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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
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| 0 n 1 | 0 | 10.6 m | 1/2+ | -1.9130427(5) d |  |  |  | N,R | 2000Mo36 | RMP 72 351 (00) |
|  |  |  |  |  |  |  |  |  |  |  |
| 1 H 1 | 0 | stable | 1/2+ | +2.79284734(3) d |  |  |  | M/N,R | 2000Mo36 | RMP 72 351 (00) |
|  |  |  |  |  |  |  |  |  |  |  |
| antiproton | 0 | - | 1/2+ | -2.7862(83) |  |  |  | HFS | 2011Fr10 | HFI 199 337 (11) |
|  |  |  |  |  |  |  |  |  |  |  |
| 1 H 2 | 0 | stable | 1+ | +0.857438228(9) d |  |  | [1H] | N,R | 2000Mo36 | RMP 72 351 (00) |
|  |  |  |  | +0.857438240(12) d |  |  | [1H] | N | 2005KA25 | Can.J.Phys. 83 405 (05) |
|  |  |  |  |  | +0.00286(2) | R |  | MB,R | 1979Bi14 | PR A20 381 (79) |
|  |  |  |  |  | 0.0028(2) |  |  | CIAN | 1985Ka05 | NP A435 502 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 1 H 3 | 0 | 12.33 y | 1/2+ | +2.97896244(4) |  |  | [1H] | N,R | 1977Ne16 | ZETF 72 1659 (77) |
|  |  |  |  |  |  |  |  |  |  |  |
| 2 He 3 | 0 | stable | 1/2+ | -2.12749772(3) |  |  | [1H] | N,R | 2000Mo36 | RMP 72 351 (00) |
|  |  |  |  |  |  |  |  |  |  |  |
| 3 Li 6 | 0 | stable | 1+ | +0.8220473(6) |  |  |  | AB/D | 1974Be50 | ZP 270 173 (74) |
|  |  |  |  | +0.822567(3) |  |  | [2H] | N | 1968LU07/1967LU06/ | ZNat 23a 1202 (68)/PL A25 440 (67)/ |
|  |  |  |  |  |  |  |  |  | 1954WA37 | PR C72 044309 (05) |
|  |  |  |  |  | -0.000806(6) | R |  | R | 2005BO45 | PR C72 044309 (2005) |
|  |  |  |  |  | -0.00082(2) a |  | [7Li] | MB,R | 1998Ce04 | PR A57 2539 (98) |
|  |  |  |  |  | -0.00083(8) st |  | [7Li] | MB,R | 1984Su09 | CPL 112 1 (84) |
|  |  |  |  |  |  |  |  |  |  |  |
| 3 Li 7 | 0 | stable | 3/2- | +3.256427(2) |  |  |  | AB/D | 1974Be50 | ZP 270 173 (74) |
|  |  |  |  | +3.2564625(4) |  |  | [2H] | N | 1968LU07/1967LU06 | ZNat 23a 1202 (68)/PL 25A 440 (67) |
|  |  |  |  |  | -0.0403(4) |  |  | R | 2011Av08 | JPhys G38 075102 (11) |
|  |  |  |  |  | -0.0400(3) | R |  | R | 2008Py02 | Mol.Phys. 99 1617 (01) |
|  |  |  |  |  | -0.0406(8) a |  |  | MB,R | 1998Ce04 | PR A57 2539 (98) |
|  |  |  |  |  | -0.0406 st |  |  | MB,R | 1984Su09 | CPL 112 1 (84) |
|  |  |  |  |  | -0.0370(8) |  |  | CIAN | 1985We08 | PRL 55 480 (85) |
|  |  |  |  |  | -0.041(6) |  |  | OD,OL | 1975Or01 | ZP A273 221 (75) |
|  |  |  |  |  | -0.059(8) |  |  | OL | 1978Na22 | PR A17 1394 (78) |
|  |  |  |  |  | -0.040(11) |  |  | CER | 1984Ve03/1984Ve08 | PL B138 365 (84)/AuJP 37 273 (84) |
|  |  |  |  |  | -0.0400(6) |  |  | CER | 1991Vo06 | NP A530 475 (91) |
|  |  |  |  |  | -0.0400(3) |  |  | CER | 1991Vo06 | NP A530 475 (91) |
|  |  |  |  |  | -0.0406(8) |  |  | R | 1989Ba80 | AuJP 42 597 (89) |
|  |  |  |  |  |  |  |  |  |  |  |
| 3 Li 8 | 0 | 842 ms | 2+ | +1.65356(2) |  |  | [1H] | -NMR | 1978Wi13/1962Co08 | PL A67 423 (78)/PR 126 1506 (62) |
|  |  |  |  |  | 0.0326(5) |  | [7Li] | NQR | 2011Vo08 | JPhys G38 075102 (11) |
|  |  |  |  |  | 0.0314(2) | R |  | -NMR | 2005BO45 | PR C72 044309 (05) |
|  |  |  |  |  | 0.0317(4) |  | [7Li] | -NMR | 1977Du06 | ZP A282 243 (77) |
|  |  |  |  |  | 0.0287(7) |  | [7Li] | CFBLS/-NMR | 1988Ar17 | ZP A331 295 (88) |
|  |  |  |  |  | 0.0327(6) |  | [7Li] | NQR | 1992Mi18 | PRL 69 2058 (92) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | sign positive |  | [6,7Li] | NMR | 1994Ja05 | NP A568 544 (94) |
|  |  |  |  |  |  |  |  |  |  |  |
| 3 Li 9 | 0 | 178 ms | 3/2- | 3.43678(6) |  |  | [8Li] | -NMR | 2005BO45 | PR C72 044309 (05) |
|  |  |  |  | 3.4391(6) |  |  | [1H] | -NMR | 1983Co11 | PR C28 862 (83) |
|  |  |  |  | 3.434(5) |  |  | [8Li] | CFBLS/-NMR | 1988Ar17 | ZP A331 295 (88) |
|  |  |  |  |  | -0.0304(2) | R | [7Li] | -NMR | 2011Av08/2008Py02 | JPhys G38 075102 (11)/Mol Phys 106 1965 (2008) |
|  |  |  |  |  | (-)0.0306(2) |  |  | -NMR | 2005BO45 | PR C72 044309 (05) |
|  |  |  |  |  | 0.0253(9) |  | [7Li] | CFBLS/-NMR | 1988Ar17 | ZP A331 295 (88) |
|  |  |  |  |  | 0.036(7) st |  | [7Li] | -NMR | 1983Co11 | PR C28 862 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 3 Li 11 | 0 | 8.5 ms | 3/2- | +3.6712(3) |  |  | [9Li] | -NMR | 2008NE11 | PRL 101 132502 (08) |
|  |  |  |  | 3.668(3) |  |  | [8Li] | CFBLS/-NMR | 1987Ar22 | PL B197 311 (87) |
|  |  |  |  |  | (-)0.0333(5) | R | [9Li] | -NMR | 2008NE11 | PRL 101 132502 (08) |
|  |  |  |  |  | -0.035(5) |  |  | R | 2005BO45 | PR C72 044309 (05) |
|  |  |  |  |  | -0.031(5) |  | [7Li] | OP/-NMR | 1992Ma12 | PL B281 16 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 4 Be 7 | 0 | 53.3 d | 3/2- | -1.39928(2) |  |  |  | LMDR | 2008OK01 | PRL 101 212502 (08) |
|  |  |  |  | -1.398(15) |  |  | [9Be] | LRIS | 98KaZN | ENAM AIP Conf Proc 455 110 (98) |
|  |  |  |  |  |  |  |  |  |  |  |
| 4 Be 9 | 0 | stable | 3/2- | -1.177432(3) d |  |  |  | R | 1983It03 | PR B27 1906 (83) |
|  |  |  |  | -1.1778(9) |  |  |  | N, OP/RD | 1976We17 | PL A56 446 (76) |
|  |  |  |  | -1.17749(2) |  |  | [1H] | N | 1949Di25/1951Al11 | PR 75 1769 (49)/PR 82 105 (51) |
|  |  |  |  |  | +0.0529(4) | R |  | R | 1991Su05 | CPL 177 91 (91) |
|  |  |  |  |  | +0.053(3) st |  |  | AB | 1967Bl09 | PR 153 164 (67) |
|  |  |  |  |  |  |  |  |  |  |  |
| 4 Be 10 | 3368 | 0.14 ps | 2+ |  | -0.08(7) |  |  | CER | 2012Or05 | PR C86 041303(R) 2012 |
|  |  |  |  |  |  |  |  |  |  |  |
| 4 Be 11 | 0 | 13. 8 s | 3/2- | -1.6814(13) |  |  | [8Li] | -NMR | 98KaZN | NuoC 111 110 (98) |
|  |  |  |  | -1.6816(8) |  |  | [8Li] | -NMR | 99Ge18 | PRL 83 3792 (99) |
|  |  |  |  |  |  |  |  |  |  |  |
| 5 B 8 | 0 | 0.77 s | 2+ | 1.0355(3) |  |  |  | -NMR | 1973Mi01 | JPJS 34 156 (73) |
|  |  |  |  | 1.03579(5) d, K |  |  | [12B] | -NMR | 1996OhZY | ARO p71 (96) |
|  |  |  |  |  | +0.0643(14) | R | [11B] | -NMR | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.0645(14) |  | [12B] | -NMR | 2004NA46/2006SU13 | HFI 159 269 (2004)/PR C74 024327 (06) |
|  |  |  |  |  | 0.063(5) |  | [11B] | -NMR | 1990MaZA | ARO p48 (89) |
|  |  |  |  |  | 0.068(2) |  | [12B] | NQR | 1992Mi18 | PRL 69 2058 (92) |
|  |  |  |  |  | 0.0646(15) |  | [12B] | NQR | 1996OhZY | ARO p71 (96) |
|  |  |  |  |  |  |  |  |  |  |  |
| 5 B 10 | 0 | stable | 3+ | +1.80064478(6) |  |  | [2H] | N,MB | 1939Mi05 | ZNat 30a 955 (75)/PR 56 165 (39) |
|  |  |  |  |  | +0.0845(2) | R | [11B] | AB | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.0847(6) st |  | [11B] | AB, R | 1970Ne21 | PR A2 1208 (70) |
|  | 718 | 0.69 ns | 1+ | +0.63(12) |  |  |  | IPAC | 1972Av01 | NP A182 359 (72) |
|  |  |  |  |  |  |  |  |  |  |  |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
| 5 B 11 | 0 | stable | 3/2- | +2.6886489(10) |  |  | [10B] | N, MB | 1975Ep02/1939Mi05 | ZNat 30a 955 (75)/PR 56 165 (39) |
|  |  |  |  |  | +0.04059(10) | R |  | AB | 2008Py02/1970Ne21 | Mol Phys 106 1965 (2008)/PR A2 1208 (1970) |
|  |  |  |  |  | +0.0407(3) |  |  | AB, R | 1970Ne21 | PR A2 1208 (70) |
|  |  |  |  |  |  |  |  |  |  |  |
| 5 B 12 | 0 | 20.4 ms | 1+ | +1.00(2) |  |  |  | -NMR | 2010Zn03 | Chin Phys Lett 27 022102 (10) |
|  |  |  |  | +1.00272(11) |  |  |  | -NMR | 1990Mi16 | NP A516 365 (90) |
|  |  |  |  | +1.00306(+15/-14) |  |  |  | -NMR | 1970Wi17 | PR C2 1219 (70) |
|  |  |  |  |  |  |  |  |  | 1972Wi08 | PR C5 1435 (72) |
|  |  |  |  | 1.000(3) |  |  |  | -NMR | 2003Zh32 | ChinPL 20 1698 (03) |
|  |  |  |  |  | 0.0132(3) | R | [11B] | NQR | 1993Oh05 | HFI 78 185 (93)/HFI 80 1051 (93) |
|  |  |  |  |  | 0.0134(14) st |  | [11B] | -NMR | 1978Mi19 | HFI 4 224 (78) |
|  |  |  |  |  |  |  |  |  |  |  |
| 5 B 13 | 0 | 17.4 ms | 3/2- | +3.1778(5) K,d |  |  |  | -NMR | 2004Na38 | NP A746 509c (04) |
|  |  |  |  | +3.1778(5) |  |  |  | -NMR | 1971Wi09 | PR C3 2149 (71) |
|  |  |  |  |  | (+)0.0365(8) | R | [11B] | -NMR | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | positive sign |  | [12B] | -NMR | 2004NA47 | HFI 159 273 (2004) |
|  |  |  |  |  | (+) 0.0366(8) |  | [12B] | -NMR | 2004Na38 | NP A746 509c (04) |
|  |  |  |  |  | 0.369(10) |  | [12B] | -NMR | 2003OG03 | PR C67 064308 |
|  |  |  |  |  |  |  |  |  |  |  |
| 5 B 14 | 0 | 13.8 ms | 2- | 1.185(5) |  |  | [12B] | -NMR | 1995Ok04 | PL B354 41 (95) |
|  |  |  |  |  | 0.0297(8) | R | [11B] | -NMR | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.0298(8) |  | [12B] | -NMR | 1996Iz01 | PL B366 51 (96) |
|  |  |  |  |  |  |  |  |  |  |  |
| 5 B 15 | 0 | 10.3 ms | 3/2- | 2.659(15) |  |  | [12B] | -NMR | 1995Ok04 | PL B354 41 (95) |
|  |  |  |  |  | 0.0379(11) | R | [11B] | -NMR | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.0380(11) |  | [12B] | -NMR | 1996Iz01 | PL B366 51 (96) |
|  |  |  |  |  |  |  |  |  |  |  |
| 5 B 17 | 0 | 5.1 ms | (3/2-) | 2.55(2) |  |  | [12B] | -NMR | 1996Ue02 | PR C53 2142 (96) |
|  |  |  |  |  | 0.0385(15) | R | [11B] | -NMR | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.0386(15) |  |  | -NMR | 2003OG03 | PR C67 064308 |
|  |  |  |  |  |  |  |  |  |  |  |
| 6 C 9 | 0 | 126 ms | 3/2- | 1.3914(5) |  |  |  | -NMR | 1995Ma48 | NP A588 153c (95) |
|  |  |  |  | 1.396(3) |  |  |  | -NMR | 1998Hu08 | PR C57 R2790 (98) |
|  |  |  |  |  |  |  |  |  |  |  |
| 6 C 11 | 0 | 20.4 m | 3/2- | -0.964(1) |  |  | [13C] | AB, R | 1970Wo11 | ZP 236 337 (70) |
|  |  |  |  |  | 0.0333(2) | R |  | AB | 2008Py02/1969Sc34 | Mol Phys 106 1965 (2008)/PR 181 137 (69) |
|  |  |  |  |  | 0.032(2) st |  |  | AB, R | 1969Sc34 | PR 181 137 (69) |
|  |  |  |  |  |  |  |  |  |  |  |
| 6 C 12 | 4438 | 45 fs | 2+ |  | +0.06(3) | R |  | CER | 1983Ve01 | PL B122 23 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 6 C 13 | 0 | stable | 1/2- | +0.7024118(14) |  |  | [1H] | N | 1954Ro34 | PR 96 543 (54) |
|  | 3854 | 8.5 ps | 5/2+ | 1.40(4) |  |  |  | RIV/D | 1981Ru04 | NP A359 442 (81) |
|  |  |  |  |  |  |  |  |  |  |  |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
| 6 C 14 | 6728 | 67 ps | 3- | 0.82(2) |  |  |  | RIV/D | 1974Al07 | PR C9 1748 (74) |
|  |  |  |  |  |  |  |  |  |  |  |
| 6 C 15 | 0 | 2.45 s | 1/2+ | 1.720(9) |  |  |  | -NMR | 2002As06 | NP A704 88c (02) |
|  |  |  |  | 1.32(7) |  |  |  | -NMR | 1988AsZY | Bk88 NFFS 165 (88) |
|  | 739 | 2.61 ns | 5/2+ | 1.76(3) |  |  |  | RIV/D | 1980As01 | JP G6 251 (80) |
|  |  |  |  | -1.92(15) |  |  |  | IPAC | 1975Ha42 | PL B59 32 (75) |
|  |  |  |  |  |  |  |  |  |  |  |
| 6 C 17 | 0 | 193 ms | (3/2+) | 0.758(4) |  |  |  | -NMR | 2002Og02 | EurPJ A13 81 (02) |
|  |  |  |  |  |  |  |  |  |  |  |
| 7 N 12 | 0 | 11.0 ms | 1+ | 0.4571(1) |  |  |  | -NMR | 2010ZN03 | Chin Phys Lett 27 022102 (10) |
|  |  |  |  | 0.4573(5) |  |  |  | -NMR | 1968Su05 | JPJa 25 1258 (68) |
|  |  |  |  |  | +0.100(9) | R | [14N] | -NMR | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.0098(9) |  | [14N] | -NMR | 98Mi10 | PL B420 31 (98) |
|  |  |  |  |  | +0.049(6) or -0.010(6) |  |  | PhPi | 1980Ra05 | YadF 31 334 (80) |
|  |  |  |  |  | 0.0103(7) |  | [14N] | NQR | 94OhZY | ARO p60 (93) |
|  |  |  |  |  |  |  |  |  |  |  |
| 7 N 13 | 0 | 9.96 m | 1/2- | 0.3222(4) |  |  | [14N] | AB, R | 1964Be24 | PR 136 B27 (64) |
|  |  |  |  |  |  |  |  |  |  |  |
| 7 N 14 | 0 | stable | 1+ | +0.40376100(6) |  |  | [1H] | N | 1976Fu06/1951Pr02 | JPCR 5 835 (76)/PR 81 20 (51) |
|  |  |  |  |  | +0.02044(3) | R |  | LRFS | 2008Py02/1993Sc26 | Mol Phys 106 1965 (2008)/PR A47 4891 (93) |
|  |  |  |  |  | +0.02001(10) |  |  | LRFS | 1993Sc26 | PR A47 4891 (93) |
|  |  |  |  |  | +0.0193(8) st |  |  | IBSQB | 1980Wi22 | PR A21 581 (80) |
|  |  |  |  |  | 0.0208 e, st |  |  | MA,R | 1986Ha49 | ZNat 41a 163 (86) |
|  | 5106 | 4.3 ps | 2- | 1.32(8) |  |  |  | RIV/D | 1978Mo27 | JP G4 1593 (78) |
|  | 5832 | 12.5 ps | 3- | 2.0(5) |  |  |  | RIGV | 1989Ra17 | JPJS 34 185 (73) |
|  |  |  |  |  |  |  |  |  |  |  |
| 7 N 15 | 0 | stable | 1/2- | -0.28318884(5) |  |  | [14N] | N | 1962Ba63 | JCP 36 152 (62) |
|  | 5270 | 1.73 ps | 5/2+ | 2.4(2) |  |  |  | RIV/D | 1983Bi10 | JP G9 1407 (83) |
|  |  |  |  | +2.5(8) |  |  |  | IMPAC,R | 1978Za13 | HFI 5 347 (78) |
|  |  |  |  |  |  |  |  |  |  |  |
| 7 N 16 | 0 | 7.13 s | 2- | 1.9859(11) d |  |  | [12N] | -NMR | 2001Ma42 | PRL 86 3735 (01) |
|  |  |  |  |  | (-)0.018(2) | R | [12N] | -NMR | 2001Ma42 | PRL 86 3735 (01) |
|  | 293 | 91.3 ps | 3- | 1.60(6) |  |  |  | RIV/D | 1984Bi03 | NP A413 503 (84) |
|  |  |  |  | 1.50(8) |  |  |  | RIV/D | 1989Ra17 | ARWa p59 (84) |
|  | 397 | 4.5 ps | 1- | -1.83(13) |  |  |  | RIV/D | 1975As02/1975Fo16 | JP G1 415 (75)/PR C11 1976 (75) |
|  |  |  |  |  |  |  |  |  |  |  |
| 7 N 17 | 0 | 4.17 s | 1/2- | 0.3551(4) |  |  |  | -NMR | 2009DE34 | PR C80 037306 (09) |
|  |  |  |  | 0.352(2) |  |  |  | -NMR | 1996Ue02 | PR C53 2142 (96) |
|  |  |  |  |  |  |  |  |  |  |  |
| 7 N 18 | 0 | 624 ms | 1- | 0.3273(4) |  |  |  | -NMR | 2009DE34 | PR C80 037306 (09) |
|  |  |  |  | (-)0.135(15) |  |  |  | LMR | 1999Ne01 | PRL 82 497 (99) |
|  |  |  |  | 0.3279(13) |  |  |  | -NMR | 1999Og03 | PL B451 11 (99)/JP G24 1399 (98) |
|  |  |  |  |  | +0.027(4) | R |  | LMR | 1999Ne01 | PRL 82 497 (99) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | 0.0123(12) |  | [12N] | -NMR | 1999Og03 | PL B451 11 (99)/JP G24 1399 (98) |
|  |  |  |  |  |  |  |  |  |  |  |
| 7 N 19 | 0 | 0.27 s | 1/2- | 0.305(15) |  |  |  | -NMR | 2004Ka22 | NP A734 481 (04) |
|  |  |  |  |  |  |  |  |  |  |  |
| 8 O 13 | 0 | 8..6 ms | 3/2- | 1.3891(3) d, K |  |  | [1H] | -NMR | 1996Ma38 | HFI 97/98 519 (96) |
|  |  |  |  |  | 0.0111(8) | R | [17O] | -NQR | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.0110(13) |  | [17O] | -NQR | 1999Ma46 | PL B459 81 (99) |
|  |  |  |  |  |  |  |  |  |  |  |
| 8 O 15 | 0 | 122 s | 1/2- | 0.71951(12) c |  |  |  | -NMR | 1993Ta28 | HFI 78 105 (93) |
|  |  |  |  | 0.7189(8) |  |  | [17O] | AB | 1963Co17 | PR 131 700 (63) |
|  | 5241 | 2.25 ps | 5/2+ | +0.65(7) |  |  |  | RIV/D, IMPAC | 1978Be73/1983Bi10 | HFI 4 181 (78)/JP G9 1407 (83) |
|  |  |  |  | <0.3(2) |  |  |  | TF | 1981De40 | HFI 9 507 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 8 O 16 | 6130 | 18.4 ps | 3- | +1.668(12) |  |  |  | RIV/D | 1984As03 | JP G10 1079 (84) |
|  |  |  |  |  |  |  |  | IMPAC | 1977Ka02 | NP A276 339 (77) |
|  |  |  |  |  |  |  |  |  |  |  |
| 8 O 17 | 0 | stable | 5/2+ | -1.89379(9) |  |  | [2H] | N | 1951Al08 | PR 81 1067 (51) |
|  |  |  |  |  | -0.0256(2) | R |  | EPR/R | 2008Py02/1969Sc34 | Mol Phys 106 1965 (2008)/PR 181 137 (69) |
|  |  |  |  |  | -0.2576 e,st |  |  | EPR,R | 1969Sc34 | PR 181 137 (69) |
|  |  |  |  |  | -0.26(3) st |  |  | EPR,R | 1957Ka01 | PPS 70B 897 (57) |
|  |  |  |  |  |  |  |  |  |  |  |
| 8 O 18 | 1982 | 2.07 ps | 2+ | -0.57(3) |  |  |  | RIV/D | 1976As04 | JP G2 477 (76) |
|  |  |  |  |  | negative sign |  |  | IPAD | 1975Fo03 | PL B55 56 (75) |
|  |  |  |  |  | -0.036(9) |  |  | CER,R | 1983Gr28 | NP A411 329 (83) |
|  |  |  |  |  | -0.02(3) |  |  | CER,R | 1981Sp07 | PRep 73 369 (81) |
|  |  |  |  |  | -0.010(13) or +.020(13) |  |  | CER | 1977Vo07 | PRL 39 325 (77) |
|  |  |  |  |  | -0.07(3) or -0.05(3) |  |  | CER | 1977Fl10 | PRL 39 446 (77) |
|  |  |  |  |  | -0.11(2) or -0.08(2) |  |  | CER |  | ARMi 75 (78) |
|  |  |  |  |  | -0.05(2) or -0.02(2) |  |  | CER | 1979Fe06 | NP A321 457 (79) |
|  | 3555 | 18 ps | 4+ | 2.5(4) |  |  | [16O 6130] | RIGV | 1974Be63 | NP A235 410 (74) |
|  |  |  |  |  |  |  |  |  |  |  |
| 8 O 19 | 0 | 27 s | 5/2+ | 1.53195(7) c |  |  | [17O] | -NMR | 1999Mi16 | PL B457 9 (99) |
|  |  |  |  |  | 0.00362(13) | R | [17O] | -NMR | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.0037(4) |  | [17O] | -NMR | 1999Mi16 | PL B457 9 (99) |
|  | 96 | 1.37 s | 3/2+ | -0.72(9) |  |  |  | IPAC | 1976Go09 | NP A262 214 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 8 O 20 | 1674 | 7.4 ps | 2+ | 0.70(3) |  |  |  | RIV/D | 1980Ru01 | NP A344 294 (80) |
|  |  |  |  | -0.78(8) |  |  |  | IMPAC | 1976Ge01/1975Be15 | PL B60 338 (76)/NP A243 519 (75) |
|  |  |  |  |  |  |  |  |  |  |  |
| 9 F 17 | 0 | 64.5 s | 5/2+ | +4.7213(3) |  |  | [12B] | -NMR | 1993Mi33 | HFI 78 111 (93) |
|  |  |  |  | +4.7223(12) |  |  |  | -NMR | 1966Su01 | JPJa 21 213 (66) |
|  |  |  |  |  | 0.076(4) |  | [19F 197] | -NMR/R | 2008Py02/1974Mi21 | Mol. Phys. 106 1965 (2008)/NP A236 416 (1974) |
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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
| 9 F 18 | 937 | 47 ps | 3+ | +1.6(2) |  |  |  | IMPAC | 1981St21 | JPJa 50 2804 (81) |
|  |  |  |  | +1.77(12) |  |  |  | RIV/D | 1989Ra17 | Th Rowe (76) |
|  |  |  |  | 1.7(2) |  |  |  | RIGV | \*\*\*\*\*\*\*\*\* | HFI 4 183 (78) |
|  | 1121 | 153 ns | 5+ | +2.86(3) |  |  |  | TDPAD | 1967Sc09 | PL 24B 457 (67) |
|  |  |  |  |  | 0.071(6) | R | [19F 197] | TDPAD/R | 2008Py02/1974Mi21 | Mol. Phys. 106 1965 (2008)/NP A236 416 (1974) |
|  |  |  |  |  |  |  |  |  |  |  |
| 9 F 19 | 0 | stable | 1/2+ | +2.628868(8) |  |  | [1H] | N | 1952Li18/1964Ba11 | ArkF 4 1 (52)/PR 133 A1533 (64) |
|  | 197 | 88.5 ns | 5/2+ | +3.607(8) |  |  |  | TDPAD | 1969Bi18 | NIM 67 169 (69) |
|  |  |  |  | 3.595(13) |  |  |  | RIV/D | 1984As03 | JP G10 1079 (84) |
|  |  |  |  |  | 0.0942(9) | R | calc efg | TDPAD/R | 2008Py02 | Mol Phys 106 1965 (2008)/ChPL 19 915 (02) |
|  | 1346 | 2.9 ps | 5/2- | 0.67(11) |  |  |  | RIV/D | 1983Bi03 | JP G9 293 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 9 F 20 | 0 | 11 s | 2+ | +2.09335(9) |  |  |  | -NMR | 1996MiZW | ARO p44 (96) |
|  |  |  |  | +2.0935(9) |  |  |  | -NMR | 1967Gu14/1963Ts01 | YadF 6 657 (67)/PR 132 1141 (63) |
|  |  |  |  |  | 0.056(4) | R | [19F 197] | -NMR/R | 2008Py02/1974Mi21 | Mol. Phys. 106 1965 (2008)/NP A236 416 (1974) |
|  |  |  |  |  |  |  |  |  |  |  |
| 9 F 21 | 0 | 4.16 s | 5/2+ | 3.9194(12) |  |  |  | -NMR | 1999Mb13 | HFI 120/121 673 (99) |
|  |  |  |  | 3.93(5) |  |  |  | -NMR | 1993Ok02 | HFI 78 97 (93) |
|  |  |  |  |  | 0.11(2) | R |  | -NMR | 1999Mb13 | HFI 120/121 673 (99) |
|  |  |  |  |  |  |  |  |  |  |  |
| 9 F 22 | 0 | 4.2 s | 4+ | (+)2.6944(4) |  |  |  | -NMR | 2010MI13 | NP A834 75c (10) |
|  |  |  |  |  | 0.003(2) | R |  | -NMR | 2010MI13 | NP A834 75c (10) |
|  |  |  |  |  |  |  |  |  |  |  |
| 10 Ne 17 | 0 | 109 ms | 1/2- | +0.7873(14) |  |  | [21Ne] | CFBLS | 2005GE06 | PR C71 064319 (2006) |
|  |  |  |  | (+)0.74(3) |  |  |  | -NMR | 2004BA12 | JP G30 519 (04) |
|  |  |  |  |  |  |  |  |  |  |  |
| 10 Ne 19 | 0 | 17.3 s | 1/2+ | -1.8846(8) |  |  | [21Ne] | CFBLS | 2005GE06 | PR C71 064319 (2006) |
|  |  |  |  | -1.88542(8) |  |  |  | -NMR | 1982Ma39 | PR C26 1753 (82) |
|  | 238 | 17.7 ns | 5/2+ | -0.740(8) |  |  | [19F 197] | TDPAD | 1969Bl02 | NP A123 65 (69) |
|  |  |  |  |  |  |  |  |  |  |  |
| 10 Ne 20 | 1634 | 0.7 ps | 2+ | +1.08(8) |  |  |  | RIV/D, R | 1978Za13/1975Ho15 | HFI 5 347 (78)/NP A248 291 (75) |
|  |  |  |  |  | -0.23(3) | R |  | CER, R | 1981Sp07 | PRep. 73 369 (81) |
|  | 4247 | 64 fs | 4+ | +1.5(3) |  |  | [20Ne 1634] | TF | 2003LE01 | PL B551 249 (03) |
|  |  |  |  | +0.5(6) |  |  | [20Ne 1634] | TF | 1986Tr08 | NP A458 95 (86) |
|  |  |  |  |  |  |  |  | TF,R | 1982Sp02 | NP A378 130 (82) |
|  |  |  |  | +1.7(14) |  |  | [20Ne 1634] | TF | 1984Br15 | PR C30 696 (84) |
|  |  |  |  |  |  |  |  | TF,R | 1982Sp02 | NP A378 130 (82) |
|  |  |  |  | -0.4(8) |  |  | [20Ne 1634] | TF | 1980Sp02 | PL B92 289 (80) |
|  |  |  |  |  |  |  |  |  |  |  |
| 10 Ne 21 | 0 | stable | 3/2+ | -0.661797(5) |  |  | [2H] | MB | 1957La08 | PR 107 1202 (57) |
|  |  |  |  |  | +0.102(8) | R |  | O/AB | 2008Py02/1972Du06 | Mol Phys 106 1965 (2008)/PR A5 1036 (1972) |
|  |  |  |  |  | +0.103(8) |  |  | O,AB | 1972Du06/1958Gr65 | PR A5 1036 (72)/PRL 1 214 (58) |
|  | 351 | 7.1 ps | 5/2+ | 0.49(4) |  |  |  | RIV/D | 1978Ro10 | JP G4 431 (78) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  | 0.70(8) |  |  |  | RIV/D | 1977Be30 | PR C16 679 (77) |
|  |  |  |  | 0.9(2) |  |  |  | RIV/D | 1978An30 | HFI 4 190 (78) |
|  |  |  |  |  |  |  |  |  |  |  |
| 10 Ne 22 | 1275 | 3.6 ps | 2+ | +0.65(2) |  |  |  | RIV/D | 1977Ho01 | NP A275 237 (77) |
|  |  |  |  |  |  |  |  | TFL | 1986Ad\*\* | JPJS 55 1042 (86) |
|  |  |  |  |  | -0.19(4) |  |  | CER, R | 1981Sp07 | PRep. 73 369 (81) |
|  | 3357 | 225 fs | 4+ | +2.2(6) |  |  | [22Ne 1275] | TFL | 1984Ba10 | PR C29 1163 (84) |
|  |  |  |  |  |  |  |  |  |  |  |
| 10 Ne 23 | 0 | 37.6 s | 5/2+ | 1.0817(9) |  |  |  | -NMR | - | OULNS Ann. Rept. 2004 51 (05) |
|  |  |  |  | -1.0795(10) |  |  |  |  | - | Z. Naturforsch. 49a 27 (94) |
|  |  |  |  | -1.077(4) |  |  | [21Ne] | CFBLS | 2005GE06 | PR C71 064319 (2006) |
|  |  |  |  | -1.08(1) |  |  |  | AB | 1968Do07 | BAPS 13 173 (68) |
|  |  |  |  |  | 0.145(13) | R | [21Ne] | CFBLS | 2005GE06 | PR C71 064319 (2006) |
|  |  |  |  |  |  |  |  |  |  |  |
| 10 Ne 25 | 0 | 0.60 s | 1/2+ | -1.0062(5) |  |  | [21Ne] | CFBLS | 2005GE06 | PR C71 064319 (2006) |
|  |  |  |  |  |  |  |  |  |  |  |
| 11 Na 20 | 0 | 0.446 s | 2+ | +0.3694(2) |  |  | [23Na] | OP/RD | 1975Sc20 | NP A246 187 (75) |
|  |  |  |  |  | +0.101(8) | R | [23Na] | -NMR | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.103(8) |  | [27Na] | -NMR | 2009Mi04 | PL B672 120 (06) |
|  |  |  |  |  | +0.090(10) |  | [21Na,27Na] | -NMR | 2004MI59 | HFI 159 261 (2004) |
|  |  |  |  |  | Q/Q(21Na) = 0.728(9) |  | [21Na] | -NMR | 2004Mi50 | NP A746 501c/HFI 159 239 (2004) |
|  |  |  |  |  |  |  |  |  |  |  |
| 11 Na 21 | 0 | 22.5 s | 3/2+ | +2.38630(10) |  |  | [23Na] | AB | 1965Am01 | PR 137 B1157 (65) |
|  |  |  |  |  | +0.138(11) | R | [23Na] | -NMR | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.140(11) |  | [27Na] | -NMR | 2009Mi04 | PL B672 120 (06) |
|  |  |  |  |  | +0.124(14) |  | [23Na] | CFBLS/-NMR | 2000Ke09 | EurPJ A8 31 (00) |
|  |  |  |  |  | +0.05(4) |  |  | ABLS | 1982To05 | PR C25 2756 (82) |
|  | 332 | 6.9 ps | 5/2+ | 3.7(3) |  |  |  | RIV/D | 1977Be30 | PR C16 679 (77) |
|  |  |  |  |  |  |  |  |  |  |  |
| 11 Na 22 | 0 | 2.60 y | 3+ | +1.746(3) |  |  | [23Na] | AB | 1949Da01 | PR 76 1068 (49) |
|  |  |  |  |  | +0.180(11) | R | [23Na] | -NMR | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.185(11) |  |  | ABLS | 1998Ga44 | EurPJ A3 313 (98) |
|  | 583 | 243 ns | 1+ | +0.535(10) |  |  |  | TDPAC | 1966Su07 | PR 151 910 (66) |
|  |  |  |  | +0.523(11) |  |  | [19F 197] | TDPAD | 1989Ra17/1967Bl\*\* | ARHMI 28 (67) |
|  | 2212 | 15.2 ps | 1- | 0.36(7) |  |  |  | RIV/D | 1976Be06 | PR C13 895 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 11 Na 23 | 0 | stable | 3/2+ | +2.217522(2) |  |  |  | AB/D | 1974Be50 | ZP 270 173 (74) |
|  |  |  |  | +2.2176556(6) |  |  | [1H] | N | 1976Fu06/1954Wa37 | JPCR 5 835(76)/ORNL 1775 (54) |
|  |  |  |  |  | +0.104(1) | R |  | O | 2008Py02/2006Da14 | Mol Phys 106 1965 (2008)/J Phys B39 3111 (2006) |
|  |  |  |  |  | +0.1045(10) |  |  | R | 1999Ke12 | PR A60 3575 (99) |
|  |  |  |  |  | +0.109(3) |  |  | R | 1992Su01 | PRL 68 927 (92) |
|  |  |  |  |  | +0.095(15) |  |  | CER | 1992Vo09 | NP A549 281 (92) |
|  |  |  |  |  | +0.104(1) |  |  | MS | 1994Py02 | CPL 227 221 (94) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | +0.101(2) a |  |  | Mu-X | 1983Je09 | NP A408 495 (83) |
|  |  |  |  |  |  |  |  | OL,R | 1971St12 | PR A3 837 (71) |
|  |  |  |  |  |  |  |  |  |  |  |
| 11 Na 24 | 0 | 15.0 h | 4+ | +1.6903(8) |  |  |  | AB/D | 1966Ch15/1973CoZG | PR 150 933 (66)/BAPS 18 727 (73) |
|  | 427 | 20.2 ms | 1+ | -1.931(3) |  |  |  | -NMR | 1980He08 | PL B94 28 (80) |
|  |  |  |  |  |  |  |  |  | 1979Mu13 | PL B88 242 (79) |
|  |  |  |  |  |  |  |  |  |  |  |
| 11 Na 25 | 0 | 60 s | 5/2+ | +3.683(4) |  |  | [23Na] | OP/RD | 1975De11 | ZP A273 15 (75) |
|  |  |  |  |  | 0.0015(3) | R | [23Na] | -NMR | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.0014(3) |  | [21Na] | -NMR | 2004OG13 | HFI 159 235 (2004) |
|  |  |  |  |  | -0.10(5) |  |  | ABLS | 1982To05 | PR C25 2756 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 11 Na 26 | 0 | 1.07 s | 3+ | +2.851(2) |  |  | [23Na] | ABLS | 1978Hu12 | PR C18 2342 (78) |
|  |  |  |  |  | -0.0053(2) | R | [23Na] | CFBLS/-NMR | 2000Ke09 | EurPJ A8 31 (00) |
|  |  |  |  |  | -0.08(5) |  |  | ABLS | 1982To05 | PR C25 2756 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 11 Na 27 | 0 | 0.29 s | 5/2+ | +3.895(5) |  |  | [23Na] | ABLS | 1978Hu12 | PR C18 2342 (78) |
|  |  |  |  |  | -0.0071(3) | R | [23Na] | CFBLS/-NMR | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.0072(3) |  | [23Na] | CFBLS/-NMR | 2000Ke09 | EurPJ A8 31 (00) |
|  |  |  |  |  | -0.06(5) |  |  | ABLS | 1982To05 | PR C25 2756 (82) |
|  |  |  |  |  | Q/Q(26Na)=1.39(4) |  |  | CFBLS/-NMR | 1996Ke08 | HFI 97/98 543 (96) |
|  |  |  |  |  |  |  |  |  |  |  |
| 11 Na 28 | 0 | 30.5 ms | 1+ | +2.426(5) |  |  | [23Na] | ABLS | 1978Hu12 | PR C18 2342 (78) |
|  |  |  |  |  | +0.0389(11) | R | [23Na] | CFBLS/-NMR | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.0395(12) |  | [23Na] | CFBLS/-NMR | 2000Ke09 | EurPJ A8 31 (00) |
|  |  |  |  |  | -0.02(4) |  |  | ABLS | 1982To05 | PR C25 2756 (82) |
|  |  |  |  |  | Q/Q(26Na)=-7.7(2) |  |  | CFBLS/-NMR | 1996Ke08 | HFI 97/98 543 (96) |
|  |  |  |  |  |  |  |  |  |  |  |
| 11 Na 29 | 0 | 43 ms | 3/2+ | +2.449(8) |  |  | [23Na] | ABLS | 1978Hu12 | PR C18 2342 (78) |
|  |  |  |  |  | +0.085(3) | R | [23Na] | CFBLS/-NMR | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.086(3) |  | [23Na] | CFBLS/-NMR | 2000Ke09 | EurPJ A8 31 (00) |
|  |  |  |  |  | -0.03(5) |  |  | ABLS | 1982To05 | PR C25 2756 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 11 Na 30 | 0 | 53 ms | 2+ | +2.083(10) |  |  | [23Na] | ABLS | 1978Hu12 | PR C18 2342 (78) |
|  |  |  |  |  |  |  |  |  |  |  |
| 11 Na 31 | 0 | 17 ms | 3/2+ | +2.305(8) |  |  | [23Na] | ABLS,R | 1978Hu12 | PR C18 2342 (78) |
|  |  |  |  |  |  |  |  |  |  |  |
| 12 Mg 21 | 0 | 122 ms | 5/2+ | -0.983(7) |  |  | [25Mg] | CFBLS/-NMR | 2009KR05 | PL B 678 465 (09) |
|  |  |  |  |  |  |  |  |  |  |  |
| 12 Mg 23 | 0 | 11.3 s | 3/2+ | 0.5364(3) |  |  |  | -NMR | 1993Fu06 | PL B307 278 (93) |
|  |  |  |  |  | 0.114(3) | R |  | -NMR | 1999Mb13 | HFI 120/121 673 (99) |
|  |  |  |  |  | 0.125(5) |  |  | NQR | 1996MaZV | ARO p64 (96) |
|  |  |  |  |  |  |  |  |  |  |  |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
| 12 Mg 24 | 1369 | 1.45 ps | 2+ | +1.02(4) |  |  |  | RIV/D/IMPAC | 1975Ho15/1974Eb02 | NP A248 291 (75)/NP A229 162 (74) |
|  |  |  |  |  | -0.29(3) | R |  | CER | 1990Gr11 | PR C42 R471 (90) |
|  |  |  |  |  | -0.18(2) |  |  | CER, R | 1981Sp07 | PRep. 73 369 (81) |
|  |  |  |  |  | -0.178(13) |  |  | CER | 1979Fe05 | NP A319 214 (79) |
|  |  |  |  |  | -0.07(3) |  |  | ES,R | 1981Ko06 | JP G7 L63 (81) |
|  | 4123 | 38 fs | 4+ | +1.6(12) |  |  | [24Mg 1369] | TF | 1983Sp01 | NP A403 421 (83) |
|  | 4238 | 73 fs | 2+ | +1.2(4) |  |  | [24Mg 1369] | TF | 1983Sp01 | NP A403 421 (83) |
|  | 6010 | 55 fs | 4+ | +2.0(16) |  |  | [24Mg 1369] | TF | 1984Sp03 | ZP A315 319 (84) |
|  |  |  |  |  |  |  |  |  |  |  |
| 12 Mg 25 | 0 | stable | 5/2+ | -0.85545(8) |  |  | [14N] | N | 1951Al11 | PR 82 105 (51) |
|  |  |  |  |  | +0.199(2) | R |  | R | 1991Su13 | NP A534 360 (91) |
|  |  |  |  |  | +0.201(3) a |  |  | Mu-X | 1982We04 | NP A377 361 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 12 Mg 26 | 1809 | 476 fs | 2+ | +1.0(3) |  |  | [24Mg 1369] | TF | 1981Sp04 | PL 102B 6 (81) |
|  |  |  |  |  | -0.21(2) | R |  | CER | 1991He09 | PR C43 2546 (91) |
|  |  |  |  |  | -0.14(3) |  |  | CER,R | 1981Sp07 | PRep. 73 369 (81) |
|  |  |  |  |  | -0.14(3) or -0.10(3) |  |  | CER | 1982Sp05 | NP A378 559 (82) |
|  |  |  |  |  | -0.11(6) |  |  | CER | 1977Sc36 | NP A293 425 (77) |
|  |  |  |  |  |  |  |  |  |  |  |
| 12 Mg 27 | 0 | 9.46 m | 1/2+ | -0.411(2) |  |  | [25Mg] | CLS | 2008KO05 | PR C77 034307 (08) |
|  |  |  |  |  |  |  |  |  |  |  |
| 12 Mg 29 | 0 | 1.30 s | 3/2+ | +0.9780(6) |  |  | [25Mg] | -NMR/LRS | 2008Ko05 | PR C77 034307 (08) |
|  |  |  |  |  |  |  |  |  |  |  |
| 12 Mg 31 | 0 | 230 ms | 1/2+ | -0.88355(15) |  |  | [25Mg] | -NMR/LRS | 2005Ne01 | PRL 94 022501 (05) |
|  |  |  |  |  |  |  |  |  | 2008Ko05 | PR C77 034307 (08) |
|  |  |  |  |  |  |  |  |  |  |  |
| 12 Mg 33 | 0 | 90.5 ms | 3/2+ | -0.7456(5) |  |  | [31Mg] | -NMR/LRS | 2007Yo06 | PRL 99 212501 (07) |
|  |  |  |  |  |  |  |  |  |  |  |
| 13 Al 23 | 0 | 37.2 s | 5/2+ | +3.889(5) |  |  |  | -NMR | 2006Oz04 | PR C74 021301 (06) |
|  |  |  |  |  | 0.16(5) | Prelim. |  | -NMR | 2009NaZv | RIKEN Accel. Prog. Rept. 2008 NP p 23 (2009) |
|  |  |  |  |  |  |  |  |  |  |  |
| 13 Al 24 | 426 | 131 ms | 1+ | 2.99(9) |  |  |  | -NMR | 2007NI14 | HFI 180 71 (07) |
|  |  |  |  |  |  |  |  |  |  |  |
| 13 Al 25 | 0 | 7.18 s | 5/2+ | 3.6455(12) |  |  |  | -NMR | 1976Mi11 | PR C14 376 (76) |
|  |  |  |  |  | 0.24(2) | R | [27Al] | -NQR | 2007Ma94 | HFI 180 65 (07) |
|  |  |  |  |  |  |  |  |  |  |  |
| 13 Al 26 | 0 | 7x10\*5 y | 5+ | +2.804(4) |  |  | [27Al] | ABLS | 1996Co04 | JP G22 99 (96) |
|  |  |  |  |  | +0.26(3) |  | [27Al] | ABLS | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.27(3) |  | [27Al] | ABLS | 1997Le19 | JP G23 1145 (97) |
|  |  |  |  |  |  |  |  |  |  |  |
| 13 Al 27 | 0 | stable | 5/2+ | +3.6415069(7) |  |  | [2H] | N | 1968Ep01 | ZNat 23a 1413 (68) |
|  |  |  |  |  | +0.1466(10) | R |  | AB | 2008Py02/1968Ma23 | Mol Phys 106 1965 (2008)/PRS A305 139 (1968) |
|  |  |  |  |  | +0.1402(10) |  |  | R | 1992Su01 | PRL 68 927 (92) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | +0.150(6) a |  |  | Mu-X | 1982We04 | NP A377 361 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 13 Al 28 | 0 | 2.24 m | 3+ | 3.242(5) |  |  |  | -NMR | 1981Mi14 | PL 106B 38 (81) |
|  |  |  |  |  | 0.172(12) | R | [27Al] | -NMR | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.175(14) |  | [27Al] | -NMR | 1978St31 | HFI 4 170 (78) |
|  | 31 | 1.91 ns | 2+ | +4.3(4) |  |  |  | IPAC | 1972He22 | PR C6 878 (72) |
|  |  |  |  |  |  |  |  |  |  |  |
| 13 Al 30 | 0 | 3.63 s | 3+ | 3.010(7) |  |  |  | -NMR | 2005UE01 | PL B615 186 (2005) |
|  |  |  |  |  |  |  |  |  |  |  |
| 13 Al 31 | 0 | 644 ms | (5/2+) | +3.830(5) |  |  |  | -NMR | 2006HI18 | PL B643 257 (06) |
|  |  |  |  | (+) 3.79(5) |  |  |  | LMR | 2002Bo22 | PL B537 45 (02) |
|  |  |  |  |  | 0.140(2) | R | [27Al] | -NQR | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.134(2) |  | [27Al] | -NQR | 2009De25 | PL B678 344 (2009) |
|  |  |  |  |  |  |  |  |  |  |  |
| 13 Al 32 | 0 | 33 ms | 1+ | 1.952(2) |  |  |  | -NMR | 2006HI18 | PL B643 257 (06) |
|  |  |  |  | 1.959(9) |  |  |  | -NMR | 2005UE01 | PL B615 186 (2005) |
|  |  |  |  |  | 0.025(2) | R | [27Al] | -NQR | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.024(2) |  | [27Al] | -NQR | 2007KA68 | HI 180 61 (07) |
|  |  |  |  |  |  |  |  |  |  |  |
| 13 Al 33 | 0 | 44 ms | (5/2+) | +4.088(5) |  |  |  | -NMR | 2006HI18 | PL B643 257 (06) |
|  |  |  |  |  | 0.132(16) | R | [27Al] | -NMR | 2012Sh22 | PL B714 246 (12) |
|  |  |  |  |  |  |  |  |  |  |  |
| 13 Al 34 | 0 | 56 ms | 4- | (+)2.156(16) |  |  |  | -NMR | 2008HI01 | PL B658 203 (08) |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| 14 Si 27 | 0 | 4.1 s | 5/2+ | (-)0.8652(4) d |  |  |  | -NMR | 1998MaZJ | ARO 49 (97) |
|  |  |  |  | 0.8654(3) d |  |  |  | -NMR | 1999MaZK | ARO 54 (98) |
|  |  |  |  | (-)0.8554(4) |  |  |  | -NMR | 1984Hu11 | PR C30 1328 (84) |
|  |  |  |  |  | 0.063(14) | R | [calc efg] | -NMR | 1999MaZK | ARO 54 (98) |
|  |  |  |  |  | 0.060(13) |  |  | -NMR | 1999Mb13 | HFI 120/121 673 (99) |
|  |  |  |  |  | 0.061(4) |  | [calc efg] | -NMR | 1998MaZJ | ARO 49 (97) |
|  |  |  |  |  |  |  |  |  |  |  |
| 14 Si 28 | 1779 | 0.49 ps | 2+ | +1.1(2) |  |  |  | IMPAC | 1975Eb01 | NP A244 1 (75) |
|  |  |  |  |  | +0.16(3) | R |  | CER,R | 1981Sp07 | PRep. 73 369 (81) |
|  |  |  |  |  | +0.18(3) |  |  | CER | 1980Ba40 | NP A349 271 (80) |
|  |  |  |  |  | +0.16(3) |  |  | CER | 1980Fe07 | AuJP 33 509 (80)/AuJP 34 609 (E) (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 14 Si 29 | 0 | stable | 1/2+ | -0.55529(3) |  |  | [2H] | N | 1953We51 | PR 89 923 (53) |
|  |  |  |  |  |  |  |  |  |  |  |
| 14 Si 30 | 2235 | 0.25 ps | 2+ | +0.8(2) |  |  |  | IMPAC, R | 1978Za13 | HFI 5 347 (78) |
|  |  |  |  |  | -0.05(6) | R |  | CER, R | 1981Sp07 | PRep. 73 369 (81) |
|  |  |  |  |  | -0.05(6) or +0.01(6) |  |  | CER | 1979Fe08 | PRL 43 1463 (79) |
|  |  |  |  |  |  |  |  |  |  |  |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
| 14 Si 33 | 0 | 6.332 s | (3/2+) | 1.21(3) |  |  |  | -NMR, OP/RD | 92MA52 | HFI 74 223 (1992) |
|  |  |  |  |  |  |  |  |  |  |  |
| 14 Si 35 | 0 | 0.78 s | 7/2- | (-) 1.638(4) |  |  |  | -NMR | 2007NE14 | Eur Phys J (Sp Topics) 150 149 (07) |
|  |  |  |  |  |  |  |  |  |  |  |
| 15 P 28 | 0 | 270 ms | 3+ | 0.312(3) |  |  |  | -NMR | 2010 MAZJ | 7th China-Japan NP Symp 260 (10) |
|  |  |  |  | 0.309(9) |  |  |  | -NMR | 2009ZH52 | Chin Phys C33 Supp 1 215 (09) |
|  |  |  |  |  |  |  |  |  | 2007ZH54 | HI 180 37 (07) |
|  |  |  |  |  | 0.137(14) |  |  | -NQR | 2012Zh36 | Chin Phys Lett 29 092102 (12) |
|  |  |  |  |  |  |  |  |  |  |  |
| 15 P 29 | 0 | 4.1 s | 1/2+ | 1.2346(3) |  |  |  | -NMR | 2009ZH53 | Chin Phys C33 Supp 1 215 (09) |
|  |  |  |  | 1.2349(3) |  |  |  | -NMR | 1971SuZI | Cf70HI 325 (70) |
|  |  |  |  |  |  |  |  |  |  |  |
| 15 P 31 | 0 | stable | 1/2+ | +1.13160(3) |  |  | [23Na] | N | 1954Wa37 | ORNL 1775 (54) |
|  | 1270 | 0.52 ps | 3/2+ | +0.30(8) |  |  |  | IMPAC | 1982Ho06 | NP A379 22 (82) |
|  | 2230 | 0.25 ps | 5/2+ | +2.8(5) |  |  |  | IMPAC | 1982Ho06 | NP A379 22 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 15 P 32 | 0 | 14.28 d | 1+ | -0.2524(3) |  |  |  | ENDOR | 1957Fe32 | PR 107 1462 (57) |
|  |  |  |  |  |  |  |  |  |  |  |
| 16 S 31 | 0 | 2.6 s | 1/2+ | 0.48793(8) |  |  |  | -NMR | 1976Mi16 | PR C14 2335 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 16 S 32 | 2230 | 0.16 ps | 2+ | +0.9(2) |  |  |  | TF | 2006SP01 | PL B632 207 (2006) |
|  |  |  |  | +0.9(2) |  |  |  | TF | 1979Za01 | NP A315 133 (79) |
|  |  |  |  |  | -0.16(2) | R |  | CER | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.15(2) |  |  | CER, R | 1981Sp07 | PRep. 73 369 (81) |
|  |  |  |  |  | -0.16(2) or -0.13(2) |  |  | CER | 1982Ve09 | NP A389 185 (82) |
|  |  |  |  |  | -0.18(4) or -0.15(4) |  |  | CER | 1981Da08 | ZP A300 71 (81) |
|  |  |  |  |  | -0.12(5) |  |  | CER | 1980Ba40 | NP A349 271 (80) |
|  | 4459 | 0.144ps | 4+ | +1.6(6) |  |  | [32S 2230] | TF | 1988Si14 | ZP A330 361 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 16 S 33 | 0 | stable | 3/2+ | +0.6438212(14) |  |  | [2H] | N | 1973Lu06/1951Dh01 | ZNat 28a 1370 (73)/PR 83 845 (51) |
|  |  |  |  |  | -0.0678(13) | R |  | MA | 2008Py02/1954Bi40 | Mol Phys 106 1965 (2008)/PR 94 1203 (1954) |
|  |  |  |  |  | -0.064(10) st |  |  | MA | 1954Bi40 | PR 94 1203 (54) |
|  |  |  |  |  | -0.084(8) |  |  | CFBLS | 1986El09 | ZNat 41a 15 (86) |
|  |  |  |  |  | -0.0678(13) |  |  | MCHF | 1990Su19 | PR A42 1160 (90) |
|  |  |  |  |  |  |  |  |  |  |  |
| 16 S 34 | 2128 | 0.32 ps | 2+ | +1.0(2) |  |  |  | IMPAC | 1979Za01 | NP A315 133 (79) |
|  |  |  |  |  | +0.04(3) | R |  | CER, R | 1981Sp07 | PRep. 73 369 (81) |
|  |  |  |  |  | +0.06(4) |  |  | CER | 1980Ba40 | NP A349 271 (80) |
|  |  |  |  |  |  |  |  |  |  |  |
| 16 S 35 | 0 | 87.4 d | 3/2+ | +1.00(4) or +1.07(4) |  |  |  | MA | 1954Bu05 | PR 93 193 (54) |
|  |  |  |  |  | +0.0471(9) | R |  | MCHF | /2008Py02/1990Su19 | Mol Phys 106 1965 (2008)/PR A42 1160 (90) |
|  |  |  |  |  | +0.045(10) |  |  | MA | 1954Bi40 | PR 94 1203 (54) |
|  |  |  |  |  |  |  |  |  |  |  |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
| 16 S 38 | 1292 | 3.4 ps | 2+ | +0.26(10) |  |  |  | TF | 2006ST21 | PRL 96, 112503/PR C74 054307 (06) |
|  |  |  |  |  |  |  |  |  |  |  |
| 16 S 40 | 904 | 14.6 ps | 2+ | -0.02(12) |  |  |  | TF | 2006ST21 | PRL 96, 112503/PR C74 054307 (06) |
|  |  |  |  |  |  |  |  |  |  |  |
| 16 S 43 | 320 | 415 ns | 7/2- | 1.110(14) |  |  |  | TDPAD | 2009GA05 | PRL 102 092501 (09) |
|  |  |  |  |  | 0.23(3) | R |  | TDPAD | 2012Ch16 | PRL 108 162501 (2012) |
|  |  |  |  |  |  |  |  |  |  |  |
| 17 Cl 32 | 0 | 298 ms | 1+ | +1.114(6) |  |  |  | -NMR | 2000Ro30 | PR C62 044312 (00) |
|  |  |  |  |  |  |  |  |  |  |  |
| 17 Cl 33 | 0 | 2.52 s | 3/2+ | + 0.7549(3) d |  |  |  | -NMR | 2004Ma98 | NP A746 493c (04) |
|  |  |  |  | +0.752(2) |  |  |  | -NMR | 1986Ro20 | PL 177B 293 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 17 Cl 35 | 0 | stable | 3/2+ | +0.8218743(4) |  |  | [2H] | N | 1972Bl07 | ZNat 27a 72 (72) |
|  |  |  |  |  | 0.0850(11) |  |  | R | 2004Al08 |  |
|  |  |  |  |  | 0.0819(11) a |  |  | R | 2000Ha64 | PR B61 13588 (00) |
|  |  |  |  |  | -0.817(8) a | R |  | R | 2008Py02/1993Su36 | Mol Phys 106 1965 (2008)/JCP 98 7152 (93) |
|  |  |  |  |  | -0.08249(2) st |  |  | AB, R | 1972St38 | PR A6 1702 (72) |
|  |  |  |  |  | -0.076(5) |  |  | CFBLS | 1986El09 | ZNat 41a 15 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 17 Cl 36 | 0 | 3.0x105 y | 2+ | +1.28547(5) |  |  | [2H] | N | 1955So10 | PR 98 1316 (55) |
|  |  |  |  |  | -0.178(4) | R | [35Cl] | MA, R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.0180(4) st |  | [35Cl] | MA, R | 1972St38 | PR A6 1702 (72) |
|  |  |  |  |  |  |  |  |  |  |  |
| 17 Cl 37 | 0 | stable | 3/2+ | +0.6841236(4) |  |  | [2H] | N | 1972Bl07 | ZNat 27a 72 (72) |
|  |  |  |  |  | -0.0644(7) a | R |  | R | 2008Py02/1993Su36 | Mol Phys 106 1965 (2008)/JCP 98 7152 (93) |
|  |  |  |  |  | -0.06493(2) st |  |  | AB, R | 1972St38 | PR A6 1702 (72) |
|  |  |  |  |  | -0.068(10) |  |  | CFBLS | 1986El09 | ZNat 41a 15 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 17 Cl 38 | 0 | 37.3 m | 2- | 2.05(2) |  |  |  | -NMR | 1972La22 | ZP 252 242 (72) |
|  |  |  |  |  |  |  |  |  |  |  |
| 17 Cl 44 | 0 | 0.56 s | (2-) | (-)0.2749(2) |  |  |  | -NMR | 2010DE11 | PR C81 034308 (10) |
|  |  |  |  |  |  |  |  |  |  |  |
| 18 Ar 33 | 0 | 0.174 s | 1/2+ | -0.723(6) |  |  | [37Ar] | CFBLS/-NMR | 1996Kl04 | NP A607 1 (96) |
|  |  |  |  |  |  |  |  |  |  |  |
| 18 Ar 35 | 0 | 1.78s | 3/2+ | +0.6322(2) |  |  |  | -NMR | 2002Ma41 | NP A701 383c (02) |
|  |  |  |  | +0.633(7) |  |  | [37Ar] | CFBLS/-NMR | 1996Kl04 | NP A607 1 (96) |
|  |  |  |  | +0.633(2) |  |  |  | NO/D | 1965Ca04 | PR 137 B1453 (65) |
|  |  |  |  |  | -0.084(15) | R | [37Ar] | CFBLS/-NMR | 1996Kl04 | NP A607 1 (96) |
|  |  |  |  |  |  |  |  |  |  |  |
| 18 Ar 36 | 1970 | 0.45 ps | 2+ | +1.0(4) |  |  |  | TF | 2006SP01 | PL B632 207 (2006) |
|  |  | 0.28 ps |  |  | +0.11(6) | R |  | CER | 1971Na06 | PL 34B 389 (71) |
|  |  |  |  |  |  |  |  |  |  |  |
| 18 Ar 37 | 0 | 35.0 d | 3/2+ | +1.145(5) |  |  | [85Kr] | N, OP/RD | 1988PiZY | BAPS 33 1564 (88) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  |  |  |  | O | 1965Ro13 | PR 140 B820 (65) |
|  |  |  |  |  | +0.076(9) | R |  | CFBLS/-NMR | 1996Kl04 | NP A607 1 (96) |
|  | 1611 | 4.6 ns | 7/2- | -1.33(5) |  |  |  | TDPAD | 1971Ra22 | PRL 27 603 (71) |
|  |  |  |  |  |  |  |  |  |  |  |
| 18 Ar 38 | 2167 | 0.49 ps | 2+ | +0.5(2) |  |  |  | TF | 2006SP01 | PL B632 207 (2006) |
|  | 3937 | 0.03 ps | 2+ | +2.2(22) |  |  |  | TF | 2006SP01 | PL B632 207 (2006) |
|  |  |  |  |  |  |  |  |  |  |  |
| 18 Ar 39 | 0 | 269 y | 7/2- | -1.588(15) |  |  | [37Ar] | CFBLS/-NMR | 1996Kl04 | NP A607 1 (96) |
|  |  |  |  | -1.3(3) |  |  |  | O | 1967Tr12 | JOSA 57 1452 (67) |
|  |  |  |  |  | -0.12(2) |  | [37Ar] | CFBLS | 2008BL01 | NP A799 30 (2008) |
|  |  |  |  |  | -0.12(3) | R | [37Ar] | CFBLS/-NMR | 1996Kl04 | NP A607 1 (96) |
|  |  |  |  |  |  |  |  |  |  |  |
| 18 Ar 40 | 1461 | 1.12 ps | 2+ | -0.04(6) |  |  |  | TF | 2008SP04 | PR C78 017304 (08) |
|  |  |  |  | -0.03(8) |  |  |  | TF | 2005ST22 | PR C72 014309 (05) |
|  |  |  |  | -0.2(2) |  |  |  | TF | 1992Cu04 | NP A549 304 (92) |
|  |  |  |  |  | +0.01(4) | R |  | CER | 1970Na05 | PRL 24 903 (70) |
|  |  |  |  |  |  |  |  |  |  |  |
| 18 Ar 41 | 0 | 1.82 h | 7/2- | -1.309(8) |  |  | [39Ar] | CFBLS | 2008BL01 | NP A799 30 (2008) |
|  |  |  |  |  | -0.042(4) | R | [37Ar] | CFBLS | 2008BL01 | NP A799 30 (2008) |
|  |  |  |  |  |  |  |  |  |  |  |
| 18 Ar 43 | 0 | 5.37 m | 5/2- | -1.021(6) |  |  |  | CFBLS | 2008BL01 | NP A799 30 (2008) |
|  |  |  |  |  | +0.142(14) | R | [37Ar] | CFBLS | 2008BL01 | NP A799 30 (2008) |
|  |  |  |  |  |  |  |  |  |  |  |
| 19 K 35 | 0 | 178 ms | 3/2+ | 0.392(7) |  |  |  | -NMR | 2006ME04 | PR C73 024318 (06) |
|  |  |  |  | (+)0.36(3) |  |  |  | -NMR | 1998Sc19 | PR C57 2205 (98) |
|  |  |  |  |  |  |  |  |  |  |  |
| 19 K 36 | 0 | 0.34 s | 2+ | (+)0.548(1) |  |  | [39K] | OP/RD | 1975Sc20 | NP A246 187 (75) |
|  |  |  |  |  |  |  |  |  |  |  |
| 19 K 37 | 0 | 1.23 s | 3/2+ | +0.20321(6) |  |  |  | OP/RD | 1971Vo03 | ZP 244 44 (71) |
|  |  |  |  |  | +0.106(4) | R | [39K] | -NQR | 2008Mi07 | PL B662 389 (2008) |
|  | 1379 | 10.5 ns | 5/2,7/2- | g = +1.5(1) |  |  |  | TDPAD | 1971Ra22 | PRL 27 603 (71) |
|  |  |  |  |  |  |  |  |  |  |  |
| 19 K 38 | 0 | 7.61 m | 3+ | +1.371(6) |  |  | [39K] | AB, R | 1982To02 | PL 108B 169 (82) |
|  | 3458 | 22.1 s | 7+ | +3.836(14) |  |  |  | TDPAD | 1974Io01 | PL 48B 28 (74) |
|  |  |  |  |  |  |  |  |  |  |  |
| 19 K 39 | 0 | stable | 3/2+ | +0.39147(3) |  |  |  | ABLS | 1993Du08 | NIMPR A325 465 (93) |
|  |  |  |  | +0.3914662(3) |  |  |  | AB/D | 1974Be50 | ZP 270 173 (74) |
|  |  |  |  | +0.39150731(12) |  |  | [2H] | N | 1974Sa24/1974Sa25 | ZNat 29a 1754 (74)/ZNat 29a 1763 (74) |
|  |  |  |  |  | +0.0585(6) a | R |  | R | 2008Py02/1998Ke05 | Mol Phys 106 1965 (2008)/CPL 292 403 (1998) |
|  |  |  |  |  | +0.060(2) a |  |  | R | 1993Su36 | JCP 98 7152 (93) |
|  |  |  |  |  | +0.049(4) st |  |  | OL, R | 1971St12 | PR A3 837 (71) |
|  | 2814 | 48 ps | 7/2- | 4.0(4) |  |  | [41K 1294] | RIGV | 1981Le19 | ZP A301 243 (81) |
|  | 3598 | 37 ps | 9/2- | 2.4(2) |  |  | [41K 1294] | RIGV | 1981Le19 | ZP A301 243 (81) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  | 8030 | 14 ps | 19/2- | +3.3(3) |  |  | [41Ca3830] | TF | 1992Pa01 | PR C45 166 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 19 K 40 | 0 | 1.3x10\*9y | 4- | -1.298100(3) |  |  | [2H] | N | 1974Sa24 | ZNat 29a 1754 (74) |
|  |  |  |  | -1.2982(4) |  |  |  | AB/D | 1952Ei09 | PR 86 73 (52) |
|  |  |  |  |  | -0.073(1) a | R | [39K] | R | 2008Py02/1998Ke05 | Mol Phys 106 1965 (2008)/CPL 292 403 (1998) |
|  |  |  |  |  | -0.075(2) a |  | [39K] | R | 1993Su36 | JCP 98 7152 (93) |
|  |  |  |  |  | -0.061(5) st |  | [39K] | Q, OL | 1972Jo09/1971St12 | PR B6 757 (72)/PR A3 837 (71) |
|  |  |  |  |  |  |  |  |  |  |  |
|  | 30 | 4.30 ns | 3- | -1.29(9) |  |  | [19F 197] | TDPAD | 1974Br12 | PL 49B 261 (74) |
|  | 2543 | 1 ns | 7+ | +4.1(7) |  |  |  | IMPAD | 1976Bo21 | NP A264 151 (76) |
|  |  |  |  | +4.4(11) |  |  | [41K 1294] | RIGV | 1981Le19 | ZP A301 243 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 19 K 41 | 0 | stable | 3/2+ | +0.2148701(2) |  |  |  | AB/D | 1974Be50 | ZP 270 173 (74) |
|  |  |  |  | +0.21489274(12) |  |  | [2H] | N | 1974Sa24/1974Sa25 | ZNat 29a 1754 (74)/ZNat 29a 1763 (74) |
|  |  |  |  |  | +0.0711(7) a | R |  | R | 2008Py02/1998Ke05 | Mol Phys 106 1965 (2008)/CPL 292 403 (1998) |
|  |  |  |  |  | +0.073(2) a |  |  | R | 1993Su36 | JCP 98 7152 (93) |
|  |  |  |  |  | +0.060(5) st |  |  | MB, R | 1971St12 | PR A3 837 (71) |
|  | 1294 | 7.42 ns | 7/2- | +4.42(5) |  |  | [19F 197] | TDPAD | 1969Bi07 | PL 28B 651 (69) |
|  | 2528 | 152 ps | 11/2+ | 4.5(10) |  |  | [41K 1294] | RIGV | 1981Le19 | ZP A301 243 (81) |
|  | 2774 | 55 ps | 13/2+ | 3.0(5) |  |  | [41K 1294] | RIGV | 1981Le19 | ZP A301 243 (81) |
|  | 4983 | 73 ps | 19/2- | 7(3) |  |  | [41K 1294] | RIGV | 1981Le19 | ZP A301 243 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 19 K 42 | 0 | 12.36 h | 2- | -1.1425(6) |  |  |  | AB/D | 1969Ch20/1973CoZG | PR 184 1102 (69)/BAPS 18 727 (73) |
|  |  |  |  |  |  |  |  |  |  |  |
| 19 K 43 | 0 | 22.3 h | 3/2+ | +0.1633(8) |  |  | [39K) | ABLS, R | 1982To02/1982Du06 | PL 108B 169 (82)/JPPa 43 509 (82) |
|  | 738 | 202 ns | 7/2- | +4.43(5) |  |  |  | TDPAD | 1983Ra37 | HFI 15 59 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 19 K 44 | 0 | 22.1 m | 2- | -0.856(4) |  |  | [39K] | ABLS, R | 1982To02/1982Du06 | PL 108B 169 (82)/JPPa 43 509 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 19 K 45 | 0 | 20 m | 3/2+ | +0.1734(8) |  |  | [39K] | AB, R | 1982To02 | PL 108B 169 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 19 K 46 | 0 | 115 s | 2- | -1.051(6) |  |  | [39K] | ABLS | 1982To02 | PL 108B 169 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 19 K 47 | 0 | 17.5 s | 1/2+ | +1.933(9) |  |  | [39K] | ABLS | 1982To02 | PL 108B 169 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 19 K 49 | 0 | 1.26 s | 1/2+ | +1.3386(8) |  |  | [39K] | CLS | 2013Pa11 | PRL 110 172503 (2013) |
|  |  |  |  |  |  |  |  |  |  |  |
| 19 K 51 | 0 | 365 ms | (3/2+) | +0.513(2) |  |  | [39K] | CLS | 2013Pa11 | PRL 110 172503 (2013) |
|  |  |  |  |  |  |  |  |  |  |  |
| 20 Ca 39 | 0 | 0.86 s | 3/2+ | 1.02168(12) |  |  |  | NMR | 1976Mi05 | PL 61B 155 (76) |
|  |  |  |  |  | 0.036(7) | R |  | NMR | 1999Mb13 | HI 120/121 673 (1999) |
|  |  |  |  |  | 0.040(6) |  | [calc efg] | NMR | 1999MaZK | ARO 54 (98) |
|  |  |  |  |  |  |  |  |  |  |  |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
| 20 Ca 40 | 3737 | 47 ps | 3- | +1.6(3) |  |  |  | TFL RIGV,R | 1979Ni04/1976Ja16 | PRL 43 326 (79)/PR C14 2013 (76) |
|  |  |  |  | +1.6(3) |  |  | [40Ca 4492] | IMPAC | 1987Ma25 | ZP A327 157 (87) |
|  | 4492 | 295 ps | 5- | +2.6(5) |  |  |  | IPAD | 1974He13 | PR C10 919 (74) |
|  |  |  |  |  |  |  |  |  |  |  |
| 20 Ca 41 | 0 | 1.0x105 y | 7/2- | -1.594781(9) |  |  | [2H] | N | 1962Br30 | PRL 9 166 (62) |
|  |  |  |  | -1.5942(7) |  |  | [43Ca] | ABLDF | 1983Ar25 | ZP A314 303 (83) |
|  |  |  |  | -1.61(2) |  |  | [43Ca] | ABLFS | 1982An15 | PR C26 2194 (82) |
|  |  |  |  |  | -0.665(18) | R |  | AB | 2008Py02 | Mol Phys 106 1965 (2008) |
|  |  |  |  |  | -0.090(2) st |  | [43Ca] | R | 2002Mi37 | Z.Nat 57a 595 (02) |
|  |  |  |  |  | -0.066(2) a |  |  | R | 1993Su36 | JCP 98 7152 (93) |
|  |  |  |  |  | -0.080(8) st |  | [43Ca] | ABLDF | 1983Ar25 | ZP A314 303 (83) |
|  | 3830 | 3.1 ns | 15/2+ | +2.18(15) |  |  |  | TDPAD | 1975Yo05 | PR C12 1358 (75) |
|  |  |  |  |  |  |  |  |  |  |  |
| 20 Ca 42 | 1525 | 1.1 ps | 2+ | +0.08(12) |  |  |  | TF | 2003Sc21 | PL B571 29 (03) |
|  |  |  |  |  | -0.19(8) | R |  | CER | 1973To07 | NP A204 574 (73) |
|  | 3189 | 5.3 ns | 6+ | -2.49(9) |  |  |  | TDPAD | 1975Yo02 | PRL 35 497 (75) |
|  |  |  |  |  |  |  |  |  |  |  |
| 20 Ca 43 | 0 | stable | 7/2- | -1.3173(6) |  |  | [23Na] | OP/RD | 1972Ol01 | ZP 249 205 (72) |
|  |  |  |  | -1.317643(7) |  |  | [2H] | N | 1973Lu08 | ZNat 28a 1534 (73) |
|  |  |  |  |  | -0.055(1) |  |  | R | 2002Mi37 | Z.Nat 57a 595 (02) |
|  |  |  |  |  | -0.0408(8) | R |  | R | 2008Py02/1993Su36 | Mol Phys 106 1965 (2008)/JCP 98 7152 (93) |
|  |  |  |  |  | -0.043(9) |  |  | CFBLS | 1991Si14 | ZP D18 351 (91) |
|  |  |  |  |  | -0.049(5) |  |  | ABLDF, R | 1983Ar25/1979Gr05 | ZP A314 303 (83)/PRL 42 1528 (79) |
|  |  |  |  |  |  |  |  |  | 1982Ay02/1984Sa10 | ZP A306 1 (82)/ZP A316 135 (84) |
|  |  |  |  |  |  |  |  |  | 1982Ku12 | ZP A307 99 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 20 Ca 44 | 1157 | 3.0 ps | 2+ | +0.24(10) |  |  |  | TF | 2003Ta05 | PL B571 29 (03) |
|  |  |  |  | +0.34(6) |  |  |  | TF | 2003Sc21 |  |
|  |  |  |  | -0.6(2) |  |  | [40Ca 3737] | TFL, RIV/D | 1979Ni04 | PRL 43 326 (79) |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  | -0.14(7) | R |  | CER | 1973To07 | NP A204 574 (73) |
|  |  |  |  |  |  |  |  |  |  |  |
| 20 Ca 45 | 0 | 165 d | 7/2- | -1.3274(14) |  |  | [43Ca] | ABLFS, R | 1983Ar25/1981Ar15 | ZP A314 303 (83)/HFI 9 159 (81) |
|  |  |  |  |  |  |  |  |  | 1980Be13 | ZP A294 319 (80) |
|  |  |  |  | -1.316(16) |  |  | [43Ca] | ABLFS | 1982An15 | PR C26 2194 (82) |
|  |  |  |  |  | +0.038(12) | R | [41Ca] | ABLFS | 1983Ar25 | ZP A314 303 (1983) |
|  |  |  |  |  | +0.046(14) |  | [43Ca] | ABLFS, R | 1983Ar25/1980Be13 | ZP A314 303 (83)/ZP A294 319 (80) |
|  |  |  |  |  |  |  |  |  |  |  |
| 20 Ca 46 | 1.346 | 4.6 ps | 2+ | -0.52(12) |  |  | [46Ti 889] | TF | 2005Ta02 | PL B605 265 (05) |
|  |  |  |  | -0.4(2) |  |  | [50Ti 1554] | TF | 2003Sp04 | PR C68 061302 (04) |
|  |  |  |  |  |  |  |  |  |  |  |
| 20 Ca 47 | 0 | 4.5 d | 7/2- | -1.38(3) |  |  | [43Ca] | ABLFS | 1982An15 | PR C26 2194 (82) |
|  |  |  |  |  |  |  |  |  |  |  |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
| 20 Ca 49 | 0 |  | 3/2- | -1.38(6) |  |  |  | CFBLS | 1993VEZY | IoP Phys Conf Ser 132 193 (1992) |
|  |  |  |  |  |  |  |  |  |  |  |
| 21 Sc 41 | 0 | 0.59 s | 7/2- | +5.431(2) d |  |  | [12B] | -NMR | 1990Mi16 | NP A516 365 (90) |
|  |  |  |  |  | -0.145(3) | R | [45Sc] | NQR | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.156(3) st |  | [45Sc] | R | 2002Mi37 | Z.Nat 57a 595 (02) |
|  |  |  |  |  | 0.120(6) |  | [45Sc] | -NMR | 1990Mi19 | HFI 59 153 (90) |
|  |  |  |  |  | 0.166(8) |  | [45Sc] | NQR | 1993Mi09 | NP A559 239 (93) |
|  |  |  |  |  |  |  |  |  |  |  |
| 21 Sc 43 | 0 | 3.89 h | 7/2- | +4.528(10) |  |  | [45Sc] | CLS | 2011AV01 | J.Phys.G 38 025104 (2011) |
|  |  |  |  | +4.62(4) |  |  | [45Sc] | AB | 1966Co13 | PR 141 1106 (66) |
|  |  |  |  |  | -0.27(5) | R | [45Sc] | CLS | 2011AV01 | J.Phys.G 38 025104 (2011) |
|  |  |  |  |  | -0.27(5) |  | [45Sc] | AB | 1966Co13 | PR 141 1106 (66) |
|  | 152 | 438 s | 3/2+ | +0.348(6) |  |  |  | TDPAD | 1977Mi10 | PR C16 1605 (77) |
|  | 3123 | 473 ns | 19/2- | +3.122(7) |  |  |  | TDPAD | 1978Ha07 | PL 73B 127 (78) |
|  |  |  |  |  | 0.199(14) | R | [45Sc] | TDPAD | 1981Da06 | PR C23 1612 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 21 Sc 44 | 0 | 3.89 h | 2+ | +2.499(5) |  |  | [45Sc] | CLS | 2011AV01 | J.Phys.G 38 025104 (2011) |
|  |  |  |  | +2.56(3) |  |  | [45Sc] | AB, R | 1966Co13 | PR 141 1106 (66) |
|  |  |  |  |  | +0.10(5) | R | [45Sc] | CLS | 2011AV01 | J.Phys.G 38 025104 (2011) |
|  |  |  |  |  | +0.16(4) |  | [45Sc] | R | 1966Co13 | PR 141 1106 (66) |
|  | 68 | 153 ns | 1- | +0.342(6) |  |  |  | TDPAC | 1967Ri06 | PR 153 1209 (67) |
|  |  |  |  |  | 0.21(2) | R | [45Sc] | TDPAC | 1973Ha61 | JCP 58 3339 (73) |
|  | 235 | 6.1 ns | 2- | +0.68(10) |  |  | [19F 197] | TDPAD | 1975Br12 | NuoCL 12 433 (75) |
|  | 271 | 58.6 h | 6+ | +3.833(12) |  |  | [45Sc] | CLS | 2011AV01 | J.Phys.G 38 025104 (2011) |
|  |  |  |  | +3.88(1) |  |  | [45Sc] | AB, R | 1966Co13 | PR 141 1106 (66) |
|  |  |  |  |  | -0.19(2) | R | [45Sc] | CLS | 2011AV01 | J.Phys.G 38 025104 (2011) |
|  |  |  |  |  | -0.21(9) |  | [45Sc] | R | 1966Co13 | PR 141 1106 (66) |
|  | 350 | 3.2 ns | 4+ | +3.6(5) |  |  |  | IPAD | 1975Ch37 | ZP A275 51 (75) |
|  |  |  |  |  |  |  |  |  |  |  |
| 21 Sc 45 | 0 | stable | 7/2- | +4.756487(2) |  |  | [2H] | N | 1969Lu01 | PL 29A 58 (69) |
|  |  |  |  |  |  |  |  |  | 1951Pr02 | PR 81 20 (51) |
|  |  |  |  |  | -0.236(2) st |  | [calc efg] | NMR | 2002Mi37 | Z.Nat 57a 595 (02) |
|  |  |  |  |  | -0.220(2) | R | [calc efg] | MS | 2008Py02/2000Ke12 | Mol Phys 106 1965 (2008)/CPL 329 112 (00) |
|  |  |  |  |  | -0.22(1) |  |  | ABLDF | 1976Er01 | ZP A276 9 (76) |
|  |  |  |  |  | -0.216(9) |  |  | AB | 1971Ch25 | PR A4 1767 (71) |
|  | 12.4 | 318 ms | 3/2+ | +0.360(11) |  |  | [45Sc] | CLS | 2011AV01 | J.Phys.G 38 025104 (2011) |
|  |  |  |  |  | +0.28(5) | R | [45Sc] | CLS | 2011AV01 | J.Phys.G 38 025104 (2011) |
|  |  |  |  |  |  |  |  |  |  |  |
| 21 Sc 46 | 0 | 83.81 d | 4+ | +3.042(8) |  |  | [45Sc] | CLS | 2011AV01 | J.Phys.G 38 025104 (2011) |
|  |  |  |  | +3.03(2) |  |  | [45Sc] | AB | 1962Pe21 | PR 128 1740 (62) |
|  |  |  |  |  | +0.12(2) |  | [45Sc] | CLS | 2011AV01 | J.Phys.G 38 025104 (2011) |
|  |  |  |  |  | +0.119(6) | R | [45Sc] | AB | 1962Pe21 | PR 128 1740 (62) |
|  |  |  |  |  |  |  |  |  |  |  |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
| 21 Sc 47 | 0 | 3.42 d | 7/2- | +5.34(2) |  |  | [45Sc] | AB | 1966Co13 | PR 141 1106 (66) |
|  |  |  |  |  | -0.22(3) | R | [45Sc] | AB | 1966Co13 | PR 141 1106 (66) |
|  | 767 | 247 ns | 3/2+ | 0.35(5) |  |  |  | TDPAD | 1968Fo02 | PR 168 1228 (68) |
|  |  |  |  |  |  |  |  |  |  |  |
| 21 Sc 48 | 0 | 43.7 h | 6+ | 3.785(12) |  |  |  | NMR/ON | 2007OH10 | HI 180 79 (07) |
|  |  |  |  |  |  |  |  |  |  |  |
| 21 Sc 49 | 0 | 57.2 m | 7/2- | (+)5.62(3) |  |  |  | NMR/ON | 2012OH01 | PRL 109 032504 (12) |
|  |  |  |  |  |  |  |  |  |  |  |
| 22 Ti 43 | 0 | 0.50 s | 7/2- | 0.85(2) |  |  |  | -NMR | 1993Ma67 | HFI 78 123 (93) |
|  | 3066 | 560 ns | 19/2- | +7.22(1) |  |  |  | TDPAD | 1978Ha07 | PL 73B 127 (78) |
|  |  |  |  |  | 0.33(8) | R | [47Ti] | TDPAD | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.30(7) st |  | [47Ti] | TDPAD | 1981Da06 | PR C23 1612 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 22 Ti 44 | 1083 | 2.75 ps | 2+ | +1.0(3) |  |  |  | TF | 2003SC19 | PL B567 153 (03) |
|  |  |  |  |  |  |  |  |  |  |  |
| 22 Ti 45 | 0 | 3.09 h | 7/2- | 0.095(2) |  |  | [47,49Ti] | AB | 1966Co19 | PR 148 1157 (66) |
|  |  |  |  |  | 0.015(15) | R | [47,49Ti] | AB | 1966Co19 | PR 148 1157 (66) |
|  | 40 | 11.3 ns | 5/2- | -0.133(10) |  |  |  | TDPAD |  | NuoCL 19 229 (77) |
|  |  |  |  | -0.08(3) |  |  |  | TDPAD | 1977St12 | PR C15 1704 (77) |
|  | 329 | 1.10 ns | 3/2+ | +1.1(3) |  |  |  | IPAD, R | 1977Bu10 | CJP 55 779 (77) |
|  |  |  |  |  |  |  |  |  |  |  |
| 22 Ti 46 | 889 | 5.36 ps | 2+ | +0.99(5) |  |  |  | TF | 2000Er06 | PR C62 024305 (00) |
|  |  |  |  | +1.0(3) |  |  |  | TF | 1981Sh19 | HFI 9 65 (81) |
|  |  |  |  |  | -0.21(6) | R |  | CER | 1975To06 | NP A250 381 (75) |
|  | 2010 | 1.64 ps | 4+ | +2.3(7) |  |  |  | TF | 2000Er06 | PR C62 024305 (00) |
|  |  |  |  |  |  |  |  |  |  |  |
| 22 Ti 47 | 0 | stable | 5/2- | -0.78848(1) |  |  | [39K] | N | 1965Dr03 | PhMg 12 1061 (65) |
|  |  |  |  |  |  |  |  |  | 1953Je16 | PR 92 1262 (53) |
|  |  |  |  |  | +0.302(10) | R |  | AB | 2008Py02/1965Ch19 | Mol Phys 106 1965 (2008)/PPS 86 1145 (1965) |
|  |  |  |  |  | +0.30(2) |  |  | LRFS | 1990Ay01 | ZP D15 281 (90) |
|  |  |  |  |  | +0.29(1) |  |  | AB | 1965Ch19 | PPS 86 1145 (65) |
|  | 159 | 210 ps | 7/2- | -1.9(6) |  |  | [45Ti 330] | IPAD | 1977Bu10 | CJP 55 779 (77) |
|  |  |  |  |  |  |  |  |  |  |  |
| 22 Ti 48 | 984 | 4.29 ps | 2+ | +0.78(4) |  |  |  | TF | 2000Er06 | PR C62 024305 (00) |
|  |  |  |  | +0.9(4) |  |  |  | TF | 1981Sh19 | HFI 9 65 (81) |
|  |  |  |  |  | -0.177(8) | R |  | ES | 1972Li12 | PL 38B 475 (72) |
|  | 2296 | 1.2 ps | 4+ | +2.2(5) |  |  |  | TF | 2000Er06 | PR C62 024305 (00) |
|  |  |  |  |  |  |  |  |  |  |  |
| 22 Ti 49 | 0 | stable | 7/2- | -1.10417(1) |  |  | [39K] | N | 1965Dr03/1953Je16 | PhMg 12 1061 (65)/PR 92 1262 (53) |
|  |  |  |  |  | 0.247(11) | R |  | R | 1999Bi11 | PR A59 4295 (99) |
|  |  |  |  |  | +0.24(1) |  |  | AB | 1965Ch19 | PPS 86 1145 (65) |
|  |  |  |  |  | 0.324(3) |  |  | LRDRS | 1992Be68 | PR A46 5774 (92) |
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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
| 22 Ti 50 | 1554 | 1.12 ps | 2+ | +2,89(15) |  |  |  | TF | 2000Sp08 | PR C62 031301 (00) |
|  |  |  |  |  | +0.08(16) |  |  | CER | 1975To06 | NP A250 381 (75) |
|  |  |  |  |  | -0.02(9) |  |  | CER | 1970Ha24 | NP A150 417 (70) |
|  | 3198 | 0.42 ns | 6+ | +9.3(10) |  |  |  | IPAD | 1976Bo25 | NP A266 457 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 22 Ti 52 | 1050 | 3.6 ps | 2+ | +1.7(4) |  |  |  | TF | 2006SP02 | PL B633 219 (06) |
|  | 2318 | 3.3 ps | 4+ | +1.8(6) |  |  |  | TF | 2006SP02 | PL B633 219 (06) |
|  |  |  |  |  |  |  |  |  |  |  |
| 23 V 46 | 802 | 1.02 ms | 3+ | +1.64(3) |  |  |  | TDPAD | 1982Si15 | ZP A309 71 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 23 V 48 | 0 | 15.94 d | 4+ | 2.012 (11) |  |  | [51V] | NMR/ON | 1980Bu11 | HFI 8 59 (80) |
|  | 308 | 7.1 ns | 2+ | +0.44(2) |  |  | [51V] | TDPAC | 1987Bi14 | HFI 34 61 (87) |
|  |  |  |  | +0.28(10) |  |  | [51V] | IPAD | 1978Ta17 | CJP 56 1402 (78) |
|  |  |  |  |  |  |  |  |  |  |  |
| 23 V 49 | 0 | 330 d | 7/2- | 4.47(5) |  |  | [51V] | EPR | 1957We17 | BAPS 2 31 (57) |
|  | 153 | 19.9 ns | 3/2- | +2.37(12) |  |  |  | TDPAD | 1972Vi06 | PL 40B 638 (72) |
|  |  |  |  |  |  |  |  |  |  |  |
| 23 V 50 | 0 | 1.5x1017 y | 6+ | +3.3456889(14) |  |  | [2H] | N | 1981Ha26 | ZP A300 111 (81) |
|  |  |  |  |  | 0.21(4) |  | [51V] | N | 1982Bl03 | JP C15 L349 (82) |
|  |  |  |  |  | +0.21(4) | R | [51V] | ABLDF | 2008Py02/1979Er04 | Mol Phys 106 1965 (2008)/PL B85 319 (1979) |
|  |  |  |  |  | 0.21(4) |  | [51V] | N | 1981Ha26 | ZP A300 111 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 23 V 51 | 0 | stable | 7/2- | +5.1487057(2) |  |  | [2H] | N | 1981Ha26/1951Pr02 | ZP A300 111 (81)/PR 81 20 (51) |
|  |  |  |  |  | -0.043(5) | R |  | LRFS | 1989Un01 | ZP D11 259 (89) |
|  |  |  |  |  | -0.052(10) |  |  | AB | 1967Ch09/1967Ch10 | PR 156 64 (67)/PR 156 71 (67) |
|  |  |  |  |  | -0.033(10) |  |  | PPR | 1973Cl10 | NP A213 493 (73) |
|  | 320 | 0.17 ns | 5/2- | +3.9(3) |  |  |  | CEAD | 1968Ke09 | NP A120 540 (68) |
|  |  |  |  |  |  |  |  |  |  |  |
| 24 Cr 49 | 0 | 41.9 m | 5/2- | 0.476(3) |  |  | [53Cr] | AB | 1970Jo27 | PS 2 16 (70) |
|  | 4367 | 1.9 ps | 19/2- | +7.4(11) |  |  | [50Cr,46Ti] | TF | 1993Pa22 | PR C48 1573 (93) |
|  |  |  |  |  |  |  |  |  |  |  |
| 24 Cr 50 | 783 | 9.2 ps | 2+ | +1.24(6) |  |  |  | TF | 2000Er06 | PR C62 024305 (00) |
|  |  |  |  | +1.3(2) |  |  |  | TF | 1994Pa34 | PR C50 2608 (94) |
|  |  |  |  | +1.2(2) |  |  |  | IMPAC | 1977Fa07 | NP A291 241 (77) |
|  |  |  |  | +0.9(3) |  |  |  | TF | 1987Pa28 | PR C36 2088 (87) |
|  |  |  |  |  | -0.36(7) | R |  | CER | 1975To06 | NP A250 381 (75) |
|  | 1881 | 2.2 ps | 4+ | +3.1(5) |  |  |  | TF | 2000Er06 | PR C62 024305 (00) |
|  |  |  |  | +1.7(4) |  |  |  | TF | 1994Pa34 | PR C50 2608 (94) |
|  | 3164 | 1.2 ps | 6+ | +3(1) |  |  |  | TF | 1994Pa34 | PR C50 2608 (94) |
|  | 4743 | <2.7 ps | 8+ | +4.3(7) |  |  |  | TF | 1994Pa34 | PR C50 2608 (94) |
|  |  |  |  |  |  |  |  |  |  |  |
| 24 Cr 51 | 0 | 27.7 d | 7/2- | (-)0.934(5) |  |  | [53Cr] | AB | 1970Ad07 | ArkF 40 457 (70) |
|  | 749 | 7.25 ns | 3/2- | -0.86(12) |  |  | [19F 197] | TDPAD | 1974Ko10 | IzF 38 155 (74) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  |  |  |  |  |  |  |
| 24 Cr 52 | 1434 | 0.707 ps | 2+ | +2.41(13) |  |  |  | TF | 2000Er06 | PR C62 024305 (00) |
|  |  |  |  | +3.0(5) |  |  | [56Fe 847] | TF | 1987St07 | HFI 36 75 (87) |
|  |  |  |  | +3.2(22) |  |  |  | TF | 1987Pa28 | PR C36 2088 (87) |
|  |  |  |  |  | -0.08(2) | R |  | ES | 1989Ra17 | JPJS 34 387 (73) |
|  |  |  |  |  |  |  |  |  |  |  |
| 24 Cr 53 | 0 | stable | 3/2- | -0.47454(3) |  |  | [14N] | N | 1953Al06 | HPAc 26 426 (53) |
|  |  |  |  |  | -0.15(5) st | R |  | ABLDF | 1982Er09 | ZP A309 1 (82) |
|  |  |  |  |  | +0.04(7) |  |  | CER | 1973Th03 | PR C7 1413 (73) |
|  |  |  |  |  | -0.028(4) st |  |  | ENDOR | 1974Ma35 | CJP 52 1731 (74) |
|  |  |  |  |  |  |  |  |  |  |  |
| 24 Cr 54 | 835 | 8.0 ps | 2+ | +1.68(11) |  |  |  | TF | 2001Wa36 | PR C64 034320 (01) |
|  |  |  |  | +1.1(2) |  |  |  | IMPAC | 1977Fa07 | NP A291 241 (77) |
|  |  |  |  | +1.1(3) |  |  |  | TF | 1987Pa28 | PR C36 2088 (87) |
|  |  |  |  |  | -0.21(8) | R |  | CER | 1975To06 | NP A250 381 (75) |
|  |  |  |  |  |  |  |  |  |  |  |
| 25 Mn 50 | 229 | 1.75 m | 5+ | +2.76(1) |  |  | [55Mn] | TLS | 2010CH15 | PL B690 346 (10) |
|  |  |  |  |  | +0.83(12) |  | [55Mn] | TLS | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.80(12) |  | [55Mn] | TLS | 2010CH15 | PL B690 346 (10) |
|  |  |  |  |  |  |  |  |  |  |  |
| 25 Mn 51 | 0 | stable | 5/2- | 3.5683(13) |  |  | [55Mn] | AB | 1971Jo10 | NP A166 306 (71) |
|  |  |  |  |  | 0.41(8) |  | [55Mn] | AB | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.42(7) st |  | [55Mn] | AB | 1971Jo10 | NP A166 306 (71) |
|  | 0 | 5.80 d | 6+ | +3.0622(12) |  |  | [55Mn] | AB | 1966Ad03 | ArkF 31 549 (66) |
|  |  |  |  | +3.0632(13) |  |  | [55Mn] | NMR/ON | 1970Ni11 | Phca 50 259 (70) |
| 25 Mn 52 |  |  |  |  | +0.50(7) st | R | [55Mn] | NMR/ON | 1970Ni11 | Phca 50 259 (70) |
|  | 378 | 21.1 m | 2+ | 0.00768(8) |  |  | [55Mn] | AB | 1971Jo10 | NP A166 306 (71) |
|  |  |  |  |  |  |  |  |  |  |  |
| 25 Mn 53 | 0 | 3.7x106 y | 7/2- | 5.035(1) |  |  | [55Mn] | TLS | 2010CH15 | PL B690 346 (10) |
|  |  |  |  | 5.024(7) |  |  | [55Mn] | EPR | 1956Do45 | PR 104 1378 (56) |
|  |  |  |  |  | +0.17(3) | R | [55Mn] | TLS | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.16(3) |  | [55Mn] | TLS | 2010CH15 | PL B690 346 (10) |
|  | 378 | 117 ps | 5/2- | +3.3(3) |  |  |  | IMPAC | 1975Si08 | NP A243 1 (75) |
|  |  |  |  |  |  |  |  |  |  |  |
| 25 Mn 54 | 0 | 312 d | 3+ | 3.306(1) |  |  | [55Mn] | TLS | 2010CH15 | PL B690 346 (10) |
|  |  |  |  | +3.2819(13) |  |  | [55Mn] | NMR/ON | 1970Ni11 | Phca 50 259 (70) |
|  |  |  |  |  | +0.37(3) | R | [55Mn] | TLS | 2010CH15 | PL B690 346 (10) |
|  |  |  |  |  | +0.33(3) st |  | [55Mn] | NMR/ON | 1970Ni11 | Phca 50 259 (70) |
|  |  |  |  |  |  |  |  |  |  |  |
| 25 Mn 55 | 0 | stable | 5/2- | 3.4532(13) |  |  |  | ENDOR | 1971Sa16 | CJP 49 2276 (71) |
|  |  |  |  | +3.46871790(9) |  |  | [2H] | N | 1974Lu08 | ZNat 29a 1467 (74) |
|  |  |  |  |  | +0.330(10) | R |  | ABLDF | 2008Py02/1979De19 | /Mol Phys 106 1965 (2008)/ZP A291 207 (79) |
|  |  |  |  |  | +0.31(2) st |  |  | OL, R | 1979De19/1969Ha22 | ZP A291 207 (79)/PL 29A 486 (69) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  |  |  |  |  |  |  |
| 25 Mn 56 | 0 | 2.58 h | 3+ | +3.2266(2) |  |  | [55Mn] | AB, OP/RD | 1961Ch05 | PR 122 891 (61) |
|  |  |  |  |  | +0.48(15) | R | [55Mn] | TLS | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.47(15) |  | [55Mn] | TLS | 2010CH15 | PL B690 346 (10) |
|  |  |  |  |  |  |  |  |  |  |  |
| 26 Fe 53 | 741 | 64 ns | 3/2- | -0.386(15) |  |  |  | TDPAD | 1989Ra17 | ARHMI 64 (74) |
|  |  |  |  |  |  |  |  |  |  |  |
| 26 Fe 54 | 1408 | 0.80 ps | 2+ | +1.70(13) |  |  | [56Fe 847] R | TF, R | 2009EA01 | PR C79 024304 (09) |
|  |  |  |  | +2.10(12) |  |  | [56Fe 847] | TF | 2000Sp08 | PR C62 031301 (00) |
|  |  |  |  | +2.1(3) |  |  |  | TF | 1992SP02 | ZP A342 17 (92) |
|  |  |  |  | +3.4(8) |  |  | [56Fe 847] | TF | 1977Br23 | PR C16 899 (77) |
|  |  |  |  | +2.2(4) |  |  |  | IMPAC | 1977Fa07 | NP A291 241 (77) |
|  |  |  |  | +2.9(6) |  |  |  | TF | 1974Hu01 | PR C9 1954 (74) |
|  |  |  |  |  | -0.05(14) | R |  | CER | 1981Le02 | PR C23 244 (81) |
|  | 2950 | 1.22 ns | 6+ | 8.2(2) |  |  |  | TDPAD | 1971He21 | PRL 27 1587 (71) |
|  | 6527 | 367 ns | 10+ | +7.28(1) |  |  |  | TDPAD | 1983Ra03 | PR C27 602 (83) |
|  |  |  |  |  | +0.30(4) st | R | [57Fe 14 keV] | TDPAD, TF | 1984Ha07 | NP A414 316 (84) |
|  |  |  |  |  | 0.28(4) |  |  | TDPAD, R | 1983Ra03/1978Da09 | PR C27 602 (83)/PL 76B 51 (78) |
|  |  |  |  |  |  |  |  |  |  |  |
| 26 Fe 55 | 931 | 8.3 ps | 5/2- | +2.7(12) |  |  |  | TDPAD | 1973Ke03 | CJP 51 707 (73) |
|  | 1317 | 2.1 ps | 7/2- | +2(2) |  |  |  | IPAD | 1973Ke03 | CJP 51 707 (73) |
|  | 1408 | 38.3 ps | 7/2- | -2.4(5) |  |  |  | TDPAD | 1973Ke03 | CJP 51 707 (73) |
|  |  |  |  |  |  |  |  |  |  |  |
| 26 Fe 56 | 847 | 6.9 ps | 2+ | 1.02(11) |  |  |  | TF, R | 2009EA01 | PR C79 024303 (09) |
|  |  |  |  | 1.22(16) |  |  |  | IMPAC IPAC,R | 1977Br23 | PR C16 899 (77) |
|  |  |  |  |  | -0.19(8) |  |  | CER | 1981Le02 | PR C23 244 (81) |
|  |  |  |  |  | -0.23(3) | R |  | CER | 1971Th14 | PR C4 1699 (71) |
|  |  |  |  |  |  |  |  |  |  |  |
| 26 Fe 57 | 0 | stable | 1/2- | +0.09044(7) |  |  |  | ENDOR | 1965Lo11 | PR 139 A991 (65) |
|  |  |  |  | +0.09062300(9) |  |  | [2H] | N | 1974Sa25 | ZNat 29a 1763 (74) |
|  |  |  |  | +0.0907638(1) |  |  | [2H] | N | 1974Sa25 | ZNat 29a 1763 (74) |
|  | 14 | 98 ns | 3/2- | -0.1549(2) |  |  | [57Fe] | ME | 1965Pe15/1962Pr10 | PR 140 A875 (65)/PR 128 2207 (62) |
|  |  |  |  |  | +0.15(2) |  |  | Theory | 2001MA64 | PRL 87 062701 (01) |
|  |  |  |  |  | 0.11 |  |  | R | 1998Ha40 | ZNat 53a 358 (98) |
|  |  |  |  |  | +0.160(8) | R |  | R | 2008Py02/1995Du17 | Mol Phys 106 1965 (2008)PRL 75 3545 (95) |
|  |  |  |  |  | 0.14(2) |  |  | R | 92Ru07 | BRASP 56 (7) 201 (92) |
|  |  |  |  |  | +0.082(8) st |  |  | ME, R | 1981Du12 | PRL 46 1611 (81) |
|  |  |  |  |  | +0.209(5) |  |  | ME, R | 1976St73 | JPCR 5 1093 (76) |
|  | 136 | 8.80 ns | 5/2- | +0.935(10) |  |  |  | TDPAD | 1979Fa07 | PS 20 163 (79) |
|  | 367 | 6.9 ps | 3/2- | <0.6 |  |  |  | IMPAC | 1969Sp05 | NP A137 658 (69) |
|  |  |  |  |  |  |  |  |  |  |  |
| 26 Fe 58 | 811 | 6.7 ps | 2+ | +0.94(5) |  |  | [56Fe 847 R] | TF, R | 2009EA01 | PR C79 024304 (09) |
|  |  |  |  | +0.9(3) |  |  | [56Fe 847] | TF | 1977Br23 | PR C16 899 (77) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  | +0.9(2) |  |  |  |  | 1969Si13/1977Br23 | NP A137 278 (69)/PR C16 899 (77) |
|  |  |  |  |  | -0.27(5) | R |  | CER | 1981Le02 | PR C23 244 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 26 Fe 59 | 0 | 44.6 d | 3/2- | -0.3358(4) |  |  |  | NMR/ON() | 1996Oh02 | PR C54 554 (96) |
|  |  |  |  | 0.29(3) |  |  |  | NO/S | 1976Kr10 | PR C14 653 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 26 Fe 61 | 861 | 245 ns | (9/2+) | -1.031(9) |  |  |  | TDPAD | 2004MA80 |  |
|  |  |  |  |  | 0.44(6) |  | [57Fe 14] | TDPAD | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.41(6) |  | [57Fe 14] | TDPAD | 2007VE05 | PR C75 051302 (07) |
|  |  |  |  |  |  |  |  |  |  |  |
| 27 Co 55 | 0 | 17.5 h | 7/2- | +4.822(3) |  |  |  | NMR/ON | 1973Ca06 | NP A201 561 (73)/HFI 2 45 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 27 Co 56 | 0 | 78.8 d | 4+ | 3.85(1) |  |  | [60Co] | NMR/ON | 1977St36 | JP C10 3651 (77) |
|  |  |  |  | 3.99(6) |  |  | [60Co] | NMR/ON | 1986Ro28 | CzJP B36 1331 (86) |
|  |  |  |  |  | +0.25(9) | R | [58Co] | NMR/ON | 1988Ba87 | PR B37 4911 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 27 Co 57 | 0 | 271 d | 7/2- | +4.720(10) |  |  | [60Co] | NMR/ON | 1972Ni01 | JP C10 3651 (77)/Phca 57 1 (72) |
|  |  |  |  | 4.719(12) |  |  | [59Co] | NMR/ME | 1974La19 | ZP 270 233 (74) |
|  |  |  |  | 4.78(6) |  |  | [60Co] | NMR/ON | 1986Ro28 | CzJP B36 1331 (86) |
|  |  |  |  |  | +0.54(10) | R | [59Co] | NMR/ON | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.52(9) |  | [59Co] | NMR/ON | 1972Ni01 | Phca 57 1 (72) |
|  | 1378 | 19 ps | 3/2- | +3.0(6) |  |  | [60Co] | IPAD | 1970Va10 | ZP 233 477 (70) |
|  |  |  |  |  |  |  |  |  |  |  |
| 27 Co 58 | 0 | 70.8 d | 2+ | +4.044(8) |  |  | [59Co] | NMR/ON | 1972Ni01 | Phca 57 1 (72) |
|  |  |  |  | +4.040(14) |  |  | [59Co] | EPR | 1957Do38 | PR 108 60 (57) |
|  |  |  |  |  | +0.23(3) | R | [59Co] | NMR/ON | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.22(3) |  | [59Co] | NMR/ON | 1972Ni01 | Phca 57 1 (72) |
|  | 53 | 10.4 s | 4+ | +4.184(8) |  |  |  | SOP/RDAD | 1970Be33 | NP A151 193 (70) |
|  | 111 | 0.18 ns | 3+ | +2.2(4) |  |  |  | IPAD | 1972Ha61 | NP A194 (249 (72) |
|  |  |  |  |  |  |  |  |  |  |  |
| 27 Co 59 | 0 | stable | 7/2- | +4.627(9) |  |  |  | N | 1967Wa16/1951Pr02 | PR 162 301 (67)/PR 81 20 (51) |
|  |  |  |  |  | +0.42(3) | R |  | AB | 2008Py02/1960Eh03 | Mol Phys 106 1965 (2008)ZP 159 230 (60) |
|  |  |  |  |  | +0.35(3) |  |  | LRFS | 1990Gu28 | ZP D17 181 (90) |
|  |  |  |  |  | +0.41(1) |  |  | R | 1993De41 | PR A48 2752 (93) |
|  |  |  |  |  | +0.40(4) |  |  | AB | 1960Eh03 | ZP 159 230 (60) |
|  |  |  |  |  | +0.42(3) st |  |  | O | 1969Mu11 | JPJa 27 1690 (69) |
|  | 1292 | 555 ps | 3/2- | +2.54(12) |  |  |  | IPAC | 1974Ba08 | PS 9 79 (74) |
|  |  |  |  |  |  |  |  |  |  |  |
| 27 Co 60 | 0 | 5.271 y | 5+ | +3.799(8) |  |  | [59Co] | NMR/ON | 1972Ni01 | Phca 57 1 (72) |
|  |  |  |  |  | +0.46(6) |  | [59Co] | NMR/ON | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.44(5) |  | [59Co] | NMR/ON | 1972Ni01 | Phca 57 1 (72) |
|  | 59 | 10.5 m | 2+ | +4.40(9) |  |  |  | AB | 1969HuZY | Cf69Mntr 91 (69) |
|  |  |  |  |  | +0.3(4) |  |  | AB | 1969HuZY | Cf69Mntr 91 (69) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  |  |  |  |  |  |  |
| 28 Ni 55 | 0 | 204 ms | 3/2- | (-)0.98(3) |  |  |  | -NMR | 2009BE22 | PR C79 064305 (09) |
|  |  |  |  |  |  |  |  |  |  |  |
| 28 Ni 57 | 0 | 36 h | 3/2- | -0.7975(14) |  |  |  | NMR/ON() | 1996Oh02 | PR C54 554 (96) |
|  |  |  |  | 0.88(6) |  |  |  | NO/S | 1975Ro06 | PL 55B 450 (75) |
|  |  |  |  |  |  |  |  |  |  |  |
| 28 Ni 58 | 1454 | 0.644 ps | 2+ | +0.076(17) |  |  |  | TF | 2001KE02 | PR C63 021302 |
|  |  |  |  | -0.1(3) |  |  |  | TF | 1978Ha13 | PR C17 997 (78) |
|  |  |  |  |  | -0.10(6) | R |  | CER | 1974Le13 | NP A223 563 (74) |
|  |  |  |  |  |  |  |  |  |  |  |
| 28 Ni 59 | 339 | 83 ps | 5/2- | +0.35(15) |  |  |  | IPAD | 1974We05 | CJP 52 1137 (74) |
|  |  |  |  |  |  |  |  |  |  |  |
| 28 Ni 60 | 1332 | 0.713 ps | 2+ | +0.32(6) |  |  |  | TF | 2001KE02 | PR C63 021302 |
|  |  |  |  | +0.2(3) |  |  |  | TF | 1978Ha13 | PR C17 997 (78) |
|  |  |  |  |  | +0.03(5) |  |  | CER | 1974Le13 | NP A223 563 (74) |
|  |  |  |  |  | -0.10(2) | R |  | ES | 1972Li12 | PL 38B 475 (72) |
|  |  |  |  |  |  |  |  |  |  |  |
| 28 Ni 61 | 0 | stable | 3/2- | -0.75002(4) |  |  | [17O] | N, R | 1964Dr02/1976Fu06 | PL 11 114 (64)/JPCR 5 835 (76) |
|  |  |  |  |  | +0.162(15) st | R |  | AB | 2008Py02/1968Ch10 | Mol Phys 106 1965 (2008)/PR 170 136 (68) |
|  | 67 | 5.34 ns | 5/2- | +0.480(6) |  |  | [61Ni] | ME | 1971Go31 | ZNat 26a 1931 (71) |
|  |  |  |  |  | -0.20(3) st | R | [61Ni] | ME | 1971Go31 | ZNat 26a 1931 (71) |
|  |  |  |  |  | -0.08(7) st |  | [61Ni] | ME | 1976Ob01 | JINC 38 19 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 28 Ni 62 | 1173 | 1.43 ps | 2+ | +0.33(5) |  |  |  | TF | 2001KE02 | PR C63 021302 |
|  |  |  |  | +0.68(14) |  |  |  | TF | 1988Sp04 | ZP A331 29 (88) |
|  |  |  |  | +0.6(2) |  |  |  | TF | 1978Ha13 | PR C17 997 (78) |
|  |  |  |  |  | +0.05(12) | R |  | CER, R | 1974Le13 | NP A223 563 (74) |
|  |  |  |  |  |  |  |  |  |  |  |
| 28 Ni 63 | 87 | 1.72 s | 5/2- | +0.752(3) |  |  | [19F 197] | TDPAD | 1970Bl06 | PL 32B 41 (70) |
|  | 1294 | 9.35 ns | 9/2+ | -1.211(13) |  |  |  | TDPAD |  | PR B40 7633 (89) |
|  |  |  |  |  |  |  |  |  |  |  |
| 28 Ni 64 | 1346 | 0.85 ps | 2+ | +0.37(6) |  |  |  | TF | 2001KE02 | PR C63 021302 (01) |
|  |  |  |  | +0.9(3) |  |  |  | TF | 1978Ha13 | PR C17 997 (78) |
|  |  |  |  |  | +0.4(2) | R |  | CER | 1971ChZK | BAPS 16 625 (71) |
|  |  |  |  |  |  |  |  |  |  |  |
| 28 Ni 65 | 0 | 2.520 h | 5/2- | 0.69(6) |  |  |  | NO/S | 1976Kr09 | PR C14 650 (76) |
|  | 1017 | 26.6 ns | 9/2+ | -1.332(14) |  |  | [63Ni 1294] | TDPAD | 2005GE09 | JPhys G31 S1439 (05) |
|  |  |  |  |  |  |  |  |  |  |  |
| 28 Ni 67 | 0 | 21 s | 1/2- | +0.601(5) |  |  |  | NMR/ON() | 2000Ri14 | PRL 85 1392 (00) |
|  | 1007 | 13 s | 9/2+ | 0.56(3) |  |  |  | TDPAD | 2002Ge16 | JP G28 2993 (02) |
|  |  |  |  |  |  |  |  |  |  |  |
| 29 Cu 57 | 0 | 196 ms | 3/2- | +2.582(7) |  |  | [63Cu] | GCLS | 2010CO01 | PR C81 014314 (10) |
|  |  |  |  | 2.00(5) |  |  |  | -NMR | 2006MI07 | PRL 96 1-2501 (06) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  |  |  |  |  |  |  |
| 29 Cu 58 | 0 | 3.2 s | 1+ | +0.570(2) |  |  | [65Cu] | CLS | 2011Vi03 | PL B703 34 (2011) |
|  |  |  |  | +0.479(13) |  |  | [63Cu] | GCLS | 2010CO01 | PR C81 014314 (10) |
|  |  |  |  | 0.46(3) |  |  |  | -NMR | 2010MI\*\* | HFI 197 143 (10) |
|  |  |  |  | +0.52(8) |  |  |  | LRIS | 2008ST12 | PR C77 067302 (08) |
|  |  |  |  |  | -0.16(3) | R | [65Cu] | CLS/R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.15(3) |  | [65Cu] | CLS | 2011Vi03 | PL B703 34 (2011) |
|  |  |  |  |  |  |  |  |  |  |  |
| 29 Cu 59 | 0 | 81.5 s | 3/2- | +1.8910(9) |  |  | [65Cu] | CLS | 2011Vi03 | PL B703 34 (2011) |
|  |  |  |  | +1.910(4) |  |  | [65Cu] | GCLS | 2010CO01 | PR C81 014314 (10) |
|  |  |  |  | +1.891(9) |  |  |  | NMR/ON() | 2004GO39 | PR C70 014312 (04) |
|  |  |  |  | +1.84(3) |  |  |  | ISLS | 2008ST12 | PR C77 067302 (08) |
|  |  |  |  |  | -0.20(2) | R | [65Cu] | CLS/R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.19(2) |  | [65Cu] | CLS | 2011Vi03 | PL B703 34 (2011) |
|  |  |  |  |  |  |  |  |  |  |  |
| 29 Cu 60 | 0 | 23.4 m | 2+ | +1.2186(5) |  |  | [65Cu] | CLS | 2011Vi03 | PL B703 34 (2011) |
|  |  |  |  | +1.219(3) |  |  | [63Cu] | AB | 1968Ph04 | PR 169 917 (68) |
|  |  |  |  |  | +0.121(13) | R | [65Cu] | CLS/R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.116(12) |  | [65Cu] | CLS | 2011Vi03 | PL B703 34 (2011) |
|  |  |  |  |  |  |  |  |  |  |  |
| 29 Cu 61 | 0 | 3.41 h | 3/2- | +2.1083(5) |  |  | [65Cu] | CLS | 2011Vi03 | PL B703 34 (2011) |
|  |  |  |  | +2.1089(11) |  |  | [65Cu] | CLS | 2010VI07 | PR C82 064311 (10) |
|  |  |  |  | +2.14(4) |  |  | [63Cu] | AB | 1966Do01 | PR 142 638 (66) |
|  |  |  |  |  | -0.221(10) | R | [65Cu] | CLS/R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.211(10) |  | [65Cu] | CLS | 2011Vi03 | PL B703 34 (2011) |
|  |  |  |  |  | -0.21(2) |  | [65Cu] | CLS | 2010VI07 | PR C82 064311 (10) |
|  |  |  |  |  |  |  |  |  |  |  |
| 29 Cu 62 | 0 | 9.73 m | 1+ | -0.3796(4) |  |  | [65Cu] | CLS | 2011Vi03 | PL B703 34 (2011) |
|  |  |  |  | -0.3809(12) |  |  | [65Cu] | CLS | 2010VI07 | PR C82 064311 (10) |
|  |  |  |  | -0.380(4) |  |  | [63Cu] | AB | 1968Ph04 | PR 169 917 (68) |
|  |  |  |  |  | -0.022(4) | R | [65Cu] | CLS | 2011Vi03 | PL B703 34 (2011) |
|  |  |  |  |  | 0.00(2) |  | [65Cu] | CLS | 2010VI07 | PR C82 064311 (10) |
|  | 41 | 4.77 ns | 2+ | +1.10(10) |  |  |  | TDPAC | 1993Lo10 | HFI 77 103 (93) |
|  |  |  |  | +1.32(3) |  |  |  | TDPAD | 1973Bl07 | ZP 263 169 (73) |
|  | 390 | 11.1 ns | 4+ | +2.67(16) |  |  |  | TDPAD | 1973Bl07 | ZP 263 169 (73) |
|  |  |  |  |  |  |  |  |  |  |  |
| 29 Cu 63 | 0 | stable | 3/2- | +2.2236(4) |  |  | [65Cu] | CLS | 2010VI07 | PR C82 064311 (10) |
|  |  |  |  | 2.227206(3) |  |  | [23Na] | N | 1978Lu08 | ZP A288 17 (78) |
|  |  |  |  | 2.2273456(14) |  |  | [11B] | N | 1978Lu08 | ZP A288 17 (78) |
|  |  |  |  |  | -0.211(4) |  | [65Cu] | CLS | 2010VI07 | PR C82 064311 (10) |
|  |  |  |  |  | -0.211(4) st |  | [65Cu] | O, R | 1986St16 | ZNat 41a 24 (86) |
|  |  |  |  |  | 0.220(15) a | R |  | Mu-X | 2008Py02/1982Ef01 | Mol Phys 106 1965 (2008)/ZP A309 77 (82) |
|  | 4498 | 4.08 ns | 17/2+ | +1.56(10) |  |  | [62Cu 390] | IPAD | 1983Ka24 | NP A406 533 (83) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  |  |  |  |  |  |  |
| 29 Cu 64 | 0 | 12.7 h | 1+ | -0.2164(4) |  |  | [65Cu] | CLS | 2010VI07 | PR C82 064311 (10) |
|  |  |  |  | -0.217(2) |  |  | [63Cu] | AB | 1966Do01 | PR 142 638 (66) |
|  |  |  |  |  | +0.75(9) | R | [65Cu] | CLS/R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.072(9) |  | [65Cu] | CLS | 2010VI07 | PR C82 064311 (10) |
|  | 1594 | 20.4 ns | 6- | +1.06(3) |  |  |  | TDPAD | 1972Bl16 | NP A197 620 (72) |
|  |  |  |  |  |  |  |  |  |  |  |
| 29 Cu 65 | 0 | stable | 3/2- | +2.3817(3) |  |  |  | AB/D |  | Cf66 Paris, 355 (66) |
|  |  |  |  | 2.3816(2) |  |  | [63Cu] | N | 1978Lu08 | ZP A288 17 (78) |
|  |  |  |  |  | -0.204(14) |  |  | Mu-X | 2008Py02/1982Ef01 | Mol Phys 106 1965 (2008)/ZP A309 77 (82) |
|  |  |  |  |  | -0.195(4) st |  |  | O, R | 1972St38 | PR A6 1702 (72) |
|  | 1115 | 0.29 ps | 5/2- | +4.5(9) |  |  |  | IPAD | 1979Da20 | IzF 43 2148 (79) |
|  |  |  |  |  |  |  |  |  |  |  |
| 29 Cu 66 | 0 | 5.1 m | 1+ | -0.2823(8) |  |  | [65Cu] | CLS | 2010VI07 | PR C82 064311 (10) |
|  |  |  |  | -0.282(2) |  |  | [65Cu] | AB | 1969Cu09 | JP A2 658 (69) |
|  |  |  |  |  | +0.059(14) | R | [65Cu] | CLS/R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.056(13) |  | [65Cu] | CLS | 2010VI07 | PR C82 064311 (10) |
|  | 1154 | 0.60 s | 6- | +1.038(3) |  |  |  | TDPAD | 1972Bl16 | NP A197 620 (72) |
|  |  |  |  |  | (+)0.195(13) | R | [63,65Cu] | TDPAD | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.186(12) |  | [63,65Cu] | TDPAD | 2011Lo03 | PL B694 316 (2011) |
|  |  |  |  |  |  |  |  |  |  |  |
| 29 Cu 67 | 0 | 61.83 h | 3/2- | +2.5142(6) |  |  | [65Cu] | CLS | 2010VI07 | PR C82 064311 (10) |
|  |  |  |  | +2.54(2) |  |  |  | NMR/ON() | 2000Ri23 | HFI 129 131 (2000) |
|  |  |  |  |  | -0.182(8) | R | [65Cu] | CLS/R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.174(8) |  | [65Cu] | CLS | 2010VI07 | PR C82 064311 (10) |
|  |  |  |  |  |  |  |  |  |  |  |
| 29 Cu 68 | 0 | 31.1 s | 1+ | +2.3933(6) |  |  | [65Cu] | CLS | 2010VI07 | PR C82 064311 (10) |
|  |  |  |  | + 2.6(3) |  |  | [65 Cu] | LRIS | 2004Gh13 | PR C65 024315 (04) |
|  |  |  |  |  | -0.086(14) | R | [65Cu] | CLS/R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.082(13) |  | [65Cu] | CLS | 2010VI07 | PR C82 064311 (10) |
|  | 637 | 3.75 m | 6- | +1.1548(6) |  |  | [65Cu] | CLS | 2010VI07 | PR C82 064311 (10) |
|  |  |  |  | + 1.3(6) |  |  | [65 Cu] | LRIS | 2004Gh13 | PR C65 024315 (04) |
|  |  |  |  |  | -0.46(2) | R | [65Cu] | CLS/R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.44(2) |  | [65Cu] | CLS | 2010VI07 | PR C82 064311 (10) |
|  |  |  |  |  |  |  |  |  |  |  |
| 29 Cu 69 | 0 | 2.85 m | 3/2- | +2.8383(10) |  |  | [65Cu] | CLS | 2010VI07 | PR C82 064311 (10) |
|  |  |  |  | +2.84(1) |  |  |  | NMR/ON() | 2000Ri14 | PRL 85 1392 (00) |
|  |  |  |  |  | -0.154(17) | R | [65Cu] | CLS/R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.147(16) |  | [65Cu] | CLS | 2010VI07 | PR C82 064311 (10) |
|  | 2714 | 0.36 s | 13/2+ | 1.46(16) |  |  |  | TDPAD | 2002Ge16 | JP G28 2993 (02) |
|  |  |  |  |  |  |  |  |  |  |  |
| 29 Cu 70 | 0 | 44.5 s | 6- | +1.3666(5) |  |  | [65Cu] | CLS | 2010VI07 | PR C82 064311 (10) |
|  |  |  |  | (+)1.3(5) |  |  | [65 Cu] | LRIS | 2004Gh13 | PR C65 024315 (04) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | -0.298(15) | R | [65Cu] | CLS/R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.285(14) |  | [65Cu] | CLS | 2010VI07 | PR C82 064311 (10) |
|  | 101 | 33 s | 3- | -3.3641(15) |  |  | [65Cu] | CLS | 2010VI07 | PR C82 064311 (10) |
|  |  |  |  | (-)3.5(4) |  |  | [65 Cu] | LRIS | 2004Gh13 | PR C65 024315 (04) |
|  |  |  |  |  | -0.14(4) | R | [65Cu] | CLS/R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.13(4) |  | [65Cu] | CLS | 2010VI07 | PR C82 064311 (10) |
|  | 242 | 6.6 s | 1+ | +1.7779(15) |  |  | [65Cu] | CLS | 2010VI07 | PR C82 064311 (10) |
|  |  |  |  | +1.9(2) |  |  | [65 Cu] | LRIS | 2004Gh13 | PR C65 024315 (04) |
|  |  |  |  |  | -0.12(3) | R | [65Cu] | CLS | 2010VI07 | PR C82 064311 (10) |
|  |  |  |  |  |  |  |  |  |  |  |
| 29 Cu 71 | 0 | 19.5 s | 3/2- | +2.2747(8) |  |  | [65 Cu] | LRIS/CLS | 2009FL03 | PRL 103 142501 (09) |
|  |  |  |  | +2.28(1) |  |  |  | NMR/ON | 2008ST01 | PR C77 014315 (08) |
|  |  |  |  |  | -0.200(17) | R | [65Cu] | CLS/R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.190(16) |  | [65Cu] | CLS | 2010VI07 | PR C82 064311 (10) |
|  |  |  |  |  |  |  |  |  |  |  |
| 29 Cu 72 | 0 | 6.62 s | 2- | -1.3472(10) |  | R | [65Cu] | RILIS | 2010Fl02 | PR C82 041302(R) (10) |
|  |  |  |  |  | +0.08(2) | R | [65Cu] | RILIS | 2010Fl02 | PR C82 041302(R) (10) |
|  |  |  |  |  |  |  |  |  |  |  |
| 29 Cu 73 | 0 | 4.2 s | 3/2- | +1.7426(8) |  |  | [65 Cu] | ISLS/CLS | 2009FL03 | PRL 103 142501 (2009) |
|  |  |  |  |  | -0.210(10) | R | [65Cu] | CLS/R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.200(10) |  | [65Cu] | CLS | 2010VI07 | PR C82 064311 (10) |
|  |  |  |  |  |  |  |  |  |  |  |
| 29 Cu 74 | 0 | 1.63 s | 2- | -1.068(3) |  | R | [65Cu] | RILIS | 2010Fl02 | PR C82 041302(R) (10) |
|  |  |  |  |  | +0.27(3) | R | [65Cu] | CLS/R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.26(3) |  | [65Cu] | RILIS | 2010Fl02 | PR C82 041302(R) (10) |
|  |  |  |  |  |  |  |  |  |  |  |
| 29 Cu 75 | 0 | 1.22 s | 5/2- | +1.0062(13) |  |  | [65 Cu] | ISLS/CLS | 2009FL03 | PRL 103 142501 (2009) |
|  |  |  |  | +0.99(5) |  |  | [63Cu] | ISLS | 2011Ko36 | PR C84 034320 (2011) |
|  |  |  |  |  | -0.281(17) | R | [65Cu] | CLS/R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.269(16) |  | [65Cu] | CLS | 2010VI07 | PR C82 064311 (10) |
|  |  |  |  |  |  |  |  |  |  |  |
| 29 Cu 76 | 0 | 641 ms | (6-) | 0.0(4) |  |  | [63Cu] | ISLS | 2011Ko36 | PR C84 034320 (2011) |
|  |  |  |  |  |  |  |  |  |  |  |
| 29 Cu 77 | 0 | 467 ms | 5/2- | +1.61(5) |  |  | [63Cu] | ISLS | 2011Ko36 | PR C84 034320 (2011) |
|  |  |  |  |  |  |  |  |  |  |  |
| 30 Zn 62 | 954 | 2.9 ps | 2+ | +0.7(2) |  |  |  | TF | 2002Ke02 | PR C65 034308 (02) |
|  |  |  |  |  |  |  |  |  |  |  |
| 30 Zn 63 | 0 | 38.1 m | 3/2- | -0.28164(5) |  |  | [67Zn] | OD | 1969La05 | PR 177 1606 (69) |
|  |  |  |  |  | +0.29(3) | R | [67Zn] | OD | 1969La05 | PR 177 1606 (69) |
|  |  |  |  |  |  |  |  |  |  |  |
| 30 Zn 64 | 992 | 1.85 ps | 2+ | +0.89(6) |  |  |  | TF | 2005LE12 | PR C71 034303 (2005) |
|  |  |  |  | +0.89(9) |  |  |  | TF | 2002Ke02 | PR C65 034308 (02) |
|  |  |  |  | +0.9(2) |  |  |  | IMPAC | 1979Fa06 | ZP A291 93 (79) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | -0.124(12) |  |  | ES | 1976Ne06 | NP A263 249 (76) |
|  |  |  |  |  | -0.14(2) | R |  | ES, R | 1981Ko06 | JP G7 L63 (81) |
|  |  |  |  |  | -0.32(6) or -0.26(6) |  |  | CER | 1988Sa32 | PR C38 2439 (88) |
|  | 2307 | 0.78 ps | 4+ | +2.1(6) |  |  |  | TF | 2005LE12 | PR C71 034303 (2005) |
|  | 2999 | 0.15 ps | 3+ | +1.5(9) |  |  |  | TF | 2005LE12 | PR C71 034303 (2005) |
|  | 4635 | 0.1 ns | 7- | 1.6(3) |  |  |  | RIGV | 1983Ba69 | ZP A314 55 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 30 Zn 65 | 0 | 244.1 d | 5/2- | +0.7690(2) |  |  | [67Zn] | OD | 1964By01 | PR 134 A47 (64) |
|  |  |  |  |  | -0.023(2) | R | [67Zn] | OD | 1964By01 | PR 134 A47 (64) |
|  |  |  |  |  | -0.3(2) |  | [67Zn] | NO/S, R | 1985Ha41 | HFI 22 19 (85) |
|  | 115 | 0.45 ns | 3/2- | -0.8(2) |  |  | [67Zn 185] | IPAD | 1975We08 | NP A241 332 (75) |
|  | 207 | 0.15 ns | 3/2- | +0.7(3) |  |  | [67Zn 185] | IPAD | 1975We08 | NP A241 332 (75) |
|  | 1066 | 574 ps | 9/2+ | 1.1(2) |  |  | [67Zn 604] | R/IPAD | 1992Be51/1975WE08 | CJP 53 2544 (75) |
|  |  |  |  | -1.7(5) |  |  | [67Zn 185] | IPAD | 1975We08 | NP A241 332 (75) |
|  |  |  |  |  |  |  |  |  |  |  |
| 30 Zn 66 | 1039 | 1.56 ps | 2+ | +1.06(10) |  |  |  | TF | 2006LE24 | PR C73 064305 (10) |
|  |  |  |  | +0.80(8) |  |  |  | TF | 2002Ke02 | PR C65 034308 (02) |
|  |  |  |  | +0.9(2) |  |  |  | IMPAC | 1979Fa06 | ZP A291 93 (79) |
|  |  |  |  |  | -0.081(13) | R |  | ES, R | 1981Ko06 | JP G7 L63 (81) |
|  | 2451 | 0.76 ps | 4+ | +2.6(8) |  |  |  | TF | 2006LE24 | PR C73 064305 (10) |
|  | 2826 | 0.18 ps | 3- | +2.1(9) |  |  |  | TF | 2006LE24 | PR C73 064305 (10) |
|  | 4074 | 30 ps | 6- | 0.9(2) h |  |  |  | RIGV | 1983Ba69 | ZP A314 55 (83) |
|  | 4250 | 133 ps | 7- | 1.0(2) h |  |  |  | RIGV | 1983Ba69 | ZP A314 55 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 30 Zn 67 | 0 | stable | 5/2- | +0.875479(9) |  |  | [1H] | OP/RD, N | 1967Sp04 | PL 24A 430 (67) |
|  |  |  |  | +0.8752049(11) |  |  | [37Cl] | N | 1973Ep02 | PL 45A 255 (73) |
|  |  |  |  |  | +0.150(15) | R |  | R | 1969La05 | PR 177 1606 (69) |
|  | 93 | 9.2 s | 1/2- | +0.587(11) |  |  |  | ME | 1988Ik02 | PR B38 6380 (88) |
|  | 185 | 1.03 ns | 3/2- | +0.50(6) |  |  |  | IPAC | 1969Bo41 | APPo 36 1065 (69) |
|  | 604 | 333 ns | 9/2+ | -1.097(9) |  |  | [19F 197] | TDPAD | 1973Be56 | NP A215 486 (73) |
|  |  |  |  |  | 0.54(5) | R | [67Zn] | TDPAD | 1976Ch37 | ZP B24 177 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 30 Zn 68 | 1077 | 1.61 ps | 2+ | +1.08(6) |  |  |  | TF/R | 2010Mo14 | PR C82 014301 (2010) |
|  |  |  |  | +1.07(12) |  |  |  | TF | 2007BO04 | PR C75 021302(R) (07) |
|  |  |  |  | +1.16(12) |  |  |  | TF | 2005LE38 | PR C72 044301 (05) |
|  |  |  |  | +1.10(8) |  |  |  | TF | 2005LE12 | PR C71 034303 (05) |
|  |  |  |  | +0.87(9) |  |  |  | TF | 2002Ke02 | PR C65 034308 (02) |
|  |  |  |  | +0.9(3) |  |  |  | IMPAC | 1979Fa06 | ZP A291 93 (79) |
|  |  |  |  |  | -0.106(16) | R |  | ES, R | 1981Ko06 | JP G7 L63 (81) |
|  | 1883 | 1.0 ps | 2+ | +1.1(2) |  |  |  | TF/R | 2010Mo14 | PR C82 014301 (2010) |
|  |  |  |  | +1.2(6) |  |  |  | TF | 2007BO04 | PR C75 021302(R) (07) |
|  |  |  |  | +1.0(3) |  |  |  | TF | 2005LE38 | PR C72 044301 (05) |
|  |  |  |  | +1.1(3) |  |  |  | TF | 2005LE12 | PR C71 034303 (05) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  | 2417 | 0.79 ps | 4+ | +0.6(6) |  |  |  | TF/R | 2010MO14 | PR C82 014301 (2010) |
|  |  |  |  | +2.4(12) |  |  |  | TF | 2007BO04 | PR C75 021302(R) (07) |
|  |  |  |  | -1.2(12) |  |  |  | TF | 2005LE38 | PR C72 044301 (05) |
|  |  |  |  | -1.6(8) |  |  |  | TF | 2005LE12 | PR C71 034303 (05) |
|  | 2750 | 0.26 ps | 3- | +1.2(16) |  |  |  | TF | 2007BO04 | PR C75 021302(R) (07) |
|  |  |  |  | +0.9(12) |  |  |  | TF | 2005LE38 | PR C72 044301 (05) |
|  |  |  |  | +1.2(9) |  |  |  | TF | 2005LE12 | PR C71 034303 (05) |
|  |  |  |  |  |  |  |  |  |  |  |
| 30 Zn 69 | 439 | 13.72 h | 9/2+ | 1.157(2) |  |  | [65Zn] | NMR/ON, R | 1992Be51/1989He05 | HFI 75 301 (92)/ZP A332 247 (89) |
|  |  |  |  |  | -0.45(7) | R | [67Zn] | NO/S | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.51(5) |  | [67Zn] | NO/S | 1983Oe01 | ZP A310 233 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 30 Zn 70 | 885 | 3.2 ps | 2+ | +0.76(4) |  |  |  | TF | 2009MU06 | PR C79 054310 (09) |
|  |  |  |  | +0.76(8) |  |  |  | TF | 2002Ke02 | PR C65 034308 (02) |
|  |  |  |  | +0.60(14) |  |  |  | IMPAC | 1979Fa06 | ZP A291 93 (79) |
|  |  |  |  |  | -0.23(2) |  |  | ES | 1976Ne06 | NP A263 249 (76) |
|  |  |  |  |  | -0.24(3) | R |  | ES, R | 1981Ko06 | JP G7 L63 (81) |
|  | 1759 | 1.9 ps | 2+ | +1.0(4) |  |  |  | TF | 2009MU06 | PR C79 054310 (09) |
|  | 1786 | 1.9 ps | 4+ | 1.5(6) |  |  |  | TF | 2009MU06 | PR C79 054310 (09) |
|  |  |  |  |  |  |  |  |  |  |  |
| 30 Zn 71 | 158 | 3.94 h | 9/2+ | 1.052(6) |  |  | [65Zn] | NMR/ON, R | 1992Be51/1989He05 | HFI 75 301 (92)/ZP A332 247 (89) |
|  |  |  |  |  |  |  |  |  |  |  |
| 30 Zn 72 | 653 | 20 ps | 2+ | +0.36(34) |  |  |  | HVTF | 2012Fi02 | PR C85 034334 (12) |
|  |  |  |  |  |  |  |  |  |  |  |
| 31 Ga 63 | 0 | 32.4 s | 3/2- | +0.1469(5) |  |  | [69Ga] | CLS | 2012Pr11 | PR C86 034329 (2012) |
|  |  |  |  |  | +0.212(4) | R | [69Ga] | CLS | 2012Pr11 | PR C86 034329 (2012) |
|  |  |  |  |  |  |  |  |  |  |  |
| 31 Ga 66 | 66 | 23 ns | 2+ | 1.01(2) |  |  |  | TDPAD, R | 1976Le03 | NP A258 103 (76) |
|  | 1464 | 57 ns | 7- | 0.90(2) |  |  |  | TDPAD | 1978Fi03 | NP A295 513 (78) |
|  |  |  |  | +0.89(2) |  |  |  | TDPAD | 1985Ra33 | HFI 26 855 (85) |
|  |  |  |  |  | 0.78(4) | R |  | TDPAD | 1985Ra33 | HFI 26 855 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
|  | 3043 | 0.208 ns | 9+ | 4.2(9) |  |  |  | IPAC | 1987Ba45 | HFI 36 171 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 31 Ga 67 | 0 | 78.3 h | 3/2- | +1.8507(3) |  |  | [69,71Ga] | AB | 1968Eh02 | PR 176 25 (68) |
|  |  |  |  | +1.848(5) |  |  | [71Ga] | CLS | 2010CH16 | PRL 104 252502 (2010) |
|  |  |  |  |  | +0.197(2) | R | [69Ga][71Ga] | AB,R | 2001Py02/1968Eh02 | Mol Phys 99 1617 (2001)/PR 176 25 (68) |
|  |  |  |  |  | 0.195(5) st |  | [69,71Ga] | AB, R | 1968Eh02 | PR 176 25 (68) |
|  |  |  |  |  | +0.198(16) |  | [71Ga] | CLS | 2010CH16 | PRL 104 252502 (2010) |
|  | 359 | 49 ps | 5/2- | 1.4(7) |  |  | [67Ga 3578] | RIGV, R | 1986Ba79/1983Ba73 | HFI 30 291 (86)/HFI 15 63 (83) |
|  | 3578 | 0.16 ns | 15/2+ | -1.7(5) |  |  |  | IPAD | 1986Ba79 | HFI 30 291 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 31 Ga 68 | 0 | 68.1 m | 1+ | 0.01175(5) |  |  | [69,71Ga] | AB | 1962Eh02 | PR 127 529 (62) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | -0.0277(14) | R | [69,71Ga] | AB, R | 1972St38 | PR A6 1702 (72) |
|  | 1230 | 64 ns | 7- | +0.74(2) |  |  |  | TDPAD | 1978Fi03 | NP A295 513 (78) |
|  |  |  |  | +0.72(2) |  |  |  | TDPAD | 1985Ra33 | HFI 26 855 (85) |
|  |  |  |  |  | +0.72(2) | R | [69Ga] | TDPAD | 1985Ra33 | HFI 26 855 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 31 Ga 69 | 0 | stable | 3/2- | +2.01659(5) |  |  | [23Na] | N | 1954Wa37 | ORNL-1775 (54) |
|  |  |  |  | +2.018(4) |  |  | [71Ga] | CLS | 2010CH16 | PRL 104 252502 (2010) |
|  |  |  |  |  | +0.171(2) | R |  | MS | 2008Py02 | Mol Phys 106 1965 (2008) |
|  |  |  |  |  | +0.171(11) |  | [71Ga] | CLS | 2010CH16 | PRL 104 252502 (2010) |
|  |  |  |  |  | +0.1650(8) a |  |  | R | 1998Pe11 | CPL 295 347 (98) |
|  |  |  |  |  | +0.173(3) a |  |  | R | 1998To\*\* | CPL 291 414 (98) |
|  |  |  |  |  | +0.168(5) st |  |  | AB, R | 1972St38 | PR A6 1702 (72) |
|  |  |  |  |  | 0.17(3) st |  |  | ABLFS, R | 1983Jo02 | PL 93A 121 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 31 Ga 70 | 0 | 21.1 m | 1+ | +0.571(2) |  |  | [69Ga] | CLS | 2011Pr11 | PR C86 034329 (2012) |
|  |  |  |  |  | +0.105(7) | R | [69Ga] | CLS | 2011Pr11 | PR C86 034329 (2012) |
|  | 879 | 22.7 ns | 4- | -0.26(10) |  |  | [19F 197] | TDPAD | 1976Ta09 | PR C14 329 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 31 Ga 71 | 0 | stable | 3/2- | +2.56227(2) |  |  | [23Na] | N | 1954Wa37 | ORNL-1775 (54) |
|  |  |  |  |  | +0.107(1) | R |  | MS | 2008Py02 | Mol Phys 106 1965 (2008) |
|  |  |  |  |  | +0.1040(8) |  |  | R | 1998Pe11 | CPL 295 347 (98) |
|  |  |  |  |  | +0.109(2) |  |  | R | 1998To\*\* | CPL 291 414 (98) |
|  |  |  |  |  | +0.106(3) st |  |  | AB, R | 1972St38 | PR A6 1702 (72) |
|  |  |  |  |  | 0.10(2) st |  |  | ABLFS, R | 1983Jo02 | PL 93A 121 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 31 Ga 72 | 0 | 14.1 h | 3- | -0.134(4) |  |  | [71Ga] | LRS | 2011Ma45 | PR C84 024303 (2011) |
|  |  |  |  | -0.13224(2) |  |  | [69,71Ga] | AB | 1962Eh02 | PR 127 529 (62) |
|  |  |  |  |  | +0.530(6) | R | [69Ga][71Ga] | AB,R | 2001Py02/1968Eh02 | Mol Phys 99 1617 (2001)/PR 176 25 (68) |
|  |  |  |  |  | +0.54(3) |  | [71Ga] | LRS | 2011Ma45 | PR C84 024303 (2011) |
|  |  |  |  |  | +0.52(1) st |  | [69,71Ga] | AB, R | 1972St38 | PR A6 1702 (72) |
|  |  |  |  |  |  |  |  |  |  |  |
| 31 Ga 73 | 0 | 4.86 h | 3/2- | +0.209(2) |  |  | [71Ga] | CLS | 2010Ch16 | PRL 104 252502 (10) |
|  |  |  |  |  |  |  |  |  |  |  |
| 31 Ga 74 | 0 | 8.12 m | if 3- | 0.00(8) |  |  | [71Ga] | LRS | 2011Ma45 | PR C84 024303 (2011) |
|  |  |  | if 4- | 0.00(8) |  |  | [71Ga] | LRS | 2011Ma45 | PR C84 024303 (2011) |
|  |  |  | if 3- |  | +0.55(4) | R | [71Ga] | LRS | 2011Ma45 | PR C84 024303 (2011) |
|  |  |  | if 4- |  | +0.60(4) | R | [71Ga] | LRS | 2011Ma45 | PR C84 024303 (2011) |
|  |  |  |  |  |  |  |  |  |  |  |
| 31 Ga 75 | 0 | 126 s | 3/2- | +1.836(4) |  |  | [71Ga] | CLS | 2010Ch16 | PRL 104 252502 (10) |
|  |  |  |  |  | -0.285(17) | R | [71Ga] | CLS | 2010Ch16 | PRL 104 252502 (10) |
|  |  |  |  |  |  |  |  |  |  |  |
| 31 Ga 76 | 0 | 32.6 s | (2+) | -0.946(4) |  |  | [71Ga] | LRS | 2011Ma45 | PR C84 024303 (2011) |
|  |  |  |  |  | +0.33(2) | R | [71Ga] | LRS | 2011Ma45 | PR C84 024303 (2011) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  |  |  |  |  |  |  |
| 31 Ga 77 | 0 | 13.2 s | 3/2- | +2.020(3) |  |  | [71Ga] | CLS | 2010Ch16 | PRL 104 252502 (10) |
|  |  |  |  |  | -0.208(13) | R | [71Ga] | CLS | 2010Ch16 | PRL 104 252502 (10) |
|  |  |  |  |  |  |  |  |  |  |  |
| 31 Ga 78 | 0 | 5.1 s | (2+) | -1.215(5) |  |  | [71Ga] | LRS | 2011Ma45 | PR C84 024303 (2011) |
|  |  |  |  |  | +0.33(2) | R | [71Ga] | LRS | 2011Ma45 | PR C84 024303 (2011) |
|  |  |  |  |  |  |  |  |  |  |  |
| 31 Ga 79 | 0 | 2.85 s | 3/2- | +1.047(3) |  |  | [71Ga] | CLS | 2010Ch16 | PRL 104 252502 (10) |
|  |  |  |  |  | +0.158(10) | R | [71Ga] | CLS | 2010Ch16 | PRL 104 252502 (10) |
|  |  |  |  |  |  |  |  |  |  |  |
| 31 Ga 80 | 0? | 0.2 - 1.7 s | (3-) | -1.425(5) |  |  | [71Ga] | CLS | 2010Ch50 | PR C82 051302(R) (10) |
|  |  |  |  |  | +0.38(2) | R | [71Ga] | CLS | 2010Ch50 | PR C82 051302(R) (10) |
|  | 0? | 0.2 - 1.7 s | (6-) | +0.036(4) |  |  | [71Ga] | CLS | 2010Ch50 | PR C82 051302(R) (10) |
|  |  |  |  |  | +0.48(3) | R | [71Ga] | CLS | 2010Ch50 | PR C82 051302(R) (10) |
|  |  |  |  |  |  |  |  |  |  |  |
| 31 Ga 81 | 0 | 1.22 s | 5/2- | +1.747(5) |  |  | [71Ga] | CLS | 2010Ch16 | PRL 104 252502 (10) |
|  |  |  |  |  | -0.048(8) | R | [71Ga] | CLS | 2010Ch16 | PRL 104 252502 (10) |
|  |  |  |  |  |  |  |  |  |  |  |
| 32 Ge 67 | 752 | 146 ns | 9/2+ | -0.849(12) |  |  | [69Ge 398] | TDPAD | 1991Le31 | NIMPR B56/57 851 (91) |
|  |  |  |  |  | 0.92(9) | R | [73Ge 13 keV] | TDPAD | 1993Co17/1981Vi05 | HFI 80 1321 (1993)/HFI 10 1243 (1981) |
|  |  |  |  |  |  |  |  |  |  |  |
| 32 Ge 68 | 1016 | 2.9 ps | 2+ | +1.1(3) |  |  |  | TF | 2005LE19 |  |
|  | 3696 | 0.48 ps | 6+ | +2.4# |  |  | [estimate] | TF | 1986Ba64 | JP G12 L295 (86) |
|  | 3883 | 132 ps | 6- | 0.53(11) |  |  | [74Ge 596] | RIGV | 1982Ba42 | JP G8 1397 (82) |
|  | 4054 | 118 ps | 7- | 0.78(12) |  |  | [74Ge 596] | RIGV | 1982Ba42 | JP G8 1397 (82) |
|  | 4838 | 1.04 ps | 8+ | +0.8(3) |  |  | [68Ge 3696] | TF | 1986Ba64 | JP G12 L295 (86) |
|  | 5050 | 0.49 ps | 8+ | -2.2(11) |  |  | [68Ge 3696] | TF | 1986Ba64 | JP G12 L295 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 32 Ge 69 | 0 | 39.0 h | 5/2- | 0.735(7) |  |  | [73Ge] | AB | 1970Ol02 | PR C2 228 (70) |
|  |  |  |  |  | +0.027(6) | R | [73Ge] | AB | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.024(5) st |  | [73Ge] | AB | 1970Ol02 | PR C2 228 (70) |
|  | 398 | 2.8 s | 9/2+ | -1.001(3) |  |  |  | SOP/RDAD | 1970Ch05 | PR C1 613 (70) |
|  |  |  |  |  | 0.75(8) | R | [73Ge 13 keV] | TDPAD | 1993Co17/1981Vi05 | HFI 80 1321 (1993)/HFI 10 1243 (1981) |
|  |  |  |  |  |  |  |  |  |  |  |
| 32 Ge 70 | 1039 | 1.32 ps | 2+ | +0.88(8) |  |  |  | TF | 2013Gu23 | PR C88 014301 (2013) |
|  |  |  |  | +0.84(8) |  |  |  | TF | 2007BO41 | PR C76 054311 (07) |
|  |  |  |  | +0.9(2) |  |  |  | TF | 2006LE31 | PR C74 024315 (06) |
|  |  |  |  | +0.94(5) |  |  |  | TF | 1984Pa20 | JP G10 1759 (84) |
|  |  |  |  | +0.8(2) |  |  |  | IMPAC | 1977Fa07 | NP A291 241 (77) |
|  |  |  |  | +0.7(2) |  |  |  | TF | 1987La20 | AuJP 40 117 (87) |
|  |  |  |  | +0.9(2) |  |  |  | IMPAC, R | 1977Fa07 | NP A291 241 (77) |
|  |  |  |  |  | +0.03(6) or +0.09(6) | R |  | CER | 1980Le16 | PR C22 1530 (80) |
|  | 1707 | 1.8 ps | 2+ | +1.3(6) |  |  |  | TF | 2013Gu23 | PR C88 014301 (2013) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  | +0.8(12) |  |  |  | TF | 2006LE31 | PR C74 024315 (06) |
|  | 2153 | 1.2 ps | 4+ | +0.9(14) |  |  |  | TF | 2013Gu23 | PR C88 014301 (2013) |
|  |  |  |  | +2.0(8) |  |  |  | TF | 2007BO41 | PR C76 054311 (07) |
|  | 2562 | 0.6 ps | 3- | +0.3(9) |  |  |  | TF | 2007BO41 | PR C76 054311 (07) |
|  |  |  |  |  |  |  |  |  |  |  |
| 32 Ge 71 | 0 | 11.2 d | 1/2- | +0.547(5) |  |  | [73Ge] | AB, R | 1966Ch02 | PR 141 15 (66)/PR C1 750 (70) |
|  | 175 | 79 ns | 5/2- | +1.018(10) |  |  | [19F 197] | TDPAD | 1968Mo12 | PL 27B 370 (68) |
|  | 199 | 20.2 ms | 9/2+ | -1.0413(7) |  |  |  | NMR/AC | 1970Be29 | NP A150 282 (70) |
|  |  |  |  |  | 0.34(5) | R |  | QIR | 1975Ri03/1976Br41 | PS 11 228 (75)/HFI 2 265 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 32 Ge 72 | 834 | 3.29 ps | 2+ | +0.88(4) |  |  |  | TF | 2013Gu23 | PR C88 014301 (2013) |
|  |  |  |  | +0.80(7) |  |  |  | TF | 1984Pa20 | JP G10 1759 (84) |
|  |  |  |  | +0.74(9) |  |  |  | TF | 1987La20 | AuJP 40 117 (87) |
|  |  |  |  | +0.7(2) |  |  |  | IMPAC, R | 1977Fa07 | NP A291 241 (77) |
|  |  |  |  |  | -0.13(6) | R |  | CER | 1980Le16 | PR C22 1530 (80) |
|  | 1464 | 4.5 ps | 2+ | +0.8(4) |  |  |  | TF | 2013Gu23 | PR C88 014301 (2013) |
|  | 1728 | 1.55 ps | 4+ | +1.6(5) |  |  |  | TF | 2013Gu23 | PR C88 014301 (2013) |
|  |  |  |  |  |  |  |  |  |  |  |
| 32 Ge 73 | 0 | stable | 9/2+ | -0.8794677(2) |  |  | [2H] | N | 1974Sa25 | ZNat 29a 1763 (74) |
|  |  |  |  |  | -0.196(1) | R |  | AB | 2008Py02/1999Ke17 | Mol Phys 106 1965 (2008)/Mol Phys 96 275 (1999) |
|  |  |  |  |  | -0.17(3) |  |  | AB, R | 1966Ch02 | PR 141 15 (66)/PR C1 750 (70)/ |
|  |  |  |  |  |  |  |  |  | 1970Ol02 | PR C2 228 (70) |
|  | 13 | 2.86 s | 5/2+ | 1.08(3) |  |  |  | TDPAC | 1993Co17 | HFI 80 1321 (93) |
|  |  |  |  | -0.94(3) |  |  |  | TDPAC | 1975Ha37 | PL 58B 423 (75) |
|  |  |  |  |  | 0.70(8) |  | [69Ge 398] | TDPAC | 1993Co17 | HFI 80 1321 (93) |
|  |  |  |  |  | -0.4(3) |  |  | ME | 1983Pf02 | PR B27 4018 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 32 Ge 74 | 596 | 12.5 ps | 2+ | +0.70(2) |  |  |  | TF | 2013Gu23 | PR C88 014301 (2013) |
|  |  |  |  | +0.87(4) |  |  |  | TF | 1984Pa20 | JP G10 1759 (84) |
|  |  |  |  | +0.70(5) |  |  |  | TF | 1987La20 | AuJP 40 117 (87) |
|  |  |  |  | +0.7(2) |  |  |  | IMPAC, R | 1977Fa07 | NP A291 241 (77) |
|  |  |  |  |  | -0.19(2) | R |  | CER | 2000TO12 | Eur. Phys. J. A9 353 (00) |
|  |  |  |  |  | -0.25(6) |  |  | CER | 1980Le16 | PR C22 1530 (80) |
|  | 1204 | 4.9 ps | 2+ | +0.9(2) |  |  |  | TF | 2013Gu23 | PR C88 014301 (2013) |
|  |  |  |  | +0.8(2) |  |  |  | TF | 1984Pa20 | JP G10 1759 (84) |
|  |  |  |  |  | 0.26(6) | R |  | CER | 2000TO12 | Eur. Phys. J. A9 353 (00) |
|  | 1464 | 1.53 ps | 4+ | +1.6(5) |  |  |  | TF | 2013Gu23 | PR C88 014301 (2013) |
|  |  |  |  |  |  |  |  |  |  |  |
| 32 Ge 75 | 0 | 82.8 m | 1/2- | +0.510(5) |  |  | [73Ge] | AB | 1970Ol02 | PR C2 228 (70) |
|  |  |  |  |  |  |  |  |  |  |  |
| 32 Ge 76 | 563 | 18.6 ps | 2+ | +0.64(2) |  |  |  | TF | 2013Gu23 | PR C88 014301 (2013) |
|  |  |  |  | +0.84(5) |  |  |  | TF | 1984Pa20 | JP G10 1759 (84) |
|  |  |  |  | +0.67(8) |  |  |  | TF | 1987La20 | AuJP 40 117 (87) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  | +0.56(12) |  |  |  | IMPAC, R | 1977Fa07 | NP A291 241 (77) |
|  |  |  |  |  | -0.19(6) | R |  | CER | 1980Le16 | PR C22 1530 (80) |
|  | 1108 | 8.0 ps | 2+ | +0.78(10) |  |  |  | TF | 2013Gu23 | PR C88 014301 (2013) |
|  | 1410 | 1.8 ps | 4+ | +1.0(7) |  |  |  | TF | 2013Gu23 | PR C88 014301 (2013) |
|  |  |  |  |  |  |  |  |  |  |  |
| 33 As 68 | 2159 | 37 ns | (7,8)- | |g|=0.23(2) |  |  |  | TDPAD | 1986RaZU | BAPS 31 1210 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 33 As 69 | 0 | 15.2 m | 5/2- | +1.623(2) |  |  |  | NMR/ON | 2005GO44 | PR C72 064316 (05) |
|  |  |  |  | 1.2(2) |  |  | [75As] | AB | 1980Ho02 | ZP A294 1 (80) |
|  | 1307 | 1.35 ns | 9/2+ | +4.7(6) |  |  |  | IPAD | 1980Be32 | ZP A296 181 (80) |
|  |  |  |  | +6(2) |  |  |  | RIGV | 1981Ki07 | IzF 45 94 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 33 As 70 | 0 | 53 m | 4+ | +2.1061(2) |  |  | [75As] | AB | 1980Ho02 | ZP A294 1 (80) |
|  |  |  |  |  | +0.09(2) | R | [75As] | AB | 1980Ho02 | ZP A294 1 (80) |
|  | 888 | 5.34.ns | 7- | 0.75(5) |  |  |  | IPAD | 1991Ba43 | NP A535 425 (91) |
|  |  |  |  |  |  |  |  |  |  |  |
| 33 As 71 | 0 | 65.3 h | 5/2- | (+)1.674(2) |  |  |  | NMR/ON | 1976He25/1976He06 | HFI 2 294 (76)/NP A259 378 (76) |
|  |  |  |  | positive sign |  |  |  | + NO | 2005SE14 | PR C71 064310 (05) |
|  |  |  |  | 1.64(4) |  |  |  | AB | 1980Ho02 | ZP A 294 1 (80) |
|  |  |  |  |  | -0.021(6)) | R | [72As] | NO/S | 1988Wh03 | HFI 43 205 (88) |
|  | 1001 | 19.8 ns | 9/2+ | +5.15(9) |  |  |  | TDPAD | 1989Ra17 | ARHMI 58 (71) |
|  |  |  |  |  |  |  |  |  |  |  |
| 33 As 72 | 0 | 26 h | 2- | -2.1566(3) |  |  | [75As] | AB | 1980Ho02 | ZP A294 1 (80) |
|  |  |  |  |  | -0.08(2) | R | [75As] | AB | 1980Ho02 | ZP A294 1 (80) |
|  | 214 | 85 ns | 3+ | +1.58(2) |  |  | [19F 197] | TDPAD | 1975Be32 | NP A249 93 (75) |
|  | 561 | 87 ns | (6-) | -0.696(12) |  |  |  | TDPAD | 1977Ra03 | PR C15 1583 (77) |
|  |  |  |  |  |  |  |  |  |  |  |
| 33 As 73 | 66 | 5.0 ns | 5/2- | +1.63(10) |  |  |  | TDPAC | 1963Bo26 | PL 6 290 (63) |
|  |  |  |  |  | 0.356(12) | R | [75As] | TDPAC | 1992Sc21 | ZP A343 279 (92) |
|  | 428 | 5.6 s | 9/2+ | +5.234(14) |  |  |  | SOP/RDAD | 1970Be23 | PRL 25 102 (70) |
|  |  |  |  |  |  |  |  |  |  |  |
| 33 As 74 | 0 | 17.8 d | 2- | -1.597(3) |  |  | [75As] | NMR/ON | 1972Ka35 | NP A193 410 (72) |
|  | 259 | 26.8 ns | (4)+ | +3.24(4) |  |  | [19F 197] | TDPAD, R | 1970Ch10/1976Ga23 | NP A164 367 (71)/PR C14 1776 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 33 As 75 | 0 | stable | 3/2- | +1.43948(7) |  |  | [2H] | N | 1953Ti01/1952Je05 | PR 89 595 (53)/PR 85 478 (53) |
|  |  |  |  |  | 0.314(6) | R |  | Mu-X | 1982Ef01 | ZP A309 77 (82) |
|  |  |  |  |  | +0.30(5) |  |  | O | 1983Vo15 | Phca 123C 121 (83) |
|  | 265 | 11.9 ps | 3/2- | +1.0(2) |  |  |  | IPAC | 1971BeWK/1970Pi18 | Cf70Delft 543 (70)/Pram 1 70 (73) |
|  | 280 | 273 ps | 5/2- | +0.92(2) |  |  |  | TDPAC | 1989Mo14 | NP A500 277 (89) |
|  |  |  |  | +0.81(8) |  |  |  | IPAC | 1971BeWK/1970Pi18 | Cf70Delft 543 (70)/Pram 1 70 (73) |
|  |  |  |  |  |  |  |  |  |  |  |
| 33 As 76 | 0 | 26.3 h | 2- | (-)0.9028(10) |  |  | [75As] | NMR/ON() | 1999Oh01 | PR C59 669 (99) |
|  |  |  |  | -0.906(5) |  |  | [75As] | NO/D | 1958Pi43 | PR 109 1423 (58) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | 7(8) |  |  | AB | 1961Ch10 | PR 122 1302 (61) |
|  | 46 | 1.80 s | (1)+ | +0.559(5) |  |  | [19F 197] | SOP/RDAD | 1971BeWJ | Cf70Delft 564 (70) |
|  |  |  |  |  |  |  |  |  |  |  |
| 33 As 77 | 0 | 38.8 h | 3/2- | +1.2946(13) |  |  | [75As] | NMR/ON() | 1999Oh01 | PR C59 669 (99) |
|  | 264 | 304 ps | 5/2- | +0.74(2) |  |  |  | TDPAC | 1989Mo14 | NP A500 277 (89) |
|  |  |  |  | +0.83(7) |  |  |  | IPAC | 1973Ch42 | NP A217 177 (73) |
|  | 476 | 116 s | 9/2+ | +5.525(9) |  |  |  | SOP/RDAD | 1989Ra17 | ARHMI 53 (69) |
|  | 632 | 60 ps | 5/2+ | +2.5(4) |  |  |  | IPAC | 1974Ch31 | PR C10 774 (74) |
|  |  |  |  |  |  |  |  |  |  |  |
| 34 Se 70 | 945 | 1.5 ps | 2+ |  | prolate shape |  |  | CER | 2007HU03 | PRL 98 072501 (07) |
|  |  |  |  |  |  |  |  |  |  |  |
| 34 Se 73 | 0 | 7.1 h | 9/2+ | 0.892(13) |  |  |  | NMR/ON | 2001St31 | HFI 133 117 (2001) |
|  |  |  |  | 0.87(5) |  |  |  | NMR/ON | 1988Be39 | PR C38 2329 (88) |
|  |  |  |  | 0.85(7) |  |  |  | NMR/ON | 1987Ni13 | JPJa 56 3512 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 34 Se 74 | 635 | 7.08 ps | 2+ | +0.86(5) |  |  | [82Se 654] | TF | 1998SP03 | PR C57 2181 (98) |
|  |  |  |  |  | -0.36(7) | R |  | CER | 1978Le22 | PR C18 2801 (78) |
|  | 1269 | 4.0 ps | 2+ | 1.1(2) |  |  | [82Se 654] | TF | 1998SP03 | PR C57 2181 (98) |
|  | 1363 | 1.86 ps | 4+ | 2.0(4) |  |  | [82Se 654] | TF | 1998SP03 | PR C57 2181 (98) |
|  |  |  |  |  |  |  |  |  |  |  |
| 34 Se 75 | 0 | 118.5 d | 5/2+ | 0.683(10) |  |  |  | NMR/ON | 2001ST31 | Hyp Int 133 117 (2001) |
|  |  |  |  | 0.67(4) |  |  |  | NMR/ON | 1974Ca23 | PR B10 1075 (74) |
|  |  |  |  |  | 1.1(2) | R |  | MA, R | 1955Aa06 | PR 98 1224 (55) |
|  |  |  |  |  | Q/Q(79Se(gs))=1.2578(6) |  |  | MA, R | 1955Aa06 | PR 98 1224 (55) |
|  |  |  |  |  |  |  |  |  |  |  |
| 34 Se 76 | 559 | 12.3 ps | 2+ | +0.80(5) |  |  | [82Se 654] | TF | 1998Sp03 | PR C57 2181 (98) |
|  |  |  |  | +0.8(2) |  |  |  | IMPAC | 1969He11 | NP A133 310 (69) |
|  |  |  |  | +0.8(2) |  |  |  | IPAC | 1967Mu10 | CJP 45 1821 (67) |
|  |  |  |  |  | -0.34(7) | R |  | CER | 1977Le11 | NP A284 123 (77) |
|  |  |  |  |  | -0.30(5) |  |  | CER | 1976VoZX | BAPS 21 581 (76) |
|  | 1216 | 3.4 ps | 2+ | 0.70(12) |  |  | [82Se 654] | TF | 1998Sp03 | PR C57 2181 (98) |
|  | 1332 | 1.52 ps | 4+ | 2.6(4) |  |  | [82Se 654] | TF | 1998Sp03 | PR C57 2181 (98) |
|  |  |  |  |  |  |  |  |  |  |  |
| 34 Se 77 | 0 | stable | 1/2- | +0.5350422(6) |  |  | [23Na] | N | 1978Ko39/1953We51 | ZNat 33a 1025 (78)/ PR 89 923 (53) |
|  |  |  |  | 0.5350743(3) |  |  | [1H] | N | 1978Ko39 | ZNat 33a 1025 (78) |
|  | 250 | 9.56 ns | 5/2- | +1.12(3) |  |  |  | TDPAC | 1984Za08 | JP G10 1571 (84) |
|  |  |  |  |  | +0.76(5) |  |  | TDPAC | 2008Py02/1983Un02 | Mol Phys 106 1965 (2009)/HFI 14 119 (83) |
|  | 439 | 24 ps | 5/2- | +1.0(3) |  |  |  | IMPAC | 1970RoZS | Cf69Heid 419 (69) |
|  |  |  |  |  |  |  |  |  |  |  |
| 34 Se 78 | 614 | 8.6 ps | 2+ | +0.77(5) |  |  | [82Se 654] | TF | 1998Sp03 | PR C57 2181 (98) |
|  |  |  |  | +0.8(2) |  |  |  | IMPAC | 1969He11 | NP A133 310 (69) |
|  |  |  |  |  | -0.26(9) | R |  | CER | 1977Le11 | NP A284 123 (77) |
|  |  |  |  |  | -0.30(11) |  |  | CER | 1976VoZX | BAPS 21 581 (76) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  | 1308 | 4.2 ps | 2+ | 0.7(2) |  |  | [82Se 654] | TF | 1998Sp03 | PR C57 2181 (98) |
|  | 1503 | 1.05 ps | 4+ | 1.6(5) |  |  | [82Se 654] | TF | 1998Sp03 | PR C57 2181 (98) |
|  |  |  |  |  |  |  |  |  |  |  |
| 34 Se 79 | 0 | <6.5x104 y | 7/2+ | -1.018(15) |  |  |  | MA | 1953Ha50 | PR 92 1532 (53) |
|  |  |  |  |  | +0.8(2) | R |  | MA, R | 1989Ra17 | OSpk 12 163 (62) |
|  |  |  |  |  |  |  |  |  |  |  |
| 34 Se 80 | 666 | 8.0 ps | 2+ | +0.87(5) |  |  | [82Se 654] | TF | 1998Sp03 | PR C57 2181 (98) |
|  |  |  |  | +0.8(3) |  |  |  | IMPAC | 1969He11 | NP A133 310 (69) |
|  |  |  |  |  | -0.31(7) | R |  | CER | 1977Le11 | NP A284 123 (77) |
|  |  |  |  |  | -0.35(12) |  |  | CER | 1976VoZX | BAPS 21 581 (76) |
|  | 1449 | 1.95 ps | 2+ | 0.7(2) |  |  | [82Se 654] | TF | 1998Sp03 | PR C57 2181 (98) |
|  | 1701 | 0.66 ps | 4+ | 2.7(10) |  |  | [82Se 654] | TF | 1998Sp03 | PR C57 2181 (98) |
|  |  |  |  |  |  |  |  |  |  |  |
| 34 Se 82 | 654 | 11.3 ps | 2+ | +0.99(6) |  |  |  | TF | 1978Br38 | HFI 4 268 (78) |
|  |  |  |  | +0.9(3) |  |  |  | IMPAC | 1969He11 | NP A133 310 (69) |
|  |  |  |  |  | -0.22(7) | R |  | CER | 1977Le11 | NP A284 123 (77) |
|  | 1735 | 0.96 ps | 4+ | 2.3(15) |  |  | [82Se 654] | TF | 1998Sp03 | PR C57 2181 (98) |
|  |  |  |  |  |  |  |  |  |  |  |
| 35 Br 72 | 0 | 79 s | (3+) | 0.60(10) |  |  |  | NO/S | 1992Ba68 | HFI 75 433 (92) |
|  | 101 | 10.1 s | (1-) | >0.7 |  |  |  | NO/S | 1992Gr20 | PR C46 2228 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 35 Br 73 | 241 | 34.7 ns | 3/2- | 1.97(13) |  |  |  | TDPAD | 1987He27 | PR C36 2409 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 35 Br 74 | 14 | 46 m | 4(+) | 1.68(18) |  |  |  | NO/S | 1992Gr20 | PR C46 2228 (92) |
|  |  |  |  | 1.820(12) |  |  |  | NMR/ON | 1992Pr06 | HFI 75 275 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 35 Br 75 | 0 | 97 m | 3/2- | 0.76(18) |  |  |  | NO/S | 1992Gr20 | PR C46 2228 (92) |
|  |  |  |  | positive |  |  |  | NOS | 1992Ba68 | HFI 75 433 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 35 Br 76 | 0 | 16.1 h | 1- | 0.54821(2) |  |  | [79,81Br] | AB | 1960Li11 | PR 119 1053 (60) |
|  |  |  |  |  | 0.255 (4) |  | [79Br] | AB, R | 1960Li11/2000Ha64 | PR 119 1053 (60)/PR B61 13588 (00) |
|  |  |  |  |  |  |  |  |  | 1966Br03 | PR 142 53 (66) |
|  |  |  |  |  |  |  |  |  |  |  |
| 35 Br 77 | 0 | 57 h | 3/2- | 0.92(5) |  |  |  | NO/S | 1992Gr20 | PR C46 2228 (92) |
|  |  |  |  | 0.9731(6) |  |  |  | NMR/ON | 1993Oh09 | HFI 78 485 (93) |
|  |  |  |  | 0.9738(5) |  |  |  | NMR/ON | 1992Pr06 | HFI 75 275 (92) |
|  |  |  |  |  | +0.51(2) | R |  |  | 2013StZZ/1998Se09 | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.53(2) |  | [82Br] | MAPON | 1998Se09 | PRL 80 5289 (98) |
|  | 130 | 9.3 ns | 5/2+ | +3.30(3) |  |  |  | TDPAC | 1991Gr15 | ZP A340 349 (91) |
|  |  |  |  |  |  |  |  |  |  |  |
| 35 Br 78 | 0 | 6.46 m | 1+ | 0.13(3) |  |  |  | NO/S | 1992Pr06 | HFI 75 275 (92) |
|  | 32 | 14.2 ns | (2)- | -1.12(4) |  |  | [19F 197] | TDPAD | 1973Pl07 | NP A215 471 (73) |
|  | 181 | 119 s | 4(+) | +4.114(12) |  |  |  | NMR/AC | 1974FoYO/1971Br31 | Cf74Upp 258 (74)/ZP 244 375 (71) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  |  |  |  |  |  |  |
| 35 Br 79 | 0 | stable | 3/2- | +2.106400(4) |  |  | [2H] | N | 1972Bl07 | ZNat 27a 72 (72) |
|  |  |  |  |  | +0.313(3) | R | [calc efg] | R | 2008Py02/2001Bi17 | Mol Phys 106 1965 (2008)/PR A64 052507 (01) |
|  |  |  |  |  | 0.318(5) |  |  | R | 2004Al08 | PR B69 12501 (2004)/PR B70 119901 (2004) |
|  |  |  |  |  | +0.305(5) st |  |  | AB, R | 2000Ha64 | HPAc 51 755 (79)/PR B61 13588 (00) |
|  |  |  |  |  | +0.331(4) st |  |  | AB, R | 1998Se09 | PRL 80 5289 (98) |
|  | 217 | 47 ps | 5/2- | 1.0(3) |  |  |  | TF | 1994Sp05 | NP A578 300 (94) |
|  | 523 | 1.91 ps | 5/2- | 2.8(8) |  |  |  | TF | 1994Sp05 | NP A578 300 (94) |
|  | 761 | 1.50 ps | 7/2- | 1.9(3) |  |  |  | TF | 1994Sp05 | NP A578 300 (94) |
|  |  |  |  |  |  |  |  |  |  |  |
| 35 Br 80 | 0 | 17.6 m | 1+ | 0.5140(6) |  |  | [79,81Br] | AB | 1964Wh05 | PR 136 B584 (64) |
|  |  |  |  |  | +0.185(3) | R | [79Br] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.181(4) st |  |  | AB, R | 2000Ha64 | HPAc 51 755 (79)/PR B61 13588 (00) |
|  |  |  |  |  | +0.196(3) st |  |  | AB, R | 1998Se09 | PRL 80 5289 (98) |
|  |  |  |  |  | 0.199(8) |  |  | AB | 1964Wh05 | PR 136 B584 (64) |
|  | 37 | 7.4 ns | 2- | -1.67(12) |  |  | [19F 197] | TDPAD | 1973Pl07 | NP A215 471 (73) |
|  |  |  |  |  | 0.164(6) | R | [79Br] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.159(7) st |  | [80Br] | TDPAC | 2000Ha64 | HPAc 51 755 (79)/PR B61 13588 (00) |
|  |  |  |  |  | 0.173(6) st |  |  | TDPAC | 1978Ta24 | HPAc 51 755 (79) |
|  |  |  |  |  |  |  |  |  |  |  |
|  | 86 | 4.42 h | 5- | +1.3177(6) |  |  | [79,81Br] | AB | 1964Wh05 | PR 136 B584 (64) |
|  |  |  |  |  | +0.710(10) | R | [79Br] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.69(2) st |  |  | AB, R | 2000Ha64 | HPAc 51 755 (79)/PR B61 13588 (00) |
|  |  |  |  |  | +0.751(10) st |  |  | AB, R | 1998Se09 | PRL 80 5289 (98) |
|  |  |  |  |  |  |  |  |  |  |  |
| 35 Br 81 | 0 | stable | 3/2- | +2.270562(4) |  |  | [2H] | N | 1972Bl07 | ZNat 27a 72 (72) |
|  |  |  |  |  | +0.262(3) | R | [calc efg] | R | 2008Py02/2001Bi17 | Mol Phys 106 1965 (2008)/PR A64 052507 (01) |
|  |  |  |  |  | 0.266(4) |  |  | R | 2004Al08 | PR B69 12501 (2004)/PR B70 119901 (2004) |
|  |  |  |  |  | +0.254(6) st |  |  | AB, R | 2000Ha64 | HPAc 51 755 (79)/PR B61 13588 (00) |
|  |  |  |  |  | +0.276(4) st |  |  | AB, R | 1998Se09 | PRL 80 5292 (98) |
|  | 276 | 9.7 ps | 5/2- | 1.6(5) |  |  |  | TF | 1996Ja09 | NP A601 117 (96) |
|  | 536 | 37 s | 9/2+ | 5.70(5) |  |  |  | SOP/RDAD | 1972CH34/1972Ch34 | RRou 17 751 (72)/PL 35B 501 (71) |
|  | 767 | 0.54 ps | 5/2- | 1.0(4) |  |  |  | TF | 1996Ja09 | NP A601 117 (96) |
|  | 837 | 1.0 ps | 7/2- | 1.4(4) |  |  |  | TF | 1996Ja09 | NP A601 117 (96) |
|  |  |  |  |  |  |  |  |  |  |  |
| 35 Br 82 | 0 | 35.3 h | 5- | +1.6270(5) |  |  | [79,81Br] | AB | 1959Ga12 | PR 116 393 (59) |
|  |  |  |  |  | +0.707(10) | R | [79Br] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.69(2) st |  |  | AB, R | 2000Ha64 | HPAc 51 755 (79)/PR B61 13588 (00) |
|  |  |  |  |  | +0.748(10) st |  |  | AB, R | 1998Se09 | PRL 80 5289 (98) |
|  |  |  |  |  |  |  |  |  |  |  |
| 35 Br 84 | 0 | 31.8 m | 2- | 1.9(7) |  |  |  | NO/S | 1992Pr06 | HFI 75 275 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 36 Kr 75 | 0 | 4.3 m | 5/2+ | -0.531(4) d |  |  | [83Kr] | CFBLS | 1995Ke04 | NP A586 219 (95) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | +1.137(13) |  |  | CFBLS/R | 1995Ke04 | NP A586 219 (95) |
|  |  |  |  |  |  |  |  |  |  |  |
| 36 Kr 76 | 424 | 17 ps | 2+ | +0.7(2) |  |  |  | TF | 2004KU11 | PL B591 213 (04) |
|  |  |  |  |  |  |  |  |  |  |  |
| 36 Kr 77 | 0 | 74.4 m | 5/2+ | -0.583(3) d |  |  | [83Kr] | CFBLS | 1995Ke04 | NP A586 219 (95) |
|  |  |  |  |  | +0.948(10) | R |  | CFBLS/R | 1995Ke04 | NP A586 219 (95) |
|  |  |  |  |  |  |  |  |  |  |  |
| 36 Kr 78 | 455 | 17 ps | 2+ | +0.86(2) |  |  |  | TF | 2004KU11 | PL B591 213 (04) |
|  |  |  |  | +1.08(10) |  |  |  | TF | 1981Wa16 | NP A365 173 (81) |
|  | 1119 | 2.6 ps | 4+ | +1.8(3) |  |  |  | TF | 2001Me20 | PR C64 024314 (01) |
|  | 1148 | 3.7 ps | 2+ | +1.1(2) |  |  |  | TF | 2001Me20 | PR C64 024314 (01) |
|  |  |  |  |  |  |  |  |  |  |  |
| 36 Kr 79 | 0 | 35.04 h | 1/2- | +0.536(2) d |  |  | [83Kr] | CFBLS | 1995Ke04 | NP A586 219 (95) |
|  | 130 | 50 s | 7/2+ | -0.786(2) d |  |  | [83Kr] | CFBLS | 1995Ke04 | NP A586 219 (95) |
|  |  |  |  |  | +0.404(5) | R |  | CFBLS/R | 1995Ke04 | NP A586 219 (95) |
|  | 147 | 77.7 ns | 5/2- | +1.124(10) |  |  | [19F 197] | TDPAD | 1968Bl04 | PL 26B 134 (68) |
|  |  |  |  |  | 0.45(3) | R | [83Kr 9] | TDPAD | 1989Ra17 | ARHMI 50 (77) |
|  |  |  |  |  |  |  |  |  |  |  |
| 36 Kr 80 | 617 | 8.1 ps | 2+ | +0.76(10) |  |  |  | TF | 2001Me20 | PR C64 024314 (01) |
|  | 1257 | 1.4 ps | 4+ | +1.8(6) |  |  |  | TF | 2001Me20 | PR C64 024314 (01) |
|  | 1436 | 7.6 ps | 2+ | +1.3(7) |  |  |  | TF | 2001Me20 | PR C64 024314 (01) |
|  |  |  |  |  |  |  |  |  |  |  |
| 36 Kr 81 | 0 | 2.3 x 10\*5 y | 7/2+ | -0.908(2) d |  |  | [83Kr] | CFBLS | 1995Ke04 | NP A586 219 (95) |
|  |  |  |  | -0.909(4) |  |  | [83Kr] | LRFS | 1993Ca41 | PR A47 1148 (93) |
|  |  |  |  |  | +0.644(4) | R | [83Kr] | R | 2001Ke15/1993Ca41 | CPL 346 155 (01)/PR A47 1148 (1993) |
|  |  |  |  |  | +0.64(7) |  |  | CFBLS | 1995Ke04 | NP A586 219 (95) |
|  |  |  |  |  | +0.629(13) |  |  | LRFS | 1993Ca41 | PR A47 1148 (93) |
|  | 190 | 13.1 s | 1/2- | +0.586(2) d |  |  | [83Kr] | CFBLS | 1995Ke04 | NP A586 219 (95) |
|  |  |  |  |  |  |  |  |  |  |  |
| 36 Kr 82 | 777 | 4.5 ps | 2+ | +0.80(4) |  |  |  | TF | 2001Me20 | PR C64 024314 (01) |
|  | 1821 | 0.7 ps | 4+ | +1.2(8) |  |  |  | TF | 2001Me20 | PR C64 024314 (01) |
|  |  |  |  |  |  |  |  |  |  |  |
| 36 Kr 83 | 0 | stable | 9/2+ | -0.970669(3) |  |  | [39K] | N, AB | 1968Br16/1946Ke05 | PL 27A 466 (68)/RMP 18 323 (46) |
|  |  |  |  |  | +0.259(1) | R | [calc efg] | R | 2001Ke15 | CPL 346 155 (01) |
|  |  |  |  |  | +0.26(3) |  |  | CFBLS | 1995Ke04 | NP A586 219 (95) |
|  |  |  |  |  | +0.253(5) |  |  | AB | 1963Fa01 | PR 129 1214 (63) |
|  | 9 | 147 ns | 7/2+ | -0.943(2) |  |  | [83Kr] | ME | 1969Ca06 | PR 178 1728 (69) |
|  |  |  |  |  | +0.507(3) | R | [calc efg] | R | 2001Ke15 | CPL 346 155 (01) |
|  |  |  |  |  | +0.495(10) |  | [83Kr] | ME | 1977Ho\*\* | JCP 66 2627 (77) |
|  |  |  |  |  |  |  |  |  |  |  |
|  | 42 | 1.83 h | 1/2- | +0.591(2) d |  |  | [83Kr] | CFBLS | 1995Ke04 | NP A586 219 (95) |
|  |  |  |  |  |  |  |  |  |  |  |
| 36 Kr 84 | 882 | 4.1 ps | 2+ | +0.54(2) |  |  |  | TF | 2001Me20 | PR C64 024314 (01) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  | 3236 | 1.84 s | 8+ | -1.97(2) |  |  |  | TDPAD | 1982Za04 | R.Rou 27 33 (82) |
|  |  |  |  |  | 0.36(4) | R |  | LEMS | 2006SC22 | PR C74 034309 (06) |
|  | 5373 | 45 ns | 12+ | +2.04(12) |  |  |  | TDPAD | 1985Ro22 | PL 163B 323 (85) |
|  |  |  |  | +2.0(2) |  |  |  | TDPAD | 1990RO10 | NP A514 401 (90) |
|  |  |  |  |  |  |  |  |  |  |  |
| 36 Kr 85 | 0 | 10.76 y | 9/2+ | -1.005(2) d |  |  | [83Kr] | CFBLS | 1995Ke04 | NP A586 219 (95) |
|  |  |  |  | 1.005(2) |  |  | [83Kr] | O | 1955Ra131981Th04 | ZP 141 160 (55) |
|  |  |  |  | -1.0055(4) |  |  | [83Kr] | LRFS | 1993Ca41 | PR A47 1148 (93) |
|  |  |  |  |  | +0.443(3) | R |  | [83Kr] | 2001Ke15 | CPL 346 155 (01) |
|  |  |  |  |  | +0.440(5) |  |  | CFBLS/R | 1995Ke04 | NP A586 219 (95) |
|  |  |  |  |  | +0.433(8) |  |  | LRFS | 1993Ca41 | PR A47 1148 (93) |
|  | 305 | 4.48 h | 1/2- | +0.633(2) d |  |  | [83Kr] | CFBLS | 1995Ke04 | NP A586 219 (95) |
|  |  |  |  |  |  |  |  |  |  |  |
| 36 Kr 86 | 1565 | 0.26 ps | 2+ | +2.2(3) |  |  |  | TF | 2001Me20 | PR C64 024314 (01) |
|  |  |  |  |  |  |  |  |  |  |  |
| 36 Kr 87 | 0 | 76.3 m | 5/2+ | -1.023(2) d |  |  | [83Kr] | CFBLS | 1995Ke04 | NP A586 219 (95) |
|  |  |  |  |  | -0.300(3) | R |  | CFBLS/R | 1995Ke04 | NP A586 219 (95) |
|  |  |  |  |  |  |  |  |  |  |  |
| 36 Kr 89 | 0 | 3.15 m | 3/2+ | -0.330(3) d |  |  | [83Kr] | CFBLS | 1995Ke04 | NP A586 219 (95) |
|  |  |  |  |  | +0.166(2) | R |  | CFBLS/R | 1995Ke04 | NP A586 219 (95) |
|  |  |  |  |  |  |  |  |  |  |  |
| 36 Kr 91 | 0 | 8.57 s | 5/2+ | -0.583(2) d |  |  | [83Kr] | CFBLS | 1995Ke04 | NP A586 219 (95) |
|  |  |  |  |  | +0.303(3) | R |  | CFBLS/R | 1995Ke04 | NP A586 219 (95) |
|  |  |  |  |  |  |  |  |  |  |  |
| 36 Kr 93 | 0 | 1.286 s | 1/2+ | -0.413(2) d |  |  | [83Kr] | CFBLS | 1995Ke04 | NP A586 219 (95) |
|  |  |  |  |  |  |  |  |  |  |  |
| 36 Kr 94 | 666 | 8.7 ps | 2+ |  | -0.5(3) | R |  | CER | 2012Al03 | PRL 108 062701 (2012) |
|  |  |  |  |  |  |  |  |  |  |  |
| 36 Kr 95 | 0 | 0.78 s | 1/2+ | -0.410(3) d |  |  | [83Kr] | CFBLS | 1995Ke04 | NP A586 219 (95) |
|  |  |  |  |  |  |  |  |  |  |  |
| 36 Kr 96 | 554 | 12.4 ps | 2+ |  | 0.3(9) |  |  | CER | 2012Al03 | PRL 108 062701 (2012) |
|  |  |  |  |  |  |  |  |  |  |  |
| 37 Rb 76 | 0 | 39 s | 1(-) | -0.3726228(14) |  |  | [87Rb] | ABLS | 1986Du16/1981Th04 | JPPa 47 1903 (86)/PR C23 2720 (81) |
|  |  |  |  |  | +0.46(20) | R | [85Rb] | ABLS/R | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 37 Rb 77 | 0 | 3.8 m | 3/2- | +0.6544680(16) |  |  | [87Rb] | ABLS | 1986Du16/1981Th04 | JPPa 47 1903 (86)/PR C23 2720 (81) |
|  |  |  |  | +0.652(7) |  |  | [85Rb] | AB | 1978Ek04 | NP A311 269 (78) |
|  |  |  |  |  | +0.84(17) | R | [85Rb] | ABLS/R | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 37 Rb 78 | 103 | 6.3 m | 4- | +2.549(2) |  |  | [87Rb] | ABLS | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  | +2.56(3) |  |  | [85Rb] | AB | 1978Ek04 | NP A311 269 (78) |
|  |  |  |  |  | +0.99(20) | R | [85Rb] | ABLS/R | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  |  |  |  |  |  |  |  |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
| 37 Rb 79 | 0 | 23 m | 5/2+ | +3.3579(12) |  |  | [87Rb] | ABLS | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  | +3.36(4) |  |  | [85Rb] | AB | 1978Ek04 | NP A311 269 (78) |
|  |  |  |  |  | -0.12(4) | R | [85Rb] | ABLS/R | 1981Th04 | PR C23 2720 (81) |
|  | 97 | 18.6 ns | 9/2+ | +5.03(7) |  |  |  | TDPAD | 1994Io02 | ZP A349 129 (94) |
|  |  |  |  |  |  |  |  |  |  |  |
| 37 Rb 80 | 0 | 30 s | 1+ | -0.0836(6) |  |  |  | OP/RD,R | 1978Ek04 | NP A311 269(78) |
|  |  |  |  | -0.083(2) |  |  | [87Rb] | ABLS | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  |  | +0.42(8) | R | [85Rb] | ABLS/R | 1981Th04 | PR C23 2720 (81) |
|  | 494 | 1.63 s | 6+ | +3.38(2) |  |  |  | TDPAD | 1996Io01 | ZP A355 347 (96) |
|  |  |  |  | +3.36(6) |  |  |  | TDPAD | 1979RaZR | BAPS 24 632 (79) |
|  |  |  |  |  | 0.51(5) |  |  | TDPAD |  | Th Stenzel (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 37 Rb 81 | 0 | 4.58 h | 3/2- | +2.0595(14) |  |  | [87Rb] | ABLS | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  |  | +0.48(10) | R | [85Rb] | ABLS/R | 1981Th04 | PR C23 2720 (81) |
|  | 86 | 32 m | 9/2+ | +5.598(2) |  |  | [87Rb] | ABLS | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  |  | -0.90(19) | R | [85Rb] | ABLS/R | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 37 Rb 82 | 0 | 1.25 m | 1+ | +0.5545083(11) |  |  | [87Rb] | ABLS | 1986Du16/1981Th04 | JPPa 47 1903 (86)/PR C23 2720 (81) |
|  |  |  |  | +0.554(6) |  |  |  | OP/RD,R | 1978Ek04 | NP A311 269 (78) |
|  |  |  |  |  | +0.23(10) | R | [85Rb] | ABLS/R | 1981Th04 | PR C23 2720 (81) |
|  | ~100 | 6.47 h | 5- | +1.5100082(2) |  |  | [87Rb] | AB | 1976Fu06/1957Hu75 | JPCR 5 835 (76)/PR 107 723 (57) |
|  |  |  |  | +1.513(2) |  |  | [87Rb] | ABLS | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  | +1.51(2) |  |  | [85Rb] | AB,R | 1978Ek04 | NP A311 269 (78) |
|  |  |  |  |  | +1.2(3) | R | [85Rb] | ABLS/R | 1981Th04 | PR C23 2720 (81) |
|  | 191 | 12.3 ns | 6+ | +4.02(5) |  |  |  | TDPAD | 1996Io01 | ZP A355 347 (96) |
|  | 3027 | 0.6 ps | 12- | (+)13(3) |  |  |  | TF | 2010YU03 | Chin Phys B19 062701 (10) |
|  | 3500 | 0.6 ps | 13- | (+)13(3) |  |  |  | TF | 2010YU03 | Chin Phys B19 062701 (10) |
|  | 4048 | 0.4 ps | 14- | (+)12(3) |  |  |  | TF | 2010YU03 | Chin Phys B19 062701 (10) |
|  | 4716 | <1 ps | 15- | (+)12(3) |  |  |  | TF | 2010YU03 | Chin Phys B19 062701 (10) |
|  |  |  |  |  |  |  |  |  |  |  |
| 37 Rb 83 | 0 | 86.2 d | 5/2- | +1.4249(8) |  |  | [87Rb] | ABLS | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  |  | +0.24(5) | R | [85Rb] | ABLS/R | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 37 Rb 84 | 0 | 33 d | 2- | -1.324116(2) |  |  | [87Rb] | AB | 1962Kh02 | BAPS 7 476 (62) |
|  |  |  |  | -1.325(2) |  |  | [87Rb] | ABLS | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  | -1.30(1) |  |  | [85Rb] | OD,OL | 1973Ac02 | ZP 260 87 (73) |
|  |  |  |  |  | -0.02(4) | R | [85Rb] | ABLS/R | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  |  | +0.005(13) |  |  | OD,OL | 1973Ac02 | ZP 260 87 (73) |
|  | 465 | 20.4 m | 6- | +0.212933(1) |  |  | [87Rb] | ABLS | 1986Du16/1981Th04 | JPPa 47 1903 (86)/PR C23 2720 (81) |
|  |  |  |  |  | +0.7(4) | R |  | ABLS | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 37 Rb 85 | 0 | stable | 5/2- | +1.35298(10) |  |  |  | ABLS | 1993Du08 | NIMPR A325 465 (93) |
|  |  |  |  | +1.3533515(8) |  |  | [1H] | N | 1976Fu06/1954Wa37 | JPCR 5 835 (76)/ORNL-1775 (54) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  | +1.353028(3) |  |  |  | AB/D | 1968Eh01 | PR 167 1062 (68) |
|  |  |  |  | +1.35302(2) |  |  |  | OP/RD | 1968Wh01 | PR 174 23 (68) |
|  |  |  |  | +1.357(1) |  |  | [87Rb] | ABLS | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  |  | +0.276(1) | R |  | MS | 2008Py02 | Mol Phys 106 1965 (2008) |
|  |  |  |  |  | +0.277(1) |  |  | R | 99Ke12 | PR A60 3575 (99) |
|  |  |  |  |  | +0.286(1) |  |  | R | 99Ke12 | PR A60 3575 (99) |
|  |  |  |  |  | +0.23(4) st |  |  | ABLS | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  |  | +0.274(2) st |  |  | OD | 1973Fe05 | ZP 261 1 (73) |
|  |  |  |  |  | +0.273(2) st |  | [87Rb] | MB, R | 1971St12 | PR A3 837 (71) |
|  | 514 | 1.02 s | 9/2+ | +6.043(5) |  |  | [85Rb] | OP/RD | 1991Ma21 | PRL 66 1681 (91) |
|  |  |  |  | +6.046(10) |  |  | [85Rb] | OP/RD | 1984Sh24 | PRL 53 2230 (84) |
|  |  |  |  | +6.16(5) |  |  |  | TDPAD, SOPAD | 1974He22 | NP A234 81 (70) |
|  |  |  |  |  | -0.9(2) | R | [85Rb] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.7(2) |  | [85Rb] | OP/RD | 1991Ma21 | PRL 66 1681 (91) |
|  | 2826 | 12.5 ns | 19/2- | +1.3(4) |  |  |  | TDPAD | 1990Ka26 | HFI 59 101 (90) |
|  |  |  |  |  |  |  |  |  |  |  |
| 37 Rb 86 | 0 | 18.65 d | 2- | -1.6920(14) |  |  |  | AB/D | 1961Br16 | PR 123 1801 (61) |
|  |  |  |  | -1.698(2) |  |  | [87Rb] | ABLS | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  |  | +0.23(6) | R | [85Rb] | ABLS/R | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  |  | +0.20(3) |  |  | OD,OL | 1973Ac02 | ZP 260 87 (73) |
|  | 556 | 1.02 m | (6-) | +1.815(1) |  |  | [87Rb] | ABLS | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  |  | +0.45(14) | R | [85Rb] | ABLS/R | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 37 Rb 87 | 0 | 4.9 10\*10y | 3/2- | +2.75131(12) |  |  |  | ABLS | 1993Du08 | NIMPR A325 465 (93) |
|  |  |  |  | +2.751818(2) |  |  | [2H] | N | 1967Lu06/1968Lu07 | PL 25A 440 (67)/ZNat 23a 1202 (68) |
|  |  |  |  | +2.751235(3) |  |  |  | OP/RD | 1968Wh01 | PR 174 23 (68) |
|  |  |  |  |  | +0.1335(5) | R |  | MS | 2008Py02 | Mol Phys 106 1965 (2008) |
|  |  |  |  |  | +0.134(1) |  |  | R | 99Ke12 | PR A60 3575 (99) |
|  |  |  |  |  | +0.138(1) |  |  | R | 99Ke12 | PR A60 3575 (99) |
|  |  |  |  |  | +0.132(1) st |  |  | OD | 1973Fe05 | ZP 261 1 (73) |
|  |  |  |  |  | +0.127(1) st |  |  | TDPAD, R | 1971St12 | PR A3 837 (71) |
|  |  |  |  |  | +0.13(2) st |  |  | ABLS | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 37 Rb 88 | 0 | 17.7 m | 2- | 0.508(5) |  |  | [85Rb] | AB | 1968Va03 | PR 166 1131 (68) |
|  |  |  |  | 0.50761(1) |  |  | [87Rb] | AB,R | 1979Ek02 | PS 19 516 (79) |
|  |  |  |  | +0.512(3) |  |  | [87Rb] | ABLS | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  |  | -0.01(11) | R | [85Rb] | ABLS/R | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 37 Rb 89 | 0 | 15.2 m | 3/2- | +2.3836(7) |  |  | [87Rb] | ABLS | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  | +2.378(4) |  |  | [85Rb] | AB | 1979Ek02 | PS 19 516 (79) |
|  |  |  |  | +2.377(5) |  |  | [87Rb] | CFBLS | 1979Kl03 | PL 82B 47 (79) |
|  |  |  |  |  | +0.17(3) | R | [85Rb] | ABLS/R | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  |  | 0.16(3) st |  |  | CFBLS | 1979Kl03 | PL 82B 47 (79) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  |  |  |  |  |  |  |
| 37 Rb 90 | 107 | 4.26 m | 3- | +1.6160(6) |  |  | [87Rb] | ABLS | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  | +1.612(5) |  |  | [85Rb] | AB | 1979Ek02 | PS 19 516 (79) |
|  |  |  |  |  | +0.25(7) | R | [85Rb] | ABLS/R | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 37 Rb 91 | 0 | 58 s | 3/2(-) | +2.1815(15) |  |  | [87Rb] | ABLS | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  | +2.177(5) |  |  | [87Rb] | CFBLS | 1979Kl03 | PL 82B 47 (79) |
|  |  |  |  | +2.177(3) |  |  | [85Rb] | AB | 1979Ek02 | PS 19 516 (79) |
|  |  |  |  |  | +0.19(5) | R | [85Rb] | ABLS/R | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  |  | 0.14(3) st |  |  | CFBLS | 1979Kl03 | PL 82B 47 (79) |
|  |  |  |  |  |  |  |  |  |  |  |
| 37 Rb 93 | 0 | 5.85 s | 5/2- | +1.410(2) |  |  | [87Rb] | ABLS | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  | +1.400(6) |  |  | [85Rb] | CFBLS | 1979Kl03 | PL 82B 47 (79) |
|  |  |  |  |  | +0.21(6) | R | [85Rb] | ABLS/R | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  |  | 0.27(6) st |  |  | CFBLS | 1979Kl03 | PL 82B 47 (79) |
|  |  |  |  |  |  |  |  |  |  |  |
| 37 Rb 94 | 0 | 2.73 s | 3(-) | +1.498(2) |  |  | [87Rb] | ABLS | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  |  | +0.20(7) | R | [85Rb] | ABLS/R | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 37 Rb 95 | 0 | 0.38 s | 5/2- | +1.334(3) |  |  | [87Rb] | ABLS | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  |  | +0.26(9) | R | [85Rb] | ABLS/R | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 37 Rb 96 | 0 | 0.20 s | 2+ | +1.466(2) |  |  | [87Rb] | ABLS | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  |  | +0.30(9) | R | [85Rb] | ABLS/R | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 37 Rb 97 | 0 | 0.17 s | 3/2- | +1.841(2) |  |  | [87Rb] | ABLS | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  |  | +0.70(15) | R | [85Rb] | ABLS/R | 1981Th04 | PR C23 2720 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 38 Sr 77 | 0 | 9 s | 5/2+ | -0.348(4) |  |  | [87Sr] | CFBLS | 1992Li11 | PR C46 797 (92) |
|  |  |  |  |  | +1.27(5) | R | [87Sr] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +1.40(11) st |  | [87Sr] | CFBLS | 1992Li11 | PR C46 797 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 38 Sr 79 | 0 | 2.25 m | (3/2-) | -0.474(4) |  |  | [87Sr] | CFBLS | 1990Bu12 | PR C41 2883 (90) |
|  |  |  |  |  | +0.661(6) | R | [87Sr] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | + 0.708(6) |  | calc efg | R | 2002Ma09 | JP B35 917 (02) |
|  |  |  |  |  | +0.73(6) st |  |  | CFBLS | 1990Bu12 | PR C41 2883 (90) |
|  |  |  |  |  |  |  |  |  |  |  |
| 38 Sr 81 | 0 | 22.3 m | 1/2- | +0.543(4) |  |  | [87Sr] | CFBLS | 1990Bu12 | PR C41 2883 (90) |
|  |  |  |  | +0.542(4) |  |  | [87Sr] | ABLFS | 1987An02 | ZP A326 493 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 38 Sr 82 | 573 | 8.9 ps | 2+ | +0.94(16) |  |  |  | TF | 2008YU04/2010FA08 | Chin Phys Lett 25 3617 (08)/NP A834 107c (2010) |
|  | 1328 | 1.0 ps | 4+ | +1.9(3) |  |  |  | TF | 2008YU04/2010FA08 | Chin Phys Lett 25 3617 (08)/NP A834 107c (2010) |
|  | 2229 | 0.37 ps | 6+ | +3.5(5) |  |  |  | TF | 2008YU04/2010FA08 | Chin Phys Lett 25 3617 (08)/NP A834 107c (2010) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  | 2817 | 3.0 ps | 5- | +2(2) |  |  | [84Sr 793] | TF | 1989Ku11 | JP G15 1039 (89) |
|  | 3243 | 0.24 ps | 8+ | +6.6(8) |  |  |  | TF | 2008YU04/2010FA08 | Chin Phys Lett 25 3617 (08)/NP A834 107c (2010) |
|  |  |  |  | +5.6(8) |  |  | [84Sr 793] | TF | 1989Ku11 | JP G15 1039 (89) |
|  | 3623 | - | 8+ | +5.6(8) |  |  | [84Sr 793] | TF | 1989Ku11 | JP G15 1039 (89) |
|  | 4424 | 0.9 ps | 10+ | +11(5) |  |  | [84Sr 793] | TF | 1989Ku11 | JP G15 1039 (89) |
|  |  |  |  |  |  |  |  |  |  |  |
| 38 Sr 83 | 0 | 32.4 h | 7/2+ | -0.829(2) |  |  | [87Sr] | CFBLS | 1990Bu12 | PR C41 2883 (90) |
|  |  |  |  | -0.8298(3) |  |  | [87Sr] | ABLFS | 1987An02 | ZP A326 493 (87) |
|  |  |  |  |  | +0.708(11) | R | [87Sr] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.761(12) |  | calc efg | R | 2002Ma09 | JP B35 917 (02) |
|  |  |  |  |  | +0.78(7) st |  | [87Sr] | CFBLS | 1990Bu12 | PR C41 2883 (90) |
|  |  |  |  |  | +0.82(5) st |  | [87Sr] | ABLFS | 1987An02 | ZP A326 493 (87) |
|  | 259 | 5.0 s | 1/2- | +0.581(4) |  |  | [87Sr] | CFBLS | 1990Bu12 | PR C41 2883 (90) |
|  |  |  |  |  |  |  |  |  |  |  |
| 38 Sr 84 | 793 | 2.9 ps | 2+ | +0.96(2) |  |  |  | TF | 2012Ku14 | PR C85 044322 (12) |
|  |  |  |  | +0.84(9) |  |  |  | TF | 1988Ku01 | JP G14 65 (88) |
|  | 2769 | 9.5 ps | 5- | +8.0(10) |  |  | [84Sr 793] | TF | 1989Ku11 | JP G15 1039 (89) |
|  | 3332 | 157 ps | 8+ | -1(2) |  |  | [84Sr 793] | TF | 1989Ku11 | JP G15 1039 (89) |
|  |  |  |  | -1.1(6) |  |  | [90Se 666] | TFL | 1981Br20 | PL 105B 119 (81) |
|  | 3488 | 4.4 ps | 7- | +4.2(14) |  |  | [84Sr 793] | TF | 1989Ku11 | JP G15 1039 (89) |
|  | 3680 | 3.3 ps | 8+ | +7.2(8) |  |  | [84Sr 793] | TF | 1989Ku11 | JP G15 1039 (89) |
|  | 4448 | 2.2 ps | 10+ | +2.0(10) |  |  | [84Sr 793] | TF | 1989Ku11 | JP G15 1039 (89) |
|  | 4534 | 1.66 ps | 10+ | +8(2) |  |  | [84Sr 793] | TF | 1989Ku11 | JP G15 1039 (89) |
|  | 4636 | 2.5 ps | 9- | 0(4) |  |  | [84Sr 793] | TF | 1989Ku11 | JP G15 1039 (89) |
|  |  |  |  |  |  |  |  |  |  |  |
| 38 Sr 85 | 0 | 64.8 d | 9/2+ | -1.000(2) |  |  | [87Sr] | CFBLS | 1990Bu12 | PR C41 2883 (90) |
|  |  |  |  | -1.0005(3) |  |  | [87Sr] | ABLFS | 1987An02 | ZP A326 493 (87) |
|  |  |  |  |  | +0.263(14) | R | [87Sr] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.282(15) |  | calc efg | R | 2002Ma09 | JP B35 917 (02) |
|  |  |  |  |  | +0.29(3) st |  | [87Sr] | CFBLS | 1990Bu12 | PR C41 2883 (90) |
|  | 239 | 68 m | 1/2- | +0.600(4) |  |  | [87Sr] | CFBLS | 1990Bu12 | PR C41 2883 (90) |
|  |  |  |  | +0.599(2) |  |  | [87Sr] | ABLFS | 1987An02 | ZP A326 493 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 38 Sr 86 | 1077 | 1.4 ps | 2+ | +0.57(3) |  |  |  | TF | 2012Ku14 | PR C85 044322 (12) |
|  |  |  |  | +0.55(10) |  |  |  | TF | 1988Ku01 | JP G14 65 (88) |
|  | 1854 | 0.39 ps | 2+ | +0.8(3) |  |  |  | TF | 2012Ku14 | PR C85 044322 (12) |
|  | 2230 | 1.7 ps | 4+ | -3(2) |  |  |  | TF | 2012Ku14 | PR C85 044322 (12) |
|  | 2956 | 457 ns | 8+ | -1.93(2) |  |  |  | TDPAD | 1978Ha52 | HFI 4 196 (78) |
|  |  |  |  |  |  |  |  |  |  |  |
| 38 Sr 87 | 0 | stable | 9/2+ | -1.0928(7) |  |  | [23Na] | OP/RD | 1972Ol01 | ZP 249 205 (72) |
|  |  |  |  | -1.0936030(13) |  |  | [2H] | N | 1974Sa25 | ZNat 29a 1763 (74) |
|  |  |  |  |  | +0.305(2) | R |  | AB | 2008Py02/2006Sa21 | Mol Phys 106 1965 (2008)/PR A73 062501 (2006) |
|  |  |  |  |  | +0.33(2) |  | calc efg | R | 2002Ma09 | JP B35 917 (02) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | +0.34(2) st |  |  | AB | 1977He21 | PR A16 1371 (77) |
|  | 388 | 2.80 h | 1/2- | +0.624(4) |  |  | [87Sr] | CFBLS | 1990Bu12 | PR C41 2883 (90) |
|  |  |  |  | +0.788(9) |  |  | [87Sr] | ABLFS | 1987An02 | ZP A326 493 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 38 Sr 88 | 1836 | 0.15 ps | 2+ | +2.4(2) |  |  |  | TF | 2012Ku14 | PR C85 044322 (12) |
|  |  |  |  | +2.3(3) |  |  |  | TF | 1988Ku01 | JP G14 65 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 38 Sr 89 | 0 | 50.5 d | 5/2+ | -1.147(2) |  |  | [87Sr] | CFBLS | 1990Bu12 | PR C41 2883 (90) |
|  |  |  |  | -1.1481(8) |  |  | [87Sr] | ABLFS | 1987An02 | ZP A326 493 (87) |
|  |  |  |  |  | -0.253(8) | R | [87Sr] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.271(9) |  | calc efg | R | 2002Ma09 | JP B35 917 (02) |
|  |  |  |  |  | -0.28(3) st |  | [87Sr] | CFBLS | 1990Bu12 | PR C41 2883 (90) |
|  |  |  |  |  | -0.32(2) st |  | [87Sr] | ABLFS | 1987An02 | ZP A326 493 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 38 Sr 91 | 0 | 9.5 h | 5/2+ | -0.885(2) |  |  | [87Sr] | CFBLS | 1990Bu12 | PR C41 2883 (90) |
|  |  |  |  |  | +0.042(10) | R | [87Sr] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.045(11) |  | calc efg | R | 2002Ma09 | JP B35 917 (02) |
|  |  |  |  |  | +0.047(12) |  | [87Sr] | CFBLS | 1990Bu12 | PR C41 2883 (90) |
|  | 94 | 88.9 ns | 3/2+ | -0.35(2) |  |  |  | TDPAC | 1993Wo07 | PR C48 562 (93) |
|  |  |  |  | 0.120(3) |  |  |  | TDPAC | 1994Ka40 | HFI 84 329 (94) |
|  |  |  |  |  |  |  |  |  |  |  |
| 38 Sr 93 | 0 | 7.4 m | 5/2+ | -0.793(2) |  |  | [87Sr] | CFBLS | 1990Bu12 | PR C41 2883 (90) |
|  |  |  |  |  | +0.240(10) | R | [87Sr] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.258(11) |  | calc efg | R | 2002Ma09 | JP B35 917 (02) |
|  |  |  |  |  | +0.26(3) |  | [87Sr] | CFBLS | 1990Bu12 | PR C41 2883 (90) |
|  | 213 | 4.6 ns | (3/2+) | -0.34(2) |  |  |  | TDPAC | 2004SA69 | HFI 159 251 (2004) |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| 38 Sr 95 | 0 | 10.3 m | 1/2- | -0.537(2) |  |  | [87Sr] | CFBLS | 1990Bu12 | PR C41 2883 (90) |
|  |  |  |  |  |  |  |  |  |  |  |
| 38 Sr 97 | 0 | 0.40 s | 1/2- | -0.498(2) |  |  | [87Sr] | CFBLS | 1990Bu12 | PR C41 2883 (90) |
|  |  |  |  |  |  |  |  |  |  |  |
| 38 Sr 98 | 144 | 2.8 ns | 2+ | 0.76(14) |  |  |  | IPAC | 1989Wo05 | PR C40 932 (89) |
|  |  |  |  |  |  |  |  |  |  |  |
| 38 Sr 99 | 0 | 0.269 s | 3/2+ | -0.261(5) |  |  | [88,98Sr] | CFBLS | 1991Li05 | PL B256 141 (91) |
|  |  |  |  |  | +0.76(4) | R | [87Sr] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.84(8) |  | [88,98Sr] | CFBLS | 1991Li05 | PL B256 141 (91) |
|  |  |  |  |  |  |  |  |  |  |  |
| 39 Y 83 | 145 | 119 ps | (7/2+) | +2.1(6) |  |  |  | IMPAD | 1990Bh03 | HFI 59 109 (90) |
|  | 595 | 5.4 ps | (13/2+) | +8(3) |  |  |  | IMPAD | 1990Bh03 | HFI 59 109 (90) |
|  |  |  |  | +4.4(7) |  |  |  | TF | 1998LuZU | ARBT 96/7 35 (98) |
|  | 1406 | 1.0 ps | (17/2+) | +8(2) |  |  |  | TF | 1998LuZU | ARBT 96/7 35 (98) |
|  | 2371 | 0.6 ps | (21/2+) | +11(2) |  |  |  | TF | 1998LuZU | ARBT 96/7 35 (98) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  | 2560 | 46 ps | (17/2-) | +2.5(5) |  |  |  | IMPAD | 1990Bh06 | PL B252 540 (90) |
|  | 3451 |  | (25/2+) | +7.0(12) |  |  |  | TF | 1998LuZU | ARBT 96/7 35 (98) |
|  | 4643 |  | (29/2+) | +8(2) |  |  |  | TF | 1998LuZU | ARBT 96/7 35 (98) |
|  | 5983 |  | (33/2+) | +8(2) |  |  |  | TF | 1998LuZU | ARBT 96/7 35 (98) |
|  |  |  |  |  |  |  |  |  |  |  |
| 39 Y 84 | 112 | 79 ns | (4+) | +2.31(3) |  |  |  | TDPAD | 2005IO02 | PR C72 044313 (05) |
|  | 210 | 292 ns | (4-) | +0.94(2) |  |  |  | TDPAD | 2005IO02 | PR C72 044313 (05) |
|  |  |  |  |  |  |  |  |  |  |  |
| 39 Y 85 | 20 | 4.9 h | 9/2+ | 6.2(5) |  |  | [87Y 381] | NO/S | 1988Be46 | HFI 43 477 (88) |
|  | 266 | 170 ns | 5/2- | +1.36(2) |  |  |  | TDPAD | 2000Io02 | PR C62 014306 (00) |
|  |  |  |  | +1.33(8) |  |  |  | TDPAD | 1982RaZY | BAPS 27 26 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 39 Y 86 | 0 | 14.5 h | 4- | <0.6 |  |  | [87Y 381] | NO/S | 1988Be46 | HFI 43 477 (88) |
|  | 208 | 70 ns | 5- | -0.415(15) |  |  |  | TDPAD | 2010Ru03 | Eur Phys J A44 31 (2011) |
|  | 218 | 46 m | 8+ | 4.8(3) |  |  | [87Y 381] | NO/S | 1988Be46 | HFI 43 477 (88) |
|  | 243 | 28.5 ns | 2- | -1.06(6) |  |  |  | TDPAC | 1968Tr11 | Cf 67HI 145 (67) |
|  | 302 | 125 ns | 6+ | +3.78(12) |  |  |  | TDPAD/R | 2000Io02/2010Ru03 | PR C62 014306 (00)/Eur Phys J A44 31 (2010) |
|  |  |  |  |  |  |  |  |  |  |  |
| 39 Y 87 | 0 | 79.8 h | 1/2- | -0.19(2) |  |  | [89Y] | CLS | 2007Ch07 | PL B645 133 (07) |
|  | 381 | 13.4 h | 9/2+ | +6.24(2) |  |  | [89Y] | CLS | 2007Ch07 | PL B645 133 (07) |
|  |  |  |  | 6.06(7) |  |  |  | NMR/ON | 1991Hi04 | PRL 66 96 (91) |
|  |  |  |  |  | -0.50(6) | R | [90Y] | CLS | 2007Ch07 | PL B645 133 (07) |
|  |  |  |  |  |  |  |  |  |  |  |
| 39 Y 88 | 0 |  | 4- | -0.42(1) |  |  | [89Y] | CLS | 2007Ch07 | PL B645 133 (07) |
|  |  |  |  |  | +0.16(3) | R | [90Y] | CLS | 2007Ch07 | PL B645 133 (07) |
|  | 675 | 14 ms | 8+ | +4.88(3) |  |  | [89Y] | CLS | 2007Ch07 | PL B645 133 (07) |
|  |  |  |  | +4.87(5) |  |  |  | NMR/ON | 1980Kl01 | PR C21 1670 (80) |
|  |  |  |  |  | +0.06(6) | R | [90Y] | CLS | 2007Ch07 | PL B645 133 (07) |
|  |  |  |  |  |  |  |  |  |  |  |
| 39 Y 89 | 0 | stable | 1/2- | -0.1374154(3) |  |  | [2H] | N | 1977Ha12 | ZP A280 117 (77) |
|  |  |  |  | -0.1374208(4) |  |  | [14N] | N | 1965Ba42/1954Br09 | PR 137 A1828 (65)/PR 93 172 (54) |
|  | 909 | 16.1 s | 9/2+ | +6.37(4) |  |  | [89Y] | CLS | 2007Ch07 | PL B645 133 (07) |
|  |  |  |  | 6.23(7) |  |  |  | NMR/ON | 1991Hi04 | PRL 66 96 (91) |
|  |  |  |  | positive sign |  |  |  | NMR/ON() | 1996Oh03 | PR C54 1129 (96) |
|  |  |  |  |  | -0.43(6) | R | [90Y] | CLS | 2007Ch07 | PL B645 133 (07) |
|  |  |  |  |  |  |  |  |  |  |  |
| 39 Y 90 | 0 | 64.1 h | 2- | -1.630(8) |  |  | [89Y] | AB | 1962Pe01 | PR 125 284 (62) |
|  |  |  |  |  | -0.125(11) | R | calc efg | R | 1962Pe01/1998BI20 | PR 125 284 (62)/PR A58 4401 (98) |
|  |  |  |  |  | -0.155(3) |  |  | AB | 1962Pe01 | PR 125 284 (62) |
|  | 203 | 250 ps | 3- | -0.85(7) |  |  |  | IPAC | 1974Kl06 | NP A224 1 (74) |
|  | 682 | 3.19 h | 7+ | +5.28(3) |  |  | [89Y] | CLS | 2007Ch07 | PL B645 133 (07) |
|  |  |  |  | 5.1(5) |  |  | [87Y 381] | NO/S | 1988Be46 | HFI 43 477 (88) |
|  |  |  |  |  | -0.65(8) | R | [90Y] | CLS | 2007Ch07 | PL B645 133 (07) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  |  |  |  |  |  |  |
| 39 Y 91 | 0 | 58.5 d | 1/2- | 0.1641(8) |  |  | [89Y] | AB | 1962Pe21 | PR 128 1740 (62) |
|  | 556 | 49.7m | 9/2+ | 5.96(4) |  |  |  | NMR/ON | 1991Be18 | PR C44 104 (91) |
|  |  |  |  | 5.97(7) |  |  |  | NMR/ON | 1991Hi04 | PRL 66 96 (91) |
|  |  |  |  |  |  |  |  |  |  |  |
| 39 Y 92 | 0 | 3.54 h | 2- | -0.67(2) |  |  | [89Y] | CLS | 2007Ch07 | PL B645 133 (07) |
|  |  |  |  |  | 0.00(2) | R | [90Y] | CLS | 2007Ch07 | PL B645 133 (07) |
|  |  |  |  |  |  |  |  |  |  |  |
| 39 Y 93 | 0 | 10.2 h | 1/2- | -0.12(3) |  |  | [89Y] | CLS | 2007Ch07 | PL B645 133 (07) |
|  |  |  |  | -0.1390(9) |  |  | [91Y] | -NMR/ON | 2004NI21 | HFI 159 239 (2004) |
|  | 758 | 0.82 s | 9/2+ | +6.04(3) |  |  | [89Y] | CLS | 2007Ch07 | PL B645 133 (07) |
|  |  |  |  |  | -0.64(8) | R | [90Y] | CLS | 2007Ch07 | PL B645 133 (07) |
|  |  |  |  |  |  |  |  |  |  |  |
| 39 Y 94 | 0 | 18.7 m | 2- | -0.24(2) |  |  | [89Y] | CLS | 2007Ch07 | PL B645 133 (07) |
|  |  |  |  |  | -0.03(3) | R | [90Y] | CLS | 2007Ch07 | PL B645 133 (07) |
|  |  |  |  |  |  |  |  |  |  |  |
| 39 Y 95 | 0 | 10.3 m | 1/2- | -0.16(3) |  |  | [89Y] | CLS | 2007Ch07 | PL B645 133 (07) |
|  |  |  |  |  |  |  |  |  |  |  |
| 39 Y 96 | 1140 | 9.6 s | 8+ | +6.57(3) |  |  | [89Y] | CLS | 2007Ch07 | PL B645 133 (07) |
|  |  |  |  |  | -0.98(11) | R | [90Y] | CLS | 2007Ch07 | PL B645 133 (07) |
|  |  |  |  |  |  |  |  |  |  |  |
| 39 Y 97 | 0 | 3.75 s | 1/2- | -0.12(1) |  |  | [89Y] | CLS | 2007Ch07 | PL B645 133 (07) |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
|  | 668 | 1.17 s | 9/2+ | +5.88(2) |  |  | [89Y] | CLS | 2007Ch07 | PL B645 133 (07) |
|  |  |  |  |  | -0.76(8) | R | [90Y] | CLS | 2007Ch07 | PL B645 133 (07) |
|  | 3522 | 142 ms | (27/2) | +5.64(3) |  |  | [89Y] | CLS | 2007Bi14 | PL B645 330 (07) |
|  |  |  |  |  | -1.21(14) | R | [90Y] | CLS | 2007Bi14 | PL B645 330 (07) |
|  |  |  |  |  |  |  |  |  |  |  |
| 39 Y 98 | 410 | 2.0 s | 4 or 5 | + 2.98(2) or + 3.11(2) |  |  | [89Y] | CLS | 2007Ch07 | PL B645 133 (07) |
|  |  |  |  |  | +1.7(2) or + 1.8(2) | R | [90Y] | CLS | 2007Ch07 | PL B645 133 (07) |
|  |  |  |  |  |  |  |  |  |  |  |
| 39 Y 99 | 0 | 1.47 s | 5/2+ | +3.18(2) |  |  | [89Y] | CLS | 2007Ch07 | PL B645 133 (07) |
|  |  |  |  |  | + 1.55(17) | R | [90Y] | CLS | 2007Ch07 | PL B645 133 (07) |
|  |  |  |  |  |  |  |  |  |  |  |
| 39 Y 100 | (143) | 0.94 s | 4 | +2.75(1) |  |  | [89Y] | CLS/R | 2007Ch07/2010BA31 | PL B645 133 (07)/J Phys G37 105103 (10) |
|  |  |  |  |  | +1.85(20) | R | [90Y] | CLS/R | 2007Ch07/2010BA31 | PL B645 133 (07)/J Phys G37 105103 (10) |
|  |  |  |  |  |  |  |  |  |  |  |
| 39 Y 101 | 0 | 0.45 s | 5/2+ | +3.22(2) |  |  | [89Y] | CLS | 2007Ch07 | PL B645 133 (07) |
|  |  |  |  |  | +1.53(17) | R | [90Y] | CLS | 2007Ch07 | PL B645 133 (07) |
|  |  |  |  |  |  |  |  |  |  |  |
| 39 Y 102 | 0 + x | 0.3 s | 2 or 3 | +2.34(5) or + 2.68(1) |  |  | [89Y] | CLS | 2007Ch07 | PL B645 133 (07) |
|  |  |  |  |  | + 1.17(13) or +1.36(16) | R | [90Y] | CLS | 2007Ch07 | PL B645 133 (07) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  |  |  |  |  |  |  |
| 40 Zr 84 | 540 | 14.1 ps | 2+ | +0.5(7) |  |  |  | CRDTF | 1999Te02 | PR C59 1943 (99) |
|  |  |  |  | 1.0(2) |  |  |  | TF | 1992Mo07 | PL B279 228 (92) |
|  | 1263 | 2.8 ps | 4+ | +3(3) |  |  |  | CRDTF | 1999Te02 | PR C59 1943 (99) |
|  |  |  |  | 1.6(12) |  |  |  | TF | 1992Mo07 | PL B279 228 (92) |
|  | 2136 | 1.8 ps | 6+ | +1(3) |  |  |  | CRDTF | 1999Te02 | PR C59 1943 (99) |
|  |  |  |  | 11(7) |  |  |  | TF | 1992Mo07 | PL B279 228 (92) |
|  | 3088 | 1.4 ps | 8+ | 12(5) |  |  |  | TF | 1992Mo07 | PL B279 228 (92) |
|  | 4067 | 1.0 ps | 10+ | 5(8) |  |  |  | TF | 1992Mo07 | PL B279 228 (92) |
|  | 5134 | 0.6 ps | 12+ | 11(8) |  |  |  | TF | 1992Mo07 | PL B279 228 (92) |
|  | 6300 | 0.35 ps | 14+ | 18(7) |  |  |  | TF | 1992Mo07 | PL B279 228 (92) |
|  |  |  | 8+ - 14+ | g(avge) = 0.87(10) |  |  |  | TF | 1992Mo07 | PL B279 228 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 40 Zr 85 | 2625 | - | (17/2-) | +11(4) |  |  |  | TF | 2007YU03 | HI 180 49 (2007) |
|  | 2958 | - | (19/2-) | +11(3) |  |  |  | TF | 2007YU03 | HI 180 49 (2007) |
|  | 3387 | - | (21/2-) | +9(3) |  |  |  | TF | 2007YU03 | HI 180 49 (2007) |
|  | 3838 | - | (23/2-) | +6(2) |  |  |  | TF | 2007YU03 | HI 180 49 (2007) |
|  |  |  |  |  |  |  |  |  |  |  |
| 40 Zr 86 | - | - | 5-/7-/9- | g(avge) = +0.5(2) |  |  |  | TF | 1995Mo02 | PR C51 513 (95) |
|  | 3298 | 62 ps | 8+ | -0(3) |  |  |  | CRDTF | 1999Te02 | PR C59 1943 (99) |
|  |  |  |  | +2(4) |  |  |  | CRDTF | 1999Te02 | PR C59 1943 (99) |
|  |  |  |  | -0.2(7) |  |  |  | IMPAD | 1995We03 | NP A584 133 (95) |
|  |  |  |  | -8(5) |  |  |  | TF | 1995Mo02 | PR C51 513 (95) |
|  | 3532 | <4 ps | 8+ | +15(12) |  |  |  | CRDTF | 1999Te02 | PR C59 1943 (99) |
|  | - | - |  | +10(2)[avge8+/10+] |  |  |  | TF | 95Mo02/92Mo07 | PR C51 513 (95)/PL B279 228 (92) |
|  | 4326 | 2.1 ps | 10+ | -7(11) |  |  |  | CRDTF | 1999Te02 | PR C59 1943 (99) |
|  |  |  |  | -5(10) |  |  |  | TF | 95Mo02/92Mo07 | PR C51 513 (95)/PL B279 228 (92) |
|  | 5396 | 2.6 ps | 12+ | -20(9) |  |  |  | CRDTF | 1999Te02 | PR C59 1943 (99) |
|  |  |  |  | -4(10) |  |  |  | TF | 95Mo02/92Mo07 | PR C51 513 (95)/PL B279 228 (92) |
|  | 5524 | - | 12+ | +7(2) |  |  |  | TF | 95Mo02/92Mo07 | PR C51 513 (95)/PL B279 228 (92) |
|  | 6321 | 5.2 ps | 14+ | +30(8) |  |  |  | CRDTF | 1999Te02 | PR C59 1943 (99) |
|  |  |  |  | +28(6) |  |  |  | CRDTF | 98Ju10 | NuoC 111 719 (98) |
|  |  |  |  | +26(9) |  |  |  | TF | 95Mo02/92Mo07 | PR C51 513 (95)/PL B279 228 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 40 Zr 87 | 0 | 1.68 h | 9/2+ | -0.895(5) |  |  | [91Zr] | CLS | 2003TH03 | JP G29 2247 (03) |
|  |  |  |  |  | +0.42(5) | R | [91Zr] | CLS | 2003TH03 | JP G29 2247 (03) |
|  | 336 | 14.0 s | 1/2- | +0.642(16) |  |  | [91Zr] | CLS | 2003TH03 | JP G29 2247 (03) |
|  |  |  |  |  |  |  |  |  |  |  |
| 40 Zr 88 | 1057 | 2.5 ps | 2+ | +0.6(2) |  |  |  | TF | 2012Ku14 | PR C85 044322 (12) |
|  | 2140 | 1.5 ps | 4+ | +2.6(7) |  |  |  | TF | 2012Ku14 | PR C85 044322 (12) |
|  | 2889 | 1.32 s | 8+ | -1.81(2) |  |  |  | TDPAD | 1978Ha52 | HFI 4 196 (78) |
|  |  |  |  | -1.60(16) |  |  |  | TDPAD | 1978Ki06 | NP A302 159 (78) |
|  |  |  |  |  | +0.44(3) | R | [91Zr] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | +0.51(3) |  | [91Zr] | TDPAD | 1985Ra09 | PRL 54 2592 (85) |
|  |  |  |  |  | sign of Q |  |  | TFLD | 1986Be06 | PR C33 1517 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 40 Zr 89 | 0 | 78.4 h | 9/2+ | -1.046(6) |  |  | [91Zr] | CLS | 2002Fo12 | JP G28 L63 (02) |
|  |  |  |  | -1.08(2) |  |  |  | NMR/ON() | 1996Oh03 | PR C54 1129 (96) |
|  |  |  |  | -1.07(3) |  |  |  | NMR/ON | 1997Hi06 | NP A620 317 (97) |
|  |  |  |  |  | +0.28(10) | R | [91Zr] | CLS | 2003TH03 | JP G29 2247 (03) |
|  | 588 | 4.16 m | 1/2- | +0.795(18) |  |  | [91Zr] | CLS | 2003TH03 | JP G29 2247 (03) |
|  | 2995 | 5.2 ns | 21/2+ | +9.4(4) |  |  |  | TDPAD | 1988Ba11 | ZP A329 429 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 40 Zr 90 | 2186 | 0.087 ps | 2+ | +2.5(4) |  |  |  | TF | 2000Ja11 | PL B494 187 (00) |
|  | 2319 | 0.8 s | 5- | 6.25(13) |  |  |  | NMR/ON | 1987Ed02 | NP A468 348 (87) |
|  | 2748 | 140 ps | 3- | +3.0(2) |  |  |  | TF | 2000Ja11 | PL B494 187 (00) |
|  | 3589 | 134 ns | 8+ | +10.84(6) |  |  |  | TDPAD | 1977Ha49/1978Ha52 | NP A293 248 (77)/HFI 4 196 (78) |
|  |  |  |  |  | -0.44(3) | R | [91Zr] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.51(3) |  | [91Zr] | TDPAD | 1985Ra09 | PRL 54 2592 (85) |
|  |  |  |  |  |  |  |  | TFLD | 1986Be06 | PR C33 1517 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 40 Zr 91 | 0 | stable | 5/2+ | -1.30362(2) |  |  | [2H] | N | 1957Br26 | PR 105 1929 (57) |
|  |  |  |  |  | -0.176(3) | R | [calc efg] | MS | 2000Ke03 | CPL 318 222 (00) |
|  |  |  |  |  | (-)0.257(13) |  |  | R | 1993Yo\*\* | PR A48 173 (93) |
|  |  |  |  |  | -0.21(2) |  |  | AB | 1978Bu12 | Z Phys A286 125 (78) |
|  |  |  |  |  | -0.23(2) a |  |  | R | 1998Bo35 | EurPJ D4 39 (98) |
|  | 2287 | 29 ns | 15/2- | +5.25(8) |  |  |  | TDPAD | 1976Ba02 | NP A257 135 (76) |
|  | 3167 | 3.6 s | 21/2+ | +9.82(8) |  |  | [90Zr 3589] | TDPAD | 1982RaZR | BAPS 27 727 (82) |
|  |  |  |  |  | 0.71(4) | R | [91Zr] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.86(5) |  | [91Zr] | TDPAD | 1985Ra09 | PRL 54 2592 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 40 Zr 92 | 934 | 4.85 ps | 2+ | -0.36(4) |  |  |  | TF | 2008WE07 | PRC C78 031301(R) (08) |
|  |  |  |  | -0.36(2) |  |  |  | TF | 99Ja13 | PL B468 13 (99) |
|  |  |  |  | -0.06(10) |  |  |  | TF | 1980Ha31 | PR C22 1065 (80) |
|  | 1495 | 102 ps | 4+ | -2.0(4) |  |  |  | TF | 99Ja13 | PL B468 13 (99) |
|  | 1847 | 0.096 ps | 2+ | 1.5(10) |  |  |  | TF |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| 40 Zr 94 | 918 | 7.3 ps | 2+ | 0.68(4) |  |  |  | TF | 2008WE07 | PRC C78 031301(R) (08) |
|  |  |  |  | -0.66(3) |  |  |  | TF | 99Ja13 | PL B468 13 (99) |
|  |  |  |  | -0.52(12) |  |  |  | TF | 1980Ha31 | PR C22 1065 (80) |
|  |  |  |  | -0.10(10) |  |  | [110Cd 658] | IMPAC | 1978Ge19 | HFI 4 257 (78) |
|  | 1470 | 500 ps | 4+ | -3.2(16) |  |  |  | TF | 99Ja13 | PL B468 13 (99) |
|  | 1671 | 0.12 ps | 2+ | +1.8(5) |  |  |  | TF | 2008WE07 | PRC C78 031301(R) (08) |
|  |  |  |  |  |  |  |  |  |  |  |
| 40 Zr 95 | 0 | 64.0 d | 5/2+ | 1.13(2) |  |  |  | NMR/ON | 1991Be18 | PR C44 104 (91) |
|  |  |  |  |  | +0.22(2) | R | [90Zr(m) calc] | MAPON | 1998Se01 | PRL 80 924 (98) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | (+)0.29(5) if Vzz (ZrZr) +ve |  |  |  | 1992Be50 | HFI 75 93 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 40 Zr 96 | 1750 | 0.57 ps | 2+ | +0.06(14) |  |  |  | TF | 2003Ku11 | PL B562 193 (03) |
|  | 1897 | 67.8 ps | 3- | +2.9(5) |  |  |  | TF | 2003Ku11 | PL B562 193 (03) |
|  |  |  |  |  |  |  |  |  |  |  |
| 40 Zr 97 | 0 | 16.8 h | 1/2+ | -0.937(5) |  |  | [91Zr] | CLS | 2003TH03 | JP G29 2247 (03) |
|  | 1264 | 102 ns | 7/2+ | +1.37(14) |  |  |  | TDPAC | 1985Be20 | PL 156B 159 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 40 Zr 99 | 0 | 2.2 s | 1/2+ | -0.930(4) |  |  | [91Zr] | CLS |  |  |
|  | 122 | 1.07 ns | 3/2+ | +0.42(6) |  |  |  | IPAC | 1995Wo01 | PR C51 2381 (95) |
|  |  |  |  |  |  |  |  |  |  |  |
| 40 Zr 100 | 213 | 0.61 ns | 2+ | +0.60(6) |  |  |  | IPAC | 2004SM04 | PL B591 55 (04) |
|  |  |  |  | 0.52(12) |  |  |  | IPAC | 1989Wo05 | PR C40 932 (89) |
|  |  |  |  | 0.44(10) |  |  |  | IPAC | 1980Wo09 | PL 97B 195 (80) |
|  |  |  |  |  |  |  |  |  |  |  |
| 40 Zr 101 | 0 | 2.4s | 3/2+ | -0.272(8) |  |  | [91Zr] | CLS | 2003TH03 | JP G29 2247 (03) |
|  |  |  |  |  | +0.81(6) | R | [91Zr] | CLS | 2002Ca37 | PRL 89 082501 (02) |
|  | 98 | 0.6 ns | 5/2+ | +0.12(7) |  |  |  | IPAC | 2006OR05 | PR C73 054310 (06) |
|  | 217 | 0.33 ns | 5/2- | -0.5(3) |  |  |  | IPAC | 2006OR05 | PR C73 054310 (06) |
|  | 232 | <7 ps | 7/2+ | +0.6(4) |  |  |  | IPAC | 2006OR05 | PR C73 054310 (06) |
|  | 321 | 0.27 ns | 7/2- | -0.14(11) |  |  |  | IPAC | 2006OR05 | PR C73 054310 (06) |
|  |  |  |  |  |  |  |  |  |  |  |
| 40 Zr 102 | 152 | 1.9 ns | 2+ | +0.44(10) |  |  |  | IPAC | 2004SM04 | PL B591 55 (04) |
|  |  |  |  |  |  |  |  |  |  |  |
| 41 Nb 87 | 2412 | 58 ps | 17/2- | +7.0(9) |  |  |  | IMPAD | 1995We03 | NP A584 133 (95) |
|  | 2491 | 13.8 ps | 21/2+ | +4.3(14) |  |  |  | IMPAD | 1995We03 | NP A584 133 (95) |
|  |  |  |  | +3.8(12) |  |  |  | CRDTF | 1998Ju02 | PRL 80 2793 (98) |
|  | 2858 | 0.8 ps | 21/2+ | -6(11) |  |  |  | CRDTF | 1999Te02 | PR C59 1943 (99) |
|  | 3217 | 0.6 ps | 23/2+ | +16(9) |  |  |  | CRDTF | 1999Te02 | PR C59 1943 (99) |
|  | 3443 | 1.7 ps | 25/2+ | +3(2) |  |  |  | CRDTF | 1999Te02 | PR C59 1943 (99) |
|  | 3739 | \_ | 25/2+ | +1(3) |  |  |  | CRDTF | 1999Te02 | PR C59 1943 (99) |
|  | 4127 | 3.0 ps | 25/2- | +6(5) |  |  |  | CRDTF | 1999Te02 | PR C59 1943 (99) |
|  | 5010 | 3.5 ps | 29/2- | +7(2) |  |  |  | CRDTF | 1999Te02 | PR C59 1943 (99) |
|  |  |  |  | +8(3) |  |  |  | CRDTF | 1998Ju02 | PRL 80 2793 (98) |
|  |  |  |  |  |  |  |  |  |  |  |
| 41 Nb 89 | 0 | 2.0 h | 9/2+ | 6.216(5) |  |  |  | NMR/ON | 1997Hi06 | NP A620 317 (97) |
|  | 2193 | 14 ns | 21/2+ | +3.40(7) |  |  |  | TDPAD | 1994Kr01 | PR C49 705 (94) |
|  |  |  |  |  |  |  |  |  |  |  |
| 41 Nb 90 | 0 | 14.6 h | 8+ | +4.952(4) |  |  | [93Nb] | CLS | 2009CH25 | PRL 102 222501 (09) |
|  |  |  |  | 4.961(4) |  |  | [93Nb] | NMR/ON | 1981Ha24 | NP A365 13 (81) |
|  |  |  |  |  | +0.01(4) | R | [93Nb] | CLS | 2009CH25 | PRL 102 222501 (09) |
|  |  |  |  |  | +0.046(7) |  | [95Nb calc] | MAPON | 1998Se01 | PRL 80 924 (98) |
|  | 125 | 18.8 s | 4- | -0.018(9) |  |  | [93Nb] | CLS | 2009CH25 | PRL 102 222501 (09) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | -0.26(4) | R | [93Nb] | CLS | 2009CH25 | PRL 102 222501 (09) |
|  | 122 | 66 s | 6+ | +3.72(2) |  |  |  | TDPAD | 1975Ho16 | PL 58B 43 (75) |
|  | 1881 | 477 ns | 11- | +8.78(3) |  |  |  | TDPAD | 1978Ha52 | HFI 4 196 (78) |
|  |  |  |  |  |  |  |  |  |  |  |
| 41 Nb 91 | 0 | 680 y | 9/2+ | +6.521(2) |  |  | [93Nb] | CLS | 2009CH25 | PRL 102 222501 (09) |
|  |  |  |  |  | -0.25(3) | R | [93Nb] | CLS | 2009CH25 | PRL 102 222501 (09) |
|  | 105 | 60.9 d | 1/2- | -0.101(2) |  |  | [93Nb] | CLS | 2009CH25 | PRL 102 222501 (09) |
|  | 1985 | 10 ns | 13/2- | +9.14(13) |  |  |  | TDPAD | 1977ZaZW | Cf77Tash 374 (77) |
|  | 2037 | 3.4 s | 17/2- | +10.82(14) |  |  |  | TDPAD | 1977Ha49 | NP A293 248 (77) |
|  |  |  |  | +10.81(15) |  |  |  | TDPAD | 1979Pl05 | RRou 24 661 (79) |
|  | 3467 | 0.9 ns | 21/2+ | +12(2) |  |  |  | IPAD | 1977Ba34 | APPo B8 147 (77) |
|  |  |  |  |  |  |  |  |  |  |  |
| 41 Nb 92 | 0 | 3.5 x 107 y | 7+ | +5.136(4) |  |  | [93Nb] | CLS | 2009CH25 | PRL 102 222501 (09) |
|  |  |  |  |  | -0.35(3) | R | [93Nb] | CLS | 2009CH25 | PRL 102 222501 (09) |
|  | 135 | 10.15 d | 2+ | (+)6.137(4) |  |  | [93Nb] | NMR/ON | 1981Ha24 | NP A365 13 (81) |
|  | 225 | 4.3 s | 2- | -1.398(14) |  |  |  | SOPAD, TDPAD | 1974Le05 | NP A221 319 (74) |
|  | 2203 | 167 ns | 11- | +9.7(3) |  |  |  | TDPAD | 1977Br12 | PR C15 2044 (77) |
|  |  |  |  |  |  |  |  |  |  |  |
| 41 Nb 93 | 0 | stable | 9/2+ | +6.1705(3) |  |  | [45Sc] | N,O | 1951Sh33, 1947Me27 | PR 82 651 (51), PR 72 451 (47) |
|  |  |  |  |  | -0.32(2) | R |  | Mu-X | 1973Po15 | NP A217 573 (73) |
|  |  |  |  |  | -0.37(2) |  |  | AB,R | 1989Ra17 | Bk82HFS (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 41 Nb 95 | 0 | 35.2 d | 9/2+ | 6.141(5) |  |  | [93Nb] | NMR/ON | 1986Ed01 | NP A451 46 (86) |
|  |  |  |  | 6.140(6) |  |  | [93Nb] | NMR/ON | 1085Oh08 | NP A445 29 (85) |
|  |  |  |  | 6.143(5) |  |  | [93Nb] | NMR/ON | 1981Ha24, 1977Ko31 | NP A365 13 (81), HFI 3 321 (77) |
|  |  |  |  | 6.004(12) |  |  |  | BFNMR/ON | 1989Ra17 | JLTP 27 651 (77) |
|  |  |  |  |  | Q -ve if Vzz (NbZr) +ve |  |  |  | 1992Be50 | HFI 75 93 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 41 Nb 96 | 0 | 23.4 h | 6+ | 4.976(4) |  |  | [93Nb] | NMR/ON | 1986Ed01 | NP A451 46 (86) |
|  |  |  |  | 4.975(4) |  |  | [93Nb] | NMR/ON | 1985Oh08 | NP A445 29 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 41 Nb 97 | 0 | 72.1 m | 9/2+ | 6.153(5) |  |  |  | NMR/ON | 1991Be18 | PR C44 104 (91) |
|  |  |  |  |  |  |  |  |  |  |  |
| 41 Nb 99 | 0 | 15 s | 9/2+ | +5.97(3) |  |  | [93Nb] | CLS | 2009CH25 | PRL 102 222501 (09) |
|  |  |  |  |  | -0.42(14) | R | [93Nb] | CLS | 2009CH25 | PRL 102 222501 (09) |
|  |  |  |  |  |  |  |  |  |  |  |
| 41 Nb 101 | 0 | 7.1 s | 5/2+ | +3.190(2) |  |  | [93Nb] | CLS | 2009CH25 | PRL 102 222501 (09) |
|  |  |  |  |  | +1.05(7) | R | [93Nb] | CLS | 2009CH25 | PRL 102 222501 (09) |
|  |  |  |  |  |  |  |  |  |  |  |
| 41 Nb 103 | 0 | 1.5 s | 5/2+ | +3.137(4) |  |  | [93Nb] | CLS | 2009CH25 | PRL 102 222501 (09) |
|  |  |  |  |  | +1.08(9) | R | [93Nb] | CLS | 2009CH25 | PRL 102 222501 (09) |
|  |  |  |  |  |  |  |  |  |  |  |
| 42 Mo 88 | \_ | \_ | 6+,8+ | g(avge) = +0.5(3) |  |  |  | IMPAD | 1995We03 | NP A584 133 (95) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  |  |  |  |  |  |  |
| 42 Mo 89 | 2584 | 9.5 ns | 21/2+ | +8.3(4) |  |  | [90Mo 2875] | TDPAD | 1995We12 | ZP A353 7 (95) |
|  |  |  |  |  |  |  |  |  |  |  |
| 42 Mo 90 | 2594 | 16 ps | 5- | +5.5(14) |  |  |  | IMPAD | 1994We09 | JP G20 L77 (94) |
|  | 2875 | 1.1 s | 8+ | -1.391(14) |  |  |  | TDPAD | 1978Ha52 | HFI 4 196 (78) |
|  |  |  |  |  | 0.61(3) | R | [92Mo 2760] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.58(3) |  | [92Mo 2760] | TDPAD | 1985Ra09 | PRL 54 2592 (85) |
|  | 4842 | 39 ps | 11- | +4.6(14) |  |  |  | IMPAD | 1994We09 | JP G20 L77 (94) |
|  | 4556 | 526 ps | 12+ | +6.0(7) |  |  |  | IMPAD | 1994We09 | JP G20 L77 (94) |
|  |  |  |  |  |  |  |  |  |  |  |
| 42 Mo 91 | 0 | 15.5 m | 9/2+ | -0.932(3) |  |  | [95,97Mo] | TLS | 2009CH09 | PL B674 23 (09) |
|  | 2267 | 47 ns | 21/2+ | +8.81(8) |  |  | [90Mo 2875] | TDPAD | 1983Ra08 | PR C27 1532 (83) |
|  |  |  |  | +8.97(9) |  |  |  | TDPAD | 1977Ha49 | NP A293 248 (77) |
|  | 2279 | 38 ns | 17/2- | +4.51(6) |  |  | [90Mo 2875] | TDPAD | 1983Ra08 | PR C27 1532 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 42 Mo 92 | 1509 | 0.38 ps | 2+ | +2.3(3) |  |  |  | TF | 2001Ma17 | PR C63 034312 (01) |
|  | 2760 | 190 ns | 8+ | +11.30(5) |  |  |  | TDPAD | 1977Ha49 | NP A293 248 (77) |
|  |  |  |  | +11.35(8) |  |  |  | TDPAD,R | 1977Ku22 | IzF 41 1624 (77) |
|  |  |  |  |  | (-)0.36 | R | [B(E2)] | TDPAD | 1991Ha04 | PR C43 2140 (91) |
|  |  |  |  |  | 0.34 |  | [B(E2)] | TDPAD | 1985Ra09 | PRL 54 2592 (85) |
|  | 4486 | 9.2 ns | 11- | +13.9(3) |  |  |  | TDPAD | 1977Ha49 | NP A293 248 (77) |
|  |  |  |  | +14.17(13) |  |  |  | TDPAD,R | 1977Ku22 | IzF 41 1624 (77) |
|  |  |  |  |  |  |  |  |  |  |  |
| 42 Mo 93 | 2425 | 6.85 h | 21/2+ | (+)9.93(8) |  |  | [95Mo] | NMR/ON | 1981Ha12 | PR C23 2252 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 42 Mo 94 | 871 | 2.9 ps | 2+ | +0.62(9) |  |  |  | TF | 2001Ma17 | PR C63 034312 (01) |
|  |  |  |  |  | -0.13(8) or +0.01(8) | R |  | CER | 1976Pa13 | PR C14 835 (76) |
|  | 2956 | 98 ns | 8+ | +10.46(7) |  |  |  | TDPAD | 1979LeZL | Cf79Riga 243 (79) |
|  |  |  |  | +10.54(12) |  |  |  | TDPAD | 1975Fa04 | ZP A273 157 (75) |
|  |  |  |  |  | 0.50(1) | R | [92Mo 2760] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.47(1) |  | [92Mo 2760] | TDPAD | 1985Ra09 | PRL 54 2592 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 42 Mo 95 | 0 | stable | 5/2+ | -0.9142(1) |  |  | [97Mo] | N | 1951Pr02 | PR 81 20 (51) |
|  |  |  |  |  | -0.022(1) | R | [97Mo] | AB |  | Bk82HFS 83 (82) |
|  |  |  |  |  | -0.015(4) |  |  | ABLDF | 1978Du24 | PL 65A 109 (78) |
|  | 204 | 0.75 ns | 3/2+ | -0.404(12) |  |  |  | IPAC | 1984Al11 | ZP A317 107 (84) |
|  |  |  |  | -0.378(15) |  |  |  | IPAC | 1976Jo03 | PS 14 260 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 42 Mo 96 | 778 | 3.7 ps | 2+ | +0.79(6) |  |  |  | TF | 2001Ma17 | PR C63 034312 (01) |
|  |  |  |  |  | -0.20(8) or +0.04(8) | R |  | CER | 1976Pa13 | PR C14 835 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 42 Mo 97 | 0 | stable | 5/2+ | -0.9335(1) |  |  | [14N] | N | 1951Pr02 | PR 81 20 (51) |
|  |  |  |  |  | +0.255(13) | R |  | AB, R |  | Bk82HFS 83 (82) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | +0.17(4) |  |  | ABLDF | 1978Du24 | PL 65A 109 (78) |
|  |  |  |  |  | 0.27(10) a |  |  | Mu-X | 1980Sc01 | NP A333 333 (80) |
|  |  |  |  |  |  |  |  |  |  |  |
| 42 Mo 98 | 787 | 3.5 ps | 2+ | +0.97(6) |  |  | [106Pd 512] | TF | 2011Ch23 | PR C83 054318 (2011) |
|  |  |  |  | +0.97(7) |  |  |  | TF | 2001Ma17 | PR C63 034312 (01) |
|  |  |  |  | +0.7(4) |  |  |  | IMPAC | 1969He11 | NP A133 310 (69) |
|  |  |  |  |  | -0.26(9) | R |  | CER, R | 1979Pa11 | PR C20 1201 (79) |
|  |  |  |  |  |  |  |  |  |  |  |
| 42 Mo 99 | 0 | 65.9 h | 1/2+ | 0.375(3) |  |  | [95Mo] | AB | 1978Ru04 | PS 18 209 (78) |
|  | 98 | 17 s | 5/2+ | -0.775(5) |  |  |  | TDPAD | 1978Ra21 | PR C18 2494 (78) |
|  | 536 | 10.3 ps | 2+ | +0.94(7) |  |  |  | TF | 2001Ma17 | PR C63 034312 (01) |
|  |  |  |  |  |  |  |  |  |  |  |
| 42 Mo 100 | 536 | 10.3 ps | 2+ | +0.94(7) |  |  |  | TF | 2001Ma17 | PR C63 034312 (01) |
|  |  |  |  | +0.7(4) |  |  |  | IMPAC | 1969He11 | NP A133 310 (69) |
|  |  |  |  |  | -0.25(7) | R |  | CER | 2011WR01 | Acta Phys Pol B42 803 (2011) |
|  |  |  |  |  | -0.42(9) or -0.10(9) |  |  | CER | 1976Pa13 | PR C14 835 (76) |
|  |  |  |  |  | -0.39(8) or -0.13(8) |  |  | CER | 1977Na06 | JP G3 507 (77) |
|  |  |  |  |  |  |  |  |  |  |  |
| 42 Mo 102 | 297 | 0.11 ns | 2+ | 0.84(14) |  |  |  | IPAC | 1985Me13 | ZP A321 593 (85) |
|  |  |  |  | +0.8(4) |  |  |  | IPAC | 2004SM04 | PL B591 55 (04) |
|  |  |  |  |  |  |  |  |  |  |  |
| 42 Mo 103 | 0 | 67.5 s | 3/2+ | -0.27(2) |  |  | [95,97Mo] | TLS | 2009CH09 | PL B674 23 (09) |
|  | 103 | 0.43 ns | 5/2+ | +0.14(3) |  |  |  | IPAC | 2006OR05 | PR C73 054310 (06) |
|  | 354 | 1.20 ns | 7/2- | -0.33(11) |  |  |  | IPAC | 2006OR05 | PR C73 054310 (06) |
|  |  |  |  |  |  |  |  |  |  |  |
| 42 Mo 104 | 192 | 0.9 ns | 2+ | +0.50(4) |  |  |  | IPAC | 2002Pa14 | JP G28 649 (02) |
|  |  |  |  | +0.54(4) |  |  |  | IPAC | 2004SM04 | PL B591 55 (04) |
|  |  |  |  | 0.4(2) |  |  |  | IPAC | 1985Me13 | ZP A321 593 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 42 Mo 105 | 0 | 35.6 s | (5/2-) | -0.55(2) |  |  | [95,97Mo] | TLS | 2009CH09 | PL B674 23 (09) |
|  | 95 | 0.48 ns | 7/2- | -0.22(3) |  |  |  | IPAC | 2006OR05 | PR C73 054310 (06) |
|  | 234 | 0.11 ns | 9/2- | -0.12(16) |  |  |  | IPAC | 2006OR05 | PR C73 054310 (06) |
|  |  |  |  |  |  |  |  |  |  |  |
| 42 Mo 106 | 172 | 1.25 ns | 2+ | +0.42(4) |  |  |  | IPAC | 2004SM04 | PL B591 55 (04) |
|  |  |  |  |  |  |  |  |  |  |  |
| 42 Mo 107 | 66 | 245 ns | \_ | g = -0.92(3) |  |  |  | TDPAC | 1976ChZD | Cf76Carg 471 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 42 Mo 108 | 193 | 0.50 ns | 2+ | +1.0(6) |  |  |  | IPAC | 2004SM04 | PL B591 55 (04) |
|  |  |  |  |  |  |  |  |  |  |  |
| 43 Tc 92 | 2002 | 3.2 ns | 11- | +8.9(3) |  |  |  | TDPAD | 1996Tu03 | PR C54 2904 (96) |
|  |  |  |  |  |  |  |  |  |  |  |
| 43 Tc 93 | 0 | 2.75 h | 9/2+ | 6.32(6) |  |  |  | NMR/ON | 1995Hi06 | ZP A350 311 (95) |
|  |  |  |  | 6.26(10) |  |  |  | NMR/ON | 1981Ha16 | NP A 361 355 (81) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  | 2186 | 10.1 s | 17/2- | +10.46(5) |  |  |  | TDPAD | 1977Ha49 | NP A293 248 (77) |
|  |  |  |  |  |  |  |  |  |  |  |
| 43 Tc 94 | 0 | 293 m | 7+ | 5.12(5) |  |  |  | NMR/ON | 1995Hi06 | ZP A350 311 (95) |
|  |  |  |  | 5.08(8) |  |  |  | NMR/ON | 1981Ha16 | NP A361 355 (81) |
|  |  |  |  | 5.0(3) |  |  |  | NO/S | 1977Be19 | PR C15 1839 (77) |
|  |  |  |  |  |  |  |  |  |  |  |
| 43 Tc 95 | 0 | 20.0 h | 9/2+ | 5.94(6) |  |  |  | NMR/ON | 1995Hi06 | ZP A350 311 (95) |
|  |  |  |  | 5.89(10) |  |  |  | NMR/ON | 1981Ha16 | NP A361 355 (81) |
|  |  |  |  | 5.82(12) |  |  |  | NO/S | 1977Wi10 | HFI 3 157 (77) |
|  |  |  |  |  |  |  |  |  |  |  |
| 43 Tc 96 | 0 | 4.28 d | 7+ | 5.09(5) |  |  |  | NMR/ON | 1995Hi06 | ZP A350 311 (95) |
|  |  |  |  | +5.04(8) |  |  |  | NMR/ON | 1981Ha16 | NP A361 355 (81) |
|  |  |  |  | 5.4(2) |  |  |  | NMR/ON | 1975Sa18 | HFI 1 183 (75) |
|  | 120 | 26 ns | (2)- | -0.47(2) |  |  |  | TDPAD | 1977BeWG | Cf77Tash 370 (77) |
|  |  |  |  |  |  |  |  |  |  |  |
| 43 Tc 99 | 0 | 2.1x10\*5y | 9/2+ | +5.6847(4) |  |  | [2H] | N | 1952Wa02 | PR 85 479 (52) |
|  |  |  |  |  | -0.129(6) | R |  | AB |  | Bk82HFS 83 (82) |
|  | 141 | 0.205 ns | 7/2+ | +4.48(15) |  |  |  | IPAC | 1993Al23 | ZP A347 1 (93) |
|  |  |  |  | 3.6(9) |  |  | [99Tc] | ME | 1973Sh21 | JP A6 L144 (73) |
|  |  |  |  | +4.4(9) |  |  |  | IPAC | 1969In07 | PR 188 605 (69) |
|  | 181 | 3.44 ns | 5/2+ | 3.48(4) |  |  |  | NMR/ON | 1995Hi06 | ZP A350 311 (95) |
|  |  |  |  | +3.62(5) |  |  |  | IPAC | 1993Al23 | ZP A347 1 (93) |
|  |  |  |  | +3.29(6) |  |  |  | TDPAC | 1971Wi08 | ZP 243 166 (71) |
|  |  |  |  |  |  |  |  |  |  |  |
| 43 Tc 108 | >153 | 100 ns | \_ | g = +0.50(4) |  |  |  | TDPAC | 1976ChZD | Cf76Carg 471 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 44 Ru 93 | 2082 | 2.4 s | 21/2+ | +8.97(2) |  |  |  | TDPAD | 1983Gr33 | HFI 15 65 (83) |
|  |  |  |  |  | (+)0.04(1) | R |  | TDPAD | 1991Ha04 | PR C43 2140 (91) |
|  | 2279 | 35 ns | 17/2- | +4.4(2) |  |  |  | TDPAD | 1983Gr33 | HFI 15 65 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 44 Ru 94 | 2498 | 65 ns | 6+ | +8.12(5) |  |  |  | TDPAD | 1977Ha49 | NP A293 248 (77) |
|  |  |  |  | +8.10(7) |  |  |  | TDPAD | 1979LeZK | CF79Riga 243 (79) |
|  | 2643 | 68 s | 8+ | +11.10(4) |  |  |  | TDPAD | 1977Ha49 | NP A293 248 (77) |
|  | 4489 | 1.10 ns | 11- | 14.1(1.7) |  |  |  | IMPAD | 99Ju04 | EurPJ A6 29 (99) |
|  | 4716 | 34.3 ps | 12+ | 12.4(1.7) |  |  |  | IMPAD | 99Ju04 | EurPJ A6 29 (99) |
|  |  |  |  |  |  |  |  |  |  |  |
| 44 Ru 95 | 0 | 1.64 h | 5/2+ | 0.861(7) |  |  |  | NMR/ON | 1991Hi17 | NP A534 339 (91) |
|  | 2285 | 3 ns | 17/2+ | +6.98(14) |  |  |  | TDPAC | 1976LE30 | BRASP 40 6-128 (76) |
|  | 2540 | 10 ns | 21/2+ | +9.17(7) |  |  |  | TDPAD | 1988Gr34 | PRL 61 1249 (88) |
|  | 3908 | 36 ps | 25/2- | 11(4) |  |  |  | IMPAD | 99Ju04 | EurPJ A6 29 (99) |
|  | 6211 | 9.5 ps | 29/2+ | 9(5) |  |  |  | IMPAD | 99Ju04 | EurPJ A6 29 (99) |
|  | 7624 | 21 ps | 35/2+ | 7(2) |  |  |  | IMPAD | 99Ju04 | EurPJ A6 29 (99) |
|  |  |  |  |  |  |  |  |  |  |  |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
| 44 Ru 96 | 833 | 2.7 ps | 2+ | +0.89(6) |  |  |  | TF | 2011Ch23 | PR C83 054318 (11) |
|  |  |  |  | +0.94(6) |  |  |  | TF | 2011Ta06 | PR C83 044315 (11) |
|  |  |  |  | +0.92(4) |  |  |  | TF | 2012To01 | PR C85 017305 (12) |
|  |  |  |  |  | -0.15(8) | R |  | CER | 1991Ha04 | PR C43 2140 (1991) |
|  |  |  |  |  | -0.13(9) |  |  | CER | 1980La01 | PR C21 588 (80) |
|  |  |  |  |  | -0.1(2) |  |  | CER | 1977Ma41 | JP G3 1735 (77) |
|  |  |  |  |  | -0.2(3) |  |  | CERP | 1978Fa08 | PS 18 47 (78) |
|  | 1515 | 6.9 ps | 4+ | +2.3(3) |  |  |  | TF | 2012To01 | PR C85 017305 (12) |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| 44 Ru 97 | 0 | 2.88 d | 5/2+ | (-)0.787(8) |  |  | [101Ru] | NMR/ON | 1985Ed06/1980Le09 | PR C32 1707 (85)/PR C21 2581 (80) |
|  |  |  |  | 0.73(5) |  |  | [101Ru] | NO/S | 1981Lu04 | ZP A299 353 (81) |
|  | 2739 | 7.8 ns | 21/2+ | +9.2(8) |  |  |  | TDPAD | 1982Di18 | RRou 27 731 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 44 Ru 98 | 653 | 5.9 ps | 2+ | +0.82(6) |  |  |  | TF | 2011Ch23 | PR C83 054318 (11) |
|  |  |  |  | +0.94(6) |  |  |  | TF | 2011Ta06 | PR C83 044315 (11) |
|  |  |  |  | +0.8(6) |  |  |  | IMPAC | 1974Hu01 | PR C9 1954 (74) |
|  |  |  |  |  | -0.21(8) or -0.01(9) | R |  | CER | 1991Ha04 | PR C43 2140 (1991) |
|  |  |  |  |  | -0.20(9) or -0.01(9) |  |  | CER | 1980La01 | PR C21 588 (80) |
|  |  |  |  |  | -0.03(14) |  | [102Ru 475] | CER | 1977Ma41 | JP G3 1735 (77) |
|  |  |  |  |  |  |  |  |  |  |  |
| 44 Ru 99 | 0 | stable | 5/2+ | -0.641(5) |  |  |  | AB/D | 1977Bu04 | ZP A280 217 (77) |
|  |  |  |  | g(99/101)gs=0.8922344(4) |  |  | [101Ru] | N | 1982Br28 | ZP A309 119 (82) |
|  |  |  |  |  | +0.079(4) | R | [101Ru] | AB, R | 1977Bu04 | Bk82HFS 83 (82)/ZP A280 217 (77) |
|  | 90 | 20.5 ns | 3/2+ | -0.284(6) |  |  |  | TDPAC | 1965Ma27 | PR 139 B532 (65) |
|  |  |  |  | -0.292(3) |  |  | [99Ru] | ME | 1989Ra17 | JDal 1253 (73) |
|  |  |  |  |  | +0.231(13) | R | [99Ru] | ME | 1976Ki02/1974Gi12 | PR C13 1132 (76)/CPL 29 379 (74) |
|  |  |  |  |  |  |  |  |  |  |  |
| 44 Ru 100 | 540 | 12 ps | 2+ | +0.86(5) |  |  |  | TF | 2011Ch23 | PR C83 054318 (11) |
|  |  |  |  | +0.88(6) |  |  |  | TF | 2011Ta06 | PR C83 044315 (11) |
|  |  |  |  | +1.02(13) |  |  |  | IPAC | 1966Au06 | PL 23 367 (66) |
|  |  |  |  |  | -0.44(4) or -0.27(7) | R |  | CER | 1998Hi01 | PR C57 76 (98) |
|  |  |  |  |  | -0.54(7) or -0.33(7) |  |  | CER | 1998Hi01 | PR C57 76 (98) |
|  |  |  |  |  | -0.43(7) or -0.20(7) |  |  | CER | 1980La01 | PR C21 588 (80) |
|  |  |  |  |  | -0.54(7) or -0.33(7) |  |  | CER | 1980HiZV | Cf80Berk 102 (80) |
|  |  |  |  |  | -0.40(12) |  |  | CERP | 1978Fa08 | PS 18 47 (78) |
|  |  |  |  |  | -0.13(7) |  | [102Ru 475] | CER | 1977Ma41 | JP G3 1735 (77) |
|  |  |  |  |  |  |  |  |  |  |  |
| 44 Ru 101 | 0 | stable | 5/2+ | -0.719(6) |  |  |  | AB/D | 1977Bu04 | ZP A280 217 (77) |
|  |  |  |  | -0.716(6) |  |  | [99Ru] | N | 1974Mu09 | JPJa 36 634 (74) |
|  |  |  |  |  | +0.46(2) | R |  | AB, R | 1977Bu04 | Bk82HFS 83 (82)/ZP A280 217 (77) |
|  | 127 | 0.65 ns | 3/2+ | -0.210(5) |  |  | [99Ru 90] | TDPAC | 1986Sc15 | PR C33 2176 (86) |
|  |  |  |  | -0.236(12) |  |  |  | IPAC | 1984Al11 | ZP A317 107 (84) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  |  |  |  |  |  |  |
| 44 Ru 102 | 475 | 18 ps | 2+ | +0.91(5) |  |  |  | TF | 2011Ch23 | PR C83 054318 (11) |
|  |  |  |  | +0.86(6) |  |  |  | TF | 2011Ta06 | PR C83 044315 (11) |
|  |  |  |  | +0.74(6) |  |  |  | IPAC | 1972Jo06 | NP A188 600 (72) |
|  |  |  |  |  | -0.63(4) or -0.34(3) | R |  | CER | 1998Hi01 | PR C57 76 (98) |
|  |  |  |  |  | -0.64(5) or -0.33(4) |  |  | CER | 1998Hi01 | PR C57 76 (98) |
|  |  |  |  |  | -0.57(7) or -0.35(7) |  |  | CER | 1980La01 | PR C21 588 (80) |
|  |  |  |  |  | -0.68(8) |  |  | CER | 1979Bo28 | ZP A292 265 (79) |
|  |  |  |  |  |  |  |  |  |  |  |
| 44 Ru 103 | 0 | 39.4 d | 3/2+ | 0.206(3) |  |  |  | NMR/ON | 1990Hi02 | NP A509 541 (90) |
|  |  |  |  | 0.200(7) |  |  |  | NMR/ON | 1983Kr01 | PR C27 411 (83) |
|  |  |  |  | 0.19(2) |  |  | [101Ru] | NO/S | 1981Mu18 | HFI 11 127 (81) |
|  |  |  |  | (-)0.23(6) |  |  | [101Ru] | NO/S | 1981Lu04 | ZP A299 353 (81) |
|  |  |  |  |  | (+)0.62(2) | R | [99Ru 90] | NO/S | 1986Gr26/1983Ko49 | HFI 30 355 (86)/HFI 14 99 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 44 Ru 104 | 358 | 58 ps | 2+ | +0.81(4) |  |  |  | TF | 2011Ch23 | PR C83 054318 (11) |
|  |  |  |  | +0.78(6) |  |  |  | TF | 2011Ta06 | PR C83 044315 (11) |
|  |  |  |  | +0.82(10) |  |  |  | IMPAC, R | 1974Hu01 | PR C9 1954 (74) |
|  |  |  |  |  | -0.78(7) or -0.20(12) | R |  | CER | 1998Hi01 | PR C57 76 (98) |
|  |  |  |  |  | -0.62(8) or -0.05(7) |  |  | CER | 1998Hi01 | PR C57 76 (98) |
|  |  |  |  |  | -0.70(8) or -0.35(8) |  |  | CER | 1980La01 | PR C21 588 (80) |
|  |  |  |  |  | -0.8(2) |  |  | CERP | 1978Fa08 | PS 18 47 (78) |
|  |  |  |  |  | -0.66(5) |  | [102Ru 475] | CER | 1977Ma41 | JP G3 1735 (77) |
|  |  |  |  |  |  |  |  |  |  |  |
| 44 Ru 105 | 0 | 4.44h | 3/2+ | (-)0.32(+8/-20) |  |  | [101Ru] | NO/S | 1981Lu04 | ZP A299 353 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 44 Ru 106 | 270 | est 0.20 ns | 2+ | +0.6(2) |  |  |  | IPAC | 2004SM04 | PL B591 55 (04) |
|  |  |  |  |  |  |  |  |  |  |  |
| 44 Ru 108 | 242 | 0.34 ns | 2+ | +0.46(8) |  |  |  | IPAC | 2004SM04 | PL B591 55 (04) |
|  |  | or 0.29 ns |  | +0.56(8) |  |  |  | IPAC | 2005SM08 | J Phys. G 31 S1433 (05) |
|  |  |  |  |  |  |  |  |  |  |  |
| 44 Ru 109 | >95 | 780 ns | \_ | g = -0.22(1) |  |  |  | TDPAD | 1976ChZD | Cf76Carg 471 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 44 Ru 110 | 241 | 0.30 ns | 2+ | +0.88(14) |  |  |  | IPAC | 2004SM04 | PL B591 55 (04) |
|  |  | or 0.33 ns |  | +0.82(12) |  |  |  | IPAC | 2005SM08 | J Phys. G 31 S1433 (05) |
|  |  |  |  |  |  |  |  |  |  |  |
| 44 Ru 112 | 237 | 0.32 ns | 2+ | +0.9(2) |  |  |  | IPAC | 2004SM04 | PL B591 55 (04) |
|  |  |  |  |  |  |  |  |  |  |  |
| 45 Rh 95 | 2236 | 19 ns | 17/2- | +10.9(3) |  |  |  | TDPAD | 1983Gr33 | HFI 15 65 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 45 Rh 99 | 65 | 4.7 h | 9/2+ | 5.62(6) |  |  |  | NMR/ON, R | 1995Se20 | PR B51 11484 (95) |
|  |  |  |  | 5.668(12) |  |  | [100Rh 75] | NMR/ON | 1985Ed06 | PR C32 1707 (85) |
|  |  |  |  | 5.666(14) |  |  | [100Rh 75] | NMR/ON | 1986Ni02 | NP A451 233 (86) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  |  |  |  |  |  |  |
| 45 Rh 100 | 75 | 215 ns | 2+ | +4.324(8) |  |  |  | TDPAC | 1966Ma54 | NIM 45 309 (66) |
|  |  |  |  |  | 0.153(18) | R |  | PAC | 2008Py02/1996Bi15 | Mol Phys 106 1965 (2008)/HFI 97/98 3 (1996) |
|  | 112+x | 140 ns | 7+ | +4.69(14) |  |  |  | TDPAD | 1990Bi03 | ZP A335 365 (90) |
|  |  |  |  | +4.8(4) |  |  |  | TDPAD | 1986RaZU | BAPS 31 1210 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 45 Rh 101 | 157 | 4.34 d | 9/2+ | 5.43(6) |  |  |  | NMR/ON, R | 1995Se20 | PR B51 11484 (95) |
|  |  |  |  | +5.475(12) |  |  |  | NMR/ON | 1985Ed06/1973Ka28 | PR C32 1707 (85)/PR C8 1074 (73) |
|  |  |  |  | 5.472(14) |  |  |  | NMR/ON | 1986Ni02 | NP A451 233 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 45 Rh 102 | 0 | 206 d | 2- | 0.5(4) |  |  |  | NO/S | 1975Sc09 | NP A243 309 (75) |
|  | 141 | 2.9 y | 6+ | 4.01(4) |  |  |  | NMR/ON, R | 1995Se20 | PR B51 11484 (95) |
|  |  |  |  | 4.040(9) |  |  |  | NMR/ON | 1989Hi12 | NP A504 467 (89) |
|  |  |  |  | 4.044(12) |  |  |  | NMR/ON | 1986Ni02 | NP A451 233 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 45 Rh 103 | 0 | stable | 1/2- | -0.8840(2) |  |  | [2H] | N | 1955So10 | PR 98 1316 (55) |
|  | 40 | 56.1 m | 7/2+ | 4.50(5) |  |  |  | NMR/ON, R | 1995Se20 | PR B51 11484 (95) |
|  |  |  |  | 4.540(11) |  |  | [100Rh 75] | NMR/ON | 1985Ed06/1977Ke10 | PR C32 1707 (85)/ZP A281 341 (77) |
|  | 93 | 1.06 ns | 9/2+ | +4.9(8) |  |  |  | IPAC | 1973Ba52 | PS 8 90 (73) |
|  | 295 | 6.7 ps | 3/2- | +0.81(8) |  |  |  | TF | 1989La14 | NP A496 589 (89) |
|  |  |  |  | +0.69(12) |  |  |  | TF | 1988Be45 | HFI 43 457 (88) |
|  |  |  |  |  | -0.3(2) | R |  | CERP | 1976Ge19 | ZP A279 183 (76) |
|  | 357 | 73 ps | 5/2- | +1.08(8) |  |  |  | TF | 1989La14 | NP A496 589 (89) |
|  |  |  |  | +0.9(2) |  |  |  | TF | 1988Be45 | HFI 43 457 (88) |
|  |  |  |  | +1.09(5) |  |  |  | CEAD | 1972Sz03 | NP A196 58 (72) |
|  |  |  |  |  | -0.4(2) | R |  | CERP | 1976Ge19 | ZP A279 183 (76) |
|  | 848 | 1.9 ps | 7/2- | +2.0(6) |  |  |  | TF | 1989La14 | NP A496 589 (89) |
|  | 920 | 5.6 ps | 9/2- | +2.8(5) |  |  |  | TF | 1989La14 | NP A496 589 (89) |
|  |  |  |  |  |  |  |  |  |  |  |
| 45 Rh 104 | 215.5 + x | 47 ns | 6- | +2.00(6) |  |  |  | TDPAD | 1990Bi03 | ZP A335 365 (90) |
|  |  |  |  |  |  |  |  |  |  |  |
| 45 Rh 105 | 0 | 35.4 h | 7/2+ | 4.41(5) |  |  |  | NMR/ON,R | 1995Se20 | PR B51 11484 (95) |
|  |  |  |  | 4.452(10) |  |  | [100Rh 75] | NMR/ON | 1985Ed06/1981Ha19 | PR C32 1707 (85)/PR C23 2683 (81) |
|  |  |  |  | 4.36(12) |  |  | [100Rh 75] | NO/S | 1977Wi10 | HFI 3 157 (77) |
|  |  |  |  |  |  |  |  |  |  |  |
| 45 Rh 106 | 0 | 29.8 s | 1+ | 2.575(7) |  |  |  | NMR/ON | 1990Oh01 | PR C41 243 (90) |
|  |  |  |  | 3.09(9) |  |  | [100Rh 75] | NO/S | 1977Ru08 | HFI 3 479 (77) |
|  |  |  |  | sign positive |  |  |  | NOS | 1992Ma54 | HFI 75 415 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 46 Pd 96 | 2532 | 2.22 s | 8+ | +10.97(6) |  |  |  | TDPAD | 1983Gr01 | PL 120B 63 (83) |
|  | 7039 | 35 ns | (15+) | (+)12.5(6) |  |  | [96Pd 2532] | TDPAD | 1989Al05 | ZP A332 129 (89) |
|  |  |  |  |  |  |  |  |  |  |  |
| 46 Pd 100 | 666 | 6.2 ps | 2+ | +0.6(3) |  |  |  | TF | 2011To09 | PR C84 044327 |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  | 1416 | 2.5 ps | 4+ | +1.8(6) |  |  |  | TF | 2011To09 | PR C84 044327 |
|  |  |  |  |  |  |  |  |  |  |  |
| 46 Pd 101 | 0 | 8.5 h | 5/2+ | (-)0.66(2) |  |  | [105Pd] | NMR/ON | 1986Ni02 | NP A451 233 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 46 Pd 102 | 556 | 11.3 ps | 2+ | +0.82(6) |  |  | [106Pd 512] | TF | 2011Ch23 | PR C83 054318 (2011) |
|  |  |  |  | +0.82(8) |  |  | [106Pd 512] | TF | 1980Br01 | PR C21 574 (80) |
|  |  |  |  | +0.78(10) |  |  | [106Pd 512] | TF | 1985ThZX | BAPS 30 1264 (85) |
|  |  |  |  |  | -0.20(15) | R |  | CERP | 1977Fa11 | NIM 146 329 (77) |
|  |  |  |  |  | -0.2(2) |  |  | CER | 1977La16 | NP A292 301 (77) |
|  |  |  |  |  |  |  |  |  |  |  |
| 46 Pd 103 | 785 | 25 ns | 11/2- | -1.05(6) |  |  |  | TDPAD | 1981KaZE | ZfK-455 27 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 46 Pd 104 | 556 | 9.7 ps | 2+ | +0.89(6) |  |  | [106Pd 512] | TF | 2011Ch23 | PR C83 054318 (2011) |
|  |  |  |  | +0.92(8) |  |  | [106Pd 512] | TF | 1980Br01 | PR C21 574 (80) |
|  |  |  |  | +0.76(8) |  |  | [106Pd 512] | TF | 1985ThZX | BAPS 30 1264 (85) |
|  |  |  |  | 0.80(10) |  |  | [106Pd 512] | RIGV | 1979LaZL | DisA 40 803B (79) |
|  |  |  |  |  | -0.46(11) | R |  | CERP | 1977Fa11 | NIM 146 329 (77) |
|  |  |  |  |  |  |  |  |  |  |  |
| 46 Pd 105 | 0 | stable | 5/2+ | -0.642(3) |  |  |  | N | 1964Se13 | PR 136 A1119 (64) |
|  |  |  |  |  | 0.660(11) | R |  | Mu-X | 1978Vu01 | NP A294 273 (78) |
|  |  |  |  |  | +0.65(3) |  |  | AB, R |  | Bk82HFS 83 (82) |
|  | 280 | 67 ps | 3/2+ | -0.074(13) |  |  | [105Pd 645] | IPAC | 1981Al19 | ZP A302 223 (81) |
|  | 319 | 38 ps | 5/2+ | +1.0(2) |  |  | [105Pd 645] | IPAC | 1981Al19 | ZP A302 223 (81) |
|  | 645 | 126 ps | 7/2- | -1.49(9) |  |  |  | IPAC | 1981Al19 | ZP A302 223 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 46 Pd 106 | 512 | 12 ps | 2+ | +0.79(5( |  |  |  | R | 2011Ch23 | PR C83 054318 (2011) |
|  |  |  |  | +0.78(3) |  |  |  | R | 2010GU20 | PR C82 064301 (10) |
|  |  |  |  | +0.80(4) |  |  |  | IPAC,R | 1980Br01 | PR C21 574 (80) |
|  |  |  |  |  | -0.51(7) | R |  | ES | 1973Ho05 | PRL 30 388 (73) |
|  |  |  |  |  | -0.56(8) or -0.41(8) |  |  | CER,R | 1972Lu08 | PR C6 1385 (72) |
|  | 1128 | 3.1 ps | 2+ | +0.96(18) |  |  | [106Pd 512] | TF | 2010GU20 | PR C82 064301 |
|  |  |  |  | +0.60(12) |  |  |  | IPAC | 1970Si20 | JPJa 29 1111 (70) |
|  |  |  |  |  |  |  |  |  | 1968Bo15 | PRL 20 1176 (68) |
|  |  |  |  |  |  |  |  |  | 1968We16 | NP A122 577 (68) |
|  | 1229 | 1.5 ps | 4+ | +1.8(4) |  |  | [106Pd 512] | TF | 2010GU20 | PR C82 064301 |
|  |  |  |  |  |  |  |  |  |  |  |
| 46 Pd 108 | 434 | 23 ps | 2+ | +0.69(4) |  |  | [106Pd 512] | TF | 2011Ch23 | PR C83 054318 (2011) |
|  |  |  |  | +0.72(6) |  |  | [106Pd 512] | TF | 1980Br01 | PR C21 574 (80) |
|  |  |  |  | +0.76(6) |  |  |  | IMPAC, R | 1974Hu01 | PR C9 1954 (74) |
|  |  |  |  | +0.64(6) |  |  | [106Pd 512] | TF | 1985ThZX | BAPS 30 1264 (85) |
|  |  |  |  | 0.84(10) |  |  | [106Pd 512] | RIGV | 1979LaZL | DisA 40 803B (79) |
|  |  |  |  |  | -0.58(4) | R |  | ES | 1978Ar07 | JP G4 961 (78) |
|  |  |  |  |  | -0.48(5) |  | [110Pd 374] | CER | 1977Ma41 | JP G3 1735 (77) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | -0.51(6) or -0.30(6) |  |  | CER | 1972Lu08 | PR C6 1385 (72) |
|  |  |  |  |  | -0.7(2) |  |  | CERP | 1976Ha21 | NP A264 341 (76) |
|  |  |  |  |  | -0.7(3) |  |  | ES, R | 1981Ko06 | JP G7 L63 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 46 Pd 110 | 374 | 46 ps | 2+ | +0.67(4) |  |  | [106Pd 512] | TF | 2011Ch23 | PR C83 054318 (2011) |
|  |  |  |  | +0.62(6) |  |  | [106Pd 512] | TF | 1980Br01 | PR C21 574 (80) |
|  |  |  |  | +0.62(6) |  |  |  | IMPAC, R | 1974Hu01 | PR C9 1954 (74) |
|  |  |  |  | +0.70(6) |  |  | [106Pd 512] | TF | 1985ThZX | BAPS 30 1264 (85) |
|  |  |  |  | 0.74(6) |  |  | [106Pd 512] | RIGV | 1979LaZL | DisA 40 803B (79) |
|  |  |  |  |  | -0.47(3) | R |  | ES | 1976Li19 | PR C14 952 (76) |
|  |  |  |  |  | -0.55(8) or -0.35(8) |  |  | CER, R | 1972Lu08 | PR C6 1385 (72) |
|  |  |  |  |  |  |  |  |  |  |  |
| 46 Pd 114 | 333 | 117 ps | 2+ | +0.5(2) |  |  |  | IPAC | 2004SM04 | PL B591 55 (04) |
|  |  |  |  |  |  |  |  |  |  |  |
| 46 Pd 116 | 341 | 0.11 ns | 2+ | +0.4(2) |  |  |  | IPAC | 2004SM04 | PL B591 55 (04) |
|  |  |  |  |  |  |  |  |  |  |  |
| 47 Ag 97 | 0 | 25.5 s | (9/2+) | +6.13(2) |  |  | [109Ag] | GCLS | 2014Fe01 | PL B728 191 (2014) |
|  |  |  |  |  |  |  |  |  |  |  |
| 47 Ag 98 | 0 | 47.5 s | if 6 | +4.64(7) |  |  | [109Ag] | GCLS | 2014Fe01 | PL B728 191 (2014) |
|  |  |  | if 5 | +4.57(7) |  |  | [109Ag] | GCLS | 2014Fe01 | PL B728 191 (2014) |
|  |  |  |  |  |  |  |  |  |  |  |
| 47 Ag 99 | 0 | 124 s | (9/2+) | +5.81(3) |  |  | [109Ag] | GCLS | 2014Fe01 | PL B728 191 (2014) |
|  |  |  |  |  |  |  |  |  |  |  |
| 47 Ag 100 | 0 | 2.01 m | 5- | +4.37(3) |  |  | [109Ag] | GCLS | 2014Fe01 | PL B728 191 (2014) |
|  |  |  |  |  |  |  |  |  |  |  |
| 47 Ag 101 | 0 | 11.4 m | 9/2+ | +5.57(4) |  |  | [109Ag] | GCLS | 2014Fe01 | PL B728 191 (2014) |
|  |  |  |  | +5.627(11) |  |  | [106mAg] | CLS | 1989DI12 | NP A503 331 (89) |
|  |  |  |  | 5.7(4) |  |  | [110Ag 118] | NO/S | 1983Va09 | NP A396 115c (83) |
|  |  |  |  |  | +0.35(5) | R | [110Ag 118] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.33(5) |  | [calc efg] | CLS | 1989DI12 | NP A503 331 (89) |
|  |  |  |  |  |  |  |  |  |  |  |
| 47 Ag 102 | 0 | 13 m | 5+ | 4.6(7) |  |  | [110Ag 118] | NO/S | 1985Va06/1983Va09 | HFI 22 483 (85)/NP A396 115c (83) |
|  | 9 | 7.7 m | 2+ | 4.1(3) |  |  | [107Ag] | AB | 1974Gr10 | PR C9 2028(74) |
|  | 181 | 3.5 ns | 7+ | 4.6(3) |  |  |  | IPAD | 1989VoZR | Cf89Tshkt 71 (89) |
|  |  |  |  |  |  |  |  |  |  |  |
| 47 Ag 103 | 0 | 1.10 h | 7/2+ | +4.432(2) |  |  | [106mAg] | CLS | 1989DI12 | NP A503 331 (89) |
|  |  |  |  | +4.47(5) |  |  |  | AB/D | 1970Wa35 | PS 1 238 (70) |
|  |  |  |  |  | +0.84(9) | R | [110Ag 118] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.80(9) |  | [calc efg] | CLS | 1989DI12 | NP A503 331 (89) |
|  |  |  |  |  |  |  |  |  |  |  |
| 47 Ag 104 | 0 | 69 m | 5+ | 3.919(3) |  |  | [106mAg] | CLS | 1989DI12 | NP A503 331 (89) |
|  |  |  |  | 3.916(8) |  |  | [110Ag 118] | R | 2010GO08 | PR C81 054323 (2010) |
|  |  |  |  | 3.917(8) |  |  | [110Ag 118] | NMR/ON | 1986Va27 | PRL 57 2641 (86) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | +1.06(11) | R | [110Ag 118] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +1.01(11) |  | [calc efg] | CLS | 1989DI12 | NP A503 331 (89) |
|  | 7 | 33 m | 2+ | 3.691(3) |  |  | [104Ag] | NMR/ON | 2010GO08 | PR C81 054323 (2010) |
|  |  |  |  | +3.7(2) |  |  | [107Ag] | AB | 1961Am02 | PR 123 1793 (61) |
|  |  |  |  | 4.1(3) |  |  | [110Ag 118] | NO/S | 1989Ra17 | ARLe 12 (85) |
|  | 212 | 1.4 ns | 7+ | 4.8(3) |  |  |  | IPAD | 1989VoZR | Cf89Tshkt 71 (89) |
|  |  |  |  |  |  |  |  |  |  |  |
| 47 Ag 105 | 0 | 41.3 d | 1/2- | 0.1014(10) |  |  | [107Ag] | AB | 1963Ew02 | PR 129 1617 (63) |
|  | 25 | 7.2 m | 7/2+ | +4.414(13) |  |  | [106mAg] | CLS | 1989DI12 | NP A503 331 (89) |
|  |  |  |  |  | +0.85(11) | R | [110Ag 118] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.81(11) |  | [calc efg] | CLS | 1989DI12 | NP A503 331 (89) |
|  | 1734 | 6.0 ns | 15/2+ | +3.73(14) |  |  |  | TDPAD | 1980Le05 | IzF 44 202 (80) |
|  |  |  |  | +3.8(2) |  |  |  | TDPAD | 1985Ke09 | NP A444 261 (85) |
|  |  |  |  | +4.4(5) |  |  |  | TDPAD | 1979Ka05 | NP A315 334 (79) |
|  |  |  |  |  |  |  |  |  |  |  |
| 47 Ag 106 | 0 | 24 m | 1+ | +2.8(2) |  |  | [107Ag] | AB | 1974Gr10 | PR C9 2028 (1974) |
|  | 90 | 85 d | 6+ | (+)3.705(4) |  |  | [110Ag 118] | BFNMR/ON | 2001OH03 | PR C63 044314 |
|  |  |  |  | +3.709(4) |  |  | [107Ag] | CLS | 1989DI12 | NP A503 331 (89) |
|  |  |  |  | (+)3.709(4) |  |  |  | NMR/ON | 1984Ed02 | PR C30 676 (84) |
|  |  |  |  | (+)3.82(8) |  |  | [110Ag 118] | NO/S | 1984Be53 | PR C30 2026 (84) |
|  |  |  |  |  | +1.06(16) |  | [calc efg] | CLS | 1989DI12 | NP A503 331 (89) |
|  |  |  |  |  | +1.11(11) | R | [110Ag 118] | NO/S | 1984Be53 | PR C30 2026 (84) |
|  |  |  |  |  |  |  |  |  |  |  |
| 47 Ag 107 | 0 | stable | 1/2- | -0.11357(2) |  |  |  | AB/D | 1973Bu24 | ZNat 28a 1753 (73) |
|  |  |  |  | -0.11367965(15) |  |  | [2H] | N | 1974Sa25 | ZNat 29a 1763 (74) |
|  | 93 | 44.3 s | 7/2+ | (+)4.398(5) |  |  | [109Ag 88] | NMR/ON | 1985Ed01 | PR C31 190 (85) |
|  |  |  |  |  | 0.98(11) | R | [110Ag 118] | LMR | 1986Be01 | PR C33 390 (86) |
|  | 325 | 5.0 ps | 3/2- | +0.9(2) |  |  |  | TF | 1986Ba14 | PR C33 1461 (86) |
|  |  |  |  | +0.94(14) |  |  | [108Pd 434] | TF | 1984Wo08 | NP A427 639 (84) |
|  |  |  |  | +1.05(14) |  |  | [106Pd 512] | TF | 1984Ba72 | NuoC 84A 106 (84) |
|  | 423 | 40.2 ps | 5/2- | +1.0(2) |  |  |  | TF | 1986Ba14 | PR C33 1461 (86) |
|  |  |  |  | +0.93(15) |  |  | [108Pd 434] | TF | 1984Wo08 | NP A427 639 (84) |
|  |  |  |  | +1.13(15) |  |  | [106Pd 512] | TF | 1984Ba72 | NuoC 84A 106 (84) |
|  |  |  |  |  |  |  |  |  |  |  |
| 47 Ag 108 | 0 | 2.4 m | 1+ | 2.6884(7) |  |  | [8Li] | -NMR | 1976Wi03 | NP A261 261 (76) |
|  | 110 | 418 y | 6+ | 3.58(2) |  |  | [109Ag 88] | O | 1975Fi07 | ZP A274 79 (75) |
|  |  |  |  |  | +1.32(7) | R | {110Ag 118] | O, R | 1984Be53 | PR C30 2026 (84) |
|  | 215 | 46 ns | 3+ | +3.888(15) |  |  | [19F 197] | TDPAD, R | 1974Be47/1976Ha57 | NP A229 72 (74)/JPJa 41 1830 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 47 Ag 109 | 0 | stable | 1/2- | 0.13056(2) |  |  | [107Ag] | N | 1954So05 | PR 93 174 (54) |
|  |  |  |  | -0.1306906(2) |  |  | [2H] | N | 1974Sa25 | ZNat 29a 1763 (74) |
|  | 88 | 39.8 s | 7/2+ | +4.400(6) |  |  | {110Ag 118] | NMR/ON | 1985Ed01/1971St09 | PR C31 190 (85)/CJP 49 906 (71) |
|  |  |  |  |  | (+)1.02(12) | R | {110Ag 118] | LMR, R | 1986Be01/1984Be53 | PR C33 390 (86)/PR C30 2026 (84) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  | 311 | 5.9 ps | 3/2- | +0.99(15) |  |  |  | TF | 1986Ba14 | PR C33 1461 (86) |
|  |  |  |  | +1.2(2) |  |  | [108Pd 434] | TF | 1984Wo08 | NP A427 639 (84) |
|  |  |  |  | +1.2(2) |  |  | [106Pd 512] | TF | 1984Ba72 | NuoC 84A 106 (84) |
|  |  |  |  |  | -0.7(3) | R |  | CER | 1972Th16 | PL 41B 585 (72) |
|  | 415 | 35 ps | 5/2- | +0.73(15) |  |  |  | TF | 1986Ba14 | PR C33 1461 (86) |
|  |  |  |  | +0.90(13) |  |  | [108Pd 434] | TF | 1984Wo08 | NP A427 639 (84) |
|  |  |  |  | +0.90(15) |  |  | [106Pd 512] | TF | 1984Ba72 | NuoC 84A 106 (84) |
|  |  |  |  |  | -0.3(3) | R |  | CER | 1972Th16 | PL 41B 585 (72) |
|  |  |  |  |  |  |  |  |  |  |  |
| 47 Ag 110 | 0 | 24.4 s | 1+ | 2.7271(8) |  |  | [108Ag] | NMR/ON, AB | 1976Wi03 | NP A261 261 (76)/JP A2 658 (69) |
|  |  |  |  |  | 0.24(12) | R |  | QIR | 1981Do17 | HFI 10 727 (81) |
|  | 118 | 252 d | 6+ | 3.589(4) |  |  |  | BFNMR/ON | 1992Hu09 | HFI 73 247 (92) |
|  |  |  |  | +3.607(4) |  |  |  | AB/D | 1967Sc04 | PR 154 1142 (67) |
|  |  |  |  |  | +1.44(10) | R |  | O, R | 1984Be53 | PR C30 2026 (84) |
|  | 119 | 37 ns | 3+ | +3.77(3) |  |  | [19F 197] | TDPAD | 1974Be47 | NP A229 72 (74)/JPJa 41 1830 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 47 Ag 111 | 0 | 7.45 d | 1/2- | -0.146(2) |  |  | [109Ag] | AB | 1956Wo\*\* | PPS 69A 581 (56) |
|  |  |  |  |  |  |  |  |  |  |  |
| 47 Ag 112 | 0 | 3.14 h | 2(-) | 0.0547(5) |  |  | [109Ag] | AB | 1964Ch06 | PR 133 B1138 (64) |
|  |  |  |  |  |  |  |  |  |  |  |
| 47 Ag 113 | 0 | 5.37 h | 1/2- | 0.159(2) |  |  | [109Ag] | AB | 1964Ch06 | PR 133 B1138 (64) |
|  |  |  |  |  |  |  |  |  |  |  |
| 48 Cd 100 | 2548 | 73 ns | 8+ | 9.9(5) |  |  |  | TDPAD | 1992Al17 | ZP A344 1 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 48 Cd 102 | 2718 | 56 ns | 8+ | 10.3(2) |  |  |  | TDPAD | 1992Al17 | ZP A344 1 (92) |
|  |  |  |  |  | 0.76(9) | R |  |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.87(10) |  |  | TDPAD | 1992Al17 | ZP A344 1 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 48 Cd 103 | 0 | 7.3 m | 5/2+ | -0.81(3) |  |  | [109Cd] | CLS | 1987Bu01 | NP A462 305 (87) |
|  |  |  |  |  | -0.7(6) | R |  |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.8(7) | R | [109Cd] | CLS | 1987Bu01 | NP A462 305 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 48 Cd 105 | 0 | 56 m | 5/2+ | -0.7393(2) |  |  | [109Cd] | OD | 1969La06 | PR 177 1615 (69) |
|  |  |  |  |  | +0.37(4) | R |  |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.43(4) | R | [109Cd] | OD | 1969La06 | PR 177 1615 (69) |
|  | 2517 | 4.5 s | 21/2+ | +9.17(6) |  |  |  | SOPAD | 1978Sp09 | HFI 4 229 (78) |
|  |  |  |  |  | (+)1.02(10) | R | V |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | (+)1.17(12) |  | C | TDPAD | 1978Sp09 | HFI 4 229 (78) |
|  |  |  |  |  |  |  |  |  |  |  |
| 48 Cd 106 | 633 | 7.3 ps | 2+ | +0.79(6) |  |  |  | TF | 2011Ch23 | PR C83 054318 (2011) |
|  |  |  |  | +0.8(2) |  |  | [110Cd 658] | TF | 1980Br01 | PR C21 574 (80) |
|  |  |  |  |  | -0.28(8) | R |  | CER | 1976Es02 | NP A274 237 (76) |
|  | 4660 | 62 ns | 12+ | +8.9(2) |  |  |  | TDPAD, R | 1986Vo14 | YadF 44 849 (86) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  |  |  |  |  |  |  |
| 48 Cd 107 | 0 | 6.50 h | 5/2+ | -0.6150554(11) |  |  | [111Cd] | OP/RD,N,OD | 1972Sp09/1963By02 | PL 42A 273 (72)/PR 132 1181 (63) |
|  |  |  |  | -0.6151(2) |  |  | [109Cd] | CLS | 2013Yo02 | PRL 110 192501 (2013) |
|  |  |  |  |  | +0.60(2) | R | calc efg | CLS | 2013Yo02 | PRL 110 192501 (2013) |
|  |  |  |  |  | +0.68(7) |  | [109Cd] | OD, R | 1969La06 | PR 177 1615 (69) |
|  | 846 | 70 ns | 11/2- | -1.041(11) |  |  | [19F 197] | TDPAD | 1974Be17 | NP A222 399 (74) |
|  |  |  |  | -1.11(2) |  |  |  | TDPAD | 1976LE13 | BRASP 40-1 41 (76) |
|  |  |  |  |  | (-)0.94(10) | R | [109Cd 463] | TDPAD | 1978Sp09 | HFI 4 229 (78) |
|  | 2679 | 56 ns | 21/2+ | +9.10(10) |  |  |  | TDPAD | 1974Ha48 | PL 52B 329 (74) |
|  |  |  |  |  | +1.05(11) | R | [109Cd 463] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +1.21(13) |  | [109Cd 463] | TDPAD | 1978Sp09 | HFI 4 229 (78) |
|  |  |  |  |  |  |  |  |  |  |  |
| 48 Cd 108 | 633 | 6.8 ps | 2+ | +0.78(6) |  |  |  | TF | 2011Ch23 | PR C83 054318 (2011) |
|  |  |  |  | +0.7(2) |  |  | [110Cd 658] | TF | 1980Br01 | PR C21 574 (80) |
|  |  |  |  |  | -0.45(8) | R |  | CER | 1976Es02 | NP A274 237 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 48 Cd 109 | 0 | 453 d | 5/2+ | -0.8278461(15) |  |  | [111Cd] | OP/RD,N,OD | 1972Sp09/1963By02 | PL 42A 273 (72)/PR 132 1181 (63) |
|  |  |  |  |  | +0.60(3) | R | calc efg | CLS | 2013Yo02 | PRL 110 192501 (2013) |
|  |  |  |  |  | +0.69(7) |  |  | OD, R | 1969La06 | PR 177 1615 (69) |
|  | 463 | 10.9 s | 11/2- | -1.096(2) |  |  |  | SOPAD | 1989Ra17 | Cf70HI 356 (70) |
|  |  |  |  |  | -0.92(9) |  | estimated | not measured | 1978Sp09 | HFI 4 229 (78) |
|  |  |  |  |  |  |  |  |  |  |  |
| 48 Cd 110 | 658 | 5.0 ps | 2+ | +0.81(6) |  |  |  | TF | 2011Ch23 | PR C83 054318 (2011) |
|  |  |  |  | +0.57(11) |  |  |  | IPAC, R | 1980Br01 | PR C21 574 (80) |
|  |  |  |  | +0.56(10) |  |  | [111Cd 245] | IPAC | 1978Wa07 | PR C18 476 (78) |
|  |  |  |  | 0.62(14) |  |  | [109Pd 512] | RIGV | 1979LaZL | DisA 40 803B (79) |
|  |  |  |  |  | -0.40(4) | R |  | ES | 1977GI13 | JP G3 L169 (77) |
|  |  |  |  |  | -0.39(6) |  | [114Cd 558] | CER | 1977Ma41 | JP G3 1735 (77) |
|  |  |  |  |  | -0.36(8) |  |  | CER | 1976Es02 | NP A274 237 (76) |
|  | 3611 | 550 ps | 10+ | -0.9(3) |  |  |  | IMPAD | 1995Re15 | NP A591 533 (95) |
|  |  |  |  |  |  |  |  |  |  |  |
| 48 Cd 111 | 0 | stable | 1/2+ | -0.5948861(8) |  |  | [1H] | OP/RD, N | 1972Sp09/1950Pr51 | PL 42A 273 (72)/PR 79 35 (50) |
|  |  |  |  | 0.595543(2) |  |  | [2H] | N | 1974Ka04 | ZP 266 233 (74) |
|  | 245 | 84 ns | 5/2+ | -0.766(3) |  |  |  | TDPAC | 1974Be51 | ZP 270 203 (74) |
|  |  |  |  |  | +0.77(12) st |  | [117In 660] | TDPAC | 1973Ra02/1976Ra09 | PRL 30 10 (73)/PR B13 2835 (76) |
|  |  |  |  |  | +0.80(10) |  | [115Cd 173] | TDPAD | 1983Er01 | PL 93A 357 (83) |
|  |  |  |  |  | +0.83(13) |  | [111Cd 396] | TDPAD | 1980He02 | ZP A294 13 (80) |
|  |  |  |  |  | (+)0.74(8) |  | [109Cd 463] | TDPAD | 1978Sp09 | HFI 4 229 (78) |
|  | 342 | 27 ps | 3/2+ | 0.0(12) |  |  | [110Cd 658] | TF | 1988Be45 | HFI 43 457 (88) |
|  | 396 | 48.6 m | 11/2- | -1.1052(3) |  |  | [115Cd] | CLS | 2013Yo02 | PRL 110 192501 (2013) |
|  |  |  |  | -1.1051(4) |  |  | [109Cd] | OD | 1969La06 | PR 177 1615 (69) |
|  |  |  |  |  | -0.75(3) | R | calc efg | CLS | 2013Yo02 | PRL 110 192501 (2013) |
|  |  |  |  |  | -0.85(9) |  | [109Cd] | OD | 1969La06 | PR 177 1615 (69) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  | 620 | 10 ps | 5/2+ | +0.28(12) |  |  | [110Cd 658] | TF | 1988Be45 | HFI 43 457 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 48 Cd 112 | 617 | 6.2 ps | 2+ | +0.72(5) |  |  |  | TF | 2011Ch23 | PR C83 054318 (2011) |
|  |  |  |  | +0.6(2) |  |  | [110Cd 658] | TF | 1980Br01 | PR C21 574 (80) |
|  |  |  |  | 0.72(12) |  |  | [106Pd 512] | RIGV | 1979LaZL | DisA 40 803B (79) |
|  |  |  |  |  | -0.37(4) | R |  | ES | 1977GI13 | JP G3 L169 (77) |
|  |  |  |  |  | -0.39(8) |  | [114Cd 558] | CER | 1977Ma41 | JP G3 1735 (77) |
|  |  |  |  |  | -0.39(11) |  |  | CER | 1976Es02 | NP A274 237 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 48 Cd 113 | 0 | 9x10\*15 y | 1/2+ | -0.6223009(9) |  |  | [111Cd] | OP/RD, N | 1972Sp09/1950Pr51 | PL 42A 273 (72)/PR 79 35 (50) |
|  |  |  |  | -0.6224(2) |  |  | [111Cd] | CLS | 2013Yo02 | PRL 110 192501 (2013) |
|  | 264 | 14 y | 11/2- | -1.087784(2) |  |  | [111Cd] | OP/RD, N | 1969Ch07 | PL 29A 103 (69) |
|  |  |  |  | -1.0883(3) |  |  | [115Cd] | CLS | 2013Yo02 | PRL 110 192501 (2013) |
|  |  |  |  |  | -0.61(3) | R | calc efg | CLS | 2013Yo02 | PRL 110 192501 (2013) |
|  |  |  |  |  | -0.71(7) |  | [109Cd] | OD, R | 1969La06 | PR 177 1615 (69) |
|  | 298 | 32 ps | 3/2+ | -0.4(8) |  |  |  | TF | 1988Be45 | HFI 43 457 (88) |
|  | 584 | 9 ps | 5/2+ | +0.15(12) |  |  |  | TF | 1988Be45 | HFI 43 457 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 48 Cd 114 | 558 | 9.0 ps | 2+ | +0.65(4) |  |  |  | TF | 2011Ch23 | PR C83 054318 (2011) |
|  |  |  |  | +0.58(14) |  |  | [110Cd 658] | TF | 1980Br01 | PR C21 574 (80) |
|  |  |  |  | 0.60(8) |  |  | [106Pd 512] | RIGV | 1979LaZL | DisA 40 803B (79) |
|  |  |  |  |  | -0.35(5) |  |  | CER | 1972La25/1976Es02 | NP A195 119(72)/NP A274 237 (76) |
|  |  |  |  |  | -0.348(12) | R |  | ES | 1981Ko06 | JP G7 L63 (81) |
|  |  |  |  |  | -0.38(4) |  |  | ES | 1977GI13 | JP G3 L169 (77) |
|  |  |  |  |  | -0.34(3) |  |  | ES | 1976Li19 | PR C14 952 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 48 Cd 115 | 0 | 53.4 h | 1/2+ | -0.6484259(12) |  |  | [111Cd] | OP/RD, N | 1969Ch07 | PL 29A 103 (69) |
|  |  |  |  | -0.6483(2) |  |  | [111Cd] | CLS | 2013Yo02 | PRL 110 192501 (2013) |
|  | 173 | 44.8 d | 11/2- | -1.0410343(15) |  |  | [111Cd] | OP/RD, N | 1969Ch07 | PL 29A 103 (69) |
|  |  |  |  |  | -0.48(2) | R | calc efg | CLS | 2013Yo02 | PRL 110 192501 (2013) |
|  |  |  |  |  | -0.54(5) |  | [113Cd 264] | OL | 1973Ge12 | PL 46A 211(73) |
|  |  |  |  |  |  |  |  |  |  |  |
| 48 Cd 116 | 514 | 15 ps | 2+ | +0.59(5) |  |  |  | TF | n | PR C83 054318 (2011) |
|  |  |  |  | +0.60(14) |  |  | [110Cd 658] | TF | 1980Br01 | PR C21 574 (80) |
|  |  |  |  |  | -0.42(4) | R |  | ES | 1977GI13 | JP G3 L169 (77) |
|  |  |  |  |  | -0.42(8) |  |  | CER | 1976Es02 | NP A274 237 (76) |
|  |  |  |  |  | -0.64(12) or -0.46(12) |  |  | CER | 1977Na06 | JP G3 507 (77) |
|  |  |  |  |  |  |  |  |  |  |  |
| 48 Cd 117 | 0 | 2.49 h | 1/2+ | -0.7436(2) |  |  | [111Cd] | CLS | 2013Yo02 | PRL 110 192501 (2013) |
|  | 136 | 3.36 h | 11/2- | -0.9975(4) |  |  | [115Cd] | CLS | 2013Yo02 | PRL 110 192501 (2013) |
|  |  |  |  |  | -0.320(13) | R | calc efg | CLS | 2013Yo02 | PRL 110 192501 (2013) |
|  |  |  |  |  |  |  |  |  |  |  |
| 48 Cd 119 | 0 | 2.69 m | 1/2+ | -0.9201(2) |  |  | [111Cd] | CLS | 2013Yo02 | PRL 110 192501 (2013) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  | 147 | 2.20 m | 11/2- | -0.9642(3) |  |  | [115Cd] | CLS | 2013Yo02 | PRL 110 192501 (2013) |
|  |  |  |  |  | -0.135(6) | R | calc efg | CLS | 2013Yo02 | PRL 110 192501 (2013) |
|  |  |  |  |  |  |  |  |  |  |  |
| 48 Cd 121 | 0 | 13.5 s | 3/2+ | +0.6269(7) |  |  | [111Cd] | CLS | 2013Yo02 | PRL 110 192501 (2013) |
|  |  |  |  |  | -0.274(13) | R | calc efg | CLS | 2013Yo02 | PRL 110 192501 (2013) |
|  | 215 | 8.3 s | 11/2- | -1.0100(4) |  |  | [115Cd] | CLS | 2013Yo02 | PRL 110 192501 (2013) |
|  |  |  |  |  | +0.009(6) | R | calc efg | CLS | 2013Yo02 | PRL 110 192501 (2013) |
|  |  |  |  |  |  |  |  |  |  |  |
| 48 Cd 123 | 0 | 2.10 s | 3/2+ | +0.7896(6) |  |  | [111Cd] | CLS | 2013Yo02 | PRL 110 192501 (2013) |
|  |  |  |  |  | +0.042(5) | R | calc efg | CLS | 2013Yo02 | PRL 110 192501 (2013) |
|  | 317 | 1.82 s | 11/2- | -1.0015(3) |  |  | [115Cd] | CLS | 2013Yo02 | PRL 110 192501 (2013) |
|  |  |  |  |  | +0.135(7) | R | calc efg | CLS | 2013Yo02 | PRL 110 192501 (2013) |
|  |  |  |  |  |  |  |  |  |  |  |
| 48 Cd 125 | 0 | 0.68 s | 3/2+ | +0.8603(6) |  |  | [111Cd] | CLS | 2013Yo02 | PRL 110 192501 (2013) |
|  |  |  |  |  | +0.209(10) | R | calc efg | CLS | 2013Yo02 | PRL 110 192501 (2013) |
|  | x | 0.48 s | 11/2- | -0.9347(2) |  |  | [115Cd] | CLS | 2013Yo02 | PRL 110 192501 (2013) |
|  |  |  |  |  | +0.269(13) | R | calc efg | CLS | 2013Yo02 | PRL 110 192501 (2013) |
|  |  |  |  |  |  |  |  |  |  |  |
| 48 Cd 127 | 0 | 0.37 s | 3/2+ | +0.8783(7) |  |  | [111Cd] | CLS | 2013Yo02 | PRL 110 192501 (2013) |
|  |  |  |  |  | +0.239(11) | R | calc efg | CLS | 2013Yo02 | PRL 110 192501 (2013) |
|  | x | - | 11/2- | -0.8702(3) |  |  | [115Cd] | CLS | 2013Yo02 | PRL 110 192501 (2013) |
|  |  |  |  |  | +0.34(2) | R | calc efg | CLS | 2013Yo02 | PRL 110 192501 (2013) |
|  |  |  |  |  |  |  |  |  |  |  |
| 48 Cd 129 | 0 | 0.27 s | 3/2+ | +0.8481(8) |  |  | [111Cd] | CLS | 2013Yo02 | PRL 110 192501 (2013) |
|  |  |  |  |  | +0.132(9) | R | calc efg | CLS | 2013Yo02 | PRL 110 192501 (2013) |
|  | x | - | 11/2- | -0.7063(5) |  |  | [115Cd] | CLS | 2013Yo02 | PRL 110 192501 (2013) |
|  |  |  |  |  | +0.57(3) | R | calc efg | CLS | 2013Yo02 | PRL 110 192501 (2013) |
|  |  |  |  |  |  |  |  |  |  |  |
| 49 In 104 | 0 | 1.7 m | 5+ | +4.44(2) |  |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  | +0.63(10) | R | [115In] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.66(11) st |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 49 In 105 | 0 | 5.07 m | 9/2+ | +5.675(5) |  |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  | 4.8(4) |  |  |  | NO/S | 1982Va21 | PRL 49 1390 (82) |
|  |  |  |  |  | +0.79(5) | R | [115In] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.83(5) st |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 49 In 106 | 0 | 6.2 m | 7+ | +4.916(7) |  |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  | 4.921(13) |  |  |  | NMR/ON | 1986Va27 | PRL 57 2641 (86) |
|  |  |  |  | 4.87(15) |  |  |  | NO/S | 1982Ya21 | PRL 49 1390 (82) |
|  |  |  |  |  | +0.92(6) | R | [115In] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.97(6) st |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  |  |  |  |  |  |  |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
| 49 In 107 | 0 | 32.4 min | 9/2+ | +5.585(8) |  |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  | 5.6(5) |  |  |  | NO/S | 1982Ya21 | PRL 49 1390 (82) |
|  |  |  |  |  | +0.77(5) | R | [115In] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.81(5) st |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 49 In 108 | 0 | 58 m | 7+ | +4.561(3) |  |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  | 4.557(7) |  |  |  | NMR/ON | 1986Va27 | PRL 57 2641 (86) |
|  |  |  |  | 4.53(10) |  |  |  | NO/S | 1982Ya21 | PRL 49 1390 (82) |
|  |  |  |  |  | +0.955(7) | R | [115In] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +1.005(7) st |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  | 29 | 40 m | 2+ | +4.935(5) |  |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  | +0.444(14) | R | [115In] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.467(14) |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 49 In 109 | 0 | 4.2 h | 9/2+ | +5.538(4) |  |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  | +5.538(11) |  |  |  | NMR/ON | 1981Ha\*\* | ZP A300 339 (81) |
|  |  |  |  |  | +0.80(3) | R | [115In] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.84(3) st |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 49 In 110 | 0\* | 69.1 m | 2+ | +4.365(4) |  |  | [113In] | AB | 1968CaZX | Th Casserb (68) |
|  |  |  |  |  | +0.32(2) | R | [115In] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.35(2) st |  | [115In] | AB, R | 1968CaZX | Th Casserb (68) |
|  | 0\* | 4.9 h | 7+ | +4.713(8) |  |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  | 4.719(13) |  |  |  | NMR/ON | 1981Ha\*\* | ZP A300 339 (81) |
|  |  |  |  |  | +0.95(2) | R | [115In] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +1.00(2) |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 49 In 111 | 0 | 2.83 d | 9/2+ | +5.503(7) |  |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  | 5.499(7) |  |  |  | BFNMR/ON | 1982Nu01 | PRL 49 347 (82) |
|  |  |  |  | (+)5.504(10) |  |  |  | NMR/ON | 1981Ha45 | PR C24 2222 (81) |
|  |  |  |  | +5.48(10) |  |  |  | NO/S | 1980Ha26 | HFI 8 41 (80) |
|  |  |  |  |  | +0.76(2) | R | [115In] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.80(2) |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  | 2717 | 14.8 ns | 21/2+ | +5.3(2) |  |  |  | TDPAD | 1980Le05 | IzF 44 202 (80) |
|  |  |  |  | +4.9(2) |  |  |  | TDPAD | 1981Va15 | ZP A301 137 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 49 In 112 | 0\* | 14.4 m | 1+ | +2.82(3) |  |  | [113In] | AB | 1968CaZX | Th68 Casserb (68) |
|  |  |  |  |  | +0.082(5) | R | [115In] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.087(5) |  | [115In] | AB, R | 1968CaZX | Th68 Casserb (68) |
|  | 157 | 20.9 m | 4+ | +5.227(4) |  |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  | +0.679(10) | R | [115In] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.714(10) |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  | 351 | 0.69 s | 7+ | +4.73(4) |  |  |  | TDPAD | 1976Io04 | NP A272 1 (76) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | 1.00(3) | R | [117In 660] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 1.03(3) |  | [117In 660] | TDPAD | 1993Io02 | HFI 77 111 (93) |
|  | 614 | 2.82 s | 8- | +3.08(3) |  |  |  | TDPAD | 1976Io04 | NP A272 1 (76) |
|  |  |  |  |  | 0.092(3) | R | [117In 660] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.095(3) |  | [117In 660] | TDPAD | 1993Io02 | HFI 77 111 (93) |
|  |  |  |  |  | 0.086(3) st |  | [117In 660] | TDPAD | 1976Io02 | PL 64B 36 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 49 In 113 | 0 | stable | 9/2+ | +5.5289(2) |  |  | [115In] | N | 1957Ri42 | PR 106 953 (57) |
|  |  |  |  |  | 0.759(8) | R | calc efg | AB/MS | 2008Py02 | Mol Phys 106 1965 (2008) |
|  |  |  |  |  | +0.80(4) st |  | [115In] | AB | 1987Eb02 | NP A464 9 (87) |
|  | 392 | 99.5 m | 1/2- | -0.21074(2) |  |  | [115In] | AB | 1960Ch08 | PR 118 1578 (60) |
|  |  |  |  |  |  |  |  |  |  |  |
| 49 In 114 | 0 | 71.9 s | 1+ | 2.817(11) |  |  |  | NMR/ON | 1982Nu02 | PR C26 1701 (82) |
|  | 190 | 49.5 d | 5+ | +4.653(5) |  |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  | 4.658(7) |  |  |  | NMR/ON | 1979La20 | CERN 81-09 26 (81)/HFI 7 61 (79) |
|  |  |  |  | 4.66(3) |  |  |  | BFNO | 1981Nu03 | HFI 10 1195 (81) |
|  |  |  |  | +4.72(10) |  |  |  | NMR/ON | 1983De54 | HFI 15 31 (83) |
|  |  |  |  |  | +0.703(11) | R | [115In] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.739(12) st |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 49 In 115 | 0 | 4.4x10\*14 y | 9/2+ | +5.5408 (2) |  |  | [1H] | N | 1960Fl03 | PPS 76 301 (60) |
|  |  |  |  |  | +0.770(8) | R | calc efg | AB/MS | 2008Py02 | Mol Phys 106 1965 (2008) |
|  |  |  |  |  | +0.81(5) st |  |  | ABLFS, R | 1984Be18 | ZP A316 15 (84) |
|  |  |  |  |  | 0.8(2) st |  |  | ABLFS | 1982Ji01 | ZP A306 7 (82) |
|  |  |  |  |  | 0.83(10) a |  |  | Pi-X | 1981Ba07 | NP A355 383 (81) |
|  |  |  |  |  | 0.58(9) a |  |  | Ka-X | 1981Ba07 | NP A355 383 (81) |
|  | 336 | 4.49 h | 1/2- | -0.24398(5) |  |  | [115In] | AB | 1962Ca14 | CJP 40 931 (62) |
|  | 829 | 5.78 ns | 3/2+ | +0.74(13) |  |  |  | IPAC | 1974Ba24 | NP A222 168 (74) |
|  |  |  |  |  | -0.59(4) | R | [117In 660] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.60(2) st |  | [117In 660] | TDPAC | 1975Ra30/1973Ha61 | PR C12 2022 (75)/JCP 58 3339 (73) |
|  |  |  |  |  |  |  |  |  | 1976Ch37 | ZP B34 177 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 49 In 116 | 0 | 14.1 s | 1+ | 2.7876(6) |  |  |  | NMR/ON | 1972La22/1971Wi12 | ZP 252 242 (72)/ZP 244 289 (71) |
|  |  |  |  |  | 0.11(1) | R | [115In] | QIR | 1982Gr17 | NP A386 56 (82) |
|  |  |  |  |  | 0.09(2) |  |  | QIR | 1971Wi12 | ZP 244 289 (71) |
|  | 127 | 54.2 m | 5+ | +4.435(15) |  |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  | +0.762(11) | R | [115In] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.802(12) st |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  | 290 | 2.18 s | 8- | +3.215(11) |  |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  | +0.295(9) | R | [115In] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.310(9) st |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 49 In 117 | 0 | 42 m | 9/2+ | +5.519(4) |  |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | +0.788(10) | R | [115In] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.829(10) st |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  | 315 | 1.93 h | 1/2- | -0.25174(3) |  |  | [115In] | AB | 1962Ca14 | CJP 40 931 (62) |
|  | 589 | < 10 ps | 3/2- | > 0.84 |  |  |  | IPAC, R | 1986Bo36/1985Al05 | ZP A325 475 (86)/ZP A320 425 (85) |
|  | 660 | 53.6 ns | 3/2+ | +0.938(10) |  |  |  | TDPAC | 1976Pi18 | Pram 7 190 (76) |
|  |  |  |  | +0.910(10) |  |  |  | TDPAC | 1983De54 | HFI 15 31 (83) |
|  |  |  |  |  | -0.57(4) | R | [115In] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | (-)0.59(1) st |  | [115In] | TDPAC | 1972Ra27/1973Ha61 | PRL 28 54 (72)/JCP 58 3339 (73) |
|  |  |  |  |  |  |  |  |  |  |  |
| 49 In 118 | ~60 | 4.45 m | 5+ | +4.231(9) |  |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  | +0.757(8) | R | [115In] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.796(8) st |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  | ~200 | 8.5 s | 8- | +3.321(11) |  |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  | +0.419(7) | R | [115In] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.441(7) st |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 49 In 119 | 0 | 2.4 m | 9/2+ | +5.515(10) |  |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  | +0.812(7) | R | [115In] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.854(7) st |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  | 315 | 18 m | 1/2- | -0.319(5) |  |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  | 654 | 130 ns | 3/2+ | +0.53(3) |  |  |  | TDPAD | 1980HaYW | ARHMI 75 (79) |
|  |  |  |  |  | 0.59(4) | R | [115In] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.60(2) |  | [115In] | TDPAD | 1980HaYW | ARHMI 75 (79) |
|  |  |  |  |  |  |  |  |  |  |  |
| 49 In 120 | (0) | 44.4 s | 5+ | +4.295(5) |  |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  | +0.770(16) | R | [115In] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.81(2) st |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  | (0) | 47.3 s | 8- | +3.692(4) |  |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  | +0.504(10) | R | [115In] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.530(10) st |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 49 In 121 | 0 | 23.1 s | 9/2+ | +5.502(5) |  |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  | +0.774(10) | R | [115In] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.814(11) st |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  | 314 | 3.8 m | 1/2- | -0.355(4) |  |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 49 In 122 | 0+x | 9.2 s | 5+ | +4.318(5) |  |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  | +0.77(2) | R | [115In] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.81(2) st |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  | ~220 | 10.5s | 8- | +3.781(6) |  |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  | +0.56(2) | R | [115In] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.59(2) st |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
| 49 In 123 | 0 | 6.68 s | 9/2+ | +5.491(7) |  |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  | +0.720(9) | R | [115In] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.757(9) st |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  | 327 | 45.9 s | 1/2- | -0.400(4) |  |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 49 In 124 | 0 | 3.09 s | 3+ | +4.043(11) |  |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  | +0.58(7) | R | [115In] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.61(7) st |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  | 190 | 3.7 s | 8- | +3.888(9) |  |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  | +0.631(9) | R | [115In] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.664(9) st |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 49 In 125 | 0 | 2.50 s | 9/2+ | +5.502(9) |  |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  | +0.68(3) | R | [115In] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.71(4) st |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  | 360 | 12.2 s | 1/2- | -0.433(4) |  |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 49 In 126 | (0) | 1.60 s | 3+ | +4.034(11) |  |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  | +0.47(5) | R | [115In] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.49(5) st |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  | (0) | 1.64 s | 8- | +4.061(4) |  |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  | +0.649(11) | R | [115In] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.683(12) |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 49 In 127 | 0 | 1.22 s | 9/2+ | +5.522(8) |  |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | +0.56(3) | R | [115In] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.59(3) st |  | [115In] | CFBLS | 1987Eb02 | NP A464 9 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 50 Sn 108 | 2365 | 7.3 ns | 6+ | -0.24(12) |  |  |  | TFL | 1983Ha37 | NP A410 317 (83) |
|  | 3561 | 71 ps | 8+ | >0.8 |  |  |  | TFL | 1983Ha37 | NP A410 317 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 50 Sn 109 | 0 | 18.0 m | 5/2+ | -1.079(6) |  |  | [119Sn] | CFBLS | 1987Eb01 | ZP A326 121 (87) |
|  |  |  |  |  | +0.33(11) | R | [117Sn 315] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.31(10) |  |  | CFBLS | 1987Eb01 | ZP A326 121 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 50 Sn 110 | 2480 | 5.6 ns | 6+ | +0.07(3) |  |  |  | TDPAD | 1989Vo17 | BRASP 53 (11) 133 (89) |
|  |  |  |  |  | 0.30(4) | R | [118Sn 3106] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.34(4) |  |  | TDPAD | 1989Vo17 | BRASP 53 (11) 133 (89) |
|  | 3767 | 1.15 ns | 8- | -2.4(12) |  |  |  | TDPAD | 1989Vo17 | BRASP 53 (11) 133 (89) |
|  |  |  |  |  |  |  |  |  |  |  |
| 50 Sn 111 | 0 | 35 m | 7/2+ | +0.608(4) |  |  | [119Sn] | CFBLS | 1987Eb01 | ZP A326 121 (87) |
|  |  |  |  | +0.617(8) |  |  | [115,7,9Sn] | ABLFS | 1986An24 | PR C34 1052 (86) |
|  |  |  |  |  | +0.20(10) | R | [117Sn 315] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.18(9) |  |  | CFBLS | 1987Eb01 | ZP A326 121 (87) |
|  | 979 | 9.2 ns | 11/2- | -1.26(11) |  |  |  | TDPAD | 1974Br29 | PR C10 1414 (74) |
|  |  |  |  |  |  |  |  |  |  |  |
| 50 Sn 112 | 1257 | 0.35 ps | 2+ | +0.21(7) |  |  |  | TF | 2011Wa15 | PR C84 014319 (11) |
|  |  |  |  | +0.7(3) |  |  |  | TF | 1980Ha19 | PR C22 97 (80) |
|  |  |  |  |  | -0.09(10) | R |  | CER | 1975Gr30 | PR C12 1462 (75) |
|  | 2248 | 3.3 ps | 4+ | +1.5(7) |  |  |  | TF | 2011Wa15 | PR C84 014319 (11) |
|  | 2550 | 13.7 ns | 6+ | +0.53(3) |  |  |  | TDPAD | 1983Le18 | YadF 37 1342 (83) |
|  |  |  |  | +0.61(5) |  |  |  |  | 1981Go17 | IzF 45 2116 (81) |
|  |  |  |  | +0.2(2) |  |  |  |  | 1981Va15 | ZP A301 137 (81) |
|  |  |  |  |  | (-)0.25(5) | R | [118Sn 739] | TDPAD | 1975Vi03 | NP A243 29 (75) |
|  |  |  |  |  | 0.29(7) |  |  | TDPAD |  | ChJNP 6 188 (84) |
|  |  |  |  |  |  |  |  |  |  |  |
| 50 Sn 113 | 0 | 115 d | 1/2+ | -0.8791(6) |  |  | [115,7,9Sn] | ABLFS | 1986An24 | PR C34 1052 (86) |
|  | 739 | 82 ns | 11/2- | -1.30(2) |  |  |  | TDPAD | 1981Go17 | IzF 45 2116 (81) |
|  |  |  |  | -1.29(2) |  |  |  | TDPAD | 1974Di18/1974Br29 | ZP 271 103 (74)/PR C10 1414 (74) |
|  |  |  |  |  | (-)0.41(4) | R | [116Sn 3548] | TDPAD | 1975Di02 | PL 55B 293 (75) |
|  |  |  |  |  | 0.48(5) |  | [118Sn 3108] | TDPAD | 1976Be59 | HFI 2 326 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 50 Sn 114 | 1300 | 0.28 ps | 2+ | +0.22(5) |  |  |  | TF | 2011Wa15 | PR C84 014319 (11) |
|  | 2188 | 5.3 ps | 4+ | +0.4(3) |  |  |  | TF | 2011Wa15 | PR C84 014319 (11) |
|  | 2354 | 0.36 ps | 3- | -1.5(7) |  |  |  | TF | 2011Wa15 | PR C84 014319 (11) |
|  | 3088 | 765 ns | 7- | -0.567(4) |  |  |  | TDPAD | 1973IsZQ | Cf73Mun 1 256 (73) |
|  |  |  |  |  | (-)0.32(3) | R | [116Sn 3548] | TDPAD | 1975Di02 | PL 55B 293 (75) |
|  |  |  |  |  | 0.36(4) |  | [118Sn 3108] | TDPAD | 1976Be59 | HFI 2 326 (76) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  |  |  |  |  |  |  |
| 50 Sn 115 | 0 | stable | 1/2+ | -0.91883(7) |  |  | [23Na] | N | 1950Pr51 | PR 79 35 (50) |
|  | 613 | 3.26 ps | 7/2+ | +0.683(10) |  |  |  | TDPAD | 1975Iv02 | RRou 20 141 (75) |
|  |  |  |  |  | (-)0.26(3) | R | [118Sn 3108] | TDPAD | 1976Be59 | HFI 2 326 (76) |
|  | 714 | 159 s | 11/2- | -1.378(11) |  |  |  | TDPAD | 1975Iv02 | RRou 20 141 (75) |
|  |  |  |  | -1.369(4) |  |  |  | NMR/AC | 1971Br03 | PL 34B 54 (71) |
|  |  |  |  |  | 0.38(6) | R |  | QIR | 1975Ri03 | PS 11 228 (75) |
|  |  |  |  |  |  |  |  |  |  |  |
| 50 Sn 116 | 1294 | 0.36 ps | 2+ | +0.01(4) |  |  |  | TF | 2011Wa15 | PR C84 014319 (11) |
|  |  |  |  | -0.3(5) |  |  |  | TF | 2008EA02 | PL B665 147 (08) |
|  |  |  |  | -0.3(2) |  |  |  | TF | 1980Ha19 | PR C22 97 (80) |
|  |  |  |  |  | -0.17(4) | R |  | ES | 1976Li19 | PR C14 952 (76) |
|  |  |  |  |  | +0.08(8) |  |  | CER | 1975Gr30/1970Kl06 | PR C12 1462 (75)/NP A154 499 (70) |
|  | 2266 | 0.33 ps | 3- | -0.0(7) |  |  |  | TF | 2011Wa15 | PR C84 014319 (2011) |
|  | 2366 | 370 ns | 5- | -0.376(3) |  |  |  | TDPAD | 1973IsZQ | Cf73Mun 1 256 (73) |
|  |  |  |  |  | 0.26(3) | R | [116Sn 3548] | TDPAD | 1975Di02 | PL 55B 293 (75) |
|  |  |  |  |  | 0.28(3) |  | [118Sn 3108] | TDPAD | 1976Be59 | HFI 2 326 (76) |
|  | 3548 | 904 ns | 10+ | -2.326(15) |  |  |  | TDPAD | 1973IsZQ | Cf73Mun 1 256 (73) |
|  |  |  |  |  | [(-)0.41(4)] |  |  | Est from B(E2) | 1975Di02 | PL 55B 293 (75) |
|  |  |  |  |  |  |  |  |  |  |  |
| 50 Sn 117 | 0 | stable | 1/2+ | -1.00104(7) |  |  | [23Na] | N | 1950Pr51 | PR 79 35 (50) |
|  | 159 | 279 ps | 3/2+ | +0.66(5) |  |  |  | IPAC | 1086Bo31 | ZP A325 281 (86) |
|  | 315 | 13.6 d | 11/2- | -1.3955(10) |  |  | [115,7,9Sn] | ABLFS | 1986An24 | PR C34 1052 (86) |
|  |  |  |  |  | -0.42(5) | R |  | ABLFS | 1986An24 | PR C34 1052 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 50 Sn 118 | 1230 | 0.46 ps | 2+ | +0.34(20) |  |  |  | TF | 2008EA02 | PL B665 147 (08) |
|  |  |  |  | +0.04(20) |  |  |  | TF | 1980Ha19 | PR C22 97 (80) |
|  |  |  |  |  | -0.14(10) |  |  | CER | 1975Gr30 | PR C12 1462 (75) |
|  | 2321 | 21.7 ns | 5- | -0.30(3) |  |  |  | TDPAC | 1964DeZZ | Bk64 PAC 186 (64) |
|  |  |  |  | -0.34(4) |  |  |  | IPAC | 1962Bo16 | ZP 168 370 (62) |
|  |  |  |  |  | (-)0.22(3) |  | [116Sn 3548] | TDPAD | 1975Di02 | PL 55B 293 (75) |
|  | 2575 | 217 ns | 7- | -0.689(4) |  |  |  | TDPAD | 1973IsZQ | Cf73Mun 1 256 (73) |
|  |  |  |  |  | 0.32(3) |  | [118Sn 3108] | TDPAD | 1976Be59 | HFI 2 326 (76) |
|  | 3106 | 2.65 s | 10+ | -2.447(7) |  |  |  | TDPAD | 1973IsZQ | Cf73Mun 1 256 (73) |
|  |  |  |  |  | [0.41(4)] |  |  | Est from B(E2) | 1976Be59 | HFI 2 326 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 50 Sn 119 | 0 | stable | 1/2+ | -1.04728(7) |  |  | [23Na] | N | 1950Pr51 | PR 79 35 (50) |
|  | 24 | 17.8 ns | 3/2+ | +0.633(3) |  |  | [119Sn] | ME | 1973Cr01 | ZP 258 56 (73) |
|  |  |  |  | +0.682(3) |  |  |  | ME |  | PA 81 3771 (78) |
|  |  |  |  |  | -0.132(1) | R |  | calc efg | 2008Py02/2008Ba56 | Mol Phys 106 1956 (2008)/JPC A112 1666 (2008) |
|  |  |  |  |  | -0.112(7) |  |  | ME | 2006MA35 | Eur J Phys B51 173 (06) |
|  |  |  |  |  | -0.105(2) |  |  | [calc efg] | 2000LI53 | HFI 126 137 (00) |
|  |  |  |  |  | 0.128(7) |  |  | R | 1997Sv03 | PR B55 12572 (97) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | -0.109(8) |  |  | ME | 1983Ha50 | HFI 15/16 215 (83) |
|  |  |  |  |  | 0.094(11) |  | [116Sn 3548] | TDPAD | 1975Di02 | PL 55B 293 (75) |
|  |  |  |  |  | -0.065(5) |  |  | ME, R | 1972Mi02/1967Ru05 | PR B5 1704(72)/PR 159 239 (67) |
|  |  |  |  |  | -0.061(3) |  |  | ME, R | 1987Gr28 | JP B20 5595 (87) |
|  | 90 | 293.1 d | 11/2- | -1.40(8) |  |  |  | ME | 1972Gu09 | PL 40A 297 (72) |
|  |  |  |  |  | -0.29(3) | R | [119Sn 24] | ME, R | 1975Di02 | PL 55B 293 (75) |
|  |  |  |  |  |  |  |  |  |  |  |
| 50 Sn 120 | 1171 | 0.64 ps | 2+ | -0.18(14) |  |  |  | TF | 2008EA02 | PL B665 147 (08) |
|  |  |  |  | -0.28(14) |  |  |  | TF | 1980Ha19 | PR C22 97 (80) |
|  |  |  |  |  | +0.02(7) | R |  | CER | 1992Vo09 | NP A549 281 (92) |
|  |  |  |  |  | -0.05(10) |  |  | CER | 1975Gr30 | PR C12 1462 (75) |
|  | 2285 | 5.53 ns | 5- | -0.28(3) |  |  |  | TDPAC | 1964DeZZ | Bk64 PAC 186 (64) |
|  |  |  |  | -0.37(5) |  |  |  | IPAC | 1962Bo16 | ZP 168 370 (62) |
|  |  |  |  |  | 0.046(2) | R | [119Sn 24] | TDPAD | 1975Di02 | PL 55B 293 (75) |
|  |  |  |  |  |  |  |  |  |  |  |
| 50 Sn 121 | 0 | 27.1 h | 3/2+ | +0.6978(10) |  |  | [115,7,9Sn] | ABLFS | 1986An24 | PR C34 1052 (86) |
|  |  |  |  |  | -0.02(2) | R |  | ABLFS | 1986An24 | PR C34 1052 (86) |
|  | 6.3 | 55 y | 11/2- | -1.3877(9) |  |  | [119Sn] | ABLFS | 1986An24 | PR C34 1052 (86) |
|  |  |  |  |  | -0.14(3) | R |  | ABLFS | 1986An24 | PR C34 1052 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 50 Sn 122 | 1140 | 0.76 ps | 2+ | -0.09(4) |  |  |  | TF | 2011Wa15 | PR C84 014319 (11) |
|  |  |  |  | -0.1(2) |  |  |  | TF | 1980Ha19 | PR C22 97 (80) |
|  |  |  |  |  | -0.13(10) | R |  | CER | 1975Gr30 | PR C12 1462 (75) |
|  | 2142 | 1.6 ps | 4+ | -0.7(7) |  |  |  | TF | 2011Wa15 | PR C84 014319 (11) |
|  |  |  |  |  |  |  |  |  |  |  |
| 50 Sn 123 | 0 | 129 d | 11/2- | -1.3700(9) |  |  | [115,7,9Sn] | ABLFS | 1986An24 | PR C34 1052 (86) |
|  |  |  |  |  | +0.03(4) | R |  | ABLFS | 1986An24 | PR C34 1052 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 50 Sn 124 | 1132 | 0.93 ps | 2+ | (-)0.21(3) |  |  |  | RIV | 2013Al10 | PR C87 054325 (2013) |
|  |  |  |  | -0.13(3) |  |  |  | TF | 2011Wa15 | PR C84 014319 (11) |
|  |  |  |  | -0.3(2) |  |  |  | TF | 1980Ha19 | PR C22 97 (80) |
|  |  |  |  |  | +0.03(13) | R |  | CER | 2011Al35 | PR C84 061303® |
|  |  |  |  |  | 0.0(2) |  |  | CER | 1975Gr30 | PR C12 1462 (75) |
|  |  |  |  |  |  |  |  |  |  |  |
| 50 Sn 125 | 0 | 9.62 d | 11/2- | -1.348(2) |  |  | [115,7,9Sn] | ABLFS | 1986An24 | PR C34 1052 (86) |
|  |  |  |  | -1.348(6) |  |  |  | ABLFS | 2005Le34 | PR C72 034305 (05) |
|  |  |  |  |  | +0.2(2) | R | [117Sn 315] | ABLFS | 2004Le13 | NP A734 437 (04) |
|  |  |  |  |  | +0.1(2) |  |  | ABLFS | 1986An24 | PR C34 1052 (86) |
|  | 28 | 9.5 m | 3/2+ | +0.764(3) |  |  |  | ABLFS | 2005Le34 | PR C72 034305 (05) |
|  |  |  |  |  | +0.86(8) | R | [117Sn 315] | ABLFS | 2004Le13 | NP A734 437 (04) |
|  |  |  |  |  |  |  |  |  |  |  |
| 50 Sn 126 | 1141 | 1.15 ps | 2+ | (-)0.24(6) |  |  |  | RIV | 2013Al10 | PR C87 054325 (2013) |
|  |  |  |  | -0.5(4) |  |  |  | TF | 2012Ku24 | PR C86 034319 (12) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | 0.0(2) | R |  | CER | 2011Al35 | PR C84 061303® |
|  | 2219 | 5.9 ms | 7- | -0.69(6) |  |  |  | TDPAD | 2010IL01 | PL B687 305 (10) |
|  |  |  |  |  |  |  |  |  |  |  |
| 50 Sn 127 | 0 | 2.1 h | 11/2- | -1.329(7) |  |  |  | ABLFS | 2005Le34 | PR C72 034305 (05) |
|  |  |  |  |  | +0.32(14) | R | [117Sn 315] | ABLFS | 2005Le34 | PR C72 034305 (05) |
|  | 5 | 4.13 m | 3/2+ | +0.757(4) |  |  |  | ABLFS | 2005Le34 | PR C72 034305 (05) |
|  |  |  |  |  | +0.65(7) | R | [117Sn 315] | ABLFS | 2004Le13 | NP A734 437 (04) |
|  | 1827 | 4.5 s | (19/2) | -1.6(2) |  |  |  | TDPAD | 2010AT03 | Eur Phys Lett 91 42001 (10) |
|  |  |  |  |  |  |  |  |  |  |  |
| 50 Sn 128 | 1169 | 1.6 ps | 2+ | (-)0.46(12) |  |  |  | RIV | 2013Al10 | PR C87 054325 (2013) |
|  | 2492 | 2.7 s | 10+ | -2.0(4) |  |  |  | TDPAD | 2010AT03 | Eur Phys Lett 91 42001 (10) |
|  |  |  |  |  | -0.1(3) | R |  | CER | 2011Al35 | PR C84 061303 |
|  |  |  |  |  |  |  |  |  |  |  |
| 50 Sn 129 | 0 | 2.23 m | 3/2+ | +0.754(3) |  |  |  | ABLFS | 2005Le34 | PR C72 034305 (05) |
|  |  |  |  |  | +0.05(11) | R | [117Sn 315] | ABLFS | 2004Le13 | NP A734 437 (04) |
|  | 35 | 6.9 m | 11/2- | -1.297(5) |  |  |  | ABLFS | 2005Le34 | PR C72 034305 (05) |
|  |  |  |  |  | -0.2(2) | R | [117Sn 315] | ABLFS | 2005Le34 | PR C72 034305 (05) |
|  |  |  |  |  |  |  |  |  |  |  |
| 50 Sn 130 | 1947 | 1.7 m | 7- | -0.381(3) |  |  |  | ABLFS | 2005Le34 | PR C72 034305 (05) |
|  |  |  |  |  | -0.39(12) | R | [117Sn 315] | ABLFS | 2005Le34 | PR C72 034305 (05) |
|  |  |  |  |  |  |  |  |  |  |  |
| 50 Sn 131 | 0 | 56 s | 3/2+ | +0.747(4) |  |  |  | ABLFS | 2005Le34 | PR C72 034305 (05) |
|  |  |  |  |  | -0.04(9) | R | [117Sn 315] | ABLFS | 2004Le13 | NP A734 437 (2004) |
|  | 242 | 58.4 s | 11/2- | -1.276(5) |  |  |  | ABLFS | 2005Le34 | PR C72 034305 (05) |
|  |  |  |  |  | 0.0(2) | R | [117Sn 315] | ABLFS | 2005Le34 | PR C72 034305 (05) |
|  |  |  |  |  |  |  |  |  |  |  |
| 51 Sb 112 | 796 | 536 ns | 8- | +2.192(8) |  |  |  | TDPAD | 1976Ke07 | HFI 2 336 (76) |
|  |  |  |  |  | 1.06(2) | R |  |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.71(7) st |  | [121Sb] | TDPAD | 1982Ma29 | PR C26 493 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 51 Sb 114 | 0 | 3.49 m | 3+ | 1.72(8) |  |  |  | NO/S | 1993Bo46 | HFI 78 133 (93) |
|  | 496 | 219 s | 8- | +2.265(5) |  |  |  | SOPAD, TDPAD | 1976Ke07/1976Br40 | HFI 2 336 (76)/HFI 2 329 (76) |
|  |  |  |  |  | 1.02(6) | R | [121Sb] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.66(11) st |  | [121Sb] | QIR, R | 1982Ma29 | PR C26 493 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 51 Sb 115 | 0 | 31.8 m | 5/2+ | +3.46(1) |  |  | [121Sb] | AB | 1968Ja05 | PR 175 65 (68) |
|  | 1300 | 8.4 ns | 11/2- | +5.53(8) |  |  |  | TDPAD | 1980Le05 | IzF 44 202 (80) |
|  |  |  |  | +5.8(6) |  |  |  | TDPAD | 1979Fa03 | PR C19 720 (79) |
|  |  |  |  | +5.3(6) |  |  |  | TDPAD | 1978Ke04 | ZP A285 177 (78) |
|  | 2796 | 152 ns | 19/2- | +2.54(4) |  |  |  | TDPAD, R | 1980Le05 | IzF 44 202 (80) |
|  |  |  |  | +2.73(4) |  |  |  | TDPAD | 1979Fa03 | PR C19 720 (79) |
|  |  |  |  | +2.76(5) |  |  |  | TDPAD | 1979Sh03 | PR C19 1324 (79) |
|  |  |  |  | +2.68(6) |  |  |  | TDPAD | 1979Ko02 | ZP A289 287 (79) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | 0.79(4) | R | [121Sb] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.52(6) st |  | [121Sb] | TDPAD | 1983Se04 | ZP A309 349 (83) |
|  |  |  |  |  | 0.49(14) st |  | [121Sb] | TDPAD | 1982Ma29 | PR C26 493 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 51 Sb 116 | 0 | 16 m | 3+ | 2.715(9) |  |  | [121,123Sb] | NMR/ON | 1986Gr16 | PL 177B 159 (86) |
|  | 94 | 194 ns | 1+ | +2.47(9) |  |  |  | TDPAD | 1993Di06 | ZP A347 37 (93) |
|  | 383 | 60.3 m | 8+ | 2.59(22) |  |  |  | NO/S | 1993Bo46 | HFI 78 133 (93) |
|  | 1844 | 11.9 ns | 7+ | +4.69(10) |  |  |  | TDPAD | 1992Io01 | ZP A343 21 (92) |
|  |  |  |  |  | 2.5(6) | R | [112Sb 796] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 1.7(4) |  | [112Sb 796] | TDPAD | 1992Io01 | ZP A343 21 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 51 Sb 117 | 0 | 2.80 h | 5/2+ | +3.43(6) |  |  | [121Sb] | AB | 1974Ek01 | NP A226 219 (74) |
|  |  |  |  |  | 0.2(12) |  | [121Sb] | AB, R | 1974Ek01 | NP A226 219 (74) |
|  | 1323 | 3.8 ns | 11/2- | +5.35(9) |  |  |  | TDPAD, R | 1980Le05 | IzF 44 202 (80) |
|  |  |  |  | +5.6(4) |  |  |  | TDPAD | 1978Ke04 | ZP A285 177 (78) |
|  | 3131 | 340 s | (25/2)+ | +1.500(9) |  |  |  | NMR/ON, TDPAD | 1975Iv02 | RRou 20 141 (75) |
|  |  |  |  |  | 1.14(5) | R | [121Sb] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.75(9) st |  | [121Sb] | QIR, R | 1982Ma29 | PR C26 493 (82)/JP G3 713 (77) |
|  | 3231 | 290 ns | 23/2- | +5.03(6) |  |  |  | TDPAD | 1987Io01 | NP A466 317 (87) |
|  |  |  |  |  | 3.7(4) | R | [121Sb] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 2.5(3) st |  | [112Sb 796] | TDPAD | 1988Io01 | PL 200B 259 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 51 Sb 118 | 0 | 3.6 m | 1+ | 2.47(7) |  |  | [121Sb] | AB | 1968Ja05 | PR 175 65 (68) |
|  | 51 | 20.6 s | (3)+ | +2.63(5) |  |  | [115Sb 714] | TDPAD | 1975Pl04 | PL 57B 235 (75) |
|  |  |  |  |  | 0.9(2) | R | [121Sb] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.57(14) st |  | [121Sb] | QIR, R | 1982Ma29 | PR C26 493 (82)/Th Dimmling (77) |
|  | 212 | 5.0 h | 8- | 2.32(4) |  |  | [122Sb] | NMR/ON | 1974Ca06 | NP A221 1 (74) |
|  | 270 | 13.4 ns | 3- | -3.76(9) |  |  |  | TDPAD | 1985Di07 | ZP A320 613 (85) |
|  |  |  |  |  | 0.39(8) | R | [112Sb 796] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.25(5) st |  | [112Sb 796] | TDPAD | 1985Di07 | ZP A320 613 (85) |
|  | 927 | 22.8 ns | 7+ | +4.76(13) |  |  |  | TDPAD | 1985Di07 | ZP A320 613 (85) |
|  |  |  |  |  | 2.6(5) | R | [112Sb 796] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 1.8(3) st |  | [112Sb 796] | TDPAD | 1988Io01 | PL 200B 259 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 51 Sb 119 | 0 | 38.0 h | 5/2+ | +3.45(1) |  |  | [121Sb] | AB | 1968Ja05 | PR 175 65 (68) |
|  | 2554 | 128 ns | 19/2- | +3.14(6) |  |  |  | TDPAC | 1991Io02 | NP A531 112 (91) |
|  |  |  |  |  | 3.18(10) | R | [112Sb 796] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 2.1(2) |  | [112Sb 796] | TDPAC | 91Io02 | NP A531 112 (91) |
|  |  |  |  |  |  |  |  |  |  |  |
| 51 Sb 120 | \*0\* | 15.9 m | 1+ | 2.3(2) |  |  | [121Sb] | AB | 1968Ja05 | PR 175 65 (68) |
|  | \*0\* | 5.76 d | 8- | 2.34(1) |  |  | [122Sb] | NMR/ON | 1974Ca06 | NP A221 1 (74) |
|  | 78 | 247 ns | 3+ | +2.584(6) |  |  |  | TDPAD | 1976Io03 | PL 64B 151 (76) |
|  |  |  |  |  | 0.63(2) | R | [121Sb] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | 0.41(4) st |  | [121Sb] | TDPAD | 1982Ma29 | PR C26 493 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 51 Sb 121 | 0 | stable | 5/2+ | +3.3634(3) |  |  | [23Na] | N | 1951Pr02 | PR 81 20 (51) |
|  |  |  |  |  | -0.543(11) | R | [121Sb] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.36(4) st |  |  | O | 1978Bu24 | ZP A288 247 (78) |
|  |  |  |  |  | -0.45(3) st |  |  | AB, R | 1976De22 | APPo A49 541 (76) |
|  | 37 | 3.5 ns | 7/2+ | +2.518(7) |  |  | [121Sb] | ME | 1976La09 | PR C13 2589 (76) |
|  |  |  |  |  | -0.727(16) | R | [121Sb] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.48(5) st |  | [121Sb] | ME | 1970St13 | PL 32A 91 (70) |
|  |  |  |  |  |  |  |  |  |  |  |
| 51 Sb 122 | 0 | 2.68 d | 2- | -1.90(2) |  |  | [121,123Sb] | NO/D | 1958Pi45 | PR 112 935 (58) |
|  |  |  |  |  | +1.28(8) | R | [121Sb] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.85(11) st |  | [121Sb] | AB | 1960Fe08 | PhMg 5 1309 (60) |
|  |  |  |  |  | +0.9(2) |  | [121Sb] | NO/S | 1985He16 | ZP A322 281 (85) |
|  | 61 | 1.86 s | 3+ | +2.983(12) |  |  |  | SOPAD | 1973He10 | PR C7 2128 (73) |
|  |  |  |  |  | +0.63(2) | R | [121Sb] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.41(4) st |  | [121Sb] | TDPAD | 1982Ma29 | PR C26 493 (82) |
|  | 137 | 530 s | 5+ | +3.05(10) |  |  |  | TDPAD | 1977Co18 | RRou 22 541 (77) |
|  |  |  |  |  |  |  |  |  |  |  |
| 51 Sb 123 | 0 | stable | 7/2+ | +2.5498(2) |  |  | [2H] | N | 1951Pr02 | PR 81 20 (51) |
|  |  |  |  |  | -0.692(14) | R | [121Sb] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.49(5) st |  |  | O | 1978Bu24 | ZP A288 247 (78) |
|  |  |  |  |  |  |  |  |  |  |  |
| 51 Sb 124 | 0 | 60.2 d | 3- | 1.20(2) |  |  | [122Sb] | NMR/ON | 1974Ca06 | NP A221 1 (74) |
|  |  |  |  |  | +2.8(2) | R | [121Sb] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +1.9(4) st |  | [121Sb] | NO/S | 1985He16 | ZP A322 281 (85) |
|  | 41 | 3.2 s | 3+ | +2.97(3) |  |  |  | TDPAD | 1981Io04 | HFI 9 75 (81) |
|  | 125 | 86 ns | 6- | +0.384(12) |  |  |  | TDPAD | 1981Io04 | HFI 9 75 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 51 Sb 125 | 0 | 2.7 y | 7/2+ | +2.63(4) |  |  | [122Sb] | NMR/ON | 1974Ca06 | NP A221 1 (74) |
|  |  |  |  |  |  |  |  |  |  |  |
| 51 Sb 126 | 0 | 12.4 d | (8)- | 1.28(7) |  |  |  | NO/S | 1972Kr15 | PR C6 2268 (72) |
|  |  |  |  |  |  |  |  |  |  |  |
| 51 Sb 127 | 0 | 3.84 d | 7/2+ | 2.697(6) |  |  | [123Sb] | NMR/ON | 1996Li01 | PR C53 124 (96) |
|  |  |  |  | 2.59(12) |  |  |  | NO/S | 1972Kr15 | PR C6 2268 (72) |
|  |  |  |  |  |  |  |  |  |  |  |
| 51 Sb 128 | 0 | 9.1 h | 8- | 1.3(2) |  |  |  | NO/S | 1972Kr15 | PR C6 2268 (72) |
|  |  |  |  |  |  |  |  |  |  |  |
| 51 Sb 129 | 0 | 4.4 h | 7/2+ | 2.79(2) |  |  | [123Sb] | NMR/ON | 1997St06/1996Li01 | PR C53 124 (96) |
|  |  |  |  |  |  |  |  |  |  |  |
| 51 Sb 131 | 0 | 23 m | 7/2+ | 2.89(1) |  |  | [123Sb] | NMR/ON | 1997St06 | PRL 78 820 (97) |
|  |  |  |  |  |  |  |  |  |  |  |
| 51 Sb 133 | 0 | 2.5 m | 7/2+ | 3.00(1) |  |  | [123Sb] | NMR/ON | 1997St06 | PRL 78 820 (97) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  |  |  |  |  |  |  |
| 52 Te 115 | 280 | 7.5 s | 11/2- | -0.954(5) |  |  |  | TDPAD | 1977MiZL | DisA 37 4025B (77) |
|  |  |  |  | -1.02(4) |  |  |  | TDPAD | 1972Va38 | PL 42B 54 (72) |
|  |  |  |  |  |  |  |  |  |  |  |
| 52 Te 117 | 274 | 19.1 ns | 5/2+ | -0.787(12) |  |  |  | TDPAD | 1981Io07 | HFI 9 71 (81) |
|  |  |  |  | -0.75(5) |  |  |  | TDPAD | 1981Ha11 | ZP A299 251 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 52 Te 119 | 0 | 16.1 h | 1/2+ | 0.25(5) |  |  |  | AB | 1965Ad03 | ArkF 30 111 (65) |
|  | 300 | 4.68 d | 11/2- | 0.894(6) |  |  | [125Te 36] | NMR/ON | 1987Ni11 | PR C36 2069 (87) |
|  | 320 | 2.2 ns | 5/2+ | -0.9(2) |  |  |  | IPAD | 1989Ra17 | Cf86Bang A4 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 52 Te 120 | 560 | 9.3 ps | 2+ | +0.78(14) |  |  |  | TF | 1985ThZX | BAPS 30 1264 (85) |
|  |  |  |  | +0.58(6) |  |  |  | TF | 1981Sh15 | PR C24 954 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 52 Te 121 | 294 | 154 d | 11/2- | 0.895(10) |  |  | [125Te 36] | NMR/ON | 1987Ni11 | PR C36 2069 (87) |
|  | 443 | 83.5 ns | 7/2+ | +0.738(10) |  |  |  | TDPAD | 1980Io01 | PL 90B 65 (80) |
|  |  |  |  | +0.774(11) |  |  |  | TDPAD | 1989Ra17 | Cf86Bang A4 (86) |
|  |  |  |  | +0.63(7) |  |  |  | TDPAD | 1981Ha11 | ZP A299 251 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 52 Te 122 | 564 | 7.52 ps | 2+ | +0.72(9) |  |  |  | TF | 2007ST24 | PR C76 034306 (07) |
|  |  |  |  | +0.66(4) |  |  |  | TF | 1988Du10 | PR C37 2881 (88) |
|  |  |  |  | +0.68(4) |  |  |  | TF | 1985ThZX | BAPS 30 1264 (85) |
|  |  |  |  | +0.72(4) |  |  |  | IPAC, R | 1988Du10 | PR C37 2881 (88) |
|  |  |  |  | +0.66(6) |  |  |  | TF | 1981Sh15 | PR C24 954 (81) |
|  |  |  |  | +0.56(10) |  |  |  | TF | 1985Gr17 | IzF 49 2137 (85) |
|  |  |  |  |  | -0.57(5) | R |  | CER | 1978Be10 | PR C17 628 (78) |
|  |  |  |  |  | -0.50(5) |  |  | CER, R | 1978Be10 | PR C17 628 (78) |
|  |  |  |  |  |  |  |  |  |  |  |
| 52 Te 123 | 0 | >1x10\*15 y | 1/2+ | -0.7369478(8) |  |  | [125Te] | N | 1977Bu29/1953We51 | ZNat 32a 1263 (77)/PR 89 923 (53) |
|  | 159 | 0.2 ns | 3/2+ | 0.72(12) |  |  |  | IPAC | 1970Ro31 | ZP A240 396 (70) |
|  | 247 | 119.7 d | 11/2- | -0.927(8) |  |  | [125Te 36] | NMR/ON | 1987Ni11/1973Si26 | PR C36 2097 (87)/NP A210 307 (73) |
|  | 440 | 27 ps | 3/2+ | +0.5(2) |  |  |  | TF | 1988Be45 | HFI 43 457 (88) |
|  |  |  |  | +0.51(9) |  |  |  | IMPAC | 1974Ro40 | NP A236 165 (74) |
|  | 489 | 30.7 ns | 7/2+ | +0.787(14) |  |  |  | TDPAD | 1981Io07/1981Io05 | HFI 9 71 (81)/RRou 26 239 (81) |
|  | 506 | 18 ps | 5/2+ | +0.1(2) |  |  |  | TF | 1988Be45 | HFI 43 457 (88) |
|  |  |  |  | +0.10(6) |  |  |  | IMPAC | 1974Ro40 | NP A236 165 (74) |
|  |  |  |  |  |  |  |  |  |  |  |
| 52 Te 124 | 603 | 6.25 ps | 2+ | +0.74(6) |  |  |  | TF | 2007ST24 | PR C76 034306 (07) |
|  |  |  |  | +0.56(6) |  |  |  | IPAC, R | 1988Du10 | PR C37 2881 (88) |
|  |  |  |  | +0.66(6) |  |  |  | TF | 1985ThZX | BAPS 30 1264 (85) |
|  |  |  |  | +0.62(8) |  |  |  | TF | 1988Du10 | PR C37 2881 (88) |
|  |  |  |  | +0.52(6) |  |  |  | TF | 1981Sh15 | PR C24 954 (81) |
|  |  |  |  |  | -0.45(5) | R |  | CER | 1974Ba45/1974La05 | PR C10 1166(74)/NP A221 26 (74) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  |  |  |  |  | 1975Kl07 | NP A248 342 (75) |
|  |  |  |  |  |  |  |  |  |  |  |
| 52 Te 125 | 0 | stable | 1/2+ | -0.8885051(4) |  |  | [2H] | N | 1977Bu29 | ZNat 32a 1263 (77) |
|  |  |  |  | -0.8884509(10) |  |  | [23Na] |  | 1977Bu29/1953We51 | ZNat 32a 1263 (77)/PR 89 923 (53) |
|  | 36 | 1.48 ns | 3/2+ | +0.605(4) |  |  | [125Te] | ME | 1975Bo51 | PL 54A 293 (75) |
|  |  |  |  |  | -0.31(2) | R | [129I] | ME | 1977La03 | PR B15 2504 (77) |
|  | 145 | 58 d | 11/2- | -0.985(6) |  |  | [125Te 36] | NMR/ON | 1980Ge02 | PR C21 439 (80) |
|  |  |  |  |  | 0.0(2) | R | [129Te] | CLS | 2006SI40 | HFI 171 173 (06) |
|  |  |  |  |  | -0.06(2) |  |  | NO/ME | 1987Be36 | HFI 35 1023 (87) |
|  | 321 | 695 ps | 9/2- | -0.92(3) |  |  |  | IPAC | 1970Cr07 | NP A154 369 (70) |
|  |  |  |  |  | 0.12(+5,-9) | R | [125Te 36] | IPAC | 1976Va28 | HFI 2 321 (76) |
|  | 443 | 19 ps | 3/2+ | +0.93(9) |  |  |  | TF | 2009CH59 | PR C80 054301 (09) |
|  |  |  |  | +1.0(3) |  |  |  | TF | 2007ST24 | PR C76 034306 (07) |
|  |  |  |  | +0.7(2) |  |  |  | TF | 1988Be45 | HFI 43 457 (88) |
|  |  |  |  | +0.59(9) |  |  |  | IMPAC | 1974Ro40 | NP A236 165 (74) |
|  | 463 | 13 ps | 5/2+ | +0.50(6) |  |  |  | TF | 2009CH59 | PR C80 054301 (09) |
|  |  |  |  | +0.9(2) |  |  |  | TF | 2007ST24 | PR C76 034306 (07) |
|  |  |  |  | +0.50(12) |  |  |  | TF | 1988Be45 | HFI 43 457 (88) |
|  |  |  |  | +0.8(2) |  |  |  | TF | 1985Gr17 | IzF 49 2137 (85) |
|  | 526 | <160 ps | 7/2- | <0 |  |  |  | IPAC | 1971Ro17 | NP A170 240 (71) |
|  | 672 | 1.3 ps | 5/2+ | -0.1(7) |  |  |  | TF | 2009CH59 | PR C80 054301 (09) |
|  |  |  |  | -0.6(7) |  |  |  | TF | 1988Be45 | HFI 43 457 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 52 Te 126 | 666 | 4.41 ps | 2+ | +0.67(3) |  |  |  | TF | 2007ST24 | PR C76 034306 (07) |
|  |  |  |  | +0.62(8) |  |  |  | TF | 1988Du10 | PR C37 2881 (88) |
|  |  |  |  | +0.68(6) |  |  |  | TF | 1985ThZX | BAPS 30 1264 (85) |
|  |  |  |  | +0.38(6) |  |  |  | TF | 1981Sh15 | PR C24 954 (81) |
|  |  |  |  |  | -0.23(5) | R |  | CER | 1976Bo12 | NP A261 498 (1976) |
|  |  |  |  |  | -0.20(9) |  |  | CER | 1975Ra24 | NP A250 333 (75) |
|  | 2975 | 10.6 ns | 10+ | -1.52(9) |  |  |  | TDPAD | 1983Go02 | YadF 37 257 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 52 Te 127 | 0 | 9.4 h | 3/2+ | 0.635(4) |  |  | [125Te 36] | NMR/ON | 1979Ge04 | PR C20 1171 (79) |
|  | 88 | 109 d | 11/2- | -1.041(6) |  |  | [125Te 36] | NMR/ON | 1980Ge02 | PR C21 439 (80) |
|  |  |  |  |  | +0.17(12) | R | [129Te] | CLS | 2006SI40 | HFI 171 173 (06) |
|  | 341 | 411 ps | 9/2- | -0.96(6) |  |  |  | IPAC | 1974So03 | NP A224 358 (74) |
|  |  |  |  | -0.98(15) |  |  |  | IPAC | 1985De04 | PR C31 593 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 52 Te 128 | 743 | 3.2 ps | 2+ | +0.63(3) |  |  |  | TF | 2007ST24 | PR C76 034306 (07) |
|  |  |  |  | +0.50(6) |  |  |  | TF | 1988Du10 | PR C37 2881 (88) |
|  |  |  |  | +0.70(8) |  |  |  | TF | 1985ThZX | BAPS 30 1264 (85) |
|  |  |  |  | +0.62(8) |  |  |  | TF | 1981Sh15 | PR C24 954 (81) |
|  |  |  |  |  | -0.22(5) | R |  | CER | 1976Bo12 | NP A261 498 (1976) |
|  |  |  |  |  | -0.06(5) |  |  | CER | 1978Be10 | PR C17 628 (78) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | -0.14(12) |  |  | CER, R | 1978Be10 | PR C17 628 (78) |
|  |  |  |  |  |  |  |  |  |  |  |
| 52 Te 129 | 0 | 69.5 m | 3/2+ | 0.702(4) |  |  | [125Te 36] | NMR/ON | 1979Ge04 | PR C20 1171 (79) |
|  |  |  |  |  | 0.055(13) | R | [125Te 36] | NO/ME | 1987Be36 | HFI 35 1023 (87) |
|  | 106 | 33.5 d | 11/2- | -1.091(7) |  |  | [125Te 36] | NMR/ON | 1979Ge04 | PR C20 1171 (79) |
|  |  |  |  | -1.10(3) |  |  |  | CLS | 2006SI40 | HFI 171 173 (06) |
|  |  |  |  |  | +0.40(3) | R | calc efg | CLS | 2006SI40 | HFI 171 173 (06) |
|  |  |  |  |  |  |  |  |  |  |  |
| 52 Te 130 | 840 | 2.3 ps | 2+ | +0.70(4) |  |  |  | TF | 2007ST24 | PR C76 034306 (07) |
|  |  |  |  | +0.58(10) |  |  |  | TF | 1988Du10 | PR C37 2881 (88) |
|  |  |  |  | +0.66(16) |  |  |  | TF | 1985Gr17 | IzF 49 2137 (85) |
|  |  |  |  | +0.58(12) |  |  |  | TF | 1981Sh15 | PR C24 954 (81) |
|  |  |  |  |  | -0.12(5) |  |  | CER | 1976Bo12 | NP A261 498 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 52 Te 131 | 0 | 25 m | 3/2+ | 0.696(9) |  |  | [125Te 36] | NMR/ON | 1979Ge04 | PR C20 1171 (79) |
|  | 182 | 30 h | 11/2- | -1.04(4) |  |  |  | NO/S | 1975Lh01 | PR C12 609 (75) |
|  |  |  |  | (-)1.123(7) |  |  |  | NMR/ON | 1998Wh05 | NP A640 322 (98) |
|  |  |  |  | -1.20(14) |  |  |  | CLS | 2006SI40 | HFI 171 173 (06) |
|  |  |  |  |  | +0.25(14) | R | [129Te] | CLS | 2006SI40 | HFI 171 173 (06) |
|  |  |  |  |  |  |  |  |  |  |  |
| 52 Te 132 | 974 | 1.8 ps | 2+ | +0.6(3) |  |  |  | TF | 2008BE14 | PL B664 241 (08) |
|  |  |  |  | (+)0.70(10) |  |  |  | RIV | 2005ST18 | PRL 94 192501 (05) |
|  | 1775 | 145 ns | 6+ | +4.7(5) |  |  |  | TDPAC | 1986Fo02 | NP A451 104 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 52 Te 133 | 0 | 12.5 m | 3/2+ | +0.85(2) |  |  |  | CLS | 2006SI40 | HFI 171 173 (06) |
|  |  |  |  |  | +0.23(9) | R | [129Te] | CLS | 2006SI40 | HFI 171 173 (06) |
|  | 334 | 55.4 m | 11/2- | (-) 1.129(7) |  |  |  | NMR/ON | 1998Wh05 | NP A640 322 (98) |
|  |  |  |  | 1.15(9) |  |  |  | CLS | 2006SI40 | HFI 171 173 (06) |
|  |  |  |  |  | +0.28(14) | R | [129Te] | CLS | 2006SI40 | HFI 171 173 (06) |
|  |  |  |  |  |  |  |  |  |  |  |
| 52 Te 134 | 1576 | 1.96(6) ns | 4+ | 3(2) |  |  |  | IPAC | 2008GO28 | PR C78 044331 (08) |
|  | 1691 | 163 ns | 6+ | +5.08(15) |  |  |  | FDPAC | 1976Wo03 | PRL 36 1072 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 52 Te 135 | 0 | 19 s | 7/2- | -0.69(5) |  |  |  | CLS | 2006SI40 | HFI 171 173 (06) |
|  |  |  |  |  | +0.29(9) | R | [129Te] | CLS | 2006SI40 | HFI 171 173 (06) |
|  | 1555 | 510 ns | 19/2- | -3.8(4) |  |  |  | FDPAC | - | Cf83Gron NP13 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 53 I 117 | 0 | 2.22 m | (5/2)+ | 3.1(2) |  |  | [131,132I] | NO/S | 1986Gr06 | PL 173B 115 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 53 I 118 | 0 | 13.7 m | 2- | 2.0(2) |  |  | [131,132I] | NO/S | 1986Gr06 | PL 173B 115 (86) |
|  | 104 | 8.5 m | (7-) | 4.2(2) |  |  | [131,132I] | NO/S | 1986Gr06 | PL 173B 115 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 53 I 119 | 0 | 19 m | 5/2+ | (+)2.9(1) |  |  | [131,132I] | NO/S | 1986Gr06 | PL 173B 115 (86) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  | 307 | 35 ns | 9/2+ | +5.40(14) |  |  |  | TDPAD | 1982Da17 | NP A383 421 (82) |
|  |  |  |  | +5.5(4) |  |  |  | TDPAD | 1982Ga21 | PR C26 1101 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 53 I 120 | 0 | 1.4 h | 2- | 1.23(3) |  |  | [131,132I] | NO/S | 1986Gr06 | PL 173B 115 (86) |
|  | ~930 | 53 m | (7-) | 4.2(2) |  |  | [131,132I] | NO/S | 1986Gr06 | PL 173B 115 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 53 I 121 | 0 | 2.1 h | 5/2- | 2.3(1) |  |  | [131,132I] | NO/S | 1986Gr06 | PL 173B 115 (86) |
|  | 2353 | 80 ns | (21/2+) | +12.6(11) |  |  |  | TDPAD | 1982Ha46 | NP A389 341 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 53 I 122 | 0 | 3.63 m | 1+ | 0.94(3) |  |  | [131,132I] | NO/S | 1986Gr06 | PL 173B 115 (86) |
|  |  |  |  | +ve sign |  |  |  | NO/S | 1988As06 | HFI 43 489 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 53 I 123 | 0 | 13.3 h | 5/2+ | 2.818(7) |  |  | [131I] | NMR/ON | 1979Sc13 | NP A323 1 (79) |
|  | 2660 | 29 ns | 21/2+ | +10.9(9) |  |  |  | TDPAD |  | Cf83Gron NP14 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 53 I 124 | 0 | 4.18 d | 2- | 1.446(4) |  |  |  | NMR/ON | 1992Oh01 | PR C45 162 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 53 I 125 | 0 | 60.2 d | 5/2+ | 2.821(5) |  |  | [131I] | NMR/ON | 1979Sc13 | NP A323 1 (79) |
|  |  |  |  |  | -0.761(17) | R | [127I] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.776(17) |  | [127I] | MA, R | 1958Fl39 | PR 110 536 (58)/PR B61 13588 (00) |
|  | 188 | 0.35 ns | 3/2+ | +1.06(7) |  |  |  | IPAC | 1973Ka37 | ZP 265 65 (73) |
|  |  |  |  |  |  |  |  |  |  |  |
| 53 I 126 | 0 | 13.1 d | 2- | 1.438(4) |  |  |  | NMR/ON | 1992Oh01 | PR C45 162 (92) |
|  | 111 | 56 ns | unknown | -2.24(2) |  |  |  | TDPAD |  | PC75 Block (75) |
|  |  |  |  |  |  |  |  |  |  |  |
| 53 I 127 | 0 | stable | 5/2+ | +2.81327(8) |  |  | [1H] | N, O | 1951Ya03/1939Sc16 | PR 82 750 (51)/ZP 112 199 (39) |
|  |  |  |  |  | -0.696(12) | R |  |  | 2008Py02 | Mol Phys 106 1965 (2008) |
|  |  |  |  |  | 0.72(2) |  |  | R | 2004Al08 |  |
|  |  |  |  |  | -0.710(10) |  |  | R | 2001Bi17 | PR A64 052507 (01) |
|  |  |  |  |  | (-)0.689(15) |  |  | R | 2000HA64 | PR B61 13588 (00) |
|  |  |  |  |  | -0.789 e |  |  | AB/R | 1976Fu06 | JPCR 5 835 (76) |
|  | 58 | 1.95 ns | 7/2+ | +2.54(5) |  |  | [127I] | ME | 1972Wo13 | PR C6 228 (72) |
|  |  |  |  |  | -0.624(11) | R | [127I] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.636(9) |  | [127[I] | R | 2001Bi17 | PR A64 052507 (01) |
|  |  |  |  |  | -0.60(3) |  |  | ME | 1987Gr28 | JP B20 5595 (87) |
|  |  |  |  |  | -0.62(2) |  | [127I] | ME, R | 1964Pe15/2000Ha64 | PL 13 198 (64)/PR B61 13588 (00) |
|  | 203 | 0.388ns | 3/2+ | +0.97(7) |  |  |  | IPAC, R | 1976Le23 | HPAc 49 661 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 53 I 128 | 138 | 845 ns | 4- | -0.72(3) |  |  |  | R | 1982Al10 | IzF 46 52 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 53 I 129 | 0 | 1.6x10\*7 y | 7/2+ | +2.6210(3) |  |  | [2H] | N | 1951Wa12 | PR 82 97 (51) |
|  |  |  |  |  | -0.488(8) | R | [127I] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.498(7) |  | [127[I] | R | 2001Bi17 | PR A64 052507 (01) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | -0.482(10) |  | [127I] | Q, MA, R | 1953Li16/2000Ha64 | PR 90 609 (53)/PR B61 13588 (00) |
|  | 28 | 16.8 ns | 5/2+ | +2.805(3) |  |  | [129I] | ME | 1981De35 | PL 106B 457 (79) |
|  |  |  |  |  | -0.604(10) | R | [127I] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.616(9) |  | [127I] | R | 2001Bi17 | PR A64 052507 (01) |
|  |  |  |  |  | -0.598(13) |  | [129I] | ME, R | 1972Ro41/2000Ha64 | NIM 105 509 (72)/PR B61 13588 (00) |
|  |  |  |  |  | -0.42(2) |  |  | ME | 1987Gr28 | JP B20 5595 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 53 I 130 | 0 | 12.36 h | 5+ | 3.349(7) |  |  |  | NMR/ON | 1992Oh01 | PR C45 162 (92) |
|  | 203 | 229 ns | -5 | -0.24(2) |  |  |  | TDPAD | 1989Ra17 | PC75 Bloch (75) |
|  |  |  |  |  |  |  |  |  |  |  |
| 53 I 131 | 0 | 8.04 d | 7/2+ | +2.742(1) |  |  | [127I] | AB | 1960Li13 | PR 119 2022 (60) |
|  |  |  |  |  | -0.34(2) | R | [127I] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.35(2) |  | [127I] | AB, R | 1960Li13/2000Ha64 | PR 119 2022 (60)/PR B61 13588 (00) |
|  | 150 | 0.95 ns | 5/2+ | +2.8(5) |  |  |  | IPAC | 1967Ta07 | NP A102 203 (67) |
|  | 1797 | 5.9 ns | (15/2)- | -1.2(4) |  |  |  | IPAC | 1967Ta07 | NP A102 203 (67) |
|  |  |  |  |  | 0.66(6) | R | [129I 28] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.65(4) |  | [129I 28] | TDPAC, R | 1973Ha61/2000Ha64 | JCP 58 3339 (73)/PR B61 13588 (00) |
|  |  |  |  |  |  |  |  |  |  |  |
| 53 I 132 | 0 | 2.28 h | 4+ | 3.088(7) |  |  | [127I] | AB | 1960Wh06 | BAPS 5 504 (60) |
|  |  |  |  |  | 0.08(1) | R | [127I] | AB, R | 1960Wh06/2000Ha64 | BAPS 5 504 (60)/PR B61 13588 (00) |
|  | 50 | 1.12 ns | 3+ | +2.06(18) |  |  |  | TDPAC | 2009TA23 | PR C80 034304 (09) |
|  |  |  |  | +2.2(3) |  |  |  | IPAC | 1969Si06 | NP A132 221 (69) |
|  |  |  |  |  | 0.20(6) | R | [129I] | IPAC, R | 1979Oo01/2000Ha64 | NP A321 180 (79)/PR B61 13588 (00) |
|  | 278 | 1.42 ns | 1+ | +1.88(11) |  |  | [129I] | TDPAC | 1979Oo01 | NP A321 180 (79) |
|  |  |  |  |  | -0.150(5) | R | [129I] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | (-)0.148(6) |  | [129I] | TDPAC, R | 1979Oo01/2000Ha64 | NP A321 180 (79)/PR B61 13588 (00) |
|  |  |  |  |  |  |  |  |  |  |  |
| 53 I 133 | 0 | 20.9 h | 7/2+ | +2.856(5) |  |  | [127I] | AB | 1961Al20 | UCRL 9850 (61) |
|  |  |  |  |  | -0.23(1) | R | [127I] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.24(1) |  | [127I] | AB, R | 1961Al20/2000Ha64 | UCRL 9850 (61)/PR B61 13588 (00) |
|  |  |  |  |  |  |  |  |  |  |  |
| 53 I 135 | 0 | 6.57 h | 7/2+ | (+)2.940(2) |  |  |  | NMR/ON | 1998Wh04 | NP A644 277 (98) |
|  |  | est 2 ns | 15/2+ | >6 |  |  |  | IPAC | 2008GO28 | PR C78 044331 (08) |
|  |  |  |  |  |  |  |  |  |  |  |
| 54 Xe 117 | 0 | 1.02 m | 5/2+ | -0.5938(15) d |  |  | [129Xe] | CFBLS | 1990NeZY | PC Neugart (90) |
|  |  |  |  |  | +1.14(4) | R | [131Xe] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +1.16(4) |  | [131Xe] | CFBLS | 1990NeZY | PC Neugart (90) |
|  |  |  |  |  |  |  |  |  |  |  |
| 54 Xe 119 | 0 | 5.8 m | 5/2+ | -0.6542(15) d |  |  | [129Xe] | CFBLS | 1990NeZY | PC Neugart (90) |
|  |  |  |  | -0.59(6) |  |  |  | NO/S | 1986ShZM | Cf86Dubr, 658 (86) |
|  |  |  |  |  | +1.29(5) | R | [131Xe] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +1.31(5) |  | [131Xe] | CFBLS | 1990NeZY | PC Neugart (90) |
|  |  |  |  |  |  |  |  |  |  |  |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
| 54 Xe 121 | 0 | 39 m | 5/2+ | -0.701(3) d |  |  | [129Xe] | CFBLS | 1990NeZY | PC Neugart (90) |
|  |  |  |  | -0.65(3) |  |  |  | NO/S | 1986ShZM | Cf86Dubr 658 (86) |
|  |  |  |  |  | +1.31(5) | R | [131Xe] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +1.33(5) |  | [131Xe] | CFBLS | 1990NeZY | PC Neugart (90) |
|  |  |  |  |  |  |  |  |  |  |  |
| 54 Xe 123 | 0 | 2.00 h | 1/2+ | -0.150(3) d |  |  | [129Xe] | CFBLS | 1990NeZY | PC Neugart (90) |
|  | 180+x | 5.2 s | 7/2(-) | -0.902(7) |  |  |  | TDPAD | 1982Ze05 | ZP A308 227 (82) |
|  |  |  |  |  | 1.4(3) | R | [125Xe 296] | TDPAD | 1982Ze05 | ZP A308 227 (82) |
|  | 201+x | 17 ns | 9/2- |  | 1.1(6) | R | [123Xe 180+x] | TDPAD | 1982Ze05 | ZP A308 227 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 54 Xe 124 | 354 | 56 ps | 2+ | +0.46(4) |  |  | [132Xe 668] | IMPAC | 1975Go18 | PR C12 628 (75) |
|  |  |  |  |  |  |  |  |  |  |  |
| 54 Xe 125 | 0 | 17.1 h | 1/2+ | -0.269(3) d |  |  | [129Xe] | CFBLS | 1990NeZY | PC Neugart (90) |
|  | 253 | 57 s | 9/2- | -0.7453(8) d |  |  | [129Xe] | CFBLS | 1990NeZY | PC Neugart (90) |
|  |  |  |  |  | +0.417(15) | R | [131Xe] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.424(15) |  | [131Xe] | CFBLS | 1990NeZY | PC Neugart (90) |
|  | 296 | 140 ns | 7/2+ | +0.93(4) |  |  |  | TDPAD | 1983Al21 | ZP A314 17 (83) |
|  |  |  |  |  | model estimate 1.40(5) |  |  | - | 1983Al21 | ZP A314 17 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 54 Xe 126 | 389 | 41.2 ps | 2+ | +0.74(14) |  |  |  | IPAC | 1977Ar19 | HFI 5 81 (77) |
|  |  |  |  | +0.54(8) |  |  | [132Xe 668] | IMPAC | 1975Go18 | PR C12 628 (75) |
|  |  |  |  |  |  |  |  |  |  |  |
| 54 Xe 127 | 0 | 36.4 d | 1/2+ | -0.5033(11) d |  |  | [129Xe] | CFBLS | 1990NeZY | PC Neugart (90) |
|  |  |  |  | -0.5039(2) |  |  | [129,131Xe] | LRS | 1989Ra17 | Cf82OakR 183 (82) |
|  | 297 | 1.15 m | 9/2- | -0.8844(10) d |  |  | [129Xe] | CFBLS | 1990NeZY | PC Neugart (90) |
|  |  |  |  |  | +0.68(2) | R | [131Xe] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.69(2) |  | [131Xe] | CFBLS | 1990NeZY | PC Neugart (90) |
|  | 342 | 37 ns | 7/2+ | +0.85(3) |  |  |  | TDPAD | 1984Lo07 | ZP A317 215 (84) |
|  |  |  |  |  |  |  |  |  |  |  |
| 54 Xe 128 | 443 | 21.4 ps | 2+ | +0.82(14) |  |  | [126Xe 389] | IMPAC | 1977Ar19 | HFI 5 81 (77) |
|  |  |  |  | +0.62(6) |  |  | [132Xe 668] | IMPAC | 1975Go18 | PR C12 628 (75) |
|  | 2787 | 83 ns | 8- | -0.29(7) |  |  |  | TDPAD | 1984Lo07 | ZP A317 215 (84) |
|  |  |  |  |  |  |  |  |  |  |  |
| 54 Xe 129 | 0 | stable | 1/2+ | -0.777976(8) |  |  | [2H] | N | 1968Br12 | HPAc 41 367 (68) |
|  | 40 | 0.98 ns | 3/2+ | +0.58(8) |  |  | [129Xe] | ME | 1974VaYZ | JPCo 35 C6-301 (74) |
|  |  |  |  |  | -0.393(10) | R | [131Xe] | R | 2001Ke15 | CPL 346 155 (01) |
|  |  |  |  |  | -0.41(4) |  | [131Xe] | ME | 1964Pe06 | PR 135 B1102 (64) |
|  | 236 | 8.89 d | 11/2- | -0.8906(12) d |  |  | [129Xe] | CFBLS | 1990NeZY | PC Neugart (90) |
|  |  |  |  | -0.891223(4) |  |  | [131Xe 164] | N, OP/RD, NO/S | 1986Ki16/1974Si07 | PR C34 1974 (86)/ZP 267 145 (74) |
|  |  |  |  | 0.8911(5) |  |  | [133Xe] | NMR/ON | 1987Ed01 | ZP A326 255 (87) |
|  |  |  |  |  | +0.63(2) | R | [131Xe] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.64(2) |  | [131Xe] | CFBLS | 1990NeZY | PC Neugart (90) |
|  |  |  |  |  |  |  |  |  |  |  |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
| 54 Xe 130 | 538 | 10.0 ps | 2+ | +0.67(2) |  |  |  | TF | 2002Ja02 | PR C65 024316 2002 |
|  |  |  |  | +0.76(14) |  |  | [126Xe 389] | IMPAC | 1977Ar19 | HFI 5 81 (77) |
|  |  |  |  | +0.62(8) |  |  | [132Xe 668] | IMPAC | 1975Go18 | PR C12 628 (75) |
|  | 1122 | 4.6 ps | 2+ | +0.9(2) |  |  |  | TF | 2002Ja02 | PR C65 024316 2002 |
|  | 1205 | 2.4 ps | 4+ | +1.7(2) |  |  |  | TF | 2002Ja02 | PR C65 024316 2002 |
|  | 2972 | 5.17 ns | 10+ | -2.05(14) |  |  |  | TDPAD | 1983Go02 | YadF 37 257 (83) |
|  |  |  |  | -1.6(2) |  |  |  | IPAD | 1985Ku15 | PR C30 820 (84) |
|  |  |  |  |  |  |  |  |  |  |  |
| 54 Xe 131 | 0 | stable | 3/2+ | +0.6915(2) d |  |  | [129Xe] | CFBLS | 1990NeZY | PC Neugart (90) |
|  |  |  |  | +0.691862(4) |  |  | [2H] | N | 1968Br12 | HPAc 41 367 (68) |
|  |  |  |  |  | -0.114(1) | R | [calc efg] | R | 2001Ke15 | CPL 346 155 (01) |
|  |  |  |  |  | -0.117(6) |  | [calc efg] | R, CFBLS | 2000Pa02 | JP B33 303 (00) |
|  |  |  |  |  | -0.116(4) |  |  | CFBLS | 1989Bo03 | PL B216 7 (89) |
|  |  |  |  |  | -0.120(12) |  |  | AB | 1961Fa05 | PR 123 198 (61) |
|  | 164 | 11.8 d | 11/2- | -0.994(2) d |  |  | [129Xe] | CFBLS | 1990NeZY | PC Neugart (90) |
|  |  |  |  | 0.9940(5) |  |  | [133Xe] | NMR/ON | 1987Ed01 | ZP A326 255 (87) |
|  |  |  |  | -0.994048(6) |  |  |  | N, OP/RD, NO/S | 1986Ki16/1974Si07 | PR C34 1974 (86)/ZP 267 145 (74) |
|  |  |  |  |  | +0.72(30 | R | [131Xe] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.73(3) |  | [131Xe] | CFBLS | 1990NeZY | PC Neugart (90) |
|  |  |  |  |  |  |  |  |  |  |  |
| 54 Xe 132 | 668 | 4.9 ps | 2+ | +0.63(2) |  |  |  | TF | 2002Ja02 | PR C65 024316 2002 |
|  |  |  |  | +0.70(7) |  |  |  | TF, R | 2002Ja02 | PR C65 024316 2002 |
|  |  |  |  | +0.74(10) |  |  | [126Xe 389] | IMPAC | 1977Ar19 | HFI 5 81 (77) |
|  |  |  |  | +0.78(10) |  |  |  | IPAC, R | 1975Go18 | PR C12 628 (75) |
|  | 1298 | 3.0 ps | 2+ | +0.2(4) |  |  |  | TF | 2002Ja02 | PR C65 024316 2002 |
|  | 1440 | 1.8 ps | 4+ | +2.4(4) |  |  |  | TF | 2002Ja02 | PR C65 024316 2002 |
|  | 2214 | 90 ns | 7- | -0.06(3) |  |  |  | TDPAD | 1986Vo14 | YadF 44 849 (86) |
|  |  |  |  |  | 0.010(5) | R |  | TDPAD | 1987Le31 | UkrF 32 1636 (87) |
|  | 2753 | 8.4 ms | 10+ | (-)1.95(5) |  |  |  | TDPAD | 1976Ha50 | ZP A278 303 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 54 Xe 133 | 0 | 5.24 d | 3/2+ | +0.8129(5) d |  |  | [129Xe] | CFBLS | 1990NeZY | PC Neugart (90) |
|  |  |  |  | +0.81340(7) |  |  | [131Xe 164] | N, OP/RD | 1986Ki16 | PR C34 1974 (86) |
|  |  |  |  | 0.81(1) |  |  |  | NMR/ON |  | Bk86 LTNO 953 (86) |
|  |  |  |  | +0.8125(3) |  |  | [129,131Xe] | LRS |  | Cf82OakR 183 (82) |
|  |  |  |  | +0.81(1) |  |  | [131Xe] | O | 1978Hu04 | ZP A285 229 (78) |
|  |  |  |  | 0.80(10) |  |  |  | NO/S | 1974Si07 | ZP 267 145 (74) |
|  |  |  |  |  | +0.140(5) | R | [131Xe] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.142(5) |  | [131Xe] | CFBLS | 1990NeZY | PC Neugart (90) |
|  |  |  |  |  | +0.145(14) |  | [131Xe] | LRS |  | Cf82OakR 183 (82) |
|  |  |  |  |  | +0.12(4) |  | [131Xe] | O | 1978Hu04 | ZP A285 229 (78) |
|  | 233 | 2.19 d | 11/2- | -1.0825(13) d |  |  | [129Xe] | CFBLS | 1990NeZY | PC Neugart (90) |
|  |  |  |  |  | +0.76(5) | R | [131Xe] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.77(3) |  | [131Xe] | CFBLS | 1990NeZY | PC Neugart (90) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  |  |  |  |  |  |  |
| 54 Xe 134 | 847 | 1.9 ps | 2+ | +0.708(14) |  |  |  | TF | 2002Ja02 | PR C65 024316 2002 |
|  |  |  |  | 1.1(2) |  |  | [132Xe 668] | TF | 1993Sp01 | NP A552 140 (93) |
|  | 1731 | 2.2 ps | 4+ | +3.2(6) |  |  |  | TF | 2002Ja02 | PR C65 024316 2002 |
|  |  |  |  |  |  |  |  |  |  |  |
| 54 Xe 135 | 0 | 9.10 h | 3/2+ | +0.9032(7) d |  |  | [129Xe] | CFBLS | 1990NeZY | PC Neugart (90) |
|  |  |  |  | 0.9031(2) |  |  | [131Xe 164] | N, OP/RD | 1987CaZU | BAPS 32 1563 (87) |
|  |  |  |  |  | +0.210(7) | R | [131Xe] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.214(7) |  | [131Xe] | CFBLS | 1990NeZY | PC Neugart (90) |
|  | 527 | 15.3 m | 11/2- | -1.1036(14) d |  |  | [129Xe] | CFBLS | 1990NeZY | PC Neugart (90) |
|  |  |  |  | 1.1030(2) |  |  | [131Xe 164] | N, OP/RD | 1987CaZU | BAPS 32 1563 (87) |
|  |  |  |  |  | +0.61(2) | R | [131Xe] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.62(2) |  | [131Xe] | CFBLS | 1990NeZY | PC Neugart (90) |
|  |  |  |  |  |  |  |  |  |  |  |
| 54 Xe 136 | 1313 | 0.21 ps | 2+ | +1.53(9) |  |  |  | TF | 2002Ja02 | PR C65 024316 2002 |
|  |  |  |  | 2.4(5) |  |  | [132Xe 668] | TF | 1993Sp01 | NP A552 140 (93) |
|  | 1694 | 1.32 ns | 4+ | +4.3(17) |  |  |  | TF | 2002Ja02 | PR C65 024316 2002 |
|  |  |  |  | 3.2(6) |  |  |  | IPAC | 1985Be04 | PR C31 570 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 54 Xe 137 | 0 | 3.82 m | 7/2- | -0.968(8) |  |  | [129,131Xe] | CFBLS | 1989Bo03 | PL B216 7 (89) |
|  |  |  |  |  | -0.47(2) | R | [131Xe] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.48(2) |  | [131Xe] | CFBLS | 1989Bo03 | PL B216 7 (89) |
|  | 1620 | (0.6 ns) | 15/2 | 2.0(4) |  |  |  | IPAC | 2010LI03 | PR C81 014316 (10) |
|  |  |  |  |  |  |  |  |  |  |  |
| 54 Xe 139 | 0 | 39.7 s | 3/2- | -0.304(10) |  |  | [129,131Xe] | CFBLS | 1989Bo03 | PL B216 7 (89) |
|  |  |  |  |  | +0.39(2) | R | [131Xe] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.40(2) |  | [131Xe] | CFBLS | 1989Bo03 | PL B216 7 (89) |
|  |  |  |  |  |  |  |  |  |  |  |
| 54 Xe 140 | 377 | 0.163 ns | 2+ | 0.7(2) |  |  |  | IPAC | 2009GO09 | PR C79 034316 (09) |
|  |  |  |  |  |  |  |  |  |  |  |
| 54 Xe 141 | 0 | 1.73 s | 5/2+ | +0.010(4) |  |  | [129,131Xe] | CFBLS | 1989Bo03 | PL B216 7 (89) |
|  |  |  |  |  | -0.57(2) | R | [131Xe] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.58(2) |  | [131Xe] | CFBLS | 1989Bo03 | PL B216 7 (89) |
|  |  |  |  |  |  |  |  |  |  |  |
| 54 Xe 142 | 287 | 0.20 ns | 2+ | 0.8(3) |  |  |  | IPAC R | 2009GO09 | PR C79 034316 (09) |
|  |  |  |  |  |  |  |  |  |  |  |
| 54 Xe 143 | 0 | 0.30 s | 5/2- | -0.4599(14) |  |  | [129,131Xe] | CFBLS | 1989Bo03 | PL B216 7 (89) |
|  |  |  |  |  | +0.91(3) | R | [131Xe] |  | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.93(3) |  | [131Xe] | CFBLS | 1989Bo03 | PL B216 7 (89) |
|  |  |  |  |  |  |  |  |  |  |  |
| 55 Cs 118 | (0) | 14 s | 2 | +3.876(5) |  |  | [133Cs] | ABLS | 1987Co19 | NP A468 1 (87) |
|  |  |  |  |  | +1.31(17) | R | [133Cs] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +1.4(2) st |  | [133Cs] | ABLS | 1987Co19 | NP A468 1 (87) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  | (0) | 17 s | (6-) | 5.4(11) |  |  |  | NO/S | 1987Sh12 | PR C36 413 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 55 Cs 119 | (0) | 36 s | 9/2+ | +5.46(3) |  |  | [133Cs] | ABLS | 1981Th06 | NP A468 1 (87) |
|  |  |  |  |  | +2.65(17) | R | [133Cs] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +2.8(1) st |  | [133Cs] | ABLS | 1981Th06 | NP A468 1 (87) |
|  | (0) | 28 s | 3/2+ | +0.838(5) |  |  | [133Cs] | ABLS | 1981Th06 | NP A468 1 (87) |
|  |  |  |  |  | +0.85(12) | R | [133Cs] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.9(1) st |  | [133Cs] | ABLS | 1981Th06 | NP A468 1 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 55 Cs 120 | 0 | 64 s | 2+ | +3.87(2) |  |  | [133Cs] | ABLS | 1981Th06 | NP A468 1 (87) |
|  |  |  |  |  | +1.36(7) | R | [133Cs] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +1.45(2) st |  | [133Cs] | ABLS | 1981Th06 | NP A468 1 (87) |
|  |  |  |  | +3.92(5) |  |  | [133Cs] | AB | 1978Ek03 | PL 76B 565 (78) |
|  |  |  |  |  |  |  |  |  |  |  |
| 55 Cs 121 | 0 | 2.27 m | 3/2+ | +0.770(4) |  |  | [133Cs] | ABLS | 1981Th06 | NP A468 1 (87) |
|  |  |  |  | 0.79(2) |  |  | [133Cs] | AB | 1977Ek02 | NP A292 144 (77) |
|  |  |  |  |  | +0.79(4) | R | [133Cs] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.838(9) st |  | [133Cs] | ABLS | 1981Th06 | NP A468 1 (87) |
| m | ~36 | 2.02 m | 9/2+ | +5.41(3) |  |  | [133Cs] | ABLS | 1981Th06 | NP A468 1 (87) |
|  |  |  |  |  | +2.53(13) | R | [133Cs] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +2.69(5) st |  | [133Cs] | ABLS | 1981Th06 | NP A468 1 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 55 Cs 122 | (0) | 21 s | 1+ | -0.1333(9) |  |  | [133Cs] | ABLS | 1981Th06 | NP A468 1 (87) |
|  |  |  |  | 0.133(2) |  |  | [133Cs] | AB | 1977Ek02 | NP A292 144 (77) |
|  |  |  |  |  | -0.179(10) | R | [133Cs] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.190(10) st |  | [133Cs] | ABLS | 1981Th06 | NP A468 1 (87) |
|  | (0) | 4.2 m | 8- | +5.41(3) |  |  | [133Cs] | ABLS | 1981Th06 | NP A468 1 (87) |
|  |  |  |  |  | +3.09(8) | R | [133Cs] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +3.29(8) st |  | [133Cs] | ABLS | 1981Th06 | NP A468 1 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 55 Cs 123 | 0 | 5.8 m | 1/2+ | +1.377(7) |  |  | [133Cs] | ABLS | 1981Th06 | NP A468 1 (87) |
|  |  |  |  | +1.39(2) |  |  | [133Cs] | AB | 1977Ek02 | NP A292 144 (77) |
|  |  |  |  |  |  |  |  |  |  |  |
| 55 Cs 124 | 0 | 30.8 s | 1+ | +0.673(3) |  |  | [133Cs] | ABLS | 1981Th06 | NP A468 1 (87) |
|  |  |  |  | +0.674(7) |  |  | [133Cs] | AB | 1977Ek02 | NP A292 144 (77) |
|  |  |  |  |  | -0.69(4) | R | [133Cs] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.74(3) st |  | [133Cs] | ABLS | 1981Th06 | NP A468 1 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 55 Cs 125 | 0 | 45 m | 1/2+ | +1.409(7) |  |  | [133Cs] | ABLS | 1981Th06 | NP A468 1 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 55 Cs 126 | 0 | 1.64 m | 1+ | +0.777(4) |  |  | [133Cs] | ABLS | 1981Th06 | NP A468 1 (87) |
|  |  |  |  | +0.779(8) |  |  | [133Cs] | AB | 1977Ek02 | NP A292 144 (77) |
|  |  |  |  |  | -0.64(3) | R | [133Cs] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | -0.68(2) st |  | [133Cs] | ABLS | 1981Th06 | NP A468 1 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 55 Cs 127 | 0 | 6.2 h | 1/2+ | +1.459(7) |  |  | [133Cs] | ABLS | 1981Th06 | NP A468 1 (87) |
|  | 66 | 24.9 ns | 5/2(+) | 2.7(5) |  |  |  | TDPAC | 1999Co22 | NIMPR B152 357 (99) |
|  |  |  |  |  | 0.58(12) |  | [80Rb 561] | TDPAC | 1999Co22 | NIMPR B152 357 (99) |
|  |  |  |  |  |  |  |  |  |  |  |
| 55 Cs 128 | 0 | 3.62 m | 1+ | +0.974(5) |  |  | [133Cs] | ABLS | 1981Th06 | NP A468 1 (87) |
|  |  |  |  | +0.977(10) |  |  | [133Cs] | AB | 1977Ek02 | NP A292 144 (77) |
|  |  |  |  |  | -0.54(3) | R | [133Cs] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.570(8) st |  | [133Cs] | ABLS | 1981Th06 | NP A468 1 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 55 Cs 129 | 0 | 32.3 h | 1/2+ | +1.491(8) |  |  | [133Cs] | ABLS | 1981Th06 | NP A468 1 (87) |
|  | 575 | 734 ns | 11/2- | +6.55(10) |  |  |  | TDPAD | 1978De29 | PR C18 2061 (78) |
|  |  |  |  |  |  |  |  |  |  |  |
| 55 Cs 130 | 0 | 29.9 m | 1+ | +1.460(7) |  |  | [133Cs] | ABLS | 1981Th06 | NP A468 1 (87) |
|  |  |  |  | +1.466(15) |  |  | [133Cs] | AB | 1977Ek02 | NP A292 144 (77) |
|  |  |  |  |  | -0.056(6) | R | [133Cs] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.059(6) st |  | [133Cs] | ABLS | 1981Th06 | NP A468 1 (87) |
|  | 0+x | 3.7 m | 5(-) | +0.629(4) |  |  | [133Cs] | ABLS | 1981Th06 | NP A468 1 (87) |
|  |  |  |  | +0.631(10) |  |  | [133Cs] | AB | 1977Ek02 | NP A292 144 (77) |
|  |  |  |  |  | +1.36(8) | R | [133Cs] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +1.45(5) st |  | [133Cs] | ABLS | 1981Th06 | NP A468 1 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 55 Cs 131 | 0 | 9.69 d | 5/2+ | +3.53(2) |  |  | [133Cs] | ABLS | 1981Th06 | NP A367 1 (81) |
|  |  |  |  | +3.543(2) |  |  |  | AB/D | 1965Wo05 | PR 140 B1483 (65) |
|  |  |  |  |  | +0.59(2) | R | [133Cs] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.575(6) st |  | [133Cs] | OL, OD, R | 1986St16 | ZNat 41a 24 (86) |
|  |  |  |  |  | -0.67(4) st |  | [133Cs] | ABLS | 1981Th06 | NP A367 1 (81) |
|  | 134 | 8.7 ns | 5/2+ | +1.86(8) |  |  |  | TDPAC | 1989Ra17 | JPJS 34 427 (73) |
|  |  |  |  |  | 0.20(2) | R | [133Cs] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.022(3) |  | [133Cs 81] | TDPAC | 2000De13 | EurPJ A7 177 (00) |
|  |  |  |  |  |  |  |  |  |  |  |
| 55 Cs 132 | 0 | 6.47 d | 2(-) | +2.222(7) |  |  |  | OL | 1975Ac01 | NP A248 157 (75) |
|  |  |  |  | +2.23(1) |  |  | [133Cs] | ABLS | 1981Th06 | NP A367 1 (81) |
|  |  |  |  |  | +0.48(2) | R | [133Cs] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.508(7) st |  | [133Cs] | OL | 1975Ac01 | NP A248 157 (75) |
|  |  |  |  |  | +0.49(2) st |  | [133Cs] | ABLS | 1981Th06 | NP A367 1 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 55 Cs 133 | 0 | stable | 7/2+ | +2.582025(3) |  |  | [87Rb] | OP/RD | 1973Wh01 | PR A7 1178 (73) |
|  |  |  |  | +2.5829128(15) |  |  | [2H] | N | 1968Lu07/1967LU06 | ZNat 23a 1202 (68)/PL 25A 440 (67) |
|  |  |  |  |  | -0.00343(10) | R |  | MB | 1998Pe18 | JCP 47 3896 (1967)/JCP 108 6739 (1998) |
|  |  |  |  |  | -0.00355(4) |  |  | CLS | 2003Ge06 | PRL 91 072501 (2003) |
|  |  |  |  |  | -0.00371(14) |  |  | OL | 1988Ta17/1981Th06 | PR A38 1616 (88)/NP A367 1 (81) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | -0.009(4) st |  |  | ABLS | 1981Th06 | NP A367 1 (81) |
|  | 81 | 6.31 ns | 5/2+ | +3.45(2) |  |  | [133Cs] | ME | 1968Ca03 | NP A109 59 (68) |
|  |  |  |  |  | -0.30(2) | R | [133Cs] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.33(2) st |  | [133Cs] | ME | 1977Ca30 | PR B15 3318 (77) |
|  | 161 | 190 ps | 5/2+ | +2.0(2) |  |  |  | IPAC | 1979Th02 | NP A318 97 (79) |
|  |  |  |  |  |  |  |  |  |  |  |
| 55 Cs 134 | 0 | 2.06 y | 4+ | +2.9937(9) |  |  | [133Cs] | AB/D | 1957St11 | PR 105 590 (57) |
|  |  |  |  | +2.99(2) |  |  | [133Cs] | ABLS | 1981Th06 | NP A367 1 (81) |
|  |  |  |  |  | +0.37(2) | R | [133Cs] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.389(3) st |  | [133Cs] | OD, R | 1975Ac01 | NP A248 157 (75) |
|  |  |  |  |  | +0.38(4) st |  | [133Cs] | ABLS | 1981Th06 | NP A367 1 (81) |
|  | 11 | 47 ns | 5+ | +3.35(7) |  |  |  | TDPAC | 1970DrZX | Cf70Delft 549 (70) |
|  | 139 | 2.90 h | 8- | +1.0978(2) |  |  | [133Cs] | AB/D | 1962Co14 | PR 127 517 (62) |
|  |  |  |  | +1.111(6) |  |  | [133Cs] | ABLS | 1981Th06 | NP A367 1 (81) |
|  |  |  |  |  | +0.92(8) | R | [133Cs] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.98(8) st |  | [133Cs] | ABLS | 1981Th06 | NP A367 1 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 55 Cs 135 | 0 | 3x10\*6 y | 7/2+ | +2.7324(2) |  |  | [133Cs] | AB/D | 1957St11 | PR 105 590 (57) |
|  |  |  |  | +2.73(1) |  |  | [133Cs] | ABLS | 1981Th06 | NP A367 1 (81) |
|  |  |  |  |  | +0.048(3) | R | [133Cs] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.050(2) st |  | [133Cs] | OL, OD, R | 1975Ac01 | NP A248 157 (75) |
|  |  |  |  |  | +0.03(2) st |  | [133Cs] | ABLS | 1981Th06 | NP A367 1 (81) |
|  | 1633 | 53 m | 19/2- | +2.18(1) |  |  | [133Cs] | ABLS | 1981Th06 | NP A367 1 (81) |
|  |  |  |  |  | +0.83(7) | R | [133Cs] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.89(7) |  | [133Cs] | ABLS | 1981Th06 | NP A367 1 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 55 Cs 136 | 0 | 13.2 d | 5+ | +3.711(15) |  |  |  | OL | 1975Ac01 | NP A248 157 (75) |
|  |  |  |  | +3.71(2) |  |  | [133Cs] | ABLS | 1981Th06 | NP A367 1 (81) |
|  |  |  |  |  | +0.213(15) | R | [133Cs] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.225(10) st |  | [133Cs] | OL | 1975Ac01 | NP A248 157 (75) |
|  |  |  |  |  | +0.17(6) st |  | [133Cs] | ABLS | 1981Th06 | NP A367 1 (81) |
|  | 0+x | 19 s | 8- | +1.319(7) |  |  | [133Cs] | ABLS | 1981Th06 | NP A367 1 (81) |
|  |  |  |  |  | +0.70(3) | R | [133Cs] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.74(10) |  | [133Cs] | ABLS | 1981Th06 | NP A367 1 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 55 Cs 137 | 0 | 30.17 y | 7/2+ | +2.8513(7) |  |  | [133Cs] | AB/D | 1957St11 | PR 105 590 (57) |
|  |  |  |  | +2.838(7) |  |  | [133Cs] | CFBLS | 1978Sc27 | PL 79B 209 (78) |
|  |  |  |  | +2.84(1) |  |  | [133Cs] | ABLS | 1981Th06 | NP A367 1 (81) |
|  |  |  |  |  | +0.048(2) | R | [133Cs] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.051(1) st |  | [133Cs] | OL, OD, R | 1975Ac01 | NP A248 157 (75) |
|  |  |  |  |  | +0.06(2) st |  | [133Cs] | CFBLS | 1978Sc27 | PL 79B 209 (78) |
|  |  |  |  |  | +0.03(4) st |  | [133Cs] | ABLS | 1981Th06 | NP A367 1 (81) |
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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
| 55 Cs 138 | 0 | 32.2 m | 3- | +0.700(4) |  |  | [133Cs] | ABLS | 1981Th06 | NP A367 1 (81) |
|  |  |  |  | +0.701(7) |  |  | [133Cs] | AB | 1979Ek02 | PS 19 516 (79) |
|  |  |  |  | +0.701(14) |  |  | [133Cs] | CFBLS | 1979Bo01 | ZP A289 227 (79) |
|  |  |  |  |  | +0.112(17) | R | [133Cs] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.13(2) st |  | [133Cs] | CFBLS | 1979Bo01 | ZP A289 227 (79) |
|  |  |  |  |  | +0.12(2) st |  | [133Cs] | ABLS | 1981Th06 | NP A367 1 (81) |
|  | 80 | 2.9 m | 6- | +1.713(9) |  |  | [133Cs] | ABLS | 1981Th06 | NP A367 1 (81) |
|  |  |  |  |  | -0.37(5) | R | [133Cs] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.40(3) |  | [133Cs] | ABLS | 1981Th06 | NP A367 1 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 55 Cs 139 | 0 | 9.4 m | 7/2+ | +2.696(4) |  |  | [133Cs] | CFBLS | 1979Bo01 | ZP A289 227 (79) |
|  |  |  |  | +2.70(1) |  |  | [133Cs] | ABLS | 1981Th06 | NP A367 1 (81) |
|  |  |  |  | +2.70(3) |  |  | [133Cs] | AB | 1979Ek02 | PS 19 516 (79) |
|  |  |  |  |  | -0.063(14) | R | [133Cs] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.075(11) st |  | [133Cs] | CFBLS | 1979Bo01 | ZP A289 227 (79) |
|  |  |  |  |  | -0.06(3) st |  | [133Cs] | ABLS | 1981Th06 | NP A367 1 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 55 Cs 140 | 0 | 65 s | 1- | +0.1338953(5) |  |  | [133Cs] | ABLS | 1986Du16 | JPPa 47 1903 (86) |
|  |  |  |  | +0.134(1) |  |  | [133Cs] | ABLS | 1981Th06 | NP A367 1 (81) |
|  |  |  |  | +0.134(2) |  |  | [133Cs] | AB | 1979Ek02 | PS 19 516 (79) |
|  |  |  |  | +0.134(3) |  |  | [133Cs] | CFBLS | 1979Bo01 | ZP A289 227 (79) |
|  |  |  |  |  | -0.094(15) | R | [133Cs] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.112(7) st |  | [133Cs] | CFBLS | 1979Bo01 | ZP A289 227 (79) |
|  |  |  |  |  | -0.10(2) st |  | [133Cs] | ABLS | 1981Th06 | NP A367 1 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 55 Cs 141 | 0 | 25.1 s | 7/2+ | +2.438(10) |  |  | [133Cs] | CFBLS | 1979Bo01 | ZP A289 227 (79) |
|  |  |  |  | +2.42(3) |  |  | [133Cs] | ABLS | 1981Th06 | NP A367 1 (81) |
|  |  |  |  | +2.41(1) |  |  | [133Cs] | AB | 1979Ek02 | PS 19 516 (79) |
|  |  |  |  |  | -0.42(7) | R | [133Cs] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.36(4) st |  | [133Cs] | CFBLS | 1979Bo01 | ZP A289 227 (79) |
|  |  |  |  |  | -0.45(7) st |  | [133Cs] | ABLS | 1981Th06 | NP A367 1 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 55 Cs 143 | 0 | 1.78 s | 3/2+ | +0.870(4) |  |  | [133Cs] | ABLS | 1981Th06 | NP A367 1 (81) |
|  |  |  |  |  | +0.44(3) | R | [133Cs] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.47(3) st |  | [133Cs] | ABLS | 1981Th06 | NP A367 1 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 55 Cs 144 | 0 | 1.00 s | 1 | -0.546(3) |  |  | [133Cs] | ABLS | 1981Th06 | NP A367 1 (81) |
|  |  |  |  |  | +0.29(2) | R | [133Cs] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.30(1) st |  | [133Cs] | ABLS | 1981Th06 | NP A367 1 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 55 Cs 145 | 0 | 0.59 s | 3/2+ | +0.784(4) |  |  | [133Cs] | ABLS | 1981Th06 | NP A367 1 (81) |
|  |  |  |  |  | +0.58(6) | R | [133Cs] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.62(6) st |  | [133Cs] | ABLS | 1981Th06 | NP A367 1 (81) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  |  |  |  |  |  |  |
| 55 Cs 146 | 0 | 0.34 s | 1 | -0.515(2) |  |  | [133Cs] | ABLS | 1987Co19 | NP A468 1 (87) |
|  |  |  |  |  | +0.21(3) | R | [133Cs] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.22(3) st |  | [133Cs] | ABLS | 1987Co19 | NP A468 1 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 56 Ba 121 | 0 | 30 s | 5/2(+) | +0.660(1) |  |  | [135,137Ba] | CFBLS | 1988We14 | PL 211B 272 (88) |
|  |  |  |  |  | +1.96(13) | R | [135Ba] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +1.79(12) st |  | [135,137Ba] | CFBLS | 1988We14 | PL 211B 272 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 56 Ba 123 | 0 | 2.7 m | 5/2+ | -0.680(1) |  |  | [135,137Ba] | CFBLS | 1988We14 | PL 211B 272 (88) |
|  |  |  |  | -0.69(2) |  |  | [135,137Ba] | CFBLS | 1983Mu12 | NP A403 234 (83) |
|  |  |  |  |  | +1.63(13) | R | [135Ba] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +1.49(12) st |  | [135,137Ba] | CFBLS | 1988We14 | PL 211B 272 (88) |
|  |  |  |  |  | +1.52(13) |  | [135,137Ba] | CFBLS | 1983Mu12 | NP A403 234 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 56 Ba 125 | 0 | 3.5 m | 1/2+ | +0.177(12) |  |  | [135,137Ba] | CFBLS | 1983Mu12 | NP A403 234 (83) |
|  | 0 + x |  | 5/2+ | 0.1736(10) |  |  | [135,137Ba] | CFBLS | 1992Da06 | JP G18 L67 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 56 Ba 127 | 0 | 12.7 m | 1/2(+) | +0.0834(10) |  |  | [135,137Ba] | CFBLS | 1992Da06 | JP G18 L67 (92) |
|  |  |  |  | +0.089(12) |  |  | [135,137Ba] | CFBLS | 1983Mu12 | NP A403 234 (83) |
|  | 80 | 1.9 s | 7/2(-) | -0.7227(5) |  |  | [135,137Ba] | CFBLS | 1992Da06 | JP G18 L67 (92) |
|  |  |  |  |  | +1.78(14) | R | [135Ba] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +1.62(13) |  | [135,137Ba] | CFBLS | 1992Da06 | JP G18 L67 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 56 Ba 129 | 0 | 2.23 h | 1/2+ | -0.398(16) |  |  | [135,137Ba] | ABLFS, R | 1983Mu12/1979Be25 | NP A403 234 (83)/ZP A291 219 (79) |
|  | 8.4 | 2.16 h | 7/2+ | +0.930(17) |  |  | [135,137Ba] | ABLFS, R | 1983Mu12/1979Be25 | NP A403 234 (83)/ZP A291 219 (79) |
|  |  |  |  |  | +1.75(14) | R | [135Ba] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +1.60(13) st |  | [135,137Ba] | ABLFS, R | 1983Mu12/1979Be25 | NP A403 234 (83)/ZP A291 219 (79) |
|  | 182 | 16 ns | 9/2- | -0.86(3) |  |  | [132Ba 3115] | TDPAD | 2013Ka27 | PR C87 064312 (2013) |
|  | 2462 | 47 ns | 23/2+ | -2.68(8) |  |  | [132Ba 3115] | TDPAD | 2013Ka27 | PR C87 064312 (2013) |
|  |  |  |  |  |  |  |  |  |  |  |
| 56 Ba 130 | 357 | 37 ps | 2+ | +0.70(6) |  |  |  | TF | 1980Br01 | PR C21 574 (80) |
|  |  |  |  |  | -1.0(2) or -0.1(2) | R |  | CER | 1989Bu07 | NP A494 102 (89) |
|  |  |  |  |  | -0.86(8) |  |  | CER |  | ARANU 26 (86) |
|  |  |  |  |  | -0.3(2) |  |  | CERP | 1974Ne15 | PL 52B 189 (74) |
|  | 2476 | 9.54 ms | 8- | -0.04(3) |  |  |  | CLS | 2002Mo31 | PL B547 200 (02) |
|  |  |  |  |  | +2.40(6) | R | [135Ba] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +2.8(3) |  |  | CLS | 2002Mo31 | PL B547 200 (02) |
|  |  |  |  |  |  |  |  |  |  |  |
| 56 Ba 131 | 0 | 11.8 d | 1/2+ | 0.708113(15) |  |  | [137Ba] | TIS | 1987Kn10 | EPL 4 1361 (87) |
|  |  |  |  | -0.71(2) |  |  | [135,137Ba] | ABLFS, R | 1983Mu12/1979DbE25 | NP A403 234 (83)/ZP A291 219 (79) |
|  | 188 | 14.6 m | 9/2- | -0.87(2) |  |  | [135,137Ba] | CFBLS | 1983Mu12 | NP A403 234 (83) |
|  |  |  |  |  | +1.60(14) | R | [135Ba] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | +1.46(13) st |  | [135,137Ba] | CFBLS | 1983Mu12 | NP A403 234 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 56 Ba 132 | 465 | 18 ps | 2+ | +0.68(6) |  |  |  | TF | 1980Br01 | PR C21 574 (80) |
|  | 3115 | 12.3 ns | 10+ | -1.56(11) |  |  |  | IPAD | 1995Ha26 | PR C52 1796 (95) |
|  |  |  |  | -1.59(5) |  |  |  | TDPAD | 1996Da02 | PR C53 1009 (96) |
|  |  |  |  |  |  |  |  |  |  |  |
| 56 Ba 133 | 0 | 10.7 y | 1/2+ | 0.77167(2) |  |  | [137Ba] | TIS | 1987Kn10 | EPL 4 1361 (87)/JPCo 42 339 (81) |
|  |  |  |  | -0.769(3) |  |  | [135Ba] | O | 1976Ho13 | PL 62B 390 (76) |
|  |  |  |  | -0.777(14) |  |  | [135,137Ba] | CFBLS | 1983Mu12 | NP A403 234 (83) |
|  | 12 | 4.7 ns | 3/2+ | +0.51(7) |  |  | [135Ba] | XHFS | 1981Gr18 | ZETF 80 120 (81) |
|  | 288 | 38.9 h | 11/2- | -0.91(5) |  |  | [135,137Ba] | ABLFS, R | 1983Mu12/1979DbE25 | NP A403 234 (83)/ZP A291 219 (79) |
|  |  |  |  |  | +0.96(6) | R | [135Ba] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.89(7) st |  | [135,137Ba] | ABLFS, R | 1983Mu12/1979DbE25 | NP A403 234 (83)/ZP A291 219 (79) |
|  |  |  |  |  |  |  |  |  |  |  |
| 56 Ba 134 | 605 | 5.1 ps | 2+ | +0.86(10) |  |  |  | TF | 1980Br01 | PR C21 574 (80) |
|  |  |  |  | +0.82(12) |  |  |  | IMPAC | 1980Eb01 | HFI 7 387 (80) |
|  |  |  |  |  | -0.26(12) or +0.15(12) | R |  | CER | 1989Bu07 | NP A494 102 (89) |
|  |  |  |  |  | -0.32(6) or +0.09(6) |  |  | CER | 1989Bu07 | NP A494 102 (89) |
|  |  |  |  |  | or -0.20(6) or +0.21(6) |  |  |  |  |  |
|  |  |  |  |  | -0.34(16) or -0.13(16) |  |  | CER | 1977Kl05 | NP A283 526 (77) |
|  | 2957 | 2.6 s | 10+ | -2.0(1) |  |  |  | TDPAD | 1982BeZY | BAPS 27 27 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 56 Ba 135 | 0 | stable | 3/2+ | +0.83794(2) |  |  |  | OP/RD | 1972Ol01 | ZP 249 205 (72) |
|  |  |  |  | 0.838627(2) |  |  | [35Cl] | N | 1978Lu07 | ZP A288 11 (78) |
|  |  |  |  |  | +0.160(3) | R |  | R | 1988We07 | ZP A329 407 (88) |
|  |  |  |  |  | +0.15(2) st |  |  | OL, R | 1983Mu12/1976Ma28 | NP A403 234 (83)/ZP A277 107(76) |
|  |  |  |  |  | 0.150(15) |  |  | CFBLS | 1986Si03 | PR A33 2117 (86) |
|  |  |  |  |  | 0.16(3) st |  |  | ABLFS | 1979Ba74 | PRS A365 567 (79) |
|  |  |  |  |  | 0.22(3) |  |  | ABLS, R | 1982Gr14/1979Gu09 | ZP A306 195 (82)/ZP A290 231 (79) |
|  |  |  |  |  | 0.23(5) |  |  | ABLFS | 1982Gr14 | ZP A306 195 (82) |
|  | 268 | 28.7 h | 11/2- | -1.001(15) |  |  | [135,137Ba] | ABLFS, R | 1983Mu12/1979DbE25 | NP A403 234 (83)/ZP A291 219 (79) |
|  |  |  |  |  | +1.03(15) | R | [135Ba] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.98(8) st |  | [135,137Ba] | ABLFS, R | 1983Mu12/1979DbE25 | NP A403 234 (83)/ZP A291 219 (79) |
|  |  |  |  |  |  |  |  |  |  |  |
| 56 Ba 136 | 819 | 1.93 ps | 2+ | +0.69(10) |  |  |  | TF | 1980Br01 | PR C21 574 (80) |
|  |  |  |  |  | -0.19(6) or +0.07(7) | R |  | CER | 1986Ro15 | PR C34 732 (86) |
|  |  |  |  |  | +0.01(5) or +0.25(5) |  |  | CER | 1984Be20 | PR C29 1672 (84) |
|  | 2140 | 1.5 ns | 5- | -1.9(2) |  |  |  | IPAC | 1979Oh03 | HFI 7 103 (79) |
|  |  |  |  |  |  |  |  |  |  |  |
| 56 Ba 137 | 0 | stable | 3/2+ | +0.93737(2) |  |  |  | OP/RD | 1972Ol01 | ZP 249 205 (72) |
|  |  |  |  | 0.93734(2) |  |  | [135Ba] | N | 1978Lu07 | ZP A288 11 (78) |
|  |  |  |  |  | +0.245(4) | R |  | R | 1988We07 | ZP A329 407 (88) |
|  |  |  |  |  | +0.23(3) st |  |  | OL, R | 1983Mu12/1976Ma28 | NP A403 234 (83)/ZP A277 107(76) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | 0.246(2) |  |  | R | 1986Si03 | PR A33 2117 (86) |
|  |  |  |  |  | 0.23(2) |  |  | CFBLS | 1986Si03 | PR A33 2117 (86) |
|  |  |  |  |  | 0.34(4) |  |  | ABLS | 1979Gu09 | ZP A290 231 (79) |
|  |  |  |  |  | 0.35(8) |  |  | ABLFS | 1982Gr14 | ZP A306 195 (82) |
|  | 662 | 2.55 m | 11/2- | -0.99(3) |  |  | [135,137Ba] | ABLFS, R | 1983Mu12 | NP A403 234 (83) |
|  |  |  |  |  | +0.85(10) | R | [135Ba] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.78(9) |  | [135,137Ba] | ABLFS, R | 1983Mu12 | NP A403 234 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 56 Ba 138 | 1436 | 0.206 ps | 2+ | +1.4(2) |  |  |  | TF | 1987Ba65 | ZP A328 275 (87) |
|  |  |  |  |  | -0.14(6) or +0.08(6) | R |  | CER | 1989Bu07 | NP A494 102 (89) |
|  | 1899 | 2.17 ns | 4+ | 3.2(6) |  |  |  | IPAC | 1985Be04 | PR C31 570 (85) |
|  | 2091 | 0.8 s | 6+ | 5.9(12) |  |  |  | TDPAD | 1976Ik04 | HFI 2 331 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 56 Ba 139 | 0 | 84.6 m | 7/2- | -0.973(5) |  |  | [135,137Ba] | CFBLS | 1988We07 | ZP A329 407 (88) |
|  |  |  |  | -0.98(2) |  |  | [135,137Ba] | CFBLS | 1983Mu12 | NP A403 234 (83) |
|  |  |  |  |  | -0.573(13) | R |  | CFBLS | 1988We07 | ZP A329 407 (88) |
|  |  |  |  |  | -0.50(4) st |  | [135,137Ba] | CFBLS | 1983Mu12 | NP A403 234 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 56 Ba 140 | 602 | 7.2 ps | 2+ |  | -0.5(3) | R |  | CER | 2012Ba40 | PR C86 034310 (12) |
|  |  |  |  |  |  |  |  |  |  |  |
| 56 Ba 141 | 0 | 18.7 m | 3/2- | -0.337(5) |  |  | [135,137Ba] | CFBLS | 1988We07 | ZP A329 407 (88) |
|  |  |  |  | -0.35(2) |  |  | [135,137Ba] | CFBLS | 1983Mu12 | NP A403 234 (83) |
|  |  |  |  |  | +0.454(10) | R |  | CFBLS | 1988We07 | ZP A329 407 (88) |
|  |  |  |  |  | +0.43(4) st |  | [135,137Ba] | CFBLS | 1983Mu12 | NP A403 234 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 56 Ba 142 | 359 | 66 ps | 2+ | 0.85(10) |  |  |  | IPAC, R | 1988Wo03/1986Gi14 | PR C37 1253 (88)/PR C34 1983 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 56 Ba 143 | 0 | 14.5 s | 5/2(+) | +0.443(11) |  |  | [135,137Ba] | CFBLS | 1988We07 | ZP A329 407 (88) |
|  |  |  |  | +0.45(2) |  |  | [135,137Ba] | CFBLS | 1983Mu12 | NP A403 234 (83) |
|  |  |  |  |  | -0.88(2) | R |  | CFBLS | 1988We07 | ZP A329 407 (88) |
|  |  |  |  |  | -0.81(7) st |  | [135,137Ba] | CFBLS | 1983Mu12 | NP A403 234 (83) |
|  | 117 | 2.6 ns | 9/2- | +0.5(3) |  |  | [144Ba 199] | IMPAC | 1999Sm05 | PL B453 206 (99) |
|  |  |  |  |  |  |  |  |  |  |  |
| 56 Ba 144 | 199 | 0.70 ns | 2+ | 0.68(10) |  |  |  | IPAC | 1983Wo05 | PL 123B 165 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 56 Ba 145 | 0 | 4.31 s | 5/2(-) | -0.285(7) |  |  | [135,137Ba] | CFBLS | 1988We07 | ZP A329 407 (88) |
|  |  |  |  | -0.27(4) |  |  | [135,137Ba] | CFBLS | 1983Mu12 | NP A403 234 (83) |
|  |  |  |  |  | +1.22(2) | R |  | CFBLS | 1988We07 | ZP A329 407 (88) |
|  |  |  |  |  | +1.15(10) st |  | [135,137Ba] | CFBLS | 1983Mu12 | NP A403 234 (83) |
|  | 113 | (0.21) ns | 7/2- | -1.4(10) |  |  | [144Ba 199] | IMPAC | 1999Sm05 | PL B453 206 (99) |
|  |  |  |  |  |  |  |  |  |  |  |
| 56 Ba 146 | 181 | 0.85 ns | 2+ | 0.54(18) |  |  |  | IPAC | 2009GO09 | PR C79 034316 (09) |
|  |  |  |  | 0.56(14) |  |  |  | IPAC | 1983Wo05 | PL 123B 165 (83) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  | +0.4(2) |  |  | [144Ba 199] | IMPAC | 1999Sm05 | PL B453 206 (99) |
|  |  |  |  |  |  |  |  |  |  |  |
| 57 La 133 | 536 | 60 ns | 11/2- | 7.5(5) |  |  |  | TDPAC | 1979BuZW | CF79Riga 81 (79) |
|  |  |  |  |  |  |  |  |  |  |  |
| 57 La 135 | 0 | 19.5 h | 5/2+ | +3.70(9) |  |  | [139La] | CFBLS | 2003II03 | PR C68 054328 (03) |
|  |  |  |  |  | -0.4(4) | R | [139La] | CFBLS | 2003II03 | PR C68 054328 (03) |
|  | 2737 | 50 ns | (27/2)+ | 0.0(2) |  |  |  | TDPAD | 1976Le29 | IzF 40 1249 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 57 La 137 | 0 | 6 x 10\*4 y | 7/2+ | +2.700(15) |  |  | [139La] | CFBLS | 2003II03 | PR C68 054328 (03) |
|  |  |  |  | +2.695(6) |  |  | [139La] | O | 1972Fi19 | ZP 254 127 (72) |
|  |  |  |  |  | +0.21(4) | R | [139La] | CLS | 2003li03 | PR C68 054328 (2003) |
|  |  |  |  |  | +0.21(3) |  | [139La] | O | 1972Fi19 | ZP 254 127 (72) |
|  |  |  |  |  | +0.24(7)st |  | [139La] | O | 1972Fi19 | ZP 254 127 (72) |
|  | 10 | 89 ns | 5/2+ |  | +0.24(7)st |  | [137La] | ME | 1978Ge20 | HFI 4 630 (78) |
|  | 1870 | 365 ns | 19/2- | +2.34(6) |  |  |  | TDPAD | 1982KiZV | BAPS 27 728 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 57 La 138 | 0 | 1.1x10\*11 y | 5+ | +3.713646(7) |  |  | [139La] | N | 1977Kr12/1955So31 | PL 62A 131 (77)/PR 99 613 (55) |
|  |  |  |  |  | +0.39(3) | R | [139La] | CLS | 2003li03 | PR C68 054328 (2003) |
|  |  |  |  |  | +0.45(2) st |  | [139La] | ABLDF | 1979Ch39 | PR A20 1922 (79) |
|  |  |  |  |  | 0.43(2) st |  | [139La] | QIR | 1977Kr12 | PL 62A 131 (77) |
|  | 73 | 116 ns | 3+ | +2.89(5) |  |  | [19F 197] | TDPAD | 1979Bo11 | ZP A291 49 (79) |
|  |  |  |  |  |  |  |  |  |  |  |
| 57 La 139 | 0 | stable | 7/2+ | +2.7830455(9) |  |  | [2H] | N, O | 1977Kr12 | PL 62A 131 (77)/ZP 116 547 (40) |
|  |  |  |  |  | +0.200(6) | R |  | MB | 2007Ja16 | JCP 127 204303 (2007) |
|  |  |  |  |  | +0.20(1) st |  |  | CFBLS, R | 1982Ba08/1982Ho02 | ZP A304 285 (82)/ZP A304 279 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 57 La 140 | 0 | 40.3 h | 3- | +0.730(15) |  |  | [139La] | AB | 1969HuZY | Cf69Mont 91 (69) |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  | +0.084(13) | R | [139La] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.094(10) st |  | [139La] | NO/S, AB | 1966Bl05/1971Ch02 | PR 143 911 (66)/PR A3 25 (71) |
|  |  |  |  |  |  |  |  |  |  |  |
| 58 Ce 126 | 2887 | 8 ps | 10+ | ~+10 |  |  |  | IPAD | 1987IsZS | Cf87Melb. 93 (87) |
|  | 3317 | 4 ps | 12+ | ~+12 |  |  |  | IPAD | 1987IsZS | Cf87Melb. 93 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 58 Ce 129 | 108 | 60 ns | 9/2- | -0.83(5) |  |  |  | TDPAD | 1998Io01 | NP A633 459 (98) |
|  |  |  |  |  | 1.32(13) | R | [138Ce 3538] | TDPAD | 1998Io01 | NP A633 459 (98) |
|  |  |  |  |  |  |  |  |  |  |  |
| 58 Ce 130 | 2454 | 109 ns | 7- |  | 1.8(2) | R |  | TDPAD | 1999Io02 | PR C60 024316 (99) |
|  |  |  |  |  |  |  |  |  |  |  |
| 58 Ce 131 | 162 | 88 ns | 9/2- | -0.85(3) |  |  |  | TDPAD | 1998Io01 | NP A633 459 (98) |
|  |  |  |  |  | 0.92(10) | R | [138Ce 3538] | TDPAD | 1998Io01 | NP A633 459 (98) |
|  |  |  |  |  |  |  |  |  |  |  |
| 58 Ce 134 | 3209 | 308 ns | 10+ | -1.87(2) |  |  |  | TDPAD, R | 1984Be68 | PL 101A 507 (84) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  | -1.9(1) |  |  |  | TDPAD | 1980Go14 | PL 97B 351 (80) |
|  |  |  |  |  | +1.32(12) | R | [138Ce 3538] | TDPAD, TF | 1983Da29/1986Da22 | HFI 15 101 (83)/PL 181B 21 (86) |
|  | 3719 | 5.5 ps | 10+ | -3(3) |  |  |  | IMPAD | 1982Ze04 | NP A383 165 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 58 Ce 135 | 2126 | 8.2 ns | 19/2+ | -0.66(10) |  |  |  | IPAD | 1982Ze01 | ZP A304 269 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 58 Ce 136 | 3095 | 2.2 s | 10+ | -1.80(2) |  |  |  | TDPAD | 1980Ba68 | PRL 45 1015 (80) |
|  |  |  |  | -1.80(3) |  |  |  | TDPAD | 1982Ri09 | PRL 48 516 (82) |
|  |  |  |  |  | +1.11(11) | R | [138Ce 3538] | TDPAD | 1983Da29 | HFI 15 101 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 58 Ce 137 | 0 | 9.0 h | 3/2+ | 0.96(4) |  |  |  | NMR/ON | 1991Mu06 | JPJa 60 845 (91) |
|  |  |  |  | 0.90(15) |  |  |  | NO/S | 1963Ha07 | PR 129 1601 (63) |
|  | 254 | 34.4 h | 11/2- | 1.01(4) |  |  |  | NMR/ON | 1991Mu06 | JPJa 60 845 (91) |
|  |  |  |  | 0.70(3) |  |  |  | NO/S | 1966Bl17 | PR 143 78 (66) |
|  |  |  |  | 0.96(9) |  |  |  | NO/S | 1961Ha05 | PR 121 591 (61) |
|  |  |  |  |  |  |  |  |  |  |  |
| 58 Ce 138 | 3538 | 82 ns | 10+ | -1.70(3) |  |  |  | TDPAD | 1980Ba68 | PRL 45 1015 (80) |
|  |  |  |  | -1.76(10) |  |  |  | TDPAD | 1980Me11 | NP A346 281 (80) |
|  |  |  |  |  | estimated +0.77 eb |  |  | not measured | 1983Da29 | HFI 15 101 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 58 Ce 139 | 0 | 137.6 d | 3/2+ | 1.06(4) |  |  |  | NMR/ON | 1991Mu06 | JPJa 60 845 (91) |
|  |  |  |  | 1.0(2) |  |  |  | NO/S | 1963Ha07 | PR 129 1601 (63) |
|  |  |  |  | 0.85(15) |  |  |  | NO/S | 1962Gr17 | PhMg 7 1087 (62) |
|  | 2632 | 70 ns | 19/2- | +3.99(6) |  |  |  | TDPAD | 1980Ba68 | PRL 45 1015 (80) |
|  |  |  |  | +3.85(8) |  |  |  | TDPAD | 1984Vo12 | YadF 40 289 (84) |
|  |  |  |  |  |  |  |  |  |  |  |
| 58 Ce 140 | 1596 | 90 fs | 2+ | +1.9(2) |  |  |  | TF | 1991Ba38 | NP A533 541 (91) |
|  | 2084 | 3.4 ns | 4+ | +4.00(20) |  |  |  | TDPAC | 2013Ok03 | PR C87 044324 (2013) |
|  |  |  |  | 4.06(15) |  |  |  | TDPAC, IPAC | 1965Le16 | PR 140 B811 (65) |
|  |  |  |  | 3.8(4) |  |  |  | TDPAC | 1964Sc16 | PR 134 B718 (64) |
|  |  |  |  | 4.44(16) |  |  |  | TDPAC | 1963Ko07 | ZP 173 203 (63) |
|  |  |  |  | 4.6(3) |  |  |  | TDPAC | 1963Ka03 | PL 3 291 (63) |
|  |  |  |  |  | 0.35(7) st | R | [139La] | TDPAC | 1989Ra17 | JPJS 34 265 (73) |
|  | 3715 | 23 ns | 10+ | +10.3(4) |  |  | [139Ce 2632] | TDPAD | 1988Ka04 | ZP A329 143 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 58 Ce 141 | 0 | 32.5 d | 7/2- | 1.09(4) |  |  |  | NMR/ON | 1983Va36 | HFI 15 325 (83) |
|  |  |  |  | 0.89(1) |  |  |  | EPR | 1957Ke13 | PR 108 54 (57) |
|  |  |  |  | 0.89(9) |  |  |  | NO/S | 1962Gr17 | PhMg 7 1087 (62) |
|  |  |  |  | 1.3(2) |  |  |  | NO/S | 1963Ha07 | PR 129 1601 (63) |
|  |  |  |  |  |  |  |  |  |  |  |
| 58 Ce 142 | 641 | 5.7 ps | 2+ | +0.42(10) |  |  |  | TF | 1991Ba38 | NP A533 541 (91) |
|  |  |  |  |  | -0.16(5) or -0.37(5) | R |  | CER | 1988Ve08/1989Sp07 | PR C38 2982 (88)/AuJP 42 345 (89) |
|  |  |  |  |  |  |  |  |  |  |  |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
| 58 Ce 143 | 0 | 33 h | 3/2- | 0.43(1) |  |  |  | NMR/ON | 2002Ta01 | PR C65 017301 (01) |
|  |  |  |  | 1.0(3) |  |  |  | NO/S | 1963Ha07 | PR 129 1601 (63) |
|  |  |  |  |  |  |  |  |  |  |  |
| 58 Ce 146 | 259 | 0.25 ns | 2+ | 0.9(2) |  |  |  | IPAC | 2009GO09 | PR C79 034316 (09) |
|  |  |  |  | 0.48(10) |  |  |  | IPAC | 1986Gi05 | PR C33 1030 (86) |
|  |  |  |  | +0.9(7) |  |  | [148Ce 158] | IMPAC | 1999Sm05 | PL B453 206 (99) |
|  |  |  |  |  |  |  |  |  |  |  |
| 58 Ce 148 | 158 | 1.01 ns | 2+ | 0.78(16) |  |  |  | IPAC | 2009GO09 | PR C79 034316 (09) |
|  |  |  |  | 0.74(12) |  |  |  | IPAC | 1986Gi05 | PR C33 1030 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 58 Ce 150 | 306 | (0.18) ns | 4+ | +3.2(16) |  |  | [148Ce 158] | IMPAC | 1999Sm05 | PL B453 206 (99) |
|  |  |  |  |  |  |  |  |  |  |  |
| 59 Pr 136 | 595 | 90 ns | 6+ | +3.42(11) |  |  |  | TDPAD | 1993Ba42 | NP A603 50 (96) |
|  |  |  |  |  |  |  |  |  |  |  |
| 59 Pr 139 | 822 | 45 ns | 11/2- | +6.6(5) |  |  |  | TDPAD | 1979Ke07 | ZP A291 319 (79) |
|  |  |  |  | +7.2(6) |  |  |  | TDPAD | 1982Ri09 | PRL 48 516 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 59 Pr 141 | 0 | stable | 5/2+ | +4.2754(5) |  |  | [19F] | OD | 1982Ma31/1984Ma12 | PRL 49 636 (82)/PR B29 2390 (84) |
|  |  |  |  |  | -0.077(6) st | R |  | R | 1994Ii01 | PR C50 661 (94) |
|  |  |  |  |  | -0.059(4) |  |  | AB | 1963Bl25 | Cf63Paris 595 (63) |
|  | 145 | 1.85 ns | 7/2+ | +2.95(9) |  |  | [141Pr] | ME, R | 1976St73 | JPCR 5 1093 (76) |
|  | 1118 | 4.6 ns | 11/2- | +6.2(4) |  |  |  | TDPAD | 1984Go12 | ZETF 87 3 (84) |
|  |  |  |  | +7.2(4) |  |  |  | TDPAD | 1974Ej01 | NP A221 211 (74) |
|  | 1797 | 1.0 ns | 15/2+ | +8(2) |  |  |  | IPAD | 1984Go12 | ZETF 87 3 (84) |
|  |  |  |  |  |  |  |  |  |  |  |
| 59 Pr 142 | 0 | 19.2 h | 2- | +0.234(1) |  |  |  | AB, R | 1973AnZO/1970HiZW | PCan 29n4 47 (73)/BAPS 15 628 (70) |
|  |  |  |  |  | +0.039(17) | R | [141Pr] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.030(9) |  |  | AB | 1962Ca10 | PR 126 1004 (62) |
|  | 4 | 14.6 m | 5- | 2.2(1) |  |  |  | AB | 1973AnZO | PCan 29n4 47 (73) |
|  |  |  |  |  |  |  |  |  |  |  |
| 59 Pr 143 | 0 | 13.57 d | 7/2+ | +2.701(4) |  |  | [141Pr] | CFBLS | 1994Ii01 | PR C50 661 (94) |
|  |  |  |  |  | +0.77(16) st | R | [141Pr] | CFBLS | 1994Ii01 | PR C50 661 (94) |
|  | 57 | 4.2 ns | 5/2+ | +3.4(1) |  |  |  | TDPAC | 1977Ne12 | HFI 3 147 (77) |
|  |  |  |  |  |  |  |  |  |  |  |
| 59 Pr 144 | 80 | 0.12 ns | 1- | -1.2(4) |  |  |  | IPAC | 1975Ba32 | PS 11 363 (75) |
|  |  |  |  |  |  |  |  |  |  |  |
| 60 Nd 133 | SD band | (-) | (37-45)/2+ | g(avge) = 0.31(8) |  |  |  | TF | 1995Me08 | NP A589 106 (95) |
|  |  |  |  |  |  |  |  |  |  |  |
| 60 Nd 134 | 295 | 64 ps | 2+ | +1.2(4) |  |  | [146Nd 454] | IMPAD | 1987Bi13 | PR C36 974 (87) |
|  | 2817 | 9.0 ps | 10+ | ~0 |  |  |  | IPAD | 89OgZY | Gensh. Ken. 33 145 (89) |
|  |  |  |  |  |  |  |  |  |  |  |
| 60 Nd 135 | 0 | 12.4 m | 9/2- | -0.78(3) |  |  | [143Nd] | LRIMS | 1992Le09 | JP G18 1177 (92) |
|  |  |  |  |  | +1.9(5) st | R | [143Nd] | LRIMS | 1992Le09 | JP G18 1177 (92) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  | 199 | 35 ps | 11/2- | -0.5(3) |  |  | [146Nd 454] | IMPAD | 1987Bi13 | PR C36 974 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 60 Nd 136 | 3298 | 51.3 ps | 10+ | +11(4) |  |  | [146Nd 454] | IMPAD | 1987Bi13 | PR C36 974 (87) |
|  | 3688 | 18.7 ps | 12+ | +14(5) |  |  | [146Nd 454] | IMPAD | 1987Bi13 | PR C36 974 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 60 Nd 137 | 0 | 38 m | 1/2+ | -0.633(5) |  |  | [143Nd] | LRIMS | 1992Le09 | JP G18 1177 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 60 Nd 138 | 3172 | 330 ns | 10+ | -1.74(4) |  |  |  | TDPAD | 1982Ri09 | PRL 48 516 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 60 Nd 139 | 0 | 30 m | 3/2+ | +0.907(7) |  |  | [143Nd] | LRIMS | 1992Le09 | JP G18 1177 (92) |
|  |  |  |  |  | +0.28(9) st | R | [143Nd] | LRIMS | 1992Le09 | JP G18 1177 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 60 Nd 140 | 3622 | 22 ns | 10+ | -1.92(12) |  |  |  | TDPAD | 1980Me11 | NP A346 281 (80) |
|  |  |  |  | -1.6(2) |  |  |  | TDPAD | 1982SiZP | Cf82Fuji 35 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 60 Nd 141 | 0 | 2.49 h | 3/2+ | +1.012(9) |  |  | [143Nd] | LRIMS | 1992Le09 | JP G18 1177 (92) |
|  |  |  |  |  | +0.32(13) st | R | [143Nd] | LRIMS | 1992Le09 | JP G18 1177 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 60 Nd 142 | 1576 | 110 fs | 2+ | +1.69(15) |  |  |  | TF | 1991Ba38 | NP A533 541 (91) |
|  |  |  |  |  |  |  |  |  |  |  |
| 60 Nd 143 | 0 | stable | 7/2- | -1.065(5) |  |  |  | AB/D | 1965Sm04 | PPS 86 1249 (65) |
|  |  |  |  |  | -0.61(2) st | R |  | ABLS | 1992Au04 | ZP D23 19 (92) |
|  |  |  |  |  | -0.59(3) st |  |  | AB, R | 1992Le09 | JP G18 1177 (92) |
|  |  |  |  |  | -0.56(6) st |  |  | AB | 1972Ch54 | PR A6 1772 (72) |
|  |  |  |  |  | -0.48(2) |  |  | AB | 1965Sm04 | PPS 86 1249 (65) |
|  | 1229 | 6.79 ns | 13/2+ | +0.38(3) p |  |  |  | IPAD | 1994KA23 | ZP A348 173 (94) |
|  | 2911 | 482 ps | 21/2+ | +7.2(13) p |  |  |  | IPAD | 1994KA23 | ZP A348 173 (94) |
|  |  |  |  |  |  |  |  |  |  |  |
| 60 Nd 144 | 697 | 4.51 ps | 2+ | +0.418(14) |  |  |  | TF | 2001Ho02 | PL B493 7 (00) |
|  |  |  |  | +0.32(4) |  |  |  | TF | 1990St18 | NP A516 119 (90) |
|  |  |  |  | +0.33(8) |  |  | [152Sm 122] | TF | 1987Be08 | HFI 33 37 (87) |
|  |  |  |  | +0.30(4) |  |  | [148Nd 302] | TF/IMPAC, R | 1978Ka36 | NP A311 507 (78) |
|  |  |  |  |  | -0.15(6) or -0.28(6) | R |  | CER | 1989Sp07 | AuJP 42 345 (89) |
|  |  |  |  |  | -0.18(12) |  |  | CER | 1971Cr01/1970Ge08 | PR C3 2049 (71)/NP A151 282 (70) |
|  | 1314 | 7.4 ps | 4+ | +0.52(14) |  |  |  | TF | 2001Ho02 | PL B493 7 (00) |
|  |  |  |  | +0.8(8) |  |  |  | IPAC | 1967Jo11 | ArkF 33 329 (67) |
|  | 1791 | (est.40 ps) | 6+ | -3.4(13) |  |  |  | TF | 2001Ho02 | PL B493 7 (00) |
|  |  |  |  |  |  |  |  |  |  |  |
| 60 Nd 145 | 0 | stable | 7/2- | -0.656(4) |  |  |  | AB/D | 1965Sm04 | PPS 86 1249 (65) |
|  |  |  |  |  | -0.314(12) st | R |  | ABLS | 1992Au04 | ZP D23 19 (92) |
|  |  |  |  |  | -0.29(3) st |  |  | AB | 1972Ch54 | PR A6 1772 (72) |
|  |  |  |  |  | -0.253(10) |  |  | AB | 1965Sm04 | PPS 86 1249 (65) |
|  | 73 | 0.72 ns | 5/2- | -0.320(4) |  |  | [145Nd] | ME | 1970Ka36 | ZP 240 100 (70) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  |  |  |  |  |  |  |
| 60 Nd 146 | 454 | 27.5 ps | 2+ | +0.578(16) |  |  |  | TF | 2001Ho02 | PL B493 7 (00) |
|  |  |  |  | 0.60(4) |  |  |  | TF | 1999BeZR | Cf99S.Agata |
|  |  |  |  | 0.58(2) |  |  |  | TF | 1990St18 | NP A516 119 (90) |
|  |  |  |  | +0.63(10) |  |  | [152Sm 122] | TF | 1987Be08 | HFI 33 37 (87) |
|  |  |  |  | +0.50(8) |  |  | [148Nd 302] | TF/IMPAC, R | 1978Ka36 | NP A311 507 (78) |
|  |  |  |  |  | -0.78(9) | R |  | CER | 1970Ge08 | NP A151 282 (70) |
|  | 1043 | 4 ps | 4+ | +0.77(10) |  |  |  | TF | 2001Ho02 | PL B493 7 (00) |
|  |  |  |  |  |  |  |  |  |  |  |
| 60 Nd 147 | 0 | 11.0 d | 5/2- | 0.578(3) |  |  | [143Nd] | EPR | 1957Ke13 | PR 108 54 (57) |
|  |  |  |  | 0.554(10) |  |  | [145Nd] | AB | 1970PiZR | BAPS 15 769 (70) |
|  |  |  |  |  | 0.9(3) | R | [145Nd] | AB | 1970PiZR | BAPS 15 769 (70) |
|  |  |  |  |  |  |  |  |  |  |  |
| 60 Nd 148 | 302 | 78 ps | 2+ | +0.73(3) |  |  |  | TF | 2001Ho02 | PL B493 7 (00) |
|  |  |  |  | 0.70(4) |  |  |  | TF | 1990St18 | NP A516 119 (90) |
|  |  |  |  | +0.83(9) |  |  | [152Sm 122] | TF | 1987Be08 | HFI 33 37 (87) |
|  |  |  |  | +0.64(8) |  |  |  | TF,IMPAC,CEAD,R | 1978Ka36 | NP A311 507 (78) |
|  |  |  |  |  | -1.46(13) | R |  | CER | 1970Ge08 | NP A151 282 (70) |
|  | 752 | 7.0 ps | 4+ | +1.4(1) |  |  |  | TF | 2001Ho02 | PL B493 7 (00) |
|  | 1280 | (est 4.6 ps) | 6+ | +1.6(3) |  |  |  | TF | 2001Ho02 | PL B493 7 (00) |
|  | 3621 | 330 ns | 10+ | -1.75(9) |  |  |  | TDPAD | 1989Ra17 | Cf80Ber A6 (80) |
|  |  |  |  |  |  |  |  |  |  |  |
| 60 Nd 149 | 0 | 1.73 h | 5/2- | 0.351(10) |  |  | [145Nd] | AB | 1970PiZR | BAPS 15 769 (70) |
|  |  |  |  |  | 1.3(3) | R | [145Nd] | AB | 1970PiZR | BAPS 15 769 (70) |
|  |  |  |  |  |  |  |  |  |  |  |
| 60 Nd 150 | 130 | 2142 ps | 2+ | 0.9(2) |  |  |  | TF | 1999BeZR | Cf99S.Agata |
|  |  |  |  | 0.76(10) |  |  |  | TF | 1990St18 | NP A516 119 (90) |
|  |  |  |  | +0.84(8) |  |  | [152Sm 122] | TF | 1987Be08 | HFI 33 37 (87) |
|  |  |  |  | 0.64(2) |  |  |  | RIGV | 1970Be36 | NP A151 401 (70) |
|  |  |  |  |  | -2.0(5) | R |  | CER, R | 1970Ge08 | NP A151 282 (70) |
|  | 381 | 56 ps | 4+ | +1.8(3) |  |  |  | TF | 2001Ho02 | PL B493 7 (00) |
|  |  |  |  | 1.76(16) |  |  |  | TF | 1990St18 | NP A516 119 (90) |
|  |  |  |  | +1.3(2) |  |  |  | IMPAC | 1972Ku10 | NP A186 513 (72) |
|  | 720 | 12 ps | 6+ | +2.1(4) |  |  |  | TF | 2001Ho02 | PL B493 7 (00) |
|  | 1130 | 4 ps | 8+ | +4.5(10) |  |  |  | TF | 2001Ho02 | PL B493 7 (00) |
|  | 1599 | (est 3.6ps) | 10+ | +1(2) |  |  |  | TF | 2001Ho02 | PL B493 7 (00) |
|  |  |  |  |  |  |  |  |  |  |  |
| 61 Pm 138 | 0 | 3.5 m | (3+) | 3.2(9) |  |  |  | NO/S | 1992Si22 | HFI 75 471 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 61 Pm 143 | 0 | 265 d | 5/2+ | 3.8(5) |  |  |  | NO/S | 1963Gr10 | PR 130 1100 (63) |
|  | 960 | 22 ns | 11/2- | +6.8(4) |  |  |  | TDPAD | 1984Go12 | ZETF 87 3 (84) |
|  |  |  |  | +6.3(5) |  |  | [19F 197] | TDPAD | 1980Pr02 | NP A333 33 (80) |
|  | 1898 | 10.2 ns | 15/2+ | +7.7(4) |  |  |  | TDPAD | 1984Go12 | ZETF 87 3 (84) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  | +7.5(5) |  |  | [19F 197] | TDPAD | 1980Pr02 | NP A333 33 (80) |
|  |  |  |  |  |  |  |  |  |  |  |
| 61 Pm 144 | 0 | 349 d | 5- | 1.69(14) |  |  |  | NO/S | 1961Sh02 | PR 121 558 (61) |
|  |  |  |  |  |  |  |  |  |  |  |
| 61 Pm 145 | 0 | 17.7 y | 5/2+ | +3.80(16) |  |  | [147Pm] | CFBLS | 1992Al03 | JP B25 571 (92) |
|  |  |  |  |  | +0.23(8) | R |  | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.21(8) |  | [147Pm] | CFBLS | 1992Al03 | JP B25 571 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 61 Pm 147 | 0 | 2.623 y | 7/2+ | +2.58(7) |  |  |  | O | 1966Re04 | PR 141 1123 (66) |
|  |  |  |  |  | +0.74(20) | R |  | R | 2008Py02 | Mol Phys 106 1965 (2008) |
|  |  |  |  |  | +0.7(2) |  |  | O | 1966Re04 | PR 141 1123 (66) |
|  |  |  |  |  | 0.59(16) |  |  | AB, R | 1966Re04 | PR 141 1123 (66) |
|  | 91 | 2.5 ns | 5/2+ | +3.22(16) |  |  | [147Pm] | ME | 1970Ba39 | PL 32B 678 (70) |
|  |  |  |  | 3.55(10) |  |  | [147Pm] | ME | 1970Ba39 | PL 32B 678 (70) |
|  |  |  |  |  |  |  |  |  |  |  |
| 61 Pm 148 | 0 | 5.37 d | 1- | +2.1(2) |  |  |  | AB | 1965Al10 | PR 138 B1356 (65) |
|  |  |  |  | 1.8(2) |  |  |  | NO/S | 1963Gr10 | PR 130 1100 (63) |
|  |  |  |  |  | +0.2(2) | R |  | AB | 1965Al10 | PR 138 B1356 (65) |
|  | 137 | 41.3 d | 6- | 1.8(2) |  |  |  | NO/S | 1963Gr10 | PR 130 1100 (63) |
|  |  |  |  |  |  |  |  |  |  |  |
| 61 Pm 149 | 0 | 53.1 h | 7/2+ | 3.3(5) |  |  |  | NO/S | 1960Ch15/1963Gr10 | PRS 259A 377 (60)/PR 130 1100 (63) |
|  | 114 | 2.54 ns | 5/2+ | +2.13(15) |  |  |  | IPAC |  | IzUz 1970n2 65 (70) |
|  |  |  |  | 2.0(2) |  |  |  | TDPAC | 1970Se11 | NP A159 494 (70) |
|  | 189 | 3.24 ns | 3/2+ | +1.09(15) |  |  |  | IPAC |  | IzUz 1970n2 65 (70) |
|  |  |  |  | 2.3(6) |  |  |  | TDPAC | 1970Se11 | NP A159 494 (70) |
|  | 211 | 80 ps | 5/2+ | +2.2(4) |  |  |  | IPAC |  | IzUz 1970n2 65 (70) |
|  | 270 | 2.64 ns | 7/2- | +2.19(11) |  |  |  | IPAC |  | IzUz 1970n2 65 (70) |
|  |  |  |  | 3.6(2) |  |  |  | TDPAC | 1970Se11 | NP A159 494 (70) |
|  |  |  |  |  |  |  |  |  |  |  |
| 61 Pm 151 | 0 | 28.4 h | 5/2 + | 1.8(2) |  |  |  | AB | 1963Bu14 | PR 132 723 (63) |
|  |  |  |  |  | 2.2(9) | R |  | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 1.9(3) |  |  | AB | 1963Bu14 | PR 132 723 (63) |
|  | 256 | 0.90 ns | 3/2+ | 1.8(2) |  |  |  | IPAC | 1977Se06 | NP A282 302 (77) |
|  |  |  |  |  |  |  |  |  |  |  |
| 62 Sm 138 | 2903 | 0.55 ns | 10+ | ~10 |  |  |  | IPAD | 1989OgZY | Gensh. Ken. 33 145 (89) |
|  |  |  |  |  |  |  |  |  |  |  |
| 62 Sm 139 | 0 | 2.57 m | 1/2+ | -0.53(2) |  |  | [145,7,9Sm] | LRIMS | 1992Le09 | JP G18 1177 (92) |
|  | 457 | 10.7 s | 11/2- | 1.1(2) |  |  | [141Sm176] | NO/S | 1992Si22 | HFI 75 471 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 62 Sm 140 | 3172 | 19.4 ns | 10+ | -1.8(2) |  |  |  | TDPAD | 1988Ba22 | PL 206B 404 (88) |
|  |  |  |  |  | 1.7(5) | R | [154Sm 82] | TDPAD | 1985Be23 | ZP A321 403 (85) |
|  | 3210 | 5.2 ns | 10+ | +12.7(9) |  |  |  | TDPAD | 1988Ba22 | PL 206B 404 (88) |
|  |  |  |  |  |  |  |  |  |  |  |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
| 62 Sm 141 | 0 | 10.2 m | 1/2+ | -0.74(2) |  |  | [145,7,9Sm] | LRIMS | 1992Le09 | JP G18 1177 (92) |
|  | 176 | 22.6 m | 11/2- | -0.84(2) |  |  | [145,7,9Sm] | LRIMS | 1992Le09 | JP G18 1177 (92) |
|  |  |  |  | 0.87(15) |  |  |  | NO/S | 1987BeXZ | Cf87Melb 76 (87) |
|  |  |  |  |  | +1.6(5) st | R | [145,7,9Sm] | LRIMS | 1992Le09 | JP G18 1177 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 62 Sm 142 | 2372 | 170 ns | 7- |  | +1.1(3) | R | [154Sm 82] | TDPAD, TF | 1985Be23/1986Da22 | ZP A321 403 (85)/PL 181B 21 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 62 Sm 143 | 0 | 8.83 m | 3/2+ | +1.01(2) |  |  | [145,7,9Sm] | LRIMS | 1992Le09 | JP G18 1177 (92) |
|  |  |  |  |  | +0.4(2) | R | [145,7,9Sm] | LRIMS | 1992Le09 | JP G18 1177 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 62 Sm 144 | 1660 | 85 fs | 2+ | +1.5(2) |  |  |  | TF | 1991Ba38 | NP A533 541 (91) |
|  | 1810 | 25 ps | 3- | +2.3(3) |  |  | 148Sm 550 | TF | 1990Ba41 | HFI 59 133 (90) |
|  |  |  |  |  |  |  |  |  |  |  |
| 62 Sm 145 | 0 | 340 d | 7/2- | -1.11(6) |  |  | [145,7,9Sm] | LRIMS | 1992Le09 | JP G18 1177 (92) |
|  |  |  |  | -1.123(11) |  |  | [147,147Sm] | LRFS | 1990En01 | JP G16 105 (90) |
|  |  |  |  | 0.92(6) |  |  | [147Sm] | NO/S | 1969Ka21 | PR 184 1177 (69) |
|  |  |  |  |  | -0.6(2) |  | [145,7,9Sm] | LRIMS | 1992Le09 | JP G18 1177 (92) |
|  |  |  |  |  | -0.60(7) | R | [147,147Sm] | LRFS | 1990En01 | JP G16 105 (90) |
|  |  |  |  |  |  |  |  |  |  |  |
| 62 Sm 147 | 0 | 1.1x10\*11y | 7/2- | -0.812(2) |  |  | [147,147Sm] | LRFS | 1990En01 | JP G16 105 (90) |
|  |  |  |  | -0.8148(7) |  |  |  | AB | 1966Wo05 | PRS 293A 117 (66) |
|  |  |  |  |  | -0.27(3) |  | [147,147Sm] | LRFS | 1990En01 | JP G16 105 (90) |
|  |  |  |  |  | -0.261(7) |  |  | AB, R | 1992Le09/1972Ch55 | JP G18 1177 (92)/PR A6 2011 (72) |
|  |  |  |  |  | -0.26(3) | R |  | Mu-X | 2008Py02/1981Ba28 | Mol Phys 106 1956 (2008)/NP A364 446 (81) |
|  |  |  |  |  | Q(147)/Q(149) =-3.4601(6) |  |  | AB | 1972Ch55 | PR A6 2011 (72) |
|  | 121 | 0.78 ns | 5/2- | -0.45(3) |  |  | [147Sm] | ME | 1971Pa04 | PR C3 841 (71) |
|  |  |  |  |  | -0.5(2) | R | [147Sm] | ME | 1971Pa04 | PR C3 841 (71) |
|  | 197 | 1.35 ns | 3/2- | -0.27(6) |  |  |  | IPAC |  | IzUz 1970n2 65 (70) |
|  |  |  |  |  |  |  |  |  |  |  |
| 62 Sm 148 | 550 | 7.3 ps | 2+ | +0.51(4) |  |  | [150Sm 334] | TF | 1987Ba65 | ZP A328 275 (87) |
|  |  |  |  | +0.61(7) |  |  | [152Sm 122] | TF | 1987Be08 | HFI 33 37 (87) |
|  |  |  |  |  | -1.0(3) | R |  | CER | 1989Ra17 | JPJS 34 443 (73) |
|  |  |  |  |  |  |  |  |  |  |  |
| 62 Sm 149 | 0 | > 2x10\*15 y | 7/2- | -0.6677(11) |  |  | [147,147Sm] | LRFS | 1990En01 | JP G16 105 (90) |
|  |  |  |  | -0.6717(7) |  |  | [147Sm] | AB | 1966Wo05 | PRS 293A 117 (66) |
|  |  |  |  | -0.6708(10) |  |  | [147Sm] | CFBLS | 1985Al06/1986Al33 | IzF 49 24 (85)/YadF 44 1134 (86) |
|  |  |  |  |  | +0.078(8) | R | [147,147Sm] | LRFS | 1990En01 | JP G16 105 (90) |
|  |  |  |  |  | +0.075(2) |  |  | AB, R | 1992Le09/1972Ch55 | JP G18 1177 (92)/PR A6 2011 (72) |
|  |  |  |  |  | +0.075(8) |  | [147Sm] | AB | 1966Wo05 | PRS 293A 117 (66) |
|  |  |  |  |  | +0.07(2) |  | [147Sm] | CFBLS | 1985Al06/1986Al33 | IzF 49 24 (85)/YadF 44 1134 (86) |
|  |  |  |  |  | -0.09(2) a |  |  | Mu-X | 1981Ba28 | NP A364 446 (81) |
|  | 23 | 7.6 ns | 5/2- | -0.6238(8) |  |  | [149Sm] | ME | 1970EiZY | Cf70Reho 720 (70) |
|  |  |  |  |  | +1.01(9) a | R |  | Mu-X | 1981Ba28 | NP A364 446 (81) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  |  |  |  |  |  |  |
| 62 Sm 150 | 334 | 49 ps | 2+ | +0.77(5) |  |  | [152Sm 122] | TF | 1987Be08 | HFI 33 37 (87) |
|  |  |  |  | +0.82(6) |  |  | [152Sm 122] | TF | 1987By02 | NP A466 419 (87) |
|  |  |  |  |  | -1.3(2) | R |  | CERP | 1973Gr06 | PRL 30 453 (73) |
|  | 773 | 6.6 ps | 4+ | +2.6(3) |  |  | [150Sm 334] | TF | 1993Va10 | PR C48 2640 (93) |
|  |  |  |  | +1.4(2) |  |  | [152Sm 122] | TF | 1987By02 | NP A466 419 (87) |
|  | 1046 | 0.73 ps | 2+ | +0.7(2) |  |  | [152Sm 122] | TF | 1987By02 | NP A466 419 (87) |
|  | 1194 | 1.27 ps | 2+ | +0.83(14) |  |  | [152Sm 122] | TF | 1987By02 | NP A466 419 (87) |
|  | 1279 | (1.4 ps) | 6+ | +2.6(8) |  |  | [150Sm 334] | TF | 1993Va10 | PR C48 2640 (93) |
|  |  |  |  | +2.3(5) |  |  | [152Sm 122] | TF | 1987By02 | NP A466 419 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 62 Sm 151 | 0 | 90 y | 5/2- | -0.3611(13) |  |  | [147Sm] | LRFS | 1990En01 | JP G16 105 (90) |
|  |  |  |  | -0.363(2) |  |  | [147Sm] | CFBLS | 1985Al06/1986Al33 | IzF 49 24 (85)/YadF 44 1134 (86) |
|  |  |  |  | 0.368(3) |  |  | [147Sm] | CFBLS | 1985Dy01 | PR C31 240 (85) |
|  |  |  |  | -0.3630(5) |  |  | [147Sm] | CFBLS | 1981Do07 | ZP A302 359 (81) |
|  |  |  |  |  | +0.71(7) | R | [147Sm] | LRFS | 1990En01 | JP G16 105 (90) |
|  |  |  |  |  | +0.65(15) |  | [147Sm] | CFBLS | 1985Al06/1986Al33 | IzF 49 24 (85)/YadF 44 1134 (86) |
|  |  |  |  |  | 0.67(7) |  | [147Sm] | CFBLS | 1985Dy01 | PR C31 240 (85) |
|  |  |  |  |  | +0.67(7) |  | [147Sm] | CFBLS | 1981Do07 | ZP A302 359 (81) |
|  | 92 | 77 ns | 9/2+ | -0.95(5) |  |  |  | TDPAC | 1974Dr03 | NP A223 195 (74) |
|  | 105 | 0.48 ns | 3/2- | +0.31(11) |  |  |  | IPAC | 1971Be23 | IzF 35 135 (71) |
|  | 168 | 0.38 ns | 5/2+ | +1.8(5) |  |  |  | IPAC, R | 1974Dr03 | NP A223 195 (74) |
|  |  |  |  |  |  |  |  |  |  |  |
| 62 Sm 152 | 122 | 1.40 ns | 2+ | +0.80(6) |  |  |  | IPAC | 1992De29 | CJP 70 268 (92) |
|  |  |  |  | +0.84(5) |  |  | [149Sm] | ME | 1967At04 | PL 26B 81 (67) |
|  |  |  |  |  | -1.666(16) a | R |  | Mu-X | 1979Po05 | NP A316 295 (79) |
|  |  |  |  |  | -1.702(17) a |  |  | Mu-X | 1978Ya11 | PR C18 1474 (78) |
|  | 366 | 56.6 ps | 4+ | +1.7(2) |  |  | [152Sm 122] | TF | 1987By02 | NP A466 419 (87) |
|  |  |  |  | +1.22(15) |  |  |  | IMPAC | 1972Ku10 | NP A186 513 (72) |
|  | 707 | 10.1 ps | 6+ | +2.4(3) |  |  | [152Sm 122] | TF | 1987By02 | NP A466 419 (87) |
|  | 810 | 7.2 ps | 2+ | +0.8(2) |  |  | [152Sm 122] | TF | 1987By02 | NP A466 419 (87) |
|  | 1086 | 0.85 ps | 2+ | +0.8(2) |  |  | [152Sm 122] | TF | 1987By02 | NP A466 419 (87) |
|  | 1125 | 3.3 ps | 8+ | +2.8(5) |  |  | [152Sm 122] | TF | 1987By02 | NP A466 419 (87) |
|  | 1609 | 1.38 ps | 10+ | +4(2) |  |  | [152Sm 122] | TF | 1987By02 | NP A466 419 (87) |
|  | gsb |  | <10+ | g(0) = +0.38(3) |  |  |  | TF | 1982An10 | NP A383 509 (82) |
|  |  |  |  | x10\*3=0.4(2) |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| 62 Sm 153 | 0 | 46.8 h | 3/2+ | -0.021(3) |  |  | [147,147Sm] | LRFS | 1990En01 | JP G16 105 (90) |
|  |  |  |  | -0.0257(14) |  |  | [147Sm] | ABLFS | 1984Ea02 | JP G10 L271 (84) |
|  |  |  |  | -0.0216(1) |  |  |  | AB | 1976Fu06 | JPCR 5 835 (76)/PC Wadding (68) |
|  |  |  |  |  | +1.30(12) | R | [147,147Sm] | LRFS | 1990En01 | JP G16 105 (90) |
|  |  |  |  |  | +1.26(13) |  | [147Sm] | ABLFS | 1984Ea02 | JP G10 L271 (84) |
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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
| 62 Sm 154 | 82 | 3.01 ns | 2+ | +0.78(4) |  |  | [149Sm] | ME | 1969Wh04 | PR 186 1280 (69) |
|  |  |  |  |  | -1.87(4) a | R |  | Mu-X | 1979Po05 | NP A316 295 (79) |
|  | 267 | 165 ps | 4+ | +1.35(15) |  |  |  | IMPAC | 1972Ku10 | NP A186 513 (72) |
|  | 544 | 23.4 | 6+ | +1.9(3) |  |  |  | IMPAC | 1972Ku10 | NP A186 513 (72) |
|  | gsb |  | <10+ | g(0) = +0.39(3) |  |  |  | TF | 1982An10 | NP A383 509 (82) |
|  |  |  |  | x10\*3=-1.3(15) |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| 62 Sm 155 | 0 | 22.4 m | 3/2- |  | 1.13(13) | R | [153Sm] | AB | 1976Fu06 | JPCR 5 835 (76)/PC Wadding (68) |
|  |  |  |  |  |  |  |  |  |  |  |
| 63 Eu 138 | 0 | 12.1 s | (6-) | 5.3(7) |  |  | [142Eu] | NO/S | 1992Si22 | HFI 75 471 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 63 Eu 139 | 0 | 17.9s | (11/2-) | 6.1(8) |  |  | [142Eu] | NO/S | 1992Si22 | HFI 75 471 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 63 Eu 140 | 0 + x | 1.54 s | 1(+) | +1.365(13) |  |  | [151Eu] | CFBLS | 1985Ah02 | ZP A321 35 (85) |
|  |  |  |  |  | +0.31(4) | R | [153Eu] | CFBLS | 1985Ah02 | ZP A321 35 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 63 Eu 141 | 0 | 40 s | 5/2+ | +3.494(8) |  |  | [151Eu] | CFBLS | 1985Ah02 | ZP A321 35 (85) |
|  |  |  |  |  | +0.85(4) | R | [153Eu] | CFBLS | 1985Ah02 | ZP A321 35 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 63 Eu 142 | 0 | 2.4 s | 1+ | +1.54(2) |  |  | [151Eu] | CFBLS | 1985Ah02 | ZP A321 35 (85) |
|  |  |  |  |  | +0.12(5) | R | [153Eu] | CFBLS | 1985Ah02 | ZP A321 35 (85) |
|  | 180 | 73 s | 8- | +2.978(11) |  |  | [151Eu] | CFBLS | 1985Ah02 | ZP A321 35 (85) |
|  |  |  |  |  | +1.41(6) | R | [153Eu] | CFBLS | 1985Ah02 | ZP A321 35 (85) |
|  | 282 + x | 6.2 ns | 8+ | (+)4.1(2) |  |  |  | TDPAD | 1993Bi13 | ZP A346 181 (93) |
|  |  |  |  |  |  |  |  |  |  |  |
| 63 Eu 143 | 0 | 2.6 m | 5/2+ | +3.673(8) |  |  | [151Eu] | CFBLS | 1985Ah02 | ZP A321 35 (85) |
|  |  |  |  |  | +0.51(3) | R | [153Eu] | CFBLS | 1985Ah02 | ZP A321 35 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 63 Eu 144 | 0 | 10 s | 1+ | +1.893(13) |  |  | [151Eu] | CFBLS | 1985Ah02 | ZP A321 35 (85) |
|  |  |  |  |  | +0.10(3) | R | [153Eu] | CFBLS | 1985Ah02 | ZP A321 35 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 63 Eu 145 | 0 | 5.93 d | 5/2+ | +3.999(3) |  |  | [151Eu] | CFBLS | 1993HuZU | Cf93Bern 209(93) |
|  |  |  |  | +3.993(7) |  |  | [151 Eu] | CFBLS | 1985Ah02 | ZP A321 35 (85) |
|  |  |  |  | 3.2(5) |  |  |  | NO/S | 1983Kr18 | HFI 15 73 (83) |
|  |  |  |  |  | Q/Q(153Eu) = 0.1168(9) |  | [151Eu] | CFBLS | 1993HuZU | Cf93Bern 209(93) |
|  |  |  |  |  | +0.29(2) | R | [151 Eu] | CFBLS | 1985Ah02 | ZP A321 35 (85) |
|  | 716 | 0.49 s | 11/2- | +7.46(4) |  |  | [19F 197] | TDPAD | 1980Kl07 | NP A350 61 (80) |
|  |  |  |  |  |  |  |  |  |  |  |
| 63 Eu 146 | 0 | 4.59 d | 4- | +1.421(8) |  |  | [151Eu] | CFBLS | 1993HuZU | Cf93Bern 209(93) |
|  |  |  |  | +1.425(11) |  |  | [151 Eu] | CFBLS | 1985Ah02 | ZP A321 35 (85) |
|  |  |  |  | 1.3(2) |  |  |  | NO/S | 1985Va21 | Phca 133B 138 (85) |
|  |  |  |  | 1.7(3) |  |  |  | NO/S | 1983Kr18 | HFI 15 73 (83) |
|  |  |  |  |  | Q/Q(153Eu) = -0.074(2) |  | [153Eu] | CFBLS | 1993HuZU | Cf93Bern 209(93) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | -0.18(6) | R | [151 Eu] | CFBLS | 1985Ah02 | ZP A321 35 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 63 Eu 147 | 0 | 24.1 d | 5/2+ | +3.736(6) |  |  | [151Eu] | CFBLS | 1993HuZU | Cf93Bern 209(93) |
|  |  |  |  | +3.725(7) |  |  | [151 Eu] | CFBLS | 1986Al33 | YadF 44 1134 (86) |
|  |  |  |  | +3.724(8) |  |  | [151 Eu] | CFBLS | 1985Ah02 | ZP A321 35 (85) |
|  |  |  |  | 4.0(9) |  |  |  | NO/S | 1985Va21 | Phca 133B 138 (85) |
|  |  |  |  | 3.1(4) |  |  |  | NO/S | 1983Kr18 | HFI 15 73 (83) |
|  |  |  |  | 3.7(5) |  |  |  | NO/S | 1979Er13 | IzF 43 2176 (79) |
|  |  |  |  |  | Q/Q(153Eu) = 0.218(2) |  | [153Eu] | CFBLS | 1993HuZU | Cf93Bern 209(93) |
|  |  |  |  |  | +0.49(3) |  | [151 Eu] | CFBLS | 1986Al33 | YadF 44 1134 (86) |
|  |  |  |  |  | +0.55(3) | R | [151 Eu] | CFBLS | 1985Ah02 | ZP A321 35 (85) |
|  | 635 | 765 ns | 11/2- | +7.05(3) |  |  |  | TDPAD | 1980Ba67 | PL 77A 365 (80) |
|  |  |  |  | +7.04(6) |  |  | [19F 197] | TDPAD | 1980Kl07 | NP A350 61 (80) |
|  |  |  |  |  |  |  |  |  |  |  |
| 63 Eu 148 | 0 | 54.5 d | 5- | +2.340(10) |  |  | [151 Eu] | CFBLS | 1985Ah02 | ZP A321 35 (85) |
|  |  |  |  | 2.2(4) |  |  |  | NO/S | 1985Va21 | Phca 133B 138 (85) |
|  |  |  |  | 2.1(3) |  |  |  | NO/S | 1983Kr18 | HFI 15 73 (83) |
|  |  |  |  |  | +0.35(6) | R | [151 Eu] | CFBLS | 1985Ah02 | ZP A321 35 (85) |
|  | 720 | 235 ns | 9+ | +6.12(5) |  |  |  | TDPAD | 1980Ba67 | PL 77A 365 (80) |
|  |  |  |  |  |  |  |  |  |  |  |
| 63 Eu 149 | 0 | 93.1 d | 5/2+ | +3.576(10) |  |  | [151 Eu] | CFBLS | 1986Al33 | YadF 44 1134 (86) |
|  |  |  |  | +3.565(6) |  |  | [151 Eu] | CFBLS | 1985Ah02 | ZP A321 35 (85) |
|  |  |  |  |  | +0.70(8) |  | [151 Eu] | CFBLS | 1986Al33 | YadF 44 1134 (86) |
|  |  |  |  |  | +0.75(2) | R | [151 Eu] | CFBLS | 1985Ah02 | ZP A321 35 (85) |
|  | 497 | 2.43 s | 11/2- | +7.0(3) |  |  | [19F 197] | TDPAD | 1980Kl07 | NP A350 61 (80) |
|  |  |  |  |  |  |  |  |  |  |  |
| 63 Eu 150 | 0 | 35.8 y | 5(-) | +2.708(11) |  |  | [151 Eu] | CFBLS | 1985Ah02 | ZP A321 35 (85) |
|  |  |  |  |  | +1.13(5) | R | [151 Eu] | CFBLS | 1985Ah02 | ZP A321 35 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 63 Eu 151 | 0 | stable | 5/2+ | +3.4717(6) |  |  |  | AB/D | 1965Ev08 | PRS 289A 114 (65) |
|  |  |  |  |  | Q/Q(153Eu) = 0.3918(2) |  | [153Eu] | CFBLS | 1993HuZU | Cf93Bern 209(93) |
|  |  |  |  |  | Q/Q(153Eu) = 0.39191(12) |  | [153Eu] | CFBLS | 1993Mo04 | PRL 70 541 (93) |
|  |  |  |  |  | Q/Q(153Eu)=0.393(9) |  | [153Eu] | O | 1965Wi09 | PL 16 156 (65) |
|  |  |  |  |  | 0.83 e,st |  |  | ABLDF | 1987Se12 | PR A36 1983 (87) |
|  |  |  |  |  | +0.95(3) |  | [153Eu] | CFBLS | 1985Ah02 | ZP A321 35 (85) |
|  |  |  |  |  | +0.903(10) a | R |  | Mu-X, O | 1984Ta04/1965Wi09 | PR C29 1830 (84)/PL 16 156 (65) |
|  |  |  |  |  | 1.53(5) |  |  | ABLFS | 1981Br17 | ZP A302 291 (81) |
|  |  |  |  |  | 1.32(13) |  |  | CFBLS | 1981Ar25 | PS 24 747 (81) |
|  | 22 | 9.5 ns | 7/2+ | +2.591(2) |  |  | [151Eu] | ME | 1972Cr09 | ZP A256 155 (72) |
|  |  |  |  |  | 1.28(2) a | R |  | Mu-X | 1984Ta05 | PR C29 1897 (84) |
|  |  |  |  |  | +1.19(2) |  | [151Eu] | ME, R | 1976St73 | JPCR 5 1093 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 63 Eu 152 | 0 | 13.54 y | 3- | -1.9401(8) |  |  | [151Eu] | CFBLS | 1993HuZU | Cf93Bern 209(93) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  | -1.950(12) |  |  | [151Eu] | CFBLS | 1986Al33 | YadF 44 1134 (86) |
|  |  |  |  | -1.96(6) |  |  | [151Eu] | CFBLS | 1985Ah02 | ZP A321 35 (85) |
|  |  |  |  | -1.9414(13) |  |  | [151Eu] | AB, O, R | 1963Al06/1970He09 | PR 129 1344(63)/PL 31B 295 (70)/ |
|  |  |  |  |  |  |  |  |  | 1971He18 | ZP 245 411 (71) |
|  |  |  |  |  | Q/Q(153Eu) = 1.1822(5) |  | [153Eu] | CFBLS | 1993HuZU | Cf93Bern 209(93) |
|  |  |  |  |  | +2.72(3) | R | [151Eu] | CFBLS | 1986Al33 | YadF 44 1134 (86) |
|  |  |  |  |  | +2.5(2) |  | [151Eu] | CFBLS | 1985Ah02 | ZP A321 35 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 63 Eu 153 | 0 | stable | 5/2+ | +1.5324(3) |  |  | [151Eu] | CFBLS | 1993HuZU | Cf93Bern 209(93) |
|  |  |  |  | +1.56(4) |  |  | [151Eu] | CFBLS | 1986Al33 | YadF 44 1134 (86) |
|  |  |  |  | +1.538(13) |  |  | [151Eu] | CFBLS | 1985Ah02 | ZP A321 35 (85) |
|  |  |  |  | +1.5330(8) |  |  |  | AB/D | 1965Ev08 | PRS 289A 114 (65) |
|  |  |  |  |  | 2.22 e,st |  |  | ABLDF | 1987Se12 | PR A36 1983 (87) |
|  |  |  |  |  | +2.28(9) |  | [151Eu] | CFBLS | 1986Al33 | YadF 44 1134 (86) |
|  |  |  |  |  | +2.41(2) a | R |  | Mu-X, O | 1984Ta04/1965Wi09 | PR C29 1830 (84)/PL 16 156 (65) |
|  |  |  |  |  | 3.92(12) |  |  | ABLFS | 1981Br17 | ZP A302 291 (81) |
|  |  |  |  |  | 3.6(4) |  |  | CFBLS | 1981Ar25 | PS 24 747 (81) |
|  | 83 | 0.80 ns | 7/2+ | +1.81(6) |  |  | [153Eu] | ME | 1969Ri02 | ZP A218 223 (69) |
|  |  |  |  |  | 0.44(2) a | R |  | Mu-X | 1984Ta04 | PR C29 1830 (84) |
|  | 97 | 180 ps | 5/2- | +3.2(2) or -0.5(2) |  |  | [153Eu] | ME | 1966At01 | PR 145 915 (66) |
|  | 103 | 3.9 ns | 3/2+ | +2.048(6) |  |  | [153Eu] | ME, IPAC | 1972Cr09/1975Si07 | ZP 256 155 (72)/JP G1 467 (75) |
|  |  |  |  |  | 1.253(12) | R | [153Eu] | ME | 1973Ar19 | PL 44A 279 (73) |
|  |  |  |  |  |  |  |  |  |  |  |
| 63 Eu 154 | 0 | 8.6 y | 3- | -2.005(6) |  |  | [153Eu] | EPR | 1957Ab05 | PR 108 58 (57) |
|  |  |  |  | -2.02(5) |  |  | [151Eu] | CFBLS | 1986Al33 | YadF 44 1134 (86) |
|  |  |  |  |  | +2.85(10) | R | [151Eu] | CFBLS | 1986Al33 | YadF 44 1134 (86) |
|  |  |  |  |  | +3.4(3) |  | [152Eu] | NO/S, O, R | 1962Ju06/1970He09/ | PR 128 1733 (62)/PL 31B 295 (70)/ |
|  |  |  |  |  |  |  |  |  | 1971He18 | ZP 245 411 (71) |
|  |  |  |  |  |  |  |  |  |  |  |
| 63 Eu 155 | 0 | 4.68 y | 5/2+ | +1.520(2) |  |  | [153Eu] | ABLFS | 2000Ga35 | EurPJ D11 341 (00) |
|  |  |  |  | +1.52(2) |  |  | [151,153Eu] | CFBLS | 1990Al34 | ZP A337 257 (90) |
|  |  |  |  | 1.519(10) |  |  | [153Eu] | ABLFS | 1986Al33 | APPo 30 1415 (99) |
|  |  |  |  | +1.56(10) |  |  | [151Eu] | CFBLS | 1990Al34 | YadF 44 1134 (86) |
|  |  |  |  |  | +2.49(2) |  | [153Eu] | ABLFS | 2000Ga35 | EurPJ D11 341 (00) |
|  |  |  |  |  | 2.51(6) |  | [153Eu] | ABLFS | 1999Ga36 | APPo 30 1415 (99) |
|  |  |  |  |  | +2.5(3) | R | [151,153Eu] | CFBLS | 1990Al34 | ZP A337 257 (90) |
|  |  |  |  |  | +2.3(2) |  | [151Eu] | CFBLS | 1986Al33 | YadF 44 1134 (86) |
|  | 104 | 0.104 ns | 5/2- | +9.6(10) |  |  |  | IPAC | 1971Be23 | IzF 35 135 (71)/IzF 35 2295 (71) |
|  |  |  |  |  |  |  |  |  |  |  |
| 63 Eu 157 | 0 | 15.2 h | 5/2+ | +1.50(2) |  |  | [151,153Eu] | CFBLS | 1990Al34 | ZP A337 257 (90) |
|  |  |  |  |  | +2.6(3) | R | [151,153Eu] | CFBLS | 1990Al34 | ZP A337 257 (90) |
|  |  |  |  |  |  |  |  |  |  |  |
| 63 Eu 158 | 0 | 45.9 m | 1(-) | +1.44(2) |  |  | [151,153Eu] | CFBLS | 1990Al34 | ZP A337 257 (90) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | +0.66(14) | R | [151,153Eu] | CFBLS | 1990Al34 | ZP A337 257 (90) |
|  |  |  |  |  |  |  |  |  |  |  |
| 63 Eu 159 | 0 | 18.1 m | 5/2+ | +1.38(2) |  |  | [151,153Eu] | CFBLS | 1990Al34 | ZP A337 257 (90) |
|  |  |  |  |  | +2.7(3) | R | [151,153Eu] | CFBLS | 1990Al34 | ZP A337 257 (90) |
|  |  |  |  |  |  |  |  |  |  |  |
| 64 Gd 144 | 3433 | 130 ns | 10+ | +12.76(14) |  |  |  | TDPAD | 1979Ha15 | PRL 42 1451 (79) |
|  |  |  |  |  | -1.40(6) | R | [155Gd] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -1.46(6) |  |  | TDPAD, TFLD | 1982Ha22/1985Da20 | NP A379 287 (82)/NP A443 135 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 64 Gd 145 | 0 | 22 m | 1/2+ | -0.74(5) |  |  |  | LS | 2005BA64 | PR C72 017301 (05) |
|  | 749 | 85 s | 11/2- | -1.0(2) |  |  |  | LS | 2005BA64 | PR C72 017301 (05) |
|  |  |  |  |  |  |  |  |  |  |  |
| 64 Gd 146 | 1580 | 1.1 ns | 3- | +2.1(9) |  |  |  | TDPAD | 1979Ke03 | ZP A290 229 (79) |
|  | 2982 | 6.7 ns | 7- | +9.0(2) |  |  |  | TDPAD | 1979Ha15 | PRL 42 1451 (79) |
|  |  |  |  | +8.3(4) |  |  |  | TDPAD | 1979Ke03 | ZP A290 229 (79) |
|  |  |  |  | +7.9(6) |  |  |  | TDPAD | 1979Fa01 | PL 80B 190 (79) |
|  | 8916 | 4.1 ns | (19+) | +12(2) |  |  |  | TDPAD | 1979Ha15 | PRL 42 1451 (79) |
|  |  |  |  |  |  |  |  |  |  |  |
| 64 Gd 147 | 0 | 38.1 h | 7/2- | 1.02(9) |  |  |  | NO/S | 1987Kr11 | HFI 34 69 (87) |
|  |  |  |  | 1.2(2) |  |  |  | NO/S | 1986Va16 | NP A455 189 (86) |
|  | 997 | 22.2 ns | 13/2+ | +0.49(2) |  |  |  | TDPAD | 1987Da27 | PL 199B 26 (87) |
|  |  |  |  | -0.24(7) |  |  |  | TDPAD | 1979Ha15 | PRL 42 1451 (79) |
|  |  |  |  |  | -0.70(8) | R | [155Gd] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.73(7) |  |  | TDPAD, TFLD | 1982Ha22/1985Da20 | NP A379 287 (82)/NP A443 135 (85) |
|  | 2760 | 4.4 ns | 21/2+ | +7.6(12) |  |  |  | TDPAD | 1979Ha15 | PRL 42 1451 (79) |
|  | 3582 | 27 ns | 27/2- | +11.3(2) |  |  |  | TDPAD | 1979Ha15 | PRL 42 1451 (79) |
|  |  |  |  | +11.9(3) |  |  |  | TDPAD | 1979Fa01 | PL 80B 190 (79) |
|  |  |  |  |  | -1.21(9) | R | [155Gd] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -1.26(8) |  |  | TDPAD, TFLD | 1982Ha22/1985Da20 | NP A379 287 (82)/NP A443 135 (85) |
|  | 8587 | 510 ns | 49/2+ | +10.9(2) |  |  |  | TDPAD | 1979Ha15 | PRL 42 1451 (79) |
|  |  |  |  |  | -3.00(18) | R | [155Gd] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -3.24(18) |  |  | TDPAD, TFLD | 1982Ha22/1985Da20 | NP A379 287 (82)/NP A443 135 (85) |
|  | 10993 | 0.8 ns | 59/2- | +11(2) |  |  |  | TF | 1989Ha15 | PR 39C 2237 (89) |
|  |  |  |  |  |  |  |  |  |  |  |
| 64 Gd 148 | 2695 | 16.5 ns | 9- | -0.16(2) |  |  |  | TDPAD | 1987Da27 | PL 199B 26 (87) |
|  |  |  |  | -0.25(8) |  |  |  | TDPAD | 1979Ha15 | PRL 42 1451 (79) |
|  |  |  |  |  | 0.96(5) | R | [155Gd] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 1.01(5) |  |  | TDPAD | 1982Ha22 | NP A379 287 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 64 Gd 149 | 0 | 9.4 d | 7/2- | 0.88(4) |  |  |  | NO/S | 1987Kr11 | HFI 34 69 (87) |
|  |  |  |  | 0.97(6) |  |  |  | NO/S | 1987Be33 | HFI 34 119 (87) |
|  |  |  |  | 1.1(2) |  |  |  | NO/S | 1985Al21 | NP A445 189 (86) |
|  | 165 | 1.7 ns | 5/2- | -0.9(2) |  |  |  | IPAC, TDPAC | 1977GrZF | Cf77Tokyo 379 (77) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  |  |  |  |  |  |  |
| 64 Gd 151 | 0 | 120 d | 7/2- | 0.77(6) |  |  |  | NO/S | 1987Be33 | HFI 34 119 (87) |
|  | 109 | 3.0 ns | 5/2- | -1.08(13) |  |  |  | IPAC, TDPAC | 1977GrZF | Cf77Tokyo 379 (77) |
|  |  |  |  | -1.2(2) |  |  |  | IPAC | 1976Ba26/1976Ba59 | ZP A277 217 (76)/HFI 2 323 (76) |
|  | 395 | 0.31 ns | 3/2- | -2.5(8) |  |  |  | IPAC | 1977GrZF | Cf77Tokyo 379 (77) |
|  |  |  |  |  |  |  |  |  |  |  |
| 64 Gd 152 | 344 | 28.6 ps | 2+ | +0.96(8) |  |  | [156Gd 89] | RIGV, R | 1974Ar23 | NP A233 385 (74) |
|  |  |  |  | +0.90(8) |  |  | [152Sm 122] | TF | 1987Be08 | HFI 33 37 (87) |
|  | 755 | 6.1 ps | 4+ | (+)2.0(5) |  |  | [152Gd 344] | TF | 1999Ma06 | PR C59 665 (99) |
|  |  |  |  |  |  |  |  |  |  |  |
| 64 Gd 153 | 0 | 241.6 d | 3/2- | 0.38(8) |  |  |  | NO/S | 1985Al21 | NP A445 189 (86) |
|  | 110 | 1.97 ns | 5/2- | +0.40(15) |  |  |  | IPAC, TDPAC | 1977GrZF | Cf77Tokyo 379 (77) |
|  | 129 | 2.50 ns | 3/2- | +0.37(7) |  |  |  | IPAC | 1977Ba63 | HFI 3 423 (77) |
|  |  |  |  |  |  |  |  |  |  |  |
| 64 Gd 154 | 123 | 1.17 ns | 2+ | +0.96(6) |  |  | [156Gd 89] | RIGV, R | 1974Ar23 | NP A233 385 (74) |
|  |  |  |  | +0.86(6) |  |  | [156Gd 89] | TDPAC | 1970Wa26 | ZP A238 69 (70) |
|  |  |  |  |  | -1.82(4) a | R | [155Gd] | Mu-X | 1983La08 | PR C27 1772 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 64 Gd 155 | 0 | stable | 3/2- | -0.2572(4) |  |  |  | ENDOR | 1978Va24 | JP C11 203 (78) |
|  |  |  |  | -0.2591(5) |  |  |  | AB/D | 1969Un02 | JP B2 122 (69) |
|  |  |  |  |  | +1.27(5) st |  |  | ABLS | 1990Ji06 | PR A42 1416 (90) |
|  |  |  |  |  | 1.27(3) a | R |  | Mu-X | 1983La08 | PR C27 1772 (83) |
|  |  |  |  |  | +1.30(2) a |  |  | Mu-X, AB | 1982Ta01 | PL 108B 8 (82)/JP B2 122 (69) |
|  | 60 | 0.19 ns | 5/2- |  | -0.44(2) a |  |  | Mu-X | 1983La08 | PR C27 1772 (83) |
|  | 87 | 6.35 ns | 5/2+ | -0.525(2) |  |  | [155Gd] | ME | 1978Co23 | HFI 5 479 (78) |
|  |  |  |  | -0.518(5) |  |  | [155Gd] | ME | 1977Va21 | Phca 92B 52 (77) |
|  |  |  |  | -0.533(4) |  |  | [155Gd] | ME | 1973Ar03 | PL 43B 380 (73) |
|  |  |  |  |  | +0.110(8) | R | [155Gd] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.13(3) |  | [155Gd] | ME | 1978Co23 | HFI 5 479 (78) |
|  |  |  |  |  | +0.111(7) |  | [155Gd] | ME | 1977Va21 | Phca 92B 52 (77) |
|  |  |  |  |  | +0.113(8) |  | [155Gd] | ME | 1973Ar03 | PL 43B 380 (73) |
|  | 105 | 1.18 ns | 3/2+ | +0.143(5) |  |  | [155Gd] | ME | 1978Co23 | HFI 5 479 (78) |
|  |  |  |  |  | +1.27(5) | R | [155Gd] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.96(3) |  | [155Gd] | ME | 1978Co23 | HFI 5 479 (78) |
|  |  |  |  |  | +1.30(4) |  | [155Gd] | ME | 1974Ar23 | NP A233 385 (74) |
|  | 146 | 101 ps | 7/2- | +0.4(4) |  |  | [156Gd] | TF | 1998St28 | NP A642 361 (98) |
|  | 252 | 58 ps | 9/2- | +1.2(3) |  |  | [156Gd] | TF | 1998St28 | NP A642 361 (98) |
|  | 392 | 23 ps | 11/2- | +1.5(3) |  |  | [156Gd] | TF | 1998St28 | NP A642 361 (98) |
|  | 534 | 14.6 ps | 13/2- | +1.9(3) |  |  | [156Gd] | TF | 1998St28 | NP A642 361 (98) |
|  | 730 | 5.8 ps | 15/2- | +2.6(5) |  |  | [156Gd] | TF | 1998St28 | NP A642 361 (98) |
|  | 897 | 4.9 ps | 17/2- | +2.2(9) |  |  | [156Gd] | TF | 1998St28 | NP A642 361 (98) |
|  | 1142 | 2.4 ps | 19/2- | +2.9(10) |  |  | [156Gd] | TF | 1998St28 | NP A642 361 (98) |
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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
| 64 Gd 156 | 89 | 2.21 ns | 2+ | +0.82(14) |  |  | [158Gd 261] | TF | 1991St01 | ZP A338 135 (91) |
|  |  |  |  | +0.774(8) |  |  | [155Gd] | ME | 1974Ar23 | NP A233 385 (74) |
|  |  |  |  |  | -1.93(4) a | R |  | Mu-X | 1983La08 | PR C27 1772 (83) |
|  |  |  |  |  | -1.96(4) |  | [155Gd] | ME | 1974Ar23 | NP A233 385 (74) |
|  | 288 | 112 ps | 4+ | +1.68(12) |  |  | [156Gd 89] | TF | 1992Br07 | PR C45 1549 (92) |
|  |  |  |  | +1.76(16) |  |  | [156Gd 89] | TF | 1990Ba39 | HFI 59 125 (90) |
|  |  |  |  | +1.31(8) |  |  | [BhfGd(Fe)] | IPAC | 1990Sc10 | ZP A335 387 (90) |
|  |  |  |  | +1.63(15) |  |  | [158Gd 261] | TF | 1991St01 | ZP A338 135 (91) |
|  |  |  |  | +1.55(14) |  |  | [156Gd 89] | TF | 1991St01 | ZP A338 135 (91) |
|  |  |  |  | +1.24(8) |  |  |  | IPAC | 1988Al33 | ZP A331 277 (88) |
|  | 585 | 16 ps | 6+ | +2.4(2) |  |  | [156Gd 89] | TF | 1992Br07 | PR C45 1549 (92) |
|  |  |  |  | +2.3(4) |  |  | [158Gd 261] | TF | 1991St01 | ZP A338 135 (91) |
|  |  |  |  | +2.2(4) |  |  | [156Gd 89] | TF | 1991St01 | ZP A338 135 (91) |
|  |  |  |  | +1.5(13) |  |  |  | IPAC | 1988Al33 | ZP A331 277 (88) |
|  | 965 | 4.3 ps | 8+ | +2.7(3) |  |  | [156Gd 89] | TF | 1992Br07 | PR C45 1549 (92) |
|  | 1511 | 190 ps | 4+ | +3.24(11) |  |  |  | IPAC | 1988Al33 | ZP A331 277 (88) |
|  | gsb |  | <10+ | g(10+)/g(2+) =0.89(12) |  |  |  | TF | 1983Ha24 | NP A406 339 (83) |
|  |  |  |  | x10\*3=-1.1(12) |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| 64 Gd 157 | 0 | stable | 3/2- | -0.3398(7) |  |  | [155Gd] | AB/D, ENDOR | 1969Un02/1969Ba15 | JP B2 122 (69)/JP C2 862 (69) |
|  |  |  |  | -0.3373(6) |  |  |  | ENDOR | 1978Va24 | JP C11 203 (78) |
|  |  |  |  |  | +1.36(6) st |  |  | ABLS | 1990Ji06 | PR A42 1416 (90) |
|  |  |  |  |  | +1.35(3) a | R |  | Mu-X | 1983La08 | PR C27 1772 (83) |
|  |  |  |  |  | +1.36(2) a |  |  | Mu-X, O | 1982Ta01/1959Ka10 | PL 108B 8 (82)/ZETF 37 882 (59) |
|  |  |  |  |  | 1.34(7) st |  |  | O | 1979Cl04 | ZP A289 361 (79) |
|  |  |  |  |  | +1.38(2) |  | [155Gd] | AB | 1969Un02 | JP B2 122 (69) |
|  | 55 | 0.13 ns | 5/2- |  | -0.46(2) a |  |  | Mu-X | 1983La08 | PR C27 1772 (83) |
|  | 64 | 0.46 s | 5/2+ | -0.464(11) |  |  | [157Gd] | ME, R | 1974Ar23 | NP A233 385 (74) |
|  |  |  |  |  | +2.43(7) | R | [157Gd] | ME | 1974Ar23 | NP A233 385 (74) |
|  |  |  |  |  |  |  |  |  |  |  |
| 64 Gd 158 | 80 | 2.52 ns | 2+ | +0.78(6) |  |  | [158Gd 261] | TF | 1992Br07 | PR C45 1549 (92) |
|  |  |  |  | +0.762(8) |  |  |  | ME, R | 1988Al33 | ZP A331 277 (88) |
|  |  |  |  | +0.9(2) |  |  | [158Gd 261] | TF | 1991St01 | ZP A338 135 (91) |
|  |  |  |  | +0.8(2) |  |  | [156Gd 89] | TF | 1991St01 | ZP A338 135 (91) |
|  |  |  |  |  | -2.01(4) a | R |  | Mu-X | 1983La08 | PR C27 1772 (83) |
|  |  |  |  |  | -1.96(4) |  | [157Gd] | ME | 1974Ar23 | NP A233 385 (74) |
|  | 261 | 148 ps | 4+ | +1.60(12) |  |  | [158Gd 261] | TF | 1992Br07 | PR C45 1549 (92) |
|  |  |  |  | +1.4(2) |  |  | {156Gd 89} | TF | 1990Ba39 | HFI 59 125 (90) |
|  |  |  |  | +1.55(12) |  |  | {156Gd 89] | TF | 1991St01 | ZP A338 135 (91) |
|  |  |  |  | +1.64(6) |  |  |  | IPAC | 1988Al33 | ZP A331 277 (88) |
|  | 539 | 16 ps | 6+ | +2.5(2) |  |  | {158Gd 261} | TF | 1992Br07 | PR C45 1549 (92) |
|  |  |  |  | 2.4(3) |  |  | [158Gd 261] | TF | 1991St01 | ZP A338 135 (91) |
|  |  |  |  | 2.3(3) |  |  | [156Gd 89] | TF | 1991St01 | ZP A338 135 (91) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  | 904 | 5.1 | 8+ | 3.4(4) |  |  | {158Gd 261} | TF | 1992Br07 | PR C45 1549 (92) |
|  | gsb |  | <10+ | g(10+)/g(2+) =0.83(11) |  |  |  | TF | 1983Ha24 | NP A406 339 (83) |
|  |  |  |  | x10\*3=-1.7(11) |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| 64 Gd 159 | 0 | 18.6 h | 3/2- | -0.44(3) |  |  |  | NO/S | 1971Kr19 | PR C4 1942 (71) |
|  |  |  |  |  |  |  |  |  |  |  |
| 64 Gd 160 | 75 | 2.70 ns | 2+ | +.72(4) |  |  | [156Gd 89] | RIGV, R | 1974Ar23 | NP A233 385 (74) |
|  |  |  |  |  | -2.08(4) a | R |  | Mu-X | 1983La08 | PR C27 1772 (83) |
|  | 248 |  | 4+ | 1.6(2) |  |  | [158Gd 261] | TF | 1991St01 | ZP A338 135 (91) |
|  |  |  |  | 1.5(2) |  |  | [156Gd 89] | TF | 1991St01 | ZP A338 135 (91) |
|  | 515 |  | 6+ | 2.4(3) |  |  | [158Gd 261] | TF | 1991St01 | ZP A338 135 (91) |
|  |  |  |  | 2.3(3) |  |  | [156Gd 89] | TF | 1991St01 | ZP A338 135 (91) |
|  | gsb |  | <10+ | g(10+)/g(2+) =0.93(13) |  |  |  | TF | 1983Ha24 | NP A406 339 (83) |
|  |  |  |  | x10\*3=-0.7(12) |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| 65 Tb 147 | 0 | 1.7 h | 1/2+ | +1.70(5) |  |  | [159Tb] | CFBLS | 1990Al36 | ZP A337 367 (90) |
|  |  |  |  |  |  |  |  |  |  |  |
| 65 Tb 148 | 0 | 60 m | 2- | -1.75(2) |  |  | [159Tb] | CFBLS | 1990Al36 | ZP A337 367 (90) |
|  |  |  |  |  | -0.3(2) | R | [159Tb] | CFBLS | 1990Al36 | ZP A337 367 (90) |
|  |  |  |  |  |  |  |  |  |  |  |
| 65 Tb 149 | 0 | 4.12 h | 1/2+ | +1.35(2) |  |  | [159Tb] | CFBLS | 1990Al36 | ZP A337 367 (90) |
|  | 2518 | 3.5 ns | (27/2)+ | 4.9(12) |  |  |  | IPAD | 1990Ad02 | JPJa 59 66 (90) |
|  |  |  |  |  |  |  |  |  |  |  |
| 65 Tb 150 | 0 + x | 3.48 h | 2(-) | -0.90(2) |  |  | [159Tb] | CFBLS | 1990Al36 | ZP A337 367 (90) |
|  |  |  |  |  | 0.00(13) | R | [159Tb] | CFBLS | 1990Al36 | ZP A337 367 (90) |
|  |  |  |  |  |  |  |  |  |  |  |
| 65 Tb 151 | 0 | 17.6 h | 1/2(+) | +0.919(6) |  |  | [159Tb] | CFBLS | 1990Al36 | ZP A337 367 (90) |
|  |  |  |  |  |  |  |  |  |  |  |
| 65 Tb 152 | 0 | 17.5 h | 2- | -0.58(2) |  |  | [159Tb] | CFBLS | 1990Al36 | ZP A337 367 (90) |
|  |  |  |  |  | +0.34(13) | R | [159Tb] | CFBLS | 1990Al36 | ZP A337 367 (90) |
|  |  |  |  |  | +0.5(16) |  | [159Tb] | NO/S | 1983Be03 | JP G9 213 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 65 Tb 153 | 0 | 2.34 d | 5/2+ | +3.44(2) |  |  | [159Tb] | CFBLS | 1990Al36 | ZP A337 367 (90) |
|  |  |  |  | 3.5(7) |  |  | [159Tb] | NO/S | 1983Be03 | JP G9 213 (83) |
|  |  |  |  |  | +1.08(14) | R | [159Tb] | CFBLS | 1990Al36 | ZP A337 367 (90) |
|  |  |  |  |  |  |  |  |  |  |  |
| 65 Tb 154 | 0 + x | 9.4 h | 3- | +1.6(2) |  |  | [159Tb] | CFBLS | 1990Al36 | ZP A337 367 (90) |
|  |  |  |  | 1.8(4) |  |  | [159Tb] | NO/S | 1983Be03 | JP G9 213 (83) |
|  |  |  |  |  | +2.4(13) | R | [159Tb] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +2.9(15) |  | [159Tb] | NO/S | 1983Be03 | JP G9 213 (83) |
|  | 0 + y | 22.7 h | 7- | 0.9(3) |  |  | [est] | NO/S | 1983Be03 | JP G9 213 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 65 Tb 155 | 0 | 5.32 d | 3/2+ | +2.01(2) |  |  | [159Tb] | CFBLS | 1990Al36 | ZP A337 367 (90) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  | 2.0(2) |  |  | [159Tb] | NO/S | 1979Du08 | CzJP B29 361 (79) |
|  |  |  |  |  | +1.41(6) | R | [159Tb] | CFBLS | 1990Al36 | ZP A337 367 (90) |
|  |  |  |  |  |  |  |  |  |  |  |
| 65 Tb 156 | 0 | 5.35 d | 3- | 1.7(2) |  |  | [159Tb] | NO/S | 1983Be03 | JP G9 213 (83) |
|  |  |  |  | 1.9(3) |  |  | [159Tb] | NO/S | 1979Ri17 | CzJP B29 620 (79) |
|  |  |  |  | 1.4(2) |  |  |  | NO/S | 1962Lo01 | NP 30 452 (62) |
|  |  |  |  |  | +2.3(8) | R | [159Tb] | NO/S | 1983Be03 | JP G9 213 (83) |
|  |  |  |  |  | +3.0(9) |  | [159Tb] | NO/S | 1979Ri17 | CzJP B29 620 (79) |
|  |  |  |  |  | +1.4(5) |  | [159Tb] | NO/S | 1962Lo01 | NP 30 452 (62) |
|  |  |  |  |  |  |  |  |  |  |  |
| 65 Tb 157 | 0 | 99 y | 3/2+ | +2.01(2) |  |  | [159Tb] | CFBLS | 1990Al36 | ZP A337 367 (90) |
|  |  |  |  | 2.0(1) |  |  | [159Tb] | EPR | 1968Ea04 | PR 170 1083 (68) |
|  |  |  |  |  | +1.40(8) | R | [159Tb] | CFBLS | 1990Al36 | ZP A337 367 (90) |
|  |  |  |  |  |  |  |  |  |  |  |
| 65 Tb 158 | 0 | 150 y | 3- | +1.758(7) |  |  | [159Tb] | EPR | 1968Ea04 | PR 170 1083 (68) |
|  |  |  |  |  | +2.7(5) st | R |  | NO/S, EPR | 1968Ea04 | PR 170 1083 (68) |
|  |  |  |  |  |  |  |  |  |  |  |
| 65 Tb 159 | 0 | stable | 3/2+ | +2.014(4) |  |  |  | EPR, ENDOR | 1965Ba49 | PRS 286A 352 (65) |
|  |  |  |  |  | +1.432(8) a | R |  | Mu-X. AB | 1984Ta04/1970Ch26 | PR C29 1830 (84)/PR A2 316 (70) |
|  | 58 | 53.5 ps | 5/2- | 3.9(2) |  |  |  | IPAC | 1972Be94 | Duzb 1972n1 32 (72) |
|  |  |  |  | 1.62(9) or 2.32(13) |  |  | [159Tb] | ME | 1966At05 | NP 89 433 (66) |
|  |  |  |  |  |  |  |  |  |  |  |
| 65 Tb 160 | 0 | 72.1 d | 3- | 1.790(7) |  |  | [159Tb] | NMR/ON | 1987Ma42 | PRL 59 1764 (87) |
|  |  |  |  | +1.702(8) |  |  | [159Tb] | EPR | 1968Ea04 | PR 170 1083 (68) |
|  |  |  |  | 1.5(6) |  |  | [159Tb] | NO/S | 1983Be03 | JP G9 213 (83) |
|  |  |  |  |  | 3.85(5) | R | [159Tb] | NMR/ON | 1987Ma42 | PRL 59 1764 (87) |
|  |  |  |  |  | 3.56(10) |  | [159Tb] | NMR/ON | 1986Ro07 | PRL 56 1976 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 65 Tb 161 | 0 | 6.9 d | 3/2+ | 2.2(1) |  |  | [159Tb] | NO/S | 1983Ri15 | HFI 15 83 (83) |
|  |  |  |  |  | +1.3(6) |  | [159Tb] | NO/S | 1983Ri15 | HFI 15 83 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 66 Dy 147 | 0 | ~1.3 m | (1/2+) | -0.915(9) |  |  |  | CFBLS | 1989Ra17 | PC Neugart (87) |
|  | 751 | 59 s | (11/2-) | -0.655(10) |  |  | [163Dy] | CFBLS | 1989Ra17 | PC Neugart (87) |
|  |  |  |  |  | +0.67(10) | R | [163Dy] | CFBLS | 1989Ra17 | PC Neugart (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 66 Dy 149 | 0 | 4.23 m | 7/2- | -0.119(7) |  |  | [163Dy] | CFBLS | 1989Ra17 | PC Neugart (87) |
|  |  |  |  |  | -0.62(5) | R | [163Dy] | CFBLS | 1989Ra17 | PC Neugart (87) |
|  | 8522 | 28 ns | (49/2) | +10.0(15) |  |  | [152Dy 6129] | TDPAD | 2003Wa28 | NP A728 365 (2003) |
|  |  |  |  |  |  |  |  |  |  |  |
| 66 Dy 151 | 0 | 17 m | 7/2- | -0.945(7) |  |  |  | CFBLS | 1989Ra17 | PC Neugart (87) |
|  |  |  |  |  | -0.30(5) | R | [163Dy] | CFBLS | 1989Ra17 | PC Neugart (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 66 Dy 152 | 6129 | 9.9 ns | 21- | +11.6(12) |  |  |  | TDPAD | 1979Me01 | PRL 42 23 (79) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  | 7882 | 1.6 ns | 27- | +2.4(11) |  |  |  | TDPAD | 2004FU36 | HFI 159 245 (2004) |
|  |  |  | 31 - 56 | g(avge) = 0.21(1) |  |  |  | TF | 1991Ha16 | PR C44 1397 (91) |
|  |  |  |  |  |  |  |  |  |  |  |
| 66 Dy 153 | 0 | 6.3 h | 7/2- | -0.782(6) |  |  | [163Dy] | CFBLS | 1989Ra17 | PC Neugart (87) |
|  |  |  |  | -0.715(6) |  |  | [163Dy] | AB | 1972Ro36 | PS 6 24 (72)/PL 49A 287 (74) |
|  |  |  |  |  | -0.02(5) |  | [163Dy] | CFBLS | 1989Ra17 | PC Neugart (87) |
|  |  |  |  |  | -0.15(9) | R | [163Dy] | AB | 1972Ro36 | PS 6 24 (72)/PL 49A 287 (74) |
|  |  |  |  |  |  |  |  |  |  |  |
| 66 Dy 154 | yrast |  | 2+ | 0.72(8) |  |  | [calc] | theory | 1993Bi05/1993Bi09 | NP A553 527c (93)/NP A555 643 (93) |
|  | band |  | 4+ | 1.6(2), g/g(2+) 1.1(2) |  |  | [154Dy 2+] | IPAD | 1993Bi05/1993Bi09 | NP A553 527c (93)/NP A555 643 (93) |
|  |  |  | 6+ - 8+ | g/g(2+) 1.0(3) |  |  | [154Dy 2+] | IPAD | 1993Bi05/1993Bi09 | NP A553 527c (93)/NP A555 643 (93) |
|  |  |  | 10+ - 14+ | g/g(2+) 0.5(4) |  |  | [154Dy 2+] | IPAD | 1993Bi05/1993Bi09 | NP A553 527c (93)/NP A555 643 (93) |
|  |  |  | 16+ - 20+ | g/g(2+) 0.3(4) |  |  | [154Dy 2+] | IPAD | 1993Bi05/1993Bi09 | NP A553 527c (93)/NP A555 643 (93) |
|  |  |  | 22+ - 30+ | g/g(2+) 0.8(4) |  |  | [154Dy 2+] | IPAD | 1993Bi05/1993Bi09 | NP A553 527c (93)/NP A555 643 (93) |
|  |  |  | 32+ - 36+ | g/g(2+) 1.2(3) |  |  | [154Dy 2+] | IPAD | 1993Bi05/1993Bi09 | NP A553 527c (93)/NP A555 643 (93) |
|  | cont. | short | I(av) = 26 | g(avge) = +0.39(5) |  |  |  | TF | 1984Ha39 | PL 144B 341 (84) |
|  |  |  |  |  |  |  |  |  |  |  |
| 66 Dy 155 | 0 | 10.0 h | 3/2- | -0.385(4) |  |  | [163Dy] | CFBLS | 1989Ra17 | PC Neugart (87) |
|  |  |  |  | -0.339(2) |  |  | [163Dy] | AB | 1972Ro36 | PS 6 24 (72)/PL 49A 287 (74) |
|  |  |  |  |  | +1.04(3) |  | [163Dy] | CFBLS | 1989Ra17 | PC Neugart (87) |
|  |  |  |  |  | +0.96(2) | R | [163Dy] | AB | 1973Ek01 | PS 7 31 (1973) |
|  |  |  |  |  | +0.967(14) |  | [163Dy] | AB | 1972Ro36 | PS 6 24 (72)/PL 49A 287 (74) |
|  |  |  |  |  |  |  |  |  |  |  |
| 66 Dy 156 | 138 | 0.82 ns | 2+ | +0.78(8) |  |  |  | R | 1984Ha39 | PL 144B 341 (84) |
|  | cont | short | I(av) = 19 | g(avge) = +0.11(4) |  |  |  | TF | 1985Ta02 | NP A435 294 (85) |
|  |  |  |  | g(avge) = +0.12(3) |  |  |  | TF | 1985Ta02 | NP A435 294 (85) |
|  |  |  | I(av) = 21 | g(avge) = +0.14(6) |  |  |  | TF | 1985Ta02 | NP A435 294 (85) |
|  |  |  | I(av) = 23 | g(avge) = +0.20(3) |  |  |  | TF | 1985Ta02 | NP A435 294 (85) |
|  |  |  |  | g(avge) = +0.21(7) |  |  |  | TF | 1985Ta02 | NP A435 294 (85) |
|  |  |  | I(av) = 23 | g(avge) = +0.21(3) |  |  |  | TF | 1984Ha39 | PL 144B 341 (84) |
|  |  |  |  |  |  |  |  |  |  |  |
| 66 Dy 157 | 0 | 8.1 h | 3/2- | -0.301(2) |  |  | [163Dy] | CFBLS | 1989Ra17 | PC Neugart (87) |
|  |  |  |  | -0.302(2) |  |  | [163Dy] | AB | 1972Ro36 | PS 6 24 (72)/PL 49A 287 (74) |
|  |  |  |  |  | +1.30(2) |  | [163Dy] | CFBLS | 1989Ra17 | PC Neugart (87) |
|  |  |  |  |  | +1.29(2) | R | [163Dy] | AB | 1973Ek01 | PS 7 31 (1973) |
|  |  |  |  |  | +1.30(1) |  | [163Dy] | AB | 1972Ro36 | PS 6 24 (72)/PL 49A 287 (74) |
|  |  |  |  |  |  |  |  |  |  |  |
| 66 Dy 158 | 99 | 1.66 ns | 2+ | +0.72(5) |  |  |  | IPAC | 1993Al09 | ZP A345 273 (93) |
|  | 317 | 73 ps | 4+ | +1.33(10) |  |  |  | IPAC | 1997AL04 | ZP A357 13 (97) |
|  |  |  |  | +1.36(8) |  |  |  | IPAC | 1993Al09 | ZP A345 273 (93) |
|  |  |  |  | +1.4(2) |  |  |  | IMPAC | 1983Se09 | NP A399 211 (83) |
|  |  |  |  | +1.4(2) |  |  |  | IMPAD | 1973Ka25 | PR C8 757 (73) |
|  | 638 | 10.8 ps | 6+ | +1.42(13) |  |  |  | IPAC | 1997AL04 | ZP A357 13 (97) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  | +1.2(2) |  |  |  | IPAC | 1993Al09 | ZP A345 273 (93) |
|  | 1044 | 2.9 ps | 8+ | +2.5(7) |  |  |  | IPAC | 1997AL04 | ZP A357 13 (97) |
|  |  |  |  | +1.7(9) |  |  |  | IPAC | 1993Al09 | ZP A345 273 (93) |
|  |  |  |  | +3.3(10) |  |  |  | TF | 1983Se09 | NP A399 211 (83) |
|  | >1044 |  | I(av) = 14 | g(avge) = +0.04(11) |  |  |  | TF | 1983Se09 | NP A399 211 (83) |
|  | gsband |  | <16+ |  x 10\*3 = -1.5(13) |  |  |  | TF | 1980An27 | PRL 45 1835 (80) |
|  |  |  |  |  |  |  |  |  |  |  |
| 66 Dy 159 | 0 | 144 d | 3/2- | -0.354(3) |  |  | [163Dy] | CFBLS | 1989Ra17 | PC Neugart (87) |
|  |  |  |  |  | +1.37(2) | R | [163Dy] | CFBLS | 1989Ra17 | PC Neugart (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 66 Dy 160 | 87 | 1.96 ns | 2+ | +0.74(2) |  |  |  | TDPAC | 1973Ka25 | PR C8 757 (73) |
|  |  |  |  | +0.70(3) |  |  |  | TDPAC | 1984Si07 | NIM 219 443 (84) |
|  |  |  |  |  | 1.8(4) | R |  | TDPAC | 1970Wa25 | ZP 238 35 (70) |
|  | 284 | 101 ps | 4+ | +1.60(12) |  |  |  | IPAC | 1997Al04 | ZP A357 13 (97) |
|  |  |  |  | +1.40(8) |  |  |  | IPAC | 1996Al02 | ZP A353 357 (96) |
|  | 581 | 18.6 ps | 6+ | +2.11(10) |  |  |  | TF | 1999Br43 | EurPJ A6 149 (99) |
|  |  |  |  | +1.45(12) |  |  |  | IPAC | 1997Al04 | ZP A357 13 (97) |
|  | 966 | 1.34 ps | 2+ | +0.80(5) |  |  |  | TF | 1999Br43 | EurPJ A6 149 (99) |
|  |  |  |  | +0.63(2) |  |  |  | IPAC | 1995Al22 | ZP A353 17 (95) |
|  |  |  |  | +0.34(9) |  |  |  | IPAC | 1969Si01/1975Kh03 | PL 28B 590 (69)/JP G1 727 (75) |
|  | 967 | 3.8 ps | 8+ | +2.7(2) |  |  |  | TF | 1999Br43 | EurPJ A6 149 (99) |
|  |  |  |  | +2.4(8) |  |  |  | IPAC | 1997Al04 | ZP A357 13 (97) |
|  | 1429 | 1.56 ps | 10+ | +3.1(3) |  |  |  | TF | 1999Br43 | EurPJ A6 149 (99) |
|  | 1951 | 0.89 ps | 12+ | +3.6(7) |  |  |  | TF | 1999Br43 | EurPJ A6 149 (99) |
|  | gsband |  | <16+ |  x 10\*3 = -1.5(16) |  |  |  | TF | 1980An27 | PRL 45 1835 (80) |
|  |  |  |  |  |  |  |  |  |  |  |
| 66 Dy 161 | 0 | stable | 5/2+ | -0.480(3) |  |  | [163Dy] | AB | 1974Fe05 | PL 49A 287 (74) |
|  |  |  |  | -0.481(5) |  |  |  | AB/D | 1974Fe05 | PL 49A 287 (74) |
|  |  |  |  |  | +2.51(2) | R | [163Dy] | AB | 1974Fe05 | PL 49A 287 (74) |
|  |  |  |  |  | 2.47(3) a |  |  | Mu-X | 1977Po15 | NP A292 487 (77) |
|  | 26 | 29 ns | 5/2- | +0.594(3) |  |  | [161Dy] | ME, R | 1976St23 | JPCR 5 1093 (76) |
|  |  |  |  |  | +2.51(2) | R | [161Dy] | ME, R | 1976St23 | JPCR 5 1093 (76) |
|  | 44 | 0.78 ns | 7/2+ | -0.141(5) |  |  | [161Dy] | ME | 1973Sy01 | PR C7 2056 (73) |
|  |  |  |  |  | +0.53(13) | R | [161Dy] | ME | 1973Sy01 | PR C7 2056 (73) |
|  | 75 | 3.2 ns | 3/2- | -0.403(4) |  |  | [161Dy] | ME, R | 1976St23 | JPCR 5 1093 (76) |
|  |  |  |  |  | +1.45(6) | R | [161Dy] | ME, R | 1976St23 | JPCR 5 1093 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 66 Dy 162 | 81 | 2.25 ns | 2+ | +0.69(3) |  |  |  | RIGV | 1970Be36/1973Ka25 | NP A151 401 (70)/PR C8 757 (73) |
|  | 266 | 133 ps | 4+ | +1.14(12) |  |  |  | IPAC | 1997Al04 | ZP A357 13 (97) |
|  | 549 | 19 ps | 6+ | +2.18(11) |  |  |  | TF | 1999Br43 | EurPJ A6 149 (99) |
|  |  |  |  | +1.8(2) |  |  |  | IPAC | 1997Al04 | ZP A357 13 (97) |
|  | 888 | 2.0 ps | 2+ | +0.92(6) |  |  |  | TF | 1999Br43 | EurPJ A6 149 (99) |
|  | 921 | 4.5 ps | 8+ | +3.05(16) |  |  |  | TF | 1999Br43 | EurPJ A6 149 (99) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  | +3.4(10) |  |  |  | IPAC | 1997Al04 | ZP A357 13 (97) |
|  | 1375 | 1.6 ps | 10+ | +3.6(4) |  |  |  | TF | 1999Br43 | EurPJ A6 149 (99) |
|  |  |  |  |  |  |  |  |  |  |  |
| 66 Dy 163 | 0 | stable | 5/2- | +0.673(4) |  |  |  | AB/D | 1974Fe05 | PL 49A 287 (74) |
|  |  |  |  |  | 2.318(6) |  |  | AB | 1974Fe05 | PL 49A 287 (74) |
|  |  |  |  |  | +2.65(2) a | R |  | Mu-X, O | 1984Ta04/1973Mu06 | PR C29 1830 (84)/PR A7 416 (73) |
|  |  |  |  |  |  |  |  |  |  |  |
| 66 Dy 164 | 73 | 2.39 ns | 2+ | +0.68(2) |  |  | [161Dy] | ME | 1968Mu01 | ZP 208 184 (68) |
|  |  |  |  | +0.73(3) |  |  |  | RIGV | 1970Be36 | NP A151 401 (70) |
|  |  |  |  |  | -2.08(15) | R | [161Dy] | ME | 1968Mu01 | ZP 208 184 (68) |
|  | 242 | 0.20 ns | 4+ | +1.00(12) |  |  | [162Dy] | IPAC | 1997Al25 | HFI 110 313 (97) |
|  |  |  |  | +1.5(5) |  |  | [164Dy73] | TF | 1989Do12 | PR C40 2035 (89) |
|  | 501 | 26.6 ps | 6+ | +1.95(10) |  |  |  | TF | 1999Br43 | EurPJ A6 149 (99) |
|  |  |  |  | +1.6(3) |  |  | [162Dy] | IPAC | 1997Al25 | HFI 110 313 (97) |
|  |  |  |  | +1.7(5) |  |  |  | IMPAC | 1983Se09 | NP A399 211 (83) |
|  | 762 | 4.6 ps | 2+ | +0.76(5) |  |  |  | TF | 1999Br43 | EurPJ A6 149 (99) |
|  |  |  |  | +0.6(2) |  |  | [164Dy73] | TF | 1989Do12 | PR C40 2035 (89) |
|  | 844 | 7.2 ps | 8+ | +2.48(16) |  |  |  | TF | 1999BR43 | EurPJ A6 149 (99) |
|  |  |  |  | +2.2(7) |  |  | [164Dy73] | TF | 1989Do12 | PR C40 2035 (89) |
|  | 1261 | 2.3 ps | 10+ | +3.1(4) |  |  |  | TF | 1999Br43 | EurPJ A6 149 (99) |
|  |  |  |  | +3.5(13) |  |  | [164Dy73] | TF | 1989Do12 | PR C40 2035 (89) |
|  |  |  |  |  |  |  |  |  |  |  |
| 66 Dy 165 | 0 | 2.33 h | 7/2+ | -0.520(5) |  |  | [163Dy] | AB | 1968Ra03 | PR 165 1360 (68)/PL 49A 287 (74) |
|  |  |  |  |  | -3.48(7) | R | [163Dy] | AB | 1968Ra03 | PR 165 1360 (68)/PL 49A 287 (74) |
|  |  |  |  |  |  |  |  |  |  |  |
| 67 Ho 152 | 0 | 161.8 s | 2- | -1.02(2) |  |  | [165Ho] | LRIMS | 1989Al27 | NP A504 549 (89) |
|  |  |  |  |  | +0.1(2) | R | [165Ho] | LRIMS | 1989Al27 | NP A504 549 (89) |
|  | 160 | 49.5 s | 9+ | +5.94(5) |  |  | [165Ho] | LRIMS | 1989Al27 | NP A504 549 (89) |
|  |  |  |  |  | -1.3(8) | R | [165Ho] | LRIMS | 1989Al27 | NP A504 549 (89) |
|  |  |  |  |  |  |  |  |  |  |  |
| 67 Ho 153 | 0 | 2.0 m | 11/2- | +6.81(5) |  |  | [165Ho] | LRIMS | 1989Al27 | NP A504 549 (89) |
|  |  |  |  |  | -1.1(5) | R | [165Ho] | LRIMS | 1989Al27 | NP A504 549 (89) |
|  | 68 | 9.3 m | 1/2+ | +1.19(1) |  |  | [165Ho] | LRIMS | 1989Al27 | NP A504 549 (89) |
|  |  |  |  |  |  |  |  |  |  |  |
| 67 Ho 154 | 0 | 11.76 m | 2- | -0.643(6) |  |  | [165Ho] | LRIMS | 1989Al27 | NP A504 549 (89) |
|  |  |  |  |  | +0.19(10) | R | [165Ho] | LRIMS | 1989Al27 | NP A504 549 (89) |
|  | 320 | 3.10 m | 8+ | +5.65(6) |  |  | [165Ho] | LRIMS | 1989Al27 | NP A504 549 (89) |
|  |  |  |  |  | -1.0(5) | R | [165Ho] | LRIMS | 1989Al27 | NP A504 549 (89) |
|  |  |  |  |  |  |  |  |  |  |  |
| 67 Ho 155 | 0 | 48 m | 5/2+ | +3.51(3) |  |  | [165Ho] | LRIMS | 1989Al27 | NP A504 549 (89) |
|  |  |  |  |  | +1.56(10) | R | [165Ho] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +1.52(10) st |  | [165Ho] | LRIMS | 1989Al27 | NP A504 549 (89) |
|  |  |  |  |  |  |  |  |  |  |  |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
| 67 Ho 156 | 0 | 56 m | 4(+) | +2.99(3) |  |  | [165Ho] | LRIMS | 1989Al27 | NP A504 549 (89) |
|  |  |  |  |  | +2.40(18) | R | [165Ho] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +2.3(2) st |  | [165Ho] | LRIMS | 1989Al27 | NP A504 549 (89) |
|  |  |  |  |  |  |  |  |  |  |  |
| 67 Ho 157 | 0 | 12.6 m | 7/2- | +4.35(3) |  |  | [165Ho] | LRIMS | 1989Al27 | NP A504 549 (89) |
|  |  |  |  |  | +3.05(13) | R | [165Ho] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +2.97(13) st |  | [165Ho] | LRIMS | 1989Al27 | NP A504 549 (89) |
|  |  |  |  |  |  |  |  |  |  |  |
| 67 Ho 158 | 0 | 11.3 m | 5+ | +3.77(3) |  |  | [165Ho] | LRIMS | 1989Al27 | NP A504 549 (89) |
|  |  |  |  |  | +4.2(4) | R | [165Ho] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +4.1(4) st |  | [165Ho] | LRIMS | 1989Al27 | NP A504 549 (89) |
|  | 67.2 | 28 m | 2- | +2.44(3) |  |  | [165Ho] | LRIMS | 1989Al27 | NP A504 549 (89) |
|  |  |  |  |  | +1.66(17) | R | [165Ho] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +1.6(2) st |  | [165Ho] | LRIMS | 1989Al27 | NP A504 549 (89) |
|  |  |  |  |  |  |  |  |  |  |  |
| 67 Ho 159 | 0 | 35.05 m | 7/2- | +4.28(3) |  |  | [165Ho] | LRIMS | 1989Al27 | NP A504 549 (89) |
|  |  |  |  |  | +3.27(13) | R | [165Ho] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 3.19(13) st |  | [165Ho] | LRIMS | 1989Al27 | NP A504 549 (89) |
|  |  |  |  |  |  |  |  |  |  |  |
| 67 Ho 160 | 0 | 25.6 m | 5+ | +3.71(3) |  |  | [165Ho] | LRIMS | 1989Al27 | NP A504 549 (89) |
|  |  |  |  |  | +4.0(2) | R | [165Ho] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +4.0(2) st |  | [165Ho] | LRIMS | 1989Al27 | NP A504 549 (89) |
|  | 60 | 5.02 h | 2- | +2.52(3) |  |  | [165Ho] | LRIMS | 1989Al27 | NP A504 549 (89) |
|  |  |  |  |  | +1.83(17) | R | [165Ho] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +1.8(2)st |  | [165Ho] | LRIMS | 1989Al27 | NP A504 549 (89) |
|  |  |  |  |  |  |  |  |  |  |  |
| 67 Ho 161 | 0 | 2.48 h | 7/2- | +4.25(3) |  |  | [165Ho] | LRIMS | 1989Al27 | NP A504 549 (89) |
|  |  |  |  |  | +3.30(11) | R | [165Ho] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 3.22(11) st |  | [165Ho] | LRIMS | 1989Al27 | NP A504 549 (89) |
|  |  |  |  |  |  |  |  |  |  |  |
| 67 Ho 162 | 106 | 67 m | 6- | +3.60(4) |  |  | [165Ho] | LRIMS | 1989Al27 | NP A504 549 (89) |
|  |  |  |  |  | +4.0(7) | R | [165Ho] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 3.9(7) st |  | [165Ho] | LRIMS | 1989Al27 | NP A504 549 (89) |
|  |  |  |  |  |  |  |  |  |  |  |
| 67 Ho 163 | 0 | 4570 y | 7/2- | +4.23(4) |  |  | [165Ho] | LRIMS | 1989Al27 | NP A504 549 (89) |
|  |  |  |  |  | +3.7(6) | R | [165Ho] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 3.6(6) st |  | [165Ho] | LRIMS | 1989Al27 | NP A504 549 (89) |
|  |  |  |  |  |  |  |  |  |  |  |
| 67 Ho 165 | 0 | stable | 7/2- | +4.17(3) |  |  |  | AB/D, R | 1974Da11 | ZP 267 239 (74) |
|  |  |  |  |  | 3.58(2) a | R |  | Pi-X | 1983Ol03 | NP A403 572 (83) |
|  |  |  |  |  | +2.716(9) |  |  | ABLS | 1982Bu13 | ZP A307 193 (82) |
|  |  |  |  |  | 3.60(2) a |  |  | Pi-X | 1981Ba07 | NP A355 383 (81) |
|  |  |  |  |  | 3.41(8) a |  |  | Ka-X | 1981Ba07 | NP A355 383 (81) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | 3.53(8) a |  |  | Pi-X | 1978Eb01 | NP A296 493 (78) |
|  |  |  |  |  | +3.49(3) a |  |  | Mu-X, AB | 1976Po05/1974Da10 | NP A262 493 (76)/ZP 267 229 (74) |
|  | 95 | 22 ps | 9/2- | 4.1(2) |  |  | [165Ho] | ME | 1972Ge21 | ZP 257 29 (72) |
|  |  |  |  |  | +3.52(4) | R | [165Ho] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 3.43(4) a |  |  | Mu-X | 1976Po05 | NP A262 493 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 67 Ho 166 | 6 | 1200 y | (7)- | 3.60(16) |  |  |  | NO/S | 1981Kr12 | PR C24 654 (81) |
|  |  |  |  | 3.65(13) |  |  | [165Ho] | NO/S | 1981Ma43 | HFI 10 1183 (80) |
|  |  |  |  | 3.60(5) |  |  |  | NO/S | 1980Al34 | PRS A372 19 (80) |
|  |  |  |  |  | -3(3) |  | [165Ho] | NO/S | 1981Ma43 | HFI 10 1183 (80) |
|  | 54 | 3.4 ns | 2- | +0.068(10) |  |  |  | IPAC | 1979Ba40 | NP A331 75 (79) |
|  |  |  |  |  |  |  |  |  |  |  |
| 68 Er 152 | 2184 | 1.8 ns | 8+ | -0.6(6) |  |  |  | IPAD | 1984AdZT | Cf83Meguro, 155 (83) |
|  | 4521 | 1.2 ns | 16+ | +5(2) |  |  |  | IPAD | 1984AdZT | Cf83Meguro, 155 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 68 Er 153 | 0 | 37.1 s | (7/2-) | -0.939(7) |  |  | [167Er] | CFBLS | 1987OtZW | CERN EP/87 51 (1987) |
|  |  |  |  |  | -0.42(2) | R | [167Er] | CFBLS | 1987OtZW | CERN EP/87 51 (1987) |
|  |  |  |  |  |  |  |  |  |  |  |
| 68 Er 154 | 3016 + x | 39 ns | 11- | +0.169(13) |  |  |  | TDPAD | 1984Ra11 | PR C30 169 (84) |
|  |  |  |  | +0.19(3) |  |  |  | TDPAD | 1983Ng02 | ZP A309 207 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 68 Er 155 | 0 | 5.3 m | 7/2- | -0.671(5) |  |  | [167Er] | CFBLS | 1987OtZW | CERN EP/87 51 (1987) |
|  |  |  |  |  | -0.27(2) | R | [167Er] | CFBLS | 1987OtZW | CERN EP/87 51 (1987) |
|  | 563 | 30 ns | 13/2+ | -0.55(3) |  |  |  | TDPAD | 1984Ra11 | PR C30 169 (84) |
|  |  |  |  |  |  |  |  |  |  |  |
| 68 Er 156 | 345 | 33 ps | 2+ | 0.80(12) |  |  |  | RIGV | 1970No01 | NP A142 577 (70) |
|  |  |  |  |  |  |  |  |  |  |  |
| 68 Er 157 | 0 | 25 m | 3/2- | -0.414(3) |  |  | [167Er] | CFBLS | 1987OtZW | CERN EP/87 51 (1987) |
|  |  |  |  |  | +0.92(2) | R | [167Er] | CFBLS | 1987OtZW | CERN EP/87 51 (1987) |
|  | 266+x | 54 ps | 17/2+ | 0.4(4) |  |  |  | IAPAD | 1974Na08 | PRL 32 1380 (74) |
|  |  |  |  |  |  |  |  |  |  |  |
| 68 Er 158 | 192 | 0.30 ns | 2+ | 0.72(11) |  |  |  | RIGV | 1970No01 | NP A142 577 (70) |
|  |  |  |  |  |  |  |  |  |  |  |
| 68 Er 159 | 0 | 36 m | 3/2- | -0.305(2) |  |  | [167Er] | CFBLS | 1987OtZW | CERN EP/87 51 (1987) |
|  |  |  |  |  | +1.17(1) | R | [167Er] | CFBLS | 1987OtZW | CERN EP/87 51 (1987) |
|  | 784 | 8.2 ps | 21/2+ | <0.74 |  |  |  | RIGV | 1980Sp03 | NP A344 176 (80) |
|  |  |  |  |  |  |  |  |  |  |  |
| 68 Er 160 | 126 | 0.919 ns | 2+ | +0.66(12) |  |  |  | PAC | 2005WO06 | PR C72 027301 (05) |
|  | 390 | 34 ps | 4+ | 1.28(19) |  |  |  | RIGV | 1970No01 | NP A142 577 (70) |
|  |  |  |  |  |  |  |  |  |  |  |
| 68 Er 161 | 0 | 3.21 h | 3/2- | -0.367(3) |  |  | [167Er] | CFBLS | 1987OtZW | CERN EP/87 51 (1987) |
|  |  |  |  | -0.369(3) |  |  | [167Er] | AB | 1972Ek03 | NP A194 237 (72) |
|  |  |  |  |  | +1.35(2) |  | [167Er] | CFBLS | 1987OtZW | CERN EP/87 51 (1987) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | +1.363(8) | R | [167Er] | AB | 1972Ek03 | NP A194 237 (72) |
|  |  |  |  |  |  |  |  |  |  |  |
| 68 Er 162 | 102 | 1.3 ns | 2+ |  | < 0 |  |  | CER | 1981Hu02 | PR C23 240 (81) |
|  | 901 | 1.24 ps | 2+ |  | 1.8(6) | R |  | CER | 1983Hu01 | PR C27 550 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 68 Er 163 | 0 | 75.1 m | 5/2- | +0.560(4) |  |  | [167Er] | CFBLS | 1987OtZW | CERN EP/87 51 (1987) |
|  |  |  |  |  | +2.56(2) | R | [167Er] | CFBLS | 1987OtZW | CERN EP/87 51 (1987) |
|  |  |  |  |  | +2.57(10) |  | [167Er] | AB | 1972Ek03 | NP A194 237 (72) |
|  |  |  |  |  |  |  |  |  |  |  |
| 68 Er 164 | 92 | 1.48 ns | 2+ | 0.697(15) |  |  | [166Er 81] | ME | 1968Mu01 | ZP 208 184 (68) |
|  |  |  |  |  | < 0 |  |  | CER | 1981Hu02 | PR C23 240 (81) |
|  | 299 | 86 ps | 4+ | +1.46(15) |  |  | [166Er] | IPAC | 1997AL25 | HFI 110 313 (97) |
|  |  |  |  | +1.36(8) |  |  |  | TF | 1996Br09 | NP A600 272 (96) |
|  | 614 |  | 6+ | +1.88(9) |  |  |  | TF | 1996Br09 | NP A600 272 (96) |
|  | 860 | 1.9 ps | 2+ | +0.81(6) |  |  |  | TF | 1996Br09 | NP A600 272 (96) |
|  |  |  |  |  | 2.4(3) | R |  | CER | 1983Hu01 | PR C27 550 (83) |
|  | 1025 | 2.6 ps | 8+ | +2.72(13) |  |  |  | TF | 1996Br09 | NP A600 272 (96) |
|  | 1518 | 1.0 ps | 10+ | +3.2(3) |  |  |  | TF | 1996Br09 | NP A600 272 (96) |
|  |  |  |  |  |  |  |  |  |  |  |
| 68 Er 165 | 0 | 10.36 h | 5/2- | +0.646(4) |  |  | [167Er] | CFBLS | 1987OtZW | CERN EP/87 51 (1987) |
|  |  |  |  |  | +2.71(3) | R | [167Er] | CFBLS | 1987OtZW | CERN EP/87 51 (1987) |
|  | 243 | 0.31 ns | 3/2- | +0.6(2) |  |  |  |  | 1978EgZY | Cf78Dubna 138 (78) |
|  |  |  |  |  |  |  |  |  |  |  |
| 68 Er 166 | 81 | 1.85 ns | 2+ | +0.649(10) |  |  | [167Er] | ME | 1981Ho31 | HFI 11 29 (81) |
|  |  |  |  | +0.632(10) |  |  | [167Er] | ME | 1968Mu01/1964Do09 | ZP 208 184 (68)/PL 10 319 (64) |
|  |  |  |  |  | -2.9(10) |  |  | CER | 1970Ka45 | Cf69Heid 471 (69) |
|  |  |  |  |  | -1.9(4) | R |  | ME | 1965Hu01 | ZP 182 499 (65) |
|  | 265 | 118 ps | 4+ | +1.14(8) |  |  |  | TF | 1996Br09 | NP A600 272 (96) |
|  |  |  |  | +1.26(6) |  |  | [166Er 81] | IPAC | 1985Al22 | ZP A322 467 (85) |
|  |  |  |  |  | -2.7(9) | R |  | CER | 1969McZS | BAPS 14 1204 (69) |
|  | 545 | 16.8 ps | 6+ | +1.72(9) |  |  |  | TF | 1996Br09 | NP A600 272 (96) |
|  |  |  |  | +1.6(2) |  |  | [166Er 265] | TF | 1986Do13 | ZP A325 285 (86) |
|  |  |  |  | +1.55(7) |  |  | [166Er 81] | IPAC | 1985Al22 | ZP A322 467 (85) |
|  | 786 | 4.6 ps | 2+ | +0.74(5) |  |  |  | TF | 1996Br09 | NP A600 272 (96) |
|  |  |  |  | +0.56(9) |  |  | [166Er 265] | TF | 1986Do13 | ZP A325 285 (86) |
|  |  |  |  |  | 2.2(3) | R |  | CER | 1983Hu01 | PR C27 550 (83) |
|  |  |  |  |  | 2.1(4) |  |  | CER | 1977Mc11 | NP A289 253 (77) |
|  |  |  |  |  | 2.0(3) |  |  | CER | 1970McZQ | ORNL 4513 56 (70) |
|  | 911 | 4.2 ps | 8+ | +2.2(2) |  |  |  | TF | 1996Br09 | NP A600 272 (96) |
|  |  |  |  | +1.9(3) |  |  | [166Er 265] | TF | 1986Do13 | ZP A325 285 (86) |
|  |  |  |  | +2.1(4) |  |  | [166Er 81] | IPAC | 1985Al22 | ZP A322 467 (85) |
|  | 1216 | 3.9 ps | 6+ | +1.5(2) |  |  | [166Er 81] | IPAC | 1985Al22 | ZP A322 467 (85) |
|  | 1350 | 1.7 ps | 10+ | +2.8(4) |  |  |  | TF | 1996Br09 | NP A600 272 (96) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  | +2.0(8) |  |  | [166Er 265] | TF | 1986Do13 | ZP A325 285 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 68 Er 167 | 0 | stable | 7/2+ | -0.56385(12) |  |  |  | AB/D | 1984Fo02 | ZP A315 1 (84) |
|  |  |  |  | -0.565(2) |  |  |  | AB | 1965Sm04 | PPS 86 1249 (65) |
|  |  |  |  |  | +3.57(3) a | R |  | Mu-X | 1984Ta04 | PR C29 1830 (84) |
|  |  |  |  |  | +2.827(12) |  |  | AB | 1965Sm04 | PPS 86 1249 (65) |
|  |  |  |  |  |  |  |  |  |  |  |
| 68 Er 168 | 80 | 1.86 ns | 2+ | +0.62(6) |  |  |  | IPAC | 1980Fu03 | PR C21 2575 (80) |
|  |  |  |  | +0.658(14) |  |  | [166Er 81] | ME | 1968Mu01 | ZP 208 184 (68) |
|  | 264 | 121 ps | 4+ | +1.17(12) |  |  |  | TF | 1996Br09 | NP A600 272 (96) |
|  |  |  |  | +1.26(16) |  |  | [166Er 265] | IMPAC | 1968De28 | Cf67HI 731 (67) |
|  |  |  |  |  | -2.2(10) | R |  | CER | 1970McZQ | ORNL 4513 56 (70) |
|  | 549 | 16.8 ps | 6+ | +1.81(12) |  |  |  | TF | 1996Br09 | NP A600 272 (96) |
|  |  |  |  | +2.0(3) |  |  | [168Er 264] | TF | 1989Do12 | PR C40 2035 (89) |
|  | 821 | 2.9 ps | 2+ | +0.77(4) |  |  |  | TF | 1996Br09 | NP A600 272 (96) |
|  |  |  |  | +0.72(14) |  |  | [168Er 549] | TF | 1989Do12 | PR C40 2035 (89) |
|  |  |  |  |  | 2.3(2) | R |  | CER | 1983Hu01 | PR C27 550 (83) |
|  | 928 | 3.4 ps | 8+ | +2.4(2) |  |  |  | TF | 1996Br09 | NP A600 272 (96) |
|  |  |  |  | +2.7(5) |  |  | [168Er 549] | TF | 1989Do12 | PR C40 2035 (89) |
|  | 1094 | 112.5 ns | 4- | +0.96(4) |  |  |  | TDPAC | 1980Fu03 | PR C21 2575 (80) |
|  | 1396 | 1.4 ps | 10+ | +3.1(4) |  |  |  | TF | 1996Br09 | NP A600 272 (96) |
|  |  |  |  | +3.2(8) |  |  | [168Er 549] | TF | 1989Do12 | PR C40 2035 (89) |
|  |  |  |  |  |  |  |  |  |  |  |
| 68 Er 169 | 0 | 9.40 d | 1/2- | +0.52(3) |  |  |  | AB/D | 1963Do09 | PR 131 1586 (63) |
|  |  |  |  | +0.4850(2) |  |  | [167Er] | AB | 1963Do09 | PR 131 1586 (63)/PPS 86 1249 (65) |
|  |  |  |  |  |  |  |  |  |  |  |
| 68 Er 170 | 79 | 1.90 ns | 2+ | 0.633(13) |  |  | [166Er 81] | ME | 1969Wi04 | PR 177 1786 (69) |
|  |  |  |  |  | -1.9(2) | R |  | CER | 1973Lu02 | PR C8 391 (73) |
|  | 260 | ~135 ps | 4+ | +1.09(15) |  |  | [166Er 265] | IMPAC | 1968De28 | Cf67HI 731 (67) |
|  |  |  |  |  | -2.2(10) | R |  | CER | 1970McZQ | ORNL 4513 56 (70) |
|  | 934 | 1.7 ps | 2+ |  | 2.0(3) | R |  | CER | 1983Hu01 | PR C27 550 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 68 Er 171 | 0 | 7.52 h | 5/2- | 0.659(10) |  |  | [167Er] | AB | 1964Bu09 | PR 135 B1281 (64) |
|  |  |  |  |  | 2.86(9) | R | [167Er] | AB | 1964Bu09 | PR 135 B1281 (64) |
|  |  |  |  |  |  |  |  |  |  |  |
| 69 Tm 153 | 0 | 1.48 s | (11/2-) | 6.93(11) |  |  | [169Tm] | LRIS | 2000Ba16 | PR C61 034304 (00) |
|  |  |  |  |  | +0.5(10) | R | [169Tm] | LRIS | 2000Ba16 | PR C61 034304 (00) |
|  |  |  |  |  |  |  |  |  |  |  |
| 69 Tm 154 | 0 | 8.1 s | (2-) | -1.14(2) |  |  | [169Tm] | LRIS | 2000Ba16 | PR C61 034304 (00) |
|  |  |  |  |  | +0.4(9) | R | [169Tm] | LRIS | 2000Ba16 | PR C61 034304 (00) |
|  | 0 + x | 3.30 s | (9+) | +5.91(5) |  |  | [169Tm] | LRIS | 2000Ba16 | PR C61 034304 (00) |
|  |  |  |  |  | -0.2(4) | R | [169Tm] | LRIS | 2000Ba16 | PR C61 034304 (00) |
|  |  |  |  |  |  |  |  |  |  |  |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
| 69 Tm 156 | 0 | 1.3 m | 2- | +0.40(3) |  |  | [169Tm] | LRIMS | 1987AlZb | LIYAF 1309 (1987) |
|  |  |  |  |  | -0.48(11) st | R | [170Tm] | LRIMS | 1987AlZb | LIYAF 1309 (1987) |
|  |  |  |  |  |  |  |  |  |  |  |
| 69 Tm 157 | 0 | 3.6 m | 1/2+ | +0.476(15) |  |  | [169Tm] | LRIMS | 1988Al04 | NP A477 37 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 69 Tm 158 | 0 | 4.3 m | 2- | +0.04(2) |  |  | [169Tm] | LRIMS | 1988Al04 | NP A477 37 (88) |
|  |  |  |  |  | +0.74(11) st | R | [170Tm] | LRIMS | 1988Al04 | NP A477 37 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 69 Tm 159 | 0 | 9.0 m | 5/2+ | +3.42(3) |  |  | [169Tm] | LRIMS | 1988Al04 | NP A477 37 (88) |
|  |  |  |  |  | +1.93(7) st | R | [170Tm] | LRIMS | 1988Al04 | NP A477 37 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 69 Tm 160 | 0 | 9.4 m | 1- | +0.16(2) |  |  | [169Tm] | LRIMS | 1988Al04 | NP A477 37 (88) |
|  |  |  |  |  | +0.58(4) st | R | [170Tm] | LRIMS | 1988Al04 | NP A477 37 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 69 Tm 161 | 0 | 38 m | 7/2+ | +2.40(2) |  |  | [169Tm] | LRIMS | 1988Al04 | NP A477 37 (88) |
|  |  |  |  |  | +2.90(7) st | R | [170Tm] | LRIMS | 1988Al04 | NP A477 37 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 69 Tm 162 | 0 | 21 m | 1- | +0.068(8) |  |  | [169Tm] | LRIMS | 1988Al04 | NP A477 37 (88) |
|  |  |  |  |  | +0.69(3) st | R | [170Tm] | LRIMS | 1988Al04 | NP A477 37 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 69 Tm 163 | 0 | 1.8 h | 1/2+ | -0.082(1) |  |  | [169Tm] | AB, LRIMS | 1967Dy01/1988Al04 | BAPS 12 1046 (67)/NP A477 37 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 69 Tm 164 | 0 | 2.0 m | 1+ | +2.38(3) |  |  | [169Tm] | LRIMS | 1988Al04 | NP A477 37 (88) |
|  |  |  |  |  | +0.71(5) st | R | [170Tm] | LRIMS | 1988Al04 | NP A477 37 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 69 Tm 165 | 0 | 30.06 h | 1/2+ | -0.139(2) |  |  | [169Tm] | AB, LRIMS | 1968Sc26/1988Al04 | BAPS 13 1650 (68)/NP A477 37 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 69 Tm 166 | 0 | 7.7 h | 2+ | +0.092(1) |  |  | [169Tm] | AB, LRIMS | 1988Al04/1972Ad14 | NP A477 37 (88)/NP A198 380 (72) |
|  |  |  |  |  | +2.14(3) st | R | [170Tm] | LRIMS | 1988Al04 | NP A477 37 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 69 Tm 167 | 0 | 9.25 d | 1/2+ | -0.197(2) |  |  | [169Tm] | AB, R, LRIMS | 1973Ek01/1988Al04 | PS 7 31 (73)/NP A477 37 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 69 Tm 168 | 0 | 85 d | 3+ | +0.227(11) |  |  | [169Tm] | LRIMS | 1988Al04 | NP A477 37 (88) |
|  |  |  |  |  | +3.23(7) st | R | [170Tm] | LRIMS | 1988Al04 | NP A477 37 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 69 Tm 169 | 0 | stable | 1/2+ | -0.2310(15) d |  |  |  | AB | 1967Gi04 | ZP 199 244 (67) |
|  |  |  |  | -0.229(3) |  |  |  | AB/D | 1962Ri11 | PR 128 2238 (62) |
|  |  |  |  | 0.24(1) |  |  |  | PMR | 1961Ha37 | JCP 35 1521 (61) |
|  |  |  |  | -0.21(2) |  |  |  | O | 1955Li49 | ZP 141 476 (55) |
|  | 8 | 3.9 ns | 3/2+ | +0.515(5) |  |  | [169Tm] | ME |  | HFI 1 50 (76) |
|  |  |  |  | +0.513(5) |  |  | [169Tm] | ME |  | JMMM 15/18 651 (80) |
|  |  |  |  |  | -1.2(1) st | R |  | ME | 1964Co08 | PR 134 A94 (64) |
|  | 118 | 62 ps | 5/2+ | +0.76(5) |  |  |  | IPAC | 1969Gu01/1968Ka14 | NP A123 386 (69)/NP A119 417 (68) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  | 139 | 302 ps | 7/2+ | +1.34(5) |  |  |  | IPAC | 1969Gu01/1968Ka14 | NP A123 386 (69)/NP A119 417 (68) |
|  | 316 | 660 ns | 7/2+ | +0.156(8) |  |  |  | TDPAC | 1972Ni03 | NP A181 298 (72) |
|  | 332 | 19 ps | 9/2+ | +1.56(9) |  |  | [169Tm 118,139] | TF | 1999Ro03 | NP A647 175 (99) |
|  | 368 | 42 ps | 11/2+ | +2.28(14) |  |  | [169Tm 118,139] | TF | 1999Ro03 | NP A647 175 (99) |
|  | 379 | 48 ns | 7/2- | +3.04(14) |  |  |  | TDPAC | 1997De02 | PR C55 1197 (97) |
|  | 637 | 5.6 ps | 13/2+ | +2.37(14) |  |  | [169Tm 118,139] | TF | 1999Ro03 | NP A647 175 (99) |
|  | 691 | 8.4 ps | 15/2+ | +3.2(3) |  |  | [169Tm 118,139] | TF | 1999Ro03 | NP A647 175 (99) |
|  | 1028 | 2.0 ps | 17/2+ | +3.2(3) |  |  | [169Tm 118,139] | TF | 1999Ro03 | NP A647 175 (99) |
|  | 1104 | 2.0 ps | 19/2+ | +4.2(8) |  |  | [169Tm 118,139] | TF | 1999Ro03 | NP A647 175 (99) |
|  |  |  |  |  |  |  |  |  |  |  |
| 69 Tm 170 | 0 | 128.6 d | 1+ | +0.246(2) |  |  | [169Tm] | ABLS | 1988Dy02 | PR C38 2813 (88) |
|  |  |  |  | +0.247(5) |  |  | [169Tm] | AB, R | 1960Ca15/1967Gi04/ | PR 120 920 (60)/ZP 199 244 (67)/ |
|  |  |  |  |  |  |  |  |  | 1973Ek01 | PS 7 31 (73) |
|  |  |  |  |  | +0.72(5) st |  | [169Tm] | ABLS | 1988Dy02 | PR C38 2813 (88) |
|  |  |  |  |  | +0.74(2) st | R |  | AB, R, LRIMS | 1973Ek01/1988Al04 | PS 7 31 (73)/NP A477 37 (88) |
|  |  |  |  |  | 0.63(5) |  |  | AB, R | 1960Ca15/1973Ek01 | PR 120 920 (60)/PS 7 31 (73) |
|  |  |  |  |  |  |  |  |  |  |  |
| 69 Tm 171 | 0 | 1.92 y | 1/2+ | -0.228(4) |  |  | [169Tm] | AB, R | 1967Gi04/1964Bu09 | ZP 199 244 (67)/PR 135B 1281 (64) |
|  | 117 | 55 ps | 5/2+ | +0.8(4) |  |  |  | IPAC | 1968Ka14 | NP A119 417 (68) |
|  | 129 | 415 ps | 7/2+ | +1.27(12) |  |  |  | IPAC | 1968Ka14 | NP A119 417 (68) |
|  | 636 | 1.26 ns | 7/2+ | +1.2(2) |  |  |  | IPAC | 1978Ba03 | ZP A284 161 (78) |
|  |  |  |  |  |  |  |  |  |  |  |
| 70 Yb 155 | 0 | 1.59 s | (7/2-) | -0.91(2) |  |  |  | LRIS | 1998Ba08 | EurPJ A1 3 (98) |
|  |  |  |  | -0.84(8) |  |  |  | LRIMS | 92Al25 | BRASP 56 (11) 69 (92) |
|  |  |  |  |  | -0.5(3) | R |  | LRIS | 1998Ba08 | EurPJ A1 3 (98) |
|  |  |  |  |  | -1.2(10) |  |  | LRIMS | 92Al25 | BRASP 56 (11) 69 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 70 Yb 157 | 0 | 38.6 s | 7/2- | -0.639(8) |  |  | [171Yb] | CFBLS | 92Ku21 | HFI 74 171 (92) |
|  | 494 + x | 45 ns | 13/2+ | -0.75(8) |  |  |  | TDPAD | 1984Ra11 | PR C30 169 (84) |
|  |  |  |  |  |  |  |  |  |  |  |
| 70 Yb 158 | band |  | 30 - 38 | (+)0.20(7) |  |  |  | TF | 1988KlZX | ANL-PHY-88-2 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 70 Yb 159 | 0 | 1.58 m | 5/2(-) | -0.368(8) |  |  | [171Yb] | CFBLS | 1992Ku21 | HFI 74 171 (92) |
|  |  |  |  | -0.366(8) |  |  | [173Yb] | CFBLS | 1983Ne13 | HFI 15 181 (83) |
|  |  |  |  |  | -0.22(2) | R | [173Yb] | CFBLS | 1983Ne13 | HFI 15 181 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 70 Yb 160 | band |  | ~4+ | +1.9(10) |  |  |  | IPAC | 1990Lu02 | ZP A335 369 (90) |
|  | band |  | 14+ | -3(4) |  |  |  | IPAC | 1990Lu02 | ZP A335 369 (90) |
|  | band |  | 34 - 42 | 0.12(7) |  |  |  | TF | 1988KlZX | ANL-PHY-88-2 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 70 Yb 161 | 0 | 4.2 m | 3/2- | -0.327(8) |  |  | [173Yb] | CFBLS | 1983Ne13 | HFI 15 181 (83) |
|  |  |  |  |  | +1.03(2) | R | [173Yb] | CFBLS | 1983Ne13 | HFI 15 181 (83) |
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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
| 70 Yb 162 | cont. |  | 20-32 | g(avge) = 0.24(5) |  |  |  | TF | 1984Ma10 | PL 134B 153 (84) |
|  |  |  |  |  |  |  |  |  |  |  |
| 70 Yb 163 | 0 | 11.0 m | 3/2- | -0.374(8) |  |  | [173Yb] | CFBLS | 1983Ne13 | HFI 15 181 (83) |
|  |  |  |  |  | +1.24(2) | R | [173Yb] | CFBLS | 1983Ne13 | HFI 15 181 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 70 Yb 164 | 123 | 0.88 ns | 2+ | +0.64(10) |  |  |  | IPAC | 2004Be13 | PR C69 034320 |
|  |  |  |  |  |  |  |  |  |  |  |
| 70 Yb 165 | 0 | 9.9 m | 5/2- | +0.478(8) |  |  | [173Yb] | CFBLS | 1983Ne13 | HFI 15 181 (83) |
|  |  |  |  |  | +2.48(4) | R | [173Yb] | CFBLS | 1983Ne13 | HFI 15 181 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 70 Yb 167 | 0 | 17.5 m | 5/2- | +0.623(8) |  |  | [173Yb] | CFBLS | 1983Ne13 | HFI 15 181 (83) |
|  |  |  |  |  | +2.70(4) | R | [173Yb] | CFBLS | 1983Ne13 | HFI 15 181 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 70 Yb 169 | 0 | 32.0 d | 7/2+ | -0.635(8) |  |  | [173Yb] | CFBLS | 1983Ne13 | HFI 15 181 (83) |
|  |  |  |  | -0.633(16) |  |  | [173Yb] | O, R | 1983Ne13 | HFI 15 181 (83) |
|  |  |  |  |  | +3.54(6) | R | [173Yb] | CFBLS | 1983Ne13 | HFI 15 181 (83) |
|  |  |  |  |  | +3.52(7) |  | [173Yb] | O, R | 1983Ne13 | HFI 15 181 (83) |
|  | 24 | 46 s | 1/2- | +0.507(8) |  |  | [173Yb] | CFBLS | 1983Ne13 | HFI 15 181 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 70 Yb 170 | 84 | 1.57 ns | 2+ | +0.674(8) |  |  | [171Yb] | ME | 1968Mu01/1965Hu03 | ZP 208 184 (68)/PL 15 269 (65) |
|  |  |  |  |  | -2.18(3) | R | [170Yb 84] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 2.1(4) |  | [172Yb 79] | ME | 1971Pl03 | NP A165 97 (71) |
|  | gs band |  | <12+ |  x 10\*3 = -0.5(15) |  |  | [169Tm] | TF | 1979Wa15 | NP A330 225 (79) |
|  | gs band |  | <18+ |  x 10\*3 = -2.4(15) |  |  |  | TF | 1980An27 | PRL 45 1835 (80) |
|  |  |  |  |  |  |  |  |  |  |  |
| 70 Yb 171 | 0 | stable | 1/2- | +0.49367(1) |  |  | [23Na] | OP/RD | 1972Ol01 | ZP 249 205 (72) |
|  |  |  |  | +0.4949(4) |  |  | [35Cl] | N | 1964Go06 | PR 133 A881 (64) |
|  | 67 | 0.81 ns | 3/2- | 0.350(2) |  |  | [171Yb] | ME | 1966He09/1966Gu07 | PL 22 446 (66)/PL 22 443 (66) |
|  |  |  |  |  | -2.34(7) | R |  | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 1.6(3) |  | [170Yb 84] | ME | 1971Pl03 | NP A165 97 (71) |
|  | 76 | 1.64 ns | 5/2- | +1.015(5) |  |  | [171Yb] | ME | 1970He25 | PR C2 2414 (70) |
|  |  |  |  |  | -2.22(7) | R | [170Yb 84] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 2.2(4) |  | [170Yb 84] | ME | 1971Pl03 | NP A165 97 (71) |
|  | 231 | (est 136 ps) | 7/2- | 0.83(5) |  |  |  | TF | 2000ST06 | NP A669 27 (00) |
|  | 247 | (est 135 ps) | 9/2- | 1.53(7) |  |  |  | TF | 2000ST06 | NP A669 27 (00) |
|  | 487 | (est 21 ps) | 11/2- | 1.54(8) |  |  |  | TF | 2000ST06 | NP A669 27 (00) |
|  | 509 | (est 21 ps) | 13/2- | 2.31(12) |  |  |  | TF | 2000ST06 | NP A669 27 (00) |
|  | 833 | (est 5.1 ps) | 15/2- | 2.10(14) |  |  |  | TF | 2000ST06 | NP A669 27 (00) |
|  | 860 | (est 5.1 ps) | 17/2- | 2.83(15) |  |  |  | TF | 2000ST06 | NP A669 27 (00) |
|  | 1263 | (est 1.8 ps) | 19/2 | 2.5(3) |  |  |  | TF | 2000ST06 | NP A669 27 (00) |
|  | 1293 | (est 1.8 ps) | 21/2 | 3.0(3) |  |  |  | TF | 2000ST06 | NP A669 27 (00) |
|  |  |  |  |  |  |  |  |  |  |  |
| 70 Yb 172 | 79 | 1.80 ns | 2+ | +0.669(16) |  |  | [171Yb] | ME | 1968Mu01 | ZP 208 184 (1968) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | -2.22(4) | R | [170Yb 84] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 2.2(4) |  |  | TDPAC | 1970WaZS | ZP 238 35 (1970) |
|  | 260 | 0.122 ns | 4+ | +1.37(5) |  |  |  | IPAC | 1972Be94 | Duzb 1972n 1 32 (1972) |
|  |  |  |  |  | -2.3(12) | R |  | CER | 1970McZQ | ORNL-4513 56 (70) |
|  | 1172 | 7.8 ns | 3+ | +0.65(4) |  |  |  | TDPAC | 1965Gu01 | NP 61 65 (1965) |
|  |  |  |  |  | -2.9(3) | R | [170Yb 84] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -3.0(3) |  |  | TDPAC | 1970Wa25 | ZP 238 35 (1970) |
|  | 1757 |  | (1-) |  | -3.44(10) | R |  | Mu-X | 1979Ho23 | PR C20 1934 (1979) |
|  | 1822 |  | (3-) |  | +1.97(10) | R |  | Mu-X | 1979Ho23 | PR C20 1934 (1979) |
|  |  |  |  |  |  |  |  |  |  |  |
| 70 Yb 173 | 0 | stable | 5/2- | -0.648(3) |  |  | [171Yb] | CFBLS | 1992Ku21 | HFI 74 171 (92) |
|  |  |  |  | -0.67989(3) |  |  | [23Na] | OP/RD | 1972Ol01 | ZP 249 205 (72) |
|  |  |  |  | 0.68002(3) |  |  | [35Cl] | N | 1964Go06 | PR 133 A881 (64) |
|  |  |  |  |  | +2.80(4) | R |  | Mu-X, O | 1975Ze04/1964Ro11 | NP A254 315 (75)/JPJa 19 249 (64) |
|  | 79 | 44 ps | 7/2- | -0.20(7) |  |  |  | IPAC | 1983Ca28 | HFI 15 85 (83) |
|  | 179 | 24 ps | 9/2- | +0.3(4) |  |  |  | IPAC | 1983Ca28 | HFI 15 85 (83) |
|  | 351 | 471 ps | 7/2+ | -0.5(5) |  |  |  | IPAC | 1983Ca28 | HFI 15 85 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 70 Yb 174 | 77 | 1.79 ns | 2+ | +0.676(8) |  |  |  | ME | 1971He03 | ZP 241 138 (71) |
|  |  |  |  |  | -2.18(5) | R | [170Yb 84] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 2.1(3) |  | [170Yb 84] | ME | 1971Pl03/1971He03 | NP A165 97 (71)/ZP 241 138 (71) |
|  | 253 | 144 ps | 4+ |  | -1.8(12) | R |  | CER | 1970McZQ | ORNL 4513 56 (70) |
|  | gs band | < 12+ |  |  x 10\*3 = +0.3(15) |  |  | [169Tm] | TF | 1979Wa15 | NP A330 225 (79) |
|  | gs band | <16+ |  |  x 10\*3 = -1.3(10) |  |  |  | TF | 1980An27 | PRL 45 1835 (80) |
|  |  |  |  |  |  |  |  |  |  |  |
| 70 Yb 175 | 0 | 4.18 d | 7/2- | 0.768(8) |  |  | [171Yb] | CFBLS | 1992Ku21 | HFI 74 171 (92) |
|  |  |  |  | 0.58(8) |  |  |  | NO/S | 1974Be19 | PR B9 1092 (74) |
|  |  |  |  | 0.40(5) |  |  |  | NO/S | 1972Kr18 | NP A197 352 (72) |
|  |  |  |  |  | +3.52(5) | R | [173Yb] | CLS | 2012Fl05 | JP G39 125101 (2012) |
|  |  |  |  |  |  |  |  |  |  |  |
| 70 Yb 176 | 82 | 1.8 ns | 2+ | +0.68(3) |  |  | [171Yb 67] | ME, CETD | 1967Ec02/1966Ti01 | PR 163 1295 (67)/PR 141 1062 (66) |
|  |  |  |  |  | -2.28(6) | R | [170Yb 84] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 2.2(4) |  | [170Yb 84] | ME | 1967Ec01 | PR 156 246 (67) |
|  | 272 | 0.11 ns | 4+ |  | -0.9(12) | R |  | CER | 1970McZQ | ORNL 4513 56 (70) |
|  | 1050 | 11.4 s | 8- | -0.151(15) |  |  | [175,177Yb] | CLS | 2007BI14 | PL B645 330 (07) |
|  |  |  |  |  | +5.30(8) | R | [175,177Yb] | CLS | 2007BI14 | PL B645 330 (07) |
|  |  |  |  |  |  |  |  |  |  |  |
| 70 Yb 177 | 0 | 1.91 h | 9/2+ | -0.695(15) |  |  | [173Yb] | CLS | 2012Fl05 | JP G39 125101 (2012) |
|  |  |  |  |  | +4.03(6) | R | [173Yb] | CLS | 2012Fl05 | JP G39 125101 (2012) |
|  | 331.5 | 6.41 s | 1/2- | +0.151(15) |  |  | [173Yb] | CLS | 2012Fl05 | JP G39 125101 (2012) |
|  |  |  |  |  |  |  |  |  |  |  |
| 71 Lu 161 | 0 | 77 s | 1/2(+) | +0.223(3) |  |  | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
| 71 Lu 162 | 0 | 1.37 m | 1- | +0.0553(11) |  |  | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  |  | +0.519(8) | R | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  |  |  |  |  |  |  |  |
| 71 Lu 163 | 0 | 238 s | 1/2(+) | +0.0769(10) |  |  | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  |  |  |  |  |  |  |  |
| 71 Lu 164 | 0 | 3.14 m | 1- | +0.0591(11) |  |  | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  |  | +0.608(7) | R | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  |  |  |  |  |  |  |  |
| 71 Lu 165 | 0 | 10.74 m | 1/2(+) | -0.0245(3) |  |  | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  |  |  |  |  |  |  |  |
| 71 Lu 166 | 0 | 2.65 m | 6- | +2.912(12) |  |  | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  |  | +4.33(4) | R | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  | 34 | 1.41 m | 3- | +0.189(5) |  |  | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  |  | +2.72(2) | R | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  |  |  |  |  |  |  |  |
| 71 Lu 167 | 0 | 51.5 m | 7/2+ | +2.325(4) |  |  | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  |  | +3.28(2) | R | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  | x | >60 s | 1/2(+) | -0.0999(13) |  |  | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  |  |  |  |  |  |  |  |
| 71 Lu 168 | 0 | 5.5 m | 6- | +3.02(3) |  |  | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  |  | +4.77(6) | R | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  | 220 | 6.7 m | 3+ | +1.221(5) |  |  | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  |  | +2.43(2) | R | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  |  |  |  |  |  |  |  |
| 71 Lu 169 | 0 | 34.1 h | 7/2+ | 2.295(4) |  |  | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  | 2.297(13) |  |  | [177Lu] | NMR-ON | 1996Ko26 | PR C54 1027 (96) |
|  |  |  |  |  | 3.48(3) | R | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  |  | 3.42(12) |  | [177Lu] | NMR-ON | 1996Ko26 | PR C54 1027 (96) |
|  |  |  |  |  |  |  |  |  |  |  |
| 71 Lu 171 | 0 | 8.24 d | 7/2+ | +2.293(4) |  |  | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  | 2.305(12) |  |  | [177Lu] | NMR-ON | 1996Ko26 | PR C54 1027 (96) |
|  |  |  |  | 2.03(10) |  |  | [177Lu] | NO/S | 1976Kr04 | PR C13 1295 (76) |
|  |  |  |  |  | +3.53(3) | R | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  |  | 3.38(4) |  | [177Lu] | NMR-ON | 1996Ko26 | PR C54 1027 (96) |
|  | 71 | 79 s | 1/2- | +0.585(7) |  |  | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  |  |  |  |  |  |  |  |
| 71 Lu 172 | 0 | 6.70 d | 4- | +2.900(10) |  |  | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  | 2.893(15) |  |  | [177Lu] | NMR-ON | 1996Ko26 | PR C54 1027 (96) |
|  |  |  |  | 2.25(10) |  |  | [177Lu] | NO/S | 1976Kr04 | PR C13 1295 (76) |
|  |  |  |  |  | +3.80(4) | R | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  |  | 3.79(6) |  | [177Lu] | NMR-ON | 1996Ko26 | PR C54 1027 (96) |
|  | 42 | 3.7 m | 1- | +1.98(4) |  |  | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  |  | +0.76(3) | R | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  |  |  |  |  |  |  |
| 71 Lu 173 | 0 | 1.37 y | 7/2+ | +2.281(2) |  |  | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  | 2.280(12) |  |  | [177Lu] | NMR-ON | 1996Ko26 | PR C54 1027 (96) |
|  |  |  |  | 2.34(9) |  |  | [177Lu] | NO/S | 1975Kr11 | PR C12 1999 (75) |
|  |  |  |  |  | +3.53(2) | R | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  |  | 3.56(4) |  | [177Lu] | NMR-ON | 1996Ko26 | PR C54 1027 (96) |
|  |  |  |  |  |  |  |  |  |  |  |
| 71 Lu 174 | 0 | 3.3 y | 1- | +1.988(5) |  |  | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  | 1.9(3) |  |  | [173Lu] | NO/S | 1975Kr11 | PR C12 1999 (75) |
|  |  |  |  |  | +0.773(5) | R | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  | 171 | 142 d | 6- | +1.492(16) |  |  | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  | 1.497(10) |  |  |  | NMR/ON | 1991Hi19 | PL B263 29 (91) |
|  |  |  |  |  | +4.80(5) | R | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  |  |  |  |  |  |  |  |
| 71 Lu 175 | 0 | stable | 7/2+ | +2.2323(11) |  |  |  | AB/D | 1985Br09 | NP A440 407 (85) |
|  |  |  |  | +2.2327(11) |  |  |  | N, OP/RD | 1975Mu15 | ZP A275 305 (75) |
|  |  |  |  | +2.23799(6) |  |  | [2H] | N, AB | 1962Re02/1962Ri04 | PR 126 1493 (62)/PR 126 240 (62) |
|  |  |  |  |  | +3.49(2) a | R |  | Mu-X | 1979De29 | NP A326 418 (79) |
|  |  |  |  |  | 3.62(9) a |  |  | Pi-X | 1983Ol03 | NP A403 572 (83) |
|  | 114 | 100 ps | 9/2+ | +2.01(15) |  |  |  | IPAC, R | 1969Wa30 | PhSS 32 151 (69) |
|  | 251 | 42 ps | 11/2+ | +2.0(7) |  |  |  | IPAC | 1966De08 | PL 21 659 (66) |
|  |  |  |  |  |  |  |  |  |  |  |
| 71 Lu 176 | 0 | 3.6x10\*10 y | 7- | +3.162(12) |  |  | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  | +3.169(5) |  |  |  | AB/D | 1985Br09 | NP A440 407 (85) |
|  |  |  |  |  | +4.92(5) | R | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  |  | +4.92(3) |  | [175Lu] | AB | 1985Br09/1962Sp03 | NP A440 407 (85)/PPS 79 787 (62) |
|  |  |  |  |  | +4.97(3) |  | [175Lu] | AB | 1962Sp03 | PPS 79 787 (62) |
|  |  |  |  |  | 5.07(7) a |  |  | Pi-X | 1983Ol03 | NP A403 572 (83) |
|  | 127 | 3.68 h | 1- | +0.311(7) |  |  | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  | +0.3185(6) |  |  | [175Lu] | AB, R | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  | +0.318(3) |  |  | [175Lu] | AB, R | 1975Mu15 | ZP A275 305 (75) |
|  |  |  |  |  | -1.450(12) | R | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  |  | -1.47(1) |  | [175Lu] | AB | 1965Wh03 | PR 137 B477 (65) |
|  |  |  |  |  |  |  |  |  |  |  |
| 71 Lu 177 | 0 | 6.71 d | 7/2+ | +2.239(7) |  |  | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  | +2.239(11) |  |  | [175Lu] | AB, R | 1975Mu15 | ZP A275 305 (75) |
|  |  |  |  | +2.2384(14) |  |  |  | AB,R | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  |  | +3.39(3) | R | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  |  | +3.39(2) |  | [175Lu] | AB | 1962Pe07 | PR 126 252 (62) |
|  | 122 | 116 ps | 9/2+ | +2.2(8) |  |  |  | IPAC | 1973Il02 | IzUz 1973n4 79 (73) |
|  | 150 | 120 ns | 9/2- | +5.5(3) |  |  |  | TDPAC | 1977Ne11 | HFI 3 257 (77) |
|  | 970 | 160 d | 23/2 | +2.308(11) |  |  | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  | 2.337(13) |  |  | [177Lu] | NMR-ON | 1996Ko26 | PR C54 1027 (96) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  | 2.93(7) |  |  | [177Lu] | NO/S | 1974Kr12/1975Sc16 | PR C10 825 (74)/ZP A272 203 (75) |
|  |  |  |  |  | +5.71(5) | R | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  |  | 5.2(5) |  | [177Lu] | NMR-ON | 1996Ko26 | PR C54 1027 (96) |
|  |  |  |  |  | 4.2(7) |  | [175Lu] | NO/S | 1983Oe01 | ZP A310 233 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 71 Lu 178 | 0 | 28.4 m | 1+ | -1.377(9) |  |  | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  |  | +0.708(10) | R | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  | 120 | 23.1 m | 9- | +4.834(9) |  |  | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  |  | +5.39(5) | R | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  |  |  |  |  |  |  |  |
| 71 Lu 179 | 0 | 4.59 h | 7/2+ | +2.375(12) |  |  | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  |  | +3.32(3) | R | [175Lu] | CFBLS | 1998Ge13 | EurPJ A3 225 (98) |
|  |  |  |  |  |  |  |  |  |  |  |
| 72 Hf 162 | >yrast | \_ | \_ | g(avge) = +0.21(4) |  |  |  | TF | 1998We02 | PR C57 621 (98) |
|  |  |  |  |  |  |  |  |  |  |  |
| 72 Hf 163 | >yrast | \_ | \_ | g(avge) = +0.18(6) |  |  |  | TF | 1998We02 | PR C57 621 (98) |
|  |  |  |  |  |  |  |  |  |  |  |
| 72 Hf 164 | >yrast | \_ | \_ | g(avge) = +0.23(3) |  |  |  | TF | 1998We02 | PR C57 621 (98) |
|  |  |  |  |  |  |  |  |  |  |  |
| 72 Hf 165 | > yrast | \_ | \_ | g(avge) = +0.14(3) |  |  |  | TF | 1996We01 | PR C53 151 (96) |
|  |  |  |  |  |  |  |  |  |  |  |
| 72 Hf 166 | > yrast | \_ | \_ | g(avge) = +0.19(4) |  |  |  | TF | 1996We01 | PR C53 151 (96) |
|  |  |  |  |  |  |  |  |  |  |  |
| 72 Hf 168 | 124 | 1.24 ps | 2+ | 0.34(6) |  |  |  | IPAC | 2012Wo03 | PR C85 037304 (12) |
|  | >1213 | ~ 1 ps | >6+ | g(avge) = +0.07(4) |  |  |  | IMPAC | 1975Sk01 | NP A238 159 (75) |
|  |  |  |  |  |  |  |  |  |  |  |
| 72 Hf 170 | 100 | 1.21 ns | 2+ | 0.56(10) |  |  |  | IPAC | 2007WO08 | PR C76 047308 (07) |
|  |  |  |  |  |  |  |  |  |  |  |
| 72 Hf 171 | 0 | 12.1 h | 7/2+ | -0.674(12) |  |  |  | CFBLS | 2000Ye02 | JP G26 839 (00) |
|  |  |  |  |  | +3.46(3) | R |  | CFBLS | 2000Ye02 | JP G26 839 (00) |
|  | 22 | 29.5 s | 1/2- | +0.526(16) |  |  |  | CFBLS | 2000Ye02 | JP G26 839 (00) |
|  |  |  |  |  |  |  |  |  |  |  |
| 72 Hf 172 | 95 | 1.28 ns | 2+ | 0.50(10) |  |  |  | IPAC | 2009BE42 | PR C80 057303 (09) |
|  | >1037 | ~0.5 ps | >6+ | g(avge) = +0.14(4) |  |  |  | IMPAC | 1975Sk01 | NP A238 159 (750 |
|  | 1685 | 4.8 ns | (6+) | +5.6(6) |  |  |  | TDPAD | 1980Wa23 | NP A349 1 (80) |
|  | 2006 | 163 ns | (8-) | +7.96(7) |  |  |  | TDPAD | 1980Wa23 | NP A349 1 (80) |
|  |  |  |  |  |  |  |  |  |  |  |
| 72 Hf 173 | 0 | 23.6 h | 1/2- | +0.502(7) |  |  | [177,179Hf] | CFBLS | 1999Le11 | PRL 82 2476 (99) |
|  | 1984 | 19.5 ns | 23/2- | +6.6(2) |  |  |  | TDPAD | 1980Wa23 | NP A349 1 (80) |
|  |  |  |  |  |  |  |  |  |  |  |
| 72 Hf 174 | 1549 | 138 ns | (6+) | +5.42(5) |  |  |  | TDPAD | 1980Wa23 | NP A349 1 (80) |
|  |  |  |  |  |  |  |  |  |  |  |
| 72 Hf 175 | 0 | 70 d | 5/2- | -0.677(9) |  |  |  | LRS | 2002Ni12 | PRL 88 094801 (02) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  | -0.62(3) |  |  |  | LRS | 1997Ji02 | PR C55 1545 (97) |
|  |  |  |  | 0.54(3) |  |  | [178Hf 93] | NMR/ON | 1986He10 | ZP B63 241 (86) |
|  |  |  |  | 0.58(3) |  |  | [180Hf 93] | NMR/ON | 1986He10 | ZP B63 241 (86) |
|  |  |  |  |  | +2.72(2) | R |  | LRS | 2002Ni12 | PRL 88 094801 (02) |
|  |  |  |  |  | +2.6(2) |  |  | LRS | 1997Ji02 | PR C55 1545 (97) |
|  |  |  |  |  | +2.8(4) |  | [178Hf 93] | NO/S | 1973Ka31 | PL 46B 62 (73) |
|  |  |  |  |  |  |  |  |  |  |  |
| 72 Hf 176 | 88 | 1.47 ns | 2+ | +0.63(6) |  |  | [180Hf] | IPAC | 1996Al20 | ZP A355 363 (96) |
|  |  |  |  | +0.54(4) |  |  |  | CEAD | 1968Be04 | NP A109 201 (68) |
|  |  |  |  |  | -2.10(2) a | R |  | Mu-X | 1984Ta10 | PR C30 350 (84) |
|  | 219 | 87.9 ps | 4+ | +1.34(15) |  |  |  | IPAC | 1996Al20 | ZP A355 363 (96) |
|  |  |  |  |  |  |  |  |  |  |  |
| 72 Hf 177 | 0 | stable | 7/2- | +0.7935(6) |  |  |  | AB/D | 1973Bu07/1973Bu25 | PL 43B 479 (73)/ZP 260 157 (73) |
|  |  |  |  |  | +3.37(3) a | R |  | Mu-X | 1984Ta04 | PR C29 1830 (84) |
|  |  |  |  |  | +3.36(3) |  | [179Hf] | AB | 1973Bu25 | ZP 260 157 (73) |
|  | 113 | 530 ps | 9/2- | +1.03(3) d |  |  |  | IPAC | 1996Al20 | ZP A355 363 (96) |
|  |  | 583 ps | 9/2- | +0.91(2) |  |  |  | IPAC | 1991De24 | PR C44 2213 (91) |
|  |  | 490 ps | 9/2- | +1.08(4) |  |  |  | IPAC, R | 1975Hu15 | PR C12 2013 (75) |
|  |  |  |  |  | 1.30(2) a | R |  | Mu-X | 1984Ta10 | PR C30 350 (84) |
|  | 250 | 97 ps | 11/2- | +1.5(5) |  |  | [177Hf 113] | IPAC | 1968Br15 | CJP 46 1523 (68) |
|  | 321 | 0.67(2) ns | 9/2+ | -0.73(9) |  |  |  | IPAC | 1969Hu06 | NP A127 609 (69) |
|  |  |  |  |  |  |  |  |  |  |  |
| 72 Hf 178 | 93 | 1.47 ns | 2+ | +0.48(3) |  |  |  | CEAD | 1968Be04 | NP A109 201 (68) |
|  |  |  |  | +0.60(4) |  |  |  | IPAC | 1962Ka14 | ArkF 22 257 (62) |
|  |  |  |  |  | -2.02(2) a | R |  | Mu-X | 1984Ta10 | PR C30 350 (84) |
|  | 1147 | 4 s | 8- | +3.10(1) |  |  | [178m1Hf] | CLS | 2007BI14 | PL B645 330 (07) |
|  |  |  |  |  | +4.99(4) | R | [177,179Hf] | CLS | 2007BI14 | PL B645 330 (07) |
|  | 1554 | 77 ns | 6+ | +5.84(5) |  |  |  | TDPAD | 1980Wa23 | NP A349 1 (80) |
|  |  |  |  | +5.89(9) |  |  |  | TDPAD | 1978Fa17 | HFI 4 216 (78) |
|  | 2446 | 31 y | 16+ | +8.16(4) |  |  | [177Hf] | CFBLS | 1994Bo15 | PRL 72 2689 (94) |
|  |  |  |  |  | +6.00(7) | R | [177Hf] | CFBLS | 1994Bo15 | PRL 72 2689 (94) |
|  |  |  |  |  |  |  |  |  |  |  |
| 72 Hf 179 | 0 | stable | 9/2+ | -0.6409(13) |  |  |  | AB/D | 1973Bu25 | PL 43B 479 (73)/ZP 260 157 (73) |
|  |  |  |  |  | +3.79(3) a |  |  | Mu-X, AB | 1984Ta04/1973Bu25 | PR C29 1830 (84)/ZP 260 157 (73) |
|  |  |  |  |  | +3.93(5) a |  |  | Pi-X | 1983Ol03 | NP A403 572 (83) |
|  |  |  |  |  | +5.3(5) |  |  | AB, R | 1977Bu23 | PL 62A 307 (77) |
|  | 123 | 37 ps | 11/2+ |  | 1.88(3) a |  |  | Mu-X | 1984Ta10 | PR C30 350 (84) |
|  | 1106 | 25.1 d | 25/2- | 7.4(3) |  |  | [177Hf 113] | NO/S | 1975Hu15 | PR C12 2013 (75) |
|  |  |  |  |  |  |  |  |  |  |  |
| 72 Hf 180 | 93 | 1.53 ns | 2+ | +0.61(3) |  |  |  | IPAC | 1996Al20 | ZP A355 363 (96) |
|  |  |  |  | +0.51(8) |  |  | [178Hf 93] | ME | 1972JhZZ | BAPS 17 545 (72) |
|  |  |  |  | +0.53(3) |  |  |  | CEAD | 1968Be04 | NP A109 201 (68) |
|  |  |  |  | +0.77(7) |  |  |  | IPAC | 1961Bo25 | ZP 165 57 (61) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | -2.00(2) a | R |  | Mu-X | 1984Ta10 | PR C30 350 (84) |
|  | 309 | 75.3 ps | 4+ | +1.4(2) |  |  |  | IPAC | 1996Al20 | ZP A355 363 (96) |
|  |  |  |  | +2.0(4) |  |  |  | IPAC | 1961Bo25 | ZP 165 57 (61) |
|  | 641 | 9.0 ps | 6+ | +2.0(4) |  |  |  | IPAC | 1996Al20 | ZP A355 363 (96) |
|  | 1142 | 5.5 h | 8- | +8.7(10) |  |  | [180Hf 93] | ME | 1971Ko29 | PRL 27 1593 (71) |
|  |  |  |  | 9.0(9) |  |  |  | NO/S | 1976Kr11 | PR C14 656 (76) |
|  |  |  |  |  | +4.6(3) | R | [178Hf 93] | NO/S | 1973Ka31 | PL 46B 62 (73) |
|  |  |  |  |  |  |  |  |  |  |  |
| 73 Ta 169 | 170+x, 220 | 44, 54 ns | 5/2-, 9/2- |  | Q(5/2-)/Q(9/2-) = 1.87(13) |  |  | TDPAD | 2005Ku40 | Eur.Phys.J A 26 311 (05) |
|  |  |  |  |  |  |  |  |  |  |  |
| 73 Ta 171 | 184 | 45 ns | 9/2- |  | (+)2.81(17) | R | [181Ta] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | (+)3.1(2) |  | [181Ta] | TDPAD | 1995Do32 | HFI 96 223 (95) |
|  |  |  |  |  |  |  |  |  |  |  |
| 73 Ta 173 | 0 | 3.14 h | 5/2- | 1.70(3) |  |  |  | NMR/ON | 1991Ko25 | NP A534 344 (91) |
|  |  |  |  |  | -1.8(2) | R | [181Ta] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | (-)1.9(2) |  | [181Ta 482] | NO/S | 1983Ed01 | PL 133B 44 (83) |
|  | 166 | 225 ns | 9/2- | +2.66(8) |  |  |  | TDPAD | 2006TH07 | PR C74 034329 (06) |
|  | 1713 | ~ 100 ns | 21/2- | +6.51(16) |  |  |  | TDPAD | 2006TH07 | PR C74 034329 (06) |
|  |  |  |  |  |  |  |  |  |  |  |
| 73 Ta 175 | 0 | 10.5 h | 7/2+ | 2.27(5) |  |  | [181Ta] | NMR/ON | 1984Oh07 | JPJa 53 2479 (84) |
|  |  |  |  | 2.27(5) |  |  | [181Ta] | NMR/ON | 1984Ed01 | NP A413 247 (84) |
|  |  |  |  |  | +3.5(3) | R | [181Ta] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | (+)3.6(4) |  | [181Ta 482] | NO/S | 1983Ed01 | PL 133B 44 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 73 Ta 177 | 0 | 56.6 h | 7/2+ | 2.25(5) |  |  | [181Ta] | NMR/ON | 1984Oh07 | JPJa 53 2479 (84) |
|  |  |  |  | 2.25(5) |  |  | [181Ta] | NMR/ON | 1984Ed01 | NP A413 247 (84) |
|  | 70 | 73 ns | 5/2+ | +4.8(5) |  |  |  | PPDAC | 1976Ao02/1974Ao01 | NP A272 47 (76)/NIM 119 477 (74) |
|  | 186 | 2.78 s | 5/2- | +2.05(13) |  |  |  | TDPAC | 1978Be67 | IzF 42 2286 (78) |
|  | 1355 | 5.0 s | 21/2- | +0.080(14) |  |  |  | IPAD | 1982Ao04 | NP A381 13 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 73 Ta 178 | 0 + x | 9.3 m | 1+ | 2.740(12) |  |  | [181Ta 482] | NMR/ON | 1987Ni05 | JPJa 56 492 (87) |
|  |  |  |  | +2.8(2) |  |  | [181Ta] | NO/S | 1978Ru05 | HFI 4 206 (78) |
|  |  |  |  |  | +0.63(6) | R | [181Ta] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.65(6) |  |  | NO/S | 1983Ha49 | HFI 15 105 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 73 Ta 179 | 0 | 1.82 y | 7/2+ | +2.289(9) |  |  | [181Ta] | LRS | 1996Wa02 | PR C53 611 (96) |
|  |  |  |  |  | +3.27(4) | R | [181Ta] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +3.37(4) |  | [181Ta] | LRS | 1996Wa02 | PR C53 611 (96) |
|  |  |  |  |  |  |  |  |  |  |  |
| 73 Ta 180 | 75 | >1.2x10\*15y | 9- | +4.825(11) |  |  |  | LRS | 1994Wa34 | PR A50 4639 (94) |
|  |  |  |  | 4.77(5) |  |  | [181Ta] | ABLFS | 1980Bu09 | PL 92B 64 (80) |
|  |  |  |  |  | "+4.80(3) | R | [181Ta] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +4.95(2) |  |  | LRS | 1994Wa34 | PR A50 4639 (94) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  |  |  |  |  |  |  |
| 73 Ta 181 | 0 | stable | 7/2+ | +2.3705(7) |  |  |  | N | 1973Er17/1960Be23 | JCP 59 3911 (73)/PR 120 1812 (60) |
|  |  |  |  |  | +3.17(2) a | R |  | Pi-X | 1983Ol03 | NP A403 572 (83) |
|  |  |  |  |  | +3.28(6) a |  |  | Mu-X | 1981Ko11 | NP A360 187 (81) |
|  |  |  |  |  | +3.35(2) a |  |  | Pi-X | 1981Ba07 | NP A355 383 (81) |
|  |  |  |  |  | +3.35(11) a |  |  | Ka-X | 1981Ba07 | NP A355 383 (81) |
|  |  |  |  |  | +3.30(6) a |  |  | Pi-X | 1978Be31 | NP A300 369 (78) |
|  |  |  |  |  | 3.18(3) a |  |  | Mu-X | 1977Po02 | NP A278 477 (77) |
|  |  |  |  |  | 3.44(6) a |  |  | Mu-X | 1976Mc03 | PR C13 1644 (76) |
|  | 6 | 6.05 s | 9/2- | +5.28(9) |  |  | [181Ta] | ME | 1970Ka16/1968Sa07 | PL 32B 364 (70/PRL 21 961 (68) |
|  |  |  |  | +5.47(2) |  |  | [181Ta] | ME | 1978SA25 | ZP A288 291 (78) |
|  |  |  |  | +5.3(2) |  |  | [181Ta] | ME | 1978WE18 | ZP A288 369 (78) |
|  |  |  |  |  | +3.59(2) | R | [181Ta] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +3.71(7) |  | [181Ta] | ME | 1983Ei02 | PL 93A 259 (83) |
|  | 136 | 40 ps | 9/2+ | +2.6(7) |  |  | [182Ta] | IPAC | 1983Ak02 | IzF 47 31 (83) |
|  |  |  |  | 1.22(18) |  |  |  | IPAC | 1971KE19 | Can J Phys 49 2646 (71) |
|  | 482 | 10.8 ns | 5/2+ | +3.29(3) |  |  |  | TDPAC, CDPAC | 1962Bo09/1964Ag02 | PL 1 126 (62)/NP 58 651 (64) |
|  |  |  |  |  |  |  |  |  | 1963Ma10 | NP 40 656 (63) |
|  |  |  |  |  | +2.28(2) | R | [181Ta] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +2.35(6) |  | [181Ta] | TDPAC | 1983Bu11 | PL 97A 217 (83) |
|  | 717 | 3.0 ps | 15/2+ | +2(2) |  |  |  | TF | 1996HaZT | ARJAERI 11 (96) |
|  | 965 | 1.93 ps | 17/2+ | +4(2) |  |  |  | TF | 1996HaZT | ARJAERI 11 (96) |
|  | 1239 | 1.12.ps | 19/2+ | +4(5) |  |  |  | TF | 1996HaZT | ARJAERI 11 (96) |
|  |  |  |  |  |  |  |  |  |  |  |
| 73 Ta 182 | 0 | 115 d | 3- | 3.02(3) |  |  | [183Ta] | NMR/ON | 1980Al27 | HFI 8 229 (80) |
|  |  |  |  | (+)3.02(6) |  |  | [181Ta] | NMR/ON | 1980De22 | HFI 7 465 (80) |
|  |  |  |  |  | +2.6(3) | R |  | NO/S | 1991Fa12 | PL A159 421 (91) |
|  |  |  |  |  |  |  |  |  |  |  |
| 73 Ta 183 | 0 | 5.1 d | 7/2+ | (+)2.36(3) |  |  | [181Ta] | NMR/ON | 1984Ed01/1980Al27 | NP A413 247 (84)/HFI 8 229 (80) |
|  |  |  |  |  |  |  |  |  |  |  |
| 74 W 168 | 199 | 213 ps | 2+ | +0.50(10) |  |  |  | IMPAD | 1986Bi11 | PL 178B 145 (86) |
|  | 562 | 12 ps | 4+ | +1.4(8) |  |  |  |  | 1986Bi11 | PL 178B 145 (86) |
|  | 2272 | 61 ps | 12+ | -2.5(8) |  |  |  |  | 1986Bi11 | PL 178B 145 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 74 W 175 | 235 | 216 ns | 7/2+ | -0.65(2) |  |  |  | TDPAD | 2000Io03 | PL B495 289 (00) |
|  |  |  |  |  |  |  |  |  |  |  |
| 74 W 176 | 3746 | 41 ns | 14+ | +6.7(2) |  |  |  | TDPAD | 2000Io03 | PL B495 289 (00) |
|  |  |  |  |  | 6.0(8) | R | [calc efg] | TDPAD | 2002Io01 | PL B541 219 (02) |
|  |  |  |  |  |  |  |  |  |  |  |
| 74 W 179 | 3348 | 750 ns | 35/2- |  | +3.9(10) | R | [calc efg] | LEMS | 2001Ba04 | PRL 86 604 (01) |
|  |  |  |  |  | 2.3<Q<8.0 |  |  | LEMS | 1999Vy01 | JP G25 767 (99) |
|  |  |  |  |  | <7 |  |  | LEMS | 1997Ne04 | ZP A358 267 (97) |
|  |  |  |  |  |  |  |  |  |  |  |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
| 74 W 180 | 104 | 1.22 ns | 2+ | 0.51(3) |  |  | [182W 100] | ME | 1973Zi02 | ZP 262 413 (73) |
|  |  |  |  |  | -2.1(4) | R | [182W 100] | ME | 1973Zi02/1972He01 | ZP 262 413 (73)/PR C5 219 (72) |
|  |  |  |  |  |  |  |  |  |  |  |
| 74 W 182 | 100 | 1.37 ns | 2+ | 0.52(2) |  |  | [184W 111] | ME | 1968Pe06 | PR 170 1066 (68) |
|  |  |  |  | + 0.528(12) |  |  | [183W] | CEAD | 1972Ca12 | CJP 50 736 (72) |
|  |  |  |  |  | -2.1(4) | R |  | CER | 1977RuZV | BAPS 22 1032 (77) |
|  | 329 | 64 ps | 4+ | +0.9(2) |  |  |  | IPAC | 1972Be94 | DUzb 1972n1 32 (72) |
|  | 1289 | 1.12 ns | 2- | +1.7(2) |  |  |  | IPAC | 1973Se14 | NP A211 573 (73) |
|  | 1374 | 78 ps | 3- | 1.0(3) |  |  |  | IPAC | 1972He10 | NP A187 49 (72) |
|  |  |  |  | 2.2(3) |  |  | [182W 100] | IPAC | 1973Se14 | NP A211 573 (73) |
|  |  |  |  |  |  |  |  |  |  |  |
| 74 W 183 | 0 | stable | 1/2- | +0.11778476(9) |  |  | [2H] | N | 1974Sa25 | ZNat 29a 1763 (74) |
|  | 47 | 184 ps | 3/2- | -0.1(1) |  |  |  | ME | 1967Ag02 | PR 155 1342 (67) |
|  |  |  |  |  | -1.8(4) | R | [182W 100] | ME | 1967Ag02 | PR 155 1342 (67) |
|  | 99 | 0.71 ns | 5/2- | +0.91(4) |  |  | [183W] | ME, R, CEAD | 1968Pe06/1967Gi03 | PR 170 1066 (68)/NP A91 633 (67) |
|  |  |  |  |  | -2.0(3) | R | [182W 100] | ME | 1967Ag02/1974Ge17 | PR 155 1342 (67)/ZP 267 61 (74) |
|  | 207 | \_ | 7/2- | 0.4(2) |  |  | [184W 111] | TF | 1992La02 | NP A536 397 (92) |
|  | 309 | \_ | 9/2- | 1.53(14) |  |  | [184W 111] | TF | 1992La02 | NP A536 397 (92) |
|  | 475 | \_ | 11/2- | 1.1(2) |  |  | [184W 111] | TF | 1992La02 | NP A536 397 (92) |
|  | 551 | \_ | 9/2- | 2.2(9) |  |  | [184W 111] | TF | 1992La02 | NP A536 397 (92) |
|  | 631 | 10 ps | 13/2- | 2.6(3) |  |  | [184W 111] | TF | 1992La02 | NP A536 397 (92) |
|  | 1062 | 3.0 ps | 17/2- | 2.6(7) |  |  | [184W 111] | TF | 1992La02 | NP A536 397 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 74 W 184 | 111 | 1.25 ns | 2+ | +0.578(14) |  |  |  | IPAC | 1984Al06 | ZP A316 87 (84) |
|  |  |  |  | +0.576(14) |  |  |  | CEAD | 1972Ca12 | CJP 50 736 (72) |
|  |  |  |  |  | -1.9(2) | R |  | CER | 1977RuZV | BAPS 22 1032 (77) |
|  | 364 | 46 ps | 4+ | +1.17(9) |  |  | [184W 111] | IPAC, R | 1984Al06 | ZP A316 87 (84) |
|  | 748 | 5.5 ps | 6+ | +1.9(2) |  |  | [184W 364] | TF | 1985St18 | ZP A322 287 (85) |
|  |  |  |  | +1.8(3) |  |  | [184W 111] | IPAC, R | 1984Al06 | ZP A316 87 (84) |
|  | 904 | 1.73 ps | 2+ | +0.24(8) |  |  | [184W 364] | TF | 1985St18 | ZP A322 287 (85) |
|  |  |  |  |  | +0.1(4) | R |  | CER | 1977Ob02 | NP A291 510 (77) |
|  | 1252 | 1.32 ps | 8+ | +2.9(6) |  |  | [184W 364] | TF | 1985St18 | ZP A322 287 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 74 W 185 | 0 | 75.1 d | 3/2- | +0.543(14) |  |  | [187W] | NMR/ON | 2004OH16 | Hyp Int 159 277 (2004) |
|  |  |  |  |  |  |  |  |  |  |  |
| 74 W 186 | 123 | 1.05 ns | 2+ | 0.62(3) |  |  |  | TF | 1991St04 | NP A528 447 (91) |
|  |  |  |  | +0.62(2) |  |  | [182W 100] | ME, RIGV | 1968Pe06/1970Be36 | PR 170 1066 (68)/NP A151 401 (70) |
|  |  |  |  |  | -1.6(3) | R |  | CER | 1977RuZV | BAPS 22 1032 (77) |
|  | 396 | 36 ps | 4+ | +1.28(10) |  |  | [186W 123] | TF | 1985St07 | ZP A320 669 (85) |
|  |  |  |  |  | -2.6(13) | R |  | CER | 1970McZQ | ORNL-4513 56 (70) |
|  | 737 | 4.4 ps | 2+ | +0.39(8) |  |  | [186W 123] | TF | 1985St07 | ZP A320 669 (85) |
|  |  |  |  |  | 1.3(3) | R |  | CER | 1977Ob02 | NP A291 510 (77) |
|  |  |  |  |  | +1.3(3) |  |  | CER | 1977Mc11 | NP A289 253 (77) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | 0.7(4) |  |  | CER | 1970McZQ | ORNL-4513 56 (70) |
|  | 809 | 3.5 ps | 6+ | +1.9(4) |  |  | [186W 123] | TF | 1985St07 | ZP A320 669 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 74 W 187 | 0 | 23.9 h | 3/2- | 0.621(15) |  |  |  | NMR/ON | 1987Oh10 | HFI 36 219 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 75 Re 179 | 0 | 19.7 m | (5/2)+ | 2.8(4) |  |  |  | NO/S | 1992Bo39 | HFI 75 307 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 75 Re 180 | 0 | 2.4 m | (1)- | 1.6(2) |  |  |  | NO/S | 1992Bo39 | HFI 75 307 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 75 Re 181 | 0 | 19.9 h | 5/2+ | 3.19(7) |  |  | [185,187Re] | NMR/ON | 1981Ha22 | NP A363 269 (81) |
|  | 357 | 76 ns | 5/2- | +2.03(10) |  |  |  | TDPAC | 1978Be67 | IzF 42 2286 (78) |
|  |  |  |  |  |  |  |  |  |  |  |
| 75 Re 182 | 0 | 64.0 h | 7+ | 2.84(6) |  |  | [185,187Re] | NMR/ON | 1981Ha22 | NP A363 269 (81) |
|  |  |  |  | 2.83(6) |  |  | [185,187Re] | NO/S | 1980Sp01 | PR C21 361 (80) |
|  |  |  |  |  | +4.1(3) | R | [187Re] | NO/S | 1983Ha49 | HFI 15 105 (83) |
|  | 0 + x | 12.7 h | 2+ | 3.26(10) |  |  |  | NMR/ON | 1987Oh10 | HFI 36 219 (87) |
|  |  |  |  | 3.2(3) |  |  | [185,187Re] | NO/S | 1980Sp01 | PR C21 361 (80) |
|  |  |  |  |  | +1.8(2) | R | [187Re] | NO/S, R | 1985Ha41/1981Er01 | HFI 22 19 (85)/PR C23 1739 (81) |
|  | 236 | 570 ns | 2- | +2.15(8) |  |  |  | TDPAC | 1978Be67 | IzF 42 2286 (78) |
|  | 2256 | 82 ns | 16- | +3.82(13) |  |  |  | TDPAD | 1988Ja02 | PL 202B 185 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 75 Re 183 | 0 | 70.0 d | 5/2+ | 3.168(15) |  |  | [186Re] | NMR/ON | 1987Oh10 | HFI 36 219 (87) |
|  |  |  |  | +3.160(13) |  |  | [186Re] | NMR/ON, R | 1987Oh10/1981Ru11 | HFI 36 219 (87)/HFI 11 37 (81) |
|  |  |  |  |  | +2.3(2) | R | [187Re] | NO/S | 1983Ha49 | HFI 15 105 (83) |
|  |  |  |  |  | +2.1(2) |  | [187Re] | NO/S, R | 1985Ha41/1981Er01 | HFI 22 19 (85)/ PR C23 1739 (81) |
|  | 497 | 7 ns | 9/2- | +5.14(11) |  |  | [19F 197] | TDPAD | 1980Za09 | IzF 44 1988 (80) |
|  |  |  |  |  | (+)3.7(3) | R | [187Re] | TDPAC | 1978Ne14 | HFI 4 211 (78) |
|  |  |  |  |  |  |  |  |  |  |  |
| 75 Re 184 | 0 | 38.0 d | 3- | (+)2.53(5) |  |  | [185,187Re] | NMR/ON | 1981Ha22 | NP A363 269 (81) |
|  |  |  |  |  | +2.8(2) | R | [187Re] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +2.9(2) |  | [187Re] | NO/S | 1983Ha49 | HFI 15 105 (83) |
|  |  |  |  |  | +3.1(3) |  | [187Re] | NO/S | 1981Er01 | PR C23 1739 (81) |
|  | 188 | 169 d | 8+ | (+)2.88(10) |  |  |  | NO/S | 1973Hu06/1973Kr01 | NP A210 317 (73)/PR C7 263 (73) |
|  |  |  |  |  |  |  |  |  |  |  |
| 75 Re 185 | 0 | stable | 5/2+ | +3.1871(3) |  |  | [23Na] | N | 1951Al11 | PR 82 105 (51) |
|  |  |  |  |  | +2.18(2) a | R |  | Pi-X, O | 1981Ko11/1966Ku07 | NP A360 187 (81)/ZP 196 365 (66) |
|  |  |  |  |  | 2.21(4) a |  |  | Mu-X | 1981Ko11 | NP A360 187 (81) |
|  |  |  |  |  | 2.19(2) |  | [187Re] | Q | 1978Se09 | PR C18 2430 (78) |
|  | 125 | 10.2 ps | 7/2+ | +2.1(8) |  |  |  | PAC | 1973BeYN | Cf72 Kiev, 150 (72) |
|  |  |  |  |  |  |  |  |  |  |  |
| 75 Re 186 | 0 | 90.6 h | 1- | +1.739(6) |  |  |  | AB/D | 1965Ar01 | PR 138 B310 (65) |
|  |  |  |  |  | +0.618(6) | R | [187Re] | AB | 1981Bu13/1965Ar01 | ZP A302 281 (81)/ PR 138 B310 (65) |
|  |  |  |  |  | +0.60(6) |  | [187Re] | NO/S | 1983Ha49 | HFI 15 105 (83) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | +0.54(9) |  | [187Re] | NO/S, R | 1985Ha41/1983Oe01 | HFI 22 19 (85)/ZP A310 233 (83) |
|  | 314 | 23.1 ns | 3+ | +2.18(6) |  |  | [19F 197] | TDPAD | 1980Za09 | IzF 44 1988 (80) |
|  | 330 | 17.8 ns | 5+ | +4.62(11) |  |  | [19F 197] | TDPAD | 1980Za09 | IzF 44 1988 (80) |
|  |  |  |  |  |  |  |  |  |  |  |
| 75 Re 187 | 0 | 4 x 10\*10 y | 5/2+ | +3.2197(3) |  |  | [23Na] | N | 1951Al11 | PR 82 105 (51) |
|  |  |  |  |  | +2.07(2) a | R |  | Pi-X, O | 1981Ko11/1966Ku07 | NP A360 187 (81)/ZP 196 365 (66) |
|  |  |  |  |  | 2.09(4) a |  |  | Mu-X | 1981Ko11 | NP A360 187 (81) |
|  | 134 | 9.9 ps | 7/2+ | +1.9(9) |  |  |  | PAC | 1973BeYN | Cf72 Kiev, 150 (72) |
|  | 206 | 555 ns | 9/2- | +5.11(9) |  |  |  | TDPAC | 1978Be67 | IzF 42 2286 (78) |
|  |  |  |  | +5.02(5) |  |  |  | TDPAC | 1963Ko19/1971Ni01/ | NP 49 161 (63)/NP 164 411 (71) |
|  |  |  |  |  |  |  |  |  | 1963Wa16 | /ZP 175 520 (63)/PSNI 15B 349 (72) |
|  |  |  |  |  | 3.04(5) | R | [187Re] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 3.3(7) |  | [187Re] | TDPAC | 1973Ha61 | JCP 58 3339 (73) |
|  |  |  |  |  |  |  |  |  |  |  |
| 75 Re 188 | 0 | 16.9 h | 1- | +1.788(5) |  |  |  | AB/D | 1965Ar01 | PR 138 B310 (65) |
|  |  |  |  |  | +0.572(6) | R | [187Re] | AB | 1981Bu13 | ZP A302 281 (81)/ PR 138 B310 (65) |
|  |  |  |  |  | +0.36(16) |  | [187Re] | NO/S | 1983Oe01 | ZP A310 233 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 76 Os 182 | 7049 | 150 ns | 25(+) | +10.6(2) |  |  |  | TDPAD | 1989Al19 | PL B228 463 (89) |
|  |  |  |  |  | 4.2(2) | R | [188Os 155] | TDPAD | 1991Br25 | PL B264 17 (91) |
|  |  |  |  |  |  |  |  |  |  |  |
| 76 Os 183 | 0 | 13.0 h | 9/2+ | (-)0.794(14) |  |  |  | NMR/ON | 1980Ha24 | ZP A295 345 (80) |
|  |  |  |  |  | +3.1(3) | R | [188Os 155] | NO/S | 1985Ha41 | HFI 22 19 (85)/PR B22 2248 (80) |
|  |  |  |  |  |  |  |  |  |  |  |
| 76 Os 184 | 120 | 1.18 ns | 2+ |  | -2.7(12) | R | [188Os 155] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -2.4(11) |  |  | CER | 1972La16 | PR C6 613 (72) |
|  |  |  |  |  |  |  |  |  |  |  |
| 76 Os 186 | 137 | 830 ps | 2+ | +0.56(2) |  |  |  | ME, CEAD | 1970Wa06/1967Gi02 | ZP 230 80 (70)/NP A91 85 (67) |
|  |  |  |  | +0.52(3) |  |  |  | TF | 1982Le02 | PR C25 293 (82) |
|  |  |  |  |  | -1.63(4) a | R |  | Mu-X | 1981Ho22 | PR C24 1667 (81) |
|  |  |  |  |  | -1.61(5) |  | [188Os 155] | ME | 1972Wa24 | ZP 254 112 (72) |
|  |  |  |  |  | -1.2(2) |  |  | CER | 1979RuZP | ARRo 79 (78) |
|  | 1775 | 10.4 ns | 7- | -0.22(14) |  |  |  | TDPAD | 1984Go06 | YadF 39 518 (84) |
|  |  |  |  |  |  |  |  |  |  |  |
| 76 Os 187 | 0 | stable | 1/2- | +0.06465189(6) |  |  | [2H] | N | 1974Sa25 | ZNat 29a 1763 (74) |
|  |  |  |  | +0.0665(6) |  |  | [189Os] | O | 1989Ra17 | JPJa 17 891 (62) |
|  |  |  |  |  |  |  |  |  |  |  |
| 76 Os 188 | 155 | 710 ps | 2+ | +0.58(2) |  |  |  | IMPAC, R | 1985St05 | NP A435 635 (85) |
|  |  |  |  | 0.61(3) |  |  |  | ME | 1970Wa06 | ZP 230 80 (70) |
|  |  |  |  | +0.60(3) |  |  |  | TF | 1982Le02 | PR C25 293 (82) |
|  |  |  |  |  | -1.46(4) a | R |  | Mu-X | 1981Ho22 | PR C24 1667 (81) |
|  |  |  |  |  | -1.33(10) |  |  | CER | 1979RuZP | ARRo 79 (78) |
|  |  |  |  |  | -1.2(3) |  |  | CER | 1980Ba42 | PR C22 2383 (80) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  | 478 | 19 ps | 4+ | +1.43(14) |  |  | [188Os 155] | TF | 1985St05 | NP A435 635 (85) |
|  | 633 | 6.3 ps | 2+ | +0.78(7) |  |  | [188Os 155] | TF | 1985St05 | NP A435 635 (85) |
|  |  |  |  |  | +1.0(3) | R |  | CER | 1980Ba42 | PR C22 2383 (80) |
|  | 940 | 2.3 ps | 6+ | +2.5(4) |  |  | [188Os 155] | TF | 1985St05 | NP A435 635 (85) |
|  | 966 | 5.2 ps | 4+ | +1.6(5) |  |  | [188Os 155] | TF | 1985St05 | NP A435 635 (85) |
|  | 1771 | 13.9 ps | 7- | -0.17(11) |  |  |  | TDPAD | 1984Go06 | YadF 39 518 (84) |
|  | 2121 |  | (3-) |  | 1.69(9) a | R |  | Mu-X | 1979Ho23 | PR C20 1934 (79) |
|  |  |  |  |  |  |  |  |  |  |  |
| 76 Os 189 | 0 | stable | 3/2- | +0.659933(4) |  |  | [1H] | N | 1968Sc03/1954Lo36 | PL 26A 258 (68)/PR 95 291 (54) |
|  |  |  |  |  | +0.98(6) |  |  | LRFS | 2002Kr01 | PS 65 56 (02) |
|  |  |  |  |  | +0.86(3) | R | [188Os 155] | ME | 1972Wa24 | ZP 254 112 (72) |
|  | 36 | 0.50 ns | 1/2- | +0.23(3) |  |  | [189Os] | ME | 1969Wa02 | PL 28B 548 (69) |
|  | 70 | 1.63 ns | 5/2- | +0.988(6) |  |  | [189Os] | ME, IPAC | 1972Wa24/1968Pe09 | ZP 254 112 (72)/PR 174 1509 (68) |
|  |  |  |  |  |  |  |  |  | 1971Be23 | /IzF 35 2295 (71) |
|  |  |  |  |  | -0.63(2) | R | [189Os] | ME | 1972Wa24 | ZP 254 112 (72) |
|  | 95 | 0.23 ns | 3/2- | -0.32(5) |  |  |  | IPAC | 1971Be23 | IzF 35 2295 (71) |
|  |  |  |  |  |  |  |  |  |  |  |
| 76 Os 190 | 187 | 366 ps | 2+ | +0.69(3) |  |  |  | TF | 1992ST06 | ZP A342 373 (92) |
|  |  |  |  | +0.70(2) |  |  |  | IMPAC, R | 1985St05 | NP A435 635 (85) |
|  |  |  |  |  | -1.18(3) a | R |  | Mu-X | 1981Ho22 | PR C24 1667 (81) |
|  |  |  |  |  | -1.26(8) |  | [188Os 155] | ME | 1972Wa24 | ZP 254 112 (72) |
|  |  |  |  |  | 1.00(10) |  |  | CER | 1979RuZP | ARRo 79 (78) |
|  |  |  |  |  | -1.0(3) |  | [188Os 155] | CER | 1980Ba42 | PR C22 2383 (80) |
|  | 548 | 14 ps | 4+ | +1.6(2) |  |  | [190Os 187] | TF | 1985St05 | NP A435 635 (85) |
|  | 558 | 12.5 ps | 2+ | +0.69(9) |  |  | [190Os 187] | TF | 1985St05 | NP A435 635 (85) |
|  |  |  |  |  | +0.8(5) | R | [188Os 155] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.9(4) |  |  | CER | 1980Ba42 | PR C22 2383 (80) |
|  | 1705 | 9.9 m | 10- | -0.56(+8,-12) |  |  |  | RENO | 1987Be54 | PRL 59 2923 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 76 Os 191 | 0 | 15.4 d | 9/2- | +0.96(3) |  |  |  | NMR/ON() | 1996Oh03 | PR C54 1129 |
|  |  |  |  |  | +2.5(2) | R | [186 Os 137] | NO/S, ME | 1979Er09/1979Er14 | NP A332 41 (79)/PL 70A 246 (79) |
|  |  |  |  |  |  |  |  |  |  |  |
| 76 Os 192 | 206 | 289 ps | 2+ | +0.79(2) |  |  |  | IMPAC, R | 1985St05 | NP A435 635 (85) |
|  |  |  |  |  | -0.96(3) a | R |  | Mu-X | 1981Ho22 | PR C24 1667 (81) |
|  |  |  |  |  | -0.8(2) |  |  | CER | 1983Ch35 | PR C28 1570 (83) |
|  |  |  |  |  | -0.60(13) |  |  | CER | 1979RuZP | ARRo 79 (78) |
|  |  |  |  |  | -0.9(2) |  |  | CER | 1988Li22 | NP A485 399 (88) |
|  | 489 | 30.1 ps | 2+ | +0.58(4) |  |  | [192Os 206] | TF | 1985St05/1983Bo13 | NP A435 635 (85)/NP A401 175 (83) |
|  |  |  |  |  | -0.8(3) |  | [188Os 155] | CER | 1980Ba42 | PR C22 2383 (80) |
|  | 580 | 13.4 ps | 4+ | +1.56(12) |  |  | [192Os 206] | TF | 1985St05/1983Bo13 | NP A435 635 (85)/NP A401 175 (83) |
|  | 910 | 18 ps | 4+ | +1.7(4) |  |  | [192Os 206] | TF | 1985St05 | NP A435 635 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 76 Os 193 | 0 | 30.5 h | 3/2- | 0.730(2) |  |  |  | NMR/ON | 1989Ed01 | PR C40 2246 (89) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  | sign positive |  |  |  | NO/CP | 1991Sc28 | ZP A340 235 (91) |
|  |  |  |  | +0.75(3) |  |  |  | NO/ME, R | 1985Be03 | JP G11 287 (85) |
|  |  |  |  | 0.78(7) |  |  |  | NO/S, R | 1984Gh01 | NP A426 20 (84) |
|  |  |  |  |  | +0.48(6) | R | [188Os 155] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.47(6) |  | [186Os 137] | R, NO/S | 1985Be03/1979Er09 | JP G11 287 (85)/NP A332 41 (79) |
|  |  |  |  |  |  |  |  |  |  |  |
| 77 Ir 180 | 0 | 1.5 m | unknown | 2.2(2) [I=3] |  |  |  | NO/S | 1992Bo39 | HFI 75 307 (92) |
|  |  |  |  | 2.39(13) [I=4] |  |  |  | NO/S | 1992Bo39 | HFI 75 307 (92) |
|  |  |  |  | 2.5(2) [I=5] |  |  |  | NO/S | 1992Bo39 | HFI 75 307 (92) |
|  |  |  |  | 2.6(2) [I=6] |  |  |  | NO/S | 1992Bo39 | HFI 75 307 (92) |
|  |  |  |  | 2.6(2) [I=7] |  |  |  | NO/S | 1992Bo39 | HFI 75 307 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 77 Ir 182 | 0 | 15 m | 3+ | +2.6(2) |  |  | [Ir191] | LS | 2006VE10 | Eur Phys J A30 489 (06) |
|  |  |  |  | 2.10(9) |  |  |  | NO/S | 1992Bo39 | HFI 75 307 (92) |
|  |  |  |  |  | -1.7(6) st | R | [Ir191] | LS | 2006VE10 | Eur Phys J A30 489 (06) |
|  |  |  |  |  |  |  |  |  |  |  |
| 77 Ir 183 | 0 | 55 m | 5/2- | +2.40(8) |  |  | [Ir191] | LS | 2006VE10 | Eur Phys J A30 489 (06) |
|  |  |  |  | 2.36(8) |  |  |  | NO/S | 1992Bo39 | HFI 75 307 (92) |
|  |  |  |  | 2.2(6) |  |  |  | NO/S | 1992Ro21 | HFI 75 457 (92) |
|  |  |  |  |  | -1.8(7) st | R | [Ir191] | LS | 2006VE10 | Eur Phys J A30 489 (06) |
|  |  |  |  |  |  |  |  |  |  |  |
| 77 Ir 184 | 0 | 3.14 h | 5- | 0.696(5) |  |  |  | NMR-ON | 1988Oh02 | JP G14 365 (88) |
|  |  |  |  | +0.72(3) |  |  | [Ir191] | LS | 2006VE10 | Eur Phys J A30 489 (06) |
|  |  |  |  | 0.8(2) |  |  |  | NO/S | 1981Sp06 | HFI 9 99 (81) |
|  |  |  |  |  | +2.41(3) | R | [Ir189] | NMR-ON | 1996Se15 | PRL 77 5016 (96) |
|  |  |  |  |  | +2.5(4) st |  | [Ir191] | LS | 2006VE10 | Eur Phys J A30 489 (06) |
|  |  |  |  |  | +2.0(3) |  | [Ir189] | NO/S | 1982Al34 | HFI 12 289 (82) |
|  |  |  |  |  | +2.1(4) |  | [Ir189] | NO/S | 1981Ha33 | PL 104B 365 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 77 Ir 185 | 0 | 14.4 h | 5/2- | 2.605(13) |  |  |  | NMR/ON | 1988Oh02 | JP G14 365 (88) |
|  |  |  |  | 2.601(14) |  |  |  | NMR/ON | 1986De02 | ZP A323 185 (86) |
|  |  |  |  | 2.59(7) |  |  | [Ir191] | LS | 2006VE10 | Eur Phys J A30 489 (06) |
|  |  |  |  | 2.5(2) |  |  |  | NO/S | 1985Va07 | HFI 22 507 (85) |
|  |  |  |  | 2.6(2) |  |  |  | NO/S | 1981Sp06 | HFI 9 99 (81) |
|  |  |  |  |  | -1.84(12) |  |  |  |  |  |
|  |  |  |  |  | -2.06(14) |  | [193Ir] | NMR/ON | 1988Oh02 | JP G14 365 (88) |
|  |  |  |  |  | -1.7(6) st |  | [Ir191] | LS | 2006VE10 | Eur Phys J A30 489 (06) |
|  |  |  |  |  | -1.9(3) |  | [193Ir] | NMR/ON | 1986De02 | ZP A323 185 (86) |
|  |  |  |  |  | -2.5(3) |  | [193Ir] | NO/S | 1982Al34 | HFI 12 289 (82) |
|  |  |  |  |  | -1.9(3) |  | [193Ir] | NO/S | 1981Ha33 | PL 104B 365 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 77 Ir 186 | 0 | 16.64 h | 5+ | 3.88(5) |  |  |  | NO/S | 1982Al11 | JP G8 857 (82) |
|  |  |  |  | +3.8(2) |  |  | [Ir191] | LS | 2006VE10 | Eur Phys J A30 489 (06) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  | 3.80(+12,-2) |  |  |  | NMR/ON | 1980Ha49 | ZP A297 329 (80) |
|  |  |  |  | 3.78(5) |  |  |  | NMR/ON | 1981Sp06 | HFI 9 99 (81) |
|  |  |  |  |  | -2.55(3) | R | [Ir189] | NMR/ON | 1996Se15 | PRL 77 5016 (96) |
|  |  |  |  |  | -2.6(9) st |  | [Ir191] | LS | 2006VE10 | Eur Phys J A30 489 (06) |
|  |  |  |  |  | -2.5(2) |  | [189Ir] | NO/S | 1980Mu07 | HFI 7 481 (80) |
|  |  |  |  |  | -2.3(2) |  | [189Ir] | NO/S, ME | 1979Er06 | PL 86B 154 (79) |
|  |  |  |  |  | -2.89(10) |  | [189Ir] | NMR/ON | 1980Ha49 | ZP A297 329 (80) |
|  | x |  | 2(-) | 0.638(8) |  |  |  | NMR/ON | 1990Ed01 | HFI 59 83 (90) |
|  |  |  |  | -0.66(3) |  |  | [Ir191] | LS | 2006VE10 | Eur Phys J A30 489 (06) |
|  |  |  |  |  | +1.46(2) | R | [Ir189] | NMR/ON | 1996Se15 | PRL 77 5016 (96) |
|  |  |  |  |  | +1.5(2) |  | [Ir191] | LS | 2006VE10 | Eur Phys J A30 489 (06) |
|  |  |  |  |  |  |  |  |  |  |  |
| 77 Ir 187 | 0 | 10.5 h | 3/2+ | +0.17(1) |  |  | [Ir191] | LS | 2006VE10 | Eur Phys J A30 489 (06) |
|  |  |  |  |  | +0.941(11) | R | [Ir189] | NMR/ON | 1996Se15 | PRL 77 5016 (96) |
|  |  |  |  |  | +0.9(1) st |  | [Ir191] | LS | 2006VE10 | Eur Phys J A30 489 (06) |
|  | 434 | 152 ns | 11/2- | +6.21(5) |  |  |  | TDPAC | 1978HaXO | ARHMI 1977 52 (78) |
|  |  |  |  |  | 2.33(14) | R | [193Ir] | TDPAC | 1978HaXO | ARHMI 1977 52 (78) |
|  |  |  |  |  |  |  |  |  |  |  |
| 77 Ir 188 | 0 | 40.5 h | 1(-) | 0.302(10) |  |  | [193Ir] | NMR/ON, NO/S | 1985Ed02 | PR C32 582 (85) |
|  |  |  |  | +0.33(1) |  |  | [Ir191] | LS | 2006VE10 | Eur Phys J A30 489 (06) |
|  |  |  |  |  | +0.484(6) | R | [Ir189] | NMR/ON | 1996Se15 | PRL 77 5016 (96) |
|  |  |  |  |  | +0.54(2) |  | [193Ir] | NMR/ON | 1985Ed02 | PR C32 582 (85) |
|  |  |  |  |  | +0.49(3) |  | [193Ir] | NMR/ON | 1988Oh05 | HFI 39 193 (88) |
|  |  |  |  |  | +0.46(5) st |  |  | ???????? | ?????????? | ????????? |
|  |  |  |  |  |  |  |  |  |  |  |
| 77 Ir 189 | 0 | 13.1 d | 3/2+ | +0.147(7) |  |  | [Ir191] | LS | 2006VE10 | Eur Phys J A30 489 (06) |
|  |  |  |  | 0.13(+8,-4) |  |  | [188Ir] | NO/S | 1980Be27 | JP G6 775 (80) |
|  |  |  |  |  | [+0.878(10)] |  |  | estimated | 1996Se15 | PRL 77 5016 (96) |
|  |  |  |  |  | +0.82(8) | R | [Ir191] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.85(7) st |  | [Ir191] | LS | 2006VE10 | Eur Phys J A30 489 (06) |
|  |  |  |  |  | +0.79(6) |  | [Ir188] | NO/S | 1992Ka49 | NIMPR A316 158 (92) |
|  |  |  |  |  | +1.0(2) |  | [192Ir] | NO/S | 1985Ha41 | HFI 22 19 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 77 Ir 190 | 0 | 11.8 d | (4)+ | 0.04(1) |  |  |  | NO/S | 1983Al15 | JP G9 1125 (83) |
|  |  |  |  |  | +2.87(16) | R |  | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +2.85(14) |  | [189Ir] | NO/S | 1980Mu07 | HFI 7 481 (80) |
|  |  |  |  |  | +2.7(2) |  | [192Ir] | NO/S | 1985Ha41 | HFI 22 19 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 77 Ir 191 | 0 | stable | 3/2+ | +0.1507(6) |  |  |  | AB/D | 1984Bu15 | PL 140B 17 (84) |
|  |  |  |  | +0.1461(6) |  |  |  | N | 1968Na01/1968Na01 | PR 165 506 (68)/PR 175 696 (68) |
|  |  |  |  | +0.152(4) |  |  | [Ir191] | LS | 2006VE10 | Eur Phys J A30 489 (06) |
|  |  |  |  |  | +0.816(9) a | R |  | Mu-X, O | 1984Ta04/1952Mu40 | PR C29 1830 (84)/PR 87 1048 (52) |
|  |  |  |  |  | +0.82(8) st |  | [Ir191] | LS | 2006VE10 | Eur Phys J A30 489 (06) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | +0.8(2) st |  |  | AB | 1978Bu17 | ZP A286 333 (78) |
|  | 82 | 3.8 ns | 1/2+ | +0.600(6) |  |  | [191Ir] | ME, R | 1983Wa31 | HFI 13 149 (83) |
|  | 129 | 123 ps | 5/2+ | +0.81(6) |  |  |  | TF | 2000BE07 | NP A669 241 (00) |
|  |  |  |  | +0.86(6) |  |  | [198Pt 407] | TF | 1996St22 | HFI 97/98 479 (96) |
|  |  |  |  | +0.45(2) |  |  |  | IMPAC, TF, R | 1986Ko20 | NP A456 349 (86) |
|  |  |  |  | +0.48(4) |  |  |  | IPAD, ME | 1980Da24 | IzF 44 1778 (80) |
|  | 171 | 4.9 s | 11/2- | 6.03(4) |  |  |  | NMR/ON | 1971Es03/1974Kr06 | PL 36B 328 (71)/PR C9 2063 (74) |
|  |  |  |  | sign positive |  |  |  | NO/CP | 1991Sc28 | ZP A340 235 (91) |
|  |  |  |  | sign positive |  |  |  | NMR/ON() | 1996Oh03 | PR C54 1129 |
|  | 179 | 39 ps | 3/2+ | +1.4(4) |  |  |  | IPAC | 1973Il02 | IzUz 1973n4 79 (73) |
|  | 343 | 20 ps | 7/2+ | +1.40(6) |  |  |  | TF | 2000BE07 | NP A669 241 (00) |
|  |  |  |  | +1.35(11) |  |  | [198Pt 407] | TF | 1996St22 | HFI 97/98 479 (96) |
|  |  |  |  | +1.7(3) |  |  | [191Ir 129] | TF, IMPAC | 1986Ko20 | NP A456 349 (86) |
|  | 503 | 9.6 ps | 9/2+ | +2.4(2) |  |  | [198Pt 407] | TF | 1996St22 | HFI 97/98 479 (96) |
|  |  |  |  | +3.1(11) |  |  | [191Ir 129] | TF | 1986Ko20 | NP A456 349 (86) |
|  | 686 | 2.7 ps | 7/2+ | +0.8(3) |  |  | [198Pt 407] | TF | 1996St22 | HFI 97/98 479 (96) |
|  |  |  |  | +0.5(7) |  |  | [191Ir 129] | TF | 1986Ko20 | NP A456 349 (86) |
|  | 832 | 2.8 ps | 11/2+ | +3.4(9) |  |  | [198Pt 407] | TF | 1996St22 | HFI 97/98 479 (96) |
|  |  |  |  |  |  |  |  |  |  |  |
| 77 Ir 192 | 0 | 74.2 d | 4- | 1.924(10) |  |  | [193Ir] | NMR/ON | 1980Ha25 | ZP A295 385 (80) |
|  |  |  |  | sign positive |  |  |  | NO/CP | 1991Sc28 | ZP A340 235 (91) |
|  |  |  |  |  | +2.15(6) | R | [189Ir] | R | 1996Se15 | PRL 77 5016 (96) |
|  |  |  |  |  | +2.28(6) |  | [193Ir] | NMR/ON, R | 1985Ed02/1980Ha25 | PR C32 582 (85)/ZP A295 385 (80) |
|  |  |  |  |  | +2.0(2) |  | [193Ir] | NO/S ME | 1986Gr26 | HFI 30 355 (86) |
|  |  |  |  |  | +2.4(1) |  | [193Ir] | NO/S | 1985Ha41 | HFI 22 19 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 77 Ir 193 | 0 | stable | 3/2+ | +0.1637(6) |  |  |  | AB/D | 1984Bu15 | PL 140B 17 (84) |
|  |  |  |  | +0.1591(6) |  |  |  | N | 1968Na01/1968Na01 | PR 165 506 (68)/PR 175 696 (68) |
|  |  |  |  | +0.168(8) |  |  | [Ir191] | LS | 2006VE10 | Eur Phys J A30 489 (06) |
|  |  |  |  |  | +0.751(9) a | R |  | Mu-X, O | 1984Ta04/1952Mu40 | PR C29 1830 (84)/PR 87 1048 (52) |
|  |  |  |  |  | +0.73(7) st |  | [Ir191] | LS | 2006VE10 | Eur Phys J A30 489 (06) |
|  |  |  |  |  | +0.7(2) st |  |  | AB | 1978Bu17 | ZP A286 333 (78) |
|  | 73 | 6.2 ns | 1/2+ | +0.519(2) |  |  | [193Ir] | ME | 1969Pe05 | PRL 23 680 (69) |
|  | 139 | 88 ps | 5/2+ | +0.89(4) |  |  |  | TF | 2000BE07 | NP A669 241 (00) |
|  |  |  |  | +0.93(5) |  |  | [198Pt 407] | TF | 1996St22 | HFI 97/98 479 (96) |
|  |  |  |  | +0.53(3) |  |  |  | TF, IMPAC, R | 1986Ko20 | NP A456 349 (86) |
|  | 180 | 55 ps | 3/2+ | +1.1(4) |  |  |  | IPAC | 1973Il02 | IzUz 1973n4 79 (73) |
|  | 358 | 19.8 ps | 7/2+ | +1.54(6) |  |  |  | TF | 2000BE07 | NP A669 241 (00) |
|  |  |  |  | +1.55(6) |  |  | [198Pt 407] | TF | 1996St22 | HFI 97/98 479 (96) |
|  |  |  |  | +1.7(3) |  |  | [193Ir 139] | TF, IMPAC | 1986Ko20 | NP A456 349 (86) |
|  | 522 | 12.7 ps | 9/2+ | +2.2((2) |  |  | [198Pt 407] | TF | 1996St22 | HFI 97/98 479 (96) |
|  |  |  |  | +3.8(11) |  |  | [193Ir 139] | TF | 1986Ko20 | NP A456 349 (86) |
|  | 621 | 4.6 ps | 7/2+ | +1.16(14) |  |  | [198Pt 407] | TF | 1996St22 | HFI 97/98 479 (96) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  | +0.5(4) |  |  | [193Ir 139] | TF | 1986Ko20 | NP A456 349 (86) |
|  | 857 | 5.1 ps | 11/2+ | +2.7(7) |  |  | [198Pt 407] | TF | 1996St22 | HFI 97/98 479 (96) |
|  |  |  |  |  |  |  |  |  |  |  |
| 77 Ir 194 | 0 | 19.4 h | 1- | 0.39(1) |  |  | [193Ir] | NMR/ON | 1982Ha28 | ZP A306 73 (82) |
|  |  |  |  | sign positive |  |  |  | NO/CP | 1991Sc28 | ZP A340 235 (91) |
|  |  |  |  |  | +0.339(12) | R | [193Ir] | NMR/ON, R | 1985Ed02/1982Ha28 | PR C32 582 (85)/ZP A306 73 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 78 Pt 179 | 0 | 21.2 s | 1/2- | +0.43(3) |  |  | [195Pt] | LRIMS | 1999Le52 | PR C60 054310 (99) |
|  |  |  |  |  |  |  |  |  |  |  |
| 78 Pt 180 | 153 | 370 ps | 2+ | 0.70(16) |  |  | [184Pt 163 ] | PDCO | 2002Ro36 | NIMPR 489 469 (2002) |
|  |  |  |  | 0.64(12) |  |  |  | IPAC | 1998Br33 | EurPJ A3 129 (98) |
|  | 411 | 52 ps | 4+ | 1.6(6) |  |  |  | PDCO | 2002Ro36 | NIMPR 489 469 (2002) |
|  | (-) | (-) | 6+ to 10+ | g(avge) = +0.40(8) |  |  |  | TF | 2002Ro12 | PL B530 74 (02) |
|  |  |  |  |  |  |  |  |  |  |  |
| 78 Pt 181 | 0 | 51 s | 1/2- | +0.48(2) |  |  | [195Pt] | LRIMS | 1999Le52 | PR C60 054310 (99) |
|  |  |  |  |  |  |  |  |  |  |  |
| 78 Pt 182 | 155 | - | 2+ | 0.46(8) |  |  | [184Pt 163 ] | PDCO | 2002Ro36 | NIMPR 489 469 (2002) |
|  | 420 | - | 4+ | 1.7(8) |  |  |  | PDCO | 2002Ro36 | NIMPR 489 469 (2002) |
|  | (-) | (-) | 6+ to 12+ | g(avge) = +0.36(5) |  |  |  | TF | 2002Ro12 | PL B530 74 (02) |
|  |  |  |  |  |  |  |  |  |  |  |
| 78 Pt 183 | 0 | 6.5 m | 1/2- | +0.502(5) |  |  | [195Pt] | LRIMS | 1999Le52 | PR C60 054310 (99) |
|  |  |  |  | +0.51(3) |  |  |  | LRIMS | 1990Hi08 | HFI 59 97 (90) |
|  |  |  |  | +0.52(3) |  |  |  | LRIMS | 1992Hi07 | ZP A342 1 (92) |
|  | 35 | 43 s | 7/2- | +0.782(14) |  |  | [195Pt] | LRIMS | 1999Le52 | PR C60 054310 (99) |
|  |  |  |  | 0.96(8) |  |  |  | NO/S | 1992Ro21 | HFI 75 457 (92) |
|  |  |  |  | 1.03(8) |  |  |  | NO/S | 1992St16 | HFI 75 491 (92) |
|  |  |  |  |  | +3.4(3) st | R |  | LRIMS | 1999Le52/1992Hi07 | PR C60 054310 (99)/ZP A342 1 (1992) |
|  |  |  |  |  |  |  |  |  |  |  |
| 78 Pt 184 | 163 | 376 ps | 2+ | +0.56(6) |  |  |  | IPAC | 1996St12 | PRL 76 2246 (96) |
|  | 436 | 25 ps | 4+ | 1.3(7) |  |  |  | PDCO | 2002Ro36 | NIMPR 489 469 (2002) |
|  | (-) | (-) | 6+ to 14+ | g(avge) = +0.37(5) |  |  |  | TF | 2002Ro12 | PL B530 74 (02) |
|  |  |  |  |  |  |  |  |  |  |  |
| 78 Pt 185 | 0 | 70.9 m | 9/2+ | -0.723(11) |  |  | [195Pt] | LRIMS | 1999Le52 | PR C60 054310 (99) |
|  |  |  |  | 0.774(14) |  |  |  | NMR/ON | 1990Ed01 | HFI 59 83 (90) |
|  |  |  |  | -0.83(1) |  |  | [195Pt] | LRIMS | 1989Du01 | PL 217A 401 (89) |
|  |  |  |  |  | +3.73(17) st | R |  | LRIMS | 1999Le52/1992Hi07 | PR C60 054310 (99)/ZP A342 1 (1992) |
|  |  |  |  |  | +4.3(5) |  |  | LRIMS | 1989Du01 | PL 217 401 (89) |
|  |  |  |  |  | 3.4(5) |  | [189Pt] | NO/S | 1990Ed01 | HFI 59 83 (90) |
|  |  |  |  |  | +4.4(3) |  | [191Pt] | QI-NMR/ON | 1998Hi08 | PR C57 2165 (98) |
|  |  |  |  |  | +4.5(1) |  | [191Pt] | NMR/ON | 1993HaZU | Cf93Bern 173(93) |
|  | 103 | 33 m | 1/2- | +0.503(5) |  |  | [195Pt] | LRIMS | 1999Le52 | PR C60 054310 (99) |
|  |  |  |  | +0.540(9) |  |  | [195Pt] | LRIMS | 1992Hi07 | ZP A342 1 (92) |
|  |  |  |  |  |  |  |  |  |  |  |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
| 78 Pt 186 | 192 | 260 ps | 2+ | +0.54(6) |  |  |  | IPAC | 1996St12 | PRL 76 2246 (96) |
|  |  |  |  |  |  |  |  |  |  |  |
| 78 Pt 187 | 0 | 2.35 h | 3/2- | 0.408(8) |  |  |  | NMR/ON | 1990Ed01 | HFI 59 83 (90) |
|  |  |  |  | -0.399(8) |  |  | [195Pt] | LRIMS | 2000SaZZ/1989Du01 | IPNO-DR 00-04/PL 217 401 (89) |
|  |  |  |  | -0.43(2) |  |  | [195Pt] | LRIMS | 1992Hi07 | ZP A342 1 (92) |
|  |  |  |  |  | -1.02(4) | R |  | LRIMS | 1992Hi07/1989Du01 | ZP A342 1 (92)/PL B217 401 (1989) |
|  |  |  |  |  | -0.98(5) st |  | [195Pt] | LRIMS | 2000SaZQ | IPNO-DR 00-21 |
|  |  |  |  |  | -1.13(5) |  |  | LRIMS | 1989Du01 | PL 217 401 (89) |
|  |  |  |  |  | -1.3(3) |  | [189Pt] | NO/S | 1990Ed01 | HFI 59 83 (90) |
|  |  |  |  |  | -1.00(7) st |  |  | LRIMS | 1992Hi07 | ZP A342 1 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 78 Pt 188 | 266 | 64 ps | 2+ | +0.58(8) |  |  |  | IPAC | 1996St12 | PRL 76 2246 (96) |
|  |  |  |  |  |  |  |  |  |  |  |
| 78 Pt 189 | 0 | 10.9 h | 3/2- | -0.422(7) |  |  | [195Pt] | LRIMS | 2000SaZZ/1989Du01 | IPNO-DR 00-04/PL 217 401 (89) |
|  |  |  |  | -0.440(8) |  |  | [195Pt] | LRIMS | 1992Hi07 | ZP A342 1 (92) |
|  |  |  |  | 0.439(9) |  |  | [195Pt] | NMR/ON | 1985Ed05 | PL 158B 371 (85) |
|  |  |  |  | 0.433(9) |  |  | [195Pt] | NMR/ON | 1985Oh05 | HFI 22 585 (85) |
|  |  |  |  | 0.42(3) |  |  | [195Pt] | NO/S | 1980Be27 | JP G6 775 (80) |
|  |  |  |  |  | -0.87(8) st |  |  | LRIMS | 2000SaZQ | IPNO-DR 00-21 |
|  |  |  |  |  | -0.95(4) | R |  | LRIMS | 1992Hi07/1989Du01 | ZP A342 1 (92)/PL B217 401 (1989) |
|  |  |  |  |  | -1.03(5) |  |  | LRIMS | 1989Du01 | PL 217 401 (89) |
|  |  |  |  |  | -1.21(6) |  | [191Pt] | QI-NMR/ON | 1998Hi08 | PR C57 2165 (98) |
|  |  |  |  |  | -1.27(3) |  | [191Pt] | NMR-ON | 1993HaZU | Cf93Bern 173(93) |
|  |  |  |  |  | -1.1(2) st |  |  | LRIMS | 1992Hi07 | ZP A342 1 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 78 Pt 190 | 296 | 60 ps | 2+ | +0.57(3) |  |  | [194,196Pt 2+] | TF | 1995An15 | NP A593 212 (95) |
|  | 1631 | 0.79 ns | 7- | +4.3(6) |  |  |  | IPAC | 2006LE06 | NP A764 24 (2006) |
|  | 2297 | 48 ns | 10- | -0.02(4) |  |  |  | IPAC | 2006LE06 | NP A764 24 (2006) |
|  |  |  |  | +0.09(8) |  |  |  | IPAC | 2001Ko41 | PAN 64 843 (01) |
|  | 2727 | 1.4 ns | 12+ | -2.0(14) |  |  |  | IPAC | 2006LE06 | NP A764 24 (2006) |
|  |  |  |  |  |  |  |  |  |  |  |
| 78 Pt 191 | 0 | 2.9 d | 3/2- | -0.501(5) |  |  | [195Pt] | LRIMS | 1989Du01 | PL 217 401 (89) |
|  |  |  |  | -0.494(8) |  |  | [195Pt] | LRIMS | 1992Hi07 | ZP A342 1 (92) |
|  |  |  |  | 0.500(10) |  |  | [195Pt] | NMR/ON | 1985Ed05 | PL 158B 371 (85) |
|  |  |  |  | 0.499(10) |  |  | [195Pt] | NMR/ON | 1985Oh05 | HFI 22 585 (85) |
|  |  |  |  | 0.506(11) |  |  | [195Pt] | NMR/ON, NO/S | 1981La25 | JP G7 1713 (81) |
|  |  |  |  | -0.46(+14,-4) |  |  | [195Pt] | NO/S, NO/ME | 1980Be27/1987Be36 | JP G6 775 (80)/HFI 35 1023 (87) |
|  |  |  |  |  | -0.78(10) st |  |  | LRIMS | 2000SaZQ | IPNO-DR 00-21 |
|  |  |  |  |  | -0.87(4) | R |  | LRIMS | 1992Hi07/1989Du01 | ZP A342 1 (92)/PL B217 401 (1989) |
|  |  |  |  |  | -0.98(5) |  |  | LRIMS | 1989Du01 | PL 217 401 (89) |
|  |  |  |  |  | -0.78(10) st |  |  | LRIMS | 1992Hi07 | ZP A342 1 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 78 Pt 192 | 317 | 43.7 ps | 2+ | +0.57(3) |  |  |  | TDPAC | 1992Al21/1992Bo20 | NIMPR A321 506 (92)/ZP A342 249 (92) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  | +0.64(3) |  |  | [194,196Pt 2+] | TF | 1992Br03 | NP A536 366 (92) |
|  |  |  |  | +0.60(2) |  |  | [194,196Pt 2+] | TF | 1995An15 | NP A593 212 (95) |
|  |  |  |  | +0.57(4) |  |  |  | IPAC | 1975Ka42 | HFI 1 113 (75) |
|  |  |  |  |  | +0.6(2) | R |  | CER | 1987Gy01 | NP A470 415 (87) |
|  |  |  |  |  | +0.62(6) |  |  | CER | 1978SpZW | ARRo 82 (77) |
|  | 612 | 26.5 ps | 2+ | +0.56(9) |  |  | [194,196Pt 2+] | TF | 1992Br03 | NP A536 366 (92) |
|  |  |  |  | +0.72(14) |  |  |  | IPAC | 1975Ka42 | HFI 1 113 (75) |
|  | 785 | 4.2 ps | 4+ | +1.12(12) |  |  | [194,196Pt 2+] | TF | 1992Br03 | NP A536 366 (92) |
|  |  |  |  | 1.6(11) |  |  |  | IPAC | 1969Ke11 | CJP 47 2395 (69) |
|  | 1518 | 1.85 ns | 7- | +3.4(8) |  |  |  | IPAC | 2006LE06 | NP A764 24 (2006) |
|  | 2172 | 280 ns | 10- | -0.012(10) |  |  |  | IPAC | 2006LE06 | NP A764 24 (2006) |
|  |  |  |  | 0.10(6) |  |  |  | IPAC | 2001Ko04 | PAN 64 843 (01) |
|  | 2624 | 2.6 ns | 12- | -2.2(11) |  |  |  | IPAC | 2006LE06 | NP A764 24 (2006) |
|  |  |  |  |  |  |  |  |  |  |  |
| 78 Pt 193 | 0 | 50 y | 1/2- | +0.603(8) |  |  | [195Pt] | LRIMS | 1992Hi07 | ZP A342 1 (92) |
|  | 150 | 4.3 d | 13/2+ | (-)0.753(15) |  |  | [195Pt] | NMR/ON(X) | 1986Sc04 | PRL 56 1051 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| 78 Pt 194 | 328 | 41.8 ps | 2+ | +0.60(3) |  |  |  | TF | 1995An15 | NP A593 212 (95) |
|  |  |  |  | +0.59(4) |  |  |  | TF | 1991St04 | NP A528 447 (91) |
|  |  |  |  | +0.406(12) |  |  |  | TF | 1982Le02 | PR C25 293 (82) |
|  |  |  |  | +0.60(3) |  |  |  | IPAC | 1975Ka42 | HFI 1 113 (75) |
|  |  |  |  |  | +0.48(14) | R |  | CER | 1986Gy04 | NP A458 165 (86) |
|  |  |  |  |  | 0.1(2) |  |  | CER | 1983Ch35 | PR C28 1570 (83) |
|  |  |  |  |  | +0.63(6) |  |  | CER | 1978Ba38 | PR C18 131 (78) |
|  | 622 | 35 ps | 2+ | +0.56(11) |  |  | [194,196Pt 2+] | TF | 1992Br03 | NP A536 366 (92) |
|  |  |  |  | +0.69(6) |  |  |  | IPAC | 1975Ka42 | HFI 1 113 (75) |
|  |  |  |  |  | -0.5(5) |  |  | CER | 1983Ch35 | PR C28 1570 (83) |
|  | 811 | 3.7 ps | 4+ | +1.12(12) |  |  | [194,196Pt 2+] | TF | 1992Br03 | NP A536 366 (92) |
|  |  |  |  |  | +0.5(10) |  |  | CER | 1983Ch35 | PR C28 1570 (83) |
|  | 1485 | 3.45 ns | 7- | +1.8(6) |  |  |  | IPAC | 2006LE06 | NP A764 24 (2006) |
|  | 2438 | 6.4 ns | [12+] | -2.0(8) |  |  |  | IPAC | 2006LE06 | NP A764 24 (2006) |
|  |  |  |  |  |  |  |  |  |  |  |
| 78 Pt 195 | 0 | stable | 1/2- | +0.60952(6) |  |  | [23Na] | N | 1951Pr02 | PR 81 20 (51) |
|  | 99 | 0.17 ns | 3/2- | -0.62(6) |  |  | [195Pt] | ME | 1967Ag01 | PR 155 1339 (67) |
|  | 130 | 0.62 ns | 5/2- | +0.90(6) |  |  | [195Pt] | ME | 1974Ru03/1972Wo06 | HPAc 46 735 (74)/NP A181 289 (72) |
|  | 211 | 49 ps | 3/2- | +0.16(3) |  |  |  | CEAD | 1972Va16 | PR C6 388 (72) |
|  | 239 | 70 ps | 5/2- | +0.64(9) |  |  |  | TF | 1994La02 | NP A568 617 (94) |
|  |  |  |  | +0.52(5) |  |  |  | IMPAC | 1973Ga31 | ZP A270 163 (74) |
|  | 259 | 4.02 d | 13/2+ | 0.606(15) |  |  | [195Pt] | NMR/ON | 1972Ba22 | PRL 28 720 (72) |
|  |  |  |  | sign negative |  |  |  | NO/CP | 1991Sc28 | ZP A340 235 (91) |
|  |  |  |  |  | +1.4(6) | R |  | NO/S | 1985Ed05/1985Ed03 | PL 158B 371 (85)/HFI 22 47 (85) |
|  | 389 | 9 ps | 5/2- | +0.39(10) |  |  |  | TF | 1994La02 | NP A568 617 (94) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  | 455 | >10 ps | 5/2- | +1.6(6) |  |  |  | TF | 1994La02 | NP A568 617 (94) |
|  | 508 | 9.7 ps | 7/2- | +0.55(8) |  |  |  | TF | 1994La02 | NP A568 617 (94) |
|  | 544 | >2.8 ps | 5/2- | +1.5(4) |  |  |  | TF | 1994La02 | NP A568 617 (94) |
|  | 563 | 14 ps | 9/2- | +1.55(12) |  |  |  | TF | 1994La02 | NP A568 617 (94) |
|  | 613 | 6 ps | 7/2- | +1.4(4) |  |  |  | TF | 1994La02 | NP A568 617 (94) |
|  | 667 | (16 ps) | 9/2- | +1.52(16) |  |  |  | TF | 1994La02 | NP A568 617 (94) |
|  | 679 | >2.8 ps | 7/2- | +1.2(3) |  |  |  | TF | 1994La02 | NP A568 617 (94) |
|  |  |  |  |  |  |  |  |  |  |  |
| 78 Pt 196 | 356 | 34 ps | 2+ | +0.59(5) |  |  |  | TF | 1991St04 | NP A528 447 (91) |
|  |  |  |  | +0.60(5) |  |  | [194Pt 328] | TF | 1993Ta07 | PR C48 140 (93) |
|  |  |  |  | +0.43(4) |  |  |  | TF | 1982Le02 | PR C25 293 (82) |
|  |  |  |  | +0.69(3) |  |  |  | IPAC | 1981Ka23 | JPJa 50 1832 (81) |
|  |  |  |  | +0.63(6) |  |  | [194Pt 328] | TF | 1979Ha06 | NP A314 161 (79) |
|  |  |  |  |  | +0.62(8) | R |  | CER | 1992Li14 | NP A548 308 (92) |
|  |  |  |  |  | +0.66(12) |  |  | CER | 1986Gy04 | NP A458 165 (86) |
|  | 689 | 36.8 ps | 2+ | +0.54(9) |  |  |  | R | 1992Br03 | NP A536 366 (92) |
|  |  |  |  | +0.75(15) |  |  | [196Pt 356] | TF | 1981St24 | PR C24 2106 (81) |
|  |  |  |  |  | -0.39(16) | R |  | CER | 1992Li14 | NP A548 308 (92) |
|  | 877 | 3.6 ps | 4+ | +1.38(16) |  |  | [194Pt328, | TF | 1992Br03 | NP A536 366 (92) |
|  |  |  |  |  |  |  | 196Pt356] |  |  |  |
|  |  |  |  | +1.5(3) |  |  | [196Pt 356] | TF | 1981St24 | PR C24 2106 (81) |
|  |  |  |  |  | +1.03(12) | R |  | CER | 1992Li14 | NP A548 308 (92) |
|  | 1526 | 0.98 ps | 6+ |  | -0.2(3) | R |  | CER | 1992Li14 | NP A548 308 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 78 Pt 197 | 0 | 18.3 h | 1/2- | 0.51(2) |  |  |  | AB | 1976Fu06 | JPCR 5 835 (76) |
|  | 53 | 16.6 ns | 5/2- | +0.85(3) |  |  |  | TDPAC | 1982So05 | PR C25 1587 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 78 Pt 198 | 407 | 22.3 ps | 2+ | +0.63(2) |  |  | [194Pt328, | TF | 1995An15 | NP A593 212 (95) |
|  |  |  |  |  |  |  | 196Pt356] |  |  |  |
|  |  |  |  | +0.70(6) |  |  | [194Pt 328] | TF | 1993Ta07 | PR C48 140 (93) |
|  |  |  |  | +0.59(7) |  |  |  | TF | 1991St04 | NP A528 447 (91) |
|  |  |  |  | +0.69(6) |  |  | [196Pt 356] | TF | 1981St13 | NP A365 317 (81) |
|  |  |  |  | +0.62(10) |  |  | [194Pt 328] | TF | 1979Ha06 | NP A314 161 (79) |
|  |  |  |  |  | +0.42(12)\*\* or +0.54(12) | \*\*R |  | CER | 1986Gy04 | NP A458 165 (86) |
|  | 775 | 27 ps | 2+ | +0.61(11) |  |  |  | R | 1992Br03 | NP A536 366 (92) |
|  |  |  |  | +0.72(13) |  |  | [196Pt 356] | TF | 1981St13 | NP A365 317 (81) |
|  | 985 | 3.3 ps | 4+ | +1.2(2) |  |  |  | R | 1992Br03 | NP A536 366 (92) |
|  |  |  |  | +1.4(3) |  |  | [196Pt 356] | TF | 1981St13 | NP A365 317 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 79 Au 182 | 0 | 21 s | unknown | 1.30(10) [I=2] |  |  |  | TR/OLNO | 1992Ro21 | HFI 75 457 (92) |
|  |  |  |  | 1.62(15) [I=3] |  |  |  | TR/OLNO | 1992Ro21 | HFI 75 457 (92) |
|  |  |  |  | 1.9(2) [I=4] |  |  |  | TR/OLNO | 1992Ro21 | HFI 75 457 (92) |
|  |  |  |  |  |  |  |  |  |  |  |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
| 79 Au 183 | 0 | 42 s | 5/2- | +1.97(2) |  |  |  | LRIMS | 1988Kr18 | ZP A331 521 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 79 Au 184 | 0 | 21 s | 5 | +2.07(2) |  |  |  | LRIS | 1997Le22 | PRL 79 2213 (97) |
|  |  |  |  |  | +4.7(3) | R |  | LRIS | 1997Le22 | PRL 79 2213 (97) |
|  |  | 49 s | 2 | +1.44(2) |  |  |  | LRIS | 1997Le22 | PRL 79 2213 (97) |
|  |  |  |  |  | +1.90(16) | R |  | LRIS | 1997Le22 | PRL 79 2213 (97) |
|  |  |  |  |  |  |  |  |  |  |  |
| 79 Au 185 | 0 | 4.2 m | 5/2- | +2.17(2) |  |  |  | LRIMS | 1989Wa11/1987Wa06 | NP A493 224 (89)/PRL 58 1516 (87) |
|  |  |  |  | +1.98(2) |  |  |  | LRIMS | 1992Ki30 | NIMPR B70 537 (92) |
|  |  |  |  | 2.22(14) |  |  |  | NO/S | 1985Va07 | HFI 22 507 (85) |
|  |  |  |  |  | -1.10(10) | R |  | LRIMS | 1992Ki30 | NIMPR B70 537 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 79 Au 186 | 0 | 10.7 m | 3- | -1.28(3) |  |  |  | LRIMS | 1990Sa21 | NP A512 241 (90) |
|  |  |  |  | 1.28(2) |  |  |  | NMR/ON | 1988Sc19 | HFI 43 141 (88) |
|  |  |  |  | -1.26(3) |  |  |  | LRIMS | 1989Wa11/1987Wa06 | NP A493 224 (89)/PRL 58 1516 (87) |
|  |  |  |  | 1.07(13) |  |  |  | NO/S | 1985Va07 | HFI 22 507 (85) |
|  |  |  |  |  | +3.10(6) | R |  | LRIMS | 1992Ki30 | NIMPR B70 537 (92) |
|  |  |  |  |  | +3.14(16) |  | 193Au | NMR-ON | 1993Hi10 | NP A562 205 (93) |
|  |  |  |  |  |  |  |  |  |  |  |
| 79 Au 187 | 0 | 8.4 m | 1/2+ | +0.535(15) |  |  |  | LRIMS | 1989Wa11/1987Wa06 | NP A493 224 (89)/PRL 58 1516 (87) |
|  |  |  |  | +0.531(12) |  |  |  | LRIMS | 1990Sa21 | NP A512 241 (90) |
|  |  |  |  | 0.72(7) |  |  |  | AB | 1980Ek04 | NP A348 25 (80) |
|  | 2670(+D) | 102 ns | 31/2-,35/2- | g = 0.25(3) |  |  |  | TDPAD | 1997Pe26 | ZP A359 (97) |
|  |  |  |  |  |  |  |  |  |  |  |
| 79 Au 188 | 0 | 8.8 m | 1- | -0.07(3) |  |  |  | LRIMS | 1989Wa11/1987Wa06 | NP A493 224 (89)/PRL 58 1516 (87) |
|  |  |  |  | 0.07(2) |  |  |  | AB | 1980Ek04 | NP A348 25 (80) |
|  |  |  |  |  |  |  |  |  |  |  |
| 79 Au 189 | 0 | 28.7 m | 1/2+ | +0.494(14) |  |  |  | LRIMS | 1989Wa11/1987Wa06 | NP A493 224 (89)/PRL 58 1516 (87) |
|  | 247 | 4.6 m | 11/2- | +6.19(2) |  |  |  | LRIMS | 1989Wa11/1987Wa06 | NP A493 224 (89)/PRL 58 1516 (87) |
|  |  |  |  | 6.17(15) |  |  | [195Au 319] | NO/S, NMR/ON | 1986Va35 | PR B34 2014 (86) |
|  | 2553 | 242 ns | 31/2+ | 6.5(3) |  |  |  | TDPAD | 1997Pe26 | ZP A359 (97) |
|  |  |  |  |  |  |  |  |  |  |  |
| 79 Au 190 | 0 | 42.8 m | 1- | -0.065(7) |  |  |  | LRIMS | 1990Sa21 | NP A512 241 (90) |
|  |  |  |  | -0.07(3) |  |  |  | LRIMS | 1989Wa11 | NP A493 224 (89) |
|  |  |  |  | -0.07(2) |  |  |  | AB, R, CLS | 1980Ek04/1985St10 | NP A348 25 (80)/ZP A321 537 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 79 Au 191 | 0 | 3.18 h | 3/2+ | +0.1369(9) |  |  |  | LRIMS | 1994Pa37 | NP A580 173 (94) |
|  |  |  |  | +0.137(1) |  |  |  | AB, R | 1980Ek04 | NP A348 25 (80) |
|  |  |  |  |  | +0.72(2) | R |  | LRIMS | 1994Pa37 | NP A580 173 (94) |
|  | 266 | 0.9 s | 11/2- | 6.6(6) |  |  |  | NO/S | 1985Va07 | HFI 22 507 (85) |
|  | 2446 | 890 ps | 27/2- | <<20 |  |  |  | IPAD | 1985Ko13 | NP A439 189 (85) |
|  | 2489 | 400 ns | 31/2+ | 6.5(6) |  |  |  | TDPAD | 1997Pe26 | ZP A359 (97) |
|  |  |  |  |  |  |  |  |  |  |  |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
| 79 Au 192 | 0 | 5.0 h | 1- | -0.0107(15) |  |  |  | LRIMS | 1994Pa37 | NP A580 173 (94) |
|  |  |  |  | -0.008(2) |  |  |  | LRIMS | 1990Sa21 | NP A512 241 (90) |
|  |  |  |  | 0.01(2) |  |  |  | AB, R | 1980Ek04 | NP A348 25 (80) |
|  |  |  |  |  | -0.228(8) | R |  | LRIMS | 1994Pa37 | NP A580 173 (94) |
|  |  |  |  |  |  |  |  |  |  |  |
| 79 Au 193 | 0 | 17.65 h | 3/2+ | 0.1396(6) |  |  |  | NMR/ON | 1993Hi10 | NP A562 205 (93) |
|  |  |  |  | +0.1396(5) |  |  |  | LRIMS | 1994Pa37 | NP A580 173 (94) |
|  |  |  |  | +0.140(1) |  |  |  | AB, R | 1980Ek04 | NP A348 25 (80) |
|  |  |  |  |  | +0.66(2) | R |  | LRIMS | 1994Pa37 | NP A580 173 (94) |
|  | 290 | 3.9 s | 11/2- | 6.18(9) |  |  | [195Au 319] | NMR/ON | 1983Ha10 | NP A399 83 (83) |
|  |  |  |  | 6.17(9) |  |  |  | NMR/ON | 1983Li21 | HFI 14 125 (83) |
|  |  |  |  |  | +1.98(6) | R |  | MAPON | 1996Se06 | NP A602 41 (96) |
|  | 1947 | 12 ns | 21/2+ | +6.48(11) |  |  |  | TDPAD, R |  | Cf80Ber A 18-I (80) |
|  | 2378 | 790 ps | 27/2- | <9.45 |  |  |  | IPAD | 1985Ko13 | NP A439 189 (85) |
|  | 2477 | 3.5 ns | 31/2- | 5(3) |  |  |  | IPAD | 1985Ko13 | NP A439 189 (85) |
|  | 2701 | 1.8 ns | 35/2- | 2(2) |  |  |  | IPAD | 1985Ko13 | NP A439 189 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 79 Au 194 | 0 | 39.5 h | 1- | +0.0763(13) |  |  |  | LRIMS | 1994Pa37 | NP A580 173 (94) |
|  |  |  |  | +0.079(3) |  |  |  | LRIMS | 1990Sa21 | NP A512 241 (90) |
|  |  |  |  | 0.08(2) |  |  |  | AB, R | 1980Ek04 | NP A348 25 (80) |
|  |  |  |  |  | -0.240(9) | R | [197Au] | LRIMS | 1994Pa37 | NP A580 173 (94) |
|  |  |  |  |  |  |  |  |  |  |  |
| 79 Au 195 | 0 | 183 d | 3/2+ | 0.1487(6) |  |  |  | NMR/ON | 1993Hi10 | NP A562 205 (93) |
|  |  |  |  | +0.145(5) |  |  |  | LRIMS | 1990Sa21 | NP A512 241 (90) |
|  |  |  |  | +0.149(1) |  |  |  | AB, R | 1980Ek04 | NP A348 25 (80) |
|  |  |  |  |  | +0.607(18) | R | [193Au] | NMR-ON | 1993Hi10 | NP A562 205 (93) |
|  | 319 | 30.6 s | 11/2- | 6.18(9) |  |  |  | NMR/ON | 1981Ha27 | PR C24 631 (81) |
|  |  |  |  | 6.17(9) |  |  |  | NMR/ON | 1983Li21 | HFI 14 125 (83) |
|  |  |  |  |  | +1.87(6) | R |  | MAPON | 1996Se06 | NP A602 41 (96) |
|  |  |  |  |  | +1.41(10) |  | [197Au] | NO/S, ME | 1983Be68/1983Pe22 | HFI 15 233 (83)/HFI 15 227 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 79 Au 196 | 0 | 6.18 d | 2- | +0.580(15) |  |  |  | LRIMS | 1990Sa21 | NP A512 241 (90) |
|  |  |  |  | +0.5914(14) |  |  |  | AB/D | 1970Sc02 | PR C2 225 (70) |
|  |  |  |  | 0.5906(5) |  |  | [198Au] | NMR/ON | 1987Oh11 | PR C36 2072 (87) |
|  |  |  |  |  | 0.81(7) | R | [197Au] | NMR/ON, N | 1987Oh11/1984Ri15 | PR C36 2072 (87)/PR B30 5680 (84) |
|  | 596 | 9.7 h | 12- | 5.72(8) |  |  |  | NMR/ON | 1982Ha04 | NP A373 256 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 79 Au 197 | 0 | stable | 3/2+ | +0.145746(9) |  |  |  | AB/D | 1967Da04 | ZP A200 456 (67) |
|  |  |  |  | +0.148158(8) |  |  | [2H] | N | 1967Na13/1968Na01 | PR 163 232 (67)/PR 175 696 (68) |
|  |  |  |  |  | +0.59(3) |  |  | R | 2006IT01 | PR A73 022510 (2006) |
|  |  |  |  |  | +0.547(16) a | R |  | Mu-X, O | 1974Po12 | NP A230 413 (74)/APLz s6v 13 158 (53) |
|  |  |  |  |  | 0.594(10) |  |  | AB | 1967Bl16/1966Ch03 | PR 161 60 (67)/PR 141 176 (66) |
|  | 77 | 1.91 ns | 1/2+ | +0.420(3) |  |  | [197Au] | ME | 1968Co17 | PR 171 343 (68) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  | 279 | 20.4 ps | 5/2+ | +0.53(5) |  |  |  | TF | 1986Ba19 | PR C33 1785 (86) |
|  |  |  |  | +0.74(6) |  |  |  | TF | 1988St09 | ZP A330 131 (88) |
|  | 409 | 7.8 s | 11/2- | (+)5.98(9) |  |  |  | NMR/ON | 1984Ha12 | NP A417 88 (84) |
|  |  |  |  | 6.4(4) |  |  |  | NO/S | 1983Li21 | HFI 14 125 (83) |
|  |  |  |  |  | +1.68(5) | R |  | MAPON | 1996Se06 | NP A602 41 (96) |
|  |  |  |  |  | +1.4(2) |  | [197Au] | NO/S, ME | 1983Be68/1983Pe22 | HFI 15 233 (83)/HFI 15 227 (83) |
|  | 503 | 1.8 ps | 5/2+ | +3.0(5) |  |  |  | TF | 1988St09 | ZP A330 131 (88) |
|  | 548 | 4.6 ps | 7/2+ | +0.53(7) |  |  |  | TF | 1988St16 | NP A486 374 (88) |
|  |  |  |  | +0.84(7) |  |  |  | TF | 1988St09 | ZP A330 131 (88) |
|  | 737 | 1.1 ps | 7/2+ | +1.7(5) |  |  |  | TF | 1988St16 | NP A486 374 (88) |
|  | 855 | 2.7 ps | 9/2+ | +1.5(5) |  |  |  | TF | 1988St16 | NP A486 374 (88) |
|  | 1231 | 0.93 ps | 11/2+ | +2.0(10) |  |  |  | TF | 1988St16 | NP A486 374 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 79 Au 198 | 0 | 2.696 d | 2- | +0.64(2) |  |  |  | LRIMS | 1990Sa21 | NP A512 241 (90) |
|  |  |  |  | +0.5934(4) |  |  |  | AB/D | 1967Va16 | PR 158 1078 (67) |
|  |  |  |  |  | +0.640(19) | R | [193Au] | NMR-ON | 1993Hi10 | NP A562 205 (93) |
|  |  |  |  |  | +0.68(2) |  | [197Au] | NMR-ON | 1988Ed01 | PRL 61 1301 (88) |
|  |  |  |  |  | 0.88(8) |  | [197Au] | N | 1985Ka16 | JP F15 1613 (85) |
|  |  |  |  |  | 0.76(4) |  | [197Au] | N, NMR/ON | 1984Ha03 | PR B30 5680 (84)/PR B29 1148 (84) |
|  |  |  |  |  | +0.69(4) |  | [199Au] | NO/S, NMR/ON | 1983He26/1984Ha03 | ZP A314 215 (83)/PR B29 1148 (84) |
|  |  |  |  |  | +0.46(2) |  | [197Au] | ME, NO/S | 1983Pe22/1983He26 | HFI 15 227 (83)/ZP A314 215 (83) |
|  | 312 | 123 ns | 5+ | -1.11(2) |  |  |  | TDPAD, R |  | Cf80Ber A11-I |
|  | 812 | 2.30 d | 12- | (+)5.85(9) |  |  |  | NMR/ON | 1984Ha12 | NP A417 88 (84) |
|  |  |  |  |  |  |  |  |  |  |  |
| 79 Au 199 | 0 | 3.14 d | 3/2+ | +0.261(2) |  |  |  | LRIMS | 1990Sa21 | NP A512 241 (90) |
|  |  |  |  | +0.2715(7) |  |  |  | AB/D | 1967Va16 | PR 158 1078 (67) |
|  |  |  |  |  | +0.510(16) | R | [193Au] | NMR/ON | 1993Hi10 | NP A562 205 (93) |
|  |  |  |  |  | 0.64(6) |  | [197Au] | N, NMR/ON | 1985Ka16/1982Ha39 | JP F15 1613 (85)/ZP A307 159 (82) |
|  |  |  |  |  | 0.55(3) |  | [197Au] | N, NMR/ON | 1982Ha39 | PR B30 5680 (84)/ZP A307 159 (82) |
|  |  |  |  |  | +0.37(1) |  | [197Au] | ME, NO/S | 1983Pe22/1983He26 | HFI 15 227 (83)/ZP A314 215 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 79 Au 200 | 962 | 18.7 h | 12- | 5.90(9) |  |  |  | NMR/ON | 1984Ha45 | PR C30 1675 (84) |
|  |  |  |  |  |  |  |  |  |  |  |
| 80 Hg 181 | 0 | 3.6 s | 1/2(-) | +0.5071(7) |  |  |  | NMR/OP() | 1976Bo09 | ZP A276 203 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 80 Hg 183 | 0 | 8.8 s | 1/2- | +0.524(5) |  |  |  | NMR/OP() | 1976Bo09 | ZP A276 203 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 80 Hg 185 | 0 | 55 s | 1/2- | +0.509(4) |  |  |  | NMR/OP() | 1986Ul02 | ZP A325 247 (86) |
|  | 99.3 | 27 s | 13/2+ | -1.017(9) |  |  | [193Hg 141] | CLS | 1986Ul02 | ZP A325 247 (86) |
|  |  |  |  |  | +0.2(3) st | R | [201Hg] | NMR/OP() | 1986Ul02 | ZP A325 247 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 80 Hg 187 | 0 | 2.4 m | 13/2+ | -1.044(11) |  |  | [193Hg 141] | CLS | 1979Da06 | PL 82B 199 (79) |
|  |  |  |  |  | +0.5(3) st | R | [201Hg] | NMR/OP() | 1986Ul02 | ZP A325 247 (86) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  | 134 | 1.9 m | 3/2- | -0.594(4) |  |  |  | NMR/OP() | 1986Ul02 | ZP A325 247 (86) |
|  |  |  |  |  | -0.75(18) | R | [201Hg] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.8(3) st |  | [201Hg] | NMR/OP() | 1986Ul02 | ZP A325 247 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 80 Hg 188 | 2724 | 135 ns | 12+ | -2.02(12) |  |  |  | TDPAD | 1983Se20 | ZP A313 289 (83) |
|  |  |  |  |  | 0.91(11) | R |  | TDPAD | 1984Dr09 | PL 149B 311 (84) |
|  |  |  |  |  |  |  |  |  |  |  |
| 80 Hg 189 | 0 | 7.6 m | 3/2- | -0.6086(8) |  |  |  | NMR/OP() | 1986Ul02 | ZP A325 247 (86) |
|  |  |  |  |  | -0.8(3) | R | [201Hg] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.8(4) |  | [201Hg] | NMR/OP() | 1986Ul02 | ZP A325 247 (86) |
|  | 0 + x | 8.6 m | 13/2+ | -1.058(6) |  |  | [193Hg 141] | CLS | 1979Da06 | PL 82B 199 (79) |
|  |  |  |  |  | +0.66(19) | R | [201Hg] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.7(3) st |  | [201Hg] | NMR/OP() | 1986Ul02 | ZP A325 247 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 80 Hg 190 | 2621 | 21 ns | 12+ | -2.5(2) |  |  |  | TDPAD | 1980Hj01 | PRL 45 878 (80) |
|  |  |  |  |  | 1.17(14) | R | [199Hg 158] | TDPAD | 1984Dr09 | PL 149B 311 (84) |
|  |  |  |  |  |  |  |  |  |  |  |
| 80 Hg 191 | 0 | 49 m | 3/2- | -0.618(11) |  |  | [201Hg] | NMR/OP() | 1986Ul02 | ZP A325 247 (86) |
|  |  |  |  |  | -0.80(13) | R | [201Hg] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.8(3) st |  | [201Hg] | NMR/OP() | 1986Ul02 | ZP A325 247 (86) |
|  | 140 | 50.8 m | 13/2+ | -1.068(5) |  |  | [193Hg 141] | CLS | 1979Da06 | PL 82B 199 (79) |
|  |  |  |  |  | +0.6(2) | R | [201Hg] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.6(3) st |  | [201Hg] | NMR/OP() | 1986Ul02 | ZP A325 247 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 80 Hg 193 | 0 | 3.80 h | 3/2- | -0.6276(2) |  |  | [199Hg] | NMR/OP | 1971Mo24 | PR C4 620 (71) |
|  |  |  |  |  | -0.7(3) | R | [201Hg] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -0.7(4) st |  | [201Hg] | NMR/OP() | 1986Ul02 | ZP A325 247 (86) |
|  | 141 | 11.8 h | 13/2+ | -1.058430(3) |  |  | [199Hg] | NMR/OP | 1973Re04 | PR C7 2065 (73) |
|  |  |  |  |  | +0.92(2) | R | [201Hg] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.92(10) st |  | [201Hg] | NMR/OP() | 1986Ul02 | ZP A325 247 (86) |
|  | band | ABC |  | g(avge) = 0.188(14) |  |  |  | TF | 1998WE23 | NuoC 111 A 675 (98) |
|  | band | ABCDF + | ABF | g(avge) = 0.20(2) |  |  |  | TF | 1998WE23 | NuoC 111 A 675 (98) |
|  | band | ABCDE + | ABE | g(avge) = 0.175(14) |  |  |  | TF | 1998WE23 | NuoC 111 A 675 (98) |
|  |  |  |  |  |  |  |  |  |  |  |
| 80 Hg 194 | 2424 | 2.9 ns | 10+ | g(avge) = - 0.24(4) |  |  |  | IPAD | 1980Kr21 | PL 97B 197 (80) |
|  | and 2476 | 8.1 ns | 12+ | g(avge) = - 0.24(4) |  |  |  | IPAD | 1980Kr21 | PL 97B 197 (80) |
|  | yrast | superdef | band 1 | g(avge) = 0.36(10) |  |  |  | TF | 1998Ma71 | PR C58 R2640 (98) |
|  | yrast | superdef | band 2 | g(avge) = 0.4(2) |  |  |  | TF | 1998Ma71 | PR C58 R2640 (98) |
|  | yrast | superdef | band 3 | g(avge) = 0.7(3) |  |  |  | TF | 1998Ma71 | PR C58 R2640 (98) |
|  | band | ABCD + | AB | g(avge) = 0.25(2) |  |  |  | TF | 1998WE23 | NuoC 111 A 675 (98) |
|  | band | ABCE + | AE | g(avge) = 0.26(3) |  |  |  | TF | 1998WE23 | NuoC 111 A 675 (98) |
|  | band | ABCF + | AF | g(avge) = 0.27(2) |  |  |  | TF | 1998WE23 | NuoC 111 A 675 (98) |
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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
| 80 Hg 195 | 0 | 9.9 h | 1/2- | +0.5414749(14) |  |  | [199Hg] | NMR/OP | 1973Re04 | PR C7 2065 (73) |
|  | 176 | 41.6 h | 13/2+ | -1.044647(3) |  |  | [199Hg] | NMR/OP | 1973Re04 | PR C7 2065 (73) |
|  |  |  |  |  | +1.08(2) | R | [201Hg] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +1.08(11) st |  | [201Hg] | NMR/OP() | 1986Ul02 | ZP A325 247 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 80 Hg 196 | 1841 | 5.2 ns | 7- | -0.21(12) |  |  |  | IPAD | 2006LE06 | NP A764 24 (2006) |
|  |  |  |  | -0.29(13) |  |  |  | TDPAD, IPAD | 1984Go06 | YadF 39 518 (84) |
|  | 2342 | 5.1 ns | 10+ | -1.9(6) |  |  |  | IPAD | 2006LE06 | NP A764 24 (2006) |
|  |  |  |  | -1.8(9) |  |  |  | IPAD | 1980Kr21 | PL 97B 197 (80) |
|  | 2439 | 3.5 ns | 12+ | -2.3(7) |  |  |  | IPAD | 2006LE06 | NP A764 24 (2006) |
|  |  |  |  | -2.2(11) |  |  |  | IPAD | 1980Kr21 | PL 97B 197 (80) |
|  |  |  |  |  |  |  |  |  |  |  |
| 80 Hg 197 | 0 | 64.1 h | 1/2- | +0.5273744(9) d |  |  | [199Hg] | NMR/OP | 1973Re04 | PR C7 2065 (73) |
|  | 134 | 8.1 ns | 5/2- | +0.855(15) |  |  | [199Hg 158] | TDPAC | 1977Kr11 | ZP A283 337 (77) |
|  |  |  |  |  | -0.081(6) | R | [199Hg 158] | TDPAC | 1980He05/1981Kr16 | NP A337 261 (80)/HFI 9 105 (81) |
|  |  |  |  |  | 0.080(10) |  | [197Hg 299] | TDPAD, R | 1980He05 | NP A337 261 (80) |
|  | 299 | 23.8 h | 13/2+ | -1.027684(3) d |  |  | [199Hg] | NMR/OP | 1973Re04 | PR C7 2065 (73) |
|  |  |  |  |  | +1.25(3) | R | [201Hg] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +1.24(14) st |  | [201Hg] | NMR/OP() | 1986Ul02 | ZP A325 247 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 80 Hg 198 | 412 | 23 ps | 2+ | +0.76(6) |  |  | [199Hg 158] | TF | 1995Br34 | ZP A353 141 (95) |
|  |  |  |  | +1.0(2) |  |  | [199Hg 158] | IMPAC, R | 1986Ko02 | NP A448 123 (86) |
|  |  |  |  | 0.70(14) |  |  |  | RIGV, R | 1977Kr11 | ZP A283 337 (77) |
|  |  |  |  |  | +0.68(12) or +0.84(12) | R |  | CER, R | 1984Fe08 | NP A425 373 (84) |
|  |  |  |  |  | +0.7(2) or +0.8(2) |  |  | CER | 1979Bo16 | ZP A291 245 (79) |
|  |  |  |  |  | +0.5(2) a |  |  | Mu-X | 1979Ha08 | NP A314 361 (79) |
|  | 1048 | 1.8 ps | 4+ | +1.6(2) |  |  | [199Hg 158] | TF | 1995Br34 | ZP A353 141 (95) |
|  | 1684 | 7.1 ns | 7- | -0.23(10) |  |  |  | IPAD | 2006LE06 | NP A764 24 (2006) |
|  |  |  |  | -0.22(11) |  |  |  | TDPAD, IPAD | 1984Go06 | YadF 39 518 (84)/PC Levon (86) |
|  | 2434 | 1.9 ns | 10+ | -1.8(8) |  |  |  | IPAD | 2006LE06 | NP A764 24 (2006) |
|  | 2578 | 1.4 ns | 12+ | -2.2(10) |  |  |  | IPAD | 2006LE06 | NP A764 24 (2006) |
|  |  |  |  |  |  |  |  |  |  |  |
| 80 Hg 199 | 0 | stable | 1/2- | +0.5058855(9) |  |  | [1H] | NMR/OP | 1961Ca21 | AnP 6 467 (61) |
|  | 158 | 2.45 ns | 5/2- | +0.88(3) |  |  |  | TDPAC | 1977Kr11 | ZP A283 337 (77) |
|  |  |  |  | +0.91(9) |  |  |  | IPAC | 1977Kr11 | ZP A283 337 (77) |
|  |  |  |  | +0.60(15) |  |  | [198Hg 412] | TF | 1986Ko02 | NP A448 123 (86) |
|  |  |  |  |  | +0.8(4) |  |  | ME, R | 1985La21/1979Wu12 | HFI 23 259 (85)/ZP A293 219 (79) |
|  |  |  |  |  | +0.85(12) a |  |  | Mu-X | 1983Gu02 | PR C27 816 (83) |
|  |  |  |  |  | +0.95(7) a | R |  | Mu-X | 1979Ha08 | NP A314 361 (79) |
|  |  |  |  |  | 0.70(9) st |  | [201Hg] | TDPAC, Q | 1973Ha61 | JCP 58 3339 (73) |
|  | 208 | 69 ps | 3/2- | -0.56(9) |  |  | [199Hg 158] | TF | 1990Ba40 | HFI 59 129 (90) |
|  |  |  |  | -0.29(15) |  |  | [198Hg 412] | TF | 1986Ko02 | NP A448 123 (86) |
|  |  |  |  | -0.47(8) |  |  |  | IMPAC | 1986Ko02 | NP A448 123 (86) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | +0.50(12) a |  |  | Mu-X | 1983Gu02 | PR C27 816 (83) |
|  |  |  |  |  | +0.62(15) a | R |  | Mu-X | 1979Ha08 | NP A314 361 (79) |
|  | 414 | 97 ps | 5/2- | +0.80(9) |  |  | [199Hg 158] | TF | 1990Ba40 | HFI 59 129 (90) |
|  |  |  |  | -0.7(3) |  |  | [198Hg 412] | TF | 1986Ko02 | NP A448 123 (86) |
|  | 532 | 42.6 m | 13/2+ | -1.014703(3) |  |  | [199Hg] | NMR/OP() | 1973Re04 | PR C7 2065 (73) |
|  |  |  |  |  | +1.2(3) st | R | [201Hg] | NMR/OP() | 1986Ul02 | ZP A325 247 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 80 Hg 200 | 368 | 46.6 ps | 2+ | +0.65(5) |  |  | [199Hg 158] | TF | 1995Br34 | ZP A353 141 (95) |
|  |  |  |  | +0.6(2) |  |  | [198Hg] | IMPAC, R | 1986Ko02 | NP A448 123 (86) |
|  |  |  |  | +0.58(12) |  |  | [198Hg 412] | TF | 1986Ko02 | NP A448 123 (86) |
|  |  |  |  | +0.52(10) |  |  |  | IMPAC | 1986Ko02 | NP A448 123 (86) |
|  |  |  |  | 0.80(14) |  |  |  | RIGV, R | 1977Kr11 | ZP A283 337 (77) |
|  |  |  |  |  | +1.0(2) or +1.1(2) |  |  | CER | 1980Sp05 | NP A345 252 (80) |
|  |  |  |  |  | +0.96(11) or +1.11(11) | R |  | CER | 1979Bo16 | ZP A291 245 (79) |
|  |  |  |  |  | +2.6(14) a |  |  | Mu-X | 1979Ha08 | NP A314 361 (79) |
|  |  |  |  |  | +0.1(6) a |  |  | Mu-X | 1983Gu02 | PR C27 816 (83) |
|  | 947 | 3.2 ps | 4+ | 1.02(17) |  |  | [199Hg 158] | TF | 1995Br34 | ZP A353 141 (95) |
|  |  |  |  |  |  |  |  |  |  |  |
| 80 Hg 201 | 0 | stable | 3/2- | -0.5602257(14) |  |  | [199Hg] | NMR/OP | 1973Re04 | PR C7 2065 (73) |
|  |  |  |  | -0.560226(3) |  |  | [1H] | NMR/OP | 1961Ca21 | AnP 6 467 (61) |
|  |  |  |  |  | +0.35(4) |  | calc Q | R | 2001Fo08 | PRL 87 212501 (01) |
|  |  |  |  |  |  |  | 206Hg 2102 |  |  |  |
|  |  |  |  |  | +0.387(6) | R |  | R | 2005BI03/1979Da06 | PR A71 012502 (2005)/PL B82 199 (1979) |
|  |  |  |  |  | +0.38(4) st |  |  | AB, R | 1986Ul02 | ZP A325 247 (86) |
|  |  |  |  |  | 0.39(5) or 0.27(4) a |  |  | Mu-X | 1979Ha08 | NP A314 361 (79) |
|  |  |  |  |  | 0.41(4) |  |  | O | 1965Mu15 | JPJa 14 1624 (59)/JPJa 20 1094 (65) |
|  |  |  |  |  | 0.46(4) |  |  | AB | 1960Mc11 | PR 119 134 (60) |
|  |  |  |  |  | +0.53(4) |  | [199Hg 158] | TDPAC, Q | 1975Ed01 | PR B11 985 (75) |
|  | 32 | ~0.1 ns | 3/2- |  | 0.3(15) or 0.1(3) a |  |  | Mu-X | 1979Ha08 | NP A314 361 (79) |
|  |  |  |  |  |  |  |  |  |  |  |
| 80 Hg 202 | 440 | 27.3 ps | 2+ | +0.78(6) |  |  | [199Hg 158] | TF | 1995Br34 | ZP A353 141 (95) |
|  |  |  |  | +0.9(2) |  |  | [198Hg 412] | TF | 1986Ko02 | NP A448 123 (86) |
|  |  |  |  | +1.0(3) |  |  | [198Hg 412] | IMPAC, R | 1986Ko02 | NP A448 123 (86) |
|  |  |  |  | 1.0(2) |  |  |  | RIGV, R | 1977Kr11 | ZP A283 337 (77) |
|  |  |  |  |  | +0.87(13) or +1.01(13) | R |  | CER | 1980Sp05 | NP A345 252 (80) |
|  |  |  |  |  | +0.17(14) or +0.32(14) |  |  | CER | 1979Bo16 | ZP A291 245 (79) |
|  | 1120 | 2.0 ps | 4+ | 1.4(3) |  |  | [199Hg 158] | TF | 1995Br34 | ZP A353 141 (95) |
|  |  |  |  |  |  |  |  |  |  |  |
| 80 Hg 203 | 0 | 46.8 d | 5/2- | +0.84895(13) |  |  | [201Hg] | NMR/OP() | 1970Ki05/1964Re03 | PL 31B 567 (70)/PL 8 257 (64) |
|  |  |  |  |  | +0.344(7) | R | [201Hg] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.34(4) st |  | [201Hg] | NMR/OP() | 1986Ul02 | ZP A325 247 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 80 Hg 204 | 437 | 40.2 ps | 2+ | +0.9(2) |  |  | [198Hg 412] | TF | 1986Ko02 | NP A448 123 (86) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  | +0.8(2) |  |  | [198Hg 412] | IMPAC, R | 1986Ko02 | NP A448 123 (86) |
|  |  |  |  |  | +0.4(2) | R |  | CER | 1981Es03 | NP A362 227 (81) |
|  |  |  |  |  | +0.2(2) or +0.4(2) |  |  | CER | 1979Bo16 | ZP A291 245 (79) |
|  |  |  |  |  | +0(2) a |  |  | Mu-X | 1979Ha08 | NP A314 361 (79) |
|  |  |  |  |  |  |  |  |  |  |  |
| 80 Hg 205 | 0 | 5.2 m | 1/2- | +0.60089(10) |  |  | [199Hg] | NMR/OP() | 1975Ro10 | ZP A272 369 (75) |
|  |  |  |  |  |  |  |  |  |  |  |
| 80 Hg 206 | 2102 | 2.15 s | 5- | +5.45(5) |  |  |  | TDPAD | 1982Be38 | PR C26 914 (82) |
|  |  |  |  |  | 0.74(15) | R | [199Hg 158] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.65(13) | R | [199Hg 158] | TDPAD | 1984Ma43 | PR C30 1702 (84) |
|  |  |  |  |  |  |  |  |  |  |  |
| 81 Tl 183 | 0 | 6.9 s | (1/2+) | 1.62(4) |  |  | [205Tl] | ISLS | 2013Ba41 | PR C88 024315 (2013) |
|  |  |  |  |  |  |  |  |  |  |  |
| 81 Tl 184 | 0+y | - | (2-) | 0.3(1) |  |  | [205Tl] | ISLS | 2013Ba41 | PR C88 024315 (2013) |
|  |  |  |  |  |  |  |  |  |  |  |
| 81 Tl 185 | 0 | 19.5 s | (1/2+) | 1.61(4) |  |  | [205Tl] | ISLS | 2013Ba41 | PR C88 024315 (2013) |
|  | 455 | 1.93 s | (9/2-) | 3.8(2) |  |  | [205Tl] | ISLS | 2013Ba41 | PR C88 024315 (2013) |
|  |  |  |  |  |  |  |  |  |  |  |
| 81 Tl 186 | 374 | 2.9 s | -10 | 2.57(6) |  |  | [205Tl] | ISLS | 2013Ba41 | PR C88 024315 (2013) |
|  |  |  |  |  |  |  |  |  |  |  |
| 81 Tl 187 | 0 | 51 s | (1/2+) | 1.55(6) |  |  | [205Tl] | CFBLS | 1993ScZW | IoPconf132 221 (93) |
|  | 335 | 15.6 s | (9/2-) | +3.71(2) |  |  | [205Tl] | RIS | 2012Ba32 | PR C86 014311 (12) |
|  |  |  |  | (+) 3.79(2) |  |  | [205Tl] | CFBLS | 1993ScZW | IoPconf132 221 (93) |
|  |  |  |  |  | -2.43(5) | R |  | CFBLS | 1993ScZW | IoPconf132 221 (93) |
|  |  |  |  |  |  |  |  |  |  |  |
| 81 Tl 188 | 0 + x | 71 s | 7+ | +0.483(8) |  |  | est efg | CFBLS | 1992Me07 | ZP A341 475 (92) |
|  |  |  |  |  | +0.129(4) | R | est efg | CFBLS | 1992Me07 | ZP A341 475 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 81 Tl 189 | 281 | 1.4 m | 9/2- | +3.76(2) |  |  | [205Tl] | RIS | 2012Ba32 | PR C86 014311 (12) |
|  |  |  |  | +3.878(6) |  |  | [203,205 | CFBLS | 1987Bo44 | PR C36 2560 (87) |
|  |  |  |  |  | -2.29(4) | R | est efg | CFBLS | 1987Bo44 | PR C36 2560 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 81 Tl 190 | 0 + x | 2.6 m | 2- | +0.254(2) |  |  | [203,205Tl] | CFBLS | 1992Me07 | ZP A341 475 (92) |
|  |  |  |  |  | -0.329(9) | R | est efg | CFBLS | 1992Me07 | ZP A341 475 (92) |
|  | 0 + y | 3.7 m | 7+ | +0.487(8) |  |  | [203,205Tl] | CFBLS | 1992Me07 | ZP A341 475 (92) |
|  |  |  |  | +0.495(4) |  |  | [203,205Tl] | CFBLS | 1987Bo44 | PR C36 2560 (87) |
|  |  |  |  |  | +0.285(14) | R | est efg | CFBLS | 1992Me07 | ZP A341 475 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 81 Tl 191 | 0 | 2.2 m | 1/2+ | +1.588(4) |  |  | [203,205Tl] | CFBLS | 1992Me07 | ZP A341 475 (92) |
|  | 299 | 5.2 m | 9/2- | +3.78(2) |  |  | [205Tl] | RIS | 2012Ba32 | PR C86 014311 (12) |
|  |  |  |  | +3.880(7) |  |  | [203,205Tl] | CFBLS | 1992Me07 | ZP A341 475 (92) |
|  |  |  |  | +3.903(5) |  |  | [203,205Tl] | CFBLS | 1987Bo44 | PR C36 2560 (87) |
|  |  |  |  |  | -2.23(2) | R | est efg | CFBLS | 1992Me07 | ZP A341 475 (92) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | -2.28(3) |  | est efg | CFBLS | 1987Bo44 | PR C36 2560 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 81 Tl 192 | 0 + x | 9.6 m | 2- | +0.200(3) |  |  | [203,205Tl] | CFBLS | 1992Me07 | ZP A341 475 (92) |
|  |  |  |  |  | -0.328(11) | R | est efg | CFBLS | 1992Me07 |  |
|  | 0 + y | 10.8 m | 7+ | +0.502(8) |  |  | [203,205Tl] | CFBLS | 1992Me07 | ZP A341 475 (92) |
|  |  |  |  | +0.518(4) |  |  | [203,205Tl] | CFBLS | 1987Bo44 | PR C36 2560 (87) |
|  |  |  |  |  | +0.46(2) | R | est efg | CFBLS | 1992Me07 |  |
|  | 251 + x | 296 ns | 8- | +1.66(4) |  |  | [19F 197] | TDPAD | 1982Da17 | NP A383 421 (82) |
|  |  |  |  |  | 0.44(7) | R | est efg | TDPAD | 1982Sc27 | ZP B49 23 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 81 Tl 193 | 0 | 21.6 m | 1/2+ | +1.591(2) |  |  | [203,205Tl] | CFBLS | 1987Bo44 | PR C36 2560 (87) |
|  | 365 | 2.11m | 9/2- | +3.82(3) |  |  | [205Tl] | RIS | 2012Ba32 | PR C86 014311 (12) |
|  |  |  |  | +3.948(4) |  |  | [203,205Tl] | CFBLS | 1987Bo44 | PR C36 2560 (87) |
|  |  |  |  |  | -2.20(2) | R | est efg | CFBLS | 1987Bo44 | PR C36 2560 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 81 Tl 194 | 0 | 34 m | 2- | +0.140(3) |  |  | [203,205Tl] | CFBLS | 1992Me07 | ZP A341 475 (92) |
|  |  |  |  | 0.14(1) |  |  | [203Tl] | AB | 1976Ek03/1984Be40 | HFI 1 437 (76)/PS 30 164 (84) |
|  |  |  |  |  | -0.282(7) | R | est efg | CFBLS | 1992Me07 | ZP A341 475 (92) |
|  | 0 + y | 32.8 m | 7+ | +0.530(8) |  |  | [203,205Tl] | CFBLS | 1992Me07 | ZP A341 475 (92) |
|  |  |  |  | +0.540(5) |  |  | [203,205Tl] | CFBLS | 1987Bo44 | PR C36 2560 (87) |
|  |  |  |  |  | +0.607(16) | R | est efg | CFBLS | 1992Me07 | ZP A341 475 (92) |
|  |  |  |  |  | 0.62(1) |  | est efg | CFBLS | 1986BoZZ | BAPS 31 874 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 81 Tl 195 | 0 | 1.16 h | 1/2+ | +1.58(4) |  |  | [205Tl] | O | 1969Go21 | PR 188 1897 (69) |
|  |  |  |  | +1.59(9) |  |  |  | AB/D, R | 1984Be40 | PS 30 164 (84) |
|  | 265 | 3.6 s | 9/2- | +3.87(4) |  |  | [205Tl] | RIS | 2012Ba32 | PR C86 014311 (12) |
|  |  |  |  |  |  |  |  |  |  |  |
| 81 Tl 196 | 0 | 1.84 h | 2- | +0.072(3) |  |  | [203,205Tl] | CFBLS | 1992Me07 | ZP A341 475 (92) |
|  |  |  |  | 0.07(1) |  |  | [203Tl] | AB | 1976Ek03/1984Be40 | HFI 1 437 (76)/PS 30 164 (84) |
|  |  |  |  |  | -0.178(14) | R | est efg | CFBLS | 1992Me07 | ZP A341 475 (92) |
|  | 394 | 1.41 h | 7+ | +0.549(8) |  |  | [203,205Tl] | CFBLS | 1992Me07 | ZP A341 475 (92) |
|  |  |  |  |  | +0.76(2) | R | est efg | CFBLS | 1992Me07 | ZP A341 475 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 81 Tl 197 | 0 | 2.84 h | 1/2+ | +1.58(2) |  |  | [205Tl] | O | 1966Da15 | JOSA 56 1604 (66) |
|  |  |  |  | +1.59(9) |  |  |  | AB/D, R | 1984Be40 | PS 30 164 (84) |
|  | 216 | 0.54 s | 9/2- | +4.03(6) |  |  | [205Tl] | RIS | 2012Ba32 | PR C86 014311 (12) |
|  |  |  |  |  |  |  |  |  |  |  |
| 81 Tl 198 | 0 | 5.3 h | 2- | 0.00(1) |  |  | [203Tl] | AB | 1976Ek03/1984Be40 | HFI 1 437 (76)/PS 30 164 (84) |
|  | 544 | 1.87 h | 7+ | +0.641(10) |  |  | [203Tl] | AB | 1983Bu04 | NP A395 182 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 81 Tl 199 | 0 | 7.4 h | 1/2+ | +1.60(2) |  |  | [205Tl] | O | 1966Da15 | JOSA 56 1604 (66) |
|  |  |  |  | +1.58(7) |  |  |  | AB/D, R | 1984Be40 | PS 30 164 (84) |
|  |  |  |  |  |  |  |  |  |  |  |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
| 81 Tl 200 | 0 | 26.1 h | 2- | 0.04(1) |  |  | [203Tl] | AB | 1976Ek03/1984Be40 | HFI 1 437 (76)/PS 30 164 (84) |
|  |  |  |  |  |  |  |  |  |  |  |
| 81 Tl 201 | 0 | 73 h | 1/2+ | +1.605(2) |  |  | [203,205Tl] | CFBLS | 1987Bo44 | PR C36 2560 (87) |
|  |  |  |  | +1.60(7) |  |  |  | AB/D, R | 1984Be40 | PS 30 164 (84) |
|  |  |  |  |  |  |  |  |  |  |  |
| 81 Tl 202 | 0 | 12.2 d | 2- | 0.06(1) |  |  | [203Tl] | AB | 1976Ek03/1984Be40 | HFI 1 437 (76)/PS 30 164 (84) |
|  | 950 | 572 s | 7+ | +0.90(4) |  |  |  | TDPAD | 1974Ha06 | NP A218 180 (74) |
|  |  |  |  |  |  |  |  |  |  |  |
| 81 Tl 203 | 0 | stable | 1/2+ | +1.62225787(12) |  |  | [1H] | N | 1963Ba23/1950Pr51 | RSI 34 238 (63)/PR 79 35 (50) |
|  |  |  |  | +1.6231(13) |  |  | [205Tl] | CFBLS | 1987Bo44 | PR C36 2560 (87) |
|  | 279 | 281 ps | 3/2+ | 0.0(2) |  |  | [194Pt 328] | TF | 1979Ha06 | NP A314 161 (79) |
|  |  |  |  | +0.16(5) |  |  |  | IPAC | 1965Ka02 | NP 61 582 (65) |
|  | 681 | 0.88 ps | 5/2+ | +2.6(11) |  |  | [194Pt 328] | TF | 1979Ha06 | NP A314 161 (79) |
|  |  |  |  |  |  |  |  |  |  |  |
| 81 Tl 204 | 0 | 3.78 y | 2- | 0.09(1) |  |  |  | AB | 1976Ek03 | HFI 1 437 (76) |
|  | 1104 | 63 s | (7)+ | +1.187(6) |  |  |  | TDPAD | 1972Ma59 | NP A195 577 (72) |
|  |  |  |  |  |  |  |  |  |  |  |
| 81 Tl 205 | 0 | stable | 1/2+ | +1.63821461(12) |  |  | [1H] | N | 1963Ba23/1950Pr51 | RSI 34 238 (63)/PR 79 35 (50) |
|  | 204 | 1.5 ns | 3/2+ | -0.8(5) |  |  |  | TF | 1984HaXX | Cf83Meguro, 145 (83) |
|  |  |  |  | +0.02(12) |  |  | [194Pt 328] | TF | 1979Ha06 | NP A314 161 (79) |
|  |  |  |  | 0.41(5) |  |  |  | Mu-X | 1972Ch07 | NP A181 25 (72) |
|  |  |  |  |  | 0.74(15) a | R |  | Mu-X | 1972Ch07 | NP A181 25 (72) |
|  | 619 | 1.0 ps | 5/2+ | +2.0(3) |  |  |  | TF | 1984HaXX | Cf83Meguro, 145 (83) |
|  |  |  |  | +2.2(7) |  |  | [194Pt 328] | TF | 1979Ha06 | NP A314 161 (79) |
|  | 2623 | short | (5/2)- | 0.71(15) |  |  |  | Mu-X | 1972Ch07 | NP A181 25 (72) |
|  |  |  |  |  | -0.5(2) a | R |  | Mu-X | 1972Ch07 | NP A181 25 (72) |
|  | 3291 | 2.56 s | 25/2+ | +6.80(10) |  |  |  | TDPAD | 1982Ma05 | PRL 48 466 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 81 Tl 206 | 1405 | 78 ns | (5)+ | +4.27(6) |  |  |  | TDPAD | 1976Ha44 | PL 64B 273 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 81 Tl 207 | 0 | 4.77 m | 1/2+ | +1.876(5) |  |  | [205Tl] | CFBLS | 1985Ne06 | PRL 55 1559 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 81 Tl 208 | 0 | 3.05 m | 5(+) | +0.292(13) |  |  | [205Tl] | LRSRD | 1992La23 | PRL 68 1675 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 82 Pb 183 | 0 | 0.53 s | 3/2- | -1.158(5) |  |  | [207Pb] | LRIS | 2009SE13 | Eur Phys J A41 315 (09) |
|  | 97 | 0.41 s | 13/2+ | -1.245(6) |  |  | [207Pb] | LRIS | 2009SE13 | Eur Phys J A41 315 (09) |
|  |  |  |  |  |  |  |  |  |  |  |
| 82 Pb 185 | 0 | 6.3 s | 3/2- | -1.141(5) |  |  | [207Pb] | LRIS | 2009SE13 | Eur Phys J A41 315 (09) |
|  |  |  |  | -1.10(4) |  |  | [197Pb] | RILIS | 2002AN15 | Eur Phys J A14 63 (02) |
|  | 0 + y | 4.3 s | 13/2+ | -1.23(1) |  |  | [207Pb] | LRIS | 2009SE13 | Eur Phys J A41 315 (09) |
|  |  |  |  | -1.19(3) |  |  | [197Pb] | RILIS | 2002AN15 | Eur Phys J A14 63 (02) |
|  |  |  |  |  |  |  |  |  |  |  |
| 82 Pb 187 | 0 | 18.3 s | 13/2+ | -1.210(5) |  |  | [207Pb] | LRIS | 2009SE13 | Eur Phys J A41 315 (09) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  | 33 | 15.2 s | 3/2- | -1.126(3) |  |  | [207Pb] | LRIS | 2009SE13 | Eur Phys J A41 315 (09) |
|  |  |  |  |  |  |  |  |  |  |  |
| 82 Pb 188 | 2577 | 797 ns | 8- | -0.30(6) |  |  | TDPA | TDPAD | 2010IO01 | PR C81 024323 (10) |
|  | 2702 | 26 ns | 11- | +11.3(3) |  |  | TDPA | TDPAD | 2010IO01 | PR C81 024323 (10) |
|  | 2710 | 94 ns | 12+ | -2.15(7) |  |  | TDPA | TDPAD | 2010IO01 | PR C81 024323 (10) |
|  |  |  |  |  |  |  |  |  |  |  |
| 82 Pb 189 | 0 | 51 s | 3/2- | -1.081(9) |  |  | [207Pb] | LRIS | 2009SE13 | Eur J Phys A41 315 (09) |
|  | 0 + y | 39 s | 13/2+ | -1.19(1) |  |  | [207Pb] | LRIS | 2009SE13 | Eur J Phys A41 315 (09) |
|  |  |  |  |  |  |  |  |  |  |  |
| 82 Pb 191 | 138 | 2.18 m | 13/2+ | -1.172(7) |  |  | [207Pb] | CFBLS | 1991Du07 | ZP A341 39 (91) |
|  |  |  |  |  | +0.085(5) | R | [207Pb] | CFBLS | 1991Du07 | ZP A341 39 (91) |
|  |  |  |  |  |  |  |  |  |  |  |
| 82 Pb 192 | 2581+d | 1.07 s | 12+ | -2.1(2) |  |  |  | TDPAD | 2010KM01 | Eur Phys J 45 153 (2010) |
|  |  |  |  | -2.08(2) |  |  |  | TDPAD | 1983St15 | NP A411 248 (83) |
|  |  |  |  |  | 0.32(4) | R | [194Pb 2628] | TDPAD | 2007IO03 | PL B650 147 (07) |
|  | 2743 | 756 ns | 11- |  | 2.9(3) | R | [194Pb 2628] | TDPAD | 2007IO03 | PL B650 147 (07) |
|  |  |  |  |  |  |  |  |  |  |  |
| 82 Pb 193 | 100 | 5.8 m | 13/2+ | -1.150(7) |  |  | [207Pb] | CFBLS | 1991Du07 | ZP A341 39 (91) |
|  |  |  |  |  | +0.195(10) | R | [207Pb] | CFBLS | 1991Du07 | ZP A341 39 (91) |
|  | 1586 + x | 22 ns | (21/2-) | -0.62(12) |  |  |  | TDPAD | 2004IO01 | PR C70 034305 (2004) |
|  |  |  |  |  | 0.22(2) | R | [206Pb 4027] | TDPAD | 2004BA31 | EurPJ A20 191 (04) |
|  | 2585 + x | 9.4 ns | (27/2-) | +9.2(4) |  |  |  | R | 2011Ba02 | PR C83 014304 |
|  |  |  | (27/2) |  | 2.6(3) | R |  | TDPAD | 2011Ba02 | PR C83 014304 |
|  |  |  | (29/2-) | +9.9(4) |  |  |  | TDPAD | 1997Ch33 | PRL 79 2002 (97) |
|  |  |  |  |  | 2.8(3) | R | [206Pb 4027] | TDPAD | 2004BA31 | EurPJ A20 191 (04) |
|  | 2613 + x | 135 ns | (33/2+) | -2.82(15) |  |  |  | TDPAD | 2004IO01 | PR C70 034305 (2004) |
|  |  |  |  |  | 0.45(4) | R | [206Pb 4027] | TDPAD | 2004BA31 | EurPJ A20 191 (04) |
|  |  |  |  |  |  |  |  |  |  |  |
| 82 Pb 194 | 2407 | 18 ns | 9- | -0.38(14) |  |  |  | TDPAD | 2004VY01 | PR C69 064318 (04) |
|  |  |  |  | -0.6(4) |  |  |  | TDPAD | 1985St16 | ZP A322 83 (85) |
|  | 2628 | 350 ns | 12+ | -2.076(12) |  |  |  | TDPAD | - | Th Berger (87) |
|  |  |  |  | -2.00(2) |  |  |  | TDPAD | 1985St16 | ZP A322 83 (85) |
|  |  |  |  | -1.90(7) |  |  |  | TDPAD | 1977Ro15 | NP A285 156 (77) |
|  |  |  |  |  | 0.49(3) | R | [206Pb 4027] | TDPAD | 1985St16 | ZP A322 83 (85) |
|  | 2933 | 122 ns | 11- | +11.3(2) |  |  |  | TDPAD | 2004VY01 | PR C69 064318 (04) |
|  |  |  |  |  | 3.6(4) | R | [194Pb 2628] | TDPAD | 2007IO03 | PL B650 147 (07) |
|  |  |  |  |  | 4.8(7) |  | [196Pb 2694] | LEMS | 2002Vy01 | PR C65 024320 (02) |
|  |  |  |  |  |  |  |  |  |  |  |
| 82 Pb 195 | 203 | 15.0 m | 13/2+ | -1.128(7) |  |  | [207Pb] | CFBLS | 1991Du07 | ZP A341 39 (91) |
|  |  |  |  | -1.1318(13) |  |  | [207Pb] | CFBLS | 1987Di06 | ZP A328 253 (87) |
|  |  |  |  |  | +0.306(15) | R | [207Pb] | CFBLS | 1991Du07 | ZP A341 39 (91) |
|  |  |  |  |  | +0.29(10) |  |  | CFBLS | 1987Di06 | ZP A328 253 (87) |
|  | 2699+x | 95 ns | 33/2+ | -2.57(10) |  |  |  | TDPAD | 1985St16 | ZP A322 83 (85) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  | -3.1(3) |  |  |  | TDPAD | 1983RaZW | BAPS 28 702 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 82 Pb 196 | 1797 | 185 ns | 5- | +0.490(15) |  |  |  | TDPAD | 1985St16 | ZP A322 83 (85) |
|  | 2307 | 51 ns | 9- | -0.33(9) |  |  |  | TDPAD | 2004VY01 | PR C69 064318 (04) |
|  | 2694 | 269 ns | 12+ | -1.92(2) |  |  |  | TDPAD | 1983St15 | NP A411 248 (83) |
|  |  |  |  | -1.88(8) |  |  |  | TDPAD | 1977Ro15 | NP A285 156 (77) |
|  |  |  |  |  | 0.65(5) | R | [206Pb 4027] | TDPAD | 1981Zy02 | HFI 9 109 (81) |
|  | 3191 | 85 ns | 11- | +11.4(6) |  |  |  | TDPAD | 2004VY01 | PR C69 064318 (04) |
|  |  |  |  | 10.6(9) |  |  |  | TDPAD | 1987Pe13 | NP A471 535 (87) |
|  |  |  |  |  | (-)3.4(7) | R |  | LEMS | 2002Vy02 | PRL 88 102502 (02) |
|  |  |  |  |  |  |  |  |  |  |  |
| 82 Pb 197 | 0 | 8 m | 3/2- | -1.075(2) |  |  | [207Pb] | ABLFS | 1986An06 | NP A451 471 (86) |
|  |  |  |  |  | -0.08(17) st | R |  | ABLFS | 1986An06 | NP A451 471 (86) |
|  | 319 | 43 m | 13/2+ | -1.098(11) |  |  | [207Pb] | CFBLS | 1991Du07 | ZP A341 39 (91) |
|  |  |  |  | -1.105(3) |  |  | [207Pb] | ABLFS | 1986An06 | NP A451 471 (86) |
|  |  |  |  |  | +0.38(2) | R | [207Pb] | CFBLS | 1991Du07 | ZP A341 39 (91) |
|  |  |  |  |  | +0.5(3) st |  |  | ABLFS | 1986An06 | NP A451 471 (86) |
|  | 1913 | 470 ns | 21/2- | -0.531(6) |  |  |  | TDPAD | 1985St16 | ZP A322 83 (85) |
|  | 3168 | 55 ns | (33/2+) | -2.51(10) |  |  |  | TDPAD | 1985St16 | ZP A322 83 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 82 Pb 198 | 1823 | 49 ns | 5- | +0.38(3) |  |  |  | TDPAD | 1985St16 | ZP A322 83 (85) |
|  | 2141 | 4.19 s | (8-) | -0.377(6) |  |  |  | TDPAD | 1987Ca23 | HFI 34 77 (87) |
|  |  |  |  | -0.376(16) |  |  |  | TDPAD | 1985St16 | ZP A322 83 (85) |
|  | 2820 | 212 ns | 12+ | -1.86(2) |  |  |  | TDPAD | 1983St15 | NP A411 248 (83) |
|  |  |  |  | -1.73(13) |  |  |  | TDPAD | 1977Ro15 | NP A285 156 (77) |
|  |  |  |  |  | 0.75(5) | R | [206Pb 4027] | TDPAD | 1981Zy02 | HFI 9 109 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 82 Pb 199 | 0 | 1.5 h | 3/2- | -1.0742(12) |  |  | [207Pb] | ABLFS | 1986An06 | NP A451 471 (86) |
|  |  |  |  |  | +0.08(9) st | R |  | ABLFS | 1986An06 | NP A451 471 (86) |
|  | 2579 | 10.6 s | 29/2- | -1.076(3) |  |  |  | TDPAD | 1988Ro08 | NP A482 573 (88) |
|  |  |  |  | -1.07(7) |  |  |  | TDPAD | 1985St16 | ZP A322 83 (85) |
|  | 3509 | 71 ns | (33/2)+ | -2.39(15) |  |  |  | TDPAD | 1988Ro08 | NP A482 573 (88) |
|  |  |  |  | -2.51(5) |  |  |  | TDPAD | 1985St16 | ZP A322 83 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 82 Pb 200 | 2154 | 44 ns | 7- | -0.21(10) |  |  |  | TDPAD | 1985St16 | ZP A322 83 (85) |
|  |  |  |  |  | 0.32(2) | R | [206Pb 4027] | TDPAD |  | AECL-6680 27 (79) |
|  | 2183 | 480 ns | 9- | -0.258(9) |  |  |  | TDPAD | 1974Lu03/1975Yo04 | NP A229 230 (74)/PR C12 1242 (75) |
|  |  |  |  | -0.25(4) |  |  |  | TDPAD | 1985St16 | ZP A322 83 (85) |
|  |  |  |  |  | 0.40(2) | R | [206Pb 4027] | TDPAD |  | AECL-6680 27 (79) |
|  | 3006 | 152 ns | 12+ | -1.849(12) |  |  |  | TDPAD | 1988Ro08 | NP A482 573 (88) |
|  |  |  |  | -1.836(7) |  |  |  | TDPAD | 1987Fa15 | NP A475 338 (87) |
|  |  |  |  | -1.81(2) |  |  |  | TDPAD | 1983St15 | NP A411 248 (83) |
|  |  |  |  |  | 0.79(3) | R | [206Pb 4027] | TDPAD | 1979Ma37 | PL 88B 48 (79) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  | 5078 | 77 ns | 19- | -1.79(13) |  |  |  | TDPAD | 1987Fa15 | NP A475 338 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 82 Pb 201 | 0 | 9.33 h | 5/2- | +0.6753(5) |  |  | [207Pb] | ABLFS | 1986An06 | NP A451 471 (86) |
|  |  |  |  |  | -0.01(4) st | R |  | ABLFS | 1986An06 | NP A451 471 (86) |
|  | 2719 | 63 ns | 25/2- | -0.79(4) |  |  |  | TDPAD | 1988Ro08 | NP A482 573 (88) |
|  |  |  |  |  | 0.46(2) | R | [206Pb 4027] | TDPAD |  | AECL-6680 27 (79) |
|  | 2719+x | 508 ns | 29/2- | -1.011(6) |  |  |  | TDPAD | 1988Ro08 | NP A482 573 (88) |
|  | 4639+x | 43 ns | 41/2(+) | -3.7(8) |  |  |  | TDPAD | 1988Ro08 | NP A482 573 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 82 Pb 202 | 1384 | 1.97 ns | 4+ | +0.008(16) |  |  |  | IPAC | 1977Th02 | ZP A280 371 (77) |
|  | 2170 | 3.62 h | 9- | -0.2276(7) |  |  | [207Pb] | ABLFS | 1986An06 | NP A451 471 (86) |
|  |  |  |  |  | +0.58(9) st | R |  | ABLFS | 1986An06 | NP A451 471 (86) |
|  | 2208 | 65 ns | 7- |  | 0.28(2) | R | [206Pb 4027] | TDPAD |  | AECL-6680 27 (79) |
|  | 4091+x | 110 ns | 16+ | -0.67(16) |  |  |  | TDPAD | 1986Ja13 | NP A458 225 (86) |
|  | 5242+y | 107 ns | 19- | -1.88(6) |  |  |  | TDPAD | 1987Ja08/1987Fa15 | HFI 34 73 (87)/NP A475 338 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 82 Pb 203 | 0 | 51.9 h | 5/2- | +0.6864(5) |  |  | [207Pb] | ABLFS | 1986An06 | NP A451 471 (86) |
|  |  |  |  | +0.677(12) |  |  | [207Pb] | O | 1987Mo\*\* | JOSA B4 1297 (87) |
|  |  |  |  |  | +0.10(5) st | R |  | ABLFS | 1986An06 | NP A451 471 (86) |
|  |  |  |  |  | -0.5(13) |  |  | O | 1987Mo\*\* | JOSA B4 1297 (87) |
|  | 1921 | 56 ns | 21/2+ | -0.64(2) |  |  |  | TDPAD | 1986Ja21 | PS 34 717 (86) |
|  |  |  |  |  | 0.85(3) | R | [206Pb 4027] | TDPAD |  | AECL-6680 27 (79) |
|  | 2923+x | 122 ns | 25/2- | -0.74(4) |  |  |  | TDPAD | 1988Ro08 | NP A482 573 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 82 Pb 204 | 899 | 2.94 ps | 2+ | <0.02 |  |  |  | RIGV, R | 1986Bi13 | HFI 30 265 (86) |
|  |  |  |  |  | +0.23(9) | R |  | CER | 1978Jo04 | PL 72B 307 (78) |
|  | 1274 | 280 ns | 4+ | +0.225(4) |  |  |  | TDPAD, TDPAC | 1974Lu03/1963Sa19 | NP A229 230 (74)/NP 46 377 (63) |
|  |  |  |  |  | 0.44(2) | R | [206Pb 4027] | TDPAD |  | AECL-6680 27 (79) |
|  |  |  |  |  | 0.62(14) st |  | [140Ce 2084] | TDPAC | 1974He16 | ZP 269 265 (74) |
|  |  |  |  |  |  |  |  |  |  |  |
| 82 Pb 205 | 0 | 1.5x10\*7y | 5/2- | +0.7117(4) |  |  | [207Pb] | ABLFS | 1986An06 | NP A451 471 (86) |
|  |  |  |  | +0.709(5) |  |  | [207Pb] | O | 1987Ba85 | ZP D7 165 (87) |
|  |  |  |  |  | +0.23(4) st | R |  | ABLFS | 1986An06 | NP A451 471 (86) |
|  |  |  |  |  | 0.2(4) |  |  | O | 1987Ba85 | ZP D7 165 (87) |
|  | 1014 | 5.55 ms | 13/2+ | -0.98(4) |  |  |  | TDPAD | 1971Ma59 | NP A176 497 (71) |
|  |  |  |  |  | 0.30(5) | R |  | QIR | 1975Ri03/1974DaYM | PS 11 228 (75)/Cf74Upp 254 (74) |
|  | 3196 | 217 ns | 25/2- | -0.845(14) |  |  |  | TDPAD | 1976Li09 | ZP A277 273 (76) |
|  |  |  |  |  | 0.63(3) | R | [206Pb 4027] | TDPAD |  | AECL-6680 27 (79) |
|  | 5161 | 63 ns | 33/2+ | -2.44(8) |  |  |  | TDPAD | 1983St15 | NP A411 248 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 82 Pb 206 | 803 | 8.4 ps | 2+ | <0.03 |  |  |  | RIV/D, R | 1986Bi13 | HFI 30 265 (86) |
|  |  |  |  |  | +0.05(9) | R |  | CER | 1978Jo04 | PL 72B 307 (78) |
|  | 2200 | 123 s | 7- | -0.152(3) |  |  |  | SOPAD | 1972Ma24 | v |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | 0.33(5) | R |  | QIR | 1975Ri03/1974DaYM | PS 11 228 (75)/Cf74Upp 254 (74) |
|  | 2384 | 29 ps | 6- | +0.8(4) |  |  |  | IPAC | 1970Za03 | NP A146 215 (70) |
|  | 4027 | 185 ns | 12+ | -1.80(2) |  |  |  | TDPAD | 1983St15 | NP A411 248 (83) |
|  |  |  |  |  | estimated 0.51(2) |  | [B(E2)] |  | 1979Ma37 | PL 88B 48 (79) |
|  |  |  |  |  |  |  |  |  |  |  |
| 82 Pb 207 | 0 | stable | 1/2- | +0.592583(9) |  |  | [2H] | N | 1971Lu06/1950Pr51 | PL 35A 397 (71)/PR 79 35 (50) |
|  |  |  |  | 0.58219(2) |  |  | [199Hg] | OP/RD | 1969Gi04 | PR 188 180 (69) |
|  | 570 | 129 ps | 5/2- | +0.80(3) |  |  |  | IPAC | 1973Ao01 | JPJS 34 271 (73) |
|  |  |  |  |  |  |  |  |  |  |  |
| 82 Pb 208 | 2615 | 15 ps | 3- | +1.9(2) |  |  |  | IPAC | 1973Ao01/1969Bo12 | JPJS 34 271 (73)/PL 29B 226 (69) |
|  |  |  |  |  | -0.34(15) | R |  | CER | 1984Ve07/1983Sp02 | AuJP 37 123 (84)/PL 128B 29 (83) |
|  | 3198 | 297 ps | 5- | +0.11(4) |  |  | [208Pb 2615] | IPAC | 1969Bo01 | NP A138 90 (69) |
|  | 4086 | 0.74 fs | 2+ |  | -0.7(3) | R |  | CER | 1984Ve07 | AuJP 37 123 (84) |
|  |  |  |  |  |  |  |  |  |  |  |
| 82 Pb 209 | 0 | 3.25 h | 9/2+ | -1.4735(16) |  |  | [207Pb] | ABLFS | 1986An06 | NP A451 471 (86) |
|  |  |  |  |  | -0.27(17) st | R |  | ABLFS | 1986An06 | NP A451 471 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 82 Pb 210 | 1195 | 49 ns | 6+ | -1.87(9) |  |  |  | TDPAD | 1983De34 | PR C28 1060 (83) |
|  | 1272 | 201 ns | 8+ | -2.50(6) |  |  |  | TDPAD | 1983De34 | PR C28 1060 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 82 Pb 211 | 0 | 36.1 m | 9/2+ | -1.4037(8) |  |  | [207Pb] | ABLFS | 1986An06 | NP A451 471 (86) |
|  |  |  |  |  | +0.09(6) st | R |  | ABLFS | 1986An06 | NP A451 471 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 83 Bi 199 | 0 | 11.8 h | 9/2- | 4.6(4) |  |  |  | NO/S | 1988Wo12 | HFI 43 401 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 83 Bi 201 | 0 | 108 m | 9/2- | 4.8(3) |  |  |  | NO/S | 1988Wo12 | HFI 43 401 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 83 Bi 202 | 0 | 1.72 h | 5+ | 4.9(3) |  |  |  | NO/S | 1988Wo12 | HFI 43 401 (88) |
|  |  |  | [5+] | +4.259(14) |  |  | [209Bi] | LRFS | 1996Ca02 | NP A598 61 (96) |
|  |  |  | [5+] |  | -1.00(9) | R |  | R | 2001Bi23 | PRL 87 133003 (2001) |
|  |  |  | [5+] |  | -0.72(8) |  | [209Bi] | LRFS | 1996Ca02 | NP A598 61 (96) |
|  |  |  | [6+] | +4.325(13) |  |  | [209Bi] | LRFS | 1996Ca02 | NP A598 61 (96) |
|  |  |  | [6+] |  | -1.21(9) | R |  | R | 2001Bi23 | PRL 87 133003 (2001) |
|  |  |  | [6+] |  | -0.87(9) |  | [209Bi] | LRFS | 1996Ca02 | NP A598 61 (96) |
|  | 615 | 3.04 s | 10- | +2.54(1) |  |  |  | TDPAD |  | Th Berger (87) |
|  |  |  |  | 2.56(3) |  |  |  | TDPAD | 1982Hu07/1985No09 | NP A382 56 (82)/ZP A322 463 (85) |
|  |  |  |  | 2.43(14) |  |  |  | TDPAD | 1980Kl06 | NP A346 324 (80) |
|  |  |  |  |  | 0.14(2) | R | [209Bi] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.106(13) |  | [209Bi] | TDPAD | 1987Ma65 | HFI 34 47 (87) |
|  |  |  |  |  | 0.07(3) |  | [204Pb] | IPAD | 1981Th03 | NP A362 71 (81) |
|  | 2607 | 310 ns | 17+ | +2.07(3) |  |  |  | TDPAD |  | Th Berger (87) |
|  |  |  |  | 2.06(5) |  |  |  | TDPAD | 1982Hu07 | NP A382 56 (82) |
|  |  |  |  |  | 0.45(2) | R | [209Bi] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | 0.35(3) |  | [209Bi] | TDPAD | 1987Ma65 | Cf87Melb 127 (87)/HFI 34 47 (87) |
|  |  |  |  |  | >1.0 |  |  | IPAD | 1981Th03 | NP A362 71 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 83 Bi 203 | 0 | 11.8 h | 9/2- | +4.017(13) |  |  | [209Bi] | LRFS | 1996Ca02 | NP A598 61 (96) |
|  |  |  |  | +4.62(3) |  |  | [209Bi] | AB | 1959Li50 | ArkF 15 445 (59)/PR A1 685 (70) |
|  |  |  |  |  | -0.93(7) | R |  | R | 2001Bi23 | PRL 87 133003 (2001) |
|  |  |  |  |  | -0.67(7) |  | [209Bi] | LRFS | 1996Ca02 | NP A598 61 (96) |
|  |  |  |  |  | -0.68(6) |  | [209Bi] | AB | 1959Li50 | ArkF 15 445 (59)/PR A1 685 (70) |
|  | 1991 | 90 ns | (21/2+) | 2.79(4) |  |  |  | TDPAD | 1982Hu07 | NP A382 56 (82) |
|  | 2042 | 194 ns | (25/2+) | 3.33(5) |  |  |  | TDPAD | 1982Hu07 | NP A382 56 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 83 Bi 204 | 0 | 11.22 h | 6+ | +4.322(15) |  |  | [209Bi] | LRFS | 1996Ca02 | NP A598 61 (96) |
|  |  |  |  | 4.5(2) |  |  |  | NO/S | 1988Wo12 | HFI 43 401 (88) |
|  |  |  |  | +4.28(2) |  |  | [209Bi] | AB | 1959Li50 | ArkF 15 445 (59)/PR A1 685 (70) |
|  |  |  |  |  | -0.7(2) | R |  | R | 2001Bi23 | PRL 87 133003 (2001) |
|  |  |  |  |  | -0.49(15) |  | [209Bi] | LRFS | 1996Ca02 | NP A598 61 (96) |
|  |  |  |  |  | -0.43(4) |  | [209Bi] | AB | 1959Li50 | ArkF 15 445 (59)/PR A1 685 (70) |
|  | 806 | 13.0 ms | 10- | 2.59(4) |  |  |  | NMR/AC |  | FortP 25 327 (77) |
|  |  |  |  | 2.4(2) |  |  |  | TDPAD | 1980Kl06/1985No09 | NP A346 324 (80)/ZP A322 463 (85) |
|  |  |  |  |  | 0.074(2) | R | [202 Bi 615] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.0630(12) |  | [202 Bi 615] | LEMS | 1991Sc14 | PR C43 2560 (91) |
|  |  |  |  |  |  |  |  |  |  |  |
| 83 Bi 205 | 0 | 15.3 d | 9/2- | +4.065(7) |  |  | [209Bi] | LRFS | 1997Ki15 | PL B405 31 (97) |
|  |  |  |  | +4.16(10) |  |  | [209Bi] | O, AB | 1975Ma08/1959Li50 | PRL 34 625 (75)/ArkF 15 445 (59) |
|  |  |  |  |  | -0.81(3) | R |  | R | 2001Bi23 | PRL 87 133003 (2001) |
|  |  |  |  |  | -0.59(4) |  | [209Bi] | LRFS | 1997Ki15 | PL B405 31 (97) |
|  | 2064 | 100 ns | 21/2+ | 2.70(4) |  |  |  | TDPAD | 1982Hu07 | NP A382 56 (82) |
|  | 2138 | 223 ns | 25/2+ | 3.21(5) |  |  |  | TDPAD | 1982Hu07 | NP A382 56 (82) |
|  |  |  |  |  |  |  |  |  |  |  |
| 83 Bi 206 | 0 | 6.243 d | 6+ | +4.361(8) |  |  | [209Bi] | LRFS | 1997Ki15 | PL B405 31 (97) |
|  |  |  |  | +4.60(4) |  |  | [209Bi] | AB | 1959Li50 | ArkF 15 445 (59) |
|  |  |  |  |  | -0.54(4) | R |  | R | 2001Bi23 | PRL 87 133003 (2001) |
|  |  |  |  |  | -0.39(4) |  | [209Bi] | LRFS | 1997Ki15 | PL B405 31 (97) |
|  |  |  |  |  | -0.20(4) |  | [209Bi] | AB | 1959Li50 | ArkF 15 445 (59)/PR A1 685 (70) |
|  | 1045 | 0.89 ms | (10-) | 2.644(14) |  |  |  | NMR/AC | 1985No09 | PL 46B 65 (73)/ZP A322 463 (85) |
|  |  |  |  |  | 0.057(11) | R | [202 Bi 615] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.049(9) |  | [202 Bi 615] | LEMS | 1991Sc14 | PR C43 2560 (91) |
|  |  |  |  |  |  |  |  |  |  |  |
| 83 Bi 207 | 0 | 32.2 y | 9/2- | 4.0915(9) |  |  | [209Bi] | LRFS | 2000Pe30 | JP G26 1829 (00) |
|  |  |  |  | 4.081(9) |  |  | [209Bi] | O | 1985Ba21 | ZP A321 85 (85) |
|  |  |  |  |  | -0.76(2) | R |  | R | 2001Bi23 | PRL 87 133003 (2001) |
|  |  |  |  |  | -0.55(4) |  | [209Bi] | LRFS | 2000Pe30 | JP G26 1829 (00) |
|  |  |  |  |  | -0.60(11) |  | [209Bi] | O | 1985Ba21 | ZP A321 85 (85) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  | 2101 | 182 s | 21/2+ | +3.43(2) |  |  |  | TDPAD | 1989Ra17 | ZfK-445 51 (81) |
|  |  |  |  | +3.41(6) |  |  |  | SOPAD | 1972Ma24 | NP A186 97 (72) |
|  |  |  |  |  | 0.051(9) | R | [202 Bi 615] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | 0.044(8) |  | [202 Bi 615] | LEMS | 1991Sc14 | PR C43 2560 (91) |
|  |  |  |  |  |  |  |  |  |  |  |
| 83 Bi 208 | 0 | 3.7x10\*5 y | 5+ | +4.578(13) |  |  | [209Bi] | LRFS | 2000Pe30 | JP G26 1829 (00) |
|  |  |  |  |  | -0.70(8) | R |  | R | 2001Bi23 | PRL 87 133003 (2001) |
|  |  |  |  |  | -0.51(7) |  | [209Bi] | LRFS | 2000Pe30 | JP G26 1829 (00) |
|  | 1571 | 2.53 ms | 10- | 2.672(14) |  |  |  | NMR/AD | 1974Hu11/1985No09 | NP A227 421 (74)/ZP A322 463 (85) |
|  |  |  |  | 2.633(14) |  |  |  | TDPAD | 1975WhZX | DisA 36 790B (75) |
|  |  |  |  |  |  |  |  |  |  |  |
| 83 Bi 209 | 0 | stable | 9/2- | +4.1103(5) d |  |  |  | R | 1996Ba94 | ZP D37 281 (96) |
|  |  |  |  | +4.1106(2) |  |  | [2H] | N | 1953Ti01/1951Pr02 | PR 89 595 (53)/PR 81 20 (51) |
|  |  |  |  |  | -0.516(15) | R |  | R | 2001Bi23 | PRL 87 133003 (2001) |
|  |  |  |  |  | -0.37(3) a |  |  | Mu-X | 1972Le07 | NP A181 14 (72)/PR 169 1 (68) |
|  |  |  |  |  | -0.55(1) |  |  | AB | 1983De07 | ZP A310 27 (83) |
|  |  |  |  |  | -0.77(1) st |  |  | AB | 1983De07 | ZP A310 27 (83) |
|  |  |  |  |  | -0.40(5) |  |  | R | 1974Ho40 | PS 10 171 (74) |
|  |  |  |  |  | -0.39(3) |  |  | O | 1967Di04/1970Ge10 | CJP 45 2249 (67)/JOSA 60 869 (70) |
|  |  |  |  |  | -0.50(8) a |  |  | Pi-X | 1978Be24 | ZP A286 215 (78) |
|  |  |  |  |  | -0.5(2) a |  |  | Pi-X | 1981Ba07 | NP A355 383 (81) |
|  | 2563 | 14 fs | (9/2)+ | 3.5(7) |  |  |  | Mu-X | 1972Le07 | NP A181 14 (72) |
|  |  |  |  |  | +0.15(7) | R | [209Bi] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.11(5) a |  |  | Mu-X | 1972Le07 | NP A181 14 (72) |
|  | 2741 | 12 ps | 15/2+ | 6.2(12) |  |  |  | Mu-X | 1972Le07 | NP A181 14 (72) |
|  |  |  |  |  | 0.0(5) a | R |  | Mu-X | 1972Le07 | NP A181 14 (72) |
|  | 2986 | 18 ns | 19/2+ | 3.50(8) |  |  |  | TDPAD | 1978Be17 | PR C17 1359 (78) |
|  |  |  |  |  |  |  |  |  |  |  |
| 83 Bi 210 | 0 | 5.01 d | 1- | -0.04451(6) |  |  | [209Bi] | AB, NO/S | 1962Al02 | PR 125 256 (62)/JPJS 34 113 (73) |
|  |  |  |  |  | +0.190(6) | R |  | R | 2001Bi23 | PRL 87 133003 (2001) |
|  |  |  |  |  | +0.136(1) |  | [209Bi] | AB | 1962Al02 | PR 125 256 (62)/PR A1 685 (70) |
|  |  |  |  |  |  |  |  |  | 1989Ra17 | JPJS 34 113 (73) |
|  | 271 | 3.0x10\*6 y | 9- | +2.73(4) |  |  | [209Bi] | LRFS | 1997KI15 | PL B405 31 (97) |
|  |  |  |  |  | -0.66(7) | R |  | R | 2001Bi23 | PRL 87 133003 (2001) |
|  |  |  |  |  | -0.47(6) |  | [209Bi] | LRFS | 1997Ki15 | PL B405 31 (97) |
|  | 433 | 56.8 ns | 7- | +2.11(5) |  |  |  | TDPAD | 1972Ba65 | PRL 29 496 (72) |
|  | 439 | 37 ns | 5- | +1.53(5) |  |  |  | TDPAD | 1972Ba65 | PRL 29 496 (72) |
|  |  |  |  |  |  |  |  |  |  |  |
| 83 Bi 211 | 0 | 2.1 m | 9/2- | (+)3.79 |  |  |  | NO/S | 1996Wi\*\* | HFI C1 565 (96) |
|  | 405 | 315 ps | 7/2- | +4.5(7) |  |  |  | IPAC | 1965Ag03 | PL 19 578 (65) |
|  |  |  |  |  |  |  |  |  |  |  |
| 83 Bi 212 | 0 | 60.6 m | 1(-) | +0.32(4) |  |  | [209Bi] | LRFS | 1997KI15 | PL B405 31 (97) |
|  |  |  |  | 0.41(5) |  |  |  | NO/S | 1992LI25 | HFI 75 109 (92) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | +0.1(4) | R |  | R | 2001Bi23 | PRL 87 133003 (2001) |
|  |  |  |  |  | +0.1(3) |  | [209Bi] | LRFS | 1997Ki15 | PL B405 31 (97) |
|  |  |  |  |  |  |  |  |  |  |  |
| 83 Bi 213 | 0 | 45.6 m | 9/2- | +3.716(7) |  |  | [209Bi] | LRFS | 1997KI15 | PL B405 31 (97) |
|  |  |  |  | 3.89(9) |  |  |  | NO/S | 1992LI25 | HFI 75 109 (92) |
|  |  |  |  |  | -0.83(5) | R |  | R | 2001Bi23 | PRL 87 133003 (2001) |
|  |  |  |  |  | -0.60(5) |  | [209Bi] | LRFS | 1997Ki15 | PL B405 31 (97) |
|  |  |  |  |  |  |  |  |  |  |  |
| 84 Po 198 | 1854 | 29 ns | 8+ | +7.3(2) |  |  |  | TDPAD | 1986Ma31 | ZP A324 123 (86) |
|  | 2566 | 200 ns | 11- | +12.1(6) |  |  |  | TDPAD | 1986Ma31 | ZP A324 123 (86) |
|  | 2692+x | 750 ns | 12+ | -1.86(4) |  |  |  | TDPAD | 1986Ma31 | ZP A324 123 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 84 Po 199 | 310 | 4.2 m | 13/2+ | 0.99(7) |  |  |  | NO/S | 1991Wo04 | JP G17 1673 (91) |
|  |  |  |  |  |  |  |  |  |  |  |
| 84 Po 200 | 1774 | 61 ns | 8+ | +7.44(16) |  |  |  | TDPAD | 1986Ma31 | ZP A324 123 (86) |
|  |  |  |  |  | 1.38(7) | R | [210Po 1557] | TDPAD, R | 1987Ma65 | HFI 34 47 (87) |
|  | 2596 | 100 ns | 11- | +11.9(2) |  |  |  | TDPAD | 1986Ma31 | ZP A324 123 (86) |
|  | 2830 | 270 ns | 12+ | -1.79(2) |  |  |  | TDPAD | 1986Ma31 | ZP A324 123 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 84 Po 201 | 0 | 15.3 m | 3/2- | 0.94(8) |  |  |  | NO/S | 1991Wo04 | JP G17 1673 (91) |
|  | 425 | 8.9 m | 13/2+ | 1.00(7) |  |  |  | NO/S | 1991Wo04 | JP G17 1673 (91) |
|  |  |  |  |  |  |  |  |  |  |  |
| 84 Po 202 | 1712 | 110 ns | 8+ | 7.45(12) |  |  |  | TDPAD | 1976Ha56 | NP A273 253 (76) |
|  |  |  |  |  | 1.21(16) | R |  | LEMS | 1997Ne06 | NP A625 668 (97) |
|  | 2625 | 85 ns | 11- | 11.9(4) |  |  |  | TDPAD | 1976Ha56 | NP A273 253 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 84 Po 203 | 0 | 36.7 m | 5/2- | 0.74(6) |  |  |  | NO/S | 1991Wo04 | JP G17 1673 (91) |
|  |  |  |  | (+)0.74(3) |  |  |  | NO/S | 1987VaZH | Cf87Melb 174 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 84 Po 204 | 1639 | 158 ns | 8+ | +7.38(10) |  |  |  | SOPAD | 1973Br14 | NP A206 452 (73) |
|  |  |  |  |  | 1.14(5) | R | [210Po 1557] | TDPAD | 1987Ma65 | HFI 34 47 (87) |
|  | 3565 | 12 ns | 15- | 5.6(6) |  |  | [208Po 1524] | TDPAD | 1982Ha16/1983He09 | ZP A305 1 (82)/ZP A311 351 (83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 84 Po 205 | 0 | 1.66 h | 5/2- | +0.76(6) |  |  | [207Po] | NMR/ON | 1983He09 | ZP A311 351 (83) |
|  | 880 | 640 s | 13/2+ | -0.95(5) |  |  |  | TDPAD | 1974BrXD | Cf74Upp 116 (74) |
|  |  |  |  |  |  |  |  |  |  |  |
| 84 Po 206 | 1586 | 212 ns | 8+ | +7.34(7) |  |  |  | SOPAD, TDPAD | 1973Br14 | NP A211 38 (73)/NP A206 452 (73) |
|  |  |  |  |  | 1.02(4) | R | [210Po 1557] | TDPAD | 1987Ma65 | HFI 34 47 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 84 Po 207 | 0 | 5.79 h | 5/2- | +0.79(6) |  |  |  | NMR/ON | 1983He09 | ZP A311 351 (83) |
|  | 1115 | 47 s | 13/2+ | -0.910(14) |  |  |  | TDPAD | 1973Ri06 | PL 44B 456 (73) |
|  | 2380 | 43 ns | 25/2+ | 5.41(4) |  |  |  | TDPAD | 1985Ro07 | PS 31 122 (85) |
|  |  |  |  |  |  |  |  |  |  |  |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
| 84 Po 208 | 1524 | 4.3 ns | 6+ | +5.3(6) |  |  | [Bhf PoNi] | TDPAD, R | 1982Ha16/1983He09 | ZP A305 1 (82)/ZP A311 351 (83) |
|  | 1528 | 380 ns | 8+ | +7.37(5) |  |  |  | SOPAD, TDPAD | 1976Ha56 | NP A273 253 (76)/NP A211 38 (73) |
|  |  |  |  |  | 0.90(4) | R | [210Po 1557] | TDPAD | 1987Ma65 | HFI 34 47 (87) |
|  | 2703 | 8.0 ns | 11- | 12.11(14) |  |  |  | TDPAD | 1985Ro07 | PS 31 122 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 84 Po 209 | 0 | 102 y | 1/2- | 0.68(8) |  |  |  | O | 1966Ch\*\* | JOSA 56 1292 (66) |
|  | 1418 | 24.4 ns | (13/2)- | 6.13(9) |  |  |  | TDPAD | 1976Ha56 | NP A273 253 (76) |
|  | 1473 | 98.1 ns | (17/2-) | 7.75(5) |  |  |  | TDPAD | 1976Ha56/1974Na02 | NP A273 253 (76)/NIM 114 349 (74) |
|  |  |  |  |  | (-)0.39(8) | R | [210Po 1557] | TDPAD | 1983Da01 | NP A394 245 (83) |
|  | 4266 | 118 ns | 31/2- | +9.68(8) |  |  | [208Po 1528] | TDPAD | 1976Re12 | PS 14 95 (76) |
|  |  |  |  |  |  |  |  |  |  |  |
| 84 Po 210 | 1473 | 43 ns | 6+ | 5.48(5) |  |  |  | TDPAD | 1976Ha56 | NP A273 253 (76) |
|  | 1557 | 96 ns | 8+ | +7.35(5) |  |  |  | TDPAD | 1976Ha56 | NP A273 253 (76) |
|  |  |  |  |  | (-)0.55(2) |  | est. from B(E2) | not measured | 1987Ma65/1983Da01 | HFI 34 47 (87)/NP A394 245 (83) |
|  | 2849 | 20.1 ns | 11- | +12.20(9) |  |  |  | TDPAD | 1976Ha56/1976Re12 | NP A273 253 (76)/PS 14 95 (76) |
|  |  |  |  |  | -0.86(11) | R | [210Po 1557] | TDPAD | 1991Be03 | NP A522 483 (91) |
|  |  |  |  |  | -0.8(2) |  | [210Po 1557] | TDPAD | 1983Da01 | NP A394 245 (83) |
|  | 4372 | 51 ns | 13- | 6.8(2) |  |  |  | TDPAD | 1985Be22 | PS 31 333 (85) |
|  |  |  |  |  | -0.90(7) | R | [210Po 1557] | TDPAD | 1991Be03 | NP A522 483 (91) |
|  |  |  |  |  | (-)0.62(11) |  | [210Po 1557] | TDPAD | 1983Da01 | NP A394 245 (83) |
|  | 5058 | 265 ns | 16+ | 9.84(8) |  |  |  | TDPAD | 1985Be22 | PS 31 333 (85) |
|  |  |  |  |  | -1.30(2) | R | [210Po 1557] | TDPAD | 1991Be03 | NP A522 483 (91) |
|  |  |  |  |  | 1.34(8) |  | [210Po 1557] | TDPAD |  | BAPS 31 1236 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 84 Po 211 | 1065 | 16 ns | 15/2- | -0.38(15) |  |  |  | IPAD | 1989Ra17 | JPJS 34 287 (73) |
|  |  |  |  |  |  |  |  |  |  |  |
| 85 At 207 | 2117 | 108 ns | 25/2+ | +3.75(13) |  |  | [208Po 1528] | TDPAD | 1978Sj01/1981Sj01 | PL 76B 397 (78)/PR C23 272 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 85 At 208 | 1090 | 48 ns | 10- | +2.69(3) |  |  |  | TDPAD | 1985No09 | ZP A322 463 (85) |
|  | 2276 | 1.5s | 16- |  | (-)1.67(18) | R | [211At 1417] | LEMS | 1991Sc15 | PR C43 2566 (91) |
|  |  |  |  |  |  |  |  |  |  |  |
| 85 At 209 | 1428 | 26 ns | 21/2- | +10.0(2) |  |  |  | TDPAD | 1976Sj01 | PR C14 1023 (76) |
|  |  |  |  |  | (-)0.78(6) | R | [211At 1417] | TDPAD/R | 1983Ma08/1995Ba66 | PL 122B 27 (83)/NP A591 104 (1995) |
|  | 2429 | 890 ns | 29/2+ | 15.38(14) |  |  |  | TDPAD | 1987Ma65 | HFI 34 47 (87) |
|  |  |  |  |  | 1.50(15) |  | [211At 1417] | LEMS | 1991Sc15 | PR C43 2566 (91) |
|  |  |  |  |  | (-)1.49(9) | R | [211At 1417] | TDPAD/R | 1983Ma08/1995Ba66 | PL 122B 27 (83)/NP A591 104 (1995) |
|  |  |  |  |  |  |  |  |  |  |  |
| 85 At 210 | 1363 | 28.4 ns | 11+ | +9.8(3) |  |  |  | TDPAD |  | ARRIP 140 (74) |
|  |  |  |  |  | (-)0.64(5) | R | [211At 1417] | TDPAD/R | 1983Ma08/1995Ba66 | PL 122B 27 (83)/NP A591 104 (1995) |
|  | 2550 | 480 ns | 15- | +15.68(2) |  |  |  | TDPAD |  | Th Berger (87) |
|  |  |  |  | 15.48(15) |  |  |  | TDPAD | 1987Ma65 | HFI 34 47 (87) |
|  |  |  |  | 15.57(15) |  |  |  | TDPAD, R | 1978Ra03 | ZP A284 357 (78) |
|  |  |  |  |  | (-)1.21(7) |  | [211At 1417] | LEMS | 1991Sc15 | PR C43 2566 (91) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | 1.21(7) | R | [211At 1417] | TDPAD/R | 1983Ma08/1995Ba66 | PL 122B 27 (83)/NP A591 104 (1995) |
|  | 4028 | 5.9 s | 19+ | 13.26(13) |  |  |  | TDPAD | 1987Ma65 | HFI 34 47 (87) |
|  |  |  |  | 14.0(5) |  |  | [210At 2550] | TDPAD | 1978Ra03 | ZP A284 357 (78) |
|  |  |  |  |  | (-)2.16(18) | R | [211At 1417] | LEMS | 1991Sc15 | PR C43 2566 (91) |
|  |  |  |  |  |  |  |  |  |  |  |
| 85 At 211 | 1417 | 35.1 ns | 21/2- | +9.56(9) |  |  |  | TDPAD | 1976Ha62/1975In01 | HFI 2 334 (76)/PR C11 243 (75) |
|  |  |  |  |  | (-)0.524(10) |  | estimated | B(E2) | 1983Ma08/1995Ba66 | PL 122B 27 (83)/NP A591 104 (1995) |
|  | 2641 | 50.8 ns | 29/2+ | +15.31(13) |  |  |  | TDPAD | 1976Ha62/1975In01 | HFI 2 334 (76)/PR C11 243 (75) |
|  |  |  |  |  | (-)1.01(7) | R | [211At 1417] | TDPAD/R | 1983Ma08/1995Ba66 | PL 122B 27 (83)/NP A591 104 (1995) |
|  |  |  |  |  | 1.0(2) |  | [211At 1417] | TDPAD | 1983Ma08 | PL 122B 27 (83) |
|  | 4816 | 4.2 s | 39/2- | 13.46(14) |  |  |  | TDPAD | 1985Be22 | PS 31 333 (85) |
|  |  |  |  |  | (-)1.88(19) | R | [211At 1417] | LEMS | 1991Sc15 | PR C43 2566 (91) |
|  |  |  |  |  |  |  |  |  |  |  |
| 85 At 212 | 888 | 19.4 ns | 11+ | 5.94(11) |  |  |  | TDPAD | 1994By01 | NP A567 445 (94) |
|  |  |  |  | 5.95(12) |  |  |  | TDPAD | 1979Sj01 | PR C20 960 (79) |
|  | 1616 | 37 ns | 15- | 9.46(8) |  |  |  | TDPAD | 1994By01 | NP A567 445 (94) |
|  |  |  |  | 9.33(15) |  |  |  | TDPAD | 1979Sj01 | PR C20 960 (79) |
|  |  |  |  |  |  |  |  |  |  |  |
| 85 At 217 | 0 | 32 ms | 9/2- | 3.8(2) |  |  |  | NO/S | 1992Li26 | HFI 75 323 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 86 Rn 203 | 361 | 28 s | (13/2+) | -0.960(11) |  |  | [209Rn] | CFBLS | 1987Bo29 | HFI 34 25 (87) |
|  |  |  |  |  | +1.28(13) | R | [209Rn] | CFBLS | 1987OtZW | CERN EP/87 51 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 86 Rn 205 | 0 | 2.83 m | 5/2- | +0.802(9) |  |  | [209Rn] | CFBLS | 1987Bo29 | HFI 34 25 (87) |
|  |  |  |  |  | +0.062(6) | R | [209Rn] | CFBLS | 1987OtZW | CERN EP/87 51 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 86 Rn 206 | 1922 | 13.5 ns | 8+ | 6.6(4) |  |  |  | TDPAD | 1981Ma28 | HFI 9 87 (81) |
|  | 2476 | 65 ns | (10-) | 11.20(10) |  |  |  | TDPAD | 1981Ma28 | HFI 9 87 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 86 Rn 207 | 0 | 9.3 m | 5/2- | +0.816(9) |  |  | [209Rn] | CFBLS | 1987Bo29 | HFI 34 25 (87) |
|  |  |  |  |  | +0.22(2) | R | [209Rn] | CFBLS | 1987OtZW | CERN EP/87 51 (87) |
|  | 899 | 180 s | 13/2+ | -0.903(3) |  |  |  | TDPAD | 1981Ma28 | HFI 9 87 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 86 Rn 208 | 1826 | 490 ns | 8+ | 6.98(8) |  |  |  | TDPAD | 1981Ma28 | HFI 9 87 (81) |
|  |  |  |  |  | 0.41(5) | R | [212Rn 1694] | TDPAD | 1986Be40 | PL 182B 11 (86) |
|  | 2615 | 22 ns | 10- | 10.77(10) |  |  |  | TDPAD | 1981Ma28 | HFI 9 87 (81) |
|  |  |  |  |  |  |  |  |  |  |  |
| 86 Rn 209 | 0 | 29 m | 5/2- | (+)0.8388(4) |  |  | [129Xe 236] | N, OP/RD | 1988Ki03 | PRL 60 2133 (88) |
|  |  |  |  |  | +0.31(3) | R |  | CFBLS | 1987OtZW | CERN EP/87 51 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 86 Rn 210 | 1665+x | 644 ns | (8+) | 7.18(6) |  |  |  | TDPAD | 1986Po01 | NP A448 189 (86) |
|  |  |  |  | 7.06(8) |  |  |  | TDPAD | 1981Ma28 | HFI 9 87 (81) |
|  |  |  |  |  | 0.32(4) | R | [212Rn 1694] | TDPAD | 1986Be40 | PL 182B 11 (86) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  | 2563+x | 64 ns | (11)- | 12.16(11) |  |  |  | TDPAD | 1981Ma28 | HFI 9 87 (81) |
|  | 3248+x | 72 ns | (14)+ | 14.92(10) |  |  |  | TDPAD | 1986Po01 | NP A448 189 (86) |
|  |  |  |  | 14.6(3) |  |  |  | TDPAD | 1981Ma28 | HFI 9 87 (81) |
|  | 3812+x | 1.05 s | (17)- | 17.88(9) |  |  |  | TDPAD | 1986Po01 | NP A448 189 (86) |
|  |  |  |  | 17.7(2) |  |  |  | TDPAD | 1981Ma28 | HFI 9 87 (81) |
|  |  |  |  |  | 0.89(10) | R | [212Rn 1694] | TDPAD | 1986Be40 | PL 182B 11 (86) |
|  | 4993+ | 12.3 ns | (20)+ | 22.3(1) |  |  |  |  | 1986Po01 | NP A448 189 (86) |
|  | 6468+ | 1.04 s | (22)+ | 15.42(15) |  |  |  |  | 1986Po01 | NP A448 189 (86) |
|  | 7310+ | 34 ns | (25)- | 18.3(2) |  |  |  |  | 1986Po01 | NP A448 189 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 86 Rn 211 | 0 | 14.6 h | 1/2- | +0.601(7) |  |  | [209Rn] | CFBLS | 1988Ki03 | PRL 60 2133 (88) |
|  | 1578+x | 596 ns | 17/2- | +7.75(8) |  |  |  | TDPAD | 1985Po06 | PL 154B 263 (85) |
|  |  |  |  |  | 0.19(2) | R | [212Rn 1694] | TDPAD | 1985Da14 | PRL 55 1269 (85) |
|  | 3926+x | 40 ns | 35/2+ | +17.8(2) |  |  |  | TDPAD | 1985Po06 | PL 154B 263 (85) |
|  | 5246+y | 14 ns | 43/2- | +15.9(4) |  |  |  | TDPAD | 1985Po06 | PL 154B 263 (85) |
|  | 6100+y | 29 ns | 49/2+ | +18.8(2) |  |  |  | TDPAD | 1985Po06 | PL 154B 263 (85) |
|  | 8855+y | 201 ns | 63/2- | +19.6(2) |  |  |  | TDPAD | 1985Po06 | PL 154B 263 (85) |
|  |  |  |  |  | 1.6(2) | R | [212Rn 1694] | TDPAD | 1985Da14 | PRL 55 1269 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 86 Rn 212 | 1502 | 8.8 ns | 4+ | 4.0(2) |  |  |  | TDPAD | 1988St17 | NP A486 397 (88) |
|  | 1640 | 118 ns | 6+ | 5.45(5) |  |  |  | TDPAD | 1988St17 | NP A486 397 (88) |
|  | 1694 | 0.91 s | 8+ | +7.15(2) |  |  |  | TDPAD, SOPAD | 1979Ho06/1978Ha50 | NP A317 520 (79)/HFI 4 219 (78) |
|  |  |  |  | 7.16(6) |  |  |  | TDPAD | 1988St17 | NP A486 397 (88) |
|  |  |  |  |  | (-)0.18(2) |  | [B(E2)] | TDPAD, R | 1985Da13 | PC Dafni (87)/NP A441 501 (85) |
|  | 3358 | 7.4 ns | 14+ | 15.0(4) |  |  |  | TDPAD | 1988St17 | NP A486 397 (88) |
|  | 4067 | 29 ns | 17- | 17.9(2) |  |  |  | TDPAD | 1988St17 | NP A486 397 (88) |
|  |  |  |  | 17.9(3) |  |  |  | TDPAD | 1979Ho06 | NP A317 520 (79) |
|  |  |  |  |  |  |  |  |  | 1977Ho17 | PRL 39 389 (77) |
|  | 6167+x | 104 ns | 22+ | 15.8(2) |  |  |  | TDPAD | 1988St17 | NP A486 397 (88) |
|  |  |  |  | 15.8(2) |  |  |  | TDPAD | 1979Ho06 | NP A317 520 (79) |
|  |  |  |  |  |  |  |  |  | 1977Ho17 | PRL 39 389 (77) |
|  | 7135+x | 18 ns | 25- | 17.8(5) |  |  |  | TDPAD | 1979Ho06 | NP A317 520 (79)/JPJS 44 605 (78) |
|  |  |  |  |  |  |  |  |  | 1977Ho17 | PRL 39 389 (77) |
|  | 7871+x | 14 ns | 27- | 17.0(8) |  |  |  | TDPAD | 1979Ho06 | NP A317 520 (79)/JPJS 44 605 (78) |
|  |  |  |  |  |  |  |  |  | 1977Ho17 | PRL 39 389 (77) |
|  | 8571+x | 154 ns | 30+ | 19.71(9) |  |  |  | TDPAD | 1979Ho06 | NP A317 520 (79)/JPJS 44 605 (78) |
|  |  |  |  |  |  |  |  |  | 1977Ho17 | PRL 39 389 (77) |
|  |  |  |  |  |  |  |  |  |  |  |
| 86 Rn 213 | 1664 | 29 ns | 21/2+ | 4.73(11) |  |  |  | TDPAD | 1988St10 | NP A482 692 (88) |
|  | 1664+x | 1 s | 25/2+ | 7.3(3) |  |  |  | TDPAD | 1976McZD | AECL-5614 13 (76) |
|  |  |  |  | 7.6(3) |  |  |  | TDPAD | 1988St10 | NP A482 692 (88) |
|  | 2187+x | 1.36 s | 31/2- | 9.90(8) |  |  |  | TDPAD | 1988St10 | NP A482 692 (88) |
|  | 3029+x | 26 ns | 37/2+ | 13.67(13) |  |  |  | TDPAD | 1988St10 | NP A482 692 (88) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  | 3494+x | 28 ns | 43/2- | 15.59(15) |  |  |  | TDPAD | 1988St10 | NP A482 692 (88) |
|  | 4506+x | 12 ns | 49/2+ | 19.9(3) |  |  |  | TDPAD | 1988St10 | NP A482 692 (88) |
|  | 5929+y | 164 ns | (55/2+) | 16.61(14) |  |  |  | TDPAD | 1988St10 | NP A482 692 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 86 Rn 219 | 0 | 3.96 s | 5/2+ | -0.442(5) |  |  | [209Rn] | CFBLS, R | 1988Ki03 | PRL 60 2133 (88) |
|  |  |  |  |  | +0.93(9) |  | [209Rn] | CFBLS, R | 1988NeZZ | Bk88 NFFS 126 (88) |
|  |  |  |  |  | +1.15(12) | R | [209Rn] | CFBLS | 1987OtZW | CERN EP/87-15 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 86 Rn 221 | 0 | 25 m | (7/2+) | -0.020(1) |  |  | [209Rn] | CFBLS | 1988Ki03 | PRL 60 2133 (88) |
|  |  |  |  |  | -0.38(4) |  | [209Rn] | CFBLS, R | 1988NeZZ | Bk88 NFFS 126 (88) |
|  |  |  |  |  | -0.47(5) | R | [209Rn] | CFBLS | 1987OtZW | CERN EP/87-15 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 86 Rn 222 | 186 | 0.32 ns | 2+ | +0.92(14) |  |  |  | IPAC | 1970Or02 | NP A148 516 (70) |
|  |  |  |  |  |  |  |  |  |  |  |
| 86 Rn 223 | 0 | 23.2 m | 7/2 | -0.776(8) |  |  | [209Rn] | CFBLS | 1988Ki03 | PRL 60 2133 (88) |
|  |  |  |  |  | +0.99(10) | R | [209Rn] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.80(8) |  | [209Rn] | CFBLS | 1988NeZZ | Bk88 NFFS 126 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| 86 Rn 225 | 0 | 4.5 m | 7/2- | -0.696(8) |  |  | [209Rn] | CFBLS | 1988Ki03 | PRL 60 2133 (88) |
|  |  |  |  |  | +1.04(10) | R | [209Rn] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.84(8) |  | [209Rn] | CFBLS | 1988NeZZ | Bk88 NFFS 126 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 87 Fr 202 | 0 | 0.30 s | (3+) | +3.90(5) |  |  | [211Fr] | CLS | 2013Fl09 | PRL 111 212501 (2013) |
|  | 0+x | 0.29 s | (10-) | +2.34(4) |  |  | [211Fr] | CLS | 2013Fl09 | PRL 111 212501 (2013) |
|  |  |  |  |  |  |  |  |  |  |  |
| 87 Fr 203 | 0 | 0.55s | (9/2-) | +3.73(4) |  |  | [211Fr] | CLS | 2013Fl09 | PRL 111 212501 (2013) |
|  |  |  |  |  |  |  |  |  |  |  |
| 87 Fr 204 | 0 | 1.8 s | 3+ | +4.02(6) |  |  | [211Fr] | CLS | 2013Vo10 | PRL 111 122501 (2013) |
|  |  |  |  |  |  |  |  |  |  |  |
| 87 Fr 205 | 0 | 3.9 s | 9/2- | +3.81(5) |  |  | [211Fr] | CLS | 2013Fl09 | PRL 111 212501 (2013) |
|  |  |  | 9/2- | +3.89(8) |  |  | [211Fr] | CLS | 2013Vo10 | PRL 111 122501 (2013) |
|  |  |  |  |  |  |  |  |  |  |  |
| 87 Fr 206 | 0 | 16 s | 3+ | +3.97(6) |  |  | [211Fr] | CLS | 2013Vo10 | PRL 111 122501 (2013) |
|  |  |  |  |  |  |  |  |  |  |  |
| 87 Fr 207 | 0 | 14.8 s | 9/2- | +3.89(8) |  |  | [211Fr] | ABLS | 1985Co24 | PL 163B 66 (85) |
|  |  |  |  |  | -0.16(5) st | R |  | ABLS | 1985Co24 | PL 163B 66 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 87 Fr 208 | 0 | 58.6 s | 7+ | +4.75(10) |  |  | [211Fr] | ABLS | 1985Co24/1986Ek02 | PL 163B 66 (85)/PS 34 624 (86) |
|  |  |  |  |  | 0.00(4) | R |  | ABLS | 1985Co24 | PL 163B 66 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 87 Fr 209 | 0 | 50 s | 9/2- | +3.95(8) |  |  | [211Fr] | ABLS | 1985Co24/1986Ek02 | PL 163B 66 (85)/PS 34 624 (86) |
|  |  |  |  |  | -0.24(2) st | R |  | ABLS | 1985Co24 | PL 163B 66 (85) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  |  |  |  |  |  |  |
| 87 Fr 210 | 0 | 3.2 m | 6+ | +4.38(5) |  |  | [211Fr] | TLS | 2008GO11 | PRL 100 172502 (08) |
|  |  |  |  | +4.40(9) |  |  | [211Fr] | ABLS | 1985Co24 | PL 163B 66 (85) |
|  |  |  |  |  | +0.19(2) st | R |  | ABLS | 1985Co24 | PL 163B 66 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 87 Fr 211 | 0 | 3.1 m | 9/2- | +4.00(8) |  |  |  | AB/D | 1986Ek02 | PS 34 624 (86) |
|  |  |  |  |  | -0.19(3) st | R |  | ABLS | 1985Co24 | PL 163B 66 (85) |
|  | 2423 | 146 ns | 29/2+ | 15.37(15) |  |  |  | TDPAD | 1986By01 | NP A448 137 (86) |
|  |  |  |  |  | -1.07(18) | R | [213Fr 2538] | LEMS | 1991Ha02 | PR C43 514 (91) |
|  | 4657 | 123 ns | 45/2- | 24.3(2) |  |  |  | TDPAD | 1986By01 | NP A448 137 (86) |
|  |  |  |  |  | -2.0(6) | R | [213Fr 2538] | LEMS | 1991Ha02 | PR C43 514 (91) |
|  |  |  |  |  |  |  |  |  |  |  |
| 87 Fr 212 | 0 | 19.3 m | 5+ | +4.62(9) |  |  | [211Fr] | ABLS | 1985Co24 | PL 163B 66 (85) |
|  |  |  |  |  | -0.10(1) st | R |  | ABLS | 1985Co24 | PL 163B 66 (85) |
|  | 1551 | 27 s | 11+ | 9.89(4) |  |  |  | SOPAD | 1977Be56 | HFI 3 297 (77) |
|  | 2492 | 604 ns | (15-) | +15.65(12) |  |  |  | TDPAD | 1989By01 | PL B217 38 (89) |
|  |  |  |  | 15.60(15) |  |  |  | TDPAD | 1986By01 | NP A448 137 (86) |
|  |  |  |  |  | (-)0.84(13) | R | [213Fr 2538] | TDPAD | 1990By03 | NP A516 145 (90) |
|  |  |  |  |  | -0.80(12) |  | [213Fr 2538] | LEMS | 1991Ha02 | PR C43 514 (91) |
|  | 4834 | 4.2 ns | 22+ | 22(4) |  |  |  | TDPAD | 1986By01 | NP A448 137 (86) |
|  | 5854 | 312 ns | (27-) | 21.9(3) |  |  |  | TDPAD | 1986By01 | NP A448 137 (86) |
|  |  |  |  |  | (-)1.7(3) | R | [213Fr 2538] | TDPAD | 1990By03 | NP A516 145 (90) |
|  |  |  |  |  | -1.5(3) |  | [213Fr 2538] | LEMS | 1991Ha02 | PR C43 514 (91) |
|  |  |  |  |  |  |  |  |  |  |  |
| 87 Fr 213 | 0 | 34.7 s | 9/2- | +4.02(8) |  |  | [211Fr] | ABLS | 1985Co24/1986Ek02 | PL 163B 66 (85)/PS 34 624 (86) |
|  |  |  |  |  | -0.14(2) st | R |  | ABLS | 1985Co24 | PL 163B 66 (85) |
|  | 1411 | 18 ns | 17/2- | 7.5(14) |  |  |  | TDPAD | 1986By01 | NP A448 137 (86) |
|  | 1590 | 499 ns | 21/2- | 9.4(2) |  |  |  | TDPAD | 1986By01 | NP A448 137 (86) |
|  |  |  |  | 9.32(3) |  |  |  | TDPAD, R | 1977Be56/1978Ha50 | HFI 3 397 (77)/HFI 4 219 (78) |
|  | 2538 | 243 ns | 29/2+ | +15.30(7) |  |  |  | TDPAD | 1989By01 | PL B217 38 (89) |
|  |  |  |  | 15.23(14) |  |  |  | TDPAD | 1986By01 | NP A448 137 (86) |
|  |  |  |  | 15.22(3) |  |  |  | TDPAD | 1977Be56/1978Ha50 | HFI 3 397 (77)/HFI 4 219 (78) |
|  |  |  |  |  | [-0.70(7)] |  | calculated | not measured | 1990By03 | NP A516 145 (90) |
|  | 4993 | 13 ns | 45/2- | 23.2(7) |  |  |  | TDPAD | 1986By01 | NP A448 137 (86) |
|  |  |  |  | 22.3(6) |  |  |  | TDPAD | 1979Ho06 | NP A317 520 (79) |
|  | 8095 | 3.1 s | 65/2- | +22.6(2) |  |  | [213Fr 2538] | TDPAD | 1989By01 | PL B217 38 (89) |
|  |  |  |  |  | (-)2.2(5) | R | [213Fr 2538] | LEMS | 1991Ha02 | PR C43 514 (91) |
|  |  |  |  |  |  |  |  |  |  |  |
| 87 Fr 214 | 640 | 103 ns | 11+ | +5.62(7) K, d |  |  | [213Fr 2538] | TDPAD | 1994By01 | NP A567 445 (94) |
|  |  |  |  |  | 0.8(2) | R | [213Fr 2538] | LEMS | 1995Ne06 | PR C51 3483 (95) |
|  | 1663 or | 11 or 10 ns | 14- or 15- | +8.5(4) K, d |  |  | [213Fr 2538] | TDPAD | 1994By01 | NP A567 445 (94) |
|  | 1734 |  |  |  |  |  |  |  |  |  |
|  | 4318+D | 8 ns | 27- | +19.7(8) K, d |  |  | [213Fr 2538] | TDPAD | 1994By01 | NP A567 445 (94) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  | 6477+D' | 108 ns | 33+ | +22(3) |  |  | [213Fr 2538] | TDPAD | 1994By01 | NP A567 445 (94) |
|  |  |  | 32+ or 33+ | | 2.2(5) | R | [213Fr 2538] | LEMS | 1995Ne06 | PR C51 3483 (95) |
|  |  |  |  |  |  |  |  |  |  |  |
| 87 Fr 215 | 1500+/-75 | 4 ns | (21/2)+/-1 | g=0.33(10) |  |  |  | TDPAD | 1984De16 | NP A419 163 (84) |
|  | 2016 | 4.7 ns | 29/2+ | 7(3) |  |  |  | TDPAD | 1984De16 | NP A419 163 (84) |
|  | 2251 | 5.3 ns | 33/2+ | 8(2) |  |  |  | TDPAD | 1984De16 | NP A419 163 (84) |
|  | 3068 | 14.6 ns | 39/2- | 9.2(2) |  |  |  | TDPAD | 1984De16 | NP A419 163 (84) |
|  |  |  |  |  |  |  |  |  |  |  |
| 87 Fr 220 | 0 | 27.4 s | 1+ | -0.67(1) |  |  | [211Fr] | ABLS | 1985Co24 | PL 163B 66 (85) |
|  |  |  |  |  | +0.47(3) st | R |  | ABLS, R | 1985Co24/1987Co19 | PL 163B 66 (85)/NP A468 1 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 87 Fr 221 | 0 | 4.8 m | 5/2- | +1.58(3) |  |  | [211Fr] | ABLS | 1985Co24 | PL 163B 66 (85) |
|  |  |  |  |  | -0.98(6) st | R |  | ABLS, R | 1985Co24/1987Co19 | PL 163B 66 (85)/NP A468 1 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 87 Fr 222 | 0 | 14.2 m | 2- | +0.63(1) |  |  | [211Fr] | ABLS | 1985Co24 | PL 163B 66 (85) |
|  |  |  |  |  | +0.51(4) st | R | [211Fr] | ABLS | 1985Co24 | PL 163B 66 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 87 Fr 223 | 0 | 21.8 m | 3/2(-) | +1.17(2) |  |  | [211Fr] | ABLS | 1985Co24 | PL 163B 66 (85) |
|  |  |  |  |  | +1.17(1) | R | [211Fr] | ABLS | 1985Co24 | PL 163B 66 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 87 Fr 224 | 0 | 3.3 m | 1(-) | +0.40(1) |  |  | [211Fr] | ABLS | 1985Co24 | PL 163B 66 (85) |
|  |  |  |  |  | +0.517(4) st | R | [211Fr] | ABLS | 1985Co24 | PL 163B 66 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 87 Fr 225 | 0 | 3.9 m | 3/2- | +1.07(2) |  |  | [211Fr] | ABLS | 1985Co24 | PL 163B 66 (85) |
|  |  |  |  |  | +1.32(5) st | R |  | ABLS, R | 1985Co24/1987Co19 | PL 163B 66 (85)/NP A468 1 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 87 Fr 226 | 0 | 48 s | 1 | +0.0712(14) |  |  | [211Fr] | ABLS | 1986Du16 | JPPa 47 1903 (86) |
|  |  |  |  | +0.071(2) |  |  | [211Fr] | ABLS | 1985Co24 | PL 163B 66 (85) |
|  |  |  |  |  | -1.35(2) st | R |  | ABLS | 1985Co24 | PL 163B 66 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 87 Fr 227 | 0 | 2.4 m | 1/2+ | +1.50(3) |  |  | [211Fr] | ABLS | 1985Co24 | PL 163B 66 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 87 Fr 228 | 0 | 39 s | 2- | -0.76(2) |  |  | [211Fr] | ABLS | 1985Co24 | PL 163B 66 (85) |
|  |  |  |  |  | +2.38(5) st | R | [211Fr] | ABLS | 1985Co24 | PL 163B 66 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 88 Ra 209 | 0 | 4.7 s | 5/2- | +0.865(13) |  |  | [213,225Ra] | CFBLS, R | 1988Ah02/1987Ar20 | NP A483 244 (88)/PRL 59 771 (87) |
|  |  |  |  |  | +0.39(4) | R | [223Ra] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.40(4) st |  | [221,223Ra] | CFBLS | 1989Ne03 | ZP D11 105 (89) |
|  |  |  |  |  | +0.38(4) st |  |  | CFBLS | 1988Ah02/1987We03 | NP A483 244 (88)/ZP D4 227 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 88 Ra 211 | 0 | 13s | 5/2- | +0.878(4) |  |  | [213,225Ra] | CFBLS, R | 1988Ah02/1987Ar20 | NP A483 244 (88)/PRL 59 771 (87) |
|  |  |  |  |  | +0.46(4) | R | [223Ra] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +0.48(4) st |  | [221,223Ra] | CFBLS | 1989Ne03 | ZP D11 105 (89) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  | +0.46(5) st |  |  | CFBLS, R | 1988Ah02/1987We03 | NP A483 244 (88)/ZP D4 227 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 88 Ra 212 | 1958 | 10.9 s | 8+ | 7.10(7) |  |  |  | SOPAD | 1986Ko01 | PR C33 392 (86) |
|  |  |  |  |  | Q/Qref = 1.5(4) |  | [214Ra 1864] | LEMS | 1993Ne04 | NP A555 629 (93) |
|  | 2613 | 0.85 s | 11- | 12.0(2) |  |  |  | SOPAD | 1986Ko01 | PR C33 392 (86) |
|  |  |  |  |  |  |  |  |  |  |  |
| 88 Ra 213 | 0 | 2.7 m | 1/2- | +0.613(2) |  |  | [137Ba] | CFBLS | 1987Ar20/1988Ah02 | PRL 59 771 (87)/NP A483 244 (88) |
|  | 1770 | 2.1 ms | (17/2-) | 7.4(4) |  |  | [214Ra 1865] | LEMS | 1994Ne01 | PR C49 645 (94) |
|  |  |  |  |  | Q/Qref = 1.21(8) |  | [214Ra 1865] | LEMS | 1993Ne04 | NP A555 629 (93) |
|  |  |  |  |  |  |  |  |  |  |  |
| 88 Ra 214 | 1865 | 67s | 8+ | 7.08(3) |  |  |  | SOPAD | 1977Be56/1978Ha50 | HFI 3 397 (77)/HFI 4 219 (78) |
|  | 2683 | 295 ns | 11- | 11.98(8) |  |  |  | TDPAD | 1992St09 | NP A548 159 (92) |
|  |  |  |  | 11.94(11) |  |  |  | TDPAD | 1979Ho06 | NP A317 520 (79) |
|  | 3478 | 279 ns | 14+ | 14.29(6) |  |  |  | TDPAD | 1992St09 | NP A548 159 (92) |
|  |  |  |  | 14.31(13) |  |  |  | TDPAD | 1979Ho06 | NP A317 520 (79) |
|  | 4147 | 225 ns | 17- | 17.36(5) |  |  |  | TDPAD | 1992St09 | NP A548 159 (92) |
|  |  |  |  | 17.48(12) |  |  |  | TDPAD | 1979Ho06 | NP A317 520 (79) |
|  | 6577 | 128 ns | (25-) | 16.5(3) |  |  |  | TDPAD | 1992St09 | NP A548 159 (92) |
|  |  |  |  |  |  |  |  |  |  |  |
| 88 Ra 215 | 3757+x | 800 ns | (43/2-) | 15.78 (15) |  |  |  | SOPAD | 1989Ra17 | ARTIT 52 (85) |
|  |  |  |  | 15.61(6) |  |  |  | TDPAD | 1998St24 | NP A641 401 (98) |
|  | 4567+x | 15 ns | (49/2+) | 18.9(2) |  |  |  | TDPAD | 1998St24 | NP A641 401 (98) |
|  |  |  |  |  |  |  |  |  |  |  |
| 88 Ra 216 | 1508 | 0.5 ns | 6+ | g(avge) = 0.1(3) |  |  |  | TDPAD | 1990Sc29 | HFI 59 165 (90) |
|  | 1711 | 1.7 ns | 8+ | g(avge) = 0.1(3) |  |  |  | TDPAD | 1990Sc29 | HFI 59 165 (90) |
|  |  |  |  | +3(3) |  |  |  | IPAD |  | Cf83Meguro 155 (83) |
|  | 2026 | 0.6 ns | 10+ | +1(3) |  |  |  | TDPAD | 1990Sc29 | HFI 59 165 (90) |
|  | 2679 | 0.8 ns | 13- | -1(3) |  |  |  | TDPAD | 1990Sc29 | HFI 59 165 (90) |
|  | 3763 | 5.3 ns | 19- | +9.3(10) |  |  |  | TDPAD | 1990Sc29 | HFI 59 165 (90) |
|  |  |  |  | +9.7(6) |  |  |  | TDPAD | 1985Ad09 | NP A442 361 (85) |
|  | 5170 | 6.6 ns | 25- | +18(5) |  |  |  | TDPAD | 1990Sc29 | HFI 59 165 (90) |
|  |  |  | 25-/24+ | g = 0.63(6) |  |  |  | TDPAD | 1985Ad09 | NP A442 361 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 88 Ra 221 | 0 | 30 s | 5/2- | -0.180(2) |  |  | [213,225Ra] | CFBLS, R | 1988Ah02/1987Ar20 | NP A483 244 (88)/PRL 59 771 (87) |
|  |  |  |  |  | +1.92(6) | R | [223Ra] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +1.98(11) st |  |  | CFBLS | 1989Ne03 | ZP D11 105 (89) |
|  |  |  |  |  | +1.9(2) st |  |  | CFBLS, R | 1988Ah02/1987We03 | NP A483 244 (88)/ZP D4 227 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 88 Ra 223 | 0 | 11.44 d | 3/2+ | +0.271(2) |  |  | [213,225Ra] | CFBLS, R | 1988Ah02/1987Ar20 | NP A483 244 (88)/PRL 59 771 (87) |
|  |  |  |  |  | +1.21(3) | R |  | R | 2008Py02 | Mol Phys 106 1956 (2008) |
|  |  |  |  |  | +1.25(7) st |  |  | CFBLS | 1989Ne03 | ZP D11 105 (89) |
|  |  |  |  |  | +1.19(12) st |  |  | CFBLS, R | 1988Ah02/1987We03 | NP A483 244 (88)/ZP D4 227 (87) |
|  | 50 | 0.63 ns | 3/2- | +0.43(6) |  |  |  | IPAC | 1970Le13 | PR C2 672 (70) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  |  |  |  |  |  |  |
| 88 Ra 224 | 84 | 0.74 ns | 2+ | +0.9(2) |  |  |  | IPAC | 1973He13 | ZP 260 57 (73) |
|  |  |  |  |  |  |  |  |  |  |  |
| 88 Ra 225 | 0 | 14.8 d | 1/2- | -0.7338(15) |  |  | [137Ba] | CFBLS | 1987Ar20/1988Ah02 | PRL 59 771 (87)/NP A483 244 (88) |
|  |  |  |  |  |  |  |  |  |  |  |
| 88 Ra 227 | 0 | 42.2 m | 3/2+ | -0.404(2) |  |  | [213,225Ra] | CFBLS, R | 1988Ah02/1987Ar20 | NP A483 244 (88)/PRL 59 771 (87) |
|  |  |  |  |  | +1.53(6) | R | [223Ra] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +1.58(11) st |  | [221,223Ra] | CFBLS | 1989Ne03 | ZP D11 105 (89) |
|  |  |  |  |  | +1.50(15) st |  |  | CFBLS, R | 1988Ah02/1987We03 | NP A483 244 (88)/ZP D4 227 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 88 Ra 229 | 0 | 4.0 m | 5/2(+) | +0.503(3) |  |  | [213,225Ra] | CFBLS, R | 1988Ah02/1987Ar20 | NP A483 244 (88)/PRL 59 771 (87) |
|  |  |  |  |  | +2.99(12) | R | [223Ra] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +3.1(2) st |  | [221,223Ra] | CFBLS | 1989Ne03 | ZP D11 105 (89) |
|  |  |  |  |  | +3.0(3) st |  |  | CFBLS, R | 1988Ah02/1987We03 | NP A483 244 (88)/ZP D4 227 (87) |
|  |  |  |  |  |  |  |  |  |  |  |
| 89 Ac 215 | 1621 | 30 ns | 17/2- | 7.82(16) |  |  |  | TDPAD | 1983De08 | ZP A310 55(83) |
|  | 1796 | 185 ns | 21/2- | 9.7(2) |  |  |  | TDPAD | 1983De08 | ZP A310 55(83) |
|  | 2438+x | 335 ns | 29/2+ | 15.1(3) |  |  |  | TDPAD | 1983De08 | ZP A310 55(83) |
|  |  |  |  |  |  |  |  |  |  |  |
| 89 Ac 217 | 0 | 69 ns | 9/2- | +3.83(5) |  |  |  | TDPAD | 1985De14 | NP A436 311 (85) |
|  | 2013 | 740 ns | 29/2+ | +5.03(7) |  |  |  | TDPAD | 1985De14 | NP A436 311 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 89 Ac 227 | 0 | 21.77 y | 3/2- | +1.1(1) |  |  |  | O | 1955Fr26 | PR 98 1514 (55)/PR 111 1747 (58) |
|  |  |  |  |  | +1.7(2) | R |  | O | 1955Fr26 | PR 98 1514 (55)/PR 111 1747 (58) |
|  |  |  |  |  |  |  |  |  |  |  |
| 90 Th 229 | 0 | 7340 y | 5/2+ | +0.46(4) |  |  | [239Pu] | O | 1974Ge06 | JPPa 35 483 (74) |
|  |  |  |  |  | (+)3.11(16) |  |  | O | 2011Ca17 | PRL 106 223001 (2011) |
|  |  |  |  |  | +4.3(9) | R |  | O | 1974Ge06 | JPPa 35 483 (74) |
|  |  |  |  |  |  |  |  |  |  |  |
| 90 Th 232 | gsband |  |  | g(18-24)>g(10-16) |  |  |  | TF | 1992Ha03 | PRL 48 383 (82) |
|  |  |  |  | g(avge)=0.28(2) |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| 91 Pa 228 | 0 | 22 h | (3+) | 3.5(5) |  |  |  | NO/S | 1989He07 | NP A493 83 (89) |
|  |  |  |  |  |  |  |  |  |  |  |
| 91 Pa 230 | 0 | 17.4 d | (2-) | 2.0(2) |  |  |  | NO/S | 1989He07 | NP A493 83 (89) |
|  |  |  |  |  |  |  |  |  |  |  |
| 91 Pa 231 | 0 | 3.3x10\*4y | 3/2- | 2.01(2) |  |  |  | ENDOR | 1961Ax01 | PR 121 1630 (61) |
|  |  |  |  |  | [-1.72(5)] |  | estimated | from B(E2) | 1978Fr28 | PL A69 225 (1978) |
|  | 84 | 44 ns | 5/2+ |  | +0.7(2) | R | [231Pa] | ME | 1978Fr28 | PL A69 225 (1978) |
|  |  |  |  |  |  |  |  |  |  |  |
| 91 Pa 233 | 0 | 27.0 d | 3/2- | 4.0(7) |  |  |  | NO/S | 1989Ra17 | ARISKP (84) |
|  |  |  |  | +3.4(8) |  |  |  | AB | 1961Ma42 | NP 23 90 (61) |
|  |  |  |  |  | -3.0(4) | R | est efg | AB | 1961Ma42 | NP 23 90 (61) |

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| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  |  |  |  |  |  |  |  |
| 92 U 233 | 0 | 1.6x10\*5y | 5/2+ | (ref) |  |  | [235U] | ABLS | 1990Ga28 | BRASP 54 (5) 13 (90) |
|  |  |  |  | = 1.5604(14) |  |  |  |  |  |  |
|  |  |  |  | 0.59(5) |  |  | [235U] | EPR | 1983Lu10 | JP C16 6627 (83) |
|  |  |  |  |  | Q/Q(ref) |  | [235U] | ABLS | 1990Ga28 | BRASP 54 (5) 13 (90) |
|  |  |  |  |  | = 0.746(2) |  |  |  |  |  |
|  |  |  |  |  | 3.663(8) | R |  | Mu-X | 1984Zu02 | PRL 53 1888 (84) |
|  | 40 | 50 ps | 7/2+ |  | 0.64(3) | R |  | Mu-X | 1984Zu02 | PRL 53 1888 (84) |
|  |  |  |  |  |  |  |  |  |  |  |
| 92 U 235 | 0 | 7.0x10\*8y | 7/2- | -0.38(3) |  |  |  | CFBLS | 1983Ni08 | PRL 51 1749 (83) |
|  |  |  |  | -0.34(3) |  |  |  | EPR | 1983Lu10 | JP C16 6627 (83) |
|  |  |  |  | -0.46(3) |  |  |  | ABLDF | \*\*\*\*\*\*\*\*\*\*\*\* | OptL 4 63 (79) |
|  |  |  |  |  | 4.936(6) | R |  | Mu-X | 1984Zu02 | PRL 53 1888 (84) |
|  |  |  |  |  | 4.55(9) |  |  | Mu-X |  | JPJS 34 582 (73) |
|  | 46 | <60 ps | 9/2- |  | 1.87(3) | R |  | Mu-X | 1984Zu02 | PRL 53 1888 (84) |
|  |  |  |  |  |  |  |  |  |  |  |
| 92 U 238 | gsband |  |  | g(18-24)>g(10-16) |  |  |  | TF | 1992Ha03 | PRL 48 383 (82) |
|  |  |  |  | g(avge)=0.37(2) |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| 93 Np 237 | 0 | 2.1x10\*6y | 5/2+ | +3.14(4) |  |  |  | EPR, R | 1970Le29 | JCP 53 809 (70) |
|  |  |  |  | ~ +2.9 |  |  |  | ME | 1968St03 | PR 165 1319 (68) |
|  |  |  |  |  | +3.866(6) | R |  | Mu-X, Pi-X, ME | 1987De10/1969Du09 | PL 189B 7 (87)/PR 186 1296 (69) |
|  | 60 | 68 ns | 5/2- | +1.68(3) |  |  | [237Np] | ME | 1968Du02/1970Le29 | PR 171 316 (68)/JCP 53 809 (70) |
|  |  |  |  | +1.95(15) |  |  |  | TDPAC | 1967Gu08 | NP A104 588 (67) |
|  |  |  |  |  | +3.85(4) | R | [237Np] | ME | 1968Pi01/1968St03 | BAPS 13 28 (68)/PR 165 1319 (1968) |
|  |  |  |  |  |  |  |  |  |  |  |
| 93 Np 239 | 75 | 1.40 ns | 5/2- | +2.0(3) |  |  | [237Np 60] | IPAC | 1967Gu08 | NP A104 588 (67) |
|  |  |  |  |  |  |  |  |  |  |  |
| 94 Pu 237 | ~2300 | 85 ns | (3/2) | -0.68(5) |  |  |  | TDPAD | 1982Ra04/1982Ra04 | PRL 48 982 (82)/PRL 49 244(E) (82) |
|  | ~2600 | 1.1 s |  | g=+0.14(2) |  |  |  | TDPAD | 1974Ka06 | PRL 32 1009 (74) |
|  |  |  |  |  |  |  |  |  |  |  |
| 94 Pu 239 | 0 | 2.4x10\*4y | 1/2+ | +0.203(4) |  |  |  | AB/D | 1965Fa02 | PL 16 71 (65) |
|  | 8 | 36 ps | 3/2+ |  | -2.319(7) | R |  | Mu-X | 1986Zu01 | PL 167B 383 (86) |
|  | 57 | 101 ps | 5/2+ |  | -3.345(13) | R |  |  | 1986Zu01 | PL 167B 383 (86) |
|  | 76 | 83 ps | 7/2+ |  | -3.83(3) | R |  |  | 1986Zu01 | PL 167B 383 (86) |
|  | 285 | 1.12 ns | 5/2+ | -1.3(3) |  |  |  | IPAC | 1974Pa03 | PR C9 1515 (74) |
|  |  |  |  |  |  |  |  |  |  |  |
| 94 Pu 241 | 0 | 14.4 y | 5/2+ | -0.683(15) |  |  | [239Pu] | O | 1969Ge04 | Phca 42 581 (69) |
|  |  |  |  |  | +6(2) | R |  | O | 1964Ch10 | JPPa 25 825 (64) |
|  |  |  |  |  |  |  |  |  |  |  |
| 95 Am 239 | ~2500 | 163 ns | (7/2+) | (+)2.6(2) |  |  |  | TDPAD | 1985Ra28 | PL163B 327 (85) |
|  |  |  |  |  |  |  |  |  |  |  |
| 95 Am 241 | 0 | 432.7 y | 5/2- | +1.58(1) |  |  |  | ABLS | 1990Iz01 | JRNC 143 93 (90) |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Nucleus | Ex | T1/2 | I | nm | Q(b) |  | [Ref. Std.] | Method | NSR Keynumber | Journal Reference |
|  |  |  |  | +1.61(3) |  |  |  | AB/D | 1966Ar04 | PR 144 994 (66) |
|  |  |  |  |  | +3.8(1.2) |  |  | R | 1989De26 | ZP D13 181 (89) |
|  |  |  |  |  | +3.14(5) |  |  | ABLS | 1990Iz01 | JRNC 143 93 (90) |
|  |  |  |  |  | +4.2(13) |  |  | R | 1988Be30 | ZP A330 235 (88) |
|  |  |  |  |  | +4.34(5) | R |  | Mu-X | 1985Jo04 | PL B161 75 (1985) |
|  |  |  |  |  |  |  |  |  |  |  |
| 95 Am 242 | 0 | 16.0 h | 1- | +0.3879(15) |  |  |  | AB/D | 1966Ar04 | PR 144 994 (66) |
|  |  |  |  |  | -2.44(3) | R | [241Am] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | -2.4(7) |  | [241Am] | AB | 1966Ar04/1961Ma27 | PR 144 994 (66)/PR 124 1904 (61) |
|  | 49 | 152 y | 5- | +1.00(5) |  |  | [241Am] | ABLFS | 1988Be30 | ZP A330 235 (88) |
|  |  |  |  |  | +6.7(4) | R | [241Am] | R | 2013StZZ | IAEA Rept INDC(NDS)-0650 (2013) |
|  |  |  |  |  | +7(2) |  | [241Am] | ABLFS | 1988Be30 | ZP A330 235 (88) |
|  | 2200 | 14 ms | unknown | -1.14(8) [I=2] |  |  |  | LRSRD | 1996Ba52 | HFI 97/98 535 (96) |
|  |  |  |  | -1.14(8) [I=3] |  |  |  | LRSRD | 1996Ba52 | HFI 97/98 535 (96) |
|  |  |  |  |  |  |  |  |  |  |  |
| 95 Am 243 | 0 | 7370 y | 5/2- | +1.503(14) |  |  | [241Am] | ABLS | 1990Iz01 | JRNC 143 93 (90) |
|  |  |  |  | +1.61(4) |  |  | [241Am] | O | 1966Ar094/1956Ma31 | PR 144 994 (66)/PR 102 1108 (56) |
|  |  |  |  |  | +2.86(3) |  |  | ABLS | 1990Iz01 | JRNC 143 93 (90) |
|  |  |  |  |  | +4.32(6) | R |  | Mu-X | 1985Jo04 | PL B161 75 (1985) |
|  |  |  |  |  | +4.2(13) |  | [241Am] | O | 1956Ma31 | PR 102 1108 (56) |
|  | 84 | 2.3 ns | 5/2+ | +2.9(2) |  |  | [243Am] | ME | 1986Sa10 | PL 115A 71 (86) |
|  |  |  |  |  | +4.2(2) |  | [241Am] | ME | 1976Bo13 | JINC 38 1291 (1976) |
|  |  |  |  |  |  |  |  |  |  |  |
| 96 Cm 243 | 0 | 28.5 y | 5/2+ | 0.40(8) |  |  | [241Am] | EPR | 1973Ab03 | PL 44A 527 (73) |
|  |  |  |  |  |  |  |  |  |  |  |
| 96 Cm 245 | 0 | 8500 y | 7/2+ | 0.5(1) |  |  | [241Am] | EPR | 1970Ab03 | PR B1 3555 (70) |
|  |  |  |  |  |  |  |  |  |  |  |
| 96 Cm 247 | 0 | 1.6x10\*7y | 9/2- | 0.36(7) |  |  | [241Am] | EPR | 1973Ab03 | PL 44A 527 (73) |
|  |  |  |  |  |  |  |  |  |  |  |
| 97 Bk 249 | 0 | 320 d | 7/2+ | 2.0(4) |  |  | [241Am] | EPR | 1972Bo67 | PL 42A 93 (72) |
|  |  |  |  |  |  |  |  |  |  |  |
| 99 Es 253 | 0 | 20.4 d | 7/2+ | +4.10(7) |  |  |  | AB/D | 1975Go05 | PR A11 499 (75) |
|  |  |  |  |  | 6.7(8) | R |  | AB | 1975Go05 | PR A11 499 (75) |
|  |  |  |  |  |  |  |  |  |  |  |
| 99 Es 254 | 0 | 276 d | (7+) | 4.4(4) |  |  | [253Es] | NO | 2009Se09 | PR C79 064322 (09) |
|  | 78 | 39.3 h | 2+ | 2.90(7) |  |  | [253Es] | AB | 1975Go05 | PR A11 499 (75) |
|  |  |  |  |  | 3.7(5) | R | [253Es] | AB | 1975Go05 | PR A11 499 (75) |