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TABLE OF NUCLEAR MAGNETIC DIPOLE AND ELECTRIC QUADRUPOLE MOMENTS

N.J. STONE

Oxford Physics, Clarendon Laboratory, Parks Road, Oxford U.K. OX1 3PU and
Department of Physics and Astronomy, University of Tennessee, Knoxville, USA, TN 37996-1200

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Nuclear Data Section
International Atomic Energy Agency
Vienna International Centre
PO Box 100
A-1400 Vienna
Austria

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Oxford Physics, Clarendon Laboratory, Parks Road, Oxford U.K. OX1 3PU and
Department of Physics and Astronomy, University of Tennessee, Knoxville, USA, TN 37996-1200.

This Table is a compilation of experimental measurements of static magnetic dipole and electric quadrupole moments of ground states and excited states of atomic nuclei throughout the periodic table. To aid identification of the states, their excitation energy, half-life, spin and parity are given, along with a brief indication of the method and any reference standard used in the particular measurement. The literature search covers the period to late 2010. Many of the entries prior to 1988 follow those in Raghavan P., Atomic and Nuclear Data Tables 42, 189 (1989).

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INTRODUCTION

This Table comprises a listing of measured magnetic dipole and electric quadrupole moments of ground states and excited states of atomic nuclei. Results obtained by all experimental methods are included and the literature search covers the period approximately to mid-December 2010. The Table includes many listings from the two most recent previous compilations [1,2], mainly without change, but amended where appropriate. To assist in definitive identification of the nuclear state involved, the table includes the energy (in keV), half-life, and spin/parity of the state, taken either from the authors or from recent compilations. The Table follows its predecessors in listing also any reference isotope and state involved in extraction of the quoted moment from experiment. The method used in the experiment is given, although for all details of the method reference should be made to the original publication. References are given are given in the Table in the ENSDF keyword format [as used in the NNDC Nuclear Data compilation] and a full listing of authors and journal references follows the Table. A listing of abbreviations used to identify methods is given following the explanation of the Table. Some comments on the results are made using abbreviations given in the Table entry. The abbreviations used for these comments are also listed following the explanation below.

POLICIES

Signs

Signs are given when the sign can be determined from experimental data. Where the sign is not given by the measurement, no sign is given in the Table, although it can sometimes be inferred either from systematics or from the magnitude of the result.

Results and Uncertainties

Experimental values and their associated errors are as given by the authors subject to a policy of limiting significant figures. Numerical errors with digits above 15 have been rounded to 2 and results have been rounded to give no more significant figures than the rounded error would allow. Thus a published value 0.953(65) has been rounded to 0.95(7) and 0.25(16) rounded to 0.3(2).

Magnetic Dipole Moments

The fundamental reference is to the adopted proton moment +2.79284734(3) nuclear magnetons (nm), after diamagnetic correction, based on the most recent recommended values for physical constants [3]. This has been revised downward since the last compilation [2] by 0.018 ppm. Other subsidiary dipole moment standards are set using high precision experimental ratios of nuclear magnetic resonance frequencies for heavier stable nuclei (^{11}B, ^{14}N, ^{35}Cl, ^{45}Sc, ^{111}Cd), and from optical pumping frequency for ^{199}Hg, compared to that of the proton or deuteron. References to these are given where they appear in the Table.

Corrections for diamagnetism, Knight shift, paramagnetism and hyperfine anomaly are noted by annotations “d, K, p,” or “ha,” respectively after the entry when they have been taken into consideration by authors, either by explicit correction or by allowance in quoted uncertainties.

The diamagnetic correction merits further comment. This correction is applicable under any circumstance that a magnetic field is applied to the nucleus under study and the nucleus is situated in a medium subject to diamagnetism - that is all media other than vacuum. Diamagnetism describes the polarization of the medium whereby the field as experienced by the nucleus is reduced. This effect leads to a reduction in the magnetic dipole interaction energy and an apparent reduction in the nuclear magnetic dipole moment if the full applied magnetic field strength is used without correction.

Many experimental methods use “internal” or “transient” fields produced by electrons in the vicinity of the nucleus. Such internal fields are determined through their measured interaction energy with nuclei having known magnetic dipole moments. They are not subject to diamagnetic correction, although they do require correction for any hyperfine anomaly between the isotope used for calibrating the field and the isotope under study. However, if there is any additional external applied field used then this component of the total field at the nucleus is subject to the diamagnetic correction.

Several previous tabulation compilers have apparently applied diamagnetic corrections and have included listings of diamagnetic correction factors due to Johnson and co-workers [4]. It should be stressed that the tabulated corrections apply only to neutral atoms, assumed spherical, and are not generally applicable e.g. to nuclei implanted into planar non-magnetic foils and subject to applied magnetic fields. All post 1989 magnetic moment entries in the Table are unmodified published values.

Electric Quadrupole Moments

These are listed in units of barns (1 b = 10^{-28} m^2). Corrections relating to electric field gradient shielding caused by polarization of atomic electrons, normally known as Sternheimer Corrections, are indicated by the annotation “st” after the entry. The Sternheimer correction, which can be positive (shielding) or negative (anti-shielding) and can be large, is difficult to calculate with high accuracy, even for different states of the same atom or ion. This is the cause of several

apparently large discrepancies between reported, uncorrected, electric quadrupole moments listed in the Table.

Where two values of Q are given based on CER experiments, the first represents the value assuming constructive interference between the matrix elements and the second assumes destructive interference.

ACKNOWLEDGEMENTS

The author acknowledges help and advice from many fellow scientists in the field of hyperfine interactions and nuclear moments during the preparation and checking of this Table. The Table could not have been produced without extensive assistance at various stages of production by staff of the National Nuclear Data Centre, Brookhaven National Laboratory, in particular Charles Dunford, Tom Burrows and David Winchell and, more recently, Boris Pritychenko and Joann B. Totans. The Nuclear Data Project at the Oak Ridge National Laboratory provided the library in which much of the 2005 listing work was done, with help from Murray Martin and Mary Ruth Lay. Computing assistance from Chiara Mazzocchi was very helpful at a vital stage. Finally thanks are due to the late Richard A. Meyer who initiated the undertaking, and to Jirina Rikovska Stone for her unfailing assistance and encouragement.

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1. N. J. Stone, At. Data Nucl. Data Tables **90** (2005) 75.

2. P. Raghavan, At. Data Nucl. Data Tables **42** (1989) 189.

3. P. J. Mohr and B. N. Taylor, Rev. Mod. Phys. **72** (2000) 351.

4. W. R. Johnson, Dietmar Kolb, K.–N. Huang, At. Data Nucl. Data Tables **28** (1983) 333 and references therein.

EXPLANATION OF THE TABLE

The Table gives information as follows:

Nucleus — Identifies the nucleus by mass number *A* and atomic number *Z*, with its chemical symbol. This is given once for each nucleus. Nuclei are grouped by element in increasing sequence of atomic number and by increasing mass number for each element.

E(level) — Gives the energy of the state on which the measurement is made, rounded to the nearest kilovolt, 0 being the ground state. Where placement of the level with resepct to the ground state is unknown, this is denoted be addition of an offset *x* or *y*.

$\tau_{1/2}$ — Gives the half-life τ of the state: Units y = years, d = days, h = hours, m = minutes, s = seconds, ms = milliseconds (10^{-3} s), μs = microseconds (10^{-6} s), ns = nanoseconds (10^{-9} s), ps = picoseconds (10^{-12} s) and fs = femtoseconds (10^{-15} s).

I^{π} — Gives the spin (*I*) and parity (π) of the state. Uncertain values are given in brackets. Where the measurement was made on unresolved states, the average spin is given as I_{av}

μ*(nm)** — Gives the measured nuclear magnetic dipole moment μ in units of the nuclear magneton μ_N (nm). No sign is given if it was not determined by the experiment. The uncertainty in the result is given in brackets, subject to the policy declared in the introduction. Thus 1.432(8) means a value of 1.432 nm with uncertainty 0.008 nm and of unknown sign. In some cases, where the spin of the level is unknown, the nuclear *g*-factor, $g = \mu/I$ is given. Where several states were unresolved, the average *g*-factor is given as g_{avge}. An entry of the form g_{6+}/g_{2+} gives the ratio of the *g*-factors of two states in a band. For high spin bands in even-even nuclei in some cases the spin dependence of the *g*-factor is approximately given by $g(I) = g_o[1 + \alpha I^2]$, where I is the spin of the state and $g_o \sim g_{2+}$. The fitted value of α is given.

*Q(b)** — Gives the measured nuclear electric quadrupole moment *Q* in units of the barn (1 barn = 10^{-28} m^2). No sign is given if it was not determined by the experiment. The uncertainty in the result is given in brackets, subject to the policy declared in the introduction. Thus +1.27(10) means a value of +1.27 barns with uncertainty 0.10 barns.

Ref. Std.. — In this column any reference standard upon which the listed result depends is given. Often the reference state has been used to obtain the value of a static magnetic field or an electric field gradient which is then used to determine the quoted result. Any subsequent change in the value of the standard will affect the listed result.

Method — The method used in the measurement is briefly identified here. A list of abbreviations used follows this explanation. In view of the great proliferation of specialised methods, this method description is limited and for detailed information reference should be made to the original publication. Where there has been re-evaluation, by the tabulator or by subsequent referenced authors, of the original

referenced result, usually associated with change to the reference standard, this is denoted by R.

Reference The NSR keyword reference is given. A complete listing of references follows the Table. In the few cases where no NSR keyword has been assigned, or it is not known, the same format has been used with last two digits replaced by „99" and the reference included in the listing.

* Certain entries have additional annotations relating to whether or not specific corrections have been made. These annotations are discussed under the magnetic dipole moment and electric quadrupole moment sections of the policies given above. The abbreviations used are given below.

Abbreviations relating to Corrections applied to measurements in the Table

a	Requires no Sternheimer correction.
d	Corrected for diamagnetism.
e	No estimate of uncertainty given by authors.
K	Corrected for Knight shift.
p	Corrected for paramagnetism
st	A Sternheimer shielding correction has been made by the authors
#	This result uses an estimated hyperfine field with no error given.

Experimental Methods

AB	Atomic Beam Magnetic Resonance - Thermal Beam
AB/D	Atomic Beam Magnetic Resonance (direct moment measurement)
ABLDF	Atomic Beam with Laser Double Resonance Detection
ABLFS	Atomic Beam with Laser Fluorescence Spectroscopy
ABLS	Atomic Beam Laser Spectroscopy
β-NMR	NMR of in-beam polarised nuclei with beta asymmetry detection
β-NMR/OP	NMR of nuclei polarised by optical pumping with beta asymmetry detection
β-NNQR	Nuclear Quadrupole Resonance with beta detection
B(E2)	Value based on measured E2 transition probability
BFNO	Brute Force Nuclear Orientation
BFNMR/ON	Nuclear Magnetic Resonance on Brute Force Oriented Nuclei
CDPAC	Constant-Delay Perturbed Angular Correlation
CEAD	Integral Perturbed Angular Distribution after Coulomb Excitation
CER	Coulomb Excitation Reorientation
CERP	Precession of Coulomb Excitation Reorientation
CETD	TDPAD following Coulomb Excitation
CFBLS	Collinear Fast Beam Laser Spectroscopy - Accelerated Beam
CFBLS/ β-NMR	Collinear Fast Beam Laser Spectroscopy: NMR with beta detection
CIAN	Coulomb Interaction of Aligned Nuclei
CLS	Resonance Cell Laser Spectroscopy

CRDTF	Coincident Recoil Distance Transient Field
ENDOR	Electron-nuclear Double Resonance
EPR	Electron Paramagnetic Resonance
ES	Electron Scattering
FDPAC	Time Differential Perturbed Angular Correlation of Fission Fragments
GCLS	Gas Cell Laser Spectroscopy
IAPAD	Integral Attenuation of Perturbed Angular Distribution
IBSQB	Quantum Beats after Surface Interaction at Grazing Incidence
IPAC	Integral Perturbed Angular Correlation
IPAD	Integral Perturbed Angular Distribution
IMPAC	Perturbed Angular Correlation after Ion Implantation
IMPAD	Perturbed Angular Distribution after Ion Implantation
ISLS	In Source Laser Spectroscopy
Ka-X	Kaonic X-ray Hyperfine Structure
LEMS	Level Mixing Spectroscopy
LMDR	Laser Microwave Double Resonance
LMR	Level Mixing Resonance on Oriented Nuclei
LRDRS	Laser RF Double Resonance Spectroscopy
LRFS	Laser Resonance Fluorescence Spectroscopy
LRIMS	Laser Resonance Ionisation Mass Spectroscopy
LRIS	Laser Resonance Ionisation Spectroscopy
LRS	Laser Resonance Spectroscopy
LRSRD	Laser Resonance Specroscopy with Radioactive Detection
MA	Microwave Absorption in gases
MAPON	Multiple Adiabatic Passage NMR on Oriented Nuclei
MB	Molecular Beam Magnetic Resonance
MCHF	Multiconfigurational Hartree Foch calculated efg's used to extract Q
ME	Mossbauer Effect
M/N	Maser/Nuclear Magnetic Resonance frequency comparison
MS	Molecular Spectroscopy
Mu-X	Muonic X-ray Hyperfine Structure
N	Nuclear Magnetic Resonance
NMR	Nuclear Magnetic Resonance
NMR/AC	Nuclear Magnetic Resonance detected using Angular Correlation
NMR/AD	Nuclear Magnetic Resonance detected using Angular Distribution
NMR/ME	Nuclear Magnetic Resonance detected using the Mossbauer Effect
NMR/ON	Nuclear Magnetic Resonance on Oriented Nuclei
NMR/ON(β)	Nuclear Magnetic Resonance on Oriented Nuclei with beta detection
NMR/ON(X)	Nuclear Magnetic Resonance on Oriented Nuclei with X-ray detection
NMR/OP	NMR detected using Optically Pumped Ions
NMR/OP(β)	NMR using Optically Pumped Ions with beta detection
NO/CP	Gamma Circular Polarisation measured from Oriented Nuclei
NO/ME	Mossbauer Effect on Oriented Nuclei
NO/S	Static Nuclear Orientation with gamma detection
NO/βS	Static Nuclear Orientation with beta detection
NO/D	Dynamic Nuclear Orientation
O	Optical Spectroscopy
OD	Optical Double Resonance
OGLS	Optogalvanic Laser Spectroscopy
OL	Optical Level Crossing

OP/β-NMR	Optical Pumping with NMR using beta detection
OP/RD	Optical Pumping with Radiative Detection
PhPi	Pion Photoproduction near threshold
Pi-X	Pionic X-ray Hyperfine Structure
PMR	Paramagnetic Resonance
PPDAC	Perturbed Polarisation-Directional Angular Correlations
PPR	Proton Pick-up Reaction: Spectroscopic Factors
Q	Quadrupole Resonance
QI-NMR/ON	Quadrupole Interaction Resolved NMR on Oriented Nuclei
QIR	Quadrupole Interaction deduced from Relaxation Time
R	Re-evaluated data, or (for revised reference standard) adjusted by tabulator
RENO	Reorientation Nuclear Orientation
RIGV	Recoil into gas or vacuum
RIV/D	Recoil into Vacuum, Differential method
SOPAD	Stroboscopic Observation of Perturbed Angular Distribution
TDPAC	Time Dependent Perturbed Angular Correlation
TDPAD	Time Dependent Perturbed Angular Distribution
TF	Transient Field integral perturbed angular correlation
TFL	Tilted Foil hyperfine field integral perturbed angular correlation
TFLD	Tilted Foil Time Differential Perturbed Gamma Angular Distribution
TIS	Trapped Ion Spectroscopy
TLS	Trap Laser Spectroscopy
TR/OLNO	Time Resolved On-Line Nuclear Orientation
XHFS	X-ray Hyperfine Shift

Nucleus	Ex	T1/2	I	μ(nm)	Q(b)	[Ref. Std.]	Method	NSR Keynumber	Journal Reference
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)
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) st		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/ 1954WA37	ZNat 23a 1202 (68)/PL A25 440 (67)/ PR C72 044309 (05)
					-0.000806(6)		R	2005BO45	ORNL-1775 (54)
					-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)
					-0.0400(3)		R		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]	β-NMR	1978Wi13/1962Co08	PL A67 423 (78)/PR 126 1506 (62)
					0.0314(2)		β-NMR	2005BO45	PR C72 044309 (05)
					0.0317(4)	[7Li]	β-NMR	1977Du06	ZP A282 243 (77)
					0.0287(7)	[7Li]	CFBLS/β-NMR	1988Ar17	ZP A331 295 (88)
					0.0327(6)	[7Li]	β–NQR	1992Mi18	PRL 69 2058 (92)
					sign positive	[6,7Li]	NMR	1994Ja05	NP A568 544 (94)
3 Li 9	0	178 ms	3/2-	3.43678(6)		[8Li]	β-NMR	2005BO45	PR C72 044309 (05)
				3.4391(6)		[1H]	β-NMR	1983Co11	PR C28 862 (83)
				3.434(5)		[8Li]	CFBLS/β-NMR	1988Ar17	ZP A331 295 (88)
					(-)0.0306(2)		β-NMR	2005BO45	PR C72 044309 (05)

					0.0253(9)	[7Li]	CFBLS/β-NMR	1988Ar17	ZP A331 295 (88)
					0.036(7) st	[7Li]	β-NMR	1983Co11	PR C28 862 (83)
3 Li 11	0	8.5 ms	3/2-	+3.6712(3)		[9Li]	β-NMR	2008NE11	PRL 101 132502 (08)
				3.668(3)		[8Li]	CFBLS/β-NMR	1987Ar22	PL B197 311 (87)
					(-)0.0333(5)	[9Li]	β-NMR	2008NE11	PRL 101 132502 (08)
					-0.035(5)		R	2005BO45	PR C72 044309 (05)
					-0.031(5)	[7Li]	OP/β-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	1991Su05	CPL 177 91 (91)
					+0.053(3) st		AB	1967Bl09	PR 153 164 (67)
4 Be 11	0	13. 8 s	3/2-	-1.6814(13)		[8Li]	β-NMR	98KaZN	NuoC 111 110 (98)
				-1.6816(8)		[8Li]	β-NMR	99Ge18	PRL 83 3792 (99)_
5 B 8	0	0.77 s	2+	1.0355(3)			β-NMR	1973Mi01	JPJS 34 156 (73)
				1.03579(5) d, K		[12B]	β-NMR	1996OhZY	ARO p71 (96)
					+0.0645(14)	[12B]	β-NMR	2004NA46/2006SU13	HFI 159 269 (2004)/PR C74 024327 (06)
					0.063(5)	[11B]	β-NMR	1990MaZA	ARO p48 (89)
					0.068(2)	[12B]	β−NQR	1992Mi18	PRL 69 2058 (92)
					0.0646(15)	[12B]	β−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)
					+0.0847(6) st	[11B]	AB, R	1970Ne21	PR A2 1208 (70)
	718	0.69 ns	1+	+0.63(12)			IPAC	1972Av01	NP A182 359 (72)
5 B 11	0	stable	3/2-	+2.6886489(10)		[10B]	N, MB	1975Ep02/1939Mi05	ZNat 30a 955 (75)/PR 56 165 (39)
					+0.0407(3)		AB, R	1970Ne21	PR A2 1208 (70)
5 B 12	0	20.4 ms	1+	+1.00(2)			β-NMR	2010ZN03	Chin Phys Lett 27 022102 (10)
				+1.00272(11)			β-NMR	1990Mi16	NP A516 365 (90)
				+1.00306(+15/-14)			β-NMR	1970Wi17	PR C2 1219 (70)
								1972Wi08	PR C5 1435 (72)
				1.000(3)			β-NMR	2003ZH32	ChinPL 20 1698 (03)
					0.0132(3)	[11B]	β−NQR	1993Oh05	HFI 78 185 (93)/HFI 80 1051 (93)
					0.0134(14) st	[11B]	β-NMR	1978Mi19	HFI 4 224 (78)
5 B 13	0	17.4 ms	3/2-	+3.1778(5) K,d			β-NMR	2004Na38	NP A746 509c (04)
				+3.1778(5)			β-NMR	1971Wi09	PR C3 2149 (71)
					positive sign	[12B]	β-NMR	2004NA47	HFI 159 273 (2004)

					(+) 0.0366(8)	[12B]	β-NMR	2004Na38	NP A746 509c (04)
					0.037(4)	[12B]	β-NMR	1989Ra17	JPJS 34 167 (73)
5 B 14	0	13.8 ms	2-	1.185(5)		[12B]	β-NMR	1995Ok04	PL B354 41 (95)
					0.0298(8)	[12B]	β-NMR	1996Iz01	PL B366 51 (96)
5 B 15	0	10.3 ms	3/2-	2.659(15)		[12B]	β-NMR	1995Ok04	PL B354 41 (95)
					0.0380(11)	[12B]	β-NMR	1996Iz01	PL B366 51 (96)
5 B 17	0	5.1 ms	(3/2-)	2.55(2)		[12B]	β-NMR	1996Ue02	PR C53 2142 (96)
					0.0386(15)		β-NMR	2003OG03	PR C67 064308
6 C 9	0	126 ms	3/2-	1.3914(5)			β-NMR	1995Ma48	NP A588 153c (95)
				1.396(3)			β-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)
					0.032(2) st		AB, R	1969Sc34	PR 181 137 (69)
6 C 12	4438	45 fs	2+		+0.06(3)		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)
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)			β-NMR	2002As06	NP A704 88c (02)
				1.32(7)			β-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)			β-NMR	2002Og02	EurPJ A13 81 (02)
7 N 12	0	11.0 ms	1+	0.4571(1)			β-NMR	2010ZN03	Chin Phys Lett 27 022102 (10)
				0.4573(5)			β-NMR	1968Su05	JPJa 25 1258 (68)
					+0.0098(9)	[14N]	β-NMR	98Mi10	PL B420 31 (98)
					+0.049(6) or -0.010(6)		PhPi	1980Ra05	YadF 31 334 (80)
					0.0103(7)	[14N]	β–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)
					+0.02001(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]	β-NMR	2001Ma42	PRL 86 3735 (01)
					0.018(2)	[12N]	β-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)			β-NMR	2009DE34	PR C80 037306 (09)
				0.352(2)			β-NMR	1996Ue02	PR C53 2142 (96)
7 N 18	0	624 ms	1-	0.3273(4)			β-NMR	2009DE34	PR C80 037306 (09)
				(-)0.135(15)			LMR	1999Ne01	PRL 82 497 (99)
				0.3279(13)			β-NMR	1999Og03	PL B451 11 (99)/JP G24 1399 (98)
					+0.027(4)		LMR	1999Ne01	PRL 82 497 (99)
					0.0123(12)	[12N]	β-NMR	1999Og03	PL B451 11 (99)/JP G24 1399 (98)
7 N 19	0	0.27 s	1/2-	0.305(15)			β-NMR	2004Ka22	NP A734 481 (04)
8 O 13	0	8..6 ms	3/2-	1.3891(3) d, K		[1H]	β-NMR	1996Ma38	HFI 97/98 519 (96)
					0.0110(13)	[17O]	β-NQR	1999Ma46	PL B459 81 (99)
8 O 15	0	122 s	1/2-	0.71951(12) c			β-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)
					-0.2576 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]	β-NMR	1999Mi16	PL B457 9 (99)
					0.0037(4)	[17O]	β-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]	β-NMR	1993Mi33	HFI 78 111 (93)
				+4.7223(12)			β-NMR	1966Su01	JPJa 21 213 (66)
					0.058(4) st	[19F 197]	β-NMR	1974Mi21	NP A236 416 (74)
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)
					0.077(5) st	[19F 197]	TDPAD	1989Ra17	Th Morgen (69)
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)
					0.121(5)	calc efg	TDPAD	2002Zh23	ChPL 19 915 (02)
					-0.12(2) st		TDPAD	1964Bu01	PR 134 B539 (64)
								1976Si20	PR B13 2853 (76)
	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)			β-NMR	1996MiZW	ARO p44 (96)
				+2.0935(9)			β-NMR	1967Gu14/1963Ts01	YadF 6 657 (67)/PR 132 1141 (63)
					0.042(3) st	[19F 197]	β-NMR	1974St10	ZP 269 47 (74)
9 F 21	0	4.16 s	5/2+	3.9194(12)			β-NMR	-	HFI 120/121 673 (99)
				3.93(5)			β-NMR	1993Ok02	HFI 78 97 (93)
					0.11(2)		β-NMR	-	HFI 120/121 673 (99)
9 F 22	0	4.2 s	4+	(+)2.6944(4)			β-NMR	2010MI13	NP A834 75c (10)
					0.003(2)		β-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)			β-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)			β-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)		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)
					+0.103(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)
				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)			β-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)	[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)
					+0.090(10)	[21Na,27Na]	β-NMR	2004MI59	HFI 159 261 (2004)
					Q/Q(21Na) = 0.728(9)	[21Na]	β-NMR	2004Mi50	NP A746 501c/HFI 159 239 (2004)
11 Na 21	0	22.5 s	3/2+	+2.83630(10)		[23Na]	AB	1965Am01	PR 137 B1157 (65)
					+0.124(14)	[23Na]	CFBLS/β-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)
					+0.185(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	1989Ra17/1967BI**	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)
					+0.1045(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)
					+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)			β-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)
					0.0014(3)	[21Na]	β-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)	[23Na]	CFBLS/β-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)
					-0.0072(3)	[23Na]	CFBLS/β-NMR	2000Ke09	EurPJ A8 31 (00)
					-0.06(5)		ABLS	1982To05	PR C25 2756 (82)
					Q/Q(26Na)=1.39(4)		CFBLS/β-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)
					+0.0395(12)	[23Na]	CFBLS/β-NMR	2000Ke09	EurPJ A8 31 (00)
					-0.02(4)		ABLS	1982To05	PR C25 2756 (82)
					Q/Q(26Na)=-7.7(2)		CFBLS/β-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)
					+0.086(3)	[23Na]	CFBLS/β-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/β-NMR	2009KR05	PL B 678 465 (09)
12 Mg 23	0	11.3 s	3/2+	0.5364(3)			β-NMR	1993Fu06	PL B307 278 (93)
					0.114(3)		β-NMR	-	HFI 120/121 673 (99)
					0.125(5)		β−NQR	1996MaZV	ARO p64 (96)
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)		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	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)		CER	1991He09	PR C43 2546
					-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]	β-NMR/LRS	2008KO05	PR C77 034307 (08)
12 Mg 31	0	230 ms	1/2+	-0.88355(15)		[25Mg]	β-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]	β-NMR/LRS	2007YO06	PRL 99 212501 (07)
13 Al 23	0	37.2 s	5/2+	+3.9(2)			β-NMR	2006OZ04	PR C74 021301 (06)
13 Al 24	426	131 ms	1+	2.99(9)			β-NMR	2007NI14	HI 180 71 (07)
13 Al 25	0	7.18 s	5/2+	3.6455(12)			β-NMR	1976Mi11	PR C14 376 (76)
					0.24(2)	[27Al]	β-NQR	2007MA94	HI 180 65 (07)
13 Al 26	0	7x10*5 y	5+	+2.804(4)		[27Al]	ABLS	1996Co04	JP G22 99 (96)
					+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	99Ke07	CPL 304 414 (99)
					+0.1402(10)		R	1992Su01	PRL 68 927 (92)
					+0.150(6) a		Mu-X	1982We04	NP A377 361 (82)
13 Al 28	0	2.24 m	3+	3.242(5)			β-NMR	1981Mi14	PL 106B 38 (81)
					0.175(14)	[27Al]	β-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)			β-NMR	2005UE01	
13 Al 31	0	644 ms	(5/2+)	+3.830(5)			β-NMR	2006HI18	PL B643 257 (06)
				(+) 3.79(5)			LMR	2002Bo22	PL B537 45 (02)
					0.11(3)	[27Al]	β-NQR	2009NA03	PR C79 027301 (09)

13 Al 32	0	33 ms	1+	1.952(2)			β-NMR	2006HI18	PL B643 257 (06)
				1.959(9)			β-NMR	2005UE01	
					0.024(2)	[27Al]	β-NQR	2007KA68	HI 180 61 (07)
13 Al 33	0	44 ms	(5/2+)	+4.088(5)			β-NMR	2006HI18	PL B643 257 (06)
13 Al 34	0	56 ms	4-	(+)2.156(16)			β-NMR	2008HI01	PL B658 203 (08)
14 Si 27	0	4.1 s	5/2+	(-)0.8652(4) d			β-NMR	1998MaZJ	ARO 49 (97)
				0.8654(3) d			β-NMR	1999MaZK	ARO 54 (98)
				(-)0.8554(4)			β-NMR	1984Hu11	PR C30 1328 (84)
					0.063(14)	[calc efg]	β-NMR	1999MaZK	ARO 54 (98)
					0.060(13)		β-NMR	-	HFI 120/121 673 (99)
					0.061(4)	[calc efg]	β-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)		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)		CER, R	1981Sp07	PRep. 73 369 (81)
					-0.05(6) or +0.01(6)		CER	1979Fe08	PRL 43 1463 (79)
14 Si 32	1941	0.4 ps	2+		-0.16(2) or -0.13(2)		CER	1982Ve09	NP A389 185 (82)
14 Si 33	0	6.332 s	(3/2+)	1.21(3)			β-NMR, OP/RD	92MA52	HFI 74 223 (1992)
14 Si 35	0	0.78 s	7/2-	(-) 1.638(4)			β-NMR	2007NE14	Eur Phys J (Sp Topics) 150 149 (07)
15 P 28	0	270 ms	3+	0.312(3)			β-NMR	2010 MA**	Priv Comm
				0.309(9)			β-NMR	2009ZH52	Chin Phys C33 Supp 1 215 (2009)
								2007ZH54	HI 180 37 (07)
15 P 29	0	4.1 s	1/2+	1.2346(3)			β-NMR	2009ZH53	Chin Phys C33 Supp 1 218 (2009)
				1.2349(3)			β-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)			β-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)
					-0.15(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)
					-0.064(10) st		MA	1954Bi40	PR 94 1203 (54)
					-0.084(8)		CFBLS	1986El09	ZNat 41a 15 (86)
					-0.678(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)		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)		MCHF	1990Su19	PR A42 1160 (90)
					+0.045(10)		MA	1954Bi40	PR 94 1203 (54)
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)
17 Cl 32	0	298 ms	1+	+1.114(6)			β-NMR	2000Ro30	PR C62 044312 (00)
17 Cl 33	0	2.52 s	3/2+	+ 0.7549(3) d			β-NMR	2004Ma98	NP A746 493c (04)
				+0.752(2)			β-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	1993Su36	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	3.0×10^5 v	2+	+1.28547(5)		[2H]	N	1955So10	PR 98 1316 (55)
					-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	1993Su36	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)			β-NMR	1972La22	ZP 252 242 (72)
17 Cl 44	0	0.56 s	(2-)	(-)0.2749(2)			β-NMR	2010DE11	PR C81 034308 (10)
18 Ar 33	0	0.174 s	1/2+	-0.723(6)		[37Ar]	CFBLS/β-NMR	1996Kl04	NP A607 1 (96)
18 Ar 35	0	1.78s	3/2+	+0.6322(2)			β-NMR	2002Ma41	NP A701 383c (02)
				+0.633(7)		[37Ar]	CFBLS/β-NMR	1996Kl04	NP A607 1 (96)
				+0.633(2)			NO/D	1965Ca04	PR 137 B1453 (65)
					-0.084(15)	[37Ar]	CFBLS/β-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)		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)
							O	1965Ro13	PR 140 B820 (65)
					+0.076(9)		CFBLS/β-NMR		
	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/β-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)	[37Ar]	CFBLS/β-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)		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)	[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)	[37Ar]	CFBLS	2008BL01	NP A799 30 (2008)
19 K 35	0	178 ms	3/2+	0.392(7)			β-NMR	2006ME04	PR C73 024318 (06)
				(+)0.36(3)			β-NMR	98Sc19	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)
	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 μs	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)
					+0.585(6) a		R	1998Ke05	CPL 292 403 (98)
					+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)
	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	[39K]	R	1998Ke05	CPL 292 403 (98)
					-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	1998Ke05	CPL 292 403 (98)
					+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)
20 Ca 39	0	0.86 s	3/2+	1.02168(12)			β–NMR	1976Mi05	PL 61B 155 (76)
					0.036(7)		β–NMR	99MaZI	RIKEN 32 79 (99)
					0.040(6)	[calc efg]	β–NMR	99MaZK	ARO 54 (98)
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	$1.0x10^5$ v	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
					-0.090(2) st	[43Ca]	R	2002Mi37	N.Naturforsch. 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)		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
					-0.0408(8) a		R	1993Su36	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)		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)
					+0.046(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

20 Ca 47	0	4.5 d	7/2-	-1.38(3)		[43Ca]	ABLFS	1982An15	PR C26 2194 (82)
					+0.021(4)	[43Ca]	ABLFS	1982An15	PR C26 2194 (82)
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]	β-NMR	1990Mi16	NP A516 365 (90)
					-0.156(3) st	[45Sc]	R	2002Mi37	N.Naturforsch. 57a 595 (02)
					0.120(6)	[45Sc]	β-NMR	1990Mi19	HFI 59 153 (90)
					0.166(8)	[45Sc]	β−NQR	1993Mi09	NP A559 239 (93)
21 Sc 43	0	3.89 h	7/2-	+4.503(4)		[45Sc]	CLS	2006GA47	HI 171 209 (06)
				+4.62(4)		[45Sc]	AB	1966Co13	PR 141 1106 (66)
					-0.21(2)	[45Sc]	CLS	2006GA47	HI 171 209 (06)
					-0.26(6)	[45Sc]	AB	1966Co13	PR 141 1106 (66)
	152	438 μs	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)	[45Sc]	TDPAD	1981Da06	PR C23 1612 (81)
21 Sc 44	0	3.89 h	2+	+2.505(3)		[45Sc]	CLS	2006GA47	HI 171 209 (06)
				+2.56(3)		[45Sc]	AB, R	1966Co13	PR 141 1106 (66)
					+0.18(2)	[45Sc]	CLS	2006GA47	HI 171 209 (06)
					+0.10(5)	[45Sc]	R	1966Co13	PR 141 1106 (66)
	68	153 ns	1-	+0.342(6)			TDPAC	1967Ri06	PR 153 1209 (67)
					0.21(2)	[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+	+3.810(6)		[45Sc]	CLS	2006GA47	HI 171 209 (06)
				+3.88(1)		[45Sc]	AB, R	1966Co13	PR 141 1106 (66)
					-0.20(2)	[45Sc]	CLS	2006GA47	HI 171 209 (06)
					-0.19(2)	[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	N.Naturforsch. 57a 595 (02)
					-0.220(2)	[calc efg]	MS	2000Ke12	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+	0.368(5)		[45Sc]	CLS	2006GA47	HI 171 209 (06)
					+0.32(2)	[45Sc]	CLS	2006GA47	HI 171 209 (06)
21 Sc 46	0	83.81 d	4+	+3.040(9)		[45Sc]	CLS	2006GA47	HI 171 209 (06)
				+3.03(2)		[45Sc]	AB	1962Pe21	PR 128 1740 (62)
					+0.123(17)	[45Sc]	CLS	2006GA47	HI 171 209 (06)
					+0.119(6)	[45Sc]	AB	1962Pe21	PR 128 1740 (62)

21 Sc 47	0	3.42 d	7/2-	+5.34(2)		[45Sc]	AB	1966Co13	PR 141 1106 (62)
					-0.22(3)	[45Sc]	AB	1966Co13	PR 141 1106 (62)
	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)
22 Ti 43	0	0.50 s	7/2-	0.85(2)			β-NMR	1993Ma67	HFI 78 123 (93)
	3066	560 ns	19/2-	+7.22(1)			TDPAD	1978Ha07	PL 73B 127 (78)
					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)	[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)		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)
					+0.30(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)		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	1999Bi11	PR A59 4295 (99)
					+0.24(1)		AB	1965Ch19	PPS 86 1145 (65)
					0.324(3)		LRDRS	1992Be68	PR A46 5774 (92)
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	$1.5x10^{17}$ v	6+	+3.3456889(14)		[2H]	N	1981Ha26	ZP A300 111 (81)
					0.21(4)	[51V]	N	1982Bl03	JP C15 L349 (82)
					+0.21(4)	[51V]	ABLDF	1979Er04	PL 85B 319 (79)
					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)		LRFS	1989Un01	ZP D111 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)		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)
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)		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		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)		CER	1975To06	NP A250 381 (75)
25 Mn 50	229	1.75 m	5+	+2.76(1)		[55Mn]	TLS	2010CH15	PL B690 346 (10)
					+0.80(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)
					0.42(7) st	[55Mn]	AB	1971Jo10	NP A166 306 (71)
25 Mn 52	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)
					+0.50(7) st	[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	$3.7x10^6$ v	7/2-	5.035(1)		[55Mn]	TLS	2010CH15	PL B690 346 (10)
				5.024(7)		[55Mn]	EPR	1956Do45	PR 104 1378 (56)
					+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)	[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)
					+0.33(1) st		ABLDF	1979De19	ZP A291 207 (79)
					+0.31(2) st		OL, R	1979De19/1969Ha22	ZP A291 207 (79)/PL 29A 486 (69)
25 Mn 56	0	2.58 h	3+	+3.2266(2)		[55Mn]	AB, OP/RD	1961Ch05	PR 122 891 (61)
					+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)		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		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)		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)
					0.16(1)		R	1995Du17	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)
				+0.9(2)				1969Si13/1977Br23	NP A137 278 (69)/PR C16 899 (77)
					-0.27(5)		CER	1981Le02	PR C23 244 (81)
26 Fe 59	0	44.6 d	3/2-	-0.3358(4)			NMR/ON(β)	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	
					0.41(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)	[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)
					+0.52(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)
					+0.22(3)	[59Co]	NMR/ON	1972Ni01	Phca 57 1 (72)
	53	10.4 μs	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)
					+0.35(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)
					+0.44(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)
28 Ni 55	0	204 ms	3/2-	(-)0.98(3)			β-NMR	2009BE22	PR C79 064305 (09)
28 Ni 57	0	36 h	3/2-	-0.7975(14)			NMR/ON(β)	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)		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)		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		AB	1968Ch10	PR 170 136 (68)
	67	5.34 ns	5/2-	+0.480(6)		[61Ni]	ME	1971Go31	ZNat 26a 1931 (71)
					-0.20(3) st	[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)		CER, R	1974Le13	NP A223 563 (74)

28 Ni 63	87	1.72 μs	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
				+0.9(3)			TF	1978Ha13	PR C17 997 (78)
					+0.4(2)		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(β)	2000Ri14	PRL 85 1392 (00)
	1007	13 μs	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)			β-NMR	2006Ml07	PRL 96 1-2501 (06)
29 Cu 58	0	3.2 s	1+	+0.479(13)		[63Cu]	GCLS	2010CO01	PR C81 014314 (10)
				0.46(3)			β-NMR	2010Ml**	Priv Comm (10)
				+0.52(8)			LRIS	2008ST12	PR C77 067302 (08)
29 Cu 59	0	81.5 s	3/2-	+1.910(4)		[65Cu]	GCLS	2010CO01	PR C81 014314 (10)
				+1.891(9)			NMR/ON(β)	2004GO39	PR C70 014312 (04)
				+1.84(3)			ISLS	2008ST12	PR C77 067302 (08)
29 Cu 60	0	23.4 m	2+	+1.219(3)		[63Cu]	AB	1968Ph04	PR 169 917 (68)
29 Cu 61	0	3.41 h	3/2-	+2.1089(11)		[65Cu]	CLS	2010Vl**	PR C82 064311 (10)
				+2.14(4)		[63Cu]	AB	1966Do01	PR 142 638 (66)
					-0.21(2)	[65Cu]	CLS	2010Vl**	PR C82 064311 (10)
29 Cu 62	0	9.73 m	1+	-0.3809(12)					
				-0.380(4)		[63Cu]	AB	1968Ph04	PR 169 917 (68)
					0.00(2)				
	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	2010Vl**	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	2010Vl**	PR C82 064311 (10)
					-0.211(4) st	[65Cu]	O, R	1986St16	ZNat 41a 24 (86)
					0.220(15) a		Mu-X	1982Ef01	ZP A309 77 (82)
	4498	4.08 ns	17/2+	+1.56(10)		[62Cu 390]	IPAD	1983Ka24	NP A406 533 (83)

29 Cu 64	0	12.7 h	1+	-0.2164(4)		[65Cu]	CLS	2010VI**	PR C82 064311 (10)
				-0.217(2)		[63Cu]	AB	1966Do01	PR 142 638 (66)
					+0.072(9)	[65Cu]	CLS	2010VI**	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)
					-0.195(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	2010VI**	PR C82 064311 (10)
				-0.282(2)		[65Cu]	AB	1969Cu09	JP A2 658 (69)
					+0.056(13)	[65Cu]	CLS	2010VI**	PR C82 064311 (10)
	1154	0.60 μs	6-	+1.038(3)			TDPAD	1972Bl16	NP A197 620 (72)
					0.186(12)	[63,65Cu]	TDPAD	-	PL B694 316 (10)
29 Cu 67	0	61.83 h	3/2-	+2.5142(6)		[65Cu]	CLS	2010VI**	PR C82 064311 (10)
				+2.54(2)			NMR/ON(β)	2000Ri23	HFI 129 131 (2000)
					-0.174(8)	[65Cu]	CLS	2010VI**	PR C82 064311 (10)
29 Cu 68	0	31.1 s	1+	+2.3933(6)		[65Cu]	CLS	2010VI**	PR C82 064311 (10)
				+ 2.6(3)		[65 Cu]	LRIS	2004Gh13	PR C65 024315 (04)
					-0.082(13)	[65Cu]	CLS	2010VI**	PR C82 064311 (10)
	637	3.75 m	6-	+1.1548(6)		[65Cu]	CLS	2010VI**	PR C82 064311 (10)
				+ 1.3(6)		[65 Cu]	LRIS	2004Gh13	PR C65 024315 (04)
					-0.44(2)	[65Cu]	CLS	2010VI**	PR C82 064311 (10)
29 Cu 69	0	2.85 m	3/2-	+2.8383(10)		[65Cu]	CLS	2010VI**	PR C82 064311 (10)
				+2.84(1)			NMR/ON(β)	2000Ri14	PRL 85 1392 (00)
					-0.147(16)	[65Cu]	CLS	2010VI**	PR C82 064311 (10)
	2714	0.36 μs	13/2+	1.46(16)			TDPAD	2002Ge16	JP G28 2993 (02)
29 Cu 70	0	44.5 s	6-	+1.3666(5)		[65Cu]	CLS	2010VI**	PR C82 064311 (10)
				(+)1.3(5)		[65 Cu]	LRIS	2004Gh13	PR C65 024315 (04)
					-0.285(14)	[65Cu]	CLS	2010VI**	PR C82 064311 (10)
	101	33 s	3-	-3.3641(15)		[65Cu]	CLS	2010VI**	PR C82 064311 (10)
				(-)3.5(4)		[65 Cu]	LRIS	2004Gh13	PR C65 024315 (04)
					-0.13(4)	[65Cu]	CLS	2010VI**	PR C82 064311 (10)
	242	6.6 s	1+	+1.7779(15)		[65Cu]	CLS	2010VI**	PR C82 064311 (10)
				+1.9(2)		[65 Cu]	LRIS	2004Gh13	PR C65 024315 (04)
					-0.12(3)	[65Cu]	CLS	2010VI**	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)
					-0.190(16)	[65Cu]	CLS	2010VI**	PR C82 064311 (10)

29 Cu 72	0	6.62 s	2-	-1.3472(10)		[65Cu]	RILIS	2010Fl02	PR C82 041302(R) (10)
					+0.08(2)	[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)
					-0.200(10)	[65Cu]	CLS	2010Vl**	PR C82 064311 (10)
29 Cu 74	0	1.63 s	2-	-1.068(3)		[65Cu]	RILIS	2010Fl02	PR C82 041302(R) (10)
					+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)
					-0.269(16)	[65Cu]	CLS	2010Vl**	PR C82 064311 (10)
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)	[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)
					-0.124(12)		ES	1976Ne06	NP A263 249 (76)
					-0.14(2)		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)	[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)
	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)
					-0.81(13)		ES, R	1981Ko06	JP G7 L63 (81)
	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	1969La05	PR 177 1606 (69)
	93	9.2 μs	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)
					0.60(6)	[67Zn]	TDPAD	1986He10	ZP B24 177 (76)
30 Zn 68	1077	1.61 ps	2+	+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)
					-0.11(2)		ES, R	1981Ko06	JP G7 L63 (81)
	1883	1.0 ps	2+	+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)
	2417	0.8 ps	4+	+0.6(5)			TF	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)
					-0.51(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)		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)
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) st		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)
					0.195(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)
					0.0277(14) st	[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) st	[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(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)
					+0.171(11)	[71Ga]	CLS	2010CH16	PRL 104 252502 (2010)
					0.17(3) st		ABLFS, R	1983Jo02	PL 93A 121 (83)
31 Ga 70	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)
					+0.1040(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-	-0.13224(2)		[69,71Ga]	AB	1962Eh02	PR 127 529 (62)
					+0.52(1) st	[69,71Ga]	AB, R	1972St38	PR A6 1702 (72)
31 Ga 73	0	4.86 h	1/2-	+0.209(2)		[71Ga]	CLS	2010CH16	PRL 104 252502 (10)
31 Ga 75	0	126 s	3/2-	+1.836(4)		[71Ga]	CLS	2010CH16	PRL 104 252502 (10)
					-0.285(17)	[71Ga]	CLS	2010CH16	PRL 104 252502 (10)
31 Ga 77	0	13.2 s	3/2-	+2.020(3)		[71Ga]	CLS	2010CH16	PRL 104 252502 (10)
					-0.208(13)	[71Ga]	CLS	2010CH16	PRL 104 252502 (10)
31 Ga 79	0	2.85 s	3/2-	+1.047(3)		[71Ga]	CLS	2010CH16	PRL 104 252502 (10)
					+0.158(10)	[71Ga]	CLS	2010CH16	PRL 104 252502 (10)
31 Ga 80	0?	0.2 - 1.7 s	(3-)	-1.425(5)		[71Ga]	CLS	-	PR C82 051302(R) (10)
					+0.38(2)	[71Ga]	CLS	-	PR C82 051302(R) (10)
	0?	0.2 - 1.7 s	(6-)	+0.036(4)		[71Ga]	CLS	-	PR C82 051302(R) (10)
					+0.48(3)	[71Ga]	CLS	-	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)	[71Ga]	CLS	2010CH16	PRL 104 252502 (10)
32 Ge 67	752	111 ns	9/2+	-0.849(12)		[69Ge 398]	TDPAD	1991Le31	NIMPR B56/57 851 (91)
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)
					0.024(5) st		AB	1970Ol02	PR C2 228 (70)
	398	2.8 μs	9/2+	-1.001(3)			SOP/RDAD	1970Ch05	PR C1 613 (70)
32 Ge 70	1039	1.32 ps	2+	+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)		CER	1980Le16	PR C22 1530 (80)
	1707	1.8 ps	2+	+0.8(12)			TF	2006LE31	PR C74 024315 (06)
	2153	1.2 ps	4+	+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)		QIR	1975Ri03/1976Br41	PS 11 228 (75)/HFI 2 265 (76)
32 Ge 72	834	3.29 ps	2+	+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)		CER	1980Le16	PR C22 1530 (80)
32 Ge 73	0	stable	9/2+	-0.8794677(2)		[2H]	N	1974Sa25	ZNat 29a 1763 (74)
					-0.17(3)		AB, R	1966Ch02	PR 141 15 (66)/PR C1 750 (70)/
								1970Ol02	PR C2 228 (70)
	13	2.86 μs	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+	+0.87(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)
					-0.25(6)		CER	1980Le16	PR C22 1530 (80)
	1204	4.9 ps	2+	+0.8(2)			TF	1984Pa20	JP G10 1759 (84)
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+	+0.84(5)			TF	1984Pa20	JP G10 1759 (84)
				+0.67(8)			TF	1987La20	AuJP 40 117 (87)
				+0.56(12)			IMPAC, R	1977Fa07	NP A291 241 (77)
					-0.19(6)		CER	1980Le16	PR C22 1530 (80)
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
				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)	[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			β+ NO	2005SE14	PR C71 064310 (05)
				1.64(4)			AB	1980Ho02	ZP A 294 1 (80)
					-0.017(10)	[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)	[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)	[75As]	TDPAC	1992Sc21	ZP A343 279 (92)
	428	5.6 μs	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) a		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)

					0.30(10)	[73As]	TDPAC	1990Mo23	HFI 59 121 (90)
				+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(β)	1999Oh01	PR C59 669 (99)
				-0.906(5)		[75As]	NO/D	1958Pi43	PR 109 1423 (58)
					7(8)		AB	1961Ch10	PR 122 1302 (61)
	46	1.80 μs	(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(β)	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)
					<0.75		TDPAC	1990Mo23	HFI 59 121 (90)
	476	116 μs	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	**********	
				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)		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	**********	
				0.67(4)			NMR/ON	1974Ca23	PR B10 1075 (74)
					1.1(2)		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)		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)
					1.1(5)		TDPAC	1983Un02	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)		CER	1977Le11	NP A284 123 (77)
					-0.30(11)		CER	1976VoZX	BAPS 21 581 (76)
	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	$<6.5x10^4$ v	7/2+	-1.018(15)			MA	1953Ha50	PR 92 1532 (53)
					+0.8(2)		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)		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)		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/βS	1992Ba68	HFI 75 433 (92)
35 Br 76	0	16.1 h	1-	0.54821(2)		[79,81Br]	AB	1960Li11	PR 119 1053 (60)
								1966Br03	PR 142 53 (66)
					0.249 (6) st	[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)
					+0.53(2) st	[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 μs	4(+)	+4.114(12)			NMR/AC	1974FoYO/1971Br31	Cf74Upp 258 (74)/ZP 244 375 (71)

35 Br 79	0	stable	3/2-	+2.106400(4)		[2H]	N	1972Bl07	ZNat 27a 72 (72)
					0.318(5)		R	2004Al08	
					+0.313(3)	[calc efg]	R	2001Bi17	PR A64 052507 (01)
					+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(2)		R	2001Bi17	PR A64 052507 (01)
					+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)
	37	7.4 ns	2-	-1.67(12)		[19F 197]	TDPAD	1973Pl07	NP A215 471 (73)
					0.163(7)	[79,81Br]	R	2001Bi17	PR A64 052507 (01)
					0.159(7) st	[80Br]	TDPAC	2000Ha64	HPAc 51 755 (79)/PR B61 13588 (00)
					0.173(6) st		AB, R	1998Se09	PRL 80 5289 (98)
	86	4.42 h	5-	+1.3177(6)		[79,81Br]	AB	1964Wh05	PR 136 B584 (64)
					+0.71(2)	[79,81Br]	R	2001Bi17	PR A64 052507 (01)
					+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)
					0.266(4)		R	2004Al08	
					+0.262(3)	[calc efg]	R	2001Bi17	PR A64 052507 (01)
					+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 μs	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)
					+0.69(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)
					+1.12(12)		CFBLS	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)
					+0.94(10)		CFBLS	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)
					+0.40(4)		CFBLS	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)	[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)	[83Kr]	R	2001Ke15	CPL 346 155 (01)
					+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)	[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)	[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)
	3236	1.84 μs	8+	-1.97(2)			TDPAD	1982Za04	R.Rou 27 33 (82)
					0.36(4)		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)		[83Kr]	2001Ke15	CPL 346 155 (01)

					+0.44(5)		CFBLS	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)
					-0.30(3)		CFBLS	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)
					+0.16(2)		CFBLS	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)
					+0.30(3)		CFBLS	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 95	0	0.78 s	1/2+	-0.410(3) d		[83Kr]	CFBLS	1995Ke04	NP A586 219 (95)
37 Rb 76	0	39 s	1(-)	-0.3726228(14)		[87Rb]	ABLS	1986Du16/1981Th04	JPPa 47 1903 (86)/PR C23 2720 (81)
					+0.38(15) st		ABLS	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)
					+0.70(4) st		ABLS	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)
					+0.81(4) st		ABLS	1981Th04	PR C23 2720 (81)
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)
					+0.10(2) st		ABLS	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)
					+0.35(2) st		ABLS	1981Th04	PR C23 2720 (81)
	494	1.63 μs	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)
					+0.40(2) st		ABLS	1981Th04	PR C23 2720 (81)
	86	32 m	9/2+	+5.598(2)		[87Rb]	ABLS	1981Th04	PR C23 2720 (81)
					-0.74(6) st		ABLS	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)
					+0.19(7)		ABLS	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)
					+1.0(1) st				
	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)
					+0.20(2) st		ABLS	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) st		ABLS	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)
					+0.6(3) st		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)
				+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)
					+0.277(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 μs	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)
					-0.7(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)
					+0.19(3) st		ABLS	1981Th04	PR C23 2720 (81)
					+0.20(3) st		OD,OL	1973Ac02	ZP 260 87 (73)
	556	1.02 m	(6-)	+1.815(1)		[87Rb]	ABLS	1981Th04	PR C23 2720 (81)

					+0.37(10) st		ABLS	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)
					+0.134(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(10) st		ABLS	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)
					+0.14(3) st		ABLS	1981Th04	PR C23 2720 (81)
					0.16(3) st		CFBLS	1979Kl03	PL 82B 47 (79)
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)
					+0.20(5) st		ABLS	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)
					+0.15(3) st		ABLS	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)
					+0.18(4) st		ABLS	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)
					+0.16(5) st		ABLS	1981Th04	PR C23 2720 (81)
37 Rb 95	0	0.38 s	5/2-	+1.334(3)		[87Rb]	ABLS	1981Th04	PR C23 2720 (81)
					+0.21(7) st		ABLS	1981Th04	PR C23 2720 (81)
37 Rb 96	0	0.20 s	2+	+1.466(2)		[87Rb]	ABLS	1981Th04	PR C23 2720 (81)
					+0.25(6) st		ABLS	1981Th04	PR C23 2720 (81)

37 Rb 97	0	0.17 s	3/2-	+1.841(2)		[87Rb]	ABLS	1981Th04	PR C23 2720 (81)
					+0.58(4) st		ABLS	1981Th04	PR C23 2720 (81)
38 Sr 77	0	9 s	5/2+	-0.348(4)		[87Sr]	CFBLS	1992Li11	PR C46 797 (92)
					+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)
					+ 0.708(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	Chin Phys Lett 25 3617 (08)
	1328	1.0 ps	4+	+1.9(3)			TF	2008YU04	Chin Phys Lett 25 3617 (08)
	2229	0.37 ps	6+	+3.5(5)			TF	2008YU04	Chin Phys Lett 25 3617 (08)
	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	Chin Phys Lett 25 3617 (08)
				+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)
					+0.761(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	3.2 ps	2+	+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)
					+0.282(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	1.46 ps	2+	+0.55(10)			TF	1988Ku01	JP G14 65 (88)
	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)
					+0.33(2)	calc efg	R	2002Ma09	JP B35 917 (02)
					+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	0.152 ps	2+	+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)
					-0.271(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)
					+0.045(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)
					+0.258(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)
					0.84(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)
	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)
	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	7-	-0.58(2)			TDPAD	2000Io02	PR C62 014306 (00)
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)	[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)	[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)	[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(β)	1996Oh03	PR C54 1129 (96)
					-0.43(6)	[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)	calc efg	R	1962Pe01/1998Bl20	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)	[90Y]	CLS	2007CH07	PL B645 133 (07)
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 645 133 (07)

					0.00(2)	[90Y]	CLS	2007CH07	PL 645 133 (07)
39 Y 93	0	10.2 h	1/2-	-0.12(3)		[89Y]	CLS	2007CH07	PL 645 133 (07)
				-0.1390(9)		[91Y]	β-NMR/ON	2004NI21	HFI 159 239 (2004)
	758	0.82 s	9/2+	+6.04(3)		[89Y]	CLS	2007CH07	PL 645 133 (07)
					-0.64(8)	[90Y]	CLS	2007CH07	PL 645 133 (07)
39 Y 94	0	18.7 m	2-	-0.24(2)		[89Y]	CLS	2007CH07	PL 645 133 (07)
					-0.03(3)	[90Y]	CLS	2007CH07	PL 645 133 (07)
39 Y 95	0	10.3 m	1/2-	-0.16(3)		[89Y]	CLS	2007CH07	PL 645 133 (07)
39 Y 96	1140	9.6 s	8+	+6.57(3)		[89Y]	CLS	2007CH07	PL 645 133 (07)
					-0.98(11)	[90Y]	CLS	2007CH07	PL 645 133 (07)
39 Y 97	0	3.75 s	1/2-	-0.12(1)		[89Y]	CLS	2007CH07	PL 645 133 (07)
	668	1.17 s	9/2+	+5.88(2)		[89Y]	CLS	2007CH07	PL 645 133 (07)
					-0.76(8)	[90Y]	CLS	2007CH07	PL 645 133 (07)
	3522	142 ms	(27/2)	+5.64(3)		[89Y]	CLS	2007BI14	PL B645 330 (07)
					-1.21(14)	[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	2007BI14	PL B645 330 (07)
					+1.7(2) or + 1.8(2)	[90Y]	CLS	2007BI14	PL B645 330 (07)
39 Y 99	0	1.47 s	5/2+	+3.18(2)		[89Y]	CLS	2007BI14	PL B645 330 (07)
					+ 1.55(17)	[90Y]	CLS	2007BI14	PL B645 330 (07)
39 Y 100	(143)	0.94 s	4	+2.75(1)		[89Y]	CLS/R	2007BI14/2010BA31	PL B645 330 (07)/J Phys G37 105103 (10)
					+1.85(20)	[90Y]	CLS/R	2007BI14/2010BA31	PL B645 330 (07)/J Phys G37 105103 (10)
39 Y 101	0	0.45 s	5/2+	+3.22(2)		[89Y]	CLS	2007BI14	PL B645 330 (07)
					+1.53(17)	[90Y]	CLS	2007BI14	PL B645 330 (07)
39 Y 102	0 + x	~ 0.3 s	2 or 3	+2.34(5) or + 2.68(1)		[89Y]	CLS	2007BI14	PL B645 330 (07)
					+ 1.17(13) or +1.36(16)	[90Y]	CLS	2007BI14	PL B645 330 (07)
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
					+0.42(5)	[91Zr]	CLS	2003TH03	JP G29 2247
	336	14.0 s	1/2-	+0.642(16)		[91Zr]	CLS	2003TH03	JP G29 2247
40 Zr 88	2889	1.32 μs	8+	-1.81(2)			TDPAD	1978Ha52	HFI 4 196 (78)
				-1.60(16)			TDPAD	1978Ki06	NP A302 159 (78)
					+0.51(3)	[91Zr]	TDPAD	1985Ra09	PRL 54 2592 (85)
							TFLD	1986Be06	PR C33 1517 (86)
40 Zr 89	0	78.4 h	9/2+	-1.046(6)		[91Zr]	CLS	2002Fo12	JP G28 L63
				-1.08(2)			NMR/ON(β)	1996Oh03	PR C54 1129 (96)
				-1.07(3)			NMR/ON	1997Hi06	NP A620 317 (97)
					+0.28(10)	[91Zr]	CLS	2003TH03	JP G29 2247
	588	4.16 m	1/2-	+0.795(18)		[91Zr]	CLS	2003TH03	JP G29 2247
	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)
					-0.51(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)	[calc efg]	MS	2000Ke03	CPL 318 222 (00)
					(-)0.257(13)		R	1993Yo**	PR A48 173 (93)
					-0.206(10)		AB	1989Ra17	Bk82HFS 83 (82)
					-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 μs	21/2+	+9.82(8)		[90Zr 3589]	TDPAD	1982RaZR	BAPS 27 727 (82)
					(-)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)	[90Zr(m) calc]	MAPON	1998Se01	PRL 80 924 (98)
					(+)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)	[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)	[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)					
					-0.26(4)				
	122	66 μs	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)	[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 μs	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	3.5×10^7 y	7+	+5.136(4)		[93Nb]	CLS	2009CH25	PRL 102 222501 (09)
					-0.35(3)	[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 μs	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) a		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)	[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)	[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)	[93Nb]	CLS	2009CH25	PRL 102 222501 (09)
42 Mo 88	_	_	6+,8+	g(avge) = +0.5(3)			IMPAD	1995We03	NP A584 133 (95)
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 μs	8+	-1.391(14)			TDPAD	1978Ha52	HFI 4 196 (78)
					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)
					Q (negative)		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)		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)
					0.47(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)	[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)		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)		AB, R		Bk82HFS 83 (82)
					+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	priv comm	Preprint A.E.Stuchbery (2010)
				+0.97(7)			TF	2001Ma17	PR C63 034312 (01)
				+0.7(4)			IMPAC	1969He11	NP A133 310 (69)
					-0.26(9)		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 μs	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)
					-0.42(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)
	2186	10.1 μs	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)		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 μs	21/2+	+8.97(2)			TDPAD	1983Gr33	HFI 15 65 (83)
					(+)0.04(1)		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 μs	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)
44 Ru 96	833	2.7 ps	2+	+0.89(6)			TF	Priv Comm	Preprint A.E.,Stuchbery (10)
					-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)
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	Priv Comm	Preprint A.E.,Stuchbery (10)
				+0.8(6)			IMPAC	1974Hu01	PR C9 1954 (74)
					-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)	[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(12)	[99Ru]	ME	1976Ki02/1974Gi12	PR C13 1132 (76)/CPL 29 379 (74)
44 Ru 100	540	12 ps	2+	+0.86(5)			TF	Priv Comm	Preprint A.E.,Stuchbery (10)
				+1.02(13)			IPAC	1966Au06	PL 23 367 (66)
					-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)		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)
44 Ru 102	475	18 ps	2+	+0.91(5)			TF	Priv Comm	Preprint A.E.,Stuchbery (10)
				+0.74(6)			IPAC	1972Jo06	NP A188 600 (72)
					-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)	[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	Priv Comm	Preprint A.E.,Stuchbery (10)
				+0.82(10)			IMPAC, R	1974Hu01	PR C9 1954 (74)
					-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)
45 Rh 100	75	215 ns	2+	+4.324(8)			TDPAC	1966Ma54	NIM 45 309 (66)
	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)		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)		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/βS	1992Ma54	HFI 75 415 (92)
46 Pd 96	2532	2.22 μs	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 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+	+0.84(4)		[106Pd 512]	TF	Priv Comm	Preprint A.E.Stuchbery (10)
				+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)		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+	+0.92(4)		[106Pd 512]	TF	Priv Comm	Preprint A.E.Stuchbery (10)
				+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)		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) a		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+	+0.78(3)			R	2010GU**	PR C82 064301
				+0.80(4)			IPAC,R	1980Br01	PR C21 574 (80)
					-0.56(8) or -0.41(8)		CER,R	1972Lu08	PR C6 1385 (72)
					-0.51(7)		ES	1973Ho05	PRL 30 388 (73)
	1128	3.1 ps	2+	+0.96(18)		[106Pd 512]	TF	2010GU**	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	2010GU**	PR C82 064301
46 Pd 108	434	23 ps	2+	+0.69(3)		[106Pd 512]	TF	Priv Comm	Preprint A.E.Stuchbery (10)
				+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)		ES	1978Ar07	JP G4 961 (78)
					-0.48(5)	[110Pd 374]	CER	1977Ma41	JP G3 1735 (77)
					-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+	+0.70(3)		[106Pd 512]	TF	Priv Comm	Preprint A.E.Stuchbery (10)
				+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)		ES	1976Li19	PR C14 952 (76)
					-0.55(8) or -0.35(8)		CER, R	1972Lu08	PR C6 1385 (72)
46 Pd 114	333	0.20 ns	2+	+0.18(10)			IPAC	2004SM04	PL B591 55 (04)
		or 0.35 ns		+0.5(2)			IPAC	2005SM08	
46 Pd 116	341	0.11 ns	2+	+0.4(2)			IPAC	2004SM04	PL B591 55 (04)
47 Ag 101	0	11.4 m	9/2+	+5.627(11)		[106mAg]	CLS	1989DI12	NP A503 331 (89)_
				5.7(4)		[110Ag 118]	NO/S	1983Va09	NP A396 115c (83)
					+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)
					+0.80(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)
					+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)_
					+0.81(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) st	[calc efg]	CLS	1989DI12	NP A503 331 (89)_
					+1.11(11) st	[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) st	[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]	β-NMR	1976Wi03	NP A261 261 (76)
	110	418 y	6+	3.58(2)		[109Ag 88]	O	1975Fi07	ZP A274 79 (75)
					+1.32(7) st		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)	{110Ag 118]	LMR, R	1986Be01/1984Be53	PR C33 390 (86)/PR C30 2026 (84)
	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)		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)		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)		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) st		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)
					0.87(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)
					-0.8(7)	[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)
					+0.43(4)	[109Cd]	OD	1969La06	PR 177 1615 (69)
	2517	4.5 μs	21/2+	+9.17(6)			SOPAD	1978Sp09	HFI 4 229 (78)
					(+)1.17(12)	[109Cd 463]	TDPAD	1978Sp09	HFI 4 229 (78)
48 Cd 106	633	7.3 ps	2+	+0.78(6)			TF	Priv Comm	Preprint A.E.Stuchbery (10)
				+0.8(2)		[110Cd 658]	TF	1980Br01	PR C21 574 (80)
					-0.28(8)		CER	1976Es02	NP A274 237 (76)
	4660	62 ns	12+	+8.9(2)			TDPAD, R	1986Vo14	YadF 44 849 (86)
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)

					+0.68(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)	[109Cd 463]	TDPAD	1978Sp09	HFI 4 229 (78)
	2679	56 ns	21/2+	+9.10(10)			TDPAD	1974Ha48	PL 52B 329 (74)
					+1.21(13)	[109Cd 463]	TDPAD	1978Sp09	HFI 4 229 (78)
48 Cd 108	633	6.8 ps	2+	+0.78(6)			TF	Priv Comm	Preprint A.E.Stuchbery (10)
				+0.7(2)		[110Cd 658]	TF	1980Br01	PR C21 574 (80)
					-0.45(8)		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)
					+0.69(7)		OD, R	1969La06	PR 177 1615 (69)
	463	10.9 μs	11/2-	-1.096(2)			SOPAD	1989Ra17	Cf70HI 356 (70)
					-0.92(9)	[111,3,5Cd 11/2-]	TDPAD	1978Sp09	HFI 4 229 (78)
48 Cd 110	658	5.0 ps	2+	+0.81(6)			TF	Priv Comm	Preprint A.E.Stuchbery (10)
				+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)		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-	-1.1051(4)		[109Cd]	OD	1969La06	PR 177 1615 (69)
					-0.85(9)	[109Cd]	OD	1969La06	PR 177 1615 (69)
	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	Priv Comm	Preprint A.E.Stuchbery (10)
				+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)		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)
	264	14 y	11/2-	-1.087784(2)		[111Cd]	OP/RD, N	1969Ch07	PL 29A 103 (69)

					-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	Priv Comm	Preprint A.E.Stuchbery (10)
				+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)		ES	1981Ko06	JP G7 L63 (81)
					-0.38(4)		ES	1977Gl13	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)
	173	44.8 d	11/2-	-1.0410343(15)		[111Cd]	OP/RD, N	1969Ch07	PL 29A 103 (69)
					-0.54(5)	[113Cd 264]	OL	1973Ge12	PL 46A 211(73)
48 Cd 116	514	15 ps	2+	+0.59(5)			TF	Priv Comm	Preprint A.E.Stuchbery (10)
				+0.60(14)		[110Cd 658]	TF	1980Br01	PR C21 574 (80)
					-0.42(4)		ES	1977Gl13	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)
49 In 104	0	1.7 m	5+	+4.44(2)		[115In]	CFBLS	1987Eb02	NP A464 9 (87)
					+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)
					+0.83(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)
					+0.97(6) st	[115In]	CFBLS	1987Eb02	NP A464 9 (87)
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)
					+0.81(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)
					+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)
					+0.467(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)
					+0.84(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)
					+0.35(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)
					+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)
					+0.80(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)
					+0.087(5)	[115In]	AB, R	1968CaZX	Th68 Casserb (68)
	157	20.9 m	4+	+5.227(4)		[115In]	CFBLS	1987Eb02	NP A464 9 (87)
					+0.714(10)	[115In]	CFBLS	1987Eb02	NP A464 9 (87)
	351	0.69 μs	7+	+4.73(4)			TDPAD	1976Io04	NP A272 1 (76)
					1.03(3)	[117In 660]	TDPAD	1993Io02	HFI 77 111 (93)
	614	2.82 μs	8-	+3.08(3)			TDPAD	1976Io04	NP A272 1 (76)
					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)
					+0.80(4) st	[115In]	AB	1957Ri42	PR 106 953 (57)
	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)
					+0.739(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)
					+0.81(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)
					-0.60(2) st		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) st	[115In]	QIR	1982Gr17	NP A386 56 (82)
					0.09(2)		NMR/ON	1971Wi12	ZP 244 289 (71)
	127	54.2 m	5+	+4.435(15)		[115In]	CFBLS	1987Eb02	NP A464 9 (87)
					+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)
					+0.310(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)
					+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)
					(-)0.59(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)
					+0.796(8) st	[115In]	CFBLS	1987Eb02	NP A464 9 (87)
	~200	8.5 s	8-	+3.321(11)		[115In]	CFBLS	1987Eb02	NP A464 9 (87)
					+0.441(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)
					+0.854(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	1989Ra17	ARHMI 75 (79)
					0.60(2)	[115In]	TDPAD	1989Ra17	ARHMI 75 (79)
49 In 120	(0)	44.4 s	5+	+4.295(5)		[115In]	CFBLS	1987Eb02	NP A464 9 (87)
					+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)
					+0.530(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)
					+0.814(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)
					+0.81(2) st	[115In]	CFBLS	1987Eb02	NP A464 9 (87)
	~220	10.5s	8-	+3.781(6)		[115In]	CFBLS	1987Eb02	NP A464 9 (87)
					+0.59(2) st	[115In]	CFBLS	1987Eb02	NP A464 9 (87)
49 In 123	0	6.68 s	9/2+	+5.491(7)		[115In]	CFBLS	1987Eb02	NP A464 9 (87)
					+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)
					+0.61(7) st	[115In]	CFBLS	1987Eb02	NP A464 9 (87)
	190	3.7 s	8-	+3.888(9)		[115In]	CFBLS	1987Eb02	NP A464 9 (87)
					+0.664(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)
					+0.71(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)
					+0.49(5) st	[115In]	CFBLS	1987Eb02	NP A464 9 (87)
	(0)	1.64 s	8-	+4.061(4)		[115In]	CFBLS	1987Eb02	NP A464 9 (87)
49 In 127	0	1.22 s	9/2+	+5.522(8)		[115In]	CFBLS	1987Eb02	NP A464 9 (87)
					+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)
					+0.31(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)
					0.34(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)
					+0.18(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+	+0.7(3)			TF	1980Ha19	PR C22 97 (80)
					-0.03(11)		CER	1975Gr30	PR C12 1462 (75)
	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(2)	[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)	[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			TF	1980Ha19	PR C22 97 (80)
	3088	765 ns	7-	-0.567(4)			TDPAD	1973IsZQ	Cf73Mun 1 256 (73)
					0.32(3)	[116Sn 3548]	TDPAD	1975Di02	PL 55B 293 (75)
					0.36(4)	[118Sn 3108]	TDPAD	1976Be59	HFI 2 326 (76)
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)	[118Sn 3108]	TDPAD	1976Be59	HFI 2 326 (76)
	714	159 μs	11/2-	-1.378(11)			TDPAD	1975Iv02	RRou 20 141 (75)
				-1.369(4)			NMR/AC	1971Br03	PL 34B 54 (71)
					0.38(6)		QIR	1975Ri03	PS 11 228 (75)
50 Sn 116	1294	0.36 ps	2+	-0.3(5)			TF	2008EA02	PL B665 147 (08)
				-0.3(2)			TF	1980Ha19	PR C22 97 (80)
					-0.17(4)		ES	1976Li19	PR C14 952 (76)
					+0.08(8)		CER	1975Gr30/1970Kl06	PR C12 1462 (75)/NP A154 499 (70)
	2366	370 ns	5-	-0.376(3)			TDPAD	1973IsZQ	Cf73Mun 1 256 (73)
					0.26(3)	[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)
					0.50(5)		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)		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)
					-0.05(14)		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)
					0.16(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 μs	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)
					-0.112(7)		ME	2006MA35	Eur J Phys B51 173 (06)
					-0.105(2)		[calc efg]	2000Ll53	HFI 126 137 (00)
					0.128(7)		R	1997Sv03	PR B55 12572 (97)
					-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)
					0.21(2)	[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)
					+0.022(10)		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)
					0.033(4)	[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)		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)		ABLFS	1986An24	PR C34 1052 (86)
50 Sn 122	1140	0.76 ps	2+	-0.1(2)			TF	1980Ha19	PR C22 97 (80)
					-0.28<Q<+0.14		CER	1975Gr30	PR C12 1462 (75)
50 Sn 123	0	129 d	11/2-	-1.3700(9)		[115,7,9Sn]	ABLFS	1986An24	PR C34 1052 (86)
					+0.03(4)		ABLFS	1986An24	PR C34 1052 (86)
50 Sn 124	1132	0.97 ps	2+	-0.3(2)			TF	1980Ha19	PR C22 97 (80)
					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)
					+0.1(2)		ABLFS	2005Le34	PR C72 034305 (05)
					+0.1(2)		ABLFS	1986An24	PR C34 1052 (86)
	28	9.5 m	3/2+	+0.764(3)			ABLFS	2005Le34	PR C72 034305 (05)
					+0.79(7)		ABLFS	2005Le34	PR C72 034305 (05)
50 Sn 126	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)
					+0.30(13)		ABLFS	2005Le34	PR C72 034305 (05)
	5	4.13 m	3/2+	+0.757(4)			ABLFS	2005Le34	PR C72 034305 (05)
					+0.60(6)		ABLFS	2005Le34	PR C72 034305 (05)
	1827	4.5 μs	(19/2)	-1.6(2)			TDPAD	2010AT03	Eur Phys Lett 91 42001 (2010)
50 Sn 128	2492	2.7 μs	10+	-2.0(4)			TDPAD	2010AT03	Eur Phys Lett 91 42001 (2010)
50 Sn 129	0	2.23 m	3/2+	+0.754(3)			ABLFS	2005Le34	PR C72 034305 (05)
					+0.05(11)		ABLFS	2005Le34	PR C72 034305 (05)

	35	6.9 m	11/2-	-1.297(5)			ABLFS	2005Le34	PR C72 034305 (05)
					-0.2(2)		ABLFS	2005Le34	PR C72 034305 (05)
50 Sn 130	1947	1.7 m	7-	-0.381(3)			ABLFS	2005Le34	PR C72 034305 (05)
					-0.36(11)		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(8)		ABLFS	2005Le34	PR C72 034305 (05)
	242	58.4 s	11/2-	-1.276(5)			ABLFS	2005Le34	PR C72 034305 (05)
					0.0(2)		ABLFS	2005Le34	PR C72 034305 (05)
51 Sb 112	796	536 ns	8-	+2.192(8)			TDPAD	1976Ke07	HFI 2 336 (76)
					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 μs	8-	+2.265(5)			SOPAD, TDPAD	1976Ke07/1976Br40	HFI 2 336 (76)/HFI 2 329 (76)
					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)
					-0.36(6) st	[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)
					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)
					1.67(39)	[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)	[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 μs	(25/2)+	+1.500(9)			NMR/ON, TDPAD	1975Iv02	RRou 20 141 (75)
					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)
					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 μs	(3)+	+2.63(5)		[115Sb 714]	TDPAD	1975Pl04	PL 57B 235 (75)
					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)
					0.25(5) st	[112Sb 796]	TDPAD	1985Di07	ZP A320 613 (85)
	927	22.8 ns	7+	+4.76(13)			TDPAD	1985Di07	ZP A320 613 (85)
					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)
					-0.37(6) st	[121Sb]	AB	1968Ja05	PR 175 65 (68)
	2554	128 ns	19/2-	+3.14(6)			TDPAC	1991Io02	NP A531 112 (91)
					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)
					0.41(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)
					-0.36(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)
					-0.48(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)
					+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 μs	3+	+2.983(12)			SOPAD	1973He10	PR C7 2128 (73)
					+0.41(4) st	[121Sb]	TDPAD	1982Ma29	PR C26 493 (82)
	137	530 μs	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)
					-0.49(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)
					+1.9(4) st	[121Sb]	NO/S	1985He16	ZP A322 281 (85)
	41	3.2 μs	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)
52 Te 115	280	7.5 μs	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)		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)		CER	1974Ba45/1974La05	PR C10 1166(74)/NP A221 26 (74)
								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)	[129I]	ME	1977La03	PR B15 2504 (77)
	145	58 d	11/2-	-0.985(6)		[125Te 36]	NMR/ON	1980Ge02	PR C21 439 (80)
					-0.06(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)	[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)
					-0.20(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)
	341	411 ps	9/2-	-0.96(6)			IPAC	1974So03	NP A224 358 (74)
				-0.98(15)			IPAC	1985De04	PR C31 593 (85)
					+0.17(12*)	*calc efg	CLS	2006Sl40	HFI 171 173 (06)
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)
					-0.06(5)		CER	1978Be10	PR C17 628 (78)
					-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)	[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	2006Sl40	HFI 171 173 (06)
					+0.40(3)*	*calc efg	CLS	2006Sl40	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)
					-0.15(10)		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	2006Sl40	HFI 171 173 (06)
					+0.25(14)*	*calc efg	CLS	2006Sl40	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	2006Sl40	HFI 171 173 (06)
					+0.23(9)*	*calc efg	CLS	2006Sl40	HFI 171 173 (06)
	334	55.4 m	11/2-	(-) 1.129(7)			NMR/ON	1998Wh05	NP A640 322 (98)
				1.15(9)			CLS	2006Sl40	HFI 171 173 (06)
					+0.28(14)*	*calc efg	CLS	2006Sl40	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	2006Sl40	HFI 171 173 (06)
					+0.29(9)*	*calc efg	CLS	2006Sl40	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)
	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)
					-0.776(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)
					0.72(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)
					-0.636(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)
					-0.498(7)	[127[I]	R	2001Bi17	PR A64 052507 (01)
					-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)
					-0.616(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)
					-0.35(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)
					0.65(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)	[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(7)	[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)
					(-)0.148(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)
					-0.24(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)
					+1.16(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)
					+1.31(5)	[131Xe]	CFBLS	1990NeZY	PC Neugart (90)
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)
					+1.33(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 μs	7/2(-)	-0.902(7)			TDPAD	1982Ch25	ZP A308 227 (82)
					1.33(14)	[125Xe 296]	TDPAD	1982Ch25	ZP A308 227 (82)
	201+x	17 ns	9/2-		1.1(5)	[123Xe 180+x]	TDPAD	1982Ch25	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)
					+0.424(15)	[131Xe]	CFBLS	1990NeZY	PC Neugart (90)
	296	140 ns	7/2+	+0.93(4)			TDPAD	1983Al21	ZP A314 17 (83)
					1.40(15)		TDPAD	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)
					+0.69(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)	[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)
					+0.64(2)	[131Xe]	CFBLS	1990NeZY	PC Neugart (90)
54 Xe 130	538	10.0 ps	2+	+0.67(2)			TF	2002Ja02	PR C65 024316
				+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
	1205	2.4 ps	4+	+1.7(2)			TF	2002Ja02	PR C65 024316
	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)	[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)
					+0.73(3)	[131Xe]	CFBLS	1990NeZY	PC Neugart (90)
54 Xe 132	668	4.9 ps	2+	+0.63(2)			TF	2002Ja02	PR C65 024316
				+0.70(7)			TF, R	2002Ja02	PR C65 024316
				+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
	1440	1.8 ps	4+	+2.4(4)			TF	2002Ja02	PR C65 024316
	2214	90 ns	7-	-0.06(3)			TDPAD	1986Vo14	YadF 44 849 (86)
					0.010(5)		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)
					+0.142(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)
					+0.77(3)	[131Xe]	CFBLS	1990NeZY	PC Neugart (90)
54 Xe 134	847	1.9 ps	2+	+0.708(14)			TF	2002Ja02	PR C65 024316
				1.1(2)		[132Xe 668]	TF	1993Sp01	NP A552 140 (93)
	1731	2.2 ps	4+	+3.2(6)			TF	2002Ja02	PR C65 024316
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)
					+0.214(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)
					+0.62(2)	[131Xe]	CFBLS	1990NeZY	PC Neugart (90)
54 Xe 136	1313	0.21 ps	2+	+1.53(9)			TF	2002Ja02	PR C65 024316
				2.4(5)		[132Xe 668]	TF	1993Sp01	NP A552 140 (93)
	1694	1.32 ns	4+	+4.3(17)			TF	2002Ja02	PR C65 024316
				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)
					-0.48(2)	[131Xe]	CFBLS	1989Bo03	PL B216 7 (89)
	1620	(0.6 ns)	15/2	2.0(4)			IPAC	2010Ll03	PR C81 014316 (10)
54 Xe 139	0	39.7 s	3/2-	-0.304(10)		[129,131Xe]	CFBLS	1989Bo03	PL B216 7 (89)
					+0.40(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)
					-0.58(2)	[131Xe]	CFBLS	1989Bo03	
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)
					+0.93(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)

					+1.4(2) st		ABLS	1987Co19	NP A468 1 (87)
	(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	1987Co19	NP A468 1 (87)
					+2.8(1) st		ABLS	1987Co19	NP A468 1 (87)
	(0)	28 s	3/2+	+0.838(5)		[133Cs]	ABLS	1987Co19	NP A468 1 (87)
					+0.9(1) st		ABLS	1987Co19	NP A468 1 (87)
55 Cs 120	0	64 s	2+	+3.87(2)		[133Cs]	ABLS	1987Co19	NP A468 1 (87)
					+1.45(2) st		ABLS	1987Co19	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	1987Co19	NP A468 1 (87)
				0.79(2)		[133Cs]	AB	1977Ek02	NP A292 144 (77)
					+0.838(9) st		ABLS	1987Co19	NP A468 1 (87)
	~36	2.02 m	9/2+	+5.41(3)		[133Cs]	ABLS	1987Co19	NP A468 1 (87)
					+2.69(5) st		ABLS	1987Co19	NP A468 1 (87)
55 Cs 122	(0)	21 s	1+	-0.1333(9)		[133Cs]	ABLS	1987Co19	NP A468 1 (87)
				0.133(2)		[133Cs]	AB	1977Ek02	NP A292 144 (77)
					-0.19(1) st		ABLS	1987Co19	NP A468 1 (87)
	(0)	4.2 m	8-	+5.41(3)		[133Cs]	ABLS	1987Co19	NP A468 1 (87)
					+3.29(8) st		ABLS	1987Co19	NP A468 1 (87)
55 Cs 123	0	5.8 m	1/2+	+1.377(7)		[133Cs]	ABLS	1987Co19	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	1987Co19	NP A468 1 (87)
				+0.674(7)		[133Cs]	AB	1977Ek02	NP A292 144 (77)
					-0.74(3) st		ABLS	1987Co19	NP A468 1 (87)
55 Cs 125	0	45 m	1/2+	+1.409(7)		[133Cs]	ABLS	1987Co19	NP A468 1 (87)
55 Cs 126	0	1.64 m	1+	+0.777(4)		[133Cs]	ABLS	1987Co19	NP A468 1 (87)
				+0.779(8)		[133Cs]	AB	1977Ek02	NP A292 144 (77)
					-0.68(2) st		ABLS	1987Co19	NP A468 1 (87)
55 Cs 127	0	6.2 h	1/2+	+1.459(7)		[133Cs]	ABLS	1987Co19	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	1987Co19	NP A468 1 (87)
				+0.977(10)		[133Cs]	AB	1977Ek02	NP A292 144 (77)
					-0.570(8) st		ABLS	1987Co19	NP A468 1 (87)
55 Cs 129	0	32.3 h	1/2+	+1.491(8)		[133Cs]	ABLS	1987Co19	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	1987Co19	NP A468 1 (87)
				+1.466(15)		[133Cs]	AB	1977Ek02	NP A292 144 (77)
					-0.059(6) st		ABLS	1987Co19	NP A468 1 (87)
	0+x	3.7 m	5(-)	+0.629(4)		[133Cs]	ABLS	1987Co19	NP A468 1 (87)
				+0.631(10)		[133Cs]	AB	1977Ek02	NP A292 144 (77)
					+1.45(5) st		ABLS	1987Co19	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)
					-0.575(6) st		OL, OD, R	1986St16	ZNat 41a 24 (86)
					-0.67(4) st		ABLS	1981Th06	NP A367 1 (81)
	134	8.7 ns	5/2+	+1.86(8)			TDPAC	1989Ra17	JPJS 34 427 (73)
					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)
					+0.508(7) st		OL	1975Ac01	NP A248 157 (75)
					+0.49(2) st		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)
					-0.00355(4)		CLS	2003Ge06	
					-0.00371(14)		OL	1988Ta17/1981Th06	PR A38 1616 (88)/NP A367 1 (81)
					-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)
					-0.33(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)
					+0.389(3) st		OD, R	1975Ac01	NP A248 157 (75)
					+0.38(4) st		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)
					+0.98(8) st		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)
					+0.050(2) st		OL, OD, R	1975Ac01	NP A248 157 (75)
					+0.03(2) st		ABLS	1981Th06	NP A367 1 (81)
	1633	53 m	19/2-	+2.18(1)		[133Cs]	ABLS	1981Th06	NP A367 1 (81)
					+0.89(7)		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)
					+0.225(10) st		OL	1975Ac01	NP A248 157 (75)
					+0.17(6) st		ABLS	1981Th06	NP A367 1 (81)
	0+x	19 s	8-	+1.319(7)		[133Cs]	ABLS	1981Th06	NP A367 1 (81)
					+0.74(10)		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)
					+0.051(1) st		OL, OD, R	1975Ac01	NP A248 157 (75)
					+0.06(2) st		CFBLS	1978Sc27	PL 79B 209 (78)
					+0.03(4) st		ABLS	1981Th06	NP A367 1 (81)
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)
					+0.13(2) st		CFBLS	1979Bo01	ZP A289 227 (79)
					+0.12(2) st		ABLS	1981Th06	NP A367 1 (81)
	80	2.9 m	6-	+1.713(9)		[133Cs]	ABLS	1981Th06	NP A367 1 (81)
					-0.40(3)		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)
					-0.075(11) st		CFBLS	1979Bo01	ZP A289 227 (79)
					-0.06(3) st		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)
					-0.112(7) st		CFBLS	1979Bo01	ZP A289 227 (79)
					-0.10(2) st		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)
					-0.36(4) st		CFBLS	1979Bo01	ZP A289 227 (79)
					-0.45(7) st		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)
					+0.47(3) st		ABLS	1981Th06	NP A367 1 (81)
55 Cs 144	0	1.00 s	1	-0.546(3)		[133Cs]	ABLS	1981Th06	NP A367 1 (81)
					+0.30(1) st		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)
					+0.62(6) st		ABLS	1981Th06	NP A367 1 (81)
55 Cs 146	0	0.34 s	1	-0.515(2)		[133Cs]	ABLS	1987Co19	NP A468 1 (87)
					+0.22(3) st		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)
					+1.79(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)
					+1.49(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)
					+1.62(13)	[135,137Ba]	CFBLS	1992Da06	JP G18 L67 (92)
56 Ba 129	0	2.23 h	1/2+	-0.40(2)		[135,137Ba]	ABLFS, R	1983Mu12/1979Be25	NP A403 234 (83)/ZP A291 219 (79)
					+1.60(13) st	[135,137Ba]	ABLFS, R	1983Mu12/1979Be25	NP A403 234 (83)/ZP A291 219 (79)
	182	9 ns	9/2-	-0.81(9)			TDPAD	2010IO??	Priv Comm to be published
56 Ba 130	357	37 ps	2+	+0.70(6)			TF	1980Br01	PR C21 574 (80)
					-1.0(2) or -0.1(2)		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
					+2.8(3)		CLS	2002Mo31	PL B547 200
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)
					+1.46(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)
					+0.89(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)
					-0.32(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 μs	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) st		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)
					+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)		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) st		R	1988We07	ZP A329 407 (88)
					+0.23(3) st		OL, R	1983Mu12/1976Ma28	NP A403 234 (83)/ZP A277 107(76)
					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)
					+0.78(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)		CER	1989Bu07	NP A494 102 (89)
	1899	2.17 ns	4+	3.2(6)			IPAC	1985Be04	PR C31 570 (85)
	2091	0.8 μs	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) st		CFBLS	1988We07	ZP A329 407 (88)

					-0.50(4) st	[135,137Ba]	CFBLS	1983Mu12	NP A403 234 (83)
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) st		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) st		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) st		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)
				+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	2003Il03	PR C68 054328 (03)
					-0.4(4)	[139La]	CFBLS	2003Il03	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	2003Il03	PR C68 054328 (03)
				+2.695(6)		[139La]	O	1972Fi19	ZP 254 127 (72)
					+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)
					+0.45(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)

					+0.20(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)
					+0.094(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)	[138Ce 3538]	TDPAD	1998Io01	NP A633 459 (98)
58 Ce 130	2454	109 ns	7-		1.8(2)		TDPAD	99Io02	PR C60 024316 (99)
58 Ce 131	162	88 ns	9/2-	-0.85(3)			TDPAD	1998Io01	NP A633 459 (98)
					0.92(10)	[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)
				-1.9(1)			TDPAD	1980Go14	PL 97B 351 (80)
					+1.32(12)	[138Ce 3538]	TDPAD, TF	1983Da29/1986Da22	HFI 15 101 (83)/PL 181B 21 (86)
					[Q/Q(10+ Ce138)=1.71(16)]			1983Da29	HFI 15 101 (83)
	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 μs	10+	-1.80(2)			TDPAD	1980Ba68	PRL 45 1015 (80)
				-1.80(3)			TDPAD	1982Ri09	PRL 48 516 (82)
					[Q/Q(10+ Ce138)=1.45(14)]		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)
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+	4.06(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	[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)		CER	1988Ve08/1989Sp07	PR C38 2982 (88)/AuJP 42 345 (89)
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	1994Ii01	PR C50 661 (94)
					-0.059(4)		AB	1963Bi25	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)
					+0.030(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	[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	[143Nd]	LRIMS	1992Le09	JP G18 1177 (92)
	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	[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	[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		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)		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		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)
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)		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)	[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)		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)	[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)		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)
				+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)
					+0.21(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)
					+0.7(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)		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)
					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)	[154Sm 82]	TDPAD	1985Be23	ZP A321 403 (85)
	3210	5.2 ns	10+	+12.7(9)			TDPAD	1988Ba22	PL 206B 404 (88)
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	[145,7,9Sm]	LRIMS	1992Le09	JP G18 1177 (92)
62 Sm 142	2372	170 ns	7-		+1.1(3)	[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)	[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)	[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) a		Mu-X	1981Ba28	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)	[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)		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)	[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		Mu-X	1981Ba28	NP A364 446 (81)
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)		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)	[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		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)
				αx10*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)	[147,147Sm]	LRFS	1990En01	JP G16 105 (90)
					+1.26(13)	[147Sm]	ABLFS	1984Ea02	JP G10 L271 (84)
62 Sm 154	82	3.01 ns	2+	+0.78(4)		[149Sm]	ME	1969Wh04	PR 186 1280 (69)
					-1.87(4) a		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)
				αx10*3=-1.3(15)					
62 Sm 155	0	22.4 m	3/2-		1.13(13)	[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)	[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)	[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)	[153Eu]	CFBLS	1985Ah02	ZP A321 35 (85)
	180	73 s	8-	+2.978(11)		[151Eu]	CFBLS	1985Ah02	ZP A321 35 (85)
					+1.41(6)	[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)	[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)	[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)	[151 Eu]	CFBLS	1985Ah02	ZP A321 35 (85)
	716	0.49 μs	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)
					-0.18(6)	[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)	[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)	[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)	[151 Eu]	CFBLS	1985Ah02	ZP A321 35 (85)
	497	2.43 μs	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)	[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		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		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)
				-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)
					+2.71(3)	[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		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		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)
					1.254(13)	[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)
					+2.84(10)	[151Eu]	CFBLS	1986Al33	YadF 44 1134 (86)
					+3.4(3)	[152Eu]	NO/S, O, R	1962Ju06/1970He09/ 1971He18	PR 128 1733 (62)/PL 31B 295 (70)/ 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	99Ga36	APPo 30 1415 (99)
					+2.5(3)	[151,153Eu]	CFBLS	90Al34	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)	[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)
					+0.66(14)	[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)	[151,153Eu]	CFBLS	1990Al34	ZP A337 257 (90)
64 Gd 144	3433	130 ns	10+	+12.76(14)			TDPAD	1979Ha15	PRL 42 1451 (79)
					-1.46(6)		TDPAD, TFLD	1982Ha22/1985Da200	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)
					-0.73(7)		TDPAD, TFLD	1982Ha22/1985Da200	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)
					-1.26(8)		TDPAD, TFLD	1982Ha22/1985Da200	NP A379 287 (82)/NP A443 135 (85)
	8587	510 ns	49/2+	+10.9(2)			TDPAD	1979Ha15	PRL 42 1451 (79)
					-3.24(18)		TDPAD, TFLD	1982Ha22/1985Da200	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)
					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)
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		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		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)
					+0.13(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)
					+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)
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		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)
				αx10*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		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 μs	5/2+	-0.464(11)		[157Gd]	ME, R	1974Ar23	NP A233 385 (74)
					+2.45(5)	[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		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)
	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)
				αx10*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		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)
				αx10*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)	[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)	[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)	[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)	[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)
					+2.9(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)
				2.0(2)		[159Tb]	NO/S	1979Du08	CzJP B29 361 (79)
					+1.41(6)	[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	1979Du08	CzJP B29 361 (79)
				1.4(2)			NO/S	1962Lo01	NP 30 452 (62)
					+2.3(8)	[159Tb]	NO/S	1983Be03	JP G9 213 (83)
					+3.0(9)	[159Tb]	NO/S	1979Du08	CzJP B29 361 (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)	[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		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		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)	[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)
					+1.2(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)	[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)	[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)	[163Dy]	CFBLS	1989Ra17	PC Neugart (87)
66 Dy 152	6129	9.9 ns	21-	+11.6(12)			TDPAD	1979Me01	PRL 42 23 (79)
	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)	[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)
					+0.967(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)
					+1.30(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)

				+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+	α 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)	[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)		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+	α 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)	[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	1976St73	JPCR 5 1093 (76)
					+2.51(2)	[161Dy]	ME, R	1976St73	JPCR 5 1093 (76)
	44	0.78 ns	7/2+	-0.141(5)		[161Dy]	ME	1973Sy01	PR C7 2056 (73)
					+0.53(13)	[161Dy]	ME	1973Sy01	PR C7 2056 (73)
	75	3.2 ns	3/2-	-0.403(4)		[161Dy]	ME, R	1976St73	JPCR 5 1093 (76)
					+1.45(6)	[161Dy]	ME, R	1976St73	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)
				+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		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)	[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)
					-3.49(7)	[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) st	[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) st	[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) st	[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) st	[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) st	[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)
					+1.52(10) st	[165Ho]	LRIMS	1989Al27	NP A504 549 (89)
67 Ho 156	0	56 m	4(+)	+2.99(3)		[165Ho]	LRIMS	1989Al27	NP A504 549 (89)
					+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)
					+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)

					+4.1(4) st	[165Ho]	LRIMS	1989Al27	NP A504 549 (89)
	67.2	28 m	2-	+2.44(3)		[165Ho]	LRIMS	1989Al27	NP A504 549 (89)
					+1.6(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)
					3.19(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) st	[165Ho]	LRIMS	1989Al27	NP A504 549 (89)
	60	5.02 h	2-	+2.52(3)		[165Ho]	LRIMS	1989Al27	NP A504 549 (89)
						[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)
					3.22(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)
					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)
					3.6(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		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)
					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)
					3.43(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-)	-0.934(5)		[167Er]	CFBLS	1989Ra17	Cf85Bomb 175 (85)
					-0.42(2)	[167Er]	CFBLS	1989Ra17	Cf85Bomb 175 (85)
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-	-0.669(4)		[167Er]	CFBLS	1989Ra17	Cf85Bomb 175 (85)
					-0.27(2)	[167Er]	CFBLS	1989Ra17	Cf85Bomb 175 (85)
	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-	-0.412(3)		[167Er]	CFBLS	1989Ra17	Cf85Bomb 175 (85)
					+0.92(2)	[167Er]	CFBLS	1989Ra17	Cf85Bomb 175 (85)
	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-	-0.304(2)		[167Er]	CFBLS	1989Ra17	Cf85Bomb 175 (85)
					+1.17(1)	[167Er]	CFBLS	1989Ra17	Cf85Bomb 175 (85)
	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-	-0.365(3)		[167Er]	CFBLS	1989Ra17	Cf85Bomb 175 (85)
				-0.369(3)		[167Er]	AB	1972Ek03	NP A194 237 (72)
					+1.35(2)	[167Er]	CFBLS	1989Ra17	Cf85Bomb 175 (85)
					+1.361(14)	[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)		CER	1983Hu01	PR C27 550 (83)
68 Er 163	0	75.1 m	5/2-	+0.557(4)		[167Er]	CFBLS	1989Ra17	Cf85Bomb 175 (85)
					+2.55(3)	[167Er]	CFBLS	1989Ra17	Cf85Bomb 175 (85)
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)		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-	+0.643(3)		[167Er]	CFBLS	1989Ra17	Cf85Bomb 175 (85)
					+2.71(3)	[167Er]	CFBLS	1989Ra17	Cf85Bomb 175 (85)
	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)

				-2.7(9)		CER	1970McZQ	ORNL 4513 56 (70)
				-2.9(10)		CER	1970Ka45	Cf69Heid 471 (69)
				-1.9(4) st		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)	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(2)	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)
				+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	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)	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)	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)		CER	1973Lu02	PR C8 391 (73)
	260	~135 ps	4+	+1.09(15)		[166Er 265]	IMPAC	1968De28	Cf67HI 731 (67)
					-2.2(10)		CER	1970McZQ	ORNL 4513 56 (70)
	934	1.7 ps	2+		2.0(3)		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)	[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)	[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)	[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)	[169Tm]	LRIS	2000Ba16	PR C61 034304 (00)
69 Tm 156	0	1.3 m	2-	+0.40(3)		[169Tm]	LRIMS	1989Ra17	LNPP 1309 (87)
					-0.48(11) st	[170Tm]	LRIMS	1989Ra17	LNPP 1309 (87)
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	[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	[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	[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	[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	[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	[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	[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	[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		ME	1973Lu02	PR 134 A94 (64)
	118	62 ps	5/2+	+0.76(5)			IPAC	1969Gu01/1968Ka14	NP A123 386 (69)/NP A119 417 (68)
	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/ 1973Ek01	PR 120 920 (60)/ZP 199 244 (67)/ PS 7 31 (73)
					+0.72(5) st	[169Tm]	ABLS	1988Dy02	PR C38 2813 (88)
					+0.74(2) st		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)		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)	[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)	[173Yb]	CFBLS	1983Ne13	HFI 15 181 (83)
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)	[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)	[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)	[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)	[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)
					2.1(4)	[172Yb 79]	ME	1971Pl03	NP A165 97 (71)
	gs band		<12+	α x 10*3 = -0.5(15)		[169Tm]	TF	1979Wa15	NP A330 225 (79)
	gs band		<18+	α 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)
					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)
					2.2(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	260	0.122 ns	4+		-2.3(12)		CER	1970McZQ	ORNL-4513 56 (70)
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) a		Mu-X, O	1975Ze04/1964Ro11	NP A254 315 (75)/JPJa 19 249 (64)
	79	44 ps	7/2-	-0.20(7)			IPAC	1983Ca**	HFI 15 85 (83)
	179	24 ps	9/2-	+0.3(4)			IPAC	1983Ca**	HFI 15 85 (83)
	351	471 ps	7/2+	-0.5(5)			IPAC	1983Ca**	HFI 15 85 (83)
70 Yb 174	77	1.79 ns	2+	+0.676(8)			ME	1971He03	ZP 241 138 (71)
					2.1(3)	[170Yb 84]	ME	1971Pl03/1971He03	NP A165 97 (71)/ZP 241 138 (71)
	253	144 ps	4+		-1.8(12)		CER	1970McZQ	ORNL 4513 56 (70)
	gs band	< 12+		α x 10*3 = +0.3(15)		[169Tm]	TF	1979Wa15	NP A330 225 (79)
	gs band	<16+		α 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)
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)
					2.2(4)	[170Yb 84]	ME	1967Ec01	PR 156 246 (67)
	272	0.11 ns	4+		-0.9(12)		CER	1970McZQ	ORNL 4513 56 (70)
	1050	11.4 s	8-	-0.151(15)		[175,177Yb]	CLS	2007Bl14	PL B645 330 (07)
					+5.30(8)	[175,177Yb]	CLS	2007Bl14	PL B645 330 (07)
71 Lu 161	0	77 s	1/2(+)	+0.223(3)		[175Lu]	CFBLS	1998Ge13	EurPJ A3 225 (98)
71 Lu 162	0	1.37 m	1-	+0.0553(11)		[175Lu]	CFBLS	1998Ge13	EurPJ A3 225 (98)
					+0.519(8)	[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)	[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)	[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)	[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)	[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)	[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)	[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)	[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)	[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)	[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)	[175Lu]	CFBLS	1998Ge13	EurPJ A3 225 (98)
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)	[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)	[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)	[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		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)	[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)	[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)	[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)
				2.93(7)		[177Lu]	NO/S	1974Kr12/1975Sc16	PR C10 825 (74)/ZP A272 203 (75)
					+5.71(5)	[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)	[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)	[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)	[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	>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)		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	**********	PRL 88 094801 (02)
				-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)		LRS	**********	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		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		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		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		Mu-X	1984Ta10	PR C30 350 (84)

	1147	4 s	8-	+3.10(1)		[178m1Hf]	CLS	2007BI14	PL B645 330 (07)
					+4.99(4)	[178m1Hf]	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)	[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)
					-2.00(2) a		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)	[178Hf 93]	NO/S	1973Ka31	PL 46B 62 (73)
73 Ta 169	170+x, 220	44, 54 ns	5/2-, 9/2-		ratio 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-		(+)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)
					(-)1.9(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)
					(+)3.6(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 μs	5/2-	+2.05(13)			TDPAC	1978Be67	IzF 42 2286 (78)
	1355	5.0 μs	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)
					+0.65(6)		NO/S	1983Ha49	HFI 16 105 (83)
73 Ta 179	0	1.82 y	7/2+	+2.289(9)		[181Ta]	LRS	1996Wa02	PR C53 611 (96)
					+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)
					+4.95(2)		LRS	1994Wa34	PR A50 4639 (94)
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		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 μs	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)
					+3.71(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)
					+2.35(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)		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)
					5.2<Q<6.7	[calc efg]	TDPAD	2002Io01	PL B541 219 (02)

74 W 179	3348	750 ns	35/2-		3.2<Q<5.1	[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)
74 W 180	104	1.22 ns	2+	0.51(3)		[182W 100]	ME	1973Zi02	ZP 262 413 (73)
					2.1(4)	[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)		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)	[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)	[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)		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)		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)		CER	1977RuZV	BAPS 22 1032 (77)
	396	36 ps	4+	+1.28(10)		[186W 123]	TF	1985St07	ZP A320 669 (85)
					-2.6(13)		CER	1970McZQ	ORNL-4513 56 (70)
	737	4.4 ps	2+	+0.39(8)		[186W 123]	TF	1985St07	ZP A320 669 (85)
					1.2(3)		CER	1977Ob02	NP A291 510 (77)

					+1.3(3)		CER	1977Mc11	NP A289 253 (77)
					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)	[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)	[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 (880
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)	[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)
					(+)3.8(3)	[187Re]	TDPAC	1978Ne14	HFI 4 212 (78)
75 Re 184	0	38.0 d	3-	(+)2.53(5)		[185,187Re]	NMR/ON	1981Ha22	NP A363 269 (81)
					+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		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)	[187Re]	AB	1981Bu13/1965Ar01	ZP A302 281 (81)/ PR 138 B310 (65)
					+0.60(6)	[187Re]	NO/S	1983Ha49	HFI 15 105 (83)
					+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		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/ 1963Wa16	NP 49 161 (63)/NP 164 411 (71) /ZP 175 520 (63)/PSNI 15B 349 (72)
					3.04(5)	[187Re]	TDPAC	1973Ha61	JPC 58 3339 (73)
75 Re 188	0	16.9 h	1-	+1.788(5)			AB/D	1965Ar01	PR 138 B310 (65)
					+0.572(6)	[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)		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)	[186Os 137]	NO/S	1985Ha41	HFI 22 19 (85)/PR B22 2248 (80)
76 Os 184	120	1.18 ns	2+		-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		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		Mu-X	1981Ho22	PR C24 1667 (81)
					-1.33(10)		CER	1979RuZP	ARRo 79 (78)
					-1.2(3)		CER	1980Ba42	PR C22 2383 (80)
	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)		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		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)	[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)	[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		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)
					+0.9(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(β)	1996Oh03	PR C54 1129
					+2.5(2)	[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		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)
				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)
					+0.47(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	[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	[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)	[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)
					-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)
				3.80(+12,-2)			NMR/ON	1980Ha49	ZP A297 329 (80)
				3.78(5)			NMR/ON	1981Sp06	HFI 9 99 (81)
					-2.55(3)	[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)	[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)	[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)			TDPAD	1989Ra17	ARHMI 52 (77)
					3.1(3)	[193Ir]	TDPAD	1989Ra17	ARHMI 52 (77)

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)	[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)		NMR/ON	1996Se15	PRL 77 5016 (96)
					+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)
					+2.85(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		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)
					+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(β)	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)	[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		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)
				+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)	[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+	0.64(12)			IPAC	1998Br33	EurPJ A3 129 (98)
	(-)	(-)	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	(-)	(-)	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		LRIMS	1999Le52	PR C60 054310 (99)
78 Pt 184	163	376 ps	2+	+0.56(6)			IPAC	1996St12	PRL 76 2246 (96)

	(-)	(-)	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)
					+3.7(2) st		LRIMS	1999Le52	PR C60 054310 (99)
					+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)
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)
					-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	[195Pt]	LRIMS	2000SaZQ	IPNO-DR 00-21
					-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	[195Pt]	LRIMS	2000SaZQ	IPNO-DR 00-21
					-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)
				+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)		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)		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)		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)
	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)		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)		CER	1992Li14	NP A548 308 (92)
	877	3.6 ps	4+	+1.38(16)		[194Pt328, 196Pt356]	TF	1992Br03	NP A536 366 (92)
				+1.5(3)		[196Pt 356]	TF	1981St24	PR C24 2106 (81)
					+1.03(12)		CER	1992Li14	NP A548 308 (92)
	1526	0.98 ps	6+		-0.18(26)		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, 196Pt356]	TF	1995An15	NP A593 212 (95)
				+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)		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)

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)		LRIS	1997Le22	PRL 79 2213 (97)
		49 s	2	+1.44(2)			LRIS	1997Le22	PRL 79 2213 (97)
					+1.90(16)		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)		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)		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)		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)
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)		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)		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)		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)	[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)
					+0.61(2)	[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)		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)	[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		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)
	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)		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)
					+0.64(2)	[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)	[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(β)	1976Bo09	ZP A276 203 (76)
80 Hg 183	0	8.8 s	1/2-	+0.524(5)			NMR/OP(β)	1976Bo09	ZP A276 203 (76)
80 Hg 185	0	55 s	1/2-	+0.509(4)			NMR/OP(β)	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	[201Hg]	NMR/OP(β)	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	[201Hg]	NMR/OP(β)	1986Ul02	ZP A325 247 (86)
	134	1.9 m	3/2-	-0.594(4)			NMR/OP(β)	1986Ul02	ZP A325 247 (86)
					-0.8(3) st	[201Hg]	NMR/OP(β)	1986Ul02	ZP A325 247 (86)
80 Hg 188	2724	135 ns	12+	-2.02(12)			TDPAD	1983Se20	ZP A313 289 (83)
					0.91(11)		TDPAD	1984Dr09	PL 149B 311 (84)
80 Hg 189	0	7.6 m	3/2-	-0.6086(8)			NMR/OP(β)	1986Ul02	ZP A325 247 (86)
					-0.8(4)	[201Hg]	NMR/OP(β)	1986Ul02	ZP A325 247 (86)

	0 + x	8.6 m	13/2+	-1.058(6)		[193Hg 141]	CLS	1979Da06	PL 82B 199 (79)
					+0.7(3) st	[201Hg]	NMR/OP(β)	1986Ul02	ZP A325 247 (86)
80 Hg 190	2621	21 ns	12+	-2.5(2)			TDPAD	1980Hj01	PRL 45 878 (80)
					1.17(14)	[199Hg 158]	TDPAD	1984Dr09	PL 149B 311 (84)
80 Hg 191	0	49 m	3/2-	-0.618(11)		[201Hg]	NMR/OP(β)	1986Ul02	ZP A325 247 (86)
					-0.8(3) st	[201Hg]	NMR/OP(β)	1986Ul02	ZP A325 247 (86)
	140	50.8 m	13/2+	-1.068(5)		[193Hg 141]	CLS	1979Da06	PL 82B 199 (79)
					+0.6(3) st	[201Hg]	NMR/OP(β)	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(4) st	[201Hg]	NMR/OP(β)	1986Ul02	ZP A325 247 (86)
	141	11.8 h	13/2+	-1.058430(3)		[199Hg]	NMR/OP	1973Re04	PR C7 2065 (73)
					+0.92(10) st	[201Hg]	NMR/OP(β)	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)
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(11) st	[201Hg]	NMR/OP(β)	1986Ul02	ZP A325 247 (86)
80 Hg 196	1841	5.2 ns	7-	-0.21(12)			IPAD	2006LE06	NP A764 24 (2007)
				-0.29(13)			TDPAD, IPAD	1984Go06	YadF 39 518 (84)
	2342	5.1 ns	10+	-1.9(6)			IPAD	2006LE06	NP A764 24 (2007)
				-1.8(9)			IPAD	1980Kr21	PL 97B 197 (80)
	2439	3.5 ns	12+	-2.3(7)			IPAD	2006LE06	NP A764 24 (2007)
				-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)	[199Hg 158]	TDPAC, PPDAC	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)
					+1.24(14) st	[201Hg]	NMR/OP(β)	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)		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 (2007)
				-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 (2007)
	2578	1.4 ns	12+	-2.2(10)			IPAD	2006LE06	NP A764 24 (2007)
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		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)
					+0.50(12) a		Mu-X	1983Gu02	PR C27 816 (83)
					+0.62(15) a		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(β)	1973Re04	PR C7 2065 (73)
					+1.2(5) st	[201Hg]	NMR/OP(β)	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)		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	2005BI03	

					+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)		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(β)	1970Ki05/1964Re03	PL 31B 567 (70)/PL 8 257 (64)
					+0.34(4) st	[201Hg]	NMR/OP(β)	1986Ul02	ZP A325 247 (86)
80 Hg 204	437	40.2 ps	2+	+0.9(2)		[198Hg 412]	TF	1986Ko02	NP A448 123 (86)
				+0.8(2)		[198Hg 412]	IMPAC, R	1986Ko02	NP A448 123 (86)
					+0.4(2)		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(β)	1975Ro10	ZP A272 369 (75)
80 Hg 206	2102	2.15 μs	5-	+5.45(5)			TDPAD	1982Be38	PR C26 914 (82)
					0.74(15)	[199Hg 158]	TDPAD	1984Ma43	PR C30 1702 (84)
81 Tl 187	0	51 s	(1/2+)	1.55(6)		[205Tl]	CFBLS	1993ScZW	IoPconf132 221 (93)
	335	15.6 s	(9/2-)	(+) 3.79(2)		[205Tl]	CFBLS	1993ScZW	IoPconf132 221 (93)
					-2.43(5)		CFBLS	1993ScZW	IoPconf132 221 (93)
81 Tl 188	0 + x	71 s	7+	+0.483(8)		[203,205Tl]	CFBLS	1992Me07	ZP A341 475 (92)
					+0.129(4)	[203,205Tl]	CFBLS	1992Me07	ZP A341 475 (92)
81 Tl 189	281	1.4 m	9/2-	+3.878(6)		[203,205	CFBLS	1987Bo44	PR C36 2560 (87)
					-2.29(4)		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)	[203,205Tl]	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)	[203,205Tl]	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-	+3.880(7)		[203,205Tl]	CFBLS	1992Me07	ZP A341 475 (92)
				+3.903(5)		[203,205Tl]	CFBLS	1987Bo44	PR C36 2560 (87)
					-2.23(2)	[203,205Tl]	CFBLS	1992Me07	ZP A341 475 (92)
					-2.28(3)		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)				
	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)				
	251 + x	296 ns	8-	+1.66(4)		[19F 197]	TDPAD	1982Da17	NP A383 421 (82)
					0.44(7)		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-	+3.948(4)		[203,205Tl]	CFBLS	1987Bo44	PR C36 2560 (87)
					-2.20(2)		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)	[203,205Tl]	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)	[203,205Tl]	CFBLS	1992Me07	ZP A341 475 (92)
					0.62(1)		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)
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)	[203,205Tl]	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)	[203,205Tl]	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)
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)
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 μs	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 μs	(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		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		Mu-X	1972Ch07	NP A181 25 (72)
	3291	2.56 μs	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)
	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)	[207Pb]	CFBLS	1991Du07	ZP A341 39 (91)
82 Pb 192	2581+d	1.07 μs	12+	2.08(2)			TDPAD	1983St15	NP A411 248 (83)
					0.32(4)	[194Pb 2628]	TDPAD	2007IO03	PL B650 147 (07)
	2743	756 ns	11-		2.9(3)	[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)	[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)	[206Pb 4027]	TDPAD	2004BA31	EurPJ A20 191 (04)
	2585 + x	9.4 ns	(27/2-)	+9.2(4)			R	Priv Comm	M. Ionescu-Bujor (10)
			(27/2)		2.6(3)		TDPAD	Priv Comm	M. Ionescu-Bujor (10)
			(29/2-)	+9.9(4)			TDPAD	1997Ch33	PRL 79 2002 (97)
					2.8(3)	[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)	[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)
					0.48(3)	[206Pb 4027]	TDPAD	1985St16	ZP A322 83 (85)
	2933	122 ns	11-	+11.3(2)			TDPAD	2004VY01	PR C69 064318 (04)
					3.6(4)	[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 (870
					+0.306(15)	[207Pb]	CFBLS	1991Du07	ZP A341 39 (91)
					+0.29(10)		CFBLS	1987Di06	ZP A328 253 (870
	2699+x	95 ns	33/2+	-2.57(10)			TDPAD	1985St16	ZP A322 83 (85)
				-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)	[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)		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		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)	[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 μs	(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)	[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		ABLFS	1986An06	NP A451 471 (86)
	2579	10.6 μs	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)	[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)	[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)	[206Pb 4027]	TDPAD	1979Ma37	PL 88B 48 (79)
	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		ABLFS	1986An06	NP A451 471 (86)
	2719	63 ns	25/2-	-0.79(4)			TDPAD	1988Ro08	NP A482 573 (88)
					0.46(2)	[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		ABLFS	1986An06	NP A451 471 (86)

	2208	65 ns	7-		0.28(2)	[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		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)	[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)		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)	[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		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)		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)	[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)		CER	1978Jo04	PL 72B 307 (78)
	2200	123 μs	7-	-0.152(3)			SOPAD	1972Ma24	NP A186 97 (72)
					0.33(5)		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)
					0.51(2)	[B(E2)]	TDPAD	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)		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)		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)

					-0.3(2) st		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		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	2001Bi**	
			[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	2001Bi**	
			[6+]		-0.87(9)	[209Bi]	LRFS	1996Ca02	NP A598 61 (96)
	615	3.04 μs	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)
					0.106(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)
					0.35(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	2001Bi**	
					-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	2001Bi**	
					-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)
					0.0630(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	2001Bi**	
					-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	2001Bi**	
					-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)
					0.049(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	2001Bi**	
					-0.55(4)	[209Bi]	LRFS	2000Pe30	JP G26 1829 (00)
					-0.60(11)	[209Bi]	O	1985Ba21	ZP A321 85 (85)
	2101	182 μs	21/2+	+3.43(2)			TDPAD	1989Ra17	ZfK-445 51 (81)
				+3.41(6)			SOPAD	1972Ma24	NP A186 97 (72)
					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	2001Bi**	
					-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	2001Bi**	
					-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)
					+0.11(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(4) a		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	2001Bi**	
					+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	1997Kl15	PL B405 31 (97)
					+0.66(7)		R	2001Bi**	
					-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	1997Kl15	PL B405 31 (97)
				0.41(5)			NO/S	1992Ll25	HFI 75 109 (92)
					+0.1(4)		R	Bi2001**	
					+0.1(3)	[209Bi]	LRFS	1997Ki15	PL B405 31 (97)
83 Bi 213	0	45.6 m	9/2-	+3.716(7)		[209Bi]	LRFS	1997Kl15	PL B405 31 (97)
				3.89(9)			NO/S	1992Ll25	HFI 75 109 (92)
					-0.83(5)		R	Bi2001**	
					-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)	[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)		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)	[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 μs	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)	[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 μs	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)
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)	[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)	[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)
					(-)0.57(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)	[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)	[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)	[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	1.5μs	16-		1.7(3)	[g calc]	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(8)	[211At 2641]	TDPAD	1983Ma08	PL 122B 27 (83)

	2429	890 ns	29/2+	15.38(14)			TDPAD	1987Ma65	HFI 34 47 (87)
					1.50(15)	[211At 2641]	LEMS	1991Sc15	PR C43 2566 (91)
					1.50(15)	[211At 2641]	TDPAD	1983Ma08	PL 122B 27 (83)
85 At 210	1363	28.4 ns	11+	+9.8(3)			TDPAD		ARRIP 140 (74)
					0.65(8)	[211At 2641]	TDPAD	1983Ma08	PL 122B 27 (83)
	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)
					1.22(12)	[211At 2641]	LEMS	1991Sc15	PR C43 2566 (91)
					1.22(12)	[211At 2641]	TDPAD	1983Ma08	PL 122B 27 (83)
	4028	5.9 μs	19+	13.26(13)			TDPAD	1987Ma65	HFI 34 47 (87)
				14.0(5)		[210At 2550]	TDPAD	1978Ra03	ZP A284 357 (78)
					2.2(3)	[211At 2641]	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)
					0.53(5)	B(E2)	R	1983Ma08	PL 122B 27 (83)
	2641	50.8 ns	29/2+	+15.31(13)			TDPAD	1976Ha62/1975In01	HFI 2 334 (76)/PR C11 243 (75)
					1.00(5)		R	1995Ba66	NP A591 104 (95)
					1.0(2)	[211At 1417]	TDPAD	1983Ma08	PL 122B 27 (83)
	4816	4.2 μs	39/2-	13.46(14)			TDPAD	1985Be22	PS 31 333 (85)
					1.9(3)	[211At 2641]	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)		CFBLS		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)		CFBLS		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)		CFBLS		CERN EP/87 51 (87)
	899	180 μs	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)
					0.39(5)	[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)		CFBLS		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)
					0.31(4)	[212Rn 1694]	TDPAD	1986Be40	PL 182B 11 (86)
	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 μs	(17)-	17.88(9)			TDPAD	1986Po01	NP A448 189 (86)
				17.7(2)			TDPAD	1981Ma28	HFI 9 87 (81)
					0.86(10)	[212Rn 1694]	TDPAD	1986Be40	PL 182B 11 (86)
	4993+δ	12.3 ns	(20)+	22.3(1)				1986Po01	NP A448 189 (86)
	6468+δ	1.04 μs	(22)+	15.42(15)				1986Po01	NP A448 189 (86)
	7310+δ	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)
					0.18(2)	[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)
					1.5(2)	[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 μs	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)
					(-)0.17(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 μs	25/2+	7.3(3)			TDPAD	1976McZD	AECL-5614 13 (76)
				7.6(3)			TDPAD	1988St10	NP A482 692 (88)
	2187+x	1.36 μs	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)
	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)		CFBLS, R	1988NeZZ	Bk88 NFFS 126 (88)
					+1.15(12)		CFBLS		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)		CFBLS, R	1988NeZZ	Bk88 NFFS 126 (88)
					-0.47(5)		CFBLS		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)
					+0.80(8)		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)
					+0.84(8)		CFBLS	1988NeZZ	Bk88 NFFS 126 (88)
87 Fr 207	0	14.8 s	9/2-	+3.89(8)		[211Fr]	ABLS	1985Co24	PL 163B 66 (85)
					-0.16(5) st		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)		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		ABLS	1985Co24	PL 163B 66 (85)
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		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		ABLS	1985Co24	PL 163B 66 (85)
	2423	146 ns	29/2+	15.37(15)			TDPAD	1986By01	NP A448 137 (86)
					-1.1(2)	[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)	[213Fr 2538]	LEMS	1991Ha02	PR C43 514 (91)
87 Fr 212	0	19.3 m	5+	+4.62(9)		[211Fr]	CFBLS		EPL 3 175 (87)
				+4.62(9)		[211Fr]	ABLS	1985Co24	PL 163B 66 (85)

					-0.10(1) st		ABLS	1985Co24	PL 163B 66 (85)
	1551	27 μs	11+	9.89(4)			SOPAD	1977Be**	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)	[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)	[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]	CFBLS		EPL 3 175 (87)
				+4.02(8)		[211Fr]	ABLS	1985Co24/1986Ek02	PL 163B 66 (85)/PS 34 624 (86)
					-0.14(2) st		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)
	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 μs	65/2-	+22.6(2)		[213Fr 2538]	TDPAD	1989By01	PL B217 38 (89)
					-2.2(5)	[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)	[213Fr 2538]	LEMS	1995Ne06	PR C51 3483 (95)
	1663 or 1734	11 or 10 ns	14- or 15-	+8.5(4) K, d		[213Fr 2538]	TDPAD	1994By01	NP A567 445 (94)
	4318+D	8 ns	27-	+19.7(8) K, d		[213Fr 2538]	TDPAD	1994By01	NP A567 445 (94)
	6477+D'	108 ns	33+	+22(3)		[213Fr 2538]	TDPAD	1994By01	NP A567 445 (94)
			32+ or 33+		2.2(5)	[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]	CFBLS	1987Du13	EPL 3 175 (87)
				-0.67(1)		[211Fr]	ABLS	1985Co24	PL 163B 66 (85)
					+0.47(3) st		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]	CFBLS	1987Du13	EPL 3 175 (87)
				+1.58(3)		[211Fr]	ABLS	1985Co24	PL 163B 66 (85)
					-0.98(6) st		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	[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)	[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	[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		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		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	[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)
					+0.40(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)
					+0.48(4) st	[221,223Ra]	CFBLS	1989Ne03	ZP D11 105 (89)
					+0.46(5) st		CFBLS, R	1988Ah02/1987We03	NP A483 244 (88)/ZP D4 227 (87)
88 Ra 212	1958	10.9 μs	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 μs	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 1864]	LEMS	1994Ne01	PR C49 645 (94)
					Q/Qref = 1.21(8)	[214Ra 1864]	LEMS	1993Ne04	NP A555 629 (93)
88 Ra 214	1865	67μs	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)
					+1.98(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)
					+1.25(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)
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)
					+1.58(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)
					+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)		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)

					+4.3(9)		O	1974Ge06	JPPa 35 483 (74)
90 Th 232	gsband			g(18-24)>g(10-16) g(avge)=0.28(2)			TF	1992Ha03	PRL 48 383 (82)
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	(2-)	2.01(2)			ENDOR	1961Ax01	PR 121 1630 (61)
	84	44 ns	5/2+		+0.7(2)	[231Pa]	ME		PL 69A 225 (78)
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) (est Vzz)		AB	1961Ma42	NP 23 90 (61)
92 U 233	0	1.6x10*5y	5/2+	μ/μ(ref) = 1.5604(14)		[235U]	ABLS	1990Ga28	BRASP 54 (5) 13 (90)
				0.59(5)		[235U]	EPR	1983Lu10	JP C16 6627 (83)
					Q/Q(ref) = 0.746(2)	[235U]	ABLS	1990Ga28	BRASP 54 (5) 13 (90)
					3.663(8) a		Mu-X	1984Zu02	PRL 53 1888 (84)
	40	50 ps	7/2+		0.64(3) a		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) a		Mu-X	1984Zu02	PRL 53 1888 (84)
					4.55(9) a		Mu-X		JPJS 34 582 (73)
	46	<60 ps	9/2-		1.87(3) a		Mu-X	1984Zu02	PRL 53 1888 (84)
92 U 238	gsband			g(18-24)>g(10-16) g(avge)=0.37(2)			TF	1992Ha03	PRL 48 383 (82)
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) a		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)	[237Np]	ME	1968Pi02	BAPS 13 28 (68)
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 μs		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		3/2+		-2.319(7) a		Mu-X	1986Zu01	PL 167B 383 (86)
	57	0.10 ns	5/2+		-3.345(13)			1986Zu01	PL 167B 383 (86)
	76		7/2+		-3.83(3)			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)		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)
				+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)
95 Am 242	0	16.0 h	1-	+0.3879(15)			AB/D	1966Ar04	PR 144 994 (66)
					-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)
					+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)
					+4.2(13)	[241Am]	O	1956Ma31	PR 102 1108 (56)
	84	2.3 ns	5/2+	+2.9(2)		[243Am]	ME	1986Sa10	PL 115A 71 (86)
					4.1(12)	[243Am]	ME	1989Ra17	PC73 Meeker (73)
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) st		AB	1975Go05	PR A11 499 (75)
99 Es 254	0	276 d	(7+)	4.4(4)		[253Es]	NO	2009SE(09)	PR C79 064322 (09)
	78	39.3 h	2+	2.90(7)		[253Es]	AB	1975Go05	PR A11 499 (75)
					3.7(5) st	[253Es]	AB	1975Go05	PR A11 499 (75)

Nuclear Data Section
International Atomic Energy Agency
Vienna International Centre, P.O. Box 100
A-1400 Vienna
Austria

e-mail: services@iaeand.iaea.org
fax: (43-1) 26007
telephone: (43-1) 2600-21710
Web: http://www-nds.iaea.org/