X), (<sup>20</sup>O, X), (<sup>21</sup>O, X), (<sup>22</sup>O, X), (<sup>23</sup>O, X), (<sup>24</sup>O, X), (<sup>21</sup>F, X), (<sup>22</sup>F, X), (<sup>23</sup>F, X), (<sup>24</sup>F, X), (<sup>25</sup>F, X), (<sup>26</sup>F, X), (<sup>27</sup>F, X), (<sup>23</sup>Ne, X), (<sup>24</sup>Ne, X), (<sup>25</sup>Ne, X), (<sup>26</sup>Ne, X), (<sup>27</sup>Ne, X), (<sup>28</sup>Ne, X), (<sup>29</sup>Ne, X), (<sup>30</sup>Ne, X), (<sup>26</sup>Na, X), (<sup>27</sup>Na, X), (<sup>28</sup>Na, X), (<sup>29</sup>Na, X), (<sup>30</sup>Na, X), (<sup>31</sup>Na, X), (<sup>32</sup>Na, X), (<sup>33</sup>Na, X), (<sup>28</sup>Mg, X), (<sup>29</sup>Mg, X), (<sup>30</sup>Mg, X), (<sup>31</sup>Mg, X), (<sup>32</sup>Mg, X), (<sup>33</sup>Mg, X), (<sup>34</sup>Mg, X), (<sup>35</sup>Mg, X), (<sup>31</sup>Al, X), (<sup>32</sup>Al, X), (<sup>33</sup>Al, X), (<sup>34</sup>Al, X), (<sup>35</sup>Al, X), (<sup>36</sup>Al, X), (<sup>37</sup>Al, X), (<sup>38</sup>Al, X), (<sup>33</sup>Si, X), (<sup>34</sup>Si, X), (<sup>35</sup>Si, X), (<sup>36</sup>Si, X), (<sup>37</sup>Si, X), (<sup>38</sup>Si, X), (<sup>39</sup>Si, X), (<sup>40</sup>Si, X), (<sup>36</sup>P, X), (<sup>37</sup>P, X), (<sup>38</sup>P, X), (<sup>39</sup>P, X), (<sup>40</sup>P, X), (<sup>41</sup>P, X), (<sup>42</sup>P, X), (<sup>39</sup>S, X), (<sup>40</sup>S, X), (<sup>41</sup>S, X), (<sup>42</sup>S, X), (<sup>43</sup>S, X), (<sup>44</sup>S, X), (<sup>42</sup>Cl, X), (<sup>43</sup>Cl, X), (<sup>44</sup>Cl, X), (<sup>45</sup>Cl, X), (<sup>45</sup>Ar, X), (<sup>46</sup>Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction  $\sigma$ .  
 17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F,  
 23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,Na, 28,29,30,31,32,33,34,35,Mg,  
 31,32,33,34,35,36,37,38,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P,  
 39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin  
 dependence. <sup>35</sup>Mg, <sup>44</sup>S; deduced possible halo structure or large  
 deformation. JOUR NUPAB 780 1
- 2006R034      NUCLEAR REACTIONS <sup>2</sup>H(<sup>48</sup>Ca, X)<sup>48</sup>Sc / <sup>47</sup>Ca / <sup>46</sup>Ca / <sup>48</sup>K / <sup>47</sup>K  
 / <sup>46</sup>K / <sup>45</sup>K / <sup>44</sup>K / <sup>45</sup>Ar / <sup>44</sup>Ar / <sup>42</sup>Ar / <sup>42</sup>Cl / <sup>40</sup>Cl / <sup>39</sup>Cl, E=102  
 MeV / nucleon; <sup>2</sup>H(<sup>40</sup>S, X)<sup>40</sup>Cl / <sup>39</sup>S / <sup>38</sup>S / <sup>37</sup>P / <sup>36</sup>P / <sup>34</sup>Si / <sup>33</sup>Si /  
<sup>32</sup>Al / <sup>31</sup>Al, E=99.3 MeV / nucleon; <sup>2</sup>H(<sup>42</sup>S, X)<sup>42</sup>Cl / <sup>42</sup>S / <sup>40</sup>S / <sup>39</sup>P /  
<sup>38</sup>P / <sup>37</sup>P / <sup>36</sup>Si / <sup>35</sup>Si / <sup>33</sup>Al / <sup>32</sup>Al, E=99.8 MeV / nucleon; measured  
 production  $\sigma$ . Comparison with model predictions, fragmentation from  
 Be and Ta targets. JOUR PRVCA 74 034602
- <sup>31</sup>P      2005V024      NUCLEAR REACTIONS <sup>30</sup>Si(p,  $\gamma$ ), E=750-840, 1475-1520 keV;  
 measured E $\gamma$ , I $\gamma$ , excitation function. <sup>31</sup>P deduced analog states  
 widths, J,  $\pi$ , B(M1). JOUR BRSPE 69 1802

**A=32**

<sup>32</sup> Na	2006KH08	NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F, 23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,Na, 28,29,30,31,32,33,34,35,Mg, 31,32,33,34,35,36,37,38,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P, 39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
<sup>32</sup> Mg	2006KH08	NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F, 23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,Na, 28,29,30,31,32,33,34,35,Mg, 31,32,33,34,35,36,37,38,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P, 39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
<sup>32</sup> Al	2006ANZW	RADIOACTIVITY <sup>33</sup> Mg, <sup>35</sup> Al( $\beta^-$ ), ( $\beta^-$ n) [from <sup>36</sup> S fragmentation]; measured E $\gamma$ , En, $\beta\gamma$ -, $\beta$ n-coin; deduced log ft. <sup>34,35</sup> Si, <sup>32,33</sup> Al deduced levels, J, $\pi$ . CONF Isle of Kos (FINUSTAR), Proc, P134

**A=32 (continued)**

- 2006KH08 NUCLEAR REACTIONS Si( $^{17}\text{N}$ , X), ( $^{18}\text{N}$ , X), ( $^{19}\text{N}$ , X), ( $^{20}\text{N}$ , X), ( $^{21}\text{N}$ , X), ( $^{22}\text{N}$ , X), ( $^{19}\text{O}$ , X), ( $^{20}\text{O}$ , X), ( $^{21}\text{O}$ , X), ( $^{22}\text{O}$ , X), ( $^{23}\text{O}$ , X), ( $^{24}\text{O}$ , X), ( $^{21}\text{F}$ , X), ( $^{22}\text{F}$ , X), ( $^{23}\text{F}$ , X), ( $^{24}\text{F}$ , X), ( $^{25}\text{F}$ , X), ( $^{26}\text{F}$ , X), ( $^{27}\text{F}$ , X), ( $^{23}\text{Ne}$ , X), ( $^{24}\text{Ne}$ , X), ( $^{25}\text{Ne}$ , X), ( $^{26}\text{Ne}$ , X), ( $^{27}\text{Ne}$ , X), ( $^{28}\text{Ne}$ , X), ( $^{29}\text{Ne}$ , X), ( $^{30}\text{Ne}$ , X), ( $^{26}\text{Na}$ , X), ( $^{27}\text{Na}$ , X), ( $^{28}\text{Na}$ , X), ( $^{29}\text{Na}$ , X), ( $^{30}\text{Na}$ , X), ( $^{31}\text{Na}$ , X), ( $^{32}\text{Na}$ , X), ( $^{33}\text{Na}$ , X), ( $^{28}\text{Mg}$ , X), ( $^{29}\text{Mg}$ , X), ( $^{30}\text{Mg}$ , X), ( $^{31}\text{Mg}$ , X), ( $^{32}\text{Mg}$ , X), ( $^{33}\text{Mg}$ , X), ( $^{34}\text{Mg}$ , X), ( $^{35}\text{Mg}$ , X), ( $^{31}\text{Al}$ , X), ( $^{32}\text{Al}$ , X), ( $^{33}\text{Al}$ , X), ( $^{34}\text{Al}$ , X), ( $^{35}\text{Al}$ , X), ( $^{36}\text{Al}$ , X), ( $^{37}\text{Al}$ , X), ( $^{38}\text{Al}$ , X), ( $^{33}\text{Si}$ , X), ( $^{34}\text{Si}$ , X), ( $^{35}\text{Si}$ , X), ( $^{36}\text{Si}$ , X), ( $^{37}\text{Si}$ , X), ( $^{38}\text{Si}$ , X), ( $^{39}\text{Si}$ , X), ( $^{40}\text{Si}$ , X), ( $^{36}\text{P}$ , X), ( $^{37}\text{P}$ , X), ( $^{38}\text{P}$ , X), ( $^{39}\text{P}$ , X), ( $^{40}\text{P}$ , X), ( $^{41}\text{P}$ , X), ( $^{42}\text{P}$ , X), ( $^{39}\text{S}$ , X), ( $^{40}\text{S}$ , X), ( $^{41}\text{S}$ , X), ( $^{42}\text{S}$ , X), ( $^{43}\text{S}$ , X), ( $^{44}\text{S}$ , X), ( $^{42}\text{Cl}$ , X), ( $^{43}\text{Cl}$ , X), ( $^{44}\text{Cl}$ , X), ( $^{45}\text{Cl}$ , X), ( $^{45}\text{Ar}$ , X), ( $^{46}\text{Ar}$ , X), E=30-65 MeV / nucleon; measured energy-integrated reaction  $\sigma$ .  
 $^{17,18,19,20,21,22}\text{N}$ ,  $^{19,20,21,22,23,24}\text{O}$ ,  $^{21,22,23,24,25,26,27}\text{F}$ ,  
 $^{23,24,25,26,27,28,29,30}\text{Ne}$ ,  $^{26,27,28,29,30,31,32,33}\text{Na}$ ,  $^{28,29,30,31,32,33,34,35}\text{Mg}$ ,  
 $^{31,32,33,34,35,36,37,38}\text{Al}$ ,  $^{33,34,35,36,37,38,39,40}\text{Si}$ ,  $^{36,37,38,39,40,41,42}\text{P}$ ,  
 $^{39,40,41,42,43,44}\text{S}$ ,  $^{42,43,44,45}\text{Cl}$ ,  $^{45,46}\text{Ar}$ ; deduced radii, isospin dependence.  $^{35}\text{Mg}$ ,  $^{44}\text{S}$ ; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
- 2006R034 NUCLEAR REACTIONS  $^2\text{H}$ ( $^{48}\text{Ca}$ , X) $^{48}\text{Sc}$  /  $^{47}\text{Ca}$  /  $^{46}\text{Ca}$  /  $^{48}\text{K}$  /  $^{47}\text{K}$  /  $^{46}\text{K}$  /  $^{45}\text{K}$  /  $^{44}\text{K}$  /  $^{45}\text{Ar}$  /  $^{44}\text{Ar}$  /  $^{42}\text{Ar}$  /  $^{42}\text{Cl}$  /  $^{40}\text{Cl}$  /  $^{39}\text{Cl}$ , E=102 MeV / nucleon;  $^2\text{H}$ ( $^{40}\text{S}$ , X) $^{40}\text{Cl}$  /  $^{39}\text{S}$  /  $^{38}\text{S}$  /  $^{37}\text{P}$  /  $^{36}\text{P}$  /  $^{34}\text{Si}$  /  $^{33}\text{Si}$  /  $^{32}\text{Al}$  /  $^{31}\text{Al}$ , E=99.3 MeV / nucleon;  $^2\text{H}$ ( $^{42}\text{S}$ , X) $^{42}\text{Cl}$  /  $^{42}\text{S}$  /  $^{40}\text{S}$  /  $^{39}\text{P}$  /  $^{38}\text{P}$  /  $^{37}\text{P}$  /  $^{36}\text{Si}$  /  $^{35}\text{Si}$  /  $^{33}\text{Al}$  /  $^{32}\text{Al}$ , E=99.8 MeV / nucleon; measured production  $\sigma$ . Comparison with model predictions, fragmentation from Be and Ta targets. JOUR PRVCA 74 034602

**A=33**

- $^{33}\text{Na}$  2006KH08 NUCLEAR REACTIONS Si( $^{17}\text{N}$ , X), ( $^{18}\text{N}$ , X), ( $^{19}\text{N}$ , X), ( $^{20}\text{N}$ , X), ( $^{21}\text{N}$ , X), ( $^{22}\text{N}$ , X), ( $^{19}\text{O}$ , X), ( $^{20}\text{O}$ , X), ( $^{21}\text{O}$ , X), ( $^{22}\text{O}$ , X), ( $^{23}\text{O}$ , X), ( $^{24}\text{O}$ , X), ( $^{21}\text{F}$ , X), ( $^{22}\text{F}$ , X), ( $^{23}\text{F}$ , X), ( $^{24}\text{F}$ , X), ( $^{25}\text{F}$ , X), ( $^{26}\text{F}$ , X), ( $^{27}\text{F}$ , X), ( $^{23}\text{Ne}$ , X), ( $^{24}\text{Ne}$ , X), ( $^{25}\text{Ne}$ , X), ( $^{26}\text{Ne}$ , X), ( $^{27}\text{Ne}$ , X), ( $^{28}\text{Ne}$ , X), ( $^{29}\text{Ne}$ , X), ( $^{30}\text{Ne}$ , X), ( $^{26}\text{Na}$ , X), ( $^{27}\text{Na}$ , X), ( $^{28}\text{Na}$ , X), ( $^{29}\text{Na}$ , X), ( $^{30}\text{Na}$ , X), ( $^{31}\text{Na}$ , X), ( $^{32}\text{Na}$ , X), ( $^{33}\text{Na}$ , X), ( $^{28}\text{Mg}$ , X), ( $^{29}\text{Mg}$ , X), ( $^{30}\text{Mg}$ , X), ( $^{31}\text{Mg}$ , X), ( $^{32}\text{Mg}$ , X), ( $^{33}\text{Mg}$ , X), ( $^{34}\text{Mg}$ , X), ( $^{35}\text{Mg}$ , X), ( $^{31}\text{Al}$ , X), ( $^{32}\text{Al}$ , X), ( $^{33}\text{Al}$ , X), ( $^{34}\text{Al}$ , X), ( $^{35}\text{Al}$ , X), ( $^{36}\text{Al}$ , X), ( $^{37}\text{Al}$ , X), ( $^{38}\text{Al}$ , X), ( $^{33}\text{Si}$ , X), ( $^{34}\text{Si}$ , X), ( $^{35}\text{Si}$ , X), ( $^{36}\text{Si}$ , X), ( $^{37}\text{Si}$ , X), ( $^{38}\text{Si}$ , X), ( $^{39}\text{Si}$ , X), ( $^{40}\text{Si}$ , X), ( $^{36}\text{P}$ , X), ( $^{37}\text{P}$ , X), ( $^{38}\text{P}$ , X), ( $^{39}\text{P}$ , X), ( $^{40}\text{P}$ , X), ( $^{41}\text{P}$ , X), ( $^{42}\text{P}$ , X), ( $^{39}\text{S}$ , X), ( $^{40}\text{S}$ , X), ( $^{41}\text{S}$ , X), ( $^{42}\text{S}$ , X), ( $^{43}\text{S}$ , X), ( $^{44}\text{S}$ , X), ( $^{42}\text{Cl}$ , X), ( $^{43}\text{Cl}$ , X), ( $^{44}\text{Cl}$ , X), ( $^{45}\text{Cl}$ , X), ( $^{45}\text{Ar}$ , X), ( $^{46}\text{Ar}$ , X), E=30-65 MeV / nucleon; measured energy-integrated reaction  $\sigma$ .  
 $^{17,18,19,20,21,22}\text{N}$ ,  $^{19,20,21,22,23,24}\text{O}$ ,  $^{21,22,23,24,25,26,27}\text{F}$ ,  
 $^{23,24,25,26,27,28,29,30}\text{Ne}$ ,  $^{26,27,28,29,30,31,32,33}\text{Na}$ ,  $^{28,29,30,31,32,33,34,35}\text{Mg}$ ,  
 $^{31,32,33,34,35,36,37,38}\text{Al}$ ,  $^{33,34,35,36,37,38,39,40}\text{Si}$ ,  $^{36,37,38,39,40,41,42}\text{P}$ ,  
 $^{39,40,41,42,43,44}\text{S}$ ,  $^{42,43,44,45}\text{Cl}$ ,  $^{45,46}\text{Ar}$ ; deduced radii, isospin dependence.  $^{35}\text{Mg}$ ,  $^{44}\text{S}$ ; deduced possible halo structure or large deformation. JOUR NUPAB 780 1

**A=33 (*continued*)**

$^{33}\text{Mg}$	2006ANZW	RADIOACTIVITY $^{33}\text{Mg}$ , $^{35}\text{Al}(\beta^-)$ , $(\beta^-n)$ [from $^{36}\text{S}$ fragmentation]; measured $E\gamma$ , En, $\beta\gamma$ -, $\beta n$ -coin; deduced log ft. $^{34,35}\text{Si}$ , $^{32,33}\text{Al}$ deduced levels, J, $\pi$ . CONF Isle of Kos (FINUSTAR), Proc, P134
	2006KH08	NUCLEAR REACTIONS Si( $^{17}\text{N}$ , X), ( $^{18}\text{N}$ , X), ( $^{19}\text{N}$ , X), ( $^{20}\text{N}$ , X), ( $^{21}\text{N}$ , X), ( $^{22}\text{N}$ , X), ( $^{19}\text{O}$ , X), ( $^{20}\text{O}$ , X), ( $^{21}\text{O}$ , X), ( $^{22}\text{O}$ , X), ( $^{23}\text{O}$ , X), ( $^{24}\text{O}$ , X), ( $^{21}\text{F}$ , X), ( $^{22}\text{F}$ , X), ( $^{23}\text{F}$ , X), ( $^{24}\text{F}$ , X), ( $^{25}\text{F}$ , X), ( $^{26}\text{F}$ , X), ( $^{27}\text{F}$ , X), ( $^{23}\text{Ne}$ , X), ( $^{24}\text{Ne}$ , X), ( $^{25}\text{Ne}$ , X), ( $^{26}\text{Ne}$ , X), ( $^{27}\text{Ne}$ , X), ( $^{28}\text{Ne}$ , X), ( $^{29}\text{Ne}$ , X), ( $^{30}\text{Ne}$ , X), ( $^{26}\text{Na}$ , X), ( $^{27}\text{Na}$ , X), ( $^{28}\text{Na}$ , X), ( $^{29}\text{Na}$ , X), ( $^{30}\text{Na}$ , X), ( $^{31}\text{Na}$ , X), ( $^{32}\text{Na}$ , X), ( $^{33}\text{Na}$ , X), ( $^{28}\text{Mg}$ , X), ( $^{29}\text{Mg}$ , X), ( $^{30}\text{Mg}$ , X), ( $^{31}\text{Mg}$ , X), ( $^{32}\text{Mg}$ , X), ( $^{33}\text{Mg}$ , X), ( $^{34}\text{Mg}$ , X), ( $^{35}\text{Mg}$ , X), ( $^{31}\text{Al}$ , X), ( $^{32}\text{Al}$ , X), ( $^{33}\text{Al}$ , X), ( $^{34}\text{Al}$ , X), ( $^{35}\text{Al}$ , X), ( $^{36}\text{Al}$ , X), ( $^{37}\text{Al}$ , X), ( $^{38}\text{Al}$ , X), ( $^{33}\text{Si}$ , X), ( $^{34}\text{Si}$ , X), ( $^{35}\text{Si}$ , X), ( $^{36}\text{Si}$ , X), ( $^{37}\text{Si}$ , X), ( $^{38}\text{Si}$ , X), ( $^{39}\text{Si}$ , X), ( $^{40}\text{Si}$ , X), ( $^{36}\text{P}$ , X), ( $^{37}\text{P}$ , X), ( $^{38}\text{P}$ , X), ( $^{39}\text{P}$ , X), ( $^{40}\text{P}$ , X), ( $^{41}\text{P}$ , X), ( $^{42}\text{P}$ , X), ( $^{39}\text{S}$ , X), ( $^{40}\text{S}$ , X), ( $^{41}\text{S}$ , X), ( $^{42}\text{S}$ , X), ( $^{43}\text{S}$ , X), ( $^{44}\text{S}$ , X), ( $^{42}\text{Cl}$ , X), ( $^{43}\text{Cl}$ , X), ( $^{44}\text{Cl}$ , X), ( $^{45}\text{Cl}$ , X), ( $^{45}\text{Ar}$ , X), ( $^{46}\text{Ar}$ , X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46.
$^{33}\text{Al}$	2006ANZW	RADIOACTIVITY $^{33}\text{Mg}$ , $^{35}\text{Al}(\beta^-)$ , $(\beta^-n)$ [from $^{36}\text{S}$ fragmentation]; measured $E\gamma$ , En, $\beta\gamma$ -, $\beta n$ -coin; deduced log ft. $^{34,35}\text{Si}$ , $^{32,33}\text{Al}$ deduced levels, J, $\pi$ . CONF Isle of Kos (FINUSTAR), Proc, P134
	2006KH08	NUCLEAR REACTIONS Si( $^{17}\text{N}$ , X), ( $^{18}\text{N}$ , X), ( $^{19}\text{N}$ , X), ( $^{20}\text{N}$ , X), ( $^{21}\text{N}$ , X), ( $^{22}\text{N}$ , X), ( $^{19}\text{O}$ , X), ( $^{20}\text{O}$ , X), ( $^{21}\text{O}$ , X), ( $^{22}\text{O}$ , X), ( $^{23}\text{O}$ , X), ( $^{24}\text{O}$ , X), ( $^{21}\text{F}$ , X), ( $^{22}\text{F}$ , X), ( $^{23}\text{F}$ , X), ( $^{24}\text{F}$ , X), ( $^{25}\text{F}$ , X), ( $^{26}\text{F}$ , X), ( $^{27}\text{F}$ , X), ( $^{23}\text{Ne}$ , X), ( $^{24}\text{Ne}$ , X), ( $^{25}\text{Ne}$ , X), ( $^{26}\text{Ne}$ , X), ( $^{27}\text{Ne}$ , X), ( $^{28}\text{Ne}$ , X), ( $^{29}\text{Ne}$ , X), ( $^{30}\text{Ne}$ , X), ( $^{26}\text{Na}$ , X), ( $^{27}\text{Na}$ , X), ( $^{28}\text{Na}$ , X), ( $^{29}\text{Na}$ , X), ( $^{30}\text{Na}$ , X), ( $^{31}\text{Na}$ , X), ( $^{32}\text{Na}$ , X), ( $^{33}\text{Na}$ , X), ( $^{28}\text{Mg}$ , X), ( $^{29}\text{Mg}$ , X), ( $^{30}\text{Mg}$ , X), ( $^{31}\text{Mg}$ , X), ( $^{32}\text{Mg}$ , X), ( $^{33}\text{Mg}$ , X), ( $^{34}\text{Mg}$ , X), ( $^{35}\text{Mg}$ , X), ( $^{31}\text{Al}$ , X), ( $^{32}\text{Al}$ , X), ( $^{33}\text{Al}$ , X), ( $^{34}\text{Al}$ , X), ( $^{35}\text{Al}$ , X), ( $^{36}\text{Al}$ , X), ( $^{37}\text{Al}$ , X), ( $^{38}\text{Al}$ , X), ( $^{33}\text{Si}$ , X), ( $^{34}\text{Si}$ , X), ( $^{35}\text{Si}$ , X), ( $^{36}\text{Si}$ , X), ( $^{37}\text{Si}$ , X), ( $^{38}\text{Si}$ , X), ( $^{39}\text{Si}$ , X), ( $^{40}\text{Si}$ , X), ( $^{36}\text{P}$ , X), ( $^{37}\text{P}$ , X), ( $^{38}\text{P}$ , X), ( $^{39}\text{P}$ , X), ( $^{40}\text{P}$ , X), ( $^{41}\text{P}$ , X), ( $^{42}\text{P}$ , X), ( $^{39}\text{S}$ , X), ( $^{40}\text{S}$ , X), ( $^{41}\text{S}$ , X), ( $^{42}\text{S}$ , X), ( $^{43}\text{S}$ , X), ( $^{44}\text{S}$ , X), ( $^{42}\text{Cl}$ , X), ( $^{43}\text{Cl}$ , X), ( $^{44}\text{Cl}$ , X), ( $^{45}\text{Cl}$ , X), ( $^{45}\text{Ar}$ , X), ( $^{46}\text{Ar}$ , X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46.

KEYNUMBERS AND KEYWORDS

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**A=33 (*continued*)**

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| 2006R034         | NUCLEAR REACTIONS $^2\text{H}$ ( $^{48}\text{Ca}$ , X) $^{48}\text{Sc}$ / $^{47}\text{Ca}$ / $^{46}\text{Ca}$ / $^{48}\text{K}$ / $^{47}\text{K}$ / $^{46}\text{K}$ / $^{45}\text{K}$ / $^{44}\text{K}$ / $^{45}\text{Ar}$ / $^{44}\text{Ar}$ / $^{42}\text{Ar}$ / $^{42}\text{Cl}$ / $^{40}\text{Cl}$ / $^{39}\text{Cl}$ , E=102 MeV / nucleon; $^2\text{H}$ ( $^{40}\text{S}$ , X) $^{40}\text{Cl}$ / $^{39}\text{S}$ / $^{38}\text{S}$ / $^{37}\text{P}$ / $^{36}\text{P}$ / $^{34}\text{Si}$ / $^{33}\text{Si}$ / $^{32}\text{Al}$ / $^{31}\text{Al}$ , E=99.3 MeV / nucleon; $^2\text{H}$ ( $^{42}\text{S}$ , X) $^{42}\text{Cl}$ / $^{42}\text{S}$ / $^{40}\text{S}$ / $^{39}\text{P}$ / $^{38}\text{P}$ / $^{37}\text{P}$ / $^{36}\text{Si}$ / $^{35}\text{Si}$ / $^{33}\text{Al}$ / $^{32}\text{Al}$ , E=99.8 MeV / nucleon; measured production $\sigma$ . Comparison with model predictions, fragmentation from Be and Ta targets. JOUR PRVCA 74 034602 |  |
| $^{33}\text{Si}$ | 2006KH08  | NUCLEAR REACTIONS $\text{Si}(^{17}\text{N}, \text{X})$ , $(^{18}\text{N}, \text{X})$ , $(^{19}\text{N}, \text{X})$ , $(^{20}\text{N}, \text{X})$ , $(^{21}\text{N}, \text{X})$ , $(^{22}\text{N}, \text{X})$ , $(^{19}\text{O}, \text{X})$ , $(^{20}\text{O}, \text{X})$ , $(^{21}\text{O}, \text{X})$ , $(^{22}\text{O}, \text{X})$ , $(^{23}\text{O}, \text{X})$ , $(^{24}\text{O}, \text{X})$ , $(^{21}\text{F}, \text{X})$ , $(^{22}\text{F}, \text{X})$ , $(^{23}\text{F}, \text{X})$ , $(^{24}\text{F}, \text{X})$ , $(^{25}\text{F}, \text{X})$ , $(^{26}\text{F}, \text{X})$ , $(^{27}\text{F}, \text{X})$ , $(^{23}\text{Ne}, \text{X})$ , $(^{24}\text{Ne}, \text{X})$ , $(^{25}\text{Ne}, \text{X})$ , $(^{26}\text{Ne}, \text{X})$ , $(^{27}\text{Ne}, \text{X})$ , $(^{28}\text{Ne}, \text{X})$ , $(^{29}\text{Ne}, \text{X})$ , $(^{30}\text{Ne}, \text{X})$ , $(^{30}\text{Na}, \text{X})$ , $(^{26}\text{Na}, \text{X})$ , $(^{27}\text{Na}, \text{X})$ , $(^{28}\text{Na}, \text{X})$ , $(^{29}\text{Na}, \text{X})$ , $(^{30}\text{Na}, \text{X})$ , $(^{31}\text{Na}, \text{X})$ , $(^{32}\text{Na}, \text{X})$ , $(^{33}\text{Na}, \text{X})$ , $(^{28}\text{Mg}, \text{X})$ , $(^{29}\text{Mg}, \text{X})$ , $(^{30}\text{Mg}, \text{X})$ , $(^{31}\text{Mg}, \text{X})$ , $(^{32}\text{Mg}, \text{X})$ , $(^{33}\text{Mg}, \text{X})$ , $(^{34}\text{Mg}, \text{X})$ , $(^{35}\text{Mg}, \text{X})$ , $(^{31}\text{Al}, \text{X})$ , $(^{32}\text{Al}, \text{X})$ , $(^{33}\text{Al}, \text{X})$ , $(^{34}\text{Al}, \text{X})$ , $(^{35}\text{Al}, \text{X})$ , $(^{36}\text{Al}, \text{X})$ , $(^{37}\text{Al}, \text{X})$ , $(^{38}\text{Al}, \text{X})$ , $(^{33}\text{Si}, \text{X})$ , $(^{34}\text{Si}, \text{X})$ , $(^{35}\text{Si}, \text{X})$ , $(^{36}\text{Si}, \text{X})$ , $(^{37}\text{Si}, \text{X})$ , $(^{38}\text{Si}, \text{X})$ , $(^{39}\text{Si}, \text{X})$ , $(^{40}\text{Si}, \text{X})$ , $(^{36}\text{P}, \text{X})$ , $(^{37}\text{P}, \text{X})$ , $(^{38}\text{P}, \text{X})$ , $(^{39}\text{P}, \text{X})$ , $(^{40}\text{P}, \text{X})$ , $(^{41}\text{P}, \text{X})$ , $(^{42}\text{P}, \text{X})$ , $(^{39}\text{S}, \text{X})$ , $(^{40}\text{S}, \text{X})$ , $(^{41}\text{S}, \text{X})$ , $(^{42}\text{S}, \text{X})$ , $(^{43}\text{S}, \text{X})$ , $(^{44}\text{S}, \text{X})$ , $(^{42}\text{Cl}, \text{X})$ , $(^{43}\text{Cl}, \text{X})$ , $(^{44}\text{Cl}, \text{X})$ , $(^{45}\text{Ar}, \text{X})$ , $(^{46}\text{Ar}, \text{X})$ , E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46; deduced radii, isospin dependence. $^{35}\text{Mg}$ , $^{44}\text{S}$ ; deduced possible halo structure or large deformation. JOUR NUPAB 780 1 |
| 2006R034         | NUCLEAR REACTIONS $^2\text{H}$ ( $^{48}\text{Ca}$ , X) $^{48}\text{Sc}$ / $^{47}\text{Ca}$ / $^{46}\text{Ca}$ / $^{48}\text{K}$ / $^{47}\text{K}$ / $^{46}\text{K}$ / $^{45}\text{K}$ / $^{44}\text{K}$ / $^{45}\text{Ar}$ / $^{44}\text{Ar}$ / $^{42}\text{Ar}$ / $^{42}\text{Cl}$ / $^{40}\text{Cl}$ / $^{39}\text{Cl}$ , E=102 MeV / nucleon; $^2\text{H}$ ( $^{40}\text{S}$ , X) $^{40}\text{Cl}$ / $^{39}\text{S}$ / $^{38}\text{S}$ / $^{37}\text{P}$ / $^{36}\text{P}$ / $^{34}\text{Si}$ / $^{33}\text{Si}$ / $^{32}\text{Al}$ / $^{31}\text{Al}$ , E=99.3 MeV / nucleon; $^2\text{H}$ ( $^{42}\text{S}$ , X) $^{42}\text{Cl}$ / $^{42}\text{S}$ / $^{40}\text{S}$ / $^{39}\text{P}$ / $^{38}\text{P}$ / $^{37}\text{P}$ / $^{36}\text{Si}$ / $^{35}\text{Si}$ / $^{33}\text{Al}$ / $^{32}\text{Al}$ , E=99.8 MeV / nucleon; measured production $\sigma$ . Comparison with model predictions, fragmentation from Be and Ta targets. JOUR PRVCA 74 034602 |  |
| $^{33}\text{Cl}$ | 2006TR10  | NUCLEAR REACTIONS $^{32}\text{S}(\text{p}, \gamma)$ , E $\approx$ 1.75, 3.4 MeV; measured $E\gamma$ , $I\gamma$ , excitation functions. $^{33}\text{Cl}$ deduced level energies, widths. JOUR PRVCA 74 054306  |

**A=34**

<sup>34</sup> Mg	2006KH08	NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F, 23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,Na, 28,29,30,31,32,33,34,35,Mg, 31,32,33,34,35,36,37,38,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P, 39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
<sup>34</sup> Al	2006KH08	NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F, 23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,Na, 28,29,30,31,32,33,34,35,Mg, 31,32,33,34,35,36,37,38,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P, 39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
<sup>34</sup> Si	2006ANZW	RADIOACTIVITY <sup>33</sup> Mg, <sup>35</sup> Al( $\beta^-$ ), ( $\beta^-$ n) [from <sup>36</sup> S fragmentation]; measured E $\gamma$ , En, $\beta\gamma$ -, $\beta$ n-coin; deduced log ft. <sup>34,35</sup> Si, <sup>32,33</sup> Al deduced levels, J, $\pi$ . CONF Isle of Kos (FINUSTAR), Proc, P134

**A=34 (continued)**

2006KH08	NUCLEAR REACTIONS Si( $^{17}\text{N}$ , X), ( $^{18}\text{N}$ , X), ( $^{19}\text{N}$ , X), ( $^{20}\text{N}$ , X), ( $^{21}\text{N}$ , X), ( $^{22}\text{N}$ , X), ( $^{19}\text{O}$ , X), ( $^{20}\text{O}$ , X), ( $^{21}\text{O}$ , X), ( $^{22}\text{O}$ , X), ( $^{23}\text{O}$ , X), ( $^{24}\text{O}$ , X), ( $^{21}\text{F}$ , X), ( $^{22}\text{F}$ , X), ( $^{23}\text{F}$ , X), ( $^{24}\text{F}$ , X), ( $^{25}\text{F}$ , X), ( $^{26}\text{F}$ , X), ( $^{27}\text{F}$ , X), ( $^{23}\text{Ne}$ , X), ( $^{24}\text{Ne}$ , X), ( $^{25}\text{Ne}$ , X), ( $^{26}\text{Ne}$ , X), ( $^{27}\text{Ne}$ , X), ( $^{28}\text{Ne}$ , X), ( $^{29}\text{Ne}$ , X), ( $^{30}\text{Ne}$ , X), ( $^{26}\text{Na}$ , X), ( $^{27}\text{Na}$ , X), ( $^{28}\text{Na}$ , X), ( $^{29}\text{Na}$ , X), ( $^{30}\text{Na}$ , X), ( $^{31}\text{Na}$ , X), ( $^{32}\text{Na}$ , X), ( $^{33}\text{Na}$ , X), ( $^{28}\text{Mg}$ , X), ( $^{29}\text{Mg}$ , X), ( $^{30}\text{Mg}$ , X), ( $^{31}\text{Mg}$ , X), ( $^{32}\text{Mg}$ , X), ( $^{33}\text{Mg}$ , X), ( $^{34}\text{Mg}$ , X), ( $^{35}\text{Mg}$ , X), ( $^{31}\text{Al}$ , X), ( $^{32}\text{Al}$ , X), ( $^{33}\text{Al}$ , X), ( $^{34}\text{Al}$ , X), ( $^{35}\text{Al}$ , X), ( $^{36}\text{Al}$ , X), ( $^{37}\text{Al}$ , X), ( $^{38}\text{Al}$ , X), ( $^{33}\text{Si}$ , X), ( $^{34}\text{Si}$ , X), ( $^{35}\text{Si}$ , X), ( $^{36}\text{Si}$ , X), ( $^{37}\text{Si}$ , X), ( $^{38}\text{Si}$ , X), ( $^{39}\text{Si}$ , X), ( $^{40}\text{Si}$ , X), ( $^{36}\text{P}$ , X), ( $^{37}\text{P}$ , X), ( $^{38}\text{P}$ , X), ( $^{39}\text{P}$ , X), ( $^{40}\text{P}$ , X), ( $^{41}\text{P}$ , X), ( $^{42}\text{P}$ , X), ( $^{39}\text{S}$ , X), ( $^{40}\text{S}$ , X), ( $^{41}\text{S}$ , X), ( $^{42}\text{S}$ , X), ( $^{43}\text{S}$ , X), ( $^{44}\text{S}$ , X), ( $^{42}\text{Cl}$ , X), ( $^{43}\text{Cl}$ , X), ( $^{44}\text{Cl}$ , X), ( $^{45}\text{Cl}$ , X), ( $^{45}\text{Ar}$ , X), ( $^{46}\text{Ar}$ , X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22 $\text{N}$ , 19,20,21,22,23,24 $\text{O}$ , 21,22,23,24,25,26,27 $\text{F}$ , 23,24,25,26,27,28,29,30 $\text{Ne}$ , 26,27,28,29,30,31,32,33 $\text{Na}$ , 28,29,30,31,32,33,34,35 $\text{Mg}$ , 31,32,33,34,35,36,37,38 $\text{Al}$ , 33,34,35,36,37,38,39,40 $\text{Si}$ , 36,37,38,39,40,41,42 $\text{P}$ , 39,40,41,42,43,44 $\text{S}$ , 42,43,44,45 $\text{Cl}$ , 45,46 $\text{Ar}$ ; deduced radii, isospin dependence. $^{35}\text{Mg}$ , $^{44}\text{S}$ ; deduced possible halo structure or large deformation. JOUR NUPAB 780 1	
2006R034	NUCLEAR REACTIONS $^2\text{H}$ ( $^{48}\text{Ca}$ , X) $^{48}\text{Sc}$ / $^{47}\text{Ca}$ / $^{46}\text{Ca}$ / $^{48}\text{K}$ / $^{47}\text{K}$ / $^{46}\text{K}$ / $^{45}\text{K}$ / $^{44}\text{K}$ / $^{45}\text{Ar}$ / $^{44}\text{Ar}$ / $^{42}\text{Ar}$ / $^{42}\text{Cl}$ / $^{40}\text{Cl}$ / $^{39}\text{Cl}$ , E=102 MeV / nucleon; $^2\text{H}$ ( $^{40}\text{S}$ , X) $^{40}\text{Cl}$ / $^{39}\text{S}$ / $^{38}\text{S}$ / $^{37}\text{P}$ / $^{36}\text{P}$ / $^{34}\text{Si}$ / $^{33}\text{Si}$ / $^{32}\text{Al}$ / $^{31}\text{Al}$ , E=99.3 MeV / nucleon; $^2\text{H}$ ( $^{42}\text{S}$ , X) $^{42}\text{Cl}$ / $^{42}\text{S}$ / $^{40}\text{S}$ / $^{39}\text{P}$ / $^{38}\text{P}$ / $^{37}\text{P}$ / $^{36}\text{Si}$ / $^{35}\text{Si}$ / $^{33}\text{Al}$ / $^{32}\text{Al}$ , E=99.8 MeV / nucleon; measured production $\sigma$ . Comparison with model predictions, fragmentation from Be and Ta targets. JOUR PRVCA 74 034602	
$^{34}\text{S}$	2006IA05	RADIOACTIVITY $^{34,35}\text{Ar}$ , $^{34}\text{Cl}(\beta^+)$ [from $^1\text{H}$ ( $^{35}\text{Cl}$ , xnyp)]; measured $T_{1/2}$ . JOUR PRVCA 74 055502
$^{34}\text{Cl}$	2006IA05	RADIOACTIVITY $^{34,35}\text{Ar}$ , $^{34}\text{Cl}(\beta^+)$ [from $^1\text{H}$ ( $^{35}\text{Cl}$ , xnyp)]; measured $T_{1/2}$ . JOUR PRVCA 74 055502
$^{34}\text{Ar}$	2006IA05	RADIOACTIVITY $^{34,35}\text{Ar}$ , $^{34}\text{Cl}(\beta^+)$ [from $^1\text{H}$ ( $^{35}\text{Cl}$ , xnyp)]; measured $T_{1/2}$ . JOUR PRVCA 74 055502

### A=35

$^{35}\text{Mg}$	2006KH08	<p>NUCLEAR REACTIONS Si(<math>^{17}\text{N}</math>, X), (<math>^{18}\text{N}</math>, X), (<math>^{19}\text{N}</math>, X), (<math>^{20}\text{N}</math>, X), (<math>^{21}\text{N}</math>, X), (<math>^{22}\text{N}</math>, X), (<math>^{19}\text{O}</math>, X), (<math>^{20}\text{O}</math>, X), (<math>^{21}\text{O}</math>, X), (<math>^{22}\text{O}</math>, X), (<math>^{23}\text{O}</math>, X), (<math>^{24}\text{O}</math>, X), (<math>^{21}\text{F}</math>, X), (<math>^{22}\text{F}</math>, X), (<math>^{23}\text{F}</math>, X), (<math>^{24}\text{F}</math>, X), (<math>^{25}\text{F}</math>, X), (<math>^{26}\text{F}</math>, X), (<math>^{27}\text{F}</math>, X), (<math>^{23}\text{Ne}</math>, X), (<math>^{24}\text{Ne}</math>, X), (<math>^{25}\text{Ne}</math>, X), (<math>^{26}\text{Ne}</math>, X), (<math>^{27}\text{Ne}</math>, X), (<math>^{28}\text{Ne}</math>, X), (<math>^{29}\text{Ne}</math>, X), (<math>^{30}\text{Ne}</math>, X), (<math>^{26}\text{Na}</math>, X), (<math>^{27}\text{Na}</math>, X), (<math>^{28}\text{Na}</math>, X), (<math>^{29}\text{Na}</math>, X), (<math>^{30}\text{Na}</math>, X), (<math>^{31}\text{Na}</math>, X), (<math>^{32}\text{Na}</math>, X), (<math>^{33}\text{Na}</math>, X), (<math>^{28}\text{Mg}</math>, X), (<math>^{29}\text{Mg}</math>, X), (<math>^{30}\text{Mg}</math>, X), (<math>^{31}\text{Mg}</math>, X), (<math>^{32}\text{Mg}</math>, X), (<math>^{33}\text{Mg}</math>, X), (<math>^{34}\text{Mg}</math>, X), (<math>^{35}\text{Mg}</math>, X), (<math>^{31}\text{Al}</math>, X), (<math>^{32}\text{Al}</math>, X), (<math>^{33}\text{Al}</math>, X), (<math>^{34}\text{Al}</math>, X), (<math>^{35}\text{Al}</math>, X), (<math>^{36}\text{Al}</math>, X), (<math>^{37}\text{Al}</math>, X), (<math>^{38}\text{Al}</math>, X), (<math>^{33}\text{Si}</math>, X), (<math>^{34}\text{Si}</math>, X), (<math>^{35}\text{Si}</math>, X), (<math>^{36}\text{Si}</math>, X), (<math>^{37}\text{Si}</math>, X), (<math>^{38}\text{Si}</math>, X), (<math>^{39}\text{Si}</math>, X), (<math>^{40}\text{Si}</math>, X), (<math>^{36}\text{P}</math>, X), (<math>^{37}\text{P}</math>, X), (<math>^{38}\text{P}</math>, X), (<math>^{39}\text{P}</math>, X), (<math>^{40}\text{P}</math>, X), (<math>^{41}\text{P}</math>, X), (<math>^{42}\text{P}</math>, X), (<math>^{39}\text{S}</math>, X), (<math>^{40}\text{S}</math>, X), (<math>^{41}\text{S}</math>, X), (<math>^{42}\text{S}</math>, X), (<math>^{43}\text{S}</math>, X), (<math>^{44}\text{S}</math>, X), (<math>^{42}\text{Cl}</math>, X), (<math>^{43}\text{Cl}</math>, X), (<math>^{44}\text{Cl}</math>, X), (<math>^{45}\text{Cl}</math>, X), (<math>^{45}\text{Ar}</math>, X), (<math>^{46}\text{Ar}</math>, X), E=30-65 MeV / nucleon; measured energy-integrated reaction <math>\sigma</math>.  17,18,19,20,21,22,<math>\text{N}</math>, 19,20,21,22,23,24,<math>\text{O}</math>, 21,22,23,24,25,26,27,<math>\text{F}</math>,  23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,<math>\text{P}</math>,  31,32,33,34,35,36,37,38,39,40,41,42,<math>\text{S}</math>, 42,43,44,45,<math>\text{Cl}</math>, 45,46,Ar; deduced radii, isospin dependence. <math>^{35}\text{Mg}</math>, <math>^{44}\text{S}</math>; deduced possible halo structure or large deformation. JOUR NUPAB 780 1 </p>
$^{35}\text{Al}$	2006ANZW	<p>RADIOACTIVITY <math>^{33}\text{Mg}</math>, <math>^{35}\text{Al}(\beta^-)</math>, (<math>\beta^-</math>n) [from <math>^{36}\text{S}</math> fragmentation]; measured E<math>\gamma</math>, En, <math>\beta\gamma</math>-, <math>\beta</math>n-coin; deduced log ft. <math>^{34,35}\text{Si}</math>, <math>^{32,33}\text{Al}</math> deduced levels, J, <math>\pi</math>. CONF Isle of Kos (FINUSTAR), Proc, P134</p>
	2006KH08	<p>NUCLEAR REACTIONS Si(<math>^{17}\text{N}</math>, X), (<math>^{18}\text{N}</math>, X), (<math>^{19}\text{N}</math>, X), (<math>^{20}\text{N}</math>, X), (<math>^{21}\text{N}</math>, X), (<math>^{22}\text{N}</math>, X), (<math>^{19}\text{O}</math>, X), (<math>^{20}\text{O}</math>, X), (<math>^{21}\text{O}</math>, X), (<math>^{22}\text{O}</math>, X), (<math>^{23}\text{O}</math>, X), (<math>^{24}\text{O}</math>, X), (<math>^{21}\text{F}</math>, X), (<math>^{22}\text{F}</math>, X), (<math>^{23}\text{F}</math>, X), (<math>^{24}\text{F}</math>, X), (<math>^{25}\text{F}</math>, X), (<math>^{26}\text{F}</math>, X), (<math>^{27}\text{F}</math>, X), (<math>^{23}\text{Ne}</math>, X), (<math>^{24}\text{Ne}</math>, X), (<math>^{25}\text{Ne}</math>, X), (<math>^{26}\text{Ne}</math>, X), (<math>^{27}\text{Ne}</math>, X), (<math>^{28}\text{Ne}</math>, X), (<math>^{29}\text{Ne}</math>, X), (<math>^{30}\text{Ne}</math>, X), (<math>^{26}\text{Na}</math>, X), (<math>^{27}\text{Na}</math>, X), (<math>^{28}\text{Na}</math>, X), (<math>^{29}\text{Na}</math>, X), (<math>^{30}\text{Na}</math>, X), (<math>^{31}\text{Na}</math>, X), (<math>^{32}\text{Na}</math>, X), (<math>^{33}\text{Na}</math>, X), (<math>^{28}\text{Mg}</math>, X), (<math>^{29}\text{Mg}</math>, X), (<math>^{30}\text{Mg}</math>, X), (<math>^{31}\text{Mg}</math>, X), (<math>^{32}\text{Mg}</math>, X), (<math>^{33}\text{Mg}</math>, X), (<math>^{34}\text{Mg}</math>, X), (<math>^{35}\text{Mg}</math>, X), (<math>^{31}\text{Al}</math>, X), (<math>^{32}\text{Al}</math>, X), (<math>^{33}\text{Al}</math>, X), (<math>^{34}\text{Al}</math>, X), (<math>^{35}\text{Al}</math>, X), (<math>^{36}\text{Al}</math>, X), (<math>^{37}\text{Al}</math>, X), (<math>^{38}\text{Al}</math>, X), (<math>^{33}\text{Si}</math>, X), (<math>^{34}\text{Si}</math>, X), (<math>^{35}\text{Si}</math>, X), (<math>^{36}\text{Si}</math>, X), (<math>^{37}\text{Si}</math>, X), (<math>^{38}\text{Si}</math>, X), (<math>^{39}\text{Si}</math>, X), (<math>^{40}\text{Si}</math>, X), (<math>^{36}\text{P}</math>, X), (<math>^{37}\text{P}</math>, X), (<math>^{38}\text{P}</math>, X), (<math>^{39}\text{P}</math>, X), (<math>^{40}\text{P}</math>, X), (<math>^{41}\text{P}</math>, X), (<math>^{42}\text{P}</math>, X), (<math>^{39}\text{S}</math>, X), (<math>^{40}\text{S}</math>, X), (<math>^{41}\text{S}</math>, X), (<math>^{42}\text{S}</math>, X), (<math>^{43}\text{S}</math>, X), (<math>^{44}\text{S}</math>, X), (<math>^{42}\text{Cl}</math>, X), (<math>^{43}\text{Cl}</math>, X), (<math>^{44}\text{Cl}</math>, X), (<math>^{45}\text{Cl}</math>, X), (<math>^{45}\text{Ar}</math>, X), (<math>^{46}\text{Ar}</math>, X), E=30-65 MeV / nucleon; measured energy-integrated reaction <math>\sigma</math>.  17,18,19,20,21,22,<math>\text{N}</math>, 19,20,21,22,23,24,<math>\text{O}</math>, 21,22,23,24,25,26,27,<math>\text{F}</math>,  23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,<math>\text{P}</math>,  31,32,33,34,35,36,37,38,39,40,41,42,<math>\text{S}</math>, 42,43,44,45,<math>\text{Cl}</math>, 45,46,Ar; deduced radii, isospin dependence. <math>^{35}\text{Mg}</math>, <math>^{44}\text{S}</math>; deduced possible halo structure or large deformation. JOUR NUPAB 780 1 </p>
$^{35}\text{Si}$	2006ANZW	<p>RADIOACTIVITY <math>^{33}\text{Mg}</math>, <math>^{35}\text{Al}(\beta^-)</math>, (<math>\beta^-</math>n) [from <math>^{36}\text{S}</math> fragmentation]; measured E<math>\gamma</math>, En, <math>\beta\gamma</math>-, <math>\beta</math>n-coin; deduced log ft. <math>^{34,35}\text{Si}</math>, <math>^{32,33}\text{Al}</math> deduced levels, J, <math>\pi</math>. CONF Isle of Kos (FINUSTAR), Proc, P134</p>

**A=35 (continued)**

2006KH08	NUCLEAR REACTIONS Si( $^{17}\text{N}$ , X), ( $^{18}\text{N}$ , X), ( $^{19}\text{N}$ , X), ( $^{20}\text{N}$ , X), ( $^{21}\text{N}$ , X), ( $^{22}\text{N}$ , X), ( $^{19}\text{O}$ , X), ( $^{20}\text{O}$ , X), ( $^{21}\text{O}$ , X), ( $^{22}\text{O}$ , X), ( $^{23}\text{O}$ , X), ( $^{24}\text{O}$ , X), ( $^{21}\text{F}$ , X), ( $^{22}\text{F}$ , X), ( $^{23}\text{F}$ , X), ( $^{24}\text{F}$ , X), ( $^{25}\text{F}$ , X), ( $^{26}\text{F}$ , X), ( $^{27}\text{F}$ , X), ( $^{23}\text{Ne}$ , X), ( $^{24}\text{Ne}$ , X), ( $^{25}\text{Ne}$ , X), ( $^{26}\text{Ne}$ , X), ( $^{27}\text{Ne}$ , X), ( $^{28}\text{Ne}$ , X), ( $^{29}\text{Ne}$ , X), ( $^{30}\text{Ne}$ , X), ( $^{26}\text{Na}$ , X), ( $^{27}\text{Na}$ , X), ( $^{28}\text{Na}$ , X), ( $^{29}\text{Na}$ , X), ( $^{30}\text{Na}$ , X), ( $^{31}\text{Na}$ , X), ( $^{32}\text{Na}$ , X), ( $^{33}\text{Na}$ , X), ( $^{28}\text{Mg}$ , X), ( $^{29}\text{Mg}$ , X), ( $^{30}\text{Mg}$ , X), ( $^{31}\text{Mg}$ , X), ( $^{32}\text{Mg}$ , X), ( $^{33}\text{Mg}$ , X), ( $^{34}\text{Mg}$ , X), ( $^{35}\text{Mg}$ , X), ( $^{31}\text{Al}$ , X), ( $^{32}\text{Al}$ , X), ( $^{33}\text{Al}$ , X), ( $^{34}\text{Al}$ , X), ( $^{35}\text{Al}$ , X), ( $^{36}\text{Al}$ , X), ( $^{37}\text{Al}$ , X), ( $^{38}\text{Al}$ , X), ( $^{33}\text{Si}$ , X), ( $^{34}\text{Si}$ , X), ( $^{35}\text{Si}$ , X), ( $^{36}\text{Si}$ , X), ( $^{37}\text{Si}$ , X), ( $^{38}\text{Si}$ , X), ( $^{39}\text{Si}$ , X), ( $^{40}\text{Si}$ , X), ( $^{36}\text{P}$ , X), ( $^{37}\text{P}$ , X), ( $^{38}\text{P}$ , X), ( $^{39}\text{P}$ , X), ( $^{40}\text{P}$ , X), ( $^{41}\text{P}$ , X), ( $^{42}\text{P}$ , X), ( $^{39}\text{S}$ , X), ( $^{40}\text{S}$ , X), ( $^{41}\text{S}$ , X), ( $^{42}\text{S}$ , X), ( $^{43}\text{S}$ , X), ( $^{44}\text{S}$ , X), ( $^{42}\text{Cl}$ , X), ( $^{43}\text{Cl}$ , X), ( $^{44}\text{Cl}$ , X), ( $^{45}\text{Cl}$ , X), ( $^{45}\text{Ar}$ , X), ( $^{46}\text{Ar}$ , X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F, 23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,Na, 28,29,30,31,32,33,34,35,Mg, 31,32,33,34,35,36,37,38,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P, 39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin dependence. $^{35}\text{Mg}$ , $^{44}\text{S}$ ; deduced possible halo structure or large deformation. JOUR NUPAB 780 1	
2006R034	NUCLEAR REACTIONS $^2\text{H}$ ( $^{48}\text{Ca}$ , X) $^{48}\text{Sc}$ / $^{47}\text{Ca}$ / $^{46}\text{Ca}$ / $^{48}\text{K}$ / $^{47}\text{K}$ / $^{46}\text{K}$ / $^{45}\text{K}$ / $^{44}\text{K}$ / $^{45}\text{Ar}$ / $^{44}\text{Ar}$ / $^{42}\text{Ar}$ / $^{42}\text{Cl}$ / $^{40}\text{Cl}$ / $^{39}\text{Cl}$ , E=102 MeV / nucleon; $^2\text{H}$ ( $^{40}\text{S}$ , X) $^{40}\text{Cl}$ / $^{39}\text{S}$ / $^{38}\text{S}$ / $^{37}\text{P}$ / $^{36}\text{P}$ / $^{34}\text{Si}$ / $^{33}\text{Si}$ / $^{32}\text{Al}$ / $^{31}\text{Al}$ , E=99.3 MeV / nucleon; $^2\text{H}$ ( $^{42}\text{S}$ , X) $^{42}\text{Cl}$ / $^{42}\text{S}$ / $^{40}\text{S}$ / $^{39}\text{P}$ / $^{38}\text{P}$ / $^{37}\text{P}$ / $^{36}\text{Si}$ / $^{35}\text{Si}$ / $^{33}\text{Al}$ / $^{32}\text{Al}$ , E=99.8 MeV / nucleon; measured production $\sigma$ . Comparison with model predictions, fragmentation from Be and Ta targets. JOUR PRVCA 74 034602	
$^{35}\text{Cl}$	2006IA05	RADIOACTIVITY $^{34,35}\text{Ar}$ , $^{34}\text{Cl}(\beta^+)$ [from $^1\text{H}$ ( $^{35}\text{Cl}$ , xnyp)]; measured $T_{1/2}$ . JOUR PRVCA 74 055502
$^{35}\text{Ar}$	2006IA05	RADIOACTIVITY $^{34,35}\text{Ar}$ , $^{34}\text{Cl}(\beta^+)$ [from $^1\text{H}$ ( $^{35}\text{Cl}$ , xnyp)]; measured $T_{1/2}$ . JOUR PRVCA 74 055502

**A=36**

<sup>36</sup> Al	2006KH08	NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F, 23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,Na, 28,29,30,31,32,33,34,35,Mg, 31,32,33,34,35,36,37,38,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P, 39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
<sup>36</sup> Si	2006GAZV	NUCLEAR REACTIONS <sup>238</sup> U( <sup>82</sup> Se, X), E=505 MeV; <sup>238</sup> U( <sup>64</sup> Ni, X), E=400 MeV; <sup>208</sup> Pb( <sup>36</sup> S, X), E=230 MeV; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin, fragments isotopic yields. <sup>81</sup> Ga, <sup>83</sup> Ge, <sup>83</sup> As deduced transitions. <sup>36</sup> Si, <sup>54,58,60</sup> Cr deduced levels, J, $\pi$ . CLARA array, PRISMA spectrometer. CONF Isle of Kos (FINUSTAR), Proc, P85
	2006KH08	NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F, 23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,Na, 28,29,30,31,32,33,34,35,Mg, 31,32,33,34,35,36,37,38,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P, 39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
	2006LIZY	NUCLEAR REACTIONS <sup>208</sup> Pb( <sup>36</sup> S, X) <sup>36</sup> Si / <sup>37</sup> P, E=215 MeV; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin. <sup>37</sup> P deduced levels, possible J, $\pi$ . CONF San Servolo(Fusion06), Proc, P37

**A=36 (continued)**

2006R034	NUCLEAR REACTIONS $^2\text{H}$ ( $^{48}\text{Ca}$ , X) $^{48}\text{Sc}$ / $^{47}\text{Ca}$ / $^{46}\text{Ca}$ / $^{48}\text{K}$ / $^{47}\text{K}$ / $^{46}\text{K}$ / $^{45}\text{K}$ / $^{44}\text{K}$ / $^{45}\text{Ar}$ / $^{44}\text{Ar}$ / $^{42}\text{Ar}$ / $^{42}\text{Cl}$ / $^{40}\text{Cl}$ / $^{39}\text{Cl}$ , E=102 MeV / nucleon; $^2\text{H}$ ( $^{40}\text{S}$ , X) $^{40}\text{Cl}$ / $^{39}\text{S}$ / $^{38}\text{S}$ / $^{37}\text{P}$ / $^{36}\text{P}$ / $^{34}\text{Si}$ / $^{33}\text{Si}$ / $^{32}\text{Al}$ / $^{31}\text{Al}$ , E=99.3 MeV / nucleon; $^2\text{H}$ ( $^{42}\text{S}$ , X) $^{42}\text{Cl}$ / $^{42}\text{S}$ / $^{40}\text{S}$ / $^{39}\text{P}$ / $^{38}\text{P}$ / $^{37}\text{P}$ / $^{36}\text{Si}$ / $^{35}\text{Si}$ / $^{33}\text{Al}$ / $^{32}\text{Al}$ , E=99.8 MeV / nucleon; measured production $\sigma$ . Comparison with model predictions, fragmentation from Be and Ta targets. JOUR PRVCA 74 034602
$^{36}\text{P}$	NUCLEAR REACTIONS $\text{Si}$ ( $^{17}\text{N}$ , X), ( $^{18}\text{N}$ , X), ( $^{19}\text{N}$ , X), ( $^{20}\text{N}$ , X), ( $^{21}\text{N}$ , X), ( $^{22}\text{N}$ , X), ( $^{19}\text{O}$ , X), ( $^{20}\text{O}$ , X), ( $^{21}\text{O}$ , X), ( $^{22}\text{O}$ , X), ( $^{23}\text{O}$ , X), ( $^{24}\text{O}$ , X), ( $^{21}\text{F}$ , X), ( $^{22}\text{F}$ , X), ( $^{23}\text{F}$ , X), ( $^{24}\text{F}$ , X), ( $^{25}\text{F}$ , X), ( $^{26}\text{F}$ , X), ( $^{27}\text{F}$ , X), ( $^{23}\text{Ne}$ , X), ( $^{24}\text{Ne}$ , X), ( $^{25}\text{Ne}$ , X), ( $^{26}\text{Ne}$ , X), ( $^{27}\text{Ne}$ , X), ( $^{28}\text{Ne}$ , X), ( $^{29}\text{Ne}$ , X), ( $^{30}\text{Ne}$ , X), ( $^{26}\text{Na}$ , X), ( $^{27}\text{Na}$ , X), ( $^{28}\text{Na}$ , X), ( $^{29}\text{Na}$ , X), ( $^{30}\text{Na}$ , X), ( $^{31}\text{Na}$ , X), ( $^{32}\text{Na}$ , X), ( $^{33}\text{Na}$ , X), ( $^{28}\text{Mg}$ , X), ( $^{29}\text{Mg}$ , X), ( $^{30}\text{Mg}$ , X), ( $^{31}\text{Mg}$ , X), ( $^{32}\text{Mg}$ , X), ( $^{33}\text{Mg}$ , X), ( $^{34}\text{Mg}$ , X), ( $^{35}\text{Mg}$ , X), ( $^{31}\text{Al}$ , X), ( $^{32}\text{Al}$ , X), ( $^{33}\text{Al}$ , X), ( $^{34}\text{Al}$ , X), ( $^{35}\text{Al}$ , X), ( $^{36}\text{Al}$ , X), ( $^{37}\text{Al}$ , X), ( $^{38}\text{Al}$ , X), ( $^{33}\text{Si}$ , X), ( $^{34}\text{Si}$ , X), ( $^{35}\text{Si}$ , X), ( $^{36}\text{Si}$ , X), ( $^{37}\text{Si}$ , X), ( $^{38}\text{Si}$ , X), ( $^{39}\text{Si}$ , X), ( $^{40}\text{Si}$ , X), ( $^{36}\text{P}$ , X), ( $^{37}\text{P}$ , X), ( $^{38}\text{P}$ , X), ( $^{39}\text{P}$ , X), ( $^{40}\text{P}$ , X), ( $^{41}\text{P}$ , X), ( $^{42}\text{P}$ , X), ( $^{39}\text{S}$ , X), ( $^{40}\text{S}$ , X), ( $^{41}\text{S}$ , X), ( $^{42}\text{S}$ , X), ( $^{43}\text{S}$ , X), ( $^{44}\text{S}$ , X), ( $^{42}\text{Cl}$ , X), ( $^{43}\text{Cl}$ , X), ( $^{44}\text{Cl}$ , X), ( $^{45}\text{Ar}$ , X), ( $^{46}\text{Ar}$ , X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46; deduced radii, isospin dependence. $^{35}\text{Mg}$ , $^{44}\text{S}$ ; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
2006R034	NUCLEAR REACTIONS $^2\text{H}$ ( $^{48}\text{Ca}$ , X) $^{48}\text{Sc}$ / $^{47}\text{Ca}$ / $^{46}\text{Ca}$ / $^{48}\text{K}$ / $^{47}\text{K}$ / $^{46}\text{K}$ / $^{45}\text{K}$ / $^{44}\text{K}$ / $^{45}\text{Ar}$ / $^{44}\text{Ar}$ / $^{42}\text{Ar}$ / $^{42}\text{Cl}$ / $^{40}\text{Cl}$ / $^{39}\text{Cl}$ , E=102 MeV / nucleon; $^2\text{H}$ ( $^{40}\text{S}$ , X) $^{40}\text{Cl}$ / $^{39}\text{S}$ / $^{38}\text{S}$ / $^{37}\text{P}$ / $^{36}\text{P}$ / $^{34}\text{Si}$ / $^{33}\text{Si}$ / $^{32}\text{Al}$ / $^{31}\text{Al}$ , E=99.3 MeV / nucleon; $^2\text{H}$ ( $^{42}\text{S}$ , X) $^{42}\text{Cl}$ / $^{42}\text{S}$ / $^{40}\text{S}$ / $^{39}\text{P}$ / $^{38}\text{P}$ / $^{37}\text{P}$ / $^{36}\text{Si}$ / $^{35}\text{Si}$ / $^{33}\text{Al}$ / $^{32}\text{Al}$ , E=99.8 MeV / nucleon; measured production $\sigma$ . Comparison with model predictions, fragmentation from Be and Ta targets. JOUR PRVCA 74 034602
$^{36}\text{K}$	NUCLEAR REACTIONS $^9\text{Be}$ ( $^{37}\text{Ca}$ , X) $^{36}\text{Ca}$ / $^{37}\text{Ca}$ / $^{36}\text{K}$ , E ≈ 61 MeV / nucleon; measured $E\gamma$ , $I\gamma$ , (particle) $\gamma$ -coin. $^{36,37}\text{Ca}$ , $^{36}\text{K}$ deduced excited states energies. Secondary beam from $^{40}\text{Ca}$ fragmentation. CONF Isle of Kos (FINUSTAR), Proc, P418
$^{36}\text{Ca}$	NUCLEAR REACTIONS $^9\text{Be}$ ( $^{37}\text{Ca}$ , X) $^{36}\text{Ca}$ / $^{37}\text{Ca}$ / $^{36}\text{K}$ , E ≈ 61 MeV / nucleon; measured $E\gamma$ , $I\gamma$ , (particle) $\gamma$ -coin. $^{36,37}\text{Ca}$ , $^{36}\text{K}$ deduced excited states energies. Secondary beam from $^{40}\text{Ca}$ fragmentation. CONF Isle of Kos (FINUSTAR), Proc, P418

**A=37**

<sup>37</sup> Al	2006KH08	NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F, 23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,Na, 28,29,30,31,32,33,34,35,Mg, 31,32,33,34,35,36,37,38,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P, 39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
<sup>37</sup> Si	2006KH08	NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F, 23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,Na, 28,29,30,31,32,33,34,35,Mg, 31,32,33,34,35,36,37,38,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P, 39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1

**A=37 (continued)**

<sup>37</sup> P	2006KH08	NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F, 23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,Na, 28,29,30,31,32,33,34,35,Mg, 31,32,33,34,35,36,37,38,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P, 39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
2006LIZY		NUCLEAR REACTIONS <sup>208</sup> Pb( <sup>36</sup> S, X) <sup>36</sup> Si / <sup>37</sup> P, E=215 MeV; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin. <sup>37</sup> P deduced levels, possible J, $\pi$ . CONF San Servolo(Fusion06),Proc,P37
2006R034		NUCLEAR REACTIONS <sup>2</sup> H( <sup>48</sup> Ca, X) <sup>48</sup> Sc / <sup>47</sup> Ca / <sup>46</sup> Ca / <sup>48</sup> K / <sup>47</sup> K / <sup>46</sup> K / <sup>45</sup> K / <sup>44</sup> K / <sup>45</sup> Ar / <sup>44</sup> Ar / <sup>42</sup> Ar / <sup>42</sup> Cl / <sup>40</sup> Cl / <sup>39</sup> Cl, E=102 MeV / nucleon; <sup>2</sup> H( <sup>40</sup> S, X) <sup>40</sup> Cl / <sup>39</sup> S / <sup>38</sup> S / <sup>37</sup> P / <sup>36</sup> P / <sup>34</sup> Si / <sup>33</sup> Si / <sup>32</sup> Al / <sup>31</sup> Al, E=99.3 MeV / nucleon; <sup>2</sup> H( <sup>42</sup> S, X) <sup>42</sup> Cl / <sup>42</sup> S / <sup>40</sup> S / <sup>39</sup> P / <sup>38</sup> P / <sup>37</sup> P / <sup>36</sup> Si / <sup>35</sup> Si / <sup>33</sup> Al / <sup>32</sup> Al, E=99.8 MeV / nucleon; measured production $\sigma$ . Comparison with model predictions, fragmentation from Be and Ta targets. JOUR PRVCA 74 034602
<sup>37</sup> Cl	2006FA07	NUCLEAR REACTIONS <sup>40</sup> Ca( <sup>40</sup> Ca, pX) <sup>39</sup> K / <sup>38</sup> Ar / <sup>37</sup> Cl, E=50 MeV / nucleon; measured Ep, missing energy spectra. <sup>40</sup> Ca deduced three-phonon giant resonance state. JOUR PRLTA 97 242502
<sup>37</sup> Ca	2006BUZW	NUCLEAR REACTIONS <sup>9</sup> Be( <sup>37</sup> Ca, X) <sup>36</sup> Ca / <sup>37</sup> Ca / <sup>36</sup> K, E ≈ 61 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin. <sup>36,37</sup> Ca, <sup>36</sup> K deduced excited states energies. Secondary beam from <sup>40</sup> Ca fragmentation. CONF Isle of Kos (FINUSTAR),Proc,P418

## KEYNUMBERS AND KEYWORDS

A=38

- |                  |          |  |
|------------------|----------|--|
| <sup>38</sup> Al | 2006KH08 | NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ .<br>17,18,19,20,21,22N, 19,20,21,22,23,24O, 21,22,23,24,25,26,27F,<br>23,24,25,26,27,28,29,30Ne, 26,27,28,29,30,31,32,33,34,35Mg,<br>31,32,33,34,35,36,37,38Al, 33,34,35,36,37,38,39,40,41,42P,<br>39,40,41,42,43,44S, 42,43,44,45Cl, 45,46Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1 |
| <sup>38</sup> Si | 2006KH08 | NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ .<br>17,18,19,20,21,22N, 19,20,21,22,23,24O, 21,22,23,24,25,26,27F,<br>23,24,25,26,27,28,29,30Ne, 26,27,28,29,30,31,32,33,34,35Mg,<br>31,32,33,34,35,36,37,38Al, 33,34,35,36,37,38,39,40,41,42P,<br>39,40,41,42,43,44S, 42,43,44,45Cl, 45,46Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1 |

**A=38 (continued)**

- <sup>38</sup>P      2006KH08      NUCLEAR REACTIONS Si(<sup>17</sup>N, X), (<sup>18</sup>N, X), (<sup>19</sup>N, X), (<sup>20</sup>N, X), (<sup>21</sup>N, X), (<sup>22</sup>N, X), (<sup>19</sup>O, X), (<sup>20</sup>O, X), (<sup>21</sup>O, X), (<sup>22</sup>O, X), (<sup>23</sup>O, X), (<sup>24</sup>O, X), (<sup>21</sup>F, X), (<sup>22</sup>F, X), (<sup>23</sup>F, X), (<sup>24</sup>F, X), (<sup>25</sup>F, X), (<sup>26</sup>F, X), (<sup>27</sup>F, X), (<sup>23</sup>Ne, X), (<sup>24</sup>Ne, X), (<sup>25</sup>Ne, X), (<sup>26</sup>Ne, X), (<sup>27</sup>Ne, X), (<sup>28</sup>Ne, X), (<sup>29</sup>Ne, X), (<sup>30</sup>Ne, X), (<sup>26</sup>Na, X), (<sup>27</sup>Na, X), (<sup>28</sup>Na, X), (<sup>29</sup>Na, X), (<sup>30</sup>Na, X), (<sup>31</sup>Na, X), (<sup>32</sup>Na, X), (<sup>33</sup>Na, X), (<sup>28</sup>Mg, X), (<sup>29</sup>Mg, X), (<sup>30</sup>Mg, X), (<sup>31</sup>Mg, X), (<sup>32</sup>Mg, X), (<sup>33</sup>Mg, X), (<sup>34</sup>Mg, X), (<sup>35</sup>Mg, X), (<sup>31</sup>Al, X), (<sup>32</sup>Al, X), (<sup>33</sup>Al, X), (<sup>34</sup>Al, X), (<sup>35</sup>Al, X), (<sup>36</sup>Al, X), (<sup>37</sup>Al, X), (<sup>38</sup>Al, X), (<sup>33</sup>Si, X), (<sup>34</sup>Si, X), (<sup>35</sup>Si, X), (<sup>36</sup>Si, X), (<sup>37</sup>Si, X), (<sup>38</sup>Si, X), (<sup>39</sup>Si, X), (<sup>40</sup>Si, X), (<sup>36</sup>P, X), (<sup>37</sup>P, X), (<sup>38</sup>P, X), (<sup>39</sup>P, X), (<sup>40</sup>P, X), (<sup>41</sup>P, X), (<sup>42</sup>P, X), (<sup>39</sup>S, X), (<sup>40</sup>S, X), (<sup>41</sup>S, X), (<sup>42</sup>S, X), (<sup>43</sup>S, X), (<sup>44</sup>S, X), (<sup>42</sup>Cl, X), (<sup>43</sup>Cl, X), (<sup>45</sup>Cl, X), (<sup>45</sup>Ar, X), (<sup>46</sup>Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction  $\sigma$ . 17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F, 23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,34,35,Mg, 31,32,33,34,35,36,37,38,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P, 39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin dependence. <sup>35</sup>Mg, <sup>44</sup>S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
- 2006R034      NUCLEAR REACTIONS <sup>2</sup>H(<sup>48</sup>Ca, X)<sup>48</sup>Sc / <sup>47</sup>Ca / <sup>46</sup>Ca / <sup>48</sup>K / <sup>47</sup>K / <sup>46</sup>K / <sup>45</sup>K / <sup>44</sup>K / <sup>45</sup>Ar / <sup>44</sup>Ar / <sup>42</sup>Ar / <sup>42</sup>Cl / <sup>40</sup>Cl / <sup>39</sup>Cl, E=102 MeV / nucleon; <sup>2</sup>H(<sup>40</sup>S, X)<sup>40</sup>Cl / <sup>39</sup>S / <sup>38</sup>S / <sup>37</sup>P / <sup>36</sup>P / <sup>34</sup>Si / <sup>33</sup>Si / <sup>32</sup>Al / <sup>31</sup>Al, E=99.3 MeV / nucleon; <sup>2</sup>H(<sup>42</sup>S, X)<sup>42</sup>Cl / <sup>42</sup>S / <sup>40</sup>S / <sup>39</sup>P / <sup>38</sup>P / <sup>37</sup>P / <sup>36</sup>Si / <sup>35</sup>Si / <sup>33</sup>Al / <sup>32</sup>Al, E=99.8 MeV / nucleon; measured production  $\sigma$ . Comparison with model predictions, fragmentation from Be and Ta targets. JOUR PRVCA 74 034602
- <sup>38</sup>S      2006BAZT      NUCLEAR REACTIONS <sup>112,118,120,124</sup>Sn(<sup>12</sup>C, X)<sup>7</sup>Be / <sup>22</sup>Na / <sup>24</sup>Na / <sup>28</sup>Mg / <sup>38</sup>S / <sup>39</sup>Cl / <sup>42</sup>K / <sup>43</sup>K / <sup>43</sup>Sc / <sup>44m</sup>Sc / <sup>46</sup>Sc / <sup>48</sup>Sc / <sup>48</sup>V / <sup>52</sup>Mn / <sup>56</sup>Mn, E=2200 MeV / nucleon; <sup>112,118,120,124</sup>Sn(p, X)<sup>7</sup>Be / <sup>22</sup>Na / <sup>24</sup>Na / <sup>28</sup>Mg / <sup>38</sup>S / <sup>39</sup>Cl / <sup>42</sup>K / <sup>43</sup>K / <sup>43</sup>Sc / <sup>44m</sup>Sc / <sup>46</sup>Sc / <sup>48</sup>Sc / <sup>48</sup>V / <sup>52</sup>Mn / <sup>56</sup>Mn, E=3650 MeV; measured production  $\sigma(^{12}\text{C})$ , relative yields. Nuclotron, HPGe detector. CONF Sarov(Nucleus-2006), Contrib, P151, Balabekyan
- 2006R034      NUCLEAR REACTIONS <sup>2</sup>H(<sup>48</sup>Ca, X)<sup>48</sup>Sc / <sup>47</sup>Ca / <sup>46</sup>Ca / <sup>48</sup>K / <sup>47</sup>K / <sup>46</sup>K / <sup>45</sup>K / <sup>44</sup>K / <sup>45</sup>Ar / <sup>44</sup>Ar / <sup>42</sup>Ar / <sup>42</sup>Cl / <sup>40</sup>Cl / <sup>39</sup>Cl, E=102 MeV / nucleon; <sup>2</sup>H(<sup>40</sup>S, X)<sup>40</sup>Cl / <sup>39</sup>S / <sup>38</sup>S / <sup>37</sup>P / <sup>36</sup>P / <sup>34</sup>Si / <sup>33</sup>Si / <sup>32</sup>Al / <sup>31</sup>Al, E=99.3 MeV / nucleon; <sup>2</sup>H(<sup>42</sup>S, X)<sup>42</sup>Cl / <sup>42</sup>S / <sup>40</sup>S / <sup>39</sup>P / <sup>38</sup>P / <sup>37</sup>P / <sup>36</sup>Si / <sup>35</sup>Si / <sup>33</sup>Al / <sup>32</sup>Al, E=99.8 MeV / nucleon; measured production  $\sigma$ . Comparison with model predictions, fragmentation from Be and Ta targets. JOUR PRVCA 74 034602
- 2006ST21      NUCLEAR REACTIONS <sup>197</sup>Au(<sup>38</sup>S, <sup>38</sup>S'), (<sup>40</sup>S, <sup>40</sup>S'), E ≈ 40 MeV / nucleon; measured E $\gamma$ , I $\gamma$ (θ, H, t), (particle) $\gamma$ -coin following projectile Coulomb excitation. <sup>38,40</sup>S levels deduced excitation B(E2), g factors. Transient field technique. JOUR PRVCA 74 054307
- <sup>38</sup>Ar      2006FA07      NUCLEAR REACTIONS <sup>40</sup>Ca(<sup>40</sup>Ca, pX)<sup>39</sup>K / <sup>38</sup>Ar / <sup>37</sup>Cl, E=50 MeV / nucleon; measured Ep, missing energy spectra. <sup>40</sup>Ca deduced three-phonon giant resonance state. JOUR PRLTA 97 242502

**A=39**

<sup>39</sup> Si	2006KH08	NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F, 23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,Na, 28,29,30,31,32,33,34,35,Mg, 31,32,33,34,35,36,37,38,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P, 39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
<sup>39</sup> P	2006KH08	NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F, 23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,Na, 28,29,30,31,32,33,34,35,Mg, 31,32,33,34,35,36,37,38,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P, 39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
	2006R034	NUCLEAR REACTIONS <sup>2</sup> H( <sup>48</sup> Ca, X) <sup>48</sup> Sc / <sup>47</sup> Ca / <sup>46</sup> Ca / <sup>48</sup> K / <sup>47</sup> K / <sup>46</sup> K / <sup>45</sup> K / <sup>44</sup> K / <sup>45</sup> Ar / <sup>44</sup> Ar / <sup>42</sup> Ar / <sup>42</sup> Cl / <sup>40</sup> Cl / <sup>39</sup> Cl, E=102 MeV / nucleon; <sup>2</sup> H( <sup>40</sup> S, X) <sup>40</sup> Cl / <sup>39</sup> S / <sup>38</sup> S / <sup>37</sup> P / <sup>36</sup> P / <sup>34</sup> Si / <sup>33</sup> Si / <sup>32</sup> Al / <sup>31</sup> Al, E=99.3 MeV / nucleon; <sup>2</sup> H( <sup>42</sup> S, X) <sup>42</sup> Cl / <sup>42</sup> S / <sup>40</sup> S / <sup>39</sup> P / <sup>38</sup> P / <sup>37</sup> P / <sup>36</sup> Si / <sup>35</sup> Si / <sup>33</sup> Al / <sup>32</sup> Al, E=99.8 MeV / nucleon; measured production $\sigma$ . Comparison with model predictions, fragmentation from Be and Ta targets. JOUR PRVCA 74 034602

**A=39 (continued)**

<sup>39</sup> S	2006KH08	NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F, 23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,34,35,Mg, 31,32,33,34,35,36,37,38,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P, 39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
	2006R034	NUCLEAR REACTIONS <sup>2</sup> H( <sup>48</sup> Ca, X) <sup>48</sup> Sc / <sup>47</sup> Ca / <sup>46</sup> Ca / <sup>48</sup> K / <sup>47</sup> K / <sup>46</sup> K / <sup>45</sup> K / <sup>44</sup> K / <sup>45</sup> Ar / <sup>44</sup> Ar / <sup>42</sup> Ar / <sup>42</sup> Cl / <sup>40</sup> Cl / <sup>39</sup> Cl, E=102 MeV / nucleon; <sup>2</sup> H( <sup>40</sup> S, X) <sup>40</sup> Cl / <sup>39</sup> S / <sup>38</sup> S / <sup>37</sup> P / <sup>36</sup> P / <sup>34</sup> Si / <sup>33</sup> Si / <sup>32</sup> Al / <sup>31</sup> Al, E=99.3 MeV / nucleon; <sup>2</sup> H( <sup>42</sup> S, X) <sup>42</sup> Cl / <sup>42</sup> S / <sup>40</sup> S / <sup>39</sup> P / <sup>38</sup> P / <sup>37</sup> P / <sup>36</sup> Si / <sup>35</sup> Si / <sup>33</sup> Al / <sup>32</sup> Al, E=99.8 MeV / nucleon; measured production $\sigma$ . Comparison with model predictions, fragmentation from Be and Ta targets. JOUR PRVCA 74 034602
<sup>39</sup> Cl	2006BAZT	NUCLEAR REACTIONS <sup>112,118,120,124</sup> Sn( <sup>12</sup> C, X) <sup>7</sup> Be / <sup>22</sup> Na / <sup>24</sup> Na / <sup>28</sup> Mg / <sup>38</sup> S / <sup>39</sup> Cl / <sup>42</sup> K / <sup>43</sup> K / <sup>43</sup> Sc / <sup>44m</sup> Sc / <sup>46</sup> Sc / <sup>48</sup> Sc / <sup>48</sup> V / <sup>52</sup> Mn / <sup>56</sup> Mn, E=2200 MeV / nucleon; <sup>112,118,120,124</sup> Sn(p, X) <sup>7</sup> Be / <sup>22</sup> Na / <sup>24</sup> Na / <sup>28</sup> Mg / <sup>38</sup> S / <sup>39</sup> Cl / <sup>42</sup> K / <sup>43</sup> K / <sup>43</sup> Sc / <sup>44m</sup> Sc / <sup>46</sup> Sc / <sup>48</sup> Sc / <sup>48</sup> V / <sup>52</sup> Mn / <sup>56</sup> Mn, E=3650 MeV; measured production $\sigma(^{12}\text{C})$ , relative yields. Nuclotron, HPGe detector. CONF Sarov(Nucleus-2006), Contrib, P151, Balabekyan
	2006R034	NUCLEAR REACTIONS <sup>2</sup> H( <sup>48</sup> Ca, X) <sup>48</sup> Sc / <sup>47</sup> Ca / <sup>46</sup> Ca / <sup>48</sup> K / <sup>47</sup> K / <sup>46</sup> K / <sup>45</sup> K / <sup>44</sup> K / <sup>45</sup> Ar / <sup>44</sup> Ar / <sup>42</sup> Ar / <sup>42</sup> Cl / <sup>40</sup> Cl / <sup>39</sup> Cl, E=102 MeV / nucleon; <sup>2</sup> H( <sup>40</sup> S, X) <sup>40</sup> Cl / <sup>39</sup> S / <sup>38</sup> S / <sup>37</sup> P / <sup>36</sup> P / <sup>34</sup> Si / <sup>33</sup> Si / <sup>32</sup> Al / <sup>31</sup> Al, E=99.3 MeV / nucleon; <sup>2</sup> H( <sup>42</sup> S, X) <sup>42</sup> Cl / <sup>42</sup> S / <sup>40</sup> S / <sup>39</sup> P / <sup>38</sup> P / <sup>37</sup> P / <sup>36</sup> Si / <sup>35</sup> Si / <sup>33</sup> Al / <sup>32</sup> Al, E=99.8 MeV / nucleon; measured production $\sigma$ . Comparison with model predictions, fragmentation from Be and Ta targets. JOUR PRVCA 74 034602
<sup>39</sup> K	2006FA07	NUCLEAR REACTIONS <sup>40</sup> Ca( <sup>40</sup> Ca, pX) <sup>39</sup> K / <sup>38</sup> Ar / <sup>37</sup> Cl, E=50 MeV / nucleon; measured Ep, missing energy spectra. <sup>40</sup> Ca deduced three-phonon giant resonance state. JOUR PRLTA 97 242502

## KEYNUMBERS AND KEYWORDS

A=40

<sup>40</sup> Si	2006KH08	NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F, 23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,34,35,Mg, 31,32,33,34,35,36,37,38,38,39,40,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P, 39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
<sup>40</sup> P	2006KH08	NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F, 23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,34,35,Mg, 31,32,33,34,35,36,37,38,38,39,40,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P, 39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1

**A=40 (*continued*)**

<sup>40</sup> S	2006KH08	NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F, 23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,34,35,Mg, 31,32,33,34,35,36,37,38,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P, 39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
	2006R034	NUCLEAR REACTIONS <sup>2</sup> H( <sup>48</sup> Ca, X) <sup>48</sup> Sc / <sup>47</sup> Ca / <sup>46</sup> Ca / <sup>48</sup> K / <sup>47</sup> K / <sup>46</sup> K / <sup>45</sup> K / <sup>44</sup> K / <sup>45</sup> Ar / <sup>44</sup> Ar / <sup>42</sup> Ar / <sup>42</sup> Cl / <sup>40</sup> Cl / <sup>39</sup> Cl, E=102 MeV / nucleon; <sup>2</sup> H( <sup>40</sup> S, X) <sup>40</sup> Cl / <sup>39</sup> S / <sup>38</sup> S / <sup>37</sup> P / <sup>36</sup> P / <sup>34</sup> Si / <sup>33</sup> Si / <sup>32</sup> Al / <sup>31</sup> Al, E=99.3 MeV / nucleon; <sup>2</sup> H( <sup>42</sup> S, X) <sup>42</sup> Cl / <sup>42</sup> S / <sup>40</sup> S / <sup>39</sup> P / <sup>38</sup> P / <sup>37</sup> P / <sup>36</sup> Si / <sup>35</sup> Si / <sup>33</sup> Al / <sup>32</sup> Al, E=99.8 MeV / nucleon; measured production $\sigma$ . Comparison with model predictions, fragmentation from Be and Ta targets. JOUR PRVCA 74 034602
	2006ST21	NUCLEAR REACTIONS <sup>197</sup> Au( <sup>38</sup> S, <sup>38</sup> S'), ( <sup>40</sup> S, <sup>40</sup> S'), E ≈ 40 MeV / nucleon; measured E $\gamma$ , I $\gamma$ (θ, H, t), (particle) $\gamma$ -coin following projectile Coulomb excitation. <sup>38,40</sup> S levels deduced excitation B(E2), g factors. Transient field technique. JOUR PRVCA 74 054307
<sup>40</sup> Cl	2006R034	NUCLEAR REACTIONS <sup>2</sup> H( <sup>48</sup> Ca, X) <sup>48</sup> Sc / <sup>47</sup> Ca / <sup>46</sup> Ca / <sup>48</sup> K / <sup>47</sup> K / <sup>46</sup> K / <sup>45</sup> K / <sup>44</sup> K / <sup>45</sup> Ar / <sup>44</sup> Ar / <sup>42</sup> Ar / <sup>42</sup> Cl / <sup>40</sup> Cl / <sup>39</sup> Cl, E=102 MeV / nucleon; <sup>2</sup> H( <sup>40</sup> S, X) <sup>40</sup> Cl / <sup>39</sup> S / <sup>38</sup> S / <sup>37</sup> P / <sup>36</sup> P / <sup>34</sup> Si / <sup>33</sup> Si / <sup>32</sup> Al / <sup>31</sup> Al, E=99.3 MeV / nucleon; <sup>2</sup> H( <sup>42</sup> S, X) <sup>42</sup> Cl / <sup>42</sup> S / <sup>40</sup> S / <sup>39</sup> P / <sup>38</sup> P / <sup>37</sup> P / <sup>36</sup> Si / <sup>35</sup> Si / <sup>33</sup> Al / <sup>32</sup> Al, E=99.8 MeV / nucleon; measured production $\sigma$ . Comparison with model predictions, fragmentation from Be and Ta targets. JOUR PRVCA 74 034602
<sup>40</sup> Ca	2006FA07	NUCLEAR REACTIONS <sup>40</sup> Ca( <sup>40</sup> Ca, pX) <sup>39</sup> K / <sup>38</sup> Ar / <sup>37</sup> Cl, E=50 MeV / nucleon; measured Ep, missing energy spectra. <sup>40</sup> Ca deduced three-phonon giant resonance state. JOUR PRLTA 97 242502

## KEYNUMBERS AND KEYWORDS

A=41

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| <sup>41</sup> P  | 2006KH08 | NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ .<br>17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F,<br>23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,Na, 28,29,30,31,32,33,34,35,Mg,<br>31,32,33,34,35,36,37,38,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P,<br>39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin<br>dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large<br>deformation. JOUR NUPAB 780 1 |
| <sup>41</sup> S  | 2006KH08 | NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ .<br>17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F,<br>23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,Na, 28,29,30,31,32,33,34,35,Mg,<br>31,32,33,34,35,36,37,38,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P,<br>39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin<br>dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large<br>deformation. JOUR NUPAB 780 1 |
| <sup>41</sup> Ar | 2006VOZW | NUCLEAR REACTIONS <sup>40</sup> Ar(p, $\gamma$ ), E=450-2700 MeV; measured E $\gamma$ .<br><sup>41</sup> K deduced levels. <sup>41</sup> Ar deduced analogue resonances. Electrostatic accelerator. CONF Sarov(Nucleus-2006), Contrib,P156,Vodin  |
| <sup>41</sup> K  | 2006VOZW | NUCLEAR REACTIONS <sup>40</sup> Ar(p, $\gamma$ ), E=450-2700 MeV; measured E $\gamma$ .<br><sup>41</sup> K deduced levels. <sup>41</sup> Ar deduced analogue resonances. Electrostatic accelerator. CONF Sarov(Nucleus-2006), Contrib,P156,Vodin  |

**A=42**

$^{42}\text{Si}$	2006FR13	NUCLEAR REACTIONS $^9\text{Be}(^{44}\text{S}, \text{X})^{42}\text{Si} / ^{43}\text{P}$ , E=98.6 MeV / nucleon; $^9\text{Be}(^{46}\text{Ar}, \text{X})^{44}\text{S}$ , E=98.1 MeV / nucleon; measured $E\gamma$ , $I\gamma$ , particle spectra, (particle) $\gamma$ -coin; deduced one- and two-proton knockout $\sigma$ . $^{43}\text{P}$ deduced transition. $^{42}\text{Si}$ , $^{43}\text{P}$ , $^{44}\text{S}$ deduced ground-state configurations, shell closure features. Shell model, diffractive effects in knockout reactions. JOUR PRVCA 74 034313
$^{42}\text{P}$	2006KH08	NUCLEAR REACTIONS $\text{Si}(^{17}\text{N}, \text{X}), (^{18}\text{N}, \text{X}), (^{19}\text{N}, \text{X}), (^{20}\text{N}, \text{X}), (^{21}\text{N}, \text{X}), (^{22}\text{N}, \text{X}), (^{19}\text{O}, \text{X}), (^{20}\text{O}, \text{X}), (^{21}\text{O}, \text{X}), (^{22}\text{O}, \text{X}), (^{23}\text{O}, \text{X}), (^{24}\text{O}, \text{X}), (^{21}\text{F}, \text{X}), (^{22}\text{F}, \text{X}), (^{23}\text{F}, \text{X}), (^{24}\text{F}, \text{X}), (^{25}\text{F}, \text{X}), (^{26}\text{F}, \text{X}), (^{27}\text{F}, \text{X}), (^{23}\text{Ne}, \text{X}), (^{24}\text{Ne}, \text{X}), (^{25}\text{Ne}, \text{X}), (^{26}\text{Ne}, \text{X}), (^{27}\text{Ne}, \text{X}), (^{28}\text{Ne}, \text{X}), (^{29}\text{Ne}, \text{X}), (^{30}\text{Ne}, \text{X}), (^{26}\text{Na}, \text{X}), (^{27}\text{Na}, \text{X}), (^{28}\text{Na}, \text{X}), (^{29}\text{Na}, \text{X}), (^{30}\text{Na}, \text{X}), (^{31}\text{Na}, \text{X}), (^{32}\text{Na}, \text{X}), (^{33}\text{Na}, \text{X}), (^{28}\text{Mg}, \text{X}), (^{29}\text{Mg}, \text{X}), (^{30}\text{Mg}, \text{X}), (^{31}\text{Mg}, \text{X}), (^{32}\text{Mg}, \text{X}), (^{33}\text{Mg}, \text{X}), (^{34}\text{Mg}, \text{X}), (^{35}\text{Mg}, \text{X}), (^{31}\text{Al}, \text{X}), (^{32}\text{Al}, \text{X}), (^{33}\text{Al}, \text{X}), (^{34}\text{Al}, \text{X}), (^{35}\text{Al}, \text{X}), (^{36}\text{Al}, \text{X}), (^{37}\text{Al}, \text{X}), (^{38}\text{Al}, \text{X}), (^{33}\text{Si}, \text{X}), (^{34}\text{Si}, \text{X}), (^{35}\text{Si}, \text{X}), (^{36}\text{Si}, \text{X}), (^{37}\text{Si}, \text{X}), (^{38}\text{Si}, \text{X}), (^{39}\text{Si}, \text{X}), (^{40}\text{Si}, \text{X}), (^{36}\text{P}, \text{X}), (^{37}\text{P}, \text{X}), (^{38}\text{P}, \text{X}), (^{39}\text{P}, \text{X}), (^{40}\text{P}, \text{X}), (^{41}\text{P}, \text{X}), (^{42}\text{P}, \text{X}), (^{39}\text{S}, \text{X}), (^{40}\text{S}, \text{X}), (^{41}\text{S}, \text{X}), (^{42}\text{S}, \text{X}), (^{43}\text{S}, \text{X}), (^{44}\text{S}, \text{X}), (^{42}\text{Cl}, \text{X}), (^{43}\text{Cl}, \text{X}), (^{44}\text{Cl}, \text{X}), (^{45}\text{Cl}, \text{X}), (^{45}\text{Ar}, \text{X}), (^{46}\text{Ar}, \text{X}), E=30-65 MeV / nucleon; measured energy-integrated reaction \sigma. 17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46$ ; deduced radii, isospin dependence. $^{35}\text{Mg}$ , $^{44}\text{S}$ ; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
$^{42}\text{S}$	2006KH08	NUCLEAR REACTIONS $\text{Si}(^{17}\text{N}, \text{X}), (^{18}\text{N}, \text{X}), (^{19}\text{N}, \text{X}), (^{20}\text{N}, \text{X}), (^{21}\text{N}, \text{X}), (^{22}\text{N}, \text{X}), (^{19}\text{O}, \text{X}), (^{20}\text{O}, \text{X}), (^{21}\text{O}, \text{X}), (^{22}\text{O}, \text{X}), (^{23}\text{O}, \text{X}), (^{24}\text{O}, \text{X}), (^{21}\text{F}, \text{X}), (^{22}\text{F}, \text{X}), (^{23}\text{F}, \text{X}), (^{24}\text{F}, \text{X}), (^{25}\text{F}, \text{X}), (^{26}\text{F}, \text{X}), (^{27}\text{F}, \text{X}), (^{23}\text{Ne}, \text{X}), (^{24}\text{Ne}, \text{X}), (^{25}\text{Ne}, \text{X}), (^{26}\text{Ne}, \text{X}), (^{27}\text{Ne}, \text{X}), (^{28}\text{Ne}, \text{X}), (^{29}\text{Ne}, \text{X}), (^{30}\text{Ne}, \text{X}), (^{26}\text{Na}, \text{X}), (^{27}\text{Na}, \text{X}), (^{28}\text{Na}, \text{X}), (^{29}\text{Na}, \text{X}), (^{30}\text{Na}, \text{X}), (^{31}\text{Na}, \text{X}), (^{32}\text{Na}, \text{X}), (^{33}\text{Na}, \text{X}), (^{28}\text{Mg}, \text{X}), (^{29}\text{Mg}, \text{X}), (^{30}\text{Mg}, \text{X}), (^{31}\text{Mg}, \text{X}), (^{32}\text{Mg}, \text{X}), (^{33}\text{Mg}, \text{X}), (^{34}\text{Mg}, \text{X}), (^{35}\text{Mg}, \text{X}), (^{31}\text{Al}, \text{X}), (^{32}\text{Al}, \text{X}), (^{33}\text{Al}, \text{X}), (^{34}\text{Al}, \text{X}), (^{35}\text{Al}, \text{X}), (^{36}\text{Al}, \text{X}), (^{37}\text{Al}, \text{X}), (^{38}\text{Al}, \text{X}), (^{33}\text{Si}, \text{X}), (^{34}\text{Si}, \text{X}), (^{35}\text{Si}, \text{X}), (^{36}\text{Si}, \text{X}), (^{37}\text{Si}, \text{X}), (^{38}\text{Si}, \text{X}), (^{39}\text{Si}, \text{X}), (^{40}\text{Si}, \text{X}), (^{36}\text{P}, \text{X}), (^{37}\text{P}, \text{X}), (^{38}\text{P}, \text{X}), (^{39}\text{P}, \text{X}), (^{40}\text{P}, \text{X}), (^{41}\text{P}, \text{X}), (^{42}\text{P}, \text{X}), (^{39}\text{S}, \text{X}), (^{40}\text{S}, \text{X}), (^{41}\text{S}, \text{X}), (^{42}\text{S}, \text{X}), (^{43}\text{S}, \text{X}), (^{44}\text{S}, \text{X}), (^{42}\text{Cl}, \text{X}), (^{43}\text{Cl}, \text{X}), (^{44}\text{Cl}, \text{X}), (^{45}\text{Cl}, \text{X}), (^{45}\text{Ar}, \text{X}), (^{46}\text{Ar}, \text{X}), E=30-65 MeV / nucleon; measured energy-integrated reaction \sigma. 17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46$ ; deduced radii, isospin dependence. $^{35}\text{Mg}$ , $^{44}\text{S}$ ; deduced possible halo structure or large deformation. JOUR NUPAB 780 1

**A=42 (continued)**

2006R034	NUCLEAR REACTIONS $^2\text{H}$ ( $^{48}\text{Ca}$ , X) $^{48}\text{Sc}$ / $^{47}\text{Ca}$ / $^{46}\text{Ca}$ / $^{48}\text{K}$ / $^{47}\text{K}$ / $^{46}\text{K}$ / $^{45}\text{K}$ / $^{44}\text{K}$ / $^{45}\text{Ar}$ / $^{44}\text{Ar}$ / $^{42}\text{Ar}$ / $^{42}\text{Cl}$ / $^{40}\text{Cl}$ / $^{39}\text{Cl}$ , E=102 MeV / nucleon; $^2\text{H}$ ( $^{40}\text{S}$ , X) $^{40}\text{Cl}$ / $^{39}\text{S}$ / $^{38}\text{S}$ / $^{37}\text{P}$ / $^{36}\text{P}$ / $^{34}\text{Si}$ / $^{33}\text{Si}$ / $^{32}\text{Al}$ / $^{31}\text{Al}$ , E=99.3 MeV / nucleon; $^2\text{H}$ ( $^{42}\text{S}$ , X) $^{42}\text{Cl}$ / $^{42}\text{S}$ / $^{40}\text{S}$ / $^{39}\text{P}$ / $^{38}\text{P}$ / $^{37}\text{P}$ / $^{36}\text{Si}$ / $^{35}\text{Si}$ / $^{33}\text{Al}$ / $^{32}\text{Al}$ , E=99.8 MeV / nucleon; measured production $\sigma$ . Comparison with model predictions, fragmentation from Be and Ta targets. JOUR PRVCA 74 034602
$^{42}\text{Cl}$	2006KH08
	NUCLEAR REACTIONS Si( $^{17}\text{N}$ , X), ( $^{18}\text{N}$ , X), ( $^{19}\text{N}$ , X), ( $^{20}\text{N}$ , X), ( $^{21}\text{N}$ , X), ( $^{22}\text{N}$ , X), ( $^{19}\text{O}$ , X), ( $^{20}\text{O}$ , X), ( $^{21}\text{O}$ , X), ( $^{22}\text{O}$ , X), ( $^{23}\text{O}$ , X), ( $^{24}\text{O}$ , X), ( $^{21}\text{F}$ , X), ( $^{22}\text{F}$ , X), ( $^{23}\text{F}$ , X), ( $^{24}\text{F}$ , X), ( $^{25}\text{F}$ , X), ( $^{26}\text{F}$ , X), ( $^{27}\text{F}$ , X), ( $^{23}\text{Ne}$ , X), ( $^{24}\text{Ne}$ , X), ( $^{25}\text{Ne}$ , X), ( $^{26}\text{Ne}$ , X), ( $^{27}\text{Ne}$ , X), ( $^{28}\text{Ne}$ , X), ( $^{29}\text{Ne}$ , X), ( $^{30}\text{Ne}$ , X), ( $^{26}\text{Na}$ , X), ( $^{27}\text{Na}$ , X), ( $^{28}\text{Na}$ , X), ( $^{29}\text{Na}$ , X), ( $^{30}\text{Na}$ , X), ( $^{31}\text{Na}$ , X), ( $^{32}\text{Na}$ , X), ( $^{33}\text{Na}$ , X), ( $^{28}\text{Mg}$ , X), ( $^{29}\text{Mg}$ , X), ( $^{30}\text{Mg}$ , X), ( $^{31}\text{Mg}$ , X), ( $^{32}\text{Mg}$ , X), ( $^{33}\text{Mg}$ , X), ( $^{34}\text{Mg}$ , X), ( $^{35}\text{Mg}$ , X), ( $^{31}\text{Al}$ , X), ( $^{32}\text{Al}$ , X), ( $^{33}\text{Al}$ , X), ( $^{34}\text{Al}$ , X), ( $^{35}\text{Al}$ , X), ( $^{36}\text{Al}$ , X), ( $^{37}\text{Al}$ , X), ( $^{38}\text{Al}$ , X), ( $^{33}\text{Si}$ , X), ( $^{34}\text{Si}$ , X), ( $^{35}\text{Si}$ , X), ( $^{36}\text{Si}$ , X), ( $^{37}\text{Si}$ , X), ( $^{38}\text{Si}$ , X), ( $^{39}\text{Si}$ , X), ( $^{40}\text{Si}$ , X), ( $^{36}\text{P}$ , X), ( $^{37}\text{P}$ , X), ( $^{38}\text{P}$ , X), ( $^{39}\text{P}$ , X), ( $^{40}\text{P}$ , X), ( $^{41}\text{P}$ , X), ( $^{42}\text{P}$ , X), ( $^{39}\text{S}$ , X), ( $^{40}\text{S}$ , X), ( $^{41}\text{S}$ , X), ( $^{42}\text{S}$ , X), ( $^{43}\text{S}$ , X), ( $^{44}\text{S}$ , X), ( $^{42}\text{Cl}$ , X), ( $^{43}\text{Cl}$ , X), ( $^{45}\text{Cl}$ , X), ( $^{45}\text{Ar}$ , X), ( $^{46}\text{Ar}$ , X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F, 23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,Na, 28,29,30,31,32,33,34,35,Mg, 31,32,33,34,35,36,37,38,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P, 39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin dependence. $^{35}\text{Mg}$ , $^{44}\text{S}$ ; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
2006R034	NUCLEAR REACTIONS $^2\text{H}$ ( $^{48}\text{Ca}$ , X) $^{48}\text{Sc}$ / $^{47}\text{Ca}$ / $^{46}\text{Ca}$ / $^{48}\text{K}$ / $^{47}\text{K}$ / $^{46}\text{K}$ / $^{45}\text{K}$ / $^{44}\text{K}$ / $^{44}\text{Ar}$ / $^{42}\text{Ar}$ / $^{42}\text{Cl}$ / $^{40}\text{Cl}$ / $^{39}\text{Cl}$ , E=102 MeV / nucleon; $^2\text{H}$ ( $^{40}\text{S}$ , X) $^{40}\text{Cl}$ / $^{39}\text{S}$ / $^{38}\text{S}$ / $^{37}\text{P}$ / $^{36}\text{P}$ / $^{34}\text{Si}$ / $^{33}\text{Si}$ / $^{32}\text{Al}$ / $^{31}\text{Al}$ , E=99.3 MeV / nucleon; $^2\text{H}$ ( $^{42}\text{S}$ , X) $^{42}\text{Cl}$ / $^{42}\text{S}$ / $^{40}\text{S}$ / $^{39}\text{P}$ / $^{38}\text{P}$ / $^{37}\text{P}$ / $^{36}\text{Si}$ / $^{35}\text{Si}$ / $^{33}\text{Al}$ / $^{32}\text{Al}$ , E=99.8 MeV / nucleon; measured production $\sigma$ . Comparison with model predictions, fragmentation from Be and Ta targets. JOUR PRVCA 74 034602
$^{42}\text{Ar}$	2006R034
	NUCLEAR REACTIONS $^2\text{H}$ ( $^{48}\text{Ca}$ , X) $^{48}\text{Sc}$ / $^{47}\text{Ca}$ / $^{46}\text{Ca}$ / $^{48}\text{K}$ / $^{47}\text{K}$ / $^{46}\text{K}$ / $^{45}\text{K}$ / $^{44}\text{K}$ / $^{44}\text{Ar}$ / $^{42}\text{Ar}$ / $^{42}\text{Cl}$ / $^{40}\text{Cl}$ / $^{39}\text{Cl}$ , E=102 MeV / nucleon; $^2\text{H}$ ( $^{40}\text{S}$ , X) $^{40}\text{Cl}$ / $^{39}\text{S}$ / $^{38}\text{S}$ / $^{37}\text{P}$ / $^{36}\text{P}$ / $^{34}\text{Si}$ / $^{33}\text{Si}$ / $^{32}\text{Al}$ / $^{31}\text{Al}$ , E=99.3 MeV / nucleon; $^2\text{H}$ ( $^{42}\text{S}$ , X) $^{42}\text{Cl}$ / $^{42}\text{S}$ / $^{40}\text{S}$ / $^{39}\text{P}$ / $^{38}\text{P}$ / $^{37}\text{P}$ / $^{36}\text{Si}$ / $^{35}\text{Si}$ / $^{33}\text{Al}$ / $^{32}\text{Al}$ , E=99.8 MeV / nucleon; measured production $\sigma$ . Comparison with model predictions, fragmentation from Be and Ta targets. JOUR PRVCA 74 034602
$^{42}\text{K}$	2006BAZT
	NUCLEAR REACTIONS $^{112,118,120,124}\text{Sn}$ ( $^{12}\text{C}$ , X) $^7\text{Be}$ / $^{22}\text{Na}$ / $^{24}\text{Na}$ / $^{28}\text{Mg}$ / $^{38}\text{S}$ / $^{39}\text{Cl}$ / $^{42}\text{K}$ / $^{43}\text{Sc}$ / $^{44m}\text{Sc}$ / $^{46}\text{Sc}$ / $^{48}\text{Sc}$ / $^{48}\text{V}$ / $^{52}\text{Mn}$ / $^{56}\text{Mn}$ , E=2200 MeV / nucleon; $^{112,118,120,124}\text{Sn}$ (p, X) $^7\text{Be}$ / $^{22}\text{Na}$ / $^{24}\text{Na}$ / $^{28}\text{Mg}$ / $^{38}\text{S}$ / $^{39}\text{Cl}$ / $^{42}\text{K}$ / $^{43}\text{Sc}$ / $^{44m}\text{Sc}$ / $^{46}\text{Sc}$ / $^{48}\text{Sc}$ / $^{48}\text{V}$ / $^{52}\text{Mn}$ / $^{56}\text{Mn}$ , E=3650 MeV; measured production $\sigma(^{12}\text{C})$ , relative yields. Nuclotron, HPGe detector. CONF Sarov(Nucleus-2006), Contrib,P151,Balabekyan

**A=42 (continued)**

<sup>42</sup> Sc	2006ER08	ATOMIC MASSES <sup>26m</sup> Al, <sup>42</sup> Sc, <sup>46</sup> V; measured masses; deduced Q(EC). Comparison with previous results, implications for CKM matrix element discussed. JOUR PRLTA 97 232501
	2006MOZS	NUCLEAR REACTIONS S, Pb( <sup>16</sup> O, X) <sup>42</sup> Sc, E=60 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin. <sup>42</sup> Sc deduced high-spin levels, J, $\pi$ . Gemini-II array. REPT JAEA-Review 2006-029, P21, Morikawa

**A=43**

<sup>43</sup> P	2006FR13	NUCLEAR REACTIONS <sup>9</sup> Be( <sup>44</sup> S, X) <sup>42</sup> Si / <sup>43</sup> P, E=98.6 MeV / nucleon; <sup>9</sup> Be( <sup>46</sup> Ar, X) <sup>44</sup> S, E=98.1 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , particle spectra, (particle) $\gamma$ -coin; deduced one- and two-proton knockout $\sigma$ . <sup>43</sup> P deduced transition. <sup>42</sup> Si, <sup>43</sup> P, <sup>44</sup> S deduced ground-state configurations, shell closure features. Shell model, diffractive effects in knockout reactions. JOUR PRVCA 74 034313
<sup>43</sup> S	2006KH08	NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>44</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27F, 23, 24, 25, 26, 27, 28, 29, 30, 30Ne, 26, 27, 28, 29, 30, 31, 32, 33Na, 28, 29, 30, 31, 32, 33, 34, 35Mg, 31, 32, 33, 34, 35, 36, 37, 38Al, 33, 34, 35, 36, 37, 38, 39, 40, 40Si, 36, 37, 38, 39, 40, 41, 42P, 39, 40, 41, 42, 43, 44S, 42, 43, 44, 45Cl, 45, 46Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
<sup>43</sup> Cl	2006GA31	NUCLEAR REACTIONS H, C( <sup>46</sup> Ar, X) <sup>43</sup> Cl / <sup>45</sup> Cl, E=76.4 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin. <sup>45</sup> Cl deduced level energy. JOUR PRVCA 74 034322

**A=43 (continued)**

2006KH08	NUCLEAR REACTIONS Si( $^{17}\text{N}$ , X), ( $^{18}\text{N}$ , X), ( $^{19}\text{N}$ , X), ( $^{20}\text{N}$ , X), ( $^{21}\text{N}$ , X), ( $^{22}\text{N}$ , X), ( $^{19}\text{O}$ , X), ( $^{20}\text{O}$ , X), ( $^{21}\text{O}$ , X), ( $^{22}\text{O}$ , X), ( $^{23}\text{O}$ , X), ( $^{24}\text{O}$ , X), ( $^{21}\text{F}$ , X), ( $^{22}\text{F}$ , X), ( $^{23}\text{F}$ , X), ( $^{24}\text{F}$ , X), ( $^{25}\text{F}$ , X), ( $^{26}\text{F}$ , X), ( $^{27}\text{F}$ , X), ( $^{23}\text{Ne}$ , X), ( $^{24}\text{Ne}$ , X), ( $^{25}\text{Ne}$ , X), ( $^{26}\text{Ne}$ , X), ( $^{27}\text{Ne}$ , X), ( $^{28}\text{Ne}$ , X), ( $^{29}\text{Ne}$ , X), ( $^{30}\text{Ne}$ , X), ( $^{26}\text{Na}$ , X), ( $^{27}\text{Na}$ , X), ( $^{28}\text{Na}$ , X), ( $^{29}\text{Na}$ , X), ( $^{30}\text{Na}$ , X), ( $^{31}\text{Na}$ , X), ( $^{32}\text{Na}$ , X), ( $^{33}\text{Na}$ , X), ( $^{28}\text{Mg}$ , X), ( $^{29}\text{Mg}$ , X), ( $^{30}\text{Mg}$ , X), ( $^{31}\text{Mg}$ , X), ( $^{32}\text{Mg}$ , X), ( $^{33}\text{Mg}$ , X), ( $^{34}\text{Mg}$ , X), ( $^{35}\text{Mg}$ , X), ( $^{31}\text{Al}$ , X), ( $^{32}\text{Al}$ , X), ( $^{33}\text{Al}$ , X), ( $^{34}\text{Al}$ , X), ( $^{35}\text{Al}$ , X), ( $^{36}\text{Al}$ , X), ( $^{37}\text{Al}$ , X), ( $^{38}\text{Al}$ , X), ( $^{33}\text{Si}$ , X), ( $^{34}\text{Si}$ , X), ( $^{35}\text{Si}$ , X), ( $^{36}\text{Si}$ , X), ( $^{37}\text{Si}$ , X), ( $^{38}\text{Si}$ , X), ( $^{39}\text{Si}$ , X), ( $^{40}\text{Si}$ , X), ( $^{36}\text{P}$ , X), ( $^{37}\text{P}$ , X), ( $^{38}\text{P}$ , X), ( $^{39}\text{P}$ , X), ( $^{40}\text{P}$ , X), ( $^{41}\text{P}$ , X), ( $^{42}\text{P}$ , X), ( $^{39}\text{S}$ , X), ( $^{40}\text{S}$ , X), ( $^{41}\text{S}$ , X), ( $^{42}\text{S}$ , X), ( $^{43}\text{S}$ , X), ( $^{44}\text{S}$ , X), ( $^{42}\text{Cl}$ , X), ( $^{43}\text{Cl}$ , X), ( $^{45}\text{Cl}$ , X), ( $^{45}\text{Ar}$ , X), ( $^{46}\text{Ar}$ , X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22, $\text{N}$ , 19,20,21,22,23,24, $\text{O}$ , 21,22,23,24,25,26,27, $\text{F}$ , 23,24,25,26,27,28,29,30, $\text{Ne}$ , 26,27,28,29,30,31,32,33, $\text{Na}$ , 28,29,30,31,32,33,34,35, $\text{Mg}$ , 31,32,33,34,35,36,37,38, $\text{Al}$ , 33,34,35,36,37,38,39,40, $\text{Si}$ , 36,37,38,39,40,41,42, $\text{P}$ , 39,40,41,42,43,44, $\text{S}$ , 42,43,44,45, $\text{Cl}$ , 45,46, $\text{Ar}$ ; deduced radii, isospin dependence. $^{35}\text{Mg}$ , $^{44}\text{S}$ ; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
$^{43}\text{K}$	2006BAZT
$^{43}\text{Sc}$	2006BAZT

**A=44**

$^{44}\text{S}$	2006FR13	NUCLEAR REACTIONS $^9\text{Be}(^{44}\text{S}, \text{X})^{42}\text{Si} / ^{43}\text{P}$ , E=98.6 MeV / nucleon; $^9\text{Be}(^{46}\text{Ar}, \text{X})^{44}\text{S}$ , E=98.1 MeV / nucleon; measured $E\gamma$ , $I\gamma$ , particle spectra, (particle) $\gamma$ -coin; deduced one- and two-proton knockout $\sigma$ . $^{43}\text{P}$ deduced transition. $^{42}\text{Si}$ , $^{43}\text{P}$ , $^{44}\text{S}$ deduced ground-state configurations, shell closure features. Shell model, diffractive effects in knockout reactions. JOUR PRVCA 74 034313
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**A=44 (*continued*)**

2006KH08	NUCLEAR REACTIONS Si( $^{17}\text{N}$ , X), ( $^{18}\text{N}$ , X), ( $^{19}\text{N}$ , X), ( $^{20}\text{N}$ , X), ( $^{21}\text{N}$ , X), ( $^{22}\text{N}$ , X), ( $^{19}\text{O}$ , X), ( $^{20}\text{O}$ , X), ( $^{21}\text{O}$ , X), ( $^{22}\text{O}$ , X), ( $^{23}\text{O}$ , X), ( $^{24}\text{O}$ , X), ( $^{21}\text{F}$ , X), ( $^{22}\text{F}$ , X), ( $^{23}\text{F}$ , X), ( $^{24}\text{F}$ , X), ( $^{25}\text{F}$ , X), ( $^{26}\text{F}$ , X), ( $^{27}\text{F}$ , X), ( $^{23}\text{Ne}$ , X), ( $^{24}\text{Ne}$ , X), ( $^{25}\text{Ne}$ , X), ( $^{26}\text{Ne}$ , X), ( $^{27}\text{Ne}$ , X), ( $^{28}\text{Ne}$ , X), ( $^{29}\text{Ne}$ , X), ( $^{30}\text{Ne}$ , X), ( $^{26}\text{Na}$ , X), ( $^{27}\text{Na}$ , X), ( $^{28}\text{Na}$ , X), ( $^{29}\text{Na}$ , X), ( $^{30}\text{Na}$ , X), ( $^{31}\text{Na}$ , X), ( $^{32}\text{Na}$ , X), ( $^{33}\text{Na}$ , X), ( $^{28}\text{Mg}$ , X), ( $^{29}\text{Mg}$ , X), ( $^{30}\text{Mg}$ , X), ( $^{31}\text{Mg}$ , X), ( $^{32}\text{Mg}$ , X), ( $^{33}\text{Mg}$ , X), ( $^{34}\text{Mg}$ , X), ( $^{35}\text{Mg}$ , X), ( $^{31}\text{Al}$ , X), ( $^{32}\text{Al}$ , X), ( $^{33}\text{Al}$ , X), ( $^{34}\text{Al}$ , X), ( $^{35}\text{Al}$ , X), ( $^{36}\text{Al}$ , X), ( $^{37}\text{Al}$ , X), ( $^{38}\text{Al}$ , X), ( $^{33}\text{Si}$ , X), ( $^{34}\text{Si}$ , X), ( $^{35}\text{Si}$ , X), ( $^{36}\text{Si}$ , X), ( $^{37}\text{Si}$ , X), ( $^{38}\text{Si}$ , X), ( $^{39}\text{Si}$ , X), ( $^{40}\text{Si}$ , X), ( $^{36}\text{P}$ , X), ( $^{37}\text{P}$ , X), ( $^{38}\text{P}$ , X), ( $^{39}\text{P}$ , X), ( $^{40}\text{P}$ , X), ( $^{41}\text{P}$ , X), ( $^{42}\text{P}$ , X), ( $^{39}\text{S}$ , X), ( $^{40}\text{S}$ , X), ( $^{41}\text{S}$ , X), ( $^{42}\text{S}$ , X), ( $^{43}\text{S}$ , X), ( $^{44}\text{S}$ , X), ( $^{42}\text{Cl}$ , X), ( $^{43}\text{Cl}$ , X), ( $^{44}\text{Cl}$ , X), ( $^{45}\text{Cl}$ , X), ( $^{45}\text{Ar}$ , X), ( $^{46}\text{Ar}$ , X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22, $\text{N}$ , 19,20,21,22,23,24, $\text{O}$ , 21,22,23,24,25,26,27, $\text{F}$ , 23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42, $\text{P}$ , 31,32,33,34,35,36,37,38,39,40,41,42, $\text{S}$ , 42,43,44,45,35,36,37,38,39,40,41,42, $\text{Cl}$ , 45,46,35,36,37,38,39,40,41,42, $\text{Ar}$ ; deduced radii, isospin dependence. $^{35}\text{Mg}$ , $^{44}\text{S}$ ; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
$^{44}\text{Cl}$	NUCLEAR REACTIONS Si( $^{17}\text{N}$ , X), ( $^{18}\text{N}$ , X), ( $^{19}\text{N}$ , X), ( $^{20}\text{N}$ , X), ( $^{21}\text{N}$ , X), ( $^{22}\text{N}$ , X), ( $^{19}\text{O}$ , X), ( $^{20}\text{O}$ , X), ( $^{21}\text{O}$ , X), ( $^{22}\text{O}$ , X), ( $^{23}\text{O}$ , X), ( $^{24}\text{O}$ , X), ( $^{21}\text{F}$ , X), ( $^{22}\text{F}$ , X), ( $^{23}\text{F}$ , X), ( $^{24}\text{F}$ , X), ( $^{25}\text{F}$ , X), ( $^{26}\text{F}$ , X), ( $^{27}\text{F}$ , X), ( $^{23}\text{Ne}$ , X), ( $^{24}\text{Ne}$ , X), ( $^{25}\text{Ne}$ , X), ( $^{26}\text{Ne}$ , X), ( $^{27}\text{Ne}$ , X), ( $^{28}\text{Ne}$ , X), ( $^{29}\text{Ne}$ , X), ( $^{30}\text{Ne}$ , X), ( $^{26}\text{Na}$ , X), ( $^{27}\text{Na}$ , X), ( $^{28}\text{Na}$ , X), ( $^{29}\text{Na}$ , X), ( $^{30}\text{Na}$ , X), ( $^{31}\text{Na}$ , X), ( $^{32}\text{Na}$ , X), ( $^{33}\text{Na}$ , X), ( $^{28}\text{Mg}$ , X), ( $^{29}\text{Mg}$ , X), ( $^{30}\text{Mg}$ , X), ( $^{31}\text{Mg}$ , X), ( $^{32}\text{Mg}$ , X), ( $^{33}\text{Mg}$ , X), ( $^{34}\text{Mg}$ , X), ( $^{35}\text{Mg}$ , X), ( $^{31}\text{Al}$ , X), ( $^{32}\text{Al}$ , X), ( $^{33}\text{Al}$ , X), ( $^{34}\text{Al}$ , X), ( $^{35}\text{Al}$ , X), ( $^{36}\text{Al}$ , X), ( $^{37}\text{Al}$ , X), ( $^{38}\text{Al}$ , X), ( $^{33}\text{Si}$ , X), ( $^{34}\text{Si}$ , X), ( $^{35}\text{Si}$ , X), ( $^{36}\text{Si}$ , X), ( $^{37}\text{Si}$ , X), ( $^{38}\text{Si}$ , X), ( $^{39}\text{Si}$ , X), ( $^{40}\text{Si}$ , X), ( $^{36}\text{P}$ , X), ( $^{37}\text{P}$ , X), ( $^{38}\text{P}$ , X), ( $^{39}\text{P}$ , X), ( $^{40}\text{P}$ , X), ( $^{41}\text{P}$ , X), ( $^{42}\text{P}$ , X), ( $^{39}\text{S}$ , X), ( $^{40}\text{S}$ , X), ( $^{41}\text{S}$ , X), ( $^{42}\text{S}$ , X), ( $^{43}\text{S}$ , X), ( $^{44}\text{S}$ , X), ( $^{42}\text{Cl}$ , X), ( $^{43}\text{Cl}$ , X), ( $^{44}\text{Cl}$ , X), ( $^{45}\text{Cl}$ , X), ( $^{45}\text{Ar}$ , X), ( $^{46}\text{Ar}$ , X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22, $\text{N}$ , 19,20,21,22,23,24, $\text{O}$ , 21,22,23,24,25,26,27, $\text{F}$ , 23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42, $\text{P}$ , 31,32,33,34,35,36,37,38,39,40,41,42, $\text{S}$ , 42,43,44,45,35,36,37,38,39,40,41,42, $\text{Cl}$ , 45,46,35,36,37,38,39,40,41,42, $\text{Ar}$ ; deduced radii, isospin dependence. $^{35}\text{Mg}$ , $^{44}\text{S}$ ; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
$^{44}\text{Ar}$	NUCLEAR REACTIONS $^2\text{H}$ ( $^{48}\text{Ca}$ , X) $^{48}\text{Sc}$ / $^{47}\text{Ca}$ / $^{46}\text{Ca}$ / $^{48}\text{K}$ / $^{47}\text{K}$ / $^{46}\text{K}$ / $^{45}\text{K}$ / $^{44}\text{K}$ / $^{45}\text{Ar}$ / $^{44}\text{Ar}$ / $^{42}\text{Ar}$ / $^{42}\text{Cl}$ / $^{40}\text{Cl}$ / $^{39}\text{Cl}$ , E=102 MeV / nucleon; $^2\text{H}$ ( $^{40}\text{S}$ , X) $^{40}\text{Cl}$ / $^{39}\text{S}$ / $^{38}\text{S}$ / $^{37}\text{P}$ / $^{36}\text{P}$ / $^{34}\text{Si}$ / $^{33}\text{Si}$ / $^{32}\text{Al}$ / $^{31}\text{Al}$ , E=99.3 MeV / nucleon; $^2\text{H}$ ( $^{42}\text{S}$ , X) $^{42}\text{Cl}$ / $^{42}\text{S}$ / $^{40}\text{S}$ / $^{39}\text{P}$ / $^{38}\text{P}$ / $^{37}\text{P}$ / $^{36}\text{Si}$ / $^{35}\text{Si}$ / $^{33}\text{Al}$ / $^{32}\text{Al}$ , E=99.8 MeV / nucleon; measured production $\sigma$ . Comparison with model predictions, fragmentation from Be and Ta targets. JOUR PRVCA 74 034602

**A=44 (*continued*)**

<sup>44</sup> K	2006R034	NUCLEAR REACTIONS $^2\text{H}(^{48}\text{Ca}, \text{X})^{48}\text{Sc}$ / $^{47}\text{Ca}$ / $^{46}\text{Ca}$ / $^{48}\text{K}$ / $^{47}\text{K}$ / $^{46}\text{K}$ / $^{45}\text{K}$ / $^{44}\text{K}$ / $^{45}\text{Ar}$ / $^{44}\text{Ar}$ / $^{42}\text{Ar}$ / $^{42}\text{Cl}$ / $^{40}\text{Cl}$ / $^{39}\text{Cl}$ , E=102 MeV / nucleon; $^2\text{H}(^{40}\text{S}, \text{X})^{40}\text{Cl}$ / $^{39}\text{S}$ / $^{38}\text{S}$ / $^{37}\text{P}$ / $^{36}\text{P}$ / $^{34}\text{Si}$ / $^{33}\text{Si}$ / $^{32}\text{Al}$ / $^{31}\text{Al}$ , E=99.3 MeV / nucleon; $^2\text{H}(^{42}\text{S}, \text{X})^{42}\text{Cl}$ / $^{42}\text{S}$ / $^{40}\text{S}$ / $^{39}\text{P}$ / $^{38}\text{P}$ / $^{37}\text{P}$ / $^{36}\text{Si}$ / $^{35}\text{Si}$ / $^{33}\text{Al}$ / $^{32}\text{Al}$ , E=99.8 MeV / nucleon; measured production $\sigma$ . Comparison with model predictions, fragmentation from Be and Ta targets. JOUR PRVCA 74 034602
<sup>44</sup> Sc	2006BAZT	NUCLEAR REACTIONS $^{112,118,120,124}\text{Sn}(^{12}\text{C}, \text{X})^{7}\text{Be}$ / $^{22}\text{Na}$ / $^{24}\text{Na}$ / $^{28}\text{Mg}$ / $^{38}\text{S}$ / $^{39}\text{Cl}$ / $^{42}\text{K}$ / $^{43}\text{K}$ / $^{43}\text{Sc}$ / $^{44m}\text{Sc}$ / $^{46}\text{Sc}$ / $^{48}\text{Sc}$ / $^{48}\text{V}$ / $^{52}\text{Mn}$ / $^{56}\text{Mn}$ , E=2200 MeV / nucleon; $^{112,118,120,124}\text{Sn}(\text{p}, \text{X})^{7}\text{Be}$ / $^{22}\text{Na}$ / $^{24}\text{Na}$ / $^{28}\text{Mg}$ / $^{38}\text{S}$ / $^{39}\text{Cl}$ / $^{42}\text{K}$ / $^{43}\text{K}$ / $^{43}\text{Sc}$ / $^{44m}\text{Sc}$ / $^{46}\text{Sc}$ / $^{48}\text{Sc}$ / $^{48}\text{V}$ / $^{52}\text{Mn}$ / $^{56}\text{Mn}$ , E=3650 MeV; measured production $\sigma(^{12}\text{C})$ , relative yields. Nuclotron, HPGe detector. CONF Sarov(Nucleus-2006),Contrib,P151,Balabekyan
	2006VIZZ	RADIOACTIVITY $^{44}\text{Ti}(\text{EC})$ ; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin. $^{44}\text{Sc}$ deduced ICC. CONF Sarov(Nucleus-2006),Contrib,P96,Vishnevsky
<sup>44</sup> Ti	2006VIZZ	RADIOACTIVITY $^{44}\text{Ti}(\text{EC})$ ; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin. $^{44}\text{Sc}$ deduced ICC. CONF Sarov(Nucleus-2006),Contrib,P96,Vishnevsky

**A=45**

<sup>45</sup> Cl	2006GA31	NUCLEAR REACTIONS $\text{H}, \text{C}(^{46}\text{Ar}, \text{X})^{43}\text{Cl}$ , E=76.4 MeV / nucleon; measured $E\gamma$ , $I\gamma$ , (particle) $\gamma$ -coin. $^{45}\text{Cl}$ deduced level energy. JOUR PRVCA 74 034322
	2006KH08	NUCLEAR REACTIONS $\text{Si}(^{17}\text{N}, \text{X}), (^{18}\text{N}, \text{X}), (^{19}\text{N}, \text{X}), (^{20}\text{N}, \text{X}), (^{21}\text{N}, \text{X}), (^{22}\text{N}, \text{X}), (^{19}\text{O}, \text{X}), (^{20}\text{O}, \text{X}), (^{21}\text{O}, \text{X}), (^{22}\text{O}, \text{X}), (^{23}\text{O}, \text{X}), (^{24}\text{O}, \text{X}), (^{21}\text{F}, \text{X}), (^{22}\text{F}, \text{X}), (^{23}\text{F}, \text{X}), (^{24}\text{F}, \text{X}), (^{25}\text{F}, \text{X}), (^{26}\text{F}, \text{X}), (^{27}\text{F}, \text{X}), (^{23}\text{Ne}, \text{X}), (^{24}\text{Ne}, \text{X}), (^{25}\text{Ne}, \text{X}), (^{26}\text{Ne}, \text{X}), (^{27}\text{Ne}, \text{X}), (^{28}\text{Ne}, \text{X}), (^{29}\text{Ne}, \text{X}), (^{30}\text{Ne}, \text{X}), (^{26}\text{Na}, \text{X}), (^{27}\text{Na}, \text{X}), (^{28}\text{Na}, \text{X}), (^{29}\text{Na}, \text{X}), (^{30}\text{Na}, \text{X}), (^{31}\text{Na}, \text{X}), (^{32}\text{Na}, \text{X}), (^{33}\text{Na}, \text{X}), (^{28}\text{Mg}, \text{X}), (^{29}\text{Mg}, \text{X}), (^{30}\text{Mg}, \text{X}), (^{31}\text{Mg}, \text{X}), (^{32}\text{Mg}, \text{X}), (^{33}\text{Mg}, \text{X}), (^{34}\text{Mg}, \text{X}), (^{35}\text{Mg}, \text{X}), (^{31}\text{Al}, \text{X}), (^{32}\text{Al}, \text{X}), (^{33}\text{Al}, \text{X}), (^{34}\text{Al}, \text{X}), (^{35}\text{Al}, \text{X}), (^{36}\text{Al}, \text{X}), (^{37}\text{Al}, \text{X}), (^{38}\text{Al}, \text{X}), (^{33}\text{Si}, \text{X}), (^{34}\text{Si}, \text{X}), (^{35}\text{Si}, \text{X}), (^{36}\text{Si}, \text{X}), (^{37}\text{Si}, \text{X}), (^{38}\text{Si}, \text{X}), (^{39}\text{Si}, \text{X}), (^{40}\text{Si}, \text{X}), (^{36}\text{P}, \text{X}), (^{37}\text{P}, \text{X}), (^{38}\text{P}, \text{X}), (^{39}\text{P}, \text{X}), (^{40}\text{P}, \text{X}), (^{41}\text{P}, \text{X}), (^{42}\text{P}, \text{X}), (^{39}\text{S}, \text{X}), (^{40}\text{S}, \text{X}), (^{41}\text{S}, \text{X}), (^{42}\text{S}, \text{X}), (^{43}\text{S}, \text{X}), (^{44}\text{S}, \text{X}), (^{42}\text{Cl}, \text{X}), (^{43}\text{Cl}, \text{X}), (^{44}\text{Cl}, \text{X}), (^{45}\text{Cl}, \text{X}), (^{45}\text{Ar}, \text{X}), (^{46}\text{Ar}, \text{X}), \text{E}=30-65 \text{ MeV} / \text{nucleon}; \text{measured energy-integrated reaction } \sigma.$ $^{17,18,19,20,21,22}\text{N}, ^{19,20,21,22,23}\text{O}, ^{21,22,23,24,25,26,27}\text{F}, ^{23,24,25,26,27,28,29,30}\text{Ne}, ^{26,27,28,29,30,31,32,33}\text{Na}, ^{28,29,30,31,32,33,34,35}\text{Mg}, ^{31,32,33,34,35,36,37,38}\text{Al}, ^{33,34,35,36,37,38,39,40}\text{Si}, ^{36,37,38,39,40,41,42}\text{P}, ^{39,40,41,42,43,44}\text{S}, ^{42,43,44,45}\text{Cl}, ^{45,46}\text{Ar}; \text{deduced radii, isospin dependence. } ^{35}\text{Mg}, ^{44}\text{S}; \text{deduced possible halo structure or large deformation. JOUR NUPAB 780 1}$

**A=45 (*continued*)**

$^{45}\text{Ar}$	2006KH08	NUCLEAR REACTIONS Si( $^{17}\text{N}$ , X), ( $^{18}\text{N}$ , X), ( $^{19}\text{N}$ , X), ( $^{20}\text{N}$ , X), ( $^{21}\text{N}$ , X), ( $^{22}\text{N}$ , X), ( $^{19}\text{O}$ , X), ( $^{20}\text{O}$ , X), ( $^{21}\text{O}$ , X), ( $^{22}\text{O}$ , X), ( $^{23}\text{O}$ , X), ( $^{24}\text{O}$ , X), ( $^{21}\text{F}$ , X), ( $^{22}\text{F}$ , X), ( $^{23}\text{F}$ , X), ( $^{24}\text{F}$ , X), ( $^{25}\text{F}$ , X), ( $^{26}\text{F}$ , X), ( $^{27}\text{F}$ , X), ( $^{23}\text{Ne}$ , X), ( $^{24}\text{Ne}$ , X), ( $^{25}\text{Ne}$ , X), ( $^{26}\text{Ne}$ , X), ( $^{27}\text{Ne}$ , X), ( $^{28}\text{Ne}$ , X), ( $^{29}\text{Ne}$ , X), ( $^{30}\text{Ne}$ , X), ( $^{26}\text{Na}$ , X), ( $^{27}\text{Na}$ , X), ( $^{28}\text{Na}$ , X), ( $^{29}\text{Na}$ , X), ( $^{30}\text{Na}$ , X), ( $^{31}\text{Na}$ , X), ( $^{32}\text{Na}$ , X), ( $^{33}\text{Na}$ , X), ( $^{28}\text{Mg}$ , X), ( $^{29}\text{Mg}$ , X), ( $^{30}\text{Mg}$ , X), ( $^{31}\text{Mg}$ , X), ( $^{32}\text{Mg}$ , X), ( $^{33}\text{Mg}$ , X), ( $^{34}\text{Mg}$ , X), ( $^{35}\text{Mg}$ , X), ( $^{31}\text{Al}$ , X), ( $^{32}\text{Al}$ , X), ( $^{33}\text{Al}$ , X), ( $^{34}\text{Al}$ , X), ( $^{35}\text{Al}$ , X), ( $^{36}\text{Al}$ , X), ( $^{37}\text{Al}$ , X), ( $^{38}\text{Al}$ , X), ( $^{33}\text{Si}$ , X), ( $^{34}\text{Si}$ , X), ( $^{35}\text{Si}$ , X), ( $^{36}\text{Si}$ , X), ( $^{37}\text{Si}$ , X), ( $^{38}\text{Si}$ , X), ( $^{39}\text{Si}$ , X), ( $^{40}\text{Si}$ , X), ( $^{36}\text{P}$ , X), ( $^{37}\text{P}$ , X), ( $^{38}\text{P}$ , X), ( $^{39}\text{P}$ , X), ( $^{40}\text{P}$ , X), ( $^{41}\text{P}$ , X), ( $^{42}\text{P}$ , X), ( $^{39}\text{S}$ , X), ( $^{40}\text{S}$ , X), ( $^{41}\text{S}$ , X), ( $^{42}\text{S}$ , X), ( $^{43}\text{S}$ , X), ( $^{44}\text{S}$ , X), ( $^{42}\text{Cl}$ , X), ( $^{43}\text{Cl}$ , X), ( $^{45}\text{Cl}$ , X), ( $^{45}\text{Ar}$ , X), ( $^{46}\text{Ar}$ , X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22, $\text{N}$ , 19,20,21,22,23,24, $\text{O}$ , 21,22,23,24,25,26,27, $\text{F}$ , 23,24,25,26,27,28,29,30,31,32,33,34,35, $\text{Mg}$ , 31,32,33,34,35,36,37,38, $\text{Al}$ , 33,34,35,36,37,38,39,40, $\text{Si}$ , 36,37,38,39,40,41,42, $\text{P}$ , 39,40,41,42,43,44, $\text{S}$ , 42,43,44,45, $\text{Cl}$ , 45,46, $\text{Ar}$ ; deduced radii, isospin dependence. $^{35}\text{Mg}$ , $^{44}\text{S}$ ; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
	2006R034	NUCLEAR REACTIONS $^2\text{H}$ ( $^{48}\text{Ca}$ , X) $^{48}\text{Sc}$ / $^{47}\text{Ca}$ / $^{46}\text{Ca}$ / $^{48}\text{K}$ / $^{47}\text{K}$ / $^{46}\text{K}$ / $^{45}\text{K}$ / $^{44}\text{K}$ / $^{45}\text{Ar}$ / $^{44}\text{Ar}$ / $^{42}\text{Ar}$ / $^{42}\text{Cl}$ / $^{40}\text{Cl}$ / $^{39}\text{Cl}$ , E=102 MeV / nucleon; $^2\text{H}$ ( $^{40}\text{S}$ , X) $^{40}\text{Cl}$ / $^{39}\text{S}$ / $^{38}\text{S}$ / $^{37}\text{P}$ / $^{36}\text{P}$ / $^{34}\text{Si}$ / $^{33}\text{Si}$ / $^{32}\text{Al}$ / $^{31}\text{Al}$ , E=99.3 MeV / nucleon; $^2\text{H}$ ( $^{42}\text{S}$ , X) $^{42}\text{Cl}$ / $^{42}\text{S}$ / $^{40}\text{S}$ / $^{39}\text{P}$ / $^{38}\text{P}$ / $^{37}\text{P}$ / $^{36}\text{Si}$ / $^{35}\text{Si}$ / $^{33}\text{Al}$ / $^{32}\text{Al}$ , E=99.8 MeV / nucleon; measured production $\sigma$ . Comparison with model predictions, fragmentation from Be and Ta targets. JOUR PRVCA 74 034602
$^{45}\text{K}$	2006R034	NUCLEAR REACTIONS $^2\text{H}$ ( $^{48}\text{Ca}$ , X) $^{48}\text{Sc}$ / $^{47}\text{Ca}$ / $^{46}\text{Ca}$ / $^{48}\text{K}$ / $^{47}\text{K}$ / $^{46}\text{K}$ / $^{45}\text{K}$ / $^{44}\text{K}$ / $^{45}\text{Ar}$ / $^{44}\text{Ar}$ / $^{42}\text{Ar}$ / $^{42}\text{Cl}$ / $^{40}\text{Cl}$ / $^{39}\text{Cl}$ , E=102 MeV / nucleon; $^2\text{H}$ ( $^{40}\text{S}$ , X) $^{40}\text{Cl}$ / $^{39}\text{S}$ / $^{38}\text{S}$ / $^{37}\text{P}$ / $^{36}\text{P}$ / $^{34}\text{Si}$ / $^{33}\text{Si}$ / $^{32}\text{Al}$ / $^{31}\text{Al}$ , E=99.3 MeV / nucleon; $^2\text{H}$ ( $^{42}\text{S}$ , X) $^{42}\text{Cl}$ / $^{42}\text{S}$ / $^{40}\text{S}$ / $^{39}\text{P}$ / $^{38}\text{P}$ / $^{37}\text{P}$ / $^{36}\text{Si}$ / $^{35}\text{Si}$ / $^{33}\text{Al}$ / $^{32}\text{Al}$ , E=99.8 MeV / nucleon; measured production $\sigma$ . Comparison with model predictions, fragmentation from Be and Ta targets. JOUR PRVCA 74 034602

**A=46**

<sup>46</sup> Ar	2006KH08	NUCLEAR REACTIONS Si( <sup>17</sup> N, X), ( <sup>18</sup> N, X), ( <sup>19</sup> N, X), ( <sup>20</sup> N, X), ( <sup>21</sup> N, X), ( <sup>22</sup> N, X), ( <sup>19</sup> O, X), ( <sup>20</sup> O, X), ( <sup>21</sup> O, X), ( <sup>22</sup> O, X), ( <sup>23</sup> O, X), ( <sup>24</sup> O, X), ( <sup>21</sup> F, X), ( <sup>22</sup> F, X), ( <sup>23</sup> F, X), ( <sup>24</sup> F, X), ( <sup>25</sup> F, X), ( <sup>26</sup> F, X), ( <sup>27</sup> F, X), ( <sup>23</sup> Ne, X), ( <sup>24</sup> Ne, X), ( <sup>25</sup> Ne, X), ( <sup>26</sup> Ne, X), ( <sup>27</sup> Ne, X), ( <sup>28</sup> Ne, X), ( <sup>29</sup> Ne, X), ( <sup>30</sup> Ne, X), ( <sup>26</sup> Na, X), ( <sup>27</sup> Na, X), ( <sup>28</sup> Na, X), ( <sup>29</sup> Na, X), ( <sup>30</sup> Na, X), ( <sup>31</sup> Na, X), ( <sup>32</sup> Na, X), ( <sup>33</sup> Na, X), ( <sup>28</sup> Mg, X), ( <sup>29</sup> Mg, X), ( <sup>30</sup> Mg, X), ( <sup>31</sup> Mg, X), ( <sup>32</sup> Mg, X), ( <sup>33</sup> Mg, X), ( <sup>34</sup> Mg, X), ( <sup>35</sup> Mg, X), ( <sup>31</sup> Al, X), ( <sup>32</sup> Al, X), ( <sup>33</sup> Al, X), ( <sup>34</sup> Al, X), ( <sup>35</sup> Al, X), ( <sup>36</sup> Al, X), ( <sup>37</sup> Al, X), ( <sup>38</sup> Al, X), ( <sup>33</sup> Si, X), ( <sup>34</sup> Si, X), ( <sup>35</sup> Si, X), ( <sup>36</sup> Si, X), ( <sup>37</sup> Si, X), ( <sup>38</sup> Si, X), ( <sup>39</sup> Si, X), ( <sup>40</sup> Si, X), ( <sup>36</sup> P, X), ( <sup>37</sup> P, X), ( <sup>38</sup> P, X), ( <sup>39</sup> P, X), ( <sup>40</sup> P, X), ( <sup>41</sup> P, X), ( <sup>42</sup> P, X), ( <sup>39</sup> S, X), ( <sup>40</sup> S, X), ( <sup>41</sup> S, X), ( <sup>42</sup> S, X), ( <sup>43</sup> S, X), ( <sup>44</sup> S, X), ( <sup>42</sup> Cl, X), ( <sup>43</sup> Cl, X), ( <sup>45</sup> Cl, X), ( <sup>45</sup> Ar, X), ( <sup>46</sup> Ar, X), E=30-65 MeV / nucleon; measured energy-integrated reaction $\sigma$ . 17,18,19,20,21,22,N, 19,20,21,22,23,24,O, 21,22,23,24,25,26,27,F, 23,24,25,26,27,28,29,30,Ne, 26,27,28,29,30,31,32,33,34,35,Mg, 31,32,33,34,35,36,37,38,Al, 33,34,35,36,37,38,39,40,Si, 36,37,38,39,40,41,42,P, 39,40,41,42,43,44,S, 42,43,44,45,Cl, 45,46,Ar; deduced radii, isospin dependence. <sup>35</sup> Mg, <sup>44</sup> S; deduced possible halo structure or large deformation. JOUR NUPAB 780 1
<sup>46</sup> K	2006R034	NUCLEAR REACTIONS <sup>2</sup> H( <sup>48</sup> Ca, X) <sup>48</sup> Sc / <sup>47</sup> Ca / <sup>46</sup> Ca / <sup>48</sup> K / <sup>47</sup> K / <sup>46</sup> K / <sup>45</sup> K / <sup>44</sup> K / <sup>45</sup> Ar / <sup>44</sup> Ar / <sup>42</sup> Ar / <sup>42</sup> Cl / <sup>40</sup> Cl / <sup>39</sup> Cl, E=102 MeV / nucleon; <sup>2</sup> H( <sup>40</sup> S, X) <sup>40</sup> Cl / <sup>39</sup> S / <sup>38</sup> S / <sup>37</sup> P / <sup>36</sup> P / <sup>34</sup> Si / <sup>33</sup> Si / <sup>32</sup> Al / <sup>31</sup> Al, E=99.3 MeV / nucleon; <sup>2</sup> H( <sup>42</sup> S, X) <sup>42</sup> Cl / <sup>42</sup> S / <sup>40</sup> S / <sup>39</sup> P / <sup>38</sup> P / <sup>37</sup> P / <sup>36</sup> Si / <sup>35</sup> Si / <sup>33</sup> Al / <sup>32</sup> Al, E=99.8 MeV / nucleon; measured production $\sigma$ . Comparison with model predictions, fragmentation from Be and Ta targets. JOUR PRVCA 74 034602
<sup>46</sup> Ca	2006R034	NUCLEAR REACTIONS <sup>2</sup> H( <sup>48</sup> Ca, X) <sup>48</sup> Sc / <sup>47</sup> Ca / <sup>46</sup> Ca / <sup>48</sup> K / <sup>47</sup> K / <sup>46</sup> K / <sup>45</sup> K / <sup>44</sup> K / <sup>45</sup> Ar / <sup>44</sup> Ar / <sup>42</sup> Ar / <sup>42</sup> Cl / <sup>40</sup> Cl / <sup>39</sup> Cl, E=102 MeV / nucleon; <sup>2</sup> H( <sup>40</sup> S, X) <sup>40</sup> Cl / <sup>39</sup> S / <sup>38</sup> S / <sup>37</sup> P / <sup>36</sup> P / <sup>34</sup> Si / <sup>33</sup> Si / <sup>32</sup> Al / <sup>31</sup> Al, E=99.3 MeV / nucleon; <sup>2</sup> H( <sup>42</sup> S, X) <sup>42</sup> Cl / <sup>42</sup> S / <sup>40</sup> S / <sup>39</sup> P / <sup>38</sup> P / <sup>37</sup> P / <sup>36</sup> Si / <sup>35</sup> Si / <sup>33</sup> Al / <sup>32</sup> Al, E=99.8 MeV / nucleon; measured production $\sigma$ . Comparison with model predictions, fragmentation from Be and Ta targets. JOUR PRVCA 74 034602
<sup>46</sup> Sc	2005KU43	RADIOACTIVITY <sup>46</sup> Sc( $\beta^-$ ); measured E $\beta$ , electron yields, (electron) $\beta$ -coin. JOUR BRSPE 69 1848
	2005KU44	RADIOACTIVITY <sup>46</sup> Sc( $\beta^-$ ); measured E $\gamma$ , I $\gamma$ , (electron) $\gamma$ -coin. JOUR BRSPE 69 1852
<sup>2006BAZT</sup>		NUCLEAR REACTIONS <sup>112,118,120,124</sup> Sn( <sup>12</sup> C, X) <sup>7</sup> Be / <sup>22</sup> Na / <sup>24</sup> Na / <sup>28</sup> Mg / <sup>38</sup> S / <sup>39</sup> Cl / <sup>42</sup> K / <sup>43</sup> K / <sup>43</sup> Sc / <sup>44m</sup> Sc / <sup>46</sup> Sc / <sup>48</sup> Sc / <sup>48</sup> V / <sup>52</sup> Mn / <sup>56</sup> Mn, E=2200 MeV / nucleon; <sup>112,118,120,124</sup> Sn(p, X) <sup>7</sup> Be / <sup>22</sup> Na / <sup>24</sup> Na / <sup>28</sup> Mg / <sup>38</sup> S / <sup>39</sup> Cl / <sup>42</sup> K / <sup>43</sup> K / <sup>43</sup> Sc / <sup>44m</sup> Sc / <sup>46</sup> Sc / <sup>48</sup> Sc / <sup>48</sup> V / <sup>52</sup> Mn / <sup>56</sup> Mn, E=3650 MeV; measured production $\sigma(^{12}\text{C})$ , relative yields. Nuclotron, HPGe detector. CONF Sarov(Nucleus-2006), Contrib,P151,Balabekyan
<sup>46</sup> Ti	2005KU43	RADIOACTIVITY <sup>46</sup> Sc( $\beta^-$ ); measured E $\beta$ , electron yields, (electron) $\beta$ -coin. JOUR BRSPE 69 1848
	2005KU44	RADIOACTIVITY <sup>46</sup> Sc( $\beta^-$ ); measured E $\gamma$ , I $\gamma$ , (electron) $\gamma$ -coin. JOUR BRSPE 69 1852

**KEYNUMBERS AND KEYWORDS**

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**A=46 (*continued*)**

	2006T010	NUCLEAR REACTIONS $^{46,48}\text{Ti}(\alpha, \alpha')$ , E=240 MeV; measured $E\alpha$ , $\sigma(E, \theta)$ . $^{46,48}\text{Ti}$ deduced isoscalar monopole, dipole, and quadrupole strength distributions, resonance features. JOUR PRVCA 74 044308
$^{46}\text{V}$	2006ER08	ATOMIC MASSES $^{26m}\text{Al}$ , $^{42}\text{Sc}$ , $^{46}\text{V}$ ; measured masses; deduced Q(EC). Comparison with previous results, implications for CKM matrix element discussed. JOUR PRLTA 97 232501
	2006FAZZ	NUCLEAR REACTIONS $^{46,47}\text{Ti}(^3\text{He}, t)$ , E=27 MeV; measured triton spectra; deduced IAS excitation. $^{46}\text{V}$ deduced Q(EC). $^{46,48}\text{Ti}(d, p)$ , E=14 MeV; measured Ep. $^{47}\text{V}$ deduced neutron separation energy. REPT MLL 2005 Annual, P7,Faestermann

**A=47**

$^{47}\text{K}$	2006R034	NUCLEAR REACTIONS $^2\text{H}(^{48}\text{Ca}, X)^{48}\text{Sc} / ^{47}\text{Ca} / ^{46}\text{Ca} / ^{48}\text{K} / ^{47}\text{K} / ^{46}\text{K} / ^{45}\text{K} / ^{44}\text{K} / ^{45}\text{Ar} / ^{44}\text{Ar} / ^{42}\text{Ar} / ^{42}\text{Cl} / ^{40}\text{Cl} / ^{39}\text{Cl}$ , E=102 MeV / nucleon; $^2\text{H}(^{40}\text{S}, X)^{40}\text{Cl} / ^{39}\text{S} / ^{38}\text{S} / ^{37}\text{P} / ^{36}\text{P} / ^{34}\text{Si} / ^{33}\text{Si} / ^{32}\text{Al} / ^{31}\text{Al}$ , E=99.3 MeV / nucleon; $^2\text{H}(^{42}\text{S}, X)^{42}\text{Cl} / ^{42}\text{S} / ^{40}\text{S} / ^{39}\text{P} / ^{38}\text{P} / ^{37}\text{P} / ^{36}\text{Si} / ^{35}\text{Si} / ^{33}\text{Al} / ^{32}\text{Al}$ , E=99.8 MeV / nucleon; measured production $\sigma$ . Comparison with model predictions, fragmentation from Be and Ta targets. JOUR PRVCA 74 034602
$^{47}\text{Ca}$	2006R034	NUCLEAR REACTIONS $^2\text{H}(^{48}\text{Ca}, X)^{48}\text{Sc} / ^{47}\text{Ca} / ^{46}\text{Ca} / ^{48}\text{K} / ^{47}\text{K} / ^{46}\text{K} / ^{45}\text{K} / ^{44}\text{K} / ^{45}\text{Ar} / ^{44}\text{Ar} / ^{42}\text{Ar} / ^{42}\text{Cl} / ^{40}\text{Cl} / ^{39}\text{Cl}$ , E=102 MeV / nucleon; $^2\text{H}(^{40}\text{S}, X)^{40}\text{Cl} / ^{39}\text{S} / ^{38}\text{S} / ^{37}\text{P} / ^{36}\text{P} / ^{34}\text{Si} / ^{33}\text{Si} / ^{32}\text{Al} / ^{31}\text{Al}$ , E=99.3 MeV / nucleon; $^2\text{H}(^{42}\text{S}, X)^{42}\text{Cl} / ^{42}\text{S} / ^{40}\text{S} / ^{39}\text{P} / ^{38}\text{P} / ^{37}\text{P} / ^{36}\text{Si} / ^{35}\text{Si} / ^{33}\text{Al} / ^{32}\text{Al}$ , E=99.8 MeV / nucleon; measured production $\sigma$ . Comparison with model predictions, fragmentation from Be and Ta targets. JOUR PRVCA 74 034602
$^{47}\text{Ti}$	2006FAZZ	NUCLEAR REACTIONS $^{46,47}\text{Ti}(^3\text{He}, t)$ , E=27 MeV; measured triton spectra; deduced IAS excitation. $^{46}\text{V}$ deduced Q(EC). $^{46,48}\text{Ti}(d, p)$ , E=14 MeV; measured Ep. $^{47}\text{V}$ deduced neutron separation energy. REPT MLL 2005 Annual, P7,Faestermann
$^{47}\text{V}$	2006FAZZ	NUCLEAR REACTIONS $^{46,47}\text{Ti}(^3\text{He}, t)$ , E=27 MeV; measured triton spectra; deduced IAS excitation. $^{46}\text{V}$ deduced Q(EC). $^{46,48}\text{Ti}(d, p)$ , E=14 MeV; measured Ep. $^{47}\text{V}$ deduced neutron separation energy. REPT MLL 2005 Annual, P7,Faestermann

**A=48**

$^{48}\text{K}$	2006R034	NUCLEAR REACTIONS $^2\text{H}(^{48}\text{Ca}, X)^{48}\text{Sc} / ^{47}\text{Ca} / ^{46}\text{Ca} / ^{48}\text{K} / ^{47}\text{K} / ^{46}\text{K} / ^{45}\text{K} / ^{44}\text{K} / ^{45}\text{Ar} / ^{44}\text{Ar} / ^{42}\text{Ar} / ^{42}\text{Cl} / ^{40}\text{Cl} / ^{39}\text{Cl}$ , E=102 MeV / nucleon; $^2\text{H}(^{40}\text{S}, X)^{40}\text{Cl} / ^{39}\text{S} / ^{38}\text{S} / ^{37}\text{P} / ^{36}\text{P} / ^{34}\text{Si} / ^{33}\text{Si} / ^{32}\text{Al} / ^{31}\text{Al}$ , E=99.3 MeV / nucleon; $^2\text{H}(^{42}\text{S}, X)^{42}\text{Cl} / ^{42}\text{S} / ^{40}\text{S} / ^{39}\text{P} / ^{38}\text{P} / ^{37}\text{P} / ^{36}\text{Si} / ^{35}\text{Si} / ^{33}\text{Al} / ^{32}\text{Al}$ , E=99.8 MeV / nucleon; measured production $\sigma$ . Comparison with model predictions, fragmentation from Be and Ta targets. JOUR PRVCA 74 034602
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**A=48 (continued)**

<sup>48</sup> Sc	2006BAZT	NUCLEAR REACTIONS <sup>112,118,120,124</sup> Sn( <sup>12</sup> C, X) <sup>7</sup> Be / <sup>22</sup> Na / <sup>24</sup> Na / <sup>28</sup> Mg / <sup>38</sup> S / <sup>39</sup> Cl / <sup>42</sup> K / <sup>43</sup> K / <sup>43</sup> Sc / <sup>44m</sup> Sc / <sup>46</sup> Sc / <sup>48</sup> Sc / <sup>48</sup> V / <sup>52</sup> Mn / <sup>56</sup> Mn, E=2200 MeV / nucleon; <sup>112,118,120,124</sup> Sn(p, X) <sup>7</sup> Be / <sup>22</sup> Na / <sup>24</sup> Na / <sup>28</sup> Mg / <sup>38</sup> S / <sup>39</sup> Cl / <sup>42</sup> K / <sup>43</sup> K / <sup>43</sup> Sc / <sup>44m</sup> Sc / <sup>46</sup> Sc / <sup>48</sup> Sc / <sup>48</sup> V / <sup>52</sup> Mn / <sup>56</sup> Mn, E=3650 MeV; measured production $\sigma(^{12}\text{C})$ , relative yields. Nuclotron, HPGe detector. CONF Sarov(Nucleus-2006), Contrib, P151, Balabekyan
	2006R034	NUCLEAR REACTIONS <sup>2</sup> H( <sup>48</sup> Ca, X) <sup>48</sup> Sc / <sup>47</sup> Ca / <sup>46</sup> Ca / <sup>48</sup> K / <sup>47</sup> K / <sup>46</sup> K / <sup>45</sup> K / <sup>44</sup> K / <sup>45</sup> Ar / <sup>44</sup> Ar / <sup>42</sup> Ar / <sup>42</sup> Cl / <sup>40</sup> Cl / <sup>39</sup> Cl, E=102 MeV / nucleon; <sup>2</sup> H( <sup>40</sup> S, X) <sup>40</sup> Cl / <sup>39</sup> S / <sup>38</sup> S / <sup>37</sup> P / <sup>36</sup> P / <sup>34</sup> Si / <sup>33</sup> Si / <sup>32</sup> Al / <sup>31</sup> Al, E=99.3 MeV / nucleon; <sup>2</sup> H( <sup>42</sup> S, X) <sup>42</sup> Cl / <sup>42</sup> S / <sup>40</sup> S / <sup>39</sup> P / <sup>38</sup> P / <sup>37</sup> P / <sup>36</sup> Si / <sup>35</sup> Si / <sup>33</sup> Al / <sup>32</sup> Al, E=99.8 MeV / nucleon; measured production $\sigma$ . Comparison with model predictions, fragmentation from Be and Ta targets. JOUR PRVCA 74 034602
<sup>48</sup> Ti	2006T010	NUCLEAR REACTIONS <sup>46,48</sup> Ti( $\alpha$ , $\alpha'$ ), E=240 MeV; measured $E\alpha$ , $\sigma(E, \theta)$ . <sup>46,48</sup> Ti deduced isoscalar monopole, dipole, and quadrupole strength distributions, resonance features. JOUR PRVCA 74 044308
<sup>48</sup> V	2006BAZT	NUCLEAR REACTIONS <sup>112,118,120,124</sup> Sn( <sup>12</sup> C, X) <sup>7</sup> Be / <sup>22</sup> Na / <sup>24</sup> Na / <sup>28</sup> Mg / <sup>38</sup> S / <sup>39</sup> Cl / <sup>42</sup> K / <sup>43</sup> K / <sup>43</sup> Sc / <sup>44m</sup> Sc / <sup>46</sup> Sc / <sup>48</sup> Sc / <sup>48</sup> V / <sup>52</sup> Mn / <sup>56</sup> Mn, E=2200 MeV / nucleon; <sup>112,118,120,124</sup> Sn(p, X) <sup>7</sup> Be / <sup>22</sup> Na / <sup>24</sup> Na / <sup>28</sup> Mg / <sup>38</sup> S / <sup>39</sup> Cl / <sup>42</sup> K / <sup>43</sup> K / <sup>43</sup> Sc / <sup>44m</sup> Sc / <sup>46</sup> Sc / <sup>48</sup> Sc / <sup>48</sup> V / <sup>52</sup> Mn / <sup>56</sup> Mn, E=3650 MeV; measured production $\sigma(^{12}\text{C})$ , relative yields. Nuclotron, HPGe detector. CONF Sarov(Nucleus-2006), Contrib, P151, Balabekyan
	2006BE45	NUCLEAR REACTIONS <sup>10</sup> B( <sup>40</sup> Ca, 2n), ( <sup>40</sup> Ca, 2p), E=110 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -, (recoil) $\gamma$ -coin. <sup>48</sup> Mn deduced high-spin levels, $J$ , $\pi$ , mirror energy differences. Gammasphere array, mass separator. JOUR PRLTA 97 132501
<sup>48</sup> Mn	2006BE45	NUCLEAR REACTIONS <sup>10</sup> B( <sup>40</sup> Ca, 2n), ( <sup>40</sup> Ca, 2p), E=110 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -, (recoil) $\gamma$ -coin. <sup>48</sup> Mn deduced high-spin levels, $J$ , $\pi$ , mirror energy differences. Gammasphere array, mass separator. JOUR PRLTA 97 132501

**A=49**

<sup>49</sup> Ti	2006FAZZ	NUCLEAR REACTIONS <sup>46,47</sup> Ti( <sup>3</sup> He, t), E=27 MeV; measured triton spectra; deduced IAS excitation. <sup>46</sup> V deduced Q(EC). <sup>46,48</sup> Ti(d, p), E=14 MeV; measured Ep. <sup>47</sup> V deduced neutron separation energy. REPT MLL 2005 Annual, P7, Faestermann
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**A=50**

<sup>50</sup> Ti	2006LEZQ	NUCLEAR REACTIONS <sup>50</sup> Ti( <sup>138</sup> Xe, <sup>138</sup> Xe'), E=2.8 MeV / nucleon; measured $E\gamma$ , $I\gamma(\theta, H, t)$ , $\gamma\gamma$ -, (particle) $\gamma$ -coin following projectile Coulomb excitation. <sup>138</sup> Xe deduced transition. Miniball array. REPT MLL 2005 Annual, P15, Leske
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**KEYNUMBERS AND KEYWORDS**

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**A=51**

No references found

**A=52**

<sup>52</sup> Mn	2006BAZT	NUCLEAR REACTIONS $^{112,118,120,124}\text{Sn}(^{12}\text{C}, \text{X})^{7}\text{Be}$ / $^{22}\text{Na}$ / $^{24}\text{Na}$ / $^{28}\text{Mg}$ / $^{38}\text{S}$ / $^{39}\text{Cl}$ / $^{42}\text{K}$ / $^{43}\text{K}$ / $^{43}\text{Sc}$ / $^{44m}\text{Sc}$ / $^{46}\text{Sc}$ / $^{48}\text{Sc}$ / $^{48}\text{V}$ / $^{52}\text{Mn}$ / $^{56}\text{Mn}$ , E=2200 MeV / nucleon; $^{112,118,120,124}\text{Sn}(\text{p}, \text{X})^{7}\text{Be}$ / $^{22}\text{Na}$ / $^{24}\text{Na}$ / $^{28}\text{Mg}$ / $^{38}\text{S}$ / $^{39}\text{Cl}$ / $^{42}\text{K}$ / $^{43}\text{K}$ / $^{43}\text{Sc}$ / $^{44m}\text{Sc}$ / $^{46}\text{Sc}$ / $^{48}\text{Sc}$ / $^{48}\text{V}$ / $^{52}\text{Mn}$ / $^{56}\text{Mn}$ , E=3650 MeV; measured production $\sigma(^{12}\text{C})$ , relative yields. Nuclotron, HPGe detector. CONF Sarov(Nucleus-2006), Contrib,P151,Balabekyan
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**A=53**

No references found

**A=54**

<sup>54</sup> Cr	2006GAZV	NUCLEAR REACTIONS $^{238}\text{U}(^{82}\text{Se}, \text{X})$ , E=505 MeV; $^{238}\text{U}(^{64}\text{Ni}, \text{X})$ , E=400 MeV; $^{208}\text{Pb}(^{36}\text{S}, \text{X})$ , E=230 MeV; measured $E\gamma$ , $I\gamma$ , (particle) $\gamma$ -coin, fragments isotopic yields. $^{81}\text{Ga}$ , $^{83}\text{Ge}$ , $^{83}\text{As}$ deduced transitions. $^{36}\text{Si}$ , $^{54,58,60}\text{Cr}$ deduced levels, J, $\pi$ . CLARA array, PRISMA spectrometer. CONF Isle of Kos (FINUSTAR), Proc,P85
<sup>54</sup> Ni	2006GA33	NUCLEAR REACTIONS $^{24}\text{Mg}(^{32}\text{S}, 2\text{n})$ , E=75 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -, (charged particle) $\gamma$ -, (neutron) $\gamma$ -coin. $^{54}\text{Ni}$ deduced levels, J, $\pi$ . Euroball IV, Euclides arrays. Level systematics in neighboring isobars discussed. JOUR PRLTA 97 152501; Erratum Phys.Rev.Lett. 97, 199901 (2006)

**A=55**

<sup>55</sup> Co	2007AL01	NUCLEAR REACTIONS Ni(p, X) $^{56}\text{Ni}$ / $^{57}\text{Ni}$ / $^{55}\text{Co}$ / $^{56}\text{Co}$ / $^{57}\text{Co}$ / $^{58}\text{Co}$ / $^{60}\text{Cu}$ / $^{61}\text{Cu}$ , E $\approx$ 5-27 MeV; measured excitation functions. Stacked foil activation technique, comparison with previous results. JOUR ARISE 65 104
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**A=56**

<sup>56</sup> Cr	2006GA35	NUCLEAR REACTIONS $^9\text{Be}(^{57}\text{Cr}, ^{56}\text{CrX})$ , E=77 MeV / nucleon; measured $E\gamma$ , $I\gamma$ , (particle) $\gamma$ -coin, parallel momentum distribution; deduced $\sigma$ . $^{56}\text{Cr}$ deduced levels, spectroscopic factors. JOUR PRVCA 74 047302
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**KEYNUMBERS AND KEYWORDS**

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**A=56 (*continued*)**

<sup>56</sup> Mn	2006BAZT	NUCLEAR REACTIONS <sup>112,118,120,124</sup> Sn( <sup>12</sup> C, X) <sup>7</sup> Be / <sup>22</sup> Na / <sup>24</sup> Na / <sup>28</sup> Mg / <sup>38</sup> S / <sup>39</sup> Cl / <sup>42</sup> K / <sup>43</sup> K / <sup>43</sup> Sc / <sup>44m</sup> Sc / <sup>46</sup> Sc / <sup>48</sup> Sc / <sup>48</sup> V / <sup>52</sup> Mn / <sup>56</sup> Mn, E=2200 MeV / nucleon; <sup>112,118,120,124</sup> Sn(p, X) <sup>7</sup> Be / <sup>22</sup> Na / <sup>24</sup> Na / <sup>28</sup> Mg / <sup>38</sup> S / <sup>39</sup> Cl / <sup>42</sup> K / <sup>43</sup> K / <sup>43</sup> Sc / <sup>44m</sup> Sc / <sup>46</sup> Sc / <sup>48</sup> Sc / <sup>48</sup> V / <sup>52</sup> Mn / <sup>56</sup> Mn, E=3650 MeV; measured production $\sigma(^{12}\text{C})$ , relative yields. Nuclotron, HPGe detector. CONF Sarov(Nucleus-2006),Contrib,P151,Balabekyan
	2006V012	RADIOACTIVITY <sup>183</sup> Hf( $\beta^-$ ) [from <sup>182</sup> Hf(n, $\gamma$ )]; <sup>56</sup> Mn, <sup>116m</sup> In, <sup>180m</sup> Hf; measured E $\gamma$ , I $\gamma$ , T <sub>1/2</sub> . Comparisons with previous results. JOUR PRVCA 74 057303
<sup>56</sup> Co	2007AL01	NUCLEAR REACTIONS Ni(p, X) <sup>56</sup> Ni / <sup>57</sup> Ni / <sup>55</sup> Co / <sup>56</sup> Co / <sup>57</sup> Co / <sup>58</sup> Co / <sup>60</sup> Cu / <sup>61</sup> Cu, E ≈ 5-27 MeV; measured excitation functions. Stacked foil activation technique, comparison with previous results. JOUR ARISE 65 104
<sup>56</sup> Ni	2007AL01	NUCLEAR REACTIONS Ni(p, X) <sup>56</sup> Ni / <sup>57</sup> Ni / <sup>55</sup> Co / <sup>56</sup> Co / <sup>57</sup> Co / <sup>58</sup> Co / <sup>60</sup> Cu / <sup>61</sup> Cu, E ≈ 5-27 MeV; measured excitation functions. Stacked foil activation technique, comparison with previous results. JOUR ARISE 65 104

**A=57**

<sup>57</sup> Co	2007AL01	NUCLEAR REACTIONS Ni(p, X) <sup>56</sup> Ni / <sup>57</sup> Ni / <sup>55</sup> Co / <sup>56</sup> Co / <sup>57</sup> Co / <sup>58</sup> Co / <sup>60</sup> Cu / <sup>61</sup> Cu, E ≈ 5-27 MeV; measured excitation functions. Stacked foil activation technique, comparison with previous results. JOUR ARISE 65 104
<sup>57</sup> Ni	2007AL01	NUCLEAR REACTIONS Ni(p, X) <sup>56</sup> Ni / <sup>57</sup> Ni / <sup>55</sup> Co / <sup>56</sup> Co / <sup>57</sup> Co / <sup>58</sup> Co / <sup>60</sup> Cu / <sup>61</sup> Cu, E ≈ 5-27 MeV; measured excitation functions. Stacked foil activation technique, comparison with previous results. JOUR ARISE 65 104

**A=58**

<sup>58</sup> Cr	2006GAZV	NUCLEAR REACTIONS <sup>238</sup> U( <sup>82</sup> Se, X), E=505 MeV; <sup>238</sup> U( <sup>64</sup> Ni, X), E=400 MeV; <sup>208</sup> Pb( <sup>36</sup> S, X), E=230 MeV; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin, fragments isotopic yields. <sup>81</sup> Ga, <sup>83</sup> Ge, <sup>83</sup> As deduced transitions. <sup>36</sup> Si, <sup>54,58,60</sup> Cr deduced levels, J, $\pi$ . CLARA array, PRISMA spectrometer. CONF Isle of Kos (FINUSTAR),Proc,P85
<sup>58</sup> Co	2006C014	NUCLEAR REACTIONS <sup>12</sup> C, <sup>58</sup> Ni(t, <sup>3</sup> He), E=115 MeV / nucleon; measured particle spectra, $\sigma(\theta)$ . <sup>58</sup> Co deduced Gamow-Teller strength distribution. Comparison with previous results, model predictions. JOUR PRVCA 74 034333
	2007AL01	NUCLEAR REACTIONS Ni(p, X) <sup>56</sup> Ni / <sup>57</sup> Ni / <sup>55</sup> Co / <sup>56</sup> Co / <sup>57</sup> Co / <sup>58</sup> Co / <sup>60</sup> Cu / <sup>61</sup> Cu, E ≈ 5-27 MeV; measured excitation functions. Stacked foil activation technique, comparison with previous results. JOUR ARISE 65 104

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**KEYNUMBERS AND KEYWORDS**

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**A=58 (*continued*)**

<sup>58</sup>Ni      2006EK01      NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>110</sup>Sn, <sup>110</sup>Sn'), E=2.8 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin following projectile Coulomb excitation. <sup>110</sup>Sn deduced transition B(E2). JOUR PHSTB T125 190

**A=59**

No references found

**A=60**

<sup>60</sup>Cr      2006GAZV      NUCLEAR REACTIONS <sup>238</sup>U(<sup>82</sup>Se, X), E=505 MeV; <sup>238</sup>U(<sup>64</sup>Ni, X), E=400 MeV; <sup>208</sup>Pb(<sup>36</sup>S, X), E=230 MeV; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin, fragments isotopic yields. <sup>81</sup>Ga, <sup>83</sup>Ge, <sup>83</sup>As deduced transitions. <sup>36</sup>Si, <sup>54,58,60</sup>Cr deduced levels, J,  $\pi$ . CLARA array, PRISMA spectrometer. CONF Isle of Kos (FINUSTAR), Proc, P85

<sup>60</sup>Cu      2007AL01      NUCLEAR REACTIONS Ni(p, X) <sup>56</sup>Ni / <sup>57</sup>Ni / <sup>55</sup>Co / <sup>56</sup>Co / <sup>57</sup>Co / <sup>58</sup>Co / <sup>60</sup>Cu / <sup>61</sup>Cu, E ≈ 5-27 MeV; measured excitation functions. Stacked foil activation technique, comparison with previous results. JOUR ARISE 65 104

**A=61**

<sup>61</sup>Cu      2006R041      NUCLEAR REACTIONS Zn(p, X) <sup>61</sup>Cu, E=22 MeV; measured yield. Radiochemical separation. JOUR ARISE 64 1563

2007AL01      NUCLEAR REACTIONS Ni(p, X) <sup>56</sup>Ni / <sup>57</sup>Ni / <sup>55</sup>Co / <sup>56</sup>Co / <sup>57</sup>Co / <sup>58</sup>Co / <sup>60</sup>Cu / <sup>61</sup>Cu, E ≈ 5-27 MeV; measured excitation functions. Stacked foil activation technique, comparison with previous results. JOUR ARISE 65 104

<sup>61</sup>Zn      2006AN31      NUCLEAR REACTIONS <sup>40</sup>Ca(<sup>24</sup>Mg, n2p), E=104 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, (recoil) $\gamma$ -coin. <sup>61</sup>Zn deduced levels, J,  $\pi$ , configurations, superdeformed band features. Clarion array, large-scale shell model calculations. JOUR ZAANE 30 381

**A=62**

<sup>62</sup>Cu      2006G032      NUCLEAR MOMENTS <sup>62</sup>Cu; measured nuclear spin-lattice relaxation rate in iron. JOUR PRVCA 74 044313

**A=63**

No references found

**A=64**

$^{64}\text{Fe}$	2006HOZY	NUCLEAR REACTIONS $^{238}\text{U}(^{64}\text{Ni}, \text{X})^{64}\text{Fe}$ / $^{69}\text{Ga}$ , E=430 MeV; measured prompt and delayed $\text{E}\gamma$ , $\text{I}\gamma$ , $\gamma\gamma$ -coin. $^{64}\text{Fe}$ deduced levels, J, $\pi$ , configurations. Gammasphere array, comparison with shell model predictions. Level systematics in neighboring nuclides discussed. PREPRINT Hoteling,11/2/2006
$^{64}\text{Ni}$	2006FE11	RADIOACTIVITY $^{64}\text{Cu}(\beta^+)$ ; measured near-zero-energy electron yields vs source thickness. JOUR UKPJA 51 1044
$^{64}\text{Cu}$	2006FE11	RADIOACTIVITY $^{64}\text{Cu}(\beta^+)$ ; measured near-zero-energy electron yields vs source thickness. JOUR UKPJA 51 1044
$^{64}\text{Ge}$	2006YA17	NUCLEAR REACTIONS $^9\text{Be}(^{80}\text{Kr}, \text{X})^{76}\text{Kr}$ / $^{75}\text{Kr}$ / $^{74}\text{Kr}$ / $^{73}\text{Kr}$ / $^{72}\text{Kr}$ / $^{74}\text{Br}$ / $^{73}\text{Br}$ / $^{72}\text{Br}$ / $^{71}\text{Br}$ / $^{70}\text{Br}$ / $^{72}\text{Se}$ / $^{71}\text{Se}$ / $^{70}\text{Se}$ / $^{69}\text{Se}$ / $^{68}\text{Se}$ / $^{70}\text{As}$ / $^{69}\text{As}$ / $^{68}\text{As}$ / $^{67}\text{As}$ / $^{66}\text{As}$ / $^{68}\text{Ge}$ / $^{67}\text{Ge}$ / $^{66}\text{Ge}$ / $^{65}\text{Ge}$ / $^{64}\text{Ge}$ , E=1.05 GeV / nucleon; measured fragments isotopic production $\sigma$ . JOUR PRVCA 74 044608

**A=65**

$^{65}\text{Fe}$	2006DAZX	NUCLEAR REACTIONS Be, C, Ni, Ta( $^{86}\text{Kr}$ , X) $^{65}\text{Fe}$ / $^{67}\text{Fe}$ / $^{68}\text{Fe}$ , E not given; measured $\text{E}\gamma$ , $\text{I}\gamma$ , $\gamma\gamma$ , (recoil) $\gamma$ -coin. $^{65,67,68}\text{Fe}$ deduced levels, J, $\pi$ . $^{65,67}\text{Fe}$ deduced isomeric states $T_{1/2}$ . CONF Isle of Kos (FINUSTAR),Proc,P427
$^{65}\text{Ni}$	2006GE16	NUCLEAR REACTIONS $^{64}\text{Ni}(\text{d}, \text{p})$ , E=6 MeV; measured $\text{E}\gamma$ , $\text{I}\gamma(\theta, \text{H}, \text{t})$ . $^{65}\text{Ni}$ deduced isomeric state g. Time-dependent perturbed angular distribution method. JOUR ZAANE 30 351
$^{65}\text{Ge}$	2006YA17	NUCLEAR REACTIONS $^9\text{Be}(^{80}\text{Kr}, \text{X})^{76}\text{Kr}$ / $^{75}\text{Kr}$ / $^{74}\text{Kr}$ / $^{73}\text{Kr}$ / $^{72}\text{Kr}$ / $^{74}\text{Br}$ / $^{73}\text{Br}$ / $^{72}\text{Br}$ / $^{71}\text{Br}$ / $^{70}\text{Br}$ / $^{72}\text{Se}$ / $^{71}\text{Se}$ / $^{70}\text{Se}$ / $^{69}\text{Se}$ / $^{68}\text{Se}$ / $^{70}\text{As}$ / $^{69}\text{As}$ / $^{68}\text{As}$ / $^{67}\text{As}$ / $^{66}\text{As}$ / $^{68}\text{Ge}$ / $^{67}\text{Ge}$ / $^{66}\text{Ge}$ / $^{65}\text{Ge}$ / $^{64}\text{Ge}$ , E=1.05 GeV / nucleon; measured fragments isotopic production $\sigma$ . JOUR PRVCA 74 044608

**A=66**

$^{66}\text{Ge}$	2006YA17	NUCLEAR REACTIONS $^9\text{Be}(^{80}\text{Kr}, \text{X})^{76}\text{Kr}$ / $^{75}\text{Kr}$ / $^{74}\text{Kr}$ / $^{73}\text{Kr}$ / $^{72}\text{Kr}$ / $^{74}\text{Br}$ / $^{73}\text{Br}$ / $^{72}\text{Br}$ / $^{71}\text{Br}$ / $^{70}\text{Br}$ / $^{72}\text{Se}$ / $^{71}\text{Se}$ / $^{70}\text{Se}$ / $^{69}\text{Se}$ / $^{68}\text{Se}$ / $^{70}\text{As}$ / $^{69}\text{As}$ / $^{68}\text{As}$ / $^{67}\text{As}$ / $^{66}\text{As}$ / $^{68}\text{Ge}$ / $^{67}\text{Ge}$ / $^{66}\text{Ge}$ / $^{65}\text{Ge}$ / $^{64}\text{Ge}$ , E=1.05 GeV / nucleon; measured fragments isotopic production $\sigma$ . JOUR PRVCA 74 044608
$^{66}\text{As}$	2006YA17	NUCLEAR REACTIONS $^9\text{Be}(^{80}\text{Kr}, \text{X})^{76}\text{Kr}$ / $^{75}\text{Kr}$ / $^{74}\text{Kr}$ / $^{73}\text{Kr}$ / $^{72}\text{Kr}$ / $^{74}\text{Br}$ / $^{73}\text{Br}$ / $^{72}\text{Br}$ / $^{71}\text{Br}$ / $^{70}\text{Br}$ / $^{72}\text{Se}$ / $^{71}\text{Se}$ / $^{70}\text{Se}$ / $^{69}\text{Se}$ / $^{68}\text{Se}$ / $^{70}\text{As}$ / $^{69}\text{As}$ / $^{68}\text{As}$ / $^{67}\text{As}$ / $^{66}\text{As}$ / $^{68}\text{Ge}$ / $^{67}\text{Ge}$ / $^{66}\text{Ge}$ / $^{65}\text{Ge}$ / $^{64}\text{Ge}$ , E=1.05 GeV / nucleon; measured fragments isotopic production $\sigma$ . JOUR PRVCA 74 044608

**KEYNUMBERS AND KEYWORDS**

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**A=67**

<sup>67</sup> Fe	2006DAZX	NUCLEAR REACTIONS Be, C, Ni, Ta( <sup>86</sup> Kr, X) <sup>65</sup> Fe / <sup>67</sup> Fe / <sup>68</sup> Fe, E not given; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -, (recoil) $\gamma$ -coin. <sup>65,67,68</sup> Fe deduced levels, J, $\pi$ . <sup>65,67</sup> Fe deduced isomeric states T <sub>1/2</sub> . CONF Isle of Kos (FINUSTAR), Proc, P427
<sup>67</sup> Ga	2005NE18	NUCLEAR REACTIONS <sup>66</sup> Zn(p, $\gamma$ ), E=1.5-3.0 MeV; measured E $\gamma$ , I $\gamma$ ; deduced $\sigma$ (E). JOUR BRSPE 69 1809
<sup>67</sup> Ge	2006YA17	NUCLEAR REACTIONS <sup>9</sup> Be( <sup>80</sup> Kr, X) <sup>76</sup> Kr / <sup>75</sup> Kr / <sup>74</sup> Kr / <sup>73</sup> Kr / <sup>72</sup> Kr / <sup>74</sup> Br / <sup>73</sup> Br / <sup>72</sup> Br / <sup>71</sup> Br / <sup>70</sup> Br / <sup>72</sup> Se / <sup>71</sup> Se / <sup>70</sup> Se / <sup>69</sup> Se / <sup>68</sup> Se / <sup>70</sup> As / <sup>69</sup> As / <sup>68</sup> As / <sup>67</sup> As / <sup>66</sup> As / <sup>68</sup> Ge / <sup>67</sup> Ge / <sup>66</sup> Ge / <sup>65</sup> Ge / <sup>64</sup> Ge, E=1.05 GeV / nucleon; measured fragments isotopic production $\sigma$ . JOUR PRVCA 74 044608
<sup>67</sup> As	2006YA17	NUCLEAR REACTIONS <sup>9</sup> Be( <sup>80</sup> Kr, X) <sup>76</sup> Kr / <sup>75</sup> Kr / <sup>74</sup> Kr / <sup>73</sup> Kr / <sup>72</sup> Kr / <sup>74</sup> Br / <sup>73</sup> Br / <sup>72</sup> Br / <sup>71</sup> Br / <sup>70</sup> Br / <sup>72</sup> Se / <sup>71</sup> Se / <sup>70</sup> Se / <sup>69</sup> Se / <sup>68</sup> Se / <sup>70</sup> As / <sup>69</sup> As / <sup>68</sup> As / <sup>67</sup> As / <sup>66</sup> As / <sup>68</sup> Ge / <sup>67</sup> Ge / <sup>66</sup> Ge / <sup>65</sup> Ge / <sup>64</sup> Ge, E=1.05 GeV / nucleon; measured fragments isotopic production $\sigma$ . JOUR PRVCA 74 044608

**A=68**

<sup>68</sup> Fe	2006DAZX	NUCLEAR REACTIONS Be, C, Ni, Ta( <sup>86</sup> Kr, X) <sup>65</sup> Fe / <sup>67</sup> Fe / <sup>68</sup> Fe, E not given; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -, (recoil) $\gamma$ -coin. <sup>65,67,68</sup> Fe deduced levels, J, $\pi$ . <sup>65,67</sup> Fe deduced isomeric states T <sub>1/2</sub> . CONF Isle of Kos (FINUSTAR), Proc, P427
<sup>68</sup> Cu	2006GE18	NUCLEAR REACTIONS <sup>120</sup> Sn( <sup>68</sup> Cu, <sup>68</sup> Cu'), ( <sup>70</sup> Cu, <sup>70</sup> Cu'), E=2.86 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin following projectile Coulomb excitation. <sup>68,70</sup> Cu deduced transitions B(E2). Isomeric beams. JOUR IMPEE 15 1505
<sup>68</sup> Ge	2006YA17	NUCLEAR REACTIONS <sup>9</sup> Be( <sup>80</sup> Kr, X) <sup>76</sup> Kr / <sup>75</sup> Kr / <sup>74</sup> Kr / <sup>73</sup> Kr / <sup>72</sup> Kr / <sup>74</sup> Br / <sup>73</sup> Br / <sup>72</sup> Br / <sup>71</sup> Br / <sup>70</sup> Br / <sup>72</sup> Se / <sup>71</sup> Se / <sup>70</sup> Se / <sup>69</sup> Se / <sup>68</sup> Se / <sup>70</sup> As / <sup>69</sup> As / <sup>68</sup> As / <sup>67</sup> As / <sup>66</sup> As / <sup>68</sup> Ge / <sup>67</sup> Ge / <sup>66</sup> Ge / <sup>65</sup> Ge / <sup>64</sup> Ge, E=1.05 GeV / nucleon; measured fragments isotopic production $\sigma$ . JOUR PRVCA 74 044608
<sup>68</sup> As	2006YA17	NUCLEAR REACTIONS <sup>9</sup> Be( <sup>80</sup> Kr, X) <sup>76</sup> Kr / <sup>75</sup> Kr / <sup>74</sup> Kr / <sup>73</sup> Kr / <sup>72</sup> Kr / <sup>74</sup> Br / <sup>73</sup> Br / <sup>72</sup> Br / <sup>71</sup> Br / <sup>70</sup> Br / <sup>72</sup> Se / <sup>71</sup> Se / <sup>70</sup> Se / <sup>69</sup> Se / <sup>68</sup> Se / <sup>70</sup> As / <sup>69</sup> As / <sup>68</sup> As / <sup>67</sup> As / <sup>66</sup> As / <sup>68</sup> Ge / <sup>67</sup> Ge / <sup>66</sup> Ge / <sup>65</sup> Ge / <sup>64</sup> Ge, E=1.05 GeV / nucleon; measured fragments isotopic production $\sigma$ . JOUR PRVCA 74 044608
<sup>68</sup> Se	2006YA17	NUCLEAR REACTIONS <sup>9</sup> Be( <sup>80</sup> Kr, X) <sup>76</sup> Kr / <sup>75</sup> Kr / <sup>74</sup> Kr / <sup>73</sup> Kr / <sup>72</sup> Kr / <sup>74</sup> Br / <sup>73</sup> Br / <sup>72</sup> Br / <sup>71</sup> Br / <sup>70</sup> Br / <sup>72</sup> Se / <sup>71</sup> Se / <sup>70</sup> Se / <sup>69</sup> Se / <sup>68</sup> Se / <sup>70</sup> As / <sup>69</sup> As / <sup>68</sup> As / <sup>67</sup> As / <sup>66</sup> As / <sup>68</sup> Ge / <sup>67</sup> Ge / <sup>66</sup> Ge / <sup>65</sup> Ge / <sup>64</sup> Ge, E=1.05 GeV / nucleon; measured fragments isotopic production $\sigma$ . JOUR PRVCA 74 044608

**KEYNUMBERS AND KEYWORDS**

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**A=69**

$^{69}\text{Ga}$	2006HOZY	NUCLEAR REACTIONS $^{238}\text{U}(^{64}\text{Ni}, \text{X})^{64}\text{Fe}$ / $^{69}\text{Ga}$ , E=430 MeV; measured prompt and delayed $\text{E}\gamma$ , $\text{I}\gamma$ , $\gamma\gamma$ -coin. $^{64}\text{Fe}$ deduced levels, J, $\pi$ , configurations. Gammasphere array, comparison with shell model predictions. Level systematics in neighboring nuclides discussed. PREPRINT Hoteling,11/2/2006
	2006RA25	NUCLEAR MOMENTS $^{69}\text{Ga}$ ; measured NMR spectra, light-induced hyperfine shifts. JOUR PRBMD 74 153201
$^{69}\text{As}$	2006YA17	NUCLEAR REACTIONS $^9\text{Be}(^{80}\text{Kr}, \text{X})^{76}\text{Kr}$ / $^{75}\text{Kr}$ / $^{74}\text{Kr}$ / $^{73}\text{Kr}$ / $^{72}\text{Kr}$ / $^{74}\text{Br}$ / $^{73}\text{Br}$ / $^{72}\text{Br}$ / $^{71}\text{Br}$ / $^{70}\text{Br}$ / $^{72}\text{Se}$ / $^{71}\text{Se}$ / $^{70}\text{Se}$ / $^{69}\text{Se}$ / $^{68}\text{Se}$ / $^{70}\text{As}$ / $^{69}\text{As}$ / $^{68}\text{As}$ / $^{67}\text{As}$ / $^{66}\text{As}$ / $^{68}\text{Ge}$ / $^{67}\text{Ge}$ / $^{66}\text{Ge}$ / $^{65}\text{Ge}$ / $^{64}\text{Ge}$ , E=1.05 GeV / nucleon; measured fragments isotopic production $\sigma$ . JOUR PRVCA 74 044608
$^{69}\text{Se}$	2006YA17	NUCLEAR REACTIONS $^9\text{Be}(^{80}\text{Kr}, \text{X})^{76}\text{Kr}$ / $^{75}\text{Kr}$ / $^{74}\text{Kr}$ / $^{73}\text{Kr}$ / $^{72}\text{Kr}$ / $^{74}\text{Br}$ / $^{73}\text{Br}$ / $^{72}\text{Br}$ / $^{71}\text{Br}$ / $^{70}\text{Br}$ / $^{72}\text{Se}$ / $^{71}\text{Se}$ / $^{70}\text{Se}$ / $^{69}\text{Se}$ / $^{68}\text{Se}$ / $^{70}\text{As}$ / $^{69}\text{As}$ / $^{68}\text{As}$ / $^{67}\text{As}$ / $^{66}\text{As}$ / $^{68}\text{Ge}$ / $^{67}\text{Ge}$ / $^{66}\text{Ge}$ / $^{65}\text{Ge}$ / $^{64}\text{Ge}$ , E=1.05 GeV / nucleon; measured fragments isotopic production $\sigma$ . JOUR PRVCA 74 044608

**A=70**

$^{70}\text{Cu}$	2006GE18	NUCLEAR REACTIONS $^{120}\text{Sn}(^{68}\text{Cu}, ^{68}\text{Cu}')$ , ( $^{70}\text{Cu}$ , $^{70}\text{Cu}'$ ), E=2.86 MeV / nucleon; measured $\text{E}\gamma$ , $\text{I}\gamma$ , (particle) $\gamma$ -coin following projectile Coulomb excitation. $^{68,70}\text{Cu}$ deduced transitions B(E2). Isomeric beams. JOUR IMPEE 15 1505
$^{70}\text{As}$	2006YA17	NUCLEAR REACTIONS $^9\text{Be}(^{80}\text{Kr}, \text{X})^{76}\text{Kr}$ / $^{75}\text{Kr}$ / $^{74}\text{Kr}$ / $^{73}\text{Kr}$ / $^{72}\text{Kr}$ / $^{74}\text{Br}$ / $^{73}\text{Br}$ / $^{72}\text{Br}$ / $^{71}\text{Br}$ / $^{70}\text{Br}$ / $^{72}\text{Se}$ / $^{71}\text{Se}$ / $^{70}\text{Se}$ / $^{69}\text{Se}$ / $^{68}\text{Se}$ / $^{70}\text{As}$ / $^{69}\text{As}$ / $^{68}\text{As}$ / $^{67}\text{As}$ / $^{66}\text{As}$ / $^{68}\text{Ge}$ / $^{67}\text{Ge}$ / $^{66}\text{Ge}$ / $^{65}\text{Ge}$ / $^{64}\text{Ge}$ , E=1.05 GeV / nucleon; measured fragments isotopic production $\sigma$ . JOUR PRVCA 74 044608
$^{70}\text{Se}$	2006YA17	NUCLEAR REACTIONS $^9\text{Be}(^{80}\text{Kr}, \text{X})^{76}\text{Kr}$ / $^{75}\text{Kr}$ / $^{74}\text{Kr}$ / $^{73}\text{Kr}$ / $^{72}\text{Kr}$ / $^{74}\text{Br}$ / $^{73}\text{Br}$ / $^{72}\text{Br}$ / $^{71}\text{Br}$ / $^{70}\text{Br}$ / $^{72}\text{Se}$ / $^{71}\text{Se}$ / $^{70}\text{Se}$ / $^{69}\text{Se}$ / $^{68}\text{Se}$ / $^{70}\text{As}$ / $^{69}\text{As}$ / $^{68}\text{As}$ / $^{67}\text{As}$ / $^{66}\text{As}$ / $^{68}\text{Ge}$ / $^{67}\text{Ge}$ / $^{66}\text{Ge}$ / $^{65}\text{Ge}$ / $^{64}\text{Ge}$ , E=1.05 GeV / nucleon; measured fragments isotopic production $\sigma$ . JOUR PRVCA 74 044608
$^{70}\text{Br}$	2006YA17	NUCLEAR REACTIONS $^9\text{Be}(^{80}\text{Kr}, \text{X})^{76}\text{Kr}$ / $^{75}\text{Kr}$ / $^{74}\text{Kr}$ / $^{73}\text{Kr}$ / $^{72}\text{Kr}$ / $^{74}\text{Br}$ / $^{73}\text{Br}$ / $^{72}\text{Br}$ / $^{71}\text{Br}$ / $^{70}\text{Br}$ / $^{72}\text{Se}$ / $^{71}\text{Se}$ / $^{70}\text{Se}$ / $^{69}\text{Se}$ / $^{68}\text{Se}$ / $^{70}\text{As}$ / $^{69}\text{As}$ / $^{68}\text{As}$ / $^{67}\text{As}$ / $^{66}\text{As}$ / $^{68}\text{Ge}$ / $^{67}\text{Ge}$ / $^{66}\text{Ge}$ / $^{65}\text{Ge}$ / $^{64}\text{Ge}$ , E=1.05 GeV / nucleon; measured fragments isotopic production $\sigma$ . JOUR PRVCA 74 044608

**A=71**

$^{71}\text{Ge}$	2006GA38	NUCLEAR REACTIONS $^{71}\text{Ga}(\nu, \text{e})$ , E=spectrum; measured production rate using $^{37}\text{Ar}$ neutrino source. Comparison with model predictions, implications for solar neutrino experiment discussed. JOUR PANUE 69 1820
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**A=71 (continued)**

<sup>71</sup> Se	2006YA17	NUCLEAR REACTIONS <sup>9</sup> Be( <sup>80</sup> Kr, X) <sup>76</sup> Kr / <sup>75</sup> Kr / <sup>74</sup> Kr / <sup>73</sup> Kr / <sup>72</sup> Kr / <sup>74</sup> Br / <sup>73</sup> Br / <sup>72</sup> Br / <sup>71</sup> Br / <sup>70</sup> Br / <sup>72</sup> Se / <sup>71</sup> Se / <sup>70</sup> Se / <sup>69</sup> Se / <sup>68</sup> Se / <sup>70</sup> As / <sup>69</sup> As / <sup>68</sup> As / <sup>67</sup> As / <sup>66</sup> As / <sup>68</sup> Ge / <sup>67</sup> Ge / <sup>66</sup> Ge / <sup>65</sup> Ge / <sup>64</sup> Ge, E=1.05 GeV / nucleon; measured fragments isotopic production $\sigma$ . JOUR PRVCA 74 044608
<sup>71</sup> Br	2006YA17	NUCLEAR REACTIONS <sup>9</sup> Be( <sup>80</sup> Kr, X) <sup>76</sup> Kr / <sup>75</sup> Kr / <sup>74</sup> Kr / <sup>73</sup> Kr / <sup>72</sup> Kr / <sup>74</sup> Br / <sup>73</sup> Br / <sup>72</sup> Br / <sup>71</sup> Br / <sup>70</sup> Br / <sup>72</sup> Se / <sup>71</sup> Se / <sup>70</sup> Se / <sup>69</sup> Se / <sup>68</sup> Se / <sup>70</sup> As / <sup>69</sup> As / <sup>68</sup> As / <sup>67</sup> As / <sup>66</sup> As / <sup>68</sup> Ge / <sup>67</sup> Ge / <sup>66</sup> Ge / <sup>65</sup> Ge / <sup>64</sup> Ge, E=1.05 GeV / nucleon; measured fragments isotopic production $\sigma$ . JOUR PRVCA 74 044608

**A=72**

<sup>72</sup> Ni	2005THZX	RADIOACTIVITY <sup>72</sup> Ni, <sup>72</sup> Cu( $\beta^-$ ) [from <sup>238</sup> U(p, F)]; measured $\beta$ -delayed E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin, T <sub>1/2</sub> . <sup>72</sup> Cu, <sup>72</sup> Zn deduced levels, J, $\pi$ . Comparison with model predictions. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P131
	2006TH12	RADIOACTIVITY <sup>72</sup> Ni, <sup>72</sup> Cu( $\beta^-$ ) [from <sup>238</sup> U(p, F)]; measured E $\gamma$ , I $\gamma$ , $\beta\gamma$ -coin, T <sub>1/2</sub> ; deduced log ft. <sup>72</sup> Cu, <sup>72</sup> Zn deduced levels, J, $\pi$ , configurations. JOUR PRVCA 74 054309
<sup>72</sup> Cu	2005THZX	RADIOACTIVITY <sup>72</sup> Ni, <sup>72</sup> Cu( $\beta^-$ ) [from <sup>238</sup> U(p, F)]; measured $\beta$ -delayed E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin, T <sub>1/2</sub> . <sup>72</sup> Cu, <sup>72</sup> Zn deduced levels, J, $\pi$ . Comparison with model predictions. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P131
	2006TH12	RADIOACTIVITY <sup>72</sup> Ni, <sup>72</sup> Cu( $\beta^-$ ) [from <sup>238</sup> U(p, F)]; measured E $\gamma$ , I $\gamma$ , $\beta\gamma$ -coin, T <sub>1/2</sub> ; deduced log ft. <sup>72</sup> Cu, <sup>72</sup> Zn deduced levels, J, $\pi$ , configurations. JOUR PRVCA 74 054309
<sup>72</sup> Zn	2005THZX	RADIOACTIVITY <sup>72</sup> Ni, <sup>72</sup> Cu( $\beta^-$ ) [from <sup>238</sup> U(p, F)]; measured $\beta$ -delayed E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin, T <sub>1/2</sub> . <sup>72</sup> Cu, <sup>72</sup> Zn deduced levels, J, $\pi$ . Comparison with model predictions. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P131
	2006TH12	RADIOACTIVITY <sup>72</sup> Ni, <sup>72</sup> Cu( $\beta^-$ ) [from <sup>238</sup> U(p, F)]; measured E $\gamma$ , I $\gamma$ , $\beta\gamma$ -coin, T <sub>1/2</sub> ; deduced log ft. <sup>72</sup> Cu, <sup>72</sup> Zn deduced levels, J, $\pi$ , configurations. JOUR PRVCA 74 054309
<sup>72</sup> Se	2006YA17	NUCLEAR REACTIONS <sup>9</sup> Be( <sup>80</sup> Kr, X) <sup>76</sup> Kr / <sup>75</sup> Kr / <sup>74</sup> Kr / <sup>73</sup> Kr / <sup>72</sup> Kr / <sup>74</sup> Br / <sup>73</sup> Br / <sup>72</sup> Br / <sup>71</sup> Br / <sup>70</sup> Br / <sup>72</sup> Se / <sup>71</sup> Se / <sup>70</sup> Se / <sup>69</sup> Se / <sup>68</sup> Se / <sup>70</sup> As / <sup>69</sup> As / <sup>68</sup> As / <sup>67</sup> As / <sup>66</sup> As / <sup>68</sup> Ge / <sup>67</sup> Ge / <sup>66</sup> Ge / <sup>65</sup> Ge / <sup>64</sup> Ge, E=1.05 GeV / nucleon; measured fragments isotopic production $\sigma$ . JOUR PRVCA 74 044608
<sup>72</sup> Br	2006YA17	NUCLEAR REACTIONS <sup>9</sup> Be( <sup>80</sup> Kr, X) <sup>76</sup> Kr / <sup>75</sup> Kr / <sup>74</sup> Kr / <sup>73</sup> Kr / <sup>72</sup> Kr / <sup>74</sup> Br / <sup>73</sup> Br / <sup>72</sup> Br / <sup>71</sup> Br / <sup>70</sup> Br / <sup>72</sup> Se / <sup>71</sup> Se / <sup>70</sup> Se / <sup>69</sup> Se / <sup>68</sup> Se / <sup>70</sup> As / <sup>69</sup> As / <sup>68</sup> As / <sup>67</sup> As / <sup>66</sup> As / <sup>68</sup> Ge / <sup>67</sup> Ge / <sup>66</sup> Ge / <sup>65</sup> Ge / <sup>64</sup> Ge, E=1.05 GeV / nucleon; measured fragments isotopic production $\sigma$ . JOUR PRVCA 74 044608
<sup>72</sup> Kr	2006AN35	NUCLEAR REACTIONS <sup>40</sup> Ca( <sup>40</sup> Ca, 2 $\alpha$ ), E=165 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ , (charged particle) $\gamma$ -coin, DSA. <sup>72</sup> Kr deduced high-spin levels, J, $\pi$ , configurations, transition quadrupole moments, T <sub>1/2</sub> . Gammasphere, Microball arrays. JOUR PHSTB T125 127

**A=72 (continued)**

2006YA17 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{80}\text{Kr}, \text{X})$  ${}^{76}\text{Kr}$  /  ${}^{75}\text{Kr}$  /  ${}^{74}\text{Kr}$  /  ${}^{73}\text{Kr}$  /  ${}^{72}\text{Kr}$  /  ${}^{74}\text{Br}$  /  ${}^{73}\text{Br}$  /  ${}^{72}\text{Br}$  /  ${}^{71}\text{Br}$  /  ${}^{70}\text{Br}$  /  ${}^{72}\text{Se}$  /  ${}^{71}\text{Se}$  /  ${}^{70}\text{Se}$  /  ${}^{69}\text{Se}$  /  ${}^{68}\text{Se}$  /  ${}^{70}\text{As}$  /  ${}^{69}\text{As}$  /  ${}^{68}\text{As}$  /  ${}^{67}\text{As}$  /  ${}^{66}\text{As}$  /  ${}^{68}\text{Ge}$  /  ${}^{67}\text{Ge}$  /  ${}^{66}\text{Ge}$  /  ${}^{65}\text{Ge}$  /  ${}^{64}\text{Ge}$ , E=1.05 GeV / nucleon; measured fragments isotopic production  $\sigma$ . JOUR PRVCA 74 044608

**A=73**

${}^{73}\text{Br}$	2006YA17	NUCLEAR REACTIONS ${}^9\text{Be}({}^{80}\text{Kr}, \text{X})$ ${}^{76}\text{Kr}$ / ${}^{75}\text{Kr}$ / ${}^{74}\text{Kr}$ / ${}^{73}\text{Kr}$ / ${}^{72}\text{Kr}$ / ${}^{74}\text{Br}$ / ${}^{73}\text{Br}$ / ${}^{72}\text{Br}$ / ${}^{71}\text{Br}$ / ${}^{70}\text{Br}$ / ${}^{72}\text{Se}$ / ${}^{71}\text{Se}$ / ${}^{70}\text{Se}$ / ${}^{69}\text{Se}$ / ${}^{68}\text{Se}$ / ${}^{70}\text{As}$ / ${}^{69}\text{As}$ / ${}^{68}\text{As}$ / ${}^{67}\text{As}$ / ${}^{66}\text{As}$ / ${}^{68}\text{Ge}$ / ${}^{67}\text{Ge}$ / ${}^{66}\text{Ge}$ / ${}^{65}\text{Ge}$ / ${}^{64}\text{Ge}$ , E=1.05 GeV / nucleon; measured fragments isotopic production $\sigma$ . JOUR PRVCA 74 044608
${}^{73}\text{Kr}$	2006YA17	NUCLEAR REACTIONS ${}^9\text{Be}({}^{80}\text{Kr}, \text{X})$ ${}^{76}\text{Kr}$ / ${}^{75}\text{Kr}$ / ${}^{74}\text{Kr}$ / ${}^{73}\text{Kr}$ / ${}^{72}\text{Kr}$ / ${}^{74}\text{Br}$ / ${}^{73}\text{Br}$ / ${}^{72}\text{Br}$ / ${}^{71}\text{Br}$ / ${}^{70}\text{Br}$ / ${}^{72}\text{Se}$ / ${}^{71}\text{Se}$ / ${}^{70}\text{Se}$ / ${}^{69}\text{Se}$ / ${}^{68}\text{Se}$ / ${}^{70}\text{As}$ / ${}^{69}\text{As}$ / ${}^{68}\text{As}$ / ${}^{67}\text{As}$ / ${}^{66}\text{As}$ / ${}^{68}\text{Ge}$ / ${}^{67}\text{Ge}$ / ${}^{66}\text{Ge}$ / ${}^{65}\text{Ge}$ / ${}^{64}\text{Ge}$ , E=1.05 GeV / nucleon; measured fragments isotopic production $\sigma$ . JOUR PRVCA 74 044608

**A=74**

${}^{74}\text{Zn}$	2005KOZU	NUCLEAR REACTIONS ${}^{238}\text{U}(\text{n}, \text{X})$ ${}^{74}\text{Zn}$ / ${}^{76}\text{Zn}$ / ${}^{77}\text{Zn}$ / ${}^{78}\text{Zn}$ / ${}^{80}\text{Zn}$ / ${}^{81}\text{Zn}$ / ${}^{74}\text{Ga}$ / ${}^{78}\text{Ga}$ / ${}^{80}\text{Ga}$ / ${}^{81}\text{Ga}$ / ${}^{82}\text{Ga}$ / ${}^{80}\text{Rb}$ / ${}^{81}\text{Rb}$ / ${}^{82}\text{Rb}$ , E=spectrum; measured yields. Neutron converter, resonant laser ionization. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P315
${}^{74}\text{Ga}$	2005KOZU	NUCLEAR REACTIONS ${}^{238}\text{U}(\text{n}, \text{X})$ ${}^{74}\text{Zn}$ / ${}^{76}\text{Zn}$ / ${}^{77}\text{Zn}$ / ${}^{78}\text{Zn}$ / ${}^{80}\text{Zn}$ / ${}^{81}\text{Zn}$ / ${}^{74}\text{Ga}$ / ${}^{78}\text{Ga}$ / ${}^{80}\text{Ga}$ / ${}^{81}\text{Ga}$ / ${}^{82}\text{Ga}$ / ${}^{80}\text{Rb}$ / ${}^{81}\text{Rb}$ / ${}^{82}\text{Rb}$ , E=spectrum; measured yields. Neutron converter, resonant laser ionization. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P315
${}^{74}\text{Ge}$	2006REZX	NUCLEAR REACTIONS ${}^{192}\text{Os}({}^{82}\text{Se}, {}^{84}\text{Se})$ , E=460 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin. ${}^{84}\text{Se}$ , ${}^{190}\text{Os}$ deduced levels, $J$ , $\pi$ . ${}^{192}\text{Os}({}^{82}\text{Se}, \text{X})$ ${}^{74}\text{Ge}$ / ${}^{76}\text{Ge}$ / ${}^{78}\text{Ge}$ / ${}^{80}\text{Ge}$ / ${}^{82}\text{Ge}$ / ${}^{192}\text{Pt}$ / ${}^{194}\text{Pt}$ / ${}^{196}\text{Pt}$ , E=460 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, $\gamma$ -ray multiplicity. ${}^{74,76,78,80,82}\text{Ge}$ , ${}^{192,194,196}\text{Pt}$ deduced levels, $J$ , $\pi$ . GASP array. CONF San Servolo(Fusion06),Proc,P271
${}^{74}\text{As}$	2006D024	NUCLEAR REACTIONS ${}^{75}\text{As}(\text{n}, \text{p})$ , $(\text{n}, 2\text{n})$ , E=spectrum; measured spectrum-averaged $\sigma$ . Neutrons from fission of ${}^{235}\text{U}$ . JOUR JRNCD 270 603
${}^{74}\text{Br}$	2006YA17	NUCLEAR REACTIONS ${}^9\text{Be}({}^{80}\text{Kr}, \text{X})$ ${}^{76}\text{Kr}$ / ${}^{75}\text{Kr}$ / ${}^{74}\text{Kr}$ / ${}^{73}\text{Kr}$ / ${}^{72}\text{Kr}$ / ${}^{74}\text{Br}$ / ${}^{73}\text{Br}$ / ${}^{72}\text{Br}$ / ${}^{71}\text{Br}$ / ${}^{70}\text{Br}$ / ${}^{72}\text{Se}$ / ${}^{71}\text{Se}$ / ${}^{70}\text{Se}$ / ${}^{69}\text{Se}$ / ${}^{68}\text{Se}$ / ${}^{70}\text{As}$ / ${}^{69}\text{As}$ / ${}^{68}\text{As}$ / ${}^{67}\text{As}$ / ${}^{66}\text{As}$ / ${}^{68}\text{Ge}$ / ${}^{67}\text{Ge}$ / ${}^{66}\text{Ge}$ / ${}^{65}\text{Ge}$ / ${}^{64}\text{Ge}$ , E=1.05 GeV / nucleon; measured fragments isotopic production $\sigma$ . JOUR PRVCA 74 044608

**KEYNUMBERS AND KEYWORDS**

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**A=74 (*continued*)**

<sup>74</sup> Kr	2006VAZX	NUCLEAR REACTIONS $^{40}\text{Ca}$ ( $^{40}\text{Ca}$ , 2p $\alpha$ ), E=165, 185 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin, DSA. $^{74}\text{Kr}$ deduced high-spin levels, J, $\pi$ , T <sub>1/2</sub> , transition quadrupole moments. Gammasphere, Euroball, Microball, and ISIS arrays. CONF Isle of Kos (FINUSTAR), Proc, P283
	2006YA17	NUCLEAR REACTIONS $^9\text{Be}$ ( $^{80}\text{Kr}$ , X) $^{76}\text{Kr}$ / $^{75}\text{Kr}$ / $^{74}\text{Kr}$ / $^{73}\text{Kr}$ / $^{72}\text{Kr}$ / $^{74}\text{Br}$ / $^{73}\text{Br}$ / $^{72}\text{Br}$ / $^{71}\text{Br}$ / $^{70}\text{Br}$ / $^{72}\text{Se}$ / $^{71}\text{Se}$ / $^{70}\text{Se}$ / $^{69}\text{Se}$ / $^{68}\text{Se}$ / $^{70}\text{As}$ / $^{69}\text{As}$ / $^{68}\text{As}$ / $^{67}\text{As}$ / $^{66}\text{As}$ / $^{68}\text{Ge}$ / $^{67}\text{Ge}$ / $^{66}\text{Ge}$ / $^{65}\text{Ge}$ / $^{64}\text{Ge}$ , E=1.05 GeV / nucleon; measured fragments isotopic production $\sigma$ . JOUR PRVCA 74 044608
<sup>74</sup> Rb	2006FI08	NUCLEAR REACTIONS $^{40}\text{Ca}$ ( $^{40}\text{Ca}$ , np $\alpha$ ), E=123, 160 MeV; $^{40}\text{Ca}$ ( $^{36}\text{Ar}$ , np), E=108 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -, (charged particle) $\gamma$ -, (neutron) $\gamma$ -coin. $^{74}\text{Rb}$ deduced high-spin levels, J, $\pi$ , configurations, analog states features. Gammasphere, Microball arrays, mass separator. JOUR PRVCA 74 054304

**A=75**

<sup>75</sup> Ge	2006D024	NUCLEAR REACTIONS $^{75}\text{As}$ (n, p), (n, 2n), E=spectrum; measured spectrum-averaged $\sigma$ . Neutrons from fission of $^{235}\text{U}$ . JOUR JRNCD 270 603
<sup>75</sup> Kr	2006YA17	NUCLEAR REACTIONS $^9\text{Be}$ ( $^{80}\text{Kr}$ , X) $^{76}\text{Kr}$ / $^{75}\text{Kr}$ / $^{74}\text{Kr}$ / $^{73}\text{Kr}$ / $^{72}\text{Kr}$ / $^{74}\text{Br}$ / $^{73}\text{Br}$ / $^{72}\text{Br}$ / $^{71}\text{Br}$ / $^{70}\text{Br}$ / $^{72}\text{Se}$ / $^{71}\text{Se}$ / $^{70}\text{Se}$ / $^{69}\text{Se}$ / $^{68}\text{Se}$ / $^{70}\text{As}$ / $^{69}\text{As}$ / $^{68}\text{As}$ / $^{67}\text{As}$ / $^{66}\text{As}$ / $^{68}\text{Ge}$ / $^{67}\text{Ge}$ / $^{66}\text{Ge}$ / $^{65}\text{Ge}$ / $^{64}\text{Ge}$ , E=1.05 GeV / nucleon; measured fragments isotopic production $\sigma$ . JOUR PRVCA 74 044608

**A=76**

<sup>76</sup> Zn	2005KOZU	NUCLEAR REACTIONS $^{238}\text{U}$ (n, X) $^{74}\text{Zn}$ / $^{76}\text{Zn}$ / $^{77}\text{Zn}$ / $^{78}\text{Zn}$ / $^{80}\text{Zn}$ / $^{81}\text{Zn}$ / $^{74}\text{Ga}$ / $^{78}\text{Ga}$ / $^{80}\text{Ga}$ / $^{81}\text{Ga}$ / $^{82}\text{Ga}$ / $^{80}\text{Rb}$ / $^{81}\text{Rb}$ / $^{82}\text{Rb}$ , E=spectrum; measured yields. Neutron converter, resonant laser ionization. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P315
<sup>76</sup> Ge	2006REZX	NUCLEAR REACTIONS $^{192}\text{Os}$ ( $^{82}\text{Se}$ , $^{84}\text{Se}$ ), E=460 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin. $^{84}\text{Se}$ , $^{190}\text{Os}$ deduced levels, J, $\pi$ . $^{192}\text{Os}$ ( $^{82}\text{Se}$ , X) $^{74}\text{Ge}$ / $^{76}\text{Ge}$ / $^{78}\text{Ge}$ / $^{80}\text{Ge}$ / $^{82}\text{Ge}$ / $^{192}\text{Pt}$ / $^{194}\text{Pt}$ / $^{196}\text{Pt}$ , E=460 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin, $\gamma$ -ray multiplicity. $^{74,76,78,80,82}\text{Ge}$ , $^{192,194,196}\text{Pt}$ deduced levels, J, $\pi$ . GASP array. CONF San Servolo(Fusion06), Proc, P271
<sup>76</sup> Kr	2006YA17	NUCLEAR REACTIONS $^9\text{Be}$ ( $^{80}\text{Kr}$ , X) $^{76}\text{Kr}$ / $^{75}\text{Kr}$ / $^{74}\text{Kr}$ / $^{73}\text{Kr}$ / $^{72}\text{Kr}$ / $^{74}\text{Br}$ / $^{73}\text{Br}$ / $^{72}\text{Br}$ / $^{71}\text{Br}$ / $^{70}\text{Br}$ / $^{72}\text{Se}$ / $^{71}\text{Se}$ / $^{70}\text{Se}$ / $^{69}\text{Se}$ / $^{68}\text{Se}$ / $^{70}\text{As}$ / $^{69}\text{As}$ / $^{68}\text{As}$ / $^{67}\text{As}$ / $^{66}\text{As}$ / $^{68}\text{Ge}$ / $^{67}\text{Ge}$ / $^{66}\text{Ge}$ / $^{65}\text{Ge}$ / $^{64}\text{Ge}$ , E=1.05 GeV / nucleon; measured fragments isotopic production $\sigma$ . JOUR PRVCA 74 044608

**KEYNUMBERS AND KEYWORDS**

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**A=77**

<sup>77</sup>Zn      2005KOZU      NUCLEAR REACTIONS  $^{238}\text{U}(\text{n}, \text{X})^{74}\text{Zn} / ^{76}\text{Zn} / ^{77}\text{Zn} / ^{78}\text{Zn} / ^{80}\text{Zn} / ^{81}\text{Zn} / ^{74}\text{Ga} / ^{78}\text{Ga} / ^{80}\text{Ga} / ^{81}\text{Ga} / ^{82}\text{Ga} / ^{80}\text{Rb} / ^{81}\text{Rb} / ^{82}\text{Rb}$ , E=spectrum; measured yields. Neutron converter, resonant laser ionization. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P315

**A=78**

<sup>78</sup>Zn      2005KOZU      NUCLEAR REACTIONS  $^{238}\text{U}(\text{n}, \text{X})^{74}\text{Zn} / ^{76}\text{Zn} / ^{77}\text{Zn} / ^{78}\text{Zn} / ^{80}\text{Zn} / ^{81}\text{Zn} / ^{74}\text{Ga} / ^{78}\text{Ga} / ^{80}\text{Ga} / ^{81}\text{Ga} / ^{82}\text{Ga} / ^{80}\text{Rb} / ^{81}\text{Rb} / ^{82}\text{Rb}$ , E=spectrum; measured yields. Neutron converter, resonant laser ionization. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P315

<sup>78</sup>Ga      2005KOZU      NUCLEAR REACTIONS  $^{238}\text{U}(\text{n}, \text{X})^{74}\text{Zn} / ^{76}\text{Zn} / ^{77}\text{Zn} / ^{78}\text{Zn} / ^{80}\text{Zn} / ^{81}\text{Zn} / ^{74}\text{Ga} / ^{78}\text{Ga} / ^{80}\text{Ga} / ^{81}\text{Ga} / ^{82}\text{Ga} / ^{80}\text{Rb} / ^{81}\text{Rb} / ^{82}\text{Rb}$ , E=spectrum; measured yields. Neutron converter, resonant laser ionization. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P315

<sup>78</sup>Ge      2006REZX      NUCLEAR REACTIONS  $^{192}\text{Os}(^{82}\text{Se}, ^{84}\text{Se})$ , E=460 MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $^{84}\text{Se}$ ,  $^{190}\text{Os}$  deduced levels, J,  $\pi$ .  $^{192}\text{Os}(^{82}\text{Se}, \text{X})^{74}\text{Ge} / ^{76}\text{Ge} / ^{78}\text{Ge} / ^{80}\text{Ge} / ^{82}\text{Ge} / ^{192}\text{Pt} / ^{194}\text{Pt} / ^{196}\text{Pt}$ , E=460 MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma$ -ray multiplicity.  $^{74,76,78,80,82}\text{Ge}$ ,  $^{192,194,196}\text{Pt}$  deduced levels, J,  $\pi$ . GASP array. CONF San Servolo(Fusion06), Proc, P271

**A=79**

<sup>79</sup>Se      2006RUZX      NUCLEAR REACTIONS  $^{58}\text{Ni}$ ,  $^{78}\text{Se}(\text{n}, \gamma)$ , E=spectrum; measured capture  $\sigma$ . Astrophysical implications discussed. REPT MLL 2005 Annual, P27, Rugel

**A=80**

<sup>80</sup>Zn      2005KOZU      NUCLEAR REACTIONS  $^{238}\text{U}(\text{n}, \text{X})^{74}\text{Zn} / ^{76}\text{Zn} / ^{77}\text{Zn} / ^{78}\text{Zn} / ^{80}\text{Zn} / ^{81}\text{Zn} / ^{74}\text{Ga} / ^{78}\text{Ga} / ^{80}\text{Ga} / ^{81}\text{Ga} / ^{82}\text{Ga} / ^{80}\text{Rb} / ^{81}\text{Rb} / ^{82}\text{Rb}$ , E=spectrum; measured yields. Neutron converter, resonant laser ionization. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P315

<sup>80</sup>Ga      2005KOZU      NUCLEAR REACTIONS  $^{238}\text{U}(\text{n}, \text{X})^{74}\text{Zn} / ^{76}\text{Zn} / ^{77}\text{Zn} / ^{78}\text{Zn} / ^{80}\text{Zn} / ^{81}\text{Zn} / ^{74}\text{Ga} / ^{78}\text{Ga} / ^{80}\text{Ga} / ^{81}\text{Ga} / ^{82}\text{Ga} / ^{80}\text{Rb} / ^{81}\text{Rb} / ^{82}\text{Rb}$ , E=spectrum; measured yields. Neutron converter, resonant laser ionization. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P315

**A=80 (*continued*)**

<sup>80</sup> Ge	2006REZX	NUCLEAR REACTIONS $^{192}\text{Os}(^{82}\text{Se}, ^{84}\text{Se})$ , E=460 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin. $^{84}\text{Se}$ , $^{190}\text{Os}$ deduced levels, J, $\pi$ . $^{192}\text{Os}(^{82}\text{Se}, X)^{74}\text{Ge}$ / $^{76}\text{Ge}$ / $^{78}\text{Ge}$ / $^{80}\text{Ge}$ / $^{82}\text{Ge}$ / $^{192}\text{Pt}$ / $^{194}\text{Pt}$ / $^{196}\text{Pt}$ , E=460 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, $\gamma$ -ray multiplicity. $^{74,76,78,80,82}\text{Ge}$ , $^{192,194,196}\text{Pt}$ deduced levels, J, $\pi$ . GASP array. CONF San Servolo(Fusion06),Proc,P271
<sup>80</sup> Rb	2005KOZU	NUCLEAR REACTIONS $^{238}\text{U}(n, X)^{74}\text{Zn}$ / $^{76}\text{Zn}$ / $^{77}\text{Zn}$ / $^{78}\text{Zn}$ / $^{80}\text{Zn}$ / $^{81}\text{Zn}$ / $^{74}\text{Ga}$ / $^{78}\text{Ga}$ / $^{80}\text{Ga}$ / $^{81}\text{Ga}$ / $^{82}\text{Ga}$ / $^{80}\text{Rb}$ / $^{81}\text{Rb}$ / $^{82}\text{Rb}$ , E=spectrum; measured yields. Neutron converter, resonant laser ionization. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P315
<sup>80</sup> Y	2006KA48	ATOMIC MASSES $^{80,81,82,83}\text{Y}$ , $^{83,84,85,86,88}\text{Zr}$ , $^{85,86,87,88}\text{Nb}$ ; measured masses. Penning trap. JOUR ZAANE 29 271

**A=81**

<sup>81</sup> Zn	2005KOZU	NUCLEAR REACTIONS $^{238}\text{U}(n, X)^{74}\text{Zn}$ / $^{76}\text{Zn}$ / $^{77}\text{Zn}$ / $^{78}\text{Zn}$ / $^{80}\text{Zn}$ / $^{81}\text{Zn}$ / $^{74}\text{Ga}$ / $^{78}\text{Ga}$ / $^{80}\text{Ga}$ / $^{81}\text{Ga}$ / $^{82}\text{Ga}$ / $^{80}\text{Rb}$ / $^{81}\text{Rb}$ / $^{82}\text{Rb}$ , E=spectrum; measured yields. Neutron converter, resonant laser ionization. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P315
	2005KOZU	RADIOACTIVITY $^{81}\text{Zn}$ , $^{81}\text{Ga}$ , $^{81}\text{Ge}$ , $^{81}\text{Rb}(\beta^-)$ [from $^{238}\text{U}(n, X)$ ]; measured $E\gamma$ , $I\gamma$ . Neutron converter, resonant laser ionization. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P315
	2006VEZZ	RADIOACTIVITY $^{81}\text{Zn}$ , $^{83}\text{Ga}(\beta^-)$ [from U(n, F)]; measured not given. $^{81}\text{Ga}$ , $^{83}\text{Ge}$ deduced levels, J, $\pi$ , configurations. PREPRINT nucl-ex/0610012,10/06/2006
<sup>81</sup> Ga	2005KOZU	NUCLEAR REACTIONS $^{238}\text{U}(n, X)^{74}\text{Zn}$ / $^{76}\text{Zn}$ / $^{77}\text{Zn}$ / $^{78}\text{Zn}$ / $^{80}\text{Zn}$ / $^{81}\text{Zn}$ / $^{74}\text{Ga}$ / $^{78}\text{Ga}$ / $^{80}\text{Ga}$ / $^{81}\text{Ga}$ / $^{82}\text{Ga}$ / $^{80}\text{Rb}$ / $^{81}\text{Rb}$ / $^{82}\text{Rb}$ , E=spectrum; measured yields. Neutron converter, resonant laser ionization. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P315
	2005KOZU	RADIOACTIVITY $^{81}\text{Zn}$ , $^{81}\text{Ga}$ , $^{81}\text{Ge}$ , $^{81}\text{Rb}(\beta^-)$ [from $^{238}\text{U}(n, X)$ ]; measured $E\gamma$ , $I\gamma$ . Neutron converter, resonant laser ionization. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P315
	2006GAZV	NUCLEAR REACTIONS $^{238}\text{U}(^{82}\text{Se}, X)$ , E=505 MeV; $^{238}\text{U}(^{64}\text{Ni}, X)$ , E=400 MeV; $^{208}\text{Pb}(^{36}\text{S}, X)$ , E=230 MeV; measured $E\gamma$ , $I\gamma$ , (particle) $\gamma$ -coin, fragments isotopic yields. $^{81}\text{Ga}$ , $^{83}\text{Ge}$ , $^{83}\text{As}$ deduced transitions. $^{36}\text{Si}$ , $^{54,58,60}\text{Cr}$ deduced levels, J, $\pi$ . CLARA array, PRISMA spectrometer. CONF Isle of Kos (FINUSTAR),Proc,P85
	2006VEZZ	RADIOACTIVITY $^{81}\text{Zn}$ , $^{83}\text{Ga}(\beta^-)$ [from U(n, F)]; measured not given. $^{81}\text{Ga}$ , $^{83}\text{Ge}$ deduced levels, J, $\pi$ , configurations. PREPRINT nucl-ex/0610012,10/06/2006
<sup>81</sup> Ge	2005KOZU	RADIOACTIVITY $^{81}\text{Zn}$ , $^{81}\text{Ga}$ , $^{81}\text{Ge}$ , $^{81}\text{Rb}(\beta^-)$ [from $^{238}\text{U}(n, X)$ ]; measured $E\gamma$ , $I\gamma$ . Neutron converter, resonant laser ionization. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P315

**KEYNUMBERS AND KEYWORDS**

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**A=81 (*continued*)**

<sup>81</sup> As	2005KOZU	RADIOACTIVITY <sup>81</sup> Zn, <sup>81</sup> Ga, <sup>81</sup> Ge, <sup>81</sup> Rb( $\beta^-$ ) [from <sup>238</sup> U(n, X)]; measured E $\gamma$ , I $\gamma$ . Neutron converter, resonant laser ionization. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P315
<sup>81</sup> Rb	2005KOZU	NUCLEAR REACTIONS <sup>238</sup> U(n, X) <sup>74</sup> Zn / <sup>76</sup> Zn / <sup>77</sup> Zn / <sup>78</sup> Zn / <sup>80</sup> Zn / <sup>81</sup> Zn / <sup>74</sup> Ga / <sup>78</sup> Ga / <sup>80</sup> Ga / <sup>81</sup> Ga / <sup>82</sup> Ga / <sup>80</sup> Rb / <sup>81</sup> Rb / <sup>82</sup> Rb, E=spectrum; measured yields. Neutron converter, resonant laser ionization. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P315
	2005KOZU	RADIOACTIVITY <sup>81</sup> Zn, <sup>81</sup> Ga, <sup>81</sup> Ge, <sup>81</sup> Rb( $\beta^-$ ) [from <sup>238</sup> U(n, X)]; measured E $\gamma$ , I $\gamma$ . Neutron converter, resonant laser ionization. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P315
<sup>81</sup> Sr	2005KOZU	RADIOACTIVITY <sup>81</sup> Zn, <sup>81</sup> Ga, <sup>81</sup> Ge, <sup>81</sup> Rb( $\beta^-$ ) [from <sup>238</sup> U(n, X)]; measured E $\gamma$ , I $\gamma$ . Neutron converter, resonant laser ionization. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P315
<sup>81</sup> Y	2006KA48	ATOMIC MASSES <sup>80,81,82,83</sup> Y, <sup>83,84,85,86,88</sup> Zr, <sup>85,86,87,88</sup> Nb; measured masses. Penning trap. JOUR ZAANE 29 271

**A=82**

<sup>82</sup> Ga	2005KOZU	NUCLEAR REACTIONS <sup>238</sup> U(n, X) <sup>74</sup> Zn / <sup>76</sup> Zn / <sup>77</sup> Zn / <sup>78</sup> Zn / <sup>80</sup> Zn / <sup>81</sup> Zn / <sup>74</sup> Ga / <sup>78</sup> Ga / <sup>80</sup> Ga / <sup>81</sup> Ga / <sup>82</sup> Ga / <sup>80</sup> Rb / <sup>81</sup> Rb / <sup>82</sup> Rb, E=spectrum; measured yields. Neutron converter, resonant laser ionization. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P315
<sup>82</sup> Ge	2006REZX	NUCLEAR REACTIONS <sup>192</sup> Os( <sup>82</sup> Se, <sup>84</sup> Se), E=460 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin. <sup>84</sup> Se, <sup>190</sup> Os deduced levels, J, $\pi$ . <sup>192</sup> Os( <sup>82</sup> Se, X) <sup>74</sup> Ge / <sup>76</sup> Ge / <sup>78</sup> Ge / <sup>80</sup> Ge / <sup>82</sup> Ge / <sup>192</sup> Pt / <sup>194</sup> Pt / <sup>196</sup> Pt, E=460 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin, $\gamma$ -ray multiplicity. <sup>74,76,78,80,82</sup> Ge, <sup>192,194,196</sup> Pt deduced levels, J, $\pi$ . GASP array. CONF San Servolo(Fusion06),Proc,P271
<sup>82</sup> Rb	2005KOZU	NUCLEAR REACTIONS <sup>238</sup> U(n, X) <sup>74</sup> Zn / <sup>76</sup> Zn / <sup>77</sup> Zn / <sup>78</sup> Zn / <sup>80</sup> Zn / <sup>81</sup> Zn / <sup>74</sup> Ga / <sup>78</sup> Ga / <sup>80</sup> Ga / <sup>81</sup> Ga / <sup>82</sup> Ga / <sup>80</sup> Rb / <sup>81</sup> Rb / <sup>82</sup> Rb, E=spectrum; measured yields. Neutron converter, resonant laser ionization. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P315
<sup>82</sup> Sr	2007QA01	NUCLEAR REACTIONS Rb(p, xn) <sup>85</sup> Sr, E=25-45 MeV; measured $\sigma$ . Rb(p, xn) <sup>82</sup> Sr / <sup>85</sup> Sr, E $\approx$ 5-80 MeV; compiled, analyzed $\sigma$ ; deduced integral yields. JOUR ARISE 65 247
<sup>82</sup> Y	2006KA48	ATOMIC MASSES <sup>80,81,82,83</sup> Y, <sup>83,84,85,86,88</sup> Zr, <sup>85,86,87,88</sup> Nb; measured masses. Penning trap. JOUR ZAANE 29 271

**A=83**

<sup>83</sup> Ga	2006VEZZ	RADIOACTIVITY <sup>81</sup> Zn, <sup>83</sup> Ga( $\beta^-$ ) [from U(n, F)]; measured not given. <sup>81</sup> Ga, <sup>83</sup> Ge deduced levels, J, $\pi$ , configurations. PREPRINT nucl-ex/0610012,10/06/2006
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**KEYNUMBERS AND KEYWORDS**

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**A=83 (*continued*)**

<sup>83</sup> Ge	2006GAZV	NUCLEAR REACTIONS $^{238}\text{U}$ ( $^{82}\text{Se}$ , X), E=505 MeV; $^{238}\text{U}$ ( $^{64}\text{Ni}$ , X), E=400 MeV; $^{208}\text{Pb}$ ( $^{36}\text{S}$ , X), E=230 MeV; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin, fragments isotopic yields. $^{81}\text{Ga}$ , $^{83}\text{Ge}$ , $^{83}\text{As}$ deduced transitions. $^{36}\text{Si}$ , $^{54,58,60}\text{Cr}$ deduced levels, J, $\pi$ . CLARA array, PRISMA spectrometer. CONF Isle of Kos (FINUSTAR), Proc, P85
	2006VEZZ	RADIOACTIVITY $^{81}\text{Zn}$ , $^{83}\text{Ga}(\beta^-)$ [from U(n, F)]; measured not given. $^{81}\text{Ga}$ , $^{83}\text{Ge}$ deduced levels, J, $\pi$ , configurations. PREPRINT nucl-ex/0610012, 10/06/2006
<sup>83</sup> As	2006GAZV	NUCLEAR REACTIONS $^{238}\text{U}$ ( $^{82}\text{Se}$ , X), E=505 MeV; $^{238}\text{U}$ ( $^{64}\text{Ni}$ , X), E=400 MeV; $^{208}\text{Pb}$ ( $^{36}\text{S}$ , X), E=230 MeV; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin, fragments isotopic yields. $^{81}\text{Ga}$ , $^{83}\text{Ge}$ , $^{83}\text{As}$ deduced transitions. $^{36}\text{Si}$ , $^{54,58,60}\text{Cr}$ deduced levels, J, $\pi$ . CLARA array, PRISMA spectrometer. CONF Isle of Kos (FINUSTAR), Proc, P85
<sup>83</sup> Se	2006F013	NUCLEAR REACTIONS $^{208}\text{Pb}$ ( $^{18}\text{O}$ , F) $^{83}\text{Se}$ / $^{138}\text{Ba}$ / $^{139}\text{Ba}$ / $^{140}\text{Ba}$ , E=91 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin. $^{83}\text{Se}$ deduced high-spin levels, J, $\pi$ , configurations. Gammasphere array. JOUR PRVCA 74 034308
<sup>83</sup> Y	2006KA48	ATOMIC MASSES $^{80,81,82,83}\text{Y}$ , $^{83,84,85,86,88}\text{Zr}$ , $^{85,86,87,88}\text{Nb}$ ; measured masses. Penning trap. JOUR ZAANE 29 271
<sup>83</sup> Zr	2006KA48	ATOMIC MASSES $^{80,81,82,83}\text{Y}$ , $^{83,84,85,86,88}\text{Zr}$ , $^{85,86,87,88}\text{Nb}$ ; measured masses. Penning trap. JOUR ZAANE 29 271

**A=84**

<sup>84</sup> Se	2006REZX	NUCLEAR REACTIONS $^{192}\text{Os}$ ( $^{82}\text{Se}$ , $^{84}\text{Se}$ ), E=460 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin. $^{84}\text{Se}$ , $^{190}\text{Os}$ deduced levels, J, $\pi$ . $^{192}\text{Os}$ ( $^{82}\text{Se}$ , X) $^{74}\text{Ge}$ / $^{76}\text{Ge}$ / $^{78}\text{Ge}$ / $^{80}\text{Ge}$ / $^{82}\text{Ge}$ / $^{192}\text{Pt}$ / $^{194}\text{Pt}$ / $^{196}\text{Pt}$ , E=460 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin, $\gamma$ -ray multiplicity. $^{74,76,78,80,82}\text{Ge}$ , $^{192,194,196}\text{Pt}$ deduced levels, J, $\pi$ . GASP array. CONF San Servolo(Fusion06), Proc, P271
<sup>84</sup> Kr	2006DE36	ATOMIC MASSES $^{84,86,87,88,89,90,91,92,93,94,95}\text{Kr}$ ; measured masses. Penning trap mass spectrometer. JOUR PRVCA 74 034331
	2006SC22	NUCLEAR REACTIONS $^{82}\text{Se}$ ( $\alpha$ , 2n), E=24 MeV; measured delayed E $\gamma$ , I $\gamma(\theta, \text{H}, t)$ following implantation in Cd. $^{84}\text{Kr}$ deduced isomeric state quadrupole moment. Quadrupole systematics in neighboring nuclides compared. JOUR PRVCA 74 034309
<sup>84</sup> Zr	2006CH57	NUCLEAR REACTIONS $^{58}\text{Ni}$ ( $^{32}\text{S}$ , 2p $\alpha$ ), E=140 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ , (charged particle) $\gamma$ -coin. $^{84}\text{Zr}$ deduced superdeformed band transitions, linking transitions to normal-deformed states. Gammasphere, Microball arrays. JOUR PHSTB T125 119
	2006KA48	ATOMIC MASSES $^{80,81,82,83}\text{Y}$ , $^{83,84,85,86,88}\text{Zr}$ , $^{85,86,87,88}\text{Nb}$ ; measured masses. Penning trap. JOUR ZAANE 29 271

**A=85**

<sup>85</sup> Sr	2007QA01	NUCLEAR REACTIONS Rb(p, xn) $^{85}\text{Sr}$ , E=25-45 MeV; measured $\sigma$ . Rb(p, xn) $^{82}\text{Sr}$ / $^{85}\text{Sr}$ , E ≈ 5-80 MeV; compiled, analyzed $\sigma$ ; deduced integral yields. JOUR ARISE 65 247
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## KEYNUMBERS AND KEYWORDS

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### A=85 (*continued*)

<sup>85</sup> Zr	2006KA48	ATOMIC MASSES <sup>80,81,82,83</sup> Y, <sup>83,84,85,86,88</sup> Zr, <sup>85,86,87,88</sup> Nb; measured masses. Penning trap. JOUR ZAANE 29 271
<sup>85</sup> Nb	2006KA48	ATOMIC MASSES <sup>80,81,82,83</sup> Y, <sup>83,84,85,86,88</sup> Zr, <sup>85,86,87,88</sup> Nb; measured masses. Penning trap. JOUR ZAANE 29 271

### A=86

<sup>86</sup> Kr	2006DE36	ATOMIC MASSES <sup>84,86,87,88,89,90,91,92,93,94,95</sup> Kr; measured masses. Penning trap mass spectrometer. JOUR PRVCA 74 034331
<sup>86</sup> Zr	2006KA48	ATOMIC MASSES <sup>80,81,82,83</sup> Y, <sup>83,84,85,86,88</sup> Zr, <sup>85,86,87,88</sup> Nb; measured masses. Penning trap. JOUR ZAANE 29 271
<sup>86</sup> Nb	2006KA48	ATOMIC MASSES <sup>80,81,82,83</sup> Y, <sup>83,84,85,86,88</sup> Zr, <sup>85,86,87,88</sup> Nb; measured masses. Penning trap. JOUR ZAANE 29 271

### A=87

<sup>87</sup> Kr	2006DE36	ATOMIC MASSES <sup>84,86,87,88,89,90,91,92,93,94,95</sup> Kr; measured masses. Penning trap mass spectrometer. JOUR PRVCA 74 034331
<sup>87</sup> Nb	2006KA48	ATOMIC MASSES <sup>80,81,82,83</sup> Y, <sup>83,84,85,86,88</sup> Zr, <sup>85,86,87,88</sup> Nb; measured masses. Penning trap. JOUR ZAANE 29 271

### A=88

<sup>88</sup> Kr	2006DE36	ATOMIC MASSES <sup>84,86,87,88,89,90,91,92,93,94,95</sup> Kr; measured masses. Penning trap mass spectrometer. JOUR PRVCA 74 034331
<sup>88</sup> Sr	2006GOZX	NUCLEAR REACTIONS <sup>88</sup> Sr(n, n'γ) E=fast; measured I <sub>γ</sub> (θ). <sup>88</sup> Sr deduced mixing ratio δ. Reactor. CONF Sarov(Nucleus-2006), Contrib,P105, Govor
<sup>88</sup> Zr	2006KA48	ATOMIC MASSES <sup>80,81,82,83</sup> Y, <sup>83,84,85,86,88</sup> Zr, <sup>85,86,87,88</sup> Nb; measured masses. Penning trap. JOUR ZAANE 29 271
<sup>88</sup> Nb	2006KA48	ATOMIC MASSES <sup>80,81,82,83</sup> Y, <sup>83,84,85,86,88</sup> Zr, <sup>85,86,87,88</sup> Nb; measured masses. Penning trap. JOUR ZAANE 29 271

### A=89

<sup>89</sup> Kr	2006DE36	ATOMIC MASSES <sup>84,86,87,88,89,90,91,92,93,94,95</sup> Kr; measured masses. Penning trap mass spectrometer. JOUR PRVCA 74 034331
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### A=90

<sup>90</sup> Kr	2006DE36	ATOMIC MASSES <sup>84,86,87,88,89,90,91,92,93,94,95</sup> Kr; measured masses. Penning trap mass spectrometer. JOUR PRVCA 74 034331
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## KEYNUMBERS AND KEYWORDS

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### A=90 (*continued*)

<sup>90</sup>Zr      2006HA50      NUCLEAR REACTIONS  $^{208}\text{Pb}(\alpha, \alpha'\text{p})$ , E=200 MeV; measured Ep, E $\alpha$ ,  $\sigma(E, \theta)$ .  $^{90}\text{Zr}$ ,  $^{116}\text{Sn}$ ,  $^{208}\text{Pb}(\alpha, \alpha'\text{n})$ , E=200 MeV; measured En, E $\alpha$ .  $^{90}\text{Zr}$ ,  $^{116}\text{Sn}$ ,  $^{208}\text{Pb}$  deduced branching ratios for particle decay of isoscalar GDR. Comparison with model predictions. JOUR IMPEE 15 1357

### A=91

<sup>91</sup>Kr      2006DE36      ATOMIC MASSES  $^{84,86,87,88,89,90,91,92,93,94,95}\text{Kr}$ ; measured masses. Penning trap mass spectrometer. JOUR PRVCA 74 034331

### A=92

<sup>92</sup>Kr      2006DE36      ATOMIC MASSES  $^{84,86,87,88,89,90,91,92,93,94,95}\text{Kr}$ ; measured masses. Penning trap mass spectrometer. JOUR PRVCA 74 034331

<sup>92</sup>Zr      2006URZZ      NUCLEAR REACTIONS  $^{208}\text{Pb}(^{90}\text{Zr}, X)$ , E=560 MeV; measured fragments isotopic yields following multinucleon transfer, velocity distributions, E $\gamma$ , I $\gamma$ .  $^{208}\text{Pb}(^{90}\text{Zr}, ^{90}\text{Zr})$ , E=560 MeV; measured  $\sigma(\theta)$ .  $^{92}\text{Zr}$  deduced transitions. CONF San Servolo(Fusion06),Proc,P43

### A=93

<sup>93</sup>Kr      2006DE36      ATOMIC MASSES  $^{84,86,87,88,89,90,91,92,93,94,95}\text{Kr}$ ; measured masses. Penning trap mass spectrometer. JOUR PRVCA 74 034331

### A=94

<sup>94</sup>Kr      2006DE36      ATOMIC MASSES  $^{84,86,87,88,89,90,91,92,93,94,95}\text{Kr}$ ; measured masses. Penning trap mass spectrometer. JOUR PRVCA 74 034331

### A=95

<sup>95</sup>Kr      2005PIZX      NUCLEAR REACTIONS  $^{239,241}\text{Pu}(\text{n}, \text{F})^{95}\text{Kr} / ^{97}\text{Sr} / ^{96}\text{Rb}$ , E=thermal; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin.  $^{96}\text{Rb}$  deduced levels, J,  $\pi$ , shape coexistence features. Eurogam 2 array. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P149

2006DE36      ATOMIC MASSES  $^{84,86,87,88,89,90,91,92,93,94,95}\text{Kr}$ ; measured masses. Penning trap mass spectrometer. JOUR PRVCA 74 034331

## KEYNUMBERS AND KEYWORDS

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### A=96

<sup>96</sup> Rb	2005PIZX	NUCLEAR REACTIONS $^{239,241}\text{Pu}(n, F)^{95}\text{Kr} / ^{97}\text{Sr} / ^{96}\text{Rb}$ , E=thermal; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin. $^{96}\text{Rb}$ deduced levels, J, $\pi$ , shape coexistence features. Eurogam 2 array. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P149
<sup>96</sup> Mo	2006BEZN	NUCLEAR REACTIONS $^{96}\text{Mo}(^{138}\text{Xe}, ^{138}\text{Xe}')$ , $(^{140}\text{Xe}, ^{140}\text{Xe}')$ , $(^{142}\text{Xe}, ^{142}\text{Xe}')$ , E not given; measured $E\gamma$ , $I\gamma$ , (particle) $\gamma$ -coin following projectile Coulomb excitation. Miniball array. REPT MLL 2005 Annual, P16, Behrens

### A=97

<sup>97</sup> Sr	2005PIZX	RADIOACTIVITY $^{248}\text{Cm}(\text{SF})$ ; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin. $^{97}\text{Sr}$ , $^{99,101}\text{Zr}$ deduced levels, J, $\pi$ , shape coexistence features. Eurogam 2 array. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P149
	2005PIZX	NUCLEAR REACTIONS $^{239,241}\text{Pu}(n, F)^{95}\text{Kr} / ^{97}\text{Sr} / ^{96}\text{Rb}$ , E=thermal; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin. $^{96}\text{Rb}$ deduced levels, J, $\pi$ , shape coexistence features. Eurogam 2 array. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P149

### A=98

<sup>98</sup> Zr	2005SIZV	RADIOACTIVITY $^{98}\text{Zr}(\text{IT})$ ; measured $E\gamma$ , $I\gamma$ , $T_{1/2}$ . $^{98}\text{Zr}$ deduced levels, J, $\pi$ , configurations. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P137
<sup>98</sup> Cd	2006VE09	NUCLEAR REACTIONS $^{58}\text{Ni}(^{46}\text{Ti}, \text{xnypz}\alpha)$ , E=175 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -, (charged particle) $\gamma$ -, (neutron) $\gamma$ -coin; deduced isotopic yields. $^{98}\text{Cd}$ deduced levels, J, $\pi$ . Gammasphere, Microball arrays. JOUR PHSTB T125 222

### A=99

<sup>99</sup> Zr	2005PIZX	RADIOACTIVITY $^{248}\text{Cm}(\text{SF})$ ; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin. $^{97}\text{Sr}$ , $^{99,101}\text{Zr}$ deduced levels, J, $\pi$ , shape coexistence features. Eurogam 2 array. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P149
<sup>99</sup> Mo	2006JOZY	NUCLEAR REACTIONS $^{27}\text{Al}(^{178}\text{Hf}, \text{X})^{121}\text{Sb} / ^{123}\text{Sb} / ^{99}\text{Mo}$ , E=1150 MeV; measured delayed $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin. $^{121,123}\text{Sb}$ , $^{99}\text{Mo}$ deduced levels, J, $\pi$ , configurations, isomeric states $T_{1/2}$ . Gammasphere array. CONF San Servolo(Fusion06), Proc, P342

### A=100

<sup>100</sup> Mo	2006HO17	RADIOACTIVITY $^{100}\text{Mo}(2\beta^-)$ ; measured $E\gamma$ , $I\gamma$ , $T_{1/2}$ for inclusive $2\beta$ -decay to excited states. JOUR PRVCA 74 044314
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**KEYNUMBERS AND KEYWORDS**

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**A=100 (*continued*)**

$^{100}\text{Ru}$	2007AR02 2006H017 2007AR02	RADIOACTIVITY $^{100}\text{Mo}(2\beta^-)$ ; measured $0\nu\beta\beta$ -decay $T_{1/2}$ lower limits, $2\nu\beta\beta$ -decay $T_{1/2}$ . JOUR NUPAB 781 209 RADIOACTIVITY $^{100}\text{Mo}(2\beta^-)$ ; measured $E\gamma, I\gamma, T_{1/2}$ for inclusive $2\beta$ -decay to excited states. JOUR PRVCA 74 044314 RADIOACTIVITY $^{100}\text{Mo}(2\beta^-)$ ; measured $0\nu\beta\beta$ -decay $T_{1/2}$ lower limits, $2\nu\beta\beta$ -decay $T_{1/2}$ . JOUR NUPAB 781 209
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**A=101**

$^{101}\text{Zr}$	2005PIZX	RADIOACTIVITY $^{248}\text{Cm}(\text{SF})$ ; measured $E\gamma, I\gamma, \gamma\gamma$ -coin. $^{97}\text{Sr}, ^{99,101}\text{Zr}$ deduced levels, $J, \pi$ , shape coexistence features. Eurogam 2 array. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P149
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**A=102**

$^{102}\text{Ru}$	2006TOZX	NUCLEAR REACTIONS $^{208}\text{Pb}(^{102}\text{Ru}, ^{102}\text{Ru}')$ , $E=440$ MeV; measured $E\gamma, I\gamma, (\text{particle})\gamma$ -coin following projectile Coulomb excitation. $^{102}\text{Ru}$ deduced levels, $J, \pi$ . Gemini-II array. REPT JAEA-Review 2006-029,P25,Toh
$^{102}\text{Pd}$	2006KAZU	NUCLEAR REACTIONS $^{92}\text{Zr}(^{13}\text{C}, 3n)$ , $E=48$ MeV; measured Doppler-shifted $E\gamma, I\gamma, \gamma\gamma$ -coin. $^{102}\text{Pd}$ levels deduced $T_{1/2}, B(E2)$ . GASP array, recoil-distance method. CONF Isle of Kos (FINUSTAR),Proc,P472

**A=103**

$^{103}\text{Pd}$	2006ANZU	NUCLEAR REACTIONS $^{98}\text{Mo}(^{12}\text{C}, 3n)$ , $(^{12}\text{C}, 3n\alpha)$ , $E=60$ MeV; measured Doppler-shifted $E\gamma, I\gamma, \gamma\gamma$ -coin. $^{107}\text{Cd}, ^{103}\text{Pd}$ levels deduced $T_{1/2}, B(E2)$ . Differential decay curve method. CONF Isle of Kos (FINUSTAR),Proc,P391
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**A=104**

$^{104}\text{Ag}$	2006BEZQ	NUCLEAR REACTIONS $\text{Ag}(\gamma, 3n)^{104m}\text{Ag} / ^{104}\text{Ag}$ ; measured $E\gamma, I\gamma(t)$ ; deduced yield ratio. Microtron, HPGe detector. CONF Sarov(Nucleus-2006),Contrib,P90,Belyshev
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**A=105**

$^{105}\text{Mo}$	2006DI16	RADIOACTIVITY $^{252}\text{Cf}(\text{SF})$ ; measured $E\gamma, I\gamma, \gamma\gamma$ -coin. $^{105}\text{Mo}$ deduced high-spin levels, $J, \pi$ , configurations. Gammasphere array, total Routhian surface calculations, level systematics in neighboring isotopes discussed. JOUR PRVCA 74 054301
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*KEYNUMBERS AND KEYWORDS*

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**A=105 (*continued*)**

2006DI17      RADIOACTIVITY  $^{252}\text{Cf}(\text{SF})$ ; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin.  $^{105}\text{Mo}$  deduced high-spin levels,  $J$ ,  $\pi$ , configurations. Gammasphere array, total Routhian surface calculations, level systematics in neighboring isotopes discussed. JOUR CPLEE 23 3222

**A=106**

$^{106}\text{Sn}$     2006VAZW      NUCLEAR REACTIONS  $^{197}\text{Au}(^{106}\text{Sn}, ^{106}\text{Sn}')$ ,  $(^{108}\text{Sn}, ^{108}\text{Sn}')$ ,  $(^{110}\text{Sn}, ^{110}\text{Sn}')$ ,  $(^{112}\text{Sn}, ^{112}\text{Sn}')$ ,  $E \approx 80$  MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$ , (particle) $\gamma$ -coin following projectile Coulomb excitation.  $^{106,108,110,112}\text{Sn}$  deduced transitions B(E2). Comparison with shell model predictions. PREPRINT nucl-ex/0612011,12/08/2006

$^{106}\text{Te}$     2006HAZU      NUCLEAR REACTIONS  $^{54}\text{Fe}(^{54}\text{Fe}, 2n)$ ,  $E=182$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -, (recoil) $\gamma$ -coin; deduced production  $\sigma$ .  $^{106}\text{Te}$  deduced levels,  $J$ ,  $\pi$ . Jurogam array, recoil-decay tagging. CONF Isle of Kos (FINUSTAR), Proc, P457

**A=107**

$^{107}\text{Cd}$     2006ANZU      NUCLEAR REACTIONS  $^{98}\text{Mo}(^{12}\text{C}, 3n)$ ,  $(^{12}\text{C}, 3n\alpha)$ ,  $E=60$  MeV; measured Doppler-shifted  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin.  $^{107}\text{Cd}$ ,  $^{103}\text{Pd}$  levels deduced  $T_{1/2}$ , B(E2). Differential decay curve method. CONF Isle of Kos (FINUSTAR), Proc, P391

**A=108**

$^{108}\text{Sn}$     2006VAZW      NUCLEAR REACTIONS  $^{197}\text{Au}(^{106}\text{Sn}, ^{106}\text{Sn}')$ ,  $(^{108}\text{Sn}, ^{108}\text{Sn}')$ ,  $(^{110}\text{Sn}, ^{110}\text{Sn}')$ ,  $(^{112}\text{Sn}, ^{112}\text{Sn}')$ ,  $E \approx 80$  MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$ , (particle) $\gamma$ -coin following projectile Coulomb excitation.  $^{106,108,110,112}\text{Sn}$  deduced transitions B(E2). Comparison with shell model predictions. PREPRINT nucl-ex/0612011,12/08/2006

**A=109**

No references found

**A=110**

$^{110}\text{Pd}$     2006PE26      NUCLEAR REACTIONS  $^{110}\text{Pd}(^{18}\text{O}, ^{18}\text{O}')$ ,  $(^{18}\text{O}, ^{16}\text{O})$ ,  $(^{18}\text{O}, ^{14}\text{C})$ ,  $E=40-58$  MeV; measured  $E\gamma$ ,  $I\gamma$ , (particle) $\gamma$ -coin; deduced excitation functions. Coupled-channels analysis. JOUR PRVCA 74 034608

$^{110}\text{Sn}$     2006EK01      NUCLEAR REACTIONS  $^{58}\text{Ni}(^{110}\text{Sn}, ^{110}\text{Sn}')$ ,  $E=2.8$  MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$ , (particle) $\gamma$ -coin following projectile Coulomb excitation.  $^{110}\text{Sn}$  deduced transition B(E2). JOUR PHSTB T125 190

## KEYNUMBERS AND KEYWORDS

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### A=110 (*continued*)

	2006GU26	NUCLEAR REACTIONS $^{112}\text{Sn}$ (p, t), E=26 MeV; measured triton spectra, $\sigma(E, \theta)$ . $^{110}\text{Sn}$ deduced levels, J, $\pi$ . Q3D magnetic spectrograph. DWBA analysis, comparison with model predictions. JOUR PRVCA 74 054605
	2006GUZW	NUCLEAR REACTIONS $^{112}\text{Sn}$ (p, t), E=26 MeV; measured $\sigma(E, \theta)$ . REPT MLL 2005 Annual, P12, Guazzoni
	2006VAZW	NUCLEAR REACTIONS $^{197}\text{Au}$ ( $^{106}\text{Sn}$ , $^{106}\text{Sn}'$ ), ( $^{108}\text{Sn}$ , $^{108}\text{Sn}'$ ), ( $^{110}\text{Sn}$ , $^{110}\text{Sn}'$ ), ( $^{112}\text{Sn}$ , $^{112}\text{Sn}'$ ), E $\approx$ 80 MeV / nucleon; measured $E\gamma$ , $I\gamma$ , (particle) $\gamma$ -coin following projectile Coulomb excitation. $^{106,108,110,112}\text{Sn}$ deduced transitions B(E2). Comparison with shell model predictions. PREPRINT nucl-ex/0612011, 12/08/2006
$^{110}\text{Te}$	2006EV04	NUCLEAR REACTIONS $^{58}\text{Ni}$ ( $^{58}\text{Ni}$ , 2p $\alpha$ ), E=240 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -, (charged particle) $\gamma$ -coin, DSA. $^{110}\text{Te}$ deduced transitions B(M1). JOUR PHSTB T125 192

### A=111

No references found

### A=112

$^{112}\text{Pd}$	2006PE26	NUCLEAR REACTIONS $^{110}\text{Pd}$ ( $^{18}\text{O}$ , $^{18}\text{O}'$ ), ( $^{18}\text{O}$ , $^{16}\text{O}$ ), ( $^{18}\text{O}$ , $^{14}\text{C}$ ), E=40-58 MeV; measured $E\gamma$ , $I\gamma$ , (particle) $\gamma$ -coin; deduced excitation functions. Coupled-channels analysis. JOUR PRVCA 74 034608
$^{112}\text{Sn}$	2006VAZW	NUCLEAR REACTIONS $^{197}\text{Au}$ ( $^{106}\text{Sn}$ , $^{106}\text{Sn}'$ ), ( $^{108}\text{Sn}$ , $^{108}\text{Sn}'$ ), ( $^{110}\text{Sn}$ , $^{110}\text{Sn}'$ ), ( $^{112}\text{Sn}$ , $^{112}\text{Sn}'$ ), E $\approx$ 80 MeV / nucleon; measured $E\gamma$ , $I\gamma$ , (particle) $\gamma$ -coin following projectile Coulomb excitation. $^{106,108,110,112}\text{Sn}$ deduced transitions B(E2). Comparison with shell model predictions. PREPRINT nucl-ex/0612011, 12/08/2006

### A=113

$^{113}\text{In}$	2006SA40	NUCLEAR REACTIONS $^{114}\text{Cd}$ (p, xn) $^{114m}\text{In}$ / $^{113m}\text{In}$ , E $\approx$ 8-17 MeV; measured excitation functions. Stacked-foil activation technique, comparison with previous results. JOUR ARISE 64 1655
	2006VIZY	NUCLEAR REACTIONS $^{113,115}\text{In}$ (e $^+$ , X) $^{113m}\text{In}$ / $^{115m}\text{In}$ , E < 3.9 MeV; measured $E\gamma$ ; deduced isomer production $\sigma$ . Electrostatic accelerator, anti-Compton spectrometer. CONF Sarov(Nucleus-2006), Contrib, P158, Vishnevsky

### A=114

$^{114}\text{Cd}$	2006PE26	NUCLEAR REACTIONS $^{110}\text{Pd}$ ( $^{18}\text{O}$ , $^{18}\text{O}'$ ), ( $^{18}\text{O}$ , $^{16}\text{O}$ ), ( $^{18}\text{O}$ , $^{14}\text{C}$ ), E=40-58 MeV; measured $E\gamma$ , $I\gamma$ , (particle) $\gamma$ -coin; deduced excitation functions. Coupled-channels analysis. JOUR PRVCA 74 034608
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## KEYNUMBERS AND KEYWORDS

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### A=114 (*continued*)

$^{114}\text{In}$  2006SA40 NUCLEAR REACTIONS  $^{114}\text{Cd}(\text{p}, \text{xn})^{114m}\text{In}$  /  $^{113m}\text{In}$ , E  $\approx$  8-17 MeV; measured excitation functions. Stacked-foil activation technique, comparison with previous results. JOUR ARISE 64 1655

### A=115

$^{115}\text{In}$  2006VIZY NUCLEAR REACTIONS  $^{113,115}\text{In}(\text{e}^+, \text{X})^{113m}\text{In}$  /  $^{115m}\text{In}$ , E < 3.9 MeV; measured  $E\gamma$ ; deduced isomer production  $\sigma$ . Electrostatic accelerator, anti-Compton spectrometer. CONF Sarov(Nucleus-2006), Contrib,P158,Vishnevsky

### A=116

$^{116}\text{In}$  2006V012 RADIOACTIVITY  $^{183}\text{Hf}(\beta^-)$  [from  $^{182}\text{Hf}(\text{n}, \gamma)$ ];  $^{56}\text{Mn}$ ,  $^{116m}\text{In}$ ,  $^{180m}\text{Hf}$ ; measured  $E\gamma$ ,  $I\gamma$ ,  $T_{1/2}$ . Comparisons with previous results. JOUR PRVCA 74 057303

$^{116}\text{Sn}$  2006GUZV NUCLEAR REACTIONS  $^{118}\text{Sn}(\text{p}, \text{t})$ , E=24.6 MeV; measured  $\sigma(E, \theta)$ . REPT MLL 2005 Annual, P13,Guazzoni

2006HA50 NUCLEAR REACTIONS  $^{208}\text{Pb}(\alpha, \alpha'\text{p})$ , E=200 MeV; measured Ep, E $\alpha$ ,  $\sigma(E, \theta)$ .  $^{90}\text{Zr}$ ,  $^{116}\text{Sn}$ ,  $^{208}\text{Pb}(\alpha, \alpha'\text{n})$ , E=200 MeV; measured En, E $\alpha$ .  $^{90}\text{Zr}$ ,  $^{116}\text{Sn}$ ,  $^{208}\text{Pb}$  deduced branching ratios for particle decay of isoscalar GDR. Comparison with model predictions. JOUR IMPEE 15 1357

$^{116}\text{Cs}$  2006SM04 NUCLEAR REACTIONS  $^{58}\text{Ni}(^{64}\text{Zn}, \text{np}\alpha)$ , E=265 MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -, (charged particle) $\gamma$ -coin.  $^{116}\text{Cs}$  deduced high-spin levels, J,  $\pi$ , configurations, signature inversion. Gammasphere, Microball arrays. JOUR PRVCA 74 034310

### A=117

$^{117}\text{Pd}$  2006STZW NUCLEAR REACTIONS  $^{238}\text{U}(\alpha, \text{F})$ , E=30 MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -, (fragment) $\gamma$ -coin; deduced yields.  $^{117,118,120}\text{Pd}$ ,  $^{122,124}\text{Cd}$  deduced levels, J,  $\pi$ . Gammasphere, Chico arrays, level systematics in neighboring isotopes discussed. PREPRINT Stoyer,12/2006

$^{117}\text{In}$  2006GUZU NUCLEAR REACTIONS  $^{120}\text{Sn}(\text{polarized p}, \alpha)$ , E=23 MeV; measured  $\sigma(E, \theta)$ , Ay(E,  $\gamma$ ). REPT MLL 2005 Annual, P14,Guazzoni

### A=118

$^{118}\text{Pd}$  2006STZW NUCLEAR REACTIONS  $^{238}\text{U}(\alpha, \text{F})$ , E=30 MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -, (fragment) $\gamma$ -coin; deduced yields.  $^{117,118,120}\text{Pd}$ ,  $^{122,124}\text{Cd}$  deduced levels, J,  $\pi$ . Gammasphere, Chico arrays, level systematics in neighboring isotopes discussed. PREPRINT Stoyer,12/2006

**A=118 (*continued*)**

<sup>118</sup>Te      2006HE26      NUCLEAR REACTIONS  $^{64}\text{Ni}$ ( $^{64}\text{Ni}$ , xnypz $\alpha$ ), E=255, 261 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, (charged particle) $\gamma$ -coin.  $^{118,120}\text{Te}$ ,  $^{121,122}\text{I}$ ,  $^{121,122,123,124}\text{Xe}$ ,  $^{124,125}\text{Cs}$ ,  $^{126}\text{Ba}$  deduced superdeformed and hyperdeformed ridge structures. Euroball IV and Diamant arrays. JOUR PHSTB T125 108

**A=119**

No references found

**A=120**

$^{120}\text{Pd}$       2006STZW      NUCLEAR REACTIONS  $^{238}\text{U}$ ( $\alpha$ , F), E=30 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, (fragment) $\gamma$ -coin; deduced yields.  $^{117,118,120}\text{Pd}$ ,  $^{122,124}\text{Cd}$  deduced levels, J,  $\pi$ . Gammasphere, Chico arrays, level systematics in neighboring isotopes discussed. PREPRINT Stoyer,12/2006

$^{120}\text{Sn}$       2006GE18      NUCLEAR REACTIONS  $^{120}\text{Sn}$ ( $^{68}\text{Cu}$ ,  $^{68}\text{Cu}'$ ), ( $^{70}\text{Cu}$ ,  $^{70}\text{Cu}'$ ), E=2.86 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin following projectile Coulomb excitation.  $^{68,70}\text{Cu}$  deduced transitions B(E2). Isomeric beams. JOUR IMPEE 15 1505

$^{120}\text{Te}$       2006HE26      NUCLEAR REACTIONS  $^{64}\text{Ni}$ ( $^{64}\text{Ni}$ , xnypz $\alpha$ ), E=255, 261 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, (charged particle) $\gamma$ -coin.  $^{118,120}\text{Te}$ ,  $^{121,122}\text{I}$ ,  $^{121,122,123,124}\text{Xe}$ ,  $^{124,125}\text{Cs}$ ,  $^{126}\text{Ba}$  deduced superdeformed and hyperdeformed ridge structures. Euroball IV and Diamant arrays. JOUR PHSTB T125 108

**A=121**

$^{121}\text{Sb}$       2006JOZY      NUCLEAR REACTIONS  $^{27}\text{Al}$ ( $^{178}\text{Hf}$ , X) $^{121}\text{Sb}$  /  $^{123}\text{Sb}$  /  $^{99}\text{Mo}$ , E=1150 MeV; measured delayed E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin.  $^{121,123}\text{Sb}$ ,  $^{99}\text{Mo}$  deduced levels, J,  $\pi$ , configurations, isomeric states  $T_{1/2}$ . Gammasphere array. CONF San Servolo(Fusion06),Proc,P342

$^{121}\text{Te}$       2006KI15      NUCLEAR REACTIONS Te(p, xn) $^{121}\text{I}$  /  $^{123}\text{I}$  /  $^{124}\text{I}$  /  $^{126}\text{I}$  /  $^{128}\text{I}$  /  $^{130}\text{I}$ , E=2-18 MeV; Te(p, X) $^{121}\text{Te}$ , E=13-18 MeV; measured production  $\sigma$ . Stacked foil activation technique. JOUR JRNC 270 369

$^{121}\text{I}$       2006HE26      NUCLEAR REACTIONS  $^{64}\text{Ni}$ ( $^{64}\text{Ni}$ , xnypz $\alpha$ ), E=255, 261 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, (charged particle) $\gamma$ -coin.  $^{118,120}\text{Te}$ ,  $^{121,122}\text{I}$ ,  $^{121,122,123,124}\text{Xe}$ ,  $^{124,125}\text{Cs}$ ,  $^{126}\text{Ba}$  deduced superdeformed and hyperdeformed ridge structures. Euroball IV and Diamant arrays. JOUR PHSTB T125 108

2006KI15      NUCLEAR REACTIONS Te(p, xn) $^{121}\text{I}$  /  $^{123}\text{I}$  /  $^{124}\text{I}$  /  $^{126}\text{I}$  /  $^{128}\text{I}$  /  $^{130}\text{I}$ , E=2-18 MeV; Te(p, X) $^{121}\text{Te}$ , E=13-18 MeV; measured production  $\sigma$ . Stacked foil activation technique. JOUR JRNC 270 369

**A=121 (*continued*)**

<sup>121</sup>Xe      2006HE26      NUCLEAR REACTIONS <sup>64</sup>Ni(<sup>64</sup>Ni, xnypz $\alpha$ ), E=255, 261 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, (charged particle) $\gamma$ -coin. <sup>118,120</sup>Te, <sup>121,122</sup>I, <sup>121,122,123,124</sup>Xe, <sup>124,125</sup>Cs, <sup>126</sup>Ba deduced superdeformed and hyperdeformed ridge structures. Euroball IV and Diamant arrays. JOUR PHSTB T125 108

**A=122**

<sup>122</sup>Cd      2006KRZV      NUCLEAR REACTIONS Pd(<sup>122</sup>Cd, <sup>122</sup>Cd'), (<sup>124</sup>Cd, <sup>124</sup>Cd'), E=2.86 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin following projectile Coulomb excitation. <sup>122,124</sup>Cd levels deduced B(E2). Miniball array. CONF Isle of Kos (FINUSTAR), Proc, P119

2006STZW      NUCLEAR REACTIONS <sup>238</sup>U( $\alpha$ , F), E=30 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, (fragment) $\gamma$ -coin; deduced yields. <sup>117,118,120</sup>Pd, <sup>122,124</sup>Cd deduced levels, J,  $\pi$ . Gammasphere, Chico arrays, level systematics in neighboring isotopes discussed. PREPRINT Stoyer, 12/2006

<sup>122</sup>I      2006HE26      NUCLEAR REACTIONS <sup>64</sup>Ni(<sup>64</sup>Ni, xnypz $\alpha$ ), E=255, 261 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, (charged particle) $\gamma$ -coin. <sup>118,120</sup>Te, <sup>121,122</sup>I, <sup>121,122,123,124</sup>Xe, <sup>124,125</sup>Cs, <sup>126</sup>Ba deduced superdeformed and hyperdeformed ridge structures. Euroball IV and Diamant arrays. JOUR PHSTB T125 108

<sup>122</sup>Xe      2006HE26      NUCLEAR REACTIONS <sup>64</sup>Ni(<sup>64</sup>Ni, xnypz $\alpha$ ), E=255, 261 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, (charged particle) $\gamma$ -coin. <sup>118,120</sup>Te, <sup>121,122</sup>I, <sup>121,122,123,124</sup>Xe, <sup>124,125</sup>Cs, <sup>126</sup>Ba deduced superdeformed and hyperdeformed ridge structures. Euroball IV and Diamant arrays. JOUR PHSTB T125 108

**A=123**

<sup>123</sup>Cd      2005SCZQ      RADIOACTIVITY <sup>123,125,127,129</sup>In, <sup>123,125,127</sup>Cd(IT); measured E $\gamma$ , I $\gamma$ , T<sub>1/2</sub>. <sup>123,125,127,129</sup>In, <sup>123,125,127</sup>Cd deduced levels, J,  $\pi$ . Comparison with model predictions. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P145

<sup>123</sup>In      2005SCZQ      RADIOACTIVITY <sup>123,125,127,129</sup>In, <sup>123,125,127</sup>Cd(IT); measured E $\gamma$ , I $\gamma$ , T<sub>1/2</sub>. <sup>123,125,127,129</sup>In, <sup>123,125,127</sup>Cd deduced levels, J,  $\pi$ . Comparison with model predictions. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P145

<sup>123</sup>Sb      2006JOZY      NUCLEAR REACTIONS <sup>27</sup>Al(<sup>178</sup>Hf, X)<sup>121</sup>Sb / <sup>123</sup>Sb / <sup>99</sup>Mo, E=1150 MeV; measured delayed E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>121,123</sup>Sb, <sup>99</sup>Mo deduced levels, J,  $\pi$ , configurations, isomeric states T<sub>1/2</sub>. Gammasphere array. CONF San Servolo(Fusion06), Proc, P342

<sup>123</sup>I      2006KI15      NUCLEAR REACTIONS Te(p, xn)<sup>121</sup>I / <sup>123</sup>I / <sup>124</sup>I / <sup>126</sup>I / <sup>128</sup>I / <sup>130</sup>I, E=2-18 MeV; Te(p, X)<sup>121</sup>Te, E=13-18 MeV; measured production  $\sigma$ . Stacked foil activation technique. JOUR JRNCD 270 369

**KEYNUMBERS AND KEYWORDS**

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**A=123 (*continued*)**

<sup>123</sup>Xe      2006HE26      NUCLEAR REACTIONS <sup>64</sup>Ni(<sup>64</sup>Ni, xnypz $\alpha$ ), E=255, 261 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, (charged particle) $\gamma$ -coin. <sup>118,120</sup>Te, <sup>121,122</sup>I, <sup>121,122,123,124</sup>Xe, <sup>124,125</sup>Cs, <sup>126</sup>Ba deduced superdeformed and hyperdeformed ridge structures. Euroball IV and Diamant arrays. JOUR PHSTB T125 108

**A=124**

<sup>124</sup>Cd      2006KRZV      NUCLEAR REACTIONS Pd(<sup>122</sup>Cd, <sup>122</sup>Cd'), (<sup>124</sup>Cd, <sup>124</sup>Cd'), E=2.86 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin following projectile Coulomb excitation. <sup>122,124</sup>Cd levels deduced B(E2). Miniball array. CONF Isle of Kos (FINUSTAR), Proc, P119

<sup>124</sup>I      2006STZW      NUCLEAR REACTIONS <sup>238</sup>U( $\alpha$ , F), E=30 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, (fragment) $\gamma$ -coin; deduced yields. <sup>117,118,120</sup>Pd, <sup>122,124</sup>Cd deduced levels, J,  $\pi$ . Gammasphere, Chico arrays, level systematics in neighboring isotopes discussed. PREPRINT Stoyer, 12/2006

<sup>124</sup>Te      2006V009      NUCLEAR REACTIONS <sup>123</sup>Te(n,  $\gamma$ ), E=thermal; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin; deduced  $\sigma$ . <sup>124</sup>Te deduced levels, J,  $\pi$ , neutron binding energy. JOUR PRVCA 74 034319

<sup>124</sup>I      2006KI15      NUCLEAR REACTIONS Te(p, xn)<sup>121</sup>I / <sup>123</sup>I / <sup>124</sup>I / <sup>126</sup>I / <sup>128</sup>I / <sup>130</sup>I, E=2-18 MeV; Te(p, X)<sup>121</sup>Te, E=13-18 MeV; measured production  $\sigma$ . Stacked foil activation technique. JOUR JRNCD 270 369

<sup>124</sup>Xe      2006HE26      NUCLEAR REACTIONS <sup>64</sup>Ni(<sup>64</sup>Ni, xnypz $\alpha$ ), E=255, 261 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, (charged particle) $\gamma$ -coin. <sup>118,120</sup>Te, <sup>121,122</sup>I, <sup>121,122,123,124</sup>Xe, <sup>124,125</sup>Cs, <sup>126</sup>Ba deduced superdeformed and hyperdeformed ridge structures. Euroball IV and Diamant arrays. JOUR PHSTB T125 108

<sup>124</sup>Cs      2006HE26      NUCLEAR REACTIONS <sup>64</sup>Ni(<sup>64</sup>Ni, xnypz $\alpha$ ), E=255, 261 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, (charged particle) $\gamma$ -coin. <sup>118,120</sup>Te, <sup>121,122</sup>I, <sup>121,122,123,124</sup>Xe, <sup>124,125</sup>Cs, <sup>126</sup>Ba deduced superdeformed and hyperdeformed ridge structures. Euroball IV and Diamant arrays. JOUR PHSTB T125 108

**A=125**

<sup>125</sup>Cd      2005SCZQ      RADIOACTIVITY <sup>123,125,127,129</sup>In, <sup>123,125,127</sup>Cd(IT); measured E $\gamma$ , I $\gamma$ , T<sub>1/2</sub>. <sup>123,125,127,129</sup>In, <sup>123,125,127</sup>Cd deduced levels, J,  $\pi$ . Comparison with model predictions. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P145

<sup>125</sup>In      2005SCZQ      RADIOACTIVITY <sup>123,125,127,129</sup>In, <sup>123,125,127</sup>Cd(IT); measured E $\gamma$ , I $\gamma$ , T<sub>1/2</sub>. <sup>123,125,127,129</sup>In, <sup>123,125,127</sup>Cd deduced levels, J,  $\pi$ . Comparison with model predictions. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P145

<sup>125</sup>Sn      2006IMZZ      NUCLEAR REACTIONS <sup>2</sup>H(<sup>124</sup>Sn, p), E=4.7 MeV / nucleon; measured Ep. REPT JAEA-Review 2006-029, P47, Imai

**KEYNUMBERS AND KEYWORDS**

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**A=125 (*continued*)**

<sup>125</sup>Cs      2006HE26      NUCLEAR REACTIONS <sup>64</sup>Ni(<sup>64</sup>Ni, xnypz $\alpha$ ), E=255, 261 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, (charged particle) $\gamma$ -coin. <sup>118,120</sup>Te, <sup>121,122</sup>I, <sup>121,122,123,124</sup>Xe, <sup>124,125</sup>Cs, <sup>126</sup>Ba deduced superdeformed and hyperdeformed ridge structures. Euroball IV and Diamant arrays. JOUR PHSTB T125 108

**A=126**

<sup>126</sup>I      2006KI15      NUCLEAR REACTIONS Te(p, xn)<sup>121</sup>I / <sup>123</sup>I / <sup>124</sup>I / <sup>126</sup>I / <sup>128</sup>I / <sup>130</sup>I, E=2-18 MeV; Te(p, X)<sup>121</sup>Te, E=13-18 MeV; measured production  $\sigma$ . Stacked foil activation technique. JOUR JRNCD 270 369

<sup>126</sup>Ba      2006HE26      NUCLEAR REACTIONS <sup>64</sup>Ni(<sup>64</sup>Ni, xnypz $\alpha$ ), E=255, 261 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, (charged particle) $\gamma$ -coin. <sup>118,120</sup>Te, <sup>121,122</sup>I, <sup>121,122,123,124</sup>Xe, <sup>124,125</sup>Cs, <sup>126</sup>Ba deduced superdeformed and hyperdeformed ridge structures. Euroball IV and Diamant arrays. JOUR PHSTB T125 108

**A=127**

<sup>127</sup>Cd      2005SCZQ      RADIOACTIVITY <sup>123,125,127,129</sup>In, <sup>123,125,127</sup>Cd(IT); measured E $\gamma$ , I $\gamma$ , T<sub>1/2</sub>. <sup>123,125,127,129</sup>In, <sup>123,125,127</sup>Cd deduced levels, J,  $\pi$ . Comparison with model predictions. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P145

<sup>127</sup>In      2005SCZQ      RADIOACTIVITY <sup>123,125,127,129</sup>In, <sup>123,125,127</sup>Cd(IT); measured E $\gamma$ , I $\gamma$ , T<sub>1/2</sub>. <sup>123,125,127,129</sup>In, <sup>123,125,127</sup>Cd deduced levels, J,  $\pi$ . Comparison with model predictions. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P145

**A=128**

<sup>128</sup>I      2006KI15      NUCLEAR REACTIONS Te(p, xn)<sup>121</sup>I / <sup>123</sup>I / <sup>124</sup>I / <sup>126</sup>I / <sup>128</sup>I / <sup>130</sup>I, E=2-18 MeV; Te(p, X)<sup>121</sup>Te, E=13-18 MeV; measured production  $\sigma$ . Stacked foil activation technique. JOUR JRNCD 270 369

2006N012      NUCLEAR REACTIONS <sup>127,129</sup>I(n,  $\gamma$ ), (n, X), E=0.0005-100 keV; measured transmission and capture  $\sigma$ ; deduced resonance parameters. JOUR PRVCA 74 054602

<sup>128</sup>Xe      2006OR10      NUCLEAR REACTIONS <sup>124</sup>Sn(<sup>9</sup>Be, 5n), E=58 MeV; measured prompt and delayed E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>128</sup>Xe deduced high-spin levels, J,  $\pi$ , configurations, isomer T<sub>1/2</sub>, shape-driving effects. Caesar array. Potential energy surface calculations, configuration-constrained blocking method. JOUR PRVCA 74 034318

<sup>128</sup>Cs      2006GR23      NUCLEAR REACTIONS <sup>122</sup>Sn(<sup>10</sup>B, 4n), E=55 MeV; <sup>122</sup>Sn(<sup>14</sup>N, 4n), E=70 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, DSA. <sup>128</sup>Cs, <sup>132</sup>La deduced high-spin levels, J,  $\pi$ , T<sub>1/2</sub>, B(M1), B(E2), chiral symmetry breaking. Osiris II array. JOUR PRLTA 97 172501

## KEYNUMBERS AND KEYWORDS

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### A=129

<sup>129</sup>In      2005SCZQ      RADIOACTIVITY <sup>123,125,127,129</sup>In, <sup>123,125,127</sup>Cd(IT); measured E $\gamma$ , I $\gamma$ , T<sub>1/2</sub>. <sup>123,125,127,129</sup>In, <sup>123,125,127</sup>Cd deduced levels, J,  $\pi$ . Comparison with model predictions. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P145

### A=130

<sup>130</sup>Te      2006SIZX      NUCLEAR MOMENTS <sup>130,132,134,136</sup>Te; measured hfs, isotope shifts; deduced charge radii. Laser spectroscopy, resonant ionization. CONF Isle of Kos (FINUSTAR), Proc, P172

<sup>130</sup>I      2006KI15      NUCLEAR REACTIONS Te(p, xn)<sup>121</sup>I / <sup>123</sup>I / <sup>124</sup>I / <sup>126</sup>I / <sup>128</sup>I / <sup>130</sup>I, E=2-18 MeV; Te(p, X)<sup>121</sup>Te, E=13-18 MeV; measured production  $\sigma$ . Stacked foil activation technique. JOUR JRNCD 270 369

2006N012      NUCLEAR REACTIONS <sup>127,129</sup>I(n,  $\gamma$ ), (n, X), E=0.0005-100 keV; measured transmission and capture  $\sigma$ ; deduced resonance parameters. JOUR PRVCA 74 054602

### A=131

<sup>131</sup>Ce      2006PA37      NUCLEAR REACTIONS <sup>100</sup>Mo(<sup>36</sup>S, 4n), (<sup>36</sup>S, 5n), E=160, 165 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>131,132</sup>Ce deduced superdeformed band transitions. Euroball IV array. JOUR PHSTB T125 115

### A=132

<sup>132</sup>Te      2006SIZX      NUCLEAR MOMENTS <sup>130,132,134,136</sup>Te; measured hfs, isotope shifts; deduced charge radii. Laser spectroscopy, resonant ionization. CONF Isle of Kos (FINUSTAR), Proc, P172

<sup>132</sup>Xe      2006KOZW      NUCLEAR REACTIONS Al(<sup>132</sup>Xe, <sup>132</sup>Xe'), E=400 MeV; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin following projectile Coulomb excitation. <sup>132</sup>Xe deduced transitions. REPT JAEA-Review 2006-029, P23, Koizumi

<sup>132</sup>La      2006GR23      NUCLEAR REACTIONS <sup>122</sup>Sn(<sup>10</sup>B, 4n), E=55 MeV; <sup>122</sup>Sn(<sup>14</sup>N, 4n), E=70 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, DSA. <sup>128</sup>Cs, <sup>132</sup>La deduced high-spin levels, J,  $\pi$ , T<sub>1/2</sub>, B(M1), B(E2), chiral symmetry breaking. Osiris II array. JOUR PRLTA 97 172501

<sup>132</sup>Ce      2006PA37      NUCLEAR REACTIONS <sup>100</sup>Mo(<sup>36</sup>S, 4n), (<sup>36</sup>S, 5n), E=160, 165 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>131,132</sup>Ce deduced superdeformed band transitions. Euroball IV array. JOUR PHSTB T125 115

### A=133

No references found

**KEYNUMBERS AND KEYWORDS**

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**A=134**

$^{134}\text{Te}$	2006SIZX	NUCLEAR MOMENTS $^{130,132,134,136}\text{Te}$ ; measured hfs, isotope shifts; deduced charge radii. Laser spectroscopy, resonant ionization. CONF Isle of Kos (FINUSTAR), Proc, P172
$^{134}\text{Pr}$	2006T015	NUCLEAR REACTIONS $^{119}\text{Sn}(^{19}\text{F}, 4n)$ , E=83, 87 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, DSA. $^{134}\text{Pr}$ deduced rotational bands $T_{1/2}$ , B(E2), B(M1). Doppler-shift attenuation and recoil-distance techniques. Comparison with model predictions. JOUR IMPEE 15 1531

**A=135**

$^{135}\text{Xe}$	2005GAZP	NUCLEAR REACTIONS $^{232}\text{Th}$ , $^{238}\text{U}$ , $^{237}\text{Np}$ , $^{243}\text{Am}$ , $^{248}\text{Cm}(\gamma, F)^{135}\text{Xe}$ , E=25 MeV bremsstrahlung; measured isomer yield ratio. Comparison with model predictions. REPT JINR-P15-2005-210, Gangrski
$^{135}\text{Ba}$	2006CH51	NUCLEAR REACTIONS $^{130}\text{Te}(^9\text{Be}, 4n)$ , E=45 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin. $^{135}\text{Ba}$ deduced high-spin levels, J, $\pi$ , configurations. JOUR ZAANE 30 347
$^{135}\text{Nd}$	2006ST20	NUCLEAR REACTIONS Pr(p, X) $^{135}\text{Nd} / ^{136}\text{Nd} / ^{137}\text{Nd} / ^{138}\text{Nd} / ^{139}\text{Nd} / ^{139m}\text{Nd} / ^{141}\text{Nd} / ^{136}\text{Pr} / ^{137}\text{Pr} / ^{138m}\text{Pr}$ , E $\approx$ 7-97 MeV; measured production $\sigma$ . Stacked-foil activation technique. JOUR NIMBE 252 149

**A=136**

$^{136}\text{Te}$	2006SIZX	NUCLEAR MOMENTS $^{130,132,134,136}\text{Te}$ ; measured hfs, isotope shifts; deduced charge radii. Laser spectroscopy, resonant ionization. CONF Isle of Kos (FINUSTAR), Proc, P172
$^{136}\text{Pr}$	2006ST20	NUCLEAR REACTIONS Pr(p, X) $^{135}\text{Nd} / ^{136}\text{Nd} / ^{137}\text{Nd} / ^{138}\text{Nd} / ^{139}\text{Nd} / ^{139m}\text{Nd} / ^{141}\text{Nd} / ^{136}\text{Pr} / ^{137}\text{Pr} / ^{138m}\text{Pr}$ , E $\approx$ 7-97 MeV; measured production $\sigma$ . Stacked-foil activation technique. JOUR NIMBE 252 149
$^{136}\text{Nd}$	2006ST20	NUCLEAR REACTIONS Pr(p, X) $^{135}\text{Nd} / ^{136}\text{Nd} / ^{137}\text{Nd} / ^{138}\text{Nd} / ^{139}\text{Nd} / ^{139m}\text{Nd} / ^{141}\text{Nd} / ^{136}\text{Pr} / ^{137}\text{Pr} / ^{138m}\text{Pr}$ , E $\approx$ 7-97 MeV; measured production $\sigma$ . Stacked-foil activation technique. JOUR NIMBE 252 149

**A=137**

$^{137}\text{Cs}$	2006SEZY	RADIOACTIVITY $^{137}\text{Cs}(\beta^-)$ ; measured $E\gamma$ , $I\gamma$ . $^{137}\text{Ba}$ deduced log ft. Ge(Li) detector. CONF Sarov(Nucleus-2006), Contrib, P46, Sergeev
$^{137}\text{Ba}$	2006SEZY	RADIOACTIVITY $^{137}\text{Cs}(\beta^-)$ ; measured $E\gamma$ , $I\gamma$ . $^{137}\text{Ba}$ deduced log ft. Ge(Li) detector. CONF Sarov(Nucleus-2006), Contrib, P46, Sergeev
$^{137}\text{Pr}$	2006ST20	NUCLEAR REACTIONS Pr(p, X) $^{135}\text{Nd} / ^{136}\text{Nd} / ^{137}\text{Nd} / ^{138}\text{Nd} / ^{139}\text{Nd} / ^{139m}\text{Nd} / ^{141}\text{Nd} / ^{136}\text{Pr} / ^{137}\text{Pr} / ^{138m}\text{Pr}$ , E $\approx$ 7-97 MeV; measured production $\sigma$ . Stacked-foil activation technique. JOUR NIMBE 252 149

**KEYNUMBERS AND KEYWORDS**

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**A=137 (*continued*)**

<sup>137</sup>Nd      2006ST20      NUCLEAR REACTIONS Pr(p, X)<sup>135</sup>Nd / <sup>136</sup>Nd / <sup>137</sup>Nd / <sup>138</sup>Nd / <sup>139</sup>Nd / <sup>139m</sup>Nd / <sup>141</sup>Nd / <sup>136</sup>Pr / <sup>137</sup>Pr / <sup>138m</sup>Pr, E ≈ 7-97 MeV; measured production  $\sigma$ . Stacked-foil activation technique. JOUR NIMBE 252 149

**A=138**

<sup>138</sup>Xe      2006LEZQ      NUCLEAR REACTIONS <sup>50</sup>Ti(<sup>138</sup>Xe, <sup>138</sup>Xe'), E=2.8 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ( $\theta$ , H, t),  $\gamma\gamma$ -, (particle) $\gamma$ -coin following projectile Coulomb excitation. <sup>138</sup>Xe deduced transition. Miniball array. REPT MLL 2005 Annual, P15,Leske

<sup>138</sup>Ba      2006F013      NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>18</sup>O, F)<sup>83</sup>Se / <sup>138</sup>Ba / <sup>139</sup>Ba / <sup>140</sup>Ba, E=91 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>83</sup>Se deduced high-spin levels, J,  $\pi$ , configurations. Gammasphere array. JOUR PRVCA 74 034308

                2006V011      NUCLEAR REACTIONS <sup>138</sup>Ba( $\gamma$ ,  $\gamma'$ ), E=9.2 MeV bremsstrahlung; <sup>140</sup>Ce, <sup>142</sup>Nd, <sup>144</sup>Sm( $\gamma$ ,  $\gamma'$ ), E=7.6, 9.9 MeV bremsstrahlung; measured E $\gamma$ , I $\gamma$ . <sup>138</sup>Ba, <sup>140</sup>Ce, <sup>142</sup>Nd, <sup>144</sup>Sm deduced dipole transition energies, B(E1). Comparison with quasiparticle-phonon model predictions. JOUR NUPAB 779 1

<sup>138</sup>Pr      2006ST20      NUCLEAR REACTIONS Pr(p, X)<sup>135</sup>Nd / <sup>136</sup>Nd / <sup>137</sup>Nd / <sup>138</sup>Nd / <sup>139</sup>Nd / <sup>139m</sup>Nd / <sup>141</sup>Nd / <sup>136</sup>Pr / <sup>137</sup>Pr / <sup>138m</sup>Pr, E ≈ 7-97 MeV; measured production  $\sigma$ . Stacked-foil activation technique. JOUR NIMBE 252 149

<sup>138</sup>Nd      2006ST20      NUCLEAR REACTIONS Pr(p, X)<sup>135</sup>Nd / <sup>136</sup>Nd / <sup>137</sup>Nd / <sup>138</sup>Nd / <sup>139</sup>Nd / <sup>139m</sup>Nd / <sup>141</sup>Nd / <sup>136</sup>Pr / <sup>137</sup>Pr / <sup>138m</sup>Pr, E ≈ 7-97 MeV; measured production  $\sigma$ . Stacked-foil activation technique. JOUR NIMBE 252 149

**A=139**

<sup>139</sup>Ba      2006F013      NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>18</sup>O, F)<sup>83</sup>Se / <sup>138</sup>Ba / <sup>139</sup>Ba / <sup>140</sup>Ba, E=91 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>83</sup>Se deduced high-spin levels, J,  $\pi$ , configurations. Gammasphere array. JOUR PRVCA 74 034308

<sup>139</sup>La      2006BE55      RADIOACTIVITY <sup>139</sup>La; measured T<sub>1/2</sub> lower limit for charge non-conserving decay. LaCl<sub>3</sub>(Ce) scintillator. JOUR UKPJA 51 1037

<sup>139</sup>Nd      2006ST20      NUCLEAR REACTIONS Pr(p, X)<sup>135</sup>Nd / <sup>136</sup>Nd / <sup>137</sup>Nd / <sup>138</sup>Nd / <sup>139</sup>Nd / <sup>139m</sup>Nd / <sup>141</sup>Nd / <sup>136</sup>Pr / <sup>137</sup>Pr / <sup>138m</sup>Pr, E ≈ 7-97 MeV; measured production  $\sigma$ . Stacked-foil activation technique. JOUR NIMBE 252 149

**A=140**

<sup>140</sup>Ba      2006F013      NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>18</sup>O, F)<sup>83</sup>Se / <sup>138</sup>Ba / <sup>139</sup>Ba / <sup>140</sup>Ba, E=91 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>83</sup>Se deduced high-spin levels, J,  $\pi$ , configurations. Gammasphere array. JOUR PRVCA 74 034308

**KEYNUMBERS AND KEYWORDS**

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**A=140 (*continued*)**

$^{140}\text{La}$	2006TEZX	NUCLEAR REACTIONS $^{139}\text{La}(\text{n}, \gamma)$ , $E \approx 0\text{-}1$ MeV; measured capture $\sigma$ ; deduced resonance and level density parameters. CONF Isle of Kos (FINUSTAR), Proc, P551
	2006TEZY	NUCLEAR REACTIONS $^{139}\text{La}(\text{n}, \gamma)$ , $E=0.6\text{-}9000$ eV; measured capture $\sigma$ ; deduced resonance parameters, level densities, Maxwellian averaged $\sigma$ . Astrophysical implications discussed. PREPRINT nucl-ex/0610034, 10/24/2006
$^{140}\text{Ce}$	2006SA37	NUCLEAR REACTIONS $^{140}\text{Ce}(\alpha, \alpha')$ , $E=136$ MeV; measured $E\alpha$ , $E\gamma$ , $\alpha\gamma$ -coin, $\sigma(\theta)$ . $^{140}\text{Ce}$ deduced electric dipole strength distribution, pygmy resonance features. JOUR PRLTA 97 172502
	2006V011	NUCLEAR REACTIONS $^{138}\text{Ba}(\gamma, \gamma')$ , $E=9.2$ MeV bremsstrahlung; $^{140}\text{Ce}$ , $^{142}\text{Nd}$ , $^{144}\text{Sm}(\gamma, \gamma')$ , $E=7.6, 9.9$ MeV bremsstrahlung; measured $E\gamma$ , $I\gamma$ . $^{138}\text{Ba}$ , $^{140}\text{Ce}$ , $^{142}\text{Nd}$ , $^{144}\text{Sm}$ deduced dipole transition energies, $B(E1)$ . Comparison with quasiparticle-phonon model predictions. JOUR NUPAB 779 1
$^{140}\text{Nd}$	2006PE25	NUCLEAR REACTIONS $^{126}\text{Te}(^{18}\text{O}, 4\text{n})$ , $E=70$ MeV; measured prompt and delayed $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin; deduced $\sigma$ . $^{140}\text{Nd}$ deduced high-spin levels, $J$ , $\pi$ , configurations, six-quasiparticle isomer. Afrodite array. JOUR PRVCA 74 034304
	2006PE31	NUCLEAR REACTIONS $^{96}\text{Zr}(^{48}\text{Ca}, 4\text{n})$ , $E=195$ MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin. $^{140}\text{Nd}$ deduced high-spin levels, $J$ , triaxial deformation. Euroball array. JOUR PHSTB T125 212

**A=141**

$^{141}\text{Nd}$	2006ST20	NUCLEAR REACTIONS $\text{Pr}(\text{p}, \text{X})^{135}\text{Nd} / ^{136}\text{Nd} / ^{137}\text{Nd} / ^{138}\text{Nd} / ^{139}\text{Nd} / ^{139m}\text{Nd} / ^{141}\text{Nd} / ^{136}\text{Pr} / ^{137}\text{Pr} / ^{138m}\text{Pr}$ , $E \approx 7\text{-}97$ MeV; measured production $\sigma$ . Stacked-foil activation technique. JOUR NIMBE 252 149
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**A=142**

$^{142}\text{Nd}$	2006V011	NUCLEAR REACTIONS $^{138}\text{Ba}(\gamma, \gamma')$ , $E=9.2$ MeV bremsstrahlung; $^{140}\text{Ce}$ , $^{142}\text{Nd}$ , $^{144}\text{Sm}(\gamma, \gamma')$ , $E=7.6, 9.9$ MeV bremsstrahlung; measured $E\gamma$ , $I\gamma$ . $^{138}\text{Ba}$ , $^{140}\text{Ce}$ , $^{142}\text{Nd}$ , $^{144}\text{Sm}$ deduced dipole transition energies, $B(E1)$ . Comparison with quasiparticle-phonon model predictions. JOUR NUPAB 779 1
$^{142}\text{Gd}$	2006LI60	NUCLEAR REACTIONS $^{114}\text{Sn}(^{32}\text{S}, 2\text{n}2\text{p})$ , $E=160$ MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, DSA. $^{142}\text{Gd}$ deduced high-spin levels, $J$ , $\pi$ , $B(E2)$ . Euroball array. JOUR PHSTB T125 204

**A=143**

No references found

*KEYNUMBERS AND KEYWORDS*

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**A=144**

<sup>144</sup>Sm      2006V011      NUCLEAR REACTIONS <sup>138</sup>Ba( $\gamma, \gamma'$ ), E=9.2 MeV bremsstrahlung; <sup>140</sup>Ce, <sup>142</sup>Nd, <sup>144</sup>Sm( $\gamma, \gamma'$ ), E=7.6, 9.9 MeV bremsstrahlung; measured E $\gamma$ , I $\gamma$ . <sup>138</sup>Ba, <sup>140</sup>Ce, <sup>142</sup>Nd, <sup>144</sup>Sm deduced dipole transition energies, B(E1). Comparison with quasiparticle-phonon model predictions.  
JOUR NUPAB 779 1

**A=145**

No references found

**A=146**

<sup>146</sup>Gd      2006CAZX      NUCLEAR REACTIONS <sup>144</sup>Sm( $\alpha, 2n$ ), E=26.3 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma$ -ray polarization. <sup>146</sup>Gd deduced levels, J,  $\pi$ , two-phonon octupole state. CONF Isle of Kos (FINUSTAR), Proc, P213

**A=147**

No references found

**A=148**

No references found

**A=149**

<sup>149</sup>Eu      2006RI11      RADIOACTIVITY <sup>149</sup>Gd(EC), ( $\beta^+$ ) [from <sup>148</sup>Gd(n,  $\gamma$ )]; measured E $\gamma$ , I $\gamma$ . <sup>149</sup>Eu deduced levels, J,  $\pi$ . Comparison with previous results.  
JOUR PRVCA 74 044302

<sup>149</sup>Gd      2006RI11      NUCLEAR REACTIONS <sup>148</sup>Gd(n,  $\gamma$ ), E=thermal; measured capture  $\sigma$ , resonance integral. JOUR PRVCA 74 044302

                2006RI11      RADIOACTIVITY <sup>149</sup>Gd(EC), ( $\beta^+$ ) [from <sup>148</sup>Gd(n,  $\gamma$ )]; measured E $\gamma$ , I $\gamma$ . <sup>149</sup>Eu deduced levels, J,  $\pi$ . Comparison with previous results.  
JOUR PRVCA 74 044302

**A=150**

No references found

**A=151**

No references found

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**KEYNUMBERS AND KEYWORDS**

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**A=152**

<sup>152</sup>Gd      2006ME25      NUCLEAR REACTIONS <sup>154,156</sup>Gd, <sup>164</sup>Dy, <sup>170</sup>Er, <sup>178</sup>Hf, <sup>182,186</sup>W, <sup>192</sup>Os(p, t), E=25 MeV; measured triton spectra,  $\sigma(E, \theta)$ . <sup>152,154</sup>Gd, <sup>162</sup>Dy, <sup>168</sup>Er, <sup>176</sup>Hf, <sup>180,184</sup>W, <sup>190</sup>Os deduced 0<sup>+</sup> level energy distributions. JOUR PRVCA 74 044309

**A=153**

No references found

**A=154**

<sup>154</sup>Gd      2006ME25      NUCLEAR REACTIONS <sup>154,156</sup>Gd, <sup>164</sup>Dy, <sup>170</sup>Er, <sup>178</sup>Hf, <sup>182,186</sup>W, <sup>192</sup>Os(p, t), E=25 MeV; measured triton spectra,  $\sigma(E, \theta)$ . <sup>152,154</sup>Gd, <sup>162</sup>Dy, <sup>168</sup>Er, <sup>176</sup>Hf, <sup>180,184</sup>W, <sup>190</sup>Os deduced 0<sup>+</sup> level energy distributions. JOUR PRVCA 74 044309

**A=155**

No references found

**A=156**

<sup>156</sup>Gd      2006LE35      NUCLEAR REACTIONS <sup>155,157</sup>Gd(n, X), (n,  $\gamma$ ), E  $\approx$  0-300 eV; measured transmission and capture  $\sigma$ ; deduced resonance parameters. Comparison with previous results. JOUR NSENA 154 261

<sup>156</sup>Er      2006RI13      NUCLEAR REACTIONS <sup>114</sup>Cd(<sup>48</sup>Ca, 4n), (<sup>48</sup>Ca, 5n), (<sup>48</sup>Ca, 6n), E=215 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>156,157,158</sup>Er deduced high-spin levels, states above band termination. Gammasphere array. JOUR PHSTB T125 123

**A=157**

<sup>157</sup>Er      2006RI13      NUCLEAR REACTIONS <sup>114</sup>Cd(<sup>48</sup>Ca, 4n), (<sup>48</sup>Ca, 5n), (<sup>48</sup>Ca, 6n), E=215 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>156,157,158</sup>Er deduced high-spin levels, states above band termination. Gammasphere array. JOUR PHSTB T125 123

**A=158**

<sup>158</sup>Pm      2006HAZT      RADIOACTIVITY <sup>158,159</sup>Pm, <sup>159,161</sup>Sm, <sup>160,161,162,163,164,165</sup>Eu, <sup>163</sup>Gd, <sup>166</sup>Tb( $\beta^-$ ) [from U(p, F)]; measured Q $\beta$ ; deduced two-neutron separation energies. BGO total absorption detector. REPT JAEA-Review 2006-029, P33, Hayashi

**KEYNUMBERS AND KEYWORDS**

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**A=158 (*continued*)**

<sup>158</sup> Sm	2006HAZT	RADIOACTIVITY <sup>158,159</sup> Pm, <sup>159,161</sup> Sm, <sup>160,161,162,163,164,165</sup> Eu, <sup>163</sup> Gd, <sup>166</sup> Tb( $\beta^-$ ) [from U(p, F)]; measured Q $\beta$ ; deduced two-neutron separation energies. BGO total absorption detector. REPT JAEA-Review 2006-029,P33,Hayashi
<sup>158</sup> Gd	2006LE35	NUCLEAR REACTIONS <sup>155,157</sup> Gd(n, X), (n, $\gamma$ ), E $\approx$ 0-300 eV; measured transmission and capture $\sigma$ ; deduced resonance parameters. Comparison with previous results. JOUR NSENA 154 261
<sup>158</sup> Ho	2006VAZY	RADIOACTIVITY <sup>158</sup> Er(EC); measured E $\gamma$ , I $\gamma$ , E(ce), $\gamma\gamma$ -coin. <sup>158</sup> Ho deduced levels, J, $\pi$ , T <sub>1/2</sub> , Q(EC), log ft. YASNAPP facility. CONF Sarov(Nucleus-2006),Contrib,P83,Vaganov
<sup>158</sup> Er	2006RI13	NUCLEAR REACTIONS <sup>114</sup> Cd( <sup>48</sup> Ca, 4n), ( <sup>48</sup> Ca, 5n), ( <sup>48</sup> Ca, 6n), E=215 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin. <sup>156,157,158</sup> Er deduced high-spin levels, states above band termination. Gammasphere array. JOUR PHSTB T125 123
	2006VAZY	RADIOACTIVITY <sup>158</sup> Er(EC); measured E $\gamma$ , I $\gamma$ , E(ce), $\gamma\gamma$ -coin. <sup>158</sup> Ho deduced levels, J, $\pi$ , T <sub>1/2</sub> , Q(EC), log ft. YASNAPP facility. CONF Sarov(Nucleus-2006),Contrib,P83,Vaganov
<sup>158</sup> W	2006J010	RADIOACTIVITY <sup>159</sup> Re(p) [from <sup>106</sup> Cd( <sup>58</sup> Ni, 4np)]; measured Ep, T <sub>1/2</sub> ; deduced ground-state configuration. JOUR PYLBB 641 34

**A=159**

<sup>159</sup> Pm	2006HAZT	RADIOACTIVITY <sup>158,159</sup> Pm, <sup>159,161</sup> Sm, <sup>160,161,162,163,164,165</sup> Eu, <sup>163</sup> Gd, <sup>166</sup> Tb( $\beta^-$ ) [from U(p, F)]; measured Q $\beta$ ; deduced two-neutron separation energies. BGO total absorption detector. REPT JAEA-Review 2006-029,P33,Hayashi
<sup>159</sup> Sm	2006HAZT	RADIOACTIVITY <sup>158,159</sup> Pm, <sup>159,161</sup> Sm, <sup>160,161,162,163,164,165</sup> Eu, <sup>163</sup> Gd, <sup>166</sup> Tb( $\beta^-$ ) [from U(p, F)]; measured Q $\beta$ ; deduced two-neutron separation energies. BGO total absorption detector. REPT JAEA-Review 2006-029,P33,Hayashi
<sup>159</sup> Eu	2006HAZT	RADIOACTIVITY <sup>158,159</sup> Pm, <sup>159,161</sup> Sm, <sup>160,161,162,163,164,165</sup> Eu, <sup>163</sup> Gd, <sup>166</sup> Tb( $\beta^-$ ) [from U(p, F)]; measured Q $\beta$ ; deduced two-neutron separation energies. BGO total absorption detector. REPT JAEA-Review 2006-029,P33,Hayashi
<sup>159</sup> Re	2006J010	NUCLEAR REACTIONS <sup>106</sup> Cd( <sup>58</sup> Ni, 4np), E=300 MeV; measured E $\alpha$ , I $\alpha$ , Ep, Ip, (recoil) $\alpha$ -coin following residual nucleus decay. Recoil-decay correlation technique. JOUR PYLBB 641 34
	2006J010	RADIOACTIVITY <sup>159</sup> Re(p) [from <sup>106</sup> Cd( <sup>58</sup> Ni, 4np)]; measured Ep, T <sub>1/2</sub> ; deduced ground-state configuration. JOUR PYLBB 641 34

**A=160**

<sup>160</sup> Eu	2006HAZT	RADIOACTIVITY <sup>158,159</sup> Pm, <sup>159,161</sup> Sm, <sup>160,161,162,163,164,165</sup> Eu, <sup>163</sup> Gd, <sup>166</sup> Tb( $\beta^-$ ) [from U(p, F)]; measured Q $\beta$ ; deduced two-neutron separation energies. BGO total absorption detector. REPT JAEA-Review 2006-029,P33,Hayashi
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**A=160 (*continued*)**

$^{160}\text{Gd}$	2006HAZT	RADIOACTIVITY $^{158,159}\text{Pm}$ , $^{159,161}\text{Sm}$ , $^{160,161,162,163,164,165}\text{Eu}$ , $^{163}\text{Gd}$ , $^{166}\text{Tb}(\beta^-)$ [from U(p, F)]; measured Q $\beta$ ; deduced two-neutron separation energies. BGO total absorption detector. REPT JAEA-Review 2006-029,P33,Hayashi
$^{160}\text{Dy}$	2006BOZW	RADIOACTIVITY $^{160}\text{Ho}(\text{EC})$ [from $^{160}\text{Er}(\text{EC})$ ]; measured E(ce), I(ce). $^{160}\text{Dy}$ deduced E0 transitions. Magnetic spectrograph, photoplate. CONF Sarov(Nucleus-2006),Contrib,P50,Bogachenko
$^{160}\text{Ho}$	2006BOZW	RADIOACTIVITY $^{160}\text{Ho}(\text{EC})$ [from $^{160}\text{Er}(\text{EC})$ ]; measured E(ce), I(ce). $^{160}\text{Dy}$ deduced E0 transitions. Magnetic spectrograph, photoplate. CONF Sarov(Nucleus-2006),Contrib,P50,Bogachenko
	2006KAZX	RADIOACTIVITY $^{160}\text{Er}(\text{EC})$ ; measured E $\gamma$ , I $\gamma$ . $^{160}\text{Ho}$ deduced levels, J, $\pi$ , branching ratio, isomer T <sub>1/2</sub> . Mass-separator, HPGe detector. CONF Sarov(Nucleus-2006),Contrib,P82,Kalinnikov
$^{160}\text{Er}$	2006KAZX	RADIOACTIVITY $^{160}\text{Er}(\text{EC})$ ; measured E $\gamma$ , I $\gamma$ . $^{160}\text{Ho}$ deduced levels, J, $\pi$ , branching ratio, isomer T <sub>1/2</sub> . Mass-separator, HPGe detector. CONF Sarov(Nucleus-2006),Contrib,P82,Kalinnikov

**A=161**

$^{161}\text{Sm}$	2006HAZT	RADIOACTIVITY $^{158,159}\text{Pm}$ , $^{159,161}\text{Sm}$ , $^{160,161,162,163,164,165}\text{Eu}$ , $^{163}\text{Gd}$ , $^{166}\text{Tb}(\beta^-)$ [from U(p, F)]; measured Q $\beta$ ; deduced two-neutron separation energies. BGO total absorption detector. REPT JAEA-Review 2006-029,P33,Hayashi
$^{161}\text{Eu}$	2006HAZT	RADIOACTIVITY $^{158,159}\text{Pm}$ , $^{159,161}\text{Sm}$ , $^{160,161,162,163,164,165}\text{Eu}$ , $^{163}\text{Gd}$ , $^{166}\text{Tb}(\beta^-)$ [from U(p, F)]; measured Q $\beta$ ; deduced two-neutron separation energies. BGO total absorption detector. REPT JAEA-Review 2006-029,P33,Hayashi
$^{161}\text{Gd}$	2006HAZT	RADIOACTIVITY $^{158,159}\text{Pm}$ , $^{159,161}\text{Sm}$ , $^{160,161,162,163,164,165}\text{Eu}$ , $^{163}\text{Gd}$ , $^{166}\text{Tb}(\beta^-)$ [from U(p, F)]; measured Q $\beta$ ; deduced two-neutron separation energies. BGO total absorption detector. REPT JAEA-Review 2006-029,P33,Hayashi

**A=162**

$^{162}\text{Eu}$	2006HAZT	RADIOACTIVITY $^{158,159}\text{Pm}$ , $^{159,161}\text{Sm}$ , $^{160,161,162,163,164,165}\text{Eu}$ , $^{163}\text{Gd}$ , $^{166}\text{Tb}(\beta^-)$ [from U(p, F)]; measured Q $\beta$ ; deduced two-neutron separation energies. BGO total absorption detector. REPT JAEA-Review 2006-029,P33,Hayashi
$^{162}\text{Gd}$	2006HAZT	RADIOACTIVITY $^{158,159}\text{Pm}$ , $^{159,161}\text{Sm}$ , $^{160,161,162,163,164,165}\text{Eu}$ , $^{163}\text{Gd}$ , $^{166}\text{Tb}(\beta^-)$ [from U(p, F)]; measured Q $\beta$ ; deduced two-neutron separation energies. BGO total absorption detector. REPT JAEA-Review 2006-029,P33,Hayashi
$^{162}\text{Dy}$	2006ME25	NUCLEAR REACTIONS $^{154,156}\text{Gd}$ , $^{164}\text{Dy}$ , $^{170}\text{Er}$ , $^{178}\text{Hf}$ , $^{182,186}\text{W}$ , $^{192}\text{Os}(\text{p}, \text{t})$ , E=25 MeV; measured triton spectra, $\sigma(E, \theta)$ . $^{152,154}\text{Gd}$ , $^{162}\text{Dy}$ , $^{168}\text{Er}$ , $^{176}\text{Hf}$ , $^{180,184}\text{W}$ , $^{190}\text{Os}$ deduced 0 <sup>+</sup> level energy distributions. JOUR PRVCA 74 044309

**A=163**

$^{163}\text{Eu}$	2006HAZT	RADIOACTIVITY $^{158,159}\text{Pm}$ , $^{159,161}\text{Sm}$ , $^{160,161,162,163,164,165}\text{Eu}$ , $^{163}\text{Gd}$ , $^{166}\text{Tb}(\beta^-)$ [from U(p, F)]; measured Q $\beta$ ; deduced two-neutron separation energies. BGO total absorption detector. REPT JAEA-Review 2006-029,P33,Hayashi
	2006SAZS	RADIOACTIVITY $^{163,164,165}\text{Eu}(\beta^-)$ [from U(p, F)]; measured E $\gamma$ , I $\gamma$ , X-ray spectra, $\beta\gamma$ -coin, T <sub>1/2</sub> . REPT JAEA-Review 2006-029,P31,Sato
$^{163}\text{Gd}$	2006HAZT	RADIOACTIVITY $^{158,159}\text{Pm}$ , $^{159,161}\text{Sm}$ , $^{160,161,162,163,164,165}\text{Eu}$ , $^{163}\text{Gd}$ , $^{166}\text{Tb}(\beta^-)$ [from U(p, F)]; measured Q $\beta$ ; deduced two-neutron separation energies. BGO total absorption detector. REPT JAEA-Review 2006-029,P33,Hayashi
	2006SAZS	RADIOACTIVITY $^{163,164,165}\text{Eu}(\beta^-)$ [from U(p, F)]; measured E $\gamma$ , I $\gamma$ , X-ray spectra, $\beta\gamma$ -coin, T <sub>1/2</sub> . REPT JAEA-Review 2006-029,P31,Sato
$^{163}\text{Tb}$	2006HAZT	RADIOACTIVITY $^{158,159}\text{Pm}$ , $^{159,161}\text{Sm}$ , $^{160,161,162,163,164,165}\text{Eu}$ , $^{163}\text{Gd}$ , $^{166}\text{Tb}(\beta^-)$ [from U(p, F)]; measured Q $\beta$ ; deduced two-neutron separation energies. BGO total absorption detector. REPT JAEA-Review 2006-029,P33,Hayashi
$^{163}\text{Tm}$	2006PAZV	NUCLEAR REACTIONS $^{130}\text{Te}(^{37}\text{Cl}, 4n)$ , E=170 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin. $^{163}\text{Tm}$ deduced high-spin levels, J, $\pi$ , configurations, B(M1) / B(E2). Gammasphere array, tilted-axis cranking calculations. PREPRINT nucl-ex/0611036,11/21/2006

**A=164**

$^{164}\text{Eu}$	2006HAZT	RADIOACTIVITY $^{158,159}\text{Pm}$ , $^{159,161}\text{Sm}$ , $^{160,161,162,163,164,165}\text{Eu}$ , $^{163}\text{Gd}$ , $^{166}\text{Tb}(\beta^-)$ [from U(p, F)]; measured Q $\beta$ ; deduced two-neutron separation energies. BGO total absorption detector. REPT JAEA-Review 2006-029,P33,Hayashi
	2006SAZS	RADIOACTIVITY $^{163,164,165}\text{Eu}(\beta^-)$ [from U(p, F)]; measured E $\gamma$ , I $\gamma$ , X-ray spectra, $\beta\gamma$ -coin, T <sub>1/2</sub> . REPT JAEA-Review 2006-029,P31,Sato
$^{164}\text{Gd}$	2006HAZT	RADIOACTIVITY $^{158,159}\text{Pm}$ , $^{159,161}\text{Sm}$ , $^{160,161,162,163,164,165}\text{Eu}$ , $^{163}\text{Gd}$ , $^{166}\text{Tb}(\beta^-)$ [from U(p, F)]; measured Q $\beta$ ; deduced two-neutron separation energies. BGO total absorption detector. REPT JAEA-Review 2006-029,P33,Hayashi
	2006SAZS	RADIOACTIVITY $^{163,164,165}\text{Eu}(\beta^-)$ [from U(p, F)]; measured E $\gamma$ , I $\gamma$ , X-ray spectra, $\beta\gamma$ -coin, T <sub>1/2</sub> . REPT JAEA-Review 2006-029,P31,Sato

**A=165**

$^{165}\text{Eu}$	2006HAZT	RADIOACTIVITY $^{158,159}\text{Pm}$ , $^{159,161}\text{Sm}$ , $^{160,161,162,163,164,165}\text{Eu}$ , $^{163}\text{Gd}$ , $^{166}\text{Tb}(\beta^-)$ [from U(p, F)]; measured Q $\beta$ ; deduced two-neutron separation energies. BGO total absorption detector. REPT JAEA-Review 2006-029,P33,Hayashi
	2006SAZS	RADIOACTIVITY $^{163,164,165}\text{Eu}(\beta^-)$ [from U(p, F)]; measured E $\gamma$ , I $\gamma$ , X-ray spectra, $\beta\gamma$ -coin, T <sub>1/2</sub> . REPT JAEA-Review 2006-029,P31,Sato

**KEYNUMBERS AND KEYWORDS**

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**A=165 (*continued*)**

<sup>165</sup> Gd	2006HAZT	RADIOACTIVITY <sup>158,159</sup> Pm, <sup>159,161</sup> Sm, <sup>160,161,162,163,164,165</sup> Eu, <sup>163</sup> Gd, <sup>166</sup> Tb( $\beta^-$ ) [from U(p, F)]; measured Q $\beta$ ; deduced two-neutron separation energies. BGO total absorption detector. REPT JAEA-Review 2006-029,P33,Hayashi
	2006SAZS	RADIOACTIVITY <sup>163,164,165</sup> Eu( $\beta^-$ ) [from U(p, F)]; measured E $\gamma$ , I $\gamma$ , X-ray spectra, $\beta\gamma$ -coin, T <sub>1/2</sub> . REPT JAEA-Review 2006-029,P31,Sato

**A=166**

<sup>166</sup> Tb	2006HAZT	RADIOACTIVITY <sup>158,159</sup> Pm, <sup>159,161</sup> Sm, <sup>160,161,162,163,164,165</sup> Eu, <sup>163</sup> Gd, <sup>166</sup> Tb( $\beta^-$ ) [from U(p, F)]; measured Q $\beta$ ; deduced two-neutron separation energies. BGO total absorption detector. REPT JAEA-Review 2006-029,P33,Hayashi
<sup>166</sup> Dy	2006HAZT	RADIOACTIVITY <sup>158,159</sup> Pm, <sup>159,161</sup> Sm, <sup>160,161,162,163,164,165</sup> Eu, <sup>163</sup> Gd, <sup>166</sup> Tb( $\beta^-$ ) [from U(p, F)]; measured Q $\beta$ ; deduced two-neutron separation energies. BGO total absorption detector. REPT JAEA-Review 2006-029,P33,Hayashi
<sup>166</sup> Yb	2006LE41	NUCLEAR REACTIONS <sup>124</sup> Sn( <sup>48</sup> Ca, 4n), ( <sup>48</sup> Ca, 5n), ( <sup>48</sup> Ca, 6n), E=215 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin. <sup>168,169,170</sup> Yb deduced rotational damping widths, spreading widths, correlation probabilities, ordered and chaotic behavior. Gammasphere array. JOUR PHSTB T125 142

**A=167**

<sup>167</sup> Yb	2006LE41	NUCLEAR REACTIONS <sup>124</sup> Sn( <sup>48</sup> Ca, 4n), ( <sup>48</sup> Ca, 5n), ( <sup>48</sup> Ca, 6n), E=215 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin. <sup>168,169,170</sup> Yb deduced rotational damping widths, spreading widths, correlation probabilities, ordered and chaotic behavior. Gammasphere array. JOUR PHSTB T125 142
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**A=168**

<sup>168</sup> Er	2006ME25	NUCLEAR REACTIONS <sup>154,156</sup> Gd, <sup>164</sup> Dy, <sup>170</sup> Er, <sup>178</sup> Hf, <sup>182,186</sup> W, <sup>192</sup> Os(p, t), E=25 MeV; measured triton spectra, $\sigma(E, \theta)$ . <sup>152,154</sup> Gd, <sup>162</sup> Dy, <sup>168</sup> Er, <sup>176</sup> Hf, <sup>180,184</sup> W, <sup>190</sup> Os deduced 0 <sup>+</sup> level energy distributions. JOUR PRVCA 74 044309
<sup>168</sup> Yb	2006LE41	NUCLEAR REACTIONS <sup>124</sup> Sn( <sup>48</sup> Ca, 4n), ( <sup>48</sup> Ca, 5n), ( <sup>48</sup> Ca, 6n), E=215 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin. <sup>168,169,170</sup> Yb deduced rotational damping widths, spreading widths, correlation probabilities, ordered and chaotic behavior. Gammasphere array. JOUR PHSTB T125 142

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*KEYNUMBERS AND KEYWORDS*

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**A=169**

$^{169}\text{Yb}$	2006LE41	NUCLEAR REACTIONS $^{124}\text{Sn}(^{48}\text{Ca}, 4\text{n})$ , $(^{48}\text{Ca}, 5\text{n})$ , $(^{48}\text{Ca}, 6\text{n})$ , E=215 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin. $^{168,169,170}\text{Yb}$ deduced rotational damping widths, spreading widths, correlation probabilities, ordered and chaotic behavior. Gammasphere array. JOUR PHSTB T125 142
$^{169}\text{Ta}$	2006HA46	NUCLEAR REACTIONS $^{124}\text{Sn}(^{51}\text{V}, 6\text{n})$ , E=228 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin. $^{169}\text{Ta}$ deduced high-spin levels, $J$ , $\pi$ , configurations. Gammasphere array. JOUR PRVCA 74 054314

**A=170**

$^{170}\text{Yb}$	2006LE41	NUCLEAR REACTIONS $^{124}\text{Sn}(^{48}\text{Ca}, 4\text{n})$ , $(^{48}\text{Ca}, 5\text{n})$ , $(^{48}\text{Ca}, 6\text{n})$ , E=215 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin. $^{168,169,170}\text{Yb}$ deduced rotational damping widths, spreading widths, correlation probabilities, ordered and chaotic behavior. Gammasphere array. JOUR PHSTB T125 142
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**A=171**

No references found

**A=172**

No references found

**A=173**

$^{173}\text{Ta}$	2006TH07	NUCLEAR REACTIONS $^{165}\text{Ho}(^{12}\text{C}, 4\text{n})$ , E=66 MeV; measured delayed $E\gamma$ , $I\gamma(\theta, H, t)$ . $^{173}\text{Ta}$ deduced isomeric states g factors, configurations. Time-dependent perturbed angular distribution technique. JOUR PRVCA 74 034329
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**A=174**

$^{174}\text{Yb}$	2006KAZW	RADIOACTIVITY $^{178m}\text{Hf}(\alpha)$ ; measured $I\alpha$ ; deduced $T_{1/2}$ lower limit. Si and track detector. CONF Sarov(Nucleus-2006),Contrib,P178,Karamian
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**A=175**

No references found

## KEYNUMBERS AND KEYWORDS

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### A=176

<sup>176</sup>Hf      2006ME25      NUCLEAR REACTIONS <sup>154,156</sup>Gd, <sup>164</sup>Dy, <sup>170</sup>Er, <sup>178</sup>Hf, <sup>182,186</sup>W, <sup>192</sup>Os(p, t), E=25 MeV; measured triton spectra,  $\sigma(E, \theta)$ . <sup>152,154</sup>Gd, <sup>162</sup>Dy, <sup>168</sup>Er, <sup>176</sup>Hf, <sup>180,184</sup>W, <sup>190</sup>Os deduced 0<sup>+</sup> level energy distributions. JOUR PRVCA 74 044309

### A=177

<sup>177</sup>Ta      2006BU19      NUCLEAR REACTIONS <sup>176,178,180</sup>Hf(<sup>3</sup>He, d), E=32 MeV; measured  $\sigma(E, \theta)$ . <sup>177</sup>Hf(<sup>3</sup>He, d), E = 32 MeV; <sup>176,177,178,180</sup>Hf( $\alpha$ , t), E=30 MeV; measured  $\sigma(E)$ . <sup>177,178,179,181</sup>Ta deduced levels,  $\ell$ -values, spectroscopic strengths, Nilsson band assignments. <sup>178</sup>Ta deduced proton separation energy. Enriched targets, magnetic spectrograph. JOUR NUPAB 778 125

2006TA26      NUCLEAR REACTIONS W(p, X)<sup>181</sup>Re / <sup>182</sup>Re / <sup>182m</sup>Re / <sup>183</sup>Re / <sup>184</sup>Re / <sup>186</sup>Re / <sup>177</sup>Ta / <sup>183</sup>Ta, E ≈ 5-35 MeV; measured production  $\sigma$ . Stacked-foil activation technique. JOUR NIMBE 252 160

### A=178

<sup>178</sup>Hf      2006KAZV      NUCLEAR REACTIONS <sup>177,178m</sup>Hf(n,  $\gamma$ ), E=thermal; measured isomer production  $\sigma$ . Pulsed reactor, Ge spectrometers, Cd and B<sub>4</sub>C filters. CONF Sarov(Nucleus-2006),Contrib,P179,Karamian

2006KAZW      RADIOACTIVITY <sup>178m</sup>Hf( $\alpha$ ); measured I $\alpha$ ; deduced T<sub>1/2</sub> lower limit. Si and track detector. CONF Sarov(Nucleus-2006),Contrib,P178,Karamian

2006LAZX      RADIOACTIVITY <sup>178</sup>Ta(EC) [from <sup>179</sup>Hf(p, 2n) E=20 MeV, <sup>180</sup>Hf(d, 4n) E=30 MeV, <sup>nat</sup>Lu( $\alpha$ , n)]; measured E(ce), I(ce). <sup>178</sup>Hf deduced level energy. Isochronous cyclotron, cyclotron, magnetic spectrometer. CONF Sarov(Nucleus-2006),Contrib,P98,Lashko

<sup>178</sup>Ta      2006BU19      NUCLEAR REACTIONS <sup>176,178,180</sup>Hf(<sup>3</sup>He, d), E=32 MeV; measured  $\sigma(E, \theta)$ . <sup>177</sup>Hf(<sup>3</sup>He, d), E = 32 MeV; <sup>176,177,178,180</sup>Hf( $\alpha$ , t), E=30 MeV; measured  $\sigma(E)$ . <sup>177,178,179,181</sup>Ta deduced levels,  $\ell$ -values, spectroscopic strengths, Nilsson band assignments. <sup>178</sup>Ta deduced proton separation energy. Enriched targets, magnetic spectrograph. JOUR NUPAB 778 125

2006LAZX      RADIOACTIVITY <sup>178</sup>Ta(EC) [from <sup>179</sup>Hf(p, 2n) E=20 MeV, <sup>180</sup>Hf(d, 4n) E=30 MeV, <sup>nat</sup>Lu( $\alpha$ , n)]; measured E(ce), I(ce). <sup>178</sup>Hf deduced level energy. Isochronous cyclotron, cyclotron, magnetic spectrometer. CONF Sarov(Nucleus-2006),Contrib,P98,Lashko

### A=179

<sup>179</sup>Hf      2006KAZV      NUCLEAR REACTIONS <sup>177,178m</sup>Hf(n,  $\gamma$ ), E=thermal; measured isomer production  $\sigma$ . Pulsed reactor, Ge spectrometers, Cd and B<sub>4</sub>C filters. CONF Sarov(Nucleus-2006),Contrib,P179,Karamian

**KEYNUMBERS AND KEYWORDS**

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**A=179 (*continued*)**

<sup>179</sup>Ta      2006BU19      NUCLEAR REACTIONS <sup>176,178,180</sup>Hf(<sup>3</sup>He, d), E=32 MeV; measured  $\sigma(E, \theta)$ . <sup>177</sup>Hf(<sup>3</sup>He, d), E = 32 MeV; <sup>176,177,178,180</sup>Hf( $\alpha$ , t), E=30 MeV; measured  $\sigma(E)$ . <sup>177,178,179,181</sup>Ta deduced levels,  $\ell$ -values, spectroscopic strengths, Nilsson band assignments. <sup>178</sup>Ta deduced proton separation energy. Enriched targets, magnetic spectrograph. JOUR NUPAB 778 125

**A=180**

<sup>180</sup>Hf      2006HU15      RADIOACTIVITY <sup>180m</sup>Ta( $\beta^-$ ), (EC); measured lower limits for  $T_{1/2}$ , log ft. JOUR PRVCA 74 054311

                2006V012      RADIOACTIVITY <sup>183</sup>Hf( $\beta^-$ ) [from <sup>182</sup>Hf(n,  $\gamma$ )]; <sup>56</sup>Mn, <sup>116m</sup>In, <sup>180m</sup>Hf; measured  $E_\gamma$ ,  $I_\gamma$ ,  $T_{1/2}$ . Comparisons with previous results. JOUR PRVCA 74 057303

<sup>180</sup>Ta      2006BI14      NUCLEAR MOMENTS <sup>180,181</sup>Ta; measured hfs; deduced hyperfine structure coefficients. <sup>180m</sup>Ta deduced isomeric state J. Collinear laser spectroscopy. JOUR PRVCA 74 047301

                2006HU15      RADIOACTIVITY <sup>180m</sup>Ta( $\beta^-$ ), (EC); measured lower limits for  $T_{1/2}$ , log ft. JOUR PRVCA 74 054311

<sup>180</sup>W      2006HU15      RADIOACTIVITY <sup>180m</sup>Ta( $\beta^-$ ), (EC); measured lower limits for  $T_{1/2}$ , log ft. JOUR PRVCA 74 054311

                2006ME25      NUCLEAR REACTIONS <sup>154,156</sup>Gd, <sup>164</sup>Dy, <sup>170</sup>Er, <sup>178</sup>Hf, <sup>182,186</sup>W, <sup>192</sup>Os(p, t), E=25 MeV; measured triton spectra,  $\sigma(E, \theta)$ . <sup>152,154</sup>Gd, <sup>162</sup>Dy, <sup>168</sup>Er, <sup>176</sup>Hf, <sup>180,184</sup>W, <sup>190</sup>Os deduced 0<sup>+</sup> level energy distributions. JOUR PRVCA 74 044309

**A=181**

<sup>181</sup>Ta      2006BI14      NUCLEAR MOMENTS <sup>180,181</sup>Ta; measured hfs; deduced hyperfine structure coefficients. <sup>180m</sup>Ta deduced isomeric state J. Collinear laser spectroscopy. JOUR PRVCA 74 047301

                2006BU19      NUCLEAR REACTIONS <sup>176,178,180</sup>Hf(<sup>3</sup>He, d), E=32 MeV; measured  $\sigma(E, \theta)$ . <sup>177</sup>Hf(<sup>3</sup>He, d), E = 32 MeV; <sup>176,177,178,180</sup>Hf( $\alpha$ , t), E=30 MeV; measured  $\sigma(E)$ . <sup>177,178,179,181</sup>Ta deduced levels,  $\ell$ -values, spectroscopic strengths, Nilsson band assignments. <sup>178</sup>Ta deduced proton separation energy. Enriched targets, magnetic spectrograph. JOUR NUPAB 778 125

<sup>181</sup>Re      2006TA26      NUCLEAR REACTIONS W(p, X)<sup>181</sup>Re / <sup>182</sup>Re / <sup>182m</sup>Re / <sup>183</sup>Re / <sup>184</sup>Re / <sup>186</sup>Re / <sup>177</sup>Ta / <sup>183</sup>Ta, E  $\approx$  5-35 MeV; measured production  $\sigma$ . Stacked-foil activation technique. JOUR NIMBE 252 160

**A=182**

<sup>182</sup>Re      2006TA26      NUCLEAR REACTIONS W(p, X)<sup>181</sup>Re / <sup>182</sup>Re / <sup>182m</sup>Re / <sup>183</sup>Re / <sup>184</sup>Re / <sup>186</sup>Re / <sup>177</sup>Ta / <sup>183</sup>Ta, E  $\approx$  5-35 MeV; measured production  $\sigma$ . Stacked-foil activation technique. JOUR NIMBE 252 160

**KEYNUMBERS AND KEYWORDS**

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**A=182 (*continued*)**

$^{182}\text{Au}$	2006ZH38	NUCLEAR REACTIONS $^{152}\text{Sm}(^{35}\text{Cl}, 5\text{n})$ , E=183 MeV; $^{172}\text{Yb}(^{19}\text{F}, 5\text{n})$ , E=104 MeV; $^{159}\text{Tb}(^{29}\text{Si}, 4\text{n})$ , E=140 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin. $^{182,184,186}\text{Au}$ deduced high-spin levels, J, $\pi$ , configurations, signature inversion. JOUR IMPEE 15 1437
	2006ZHZZ	NUCLEAR REACTIONS $^{152}\text{Sm}(^{35}\text{Cl}, 5\text{n})$ , $^{171}\text{Yb}(^{19}\text{F}, 4\text{n})$ , $^{159}\text{Tb}(^{29}\text{Si}, 4\text{n})$ , E not given; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin. $^{182,184,186}\text{Au}$ deduced high-spin levels, J, $\pi$ , configurations, signature inversion. REPT JAEA-Review 2006-029, P27, Zhang

**A=183**

$^{183}\text{Hf}$	2006V012	RADIOACTIVITY $^{183}\text{Hf}(\beta^-)$ [from $^{182}\text{Hf}(n, \gamma)$ ]; $^{56}\text{Mn}$ , $^{116m}\text{In}$ , $^{180m}\text{Hf}$ ; measured $E\gamma$ , $I\gamma$ , $T_{1/2}$ . Comparisons with previous results.
$^{183}\text{Ta}$	2006TA26	NUCLEAR REACTIONS W(p, X) $^{181}\text{Re} / ^{182}\text{Re} / ^{182m}\text{Re} / ^{183}\text{Re} / ^{184}\text{Re} / ^{186}\text{Re} / ^{177}\text{Ta} / ^{183}\text{Ta}$ , E $\approx$ 5-35 MeV; measured production $\sigma$ . Stacked-foil activation technique. JOUR NIMBE 252 160
	2006V012	RADIOACTIVITY $^{183}\text{Hf}(\beta^-)$ [from $^{182}\text{Hf}(n, \gamma)$ ]; $^{56}\text{Mn}$ , $^{116m}\text{In}$ , $^{180m}\text{Hf}$ ; measured $E\gamma$ , $I\gamma$ , $T_{1/2}$ . Comparisons with previous results.
$^{183}\text{Re}$	2006TA26	NUCLEAR REACTIONS W(p, X) $^{181}\text{Re} / ^{182}\text{Re} / ^{182m}\text{Re} / ^{183}\text{Re} / ^{184}\text{Re} / ^{186}\text{Re} / ^{177}\text{Ta} / ^{183}\text{Ta}$ , E $\approx$ 5-35 MeV; measured production $\sigma$ . Stacked-foil activation technique. JOUR NIMBE 252 160

**A=184**

$^{184}\text{W}$	2006ME25	NUCLEAR REACTIONS $^{154,156}\text{Gd}$ , $^{164}\text{Dy}$ , $^{170}\text{Er}$ , $^{178}\text{Hf}$ , $^{182,186}\text{W}$ , $^{192}\text{Os}(p, t)$ , E=25 MeV; measured triton spectra, $\sigma(E, \theta)$ . $^{152,154}\text{Gd}$ , $^{162}\text{Dy}$ , $^{168}\text{Er}$ , $^{176}\text{Hf}$ , $^{180,184}\text{W}$ , $^{190}\text{Os}$ deduced 0 $^+$ level energy distributions. JOUR PRVCA 74 044309
$^{184}\text{Re}$	2006TA26	NUCLEAR REACTIONS W(p, X) $^{181}\text{Re} / ^{182}\text{Re} / ^{182m}\text{Re} / ^{183}\text{Re} / ^{184}\text{Re} / ^{186}\text{Re} / ^{177}\text{Ta} / ^{183}\text{Ta}$ , E $\approx$ 5-35 MeV; measured production $\sigma$ . Stacked-foil activation technique. JOUR NIMBE 252 160
$^{184}\text{Au}$	2006ZH38	NUCLEAR REACTIONS $^{152}\text{Sm}(^{35}\text{Cl}, 5\text{n})$ , E=183 MeV; $^{172}\text{Yb}(^{19}\text{F}, 5\text{n})$ , E=104 MeV; $^{159}\text{Tb}(^{29}\text{Si}, 4\text{n})$ , E=140 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin. $^{182,184,186}\text{Au}$ deduced high-spin levels, J, $\pi$ , configurations, signature inversion. JOUR IMPEE 15 1437
	2006ZHZZ	NUCLEAR REACTIONS $^{152}\text{Sm}(^{35}\text{Cl}, 5\text{n})$ , $^{171}\text{Yb}(^{19}\text{F}, 4\text{n})$ , $^{159}\text{Tb}(^{29}\text{Si}, 4\text{n})$ , E not given; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin. $^{182,184,186}\text{Au}$ deduced high-spin levels, J, $\pi$ , configurations, signature inversion. REPT JAEA-Review 2006-029, P27, Zhang

**A=185**

No references found

**KEYNUMBERS AND KEYWORDS**

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**A=186**

$^{186}\text{W}$	2006SHZW	NUCLEAR REACTIONS $^{186}\text{W}(^{18}\text{O}, ^{16}\text{O})$ , $(^{18}\text{O}, \text{n}^{16}\text{O})$ , $(^{18}\text{O}, 2\text{n}^{16}\text{O})$ , E=180 MeV; measured $\text{E}\gamma$ , $\text{I}\gamma$ , (particle) $\gamma$ -coin. $^{186,187,188}\text{W}$ deduced transitions. REPT JAEA-Review 2006-029,P36,Shizuma
$^{186}\text{Re}$	2006TA26	NUCLEAR REACTIONS $\text{W}(\text{p}, \text{X})^{181}\text{Re} / ^{182}\text{Re} / ^{182m}\text{Re} / ^{183}\text{Re} / ^{184}\text{Re} / ^{186}\text{Re} / ^{177}\text{Ta} / ^{183}\text{Ta}$ , E $\approx$ 5-35 MeV; measured production $\sigma$ . Stacked-foil activation technique. JOUR NIMBE 252 160
$^{186}\text{Au}$	2006ZH38	NUCLEAR REACTIONS $^{152}\text{Sm}(^{35}\text{Cl}, 5\text{n})$ , E=183 MeV; $^{172}\text{Yb}(^{19}\text{F}, 5\text{n})$ , E=104 MeV; $^{159}\text{Tb}(^{29}\text{Si}, 4\text{n})$ , E=140 MeV; measured $\text{E}\gamma$ , $\text{I}\gamma$ , $\gamma\gamma$ -coin. $^{182,184,186}\text{Au}$ deduced high-spin levels, $J$ , $\pi$ , configurations, signature inversion. JOUR IMPEE 15 1437
	2006ZHZZ	NUCLEAR REACTIONS $^{152}\text{Sm}(^{35}\text{Cl}, 5\text{n})$ , $^{171}\text{Yb}(^{19}\text{F}, 4\text{n})$ , $^{159}\text{Tb}(^{29}\text{Si}, 4\text{n})$ , E not given; measured $\text{E}\gamma$ , $\text{I}\gamma$ , $\gamma\gamma$ -coin. $^{182,184,186}\text{Au}$ deduced high-spin levels, $J$ , $\pi$ , configurations, signature inversion. REPT JAEA-Review 2006-029,P27,Zhang
$^{186}\text{Pb}$	2006PAZW	NUCLEAR REACTIONS $^{106}\text{Pd}(^{83}\text{Kr}, 3\text{n})$ , E not given; measured $\text{E}\gamma$ , $\text{I}\gamma$ , (recoil) $\gamma$ -coin; deduced production $\sigma$ . $^{186}\text{Pb}$ deduced levels, $J$ , $\pi$ , B(E2). Jurogam array, recoil-decay tagging. CONF Isle of Kos (FINUSTAR),Proc,P529

**A=187**

$^{187}\text{W}$	2006SHZW	NUCLEAR REACTIONS $^{186}\text{W}(^{18}\text{O}, ^{16}\text{O})$ , $(^{18}\text{O}, \text{n}^{16}\text{O})$ , $(^{18}\text{O}, 2\text{n}^{16}\text{O})$ , E=180 MeV; measured $\text{E}\gamma$ , $\text{I}\gamma$ , (particle) $\gamma$ -coin. $^{186,187,188}\text{W}$ deduced transitions. REPT JAEA-Review 2006-029,P36,Shizuma
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**A=188**

$^{188}\text{W}$	2006SH23	NUCLEAR REACTIONS $^{186}\text{W}(^{18}\text{O}, ^{16}\text{O})$ , E=180 MeV; measured $\text{E}\gamma$ , $\text{I}\gamma$ , (particle) $\gamma$ -coin. $^{188}\text{W}$ deduced levels, $J$ , $\pi$ , configurations. Level systematics in neighboring isotopes discussed. JOUR ZAANE 30 391
	2006SHZW	NUCLEAR REACTIONS $^{186}\text{W}(^{18}\text{O}, ^{16}\text{O})$ , $(^{18}\text{O}, \text{n}^{16}\text{O})$ , $(^{18}\text{O}, 2\text{n}^{16}\text{O})$ , E=180 MeV; measured $\text{E}\gamma$ , $\text{I}\gamma$ , (particle) $\gamma$ -coin. $^{186,187,188}\text{W}$ deduced transitions. REPT JAEA-Review 2006-029,P36,Shizuma

**A=189**

No references found

**A=190**

$^{190}\text{Os}$	2006ME25	NUCLEAR REACTIONS $^{154,156}\text{Gd}$ , $^{164}\text{Dy}$ , $^{170}\text{Er}$ , $^{178}\text{Hf}$ , $^{182,186}\text{W}$ , $^{192}\text{Os}(\text{p}, \text{t})$ , E=25 MeV; measured triton spectra, $\sigma(\text{E}, \theta)$ . $^{152,154}\text{Gd}$ , $^{162}\text{Dy}$ , $^{168}\text{Er}$ , $^{176}\text{Hf}$ , $^{180,184}\text{W}$ , $^{190}\text{Os}$ deduced $0^+$ level energy distributions. JOUR PRVCA 74 044309
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**A=190 (*continued*)**

<sup>192</sup>Pt      2006REZX      NUCLEAR REACTIONS <sup>192</sup>Os(<sup>82</sup>Se, <sup>84</sup>Se), E=460 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>84</sup>Se, <sup>190</sup>Os deduced levels, J,  $\pi$ . <sup>192</sup>Os(<sup>82</sup>Se, X)<sup>74</sup>Ge / <sup>76</sup>Ge / <sup>78</sup>Ge / <sup>80</sup>Ge / <sup>82</sup>Ge / <sup>192</sup>Pt / <sup>194</sup>Pt / <sup>196</sup>Pt, E=460 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma$ -ray multiplicity. <sup>74,76,78,80,82</sup>Ge, <sup>192,194,196</sup>Pt deduced levels, J,  $\pi$ . GASP array. CONF San Servolo(Fusion06),Proc,P271

**A=191**

<sup>191</sup> Ir	2006LAZY	RADIOACTIVITY <sup>191</sup> Pt(EC) [from <sup>190</sup> Pt(n, $\gamma$ ) E=th]; measured E $\gamma$ , I $\gamma$ . <sup>191</sup> Ir transitions deduced energy differences relative to reference. HPGe detectors. CONF Sarov(Nucleus-2006),Contrib,P96,Lashko
<sup>191</sup> Pt	2006LAZY	RADIOACTIVITY <sup>191</sup> Pt(EC) [from <sup>190</sup> Pt(n, $\gamma$ ) E=th]; measured E $\gamma$ , I $\gamma$ . <sup>191</sup> Ir transitions deduced energy differences relative to reference. HPGe detectors. CONF Sarov(Nucleus-2006),Contrib,P96,Lashko
<sup>191</sup> Hg	2006HE24	NUCLEAR REACTIONS Pt( $\alpha$ , X) <sup>191</sup> Hg / <sup>192</sup> Hg / <sup>193</sup> Hg / <sup>193m</sup> Hg / <sup>195</sup> Hg / <sup>195m</sup> Hg / <sup>197</sup> Hg / <sup>197m</sup> Hg / <sup>199m</sup> Hg / <sup>193</sup> Au / <sup>194</sup> Au / <sup>195</sup> Au / <sup>195m</sup> Au / <sup>196</sup> Au / <sup>196m</sup> Au / <sup>198</sup> Au / <sup>198m</sup> Au / <sup>199m</sup> Au / <sup>200m</sup> Au, E $\approx$ 13-38 MeV; measured excitation functions; deduced thick-target yields. Stacked-foil activation technique. JOUR NIMBE 251 333
<sup>191</sup> Pb	2006IOZY	NUCLEAR REACTIONS <sup>168,170</sup> Er( <sup>28</sup> Si, 4n), ( <sup>28</sup> Si, 5n), E=193 MeV; measured E $\gamma$ , I $\gamma$ ( $\theta$ , H, t). <sup>192,193,194</sup> Pb levels deduced spectroscopic quadrupole moments for high-spin isomeric states. CONF Isle of Kos (FINUSTAR),Proc,P278

**A=192**

<sup>192</sup> Pt	2006REZX	NUCLEAR REACTIONS <sup>192</sup> Os( <sup>82</sup> Se, <sup>84</sup> Se), E=460 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin. <sup>84</sup> Se, <sup>190</sup> Os deduced levels, J, $\pi$ . <sup>192</sup> Os( <sup>82</sup> Se, X) <sup>74</sup> Ge / <sup>76</sup> Ge / <sup>78</sup> Ge / <sup>80</sup> Ge / <sup>82</sup> Ge / <sup>192</sup> Pt / <sup>194</sup> Pt / <sup>196</sup> Pt, E=460 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin, $\gamma$ -ray multiplicity. <sup>74,76,78,80,82</sup> Ge, <sup>192,194,196</sup> Pt deduced levels, J, $\pi$ . GASP array. CONF San Servolo(Fusion06),Proc,P271
<sup>192</sup> Hg	2006HE24	NUCLEAR REACTIONS Pt( $\alpha$ , X) <sup>191</sup> Hg / <sup>192</sup> Hg / <sup>193</sup> Hg / <sup>193m</sup> Hg / <sup>195</sup> Hg / <sup>195m</sup> Hg / <sup>197</sup> Hg / <sup>197m</sup> Hg / <sup>199m</sup> Hg / <sup>193</sup> Au / <sup>194</sup> Au / <sup>195</sup> Au / <sup>195m</sup> Au / <sup>196</sup> Au / <sup>196m</sup> Au / <sup>198</sup> Au / <sup>198m</sup> Au / <sup>199m</sup> Au / <sup>200m</sup> Au, E $\approx$ 13-38 MeV; measured excitation functions; deduced thick-target yields. Stacked-foil activation technique. JOUR NIMBE 251 333
<sup>192</sup> Pb	2006IOZY	NUCLEAR REACTIONS <sup>168,170</sup> Er( <sup>28</sup> Si, 4n), ( <sup>28</sup> Si, 5n), E=193 MeV; measured E $\gamma$ , I $\gamma$ ( $\theta$ , H, t). <sup>192,193,194</sup> Pb levels deduced spectroscopic quadrupole moments for high-spin isomeric states. CONF Isle of Kos (FINUSTAR),Proc,P278

**KEYNUMBERS AND KEYWORDS**

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**A=193**

$^{193}\text{Au}$	2006HE24	NUCLEAR REACTIONS $\text{Pt}(\alpha, X)^{191}\text{Hg} / ^{192}\text{Hg} / ^{193}\text{Hg} / ^{193m}\text{Hg} / ^{195}\text{Hg} / ^{195m}\text{Hg} / ^{197}\text{Hg} / ^{197m}\text{Hg} / ^{199m}\text{Hg} / ^{193}\text{Au} / ^{194}\text{Au} / ^{195}\text{Au} / ^{195m}\text{Au} / ^{196}\text{Au} / ^{196m}\text{Au} / ^{198}\text{Au} / ^{198m}\text{Au} / ^{199m}\text{Au} / ^{200m}\text{Au}$ , E ≈ 13-38 MeV; measured excitation functions; deduced thick-target yields. Stacked-foil activation technique. JOUR NIMBE 251 333
$^{193}\text{Hg}$	2006HE24	NUCLEAR REACTIONS $\text{Pt}(\alpha, X)^{191}\text{Hg} / ^{192}\text{Hg} / ^{193}\text{Hg} / ^{193m}\text{Hg} / ^{195}\text{Hg} / ^{195m}\text{Hg} / ^{197}\text{Hg} / ^{197m}\text{Hg} / ^{199m}\text{Hg} / ^{193}\text{Au} / ^{194}\text{Au} / ^{195}\text{Au} / ^{195m}\text{Au} / ^{196}\text{Au} / ^{196m}\text{Au} / ^{198}\text{Au} / ^{198m}\text{Au} / ^{199m}\text{Au} / ^{200m}\text{Au}$ , E ≈ 13-38 MeV; measured excitation functions; deduced thick-target yields. Stacked-foil activation technique. JOUR NIMBE 251 333
$^{193}\text{Pb}$	2006IOZY	NUCLEAR REACTIONS $^{168,170}\text{Er}(^{28}\text{Si}, 4n)$ , $(^{28}\text{Si}, 5n)$ , E=193 MeV; measured $E\gamma$ , $I\gamma(\theta, H, t)$ . $^{192,193,194}\text{Pb}$ levels deduced spectroscopic quadrupole moments for high-spin isomeric states. CONF Isle of Kos (FINUSTAR), Proc, P278

**A=194**

$^{194}\text{Pt}$	2006REZX	NUCLEAR REACTIONS $^{192}\text{Os}(^{82}\text{Se}, ^{84}\text{Se})$ , E=460 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin. $^{84}\text{Se}$ , $^{190}\text{Os}$ deduced levels, $J, \pi$ . $^{192}\text{Os}(^{82}\text{Se}, X)^{74}\text{Ge} / ^{76}\text{Ge} / ^{78}\text{Ge} / ^{80}\text{Ge} / ^{82}\text{Ge} / ^{192}\text{Pt} / ^{194}\text{Pt} / ^{196}\text{Pt}$ , E=460 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, $\gamma$ -ray multiplicity. $^{74,76,78,80,82}\text{Ge}$ , $^{192,194,196}\text{Pt}$ deduced levels, $J, \pi$ . GASP array. CONF San Servolo(Fusion06), Proc, P271
$^{194}\text{Au}$	2006HE24	NUCLEAR REACTIONS $\text{Pt}(\alpha, X)^{191}\text{Hg} / ^{192}\text{Hg} / ^{193}\text{Hg} / ^{193m}\text{Hg} / ^{195}\text{Hg} / ^{195m}\text{Hg} / ^{197}\text{Hg} / ^{197m}\text{Hg} / ^{199m}\text{Hg} / ^{193}\text{Au} / ^{194}\text{Au} / ^{195}\text{Au} / ^{195m}\text{Au} / ^{196}\text{Au} / ^{196m}\text{Au} / ^{198}\text{Au} / ^{198m}\text{Au} / ^{199m}\text{Au} / ^{200m}\text{Au}$ , E ≈ 13-38 MeV; measured excitation functions; deduced thick-target yields. Stacked-foil activation technique. JOUR NIMBE 251 333
	2006PEZW	NUCLEAR REACTIONS $^{197}\text{Au}(^6\text{He}, 2n)$ , $(^6\text{He}, 3n)$ , $(^6\text{He}, 4n)$ , $(^6\text{He}, 5n)$ , $(^6\text{He}, 6n)$ , $(^6\text{He}, 7n)$ , E ≈ 10-70 MeV; $^{206}\text{Pb}(^6\text{He}, 2n)$ , E ≈ 10-26 MeV; $^{197}\text{Au}(^6\text{He}, X)^{194}\text{Au} / ^{196}\text{Au} / ^{198}\text{Au}$ , E ≈ 10-60 MeV; measured excitation functions. REPT JINR-E7-2006-75, Penionzhkevich
$^{194}\text{Pb}$	2006IOZY	NUCLEAR REACTIONS $^{168,170}\text{Er}(^{28}\text{Si}, 4n)$ , $(^{28}\text{Si}, 5n)$ , E=193 MeV; measured $E\gamma$ , $I\gamma(\theta, H, t)$ . $^{192,193,194}\text{Pb}$ levels deduced spectroscopic quadrupole moments for high-spin isomeric states. CONF Isle of Kos (FINUSTAR), Proc, P278

**A=195**

$^{195}\text{Au}$	2006HE24	NUCLEAR REACTIONS $\text{Pt}(\alpha, X)^{191}\text{Hg} / ^{192}\text{Hg} / ^{193}\text{Hg} / ^{193m}\text{Hg} / ^{195}\text{Hg} / ^{195m}\text{Hg} / ^{197}\text{Hg} / ^{197m}\text{Hg} / ^{199m}\text{Hg} / ^{193}\text{Au} / ^{194}\text{Au} / ^{195}\text{Au} / ^{195m}\text{Au} / ^{196}\text{Au} / ^{196m}\text{Au} / ^{198}\text{Au} / ^{198m}\text{Au} / ^{199m}\text{Au} / ^{200m}\text{Au}$ , E ≈ 13-38 MeV; measured excitation functions; deduced thick-target yields. Stacked-foil activation technique. JOUR NIMBE 251 333
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**A=195 (continued)**

<sup>195</sup>Hg      2006HE24      NUCLEAR REACTIONS Pt( $\alpha$ , X)<sup>191</sup>Hg / <sup>192</sup>Hg / <sup>193</sup>Hg / <sup>193m</sup>Hg / <sup>195</sup>Hg / <sup>195m</sup>Hg / <sup>197</sup>Hg / <sup>197m</sup>Hg / <sup>199m</sup>Hg / <sup>193</sup>Au / <sup>194</sup>Au / <sup>195</sup>Au / <sup>195m</sup>Au / <sup>196</sup>Au / <sup>196m</sup>Au / <sup>198</sup>Au / <sup>198m</sup>Au / <sup>199m</sup>Au / <sup>200m</sup>Au, E ≈ 13-38 MeV; measured excitation functions; deduced thick-target yields. Stacked-foil activation technique. JOUR NIMBE 251 333

**A=196**

<sup>196</sup>Pt      2006REZX      NUCLEAR REACTIONS <sup>192</sup>Os(<sup>82</sup>Se, <sup>84</sup>Se), E=460 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>84</sup>Se, <sup>190</sup>Os deduced levels, J,  $\pi$ . <sup>192</sup>Os(<sup>82</sup>Se, X)<sup>74</sup>Ge / <sup>76</sup>Ge / <sup>78</sup>Ge / <sup>80</sup>Ge / <sup>82</sup>Ge / <sup>192</sup>Pt / <sup>194</sup>Pt / <sup>196</sup>Pt, E=460 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma$ -ray multiplicity. <sup>74,76,78,80,82</sup>Ge, <sup>192,194,196</sup>Pt deduced levels, J,  $\pi$ . GASP array. CONF San Servolo(Fusion06), Proc, P271

2006R037      NUCLEAR REACTIONS <sup>12</sup>C, <sup>27</sup>Al, <sup>56</sup>Fe, <sup>197</sup>Au(e, e'p), E=3.3 GeV; measured Ep, angular distributions; deduced transparency, spectral functions. JOUR NPBSE 159 152

<sup>196</sup>Au      2006HE24      NUCLEAR REACTIONS Pt( $\alpha$ , X)<sup>191</sup>Hg / <sup>192</sup>Hg / <sup>193</sup>Hg / <sup>193m</sup>Hg / <sup>195</sup>Hg / <sup>195m</sup>Hg / <sup>197</sup>Hg / <sup>197m</sup>Hg / <sup>199m</sup>Hg / <sup>193</sup>Au / <sup>194</sup>Au / <sup>195</sup>Au / <sup>195m</sup>Au / <sup>196</sup>Au / <sup>196m</sup>Au / <sup>198</sup>Au / <sup>198m</sup>Au / <sup>199m</sup>Au / <sup>200m</sup>Au, E ≈ 13-38 MeV; measured excitation functions; deduced thick-target yields. Stacked-foil activation technique. JOUR NIMBE 251 333

2006PEZW      NUCLEAR REACTIONS <sup>197</sup>Au(<sup>6</sup>He, 2n), (<sup>6</sup>He, 3n), (<sup>6</sup>He, 4n), (<sup>6</sup>He, 5n), (<sup>6</sup>He, 6n), (<sup>6</sup>He, 7n), E ≈ 10-70 MeV; <sup>206</sup>Pb(<sup>6</sup>He, 2n), E ≈ 10-26 MeV; <sup>197</sup>Au(<sup>6</sup>He, X)<sup>194</sup>Au / <sup>196</sup>Au / <sup>198</sup>Au, E ≈ 10-60 MeV; measured excitation functions. REPT JINR-E7-2006-75, Penionzhkevich

2006TR09      NUCLEAR REACTIONS <sup>197</sup>Au( $\gamma$ , n)<sup>196m</sup>Au / <sup>196</sup>Au, E ≈ 15-25 MeV bremsstrahlung; measured yields; deduced isomeric ratio. Comparison with previous results and model predictions. JOUR FECLA 133 7

<sup>196</sup>Tl      2006PEZW      NUCLEAR REACTIONS <sup>197</sup>Au(<sup>6</sup>He, 2n), (<sup>6</sup>He, 3n), (<sup>6</sup>He, 4n), (<sup>6</sup>He, 5n), (<sup>6</sup>He, 6n), (<sup>6</sup>He, 7n), E ≈ 10-70 MeV; <sup>206</sup>Pb(<sup>6</sup>He, 2n), E ≈ 10-26 MeV; <sup>197</sup>Au(<sup>6</sup>He, X)<sup>194</sup>Au / <sup>196</sup>Au / <sup>198</sup>Au, E ≈ 10-60 MeV; measured excitation functions. REPT JINR-E7-2006-75, Penionzhkevich

**A=197**

<sup>197</sup>Au      2006KI12      NUCLEAR REACTIONS <sup>197</sup>Au(X-ray, X-ray), E ≈ 80 keV; measured X-ray spectra. <sup>197</sup>Au deduced nuclear excitation by electron transition. JOUR PRVCA 74 031301

2006ST21      NUCLEAR REACTIONS <sup>197</sup>Au(<sup>38</sup>S, <sup>38</sup>S'), (<sup>40</sup>S, <sup>40</sup>S'), E ≈ 40 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ( $\theta$ , H, t), (particle) $\gamma$ -coin following projectile Coulomb excitation. <sup>38,40</sup>S levels deduced excitation B(E2), g factors. Transient field technique. JOUR PRVCA 74 054307

**KEYNUMBERS AND KEYWORDS**

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**A=197 (*continued*)**

	2006VAZW	NUCLEAR REACTIONS $^{197}\text{Au}$ ( $^{106}\text{Sn}$ , $^{106}\text{Sn}'$ ), ( $^{108}\text{Sn}$ , $^{108}\text{Sn}'$ ), ( $^{110}\text{Sn}$ , $^{110}\text{Sn}'$ ), ( $^{112}\text{Sn}$ , $^{112}\text{Sn}'$ ), E $\approx$ 80 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin following projectile Coulomb excitation.
$^{197}\text{Hg}$	2006HE24	$^{106,108,110,112}\text{Sn}$ deduced transitions B(E2). Comparison with shell model predictions. PREPRINT nucl-ex/0612011,12/08/2006
		NUCLEAR REACTIONS Pt( $\alpha$ , X) $^{191}\text{Hg}$ / $^{192}\text{Hg}$ / $^{193}\text{Hg}$ / $^{193m}\text{Hg}$ / $^{195}\text{Hg}$ / $^{195m}\text{Hg}$ / $^{197}\text{Hg}$ / $^{197m}\text{Hg}$ / $^{199m}\text{Hg}$ / $^{193}\text{Au}$ / $^{194}\text{Au}$ / $^{195}\text{Au}$ / $^{195m}\text{Au}$ / $^{196}\text{Au}$ / $^{196m}\text{Au}$ / $^{198}\text{Au}$ / $^{198m}\text{Au}$ / $^{199m}\text{Au}$ / $^{200m}\text{Au}$ , E $\approx$ 13-38 MeV; measured excitation functions; deduced thick-target yields. Stacked-foil activation technique. JOUR NIMBE 251 333
$^{197}\text{Tl}$	2006PEZW	NUCLEAR REACTIONS $^{197}\text{Au}$ ( $^6\text{He}$ , 2n), ( $^6\text{He}$ , 3n), ( $^6\text{He}$ , 4n), ( $^6\text{He}$ , 5n), ( $^6\text{He}$ , 6n), ( $^6\text{He}$ , 7n), E $\approx$ 10-70 MeV; $^{206}\text{Pb}$ ( $^6\text{He}$ , 2n), E $\approx$ 10-26 MeV; $^{197}\text{Au}$ ( $^6\text{He}$ , X) $^{194}\text{Au}$ / $^{196}\text{Au}$ / $^{198}\text{Au}$ , E $\approx$ 10-60 MeV; measured excitation functions. REPT JINR-E7-2006-75, Penionzhkevich

**A=198**

	2006HE24	NUCLEAR REACTIONS Pt( $\alpha$ , X) $^{191}\text{Hg}$ / $^{192}\text{Hg}$ / $^{193}\text{Hg}$ / $^{193m}\text{Hg}$ / $^{195}\text{Hg}$ / $^{195m}\text{Hg}$ / $^{197}\text{Hg}$ / $^{197m}\text{Hg}$ / $^{199m}\text{Hg}$ / $^{193}\text{Au}$ / $^{194}\text{Au}$ / $^{195}\text{Au}$ / $^{195m}\text{Au}$ / $^{196}\text{Au}$ / $^{196m}\text{Au}$ / $^{198}\text{Au}$ / $^{198m}\text{Au}$ / $^{199m}\text{Au}$ / $^{200m}\text{Au}$ , E $\approx$ 13-38 MeV; measured excitation functions; deduced thick-target yields. Stacked-foil activation technique. JOUR NIMBE 251 333
	2006KRZU	NUCLEAR REACTIONS $^{197}\text{Au}$ (n, $\gamma$ ), E=thermal, 10-100 keV; measured E $\gamma$ , sum-energy spectra; deduced anomalous behavior. CONF Isle of Kos (FINUSTAR), Proc.P481
	2006PEZW	NUCLEAR REACTIONS $^{197}\text{Au}$ ( $^6\text{He}$ , 2n), ( $^6\text{He}$ , 3n), ( $^6\text{He}$ , 4n), ( $^6\text{He}$ , 5n), ( $^6\text{He}$ , 6n), ( $^6\text{He}$ , 7n), E $\approx$ 10-70 MeV; $^{206}\text{Pb}$ ( $^6\text{He}$ , 2n), E $\approx$ 10-26 MeV; $^{197}\text{Au}$ ( $^6\text{He}$ , X) $^{194}\text{Au}$ / $^{196}\text{Au}$ / $^{198}\text{Au}$ , E $\approx$ 10-60 MeV; measured excitation functions. REPT JINR-E7-2006-75, Penionzhkevich
$^{198}\text{Tl}$	2006KUZX	NUCLEAR REACTIONS $^{197}\text{Au}$ ( $\alpha$ , $\gamma$ ), ( $\alpha$ , n), ( $\alpha$ , 2n), ( $\alpha$ , 3n), E=14-36 MeV; measured excitation functions. Activation technique, comparison with model predictions. REPT JINR-P7-2006-14, Kulko
	2006PEZW	NUCLEAR REACTIONS $^{197}\text{Au}$ ( $^6\text{He}$ , 2n), ( $^6\text{He}$ , 3n), ( $^6\text{He}$ , 4n), ( $^6\text{He}$ , 5n), ( $^6\text{He}$ , 6n), ( $^6\text{He}$ , 7n), E $\approx$ 10-70 MeV; $^{206}\text{Pb}$ ( $^6\text{He}$ , 2n), E $\approx$ 10-26 MeV; $^{197}\text{Au}$ ( $^6\text{He}$ , X) $^{194}\text{Au}$ / $^{196}\text{Au}$ / $^{198}\text{Au}$ , E $\approx$ 10-60 MeV; measured excitation functions. REPT JINR-E7-2006-75, Penionzhkevich

**A=199**

	2006HE24	NUCLEAR REACTIONS Pt( $\alpha$ , X) $^{191}\text{Hg}$ / $^{192}\text{Hg}$ / $^{193}\text{Hg}$ / $^{193m}\text{Hg}$ / $^{195}\text{Hg}$ / $^{195m}\text{Hg}$ / $^{197}\text{Hg}$ / $^{197m}\text{Hg}$ / $^{199m}\text{Hg}$ / $^{193}\text{Au}$ / $^{194}\text{Au}$ / $^{195}\text{Au}$ / $^{195m}\text{Au}$ / $^{196}\text{Au}$ / $^{196m}\text{Au}$ / $^{198}\text{Au}$ / $^{198m}\text{Au}$ / $^{199m}\text{Au}$ / $^{200m}\text{Au}$ , E $\approx$ 13-38 MeV; measured excitation functions; deduced thick-target yields. Stacked-foil activation technique. JOUR NIMBE 251 333
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**A=199 (*continued*)**

$^{199}\text{Hg}$	2006HE24	NUCLEAR REACTIONS $\text{Pt}(\alpha, X)^{191}\text{Hg} / ^{192}\text{Hg} / ^{193}\text{Hg} / ^{193m}\text{Hg} / ^{195}\text{Hg} / ^{195m}\text{Hg} / ^{197}\text{Hg} / ^{197m}\text{Hg} / ^{199m}\text{Hg} / ^{193}\text{Au} / ^{194}\text{Au} / ^{195}\text{Au} / ^{195m}\text{Au} / ^{196}\text{Au} / ^{196m}\text{Au} / ^{198}\text{Au} / ^{198m}\text{Au} / ^{199m}\text{Au} / ^{200m}\text{Au}$ , $E \approx 13\text{-}38 \text{ MeV}$ ; measured excitation functions; deduced thick-target yields. Stacked-foil activation technique. JOUR NIMBE 251 333
$^{199}\text{Tl}$	2006ASZZ	NUCLEAR REACTIONS $^{203}\text{Tl}(\gamma, n), (\gamma, 2n), (\gamma, 3n), (\gamma, 4n)$ $E < 50 \text{ MeV}$ ; measured $E_\gamma, I_\gamma$ ; deduced relative yields. Microtron, HPGe detector. CONF Sarov(Nucleus-2006),Contrib,P142,Asanov
	2006FOZY	NUCLEAR REACTIONS $^{203}\text{Tl}(n, xn)$ , $E=0.6\text{-}250 \text{ MeV}$ ; measured prompt and delayed $E_\gamma, I_\gamma$ . $^{199,200,201,202}\text{Tl}$ deduced isomeric states $T_{1/2}$ . $^{203}\text{Tl}$ deduced isomeric state excitation energy, $T_{1/2}$ upper limit. Geanie array. JOUR BAPSA 51 90,GC8,Fotiades
	2006KUZX	NUCLEAR REACTIONS $^{197}\text{Au}(\alpha, \gamma), (\alpha, n), (\alpha, 2n), (\alpha, 3n)$ , $E=14\text{-}36 \text{ MeV}$ ; measured excitation functions. Activation technique, comparison with model predictions. REPT JINR-P7-2006-14,Kulko
	2006PEZW	NUCLEAR REACTIONS $^{197}\text{Au}(^6\text{He}, 2n), (^6\text{He}, 3n), (^6\text{He}, 4n), (^6\text{He}, 5n), (^6\text{He}, 6n), (^6\text{He}, 7n)$ , $E \approx 10\text{-}70 \text{ MeV}$ ; $^{206}\text{Pb}(^6\text{He}, 2n)$ , $E \approx 10\text{-}26 \text{ MeV}$ ; $^{197}\text{Au}(^6\text{He}, X)^{194}\text{Au} / ^{196}\text{Au} / ^{198}\text{Au}$ , $E \approx 10\text{-}60 \text{ MeV}$ ; measured excitation functions. REPT JINR-E7-2006-75,Penionzhkevich

**A=200**

$^{200}\text{Au}$	2006HE24	NUCLEAR REACTIONS $\text{Pt}(\alpha, X)^{191}\text{Hg} / ^{192}\text{Hg} / ^{193}\text{Hg} / ^{193m}\text{Hg} / ^{195}\text{Hg} / ^{195m}\text{Hg} / ^{197}\text{Hg} / ^{197m}\text{Hg} / ^{199m}\text{Hg} / ^{193}\text{Au} / ^{194}\text{Au} / ^{195}\text{Au} / ^{195m}\text{Au} / ^{196}\text{Au} / ^{196m}\text{Au} / ^{198}\text{Au} / ^{198m}\text{Au} / ^{199m}\text{Au} / ^{200m}\text{Au}$ , $E \approx 13\text{-}38 \text{ MeV}$ ; measured excitation functions; deduced thick-target yields. Stacked-foil activation technique. JOUR NIMBE 251 333
$^{200}\text{Tl}$	2006ASZZ	NUCLEAR REACTIONS $^{203}\text{Tl}(\gamma, n), (\gamma, 2n), (\gamma, 3n), (\gamma, 4n)$ $E < 50 \text{ MeV}$ ; measured $E_\gamma, I_\gamma$ ; deduced relative yields. Microtron, HPGe detector. CONF Sarov(Nucleus-2006),Contrib,P142,Asanov
	2006FOZY	NUCLEAR REACTIONS $^{203}\text{Tl}(n, xn)$ , $E=0.6\text{-}250 \text{ MeV}$ ; measured prompt and delayed $E_\gamma, I_\gamma$ . $^{199,200,201,202}\text{Tl}$ deduced isomeric states $T_{1/2}$ . $^{203}\text{Tl}$ deduced isomeric state excitation energy, $T_{1/2}$ upper limit. Geanie array. JOUR BAPSA 51 90,GC8,Fotiades
	2006KUZX	NUCLEAR REACTIONS $^{197}\text{Au}(\alpha, \gamma), (\alpha, n), (\alpha, 2n), (\alpha, 3n)$ , $E=14\text{-}36 \text{ MeV}$ ; measured excitation functions. Activation technique, comparison with model predictions. REPT JINR-P7-2006-14,Kulko
	2006PEZW	NUCLEAR REACTIONS $^{197}\text{Au}(^6\text{He}, 2n), (^6\text{He}, 3n), (^6\text{He}, 4n), (^6\text{He}, 5n), (^6\text{He}, 6n), (^6\text{He}, 7n)$ , $E \approx 10\text{-}70 \text{ MeV}$ ; $^{206}\text{Pb}(^6\text{He}, 2n)$ , $E \approx 10\text{-}26 \text{ MeV}$ ; $^{197}\text{Au}(^6\text{He}, X)^{194}\text{Au} / ^{196}\text{Au} / ^{198}\text{Au}$ , $E \approx 10\text{-}60 \text{ MeV}$ ; measured excitation functions. REPT JINR-E7-2006-75,Penionzhkevich

**A=201**

$^{201}\text{Tl}$	2006ASZZ	NUCLEAR REACTIONS $^{203}\text{Tl}(\gamma, n), (\gamma, 2n), (\gamma, 3n), (\gamma, 4n)$ $E < 50 \text{ MeV}$ ; measured $E_\gamma, I_\gamma$ ; deduced relative yields. Microtron, HPGe detector. CONF Sarov(Nucleus-2006),Contrib,P142,Asanov
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## KEYNUMBERS AND KEYWORDS

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### A=201 (*continued*)

2006FOZY	NUCLEAR REACTIONS $^{203}\text{Tl}(n, xn)$ , E=0.6-250 MeV; measured prompt and delayed $E\gamma$ , $I\gamma$ . $^{199,200,201,202}\text{Tl}$ deduced isomeric states $T_{1/2}$ . $^{203}\text{Tl}$ deduced isomeric state excitation energy, $T_{1/2}$ upper limit. Geanie array. JOUR BAPSA 51 90,GC8,Fotiades
2006KUZX	NUCLEAR REACTIONS $^{197}\text{Au}(\alpha, \gamma)$ , $(\alpha, n)$ , $(\alpha, 2n)$ , $(\alpha, 3n)$ , E=14-36 MeV; measured excitation functions. Activation technique, comparison with model predictions. REPT JINR-P7-2006-14,Kulko
2006PEZW	NUCLEAR REACTIONS $^{197}\text{Au}({^6\text{He}, 2n})$ , $(^6\text{He}, 3n)$ , $(^6\text{He}, 4n)$ , $(^6\text{He}, 5n)$ , $(^6\text{He}, 6n)$ , $(^6\text{He}, 7n)$ , E $\approx$ 10-70 MeV; $^{206}\text{Pb}({^6\text{He}, 2n})$ , E $\approx$ 10-26 MeV; $^{197}\text{Au}({^6\text{He}, X})$ / $^{194}\text{Au}$ / $^{196}\text{Au}$ / $^{198}\text{Au}$ , E $\approx$ 10-60 MeV; measured excitation functions. REPT JINR-E7-2006-75, Penionzhkevich

### A=202

$^{202}\text{Tl}$	2006ASZZ	NUCLEAR REACTIONS $^{203}\text{Tl}(\gamma, n)$ , $(\gamma, 2n)$ , $(\gamma, 3n)$ , $(\gamma, 4n)$ E < 50 MeV; measured $E\gamma$ , $I\gamma$ ; deduced relative yields. Microtron, HPGe detector. CONF Sarov(Nucleus-2006), Contrib,P142,Asanov
	2006FOZY	NUCLEAR REACTIONS $^{203}\text{Tl}(n, xn)$ , E=0.6-250 MeV; measured prompt and delayed $E\gamma$ , $I\gamma$ . $^{199,200,201,202}\text{Tl}$ deduced isomeric states $T_{1/2}$ . $^{203}\text{Tl}$ deduced isomeric state excitation energy, $T_{1/2}$ upper limit. Geanie array. JOUR BAPSA 51 90,GC8,Fotiades

### A=203

$^{203}\text{Tl}$	2006FOZY	NUCLEAR REACTIONS $^{203}\text{Tl}(n, xn)$ , E=0.6-250 MeV; measured prompt and delayed $E\gamma$ , $I\gamma$ . $^{199,200,201,202}\text{Tl}$ deduced isomeric states $T_{1/2}$ . $^{203}\text{Tl}$ deduced isomeric state excitation energy, $T_{1/2}$ upper limit. Geanie array. JOUR BAPSA 51 90,GC8,Fotiades
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### A=204

No references found

### A=205

$^{205}\text{Pb}$	2006DOZY	NUCLEAR REACTIONS $^{204}\text{Pb}(n, \gamma)$ , E=0.001-440 keV; measured capture $\sigma$ ; deduced resonance parameters. PREPRINT nucl-ex/0610033,10/24/2006
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### A=206

No references found

**A=207**

$^{207}\text{Tl}$	2006HA50	NUCLEAR REACTIONS $^{208}\text{Pb}(\alpha, \alpha'\text{p})$ , E=200 MeV; measured Ep, E $\alpha$ , $\sigma(E, \theta)$ . $^{90}\text{Zr}$ , $^{116}\text{Sn}$ , $^{208}\text{Pb}(\alpha, \alpha'\text{n})$ , E=200 MeV; measured En, E $\alpha$ . $^{90}\text{Zr}$ , $^{116}\text{Sn}$ , $^{208}\text{Pb}$ deduced branching ratios for particle decay of isoscalar GDR. Comparison with model predictions. JOUR IMPEE 15 1357
	2006STZX	RADIOACTIVITY $^{227}\text{Th}$ , $^{225,227}\text{Ac}$ , $^{224,225}\text{Ra}$ , $^{221,223}\text{Fr}$ , $^{219,220,221}\text{Rn}$ , $^{217,219}\text{At}$ , $^{212,213,215,216,217}\text{Po}$ , $^{211,212}\text{Bi}(\alpha)$ ; measured E $\alpha$ , $\gamma$ -ray anisotropy, T <sub>1/2</sub> for sources implanted in metals. PREPRINT nucl-ex/0611041,11/29/2006
$^{207}\text{Pb}$	2006HA50	NUCLEAR REACTIONS $^{208}\text{Pb}(\alpha, \alpha'\text{p})$ , E=200 MeV; measured Ep, E $\alpha$ , $\sigma(E, \theta)$ . $^{90}\text{Zr}$ , $^{116}\text{Sn}$ , $^{208}\text{Pb}(\alpha, \alpha'\text{n})$ , E=200 MeV; measured En, E $\alpha$ . $^{90}\text{Zr}$ , $^{116}\text{Sn}$ , $^{208}\text{Pb}$ deduced branching ratios for particle decay of isoscalar GDR. Comparison with model predictions. JOUR IMPEE 15 1357
	2006TSZZ	RADIOACTIVITY $^{211,212,213,214,215}\text{Po}$ , $^{272}\text{Bh}$ , $^{275,276}\text{Mt}$ , $^{279,280}\text{Rg}$ , $^{283,284}113(\alpha)$ [from $^{243}\text{Am}(^{48}\text{Ca}, \text{xn})$ ]; measured E $\alpha$ . REPT JINR-E13-2006-19,Tsyganov

**A=208**

$^{208}\text{Tl}$	2006STZX	RADIOACTIVITY $^{227}\text{Th}$ , $^{225,227}\text{Ac}$ , $^{224,225}\text{Ra}$ , $^{221,223}\text{Fr}$ , $^{219,220,221}\text{Rn}$ , $^{217,219}\text{At}$ , $^{212,213,215,216,217}\text{Po}$ , $^{211,212}\text{Bi}(\alpha)$ ; measured E $\alpha$ , $\gamma$ -ray anisotropy, T <sub>1/2</sub> for sources implanted in metals. PREPRINT nucl-ex/0611041,11/29/2006
$^{208}\text{Pb}$	2005MB12	NUCLEAR REACTIONS $^{12}\text{C}(^6\text{Li}, ^6\text{Li})$ , ( $^6\text{Li}, ^6\text{Li}'$ ), E=63 MeV; measured $\sigma(\theta)$ ; deduced optical model parameters. $^{12}\text{C}$ , $^{16}\text{O}$ , $^{24}\text{Mg}$ , $^{28}\text{Si}$ , $^{40}\text{Ca}$ , $^{60}\text{Ni}$ , $^{90}\text{Zr}$ , $^{124}\text{Sn}$ , $^{208}\text{Pb}(^6\text{Li}, ^6\text{Li})$ , E ≈ 50-90 MeV; calculated $\sigma(\theta)$ . JOUR BRSPE 69 1761
	2006D025	NUCLEAR REACTIONS $^{207}\text{Pb}(\text{n}, \gamma)$ , E=3-320 keV; measured $\sigma$ ; deduced resonance parameters, Maxwellian averaged $\sigma$ . Comparison with previous results. JOUR PRVCA 74 055802
	2006DOZX	NUCLEAR REACTIONS $^{207}\text{Pb}(\text{n}, \gamma)$ , E=3-320 keV; measured $\sigma$ ; deduced resonance parameters, Maxwellian averaged $\sigma$ . PREPRINT nucl-ex/0610039,10/26/2006
	2006HA50	NUCLEAR REACTIONS $^{208}\text{Pb}(\alpha, \alpha'\text{p})$ , E=200 MeV; measured Ep, E $\alpha$ , $\sigma(E, \theta)$ . $^{90}\text{Zr}$ , $^{116}\text{Sn}$ , $^{208}\text{Pb}(\alpha, \alpha'\text{n})$ , E=200 MeV; measured En, E $\alpha$ . $^{90}\text{Zr}$ , $^{116}\text{Sn}$ , $^{208}\text{Pb}$ deduced branching ratios for particle decay of isoscalar GDR. Comparison with model predictions. JOUR IMPEE 15 1357
	2006HAZV	NUCLEAR REACTIONS $^{208}\text{Pb}(^6\text{Li}, d\alpha)$ , E=150 MeV / nucleon; measured deuteron and $\alpha$ spectra, angular distributions. $^2\text{H}(\alpha, \gamma)$ , E(cm) ≈ 0-1.5 MeV; deduced astrophysical S-factors. CONF Isle of Kos (FINUSTAR),Proc,P21
	2006HE21	NUCLEAR REACTIONS $^{208}\text{Pb}(\text{p}, \text{p}')$ , E=14.92-17.48 MeV; measured Ep, $\sigma(E, \theta)$ . $^{207}\text{Pb}(\text{d}, \text{p})$ , E=22 MeV; measured Ed, $\sigma(E, \theta)$ . $^{208}\text{Pb}$ deduced levels, J, $\pi$ , configurations. JOUR PRVCA 74 034303

**A=208 (*continued*)**

2006HEZR	NUCLEAR REACTIONS $^{207}\text{Pb}(\text{d}, \text{p})$ , $E^*=5.2\text{-}5.7$ MeV; measured $E_\text{p}$ , $\sigma(\theta)$ . $^{208}\text{Pb}$ deduced $0^-$ states level energies, spectroscopic factors, mixing strength. PREPRINT nucl-ex/0611013,11/10/2006
2006STZX	RADIOACTIVITY $^{227}\text{Th}$ , $^{225,227}\text{Ac}$ , $^{224,225}\text{Ra}$ , $^{221,223}\text{Fr}$ , $^{219,220,221}\text{Rn}$ , $^{217,219}\text{At}$ , $^{212,213,215,216,217}\text{Po}$ , $^{211,212}\text{Bi}(\alpha)$ ; measured $E\alpha$ , $\gamma$ -ray anisotropy, $T_{1/2}$ for sources implanted in metals. PREPRINT nucl-ex/0611041,11/29/2006
2006TOZX	NUCLEAR REACTIONS $^{208}\text{Pb}(^{102}\text{Ru}, ^{102}\text{Ru}')$ , $E=440$ MeV; measured $E\gamma$ , $I\gamma$ , (particle) $\gamma$ -coin following projectile Coulomb excitation. $^{102}\text{Ru}$ deduced levels, $J$ , $\pi$ . Gemini-II array. REPT JAEA-Review 2006-029,P25,Toh
2006TSZZ	RADIOACTIVITY $^{211,212,213,214,215}\text{Po}$ , $^{272}\text{Bh}$ , $^{275,276}\text{Mt}$ , $^{279,280}\text{Rg}$ , $^{283,284}113(\alpha)$ [from $^{243}\text{Am}(^{48}\text{Ca}, \text{xn})$ ]; measured $E\alpha$ . REPT JINR-E13-2006-19,Tsyganov
2006URZZ	NUCLEAR REACTIONS $^{208}\text{Pb}(^{90}\text{Zr}, \text{X})$ , $E=560$ MeV; measured fragments isotopic yields following multinucleon transfer, velocity distributions, $E\gamma$ , $I\gamma$ . $^{208}\text{Pb}(^{90}\text{Zr}, ^{90}\text{Zr})$ , $E=560$ MeV; measured $\sigma(\theta)$ . $^{92}\text{Zr}$ deduced transitions. CONF San Servolo(Fusion06),Proc,P43
$^{208}\text{Fr}$	NUCLEAR REACTIONS $\text{Be}(^{238}\text{U}, \text{X})$ , $E=900$ MeV / nucleon; measured prompt and delayed $E\gamma$ , $I\gamma$ , (recoil) $\gamma$ , $\gamma\gamma$ -coin. $^{208}\text{Fr}$ , $^{211}\text{Ra}$ , $^{216}\text{Ac}$ deduced levels, $J$ , $\pi$ , isomeric states $T_{1/2}$ . CONF Isle of Kos (FINUSTAR),Proc,P114

**A=209**

$^{209}\text{Pb}$	2006STZX	RADIOACTIVITY $^{227}\text{Th}$ , $^{225,227}\text{Ac}$ , $^{224,225}\text{Ra}$ , $^{221,223}\text{Fr}$ , $^{219,220,221}\text{Rn}$ , $^{217,219}\text{At}$ , $^{212,213,215,216,217}\text{Po}$ , $^{211,212}\text{Bi}(\alpha)$ ; measured $E\alpha$ , $\gamma$ -ray anisotropy, $T_{1/2}$ for sources implanted in metals. PREPRINT nucl-ex/0611041,11/29/2006
	2006TSZZ	RADIOACTIVITY $^{211,212,213,214,215}\text{Po}$ , $^{272}\text{Bh}$ , $^{275,276}\text{Mt}$ , $^{279,280}\text{Rg}$ , $^{283,284}113(\alpha)$ [from $^{243}\text{Am}(^{48}\text{Ca}, \text{xn})$ ]; measured $E\alpha$ . REPT JINR-E13-2006-19,Tsyganov
$^{209}\text{Bi}$	2006GLZZ	NUCLEAR REACTIONS $^{209}\text{Bi}(^{11}\text{Be}, ^{11}\text{Be})$ , $(^{11}\text{Be}, 2n^{9}\text{Be})$ , $E=40$ MeV; measured elastic and quasi-elastic $\sigma(\theta)$ . CONF San Servolo(Fusion06),Proc,P108
$^{209}\text{At}$	2006TAZX	RADIOACTIVITY $^{209}\text{Rn}(\text{EC})$ [from $^{197}\text{Au}(^{16}\text{O}, 4n)$ and subsequent decay]; measured $E\gamma$ , $I\gamma$ , anisotropy following decay of polarized source. $^{209}\text{At}$ transitions deduced limits on mixing ratios. PREPRINT nucl-ex/0612006,12/07/2006
$^{209}\text{Rn}$	2006TAZX	RADIOACTIVITY $^{209}\text{Rn}(\text{EC})$ [from $^{197}\text{Au}(^{16}\text{O}, 4n)$ and subsequent decay]; measured $E\gamma$ , $I\gamma$ , anisotropy following decay of polarized source. $^{209}\text{At}$ transitions deduced limits on mixing ratios. PREPRINT nucl-ex/0612006,12/07/2006

**A=210**

$^{210}\text{Pb}$	2006TSZZ	RADIOACTIVITY $^{211,212,213,214,215}\text{Po}$ , $^{272}\text{Bh}$ , $^{275,276}\text{Mt}$ , $^{279,280}\text{Rg}$ , $^{283,284}113(\alpha)$ [from $^{243}\text{Am}(^{48}\text{Ca}, \text{xn})$ ]; measured E $\alpha$ . REPT JINR-E13-2006-19,Tsyganov
$^{210}\text{Bi}$	2006DOZW	NUCLEAR REACTIONS $^{209}\text{Bi}(\text{n}, \gamma)$ , $E \approx 0.8\text{-}23 \text{ keV}$ ; measured $\sigma$ ; deduced resonance parameters, Maxwellian averaged $\sigma$ . PREPRINT nucl-ex/0610040,10/26/2006
$^{210}\text{Po}$	2006PEZW	NUCLEAR REACTIONS $^{197}\text{Au}(^{6}\text{He}, 2\text{n})$ , $(^{6}\text{He}, 3\text{n})$ , $(^{6}\text{He}, 4\text{n})$ , $(^{6}\text{He}, 5\text{n})$ , $(^{6}\text{He}, 6\text{n})$ , $(^{6}\text{He}, 7\text{n})$ , $E \approx 10\text{-}70 \text{ MeV}$ ; $^{206}\text{Pb}(^{6}\text{He}, 2\text{n})$ , $E \approx 10\text{-}26 \text{ MeV}$ ; $^{197}\text{Au}(^{6}\text{He}, \text{X})^{194}\text{Au} / ^{196}\text{Au} / ^{198}\text{Au}$ , $E \approx 10\text{-}60 \text{ MeV}$ ; measured excitation functions. REPT JINR-E7-2006-75, Penionzhkevich

**A=211**

$^{211}\text{Pb}$	2006STZX	RADIOACTIVITY $^{227}\text{Th}$ , $^{225,227}\text{Ac}$ , $^{224,225}\text{Ra}$ , $^{221,223}\text{Fr}$ , $^{219,220,221}\text{Rn}$ , $^{217,219}\text{At}$ , $^{212,213,215,216,217}\text{Po}$ , $^{211,212}\text{Bi}(\alpha)$ ; measured E $\alpha$ , $\gamma$ -ray anisotropy, $T_{1/2}$ for sources implanted in metals. PREPRINT nucl-ex/0611041,11/29/2006
	2006TSZZ	RADIOACTIVITY $^{211,212,213,214,215}\text{Po}$ , $^{272}\text{Bh}$ , $^{275,276}\text{Mt}$ , $^{279,280}\text{Rg}$ , $^{283,284}113(\alpha)$ [from $^{243}\text{Am}(^{48}\text{Ca}, \text{xn})$ ]; measured E $\alpha$ . REPT JINR-E13-2006-19,Tsyganov
$^{211}\text{Bi}$	2006STZX	RADIOACTIVITY $^{227}\text{Th}$ , $^{225,227}\text{Ac}$ , $^{224,225}\text{Ra}$ , $^{221,223}\text{Fr}$ , $^{219,220,221}\text{Rn}$ , $^{217,219}\text{At}$ , $^{212,213,215,216,217}\text{Po}$ , $^{211,212}\text{Bi}(\alpha)$ ; measured E $\alpha$ , $\gamma$ -ray anisotropy, $T_{1/2}$ for sources implanted in metals. PREPRINT nucl-ex/0611041,11/29/2006
$^{211}\text{Po}$	2006TSZZ	RADIOACTIVITY $^{211,212,213,214,215}\text{Po}$ , $^{272}\text{Bh}$ , $^{275,276}\text{Mt}$ , $^{279,280}\text{Rg}$ , $^{283,284}113(\alpha)$ [from $^{243}\text{Am}(^{48}\text{Ca}, \text{xn})$ ]; measured E $\alpha$ . REPT JINR-E13-2006-19,Tsyganov
$^{211}\text{Ra}$	2006POZX	NUCLEAR REACTIONS $\text{Be}(^{238}\text{U}, \text{X})$ , $E=900 \text{ MeV} / \text{nucleon}$ ; measured prompt and delayed $E\gamma$ , $I\gamma$ , $(\text{recoil})\gamma^-$ , $\gamma\gamma$ -coin. $^{208}\text{Fr}$ , $^{211}\text{Ra}$ , $^{216}\text{Ac}$ deduced levels, $J$ , $\pi$ , isomeric states $T_{1/2}$ . CONF Isle of Kos (FINUSTAR), Proc,P114

**A=212**

$^{212}\text{Pb}$	2006STZX	RADIOACTIVITY $^{227}\text{Th}$ , $^{225,227}\text{Ac}$ , $^{224,225}\text{Ra}$ , $^{221,223}\text{Fr}$ , $^{219,220,221}\text{Rn}$ , $^{217,219}\text{At}$ , $^{212,213,215,216,217}\text{Po}$ , $^{211,212}\text{Bi}(\alpha)$ ; measured E $\alpha$ , $\gamma$ -ray anisotropy, $T_{1/2}$ for sources implanted in metals. PREPRINT nucl-ex/0611041,11/29/2006
$^{212}\text{Bi}$	2006STZX	RADIOACTIVITY $^{227}\text{Th}$ , $^{225,227}\text{Ac}$ , $^{224,225}\text{Ra}$ , $^{221,223}\text{Fr}$ , $^{219,220,221}\text{Rn}$ , $^{217,219}\text{At}$ , $^{212,213,215,216,217}\text{Po}$ , $^{211,212}\text{Bi}(\alpha)$ ; measured E $\alpha$ , $\gamma$ -ray anisotropy, $T_{1/2}$ for sources implanted in metals. PREPRINT nucl-ex/0611041,11/29/2006
$^{212}\text{Po}$	2006STZX	RADIOACTIVITY $^{227}\text{Th}$ , $^{225,227}\text{Ac}$ , $^{224,225}\text{Ra}$ , $^{221,223}\text{Fr}$ , $^{219,220,221}\text{Rn}$ , $^{217,219}\text{At}$ , $^{212,213,215,216,217}\text{Po}$ , $^{211,212}\text{Bi}(\alpha)$ ; measured E $\alpha$ , $\gamma$ -ray anisotropy, $T_{1/2}$ for sources implanted in metals. PREPRINT nucl-ex/0611041,11/29/2006

**A=212 (*continued*)**

$^{2006\text{TSZZ}}$  RADIOACTIVITY  $^{211,212,213,214,215}\text{Po}$ ,  $^{272}\text{Bh}$ ,  $^{275,276}\text{Mt}$ ,  $^{279,280}\text{Rg}$ ,  
 $^{283,284}113(\alpha)$  [from  $^{243}\text{Am}(^{48}\text{Ca}, \text{xn})$ ]; measured E $\alpha$ . REPT  
JINR-E13-2006-19,Tsyganov

**A=213**

$^{213}\text{Pb}$   $^{2006\text{STZX}}$  RADIOACTIVITY  $^{227}\text{Th}$ ,  $^{225,227}\text{Ac}$ ,  $^{224,225}\text{Ra}$ ,  $^{221,223}\text{Fr}$ ,  $^{219,220,221}\text{Rn}$ ,  
 $^{217,219}\text{At}$ ,  $^{212,213,215,216,217}\text{Po}$ ,  $^{211,212}\text{Bi}(\alpha)$ ; measured E $\alpha$ ,  $\gamma$ -ray  
anisotropy, T<sub>1/2</sub> for sources implanted in metals. PREPRINT  
nucl-ex/0611041,11/29/2006

$^{213}\text{Bi}$   $^{2006\text{STZX}}$  RADIOACTIVITY  $^{227}\text{Th}$ ,  $^{225,227}\text{Ac}$ ,  $^{224,225}\text{Ra}$ ,  $^{221,223}\text{Fr}$ ,  $^{219,220,221}\text{Rn}$ ,  
 $^{217,219}\text{At}$ ,  $^{212,213,215,216,217}\text{Po}$ ,  $^{211,212}\text{Bi}(\alpha)$ ; measured E $\alpha$ ,  $\gamma$ -ray  
anisotropy, T<sub>1/2</sub> for sources implanted in metals. PREPRINT  
nucl-ex/0611041,11/29/2006

$^{213}\text{Po}$   $^{2006\text{STZX}}$  RADIOACTIVITY  $^{227}\text{Th}$ ,  $^{225,227}\text{Ac}$ ,  $^{224,225}\text{Ra}$ ,  $^{221,223}\text{Fr}$ ,  $^{219,220,221}\text{Rn}$ ,  
 $^{217,219}\text{At}$ ,  $^{212,213,215,216,217}\text{Po}$ ,  $^{211,212}\text{Bi}(\alpha)$ ; measured E $\alpha$ ,  $\gamma$ -ray  
anisotropy, T<sub>1/2</sub> for sources implanted in metals. PREPRINT  
nucl-ex/0611041,11/29/2006

$^{2006\text{TSZZ}}$  RADIOACTIVITY  $^{211,212,213,214,215}\text{Po}$ ,  $^{272}\text{Bh}$ ,  $^{275,276}\text{Mt}$ ,  $^{279,280}\text{Rg}$ ,  
 $^{283,284}113(\alpha)$  [from  $^{243}\text{Am}(^{48}\text{Ca}, \text{xn})$ ]; measured E $\alpha$ . REPT  
JINR-E13-2006-19,Tsyganov

**A=214**

$^{214}\text{Po}$   $^{2006\text{TSZZ}}$  RADIOACTIVITY  $^{211,212,213,214,215}\text{Po}$ ,  $^{272}\text{Bh}$ ,  $^{275,276}\text{Mt}$ ,  $^{279,280}\text{Rg}$ ,  
 $^{283,284}113(\alpha)$  [from  $^{243}\text{Am}(^{48}\text{Ca}, \text{xn})$ ]; measured E $\alpha$ . REPT  
JINR-E13-2006-19,Tsyganov

$^{214}\text{Th}$   $^{2006\text{LEZR}}$  RADIOACTIVITY  $^{218,218m,219}\text{U}(\alpha)$  [from  $^{182}\text{W}(^{40}\text{Ar}, \text{xn})$ ]; measured  
E $\alpha$ , T<sub>1/2</sub>.  $^{218}\text{U}$  deduced isomeric state J,  $\pi$ . CONF Isle of Kos  
(FINUSTAR),Proc,P487

**A=215**

$^{215}\text{Bi}$   $^{2006\text{STZX}}$  RADIOACTIVITY  $^{227}\text{Th}$ ,  $^{225,227}\text{Ac}$ ,  $^{224,225}\text{Ra}$ ,  $^{221,223}\text{Fr}$ ,  $^{219,220,221}\text{Rn}$ ,  
 $^{217,219}\text{At}$ ,  $^{212,213,215,216,217}\text{Po}$ ,  $^{211,212}\text{Bi}(\alpha)$ ; measured E $\alpha$ ,  $\gamma$ -ray  
anisotropy, T<sub>1/2</sub> for sources implanted in metals. PREPRINT  
nucl-ex/0611041,11/29/2006

$^{215}\text{Po}$   $^{2006\text{STZX}}$  RADIOACTIVITY  $^{227}\text{Th}$ ,  $^{225,227}\text{Ac}$ ,  $^{224,225}\text{Ra}$ ,  $^{221,223}\text{Fr}$ ,  $^{219,220,221}\text{Rn}$ ,  
 $^{217,219}\text{At}$ ,  $^{212,213,215,216,217}\text{Po}$ ,  $^{211,212}\text{Bi}(\alpha)$ ; measured E $\alpha$ ,  $\gamma$ -ray  
anisotropy, T<sub>1/2</sub> for sources implanted in metals. PREPRINT  
nucl-ex/0611041,11/29/2006

$^{2006\text{TSZZ}}$  RADIOACTIVITY  $^{211,212,213,214,215}\text{Po}$ ,  $^{272}\text{Bh}$ ,  $^{275,276}\text{Mt}$ ,  $^{279,280}\text{Rg}$ ,  
 $^{283,284}113(\alpha)$  [from  $^{243}\text{Am}(^{48}\text{Ca}, \text{xn})$ ]; measured E $\alpha$ . REPT  
JINR-E13-2006-19,Tsyganov

## KEYNUMBERS AND KEYWORDS

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### A=215 (*continued*)

$^{215}\text{Th}$  2006LEZR RADIOACTIVITY  $^{218,218m,219}\text{U}(\alpha)$  [from  $^{182}\text{W}({}^{40}\text{Ar}, \text{xn})$ ]; measured E $\alpha$ , T $_{1/2}$ .  $^{218}\text{U}$  deduced isomeric state J,  $\pi$ . CONF Isle of Kos (FINUSTAR), Proc, P487

### A=216

$^{216}\text{Po}$  2006STZX RADIOACTIVITY  $^{227}\text{Th}$ ,  $^{225,227}\text{Ac}$ ,  $^{224,225}\text{Ra}$ ,  $^{221,223}\text{Fr}$ ,  $^{219,220,221}\text{Rn}$ ,  $^{217,219}\text{At}$ ,  $^{212,213,215,216,217}\text{Po}$ ,  $^{211,212}\text{Bi}(\alpha)$ ; measured E $\alpha$ ,  $\gamma$ -ray anisotropy, T $_{1/2}$  for sources implanted in metals. PREPRINT nucl-ex/0611041, 11/29/2006

$^{216}\text{Ac}$  2006POZX NUCLEAR REACTIONS Be( $^{238}\text{U}$ , X), E=900 MeV / nucleon; measured prompt and delayed E $\gamma$ , I $\gamma$ , (recoil) $\gamma$ ,  $\gamma\gamma$ -coin.  $^{208}\text{Fr}$ ,  $^{211}\text{Ra}$ ,  $^{216}\text{Ac}$  deduced levels, J,  $\pi$ , isomeric states T $_{1/2}$ . CONF Isle of Kos (FINUSTAR), Proc, P114

### A=217

$^{217}\text{Po}$  2006STZX RADIOACTIVITY  $^{227}\text{Th}$ ,  $^{225,227}\text{Ac}$ ,  $^{224,225}\text{Ra}$ ,  $^{221,223}\text{Fr}$ ,  $^{219,220,221}\text{Rn}$ ,  $^{217,219}\text{At}$ ,  $^{212,213,215,216,217}\text{Po}$ ,  $^{211,212}\text{Bi}(\alpha)$ ; measured E $\alpha$ ,  $\gamma$ -ray anisotropy, T $_{1/2}$  for sources implanted in metals. PREPRINT nucl-ex/0611041, 11/29/2006

$^{217}\text{At}$  2006STZX RADIOACTIVITY  $^{227}\text{Th}$ ,  $^{225,227}\text{Ac}$ ,  $^{224,225}\text{Ra}$ ,  $^{221,223}\text{Fr}$ ,  $^{219,220,221}\text{Rn}$ ,  $^{217,219}\text{At}$ ,  $^{212,213,215,216,217}\text{Po}$ ,  $^{211,212}\text{Bi}(\alpha)$ ; measured E $\alpha$ ,  $\gamma$ -ray anisotropy, T $_{1/2}$  for sources implanted in metals. PREPRINT nucl-ex/0611041, 11/29/2006

### A=218

$^{218}\text{U}$  2006LEZR RADIOACTIVITY  $^{218,218m,219}\text{U}(\alpha)$  [from  $^{182}\text{W}({}^{40}\text{Ar}, \text{xn})$ ]; measured E $\alpha$ , T $_{1/2}$ .  $^{218}\text{U}$  deduced isomeric state J,  $\pi$ . CONF Isle of Kos (FINUSTAR), Proc, P487

### A=219

$^{219}\text{At}$  2006STZX RADIOACTIVITY  $^{227}\text{Th}$ ,  $^{225,227}\text{Ac}$ ,  $^{224,225}\text{Ra}$ ,  $^{221,223}\text{Fr}$ ,  $^{219,220,221}\text{Rn}$ ,  $^{217,219}\text{At}$ ,  $^{212,213,215,216,217}\text{Po}$ ,  $^{211,212}\text{Bi}(\alpha)$ ; measured E $\alpha$ ,  $\gamma$ -ray anisotropy, T $_{1/2}$  for sources implanted in metals. PREPRINT nucl-ex/0611041, 11/29/2006

$^{219}\text{Rn}$  2006STZX RADIOACTIVITY  $^{227}\text{Th}$ ,  $^{225,227}\text{Ac}$ ,  $^{224,225}\text{Ra}$ ,  $^{221,223}\text{Fr}$ ,  $^{219,220,221}\text{Rn}$ ,  $^{217,219}\text{At}$ ,  $^{212,213,215,216,217}\text{Po}$ ,  $^{211,212}\text{Bi}(\alpha)$ ; measured E $\alpha$ ,  $\gamma$ -ray anisotropy, T $_{1/2}$  for sources implanted in metals. PREPRINT nucl-ex/0611041, 11/29/2006

$^{219}\text{U}$  2006LEZR RADIOACTIVITY  $^{218,218m,219}\text{U}(\alpha)$  [from  $^{182}\text{W}({}^{40}\text{Ar}, \text{xn})$ ]; measured E $\alpha$ , T $_{1/2}$ .  $^{218}\text{U}$  deduced isomeric state J,  $\pi$ . CONF Isle of Kos (FINUSTAR), Proc, P487

## KEYNUMBERS AND KEYWORDS

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### A=220

$^{220}\text{Rn}$	2006STZX	RADIOACTIVITY $^{227}\text{Th}$ , $^{225,227}\text{Ac}$ , $^{224,225}\text{Ra}$ , $^{221,223}\text{Fr}$ , $^{219,220,221}\text{Rn}$ , $^{217,219}\text{At}$ , $^{212,213,215,216,217}\text{Po}$ , $^{211,212}\text{Bi}(\alpha)$ ; measured E $\alpha$ , $\gamma$ -ray anisotropy, T <sub>1/2</sub> for sources implanted in metals. PREPRINT nucl-ex/0611041,11/29/2006
$^{220}\text{Th}$	2006RE15	NUCLEAR REACTIONS $^{198}\text{Pt}(^{26}\text{Mg}, 4\text{n})$ , E=128 MeV; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -, (recoil) $\gamma$ -coin. $^{220}\text{Th}$ deduced high-spin levels, J, $\pi$ , B(E1) / B(E2). Gammasphere array. JOUR PRVCA 74 044305

### A=221

$^{221}\text{Rn}$	2006STZX	RADIOACTIVITY $^{227}\text{Th}$ , $^{225,227}\text{Ac}$ , $^{224,225}\text{Ra}$ , $^{221,223}\text{Fr}$ , $^{219,220,221}\text{Rn}$ , $^{217,219}\text{At}$ , $^{212,213,215,216,217}\text{Po}$ , $^{211,212}\text{Bi}(\alpha)$ ; measured E $\alpha$ , $\gamma$ -ray anisotropy, T <sub>1/2</sub> for sources implanted in metals. PREPRINT nucl-ex/0611041,11/29/2006
$^{221}\text{Fr}$	2006STZX	RADIOACTIVITY $^{227}\text{Th}$ , $^{225,227}\text{Ac}$ , $^{224,225}\text{Ra}$ , $^{221,223}\text{Fr}$ , $^{219,220,221}\text{Rn}$ , $^{217,219}\text{At}$ , $^{212,213,215,216,217}\text{Po}$ , $^{211,212}\text{Bi}(\alpha)$ ; measured E $\alpha$ , $\gamma$ -ray anisotropy, T <sub>1/2</sub> for sources implanted in metals. PREPRINT nucl-ex/0611041,11/29/2006

### A=222

$^{222}\text{Rn}$	2007NE01	RADIOACTIVITY $^{226}\text{Ra}$ , $^{237}\text{Np}$ , $^{233}\text{U}(\alpha)$ ; measured E $\alpha$ , I $\alpha$ ; deduced activity. JOUR ARISE 65 209
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### A=223

$^{223}\text{Fr}$	2006STZX	RADIOACTIVITY $^{227}\text{Th}$ , $^{225,227}\text{Ac}$ , $^{224,225}\text{Ra}$ , $^{221,223}\text{Fr}$ , $^{219,220,221}\text{Rn}$ , $^{217,219}\text{At}$ , $^{212,213,215,216,217}\text{Po}$ , $^{211,212}\text{Bi}(\alpha)$ ; measured E $\alpha$ , $\gamma$ -ray anisotropy, T <sub>1/2</sub> for sources implanted in metals. PREPRINT nucl-ex/0611041,11/29/2006
$^{223}\text{Ra}$	2006STZX	RADIOACTIVITY $^{227}\text{Th}$ , $^{225,227}\text{Ac}$ , $^{224,225}\text{Ra}$ , $^{221,223}\text{Fr}$ , $^{219,220,221}\text{Rn}$ , $^{217,219}\text{At}$ , $^{212,213,215,216,217}\text{Po}$ , $^{211,212}\text{Bi}(\alpha)$ ; measured E $\alpha$ , $\gamma$ -ray anisotropy, T <sub>1/2</sub> for sources implanted in metals. PREPRINT nucl-ex/0611041,11/29/2006

### A=224

$^{224}\text{Ra}$	2006STZX	RADIOACTIVITY $^{227}\text{Th}$ , $^{225,227}\text{Ac}$ , $^{224,225}\text{Ra}$ , $^{221,223}\text{Fr}$ , $^{219,220,221}\text{Rn}$ , $^{217,219}\text{At}$ , $^{212,213,215,216,217}\text{Po}$ , $^{211,212}\text{Bi}(\alpha)$ ; measured E $\alpha$ , $\gamma$ -ray anisotropy, T <sub>1/2</sub> for sources implanted in metals. PREPRINT nucl-ex/0611041,11/29/2006
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## KEYNUMBERS AND KEYWORDS

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### A=225

$^{225}\text{Ra}$	2006STZX	RADIOACTIVITY $^{227}\text{Th}$ , $^{225,227}\text{Ac}$ , $^{224,225}\text{Ra}$ , $^{221,223}\text{Fr}$ , $^{219,220,221}\text{Rn}$ , $^{217,219}\text{At}$ , $^{212,213,215,216,217}\text{Po}$ , $^{211,212}\text{Bi}(\alpha)$ ; measured E $\alpha$ , $\gamma$ -ray anisotropy, T <sub>1/2</sub> for sources implanted in metals. PREPRINT nucl-ex/0611041,11/29/2006
$^{225}\text{Ac}$	2006STZX	RADIOACTIVITY $^{227}\text{Th}$ , $^{225,227}\text{Ac}$ , $^{224,225}\text{Ra}$ , $^{221,223}\text{Fr}$ , $^{219,220,221}\text{Rn}$ , $^{217,219}\text{At}$ , $^{212,213,215,216,217}\text{Po}$ , $^{211,212}\text{Bi}(\alpha)$ ; measured E $\alpha$ , $\gamma$ -ray anisotropy, T <sub>1/2</sub> for sources implanted in metals. PREPRINT nucl-ex/0611041,11/29/2006

### A=226

$^{226}\text{Ra}$	2007NE01	RADIOACTIVITY $^{226}\text{Ra}$ , $^{237}\text{Np}$ , $^{233}\text{U}(\alpha)$ ; measured E $\alpha$ , I $\alpha$ ; deduced activity. JOUR ARISE 65 209
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### A=227

$^{227}\text{Ac}$	2006STZX	RADIOACTIVITY $^{227}\text{Th}$ , $^{225,227}\text{Ac}$ , $^{224,225}\text{Ra}$ , $^{221,223}\text{Fr}$ , $^{219,220,221}\text{Rn}$ , $^{217,219}\text{At}$ , $^{212,213,215,216,217}\text{Po}$ , $^{211,212}\text{Bi}(\alpha)$ ; measured E $\alpha$ , $\gamma$ -ray anisotropy, T <sub>1/2</sub> for sources implanted in metals. PREPRINT nucl-ex/0611041,11/29/2006
$^{227}\text{Th}$	2006STZX	RADIOACTIVITY $^{227}\text{Th}$ , $^{225,227}\text{Ac}$ , $^{224,225}\text{Ra}$ , $^{221,223}\text{Fr}$ , $^{219,220,221}\text{Rn}$ , $^{217,219}\text{At}$ , $^{212,213,215,216,217}\text{Po}$ , $^{211,212}\text{Bi}(\alpha)$ ; measured E $\alpha$ , $\gamma$ -ray anisotropy, T <sub>1/2</sub> for sources implanted in metals. PREPRINT nucl-ex/0611041,11/29/2006

### A=228

$^{228}\text{Fr}$	2006LI59	ATOMIC MASSES $^{235}\text{Ac}$ , $^{228m}\text{Fr}$ ; measured mass, T <sub>1/2</sub> . Stored beams, Schottky mass spectrometry. JOUR IMPEE 15 1645
$^{228}\text{Ra}$	2006XU10	RADIOACTIVITY $^{228}\text{Ra}(\beta^-)$ ; measured $\beta$ -delayed fission fragment tracks. $^{228}\text{Ac}$ deduced $\beta$ -delayed fission probability. Radiochemical separation, mica foils. JOUR PRVCA 74 047303
$^{228}\text{Ac}$	2006XU10	RADIOACTIVITY $^{228}\text{Ra}(\beta^-)$ ; measured $\beta$ -delayed fission fragment tracks. $^{228}\text{Ac}$ deduced $\beta$ -delayed fission probability. Radiochemical separation, mica foils. JOUR PRVCA 74 047303

### A=229

$^{229}\text{Th}$	2005GA63	NUCLEAR REACTIONS $^{229}\text{Th}(\gamma, \gamma')$ , E=8.2 MeV bremsstrahlung; measured prompt and delayed E $\gamma$ , I $\gamma$ ; deduced no light emission from isomer decay. JOUR BRSPE 69 1857
	2007NE01	RADIOACTIVITY $^{226}\text{Ra}$ , $^{237}\text{Np}$ , $^{233}\text{U}(\alpha)$ ; measured E $\alpha$ , I $\alpha$ ; deduced activity. JOUR ARISE 65 209

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**KEYNUMBERS AND KEYWORDS**

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**A=230**

$^{230}\text{Pa}$  2006CSZX NUCLEAR REACTIONS  $^{231}\text{Pa}(\text{d}, \text{p})$ ,  $(\text{d}, \text{t})$ , E=12 MeV; measured triton and proton spectra.  $^{230,232}\text{Pa}$  deduced excited states. REPT MLL 2005 Annual, P17,Csatlos

**A=231**

$^{231}\text{Ra}$  2006B033 RADIOACTIVITY  $^{231}\text{Ra}(\beta^-)$  [from U(p, X)]; measured  $E\gamma$ ,  $I\gamma$ ,  $T_{1/2}$ . JOUR PHSTB T125 180

$^{231}\text{Ac}$  2006B033 RADIOACTIVITY  $^{231}\text{Ra}(\beta^-)$  [from U(p, X)]; measured  $E\gamma$ ,  $I\gamma$ ,  $T_{1/2}$ . JOUR PHSTB T125 180

$^{231}\text{Th}$  2006AL28 RADIOACTIVITY  $^{235}\text{U}(\alpha)$ ;  $^{234}\text{Th}$ ,  $^{234,234m}\text{Pa}(\beta^-)$ ; measured  $E\gamma$ ,  $I\gamma$ ; deduced absolute intensities. JOUR NIMAE 568 734

**A=232**

$^{232}\text{Pa}$  2006CSZX NUCLEAR REACTIONS  $^{231}\text{Pa}(\text{d}, \text{p})$ ,  $(\text{d}, \text{t})$ , E=12 MeV; measured triton and proton spectra.  $^{230,232}\text{Pa}$  deduced excited states. REPT MLL 2005 Annual, P17,Csatlos

$^{232}\text{U}$  2006CSZW NUCLEAR REACTIONS  $^{231}\text{Pa}(^3\text{He}, \text{dF})$ , E=38.1 MeV; measured deuteron and fission fragment spectra.  $^{232}\text{U}$  deduced fission probability vs excitation energy. REPT MLL 2005 Annual, P18,Csatlos

**A=233**

$^{233}\text{Pa}$  2007NE01 RADIOACTIVITY  $^{226}\text{Ra}$ ,  $^{237}\text{Np}$ ,  $^{233}\text{U}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ ; deduced activity. JOUR ARISE 65 209

$^{233}\text{U}$  2007NE01 RADIOACTIVITY  $^{226}\text{Ra}$ ,  $^{237}\text{Np}$ ,  $^{233}\text{U}(\alpha)$ ; measured  $E\alpha$ ,  $I\alpha$ ; deduced activity. JOUR ARISE 65 209

**A=234**

$^{234}\text{Th}$  2006AL28 RADIOACTIVITY  $^{235}\text{U}(\alpha)$ ;  $^{234}\text{Th}$ ,  $^{234,234m}\text{Pa}(\beta^-)$ ; measured  $E\gamma$ ,  $I\gamma$ ; deduced absolute intensities. JOUR NIMAE 568 734

$^{234}\text{Pa}$  2006AL28 RADIOACTIVITY  $^{235}\text{U}(\alpha)$ ;  $^{234}\text{Th}$ ,  $^{234,234m}\text{Pa}(\beta^-)$ ; measured  $E\gamma$ ,  $I\gamma$ ; deduced absolute intensities. JOUR NIMAE 568 734

$^{234}\text{U}$  2006AL28 RADIOACTIVITY  $^{235}\text{U}(\alpha)$ ;  $^{234}\text{Th}$ ,  $^{234,234m}\text{Pa}(\beta^-)$ ; measured  $E\gamma$ ,  $I\gamma$ ; deduced absolute intensities. JOUR NIMAE 568 734

**A=235**

$^{235}\text{Ac}$  2006LI59 ATOMIC MASSES  $^{235}\text{Ac}$ ,  $^{228m}\text{Fr}$ ; measured mass,  $T_{1/2}$ . Stored beams, Schottky mass spectrometry. JOUR IMPEE 15 1645

$^{235}\text{U}$  2006AL28 RADIOACTIVITY  $^{235}\text{U}(\alpha)$ ;  $^{234}\text{Th}$ ,  $^{234,234m}\text{Pa}(\beta^-)$ ; measured  $E\gamma$ ,  $I\gamma$ ; deduced absolute intensities. JOUR NIMAE 568 734

*KEYNUMBERS AND KEYWORDS*

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**A=236**

$^{236}\text{U}$       2006CSZV      NUCLEAR REACTIONS  $^{235}\text{U}(\text{d}, \text{pF})$ , E=13 MeV; measured Ep, fission fragment spectra.  $^{236}\text{U}$  deduced fission probability vs excitation energy, hyperdeformed transmission resonances. REPT MLL 2005 Annual, P19,Csige

**A=237**

$^{237}\text{Np}$       2007NE01      RADIOACTIVITY  $^{226}\text{Ra}$ ,  $^{237}\text{Np}$ ,  $^{233}\text{U}(\alpha)$ ; measured E $\alpha$ , I $\alpha$ ; deduced activity. JOUR ARISE 65 209

$^{237}\text{Pu}$       2006MOZT      NUCLEAR REACTIONS  $^{235}\text{U}(\alpha, \text{X})$ , E=24 MeV; measured prompt and delayed E $\gamma$ , I $\gamma$ , fission fragment spectra.  $^{237}\text{Pu}$  deduced fission isomer features. REPT MLL 2005 Annual, P20,Morgan

**A=238**

$^{238}\text{Np}$       2005LEZS      NUCLEAR REACTIONS  $^{241,242,243}\text{Am}$ ,  $^{242}\text{Pu}$ ,  $^{237}\text{Np}(\text{n}, \gamma)$ , E=spectrum; measured capture  $\sigma$ .  $^{238}\text{Np}(\text{n}, \text{F})$ , E=spectrum; measured fission  $\sigma$ . CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P11

**A=239**

$^{239}\text{U}$       20050BZW      NUCLEAR REACTIONS  $^{238}\text{U}(\text{n}, \gamma)$ , E=1 MeV; measured delayed E $\gamma$ , I $\gamma$  following shape isomer decay. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P273

**A=240**

$^{240}\text{Am}$       2006PEZX      NUCLEAR REACTIONS  $^{241}\text{Am}(\text{n}, 2\text{n})$ , E=8.8-11.1 MeV; measured  $\sigma$ . Activation technique. CONF Isle of Kos (FINUSTAR),Proc,P532

**A=241**

No references found

**A=242**

No references found

**A=243**

No references found

**KEYNUMBERS AND KEYWORDS**

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**A=244**

$^{244}\text{Cm}$       2005VOZS      RADIOACTIVITY  $^{244,248}\text{Cm}$ ,  $^{252}\text{Cf}(\text{SF})$ ; measured fission neutron multiplicities vs fragment mass, kinetic energy. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P255

**A=245**

No references found

**A=246**

No references found

**A=247**

$^{247}\text{Es}$       2006CH52      RADIOACTIVITY  $^{255}\text{Lr}$ ,  $^{251}\text{Md}(\alpha)$  [from  $^{209}\text{Bi}(^{48}\text{Ca}, 2n)$  and subsequent decay]; measured  $E\alpha$ ,  $E\gamma$ ,  $E(\text{ce})$ ,  $\alpha\gamma$ -,  $\alpha(\text{ce})$ -coin,  $Q\alpha$ ,  $T_{1/2}$ .  $^{255}\text{Lr}$ ,  $^{251}\text{Md}$ ,  $^{247}\text{Es}$  deduced levels,  $J$ ,  $\pi$ , configurations. JOUR ZAANE 30 397

**A=248**

$^{248}\text{Cm}$       2005PIZX      RADIOACTIVITY  $^{248}\text{Cm}(\text{SF})$ ; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin.  $^{97}\text{Sr}$ ,  $^{99,101}\text{Zr}$  deduced levels,  $J$ ,  $\pi$ , shape coexistence features. Eurogam 2 array. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P149

2005VOZS      RADIOACTIVITY  $^{244,248}\text{Cm}$ ,  $^{252}\text{Cf}(\text{SF})$ ; measured fission neutron multiplicities vs fragment mass, kinetic energy. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P255

**A=249**

$^{249}\text{Cm}$       2006AH09      RADIOACTIVITY  $^{253}\text{Es}$ ,  $^{255}\text{Fm}(\alpha)$ ;  $^{249}\text{Cm}(\beta^-)$ ;  $^{251}\text{Es}(\text{EC})$ ; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin.  $^{249}\text{Bk}$ ,  $^{251}\text{Cf}$  deduced single-particle states. Gammasphere array. JOUR PHSTB T125 78

$^{249}\text{Bk}$       2006AH09      RADIOACTIVITY  $^{253}\text{Es}$ ,  $^{255}\text{Fm}(\alpha)$ ;  $^{249}\text{Cm}(\beta^-)$ ;  $^{251}\text{Es}(\text{EC})$ ; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin.  $^{249}\text{Bk}$ ,  $^{251}\text{Cf}$  deduced single-particle states. Gammasphere array. JOUR PHSTB T125 78

$^{249}\text{Fm}$       2006L012      RADIOACTIVITY  $^{253}\text{No}(\alpha)$  [from  $^{207}\text{Pb}(^{48}\text{Ca}, 2n)$ ]; measured  $E\alpha$ ,  $E\gamma$ ,  $\alpha\gamma$ -coin.  $^{249}\text{Fm}$  deduced levels,  $J$ ,  $\pi$ , ICC, configurations. Level systematics in neighboring isotones discussed. JOUR PRVCA 74 044303

**A=250**

$^{250}\text{Cm}$  2006ISZX NUCLEAR REACTIONS  $^{248}\text{Cm}(^{18}\text{O}, ^{16}\text{O})$ , E=162 MeV; measured  $E\gamma$ ,  $I\gamma$ , (particle) $\gamma$ -coin.  $^{250}\text{Cm}$  deduced levels, J,  $\pi$ . REPT  
JAEA-Review 2006-029,P39,Ishii

**A=251**

$^{251}\text{Cf}$  2006AH09 RADIOACTIVITY  $^{253}\text{Es}$ ,  $^{255}\text{Fm}(\alpha)$ ;  $^{249}\text{Cm}(\beta^-)$ ;  $^{251}\text{Es}(\text{EC})$ ; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin.  $^{249}\text{Bk}$ ,  $^{251}\text{Cf}$  deduced single-particle states.  
Gammasphere array. JOUR PHSTB T125 78

$^{251}\text{Es}$  2006AH09 RADIOACTIVITY  $^{253}\text{Es}$ ,  $^{255}\text{Fm}(\alpha)$ ;  $^{249}\text{Cm}(\beta^-)$ ;  $^{251}\text{Es}(\text{EC})$ ; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin.  $^{249}\text{Bk}$ ,  $^{251}\text{Cf}$  deduced single-particle states.  
Gammasphere array. JOUR PHSTB T125 78

$^{251}\text{Fm}$  2006ASZY RADIOACTIVITY  $^{255}\text{No}(\alpha)$  [from  $^{248}\text{Cm}(^{12}\text{C}, 5n)$ ]; measured  $E\gamma$ ,  $I\gamma$ ,  $\alpha\gamma$ -coin.  $^{251}\text{Fm}$  deduced levels, J,  $\pi$ , configurations. REPT  
JAEA-Review 2006-029,P41,Asai

2006NI10 RADIOACTIVITY  $^{263,265}\text{Sg}$ ,  $^{259}\text{Rf}$ ,  $^{255}\text{No}(\alpha)$  [from  $^{238}\text{U}(^{30}\text{Si}, xn)$  and subsequent decay]; measured  $E\alpha$ ,  $T_{1/2}$ .  $^{262,264}\text{Sg}$ ,  $^{261}\text{Rf}(\text{SF})$  [from  $^{238}\text{U}(^{30}\text{Si}, xn)$  and subsequent decay]; measured  $T_{1/2}$ , fission fragments kinetic energy. JOUR ZAANE 29 281

$^{251}\text{Md}$  2006CH52 RADIOACTIVITY  $^{255}\text{Lr}$ ,  $^{251}\text{Md}(\alpha)$  [from  $^{209}\text{Bi}(^{48}\text{Ca}, 2n)$  and subsequent decay]; measured  $E\alpha$ ,  $E\gamma$ ,  $E(\text{ce})$ ,  $\alpha\gamma$ -,  $\alpha(\text{ce})$ -coin,  $Q\alpha$ ,  $T_{1/2}$ .  $^{255}\text{Lr}$ ,  $^{251}\text{Md}$ ,  $^{247}\text{Es}$  deduced levels, J,  $\pi$ , configurations. JOUR ZAANE 30 397

**A=252**

$^{252}\text{Cf}$  2005KOZV RADIOACTIVITY  $^{252}\text{Cf}(\text{SF})$ ; measured light charged particle spectra, yields following ternary and quaternary fission. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P115

2005VAZW RADIOACTIVITY  $^{252}\text{Cf}(\text{SF})$ ; measured neutron spectra, fission fragment mass distributions. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P369

2005VOZS RADIOACTIVITY  $^{244,248}\text{Cm}$ ,  $^{252}\text{Cf}(\text{SF})$ ; measured fission neutron multiplicities vs fragment mass, kinetic energy. CONF Cadarache (Nucl Fission and Fission-Product Spec) Proc, P255

2006DI16 RADIOACTIVITY  $^{252}\text{Cf}(\text{SF})$ ; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin.  $^{105}\text{Mo}$  deduced high-spin levels, J,  $\pi$ , configurations. Gammasphere array, total Routhian surface calculations, level systematics in neighboring isotopes discussed. JOUR PRVCA 74 054301

2006DI17 RADIOACTIVITY  $^{252}\text{Cf}(\text{SF})$ ; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin.  $^{105}\text{Mo}$  deduced high-spin levels, J,  $\pi$ , configurations. Gammasphere array, total Routhian surface calculations, level systematics in neighboring isotopes discussed. JOUR CPLEE 23 3222

## KEYNUMBERS AND KEYWORDS

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### A=253

$^{253}\text{Es}$	2006AH09	RADIOACTIVITY $^{253}\text{Es}$ , $^{255}\text{Fm}(\alpha)$ ; $^{249}\text{Cm}(\beta^-)$ ; $^{251}\text{Es}(\text{EC})$ ; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin. $^{249}\text{Bk}$ , $^{251}\text{Cf}$ deduced single-particle states. Gammasphere array. JOUR PHSTB T125 78
$^{253}\text{No}$	2006L012	RADIOACTIVITY $^{253}\text{No}(\alpha)$ [from $^{207}\text{Pb}(^{48}\text{Ca}, 2n)$ ]; measured $E\alpha$ , $E\gamma$ , $\alpha\gamma$ -coin. $^{249}\text{Fm}$ deduced levels, $J$ , $\pi$ , ICC, configurations. Level systematics in neighboring isotones discussed. JOUR PRVCA 74 044303

### A=254

$^{254}\text{No}$	2006EEZZ	NUCLEAR REACTIONS $^{208}\text{Pb}(^{48}\text{Ca}, 2n)$ , E not given; measured $E\gamma$ , $I\gamma$ , $E(\text{ce})$ , $I(\text{ce})$ , $(\text{recoil})\gamma$ -, $(\text{recoil})(\text{ce})$ -coin. $^{254}\text{No}$ deduced levels, non-yrast states. CONF Isle of Kos (FINUSTAR), Proc, P445
	2006HE25	NUCLEAR REACTIONS $^{208}\text{Pb}(^{48}\text{Ca}, 2n)$ , $E=219$ MeV; measured delayed $E\gamma$ , $I\gamma$ , $E(\text{ce})$ , $I(\text{ce})$ , X-ray spectra, $(\text{recoil})\gamma$ -coin. $^{254}\text{No}$ deduced isomeric states energies, $J$ , $\pi$ , $T_{1/2}$ . Recoil-decay tagging. JOUR PHSTB T125 73

### A=255

$^{255}\text{Fm}$	2006AH09	RADIOACTIVITY $^{253}\text{Es}$ , $^{255}\text{Fm}(\alpha)$ ; $^{249}\text{Cm}(\beta^-)$ ; $^{251}\text{Es}(\text{EC})$ ; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin. $^{249}\text{Bk}$ , $^{251}\text{Cf}$ deduced single-particle states. Gammasphere array. JOUR PHSTB T125 78
$^{255}\text{No}$	2006ASZY	RADIOACTIVITY $^{255}\text{No}(\alpha)$ [from $^{248}\text{Cm}(^{12}\text{C}, 5n)$ ]; measured $E\gamma$ , $I\gamma$ , $\alpha\gamma$ -coin. $^{251}\text{Fm}$ deduced levels, $J$ , $\pi$ , configurations. REPT JAEA-Review 2006-029, P41, Asai
	2006GR24	RADIOACTIVITY $^{262,264}\text{Sg}(\text{SF})$ ; measured $T_{1/2}$ , $\alpha$ -decay branching upper limit. $^{263}\text{Sg}(\text{SF})$ , $(\alpha)$ ; measured $T_{1/2}$ , branching ratio. $^{259}\text{Rf}$ , $^{255}\text{No}$ ; measured $T_{1/2}$ . JOUR PRVCA 74 044611
	2006NI10	RADIOACTIVITY $^{263,265}\text{Sg}$ , $^{259}\text{Rf}$ , $^{255}\text{No}(\alpha)$ [from $^{238}\text{U}(^{30}\text{Si}, \text{xn})$ and subsequent decay]; measured $E\alpha$ , $T_{1/2}$ . $^{262,264}\text{Sg}$ , $^{261}\text{Rf}(\text{SF})$ [from $^{238}\text{U}(^{30}\text{Si}, \text{xn})$ and subsequent decay]; measured $T_{1/2}$ , fission fragments kinetic energy. JOUR ZAANE 29 281
$^{255}\text{Lr}$	2006CH52	RADIOACTIVITY $^{255}\text{Lr}$ , $^{251}\text{Md}(\alpha)$ [from $^{209}\text{Bi}(^{48}\text{Ca}, 2n)$ and subsequent decay]; measured $E\alpha$ , $E\gamma$ , $E(\text{ce})$ , $\alpha\gamma$ -, $\alpha(\text{ce})$ -coin, $Q\alpha$ , $T_{1/2}$ . $^{255}\text{Lr}$ , $^{251}\text{Md}$ , $^{247}\text{Es}$ deduced levels, $J$ , $\pi$ , configurations. JOUR ZAANE 30 397

### A=256

No references found

## KEYNUMBERS AND KEYWORDS

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### A=257

<sup>257</sup>No      2006MOZV      RADIOACTIVITY <sup>278</sup>113, <sup>277</sup>112, <sup>274</sup>Rg, <sup>273</sup>Ds, <sup>270</sup>Mt, <sup>269</sup>Hs, <sup>266</sup>Bh, <sup>265</sup>Sg, <sup>261</sup>Rf( $\alpha$ ) [following <sup>208</sup>Pb, <sup>209</sup>Bi(<sup>70</sup>Zn, n) and subsequent decay]; measured E $\alpha$ , T<sub>1/2</sub>. CONF San Servolo(Fusion06),Proc,P253

### A=258

<sup>258</sup>Fm      2006NIZW      NUCLEAR REACTIONS <sup>244</sup>Pu(<sup>18</sup>O,  $\alpha$ ), E=103, 113 MeV; measured E $\alpha$ , (fission fragment) $\alpha$ -coin; deduced reaction mechanism features. REPT JAEA-Review 2006-029,P49,Nishinaka

### A=259

<sup>259</sup>Rf      2006GR24      RADIOACTIVITY <sup>262</sup>,<sup>264</sup>Sg(SF); measured T<sub>1/2</sub>,  $\alpha$ -decay branching upper limit. <sup>263</sup>Sg(SF), ( $\alpha$ ); measured T<sub>1/2</sub>, branching ratio. <sup>259</sup>Rf, <sup>255</sup>No; measured T<sub>1/2</sub>. JOUR PRVCA 74 044611  
<sup>2006NI10</sup>      RADIOACTIVITY <sup>263</sup>,<sup>265</sup>Sg, <sup>259</sup>Rf, <sup>255</sup>No( $\alpha$ ) [from <sup>238</sup>U(<sup>30</sup>Si, xn) and subsequent decay]; measured E $\alpha$ , T<sub>1/2</sub>. <sup>262</sup>,<sup>264</sup>Sg, <sup>261</sup>Rf(SF) [from <sup>238</sup>U(<sup>30</sup>Si, xn) and subsequent decay]; measured T<sub>1/2</sub>, fission fragments kinetic energy. JOUR ZAANE 29 281

### A=260

No references found

### A=261

<sup>261</sup>Rf      2006DV01      RADIOACTIVITY <sup>269</sup>,<sup>270</sup>Hs, <sup>265</sup>Sg( $\alpha$ ) [from <sup>248</sup>Cm(<sup>26</sup>Mg, xn) and subsequent decay]; measured E $\alpha$ , T<sub>1/2</sub>. <sup>266</sup>Sg(SF) [from <sup>270</sup>Hs decay]; measured T<sub>1/2</sub>. Rapid chemical separation. JOUR PRLTA 97 242501  
2006MOZV      RADIOACTIVITY <sup>278</sup>113, <sup>277</sup>112, <sup>274</sup>Rg, <sup>273</sup>Ds, <sup>270</sup>Mt, <sup>269</sup>Hs, <sup>266</sup>Bh, <sup>265</sup>Sg, <sup>261</sup>Rf( $\alpha$ ) [following <sup>208</sup>Pb, <sup>209</sup>Bi(<sup>70</sup>Zn, n) and subsequent decay]; measured E $\alpha$ , T<sub>1/2</sub>. CONF San Servolo(Fusion06),Proc,P253  
<sup>2006NI10</sup>      RADIOACTIVITY <sup>263</sup>,<sup>265</sup>Sg, <sup>259</sup>Rf, <sup>255</sup>No( $\alpha$ ) [from <sup>238</sup>U(<sup>30</sup>Si, xn) and subsequent decay]; measured E $\alpha$ , T<sub>1/2</sub>. <sup>262</sup>,<sup>264</sup>Sg, <sup>261</sup>Rf(SF) [from <sup>238</sup>U(<sup>30</sup>Si, xn) and subsequent decay]; measured T<sub>1/2</sub>, fission fragments kinetic energy. JOUR ZAANE 29 281

### A=262

<sup>262</sup>Db      2006MOZV      RADIOACTIVITY <sup>278</sup>113, <sup>277</sup>112, <sup>274</sup>Rg, <sup>273</sup>Ds, <sup>270</sup>Mt, <sup>269</sup>Hs, <sup>266</sup>Bh, <sup>265</sup>Sg, <sup>261</sup>Rf( $\alpha$ ) [following <sup>208</sup>Pb, <sup>209</sup>Bi(<sup>70</sup>Zn, n) and subsequent decay]; measured E $\alpha$ , T<sub>1/2</sub>. CONF San Servolo(Fusion06),Proc,P253

**A=262 (*continued*)**

$^{262}\text{Sg}$	2006GR24	NUCLEAR REACTIONS $^{238}\text{U}$ ( $^{30}\text{Si}$ , 4n), ( $^{30}\text{Si}$ , 5n), ( $^{30}\text{Si}$ , 6n), E=147-174 MeV; measured delayed $\text{E}\alpha$ , (recoil) $\alpha$ -coin; deduced excitation functions. JOUR PRVCA 74 044611
	2006GR24	RADIOACTIVITY $^{262,264}\text{Sg}$ (SF); measured $T_{1/2}$ , $\alpha$ -decay branching upper limit. $^{263}\text{Sg}$ (SF), ( $\alpha$ ); measured $T_{1/2}$ , branching ratio. $^{259}\text{Rf}$ , $^{255}\text{No}$ ; measured $T_{1/2}$ . JOUR PRVCA 74 044611
	2006NI10	RADIOACTIVITY $^{263,265}\text{Sg}$ , $^{259}\text{Rf}$ , $^{255}\text{No}$ ( $\alpha$ ) [from $^{238}\text{U}$ ( $^{30}\text{Si}$ , xn) and subsequent decay]; measured $\text{E}\alpha$ , $T_{1/2}$ . $^{262,264}\text{Sg}$ , $^{261}\text{Rf}$ (SF) [from $^{238}\text{U}$ ( $^{30}\text{Si}$ , xn) and subsequent decay]; measured $T_{1/2}$ , fission fragments kinetic energy. JOUR ZAANE 29 281

**A=263**

$^{263}\text{Sg}$	2006GR24	NUCLEAR REACTIONS $^{238}\text{U}$ ( $^{30}\text{Si}$ , 4n), ( $^{30}\text{Si}$ , 5n), ( $^{30}\text{Si}$ , 6n), E=147-174 MeV; measured delayed $\text{E}\alpha$ , (recoil) $\alpha$ -coin; deduced excitation functions. JOUR PRVCA 74 044611
	2006GR24	RADIOACTIVITY $^{262,264}\text{Sg}$ (SF); measured $T_{1/2}$ , $\alpha$ -decay branching upper limit. $^{263}\text{Sg}$ (SF), ( $\alpha$ ); measured $T_{1/2}$ , branching ratio. $^{259}\text{Rf}$ , $^{255}\text{No}$ ; measured $T_{1/2}$ . JOUR PRVCA 74 044611
	2006NI10	NUCLEAR REACTIONS $^{238}\text{U}$ ( $^{30}\text{Si}$ , F), ( $^{30}\text{Si}$ , 3n), ( $^{30}\text{Si}$ , 4n), ( $^{30}\text{Si}$ , 5n), E=145.5, 151.2, 163.5 MeV; measured fission and evaporation residue $\sigma$ . JOUR ZAANE 29 281
	2006NI10	RADIOACTIVITY $^{263,265}\text{Sg}$ , $^{259}\text{Rf}$ , $^{255}\text{No}$ ( $\alpha$ ) [from $^{238}\text{U}$ ( $^{30}\text{Si}$ , xn) and subsequent decay]; measured $\text{E}\alpha$ , $T_{1/2}$ . $^{262,264}\text{Sg}$ , $^{261}\text{Rf}$ (SF) [from $^{238}\text{U}$ ( $^{30}\text{Si}$ , xn) and subsequent decay]; measured $T_{1/2}$ , fission fragments kinetic energy. JOUR ZAANE 29 281

**A=264**

$^{264}\text{Sg}$	2006GR24	NUCLEAR REACTIONS $^{238}\text{U}$ ( $^{30}\text{Si}$ , 4n), ( $^{30}\text{Si}$ , 5n), ( $^{30}\text{Si}$ , 6n), E=147-174 MeV; measured delayed $\text{E}\alpha$ , (recoil) $\alpha$ -coin; deduced excitation functions. JOUR PRVCA 74 044611
	2006GR24	RADIOACTIVITY $^{262,264}\text{Sg}$ (SF); measured $T_{1/2}$ , $\alpha$ -decay branching upper limit. $^{263}\text{Sg}$ (SF), ( $\alpha$ ); measured $T_{1/2}$ , branching ratio. $^{259}\text{Rf}$ , $^{255}\text{No}$ ; measured $T_{1/2}$ . JOUR PRVCA 74 044611
	2006NI10	NUCLEAR REACTIONS $^{238}\text{U}$ ( $^{30}\text{Si}$ , F), ( $^{30}\text{Si}$ , 3n), ( $^{30}\text{Si}$ , 4n), ( $^{30}\text{Si}$ , 5n), E=145.5, 151.2, 163.5 MeV; measured fission and evaporation residue $\sigma$ . JOUR ZAANE 29 281
	2006NI10	RADIOACTIVITY $^{263,265}\text{Sg}$ , $^{259}\text{Rf}$ , $^{255}\text{No}$ ( $\alpha$ ) [from $^{238}\text{U}$ ( $^{30}\text{Si}$ , xn) and subsequent decay]; measured $\text{E}\alpha$ , $T_{1/2}$ . $^{262,264}\text{Sg}$ , $^{261}\text{Rf}$ (SF) [from $^{238}\text{U}$ ( $^{30}\text{Si}$ , xn) and subsequent decay]; measured $T_{1/2}$ , fission fragments kinetic energy. JOUR ZAANE 29 281

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**KEYNUMBERS AND KEYWORDS**

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**A=265**

$^{265}\text{Sg}$	2006DV01	RADIOACTIVITY $^{269,270}\text{Hs}$ , $^{265}\text{Sg}(\alpha)$ [from $^{248}\text{Cm}(^{26}\text{Mg}, \text{xn})$ and subsequent decay]; measured $\text{E}\alpha$ , $T_{1/2}$ . $^{266}\text{Sg}(\text{SF})$ [from $^{270}\text{Hs}$ decay]; measured $T_{1/2}$ . Rapid chemical separation. JOUR PRLTA 97 242501
	2006MOZV	RADIOACTIVITY $^{278}\text{113}$ , $^{277}\text{112}$ , $^{274}\text{Rg}$ , $^{273}\text{Ds}$ , $^{270}\text{Mt}$ , $^{269}\text{Hs}$ , $^{266}\text{Bh}$ , $^{265}\text{Sg}$ , $^{261}\text{Rf}(\alpha)$ [following $^{208}\text{Pb}$ , $^{209}\text{Bi}(^{70}\text{Zn}, \text{n})$ and subsequent decay]; measured $\text{E}\alpha$ , $T_{1/2}$ . CONF San Servolo(Fusion06),Proc,P253
	2006NI10	NUCLEAR REACTIONS $^{238}\text{U}(^{30}\text{Si}, \text{F})$ , $(^{30}\text{Si}, 3\text{n})$ , $(^{30}\text{Si}, 4\text{n})$ , $(^{30}\text{Si}, 5\text{n})$ , $E=145.5, 151.2, 163.5$ MeV; measured fission and evaporation residue $\sigma$ . JOUR ZAANE 29 281
	2006NI10	RADIOACTIVITY $^{263,265}\text{Sg}$ , $^{259}\text{Rf}$ , $^{255}\text{No}(\alpha)$ [from $^{238}\text{U}(^{30}\text{Si}, \text{xn})$ and subsequent decay]; measured $\text{E}\alpha$ , $T_{1/2}$ . $^{262,264}\text{Sg}$ , $^{261}\text{Rf}(\text{SF})$ [from $^{238}\text{U}(^{30}\text{Si}, \text{xn})$ and subsequent decay]; measured $T_{1/2}$ , fission fragments kinetic energy. JOUR ZAANE 29 281

**A=266**

$^{266}\text{Sg}$	2006DV01	RADIOACTIVITY $^{269,270}\text{Hs}$ , $^{265}\text{Sg}(\alpha)$ [from $^{248}\text{Cm}(^{26}\text{Mg}, \text{xn})$ and subsequent decay]; measured $\text{E}\alpha$ , $T_{1/2}$ . $^{266}\text{Sg}(\text{SF})$ [from $^{270}\text{Hs}$ decay]; measured $T_{1/2}$ . Rapid chemical separation. JOUR PRLTA 97 242501
$^{266}\text{Bh}$	2006MOZV	RADIOACTIVITY $^{278}\text{113}$ , $^{277}\text{112}$ , $^{274}\text{Rg}$ , $^{273}\text{Ds}$ , $^{270}\text{Mt}$ , $^{269}\text{Hs}$ , $^{266}\text{Bh}$ , $^{265}\text{Sg}$ , $^{261}\text{Rf}(\alpha)$ [following $^{208}\text{Pb}$ , $^{209}\text{Bi}(^{70}\text{Zn}, \text{n})$ and subsequent decay]; measured $\text{E}\alpha$ , $T_{1/2}$ . CONF San Servolo(Fusion06),Proc,P253

**A=267**

$^{267}\text{Rf}$	2006G05	RADIOACTIVITY $^{294}\text{118}$ , $^{290,291}\text{116}$ , $^{286,287}\text{114}$ , $^{283}\text{112}$ , $^{279}\text{Ds}$ , $^{275}\text{Hs}$ , $^{271}\text{Sg}(\alpha)$ [from $^{245}\text{Cm}$ , $^{249}\text{Cf}(^{48}\text{Ca}, \text{xn})$ and subsequent decay]; measured $\text{E}\alpha$ , $T_{1/2}$ . $^{282}\text{112}$ , $^{267}\text{Rf}(\text{SF})$ [from $\alpha$ -decay of $^{286}\text{Rf}$ and $^{271}\text{Sg}$ ]; measured fission fragment spectra, $T_{1/2}$ . JOUR PRVCA 74 044602
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**A=268**

$^{268}\text{Db}$	2006TSZZ	RADIOACTIVITY $^{211,212,213,214,215}\text{Po}$ , $^{272}\text{Bh}$ , $^{275,276}\text{Mt}$ , $^{279,280}\text{Rg}$ , $^{283,284}\text{113}(\alpha)$ [from $^{243}\text{Am}(^{48}\text{Ca}, \text{xn})$ ]; measured $\text{E}\alpha$ . REPT JINR-E13-2006-19,Tsyganov
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**A=269**

$^{269}\text{Hs}$	2006DV01	RADIOACTIVITY $^{269,270}\text{Hs}$ , $^{265}\text{Sg}(\alpha)$ [from $^{248}\text{Cm}(^{26}\text{Mg}, \text{xn})$ and subsequent decay]; measured $\text{E}\alpha$ , $T_{1/2}$ . $^{266}\text{Sg}(\text{SF})$ [from $^{270}\text{Hs}$ decay]; measured $T_{1/2}$ . Rapid chemical separation. JOUR PRLTA 97 242501
	2006DV01	NUCLEAR REACTIONS $^{248}\text{Cm}(^{26}\text{Mg}, 4\text{n})$ , $(^{26}\text{Mg}, 5\text{n})$ , $E=136, 145$ MeV; measured delayed $\text{E}\alpha$ , $\alpha\alpha$ -coin; deduced production $\sigma$ . JOUR PRLTA 97 242501

**KEYNUMBERS AND KEYWORDS**

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**A=269 (*continued*)**

2006MOZV      RADIOACTIVITY  $^{278}\text{113}$ ,  $^{277}\text{112}$ ,  $^{274}\text{Rg}$ ,  $^{273}\text{Ds}$ ,  $^{270}\text{Mt}$ ,  $^{269}\text{Hs}$ ,  $^{266}\text{Bh}$ ,  $^{265}\text{Sg}$ ,  $^{261}\text{Rf}(\alpha)$  [following  $^{208}\text{Pb}$ ,  $^{209}\text{Bi}$ ( $^{70}\text{Zn}$ , n) and subsequent decay]; measured E $\alpha$ , T $_{1/2}$ . CONF San Servolo(Fusion06),Proc,P253

**A=270**

$^{270}\text{Hs}$	2006DV01	RADIOACTIVITY $^{269,270}\text{Hs}$ , $^{265}\text{Sg}(\alpha)$ [from $^{248}\text{Cm}$ ( $^{26}\text{Mg}$ , xn) and subsequent decay]; measured E $\alpha$ , T $_{1/2}$ . $^{266}\text{Sg}$ (SF) [from $^{270}\text{Hs}$ decay]; measured T $_{1/2}$ . Rapid chemical separation. JOUR PRLTA 97 242501
	2006DV01	NUCLEAR REACTIONS $^{248}\text{Cm}$ ( $^{26}\text{Mg}$ , 4n), ( $^{26}\text{Mg}$ , 5n), E=136, 145 MeV; measured delayed E $\alpha$ , $\alpha\alpha$ -coin; deduced production $\sigma$ . JOUR PRLTA 97 242501
$^{270}\text{Mt}$	2006MOZV	RADIOACTIVITY $^{278}\text{113}$ , $^{277}\text{112}$ , $^{274}\text{Rg}$ , $^{273}\text{Ds}$ , $^{270}\text{Mt}$ , $^{269}\text{Hs}$ , $^{266}\text{Bh}$ , $^{265}\text{Sg}$ , $^{261}\text{Rf}(\alpha)$ [following $^{208}\text{Pb}$ , $^{209}\text{Bi}$ ( $^{70}\text{Zn}$ , n) and subsequent decay]; measured E $\alpha$ , T $_{1/2}$ . CONF San Servolo(Fusion06),Proc,P253

**A=271**

$^{271}\text{Sg}$	2006G05	RADIOACTIVITY $^{294}\text{118}$ , $^{290,291}\text{116}$ , $^{286,287}\text{114}$ , $^{283}\text{112}$ , $^{279}\text{Ds}$ , $^{275}\text{Hs}$ , $^{271}\text{Sg}(\alpha)$ [from $^{245}\text{Cm}$ , $^{249}\text{Cf}$ ( $^{48}\text{Ca}$ , xn) and subsequent decay]; measured E $\alpha$ , T $_{1/2}$ . $^{282}\text{112}$ , $^{267}\text{Rf}$ (SF) [from $\alpha$ -decay of $^{286}\text{Rf}$ and $^{271}\text{Sg}$ ]; measured fission fragment spectra, T $_{1/2}$ . JOUR PRVCA 74 044602
$^{271}\text{Bh}$	2006TSZZ	RADIOACTIVITY $^{211,212,213,214,215}\text{Po}$ , $^{272}\text{Bh}$ , $^{275,276}\text{Mt}$ , $^{279,280}\text{Rg}$ , $^{283,284}\text{113}(\alpha)$ [from $^{243}\text{Am}$ ( $^{48}\text{Ca}$ , xn)]; measured E $\alpha$ . REPT JINR-E13-2006-19,Tsyganov

**A=272**

$^{272}\text{Bh}$	2006TSZZ	RADIOACTIVITY $^{211,212,213,214,215}\text{Po}$ , $^{272}\text{Bh}$ , $^{275,276}\text{Mt}$ , $^{279,280}\text{Rg}$ , $^{283,284}\text{113}(\alpha)$ [from $^{243}\text{Am}$ ( $^{48}\text{Ca}$ , xn)]; measured E $\alpha$ . REPT JINR-E13-2006-19,Tsyganov
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**A=273**

$^{273}\text{Ds}$	2006MOZV	RADIOACTIVITY $^{278}\text{113}$ , $^{277}\text{112}$ , $^{274}\text{Rg}$ , $^{273}\text{Ds}$ , $^{270}\text{Mt}$ , $^{269}\text{Hs}$ , $^{266}\text{Bh}$ , $^{265}\text{Sg}$ , $^{261}\text{Rf}(\alpha)$ [following $^{208}\text{Pb}$ , $^{209}\text{Bi}$ ( $^{70}\text{Zn}$ , n) and subsequent decay]; measured E $\alpha$ , T $_{1/2}$ . CONF San Servolo(Fusion06),Proc,P253
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**A=274**

$^{274}\text{Rg}$	2006MOZV	RADIOACTIVITY $^{278}\text{113}$ , $^{277}\text{112}$ , $^{274}\text{Rg}$ , $^{273}\text{Ds}$ , $^{270}\text{Mt}$ , $^{269}\text{Hs}$ , $^{266}\text{Bh}$ , $^{265}\text{Sg}$ , $^{261}\text{Rf}(\alpha)$ [following $^{208}\text{Pb}$ , $^{209}\text{Bi}$ ( $^{70}\text{Zn}$ , n) and subsequent decay]; measured E $\alpha$ , T $_{1/2}$ . CONF San Servolo(Fusion06),Proc,P253
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**KEYNUMBERS AND KEYWORDS**

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**A=275**

$^{275}\text{Hs}$	20060G05	RADIOACTIVITY $^{294}\text{Rf}$ , $^{290,291}\text{Rb}$ , $^{286,287}\text{Rb}$ , $^{283}\text{Rb}$ , $^{279}\text{Ds}$ , $^{275}\text{Hs}$ , $^{271}\text{Sg}(\alpha)$ [from $^{245}\text{Cm}$ , $^{249}\text{Cf}({}^{48}\text{Ca}, \text{xn})$ and subsequent decay]; measured E $\alpha$ , T <sub>1/2</sub> . $^{282}\text{Rb}$ , $^{267}\text{Rf}(\text{SF})$ [from $\alpha$ -decay of $^{286}\text{Rf}$ and $^{271}\text{Sg}$ ]; measured fission fragment spectra, T <sub>1/2</sub> . JOUR PRVCA 74 044602
$^{275}\text{Mt}$	2006TSZZ	RADIOACTIVITY $^{211,212,213,214,215}\text{Po}$ , $^{272}\text{Bh}$ , $^{275,276}\text{Mt}$ , $^{279,280}\text{Rg}$ , $^{283,284}\text{Rb}(\alpha)$ [from $^{243}\text{Am}({}^{48}\text{Ca}, \text{xn})$ ]; measured E $\alpha$ . REPT JINR-E13-2006-19,Tsyganov

**A=276**

$^{276}\text{Mt}$	2006TSZZ	RADIOACTIVITY $^{211,212,213,214,215}\text{Po}$ , $^{272}\text{Bh}$ , $^{275,276}\text{Mt}$ , $^{279,280}\text{Rg}$ , $^{283,284}\text{Rb}(\alpha)$ [from $^{243}\text{Am}({}^{48}\text{Ca}, \text{xn})$ ]; measured E $\alpha$ . REPT JINR-E13-2006-19,Tsyganov
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**A=277**

$^{277}\text{Rb}$	2006MOZV	NUCLEAR REACTIONS $^{208}\text{Pb}({}^{70}\text{Zn}, \text{n})$ , E=349.5 MeV; measured E $\alpha$ , (recoil) $\alpha$ -coin following residual nucleus decay; deduced evidence for $^{277}\text{Rb}$ . $^{209}\text{Bi}({}^{70}\text{Zn}, \text{n})$ , E=352.6 MeV; measured E $\alpha$ , (recoil) $\alpha$ -coin following residual nucleus decay; deduced evidence for $^{278}\text{Rb}$ . CONF San Servolo(Fusion06),Proc,P253
	2006MOZV	RADIOACTIVITY $^{278}\text{Rb}$ , $^{277}\text{Rb}$ , $^{274}\text{Rg}$ , $^{273}\text{Ds}$ , $^{270}\text{Mt}$ , $^{269}\text{Hs}$ , $^{266}\text{Bh}$ , $^{265}\text{Sg}$ , $^{261}\text{Rf}(\alpha)$ [following $^{208}\text{Pb}$ , $^{209}\text{Bi}({}^{70}\text{Zn}, \text{n})$ and subsequent decay]; measured E $\alpha$ , T <sub>1/2</sub> . CONF San Servolo(Fusion06),Proc,P253

**A=278**

$^{278}\text{Rb}$	2006MOZV	NUCLEAR REACTIONS $^{208}\text{Pb}({}^{70}\text{Zn}, \text{n})$ , E=349.5 MeV; measured E $\alpha$ , (recoil) $\alpha$ -coin following residual nucleus decay; deduced evidence for $^{277}\text{Rb}$ . $^{209}\text{Bi}({}^{70}\text{Zn}, \text{n})$ , E=352.6 MeV; measured E $\alpha$ , (recoil) $\alpha$ -coin following residual nucleus decay; deduced evidence for $^{278}\text{Rb}$ . CONF San Servolo(Fusion06),Proc,P253
	2006MOZV	RADIOACTIVITY $^{278}\text{Rb}$ , $^{277}\text{Rb}$ , $^{274}\text{Rg}$ , $^{273}\text{Ds}$ , $^{270}\text{Mt}$ , $^{269}\text{Hs}$ , $^{266}\text{Bh}$ , $^{265}\text{Sg}$ , $^{261}\text{Rf}(\alpha)$ [following $^{208}\text{Pb}$ , $^{209}\text{Bi}({}^{70}\text{Zn}, \text{n})$ and subsequent decay]; measured E $\alpha$ , T <sub>1/2</sub> . CONF San Servolo(Fusion06),Proc,P253

**A=279**

$^{279}\text{Ds}$	20060G05	RADIOACTIVITY $^{294}\text{Rb}$ , $^{290,291}\text{Rb}$ , $^{286,287}\text{Rb}$ , $^{283}\text{Rb}$ , $^{279}\text{Ds}$ , $^{275}\text{Hs}$ , $^{271}\text{Sg}(\alpha)$ [from $^{245}\text{Cm}$ , $^{249}\text{Cf}({}^{48}\text{Ca}, \text{xn})$ and subsequent decay]; measured E $\alpha$ , T <sub>1/2</sub> . $^{282}\text{Rb}$ , $^{267}\text{Rf}(\text{SF})$ [from $\alpha$ -decay of $^{286}\text{Rb}$ and $^{271}\text{Sg}$ ]; measured fission fragment spectra, T <sub>1/2</sub> . JOUR PRVCA 74 044602
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**KEYNUMBERS AND KEYWORDS**

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**A=279 (*continued*)**

$^{279}\text{Rg}$       2006TSZZ      RADIOACTIVITY  $^{211,212,213,214,215}\text{Po}$ ,  $^{272}\text{Bh}$ ,  $^{275,276}\text{Mt}$ ,  $^{279,280}\text{Rg}$ ,  
 $^{283,284}113(\alpha)$  [from  $^{243}\text{Am}(^{48}\text{Ca}, \text{xn})$ ]; measured E $\alpha$ . REPT  
JINR-E13-2006-19,Tsyganov

**A=280**

$^{280}\text{Rg}$       2006TSZZ      RADIOACTIVITY  $^{211,212,213,214,215}\text{Po}$ ,  $^{272}\text{Bh}$ ,  $^{275,276}\text{Mt}$ ,  $^{279,280}\text{Rg}$ ,  
 $^{283,284}113(\alpha)$  [from  $^{243}\text{Am}(^{48}\text{Ca}, \text{xn})$ ]; measured E $\alpha$ . REPT  
JINR-E13-2006-19,Tsyganov

**A=281**

No references found

**A=282**

$^{282}112$       20060G05      RADIOACTIVITY  $^{294}118$ ,  $^{290,291}116$ ,  $^{286,287}114$ ,  $^{283}112$ ,  $^{279}\text{Ds}$ ,  $^{275}\text{Hs}$ ,  
 $^{271}\text{Sg}(\alpha)$  [from  $^{245}\text{Cm}$ ,  $^{249}\text{Cf}(^{48}\text{Ca}, \text{xn})$  and subsequent decay];  
measured E $\alpha$ , T<sub>1/2</sub>.  $^{282}112$ ,  $^{267}\text{Rf(SF)}$  [from  $\alpha$ -decay of  $^{286}\text{Rf}$  and  
 $^{271}\text{Sg}$ ]; measured fission fragment spectra, T<sub>1/2</sub>. JOUR PRVCA 74  
044602

**A=283**

$^{283}112$       20060G05      RADIOACTIVITY  $^{294}118$ ,  $^{290,291}116$ ,  $^{286,287}114$ ,  $^{283}112$ ,  $^{279}\text{Ds}$ ,  $^{275}\text{Hs}$ ,  
 $^{271}\text{Sg}(\alpha)$  [from  $^{245}\text{Cm}$ ,  $^{249}\text{Cf}(^{48}\text{Ca}, \text{xn})$  and subsequent decay];  
measured E $\alpha$ , T<sub>1/2</sub>.  $^{282}112$ ,  $^{267}\text{Rf(SF)}$  [from  $\alpha$ -decay of  $^{286}\text{Rf}$  and  
 $^{271}\text{Sg}$ ]; measured fission fragment spectra, T<sub>1/2</sub>. JOUR PRVCA 74  
044602

$^{283}113$       2006TSZZ      RADIOACTIVITY  $^{211,212,213,214,215}\text{Po}$ ,  $^{272}\text{Bh}$ ,  $^{275,276}\text{Mt}$ ,  $^{279,280}\text{Rg}$ ,  
 $^{283,284}113(\alpha)$  [from  $^{243}\text{Am}(^{48}\text{Ca}, \text{xn})$ ]; measured E $\alpha$ . REPT  
JINR-E13-2006-19,Tsyganov

**A=284**

$^{284}113$       2006TSZZ      RADIOACTIVITY  $^{211,212,213,214,215}\text{Po}$ ,  $^{272}\text{Bh}$ ,  $^{275,276}\text{Mt}$ ,  $^{279,280}\text{Rg}$ ,  
 $^{283,284}113(\alpha)$  [from  $^{243}\text{Am}(^{48}\text{Ca}, \text{xn})$ ]; measured E $\alpha$ . REPT  
JINR-E13-2006-19,Tsyganov

**A=285**

No references found

**KEYNUMBERS AND KEYWORDS**

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**A=286**

$^{286}\text{Rf}$  114      20060G05      RADIOACTIVITY  $^{294}\text{Rf}$ ,  $^{290,291}\text{Rf}$ ,  $^{286,287}\text{Rf}$ ,  $^{283}\text{Rf}$ ,  $^{279}\text{Ds}$ ,  $^{275}\text{Hs}$ ,  $^{271}\text{Sg}$ ( $\alpha$ ) [from  $^{245}\text{Cm}$ ,  $^{249}\text{Cf}$ ( $^{48}\text{Ca}$ , xn) and subsequent decay]; measured E $\alpha$ , T<sub>1/2</sub>.  $^{282}\text{Rf}$ ,  $^{267}\text{Rf}$ (SF) [from  $\alpha$ -decay of  $^{286}\text{Rf}$  and  $^{271}\text{Sg}$ ]; measured fission fragment spectra, T<sub>1/2</sub>. JOUR PRVCA 74 044602

**A=287**

$^{287}\text{Rf}$  114      20060G05      RADIOACTIVITY  $^{294}\text{Rf}$ ,  $^{290,291}\text{Rf}$ ,  $^{286,287}\text{Rf}$ ,  $^{283}\text{Rf}$ ,  $^{279}\text{Ds}$ ,  $^{275}\text{Hs}$ ,  $^{271}\text{Sg}$ ( $\alpha$ ) [from  $^{245}\text{Cm}$ ,  $^{249}\text{Cf}$ ( $^{48}\text{Ca}$ , xn) and subsequent decay]; measured E $\alpha$ , T<sub>1/2</sub>.  $^{282}\text{Rf}$ ,  $^{267}\text{Rf}$ (SF) [from  $\alpha$ -decay of  $^{286}\text{Rf}$  and  $^{271}\text{Sg}$ ]; measured fission fragment spectra, T<sub>1/2</sub>. JOUR PRVCA 74 044602

**A=288**

No references found

**A=289**

No references found

**A=290**

$^{290}\text{Rf}$  116      20060G05      NUCLEAR REACTIONS  $^{245}\text{Cm}$ ( $^{48}\text{Ca}$ , 2n), ( $^{48}\text{Ca}$ , 3n), E=249, 255 MeV;  $^{249}\text{Cf}$ ( $^{48}\text{Ca}$ , 3n), E=251 MeV; measured E $\alpha$ ,  $\alpha\alpha$ -coin, fission fragment spectra following residual nucleus decay; deduced  $\sigma$ . JOUR PRVCA 74 044602  
20060G05      RADIOACTIVITY  $^{294}\text{Rf}$ ,  $^{290,291}\text{Rf}$ ,  $^{286,287}\text{Rf}$ ,  $^{283}\text{Rf}$ ,  $^{279}\text{Ds}$ ,  $^{275}\text{Hs}$ ,  $^{271}\text{Sg}$ ( $\alpha$ ) [from  $^{245}\text{Cm}$ ,  $^{249}\text{Cf}$ ( $^{48}\text{Ca}$ , xn) and subsequent decay]; measured E $\alpha$ , T<sub>1/2</sub>.  $^{282}\text{Rf}$ ,  $^{267}\text{Rf}$ (SF) [from  $\alpha$ -decay of  $^{286}\text{Rf}$  and  $^{271}\text{Sg}$ ]; measured fission fragment spectra, T<sub>1/2</sub>. JOUR PRVCA 74 044602

**A=291**

$^{291}\text{Rf}$  116      20060G05      NUCLEAR REACTIONS  $^{245}\text{Cm}$ ( $^{48}\text{Ca}$ , 2n), ( $^{48}\text{Ca}$ , 3n), E=249, 255 MeV;  $^{249}\text{Cf}$ ( $^{48}\text{Ca}$ , 3n), E=251 MeV; measured E $\alpha$ ,  $\alpha\alpha$ -coin, fission fragment spectra following residual nucleus decay; deduced  $\sigma$ . JOUR PRVCA 74 044602

**KEYNUMBERS AND KEYWORDS**

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**A=291 (*continued*)**

20060G05      RADIOACTIVITY  $^{294}\text{118}$ ,  $^{290,291}\text{116}$ ,  $^{286,287}\text{114}$ ,  $^{283}\text{112}$ ,  $^{279}\text{Ds}$ ,  $^{275}\text{Hs}$ ,  $^{271}\text{Sg}(\alpha)$  [from  $^{245}\text{Cm}$ ,  $^{249}\text{Cf}({}^{48}\text{Ca}, \text{xn})$  and subsequent decay]; measured E $\alpha$ , T<sub>1/2</sub>.  $^{282}\text{112}$ ,  $^{267}\text{Rf(SF)}$  [from  $\alpha$ -decay of  $^{286}\text{Rf}$  and  $^{271}\text{Sg}$ ]; measured fission fragment spectra, T<sub>1/2</sub>. JOUR PRVCA 74 044602

**A=292**

No references found

**A=293**

No references found

**A=294**

$^{294}\text{118}$     20060G05      NUCLEAR REACTIONS  $^{245}\text{Cm}({}^{48}\text{Ca}, 2\text{n})$ ,  $({}^{48}\text{Ca}, 3\text{n})$ , E=249, 255 MeV;  $^{249}\text{Cf}({}^{48}\text{Ca}, 3\text{n})$ , E=251 MeV; measured E $\alpha$ ,  $\alpha\alpha$ -coin, fission fragment spectra following residual nucleus decay; deduced  $\sigma$ . JOUR PRVCA 74 044602

20060G05      RADIOACTIVITY  $^{294}\text{118}$ ,  $^{290,291}\text{116}$ ,  $^{286,287}\text{114}$ ,  $^{283}\text{112}$ ,  $^{279}\text{Ds}$ ,  $^{275}\text{Hs}$ ,  $^{271}\text{Sg}(\alpha)$  [from  $^{245}\text{Cm}$ ,  $^{249}\text{Cf}({}^{48}\text{Ca}, \text{xn})$  and subsequent decay]; measured E $\alpha$ , T<sub>1/2</sub>.  $^{282}\text{112}$ ,  $^{267}\text{Rf(SF)}$  [from  $\alpha$ -decay of  $^{286}\text{Rf}$  and  $^{271}\text{Sg}$ ]; measured fission fragment spectra, T<sub>1/2</sub>. JOUR PRVCA 74 044602

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