Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	S. K. Basu, A. A. Sonzogni	NDS 114, 435 (2013)	1-Apr-2013

Q(β^-)=−4658 *8*; S(n)=8708 *7*; S(p)=6612 *7*; Q(α)=2807 *6* 2017Wa10
S(2n)=15637 *7*; S(2p)=11006 *7* 2017Wa10
Additional information 1.

^{150}Gd Levels

Cross Reference (XREF) Flags

A	^{150}Eu β^- decay (12.8 h)	E	(HI,xnγ)	I	^{151}Eu(p,2nγ)
B	^{150}Tb ε decay (5.8 min)	F	(HI,xnγ):SD	J	^{152}Gd(p,t) E=18 MeV
C	^{150}Tb ε decay (3.48 h)	G	^{148}Sm(α,2nγ) E= 30 MeV		
D	^{154}Dy α decay	H	^{150}Sm(α,4nγ) E=50 MeV		

E(level)[†]	J$^\pi$[†]	T$_{1/2}$	XREF	Comments
0.0[d]	0$^+$	1.79×10^6 y *8*	ABCDE GHIJ	%α=100 T$_{1/2}$: weighted average of 2.1×10^6 y *3* (1962Si14), 1.4×10^6 y *4* (1965Og01), 1.78×10^6 y *8* (1966Fr11).
638.045[bd] *14*	2$^+$[@]		ABC E GHIJ	J$^\pi$: from E2 γ to 0$^+$.
1134.297[bc] *17*	3$^-$		BC E GHIJ	J$^\pi$: E1 γ to 2$^+$, E2 γ from 5$^-$.
1207.135 *20*	0$^+$		C J	J$^\pi$: from E0 transition to 0$^+$.
1288.42[bd] *3*	4$^+$[@]		BC E GHIJ	
1430.467 *18*	(2)$^+$		C IJ	J$^\pi$: E2 γ to 2$^+$, (E2) γ to 0$^+$.
1518.362 *21*	2$^+$		C I	J$^\pi$: E2 γ to 0$^+$.
1592.428 *24*	1		C	J$^\pi$: M1 γ to 0$^+$ and E1 γ to 2$^+$ agree with J=1 but disagree on the assignment of π.
1699.912[c] *25*	5$^-$		BC E GHIJ	J$^\pi$: E1 γ from 6$^+$, E1 γ to 4$^+$.
1814.13 *6*	3$^-$		C I	J$^\pi$: E1 γ to 2$^+$, γ to 4$^+$.
1936.31[bd] *16*	6$^+$[@]		B E GH	
1947.36 *3*	2$^-$,3$^-$,4$^-$		C IJ	J$^\pi$: M1 +E2 γ to 3$^-$. Spin 4$^-$ is ruled out if the observed small β feeding from (2$^-$) is real.
1955.371 *22*	2$^+$		C	J$^\pi$: E1 γ to 3$^-$, γ's to 0$^+$.
1969.99 *11*			C	
1980?			J	
1987.93 *3*	2$^+$,3$^+$,4$^+$		C I	J$^\pi$: E2 γ to 2$^+$ and γ to 4$^+$.
2080.61 *9*	(2,3,4)$^+$		C	J$^\pi$: E2 γ to 2$^+$, 4$^+$.
2083.96 *3*	2$^-$,3$^-$		C	J$^\pi$: M1 γ to 3$^-$, γ's to 1$^-$,2$^+$.
2091.623 *25*	2$^+$		C	J$^\pi$: E1 γ to 3$^-$, γ to 0$^+$.
2115.75[be] *9*	6$^+$[@]		B E GHI	J$^\pi$: E2 γ to 4$^+$.
2157.5 *7*			C	
2179.912 *21*	2$^+$		C	J$^\pi$: E1 γ to 3$^-$, γ to 0$^+$.
2209.54 *3*	2$^-$,3$^-$		C	J$^\pi$: M1 γ to 3$^-$. 4$^-$ excluded by γ to 2$^+$, since M2 transitions not expected.
2211.11[bc] *14*	7$^-$[&]		B E GH	
2262.21 *4*			C	
2306.2 *4*	(5$^-$,6$^+$)		G	J$^\pi$: γ's to 7$^-$, 5$^-$, 4$^+$.
2326.283 *17*			C	
2364.91 *5*	1,2$^+$		C	J$^\pi$: γ's to 0$^+$, 1$^-$, 2$^+$.
2392.06[‡b] *17*	(7)$^+$		B E GH	J$^\pi$: M1 γ from 8$^+$, (M1+E2) γ to 6$^+$.
2408.53 *5*	2$^+$		C	J$^\pi$: γ's to 0$^+$ and 4$^+$.
2416.7? *5*	3		C	

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Adopted Levels, Gammas (continued)

^{150}Gd Levels (continued)

E(level)[†]	Jπ[†]	XREF	Comments
2426.20 *3*	1⁻,2⁺	C	Jπ: γ's to 0⁺, 2⁺, 3⁻.
2434.34 *9*		C	
2521.56 *7*	(2⁺,3,4⁺)	C	Jπ: γ's to 2⁺ and 4⁺.
2554.14[be] *12*	8⁺[@]	B E GH	
2558.51 *20*	1,2⁺	C	Jπ: γ to 0⁺.
2564.96 *13*	(1⁻,2⁻,3⁻)	C	Jπ: (E2) γ to 3⁻, γ to 2⁺.
2593.9 *7*		C	
2627.99? *8*		C	
2654.39 *7*		C	
2678.45 *13*	1,2⁺	C	Jπ: γ's to 0⁺, 2⁺.
2686.84 *4*	1⁻,2,3⁻	C	Jπ: γ's to 1⁻ and 3⁻.
2754.58 *6*	2⁺,3,4⁺	C	Jπ: γ's to 2⁺ and 4⁺.
2767.3?[‡] *6*	(8⁺)	H	Jπ: possible stretched E2 to 6⁺ hence member of g.s. band.
2786.49 *5*	1⁻,2⁺	C	Jπ: γ's to 0⁺ and 3⁻.
2816.1[c] *4*	9⁻[&]	E H	
2827.81 *7*		C	
2834.8? *4*	8⁻	H	
2845.41 *5*	1,2⁺	C	Jπ: γ's to 0⁺ and 2⁺.
2868.27 *10*		C	
2906.0?[b] *5*	8⁺	B H	Jπ: ε decay from (8⁺,9⁺), E2 γ to 6⁺.
2956.20 *5*		C	
2984.95 *11*	1,2⁺	C	Jπ: γ's to 0⁺ and 2⁺.
3024.7 *3*		C	
3035.64 *5*	1⁻,2⁺	C	Jπ: γ's to 0⁺ and 3⁻.
3042.61 *24*		C	
3083.76? *17*		C	
3118.75 *8*		C	
3134.13 *6*		C	
3176.8 *5*		G	
3177.732 *17*		C	
3220.3[‡#] *4*	10⁻	E H	Jπ: M1+E2 γ to 9⁻.
3251.5 *5*		C	
3269.32? *11*		C	
3288.2[‡#e] *4*	10⁺[@]	E H	Jπ: E2 γ to 8⁺.
3298.34 *22*		C	
3329.33 *16*		C	
3344.68 *6*	(2⁺)	C	Jπ: γ's to 0⁺, 4⁺.
3366.4[‡#c] *4*	11⁻[&]	E H	
3375.72 *14*		C	
3378.11 *11*		C	
3389.2 *5*		C	
3461.7 *5*	2⁺	C	Jπ: γ's to 0⁺, 4⁺.
3510.72 *17*	(1⁻,2⁺)	C	Jπ: γ's to 0⁺, 2⁺, 3⁻.
3522.4 *6*		C	
3631.4 *3*		C	
3657.35? *19*	2⁺	C	Jπ: γ's to 0⁺, 4⁺.
3712.40 *22*		C	
3726.63 *15*		C	
3772.03 *19*		C	
3828.4? *4*	(1,2⁺)	C	Jπ: γ's to 0⁺, 2⁺.
3840.04 *17*		C	
3963.64 *23*		C	
4021.2? *4*	(1,2⁺)	C	Jπ: γ's to 0⁺, 2⁺.
4105.4[#e] *10*	12⁺[@]	E	Jπ: E2 γ to 10⁺.

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Adopted Levels, Gammas (continued)

^{150}Gd Levels (continued)

E(level)†	Jπ†	XREF	Comments
4111.07? *25*	$1^-,2^+$	C	Jπ: γ′s to 0^+, 2^+, 3^-.
4131.1‡#c *5*	13^-&	E H	
4143.8? *3*	$(1^-,2^+)$	C	Jπ: γ′s to 0^+, 3^-.
4151.0 *4*		C	
4164.0 *4*	2^+	C	Jπ: γ′s to 0^+, 4^+.
4178.6 *5*		C	
4186.9‡ *5*	$(12)^-$	H	Jπ: E2 γ to 10^-.
4206.9 *3*	$(1,2^+)$	C	Jπ: γ to 0^+.
4235.2? *6*	$(1^-,2^+)$	C	Jπ: γ′s to 0^+, 3^-.
4246.2? *3*	$(1,2^+)$	C	Jπ: γ to 0^+.
4258.0 *3*	$(1^-,2^+)$	C	Jπ: γ′s to 0^+, 3^-.
4264.6 *3*	2^+	C	Jπ: γ′s to 0^+, 4^+.
4283.1? *10*	$(1,2^+)$	C	Jπ: γ to 0^+.
4289.4? *3*	$(1,2^+)$	C	Jπ: γ to 0^+.
4296.7 *10*		C	
4303.2 *3*		C	
4314.0 *3*	$1,2^+$	C	Jπ: γ to 0^+.
4322.0 *3*	2^+	C	Jπ: γ′s to 0^+, 4^+.
4343.9 *4*	$(1,2^+)$	C	Jπ: γ to 0^+.
4378.6? *6*	$(1^+,2^+)$	C	Jπ: γ′s to 0^+, $(3^+,4^+)$.
4405.3 *3*	$(1,2^+)$	C	Jπ: γ to 0^+.
4419.7 *6*	(13)	H	
4435.2 *6*		C	
4445.9 *3*	$1,2^+$	C	Jπ: γ to 0^+.
4462.3 *8*		C	
4492.8 *7*		C	
4499.8 *8*		C	
4522.8? *6*		C	
4529.4? *4*	$(1,2^+)$	C	Jπ: γ to 0^+.
4545.6 *6*		C	
4557.2 *10*		C	
4563.3 *10*		C	
4739.6#e *11*	14^+@	E	
4744.9 *3*		C	
4834.9‡#c *10*	15^-&	E H	
5428.8#e *11*	16^+@	E	
5450.9#c *13*	17^-&	E H	
5632.8# *14*	17^+	E	Jπ: γ from 18^+, γ to 16^+.
5764.8#e *13*	18^+@	E	Jπ: γ to 16^+, dipole to 17^-.
6311.8# *16*	(19^-)	E	
6450.8#e *16*	(20^+)@	E	
6495.8#f *19*	(21^-)a	E	
7275.8#f *22*	(23^-)a	E	
7929.8#f *24*	(25^-)a	E	
8325#f *3*	(27^-)a	E	
9410?# *3*	(28^+)	E	
9497# *3*	(29^-)	E	
9582# *3*	(29^+)	E	
9851# *3*	(30^+)	E	
10532# *3*	(31^+)	E	
11231# *4*	(33^+)	E	

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Adopted Levels, Gammas (continued)

^{150}Gd Levels (continued)

E(level)[†]	Jπ[†]	XREF
12185[#] *4*	(34⁻)	E
12678[#] *4*	(36⁻,34⁺)	E
x[g]	J≈(30⁺)	F
815.00+x[g] *10*	J+2	F
1021.1+x[h] *8*	J+2	F
1664.10+x[g] *15*	J+4	F
1931.3+x[h] *8*	J+4	F
2156.6+x *18*	J+4	F
2552.00+x[g] *18*	J+6	F
2897.4+x[h] *7*	J+6	F
3012.6+x *15*	J+6	F
3480.90+x[g] *20*	J+8	F
3893.0+x[h] *6*	J+8	F
3960.6+x *12*	J+8	F
4451.79+x[g] *23*	J+10	F
4861.7+x[h] *6*	J+10	F
5465.28+x[g] *25*	J+12	F
5860.7+x[h] *5*	J+12	F
6521.8+x[g] *3*	J+14	F
6907.6+x[h] *5*	J+14	F
7621.8+x[g] *3*	J+16	F
8005.2+x[h] *5*	J+16	F
8766.4+x[g] *3*	J+18	F
9154.0+x[h] *5*	J+18	F
9956.9+x[g] *4*	J+20	F
10354.0+x[h] *5*	J+20	F
11194.8+x[g] *4*	J+22	F
11604.9+x[h] *6*	J+22	F
12481.4+x[g] *4*	J+24	F
12906.1+x[h] *6*	J+24	F
13818.0+x[g] *4*	J+26	F
14257.7+x[h] *6*	J+26	F
15205.8+x[g] *4*	J+28	F
15658.7+x[h] *7*	J+28	F
16645.9+x[g] *4*	J+30	F
17109.1+x[h] *7*	J+30	F
18139.1+x[g] *5*	J+32	F
18608.2+x[h] *8*	J+32	F
19686.1+x[g] *6*	J+34	F
20155.8+x[h] *9*	J+34	F
21287.8+x[g] *7*	J+36	F
21751.8+x[h] *11*	J+36	F
23397.3+x[h] *14*	J+38	F
y[j]	K≈(27⁻)	F
688.1+y[j] *3*	K+2	F
1287.6+y[i] *15*	K+2	F
1423.8+y[j] *5*	K+4	F
2015.5+y[i] *15*	K+4	F

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Adopted Levels, Gammas (continued)

^{150}Gd Levels (continued)

E(level)[†]	J$^{\pi}$[†]	XREF	Comments
2208.9+y[j] *7*	K+6	F	
2787.0+y[i] *15*	K+6	F	
3043.3+y[j] *8*	K+8	F	
3601.3+y[i] *15*	K+8	F	
3928.6+y[j] *9*	K+10	F	
4458.6+y[i] *14*	K+10	F	
4865.1+y[j] *10*	K+12	F	
5359.3+y[i] *13*	K+12	F	
5853.7+y[j] *10*	K+14	F	
6304.6+y[i] *13*	K+14	F	
6894.6+y[j] *10*	K+16	F	
7295.2+y[i] *13*	K+16	F	
7989.9+y[j] *10*	K+18	F	
8331.9+y[i] *13*	K+18	F	
9139.2+y[j] *10*	K+20	F	
9415.2+y[i] *13*	K+20	F	
10343.1+y[j] *11*	K+22	F	
10546.6+y[i] *12*	K+22	F	
11602.4+y[j] *11*	K+24	F	
11725.9+y[i] *12*	K+24	F	
12916.1+y[j] *11*	K+26	F	
12955.8+y[i] *12*	K+26	F	
14229.1+y[i] *12*	K+28	F	
14293.5+y[j] *11*	J+28	F	
15557.7+y[i] *12*	K+30	F	
15721.8+y[j] *11*	K+30	F	
16936.3+y[i] *12*	K+32	F	
17208.2+y[j] *12*	K+32	F	
18366.7+y[i] *13*	K+34	F	
18751.4+y[j] *12*	K+34	F	
19848.9+y[i] *13*	K+36	F	
20351.6+y[j] *14*	K+36	F	
21384.3+y[i] *14*	K+38	F	
22010.0+y[j] *15*	K+38	F	
22972.1+y[i] *15*	J+40	F	
z[k]	L≈(28^{-})	F	Gamma rays of 617.1 and 664.3 keV (1993Be37) are not assigned by 1999ErZZ to low lying levels in ^{149}Gd.
712.5+z[k] *3*	L+2	F	
1473.7+z[k] *5*	L+4	F	
2284.2+z[k] *6*	L+6	F	
3144.2+z[k] *6*	L+8	F	
4054.7+z[k] *8*	L+10	F	
5017.2+z[k] *9*	L+12	F	
6032.1+z[k] *9*	L+14	F	
7100.3+z[k] *9*	L+16	F	
8222.7+z[k] *10*	L+18	F	
9399.8+z[k] *10*	L+20	F	
10632.1+z[k] *11*	L+22	F	

Adopted Levels, Gammas (continued)

^{150}Gd Levels (continued)

E(level)[†]	J$^{\pi}$[†]	XREF	Comments
11919.8+z[k] *11*	L+24	F	

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Adopted Levels, Gammas (continued)

^{150}Gd Levels (continued)

E(level)†	Jπ†	XREF	E(level)†	Jπ†	XREF
13263.6+z[k] 12	L+26	F	4993.1+w[n] 10	J1+12	F
14664.1+z[k] 12	L+28	F	6001.3+w[n] 10	J1+14	F
16121.2+z[k] 12	L+30	F	7062.1+w[n] 10	J1+16	F
17635.1+z[k] 13	L+32	F	8176.0+w[n] 10	J1+18	F
19204.2+z[k] 13	L+34	F	9344.4+w[n] 11	J1+20	F
u[l]	M≈(27+)	F	10567.0+w[n] 11	J1+22	F
771.5+u[l] 4	M+2	F	11845.0+w[n] 11	J1+24	F
1588.6+u[l] 5	M+4	F	13178.7+w[n] 11	J1+26	F
2451.5+u[l] 6	M+6	F	14568.9+w[n] 12	J1+28	F
3359.9+u[l] 6	M+8	F	16015.7+w[n] 12	J1+30	F
4313.1+u[l] 6	M+10	F	17519.6+w[n] 13	J1+32	F
5311.3+u[l] 7	M+12	F	19080.3+w[n] 14	J1+34	F
6353.7+u[l] 7	M+14	F	20698.2+w[n] 16	J1+36	F
7441.4+u[l] 9	M+16	F	s[o]	J2≈(31+)	F
8574.4+u[l] 9	M+18	F	800.4+s[o] 4	J2+2	F
9753.9+u[l] 9	M+20	F	1650.3+s[o] 5	J2+4	F
10980.9+u[l] 10	M+22	F	2552.7+s[o] 6	J2+6	F
12256.0+u[l] 10	M+24	F	3507.9+s[o] 7	J2+8	F
13581.2+u[l] 11	M+26	F	4518.1+s[o] 7	J2+10	F
14956.3+u[l] 11	M+28	F	5584.2+s[o] 7	J2+12	F
16382.4+u[l] 11	M+30	F	6706.4+s[o] 7	J2+14	F
17862.5+u[l] 12	M+32	F	7886.2+s[o] 8	J2+16	F
19379.2+u[l] 12	M+34	F	9124.2+s[o] 8	J2+18	F
20915.2+u[l] 13	M+36	F	10420.8+s[o] 9	J2+20	F
22505.2+u[l] 15	M+38	F	11776.5+s[o] 9	J2+22	F
v[m]	N≈(29+)	F	13191.5+s[o] 10	J2+24	F
733.20+v[m] 20	N+2	F	14665.5+s[o] 11	J2+26	F
1511.4+v[m] 3	N+4	F	16199.5+s[o] 12	J2+28	F
2341.2+v[m] 4	N+6	F	17793.6+s[o] 14	J2+30	F
3221.1+v[m] 4	N+8	F	19446.1+s[o] 17	J2+32	F
4151.2+v[m] 5	N+10	F	t[p]	J3≈(33+)	F
5132.6+v[m] 5	N+12	F	827.6+t[p] 5	J3+2	F
6166.5+v[m] 6	N+14	F	1702.9+t[p] 7	J3+4	F
7253.5+v[m] 6	N+16	F	2627.2+t[p] 7	J3+6	F
8394.9+v[m] 6	N+18	F	3601.5+t[p] 9	J3+8	F
9590.4+v[m] 7	N+20	F	4626.6+t[p] 9	J3+10	F
10841.4+v[m] 7	N+22	F	5703.4+t[p] 10	J3+12	F
12147.9+v[m] 8	N+24	F	6832.3+t[p] 11	J3+14	F
13510.5+v[m] 8	N+26	F	8014.8+t[p] 12	J3+16	F
14929.5+v[m] 9	N+28	F	9250.8+t[p] 13	J3+18	F
16404.8+v[m] 10	N+30	F	10540.9+t[p] 13	J3+20	F
17937.1+v[m] 11	N+32	F	11885.9+t[p] 14	J3+22	F
19527.0+v[m] 14	N+34	F	13286.0+t[p] 15	J3+24	F
21171.8+v[m] 16	N+36	F	14741.9+t[p] 16	J3+26	F
w[n]	J1≈(28+)	F	16253.7+t[p] 17	J3+28	F
711.1+w[n] 5	J1+2	F	17821.0+t[p] 20	J3+30	F
1469.4+w[n] 9	J1+4	F	a[q]	J4≈(32+)	F
2275.8+w[n] 9	J1+6	F	804.0+a[q] 4	J4+2	F
3131.3+w[n] 9	J1+8	F	1655.6+a[q] 6	J4+4	F
4036.7+w[n] 10	J1+10	F	2555.8+a[q] 7	J4+6	F

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Adopted Levels, Gammas (continued)

^{150}Gd Levels (continued)

E(level)†	Jπ†	XREF	E(level)†	Jπ†	XREF
3507.0+a[q] 8	J4+8	F	4353.5+c[s] 14	J6+10	F
4508.5+a[q] 9	J4+10	F	5322.9+c[s] 15	J6+12	F
5562.2+a[q] 9	J4+12	F	6338.5+c[s] 16	J6+14	F
6660.4+a[q] 10	J4+14	F	7403.9+c[s] 17	J6+16	F
7822.2+a[q] 10	J4+16	F	8516.3+c[s] 18	J6+18	F
9034.6+a[q] 11	J4+18	F	9682.2+c[s] 19	J6+20	F
10300.5+a[q] 12	J4+20	F	10901.0+c[s] 20	J6+22	F
11621.0+a[q] 13	J4+22	F	12172.4+c[s] 21	J6+24	F
12996.6+a[q] 14	J4+24	F	13499.3+c[s] 22	J6+26	F
14427.3+a[q] 16	J4+26	F	14881.7+c[s] 23	J6+28	F
15912.7+a[q] 19	J4+28	F	16320.1+c[s] 24	J6+30	F
17451.6+a[q] 21	J4+30	F	17816.2+c[s] 25	J6+32	F
b[r]	J5≈(34+)	F	19373+c[s] 3	J6+34	F
830.0+b[r] 5	J5+2	F	d[t]	J7≈(28+)	F
1706.5+b[r] 7	J5+4	F	808.9+d[t] 5	J7+2	F
2629.1+b[r] 9	J5+6	F	1667.4+d[t] 9	J7+4	F
3599.1+b[r] 9	J5+8	F	2577.0+d[t] 12	J7+6	F
4615.7+b[r] 10	J5+10	F	3433.3+d[t] 15	J7+8	F
5680.0+b[r] 11	J5+12	F	4334.0+d[t] 15	J7+10	F
6792.0+b[r] 12	J5+14	F	5279.6+d[t] 16	J7+12	F
7952.0+b[r] 14	J5+16	F	6271.1+d[t] 17	J7+14	F
9159.7+b[r] 15	J5+18	F	7311.5+d[t] 19	J7+16	F
10414.1+b[r] 16	J5+20	F	8404.3+d[t] 21	J7+18	F
11716.8+b[r] 17	J5+22	F	9544.6+d[t] 22	J7+20	F
13068.5+b[r] 17	J5+24	F	10736.6+d[t] 22	J7+22	F
14468.6+b[r] 18	J5+26	F	11981.5+d[t] 23	J7+24	F
15917.5+b[r] 19	J5+28	F	13280.5+d[t] 24	J7+26	F
17412.5+b[r] 21	J5+30	F	14635.3+d[t] 25	J7+28	F
c[s]	J6≈(29+)	F	16047+d[t] 3	J7+30	F
815.1+c[s] 7	J6+2	F	17515+d[t] 3	J7+32	F
1664.1+c[s] 8	J6+4	F	19046+d[t] 3	J7+34	F
2553.1+c[s] 12	J6+6	F	20638+d[t] 3	J7+36	F
3430.8+c[s] 13	J6+8	F			

† Above the 18+ level the decay scheme and J^π assignments are based on $\gamma\gamma$, $\gamma(\theta)$, and Iγ measurements in (^{30}Si,4nγ).
‡ From ^{150}Sm(α,4nγ).
# From ^{124}Sn(^{30}Si,4nγ).
@ Member of ΔJ=2 positive-parity band built on the g.s.
& Member of ΔJ=2 negative-parity sequence which is interpreted by 1977Ha21 in terms of the vibrator model. Up to spin 9− the levels may represent a band built on an octupole vibration while those above 11− may be a band built on a quasiparticle state. 1983BaZG discusses in the N=87 region the transition from collective rotations at low spin to noncollective rotations at high spin.
[a] Member of ΔJ=2 sequence of negative parity states of noncollective nature. 1983BaZG discusses these states in terms of shape change and the transition from collective to noncollective rotations at high spin.
[b] From ^{150}Tb ε decay (5.8 min).
[c] Band(A): Member of ΔJ=2 negative-parity band from $J^\pi=17^-$ to 3^-.
[d] Band(B): Member of ΔJ=2, positive-parity band.
[e] Band(C): Member of ΔJ=2, positive-parity band.
[f] Band(D): Member of ΔJ=2 negative-parity band from $J^\pi=27^-$ to $J^\pi=21^-$.

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{150}Gd Levels (continued)

[g] Band(E): Yrast SD-1 band (1991Fa07,1999ErZZ). Q(intrinsic)=17.0 *+5−4* (1998Be06) from DSAM data for 17 transitions in the cascade. Other: 17 *3* (1991Fa07) Percent population=1.0 (1989Fa02). Intruder configuration=$\pi 6^2 \nu 7^2$; π=+,α=0 (1991Fa07).

[h] Band(F): SD-2 band (1994Fa13,1999ErZZ). Q(intrinsic)=16.8 *12* (1998Be06) from DSAM data for 15 transitions in the cascade. Intensity, relative to SD-1 band, is 47% *3* (1999ErZZ). Configuration (relative to yrast SD band): $\pi 1/2[301]^{-2}\pi 3/2[651]^2$; π=+,α=0, also possibly coupled to β vibration (1999ErZZ,1994Fa13). This band is identical to ^{152}Dy SD-1 band. The band undergoes backbending at low frequencies and decays into the yrast band, rather than directly to the normal deformation states, at few hundred keV excitation.

[i] Band(G): SD-3 band (1990By01,1993Be37,1999ErZZ). Q(intrinsic)=17.4 *+5−4* (1998Be06) from DSAM data for 17 transitions in the cascade. Intensity, relative to SD-1 band, is 45% *3* (1999ErZZ). Configuration (relative to yrast SD band): $\pi 1/2[301]^{-1}\pi 6^1_3$; π=−,α=1 (1999ErZZ,1993Be37). Identical to ^{151}Tb SD band with $\pi 6^3\times([301]1/2)^{-1}\nu 7^2$ intruder configuration (1993Be37).

[j] Band(H): SD-4 band (1993Be37,1999ErZZ). Q(intrinsic)=15.0 *+6−4* (1998Be06) from DSAM data for 15 transitions in the cascade. Intensity, relative to SD-1 band, is 44% *3* (1999ErZZ). Configuration (relative to yrast SD band): $\nu 7_2^{-1}\nu 5/2[402]^1$; π=−,α=1 (1999ErZZ,1993Be37). SD-4 and SD-5 bands are interpreted (1999ErZZ) as signature partners.

[k] Band(I): SD-5 band (1993Be37,1999ErZZ). Q(intrinsic)=16.2 *4* (1998Be06) from DSAM data for 17 transitions in the cascade. Intensity, relative to SD-1 band, is 42% *3* (1999ErZZ). Configuration (relative to yrast SD band): $\nu 7_2^{-1}\nu 5/2[402]^1$; π=−,α=0 (1999ErZZ,1993Be37). SD-4 and SD-5 bands are interpreted (1999ErZZ) as signature partners.

[l] Band(J): SD-6 Band (1999ErZZ). Q(intrinsic)=15.4 *+8−5* (1998Be06) from DSAM data for 14 transitions in the cascade. Intensity, relative to SD-1 band, is 30% *3* (1999ErZZ). Configuration (relative to yrast SD band): $\nu 7_2^{-1}\nu 7^1_3$; π=+,α=1 (1999ErZZ).

[m] Band(K): SD-7 Band (1999ErZZ). Intensity, relative to SD-1 band, is 19% *2* (1999ErZZ). Configuration (relative to yrast SD band): $\nu 7_2^{-1}\nu 9/2[514]^1$; π=+,α=1 (1999ErZZ). SD-7 and SD-8 bands are interpreted (1999ErZZ) as signature partners.

[n] Band(L): SD-8 Band (1999ErZZ). Intensity, relative to SD-1 band, is 19% *2* (1999ErZZ). Configuration (relative to yrast SD band): $\nu 7_2^{-1}\nu 9/2[514]^1$; π=+,α=0 (1999ErZZ). SD-7 and SD-8 bands are interpreted (1999ErZZ) as signature partners.

[o] Band(M): SD-9 Band (1999ErZZ). Intensity, relative to SD-1 band, is 18% *2* (1999ErZZ). Configuration (relative to yrast SD band): $(\nu 7_2^{-1}6_4^{-1})\nu 5/2[402]^2$ or $(\nu 7_2^{-1}6_4^{-1})\nu 9/2[514]^2$; π=+,α=1 (1999ErZZ).

[p] Band(N): SD-10 Band (1999ErZZ). Intensity, relative to SD-1 band, is 10% *2* (1999ErZZ). Configuration (relative to yrast SD band): $\pi 1/2[301]^{-1},\nu 7_2^{-1}\pi 6^1_3,\nu 5/2[402]^1$; π=+,α=1 (1999ErZZ). SD-10 and SD-11 bands are interpreted (1999ErZZ) as signature partners.

[q] Band(O): SD-11 Band (1999ErZZ). Intensity, relative to SD-1 band, is 8% *2* (1999ErZZ). Configuration (relative to yrast SD band): $\pi 1/2[301]^{-1},\nu 7_2^{-1}\pi 6^1_3,\nu 5/2[402]^1$; π=+,α=0 (1999ErZZ). SD-10 and SD-11 bands are interpreted (1999ErZZ) as signature partners. Intensity (0.09 *3*) for an additional gamma ray near 1590 keV (possibly at the top of this band) is shown in the intensity plot of 1998ErZY.

[r] Band(P): SD-12 Band (1999ErZZ). Intensity, relative to SD-1 band, is 6% *1* (1999ErZZ). Configuration (relative to yrast SD band): $\pi 1/2[301]^{-2}\pi 3/2[651]^2$; π=+,α=0 (1999ErZZ). Intensities of 0.27 *3* and 0.05 *3* for additional gamma rays near 1550 keV and 1600 keV, respectively, (possibly at the top of this band) are shown in the intensity plot of 1998ErZY.

[s] Band(Q): SD-13 Band (1999ErZZ). Intensity, relative to SD-1 band, is 6% *1* (1999ErZZ). Configuration (relative to yrast SD band): $\nu 6_4^{-1}\nu 5/2[402]^1$; π=+,α=1 (1999ErZZ). SD-13 and SD-14 bands are interpreted (1999ErZZ) as signature partners. Intensity (0.07 *3*) for an additional gamma ray near 1600 keV (possibly at the top of this band) is shown in the intensity plot of 1998ErZY.

[t] Band(d): SD-14 Band (1999ErZZ). Intensity, relative to SD-1 band, is 6% *1* (1999ErZZ). Configuration (relative to yrast SD band): $\nu 6_4^{-1}\nu 5/2[402]^1$; π=+,α=0 (1999ErZZ). SD-13 and SD-14 bands are interpreted (1999ErZZ) as signature partners.

Adopted Levels, Gammas (continued)

γ(^{150}Gd)

E_i(level)	J_i^π	E_γ	I_γ[a]	E_f	J_f^π	Mult.[†]	α[g]	$I_{(\gamma+ce)}$	Comments
638.045	2^+	638.050 *16*	100	0.0	0^+	E2[‡]	0.00754		α(K)=0.00624 *9*; α(L)=0.001017 *15*; α(M)=0.000224 *4*; α(N)=5.11×10^{-5} *8*; α(O)=7.68×10^{-6} *11* α(P)=4.26×10^{-7} *6*; α(N+..)=5.92×10^{-5} *9*
1134.297	3^-	496.242 *15*	100	638.045	2^+	E1	0.00479		α(K)=0.00409 *6*; α(L)=0.000552 *8*; α(M)=0.0001189 *17*; α(N)=2.72×10^{-5} *4*; α(O)=4.18×10^{-6} *6* α(P)=2.69×10^{-7} *4*; α(N+..)=3.17×10^{-5} *5*
1207.135	0^+	569.083 *15*	100 *5*	638.045	2^+	E2+M1	0.014 *5*		α(K)=0.012 *4*; α(L)=0.0018 *4*; α(M)=0.00039 *8*; α(N)=8.9×10^{-5} *19*; α(O)=1.4×10^{-5} *3* α(P)=8.E−7 *3*; α(N+..)=0.000103 *22*
		1207.2 *2*		0.0	0^+	E0		1.04 *15*	$I_{(\gamma+ce)}$: this is from observed ce(K) corrected by evaluators to include ce(L), using theoretical ratios given by 1969Ha61. E_γ: transition energy calculated from observed conversion electron energies.
1288.42	4^+	154.07[h] *6*	1.8[h] *4*	1134.297	3^-	(E1)			
		650.36	100	638.045	2^+	E2	0.00720		α(K)=0.00597 *9*; α(L)=0.000967 *14*; α(M)=0.000212 *3*; α(N)=4.86×10^{-5} *7*; α(O)=7.30×10^{-6} *11* α(P)=4.08×10^{-7} *6*; α(N+..)=5.63×10^{-5} *8*
1430.467	$(2)^+$	792.385 *20*	100	638.045	2^+	E2	0.00456		α(K)=0.00381 *6*; α(L)=0.000582 *9*; α(M)=0.0001272 *18*; α(N)=2.91×10^{-5} *4*; α(O)=4.42×10^{-6} *7* α(P)=2.63×10^{-7} *4*; α(N+..)=3.38×10^{-5} *5*
		1430.46 *4*	56 *4*	0.0	0^+	(E2)	1.39×10^{-3}		α(K)=0.001143 *16*; α(L)=0.0001566 *22*; α(M)=3.38×10^{-5} *5*; α(N)=7.77×10^{-6} *11* α(O)=1.201×10^{-6} *17*; α(P)=7.93×10^{-8} *12*; α(N+..)=6.12×10^{-5} *9*
1518.362	2^+	384.06 *4*	13.2	1134.297	3^-				
		880.27 *3*	100 *5*	638.045	2^+	M1+(E2+E0)[‡]	0.0049 *13*		α(K)=0.0042 *12*; α(L)=0.00059 *14*; α(M)=0.00013 *3*; α(N)=2.9×10^{-5} *7*; α(O)=4.5×10^{-6} *11* α(P)=3.0×10^{-7} *9*; α(N+..)=3.4×10^{-5} *8*
		1518.34	93	0.0	0^+	E2	1.28×10^{-3}		α(K)=0.001021 *15*; α(L)=0.0001389 *20*; α(M)=3.00×10^{-5} *5*; α(N)=6.89×10^{-6} *10* α(O)=1.066×10^{-6} *15*; α(P)=7.09×10^{-8} *10*; α(N+..)=8.85×10^{-5} *13*
1592.428	1	385.35	2.2	1207.135	0^+				
		954.46 *4*	61 *3*	638.045	2^+	E1	1.24×10^{-3}		α(K)=0.001063 *15*; α(L)=0.0001391 *20*; α(M)=2.99×10^{-5} *5*; α(N)=6.86×10^{-6} *10* α(O)=1.062×10^{-6} *15*; α(P)=7.14×10^{-8} *10*; α(N+..)=7.99×10^{-6} *12*
		1592.51 *4*	100.0 *18*	0.0	0^+	M1	1.66×10^{-3}		α(K)=0.001312 *19*; α(L)=0.0001754 *25*; α(M)=3.78×10^{-5} *6*; α(N)=8.70×10^{-6} *13*

$^{150}_{64}Gd_{86}$-10

Adopted Levels, Gammas (continued)

γ(^{150}Gd) (continued)

E_i(level)	J_i^π	E_γ	I_γ[a]	E_f	J_f^π	Mult.[†]	δ	α[g]	Comments
									α(O)=1.358×10^{-6} *19*; α(P)=9.41×10^{-8} *14*; α(N+..)=0.0001319 *19*
1699.912	5$^-$	411.490 *15*	77 *4*	1288.42	4$^+$	M1		0.0417	α(K)=0.0354 *5*; α(L)=0.00495 *7*; α(M)=0.001071 *15*; α(N)=0.000247 *4*; α(O)=3.84×10^{-5} *6* α(P)=2.60×10^{-6} *4*; α(N+..)=0.000288 *4*
		565.64 *2*	100	1134.297	3$^-$	E1		0.00359	α(K)=0.00306 *5*; α(L)=0.000411 *6*; α(M)=8.84×10^{-5} *13*; α(N)=2.03×10^{-5} *3*; α(O)=3.12×10^{-6} *5* α(P)=2.03×10^{-7} *3*; α(N+..)=2.36×10^{-5} *4*
		1061.52[@] *10*	15 *3*	638.045	2$^+$				
1814.13	3$^-$	525.70 *20*	35	1288.42	4$^+$	[E1]		0.00421	α(K)=0.00360 *5*; α(L)=0.000484 *7*; α(M)=0.0001042 *15*; α(N)=2.39×10^{-5} *4*; α(O)=3.67×10^{-6} *6* α(P)=2.37×10^{-7} *4*; α(N+..)=2.78×10^{-5} *4*
		1176.08 *6*	100 *6*	638.045	2$^+$	E1		8.60×10^{-4}	α(K)=0.000724 *11*; α(L)=9.40×10^{-5} *14*; α(M)=2.02×10^{-5} *3*; α(N)=4.63×10^{-6} *7*; α(O)=7.19×10^{-7} *10* α(P)=4.88×10^{-8} *7*; α(N+..)=2.13×10^{-5} *3*
1936.31	6$^+$	235.9 *3*	≈3	1699.912	5$^-$	(E1)			
		648.4 *3*	100 *26*	1288.42	4$^+$	E2		0.00726	α(K)=0.00601 *9*; α(L)=0.000974 *14*; α(M)=0.000214 *3*; α(N)=4.89×10^{-5} *7*; α(O)=7.36×10^{-6} *11* α(P)=4.11×10^{-7} *6*; α(N+..)=5.67×10^{-5} *8*
1947.36	2$^-$,3$^-$,4$^-$	813.06 *2*	100	1134.297	3$^-$	(E2)[‡]		0.00430	α(K)=0.00360 *5*; α(L)=0.000546 *8*; α(M)=0.0001194 *17*; α(N)=2.73×10^{-5} *4*; α(O)=4.15×10^{-6} *6* α(P)=2.48×10^{-7} *4*; α(N+..)=3.17×10^{-5} *5*
1955.371	2$^+$	436.980 *25*	66 *3*	1518.362	2$^+$	M1+E2	1.2 *4*	0.026 *4*	α(K)=0.022 *3*; α(L)=0.00355 *24*; α(M)=0.00078 *5*; α(N)=0.000179 *12*; α(O)=2.69×10^{-5} *21* α(P)=1.54×10^{-6} *24*; α(N+..)=0.000207 *14*
		524.90 *20*	38	1430.467	(2)$^+$	(M1)		0.0224	α(K)=0.0190 *3*; α(L)=0.00263 *4*; α(M)=0.000570 *8*; α(N)=0.0001312 *19*; α(O)=2.04×10^{-5} *3* α(P)=1.389×10^{-6} *20*; α(N+..)=0.0001530 *22*
		748.23	34	1207.135	0$^+$				
		821.067 *20*	100 *6*	1134.297	3$^-$	E1		1.66×10^{-3}	α(K)=0.001420 *20*; α(L)=0.000187 *3*; α(M)=4.02×10^{-5} *6*; α(N)=9.22×10^{-6} *13* α(O)=1.426×10^{-6} *20*; α(P)=9.51×10^{-8} *14*; α(N+..)=1.074×10^{-5} *15*
		1317.50 *6*	29.7 *16*	638.045	2$^+$				
		1955.3[h] *2*	7.2[h] *16*	0.0	0$^+$				
1969.99		377.82 *15*	83 *25*	1592.428	1				
		450	5	1518.362	2$^+$				
		539.26 *15*	50 *25*	1430.467	(2)$^+$				
		1332.3 *4*	1.0×10^2 *4*	638.045	2$^+$				
1987.93	2$^+$,3$^+$,4$^+$	557.45 *3*	36.5 *16*	1430.467	(2)$^+$	E2		0.01053	α(K)=0.00864 *12*; α(L)=0.001480 *21*; α(M)=0.000327

Adopted Levels, Gammas (continued)

γ(^{150}Gd) (continued)

E_i(level)	J_i^π	E_γ	I_γ[a]	E_f	J_f^π	Mult.[†]	α[g]	Comments
								5; α(N)=7.46×10^{-5} *11* α(O)=1.111×10^{-5} *16*; α(P)=5.85×10^{-7} *9*; α(N+..)=8.63×10^{-5} *12*
1987.93	2$^+$,3$^+$,4$^+$	699.47	22.2	1288.42	4$^+$			
		1349.83	100	638.045	2$^+$	E2	1.53×10^{-3}	α(K)=0.001278 *18*; α(L)=0.0001763 *25*; α(M)=3.81×10^{-5} *6*; α(N)=8.75×10^{-6} *13* α(O)=1.351×10^{-6} *19*; α(P)=8.87×10^{-8} *13*; α(N+..)=4.06×10^{-5} *6*
2080.61	(2,3,4)$^+$	560	17.5	1518.362	2$^+$			
		650.33	75	1430.467	(2)$^+$	(E2)	0.00720	α(K)=0.00597 *9*; α(L)=0.000967 *14*; α(M)=0.000213 *3*; α(N)=4.86×10^{-5} *7*; α(O)=7.30×10^{-6} *11* α(P)=4.08×10^{-7} *6*; α(N+..)=5.63×10^{-5} *8*
		792.38	75	1288.42	4$^+$	(E2)	0.00456	α(K)=0.00381 *6*; α(L)=0.000582 *9*; α(M)=0.0001272 *18*; α(N)=2.91×10^{-5} *4*; α(O)=4.42×10^{-6} *7* α(P)=2.63×10^{-7} *4*; α(N+..)=3.38×10^{-5} *5*
		945.7 *2*	30 *8*	1134.297	3$^-$			
		1442.7 *1*	<100	638.045	2$^+$			
2083.96	2$^-$,3$^-$	491.57 *5*	2.3 *23*	1592.428	1			
		565.71	13.1	1518.362	2$^+$			
		949.90 *5*	100 *5*	1134.297	3$^-$	(M1)	0.00517	α(K)=0.00441 *7*; α(L)=0.000599 *9*; α(M)=0.0001293 *19*; α(N)=2.98×10^{-5} *5*; α(O)=4.64×10^{-6} *7* α(P)=3.19×10^{-7} *5*; α(N+..)=3.47×10^{-5} *5*
		1446.1 *1*	51 *5*	638.045	2$^+$			
2091.623	2$^+$	573.30	9.4	1518.362	2$^+$	M1	0.0179	α(K)=0.01521 *22*; α(L)=0.00210 *3*; α(M)=0.000455 *7*; α(N)=0.0001047 *15* α(O)=1.630×10^{-5} *23*; α(P)=1.110×10^{-6} *16*; α(N+..)=0.0001221 *17*
		661.18 *4*	1.48	1430.467	(2)$^+$			
		803	0.93	1288.42	4$^+$			
		884.45 *5*	5.7 *4*	1207.135	0$^+$	[E2]	0.00358	α(K)=0.00301 *5*; α(L)=0.000447 *7*; α(M)=9.73×10^{-5} *14*; α(N)=2.23×10^{-5} *4*; α(O)=3.40×10^{-6} *5* α(P)=2.08×10^{-7} *3*; α(N+..)=2.59×10^{-5} *4*
		957.33 *4*	19.6 *12*	1134.297	3$^-$	E1	1.23×10^{-3}	α(K)=0.001057 *15*; α(L)=0.0001383 *20*; α(M)=2.97×10^{-5} *5*; α(N)=6.82×10^{-6} *10* α(O)=1.056×10^{-6} *15*; α(P)=7.10×10^{-8} *10*; α(N+..)=7.94×10^{-6} *12*
		1453.55 *4*	100 *6*	638.045	2$^+$	(M1)	0.00196	α(K)=0.001618 *23*; α(L)=0.000217 *3*; α(M)=4.67×10^{-5} *7*; α(N)=1.076×10^{-5} *15* α(O)=1.680×10^{-6} *24*; α(P)=1.162×10^{-7} *17*; α(N+..)=7.91×10^{-5} *11*
		2091.56 *10*	48.0 *24*	0.0	0$^+$			
2115.75	6$^+$	179.4[#i] *3*	≈1.3[#]	1936.31	6$^+$	E2	0.320	α(K)=0.215 *4*; α(L)=0.0815 *13*; α(M)=0.0189 *3*; α(N)=0.00424 *7*; α(O)=0.000577 *9* α(P)=1.203×10^{-5} *18*; α(N+..)=0.00483 *8*
		415.3[#@] *2*	25[#] *11*	1699.912	5$^-$	E1	0.00722	α(K)=0.00615 *9*; α(L)=0.000838 *12*; α(M)=0.000181 *3*; α(N)=4.14×10^{-5} *6*; α(O)=6.33×10^{-6} *9* α(P)=4.01×10^{-7} *6*; α(N+..)=4.81×10^{-5} *7*

$^{150}_{64}Gd_{86}$-12

Adopted Levels, Gammas (continued)

γ(^{150}Gd) (continued)

E_i(level)	J_i^π	E_γ	I_γ[a]	E_f	J_f^π	Mult.[†]	α[g]	Comments
2115.75	6^+	827.48[#@] *10*	100[#] *14*	1288.42	4^+	E2	0.00414	α(K)=0.00347 *5*; α(L)=0.000524 *8*; α(M)=0.0001143 *16*; α(N)=2.62×10^{-5} *4*; α(O)=3.98×10^{-6} *6*; α(P)=2.39×10^{-7} *4*; α(N+..)=3.04×10^{-5} *5*
2157.5		1023	4	1134.297	3^-			
		1519.6	100	638.045	2^+			
2179.912	2^+	224.4 *1*	3.9 *12*	1955.371	2^+			
		587	2.8	1592.428	1			
		661.55 *4*	4.5	1518.362	2^+			
		749.43 *2*	3.9	1430.467	$(2)^+$			
		1045.60 *3*	100 *5*	1134.297	3^-	E1	1.05×10^{-3}	α(K)=0.000897 *13*; α(L)=0.0001169 *17*; α(M)=2.51×10^{-5} *4*; α(N)=5.76×10^{-6} *8*; α(O)=8.93×10^{-7} *13*; α(P)=6.03×10^{-8} *9*; α(N+..)=6.71×10^{-6} *10*
		1541.94 *6*	39.66 *22*	638.045	2^+			
		2179.9[h] *2*	33.1[h] *17*	0.0	0^+			
2209.54	$2^-,3^-$	779.09 *4*	47 *5*	1430.467	$(2)^+$			
		1075.25 *3*	100 *5*	1134.297	3^-	M1	0.00384	α(K)=0.00328 *5*; α(L)=0.000444 *7*; α(M)=9.57×10^{-5} *14*; α(N)=2.20×10^{-5} *3*; α(O)=3.44×10^{-6} *5*; α(P)=2.37×10^{-7} *4*; α(N+..)=2.57×10^{-5} *4*
		1571.26[@] *12*	21 *4*	638.045	2^+			
2211.11	7^-	95.5 *2*	2.0 *4*	2115.75	6^+	(E1)		
		274.9 *3*	8 *3*	1936.31	6^+	E1[b]	0.0199	α(K)=0.01687 *24*; α(L)=0.00235 *4*; α(M)=0.000507 *8*; α(N)=0.0001158 *17*; α(O)=1.76×10^{-5} *3*; α(P)=1.066×10^{-6} *16*; α(N+..)=0.0001344 *20*; Mult.: from (α,2nγ).
		511	100 *16*	1699.912	5^-	E2	0.01318	α(K)=0.01074 *15*; α(L)=0.00191 *3*; α(M)=0.000423 *6*; α(N)=9.63×10^{-5} *14*; α(O)=1.426×10^{-5} *20*; α(P)=7.21×10^{-7} *10*; α(N+..)=0.0001113 *16*
2262.21		743.86 *6*	20.8	1518.362	2^+			
		831.73 *7*	14.6	1430.467	$(2)^+$			
		1127.7 *1*	65 *4*	1134.297	3^-			
		1624.20 *6*	100 *7*	638.045	2^+			
2306.2	$(5^-,6^+)$	≈95[b]		2211.11	7^-			
		606.8 *5*	100[d] *10*	1699.912	5^-			
		1017.2 *5*	14 *2*	1288.42	4^+			
2326.283		338.36 *5*	36 *6*	1987.93	$2^+,3^+,4^+$			
		626.47 *10*	24 *6*	1699.912	5^-			
		807.71[@] *15*	20 *4*	1518.362	2^+			
		895.86 *5*	48 *4*	1430.467	$(2)^+$			
		1037.9 *3*	14 *6*	1288.42	4^+			
		1688.23 *1*	100[e] *10*	638.045	2^+			

$^{150}_{64}Gd_{86}$-13

Adopted Levels, Gammas (continued)

γ(^{150}Gd) (continued)

E_i(level)	J_i^π	E_γ	I_γ[a]	E_f	J_f^π	Mult.[†]	α[g]	Comments
2364.91	1,2$^+$	772.52 *8*	17.2 *19*	1592.428	1			
		846.5 *2*	3.1 *19*	1518.362	2$^+$			
		1157.76 *8*	16.0 *13*	1207.135	0$^+$			
		1231	1.840	1134.297	3$^-$			
		1726.85 *15*	23.9 *25*	638.045	2$^+$			
		2364.93 *10*	100 *5*	0.0	0$^+$			
2392.06	(7)$^+$	180.9[#] *3*	[#]	2211.11	7$^-$	(M1+E2)		
		276[@]		2115.75	6$^+$			
		455.7[#@] *2*	[#]	1936.31	6$^+$	M1	0.0320	α(K)=0.0272 *4*; α(L)=0.00379 *6*; α(M)=0.000821 *12*; α(N)=0.000189 *3*; α(O)=2.94×10^{-5} *5* α(P)=1.99×10^{-6} *3*; α(N+..)=0.000220 *3*
2408.53	2$^+$	328 *1*	6 *4*	2080.61	(2,3,4)$^+$			
		977.78 *8*	20.5 *24*	1430.467	(2)$^+$			
		1120.1 *5*	16 *8*	1288.42	4$^+$			
		1274.51 *10*	45 *4*	1134.297	3$^-$			
		1770.45 *6*	100 *5*	638.045	2$^+$			
2416.7?	3	1778.6 *5*	100	638.045	2$^+$			
2426.20	1$^-$,2$^+$	908.1 *3*	1.9 *12*	1518.362	2$^+$			
		995.38 *10*	10.4 *19*	1430.467	(2)$^+$			
		1291.66 *3*	85 *5*	1134.297	3$^-$			
		1788.91 *5*	100 *5*	638.045	2$^+$			
		2425.98 *10*	63 *3*	0.0	0$^+$			
2434.34		916.1 *3*	19 *7*	1518.362	2$^+$			
		1003.8 *2*	9.375	1430.467	(2)$^+$			
		1796.29 *10*	100 *10*	638.045	2$^+$			
2521.56	(2$^+$,3,4$^+$)	574.1 *5*	15.79	1947.36	2$^-$,3$^-$,4$^-$			
		1003.2[h] *2*	26.32[h]	1518.362	2$^+$			
		1091.0 *1*	47.37	1430.467	(2)$^+$			
		1233.2 *2*	53 *8*	1288.42	4$^+$			
		1387.2	21 *14*	1134.297	3$^-$			
		1883.6 *1*	100 *8*	638.045	2$^+$			
2554.14	8$^+$	162.0[#@] *2*	14[#] *4*	2392.06	(7)$^+$	M1	0.513	α(K)=0.434 *7*; α(L)=0.0622 *9*; α(M)=0.01352 *20*; α(N)=0.00311 *5*; α(O)=0.000483 *7* α(P)=3.23×10^{-5} *5*; α(N+..)=0.00363 *6*
		343.07[#@] *10*	59[#] *19*	2211.11	7$^-$	E1	0.01142	α(K)=0.00972 *14*; α(L)=0.001337 *19*; α(M)=0.000288 *4*; α(N)=6.59×10^{-5} *10* α(O)=1.005×10^{-5} *14*; α(P)=6.25×10^{-7} *9*; α(N+..)=7.66×10^{-5} *11*
		438.37[#] *10*	100[#] *45*	2115.75	6$^+$	E2	0.0199	α(K)=0.01598 *23*; α(L)=0.00305 *5*; α(M)=0.000680 *10*; α(N)=0.0001546 *22* α(O)=2.26×10^{-5} *4*; α(P)=1.057×10^{-6} *15*; α(N+..)=0.0001783 *25*
2558.51	1,2$^+$	1351.2	16.67	1207.135	0$^+$			

$^{150}_{64}Gd_{86}$-14

Adopted Levels, Gammas (continued)

γ(^{150}Gd) (continued)

E_i(level)	J_i^π	E_γ	I_γ[a]	E_f	J_f^π	Mult.[†]	α[g]	Comments
2558.51	1,2$^+$	2558.49 *20*	100 *10*	0.0	0$^+$			
2564.96	(1$^-$,2$^-$,3$^-$)	972.7 *2*	27 *14*	1592.428	1			
		1134	90.91	1430.467	(2)$^+$			
		1430.5 *04*	9.×10^1[e] *9*	1134.297	3$^-$	(E2)	1.39×10^{-3}	α(K)=0.001143 *16*; α(L)=0.0001566 *22*; α(M)=3.38×10^{-5} *5*; α(N)=7.77×10^{-6} *11* α(O)=1.201×10^{-6} *17*; α(P)=7.93×10^{-8} *12*; α(N+..)=6.12×10^{-5} *9*
		1926.6 *2*	100 *14*	638.045	2$^+$			
		2565.4 *3*	50 *14*	0.0	0$^+$			
2593.9		1387.3	5.×10^1 *7*	1207.135	0$^+$			
		1459	100	1134.297	3$^-$			
2627.99?		1035.8 *3*	30 *13*	1592.428	1			
		1493.67 *8*	100 *13*	1134.297	3$^-$			
		1989.6 *8*	48 *22*	638.045	2$^+$			
2654.39		666.49[@] *8*	6.7 *21*	1987.93	2$^+$,3$^+$,4$^+$			
		699.03	12.75	1955.371	2$^+$			
		1223.8[h] *5*	5.4[h] *21*	1430.467	(2)$^+$			
		2016.30 *10*	100 *5*	638.045	2$^+$			
2678.45	1,2$^+$	864.41	7.273	1814.13	3$^-$			
		1247.9 *2*	16 *4*	1430.467	(2)$^+$			
		1544.1 *5*	31 *15*	1134.297	3$^-$			
		2040.4 *2*	100 *8*	638.045	2$^+$			
		2678.6[h] *3*	40[h] *6*	0.0	0$^+$			
2686.84	1$^-$,2,3$^-$	322.0 *1*	16 *4*	2364.91	1,2$^+$			
		602.78 *6*	39 *4*	2083.96	2$^-$,3$^-$			
		739.6 *3*	7 *5*	1947.36	2$^-$,3$^-$,4$^-$			
		987.3 *3*	7 *4*	1699.912	5$^-$			
		1094.41 *5*	52.46	1592.428	1			
		1168.64 *6*	100 *7*	1518.362	2$^+$			
		1256.4	13 *5*	1430.467	(2)$^+$			
		1552.3[h] *5*	21[h] *10*	1134.297	3$^-$			
2754.58	2$^+$,3,4$^+$	492.35 *5*	15.6	2262.21				
		1466.1 *3*	5 *8*	1288.42	4$^+$			
		1620.30 *10*	33 *5*	1134.297	3$^-$			
		2116.8 *2*	100 *5*	638.045	2$^+$			
		2754.6 *8*	25 *8*	0.0	0$^+$			
2767.3?	(8$^+$)	831.0[#] *5*	100[#]	1936.31	6$^+$	[E2][f]	0.00410	α(K)=0.00344 *5*; α(L)=0.000518 *8*; α(M)=0.0001131 *16*; α(N)=2.59×10^{-5} *4*; α(O)=3.94×10^{-6} *6* α(P)=2.37×10^{-7} *4*; α(N+..)=3.01×10^{-5} *5*
2786.49	1$^-$,2$^+$	831.18 *7*	4.3	1955.371	2$^+$			
		839.2 *2*	4.3 *13*	1947.36	2$^-$,3$^-$,4$^-$			
		1193.9 *1*	8.0 *19*	1592.428	1			

$^{150}_{64}Gd_{86}$-15

Adopted Levels, Gammas (continued)

γ(^{150}Gd) (continued)

E_i(level)	J_i^π	E_γ	I_γ[a]	E_f	J_f^π	Mult.[†]	α[g]	Comments
2786.49	1⁻,2⁺	1267	4.3	1518.362	2⁺			
		1356.01 *10*	15.3 *19*	1430.467	(2)⁺			
		1652.26	13.5 *19*	1134.297	3⁻			
		2148.44 *10*	100 *5*	638.045	2⁺			
2816.1	9⁻	605.0 *3*	100	2211.11	7⁻	E2[&]	0.00859	α(K)=0.00708 *10*; α(L)=0.001176 *17*; α(M)=0.000259 *4*; α(N)=5.92×10⁻⁵ *9*; α(O)=8.86×10⁻⁶ *13* α(P)=4.82×10⁻⁷ *7*; α(N+..)=6.85×10⁻⁵ *10*
2827.81		743.84 *6*	100	2083.96	2⁻,3⁻			
		874		1955.371	2⁺			
2834.8?	8⁻	623.4[i] *3*	30[e] *10*	2211.11	7⁻			
2845.41	1,2⁺	753.8 *3*	1.6 *11*	2091.623	2⁺			
		1326.7 *2*	7.1 *17*	1518.362	2⁺			
		1414.95 *6*	27.5 *17*	1430.467	(2)⁺			
		1638.06[@] *10*	14.3 *22*	1207.135	0⁺			
		2207.58 *10*	100 *5*	638.045	2⁺			
		2845.65[h] *25*	19[h] *3*	0.0	0⁺			
2868.27		1579.92 *10*	100 *20*	1288.42	4⁺			
		1733.7 *2*	88 *16*	1134.297	3⁻			
2906.0?	8⁺	789.9[#i] *4*	100[#]	2115.75	6⁺	E2	0.00459	α(K)=0.00384 *6*; α(L)=0.000587 *9*; α(M)=0.0001282 *18*; α(N)=2.94×10⁻⁵ *5*; α(O)=4.45×10⁻⁶ *7* α(P)=2.64×10⁻⁷ *4*; α(N+..)=3.41×10⁻⁵ *5*
2956.20		746	12.7	2209.54	2⁻,3⁻			
		864.55	12.7	2091.623	2⁺			
		871.9 *2*	10 *4*	2083.96	2⁻,3⁻			
		968.3 *5*	32 *8*	1987.93	2⁺,3⁺,4⁺			
		1001.0 *2*	27 *7*	1955.371	2⁺			
		1008.1 *3*	19 *7*	1947.36	2⁻,3⁻,4⁻			
		1365.3 *3*	16 *5*	1592.428	1			
		1525.70 *5*	98 *5*	1430.467	(2)⁺			
		1822.2 *5*	16 *7*	1134.297	3⁻			
		2318.14 *10*	100 *5*	638.045	2⁺			
2984.95	1,2⁺	997.8 *24*	19 *6*	1987.93	2⁺,3⁺,4⁺			
		1392.4[@] *4*	17 *6*	1592.428	1			
		1466.6 *3*	10 *7*	1518.362	2⁺			
		1554.4 *4*	38 *9*	1430.467	(2)⁺			
		1778.8	27.78	1207.135	0⁺			
		2346.9 *2*	38 *5*	638.045	2⁺			
		2984.90 *15*	100 *6*	0.0	0⁺			
3024.7		1596	100	1430.467	(2)⁺			
		3024.5 *3*	100 *17*	0.0	0⁺			
3035.64	1⁻,2⁺	826.34 *15*	7.1 *11*	2209.54	2⁻,3⁻			
		952	30	2083.96	2⁻,3⁻			

$^{150}_{64}Gd_{86}$-16

Adopted Levels, Gammas (continued)

γ(^{150}Gd) (continued)

E_i(level)	J_i^π	E_γ	I_γ[a]	E_f	J_f^π	Mult.[†]	α[g]	Comments
3035.64	1⁻,2⁺	1443.3 *1*	>40.40	1592.428	1			
		1517.4	10.10	1518.362	2⁺			
		1605.44 *11*	22 *3*	1430.467	(2)⁺			
		1747.3	30	1288.42	4⁺			
		1901.74 *10*	97 *5*	1134.297	3⁻			
		2397.04 *10*	100 *5*	638.045	2⁺			
		3034.86 *15*	53 *3*	0.0	0⁺			
3042.61		1908.6 *4*	50 *19*	1134.297	3⁻			
		3042.4 *3*	100 *9*	0.0	0⁺			
3083.76?		1130.4 *7*	20 *14*	1955.371	2⁺			
		1652.6	20 *10*	1430.467	(2)⁺			
		1876.6 *4*	20 *10*	1207.135	0⁺			
		1949.3 *2*	100 *10*	1134.297	3⁻			
		2446.1 *10*	50 *17*	638.045	2⁺			
3118.75		1600.10 *15*	78 *13*	1518.362	2⁺			
		1688.27 *10*	70 *22*	1430.467	(2)⁺			
		1830.7 *5*	39 *18*	1288.42	4⁺			
		1984.9 *2*	100 *18*	1134.297	3⁻			
3134.13		1541.94 *6*	27 *16*	1592.428	1			
		1615.37 *10*	58 *12*	1518.362	2⁺			
		1702.5 *3*	31 *12*	1430.467	(2)⁺			
		2494.7 *8*	100 *20*	638.045	2⁺			
		3133.6 *2*	58 *8*	0.0	0⁺			
3176.8		622.7 *5*	100	2554.14	8⁺			
3177.732		1094.19 *5*	10.1	2083.96	2⁻,3⁻			
		1585.19 *14*	9 *4*	1592.428	1			
		1659.9	14 *4*	1518.362	2⁺			
		1747.8	12.66	1430.467	(2)⁺			
		2043.7 *10*	14 *9*	1134.297	3⁻			
		2539.645 *10*	100 *5*	638.045	2⁺			
3220.3	10⁻	404.3[#@] *3*	100[#]	2816.1	9⁻	M1+E2	0.034 *10*	α(K)=0.028 *9*; α(L)=0.0046 *7*; α(M)=0.00100 *12*; α(N)=0.00023 *3*; α(O)=3.5×10⁻⁵ *6* α(P)=2.0×10⁻⁶ *8*; α(N+..)=0.00027 *4*
3251.5		1660.0	100 *19*	1592.428	1			
		2614.3 *10*	8.×10¹ *4*	638.045	2⁺			
		3250.8 *6*	38 *13*	0.0	0⁺			
3269.32?		1089.4 *1*	100	2179.912	2⁺			
3288.2	10⁺	472		2816.1	9⁻			
		734.0[#@] *3*	100[#]	2554.14	8⁺	E2	0.00542	α(K)=0.00452 *7*; α(L)=0.000705 *10*; α(M)=0.0001544 *22*; α(N)=3.53×10⁻⁵ *5*; α(O)=5.34×10⁻⁶ *8* α(P)=3.11×10⁻⁷ *5*; α(N+..)=4.10×10⁻⁵ *6*
3298.34		1351.7	42	1947.36	2⁻,3⁻,4⁻			

Adopted Levels, Gammas (continued)

γ(^{150}Gd) (continued)

E_i(level)	J_i^π	E_γ	I_γ[a]	E_f	J_f^π
3298.34		2661.20 *25*	100 *13*	638.045	2^+
3329.33		1737.2 *6*	17 *10*	1592.428	1
		1811.9 *3*	24 *8*	1518.362	2^+
		2194.6 *2*	100 *8*	1134.297	3^-
		2691.0[@] *5*	44 *8*	638.045	2^+
3344.68	(2^+)	935.4 *2*	7 *4*	2408.53	2^+
		1253.0[h] *1*	22[h] *4*	2091.623	2^+
		1260.5 *2*	10 *5*	2083.96	2^-,3^-
		1389.6 *4*	29 *7*	1955.371	2^+
		1530.5 *3*	12 *5*	1814.13	3^-
		1645.5 *2*	22 *5*	1699.912	5^-
		1752.1 *2*	32 *5*	1592.428	1
		1826.2 *5*	24 *9*	1518.362	2^+
		1914.3 *2*	100 *11*	1430.467	$(2)^+$
		2056.3 *2*	20 *5*	1288.42	4^+
		2210	34	1134.297	3^-
		2706.86 *15*	88 *5*	638.045	2^+
		3344.3 *5*	13.6 *17*	0.0	0^+
3366.4	11^-	≈78[@i]		3288.2	10^+
		146.2[#@] *3*	42[#] *23*	3220.3	10^-
		550.3[#@] *3*	100[#] *30*	2816.1	9^-
3375.72		1049.3 *4*	16 *10*	2326.283	
		2241.42[@] *15*	53 *7*	1134.297	3^-
		2737.8 *5*	100 *19*	638.045	2^+
		3375.5 *7*	14 *5*	0.0	0^+
3378.11		1563.96 *10*	50 *7*	1814.13	3^-
		1947	16.7	1430.467	$(2)^+$
		2740.3 *4*	100 *17*	638.045	2^+
3389.2		2751.0 *10*	$6.\times10^1$ *5*	638.045	2^+
		3389.2 *5*	100 *13*	0.0	0^+
3461.7	2^+	1943	4	1518.362	2^+
		2173.4 *5*	1.0×10^2 *3*	1288.42	4^+
3510.72	$(1^-,2^+)$	1918	17.95	1592.428	1
		2376.6[@] *2*	85 *8*	1134.297	3^-
		2872.2 *3*	100 *13*	638.045	2^+
3522.4		3522.4 *6*	100	0.0	0^+
3631.4		2201.4 *8*	1.0×10^2 *4*	1430.467	$(2)^+$
		2498	29	1134.297	3^-
		2993.2 *3*	71 *15*	638.045	2^+
3657.35?	2^+	1668.8[@] *3*	56 *17*	1987.93	2^+,3^+,4^+
		2450.2 *10*	44 *23*	1207.135	0^+

$^{150}_{64}Gd_{86}$-18

Adopted Levels, Gammas (continued)

γ(^{150}Gd) (continued)

E_i(level)	J_i^π	E_γ	I_γ[a]	E_f	J_f^π	Mult.[†]	α[g]	Comments
3657.35?	2^+	3657.74 *25*	100 *6*	0.0	0^+			
3712.40		1631.7 *2*	1.0×10^2 *4*	2080.61	$(2,3,4)^+$			
		2579.5 *8*	$9.\times10^1$ *4*	1134.297	3^-			
3726.63		1518.24	85.11	2209.54	$2^-,3^-$			
		2296.9[h] *8*	6[h] *5*	1430.467	$(2)^+$			
		2592.25 *15*	100 *7*	1134.297	3^-			
3772.03		2636.8 *5*	$5.\times10^1$ *3*	1134.297	3^-			
		3134.1 *2*	100	638.045	2^+			
3828.4?	$(1,2^+)$	2621.8[h] *5*	1.0×10^2[h] *4*	1207.135	0^+			
		3828.0 *4*	33 *7*	0.0	0^+			
3840.04		1852 *2*	16.39	1987.93	$2^+,3^+,4^+$			
		2409.36 *20*	100 *5*	1430.467	$(2)^+$			
		3202.4 *3*	20 *4*	638.045	2^+			
3963.64		2372	28	1592.428	1			
		2532.5 *3*	1.0×10^2 *3*	1430.467	$(2)^+$			
		2828.5 *6*	33 *17*	1134.297	3^-			
		3327.7 *5*	67 *6*	638.045	2^+			
4021.2?	$(1,2^+)$	3383.6[@] *5*	1.0×10^2 *5*	638.045	2^+			
		4020.8 *4*	0.71 *7*	0.0	0^+			
4105.4	12^+	817[@]	100	3288.2	10^+	E2[&]	0.00425	α(K)=0.00357 *5*; α(L)=0.000540 *8*; α(M)=0.0001179 *17*; α(N)=2.70×10^{-5} *4*; α(O)=4.10×10^{-6} *6* α(P)=2.46×10^{-7} *4*; α(N+..)=3.14×10^{-5} *5*
4111.07?	$1^-,2^+$	2822.7 *6*	27 *14*	1288.42	4^+			
		2975.9[h] *6*	40[h] *14*	1134.297	3^-			
		4111.2 *3*	100 *14*	0.0	0^+			
4131.1	13^-	764.7[#@] *2*	100[#]	3366.4	11^-	E2[&]	0.00494	α(K)=0.00412 *6*; α(L)=0.000636 *9*; α(M)=0.0001391 *20*; α(N)=3.18×10^{-5} *5*; α(O)=4.82×10^{-6} *7* α(P)=2.84×10^{-7} *4*; α(N+..)=3.69×10^{-5} *6*
4143.8?	$(1^-,2^+)$	3008.9 *3*	100 *17*	1134.297	3^-			
		4145.4 *5*	67 *9*	0.0	0^+			
4151.0		3512.1 *7*	1.0×10^2 *4*	638.045	2^+			
		4151.3 *5*	40 *9*	0.0	0^+			
4164.0	2^+	2876.6 *6*	100 *23*	1288.42	4^+			
		3525.7 *8*	23 *9*	638.045	2^+			
		4163.3 *5*	13.6 *23*	0.0	0^+			
4178.6		2971.7 *10*	1.0×10^2 *7*	1207.135	0^+			
		4178.5 *5*	80 *17*	0.0	0^+			
4186.9	$(12)^-$	966.6[#] *3*	100[#]	3220.3	10^-	E2[&]	0.00296	α(K)=0.00249 *4*; α(L)=0.000363 *5*; α(M)=7.90×10^{-5} *11*; α(N)=1.81×10^{-5} *3*; α(O)=2.77×10^{-6} *4* α(P)=1.725×10^{-7} *25*; α(N+..)=2.11×10^{-5} *3*

$^{150}_{64}Gd_{86}$-19

Adopted Levels, Gammas (continued)

γ(^{150}Gd) (continued)

E_i(level)	J_i^π	E_γ	I_γ[a]	E_f	J_f^π
4206.9	(1,2$^+$)	3570.6[@] *6*	52 *8*	638.045	2$^+$
		4206.4 *3*	100 *6*	0.0	0$^+$
4235.2?	(1$^-$,2$^+$)	4235.1[@] *6*	100	0.0	0$^+$
4246.2?	(1,2$^+$)	3609.4 *8*	43 *11*	638.045	2$^+$
		4246.0 *3*	100 *6*	0.0	0$^+$
4258.0	(1$^-$,2$^+$)	3124.0[@] *3*	100 *14*	1134.297	3$^-$
		4256.5 *6*	14 *4*	0.0	0$^+$
4264.6	2$^+$	4264.5 *3*	100	0.0	0$^+$
4283.1?	(1,2$^+$)	4283.0 *10*	100	0.0	0$^+$
4289.4?	(1,2$^+$)	4289.3 *3*	100	0.0	0$^+$
4296.7		4296.6 *10*	100	0.0	0$^+$
4303.2		3096.1 *3*	100 *11*	1207.135	0$^+$
		4302.4 *8*	7 *3*	0.0	0$^+$
4314.0	1,2$^+$	3675.3 *5*	100 *23*	638.045	2$^+$
		4314.2 *3*	70 *6*	0.0	0$^+$
4322.0	2$^+$	3684.3[@] *4*	65 *11*	638.045	2$^+$
		4321.6 *4*	100 *6*	0.0	0$^+$
4343.9	(1,2$^+$)	2913.7 *4*	100 *20*	1430.467	(2)$^+$
		4343.3[@] *6*	10 *3*	0.0	0$^+$
4378.6?	(1$^+$,2$^+$)	4378.5[@] *6*	100	0.0	0$^+$
4405.3	(1,2$^+$)	3768.4 *10*	7.×10^1 *4*	638.045	2$^+$
		4405.1 *3*	100 *6*	0.0	0$^+$
4419.7	(13)	232.4 *3*	25 *10*	4186.9	(12)$^-$
4435.2		3797.4 *7*	1.0×10^2 *4*	638.045	2$^+$
		4434.4 *10*	19 *10*	0.0	0$^+$
4445.9	1,2$^+$	3239.2 *5*	61 *7*	1207.135	0$^+$
		4445.7 *3*	100 *5*	0.0	0$^+$
4462.3		4462.2 *8*	100	0.0	0$^+$
4492.8		3854.5 *8*	1.0×10^2 *5*	638.045	2$^+$
		4493.3 *15*	12 *9*	0.0	0$^+$
4499.8		4499.7 *8*	100	0.0	0$^+$
4522.8?		3884.7[@] *6*	100	638.045	2$^+$
4529.4?	(1,2$^+$)	2935.6[@] *4*	100 *20*	1592.428	1
		4531.5[@] *5*	9.0 *20*	0.0	0$^+$
4545.6		3907.5 *6*	100	638.045	2$^+$
4557.2		4557.1 *10*	100	0.0	0$^+$
4563.3		4563.2 *10*	100	0.0	0$^+$
4739.6	14$^+$	634	100	4105.4	12$^+$
4744.9		3152.4 *3*	100 *15*	1592.428	1
		3314.5[@] *6*	29 *8*	1430.467	(2)$^+$

$^{150}_{64}Gd_{86}$-20

Adopted Levels, Gammas (continued)

γ(^{150}Gd) (continued)

E_i(level)	J_i^π	E_γ	I_γ[a]	E_f	J_f^π	Mult.[†]
4834.9	15^-	704[#@]	100[#]	4131.1	13^-	
5428.8	16^+	594[@]		4834.9	15^-	
		689[@]		4739.6	14^+	
5450.9	17^-	616[@]	100	4834.9	15^-	
5632.8	17^+	204[@]	100	5428.8	16^+	
5764.8	18^+	132[@]		5632.8	17^+	
		314[@]		5450.9	17^-	D
		336[@]		5428.8	16^+	
6311.8	(19^-)	547[@]	100	5764.8	18^+	
6450.8	(20^+)	686[@]	100	5764.8	18^+	
6495.8	(21^-)	184[@]	100	6311.8	(19^-)	
7275.8	(23^-)	780[@]	100	6495.8	(21^-)	
7929.8	(25^-)	654[@]	100	7275.8	(23^-)	
8325	(27^-)	395[@]	100	7929.8	(25^-)	
9410?	(28^+)	1085[@]	100	8325	(27^-)	
9497	(29^-)	1172[@]	100	8325	(27^-)	
9582	(29^+)	172[@]	100	9410?	(28^+)	
9851	(30^+)	269[@]		9582	(29^+)	
		354[@]		9497	(29^-)	
10532	(31^+)	950[@]	100	9582	(29^+)	
11231	(33^+)	699[@]	100	10532	(31^+)	
12185	(34^-)	954[@]	100	11231	(33^+)	
12678	$(36^-,34^+)$	493[@]	100	12185	(34^-)	
815.00+x	J+2	815.0 *1*	0.66[c] *2*	x	J≈(30^+)	
1664.10+x	J+4	849.1 *1*	0.88[c] *1*	815.00+x	J+2	
1931.3+x	J+4	910.2 *2*	0.39[c] *2*	1021.1+x	J+2	
2552.00+x	J+6	887.9 *1*	1.00[c] *1*	1664.10+x	J+4	
2897.4+x	J+6	966.1 *3*	0.53[c] *3*	1931.3+x	J+4	
3012.6+x	J+6	856		2156.6+x	J+4	
3480.90+x	J+8	928.9 *1*	1.00[c] *1*	2552.00+x	J+6	
3893.0+x	J+8	995.6 *3*	0.55[c] *3*	2897.4+x	J+6	
3960.6+x	J+8	948		3012.6+x	J+6	
4451.79+x	J+10	970.9 *1*	1.00[c] *1*	3480.90+x	J+8	
4861.7+x	J+10	901		3960.6+x	J+8	
		968.6 *3*	0.60[c] *3*	3893.0+x	J+8	
		1380	≈0.05[c]	3480.90+x	J+8	
5465.28+x	J+12	1013.5 *1*	0.99[c] *1*	4451.79+x	J+10	

$^{150}_{64}Gd_{86}$-21

Adopted Levels, Gammas (continued)

γ(^{150}Gd) (continued)

E_i(level)	J_i^π	E_γ	I_γ[a]	E_f	J_f^π
5860.7+x	J+12	999.0 *2*	0.86[c] *3*	4861.7+x	J+10
		1408	≈0.05	4451.79+x	J+10
6521.8+x	J+14	1056.5 *1*	1.00[c] *1*	5465.28+x	J+12
6907.6+x	J+14	1046.8 *2*	0.89[c] *3*	5860.7+x	J+12
		1442	≈0.05[c]	5465.28+x	J+12
7621.8+x	J+16	1100.1 *1*	0.97[c] *1*	6521.8+x	J+14
8005.2+x	J+16	1097.6 *2*	0.96[c] *2*	6907.6+x	J+14
		1484	≈0.05[c]	6521.8+x	J+14
8766.4+x	J+18	1144.6 *1*	0.99[c] *1*	7621.8+x	J+16
9154.0+x	J+18	1148.7 *2*	0.98[c] *2*	8005.2+x	J+16
		1532	≈0.05[c]	7621.8+x	J+16
9956.9+x	J+20	1190.5 *1*	0.95[c] *1*	8766.4+x	J+18
10354.0+x	J+20	1199.9 *2*	1.00[c] *1*	9154.0+x	J+18
		1588	≈0.05[c]	8766.4+x	J+18
11194.8+x	J+22	1237.9 *1*	0.96[c] *2*	9956.9+x	J+20
11604.9+x	J+22	1250.9 *2*	1.02[c] *3*	10354.0+x	J+20
		1649	≈0.05[c]	9956.9+x	J+20
12481.4+x	J+24	1286.6 *1*	0.89[c] *2*	11194.8+x	J+22
12906.1+x	J+24	1301.2 *2*	0.96[c] *3*	11604.9+x	J+22
13818.0+x	J+26	1336.6 *1*	0.81[c] *2*	12481.4+x	J+24
14257.7+x	J+26	1351.6 *2*	0.85[c] *3*	12906.1+x	J+24
15205.8+x	J+28	1387.8 *1*	0.65[c] *2*	13818.0+x	J+26
15658.7+x	J+28	1401.0 *2*	0.71[c] *2*	14257.7+x	J+26
16645.9+x	J+30	1440.1 *1*	0.48[c] *2*	15205.8+x	J+28
17109.1+x	J+30	1450.4 *2*	0.54[c] *2*	15658.7+x	J+28
18139.1+x	J+32	1493.1 *2*	0.28[c] *2*	16645.9+x	J+30
18608.2+x	J+32	1499.1 *3*	0.39[c] *2*	17109.1+x	J+30
19686.1+x	J+34	1547.0 *3*	0.13[c] *2*	18139.1+x	J+32
20155.8+x	J+34	1547.6 *4*	0.14[c] *1*	18608.2+x	J+32
21287.8+x	J+36	1601.7 *4*	0.05[c] *2*	19686.1+x	J+34
21751.8+x	J+36	1595.9 *7*	0.044[c] *10*	20155.8+x	J+34
23397.3+x	J+38	1645.5 *9*		21751.8+x	J+36
688.1+y	K+2	688.1 *3*	0.35[c] *5*	y	K≈(27$^-$)
1423.8+y	K+4	735.8 *4*	0.48[c] *4*	688.1+y	K+2
2015.5+y	K+4	727.9 *2*	0.41[c] *2*	1287.6+y	K+2
2208.9+y	K+6	785.2 *5*	0.71[c] *5*	1423.8+y	K+4
2787.0+y	K+6	771.5 *2*	0.81[c] *2*	2015.5+y	K+4
3043.3+y	K+8	834.4 *3*	0.92[c] *4*	2208.9+y	K+6
3601.3+y	K+8	814.3 *2*	0.94[c] *2*	2787.0+y	K+6
3928.6+y	K+10	885.3 *3*	0.92[c] *2*	3043.3+y	K+8

$^{150}_{64}Gd_{86}$-22

Adopted Levels, Gammas (continued)

γ(^{150}Gd) (continued)

E_i(level)	J_i^π	E_γ	I_γ[a]	E_f	J_f^π	Comments
4458.6+y	K+10	857.3 *5*	0.97[c] *2*	3601.3+y	K+8	
4865.1+y	K+12	936.6 *4*	0.93[c] *2*	3928.6+y	K+10	
5359.3+y	K+12	900.7 *2*	1.00[c] *2*	4458.6+y	K+10	
5853.7+y	K+14	988.6 *2*	0.93[c] *2*	4865.1+y	K+12	
6304.6+y	K+14	945.3 *2*	0.99[c] *2*	5359.3+y	K+12	
6894.6+y	K+16	1040.9 *2*	0.95[c] *2*	5853.7+y	K+14	
7295.2+y	K+16	990.6 *2*	0.99[c] *2*	6304.6+y	K+14	
7989.9+y	K+18	1095.3 *2*	0.97[c] *2*	6894.6+y	K+16	
8331.9+y	K+18	1036.7 *2*	0.99[c] *2*	7295.2+y	K+16	
9139.2+y	K+20	1149.3 *2*	1.00[c] *2*	7989.9+y	K+18	
9415.2+y	K+20	1083.3 *2*	1.00[c] *2*	8331.9+y	K+18	
10343.1+y	K+22	1203.9 *2*	1.00[c] *2*	9139.2+y	K+20	
10546.6+y	K+22	1131.4 *3*	1.01[c] *2*	9415.2+y	K+20	
11602.4+y	K+24	1259.3 *2*	0.93[c] *2*	10343.1+y	K+22	
11725.9+y	K+24	1179.3 *2*	1.00[c] *2*	10546.6+y	K+22	
12916.1+y	K+26	1313.7 *2*	0.81[c] *2*	11602.4+y	K+24	
12955.8+y	K+26	1229.8 *2*	0.94[c] *2*	11725.9+y	K+24	
		1354	≈0.03[c]	11602.4+y	K+24	
14229.1+y	K+28	1273.4 *2*	0.81[c] *2*	12955.8+y	K+26	
		1314		12916.1+y	K+26	I_γ: Iγ(1314)/Iγ(1273)=0.22 *4* (1998ErZY).
14293.5+y	J+28	1338		12955.8+y	K+26	I_γ: Iγ(1338)/Iγ(1377)=0.095 *6* (1998ErZY).
		1377.3 *2*	0.69[c] *2*	12916.1+y	K+26	
15557.7+y	K+30	1328.6 *2*	0.73[c] *2*	14229.1+y	K+28	
15721.8+y	K+30	1428.3 *2*	0.55[c] *2*	14293.5+y	J+28	
		1494		14229.1+y	K+28	
16936.3+y	K+32	1378.6 *2*	0.58[c] *2*	15557.7+y	K+30	
17208.2+y	K+32	1486.4 *3*	0.40[c] *2*	15721.8+y	K+30	
18366.7+y	K+34	1430.3 *2*	0.46[c] *2*	16936.3+y	K+32	
18751.4+y	K+34	1543.2 *4*	0.19[c] *1*	17208.2+y	K+32	
19848.9+y	K+36	1482.2 *3*	0.26[c] *2*	18366.7+y	K+34	
20351.6+y	K+36	1600.1 *6*	0.08[c] *1*	18751.4+y	K+34	
21384.3+y	K+38	1535.4 *4*	0.097[c] *10*	19848.9+y	K+36	
22010.0+y	K+38	1658.4 *6*	0.044[c] *10*	20351.6+y	K+36	
22972.1+y	J+40	1587.8 *7*	0.035[c] *10*	21384.3+y	K+38	
712.5+z	L+2	712.5 *3*	0.76[c] *2*	z	L≈(28$^-$)	
1473.7+z	L+4	761.2 *3*	0.89[c] *3*	712.5+z	L+2	
2284.2+z	L+6	810.5 *3*	0.94[c] *3*	1473.7+z	L+4	
3144.2+z	L+8	860.0 *3*	0.97[c] *2*	2284.2+z	L+6	
4054.7+z	L+10	910.6 *4*	1.03[c] *2*	3144.2+z	L+8	
5017.2+z	L+12	962.5 *4*	1.02[c] *2*	4054.7+z	L+10	

$^{150}_{64}Gd_{86}$-23

Adopted Levels, Gammas (continued)

γ(^{150}Gd) (continued)

E_i(level)	J_i^π	E_γ	I_γ[a]	E_f	J_f^π	Comments
6032.1+z	L+14	1014.9 *3*	1.03[c] *2*	5017.2+z	L+12	
7100.3+z	L+16	1068.2 *2*	1.03[c] *2*	6032.1+z	L+14	
8222.7+z	L+18	1122.4 *3*	1.01[c] *2*	7100.3+z	L+16	
9399.8+z	L+20	1177.1 *3*	1.03[c] *2*	8222.7+z	L+18	
10632.1+z	L+22	1232.2 *3*	1.02[c] *2*	9399.8+z	L+20	
11919.8+z	L+24	1287.7 *3*	0.97[c] *3*	10632.1+z	L+22	
13263.6+z	L+26	1343.8 *3*	0.90[c] *2*	11919.8+z	L+24	
14664.1+z	L+28	1400.5 *3*	0.76[c] *2*	13263.6+z	L+26	
16121.2+z	L+30	1457.1 *3*	0.59[c] *2*	14664.1+z	L+28	
17635.1+z	L+32	1513.9 *3*	0.38[c] *1*	16121.2+z	L+30	
19204.2+z	L+34	1569.1 *3*	0.23[c] *1*	17635.1+z	L+32	
771.5+u	M+2	771.6 *4*		u	M≈(27$^+$)	
1588.6+u	M+4	817.1 *3*	0.78[c] *3*	771.5+u	M+2	
2451.5+u	M+6	862.9 *2*	0.88[c] *3*	1588.6+u	M+4	
3359.9+u	M+8	908.4 *2*	0.89[c] *3*	2451.5+u	M+6	
4313.1+u	M+10	953.2 *2*	0.99[c] *3*	3359.9+u	M+8	
5311.3+u	M+12	998.3 *2*	0.93[c] *3*	4313.1+u	M+10	
6353.7+u	M+14	1042.4 *3*	0.93[c] *3*	5311.3+u	M+12	
7441.4+u	M+16	1087.7 *4*	1.06[c] *3*	6353.7+u	M+14	
8574.4+u	M+18	1133.1 *2*	1.04[c] *3*	7441.4+u	M+16	
9753.9+u	M+20	1179.4 *2*	1.04[c] *3*	8574.4+u	M+18	
10980.9+u	M+22	1227.1 *4*	1.03[c] *3*	9753.9+u	M+20	
12256.0+u	M+24	1275.1 *2*	1.00[c] *4*	10980.9+u	M+22	
13581.2+u	M+26	1325.2 *3*	0.91[c] *4*	12256.0+u	M+24	
14956.3+u	M+28	1375.1 *3*	0.71[c] *4*	13581.2+u	M+26	
16382.4+u	M+30	1426.1 *3*	0.53[c] *3*	14956.3+u	M+28	
17862.5+u	M+32	1480.1 *3*	0.32[c] *3*	16382.4+u	M+30	
19379.2+u	M+34	1516.7 *4*		17862.5+u	M+32	
20915.2+u	M+36	1536.0 *4*		19379.2+u	M+34	E_γ: From 1998ErZY.
22505.2+u	M+38	1589.9 *8*		20915.2+u	M+36	
733.20+v	N+2	733.2 *2*		v	N≈(29$^+$)	
1511.4+v	N+4	778.2 *2*		733.20+v	N+2	
2341.2+v	N+6	829.9 *2*	0.93[c] *2*	1511.4+v	N+4	
3221.1+v	N+8	879.8 *2*	0.99[c] *2*	2341.2+v	N+6	
4151.2+v	N+10	930.2 *2*	1.01[c] *2*	3221.1+v	N+8	
5132.6+v	N+12	981.4 *2*	1.03[c] *1*	4151.2+v	N+10	
6166.5+v	N+14	1033.9 *2*	1.04[c] *1*	5132.6+v	N+12	
7253.5+v	N+16	1087.0 *2*	1.03[c] *1*	6166.5+v	N+14	
8394.9+v	N+18	1141.4 *2*	1.02[c] *1*	7253.5+v	N+16	
9590.4+v	N+20	1195.6 *3*	0.98[c] *1*	8394.9+v	N+18	

$^{150}_{64}Gd_{86}$-24

Adopted Levels, Gammas (continued)

γ(^{150}Gd) (continued)

E_i(level)	J_i^π	E_γ	I_γ[a]	E_f	J_f^π	E_i(level)	J_i^π	E_γ	I_γ[a]	E_f	J_f^π
10841.4+v	N+22	1250.9 *2*	0.95[c] *1*	9590.4+v	N+20	16199.5+s	J2+28	1534.0 *5*	0.37[c] *3*	14665.5+s	J2+26
12147.9+v	N+24	1306.5 *2*	0.95[c] *1*	10841.4+v	N+22	17793.6+s	J2+30	1594.1 *7*	0.17[c] *3*	16199.5+s	J2+28
13510.5+v	N+26	1362.7 *3*	0.91[c] *1*	12147.9+v	N+24	19446.1+s	J2+32	1652.5 *9*	0.05[c] *3*	17793.6+s	J2+30
14929.5+v	N+28	1419.0 *3*	0.77[c] *2*	13510.5+v	N+26	827.6+t	J3+2	827.8 *5*	0.59[c] *2*	t	J3≈(33$^+$)
16404.8+v	N+30	1475.3 *4*	0.51[c] *2*	14929.5+v	N+28	1702.9+t	J3+4	875.4 *4*	0.70[c] *2*	827.6+t	J3+2
17937.1+v	N+32	1532.3 *6*	0.34[c] *2*	16404.8+v	N+30	2627.2+t	J3+6	924.4 *3*	0.91[c] *2*	1702.9+t	J3+4
19527.0+v	N+34	1589.9 *7*	0.14[c] *3*	17937.1+v	N+32	3601.5+t	J3+8	974.4 *4*	0.96[c] *2*	2627.2+t	J3+6
21171.8+v	N+36	1644.7 *9*		19527.0+v	N+34	4626.6+t	J3+10	1025.1 *3*	1.00[c] *2*	3601.5+t	J3+8
711.1+w	J1+2	711.2 *5*	[c]	w	J1≈(28$^+$)	5703.4+t	J3+12	1076.9 *4*	0.99[c] *2*	4626.6+t	J3+10
1469.4+w	J1+4	758.5 *7*	[c]	711.1+w	J1+2	6832.3+t	J3+14	1128.9 *4*	1.02[c] *2*	5703.4+t	J3+12
2275.8+w	J1+6	806.4 *2*	0.78[c] *1*	1469.4+w	J1+4	8014.8+t	J3+16	1182.5 *5*	1.04[c] *2*	6832.3+t	J3+14
3131.3+w	J1+8	855.6 *2*	0.86[c] *1*	2275.8+w	J1+6	9250.8+t	J3+18	1236.1 *4*	0.98[c] *2*	8014.8+t	J3+16
4036.7+w	J1+10	905.4 *2*	0.92[c] *1*	3131.3+w	J1+8	10540.9+t	J3+20	1290.1 *4*	0.97[c] *2*	9250.8+t	J3+18
4993.1+w	J1+12	956.4 *2*	1.00[c] *1*	4036.7+w	J1+10	11885.9+t	J3+22	1345.0 *4*	0.97[c] *2*	10540.9+t	J3+20
6001.3+w	J1+14	1008.2 *2*	1.04[c] *1*	4993.1+w	J1+12	13286.0+t	J3+24	1400.1 *5*	0.84[c] *2*	11885.9+t	J3+22
7062.1+w	J1+16	1060.8 *2*	1.01[c] *1*	6001.3+w	J1+14	14741.9+t	J3+26	1455.9 *6*	0.67[c] *2*	13286.0+t	J3+24
8176.0+w	J1+18	1113.9 *2*	1.01[c] *1*	7062.1+w	J1+16	16253.7+t	J3+28	1511.8 *7*	0.50[c] *3*	14741.9+t	J3+26
9344.4+w	J1+20	1168.4 *2*	1.03[c] *1*	8176.0+w	J1+18	17821.0+t	J3+30	1567.3 *9*	0.18[c] *4*	16253.7+t	J3+28
10567.0+w	J1+22	1222.6 *2*	1.00[c] *1*	9344.4+w	J1+20	804.0+a	J4+2	804.1 *4*		a	J4≈(32$^+$)
11845.0+w	J1+24	1278.0 *2*	0.94[c] *1*	10567.0+w	J1+22	1655.6+a	J4+4	851.7 *4*	0.87[c] *1*	804.0+a	J4+2
13178.7+w	J1+26	1333.7 *2*	0.75[c] *1*	11845.0+w	J1+24	2555.8+a	J4+6	900.2 *3*	0.91[c] *1*	1655.6+a	J4+4
14568.9+w	J1+28	1390.2 *3*	0.58[c] *1*	13178.7+w	J1+26	3507.0+a	J4+8	951.3 *4*	0.95[c] *1*	2555.8+a	J4+6
16015.7+w	J1+30	1446.8 *3*	0.41[c] *2*	14568.9+w	J1+28	4508.5+a	J4+10	1001.5 *3*	0.98[c] *1*	3507.0+a	J4+8
17519.6+w	J1+32	1503.9 *4*	0.24[c] *2*	16015.7+w	J1+30	5562.2+a	J4+12	1053.8 *4*	0.99[c] *1*	4508.5+a	J4+10
19080.3+w	J1+34	1560.7 *6*	0.15[c] *2*	17519.6+w	J1+32	6660.4+a	J4+14	1098.1 *3*	0.99[c] *1*	5562.2+a	J4+12
20698.2+w	J1+36	1617.9 *8*	0.08[c] *3*	19080.3+w	J1+34	7822.2+a	J4+16	1161.8 *3*	1.00[c] *1*	6660.4+a	J4+14
800.4+s	J2+2	800.6 *4*	0.38[c] *2*	s	J2≈(31$^+$)	9034.6+a	J4+18	1212.4 *3*	1.00[c] *1*	7822.2+a	J4+16
1650.3+s	J2+4	850.0 *3*	0.83[c] *2*	800.4+s	J2+2	10300.5+a	J4+20	1265.9 *5*	1.00[c] *1*	9034.6+a	J4+18
2552.7+s	J2+6	902.4 *2*	0.90[c] *2*	1650.3+s	J2+4	11621.0+a	J4+22	1320.6 *5*	1.01[c] *1*	10300.5+a	J4+20
3507.9+s	J2+8	955.3 *3*	0.97[c] *2*	2552.7+s	J2+6	12996.6+a	J4+24	1375.6 *5*	0.92[c] *2*	11621.0+a	J4+22
4518.1+s	J2+10	1010.2 *2*	1.03[c] *1*	3507.9+s	J2+8	14427.3+a	J4+26	1430.7 *8*	0.84[c] *2*	12996.6+a	J4+24
5584.2+s	J2+12	1066.2 *2*	1.00[c] *1*	4518.1+s	J2+10	15912.7+a	J4+28	1485.4 *9*	0.48[c] *2*	14427.3+a	J4+26
6706.4+s	J2+14	1122.2 *2*	0.99[c] *1*	5584.2+s	J2+12	17451.6+a	J4+30	1538.9 *9*	0.33[c] *3*	15912.7+a	J4+28
7886.2+s	J2+16	1179.8 *2*	0.99[c] *1*	6706.4+s	J2+14	830.0+b	J5+2	830.1 *5*	0.86[c] *1*	b	J5≈(34$^+$)
9124.2+s	J2+18	1238.0 *3*	0.99[c] *1*	7886.2+s	J2+16	1706.5+b	J5+4	876.6 *4*	0.91[c] *1*	830.0+b	J5+2
10420.8+s	J2+20	1296.6 *3*	0.99[c] *2*	9124.2+s	J2+18	2629.1+b	J5+6	922.6 *5*	0.95[c] *1*	1706.5+b	J5+4
11776.5+s	J2+22	1355.7 *3*	0.84[c] *1*	10420.8+s	J2+20	3599.1+b	J5+8	970.0 *3*	0.97[c] *1*	2629.1+b	J5+6
13191.5+s	J2+24	1415.0 *3*	0.68[c] *2*	11776.5+s	J2+22	4615.7+b	J5+10	1016.6 *4*	0.97[c] *1*	3599.1+b	J5+8
14665.5+s	J2+26	1474.0 *4*	0.53[c] *2*	13191.5+s	J2+24	5680.0+b	J5+12	1064.3 *4*	0.99[c] *1*	4615.7+b	J5+10

$^{150}_{64}Gd_{86}$-25

Adopted Levels, Gammas (continued)

γ(^{150}Gd) (continued)

E_i(level)	J_i^π	E_γ	I_γ[a]	E_f	J_f^π	Comments
6792.0+b	J5+14	1112.0 *5*	1.00[c] *1*	5680.0+b	J5+12	
7952.0+b	J5+16	1160.0 *7*	0.97[c] *1*	6792.0+b	J5+14	
9159.7+b	J5+18	1207.7 *6*	1.01[c] *1*	7952.0+b	J5+16	
10414.1+b	J5+20	1254.4 *5*	1.01[c] *1*	9159.7+b	J5+18	
11716.8+b	J5+22	1302.7 *5*	1.01[c] *1*	10414.1+b	J5+20	
13068.5+b	J5+24	1351.7 *5*	1.01[c] *1*	11716.8+b	J5+22	
14468.6+b	J5+26	1400.1 *5*	0.99[c] *2*	13068.5+b	J5+24	
15917.5+b	J5+28	1448.9 *5*	0.82[c] *2*	14468.6+b	J5+26	
17412.5+b	J5+30	1495.0 *9*	0.50[c] *2*	15917.5+b	J5+28	
815.1+c	J6+2	815.1 *7*		c	J6≈(29^+)	
1664.1+c	J6+4	849.1 *4*		815.1+c	J6+2	
2553.1+c	J6+6	889.1 *8*		1664.1+c	J6+4	
3430.8+c	J6+8	877.7 *6*	0.79[c] *2*	2553.1+c	J6+6	
4353.5+c	J6+10	922.7 *5*	0.97[c] *2*	3430.8+c	J6+8	
5322.9+c	J6+12	969.4 *5*	0.99[c] *1*	4353.5+c	J6+10	
6338.5+c	J6+14	1015.6 *5*	0.99[c] *1*	5322.9+c	J6+12	
7403.9+c	J6+16	1065.4 *6*	0.99[c] *1*	6338.5+c	J6+14	
8516.3+c	J6+18	1112.5 *6*	1.00[c] *1*	7403.9+c	J6+16	
9682.2+c	J6+20	1165.9 *7*	1.02[c] *1*	8516.3+c	J6+18	
10901.0+c	J6+22	1218.8 *6*	0.99[c] *2*	9682.2+c	J6+20	
12172.4+c	J6+24	1271.4 *6*	0.94[c] *2*	10901.0+c	J6+22	
13499.3+c	J6+26	1326.9 *5*	0.80[c] *2*	12172.4+c	J6+24	
14881.7+c	J6+28	1382.4 *7*	0.73[c] *2*	13499.3+c	J6+26	
16320.1+c	J6+30	1438.4 *6*	0.59[c] *2*	14881.7+c	J6+28	
17816.2+c	J6+32	1496.1 *8*	0.42[c] *2*	16320.1+c	J6+30	
19373+c	J6+34	1556.6 *9*	0.18[c] *3*	17816.2+c	J6+32	
808.9+d	J7+2	808.9 *5*	0.76[c] *2*	d	J7≈(28^+)	
1667.4+d	J7+4	858.6 *7*		808.9+d	J7+2	
2577.0+d	J7+6	909.8 *8*		1667.4+d	J7+4	
3433.3+d	J7+8	856.5 *8*	0.75[c] *2*	2577.0+d	J7+6	I_γ: Probably combined for 856.6+858.6.
4334.0+d	J7+10	900.7 *5*	0.89[c] *2*	3433.3+d	J7+8	I_γ: Probably combined for 900.7+909.8.
5279.6+d	J7+12	945.7 *5*	0.95[c] *2*	4334.0+d	J7+10	
6271.1+d	J7+14	991.6 *5*	1.02[c] *2*	5279.6+d	J7+12	
7311.5+d	J7+16	1040.3 *8*	1.00[c] *1*	6271.1+d	J7+14	
8404.3+d	J7+18	1093.0 *9*	1.00[c] *1*	7311.5+d	J7+16	
9544.6+d	J7+20	1140.3 *5*	0.99[c] *1*	8404.3+d	J7+18	
10736.6+d	J7+22	1192.0 *5*	0.98[c] *1*	9544.6+d	J7+20	
11981.5+d	J7+24	1244.9 *6*	0.97[c] *1*	10736.6+d	J7+22	
13280.5+d	J7+26	1299.1 *6*	0.80[c] *1*	11981.5+d	J7+24	
14635.3+d	J7+28	1354.8 *8*	0.63[c] *1*	13280.5+d	J7+26	

$^{150}_{64}Gd_{86}$-26

Adopted Levels, Gammas (continued)

$\gamma(^{150}Gd)$ (continued)

E_i(level)	J_i^π	E_γ	I_γ[a]	E_f	J_f^π
16047+d	J7+30	1411.4 *6*	0.51[c] *2*	14635.3+d	J7+28
17515+d	J7+32	1468.6 *8*	0.43[c] *3*	16047+d	J7+30
19046+d	J7+34	1530.8 *8*	0.35[c] *4*	17515+d	J7+32
20638+d	J7+36	1592.1 *9*	0.24[c] *4*	19046+d	J7+34

† Transition multipolarities were determined from K-conversion coefficients in ^{150}Tb ε decay (3.48 h) (1977Ha31) or ^{150}Tb ε decay (5.8 min) (1977Ha21), unless otherwise noted.
‡ From (p,2nγ).
# From ^{150}Sm(α,4nγ).
@ From ^{124}Sn(^{30}Si,4nγ).
& From (α,4nγ).
[a] Relative photon branching at each level. Data from ^{150}Tb ε decay (3.48 h), except as noted.
[b] From (α,2nγ).
[c] Relative intensity within each SD band, normalized to ≈1 for the most intense transitions in the band. The values are read off the intensity plots provided by 1998ErZY.
[d] Placement may not be unique.
[e] Corrected for unresolved impurity peak by authors.
[f] Assumed stretched E2 although E1 not completely excluded by α(K)exp.
[g] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.
[h] Multiply placed with undivided intensity.
[i] Placement of transition in the level scheme is uncertain.

$^{150}_{64}Gd_{86}$-27

Adopted Levels, Gammas

Level Scheme

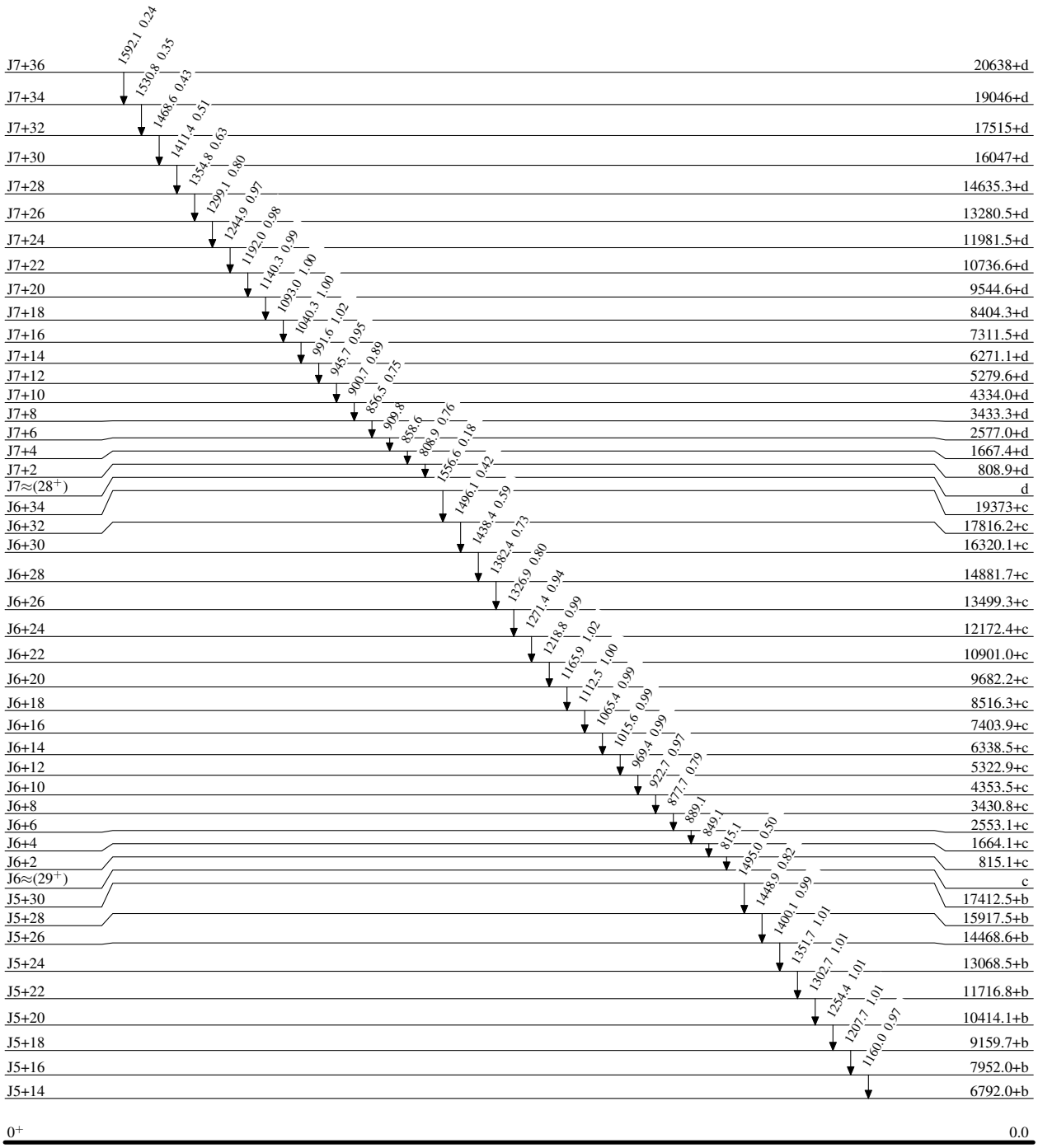
Intensities: Type not specified

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$

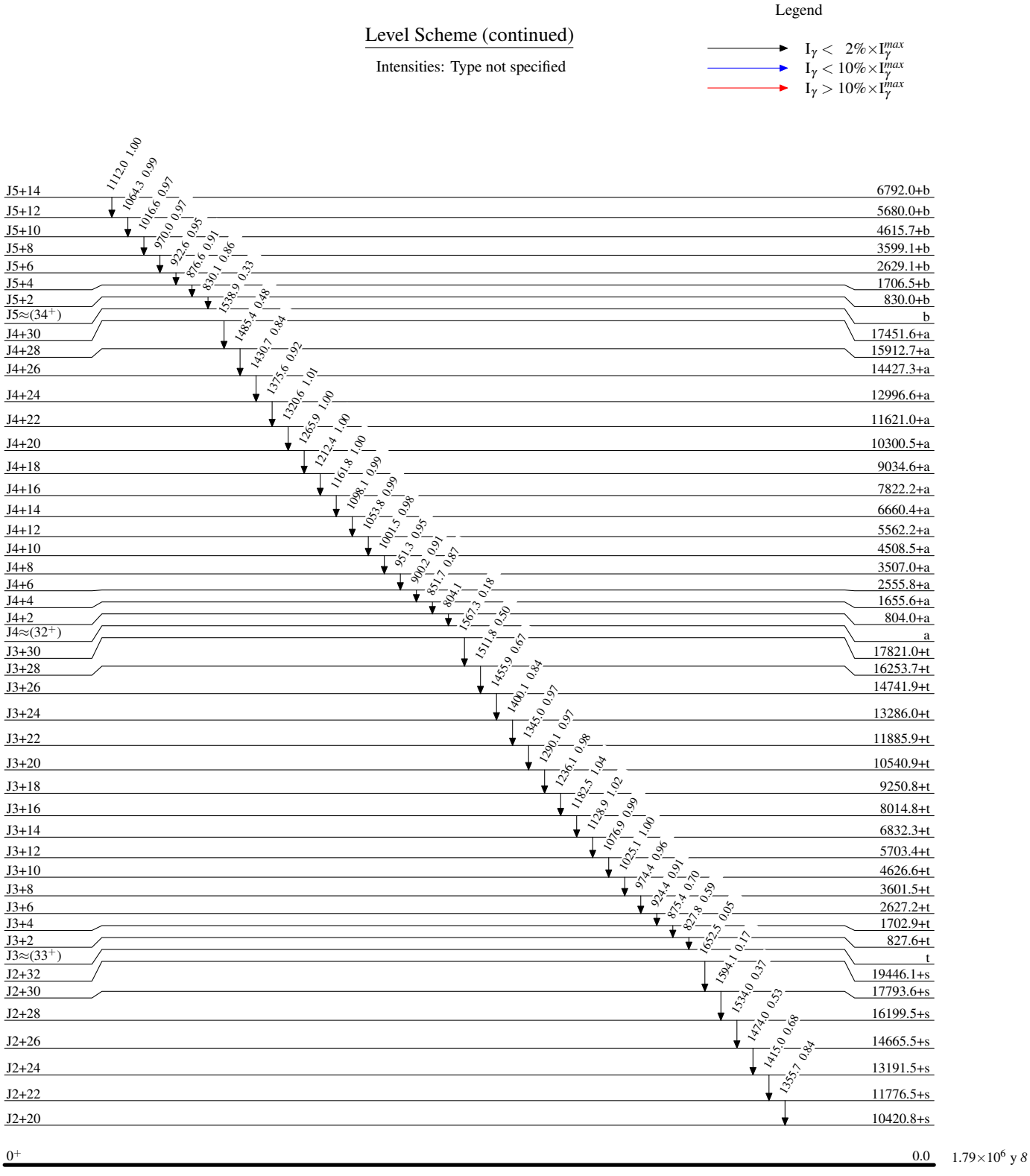


$^{150}_{64}Gd_{86}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

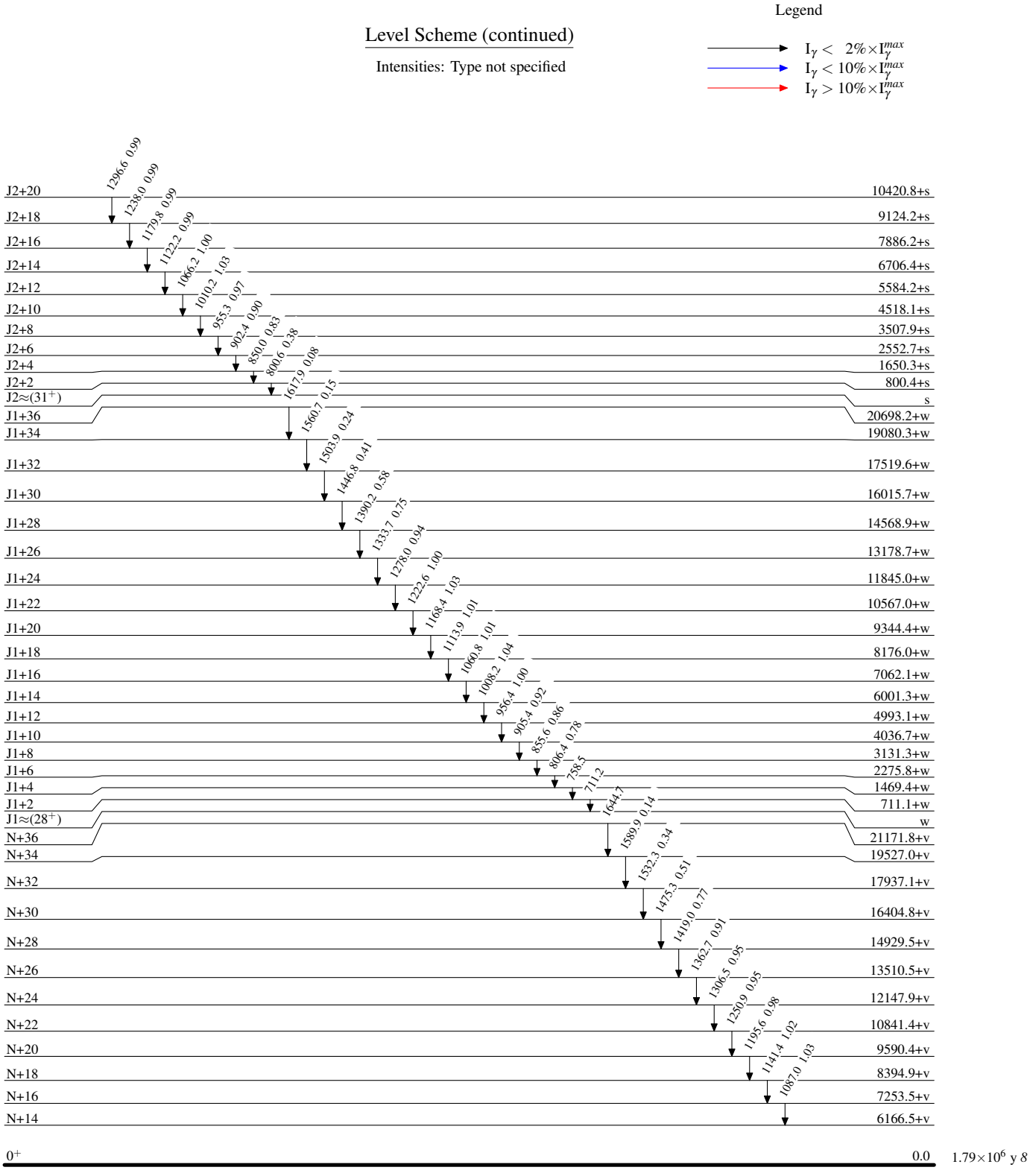


$^{150}_{64}Gd_{86}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified



$^{150}_{64}Gd_{86}$

Adopted Levels, Gammas

Level Scheme (continued)

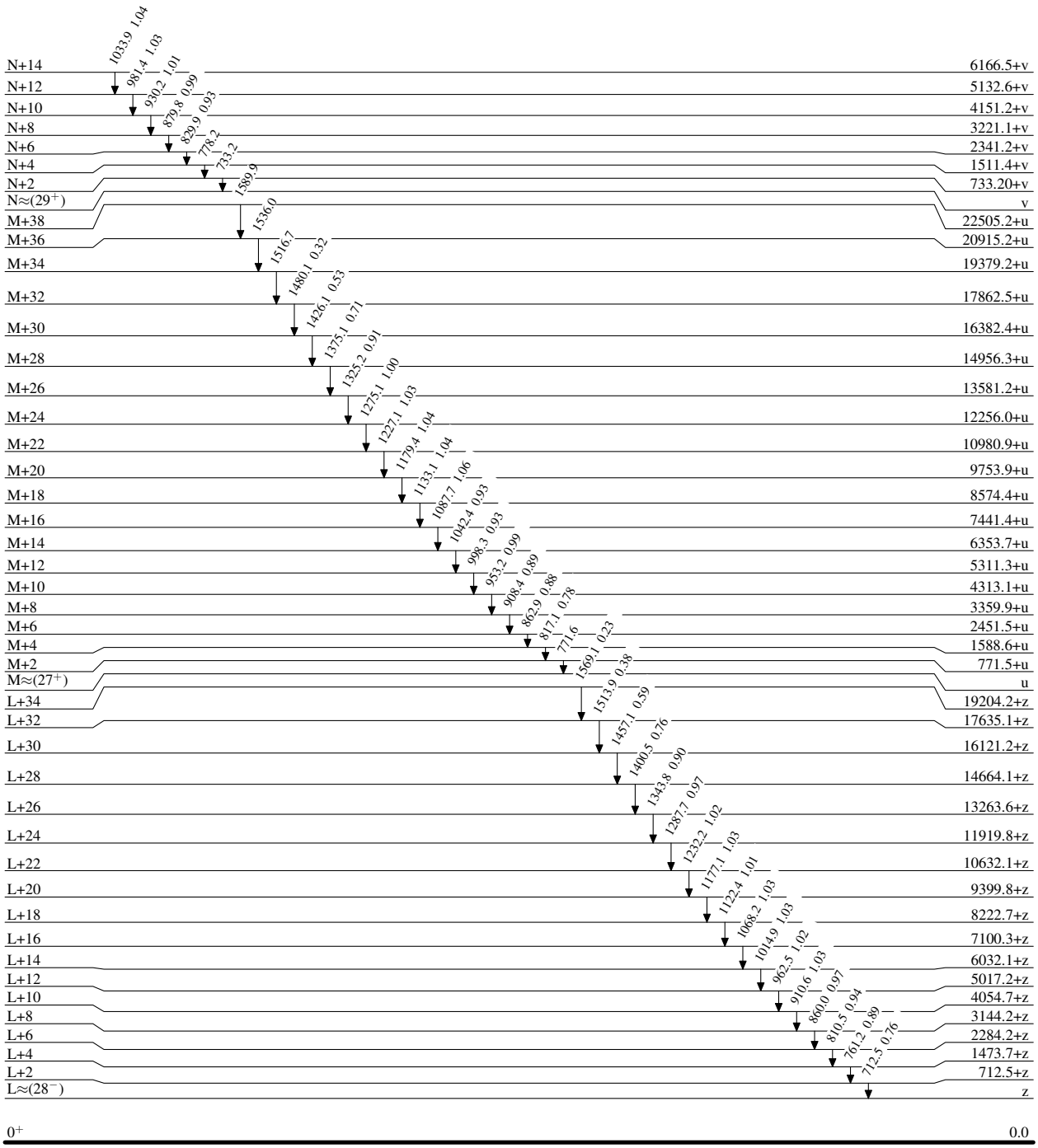
Intensities: Type not specified

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$



$^{150}_{64}Gd_{86}$

Adopted Levels, Gammas

Level Scheme (continued)

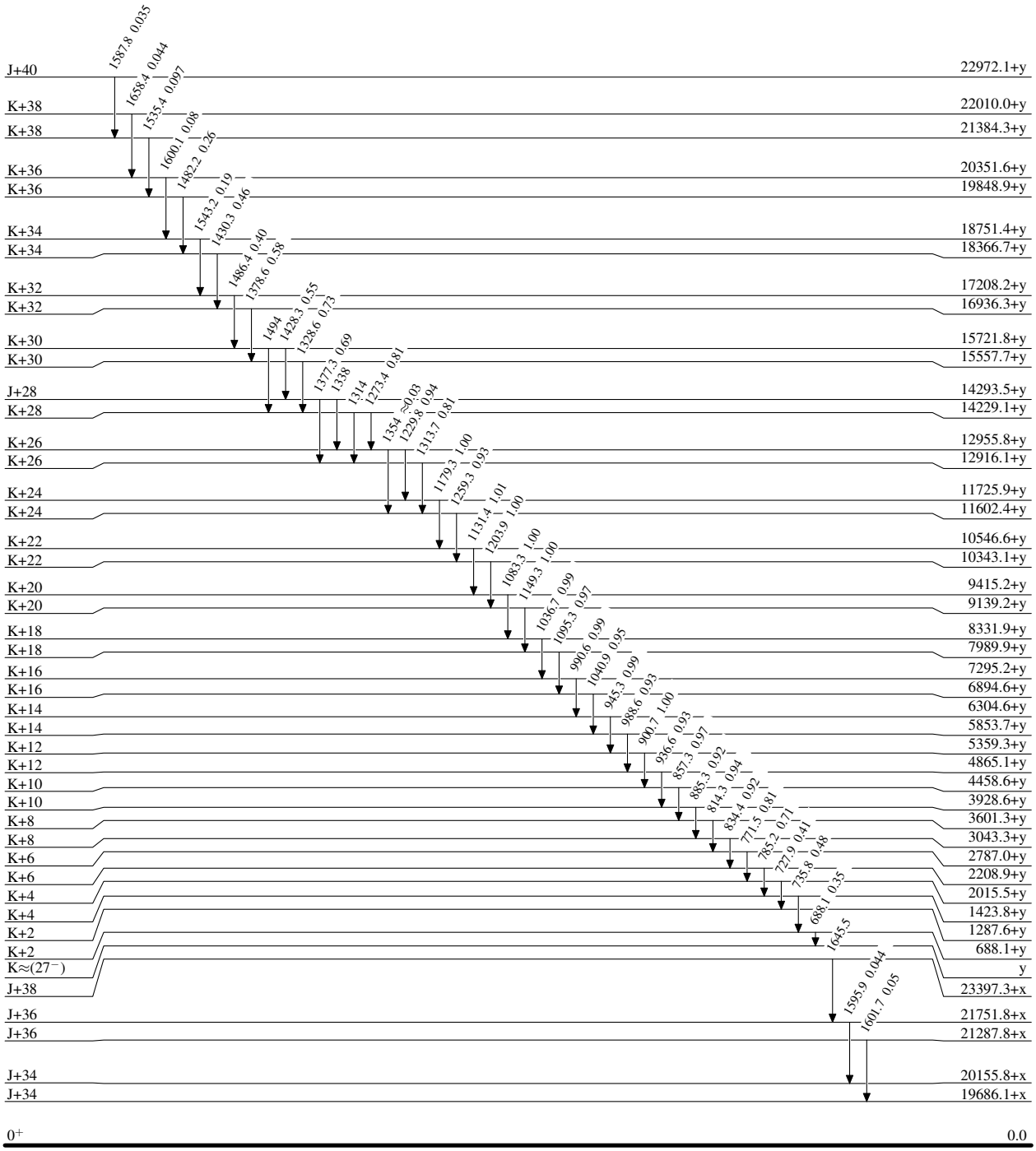
Intensities: Type not specified

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$



$^{150}_{64}Gd_{86}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

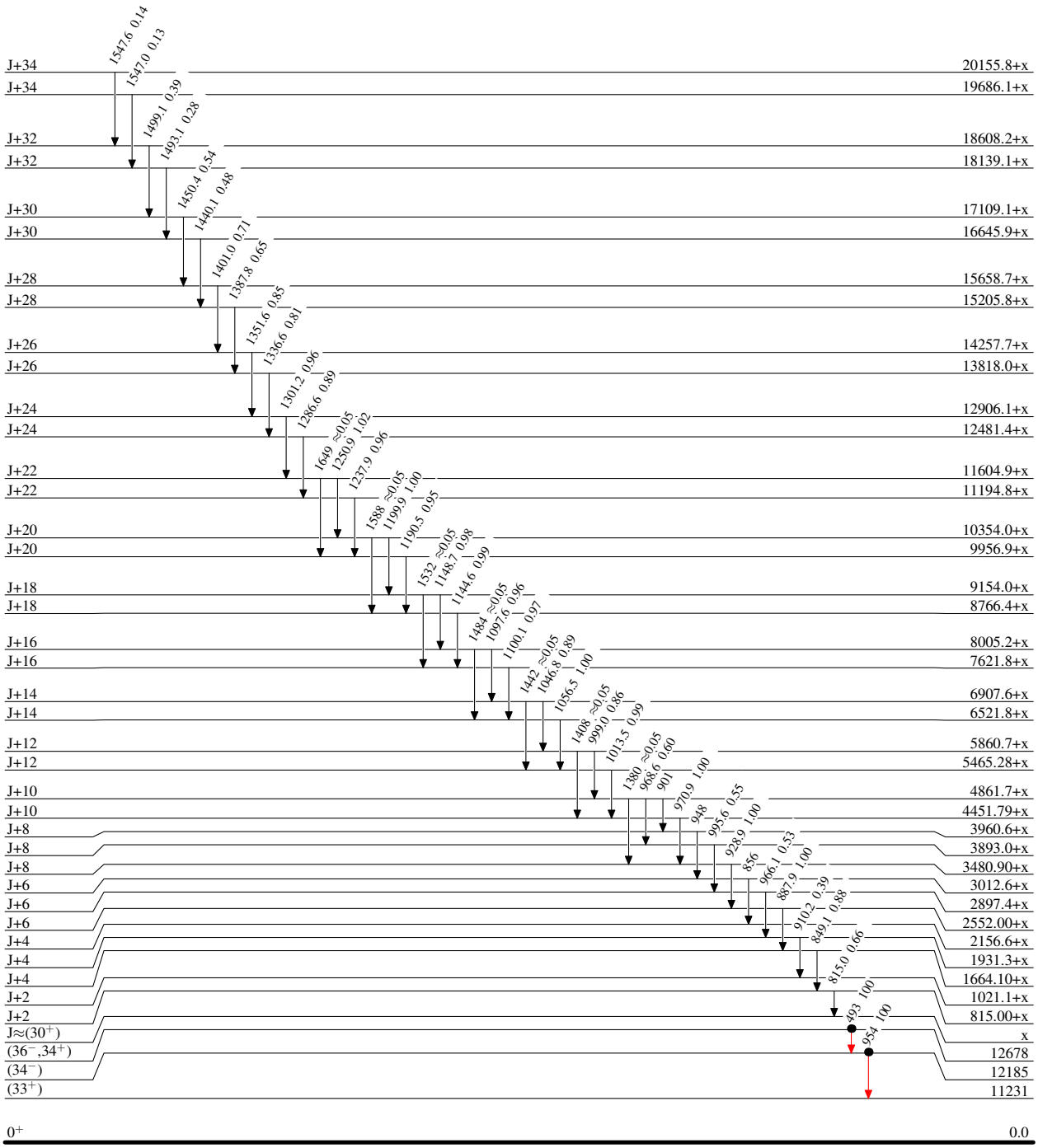
Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$

Coincidence



$^{150}_{64}Gd_{86}$ 1.79×10^{6} y *8*

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

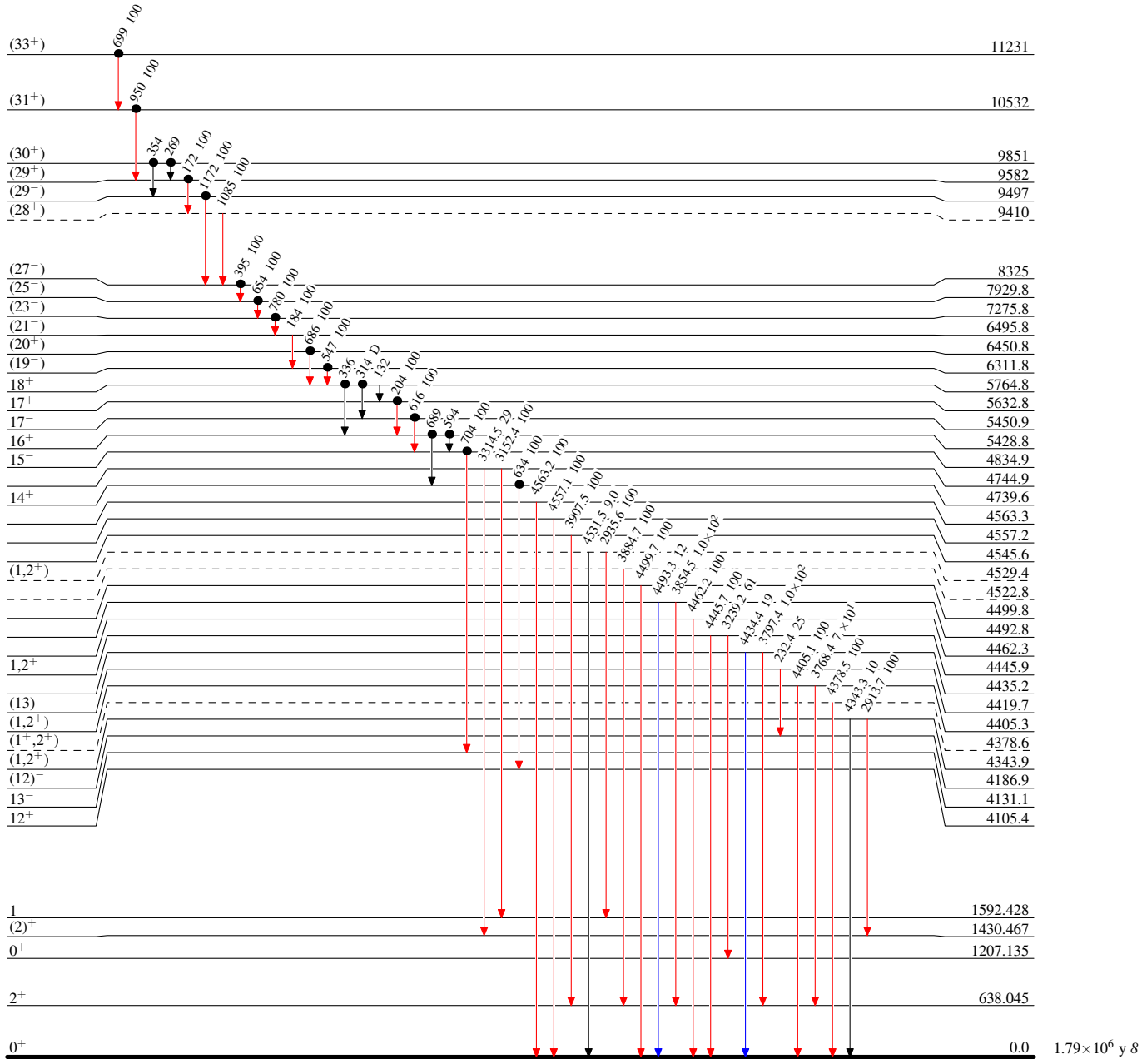
Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$

Coincidence



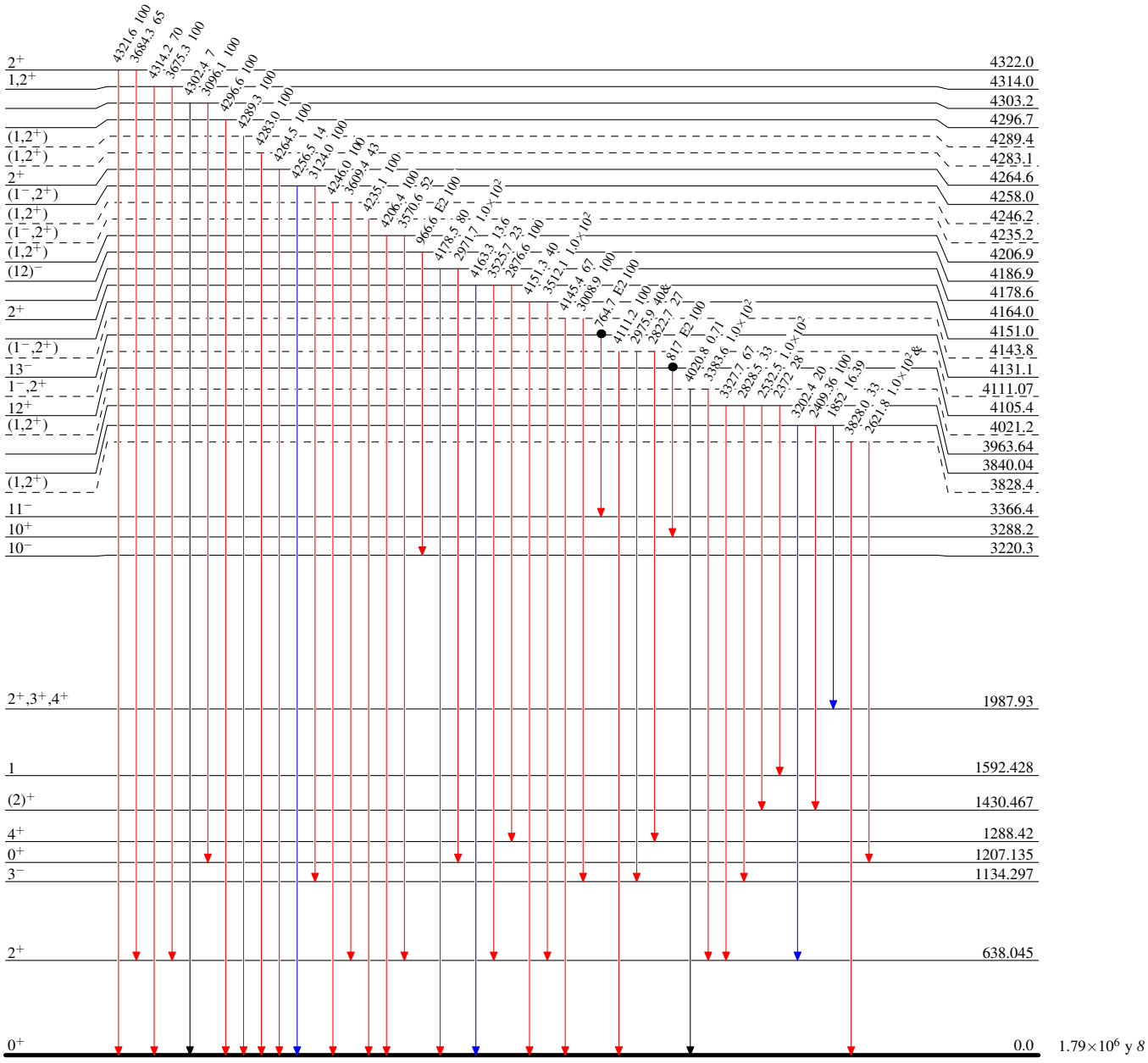
$^{150}_{64}Gd_{86}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified
& Multiply placed: undivided intensity given

Legend
$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$
Coincidence



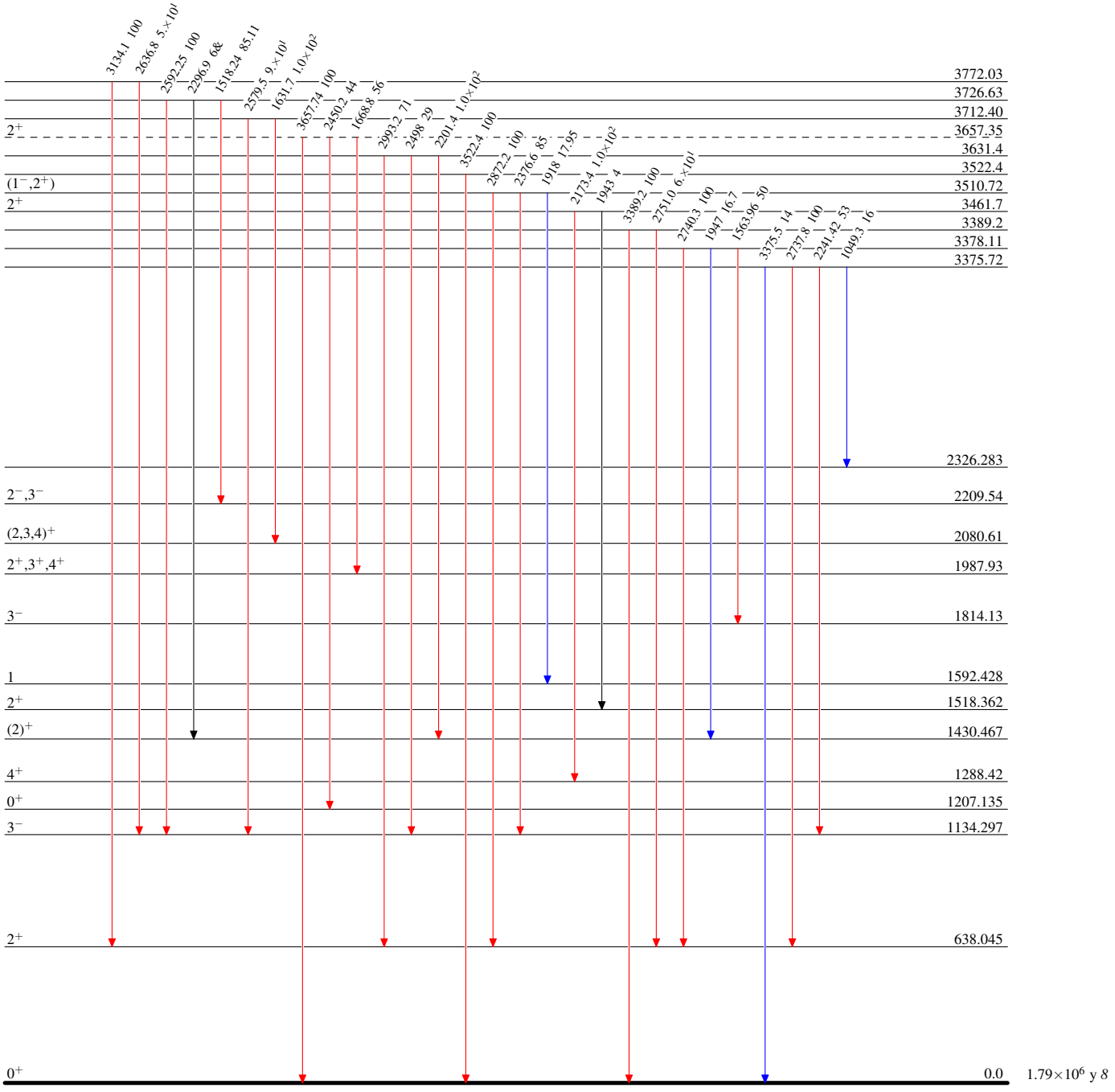
$^{150}_{64}Gd_{86}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified
& Multiply placed: undivided intensity given

Legend
$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$



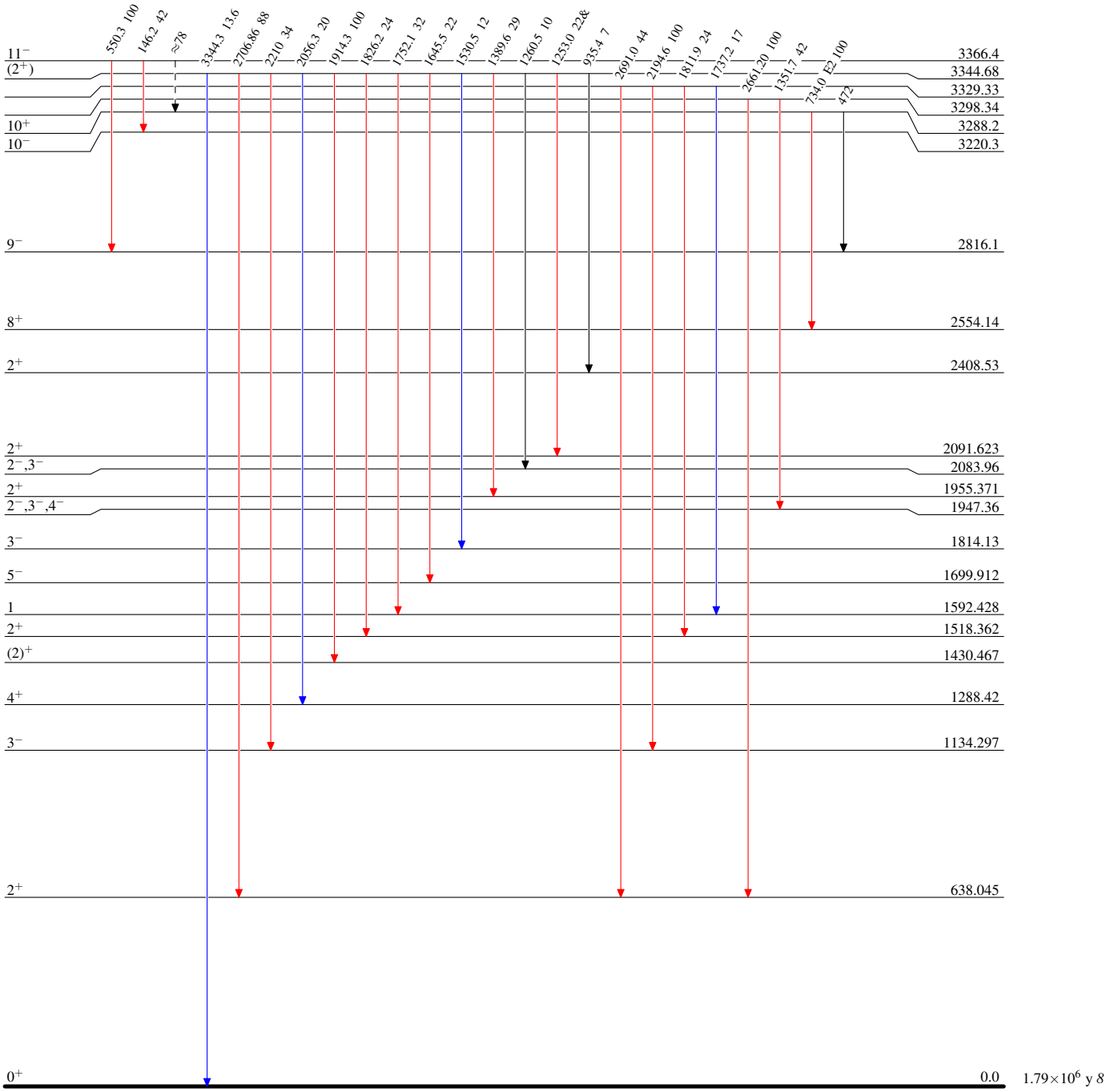
$^{150}_{64}Gd_{86}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified
& Multiply placed: undivided intensity given

Legend
$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$
γ Decay (Uncertain)

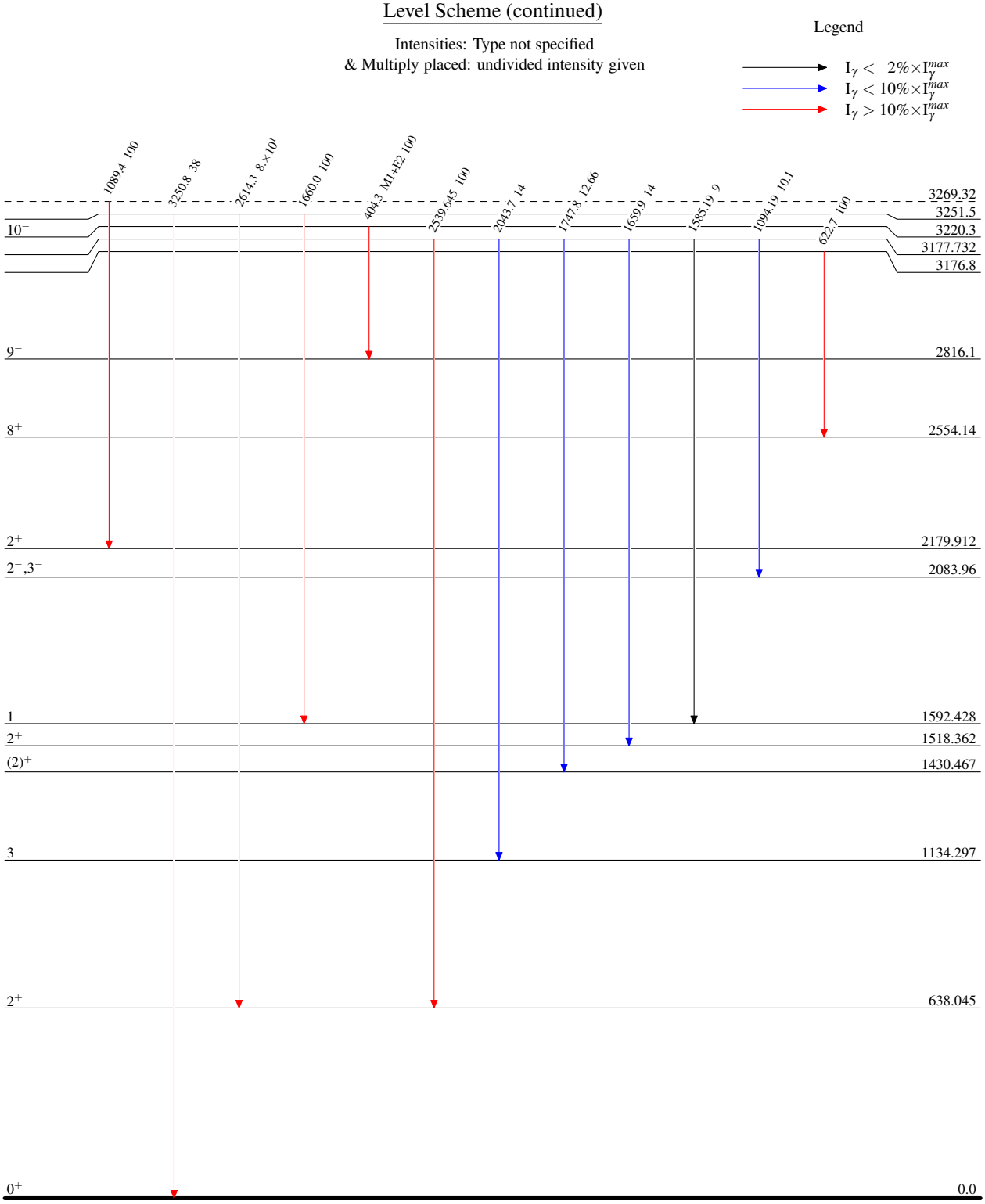


$^{150}_{64}Gd_{86}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified
& Multiply placed: undivided intensity given

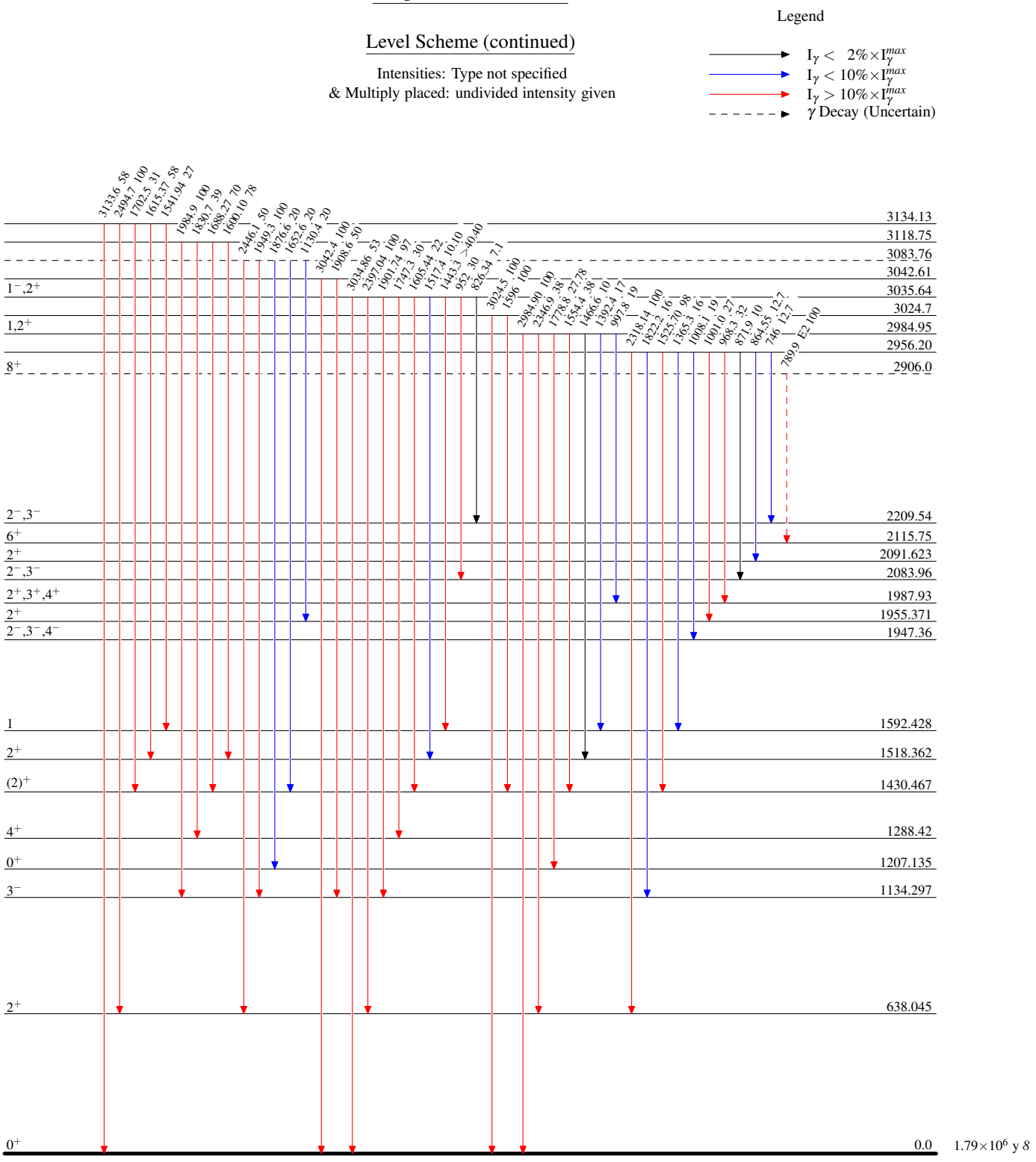


$^{150}_{64}Gd_{86}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified
& Multiply placed: undivided intensity given

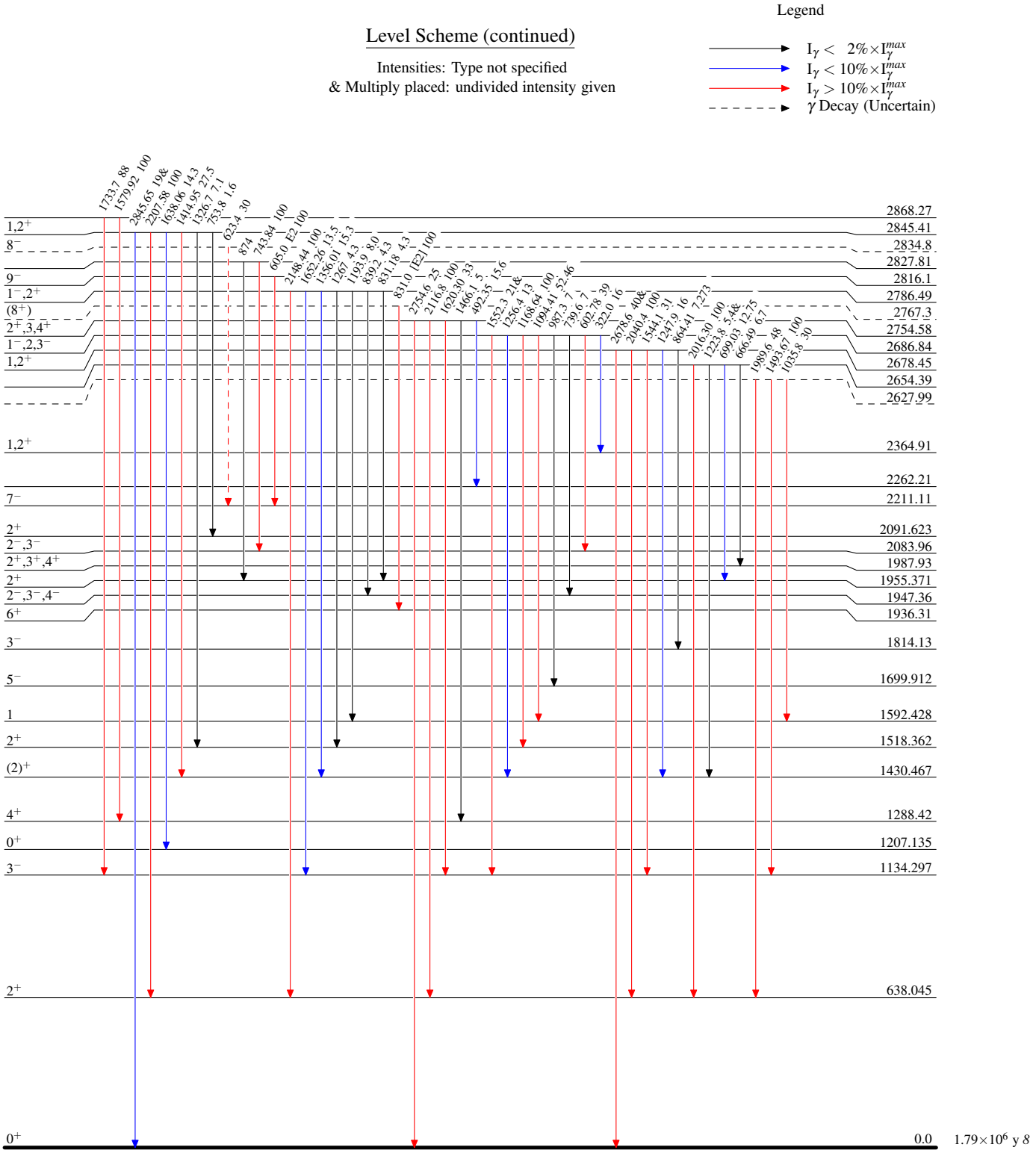


$^{150}_{64}Gd_{86}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified
& Multiply placed: undivided intensity given

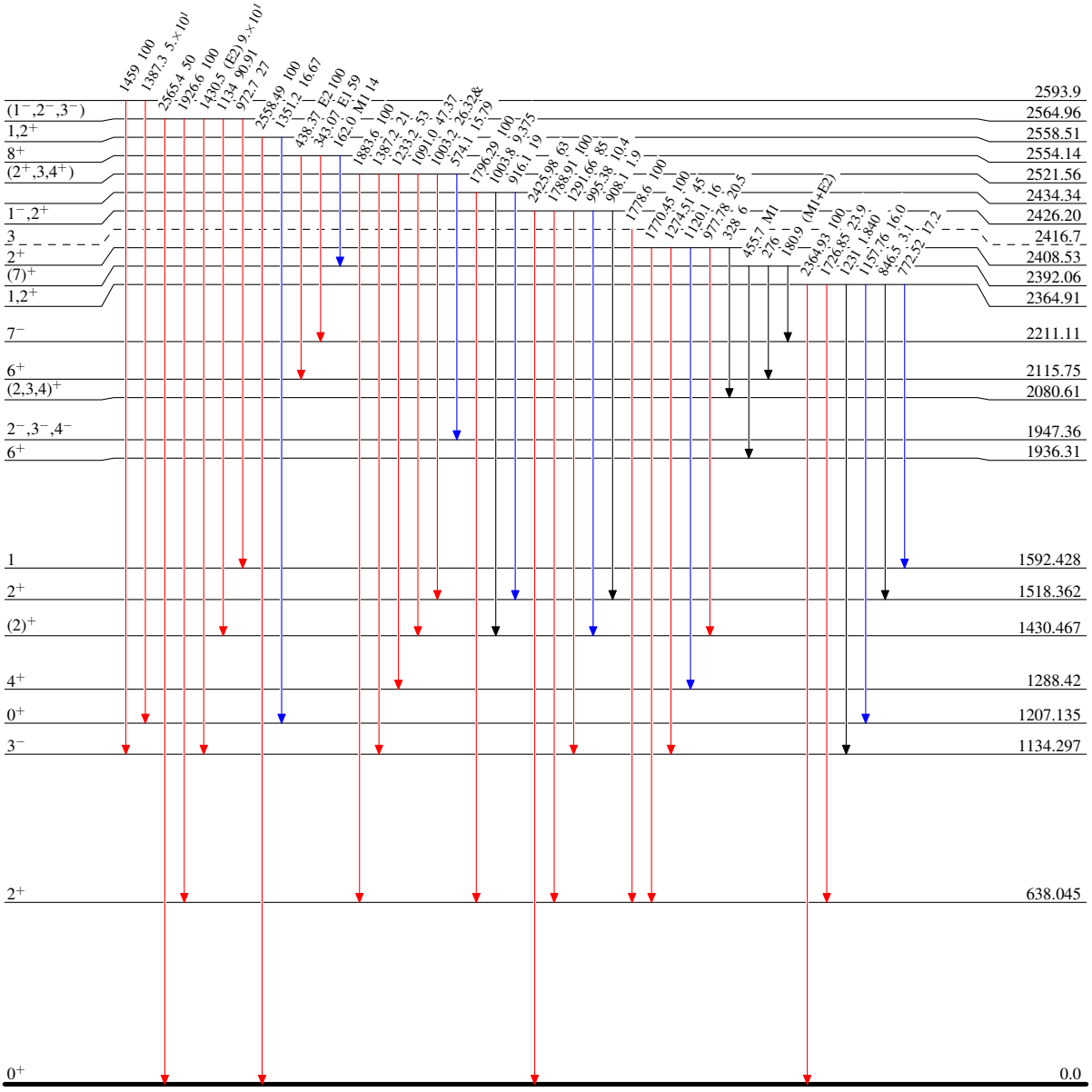


Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified
& Multiply placed: undivided intensity given

Legend
$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$

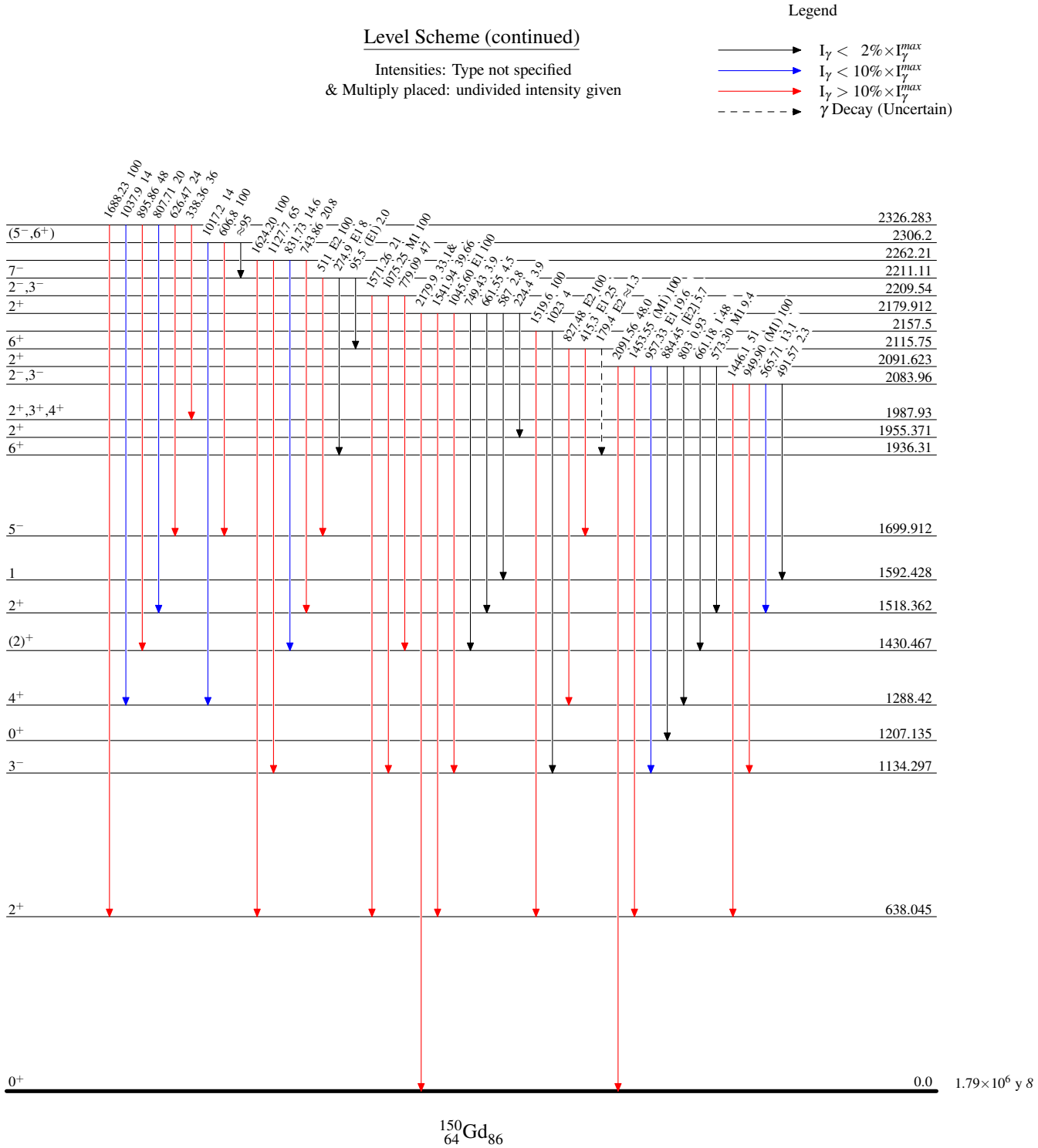


$^{150}_{64}Gd_{86}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified
& Multiply placed: undivided intensity given

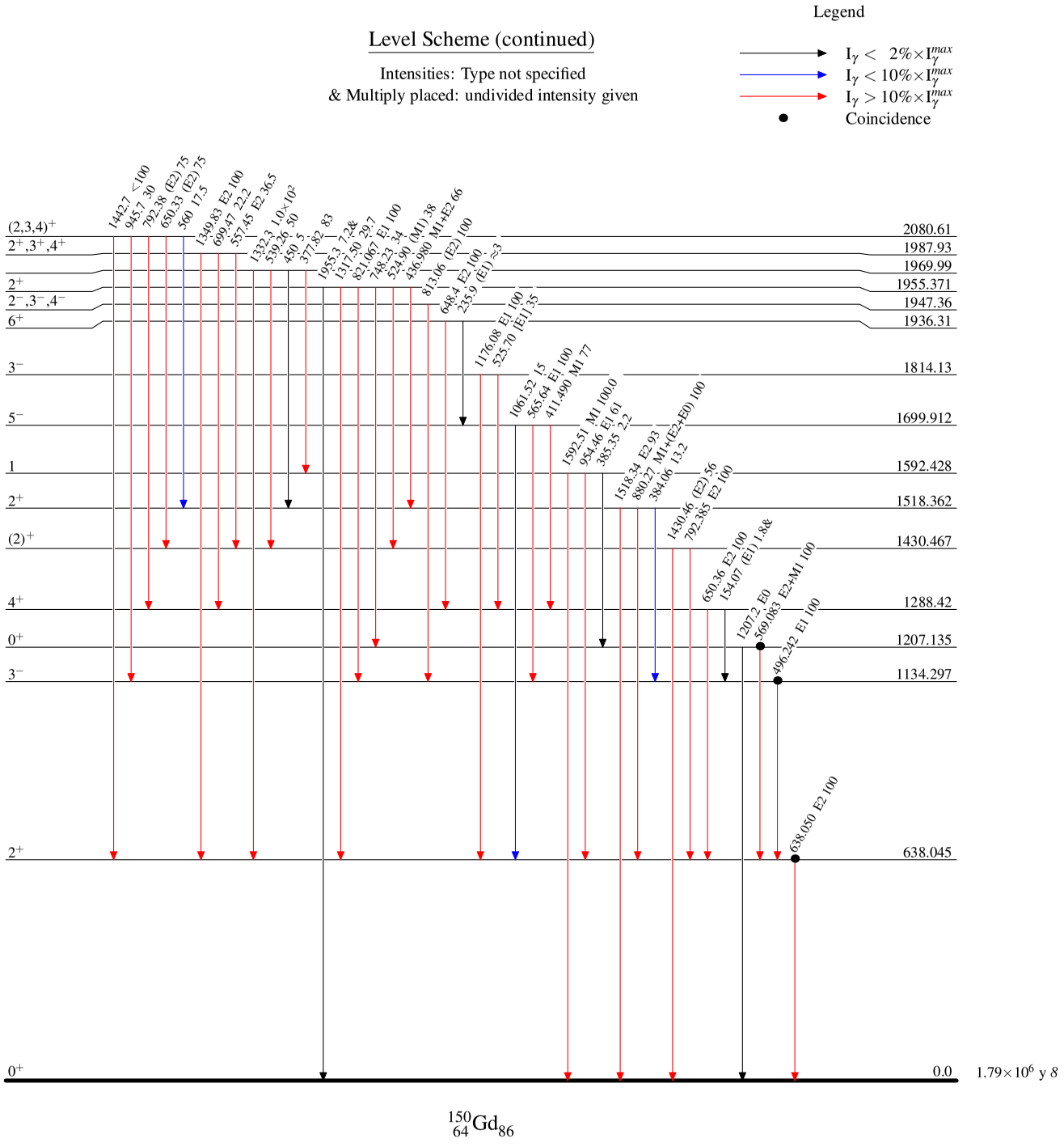


$^{150}_{64}Gd_{86}$

Adopted Levels, Gammas

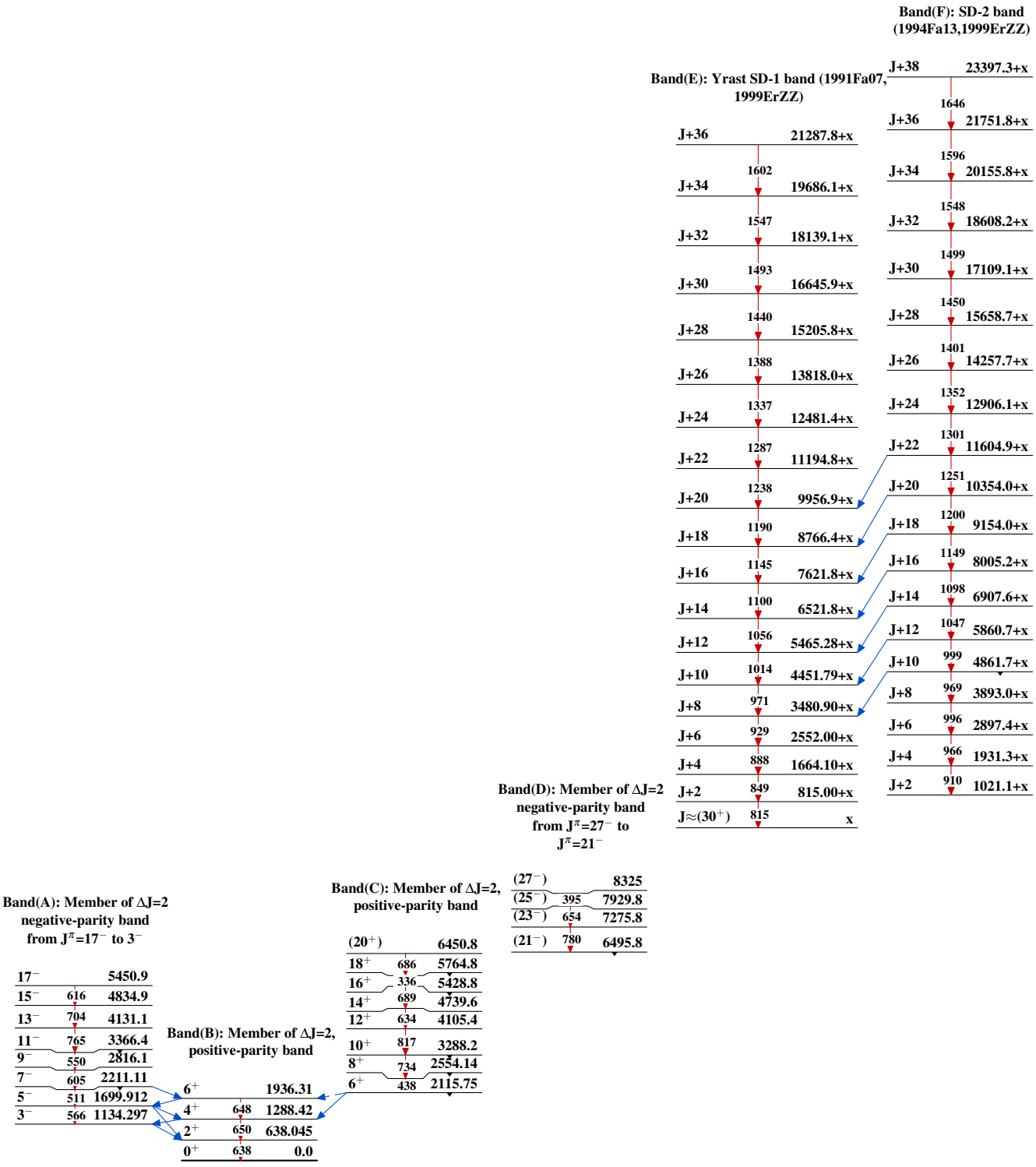
Level Scheme (continued)

Intensities: Type not specified
& Multiply placed: undivided intensity given

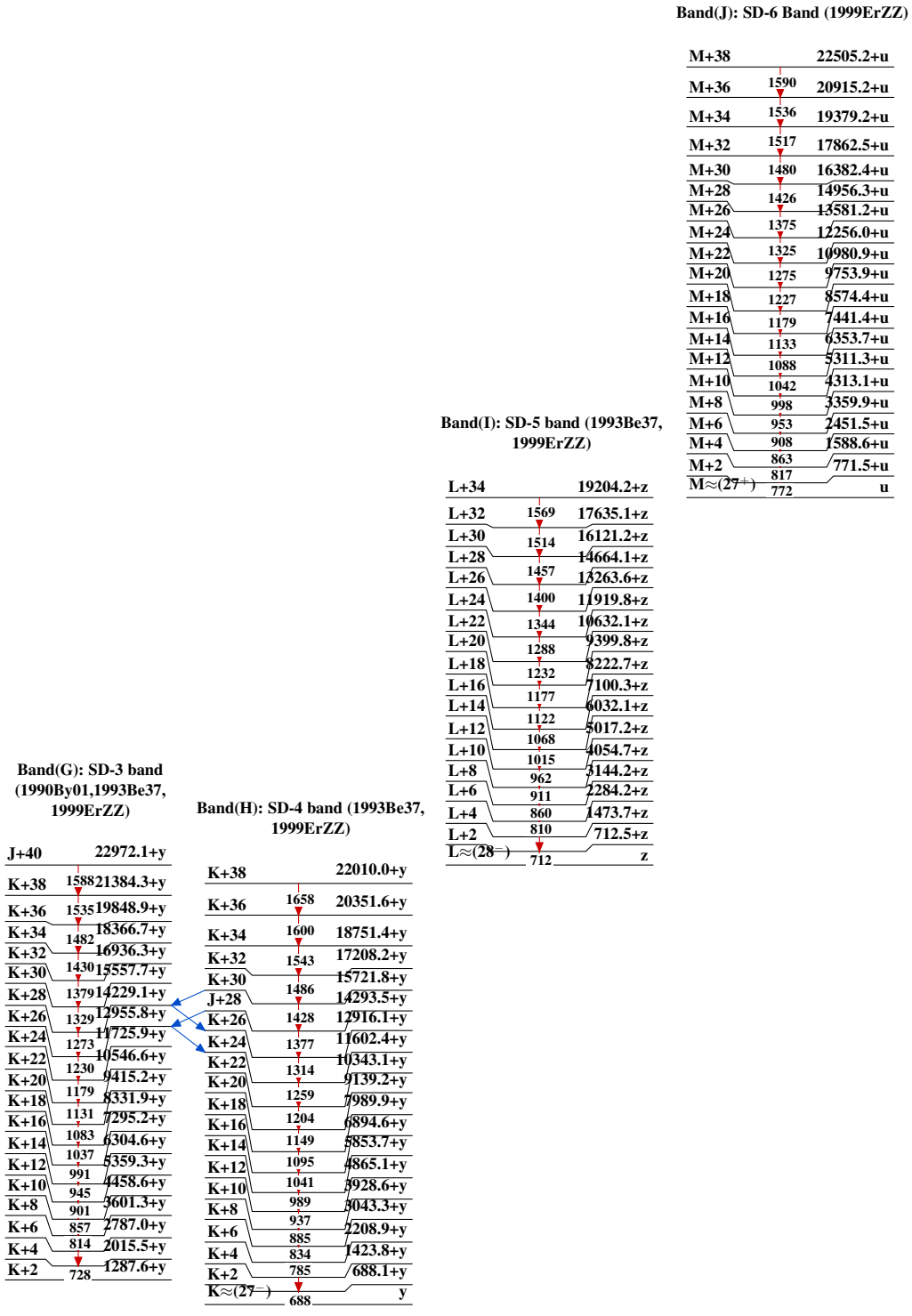


$^{150}_{64}Gd_{86}$

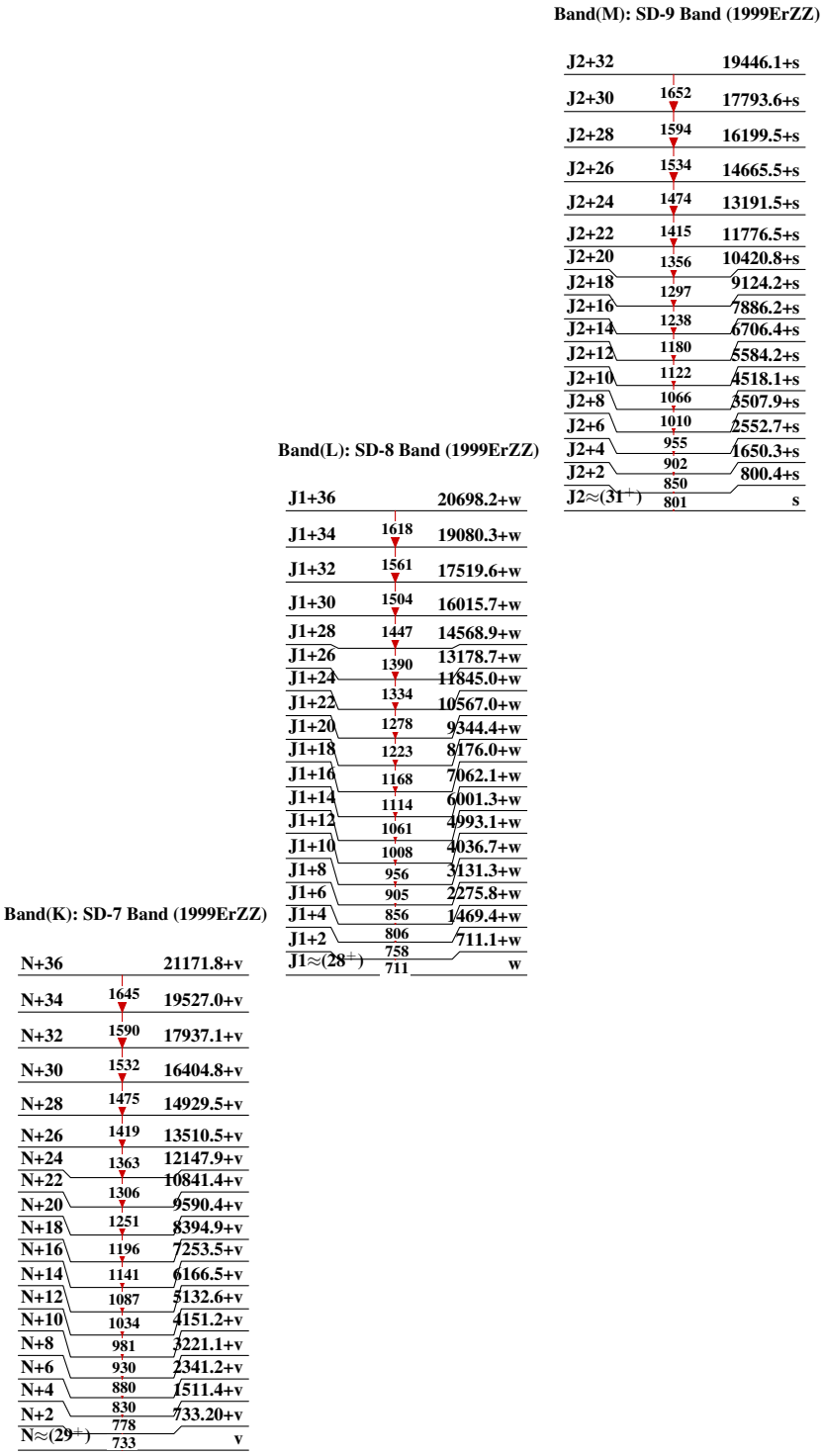
Adopted Levels, Gammas



Adopted Levels, Gammas (continued)

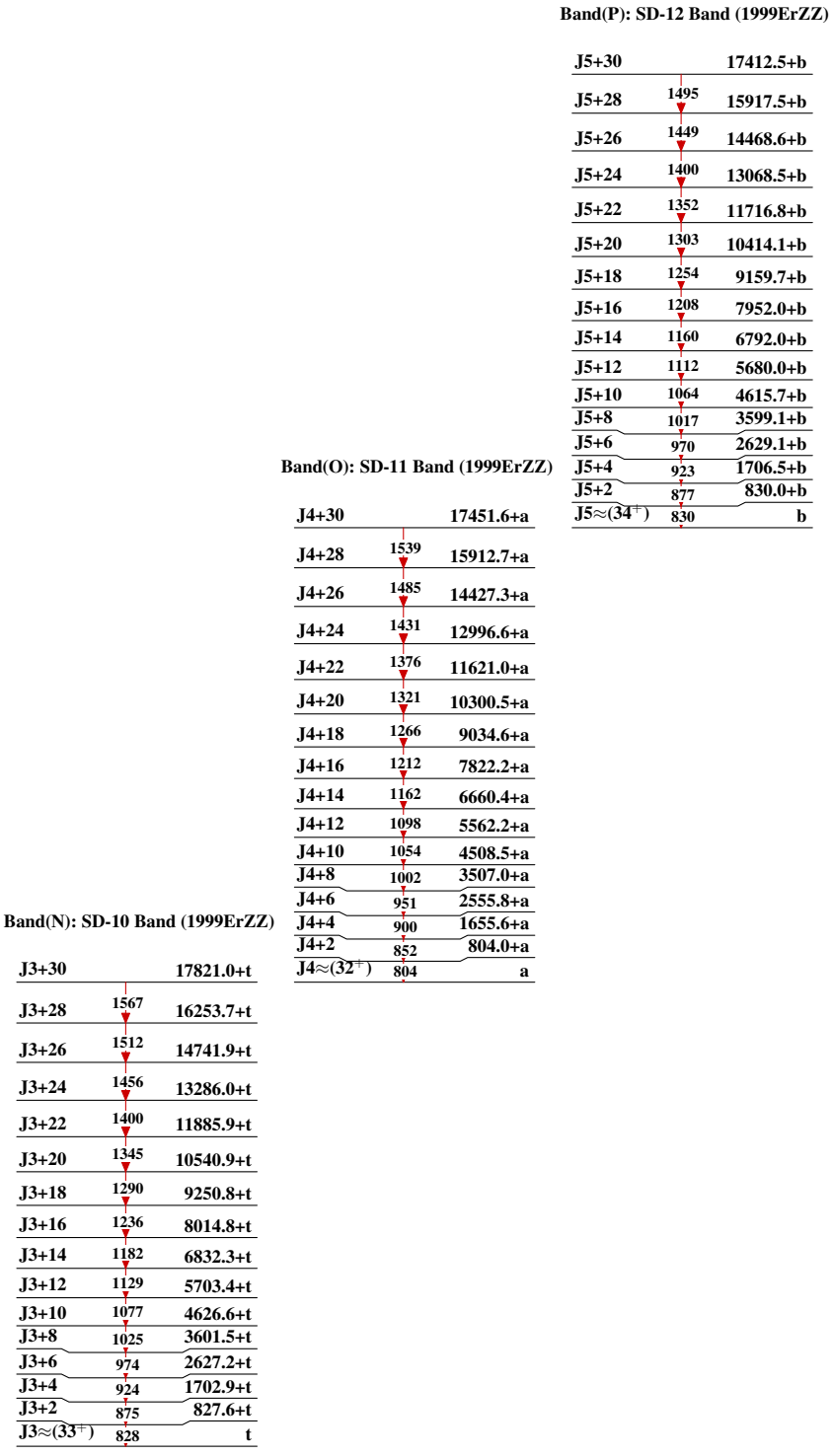


Adopted Levels, Gammas (continued)



$^{150}_{64}Gd_{86}$

Adopted Levels, Gammas (continued)



Adopted Levels, Gammas (continued)