Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	S. Lalkovski, J. Timar and Z. Elekes	NDS 161, 1 (2019)	1-Apr-2019

Q(β^-)=−1347 *5*; S(n)=−7094.1 *7*; S(p)=−8748 *3*; Q(α)=−2884.7 *12* 2017Wa10

^{105}Pd Levels

Cross Reference (XREF) Flags

A	^{105}Rh β^- decay (35.3 h)	F	^{104}Pd(d,p)	K	^{104}Ru(α,3nγ)
B	^{105}Ag ε decay (41.29 d)	G	^{106}Pd(d,t)	L	^{96}Zr(^{13}C,4nγ),^{96}Zr(^{12}C,3nγ)
C	^{105}Ag ε decay (7.23 min)	H	Coulomb excitation	M	^{64}Ni(^{48}Ca,α3nγ)
D	^{105}Pd IT decay (35.5 μs)	I	^{105}Pd(n,n′γ)		
E	^{106}Pd(p,d)	J	^{104}Pd(n,γ) E=th		

E(level)†	J$^\pi$	T$_{1/2}$	XREF	Comments
0.0‡	5/2$^+$	stable	ABCDEFGHIJKLM	μ=−0.642 *3* (2014StZZ) Q=+0.660 *11* (2016St14) J$^\pi$: L=2 in ^{106}Pd(p,d) (1975An06); Also: L=2 in ^{106}Pd(d,t) 1980Sc23. <r^2>=4.5128 fm^2 *25* (2004An14).
280.62 *20*	3/2$^+$	47 ps *5*	ABC EF HIJK	μ=−0.074 *13* (1981Al19) XREF: J(281). J$^\pi$: L=2 in ^{106}Pd(p,d) (1975An06); 280.54γ M1+E2 to 5/2$^+$; 64.072γ M1(+E2) from 1/2$^+$. T$_{1/2}$: weighted average of 45 ps *5* from B(E2)↑(280.54γ)=0.0095 *5* in Coulomb excitation with α(280.54γ)=0.0238 *4*, and 67 ps *17* from $\gamma\gamma$(t) in ^{105}Ag ε decay (41.29 d) (1974Be71). μ: from IPAC in 1981Al19.
306.41# *21*	7/2$^+$	71 ps *8*	ABCDE HIJKLM	J$^\pi$: L=4 in ^{106}Pd(p,d) (1975An06); 306.30γ M1+E2 to 5/2$^+$. T$_{1/2}$: from B(E2)↑(306.30γ)=0.00117 *11* in Coulomb excitation, and α(306.30γ)=0.0188 *3*.
319.38 *22*	5/2$^+$	33 ps *5*	ABC E GHIJ L	μ=+0.95 *20* (1981Al19) XREF: G(321). J$^\pi$: L=2 in ^{106}Pd(p,d) (1975An06); 38.77γ M1(+E2) to 3/2$^+$, and 319.24γ M1+E2 to 5/2$^+$. T$_{1/2}$: weighted average of 38 ps *2* in 1962Me07, 48 ps *7* in 1971Sh21, 40 ps *10* from β-γ(t) in ^{105}Rh β^- decay (1974Be71), 20 ps *3* from B(E2)↑(319.24γ)=0.0082 *4* in Coulomb excitation. μ: from IPAC in 1981Al19.
344.9 *4*	1/2$^+$	0.91 ns *5*	BC EF HIJ	XREF: F(340). J$^\pi$: L=0 in ^{106}Pd(p,d) (1975An06); 344.61γ E2 to 5/2$^+$. T$_{1/2}$: weighted average of 1.01 ns *5* from 618-344γ(t) and 22X-344γ(t) in ^{105}Ag ε decay (41.29 d) (1970Sc10), 0.88 ns *5* from $\gamma\gamma$(t) in ^{105}Ag ε decay (41.29 d) (1974Be71), 801 ps *64* in ^{105}Ag ε decay (41.29 d) (1969Ka02) and 1.07 ns *24* from B(E2)↑(344.61γ)=0.0022 *5* in Coulomb excitation.
442.53‡ *21*	(7/2)$^+$	1.2 ps *6*	ABC E GHIJKL	XREF: E(447)G(441). J$^\pi$: L=2 in ^{106}Pd(p,d) (1975An06); 442.25γ M1+E2 to 5/2$^+$. T$_{1/2}$: from B(E2)↑(442.25γ)=0.185 *7* in Coulomb excitation, and α(442.25γ)=0.00756 *11*; Others: 3.71 ps *9* from DSAM in 1972SiZP; 3.8 ps *10* from DSAM in 1971SiYG, and 3.81 ps *14* from RDDS in 1971SiYQ.
489.1@ *3*	11/2$^-$	35.5 μs *5*	B DEFG IJKLM	XREF: D(495)F(486)G(486).

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Adopted Levels, Gammas (continued)

^{105}Pd Levels (continued)

E(level)[†]	J^π	$T_{1/2}$	XREF	Comments
				J^π: L=5 in ^{106}Pd(p,d) (1975An06); 182.92γ M2 to $7/2^+$. $T_{1/2}$: weighted average of 36.1 μs *4* from 155.39γ-182.85γ(t) in 1970BlZT, 34.2 μs *6* in 1965Mc03, 33 μs *6* in 1956Ve03, and 36 μs *3* in 1958Du80.
535			E	
560.50 *19*	$3/2^+$	1.9 ps *5*	BC EF HIJK	XREF: E(561)F(565)J(558). J^π: L=(2) in ^{104}Pd(d,p) (1963Cu02); 560.79γ M1+E2 to $5/2^+$; 6534.0γ from the $(1/2^+)$ resonance. $T_{1/2}$: from DSA (1974Er05); Others:<35 ps from B(E2)↑(560.79γ)=0.0095 *9* in Coulomb excitation.
644.7 *5*	$7/2^-$	126 ps *2*	B IJ	μ=−1.49 *9* (1981Al19) J^π: 155.38γ E2 to $11/2^-$, 325.43γ E1 to $5/2^+$, and 644.63γ E1+M2 to $5/2^+$. $T_{1/2}$: from $\gamma\gamma$(t) in ^{105}Ag ε decay (41.29 d). μ: from IPAC in 1981Al19.
650.9 *4*	$(3/2)^+$	<7 ps	B EFGHI	XREF: E(650)G(652). J^π: L=2 in (p,d) (1975An06); 331.58γ M1+E2 to $5/2^+$, and 370.28γ M1+E2 to $3/2^+$. $T_{1/2}$: from B(E2)↑(650.78)=0.0078 *6* in Coulomb excitation.
673.2 *4*	$1/2^+$	5.0 ps *5*	B E HI	XREF: E(674). J^π: L=0 in (p,d) (1975An06); 392.73γ M1+E2 to $3/2^+$, and 673.24γ E2 to $5/2^+$. $T_{1/2}$: from B(E2)(673.24γ)=0.0082 *9* in Coulomb excitation; Others:>2 ps from DSA (1974Er05).
696.66 *19*	$(7/2^+)$	<11 ps	GH K	XREF: G(692). J^π: 415.8γ to $3/2^+$, and 254.3γ to $(7/2)^+$. $T_{1/2}$: from B(E2)(697.1γ)=0.0020 *10* in Coulomb excitation.
727.5 *5*	$5/2^+$	<7 ps	B EFGHI	XREF: F(724)G(721). J^π: L=2 in ^{106}Pd(p,d) (1975An06); 421.03γ M1(+E2) to $7/2^+$, and 446.8γ M1+E2 to $3/2^+$. $T_{1/2}$: from B(E2)↑(727.28)=0.0057 *25* in Coulomb excitation.
781.99[‡] *22*	$9/2^+$	1.58 ps *14*	C E HI KL	XREF: E(784). J^π: L=4 in ^{106}Pd(p,d) (1975An06); 781.3γ E2 to $5/2^+$, 339.4γ M1(+E2) to $(7/2)^+$; band member. $T_{1/2}$: weighted average of 1.7 ps *4* from DSAM in 1971SiYG, 1.11 ps *28* in 1974Er05, 1.80 ps *28* from RDDS in 1971SiYQ, 1.4 ps *1* in 1970GeZY, and 1.94 ps *13* from B(E2)↑(781.3)=0.101 *7* in Coulomb excitation; Other: 2.9 ps *3* from DSAM in 1972SiZX.
785.0 *10*	$(1/2^+$ to $9/2^+)$		FGH	XREF: F(787). J^π: 785γ to $5/2^+$. B(E2)↑: 0.05 *1* in Coulomb excitation.
808			E	
902.12 *22*	$9/2^+$		L	J^π: 582.74γ E2 to $5/2^+$, 595.73γ M1+E2 to $7/2^+$.
921.3 *6*	$(1/2^+$ to $5/2^+)$		B	J^π: 576.7γ to $1/2^+$, 921.2γ to $5/2^+$.
929.6 *5*	$(5/2^+)$		BC E I	J^π: L=2 in ^{106}Pd(p,d) (1975An06); 486.8γ to $(7/2)^+$, 370γ to $3/2^+$.
945.0 *10*			GH	J^π: 945γ to $5/2^+$. B(E2)↑: 0.020 *5* in Coulomb excitation.
962.4 *4*	$(1/2,3/2)^+$	<0.2 ps	B E HI	XREF: E(964)I(961.4). J^π: L=0 in ^{106}Pd(p,d) (1975An06); 401.75γ to $3/2^+$, 962.45γ to $5/2^+$. $T_{1/2}$: from B(E2)↑(962.45γ)=0.008 *5* in Coulomb excitation.
970.0[@] *3*	$15/2^-$		I KLM	J^π: 480.8γ E2 to $11/2^-$; band member.
970	$(1/2^+$ to $7/2^+)$		EFG	XREF: E(972)G(979). J^π: L=(2) in ^{104}Pd(d,p) (1963Cu02).

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Adopted Levels, Gammas (continued)

^{105}Pd Levels (continued)

E(level)[†]	Jπ	XREF	Comments
1011.47[#] *24*	(11/2$^+$)	I KLM	Jπ: 228.9γ M1+E2 to 9/2$^+$, 705.2γ E2 to 7/2$^+$, 523.6γ to 11/2$^-$.
1072.2 *8*	(5/2$^+$,7/2$^+$,9/2$^+$)	C G	XREF: G(1068). Jπ: 629.7γ to (7/2)$^+$, 1072.2γ to 5/2$^+$; log *ft*= 6.84 *10* in ^{105}Ag ε decay (7.23 min).
1074.6 *4*	(3/2$^+$)	F I	XREF: F(1075). Jπ: L=(0) in ^{104}Pd(d,p) (1963Cu02); 768.4γ to 7/2$^+$, 793.8γ to 3/2$^+$.
1088.2 *4*	3/2$^-$	B I	Jπ: L=(0) in ^{104}Pd(d,p) (1963Cu02); 360.72γ E1 to 5/2$^+$, 414.85γ (E1) to 1/2$^+$, 807.57γ E1(+M2) to 3/2$^+$.
1098.1 *5*	(5/2$^+$,7/2$^+$,9/2$^+$)	C E I	Jπ: 818γ to 3/2$^+$, 656.5γ to (7/2)$^+$; log *ft*=5.94 *10* in ^{105}Ag ε decay (7.23 min).
1102.3 *5*	(1/2$^+$ to 5/2$^+$)	FG I	XREF: F(1103)G(1105). Jπ: L=2 in ^{104}Pd(d,p) (1963Cu02); 821.7γ to 3/2$^+$.
1125.1 *6*	(1/2$^+$ to 7/2$^+$)	B	Jπ: 844.6γ to 3/2$^+$, 1125.2γ to 5/2$^+$.
1142.34 *17*	(1/2$^+$,3/2$^+$)	FG I	XREF: F(1141)G(1155). Jπ: L=(0) in ^{104}Pd(d,p) (1963Cu02); 582.1γ to 3/2$^+$, 1142.2γ to 5/2$^+$.
1177.7 *3*	(1/2$^+$,3/2$^+$)	IJ	Jπ: 1177.7γ to 5/2$^+$; 5918γ primary from 7094.1-keV level in ^{104}Pd(n,γ) E=th.
1201.7 *4*	(1/2$^+$,3/2$^+$)	F I	Jπ: L=(2) ^{104}Pd(d,p) (1963Cu02); 640.8γ to 3/2$^+$.
1259.22 *22*	(3/2$^+$)	FG I	XREF: F(1263)G(1242). Jπ: L=(0) in ^{104}Pd(d,p) (1963Cu02); 952.6γ to 7/2$^+$, 979.0γ to 3/2$^+$.
1271.41[‡] *24*	(11/2)$^+$	G KL	XREF: G(1288). Jπ: 489.5γ M1+E2 to 9/2$^+$, 829.1γ E2 to (7/2)$^+$.
1324.2 *3*	(11/2$^+$)	K	Jπ: 312.6γ to (11/2$^+$), 881.3γ (E2) to (7/2)$^+$.
1357.0[b] *8*	(13/2$^-$)	L	Jπ: 387γ to 15/2$^-$, 868γ to 11/2$^-$.
1405.2 *3*	(3/2$^+$,5/2$^+$)	F I	XREF: F(1402). Jπ: 263.3γ to (1/2$^+$,3/2), 1098.5γ to 7/2$^+$, 1405.5γ to 5/2$^+$.
1410.9 *3*	(13/2$^+$)	G K	XREF: G(1417). Jπ: L=5 in ^{106}Pd(d,t) (1980Sc23); 140.0γ to (11/2)$^+$, 399.9γ to (11/2$^+$), 628.1γ to 9/2$^+$; assumed near-yrast level.
1520.8 *5*	(3/2$^+$ to 7/2$^+$)	F I	XREF: F(1522). Jπ: 1078.0γ to (7/2)$^+$, 1240.8γ to 3/2$^+$.
1601.3 *5*	(1/2$^+$ to 5/2$^+$)	F I	XREF: F(1602). Jπ: L=(2) in ^{104}Pd(d,p) (1963Cu02), 459.0γ to (1/2$^+$,3/2), 1600.4γ to 5/2$^+$.
1650.6 *5*	(7/2$^-$)	F I	XREF: F(1652). Jπ: 1162.1γ to 11/2$^-$, 1208.7γ to (7/2)$^+$, 1305.5γ to 1/2$^+$.
1671.14[‡] *24*	(13/2)$^+$	L	Jπ: 399.76γ E2+M1 to (11/2)$^+$, 889.24γ E2 to 9/2$^+$; band member.
1701.0 *8*	(1/2$^+$ to 9/2$^+$)	F I	XREF: F(1702). Jπ: 973.3γ to 5/2$^+$.
1741.8[@] *3*	19/2$^-$	KLM	Jπ: 771.83γ E2 to 15/2$^-$; band member.
1749.6 *3*	(13/2)$^+$	L	Jπ: 847.6γ E2 to 9/2$^+$; near-yrast state assumed.
1763.2 *3*	(15/2)$^-$	L	Jπ: 793.17γ M1+E2 to 15/2$^-$, 1274.15γ to 11/2$^-$; near yrast state.
1774.7 *6*	(1/2$^+$ to 9/2$^+$)	F I	XREF: F(1772). Jπ: 1455.3γ to 5/2$^+$.
1854.1 *3*	(13/2$^+$)	K	Jπ: 530.3γ to (11/2$^+$), 442γ to (13/2$^+$); assumed near-yrast.
1865.6 *4*	(1/2$^+$ to 7/2$^+$)	F I	XREF: F(1867). Jπ: 1305.5γ to 3/2$^+$.
1873.9 *3*	(15/2$^+$)	K	Jπ: 602.7γ to (11/2)$^+$; 862.7γ to (11/2$^+$) assumed to be (E2) in ^{104}Ru(α,3nγ) (1977Gr22).
1901.8[#] *3*	(15/2)$^+$	KLM	XREF: K(1900.8)L(1902.17)M(1903). Jπ: 889.8γ E2 to (11/2$^+$); band member.
1922.9 *5*	(1/2$^+$,3/2$^+$)	F I	XREF: F(1923). Jπ: L=(0) in ^{104}Pd(d,p) (1963Cu02); 1360.7γ to 3/2$^+$.
1961.3[b] *3*	(17/2)$^-$	L	Jπ: 991.38γ M1+E2 to 15/2$^-$; 814.22γ (E2) from (21/2$^-$).
1988.9 *5*	(1/2,3/2,5/2)$^+$	F I	XREF: F(1990).

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Adopted Levels, Gammas (continued)

^{105}Pd Levels (continued)

E(level)[†]	Jπ	XREF	Comments
			Jπ: 1026.7γ to (1/2,3/2)+; L=(2) from ^{104}Pd(d,p) (1963Cu02).
2064.7 *7*	(1/2+,3/2+)	F I	XREF: F(2062). Jπ: L=(2) in ^{104}Pd(d,p) (1963Cu02); 1745.2γ to 5/2+, 1784.3γ to 3/2+.
2101.5 *7*	(7/2−,9/2,11/2+)	F I	XREF: F(2102). Jπ: 1611.8γ to 11/2−, 1660.0γ to (7/2)+.
2197.1[‡] *3*	(15/2)+	L	Jπ: 925.8γ E2 to (11/2)+; near yrast state.
2280.6 *4*	(15/2,17/2)−	L	Jπ: 1310.6γ M1+E2 to 15/2−.
2344.6 *3*	(19/2)−	L	Jπ: 581.45γ E2 to (15/2)−, 602.78γ M1+E2 to 19/2−.
2420		F	
2490.9 *4*	(19/2−)	L	Jπ: 749.1γ to 19/2−, 1520.9γ (E2) to 15/2−.
2552.0[‡] *3*	(17/2)+	L	Jπ: 881.0γ E2 to (13/2)+, 649.9γ to (15/2)+, 1582.0γ to 15/2−; band member.
2565.01 *24*	(17/2)+	L	Jπ: 367.9γ to (15/2)+, 815.4γ E2 to (13/2)+, 893.88γ (E2) to (13/2)+.
2613 *8*		F	
2700.2[@] *3*	23/2−	KLM	XREF: K(2698.9). Jπ: 958.42γ to E2 to 19/2−; band member.
2703.9 *3*	(19/2)−	L	Jπ: 962.10γ M1+E2 to 19/2−.
2755.9[#] *3*	19/2+	KLM	XREF: K(2754.5)M(2757). Jπ: 854.02γ E2 to (15/2)+, 1014.3γ E1+M2 to 19/2−; band member.
2775.6[b] *3*	(21/2−)	L	Jπ: 1033.7γ M1+E2 to 19/2−; near-yrast state assumed.
2806.5[c] *3*	(19/2)+	L	Jπ: 254.53γ M1+E2 to (17/2)+, 904.7γ E2 to (15/2)+.
2900.7[&] *3*	(21/2)−	L	Jπ: 1158.94γ M1+E2 to 19/2−, 939.4γ to (17/2)−.
3072.8[a] *3*	(21/2)+	L	Jπ: 372.6γ E1+M2 to 23/2−, 508.0γ E2 to (17/2)+, 1331.0γ E1+M2 to 19/2−; band member.
3119.2[c] *3*	(21/2)+	L	Jπ: 312.67γ M1+E2 to (19/2)+, 1377.3γ to 19/2−; band member.
3153.3 *3*	(23/2)−	KL	Jπ: 452.98γ M1(+E2) to 23/2−, 808.8γ E2 to (19/2)−; Jπ=(27/2)− in ^{104}Ru(α,3nγ).
3294.7[#] *3*	23/2+	KLM	Jπ: 538.83γ E2 to 19/2+; band member.
3320		F	
3468.6[c] *3*	(23/2)+	L	Jπ: 349.38γ M1+E2 to (21/2)+; near-yrast state assumed.
3527.6[a] *3*	(25/2)+	L	Jπ: 232.8γ M1+E2 to 23/2+; 454.82 γ E2 to (21/2)+; band member.
3570		F	
3690		F	
3694.4 *4*	(25/2−)	L	Jπ: 918.8γ E2 to (21/2−), 994.12γ M1+E2 to 23/2−.
3800.5[@] *3*	(27/2−)	KLM	XREF: K(3797.7). Jπ: 1100.24γ (E2) to 23/2−; band member.
3859.4[&] *6*	(25/2−)	L	Jπ: 1084γ to (21/2−), 1159γ to 23/2−; band member.
3873.0[#] *3*	27/2+	KLM	XREF: K(3871.3)M(3874). Jπ: 578.27γ E2 to 23/2+; band member.
4000		F	
4110		F	
4254.4[a] *4*	(29/2)+	L	Jπ: 726.8γ E2 to (25/2)+; band member.
4510		F	
4668.2[#] *4*	(31/2+)	LM	XREF: M(4669). Jπ: 795.23γ (E2) to 27/2+; band member.
4690		F	
4783.4[b] *7*	(29/2−)	L	Jπ: 1089γ (E2) to 25/2−; band member.
4840		F	
4953.1[@] *4*	(31/2−)	LM	Jπ: 1152.64γ (E2) to (27/2−); band member.
4955.9[&] *8*	(29/2−)	L	Jπ: 1261γ to 25/2−; band member.
5255.3[a] *5*	(33/2+)	L	Jπ: 1000.9γ (E2) to (29/2)+; band member.
5682.2[#] *11*	(35/2+)	M	Jπ: 1014γ to (31/2+); assumed near-yrast state.

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Adopted Levels, Gammas (continued)

^{105}Pd Levels (continued)

E(level)[†]	J^π	$T_{1/2}$	XREF	Comments
5847.4[b] *12*	(33/2$^-$)		L	J^π: 1064γ (E2) to (29/2$^-$); band member.
6073.1[@] *11*	(35/2$^-$)		LM	J^π: 1120γ to (31/2$^-$); band member.
6860.3[#] *15*	(39/2$^+$)		M	J^π: 1178γ to (35/2$^+$); band member.
6995.4[b] *16*	(37/2$^-$)		L	
(7094.5 *7*)		5.1 fs *8*	J	J^π: assumed s-wave neutron capture.
7193.1[@] *15*	(39/2$^-$)		LM	J^π: 1120γ to (35/2$^-$); band member.
8127.3[#] *18*	(43/2$^+$)		M	J^π: 1267γ to (39/2$^+$); band member.
8297.4[b] *19*	(41/2$^-$)		L	J^π: 1302γ to (37/2$^-$); band member.
8410.1[@] *18*	(43/2$^-$)		LM	J^π: 1217γ to (39/2$^-$); band member.
9440.3[#] *21*	(47/2$^+$)		M	J^π: 1313γ to (43/2$^+$); band member.
10875.3[#] *23*	(51/2$^+$)		M	J^π: 1435γ to (47/2$^+$); band member.
x[d]	[43/2$^+$]		M	Additional information 1. J^π: from systemaitcs.
x+1209.0[d] *10*	[47/2$^+$]		M	J^π: 1209γ to [43/2$^+$]; band member.
x+2491.0[d] *15*	[51/2$^+$]		M	J^π: 1282γ to [47/2$^+$]; band member.
x+3870.0[d] *18*	[55/2$^+$]		M	J^π: 1379γ to [51/2$^+$]; band member.
x+5358.0[d] *20*	[59/2$^+$]		M	J^π: 1488γ to [55/2$^+$]; band member.
x+6955.0[d] *23*	[63/2$^+$]		M	J^π: 1597γ to [59/2$^+$]; band member.
x+8675.1[d] *25*	[67/2$^+$]		M	J^π: 1720γ to [63/2$^+$]; band member.
x+10521[d] *3*	[71/2$^+$]		M	J^π: 1846γ to [67/2$^+$]; band member.
x+12528[d] *3*	[75/2$^+$]		M	J^π: 2007γ to [71/2$^+$]; band member.
x+14669[d] *3*	[79/2$^+$]		M	J^π: 2141γ to [75/2$^+$]; band member.

[†] From a least-squares fit to Eγ.
[‡] Band(A): $\Delta J=1$ band built on $J^\pi=5/2^+$.
[#] Band(B): $\Delta J=2$ band built on $J^\pi=7/2^+$.
[@] Band(C): $\Delta J=2$ band built on $J^\pi=11/2^-$.
[&] Band(D): $\Delta J=2$ signature partner of $J^\pi=11/2^-$ band.
[a] Band(E): $\Delta J=2$ band built on $J^\pi=(21/2^+)$.
[b] Band(F): $\Delta J=2$ wobbling band on $J^\pi=(13/2^-)$.
[c] Band(G): $\Delta J=1$ band, built on $J^\pi=(17/2^+)$.
[d] Band(H): $\Delta J=2$ superdeformed band.

Adopted Levels, Gammas (continued)

$\gamma(^{105}Pd)$

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.	δ	α[†]	Comments
280.62	$3/2^+$	280.54	100	0.0	$5/2^+$	M1+E2	+0.143 *7*	0.0238	α(K)=0.0207 *3*; α(L)=0.00249 *4*; α(M)=0.000469 *7*; α(N+..)=7.89×10^{-5} *12* α(N)=7.89×10^{-5} *12* B(M1)(W.u.)=0.0203 *22*; B(E2)(W.u.)=4.6 *7* Mult.: A_{22}=0.156 *8*, A_{44}=0.031 *9* in ^{105}Ag ε decay (41.29 d) (1983Si08); Also A_{22}=−0.048 *10*, A_{44}=0.015 *10* (1977Ri05) and R_{DCO}=2.19 *6* (1977Ri05) in ^{96}Zr(^{12}C,3nγ). Mult.: α(K)exp=0.0209 *13* in ^{105}Ag ε decay (41.29 d) (1970Ka13), 0.020 *4* (1965Pi01). δ: weighted average of 0.178 *14* (1983Si08) and +0.132 *8* (1977Wi10); Others: 0.01 *1* (1977Ri05), +0.07 *7* (1976Ba39), +0.013 *3* (1972Be67), +0.035 *22* (1962Bh03), +0.11 *3* (1958Ra01).
306.41	$7/2^+$	306.30	100	0.0	$5/2^+$	M1+E2	+0.055 *2*	0.0188	α(K)=0.01640 *23*; α(L)=0.00196 *3*; α(M)=0.000368 *6*; α(N+..)=6.20×10^{-5} *9* α(N)=6.20×10^{-5} *9* B(M1)(W.u.)=0.0106 *12*; B(E2)(W.u.)=0.30 *4* Mult.: A_{22}=−0.048 *10*, A_{44}=0.015 *10* (1977Ri05); R_{DCO}=2.19 *6* (1977Ri05). Mult.: α(K)exp=0.0209 *13* (1970Ka13); 0.016 *2* (1964Ka23). δ: from 1976Ba39; Other: 0.06 *1* (1977Wi10), 0.01 *1* (1977Ri05), +0.02 *4* (1977Ri05).
319.38	$5/2^+$	38.77 *17*	0.14	280.62	$3/2^+$	M1(+E2)		24 *18*	α(K)=12 *7*; α(L)=10 *10*; α(M)=1.9 *18*; α(N+..)=0.3 *3* α(N)=0.3 *3* Mult.: α(K)exp=5.8 *6* in ^{105}Rh β^- decay (35.3 h) (1965Pi01).
		319.24	100.0	0.0	$5/2^+$	M1+E2	+0.103 *8*	0.01697	α(K)=0.01481 *21*; α(L)=0.001769 *25*; α(M)=0.000332 *5*; α(N+..)=5.60×10^{-5} *8* α(N)=5.60×10^{-5} *8* B(M1)(W.u.)=0.019 *3*; B(E2)(W.u.)=1.8 *4* Mult.: A_{22}=0.21 *4*, A_{44}=0.01 *5* (1977Ri05); R_{DCO}=1.08 *19* (1977Ri05) in ^{96}Zr(^{12}C,3nγ); Also, α(K)exp=0.013 (1964Ka23) in ^{105}Rh β^- decay (35.3 h) and 0.014 *9* (1970Ka13) in ^{105}Ag ε decay (41.29 d). δ: weighted average of +0.137 *9* (1981Al19), +0.11 *1* (1977Wi10) and +0.091 *13* (1976Ba39);
344.9	$1/2^+$	64.072	26.8	280.62	$3/2^+$	M1(+E2)	−0.025 *30*	1.354 *23*	α(K)=1.175 *19*; α(L)=0.147 *5*; α(M)=0.0276 *9*; α(N+..)=0.00463 *14* α(N)=0.00463 *14* B(M1)(W.u.)=0.0149 *+20−21*; B(E2)(W.u.)=2.0 *+91−16* Mult.: α(K)exp=1.17 *7* (1970Ka13) in ^{105}Ag ε decay (41.29 d). δ: from (1981Al19) in ^{105}Ag ε decay (41.29 d).
		344.61	100.0	0.0	$5/2^+$	E2		0.0188	α(K)=0.01611 *23*; α(L)=0.00219 *3*; α(M)=0.000413 *6*; α(N+..)=6.80×10^{-5} *10*

Adopted Levels, Gammas (continued)

γ(^{105}Pd) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.	δ	α[†]	Comments
									α(N)=6.80×10^{-5} *10* B(E2)(W.u.)=2.64 *15* Mult.: α(K)exp=0.0163 *10* (1970Ka13) in ^{105}Ag ε decay (41.29 d).
442.53	(7/2)$^+$	442.25	100	0.0	5/2$^+$	M1+E2	−0.23 *6*	0.00756 *11*	B(M1)(W.u.)=0.20 *+17−7*; B(E2)(W.u.)=47 *+55−24* α=0.00756 *11*; α(K)=0.00661 *10*; α(L)=0.000784 *13*; α(M)=0.0001471 *23*; α(N+..)=2.48×10^{-5} α(N)=2.48×10^{-5} *4* Mult.: A_{22}=−0.610 *21*, A_{44}=0.031 *24* (1977Ri05); R_{DCO}=4.1 *7* (1977Ri05) in ^{96}Zr(^{12}C,3nγ). δ: weighted average of −0.33 *13* or −0.20 *7* (1977Ri05) in ^{96}Zr(^{12}C,3nγ); Also: −0.2 or −0.3 (1977Wi10) and −0.8 *+7−4* (1976Ba39) in ^{105}Rh β^- decay (35.3 h).
489.1	11/2$^-$	182.92	100	306.41	7/2$^+$	M2		0.453	α(K)=0.383 *6*; α(L)=0.0567 *8*; α(M)=0.01087 *16*; α(N+..)=0.00182 *3* α(N)=0.00182 *3* B(M2)(W.u.)=0.132 *4* Mult.: A_{22}=0.03 *4*, A_{44}=0.00 *4* (1977Ri05) in ^{96}Zr(^{12}C,3nγ); Also α(K)exp=0.40 *5* (1970Ka13) in ^{105}Ag ε decay (41.29 d).
560.50	3/2$^+$	216.1	2.44	344.9	1/2$^+$				
		560.79	100	0.0	5/2$^+$	M1+E2		0.00427 *7*	α=0.00427 *7*; α(K)=0.00372 *6*; α(L)=0.000451 *18*; α(M)=8.5×10^{-5} *4*; α(N+..)=1.42×10^{-5} *5* α(N)=1.42×10^{-5} *5* Mult.: α(K)exp=0.0038 *4* (1970Ka13) in ^{105}Ag ε decay (41.29 d).
644.7	7/2$^-$	155.38	4.05	489.1	11/2$^-$	E2		0.289	α(K)=0.238 *4*; α(L)=0.0423 *6*; α(M)=0.00808 *12*; α(N+..)=0.001290 *18* α(N)=0.001290 *18* B(E2)(W.u.)=63.5 *23* Mult.: α(K)exp=0.235 *21* (1970Ka13).
		202.21	0.29	442.53	(7/2)$^+$				
		325.43	1.98	319.38	5/2$^+$	E1		0.00559 *8*	α=0.00559 *8*; α(K)=0.00489 *7*; α(L)=0.000571 *8*; α(M)=0.0001067 *15*; α(N+..)=1.79×10^{-5} *3* α(N)=1.79×10^{-5} *3* B(E1)(W.u.)=1.289×10^{-6} *24* Mult.: α(K)exp=0.0043 *8* (1970Ka13).
		644.63	100	0.0	5/2$^+$	E1+M2	−0.016 *4*	0.001061 *15*	α=0.001061 *15*; α(K)=0.000930 *13*; α(L)=0.0001070 *15*; α(M)=2.00×10^{-5} *3*; α(N+..)=3.37×10^{-6} α(N)=3.37×10^{-6} *5* B(E1)(W.u.)=8.38×10^{-6} *14*; B(M2)(W.u.)=0.024 *12* Mult.: A_{22}=−0.170 *5*, 0.001 *1* (1977Ba32); Also, α(K)exp=0.00090 *6* (1970Ka13) in ^{105}Ag ε decay (41.29 d). δ: weighted average of −0.020 *+5−6* (1977Ba32) and −0.012 *4* (1981Al19) in ^{105}Ag ε decay (41.29 d).
650.9	(3/2)$^+$	90.01	0.81	560.50	3/2$^+$				
		331.58	100	319.38	5/2$^+$	M1+E2	−0.084 *7*	0.01539	B(M1)(W.u.)>0.047; B(E2)(W.u.)>2.2

$^{105}_{46}Pd_{59}$-7

Adopted Levels, Gammas (continued)

γ(^{105}Pd) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.	δ	α[†]	Comments
									α(K)=0.01343 *19*; α(L)=0.001602 *23*; α(M)=0.000301 *5*; α(N+..)=5.07×10^{-5} *8* α(N)=5.07×10^{-5} *8* Mult.: A_{22}=−0.104 *11*, A_{44}=−0.10 *10* (1977Ba32) in ^{105}Ag ε decay (41.29 d); Also α(K)exp=0.0122 *8* (1970Ka13) in ^{105}Ag ε decay (41.29 d). δ: −0.084 *7* (1983Si08), and −0.062 *9* (1981Al19) in ^{105}Ag ε decay (41.29 d).
650.9	(3/2)$^+$	370.28	17.85	280.62	3/2$^+$	M1+E2	0.11 *3*	0.01167	B(M1)(W.u.)>0.0059; B(E2)(W.u.)>0.21 α(K)=0.01020 *15*; α(L)=0.001212 *18*; α(M)=0.000228 *4*; α(N+..)=3.84×10^{-5} *6* α(N)=3.84×10^{-5} *6* Mult.: A_{22}=−0.072 *12*, A_{44}=−0.001 *16* (1983Si08) and A_{22}=−0.098 *16*, A_{44}=−0.030 *45* (1977Ba32) in ^{105}Ag ε decay (41.29 d); Also α(K)exp=0.0094 *8* (1970Ka13) in ^{105}Ag ε decay (41.29 d). δ: from 1983Si08 in ^{105}Ag ε decay (41.29 d), based on γ-γ(θ); Other: 0.000 *3* (1977Ba32) in ^{105}Ag ε decay (41.29 d).
		650.78	60.85	0.0	5/2$^+$	M1+E2		0.00293 *7*	α=0.00293 *7*; α(K)=0.00256 *7*; α(L)=0.000306 *5*; α(M)=5.74×10^{-5} *9*; α(N+..)=9.64×10^{-6} *14* α(N)=9.64×10^{-6} *14* Mult.: α(K)exp=0.00264 *18* (1970Ka13) in ^{105}Ag ε decay (41.29 d).
673.2	1/2$^+$	112.51	1.76	560.50	3/2$^+$				
		328.61	10.25	344.9	1/2$^+$	(M1)		0.01570	α(K)=0.01371 *20*; α(L)=0.001632 *23*; α(M)=0.000307 *5*; α(N+..)=5.17×10^{-5} *8* α(N)=5.17×10^{-5} *8* B(M1)(W.u.)=0.0078 *8* Mult.: α(K)exp=0.0084 *9* (1970Ka13) in ^{105}Ag ε decay (41.29 d).
		353.8	0.42	319.38	5/2$^+$				
		392.73	100	280.62	3/2$^+$	M1+E2	+0.06 *3*	0.01006 *15*	B(M1)(W.u.)=0.045 *+6−5*; B(E2)(W.u.)=0.9 *+12−7* α(K)=0.00879 *13*; α(L)=0.001042 *15*; α(M)=0.000196 *3*; α(N+..)=3.30×10^{-5} *5* α(N)=3.30×10^{-5} *5* Mult.: A_{22}=0.182 *17*, A_{44}=0.020 *25* (1983Si08) and 0.149 *13*, −0.014 *20* (1977Ba32) in ^{105}Ag ε decay (41.29 d); Also α(K)exp=0.0083 *6* (1970Ka13) in ^{105}Ag ε decay (41.29 d). δ: weighted average of 0.05 *4* (1983Si08) and +0.10 *7* (1981Al19) in ^{105}Ag ε decay (41.29 d); Other: −0.84 *+3−17* (1977Ba32).
		673.24	48.74	0.0	5/2$^+$	E2		0.00263 *4*	B(E2)(W.u.)=8.4 *9* α=0.00263 *4*; α(K)=0.00229 *4*; α(L)=0.000280 *4*; α(M)=5.26×10^{-5} *8*; α(N+..)=8.79×10^{-6} *13* α(N)=8.79×10^{-6} *13* Mult.: α(K)exp=0.00224 *19* (1970Ka13) in ^{105}Ag ε decay (41.29 d).

$^{105}_{46}Pd_{59}$-8

Adopted Levels, Gammas (continued)

γ(^{105}Pd) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.	δ	α[†]	Comments
696.66	(7/2$^+$)	135.8[#] *3*	22[#] *5*	560.50	3/2$^+$				
		254.3[#] *3*	92[#] *27*	442.53	(7/2)$^+$				
		415.8[#] *3*	38[#] *11*	280.62	3/2$^+$				
		697.1[#] *3*	100[#]	0.0	5/2$^+$				
727.5	5/2$^+$	284.8	65.71	442.53	(7/2)$^+$	M1		0.0226	α(K)=0.0197 *3*; α(L)=0.00236 *4*; α(M)=0.000443 *7*; α(N+..)=7.47×10^{-5} *11* α(N)=7.47×10^{-5} *11* B(M1)(W.u.)>0.025 Mult.: α(K)exp=0.0162 *23* (1970Ka13) in ^{105}Ag ε decay (41.29 d).
		408.08	28.57	319.38	5/2$^+$	M1(+E2)		0.0101 *10*	α(K)=0.0087 *8*; α(L)=0.00109 *15*; α(M)=0.00021 *3*; α(N+..)=3.4×10^{-5} *5* α(N)=3.4×10^{-5} *5* Mult.: α(K)exp=0.0070 *25* (1970Ka13) in ^{105}Ag ε decay (41.29 d).
		421.03	82.86	306.41	7/2$^+$	M1(+E2)		0.0092 *8*	α=0.0092 *8*; α(K)=0.0080 *7*; α(L)=0.00100 *13*; α(M)=0.000188 *25*; α(N+..)=3.1×10^{-5} *4* α(N)=3.1×10^{-5} *4* Mult.: α(K)exp=0.0069 *17* (1970Ka13) in ^{105}Ag ε decay (41.29 d).
		446.8	68.57	280.62	3/2$^+$	M1+E2	0.9 +*9*–*5*	0.0078 *4*	B(M1)(W.u.)>0.00040 α=0.0078 *4*; α(K)=0.0068 *3*; α(L)=0.00083 *6*; α(M)=0.000157 *11*; α(N+..)=2.62×10^{-5} *17* α(N)=2.62×10^{-5} *17* Mult.: A_{22}=0.043 (32); A_{44}=0.053 (47) (1983Si08) in ^{105}Ag ε decay (41.29 d). δ: from 1983Si08 in ^{105}Ag ε decay (41.29 d), based on γγ(θ).
		727.28	100	0.0	5/2$^+$	M1(+E2)		0.00223 *9*	α=0.00223 *9*; α(K)=0.00195 *8*; α(L)=0.000231 *5*; α(M)=4.34×10^{-5} *9*; α(N+..)=7.30×10^{-6} *18* α(N)=7.30×10^{-6} *18* Mult.: α(K)exp=0.0028 *9* (1970Ka13) in ^{105}Ag ε decay (41.29 d).
781.99	9/2$^+$	339.4[#] *1*	[#]	442.53	(7/2)$^+$	M1(+E2)	−0.04 *4*	0.01448	α(K)=0.01264 *18*; α(L)=0.001505 *22*; α(M)=0.000283 *4*; α(N+..)=4.76×10^{-5} *7* α(N)=4.76×10^{-5} *7* Mult.: A_{22}=−0.29 *5*, A_4=0.03 *8* (1977Ri05); R_{DCO}=2.5 *5* (1977Ri05) in ^{96}Zr(^{12}C,3nγ). δ: from 1977Ri05 in ^{96}Zr(^{12}C,3nγ), based on γ(θ). δ: Also: −0.08 *8* (1977Ri05) in ^{96}Zr(^{12}C,3nγ).
		475.1[@]	100[@]	306.41	7/2$^+$				

$^{105}_{46}Pd_{59}$-9

Adopted Levels, Gammas (continued)

γ(^{105}Pd) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.	δ	α[†]	Comments
781.99	9/2$^+$	781.3[@]	54[@]	0.0	5/2$^+$	E2		0.00180 *3*	B(E2)(W.u.)=14.7 *13* α=0.00180 *3*; α(K)=0.001571 *22*; α(L)=0.000189 *3*; α(M)=3.55×10^{-5} *5*; α(N+..)=5.95×10^{-6} *9* α(N)=5.95×10^{-6} *9* Mult.: A_{22}=0.33 *3*, A_{44}=−0.05 *4* (1977Ri05); R_{DCO}=1.01 *18* (1977Ri05) in ^{96}Zr(^{12}C,3nγ).
785.0	(1/2$^+$ to 9/2$^+$)	785[d]		0.0	5/2$^+$				
902.12	9/2$^+$	459.6[&] *3*	41[&] *7*	442.53	(7/2)$^+$	M1+E2	+0.24 *9*	0.00688 *11*	α=0.00688 *11*; α(K)=0.00601 *9*; α(L)=0.000712 *12*; α(M)=0.0001337 *23*; α(N+..)=2.25×10^{-5} *4* α(N)=2.25×10^{-5} *4* Mult.: A_{22}=0.10 *11*, A_{44}=−0.07 *4* (1977Ri05) in ^{96}Zr(^{12}C,3nγ). δ: from γ(θ) in 1977Ri05.
		582.74[&] *25*	66[&] *7*	319.38	5/2$^+$	E2		0.00387 *6*	α=0.00387 *6*; α(K)=0.00336 *5*; α(L)=0.000418 *6*; α(M)=7.87×10^{-5} *11*; α(N+..)=1.312×10^{-5} *19* α(N)=1.312×10^{-5} *19* Mult.: A_{22}=0.46 *5*, A_{44}=−0.11 *7* (1977Ri05), and R_{DCO}=0.92 *16* (1977Ri05) in ^{96}Zr(^{12}C,3nγ).
		595.73[&] *15*	100[&] *7*	306.41	7/2$^+$	M1+E2	+0.16 *3*	0.00367 *6*	α=0.00367 *6*; α(K)=0.00321 *5*; α(L)=0.000376 *6*; α(M)=7.06×10^{-5} *10*; α(N+..)=1.191×10^{-5} *17* α(N)=1.191×10^{-5} *17* Mult.: A_{22}=−0.01 *3*, A_{44}=0.02 *4* (1977Ri05) and R_{DCO}=2.4 *5* (1977Ri05) in ^{96}Zr(^{12}C,3nγ). δ: from γ(θ) in ^{96}Zr(^{12}C,3nγ) (1977Ri05); Also there: −0.04 *8* (1977Ri05).
921.3	(1/2$^+$ to 5/2$^+$)	270.5	4.29	650.9	(3/2)$^+$				
		576.7	85.71	344.9	1/2$^+$				
		640.5	100	280.62	3/2$^+$				
		921.2	57	0.0	5/2$^+$				
929.6	(5/2$^+$)	285.0[@ f]	[@]	644.7	7/2$^-$				E_γ: observed only in (n,n′γ), where BRs are different from the two ^{105}Ag ε decay data sets.
		370[a]	20[a]	560.50	3/2$^+$				
		486.8	33	442.53	(7/2)$^+$				
		610.0	60.61 *3*	319.38	5/2$^+$				
		649.2[a]	27.59[a]	280.62	3/2$^+$				
		929.1	100	0.0	5/2$^+$				
945.0		945[d]		0.0	5/2$^+$				
962.4	(1/2,3/2)$^+$	289.37	10.14	673.2	1/2$^+$	M1		0.0217	B(M1)(W.u.)>0.31 α(K)=0.0189 *3*; α(L)=0.00226 *4*; α(M)=0.000425 *6*; α(N+..)=7.17×10^{-5} *10*

$^{105}_{46}Pd_{59}$-10

Adopted Levels, Gammas (continued)

γ(^{105}Pd) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.	δ	α[†]	Comments
									α(N)=7.17×10^{-5} *10* Mult.: α(K)exp=0.0147 *17* (1970Ka13) in ^{105}Ag ε decay (41.29 d).
962.4	(1/2,3/2)$^+$	311.74	6.64	650.9	(3/2)$^+$	M1		0.0179	B(M1)(W.u.)>0.16 α(K)=0.01566 *22*; α(L)=0.00187 *3*; α(M)=0.000351 *5*; α(N+..)=5.92×10^{-5} *9* α(N)=5.92×10^{-5} *9* Mult.: α(K)exp=0.0096 *14* (1970Ka13) in ^{105}Ag ε decay (41.29 d).
		401.75	16.08	560.50	3/2$^+$	M1		0.00950 *14*	B(M1)(W.u.)>0.18 α=0.00950 *14*; α(K)=0.00831 *12*; α(L)=0.000983 *14*; α(M)=0.000185 *3*; α(N+..)=3.11×10^{-5} *5* α(N)=3.11×10^{-5} *5* Mult.: α(K)exp=0.0065 *10* (1970Ka13) in ^{105}Ag ε decay (41.29 d).
		617.90	100	344.9	1/2$^+$	M1(+E2)		0.00334 *6*	α=0.00334 *6*; α(K)=0.00291 *6*; α(L)=0.000350 *7*; α(M)=6.56×10^{-5} *14*; α(N+..)=1.101×10^{-5} *19* α(N)=1.101×10^{-5} *19* Mult.: α(K)exp=0.00306 *25* (1970Ka13) in ^{105}Ag ε decay (41.29 d).
		681.94	6.29	280.62	3/2$^+$	M1(+E2)		0.00261 *8*	α=0.00261 *8*; α(K)=0.00228 *8*; α(L)=0.000272 *4*; α(M)=5.10×10^{-5} *8*; α(N+..)=8.57×10^{-6} *15* α(N)=8.57×10^{-6} *15* Mult.: α(K)exp=0.0034 *8* (1970Ka13) in ^{105}Ag ε decay (41.29 d).
		962.45	9.44	0.0	5/2$^+$	M1(+E2)		0.00116 *7*	α=0.00116 *7*; α(K)=0.00102 *6*; α(L)=0.000119 *6*; α(M)=2.23×10^{-5} *11*; α(N+..)=3.75×10^{-6} *19* α(N)=3.75×10^{-6} *19* Mult.: α(K)exp=0.00119 *23* (1970Ka13) in ^{105}Ag ε decay (41.29 d).
970.0	15/2$^-$	480.8[@] *2*	100[@]	489.1	11/2$^-$	E2		0.00670 *10*	α=0.00670 *10*; α(K)=0.00580 *9*; α(L)=0.000741 *11*; α(M)=0.0001395 *20*; α(N+..)=2.32×10^{-5} *4* α(N)=2.32×10^{-5} *4* Mult.: A_{22}=0.334 *9*, A_{44}=−0.084 *9* (1977Ri05); R_{DCO}=0.99 *2* (1977Ri05) in ^{96}Zr(^{12}C,3nγ).
1011.47	(11/2$^+$)	228.9[@]	64.29[@]	781.99	9/2$^+$	M1+E2	−0.05 *9*	0.0399 *8*	α(K)=0.0348 *7*; α(L)=0.00420 *11*; α(M)=0.000789 *21*; α(N+..)=0.000133 *4* α(N)=0.000133 *4* Mult.: A_{22}=−0.33 *15*, A_{44}=0.21 *19* (1977Ri05) in ^{96}Zr(^{12}C,3nγ). δ: from 1977Ri05 in ^{96}Zr(^{12}C,3nγ), based on γ(θ).

$^{105}_{46}Pd_{59}$-11

Adopted Levels, Gammas (continued)

γ(^{105}Pd) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.	α[†]	Comments
1011.47	(11/2$^+$)	523.6[@] *7*	32[@] *6*	489.1	11/2$^-$			
		705.2[@] *2*	100[@] *7*	306.41	7/2$^+$	E2	0.00233 *4*	α=0.00233 *4*; α(K)=0.00203 *3*; α(L)=0.000247 *4*; α(M)=4.64×10^{-5} *7*; α(N+..)=7.76×10^{-6} *11* α(N)=7.76×10^{-6} *11* Mult.: A_{22}=0.346 *17*, A_{44}=−0.102 *24* (1977Ri05); R_{DCO}=0.99 *4* (1977Ri05) in ^{96}Zr(^{12}C,3nγ).
1072.2	(5/2$^+$,7/2$^+$,9/2$^+$)	629.7[a]	50[a]	442.53	(7/2)$^+$			
		1072.2[a]	100[a]	0.0	5/2$^+$			
1074.6	(3/2$^+$)	768.4[@] *5*	40[@] *20*	306.41	7/2$^+$			
		793.8[@] *5*	100[@] *20*	280.62	3/2$^+$			
1088.2	3/2$^-$	159.0	0.29	929.6	(5/2$^+$)			
		360.72	4.36	727.5	5/2$^+$	E1	0.00427 *6*	α=0.00427 *6*; α(K)=0.00374 *6*; α(L)=0.000436 *6*; α(M)=8.15×10^{-5} *12*; α(N+..)=1.365×10^{-5} *20* α(N)=1.365×10^{-5} *20* Mult.: α(K)exp=0.0039 *4* (1970Ka13) in ^{105}Ag ε decay (41.29 d).
		414.85	2.78	673.2	1/2$^+$	(E1)	0.00299 *5*	α=0.00299 *5*; α(K)=0.00262 *4*; α(L)=0.000305 *5*; α(M)=5.69×10^{-5} *8*; α(N+..)=9.55×10^{-6} *14* α(N)=9.55×10^{-6} *14* Mult.: α(K)exp=0.0040 *8* (1970Ka13) in ^{105}Ag ε decay (41.29 d).
		437.30	2.66	650.9	(3/2)$^+$	E1	0.00263 *4*	α=0.00263 *4*; α(K)=0.00230 *4*; α(L)=0.000267 *4*; α(M)=4.99×10^{-5} *7*; α(N+..)=8.37×10^{-6} *12* α(N)=8.37×10^{-6} *12* Mult.: α(K)exp=0.0029 *6* (1970Ka13) in ^{105}Ag ε decay (41.29 d).
		443.44	100	644.7	7/2$^-$	E2	0.00853 *12*	α=0.00853 *12*; α(K)=0.00737 *11*; α(L)=0.000954 *14*; α(M)=0.000180 *3*; α(N+..)=2.98×10^{-5} *5* α(N)=2.98×10^{-5} *5* Mult.: α(K)exp=0.0075 *5* (1970Ka13) in ^{105}Ag ε decay (41.29 d).
		527.34	1.00	560.50	3/2$^+$	E1	0.001673 *24*	α=0.001673 *24*; α(K)=0.001466 *21*; α(L)=0.0001694 *24*; α(M)=3.17×10^{-5} *5*; α(N+..)=5.32×10^{-6} α(N)=5.32×10^{-6} *8* Mult.: α(K)exp=0.0015 *4* (1970Ka13) in ^{105}Ag ε decay (41.29 d).
		646.00	0.62	442.53	(7/2)$^+$			
		743.45	4.9	344.9	1/2$^+$	E1	0.000778 *11*	α=0.000778 *11*; α(K)=0.000683 *10*; α(L)=7.83×10^{-5} *11*; α(M)=1.463×10^{-5} *21*; α(N+..)=2.46×10^{-6} α(N)=2.46×10^{-6} *4* Mult.: α(K)exp=0.00070 *11* (1970Ka13) in ^{105}Ag ε decay (41.29 d).
		768.9	0.09	319.38	5/2$^+$			

$^{105}_{46}Pd_{59}$-12

Adopted Levels, Gammas (continued)

γ(^{105}Pd) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.	δ	α[†]	Comments
1088.2	3/2$^-$	807.57	10.62	280.62	3/2$^+$	E1(+M2)	0.03 *+4−3*	0.000659 *19*	α=0.000659 *19*; α(K)=0.000579 *17*; α(L)=6.62×10^{-5} *20*; α(M)=1.24×10^{-5} *4*; α(N+..)=2.08×10^{-6} *7* α(N)=2.08×10^{-6} *7* Mult.: A_{22}=−0.108 *15*; A_{44}=−0.2 *2* (1983Si08) in ^{105}Ag ε decay (41.29 d); Also: α(K)exp=0.00061 *7* (1970Ka13) in ^{105}Ag ε decay (41.29 d). δ: 0.03 *+4−3* (1983Si08) in ^{105}Ag ε decay (41.29 d), based on γγ(θ).
		1088.05	33.20	0.0	5/2$^+$				Mult.: α(K)exp=0.000299 *22* (1970Ka13) in ^{105}Ag ε decay (41.29 d).
1098.1	(5/2$^+$,7/2$^+$,9/2$^+$)	656.5[a]	12[a]	442.53	(7/2)$^+$				
		818[a]	6.06[a]	280.62	3/2$^+$				
		1098.39[a]	100[a]	0.0	5/2$^+$				
1102.3	(1/2$^+$ to 5/2$^+$)	821.7[@] *4*	100[@]	280.62	3/2$^+$				
1125.1	(1/2$^+$ to 7/2$^+$)	564.4	22	560.50	3/2$^+$				
		844.6	100	280.62	3/2$^+$				
		1125.2	45	0.0	5/2$^+$				
1142.34	(1/2$^+$,3/2$^+$)	491.2[@] *5*	58[@] *4*	650.9	(3/2)$^+$				
		582.1[@] *2*	100[@]	560.50	3/2$^+$				
		1142.2[@] *2*	62[@] *5*	0.0	5/2$^+$				
1177.7	(1/2$^+$,3/2$^+$)	1177.7[@] *3*	100[@]	0.0	5/2$^+$				
1201.7	(1/2$^+$,3/2$^+$)	640.8[@] *5*	100[@] *6*	560.50	3/2$^+$				
		921.3[@] *4*	46[@] *6*	280.62	3/2$^+$				
1259.22	(3/2$^+$)	952.6[@] *3*	100[@] *8*	306.41	7/2$^+$				
		979.0[@] *4*	49[@] *8*	280.62	3/2$^+$				
		1259.2[@] *3*	85[@] *8*	0.0	5/2$^+$				
1271.41	(11/2)$^+$	260.0[#] *3*	28[#] *9*	1011.47	(11/2$^+$)				
		489.5[#] *3*	93[#] *28*	781.99	9/2$^+$	M1+E2	−0.13 *6*	0.00588 *9*	α=0.00588 *9*; α(K)=0.00514 *8*; α(L)=0.000605 *9*; α(M)=0.0001136 *17*; α(N+..)=1.92×10^{-5} *3* α(N)=1.92×10^{-5} *3* Mult.: A_{22}=−0.46 *5*, A_{44}=0.04 *6* (1977Ri05) and R_{DCO}=3.1 *10* (1977Ri05) in ^{96}Zr(^{12}C,3nγ). δ: from 1977Ri05 in ^{96}Zr(^{12}C,3nγ), but also −0.05 *8* (1977Ri05).
		829.1[#] *3*	100[#]	442.53	(7/2)$^+$	E2		0.001558 *22*	α=0.001558 *22*; α(K)=0.001359 *19*; α(L)=0.0001628 *23*; α(M)=3.05×10^{-5} *5*; α(N+..)=5.12×10^{-6}

$^{105}_{46}Pd_{59}$-13

Adopted Levels, Gammas (continued)

γ(^{105}Pd) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.	δ	α[†]	Comments
									α(N)=5.12×10^{-6} *8* Mult.: A_{22}=0.20 *5*, A_{44}=−0.09 *7* (1977Ri05) and R_{DCO}=1.2 *4* (1977Ri05) in ^{96}Zr(^{12}C,3nγ).
1324.2	(11/2$^+$)	312.6[#] *3*	53[#] *16*	1011.47	(11/2$^+$)				
		834.9[#] *3*	≤44[#]	489.1	11/2$^-$				
		881.3[#]	100[#]	442.53	(7/2)$^+$	(E2)		0.001347 *19*	α=0.001347 *19*; α(K)=0.001176 *17*; α(L)=0.0001401 *20*; α(M)=2.63×10^{-5} *4*; α(N+..)=4.41×10^{-6} α(N)=4.41×10^{-6} *7*
1357.0	(13/2$^-$)	387[e]		970.0	15/2$^-$				
		868[e]		489.1	11/2$^-$				
1405.2	(3/2$^+$,5/2$^+$)	263.3[@] *5*	25[@] *5*	1142.34	(1/2$^+$,3/2$^+$)				
		1098.5[@] *3*	100[@]	306.41	7/2$^+$				
		1405.5[@] *7*	13[@] *3*	0.0	5/2$^+$				
1410.9	(13/2$^+$)	140.0[#] *3*	40[#] *10*	1271.41	(11/2)$^+$				
		399.9[#] *3*	100[#] *30*	1011.47	(11/2$^+$)				
		628.1[#] *3*	50[#] *15*	781.99	9/2$^+$				
1520.8	(3/2$^+$ to 7/2$^+$)	1078.0[@] *5*	100[@] *21*	442.53	(7/2)$^+$				
		1240.8[@] *7*	62[@] *15*	280.62	3/2$^+$				
1601.3	(1/2$^+$ to 5/2$^+$)	459.0[@] *5*	100[@] *10*	1142.34	(1/2$^+$,3/2$^+$)				
		1600.4[@] *16*	13[@] *7*	0.0	5/2$^+$				
1650.6	(7/2$^-$)	1162.1[@] *8*	31[@] *8*	489.1	11/2$^-$	[E2]		0.000727 *11*	α=0.000727 *11*; α(K)=0.000633 *9*; α(L)=7.40×10^{-5} *11*; α(M)=1.385×10^{-5} *20*; α(N+..)=5.67×10^{-6} *1* α(N)=2.33×10^{-6} *4*; α(IPF)=3.34×10^{-6} *8*
		1208.7[@] *8*	34[@] *9*	442.53	(7/2)$^+$	[E1+M2]		0.0010 *7*	α=0.0010 *7*; α(K)=0.0009 *6*; α(L)=0.00010 *8*; α(M)=1.9×10^{-5} *14*; α(N+..)=2.5×10^{-5} *18* α(N)=3.2×10^{-6} *23*; α(IPF)=2.2×10^{-5} *21*
		1305.5[@] *4*	100[@] *14*	344.9	1/2$^+$	[E3]		0.001091 *16*	α=0.001091 *16*; α(K)=0.000944 *14*; α(L)=0.0001143 *16*; α(M)=2.15×10^{-5} *3*; α(N+..)=1.123×10^{-5} α(N)=3.61×10^{-6} *5*; α(IPF)=7.62×10^{-6} *12*
1671.14	(13/2)$^+$	399.76[&] *10*	35.1[&] *21*	1271.41	(11/2)$^+$	E2+M1	−0.08 *4*	0.00964 *14*	α=0.00964 *14*; α(K)=0.00842 *12*; α(L)=0.000997 *15*; α(M)=0.000187 *3*; α(N+..)=3.16×10^{-5} *5* α(N)=3.16×10^{-5} *5*

$^{105}_{46}Pd_{59}$-14

Adopted Levels, Gammas (continued)

γ(^{105}Pd) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.	δ	α[†]	Comments
									Mult.: A_{22}=−0.38 *4*, A_{44}=−0.05 *5* (1977Ri05) and R_{DCO}=3.9 *11* (1977Ri05) in ^{96}Zr(^{12}C,3nγ). δ: from 1977Ri05 in ^{96}Zr(^{12}C,3nγ), but also −0.19 *11* (1977Ri05).
1671.14	(13/2)$^+$	889.24[&] *25*	100[&]	781.99	9/2$^+$	E2		0.001318 *19*	α=0.001318 *19*; α(K)=0.001151 *17*; α(L)=0.0001371 *20*; α(M)=2.57×10^{-5} *4*; α(N+..)=4.31×10^{-6} α(N)=4.31×10^{-6} *6* Mult.: A_{22}=0.329 *16*, A_{44}=−0.06 *21* (1977Ri05) and R_{DCO}=1.15 *20* (1977Ri05) in ^{96}Zr(^{12}C,3nγ).
1701.0	(1/2$^+$ to 9/2$^+$)	973.3[@] *8*	100[@] *25*	727.5	5/2$^+$				
		1382.4[@] *16*	54[@] *29*	319.38	5/2$^+$				
1741.8	19/2$^-$	771.83[&] *5*	100[&]	970.0	15/2$^-$	E2		0.00186 *3*	α=0.00186 *3*; α(K)=0.001618 *23*; α(L)=0.000195 *3*; α(M)=3.66×10^{-5} *6*; α(N+..)=6.13×10^{-6} *9* α(N)=6.13×10^{-6} *9* Mult.: A_{22}=0.353 *10*, A_{44}=−0.104 *11* (1977Ri05); R_{DCO}=0.96 *2* (1977Ri05) in ^{96}Zr(^{12}C,3nγ).
1749.6	(13/2)$^+$	847.6[&] *3*	100[&]	902.12	9/2$^+$	E2		0.001477 *21*	α=0.001477 *21*; α(K)=0.001290 *18*; α(L)=0.0001541 *22*; α(M)=2.89×10^{-5} *4*; α(N+..)=4.85×10^{-6} α(N)=4.85×10^{-6} *7* Mult.: R_{DCO}=1.12 *21* (1977Ri05) in ^{96}Zr(^{12}C,3nγ).
1763.2	(15/2)$^-$	793.17[&] *25*	100[&] *11*	970.0	15/2$^-$	M1+E2	+1.0 *5*	0.00181 *6*	α=0.00181 *6*; α(K)=0.00159 *5*; α(L)=0.000187 *5*; α(M)=3.51×10^{-5} *8*; α(N+..)=5.91×10^{-6} *14* α(N)=5.91×10^{-6} *14* Mult.: A_{22}=0.28 *4*, A_{44}, −0.08 *6* (1977Ri05) and R_{DCO}=1.2 *3* (1977Ri05) in ^{96}Zr(^{12}C,3nγ). δ: from DCO measurements in 1977Ri05; Also: 1.0 *5* (1977Ri05) in ^{96}Zr(^{12}C,3nγ).
		1274.15[&] *15*	41[&] *5*	489.1	11/2$^-$				Mult.: A_{22}=0.27 *12*, A_{44}=0.02 *18* (1977Ri05) in ^{96}Zr(^{12}C,3nγ).
1774.7	(1/2$^+$ to 9/2$^+$)	1455.3[@] *5*	100[@]	319.38	5/2$^+$				
1854.1	(13/2$^+$)	442[#] *3*	[#]	1410.9	(13/2$^+$)				
		530.3[#] *3*	53[#] *15*	1324.2	(11/2$^+$)				
		582.0[#] *3*	100[#]	1271.41	(11/2)$^+$				
		843.0[#] *3*	70[#] *20*	1011.47	(11/2$^+$)				
1865.6	(1/2$^+$ to 7/2$^+$)	1305.5[@] *4*	100[@]	560.50	3/2$^+$				
		1583.9[@] *6*	49[@] *13*	280.62	3/2$^+$				
1873.9	(15/2$^+$)	463.1[#] *3*	13[#] *4*	1410.9	(13/2$^+$)				

$^{105}_{46}Pd_{59}$-15

Adopted Levels, Gammas (continued)

γ(^{105}Pd) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.	δ	α[†]	Comments
1873.9	(15/2$^+$)	549.1[#] *3*	7.3[#] *18*	1324.2	(11/2$^+$)				
		602.7[#] *3*	100[#]	1271.41	(11/2)$^+$				
		862.7[#] *3*	24[#] *7*	1011.47	(11/2$^+$)				
1901.8	(15/2)$^+$	578.0[#]	31[#] *9*	1324.2	(11/2$^+$)				
		889.8[#] *3*	100[#]	1011.47	(11/2$^+$)	E2		0.001317 *19*	α=0.001317 *19*; α(K)=0.001150 *17*; α(L)=0.0001369 *20*; α(M)=2.57×10^{-5} *4*; α(N+..)=4.31×10^{-6} α(N)=4.31×10^{-6} *6* Mult.: A_{22}=0.329 *16*, A_{44}=−0.096 *21* (1977Ri05) and R_{DCO}=0.96 *4* (1977Ri05) in ^{96}Zr(^{12}C,3nγ).
1922.9	(1/2$^+$,3/2$^+$)	825.1[@] *3*	100[@] *17*	1098.1	(5/2$^+$,7/2$^+$,9/2$^+$)				
		1360.7[@] *8*	42[@] *11*	560.50	3/2$^+$				
1961.3	(17/2)$^-$	604[e]		1357.0	(13/2$^-$)				
		991.38[&] *5*	100[&]	970.0	15/2$^-$	M1+E2	1.8 *5*	0.001055 *23*	α=0.001055 *23*; α(K)=0.000923 *20*; α(L)=0.0001083 *21*; α(M)=2.03×10^{-5} *4*; α(N+..)=3.42×10^{-6} α(N)=3.42×10^{-6} *7* Mult.: A_{22}=0.436 *25*, A_{44}=0.01 *3* (1977Ri05) and R_{DCO}=0.58 *8* (1977Ri05) in ^{96}Zr(^{12}C,3nγ). δ: from DCO and linear pol. in 2019Ti02; Also: +0.46 *10* or 1.3 *7* from DCO measurements in 1977Ri05.
1988.9	(1/2,3/2,5/2)$^+$	890.7[@] *4*	100[@]	1098.1	(5/2$^+$,7/2$^+$,9/2$^+$)				
		1026.7[@] *4*	63[@] *11*	962.4	(1/2,3/2)$^+$				
2064.7	(1/2$^+$,3/2$^+$)	1745.2[@] *7*	100[@]	319.38	5/2$^+$				
		1784.3[@] *16*	27[@] *13*	280.62	3/2$^+$				
2101.5	(7/2$^-$,9/2,11/2$^+$)	1611.8[@] *8*	100[@]	489.1	11/2$^-$				
		1660.0[@] *10*	40[@] *14*	442.53	(7/2)$^+$				
2197.1	(15/2)$^+$	925.8[&] *3*	100[&]	1271.41	(11/2)$^+$	E2		0.001200 *17*	α=0.001200 *17*; α(K)=0.001048 *15*; α(L)=0.0001244 *18*; α(M)=2.33×10^{-5} *4*; α(N+..)=3.92×10^{-6} α(N)=3.92×10^{-6} *6* Mult.: R_{DCO}=0.7 *3* (1977Ri05) in ^{96}Zr(^{12}C,3nγ).
2280.6	(15/2,17/2)$^-$	1310.6[&] *2*	100[&]	970.0	15/2$^-$	M1+E2	+1.3 *7*	0.000612 *25*	α=0.000612 *25*; α(K)=0.000515 *23*; α(L)=5.94×10^{-5} *24*; α(M)=1.11×10^{-5} *5*; α(N+..)=2.73×10^{-5} *15*

$^{105}_{46}Pd_{59}$-16

Adopted Levels, Gammas (continued)

γ(^{105}Pd) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.	δ	α[†]	Comments
									α(N)=1.88×10^{-6} *8*; α(IPF)=2.54×10^{-5} *15* Mult.: A_{22}=1.4 *7*, A_{44}=−0.4 *8* (1977Ri05) and R_{DCO}=0.8 *3* (1977Ri05) in ^{96}Zr(^{12}C,3nγ). δ: from ^{96}Zr(^{12}C,3nγ) (1977Ri05), based on DCO measurements, but also 4 *4* (1977Ri05) can not be excluded.
2344.6	(19/2)$^-$	581.45[&] *25*	39[&] *8*	1763.2	(15/2)$^-$	E2		0.00390 *6*	α=0.00390 *6*; α(K)=0.00338 *5*; α(L)=0.000421 *6*; α(M)=7.92×10^{-5} *12*; α(N+..)=1.320×10^{-5} *19* α(N)=1.320×10^{-5} *19* Mult.: A_{22}=0.46 *5*, A_{44}=−0.11 *7* (1977Ri05) and R_{DCO}=0.9 *5* (1977Ri05) in ^{96}Zr(^{12}C,3nγ).
		602.78[&] *15*	100[&]	1741.8	19/2$^-$	M1+E2	−0.01 *60*	0.00357 *6*	α=0.00357 *6*; α(K)=0.00313 *5*; α(L)=0.000366 *7*; α(M)=6.86×10^{-5} *13*; α(N+..)=1.157×10^{-5} *19* α(N)=1.157×10^{-5} *19* Mult.: A_{22}=0.42 *3*, A_{44}=−0.04 *5* (1977Ri05) and R_{DCO}=0.86 *13* (1977Ri05) in ^{96}Zr(^{12}C,3nγ). δ: from 1977Ri05, based on DCO measurements; Alternatively: 0.0 *5* (1977Ri05) in ^{96}Zr(^{12}C,3nγ).
2490.9	(19/2$^-$)	749.1[&] *4*	73[&] *12*	1741.8	19/2$^-$				
		1520.9[&] *3*	100[&] *19*	970.0	15/2$^-$	(E2)		0.000507 *7*	α=0.000507 *7*; α(K)=0.000366 *6*; α(L)=4.21×10^{-5} *6*; α(M)=7.87×10^{-6} *11*; α(N+..)=9.13×10^{-5} *13* α(N)=1.327×10^{-6} *19*; α(IPF)=9.00×10^{-5} *13* Mult.: R_{DCO}=0.75 *21* (1977Ri05) in ^{96}Zr(^{12}C,3nγ).
2552.0	(17/2)$^+$	649.9[&] *3*	26[&] *7*	1901.8	(15/2)$^+$				
		881.0[&] *2*	100[&]	1671.14	(13/2)$^+$	E2		0.001348 *19*	α=0.001348 *19*; α(K)=0.001177 *17*; α(L)=0.0001402 *20*; α(M)=2.63×10^{-5} *4*; α(N+..)=4.41×10^{-6} α(N)=4.41×10^{-6} *7* Mult.: A_{22}=0.376 *24*, A_{44}=−0.18 *3* (1977Ri05) and R_{DCO}=1.0 *3* (1977Ri05) in ^{96}Zr(^{12}C,3nγ).
		1582.0[&] *3*	23[&] *7*	970.0	15/2$^-$				
2565.01	(17/2)$^+$	367.9[&] *2*	12.5[&] *25*	2197.1	(15/2)$^+$				
		815.4[&] *2*	40[&] *5*	1749.6	(13/2)$^+$	E2		0.001622 *23*	α=0.001622 *23*; α(K)=0.001415 *20*; α(L)=0.0001697 *24*; α(M)=3.18×10^{-5} *5*; α(N+..)=5.34×10^{-6} α(N)=5.34×10^{-6} *8* Mult.: A_{22}=0.27 *8*, A_{44}=−0.01 *11* (1977Ri05) and R_{DCO}=1.07 *23* (1977Ri05) in ^{96}Zr(^{12}C,3nγ).
		893.88[&] *10*	100[&]	1671.14	(13/2)$^+$	(E2)		0.001302 *19*	α=0.001302 *19*; α(K)=0.001137 *16*; α(L)=0.0001353 *19*; α(M)=2.54×10^{-5} *4*; α(N+..)=4.26×10^{-6} α(N)=4.26×10^{-6} *6*

$^{105}_{46}Pd_{59}$-17

Adopted Levels, Gammas (continued)

γ(^{105}Pd) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.	δ	α[†]	Comments
									Mult.: A_{22}=0.37 *5*, A_{44}=−0.11 *7* (1977Ri05) and R_{DCO}=0.81 *14* in ^{96}Zr(^{12}C,3nγ).
2700.2	23/2$^-$	958.42[&] *5*	100[&]	1741.8	19/2$^-$	E2		0.001108 *16*	α=0.001108 *16*; α(K)=0.000968 *14*; α(L)=0.0001146 *16*; α(M)=2.15×10^{-5} *3*; α(N+..)=3.61×10^{-6} α(N)=3.61×10^{-6} *5* Mult.: A_{22}=0.283 *19*, A_{44}=−0.075 *24* (1977Ri05) and R_{DCO}=1.12 *4* (1977Ri05) in ^{96}Zr(^{12}C,3nγ).
2703.9	(19/2)$^-$	962.10[&] *15*	100[&]	1741.8	19/2$^-$	M1+E2	+0.2 *4*	0.00122 *4*	α=0.00122 *4*; α(K)=0.00107 *3*; α(L)=0.000124 *3*; α(M)=2.32×10^{-5} *6*; α(N+..)=3.92×10^{-6} *10* α(N)=3.92×10^{-6} *10* Mult.: A_{22}=0.42 *4*, A_{44}=−0.08 *5* (1977Ri05) and R_{DCO}=0.93 *24* (1977Ri05) in ^{96}Zr(^{12}C,3nγ). δ: from DCO measurements in 1977Ri05; Alternatively: 0.2 *6* (1977Ri05) in ^{96}Zr(^{12}C,3nγ).
2755.9	19/2$^+$	854.02[&] *5*	100[&]	1901.8	(15/2)$^+$	E2		0.001451 *21*	α=0.001451 *21*; α(K)=0.001267 *18*; α(L)=0.0001513 *22*; α(M)=2.84×10^{-5} *4*; α(N+..)=4.76×10^{-6} α(N)=4.76×10^{-6} *7* Mult.: A_{22}=0.326 *25*, A_{44}=−0.08 *4* (1977Ri05)and R_{DCO}=1.02 *5* (1977Ri05) in ^{96}Zr(^{12}C,3nγ).
		881.3[#]	65[#] *20*	1873.9	(15/2$^+$)				
		1014.3[&] *3*	19[&] *3*	1741.8	19/2$^-$	E1+M2	−0.25 *25*	0.0005 *4*	α=0.0005 *4*; α(K)=0.0005 *3*; α(L)=6.E−5 *4*; α(M)=1.0×10^{-5} *7*; α(N+..)=1.7×10^{-6} *11* α(N)=1.7×10^{-6} *11* Mult.: A_{22}=0.28 *8*, A_{44}=−0.05 *11* (1977Ri05)and R_{DCO}=1.0 3 (1977Ri05) in ^{96}Zr(^{12}C,3nγ). δ: from DCO measurements in ^{96}Zr(^{12}C,3nγ) (1977Ri05), but also 0.08 *8* (1977Ri05) can not be excluded.
2775.6	(21/2$^-$)	814.22[&] *20*	50[&] *10*	1961.3	(17/2)$^-$	(E2)		0.001628 *23*	α=0.001628 *23*; α(K)=0.001420 *20*; α(L)=0.0001704 *24*; α(M)=3.20×10^{-5} *5*; α(N+..)=5.36×10^{-6} α(N)=5.36×10^{-6} *8* Mult.: A_{22}=0.27 *8*, A_{44}=−0.01 *11* (1977Ri05) and R_{DCO}=0.7 *3* (1977Ri05) in ^{96}Zr(^{12}C,3nγ).
		1033.77[&] *10*	100[&]	1741.8	19/2$^-$	M1+E2	2.3 *3*	0.000952 *15*	α=0.000952 *15*; α(K)=0.000833 *13*; α(L)=9.77×10^{-5} *15*; α(M)=1.83×10^{-5} *3*; α(N+..)=3.08×10^{-6} *5* α(N)=3.08×10^{-6} *5* Mult.: A_{22}=0.57 *6*, A_{44}=0.14 *8* (1977Ri05) and R_{DCO}=0.62 *14* (1977Ri05) in ^{96}Zr(^{12}C,3nγ). δ: from DCO and linear pol. in 2019Ti02; Also: +0.62 *18* or 0.8 *3* from DCO measurements in 1977Ri05.

$^{105}_{46}Pd_{59}$-18

Adopted Levels, Gammas (continued)

γ(^{105}Pd) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.	δ	α[†]	Comments
2806.5	(19/2)$^+$	241.6[&] *2*	6.5[&] *22*	2565.01	(17/2)$^+$				
		254.53[&] *10*	100.0[&] *22*	2552.0	(17/2)$^+$	M1+E2	+0.09 *1*	0.0304	α(K)=0.0265 *4*; α(L)=0.00319 *5*; α(M)=0.000599 *9*; α(N+..)=0.0001009 *15* α(N)=0.0001009 *15* Mult.: A_{22}=−0.11 *3*, A_{44}=0.04 *4* (1977Ri05) and R_{DCO}=1.64 *18* (1977Ri05) in ^{96}Zr(^{12}C,3nγ). δ: from DCO measurements in ^{96}Zr(^{12}C,3nγ) (1977Ri05), but also 0.13 *4* can not be excluded (1977Ri05).
		904.7[&] *1*	26[&] *4*	1901.8	(15/2)$^+$	E2		0.001266 *18*	α=0.001266 *18*; α(K)=0.001106 *16*; α(L)=0.0001315 *19*; α(M)=2.47×10^{-5} *4*; α(N+..)=4.14×10^{-6} α(N)=4.14×10^{-6} *6* Mult.: A_{22}=0.37 *19*, A_{44}=−0.3 *3* (1977Ri05) and R_{DCO}=1.0 *4* (1977Ri05) in ^{96}Zr(^{12}C,3nγ).
2900.7	(21/2)$^-$	939.4[&] *3*	46[&] *13*	1961.3	(17/2)$^-$				
		1158.94[&] *10*	100[&]	1741.8	19/2$^-$	M1+E2	+1.3 *9*	0.00076 *5*	α=0.00076 *5*; α(K)=0.00067 *4*; α(L)=7.7×10^{-5} *5*; α(M)=1.45×10^{-5} *8*; α(N+..)=5.34×10^{-6} *16* α(N)=2.44×10^{-6} *14*; α(IPF)=2.9×10^{-6} *3* Mult.: A_{22}=0.65 *8*, A_{44}=−0.03 *12* (1977Ri05) and R_{DCO}=0.58 *16* (1977Ri05) in ^{96}Zr(^{12}C,3nγ). δ: from DCO measurements in ^{96}Zr(^{12}C,3nγ) (1977Ri05), but also 1.6 *11* (1977Ri05) can not be excluded.
3072.8	(21/2)$^+$	372.6[&] *2*	8.0[&] *20*	2700.2	23/2$^-$	E1+M2	−0.20 *13*	0.0055 *24*	α=0.0055 *24*; α(K)=0.0048 *21*; α(L)=0.0006 *3*; α(M)=0.00011 *6*; α(N+..)=1.8×10^{-5} *9* α(N)=1.8×10^{-5} *9* Mult.: A_{22}=0.13 *20*, A_{44}=−0.0 *3* in ^{96}Zr(^{12}C,3nγ) (1977Ri05). δ: from ^{96}Zr(^{12}C,3nγ) (1977Ri05).
		508.0[&] *3*	100[&]	2565.01	(17/2)$^+$	E2		0.00571 *8*	α=0.00571 *8*; α(K)=0.00494 *7*; α(L)=0.000627 *9*; α(M)=0.0001179 *17*; α(N+..)=1.96×10^{-5} *3* α(N)=1.96×10^{-5} *3* Mult.: A_{22}=0.263 *23*, A_{44}=−0.10 *3* (1977Ri05) and R_{DCO}=0.91 *9* (1977Ri05) in ^{96}Zr(^{12}C,3nγ).
		1331.0[&] *2*	48[&] *6*	1741.8	19/2$^-$	E1+M2	+0.8 *8*	0.0008 *4*	α=0.0008 *4*; α(K)=0.0006 *4*; α(L)=7.E−5 *5*; α(M)=1.3×10^{-5} *9*; α(N+..)=8.E−5 *4* α(N)=2.2×10^{-6} *14*; α(IPF)=7.E−5 *5* δ: R_{DCO}=1.8 *5* (1977Ri05) in ^{96}Zr(^{12}C,3nγ).
3119.2	(21/2)$^+$	312.67[&] *10*	100[&]	2806.5	(19/2)$^+$	M1+E2	+0.12 *3*	0.0179	α(K)=0.01564 *23*; α(L)=0.00187 *3*; α(M)=0.000352 *6*; α(N+..)=5.92×10^{-5} *9*

$^{105}_{46}Pd_{59}$-19

Adopted Levels, Gammas (continued)

γ(^{105}Pd) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.	δ	α[†]	Comments
									α(N)=5.92×10^{-5} *9* Mult.: A_{22}=−0.05 *3*, A_{44}=−0.01 *4* (1977Ri05) and R_{DCO}=1.60 *17* (1977Ri05) in ^{96}Zr(^{12}C,3nγ). δ: from DCO measurements in ^{96}Zr(^{12}C,3nγ) (1977Ri05), but also 0.11 *4* (1977Ri05) can not be excluded.
3119.2	(21/2)$^+$	1377.3[&] *3*	38[&] *9*	1741.8	19/2$^-$				
3153.3	(23/2)$^-$	452.98[&] *20*	58[&] *6*	2700.2	23/2$^-$	M1(+E2)	0.0 *6*	0.0071 *3*	α=0.0071 *3*; α(K)=0.00619 *21*; α(L)=0.00073 *5*; α(M)=0.000137 *9*; α(N+..)=2.31×10^{-5} *13* α(N)=2.31×10^{-5} *13* Mult.: A_{22}=0.42 *5*, A_{44}=−0.13 *8* (1977Ri05) and R_{DCO}=0.8 *3* (1977Ri05) in ^{96}Zr(^{12}C,3nγ). δ: from DCO measurements in ^{96}Zr(^{12}C,3nγ) (1977Ri05), but also 0.0 *7* (1977Ri05) can not be excluded.
		808.8[&] *2*	100[&]	2344.6	(19/2)$^-$	E2		0.001655 *24*	α=0.001655 *24*; α(K)=0.001443 *21*; α(L)=0.0001732 *25*; α(M)=3.25×10^{-5} *5*; α(N+..)=5.45×10^{-6} α(N)=5.45×10^{-6} *8* Mult.: A_{22}=0.28 *5*, A_{44}=−0.07 *8* (1977Ri05) and R_{DCO}=1.0 *3* (1977Ri05) in ^{96}Zr(^{12}C,3nγ).
3294.7	23/2$^+$	538.83[&] *15*	100[&]	2755.9	19/2$^+$	E2		0.00482 *7*	α=0.00482 *7*; α(K)=0.00418 *6*; α(L)=0.000526 *8*; α(M)=9.89×10^{-5} *14*; α(N+..)=1.646×10^{-5} *23* α(N)=1.646×10^{-5} *23* Mult.: A_{22}=0.358 *19*, A_{44} −0.08 *3* (1977Ri05) and R_{DCO}=1.02 *5* (1977Ri05) in ^{96}Zr(^{12}C,3nγ).
3468.6	(23/2)$^+$	349.38[&] *15*	100[&]	3119.2	(21/2)$^+$	M1+E2	+0.14 *2*	0.01354 *20*	α(K)=0.01182 *17*; α(L)=0.001410 *21*; α(M)=0.000265 *4*; α(N+..)=4.46×10^{-5} *7* α(N)=4.46×10^{-5} *7* Mult.: A_{22}=−0.02 *3*, A_{44}=0.01 *5* (1977Ri05) and R_{DCO}=1.6 *3* (1977Ri05) in ^{96}Zr(^{12}C,3nγ). δ: from DCO measurements in ^{96}Zr(^{12}C,3nγ) (1977Ri05), but also 0.11 *6* (1977Ri05)can not be excluded.
3527.6	(25/2)$^+$	232.8[&] *3*	5.3[&] *13*	3294.7	23/2$^+$	M1+E2	−0.27 *7*	0.0403 *13*	α(K)=0.0350 *11*; α(L)=0.00433 *19*; α(M)=0.00082 *4*; α(N+..)=0.000137 *6* α(N)=0.000137 *6* Mult.: A_{22}=−0.69 *10*, A_{44}=0.14 *13* (1977Ri05) in ^{96}Zr(^{12}C,3nγ).
		454.82[&] *10*	100[&]	3072.8	(21/2)$^+$	E2		0.00791 *11*	α=0.00791 *11*; α(K)=0.00683 *10*; α(L)=0.000880 *13*; α(M)=0.0001659 *24*; α(N+..)=2.75×10^{-5}

$^{105}_{46}Pd_{59}$-20

Adopted Levels, Gammas (continued)

γ(^{105}Pd) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.	δ	α[†]	Comments
									α(N)=2.75×10^{-5} *4* Mult.: A_{22}=0.36 *3*, A_{44}=−0.07 *4* (1977Ri05) and R_{DCO}=1.19 *12* (1977Ri05) in ^{96}Zr(^{12}C,3nγ).
3694.4	(25/2$^-$)	918.8[&] *3*	100[&]	2775.6	(21/2$^-$)	E2		0.001221 *18*	α=0.001221 *18*; α(K)=0.001067 *15*; α(L)=0.0001267 *18*; α(M)=2.38×10^{-5} *4*; α(N+..)=3.99×10^{-6} α(N)=3.99×10^{-6} *6* Mult.: R_{DCO}=1.0 *4* in ^{96}Zr(^{12}C,3nγ) (1977Ri05).
		994.12[&] *20*	89[&] *17*	2700.2	23/2$^-$	M1+E2	2.7 *6*	0.001035 *17*	α=0.001035 *17*; α(K)=0.000905 *15*; α(L)=0.0001064 *17*; α(M)=1.99×10^{-5} *3*; α(N+..)=3.35×10^{-6} α(N)=3.35×10^{-6} *6* Mult.: A_{22}=0.8 *3*, A_{44}=−0.2 *4* in ^{96}Zr(^{12}C,3nγ) (1977Ri05). δ: from DCO and linear pol. in 2019Ti02; Also: +1.5 *10* in 1977Ri05.
3800.5	(27/2$^-$)	1100.24[&] *10*	100[&]	2700.2	23/2$^-$	(E2)		0.000815 *12*	α=0.000815 *12*; α(K)=0.000713 *10*; α(L)=8.35×10^{-5} *12*; α(M)=1.564×10^{-5} *22*; α(N+..)=3.17×10^{-6} α(N)=2.63×10^{-6} *4*; α(IPF)=5.44×10^{-7} *8* Mult.: A_{22}=0.14 *4*, A_{44}=−0.08 *5* (1977Ri05) and R_{DCO}=1.54 *16* (1977Ri05) in ^{96}Zr(^{12}C,3nγ).
3859.4	(25/2$^-$)	959[e]		2900.7	(21/2)$^-$				
		1084[e]		2775.6	(21/2$^-$)				
		1159[e]		2700.2	23/2$^-$				
3873.0	27/2$^+$	578.27[&] *5*	100[&]	3294.7	23/2$^+$	E2		0.00396 *6*	α=0.00396 *6*; α(K)=0.00344 *5*; α(L)=0.000428 *6*; α(M)=8.04×10^{-5} *12*; α(N+..)=1.341×10^{-5} *19* α(N)=1.341×10^{-5} *19* Mult.: A_{22}=0.44 *3*, A_{44}=−0.11 *4* (1977Ri05) and R_{DCO}=1.04 *6* (1977Ri05) in ^{96}Zr(^{12}C,3nγ).
4254.4	(29/2)$^+$	726.8[&] *2*	100[&]	3527.6	(25/2)$^+$	E2		0.00216 *3*	α=0.00216 *3*; α(K)=0.00188 *3*; α(L)=0.000228 *4*; α(M)=4.28×10^{-5} *6*; α(N+..)=7.17×10^{-6} *10* α(N)=7.17×10^{-6} *10* Mult.: A_{22}=0.26 *3*, A_{44}=−0.02 *4* (1977Ri05) and R_{DCO}=0.91 *16* (1977Ri05) in ^{96}Zr(^{12}C,3nγ).
4668.2	(31/2$^+$)	795.23[&] *25*	100[&]	3873.0	27/2$^+$	(E2)		0.001724 *25*	α=0.001724 *25*; α(K)=0.001504 *21*; α(L)=0.000181 *3*; α(M)=3.39×10^{-5} *5*; α(N+..)=5.69×10^{-6} *8* α(N)=5.69×10^{-6} *8* Mult.: A_{22}=0.28 *4*, A_{44}=−0.08 *6* (1977Ri05) and R_{DCO}=1.21 *18* (1977Ri05) in ^{96}Zr(^{12}C,3nγ).
4783.4	(29/2$^-$)	924[e]		3859.4	(25/2$^-$)				
		983[e]		3800.5	(27/2$^-$)				
		1089[e]		3694.4	(25/2$^-$)	(E2)		0.000833 *12*	α=0.000833 *12*; α(K)=0.000729 *11*; α(L)=8.54×10^{-5} *12*;

$^{105}_{46}Pd_{59}$-21

Adopted Levels, Gammas (continued)

γ(^{105}Pd) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.	α[†]	Comments
								α(M)=1.600×10^{-5} *23*; α(N+..)=2.69×10^{-6} α(N)=2.69×10^{-6} *4* Mult.: from DCO and γ polarization measurements in ^{96}Zr(^{13}C,4nγ) (2019Ti02).
4953.1	(31/2$^-$)	1152.64[&] *20*	100[&]	3800.5	(27/2$^-$)	(E2)	0.000739 *11*	α=0.000739 *11*; α(K)=0.000645 *9*; α(L)=7.53×10^{-5} *11*; α(M)=1.410×10^{-5} *20*; α(N+..)=5.02×10^{-6} *8* α(N)=2.37×10^{-6} *4*; α(IPF)=2.65×10^{-6} *4* Mult.: A_{22}=0.19 *8*, A_{44}=−0.11 *2* (1977Ri05) and R_{DCO}=0.43 *23* (1977Ri05) in ^{96}Zr(^{12}C,3nγ).
4955.9	(29/2$^-$)	1097[e]		3859.4	(25/2$^-$)			
		1261[e]		3694.4	(25/2$^-$)			
5255.3	(33/2$^+$)	1000.9[&] *3*	100[&]	4254.4	(29/2)$^+$	(E2)	0.001004 *14*	α=0.001004 *14*; α(K)=0.000878 *13*; α(L)=0.0001035 *15*; α(M)=1.94×10^{-5} *3*; α(N+..)=3.26×10^{-6} α(N)=3.26×10^{-6} *5* Mult.: A_{22}=0.02 *9*, A_{44}=0.04 *14* (1977Ri05) and R_{DCO}=0.9 *3* (1977Ri05) in ^{96}Zr(^{12}C,3nγ).
5682.2	(35/2$^+$)	1014[b]	100[b]	4668.2	(31/2$^+$)			
5847.4	(33/2$^-$)	1064[e]		4783.4	(29/2$^-$)	(E2)	0.000876 *13*	α=0.000876 *13*; α(K)=0.000767 *11*; α(L)=9.00×10^{-5} *13*; α(M)=1.687×10^{-5} *24*; α(N+..)=2.84×10^{-6} α(N)=2.84×10^{-6} *4* Mult.: from DCO and γ polarization measurements in 2019Ti02.
6073.1	(35/2$^-$)	1120[b]	100[b]	4953.1	(31/2$^-$)			
6860.3	(39/2$^+$)	1178[b]	100[b]	5682.2	(35/2$^+$)			
6995.4	(37/2$^-$)	1148[e]		5847.4	(33/2$^-$)			
(7094.5)		5918[c] *3*		1177.7	(1/2$^+$,3/2$^+$)			
		6534.0[c] *10*		560.50	3/2$^+$			
		6652[c] *8*		442.53	(7/2)$^+$			
		6749.4[c] *10*		344.9	1/2$^+$			
		6812.9[c] *14*		280.62	3/2$^+$			
7193.1	(39/2$^-$)	1120[b]	100[b]	6073.1	(35/2$^-$)			E_γ: 1119 in ^{96}Zr(^{13}C,4nγ) (2019Ti02).
8127.3	(43/2$^+$)	1267[b]	100[b]	6860.3	(39/2$^+$)			
8297.4	(41/2$^-$)	1302[e]		6995.4	(37/2$^-$)			
8410.1	(43/2$^-$)	1217[b]	100[b]	7193.1	(39/2$^-$)			E_γ: 1215 in ^{96}Zr(^{13}C,4nγ) (2019Ti02).
9440.3	(47/2$^+$)	1313[b]	100[b]	8127.3	(43/2$^+$)			
10875.3	(51/2$^+$)	1435[b]	100[b]	9440.3	(47/2$^+$)			
x+1209.0	[47/2$^+$]	1209[b]	100[b]	x	[43/2$^+$]			
x+2491.0	[51/2$^+$]	1282[b]	100[b]	x+1209.0	[47/2$^+$]			
x+3870.0	[55/2$^+$]	1379[b]	100[b]	x+2491.0	[51/2$^+$]			
x+5358.0	[59/2$^+$]	1488[b]	100[b]	x+3870.0	[55/2$^+$]			

$^{105}_{46}Pd_{59}$-22

Adopted Levels, Gammas (continued)

$\gamma(^{105}Pd)$ (continued)

E_i(level)	J_i^π	E_γ ‡	I_γ ‡	E_f	J_f^π
x+6955.0	[63/2$^+$]	1597[b]	100[b]	x+5358.0	[59/2$^+$]
x+8675.1	[67/2$^+$]	1720[b]	100[b]	x+6955.0	[63/2$^+$]
x+10521	[71/2$^+$]	1846[b]	100[b]	x+8675.1	[67/2$^+$]
x+12528	[75/2$^+$]	2007[b]	100[b]	x+10521	[71/2$^+$]
x+14669	[79/2$^+$]	2141[b]	100[b]	x+12528	[75/2$^+$]

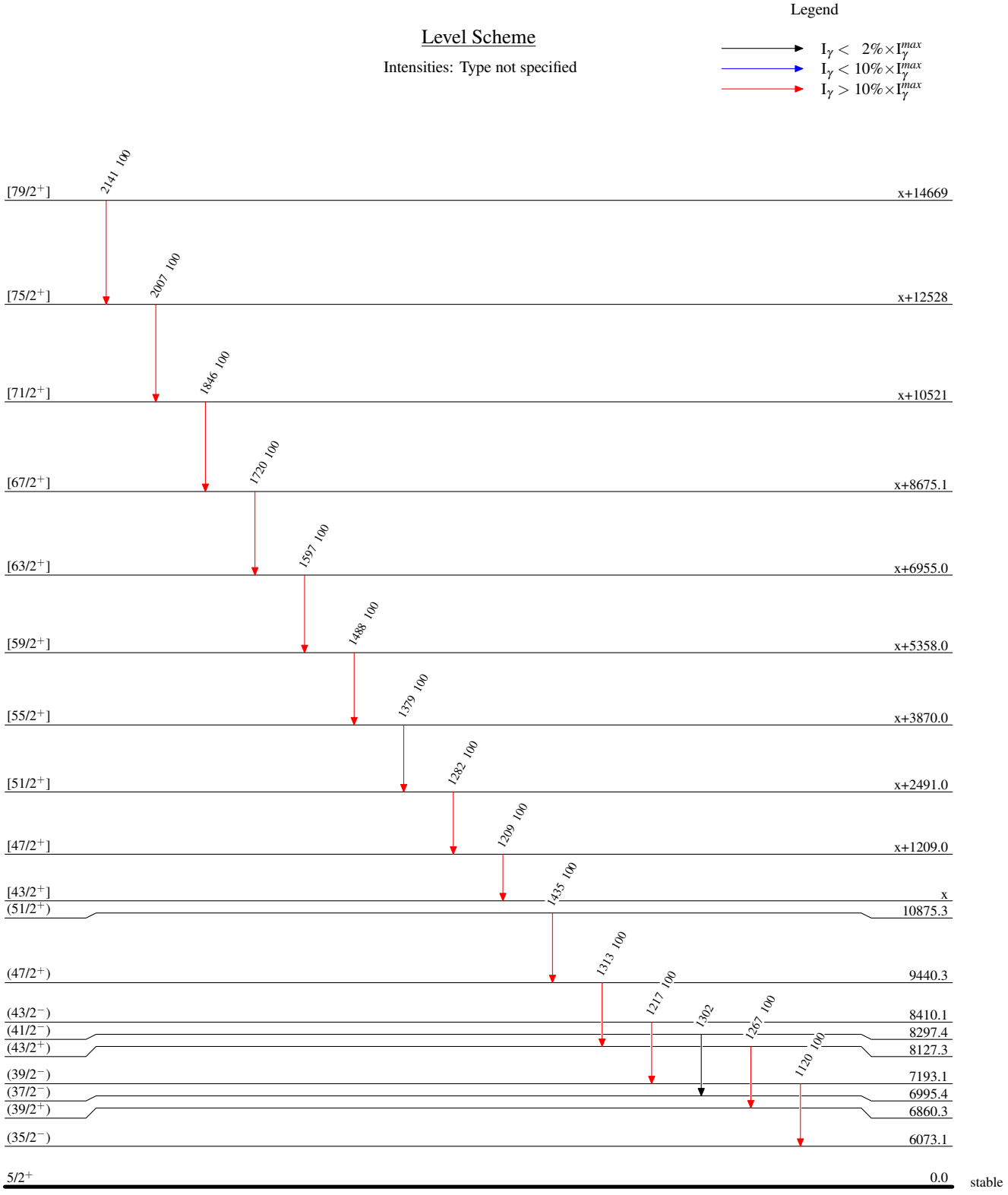
† Additional information 2.
‡ From ^{105}Ag ε decay (41.29 d), unless otherwise noted. ΔE=1 keV assumed by the evaluators for all transitions where ΔE not explicitely given by the authors.
# From ^{104}Ru(α,3nγ).
@ From ^{105}Pd(n,n′γ).
& From ^{96}Zr(^{12}C,3nγ) (1977Ri05).
a From ^{105}Ag ε decay (7.23 min).
b From ^{64}Ni(^{48}Ca,α3n).
c From ^{104}Pd(n,γ) E=th.
d From Coulomb excitation.
e From ^{96}Zr(^{13}C,4nγ) (2019Ti02).
f Placement of transition in the level scheme is uncertain.

$^{105}_{46}Pd_{59}$-23

Adopted Levels, Gammas

Level Scheme

Intensities: Type not specified

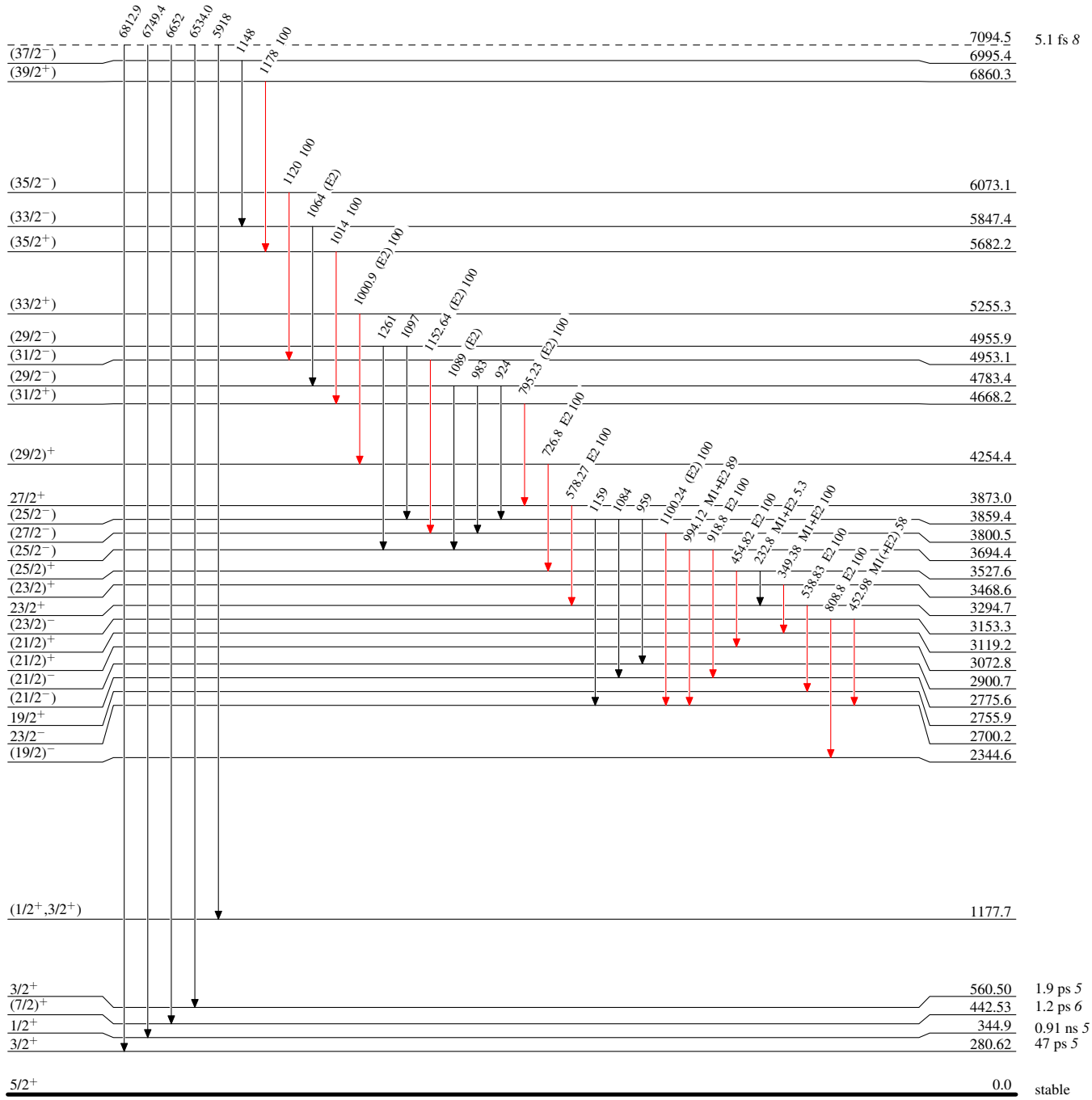


$^{105}_{46}Pd_{59}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

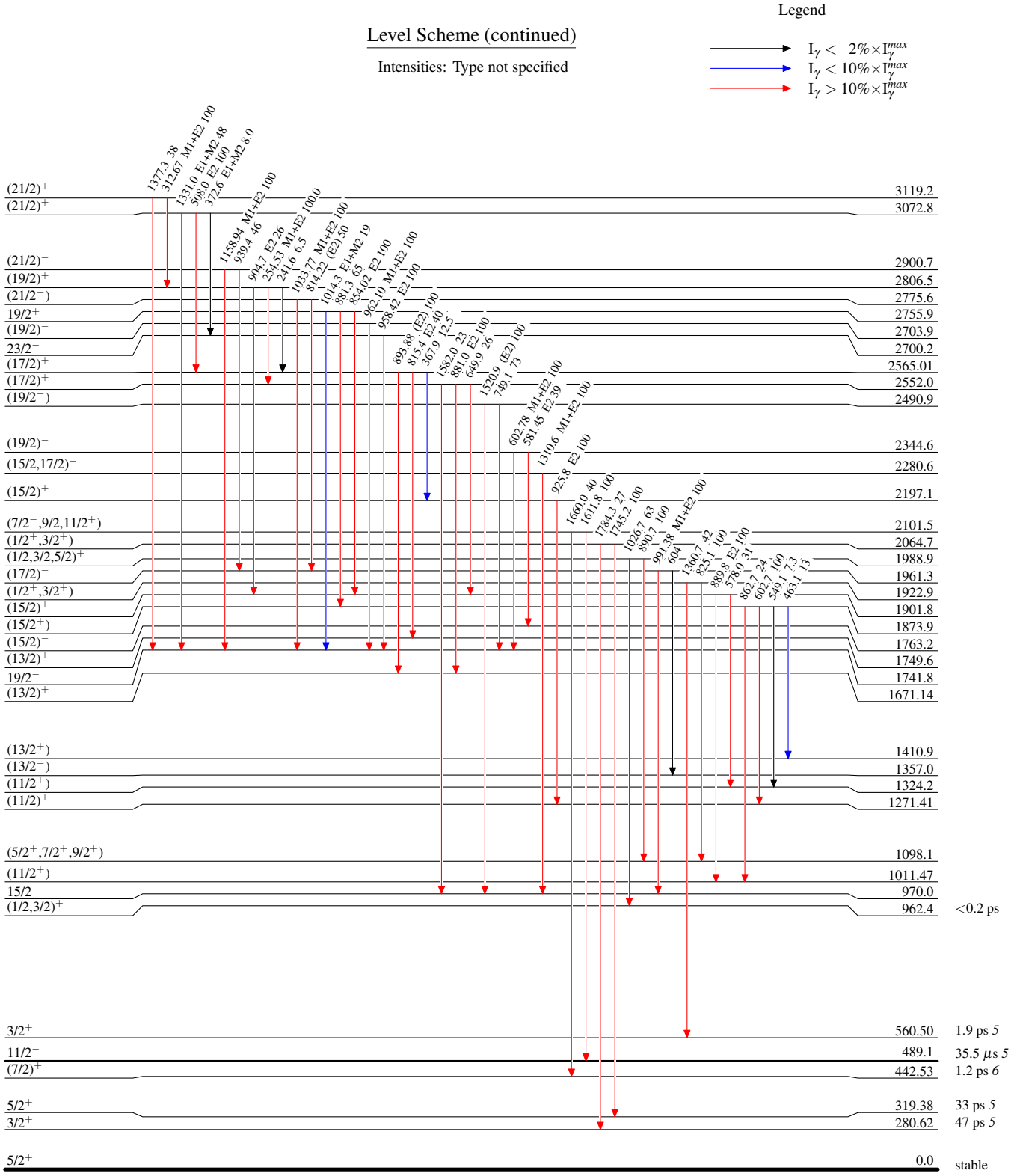


$^{105}_{46}Pd_{59}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

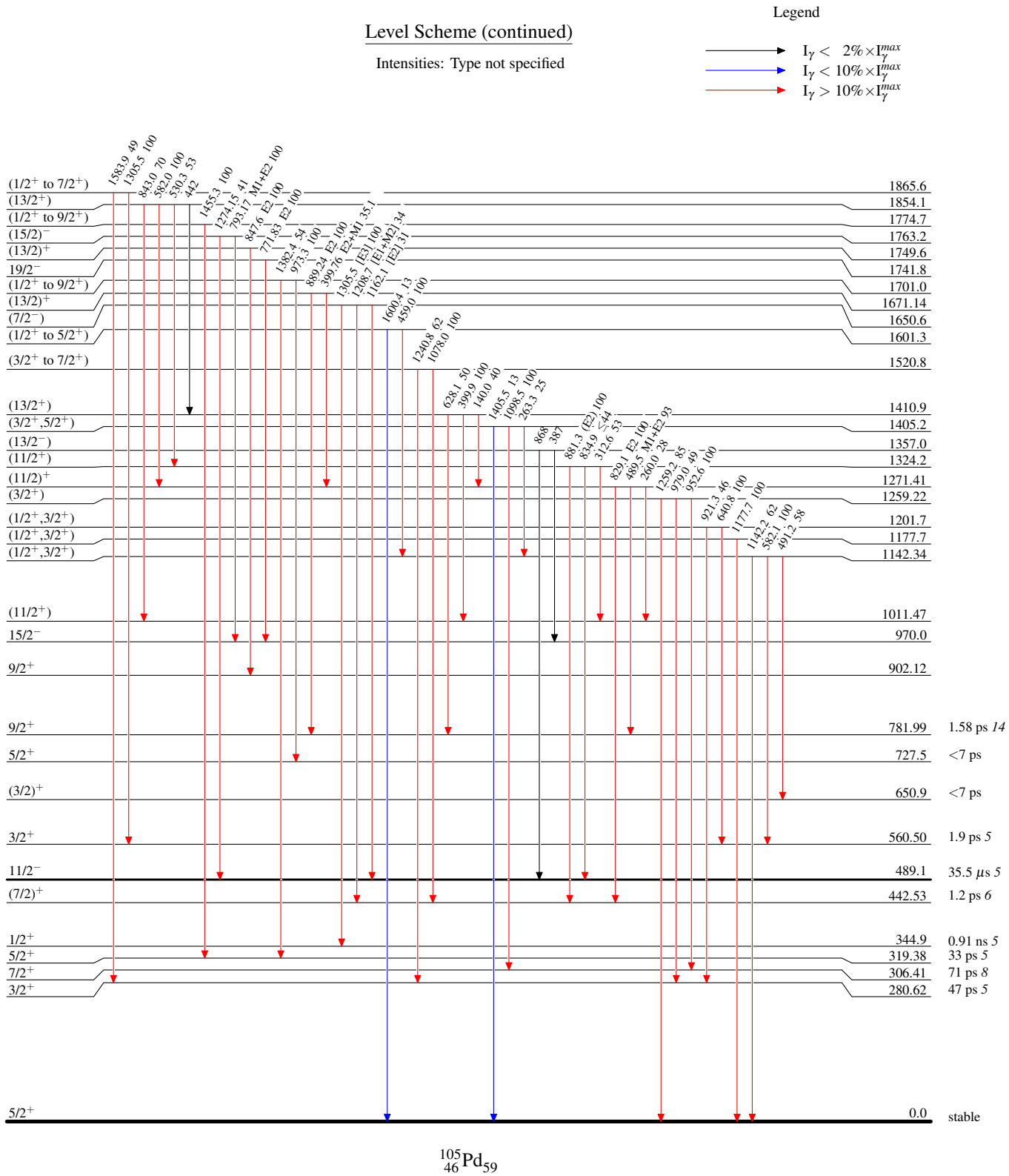


$^{105}_{46}Pd_{59}$

Adopted Levels, Gammas

Level Scheme (continued)

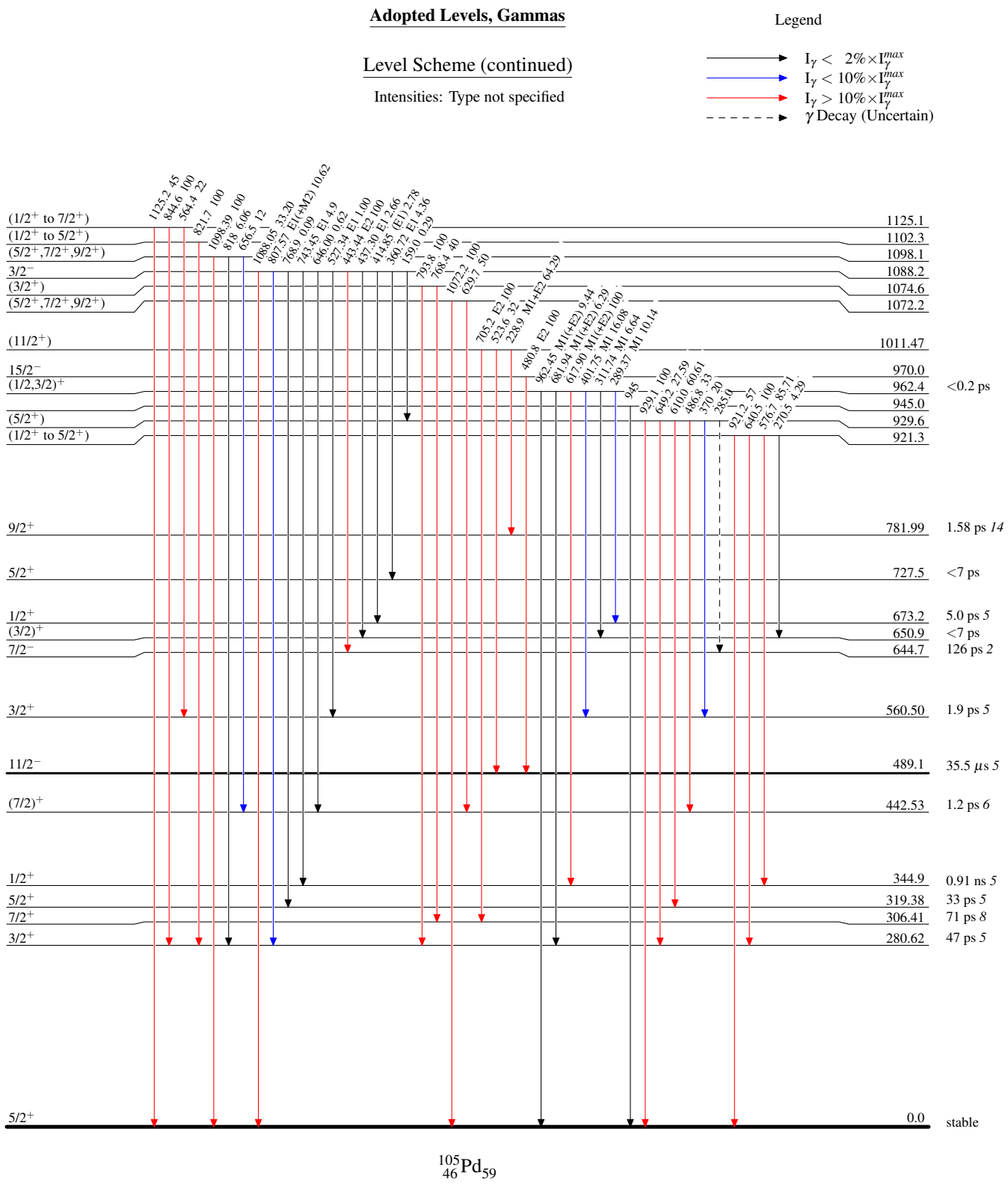
Intensities: Type not specified



Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

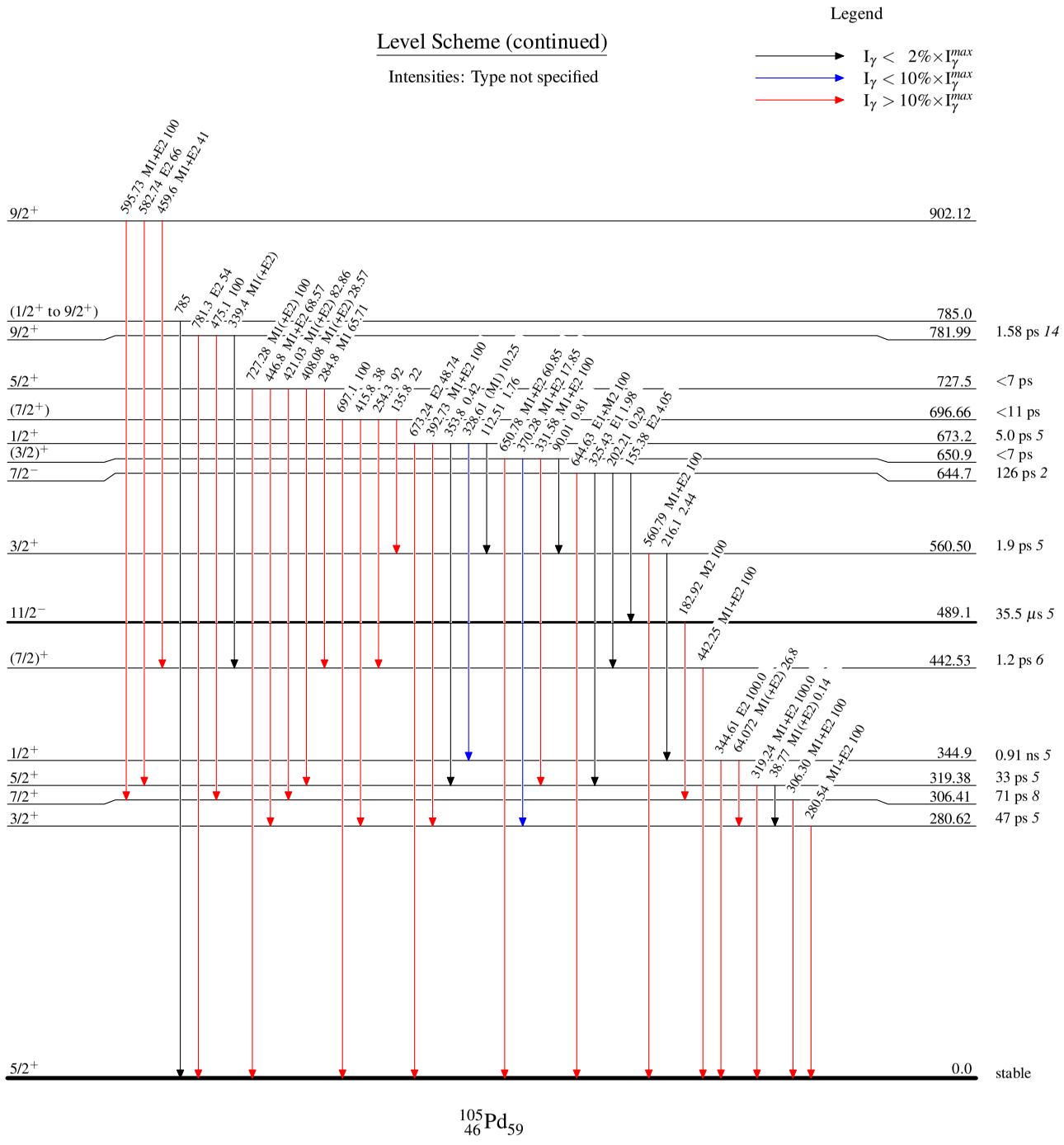


$^{105}_{46}Pd_{59}$

Adopted Levels, Gammas

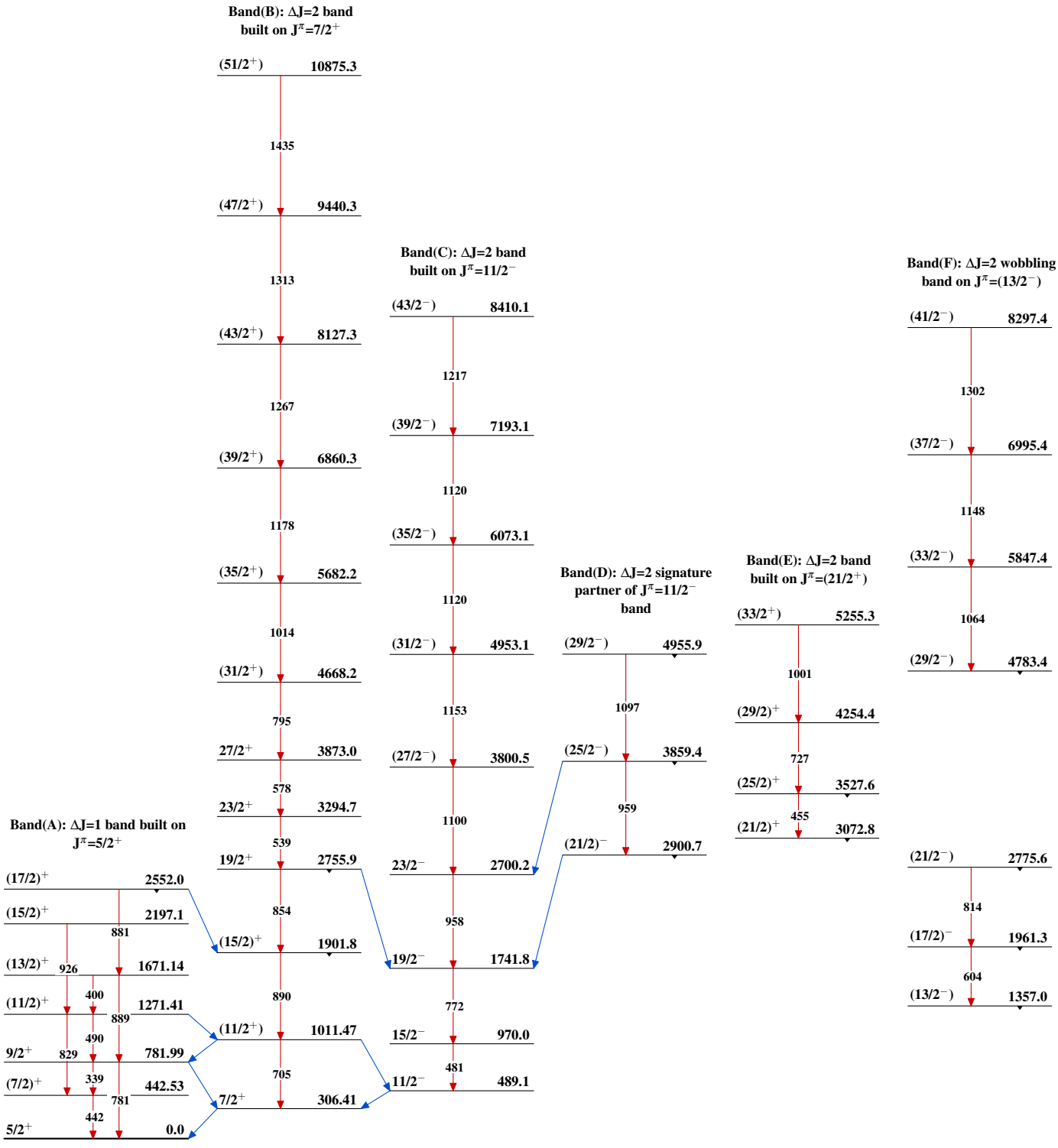
Level Scheme (continued)

Intensities: Type not specified



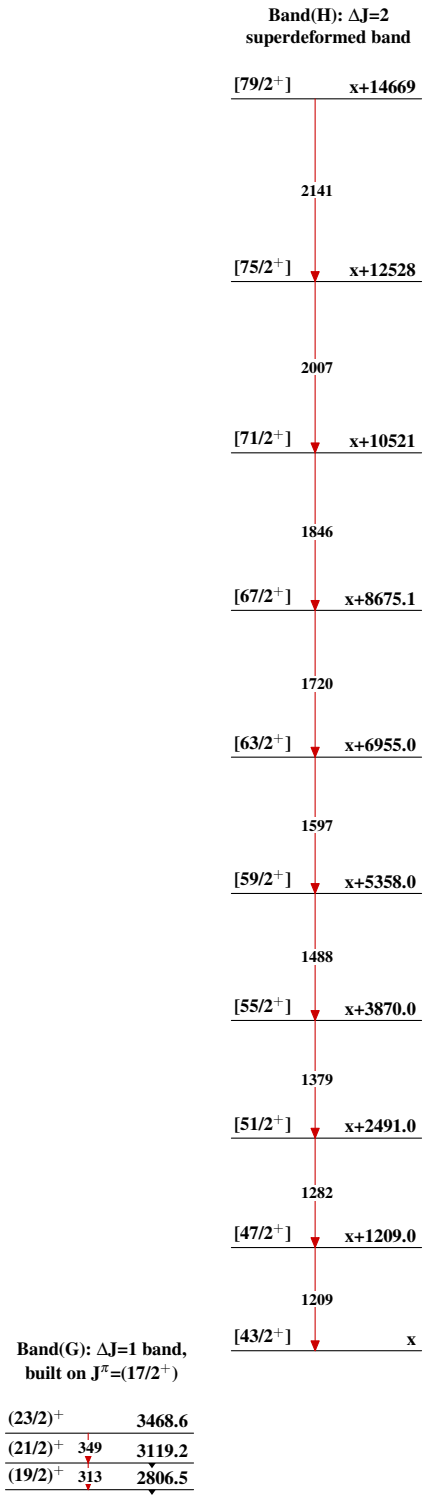
$^{105}_{46}Pd_{59}$

Adopted Levels, Gammas



$^{105}_{46}Pd_{59}$

Adopted Levels, Gammas (continued)



$^{105}_{46}Pd_{59}$