Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	N. Nica	NDS 200,2 (2025)	22-Aug-2022

Q(β^-)=−5755 *10*; S(n)=9322 *8*; S(p)=6369 *8*; Q(α)=2945 *5* 2021Wa16
S(2n)=16419 *9*, S(2p)=10265 *7* (2021Wa16).
Additional information 1.
Theory and model discussions that may be of interest include: level energies and B(E2) – 1975ZoZS, 1976Ra04, 1978De02, 1989Gu07, 1989Hs02; wave functions – 1972Ar36; moments – 1986Be09, 1988Ki08.

^{154}Dy Levels

Using the recoil-distance technique in combination with large transient magnetic fields, 1993Bi09 measured g-factors of excited states up to high spins. The measurement was sensitive only to states populated ≈ 13.5 ps after the reaction. The reported values were normalized to g=0.36 *4* (a theoretical value) for the 2^+ member of the ground state band. Relative to this value, the g-factors for the respective states (labeled by the J^π value or range) are as follows: 0.39 *6*, 4^+; 0.35 *9*, 6^+ through 8^+; 0.19 *13*, 10^+ through 14^+; 0.11 *14*, 16^+ through 20^+; 0.28 *13*, 22^+ through 30^+; 0.44 *11*, 32^+ through 36^+; 0.23 *10*, 9^- through 15^-; 0.32 *13*, 17^- through 21^-; and 0.16 *8*, 27^- through 35^-. From the data of 1984Ha39 and the evaluation of 1989Ra16, the reported average g-factor for levels with a mean J of 26 is 0.39 *5*.
Configurations for the SD bands are from 2009Ij01 based on assignments proposed in the theoretical interpretations by 1998Af02. These are labeled with respect to intruder configuration of $\pi 6^4 \nu 7^2$ for the yrast SD band in ^{152}Dy, N=86.
Additional information 2.

Cross Reference (XREF) Flags

A	^{154}Ho ε decay (11.76 min)	E	^{155}Gd(^{3}He,4nγ)
B	^{154}Ho ε decay (3.10 min)	F	^{156}Dy(p,t)
C	^{122}Sn(^{36}S,4nγ)	G	^{165}Ho(π^-,11nγ)
D	^{122}Sn(^{36}S,4nγ):SD		

E(level)†	J$^\pi$#	T$_{1/2}$[a]	XREF	Comments
0.0[i]	0^+	3.0×10^6 y *15*	ABC EFG	%α=100 Δ<r^2>(^{152}Dy−^{154}Dy)=0.285 *25* fm^2 and Δ<r^2>(^{154}Dy−^{156}Dy)=0.37 *3* (1987Au06). Other: 0.297 *94* and 0.39 *14*, respectively, experimental values from compilation of 1995Ne12. See also 1996La03. From an evaluation of data on nuclear rms charge radii, 2013An02 report <r^2>$^{1/2}$=5.12 fm *26*. Eα=2870 *5* (recommended by 1991Ry01). T$_{1/2}$: From evaluation of 1985HoZN and based on 1.5×10^6 y *9* (revision of value from 1961Ma18) and 4×10^6 y (revision of value from 1971Go08). Others: 2.9×10^6 y *15* (1965Ma51) and 10×10^6 y *4* (1967Go32). Calculated T$_{1/2}$=1.2×10^6 y (1991Bu05).
334.53[i] *5*	2^+	27.5 ps *20*	ABC EFG	J$^\pi$: From E2 γ to 0^+ level.
660.69[c] *8*	0^+		A C EF	J$^\pi$: From L=0 in (p,t) and E0 γ to 0^+ level.
746.92[i] *8*	4^+	6.9 ps *5*	ABC EFG	J$^\pi$: From E2 γ to 2^+ level and band structure.
905.25[c] *6*	2^+		ABC EF	The γ branching is from the ^{154}Ho ε decay. IT is very different from that observed in the heavy-ion study. J$^\pi$: From E0 component in γ to 2^+ level.
1027.18[s] *7*	2^+		A EF	J$^\pi$: From M1 γ to 3^+ level, γ to 0^+, and band structure.
1058.02[t] *17*	0^+		A F	J$^\pi$: From L=0 in (p,t) and E0 transitions to 0^+ levels.
1207.89[k] *10*	3^-		A EF	J$^\pi$: From E1 γ to 2^+ level and γ to 4^+.
1224.07[i] *10*	6^+	2.4 ps *4*	BC EFG	J$^\pi$: From E2 γ to 4^+ and band structure.

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Adopted Levels, Gammas (continued)

^{154}Dy Levels (continued)

E(level)[†]	Jπ[#]	$T_{1/2}$[a]	XREF	Comments
1251.88[c] 9	4+		ABC EF	The γ branching is from the ^{154}Ho ε decay. IT is very different from that observed in the heavy-ion study. Jπ: From E0 component in γ to 4+ level.
1334.38[s] 8	3+		AB E	Jπ: From γ's to 2+ and 4+ levels and expected band structure.
1390.41[t] 11	2+		A F	Jπ: From E0 components in γ's to 2+ levels.
1420.40 16	1−		A	Jπ: From γ's to 0+ and 2+ levels.
1442.45[s] 10	4+		A EF	Jπ: From M1 γ to 4+ level, γ's to 2+, and band structure.
1507.66[u] 10	2+		A EF	Jπ: From γ's to 0+ and 2+ levels and band structure.
1545.82[k] 18	5−		AB EF	Jπ: From γ to 4+ level and band structure.
1635.14[v] 21	2−		A	Jπ: From γ to 2+ level and band structure.
1658.89[c] 11	6+		BC E	Jπ: From E0 component in γ to 6+ level.
1740.03[s] 11	5+		B E	Jπ: From γ's to (3+), 4+, and 6+ levels.
1747.71[i] 10	8+	1.5 ps 3	BC E G	Jπ: From log *ft* of 6.1 for ε decay from 8+ parent and E2 γ to 6+ level.
1781.9[u] 4	(3+)		A E	Jπ: From γ's to 2+ levels and band structure.
1818.5[u] 6	4+		E	
1819.02[v] 20	(4−)		AB	Jπ: From γ's to 3− and 4+ levels and band structure.
1832.8 3	1,2,3[b]		A F	XREF: F(1835)
1844.8 3	1,2,3[b]		A	
1877.2 4	1,2,3[b]		A F	
1885.63[s] 11	(6)+		B E	Jπ: From M1,E2 γ to 6+, (E2) γ to 4+, and band structure.
1903.74[v] 24	(3−)		A F	Jπ: From γ's to 2+ and 4+ levels and band structure. Population in (p,t) indicates natural parity.
1958.2 5	1,2,3[b]		A	
1964.76[k] 11	7−		BC E	Jπ: From γ to 6+ level, log *ft* of 6.3 for ε decay from 8+ parent, and band structure.
1991.0 3	1,2,3[b]		A	
2038			F	
2148.3 5	1,2,3[b]		A	
2163.64[c] 13	8+		BC E	Jπ: From (E2) γ to 6+ level and band structure.
2168.6 4	1,2,3[b]		A	
2178.0 3	1,2,3[b]		A	
2183.11 19	1,2,3[b]		A	E(level): See the comment in the ^{154}Ho ε decay (11.76 min) data set regarding problems with this level.
2183.48[s] 14	7+		B E	Jπ: From E2 γ to 5+ level and band structure.
2192.5[u] 3	6+		B E	Jπ: From E2 γ to 4+ level and band structure.
2249.4 4	1,2,3[b]		A	
2271.93 24	1,2,3[b]		A	
2304.64[i] 11	10+	1.1 ps 3	C E G	Jπ: From E2 γ to 8+ and band structure.
2344.8 6	1,2,3[b]		A	
2370.92[s] 13	8+		E	Jπ: From E2 γ to 6+ and band structure.
2421.49[k] 11	9−		C E	Jπ: From dipole γ to 8+ level and band structure.
2472.92[w] 11	7+		B E	Jπ: E0 component in γ to 7+; M1 γ's to 6+ and 8+. Allowed-unhindered (log *ft*=4.9) ε transition from 3.10-min, 8+, isomer in ^{154}Ho establishes configurations for both levels.
2567.5[q] 7	7−		C	
2567.9[u] 6	8+		E	
2665.0[j] 8	8−		C	
2678.04[s] 16	9+		E	
2757.9[c] 6	10+		C	

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Adopted Levels, Gammas (continued)

^{154}Dy Levels (continued)

E(level)†	Jπ#	$T_{1/2}$[a]	XREF	E(level)†	Jπ#	$T_{1/2}$[a]	XREF
2759.34[c] 18	10^+		C E	6285.81[i] 20	22^+		C
2866.7[r] 6	8^-		C	6560[j] 3	22^-		C
2882.53[k] 11	11^-	4.5 ps +2–3	C E	6573.8[r] 3	22^-		C
2893.14[i] 13	12^+	0.94 ps 19	C E	6690.77[d] 16	24^+	0.2 ps	C
2912.56[s] 19	10^+		E	6754.42[k] 15	23^-		C
3012.40[q] 17	9^-		C	6805.4[p] 5	23^-		C
3033.9[u] 12	10^+		C E	6952.8[q] 3	23^-		C
3048.6[j] 7	10^-		C	7045.72[i] 19	24^+		C
3159.40[r] 18	10^-		C	7289[j] 3	24^-		C
3222.97[s] 16	11^+		E	7343.3[r] 4	24^-		C
3289.4[c] 6	12^+		C E	7375.82[h] 19	24^+		C
3314.80[q] 18	11^-		C	7513.80[d] 17	26^+	0.2 ps +4–2	C
3390.64[k] 12	13^-	1.7 ps	C E	7519.42[k] 16	25^-		C
3484.3[j] 12	12^-		C	7741.5[q] 5	25^-		C
3504.40[r] 18	12^-		C	7772.5[p] 5	25^-		C
3509.25[i] 13	14^+	0.55 ps 10	C E	7856.69[i] 19	26^+		C
3514.8[s] 4	12^+		E	8061[j] 3	26^-		C
3596.0[u] 16	12^+		E	8139.60[h] 17	26^+		C
3679.95[d] 15	14^+		C E	8151.8[r] 5	26^-		C
3720.40[q] 18	13^-		C	8280.8[p] 5	27^-		C
3809.6[s] 11	13^+		E	8335.42[k] 16	27^-		C
3964.50[r] 19	14^-		C	8400.93[d] 17	28^+	0.15 ps	C
3982.74[k] 13	15^-	3.0 ps	C E	8570.5[q] 5	27^-		C
4006.4[j] 16	14^-		C	8723.66[i] 19	28^+		C
4090.87[d] 14	16^+	1.3 ps 5	C E	8885[j] 3	28^-		C
4173.20[i] 20	16^+		C E	8917.04[h] 17	28^+		C
4230.90[q] 19	15^-		C	9002.1[r] 5	28^-		C
4519.40[r] 20	16^-		C	9119.2[m] 12	(28^-)		C
4588.1[j] 19	16^-		C	9188.7[k] 6	29^-		C
4637.40[d] 15	18^+	0.76 ps 17	C E	9217.62[p] 17	29^-		C
4642.34[k] 13	17^-	1.3 ps +10–6	C E	9350.18[d] 17	30^+		C
4826.80[q] 20	17^-		C	9445.3[q] 5	29^-		C
4869.04[i] 19	18^+		C E	9567.50[f] 18	30^+		C
5151.80[r] 20	18^-		C	9646.70[i] 20	30^+		C
5206.4[j] 21	18^-		C	9668.72[h] 19	30^+		C
5249.83[d] 15	20^+	0.62 ps 9	C E	9765[j] 4	30^-		C
5338.94[k] 14	19^-		C E	9894.1[m] 15	(30^-)		C
5489.40[q] 20	19^-		C	9898.7[r] 9	30^-		C
5564.54[i] 20	20^+		C E	10107.7[k] 6	31^-		C
5841.30[r] 21	20^-		C	10156.33[p] 18	31^-		C
5867.0[j] 24	20^-		C	10359.22[d] 19	32^+		C
5934.95[d] 16	22^+	0.38 ps	C E	10367.9[q] 12	31^-		C
6035.92[k] 15	21^-		C E	10384.79[f] 18	32^+		C
6181.9[p] 5	21^-		C	10434.6[m] 18	(32^-)		C
6201.50[q] 21	21^-		C	10446.34[h] 19	32^+		C

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Adopted Levels, Gammas (continued)

^{154}Dy Levels (continued)

E(level)[†]	Jπ[#]	$T_{1/2}$[a]	XREF
10629.75[i] *21*	32^+		C
10704[j] *4*	32^-		C
10847.2[r] *14*	32^-		C
11073.7[k] *6*	33^-		C
11082.7[n] *8*	33^-		C
11120.76[f] *18*	34^+		C
11147.83[p] *20*	33^-		C
11319.36[h] *18*	34^+		C
11340.9[q] *15*	33^-		C
11432.22[d] *21*	34^+		C
11606.0[o] *8*	34^-		C
11666.35[i] *22*	34^+		C
11704[j] *4*	34^-		C
11759.0[m] *21*	(34^-)		C
11830.0[n] *8*	35^-		C
11850.3[r] *17*	34^-		C
11916.6[l] *13*	35^-		C
11925.80[f] *19*	36^+		C
12063.53[p] *21*	(35^-)		C
12095.7[k] *6*	35^-		C
12307.3[o] *8*	36^-		C
12410.02[h] *18*	36^+		C
12540.9[n] *8*	37^-		C
12557.62[d] *22*	36^+		C
12762.86[i] *23*	36^+		C
12765[j] *4*	36^-		C
13039.7[o] *10*	38^-		C
13088.7[p] *11*	(37^-)		C
13089.1[e] *11*	37^+		C
13166.5[k] *6*	37^-		C
13257.9[h] *8*	38^+	0.8 ps *3*	C
13311.8[n] *8*	39^-		C
13403.0[l] *13*	39^-		C
13558.8[o] *11*	40^-		C
13744.93[d] *22*	38^+		C
13889[j] *4*	38^-		C
13909.79[i] *24*	38^+		C
14025.2[‡n] *11*	41^-		C
14135.8[h] *8*	40^+	0.8 ps *3*	C
14295.1[k] *6*	39^-		C
14375.8[l] *13*	41^-		C
14424.1[e] *13*	39^+		C
14469.2[g] *13*	39^+		C
14590.8[‡o] *13*	42^-		C
14886.0[h] *8*	42^+	1.1 ps *3*	C
14981.33[d] *23*	40^+		C

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Adopted Levels, Gammas (continued)

^{154}Dy Levels (continued)

E(level)[†]	J$^{\pi}$[#]	T$_{1/2}$[a]	XREF	Comments
15074[j] *4*	40$^-$		C	
15119.01[i] *24*	40$^+$		C	
15484.6[k] *6*	41$^-$		C	
15505.5[e] *13*	(41$^+$)		C	
15662.1[l] *15*	(43$^-$)		C	
16011.8[h] *13*	44$^+$	0.16 ps *6*	C	
16089.2[e] *13*	43$^+$		C	
16272.41[d] *24*	42$^+$		C	
16322[j] *4*	42$^-$		C	
16360.2[g] *13*	(43$^+$)		C	
16374.01[i] *25*	42$^+$		C	
16735.7[k] *6*	43$^-$		C	
16738.1[l] *18*	(45$^-$)		C	
17187.3[e] *16*	45$^+$		C	
17294.2[g] *16*	(45$^+$)		C	
17322.9[h] *16*	46$^+$	0.08 ps *3*	C	
17609.12[d] *24*	44$^+$		C	
17629[j] *5*	44$^-$		C	
18054.2[k] *6*	45$^-$		C	
18485.8[e] *19*	47$^+$		C	
18732.9[‡h] *19*	48$^+$	<0.11 ps	C	Band-terminating state. Configuration: $\pi[(d_{5/2}/g_{7/2})^{-2}_{6}(h_{11/2})^{4}_{16}]_{22+}\otimes\ \nu[(i_{13/2})^{2}_{12}(f_{7/2})^{2}_{6}(h_{9/2})^{2}_{8}]_{26+}$ (2009Pa17).
18915.2[g] *19*	47$^+$		C	
18963.7[d] *11*	46$^+$		C	
19445.6[k] *12*	47$^-$		C	
20904.7[k] *16*	49$^-$		C	
22436.1[k] *19*	51$^-$		C	
x[x]	J≈(24)[@&]		D	
701.7+x[x] *2*	J+2		D	
1450.7+x[x] *3*	J+4		D	
2245.1+x[x] *4*	J+6		D	
3085.7+x[x] *4*	J+8		D	
3973.1+x[x] *5*	J+10		D	
4907.8+x[x] *5*	J+12		D	
5888.9+x[x] *6*	J+14		D	
6917.7+x[x] *6*	J+16		D	
7993.2+x[x] *6*	J+18		D	
9116.7+x[x] *7*	J+20		D	
10288.0+x[x] *7*	J+22		D	
11506.6+x[x] *7*	J+24		D	
12772.6+x[x] *8*	J+26		D	
14086.7+x[x] *8*	J+28		D	
15448.6+x[x] *8*	J+30		D	
16858.3+x[x] *8*	J+32		D	
18314.9+x[x] *9*	J+34		D	
19819.2+x[x] *9*	J+36		D	
y[y]	J1		D	
794.9+y?[y] *9*	J1+2		D	

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Adopted Levels, Gammas (continued)

^{154}Dy Levels (continued)

E(level)†	Jπ#	XREF
1634.8+y[y] *10*	J1+4	D
2520.1+y[y] *10*	J1+6	D
3451.1+y[y] *10*	J1+8	D
4428.2+y[y] *10*	J1+10	D
5451.2+y[y] *10*	J1+12	D
6519.6+y[y] *11*	J1+14	D
7632.6+y[y] *12*	J1+16	D
8789.9+y[y] *13*	J1+18	D
9991.7+y[y] *13*	J1+20	D
11237.8+y[y] *13*	J1+22	D
12527.9+y[y] *13*	J1+24	D
13861.7+y[y] *14*	J1+26	D
15239.0+y[y] *15*	J1+28	D
16659.7+y[y] *15*	J1+30	D
18123.3+y[y] *16*	J1+32	D
19629.1+y[y] *16*	J1+34	D
z[z]	J2≈(33)&	D
780.5+z[z] *6*	J2+2	D
1607.7+z[z] *10*	J2+4	D
2479.7+z[z] *12*	J2+6	D
3392.1+z[z] *13*	J2+8	D
4349.5+z[z] *14*	J2+10	D
5351.6+z[z] *14*	J2+12	D
6399.0+z[z] *15*	J2+14	D
7492.4+z[z] *15*	J2+16	D
8632.5+z[z] *15*	J2+18	D
9819.6+z[z] *15*	J2+20	D
11052.1+z[z] *16*	J2+22	D
12332.2+z[z] *16*	J2+24	D
13659.4+z[z] *16*	J2+26	D
15033.1+z[z] *17*	J2+28	D
16453.2+z[z] *17*	J2+30	D
17919.3+z[z] *17*	J2+32	D
19431.5+z[z] *19*	J2+34	D
u[1]	J3	D
721.1+u[1] *7*	J3+2	D
1490.1+u[1] *10*	J3+4	D
2307.1+u[1] *11*	J3+6	D
3172.5+u[1] *12*	J3+8	D
4086.8+u[1] *14*	J3+10	D
5050.1+u[1] *14*	J3+12	D
6061.8+u[1] *14*	J3+14	D
7120.8+u[1] *15*	J3+16	D
8226.3+u[1] *15*	J3+18	D
9377.2+u[1] *15*	J3+20	D
10573.6+u[1] *15*	J3+22	D
11815.4+u[1] *15*	J3+24	D
13102.4+u[1] *15*	J3+26	D
14434.5+u[1] *16*	J3+28	D
15811.3+u[1] *16*	J3+30	D
17232.4+u[1] *17*	J3+32	D
18696.8+u[1] *18*	J3+34	D
20204.0+u[1] *20*	J3+36	D
v[2]	J4≈(31)&	D
738.6+v[2] *8*	J4+2	D
1522.6+v[2] *12*	J4+4	D
2352.5+v[2] *14*	J4+6	D
3229.0+v[2] *15*	J4+8	D
4152.5+v[2] *17*	J4+10	D
5122.8+v[2] *18*	J4+12	D
6140.2+v[2] *19*	J4+14	D
7204.4+v[2] *20*	J4+16	D
8315.0+v[2] *21*	J4+18	D
9471.9+v[2] *21*	J4+20	D
10675.0+v[2] *23*	J4+22	D
11923.6+v[2] *23*	J4+24	D
13218.0+v[2] *23*	J4+26	D
14559.2+v[2] *24*	J4+28	D
15946+v[2] *3*	J4+30	D
17380+v[2] *3*	J4+32	D
18859+v[2] *3*	J4+34	D
20385+v[2] *3*	J4+34	D
w[3]	J5≈(36)&	D
855.2+w?[3] *10*	J5+2	D
1756.4+w?[3] *15*	J5+4	D
2704.1+w[3] *15*	J5+6	D
3698.4+w[3] *16*	J5+8	D
4739.3+w[3] *17*	J5+10	D
5826.2+w[3] *18*	J5+12	D
6959.5+w[3] *18*	J5+14	D
8138.9+w[3] *19*	J5+16	D
9364.4+w[3] *20*	J5+18	D
10636.2+w[3] *20*	J5+20	D
11954.2+w[3] *21*	J5+22	D
13318.5+w[3] *23*	J5+24	D
14728.7+w[3] *24*	J5+26	D
16185+w[3] *3*	J5+28	D

† From a least-squares fit to γ energies in this data set with χ^2norm=2.04 greater than χ^2critical=1.31 (not including the SD bands). This computation assigns an uncertainty of 1 keV to those γ energies that do not have input uncertainties. The uncertainties in the level energies within the SD band are relative to the lowest level in this band. Seven E_γ values differ by 3σ or more from

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{154}Dy Levels (continued)

the calculated ones.

‡ Maximally-aligned state; proposed termination of this level sequence.

Below 2500 keV, according to specific arguments. Above 2500 keV levels are from ^{122}Sn(^{36}S,4nγ), ^{155}(^{3}He,4nγ) and ^{122}Sn(^{36}S,4nγ):SD with the J^{π} values from the γ multipolarities and the reported band structure. Level-specific J^{π} arguments are not given in this energy region.

@ In their listing of data on superdeformed bands, 1999Ha56 estimate J=28 for this level. In a subsequent compilation, however, 2002Si26 do not suggest a J^{π} value for IT.

& As proposed by 2009Ij01 from assigned configurations and effective alignments.

[a] All values for excited levels are from ^{122}Sn(^{36}S,4nγ) (1985AzZY and 1988Ma28, RDM and DSAM).

[b] Based on log *ft* value from 2^- parent (^{154}Ho $\varepsilon+\beta^+$ decay (11.76 min)).

[c] Band(A): First excited $K^{\pi}=0^+$ band. Proposed to be a quasi-beta band (1980Zo02).

[d] Band(B): S, or 'Super', band. Denoted as $(\pi=+,\alpha=0)_1$ by 2002Ma10. Band starts at 14^+ and crosses the gs band at $J^{\pi}=14^+$. It loses its yrast status above the 32^+ level.

[e] Band(b): $(\pi=+,\alpha=1)_1$ band. Band starts at 37^+.

[f] Band(C): $(\pi=+,\alpha=0)_2$ band. Band starts at 30^+.

[g] Band(c): $(\pi=+,\alpha=1)_2$ band. Band starts at 39^+.

[h] Band(D): $(\pi=+,\alpha=0)_3$ band. Band starts at 24^+.

[i] Band(E): Ground-state band. Denoted as $(\pi=+,\alpha=0)_4$ by 2002Ma10.

[j] Band(F): $(\pi=-,\alpha=0)_1$ band. Band starts at 8^-.

[k] Band(f): $(\pi=-,\alpha=1)_1$ band. Band as observed in ^{122}Sn(^{36}S,4nγ) starts at 7^- that is the same as the $K^{\pi}=3^-$ octupole band in ^{155}(^{3}He,4nγ), which also contains the 1^- through 5^- states.

[l] Band(G): $(\pi=-,\alpha=1)_3$ band. Band starts at 35^-.

[m] Band(g): $(\pi=-,\alpha=0)_3$ band. Band starts at (28^-).

[n] Band(H): $(\pi=-,\alpha=1)_2$ band. Band starts at 33^-.

[o] Band(h): $(\pi=-,\alpha=0)_2$ band. Band starts at 34^-.

[p] Band(I): $(\pi=-,\alpha=1)_5$ band. Band starts at 21^-.

[q] Band(J): $(\pi=-,\alpha=1)_4$ band. Band starts at 7^-.

[r] Band(j): $(\pi=-,\alpha=0)_4$ band. Band starts at 8^-.

[s] Band(K): First excited $K^{\pi}=2^+$ band. Proposed by 1980Zo02 to be a quasi-gamma band.

[t] Band(L): Second excited $K^{\pi}=0^+$ band.

[u] Band(M): $K^{\pi}=2^+$ band.

[v] Band(N): Negative-parity band. Octupole-related level sequence.

[w] Band(O): 7^+ bandhead. Probable configuration: (ν 3/2[532])+(ν 11/2[505]).

[x] Band(P): SD-1 band (2009Ij01,1995Ni03). Proposed configuration: $(\pi 6)^4(\nu 7)^2\otimes(\nu 5/2[402])^2$. Earlier in 1995Ni03, $(\nu 9/2[514])^2$ orbital was proposed Q_t=15.9 *+31−21*. $\beta_2 \approx 0.57$ (1996Fi08). Percent feeding=0.70 *10*, relative to that of the g.s. band.

[y] Band(Q): SD-2 band (2009Ij01). Percent feeding=0.30 *10*, relative to that of the g.s. band.

[z] Band(R): SD-3 band (2009Ij01). Band crossing at $\hbar\omega\approx$0.45 MeV Proposed configuration: $(\pi 6)^4(\nu 7)^2\otimes(\nu 3/2[761])\otimes(\nu 3/2[521])$. Percent feeding=0.11 *5*, relative to that of the g.s. band.

[1] Band(S): SD-4 band (2009Ij01). Percent feeding=0.07 *4*, relative to that of the g.s. band.

[2] Band(T): SD-5 band (2009Ij01), α=1. Band crossing at $\hbar\omega\approx$0.55 MeV. Proposed configuration: $(\pi 6)^4(\nu 7)^2\otimes(\nu 5/2[402])\otimes(\nu 3/2[761])$. Percent feeding=0.05 *3*, relative to that of the g.s. band. SD-5 and SD-6 bands are interpreted as signature partners.

[3] Band(t): SD-6 band (2009Ij01), α=0 Proposed configuration: $(\pi 6)^4(\nu 7)^2\otimes(\nu 5/2[402])\otimes(\nu 3/2[761])$. Percent feeding=0.03 *2*, relative to that of the g.s. band. SD-5 and SD-6 bands are interpreted as signature partners.

Adopted Levels, Gammas (continued)

$\gamma(^{154}Dy)$

E_i(level)	J_i^π	E_γ [†]	I_γ [‡]	E_f	J_f^π	Mult.	α [@]	$I_{(\gamma+ce)}$	Comments
334.53	2^+	334.49 *7*	100	0.0	0^+	E2	0.0465 *7*		B(E2)(W.u.)=96 *+8−7* α(K)=0.0355 *5*; α(L)=0.00850 *12*; α(M)=0.001949 *27* α(N)=0.000443 *6*; α(O)=5.89×10^{-5} *8*; α(P)=1.887×10^{-6} *26* E_γ: weighted average of 334.6 *1* from ^{154}Ho ε decay (11.76 min), 334.6 *1* from ^{154}Ho ε decay (3.10 min), 334.30 *3* from (^{36}S,4nγ), and 334.44 *10* from (π^-,11nγ).
660.69	0^+	326.11 *10*	100	334.53	2^+				E_γ: weighted average of 326.1 *1* from ^{154}Ho ε decay (11.76 min) and 326.2 *3* from (^{36}S,4nγ). Other: 326 *12* from (^{3}He,4nγ).
		660.8 *2*		0.0	0^+	E0		9.5 *5*	E_γ: from ^{154}Ho ε decay (11.76 min).
746.92	4^+	412.29 *10*	100	334.53	2^+	E2	0.0255 *4*		B(E2)(W.u.)=138 *10* α(K)=0.02007 *28*; α(L)=0.00420 *6*; α(M)=0.000953 *13* α(N)=0.0002174 *30*; α(O)=2.95×10^{-5} *4*; α(P)=1.100×10^{-6} *15* E_γ: unweighted average of 412.4 *2* from ^{154}Ho ε decay (11.76 min), 412.4 *1* from ^{154}Ho ε decay (3.10 min), 412.20 *3* from (^{36}S,4nγ), 412.5 *1* from (^{3}He,4nγ), and 411.97 *9* from (π^-,11nγ).
905.25	2^+	244.9 *6*	3.8 *11*	660.69	0^+				E_γ: unweighted average of 244.3 *3* from ^{154}Ho ε decay (11.76 min) and 245.46 *13* from (^{3}He,4nγ).
		570.66 *10*	100 *5*	334.53	2^+	E0+E2,M1	0.025 *3*		E_γ: weighted average of 570.6 *1* from ^{154}Ho ε decay (11.76 min), 570.7 *1* from ^{154}Ho ε decay (3.10 min), and 570.71 *13* from (^{3}He,4nγ).
		905.29 *8*	19.7 *18*	0.0	0^+				E_γ: weighted average of 905.3 *1* from ^{154}Ho ε decay (11.76 min), 905.2 *3* from ^{154}Ho ε decay (3.10 min), and 905.29 *14* from (^{3}He,4nγ). I_γ: Note that Iγ(905.3γ)/Iγ(244.2γ)=2.0 from the heavy-ion data.
1027.18	2^+	366.25 *29*	20.2 *25*	660.69	0^+				E_γ: weighted average of 366.2 *3* from ^{154}Ho ε decay (11.76 min) and 367.1 *13* from (^{3}He,4nγ).
		692.67 *10*	95 *5*	334.53	2^+	M1	0.01306 *18*		α(K)=0.01108 *16*; α(L)=0.001551 *22*; α(M)=0.000339 *5* α(N)=7.84×10^{-5} *11*; α(O)=1.153×10^{-5} *16*; α(P)=6.73×10^{-7} *9* E_γ: weighted average of 692.6 *1* from ^{154}Ho ε decay (11.76 min) and 692.82 *15* from (^{3}He,4nγ).
		1027.2 *1*	100 *5*	0.0	0^+				
1058.02	0^+	152.7 *3*	100 *17*	905.25	2^+				
		397.3 *2*		660.69	0^+	E0		244 *15*	
		723.6 *5*	34 *17*	334.53	2^+				
		1058.4 *6*		0.0	0^+	E0		5.8 *17*	
1207.89	3^-	461.0 *2*	6.9 *14*	746.92	4^+				E_γ: from ^{154}Ho ε decay (11.76 min).

$^{154}_{66}Dy_{88}$-8

Adopted Levels, Gammas (continued)

γ(^{154}Dy) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.	α[@]	Comments
1207.89	3⁻	873.3 *1*	100 *5*	334.53	2⁺	E1	1.61×10⁻³ *2*	α(K)=0.001379 *19*; α(L)=0.0001840 *26*; α(M)=4.00×10⁻⁵ *6* α(N)=9.21×10⁻⁶ *13*; α(O)=1.344×10⁻⁶ *19*; α(P)=7.67×10⁻⁸ *11* E_γ: from ^{154}Ho ε decay (11.76 min).
1224.07	6⁺	477.07 *9*	100	746.92	4⁺	E2	0.01714 *24*	B(E2)(W.u.)=191 *+38−28* α(K)=0.01374 *19*; α(L)=0.00265 *4*; α(M)=0.000598 *8* α(N)=0.0001367 *19*; α(O)=1.878×10⁻⁵ *26*; α(P)=7.65×10⁻⁷ *11* E_γ: unweighted average of 477.1 *1* from ^{154}Ho ε decay (3.10 min), 476.90 *4* from (^{36}S,4nγ), and 477.2 *1* from (^{3}He,4nγ).
1251.88	4⁺	346.63 *10*	67 *7*	905.25	2⁺	E2	0.0418 *6*	α(K)=0.0322 *5*; α(L)=0.00751 *11*; α(M)=0.001718 *24* α(N)=0.000391 *5*; α(O)=5.22×10⁻⁵ *7*; α(P)=1.718×10⁻⁶ *24* E_γ: weighted average of 346.7 *1* from ^{154}Ho ε decay (11.76 min), 346.5 *1* from ^{154}Ho ε decay (3.10 min), and 346.71 *13* from (^{3}He,4nγ).
		504.87 *12*	100 *10*	746.92	4⁺	E0+E2,M1	0.094 *15*	E_γ: weighted average of 504.9 *3* from ^{154}Ho ε decay (11.76 min) and 504.86 *13* from (^{3}He,4nγ). I_γ: Note that Iγ(504.3γ)/Iγ(346.6γ)=0.20 from the heavy-ion data.
1334.38	3⁺	308		1027.18	2⁺	(M1)	0.1052 *15*	α(K)=0.0889 *12*; α(L)=0.01279 *18*; α(M)=0.00280 *4* α(N)=0.000649 *9*; α(O)=9.51×10⁻⁵ *13*; α(P)=5.48×10⁻⁶ *8*
		429.0 *2*	14 *3*	905.25	2⁺			E_γ: from ^{154}Ho ε decay (11.76 min).
		587.57 *10*	24 *3*	746.92	4⁺			E_γ: weighted average of 587.5 *1* from ^{154}Ho ε decay (11.76 min), 587.3 *3* from ^{154}Ho ε decay (3.10 min), and 587.75 *14* from (^{3}He,4nγ). I_γ: From ^{154}Ho ε decay (11.76 min). Other: 52 *8* from ^{154}Ho ε decay (3.10 min).
		999.80 *8*	100 *5*	334.53	2⁺			E_γ: weighted average of 999.8 *1* from ^{154}Ho ε decay (11.76 min), 999.7 *3* from ^{154}Ho ε decay (3.10 min), and 999.82 *14* from (^{3}He,4nγ).
1390.41	2⁺	182.0 *4*	48 *9*	1207.89	3⁻			I_γ: from ^{154}Ho ε decay (11.76 min).
		363.4 *4*	26 *12*	1027.18	2⁺			I_γ: from ^{154}Ho ε decay (11.76 min).
		485.3 *3*	41 *6*	905.25	2⁺	E0+E2,M1	0.20 *5*	I_γ: from ^{154}Ho ε decay (11.76 min).
		642.8 *4*	34 *16*	746.92	4⁺			I_γ: from ^{154}Ho ε decay (11.76 min).
		729.8 *1*	100 *12*	660.69	0⁺			I_γ: from ^{154}Ho ε decay (11.76 min).
		1055.8 *3*	69 *12*	334.53	2⁺	E0+E2,M1	0.018 *8*	I_γ: from ^{154}Ho ε decay (11.76 min).
		1390.0 *4*	36 *8*	0.0	0⁺			I_γ: from ^{154}Ho ε decay (11.76 min).
1420.40	1⁻	515.2 *4*	20 *8*	905.25	2⁺			I_γ: from ^{154}Ho ε decay (11.76 min).
		1085.9 *2*	75 *8*	334.53	2⁺			I_γ: from ^{154}Ho ε decay (11.76 min).
		1420.3 *3*	100 *10*	0.0	0⁺			I_γ: from ^{154}Ho ε decay (11.76 min).
1442.45	4⁺	415.33 *19*	34 *8*	1027.18	2⁺			E_γ: weighted average of 415.8 *4* from ^{154}Ho ε decay (11.76 min) and 415.26 *16* from (^{3}He,4nγ).

$^{154}_{66}Dy_{88}$-9

Adopted Levels, Gammas (continued)

γ(^{154}Dy) (continued)

E_i(level)	J_i^π	E_γ [†]	I_γ [‡]	E_f	J_f^π	Mult.	α [@]	Comments
1442.45	4$^+$	695.56 *26*	100 *14*	746.92	4$^+$	M1(+E2)	0.0098 *31*	α(K)=0.0083 *27*; α(L)=0.00122 *31*; α(M)=0.00027 *7* α(N)=6.2×10^{-5} *15*; α(O)=9.0×10^{-6} *24*; α(P)=4.9×10^{-7} *17* E_γ: unweighted average of 695.3 *2* from ^{154}Ho ε decay (11.76 min) and 695.82 *13* from (^{3}He,4nγ).
		1108.03 *12*	54 *7*	334.53	2$^+$			E_γ: weighted average of 1108.0 *2* from ^{154}Ho ε decay (11.76 min) and 1108.05 *15* from (^{3}He,4nγ).
1507.66	2$^+$	480.0 *4*	14 *5*	1027.18	2$^+$			I_γ: from ^{154}Ho ε decay (11.76 min).
		602.9 *4*	19 *5*	905.25	2$^+$			I_γ: from ^{154}Ho ε decay (11.76 min).
		846.7 *2*	53 *5*	660.69	0$^+$			I_γ: from ^{154}Ho ε decay (11.76 min).
		1173.2 *1*	100 *11*	334.53	2$^+$			I_γ: from ^{154}Ho ε decay (11.76 min).
		1507.6 *4*	47 *9*	0.0	0$^+$			I_γ: from ^{154}Ho ε decay (11.76 min).
1545.82	5$^-$	294		1251.88	4$^+$			I_γ: from (^{3}He,4nγ).
		338		1207.89	3$^-$			I_γ: from (^{3}He,4nγ).
		798.90 *17*	100	746.92	4$^+$			E_γ: weighted average of 798.9 *2* from ^{154}Ho ε decay (11.76 min) and 798.9 *3* from ^{154}Ho ε decay (3.10 min).
1635.14	2$^-$	1300.6 *2*	100	334.53	2$^+$			I_γ: from ^{154}Ho ε decay (11.76 min).
1658.89	6$^+$	406.96 *10*	100 *7*	1251.88	4$^+$	E2	0.0264 *4*	α(K)=0.02078 *29*; α(L)=0.00438 *6*; α(M)=0.000995 *14* α(N)=0.0002269 *32*; α(O)=3.07×10^{-5} *4*; α(P)=1.136×10^{-6} *16* E_γ: weighted average of 406.9 *1* from ^{154}Ho ε decay (3.10 min) and 407.07 *13* from (^{3}He,4nγ).
		434.99 *20*	13.4 *15*	1224.07	6$^+$	E2+E0(+M1)	0.27 *3*	E_γ: weighted average of 434.7 *2* from ^{154}Ho ε decay (3.10 min) and 435.13 *14* from (^{3}He,4nγ). I_γ: From ^{154}Tb ε decay (3.25 min). Other: 105 *19*, from 1974Ba07, and 20, from 2002MaZM, both in ^{122}Sn(^{36}S,4nγ).
1740.03	5$^+$	405.69 *13*	58 *9*	1334.38	3$^+$			E_γ: weighted average of 405.8 *4* from ^{154}Ho ε decay (3.10 min) and 405.68 *14* from (^{3}He,4nγ).
		515.6 *3*	38 *6*	1224.07	6$^+$			I_γ: from ^{154}Ho ε decay (3.10 M).
		993.10 *13*	100 *9*	746.92	4$^+$			E_γ: weighted average of 992.9 *3* from ^{154}Ho ε decay (3.10 min) and 993.14 *13* from (^{3}He,4nγ).
1747.71	8$^+$	523.67 *9*	100	1224.07	6$^+$	E2	0.01345 *19*	B(E2)(W.u.)=193 *+47−33* α(K)=0.01087 *15*; α(L)=0.002005 *28*; α(M)=0.000450 *6* α(N)=0.0001031 *14*; α(O)=1.428×10^{-5} *20*; α(P)=6.11×10^{-7} *9* E_γ: unweighted average of 523.8 *1* from ^{154}Ho ε decay (3.10 min), 523.50 *4* from (^{36}S,4nγ), and 523.7 *1* from (^{3}He,4nγ).
1781.9	(3$^+$)	755.1 *5*	100 *20*	1027.18	2$^+$			E_γ: from ^{154}Ho ε decay (11.76 min).

$^{154}_{66}Dy_{88}$-10

Adopted Levels, Gammas (continued)

γ(^{154}Dy) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.	α[@]	Comments
1781.9	(3$^+$)	1447.1 *4*	91 *20*	334.53	2$^+$			E_γ: from ^{154}Ho ε decay (11.76 min).
1818.5	4$^+$	311		1507.66	2$^+$	(E2)	0.0578 *8*	α(K)=0.0436 *6*; α(L)=0.01101 *15*; α(M)=0.002532 *35* α(N)=0.000575 *8*; α(O)=7.59×10^{-5} *11*; α(P)=2.287×10^{-6} *32* E_γ: from (^{3}He,4nγ).
		566		1251.88	4$^+$	(M1+E2)	0.016 *5*	α(K)=0.014 *5*; α(L)=0.0021 *5*; α(M)=0.00046 *10* α(N)=0.000107 *24*; α(O)=1.5×10^{-5} *4*; α(P)=8.1×10^{-7} *31* E_γ: from (^{3}He,4nγ).
		1072		746.92	4$^+$			E_γ: from (^{3}He,4nγ).
1819.02	(4$^-$)	610.6 *5*	35 *16*	1207.89	3$^-$			E_γ: from ^{154}Ho ε decay (11.76 min).
		1072.2 *2*	100 *20*	746.92	4$^+$			E_γ: from ^{154}Ho ε decay (11.76 min). Other: 1072.2 *4* from ^{154}Ho ε decay (3.10 min).
1832.8	1,2,3	1498.3 *3*	100	334.53	2$^+$			E_γ: from ^{154}Ho ε decay (11.76 min).
1844.8	1,2,3	1510.3 *3*	100	334.53	2$^+$			E_γ: from ^{154}Ho ε decay (11.76 min).
1877.2	1,2,3	1542.7 *5*	100 *13*	334.53	2$^+$			E_γ: from ^{154}Ho ε decay (11.76 min).
		1877.1 *6*	52 *13*	0.0	0$^+$			E_γ: from ^{154}Ho ε decay (11.76 min).
1885.63	(6)$^+$	443.35 *13*		1442.45	4$^+$	(E2)	0.02086 *29*	α(K)=0.01659 *23*; α(L)=0.00333 *5*; α(M)=0.000753 *11* α(N)=0.0001720 *24*; α(O)=2.348×10^{-5} *33*; α(P)=9.17×10^{-7} *13* E_γ: from (^{3}He,4nγ).
		661.58 *14*	100 *26*	1224.07	6$^+$	M1,E2	0.0111 *35*	α(K)=0.0093 *31*; α(L)=0.00139 *35*; α(M)=0.00031 *7* α(N)=7.1×10^{-5} *17*; α(O)=1.02×10^{-5} *27*; α(P)=5.6×10^{-7} *20* E_γ: weighted average of 661.5 *3* from ^{154}Ho ε decay (3.10 min) and 661.60 *14* from (^{3}He,4nγ).
		1138.65 *16*	53 *11*	746.92	4$^+$			E_γ: weighted average of 1138.5 *3* from ^{154}Ho ε decay (3.10 min) and 1138.69 *16* from (^{3}He,4nγ).
1903.74	(3$^-$)	569 *1*	100 *5*	1334.38	3$^+$			E_γ: from ^{154}Ho ε decay (11.76 min).
		876.6 *3*	5.4 *8*	1027.18	2$^+$			E_γ: from ^{154}Ho ε decay (11.76 min).
		1156.8 *4*	6.1 *15*	746.92	4$^+$			E_γ: from ^{154}Ho ε decay (11.76 min).
1958.2	1,2,3	1623.7 *5*	100	334.53	2$^+$			E_γ: from ^{154}Ho ε decay (11.76 min).
1964.76	7$^-$	306		1658.89	6$^+$			E_γ: from (^{3}He,4nγ).
		419		1545.82	5$^-$			E_γ: from (^{3}He,4nγ).
		740.60 *7*	100	1224.07	6$^+$			E_γ: weighted average of 740.6 *2* from ^{154}Ho ε decay (3.10 min) and 740.60 *7* from (^{36}S,4nγ).
1991.0	1,2,3	1656.5 *3*	100	334.53	2$^+$			E_γ: from ^{154}Ho ε decay (11.76 min).
2148.3	1,2,3	1813.8 *5*	100	334.53	2$^+$			E_γ: from ^{154}Ho ε decay (11.76 min).
2163.64	8$^+$	416.30 *14*		1747.71	8$^+$			E_γ: from (^{3}He,4nγ).
		504.59 *13*	100	1658.89	6$^+$			E_γ: from (^{3}He,4nγ).

$^{154}_{66}Dy_{88}$-11

Adopted Levels, Gammas (continued)

γ(^{154}Dy) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.	α[@]	Comments
2163.64	8^+	939		1224.07	6^+	(E2)	0.00347 *5*	α(K)=0.00291 *4*; α(L)=0.000439 *6*; α(M)=9.67×10^{-5} *14* α(N)=2.227×10^{-5} *31*; α(O)=3.20×10^{-6} *4*; α(P)=1.678×10^{-7} *23* E_γ: from (^{3}He,4nγ).
2168.6	1,2,3	1834.1 *4*	100	334.53	2^+			E_γ: from ^{154}Ho ε decay (11.76 min).
2178.0	1,2,3	1431.0 *3*	100 *19*	746.92	4^+			E_γ: from ^{154}Ho ε decay (11.76 min).
		1843.8 *5*	90 *19*	334.53	2^+			E_γ: from ^{154}Ho ε decay (11.76 min).
2183.11	1,2,3	1849.3 *4*	100 *13*	334.53	2^+			E_γ: from ^{154}Ho ε decay (11.76 min).
2183.48	7^+	443.45 *13*	100 *7*	1740.03	5^+	E2	0.02085 *29*	α(K)=0.01658 *23*; α(L)=0.00333 *5*; α(M)=0.000752 *11* α(N)=0.0001719 *24*; α(O)=2.347×10^{-5} *33*; α(P)=9.16×10^{-7} *13* E_γ: weighted average of 443.4 *2* from ^{154}Ho ε decay (3.10 min) and 443.47 *13* from (^{3}He,4nγ).
		959.1 *3*	47 *5*	1224.07	6^+			E_γ: weighted average of 959.1 *3* from ^{154}Ho ε decay (3.10 min) and 959.31 *14* from (^{3}He,4nγ).
2192.5	6^+	374		1818.5	4^+	E2	0.0336 *5*	α(K)=0.0261 *4*; α(L)=0.00579 *8*; α(M)=0.001321 *18* α(N)=0.000301 *4*; α(O)=4.04×10^{-5} *6*; α(P)=1.410×10^{-6} *20* E_γ: from (^{3}He,4nγ).
		941		1251.88	4^+	E2	0.00346 *5*	α(K)=0.00290 *4*; α(L)=0.000437 *6*; α(M)=9.62×10^{-5} *13* α(N)=2.216×10^{-5} *31*; α(O)=3.18×10^{-6} *4*; α(P)=1.671×10^{-7} *23* E_γ: from (^{3}He,4nγ).
		968.3 *3*	100	1224.07	6^+			E_γ: from ^{154}Ho ε decay (11.76 min).
2249.4	1,2,3	1502.5 *4*	100	746.92	4^+			E_γ: from ^{154}Ho ε decay (11.76 min).
2271.93	1,2,3	1244.6 *3*	55 *14*	1027.18	2^+			E_γ: from ^{154}Ho ε decay (11.76 min).
		1611.2 *5*	51 *21*	660.69	0^+			E_γ: from ^{154}Ho ε decay (11.76 min).
		1937.8 *5*	100 *21*	334.53	2^+			E_γ: from ^{154}Ho ε decay (11.76 min).
2304.64	10^+	556.93 *7*	100	1747.71	8^+	E2	0.01151 *16*	B(E2)(W.u.)=1.9×10^2 *+7−4* α(K)=0.00935 *13*; α(L)=0.001677 *23*; α(M)=0.000376 *5* α(N)=8.61×10^{-5} *12*; α(O)=1.198×10^{-5} *17*; α(P)=5.28×10^{-7} *7* E_γ: weighted average of 556.90 *4* from (^{36}S,4nγ) and 557.1 *1* from (^{3}He,4nγ).
2344.8	1,2,3	2010.3 *6*	100	334.53	2^+			E_γ: from ^{154}Ho ε decay (11.76 min).
2370.92	8^+	485.43 *13*		1885.63	$(6)^+$	E2	0.01637 *23*	α(K)=0.01314 *18*; α(L)=0.002514 *35*; α(M)=0.000567 *8* α(N)=0.0001296 *18*; α(O)=1.783×10^{-5} *25*; α(P)=7.33×10^{-7} *10* E_γ: from (^{3}He,4nγ).
		622.81 *16*		1747.71	8^+			E_γ: from (^{3}He,4nγ).
		1147.12 *19*		1224.07	6^+			E_γ: from (^{3}He,4nγ).
2421.49	9^-	259		2163.64	8^+			E_γ: from (^{3}He,4nγ).
		456.70 *4*	20 *4*	1964.76	7^-			E_γ: from ^{154}Ho ε decay (11.76 min).

$^{154}_{66}Dy_{88}$-12

Adopted Levels, Gammas (continued)

γ(^{154}Dy) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.	α[@]	Comments
2421.49	9$^-$	673.80 *5*	100	1747.71	8$^+$	D		E_γ: from ^{154}Ho ε decay (11.76 min).
2472.92	7$^+$	280.4	7.4 *11*	2192.5	6$^+$			E_γ: from ^{154}Ho ε decay (3.10 min).
		289.3 *2*	27.5 *21*	2183.48	7$^+$	E0+M1,E2	0.23 *3*	E_γ: from ^{154}Ho ε decay (3.10 min).
		309.5 *2*	21.7 *16*	2163.64	8$^+$	M1	0.1039 *15*	α(K)=0.0878 *12*; α(L)=0.01263 *18*; α(M)=0.00277 *4* α(N)=0.000640 *9*; α(O)=9.39×10^{-5} *13*; α(P)=5.41×10^{-6} *8* E_γ: from ^{154}Ho ε decay (3.10 min).
		587.3 *3*	3.7 *21*	1885.63	(6)$^+$			E_γ: from ^{154}Ho ε decay (3.10 min).
		725.1 *1*	70 *4*	1747.71	8$^+$	M1+E2	0.0089 *28*	α(K)=0.0075 *24*; α(L)=0.00110 *28*; α(M)=0.00024 *6* α(N)=5.6×10^{-5} *14*; α(O)=8.1×10^{-6} *22*; α(P)=4.5×10^{-7} *16* E_γ: from ^{154}Ho ε decay (3.10 min).
		732.8 *2*	17.5 *16*	1740.03	5$^+$			E_γ: from ^{154}Ho ε decay (3.10 min).
		814.1 *1*	79 *5*	1658.89	6$^+$	M1+E2	0.0067 *20*	α(K)=0.0057 *18*; α(L)=8.3×10^{-4} *21*; α(M)=0.00018 *5* α(N)=4.2×10^{-5} *11*; α(O)=6.1×10^{-6} *16*; α(P)=3.4×10^{-7} *11* E_γ: from ^{154}Ho ε decay (3.10 min).
		1250.1 *7*	100 *5*	1224.07	6$^+$	M1	0.00313 *4*	α(K)=0.00265 *4*; α(L)=0.000364 *5*; α(M)=7.93×10^{-5} *11* α(N)=1.834×10^{-5} *26*; α(O)=2.70×10^{-6} *4*; α(P)=1.591×10^{-7} *22*; α(IPF)=1.338×10^{-5} *22* E_γ: from ^{154}Ho ε decay (3.10 min).
2567.5	7$^-$	819.8	100	1747.71	8$^+$			
2567.9	8$^+$	375		2192.5	6$^+$	E2	0.0333 *5*	α(K)=0.0259 *4*; α(L)=0.00574 *8*; α(M)=0.001309 *18* α(N)=0.000298 *4*; α(O)=4.01×10^{-5} *6*; α(P)=1.401×10^{-6} *20* E_γ: from (^{3}He,4nγ).
		405		2163.64	8$^+$	(M1+E2)	0.039 *12*	α(K)=0.032 *11*; α(L)=0.0053 *9*; α(M)=0.00118 *17* α(N)=0.00027 *4*; α(O)=3.9×10^{-5} *7*; α(P)=1.9×10^{-6} *8* E_γ: from (^{3}He,4nγ).
		820		1747.71	8$^+$			E_γ: from (^{3}He,4nγ).
2665.0	8$^-$	917.3	100	1747.71	8$^+$			
2678.04	9$^+$	495.01 *13*		2183.48	7$^+$	E2	0.01555 *22*	α(K)=0.01251 *18*; α(L)=0.002370 *33*; α(M)=0.000534 *7* α(N)=0.0001221 *17*; α(O)=1.683×10^{-5} *24*; α(P)=6.99×10^{-7} *10* E_γ: from (^{3}He,4nγ).
		930.47 *18*		1747.71	8$^+$			E_γ: from (^{3}He,4nγ).
2757.9	10$^+$	594.7	100	2163.64	8$^+$			
2759.34	10$^+$	595.73 *13*		2163.64	8$^+$			E_γ: from (^{3}He,4nγ).
		1010		1747.71	8$^+$	E2	0.00298 *4*	α(K)=0.002505 *35*; α(L)=0.000372 *5*; α(M)=8.18×10^{-5} *11* α(N)=1.884×10^{-5} *26*; α(O)=2.71×10^{-6} *4*; α(P)=1.446×10^{-7} *20* E_γ: from (^{3}He,4nγ).
2866.7	8$^-$	299.2	67	2567.5	7$^-$			

$^{154}_{66}Dy_{88}$-13

Adopted Levels, Gammas (continued)

γ(^{154}Dy) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.	α[@]	Comments
2866.7	8⁻	901.9	100 *17*	1964.76	7⁻			
2882.53	11⁻	125		2757.9	10⁺	[E1]	0.1698 *24*	α(K)=0.1424 *20*; α(L)=0.02149 *30*; α(M)=0.00471 *7* α(N)=0.001072 *15*; α(O)=0.0001479 *21*; α(P)=6.78×10^{-6} *9* E_γ: from (^{3}He,4nγ).
		461.00 *6*	83	2421.49	9⁻	E2	0.01878 *26*	B(E2)(W.u.)=55 *7* α(K)=0.01499 *21*; α(L)=0.00295 *4*; α(M)=0.000665 *9* α(N)=0.0001521 *21*; α(O)=2.083×10^{-5} *29*; α(P)=8.32×10^{-7} *12*
		577.90 *5*	100	2304.64	10⁺	D		
2893.14	12⁺	588.8 *3*	100	2304.64	10⁺	E2	0.01002 *14*	B(E2)(W.u.)=172 *+43−29* α(K)=0.00818 *12*; α(L)=0.001433 *20*; α(M)=0.000320 *5* α(N)=7.35×10^{-5} *10*; α(O)=1.027×10^{-5} *14*; α(P)=4.64×10^{-7} *7* E_γ: unweighted average of 588.50 *5* from (^{36}S,4nγ) and 589.1 *1* from (^{3}He,4nγ).
2912.56	10⁺	541.66 *14*		2370.92	8⁺	E2	0.01234 *17*	α(K)=0.01001 *14*; α(L)=0.001817 *25*; α(M)=0.000408 *6* α(N)=9.34×10^{-5} *13*; α(O)=1.296×10^{-5} *18*; α(P)=5.64×10^{-7} *8* E_γ: from (^{3}He,4nγ).
		607		2304.64	10⁺			E_γ: from (^{3}He,4nγ).
3012.40	9⁻	145.7	100	2866.7	8⁻			
		444.9	4	2567.5	7⁻			
		590.90 *13*	50	2421.49	9⁻			
		1264.7	40	1747.71	8⁺			
3033.9	10⁺	466		2567.9	8⁺	E2	0.01824 *26*	α(K)=0.01458 *20*; α(L)=0.00285 *4*; α(M)=0.000643 *9* α(N)=0.0001470 *21*; α(O)=2.016×10^{-5} *28*; α(P)=8.10×10^{-7} *11* E_γ: from (^{3}He,4nγ).
3048.6	10⁻	383.6	100 *15*	2665.0	8⁻			
		627.1	100 *10*	2421.49	9⁻			
		744.0	25	2304.64	10⁺			
3159.40	10⁻	147.0	100	3012.40	9⁻			
		292.7	20 *3*	2866.7	8⁻			
3222.97	11⁺	545.11 *14*		2678.04	9⁺	E2	0.01214 *17*	α(K)=0.00985 *14*; α(L)=0.001784 *25*; α(M)=0.000400 *6* α(N)=9.17×10^{-5} *13*; α(O)=1.273×10^{-5} *18*; α(P)=5.56×10^{-7} *8* E_γ: from (^{3}He,4nγ).
		918.12 *15*		2304.64	10⁺			E_γ: from (^{3}He,4nγ).
3289.4	12⁺	396		2893.14	12⁺	(M1+E2)	0.041 *13*	α(K)=0.034 *12*; α(L)=0.0057 *9*; α(M)=0.00126 *17* α(N)=0.00029 *4*; α(O)=4.1×10^{-5} *8*; α(P)=2.0×10^{-6} *8* E_γ: from (^{3}He,4nγ).
		531.54 *14*	100	2757.9	10⁺			E_γ: from (^{3}He,4nγ).
3314.80	11⁻	155.40 *5*	100	3159.40	10⁻			
		302.40 *7*	100	3012.40	9⁻			

$^{154}_{66}Dy_{88}$-14

Adopted Levels, Gammas (continued)

γ(^{154}Dy) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.	α[@]	Comments
3314.80	11$^-$	432.3	40	2882.53	11$^-$			
		893.3	20	2421.49	9$^-$			
		1010.2	60	2304.64	10$^+$			
3390.64	13$^-$	497.50 *6*	17.6 *12*	2893.14	12$^+$	D		
		508.10 *4*	100 *3*	2882.53	11$^-$	E2	0.01453 *20*	B(E2)(W.u.)=168.4 α(K)=0.01172 *16*; α(L)=0.002192 *31*; α(M)=0.000493 *7* α(N)=0.0001129 *16*; α(O)=1.559×10^{-5} *22*; α(P)=6.57×10^{-7} *9*
3484.3	12$^-$	435.7	100	3048.6	10$^-$			
3504.40	12$^-$	189.60 *4*	100	3314.80	11$^-$			
		345.00 *6*	100	3159.40	10$^-$			
3509.25	14$^+$	616.12 *7*	100	2893.14	12$^+$	E2	0.00897 *13*	B(E2)(W.u.)=2.3×10^2 *+5–4* α(K)=0.00735 *10*; α(L)=0.001264 *18*; α(M)=0.000282 *4* α(N)=6.47×10^{-5} *9*; α(O)=9.08×10^{-6} *13*; α(P)=4.18×10^{-7} *6* E_γ: weighted average of 616.10 *4* from (^{36}S,4nγ) and 616.33 *12* from (^{3}He,4nγ).
3514.8	12$^+$	602.22 *25*		2912.56	10$^+$	E2	0.00948 *13*	α(K)=0.00776 *11*; α(L)=0.001346 *19*; α(M)=0.000301 *4* α(N)=6.90×10^{-5} *10*; α(O)=9.65×10^{-6} *14*; α(P)=4.40×10^{-7} *6* E_γ: from (^{3}He,4nγ).
3596.0	12$^+$	562		3033.9	10$^+$	E2	0.01125 *16*	α(K)=0.00915 *13*; α(L)=0.001634 *23*; α(M)=0.000366 *5* α(N)=8.39×10^{-5} *12*; α(O)=1.168×10^{-5} *16*; α(P)=5.17×10^{-7} *7* E_γ: from (^{3}He,4nγ).
3679.95	14$^+$	390.3	85	3289.4	12$^+$			
		786.80 *9*	100	2893.14	12$^+$			
3720.40	13$^-$	216.00 *4*	100	3504.40	12$^-$			
		405.60 *9*	100	3314.80	11$^-$			
3809.6	13$^+$	586.63		3222.97	11$^+$	E2	0.01011 *14*	α(K)=0.00826 *12*; α(L)=0.001448 *20*; α(M)=0.000324 *5* α(N)=7.43×10^{-5} *10*; α(O)=1.037×10^{-5} *15*; α(P)=4.68×10^{-7} *7* E_γ: from (^{3}He,4nγ).
3964.50	14$^-$	244.10 *7*	100	3720.40	13$^-$			
		460.10 *12*	100	3504.40	12$^-$			
3982.74	15$^-$	473.50 *7*	15.6 *13*	3509.25	14$^+$	D		
		592.10 *4*	100 *4*	3390.64	13$^-$	E2	0.00989 *14*	B(E2)(W.u.)=45.3 α(K)=0.00808 *11*; α(L)=0.001411 *20*; α(M)=0.000315 *4* α(N)=7.23×10^{-5} *10*; α(O)=1.011×10^{-5} *14*; α(P)=4.58×10^{-7} *6*
4006.4	14$^-$	522.1	100	3484.3	12$^-$			
4090.87	16$^+$	410.90 *10*	14	3679.95	14$^+$			
		581.60 *5*	100 *4*	3509.25	14$^+$	E2	0.01033 *14*	B(E2)(W.u.)=1.2×10^2 *+7–3* α(K)=0.00843 *12*; α(L)=0.001483 *21*; α(M)=0.000332 *5* α(N)=7.61×10^{-5} *11*; α(O)=1.062×10^{-5} *15*; α(P)=4.77×10^{-7} *7*
4173.20	16$^+$	664.3 *2*	100	3509.25	14$^+$	E2	0.00750 *11*	α(K)=0.00618 *9*; α(L)=0.001032 *14*; α(M)=0.0002298 *32*

$^{154}_{66}Dy_{88}$-15

Adopted Levels, Gammas (continued)

γ(^{154}Dy) (continued)

E_i(level)	J_i^π	E_γ †	I_γ ‡	E_f	J_f^π	Mult.	α @	Comments
								α(N)=5.28×10^{-5} *7*; α(O)=7.43×10^{-6} *10*; α(P)=3.52×10^{-7} *5* E_γ: unweighted average of 664.10 *8* from (^{36}S,4nγ) and 664.49 *12* from (^{3}He,4nγ).
4230.90	15$^-$	266.40 *4*	100	3964.50	14$^-$			
		510.50 *12*	100	3720.40	13$^-$			
4519.40	16$^-$	288.50 *5*	100	4230.90	15$^-$			
		554.90 *10*	100	3964.50	14$^-$			
4588.1	16$^-$	581.7	100	4006.4	14$^-$			
4637.40	18$^+$	546.50 *5*	100	4090.87	16$^+$	E2	0.01207 *17*	B(E2)(W.u.)=3.1×10^2 *+9−6* α(K)=0.00979 *14*; α(L)=0.001771 *25*; α(M)=0.000397 *6* α(N)=9.10×10^{-5} *13*; α(O)=1.264×10^{-5} *18*; α(P)=5.52×10^{-7} *8*
4642.34	17$^-$	659.60 *4*	100	3982.74	15$^-$	E2	0.00763 *11*	B(E2)(W.u.)=7×10^1 *+6−3* α(K)=0.00628 *9*; α(L)=0.001052 *15*; α(M)=0.0002342 *33* α(N)=5.38×10^{-5} *8*; α(O)=7.57×10^{-6} *11*; α(P)=3.58×10^{-7} *5*
4826.80	17$^-$	307.40 *5*	100	4519.40	16$^-$			
		595.90 *6*	100	4230.90	15$^-$			
4869.04	18$^+$	695.95 *11*	100 *10*	4173.20	16$^+$			E_γ: weighted average of 695.90 *12* from (^{36}S,4nγ) and 696.00 *11* from (^{3}He,4nγ).
		778.40 *22*	54	4090.87	16$^+$			
5151.80	18$^-$	325.00 *5*	100	4826.80	17$^-$			
		632.40 *12*	100	4519.40	16$^-$			
5206.4	18$^-$	618.3	100	4588.1	16$^-$			
5249.83	20$^+$	612.40 *4*	100	4637.40	18$^+$	E2	0.00911 *13*	B(E2)(W.u.)=214 *+36−27* α(K)=0.00746 *10*; α(L)=0.001285 *18*; α(M)=0.000287 *4* α(N)=6.58×10^{-5} *9*; α(O)=9.23×10^{-6} *13*; α(P)=4.24×10^{-7} *6*
5338.94	19$^-$	696.60 *4*	100	4642.34	17$^-$	E2	0.00671 *9*	α(K)=0.00554 *8*; α(L)=0.000911 *13*; α(M)=0.0002025 *28* α(N)=4.65×10^{-5} *7*; α(O)=6.58×10^{-6} *9*; α(P)=3.17×10^{-7} *4*
5489.40	19$^-$	337.60 *5*	100	5151.80	18$^-$			
		662.60 *7*	100	4826.80	17$^-$			
5564.54	20$^+$	695.69 *12*	100	4869.04	18$^+$			E_γ: weighted average of 695.60 *12* from (^{36}S,4nγ) and 695.81 *14* from (^{3}He,4nγ).
5841.30	20$^-$	351.90 *7*	100	5489.40	19$^-$			
		689.50 *8*	100	5151.80	18$^-$			
5867.0	20$^-$	660.6	100	5206.4	18$^-$			
5934.95	22$^+$	685.10 *4*	100	5249.83	20$^+$	E2	0.00698 *10*	B(E2)(W.u.)=199.84 α(K)=0.00576 *8*; α(L)=0.000952 *13*; α(M)=0.0002116 *30* α(N)=4.86×10^{-5} *7*; α(O)=6.86×10^{-6} *10*; α(P)=3.29×10^{-7} *5*
6035.92	21$^-$	696.97 *5*	100	5338.94	19$^-$	E2	0.00670 *9*	α(K)=0.00554 *8*; α(L)=0.000910 *13*; α(M)=0.0002023 *28* α(N)=4.65×10^{-5} *7*; α(O)=6.57×10^{-6} *9*; α(P)=3.17×10^{-7} *4*
6181.9	21$^-$	843.0	100	5338.94	19$^-$			

$^{154}_{66}Dy_{88}$-16

Adopted Levels, Gammas (continued)

γ(^{154}Dy) (continued)

E_i(level)	J_i^π	E_γ †	I_γ ‡	E_f	J_f^π	Mult.	α @	Comments
6201.50	21⁻	360.20 *4*	100	5841.30	20⁻			
		712.10 *6*	100	5489.40	19⁻			
6285.81	22⁺	721.32 *6*	100	5564.54	20⁺			
6560	22⁻	693.0	100	5867.0	20⁻			
6573.8	22⁻	372.30 *17*	100	6201.50	21⁻			
		732.5 *4*	100	5841.30	20⁻			
6690.77	24⁺	755.80 *4*	100	5934.95	22⁺	E2	0.00557 *8*	B(E2)(W.u.)=232.69 α(K)=0.00462 *6*; α(L)=0.000740 *10*; α(M)=0.0001640 *23* α(N)=3.77×10^{-5} *5*; α(O)=5.36×10^{-6} *7*; α(P)=2.65×10^{-7} *4*
6754.42	23⁻	718.50 *4*	100	6035.92	21⁻	E2	0.00625 *9*	α(K)=0.00517 *7*; α(L)=0.000841 *12*; α(M)=0.0001868 *26* α(N)=4.29×10^{-5} *6*; α(O)=6.08×10^{-6} *9*; α(P)=2.96×10^{-7} *4*
6805.4	23⁻	623.50 *5*	100	6181.9	21⁻			
		769.5	40	6035.92	21⁻			
6952.8	23⁻	379.00 *19*	100	6573.8	22⁻			
		751.3 *12*	100	6201.50	21⁻			
7045.72	24⁺	760.00 *8*	100	6285.81	22⁺			
7289	24⁻	728.6	100	6560	22⁻			
7343.3	24⁻	390.50 *15*	100	6952.8	23⁻			
		769.5 *3*	100	6573.8	22⁻			
7375.82	24⁺	685.10 *12*	100	6690.77	24⁺			
7513.80	26⁺	823.00 *4*	100	6690.77	24⁺	E2	0.00461 *6*	α(K)=0.00384 *5*; α(L)=0.000600 *8*; α(M)=0.0001326 *19* α(N)=3.05×10^{-5} *4*; α(O)=4.35×10^{-6} *6*; α(P)=2.210×10^{-7} *31*
7519.42	25⁻	765.00 *4*	100	6754.42	23⁻	E2	0.00542 *8*	α(K)=0.00450 *6*; α(L)=0.000718 *10*; α(M)=0.0001591 *22* α(N)=3.66×10^{-5} *5*; α(O)=5.20×10^{-6} *7*; α(P)=2.58×10^{-7} *4*
7741.5	25⁻	398.2	100	7343.3	24⁻			
		788.7	100	6952.8	23⁻			
7772.5	25⁻	967.10 *7*	100	6805.4	23⁻			
7856.69	26⁺	811.00 *5*	100	7045.72	24⁺			
8061	26⁻	772.6	100	7289	24⁻			
8139.60	26⁺	626.01 *6*	100	7513.80	26⁺			
		763.89 *18*	33	7375.82	24⁺			
8151.8	26⁻	410.30 *18*	100	7741.5	25⁻			
		808.5 *3*	100	7343.3	24⁻			
8280.8	27⁻	508.30 *5*	100	7772.5	25⁻			
		761.4	70	7519.42	25⁻			
8335.42	27⁻	816.00 *4*	100	7519.42	25⁻	E2	0.00470 *7*	α(K)=0.00391 *5*; α(L)=0.000612 *9*; α(M)=0.0001354 *19* α(N)=3.11×10^{-5} *4*; α(O)=4.44×10^{-6} *6*; α(P)=2.250×10^{-7} *32*
8400.93	28⁺	887.00 *4*	100	7513.80	26⁺	E2	0.00392 *5*	B(E2)(W.u.)=139.590 α(K)=0.00328 *5*; α(L)=0.000501 *7*; α(M)=0.0001106 *15* α(N)=2.55×10^{-5} *4*; α(O)=3.65×10^{-6} *5*; α(P)=1.888×10^{-7} *26*

$^{154}_{66}Dy_{88}$-17

Adopted Levels, Gammas (continued)

γ(^{154}Dy) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.	α[@]	Comments
8570.5	27⁻	418.70 *19*	100	8151.8	26⁻			
		829.0 *7*	100	7741.5	25⁻			
8723.66	28⁺	867.00 *5*	100	7856.69	26⁺			
8885	28⁻	823.8	100	8061	26⁻			
8917.04	28⁺	516.00 *5*	100	8400.93	28⁺			
		778.20 *11*	50	8139.60	26⁺			
9002.1	28⁻	431.60 *21*	100	8570.5	27⁻			
		850.3 *4*	100	8151.8	26⁻			
9119.2	(28⁻)	838.4	100	8280.8	27⁻			
9188.7	29⁻	853.3	100	8335.42	27⁻	(E2)	0.00426 *6*	α(K)=0.00356 *5*; α(L)=0.000550 *8*; α(M)=0.0001214 *17* α(N)=2.79×10^{-5} *4*; α(O)=3.99×10^{-6} *6*; α(P)=2.047×10^{-7} *29*
		907.8	1.9	8280.8	27⁻			
9217.62	29⁻	882.20 *4*	100 *6*	8335.42	27⁻	E2	0.00396 *6*	α(K)=0.00331 *5*; α(L)=0.000508 *7*; α(M)=0.0001121 *16* α(N)=2.58×10^{-5} *4*; α(O)=3.69×10^{-6} *5*; α(P)=1.909×10^{-7} *27*
		936.8	29	8280.8	27⁻			
9350.18	30⁺	949.20 *4*	100	8400.93	28⁺	E2	0.00339 *5*	α(K)=0.00285 *4*; α(L)=0.000428 *6*; α(M)=9.43×10^{-5} *13* α(N)=2.172×10^{-5} *30*; α(O)=3.12×10^{-6} *4*; α(P)=1.641×10^{-7} *23*
9445.3	29⁻	443.20 *15*	100	9002.1	28⁻			
		874.8 *9*	100	8570.5	27⁻			
9567.50	30⁺	650.50 *8*	100	8917.04	28⁺			
9646.70	30⁺	923.04 *7*	100	8723.66	28⁺			
9668.72	30⁺	751.80 *12*	100	8917.04	28⁺			
		945.09 *5*	100	8723.66	28⁺			
9765	30⁻	880.3	100	8885	28⁻			
9894.1	(30⁻)	774.9	100	9119.2	(28⁻)			
9898.7	30⁻	453.4	100	9445.3	29⁻			
		896.6	100	9002.1	28⁻			
10107.7	31⁻	890.0	11	9217.62	29⁻			
		919.00 *5*	100	9188.7	29⁻			
10156.33	31⁻	938.70 *6*	100	9217.62	29⁻	E2	0.00347 *5*	α(K)=0.00291 *4*; α(L)=0.000439 *6*; α(M)=9.68×10^{-5} *14* α(N)=2.229×10^{-5} *31*; α(O)=3.20×10^{-6} *4*; α(P)=1.679×10^{-7} *24*
10359.22	32⁺	1008.82 *9*	100	9350.18	30⁺	E2	0.00299 *4*	α(K)=0.002511 *35*; α(L)=0.000373 *5*; α(M)=8.20×10^{-5} *11* α(N)=1.889×10^{-5} *26*; α(O)=2.72×10^{-6} *4*; α(P)=1.449×10^{-7} *20*
10367.9	31⁻	922.6	100	9445.3	29⁻			
10384.79	32⁺	716.1	5.0	9668.72	30⁺			
		817.40 *12*	25	9567.50	30⁺			
		1034.60 *4*	100	9350.18	30⁺	E2	0.00284 *4*	α(K)=0.002386 *33*; α(L)=0.000352 *5*; α(M)=7.75×10^{-5} *11* α(N)=1.785×10^{-5} *25*; α(O)=2.57×10^{-6} *4*; α(P)=1.377×10^{-7} *19*
10434.6	(32⁻)	540.5	100	9894.1	(30⁻)			

$^{154}_{66}Dy_{88}$-18

Adopted Levels, Gammas (continued)

γ(^{154}Dy) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.	α[@]	Comments
10446.34	32^+	777.80 *9*	100	9668.72	30^+			
10629.75	32^+	983.04 *7*	100	9646.70	30^+			
10704	32^-	938.9	100	9765	30^-			
10847.2	32^-	948.5	100	9898.7	30^-			
11073.7	33^-	966.00 *7*	100	10107.7	31^-			
11082.7	33^-	926.4	5.0	10156.33	31^-			
		975.1	100	10107.7	31^-	E2	0.00321 *4*	α(K)=0.00269 *4*; α(L)=0.000403 *6*; α(M)=8.86×10^{-5} *12* α(N)=2.041×10^{-5} *29*; α(O)=2.94×10^{-6} *4*; α(P)=1.553×10^{-7} *22*
11120.76	34^+	735.80 *6*	100	10384.79	32^+	E2	0.00592 *8*	α(K)=0.00491 *7*; α(L)=0.000792 *11*; α(M)=0.0001757 *25* α(N)=4.04×10^{-5} *6*; α(O)=5.73×10^{-6} *8*; α(P)=2.81×10^{-7} *4*
		760.90 *16*	33	10359.22	32^+			
11147.83	33^-	991.50 *8*	100 *3*	10156.33	31^-	E2	0.00310 *4*	α(K)=0.00260 *4*; α(L)=0.000388 *5*; α(M)=8.53×10^{-5} *12* α(N)=1.965×10^{-5} *28*; α(O)=2.83×10^{-6} *4*; α(P)=1.501×10^{-7} *21*
11319.36	34^+	873.20 *9*	33	10446.34	32^+			
		934.90 *8*	100	10384.79	32^+			
		958.7	100	10359.22	32^+			
11340.9	33^-	973.0	100	10367.9	31^-			
11432.22	34^+	1073.00 *8*	100	10359.22	32^+			
11606.0	34^-	523.30 *15*	100	11082.7	33^-			
11666.35	34^+	1036.60 *6*	100	10629.75	32^+			
11704	34^-	999.9	100	10704	32^-			
11759.0	(34^-)	1324.4	100	10434.6	(32^-)			
11830.0	35^-	224.00 *4*	16.7 *17*	11606.0	34^-	(D)		
		747.30 *8*	100 *8*	11082.7	33^-	(E2)	0.00571 *8*	α(K)=0.00474 *7*; α(L)=0.000761 *11*; α(M)=0.0001688 *24* α(N)=3.88×10^{-5} *5*; α(O)=5.51×10^{-6} *8*; α(P)=2.72×10^{-7} *4*
11850.3	34^-	1003.1	100	10847.2	32^-			
11916.6	35^-	833.9	100	11082.7	33^-			
11925.80	36^+	605.90 *19*	27	11319.36	34^+			
		805.00 *6*	100	11120.76	34^+	E2	0.00484 *7*	α(K)=0.00403 *6*; α(L)=0.000633 *9*; α(M)=0.0001400 *20* α(N)=3.22×10^{-5} *5*; α(O)=4.59×10^{-6} *6*; α(P)=2.316×10^{-7} *32*
12063.53	(35^-)	915.70 *6*	100	11147.83	33^-			
12095.7	35^-	1022.00 *5*	100	11073.7	33^-			
12307.3	36^-	477.30 *9*	100	11830.0	35^-			
		701.3	33	11606.0	34^-			
12410.02	36^+	484.10 *7*	100	11925.80	36^+			
		1090.96 *6*	25	11319.36	34^+			
		1289.10 *5*	50	11120.76	34^+			
12540.9	37^-	233.60 *4*	100	12307.3	36^-			
		710.90 *7*	100	11830.0	35^-	E2	0.00640 *9*	α(K)=0.00530 *7*; α(L)=0.000865 *12*; α(M)=0.0001920 *27* α(N)=4.41×10^{-5} *6*; α(O)=6.24×10^{-6} *9*; α(P)=3.03×10^{-7} *4*

$^{154}_{66}Dy_{88}$-19

Adopted Levels, Gammas (continued)

γ(^{154}Dy) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.	α[@]	Comments
12557.62	36^+	1125.40 *6*	100	11432.22	34^+			
12762.86	36^+	1096.50 *6*	100	11666.35	34^+			
12765	36^-	1060.9	100	11704	34^-			
13039.7	38^-	498.7	100	12540.9	37^-			
		732.3	30	12307.3	36^-			
13088.7	(37^-)	1025.2	100	12063.53	(35^-)			
13089.1	37^+	1163.3	100	11925.80	36^+			
13166.5	37^-	1070.88 *5*	100	12095.7	35^-			
13257.9	38^+	847.9	27	12410.02	36^+			
		1332.1	100	11925.80	36^+	E2	1.74×10^{-3} *2*	B(E2)(W.u.)=2.7 *+16−8* α(K)=0.001450 *20*; α(L)=0.0002050 *29*; α(M)=4.48×10^{-5} *6* α(N)=1.034×10^{-5} *14*; α(O)=1.504×10^{-6} *21*; α(P)=8.38×10^{-8} *12*; α(IPF)=2.58×10^{-5} *4*
13311.8	39^-	272.1	60	13039.7	38^-			
		770.80 *9*	100	12540.9	37^-	E2	0.00533 *7*	α(K)=0.00443 *6*; α(L)=0.000704 *10*; α(M)=0.0001561 *22* α(N)=3.59×10^{-5} *5*; α(O)=5.10×10^{-6} *7*; α(P)=2.54×10^{-7} *4*
13403.0	39^-	862.0	100	12540.9	37^-			
13558.8	40^-	247.0	100	13311.8	39^-			
		519.1	100	13039.7	38^-			
13744.93	38^+	1187.30 *6*	100	12557.62	36^+			
13889	38^-	1123.6	100	12765	36^-			
13909.79	38^+	1146.93 *5*	100	12762.86	36^+			
14025.2	41^-	466.4	100	13558.8	40^-			
		713.4	80	13311.8	39^-			
14135.8	40^+	877.84 *11*	100	13257.9	38^+	E2	0.00401 *6*	B(E2)(W.u.)=28 *+17−8* α(K)=0.00335 *5*; α(L)=0.000514 *7*; α(M)=0.0001134 *16* α(N)=2.61×10^{-5} *4*; α(O)=3.74×10^{-6} *5*; α(P)=1.929×10^{-7} *27*
14295.1	39^-	1128.50 *4*	100	13166.5	37^-			
14375.8	41^-	1064.0	100	13311.8	39^-			
14424.1	39^+	1166.2	100	13257.9	38^+			
14469.2	39^+	1211.3	100	13257.9	38^+			
14590.8	42^-	565.6	100	14025.2	41^-			
		1032.0	20	13558.8	40^-			
14886.0	42^+	750.25 *17*	100	14135.8	40^+	E2	0.00566 *8*	B(E2)(W.u.)=44 *+17−10* α(K)=0.00470 *7*; α(L)=0.000754 *11*; α(M)=0.0001671 *23* α(N)=3.84×10^{-5} *5*; α(O)=5.45×10^{-6} *8*; α(P)=2.70×10^{-7} *4*
14981.33	40^+	1236.40 *5*	100	13744.93	38^+			
15074	40^-	1185.7	100	13889	38^-			
15119.01	40^+	1209.21 *5*	100	13909.79	38^+			
15484.6	41^-	1189.50 *5*	100	14295.1	39^-			
15505.5	(41^+)	1369.7	100	14135.8	40^+			

$^{154}_{66}Dy_{88}$-20

Adopted Levels, Gammas (continued)

γ(^{154}Dy) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.	α[@]	Comments
15662.1	(43$^-$)	1636.9	100	14025.2	41$^-$			
16011.8	44$^+$	1125.8	100	14886.0	42$^+$	E2	2.39×10^{-3} *3*	B(E2)(W.u.)=40 *+24−11* α(K)=0.002014 *28*; α(L)=0.000293 *4*; α(M)=6.42×10^{-5} *9* α(N)=1.480×10^{-5} *21*; α(O)=2.141×10^{-6} *30*; α(P)=1.164×10^{-7} *16*; α(IPF)=7.23×10^{-7} *10*
16089.2	43$^+$	1203.2	100	14886.0	42$^+$			
16272.41	42$^+$	1291.07 *5*	100	14981.33	40$^+$			
16322	42$^-$	1247.9	100	15074	40$^-$			
16360.2	(43$^+$)	1474.2	100	14886.0	42$^+$			
16374.01	42$^+$	1255.00 *5*	100	15119.01	40$^+$			
16735.7	43$^-$	1251.17 *4*	100	15484.6	41$^-$			
16738.1	(45$^-$)	1076.0	100	15662.1	(43$^-$)			
17187.3	45$^+$	1175.5	100	16011.8	44$^+$			
17294.2	(45$^+$)	1282.4	100	16011.8	44$^+$			
17322.9	46$^+$	1311.1	100 *5*	16011.8	44$^+$	[E2]	1.79×10^{-3} *3*	B(E2)(W.u.)=37 *+22−10* α(K)=0.001495 *21*; α(L)=0.0002118 *30*; α(M)=4.63×10^{-5} *6* α(N)=1.069×10^{-5} *15*; α(O)=1.554×10^{-6} *22*; α(P)=8.64×10^{-8} *12*; α(IPF)=2.157×10^{-5} *30*
17609.12	44$^+$	1336.70 *4*	100	16272.41	42$^+$			
17629	44$^-$	1306.5	100	16322	42$^-$			
18054.2	45$^-$	1318.50 *5*	100	16735.7	43$^-$			
18485.8	47$^+$	1298.5	100	17187.3	45$^+$			
18732.9	48$^+$	1410.0	100	17322.9	46$^+$	[E2]	1.58×10^{-3} *2*	α(K)=0.001300 *18*; α(L)=0.0001824 *26*; α(M)=3.99×10^{-5} *6* α(N)=9.20×10^{-6} *13*; α(O)=1.339×10^{-6} *19*; α(P)=7.52×10^{-8} *11*; α(IPF)=4.54×10^{-5} *6*
18915.2	47$^+$	1592.3	100	17322.9	46$^+$			
18963.7	46$^+$	1354.6	100	17609.12	44$^+$			
19445.6	47$^-$	1391.4	100	18054.2	45$^-$			
20904.7	49$^-$	1459.0	100	19445.6	47$^-$			
22436.1	51$^-$	1531.4	100	20904.7	49$^-$			
701.7+x	J+2	701.7 *2*	0.20[#] *3*	x	J≈(24)			
1450.7+x	J+4	749.0 *2*	0.27[#] *4*	701.7+x	J+2			
2245.1+x	J+6	794.4 *2*	0.39[#] *4*	1450.7+x	J+4			
3085.7+x	J+8	840.6 *2*	0.59[#] *11*	2245.1+x	J+6			
3973.1+x	J+10	887.4 *2*	0.70[#] *11*	3085.7+x	J+8			
4907.8+x	J+12	934.7 *2*	0.68[#] *12*	3973.1+x	J+10			
5888.9+x	J+14	981.1 *2*	0.50[#] *12*	4907.8+x	J+12			
6917.7+x	J+16	1028.8 *2*	0.52[#] *12*	5888.9+x	J+14			

$^{154}_{66}Dy_{88}$-21

Adopted Levels, Gammas (continued)

γ(^{154}Dy) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Comments
7993.2+x	J+18	1075.5 *2*	0.49[#] *12*	6917.7+x	J+16	
9116.7+x	J+20	1123.5 *2*	0.42[#] *12*	7993.2+x	J+18	
10288.0+x	J+22	1171.3 *2*	0.35[#] *12*	9116.7+x	J+20	
11506.6+x	J+24	1218.6 *2*	0.30[#] *12*	10288.0+x	J+22	
12772.6+x	J+26	1266.0 *2*	0.30[#] *11*	11506.6+x	J+24	
14086.7+x	J+28	1314.0 *2*	0.25[#] *10*	12772.6+x	J+26	
15448.6+x	J+30	1361.9 *2*	0.22[#] *10*	14086.7+x	J+28	
16858.3+x	J+32	1409.7 *2*	0.30[#] *10*	15448.6+x	J+30	
18314.9+x	J+34	1456.6 *3*	0.11[#] *8*	16858.3+x	J+32	
19819.2+x	J+36	1504.3 *2*	<0.1[#]	18314.9+x	J+34	Eγ=1503.7 *7* (1995Ni03).
794.9+y?	J1+2	794.9[&] *9*	<0.1[#]	y	J1	
1634.8+y	J1+4	839.9 *2*	0.20[#] *2*	794.9+y?	J1+2	
2520.1+y	J1+6	885.3 *2*	0.27[#] *3*	1634.8+y	J1+4	
3451.1+y	J1+8	931.0 *2*	0.25[#] *4*	2520.1+y	J1+6	
4428.2+y	J1+10	977.1 *2*	0.30[#] *4*	3451.1+y	J1+8	
5451.2+y	J1+12	1023.0 *2*	0.30[#] *4*	4428.2+y	J1+10	
6519.6+y	J1+14	1068.4 *4*	0.24[#] *4*	5451.2+y	J1+12	
7632.6+y	J1+16	1113.0 *4*	0.21[#] *4*	6519.6+y	J1+14	
8789.9+y	J1+18	1157.3 *4*	0.20[#] *4*	7632.6+y	J1+16	
9991.7+y	J1+20	1201.8 *2*	0.21[#] *4*	8789.9+y	J1+18	
11237.8+y	J1+22	1246.1 *3*	0.19[#] *4*	9991.7+y	J1+20	
12527.9+y	J1+24	1290.1 *3*	0.18[#] *4*	11237.8+y	J1+22	
13861.7+y	J1+26	1333.7 *4*	0.10[#] *4*	12527.9+y	J1+24	
15239.0+y	J1+28	1377.3 *4*	0.09[#] *4*	13861.7+y	J1+26	
16659.7+y	J1+30	1420.7 *4*	0.04[#] *3*	15239.0+y	J1+28	
18123.3+y	J1+32	1463.6 *4*	<0.1[#]	16659.7+y	J1+30	
19629.1+y	J1+34	1505.8 *4*	<0.1[#]	18123.3+y	J1+32	
780.5+z	J2+2	780.5 *6*	<0.02[#]	z	J2≈(33)	
1607.7+z	J2+4	827.2 *8*	0.030[#] *7*	780.5+z	J2+2	
2479.7+z	J2+6	872.0 *6*	0.040[#] *9*	1607.7+z	J2+4	
3392.1+z	J2+8	912.4 *5*	0.065[#] *9*	2479.7+z	J2+6	
4349.5+z	J2+10	957.4 *5*	0.090[#] *9*	3392.1+z	J2+8	

$^{154}_{66}Dy_{88}$-22

Adopted Levels, Gammas (continued)

γ(^{154}Dy) (continued)

E_i(level)	J_i^π	E_γ [†]	I_γ [‡]	E_f	J_f^π
5351.6+z	J2+12	1002.1 *3*	0.090[#] *14*	4349.5+z	J2+10
6399.0+z	J2+14	1047.4 *3*	0.070[#] *14*	5351.6+z	J2+12
7492.4+z	J2+16	1093.4 *3*	0.100[#] *14*	6399.0+z	J2+14
8632.5+z	J2+18	1140.1 *2*	0.110[#] *14*	7492.4+z	J2+16
9819.6+z	J2+20	1187.1 *3*	0.100[#] *14*	8632.5+z	J2+18
11052.1+z	J2+22	1232.5 *3*	0.060[#] *14*	9819.6+z	J2+20
12332.2+z	J2+24	1280.1 *3*	0.060[#] *14*	11052.1+z	J2+22
13659.4+z	J2+26	1327.1 *3*	0.055[#] *9*	12332.2+z	J2+24
15033.1+z	J2+28	1373.7 *4*	0.045[#] *9*	13659.4+z	J2+26
16453.2+z	J2+30	1420.1 *3*	0.040[#] *9*	15033.1+z	J2+28
17919.3+z	J2+32	1466.1 *3*	0.030[#] *4*	16453.2+z	J2+30
19431.5+z	J2+34	1512.2 *7*	<0.02[#]	17919.3+z	J2+32
721.1+u	J3+2	721.1 *7*	0.015[#] *4*	u	J3
1490.1+u	J3+4	769.0 *6*	0.020[#] *7*	721.1+u	J3+2
2307.1+u	J3+6	817.0 *6*	0.028[#] *11*	1490.1+u	J3+4
3172.5+u	J3+8	865.4 *4*	0.040[#] *11*	2307.1+u	J3+6
4086.8+u	J3+10	914.3 *6*	0.055[#] *11*	3172.5+u	J3+8
5050.1+u	J3+12	963.3 *4*	0.080[#] *11*	4086.8+u	J3+10
6061.8+u	J3+14	1011.7 *3*	0.080[#] *11*	5050.1+u	J3+12
7120.8+u	J3+16	1059.0 *3*	0.075[#] *11*	6061.8+u	J3+14
8226.3+u	J3+18	1105.5 *2*	0.075[#] *11*	7120.8+u	J3+16
9377.2+u	J3+20	1150.9 *2*	0.072[#] *11*	8226.3+u	J3+18
10573.6+u	J3+22	1196.4 *2*	0.070[#] *11*	9377.2+u	J3+20
11815.4+u	J3+24	1241.8 *2*	0.045[#] *11*	10573.6+u	J3+22
13102.4+u	J3+26	1287.0 *2*	0.042[#] *6*	11815.4+u	J3+24
14434.5+u	J3+28	1332.0 *3*	0.030[#] *6*	13102.4+u	J3+26
15811.3+u	J3+30	1376.8 *3*	0.030[#] *6*	14434.5+u	J3+28
17232.4+u	J3+32	1421.1 *4*	0.025[#] *6*	15811.3+u	J3+30
18696.8+u	J3+34	1464.4 *7*	0.025[#] *6*	17232.4+u	J3+32
20204.0+u	J3+36	1507.2 *8*	0.010[#] *6*	18696.8+u	J3+34
738.6+v	J4+2	738.6 *8*	0.012[#] *3*	v	J4≈(31)
1522.6+v	J4+4	784.0 *8*	0.013[#] *3*	738.6+v	J4+2

$^{154}_{66}Dy_{88}$-23

Adopted Levels, Gammas (continued)

γ(^{154}Dy) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π
2352.5+v	J4+6	829.9 *8*	0.019[#] *3*	1522.6+v	J4+4
3229.0+v	J4+8	876.5 *6*	0.028[#] *7*	2352.5+v	J4+6
4152.5+v	J4+10	923.5 *6*	0.035[#] *7*	3229.0+v	J4+8
5122.8+v	J4+12	970.3 *6*	0.035[#] *9*	4152.5+v	J4+10
6140.2+v	J4+14	1017.4 *8*	0.045[#] *9*	5122.8+v	J4+12
7204.4+v	J4+16	1064.2 *6*	0.045[#] *9*	6140.2+v	J4+14
8315.0+v	J4+18	1110.6 *4*	0.055[#] *9*	7204.4+v	J4+16
9471.9+v	J4+20	1156.9 *5*	0.055[#] *9*	8315.0+v	J4+18
10675.0+v	J4+22	1203.1 *7*	0.040[#] *9*	9471.9+v	J4+20
11923.6+v	J4+24	1248.6 *5*	0.045[#] *9*	10675.0+v	J4+22
13218.0+v	J4+26	1294.4 *4*	0.055[#] *9*	11923.6+v	J4+24
14559.2+v	J4+28	1341.1 *7*	0.045[#] *9*	13218.0+v	J4+26
15946+v	J4+30	1387.3 *8*	0.032[#] *9*	14559.2+v	J4+28
17380+v	J4+32	1433.5 *6*	0.032[#] *8*	15946+v	J4+30
18859+v	J4+34	1479.4 *5*	0.030[#] *6*	17380+v	J4+32
20385+v	J4+34	1525.2 *8*	0.020[#] *4*	18859+v	J4+34
855.2+w?	J5+2	855.2[&] *10*	<0.01[#]	w	J5≈(36)
1756.4+w?	J5+4	901.2[&] *10*	<0.01[#]	855.2+w?	J5+2
2704.1+w	J5+6	947.7 *5*	0.020[#] *2*	1756.4+w?	J5+4
3698.4+w	J5+8	994.3 *5*	0.023[#] *4*	2704.1+w	J5+6
4739.3+w	J5+10	1040.9 *5*	0.023[#] *4*	3698.4+w	J5+8
5826.2+w	J5+12	1086.9 *5*	0.035[#] *4*	4739.3+w	J5+10
6959.5+w	J5+14	1133.3 *5*	0.027[#] *4*	5826.2+w	J5+12
8138.9+w	J5+16	1179.4 *5*	0.027[#] *4*	6959.5+w	J5+14
9364.4+w	J5+18	1225.5 *5*	0.020[#] *4*	8138.9+w	J5+16
10636.2+w	J5+20	1271.8 *5*	0.020[#] *4*	9364.4+w	J5+18
11954.2+w	J5+22	1318.0 *6*	0.018[#] *3*	10636.2+w	J5+20
13318.5+w	J5+24	1364.2 *8*	0.015[#] *3*	11954.2+w	J5+22
14728.7+w	J5+26	1410.2 *8*	0.013[#] *2*	13318.5+w	J5+24
16185+w	J5+28	1456.0 *8*		14728.7+w	J5+26

[†] From evaluator's average of the various available values. Unless noted, γ's above 2500 keV of excitation energy are from ^{122}Sn(^{36}S,4nγ) and ^{122}Sn(^{36}S,4nγ):SD.

$^{154}_{66}Dy_{88}$-24

Adopted Levels, Gammas (continued)

$\gamma(^{154}Dy)$ (continued)

‡ Relative photon branching ratios, except for transitions in SD bands, which are relative intensities within each band, as well relative to the g.s. band population.
# Intensity is relative to the population of the g.s. band in $^{122}Sn(^{36}S,4n\gamma)$ reaction at E=165 MeV (2009Ij01).
@ Additional information 3.
& Placement of transition in the level scheme is uncertain.

$^{154}_{66}Dy_{88}$-25

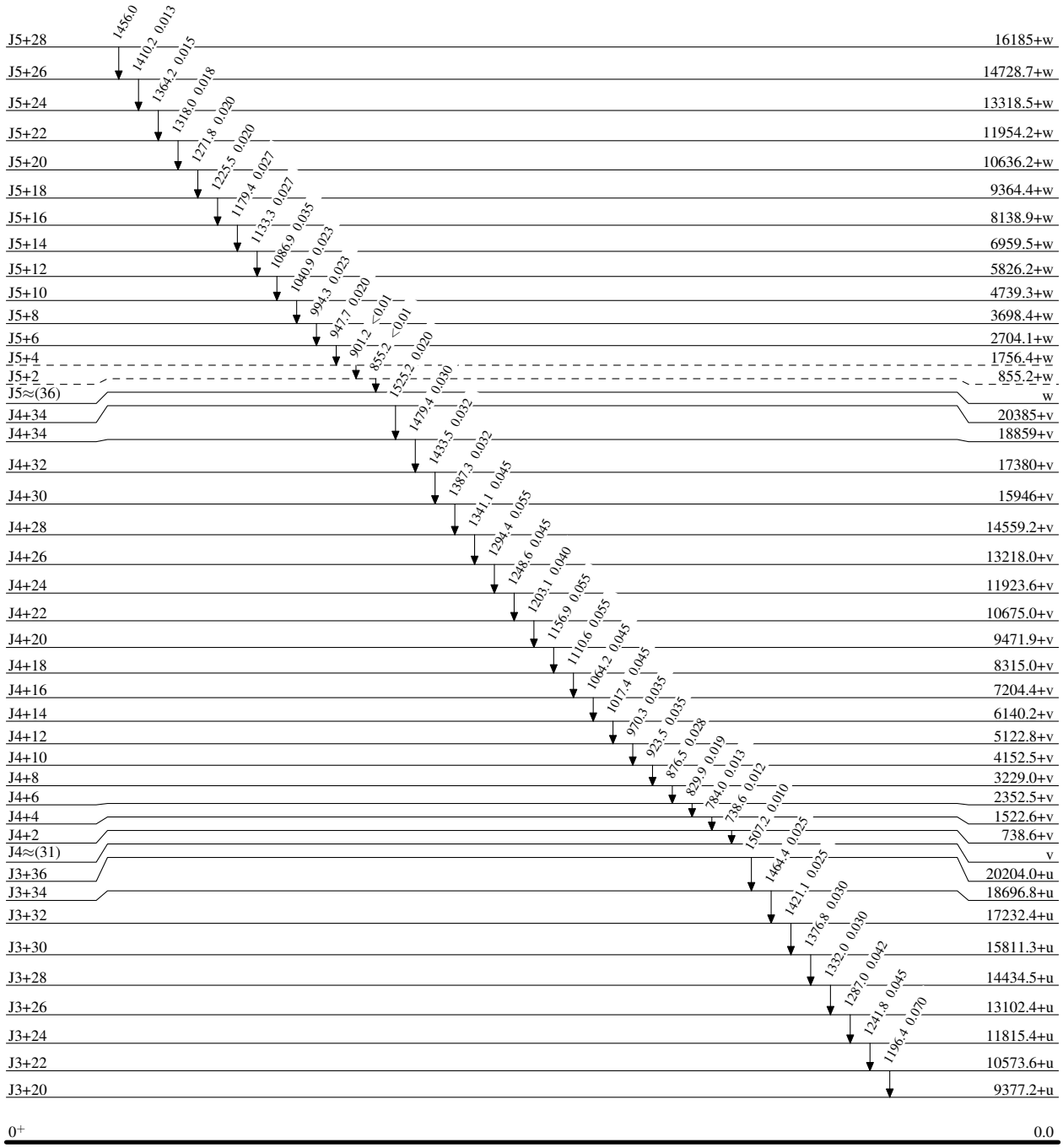
Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level

- - - - - - ► γ Decay (Uncertain)

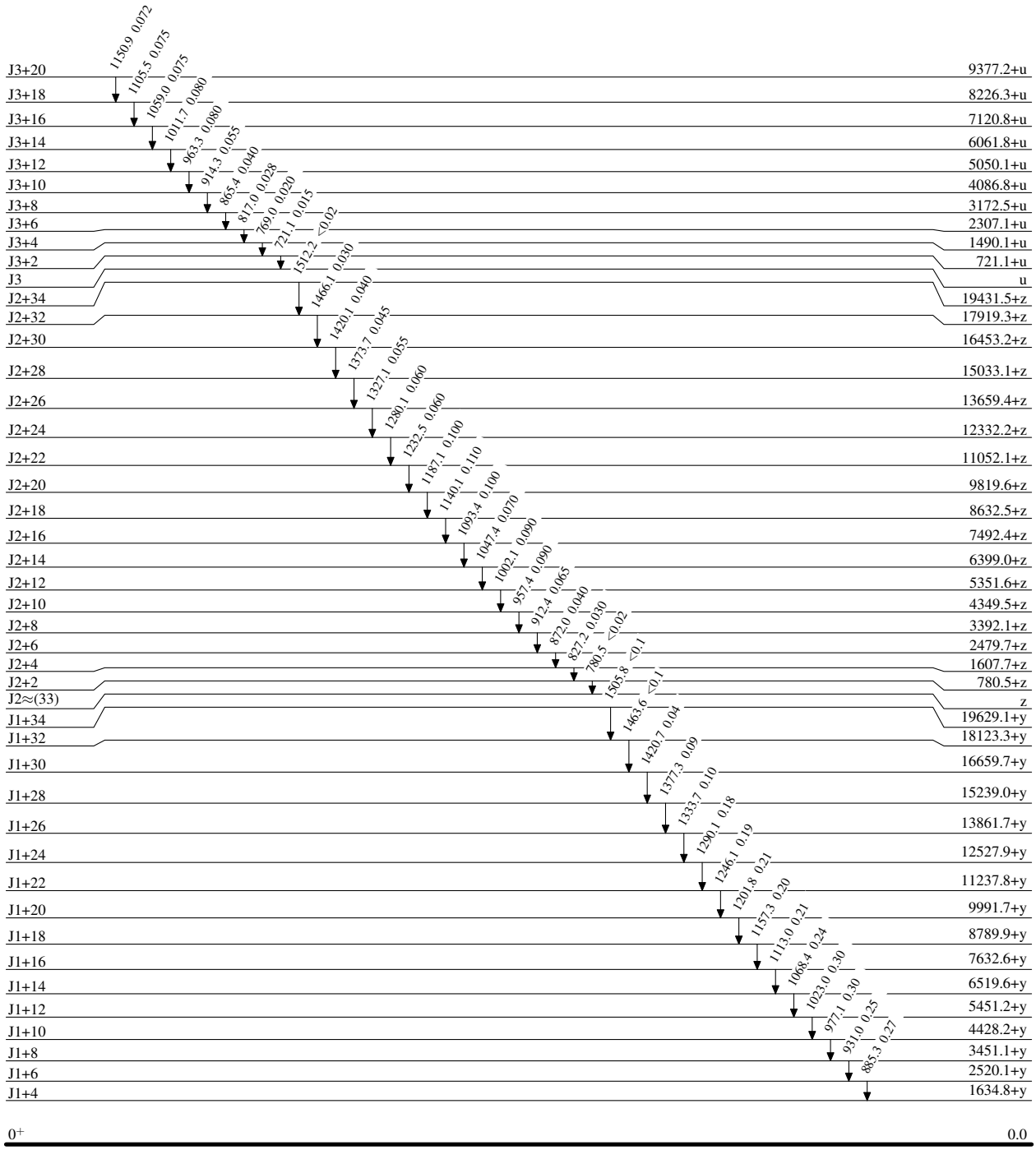


$^{154}_{66}Dy_{88}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{154}_{66}Dy_{88}$

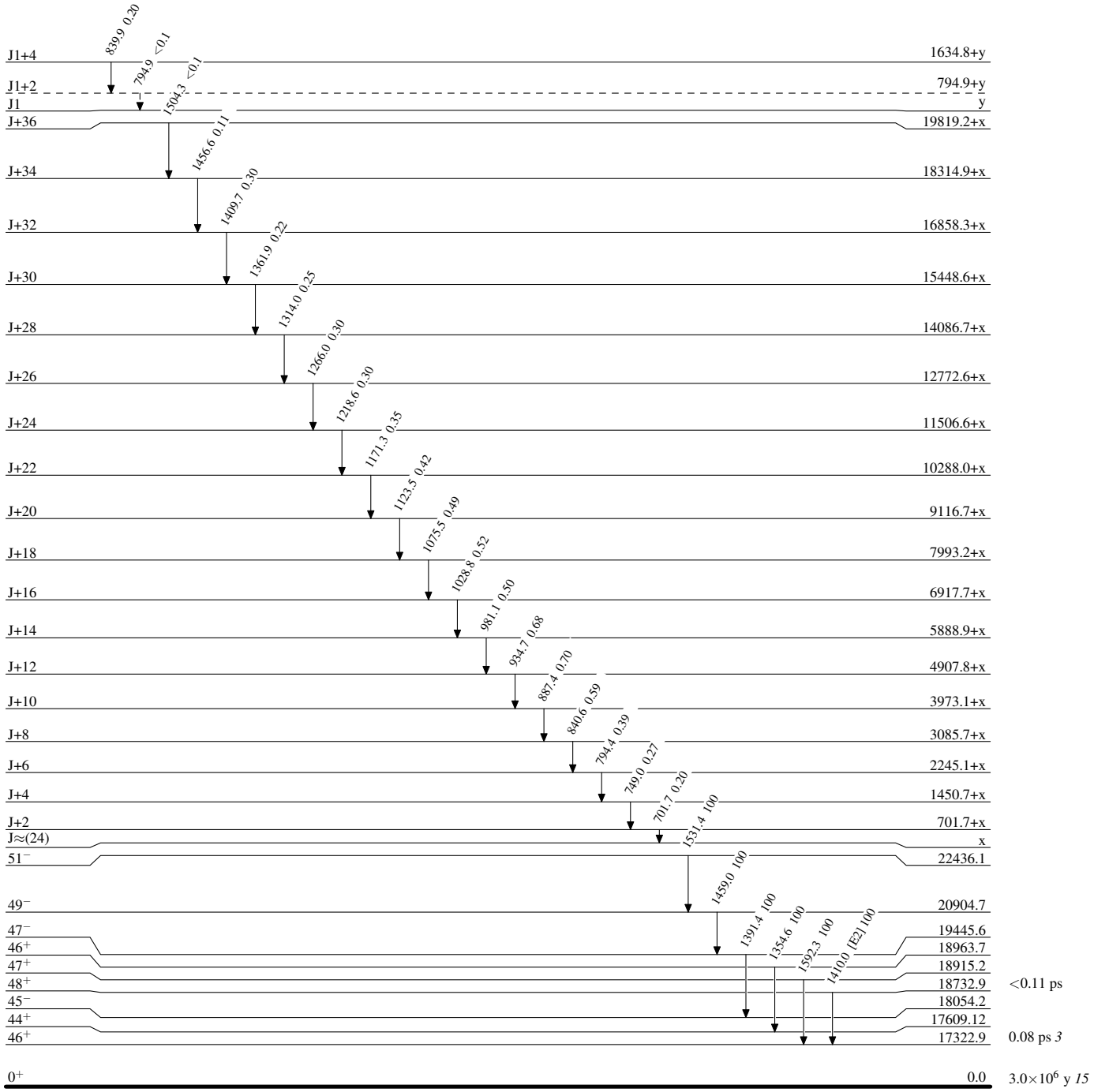
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)

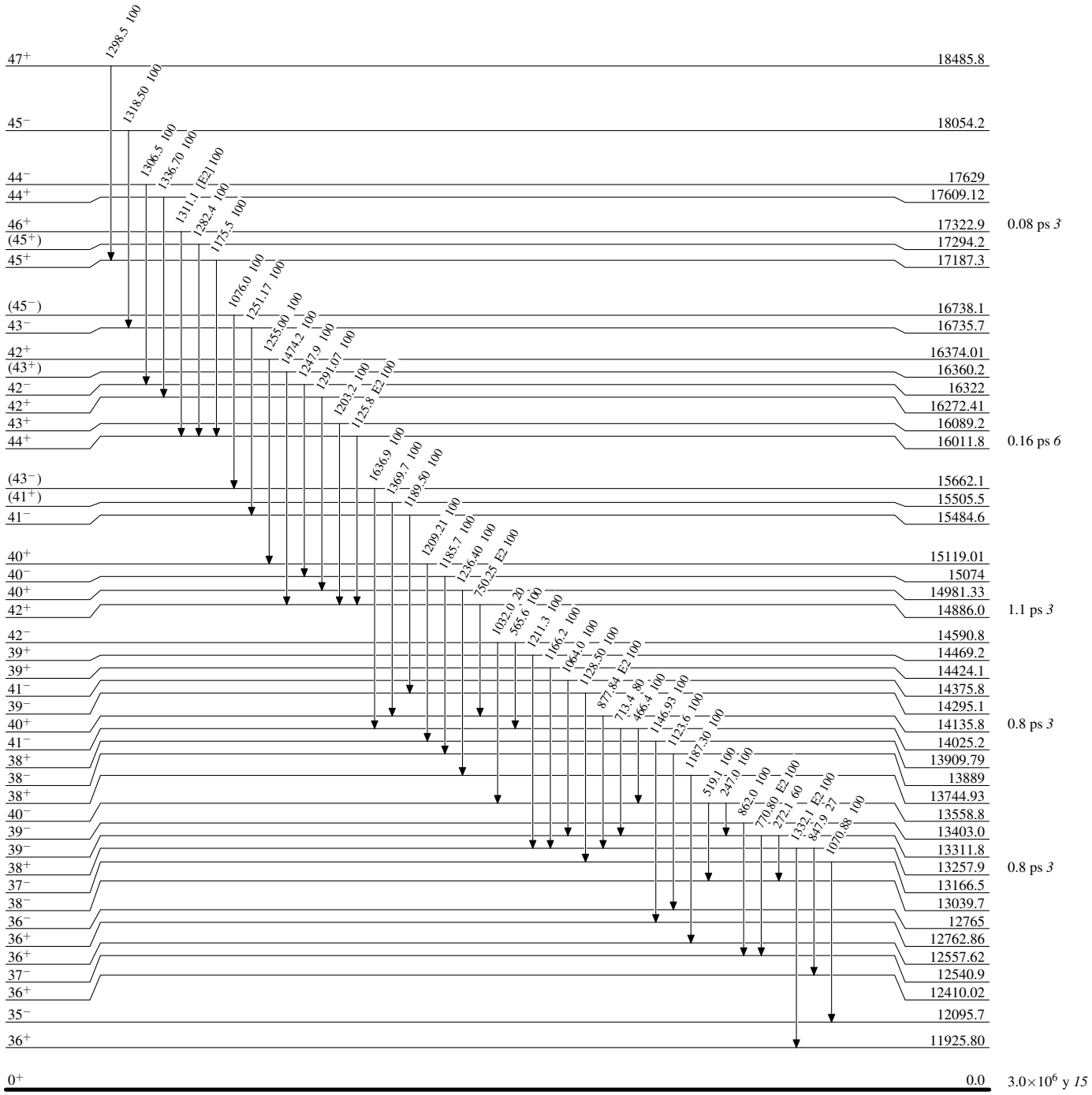


$^{154}_{66}Dy_{88}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

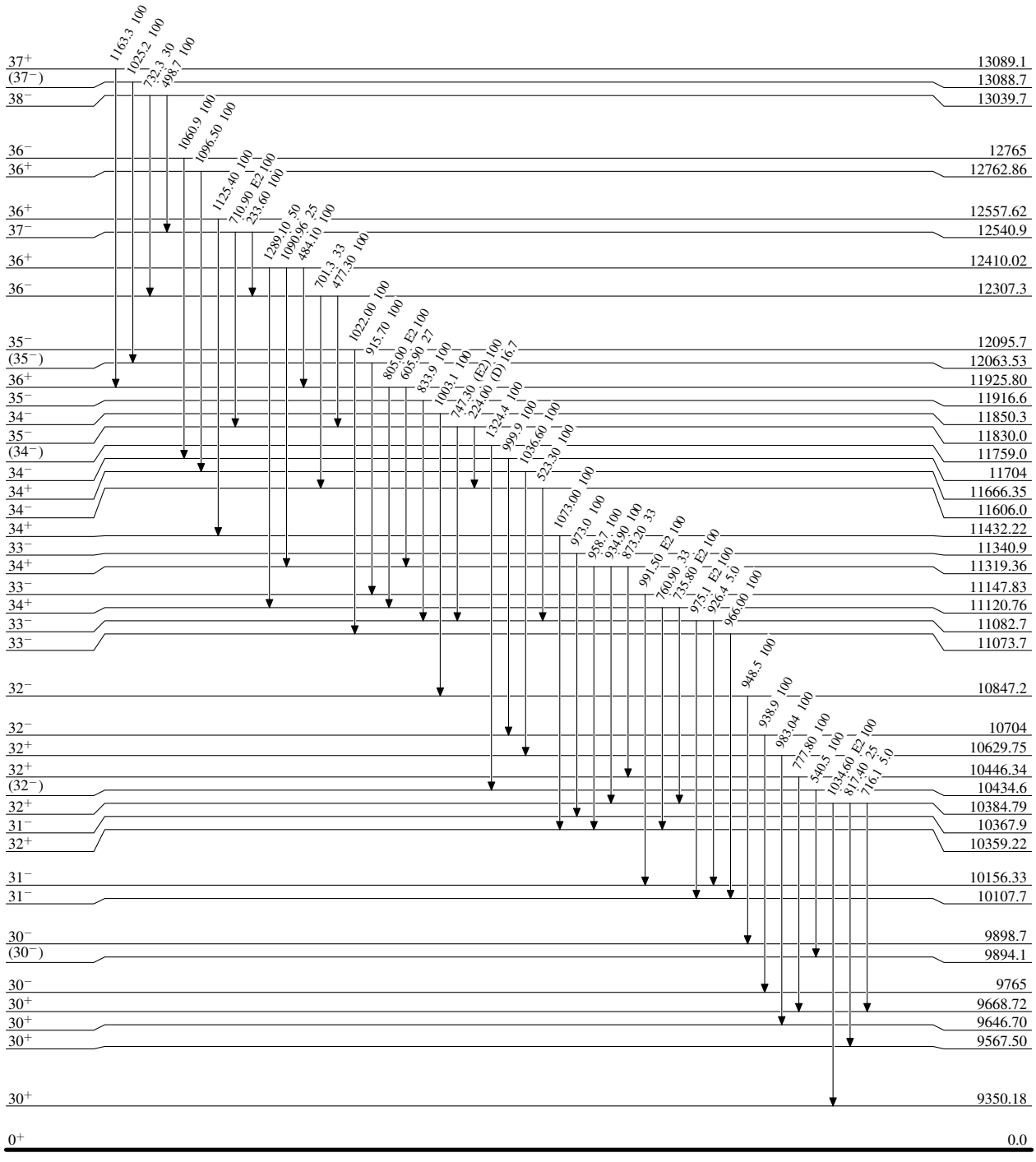


$^{154}_{66}Dy_{88}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

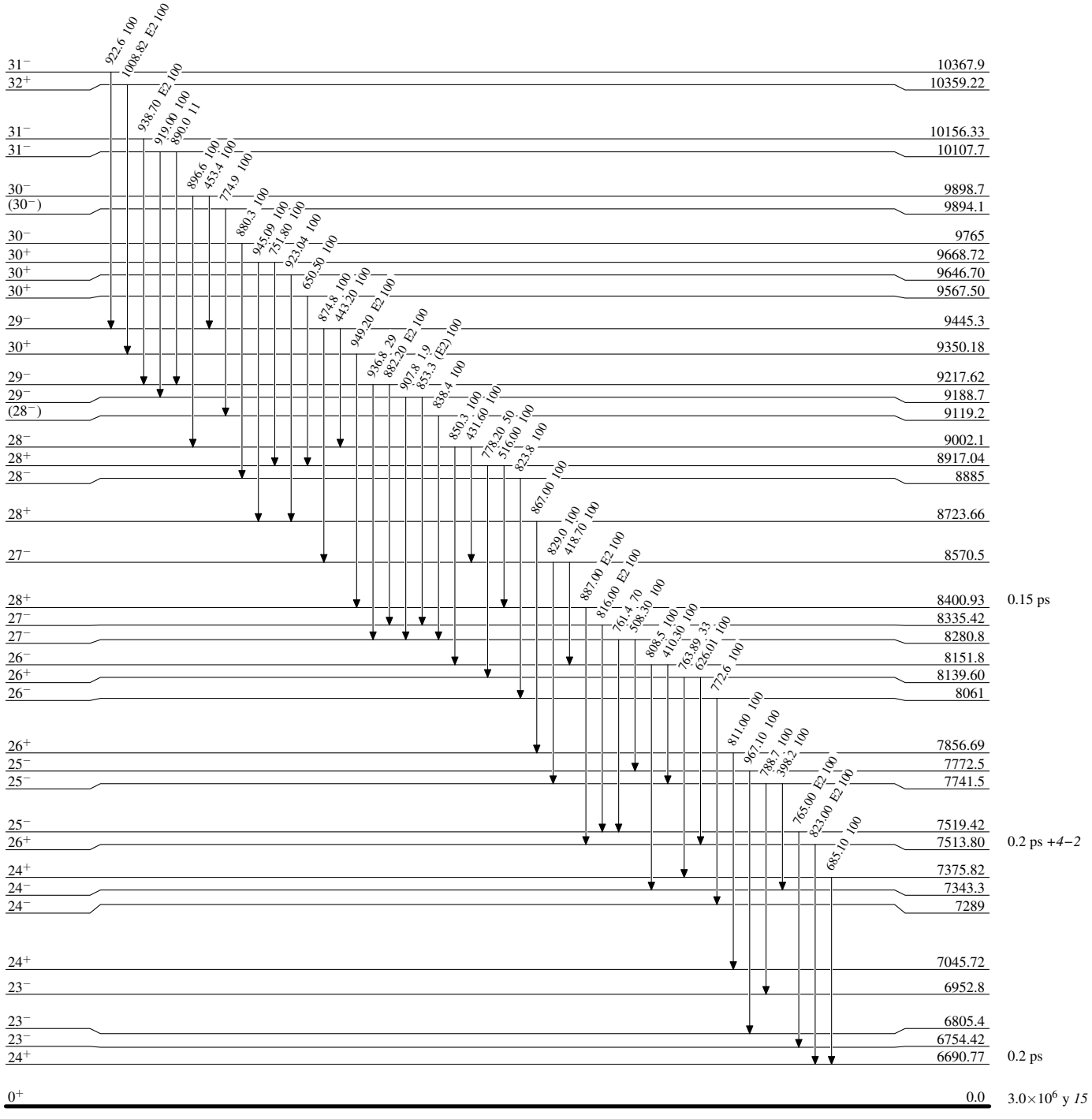


$^{154}_{66}Dy_{88}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

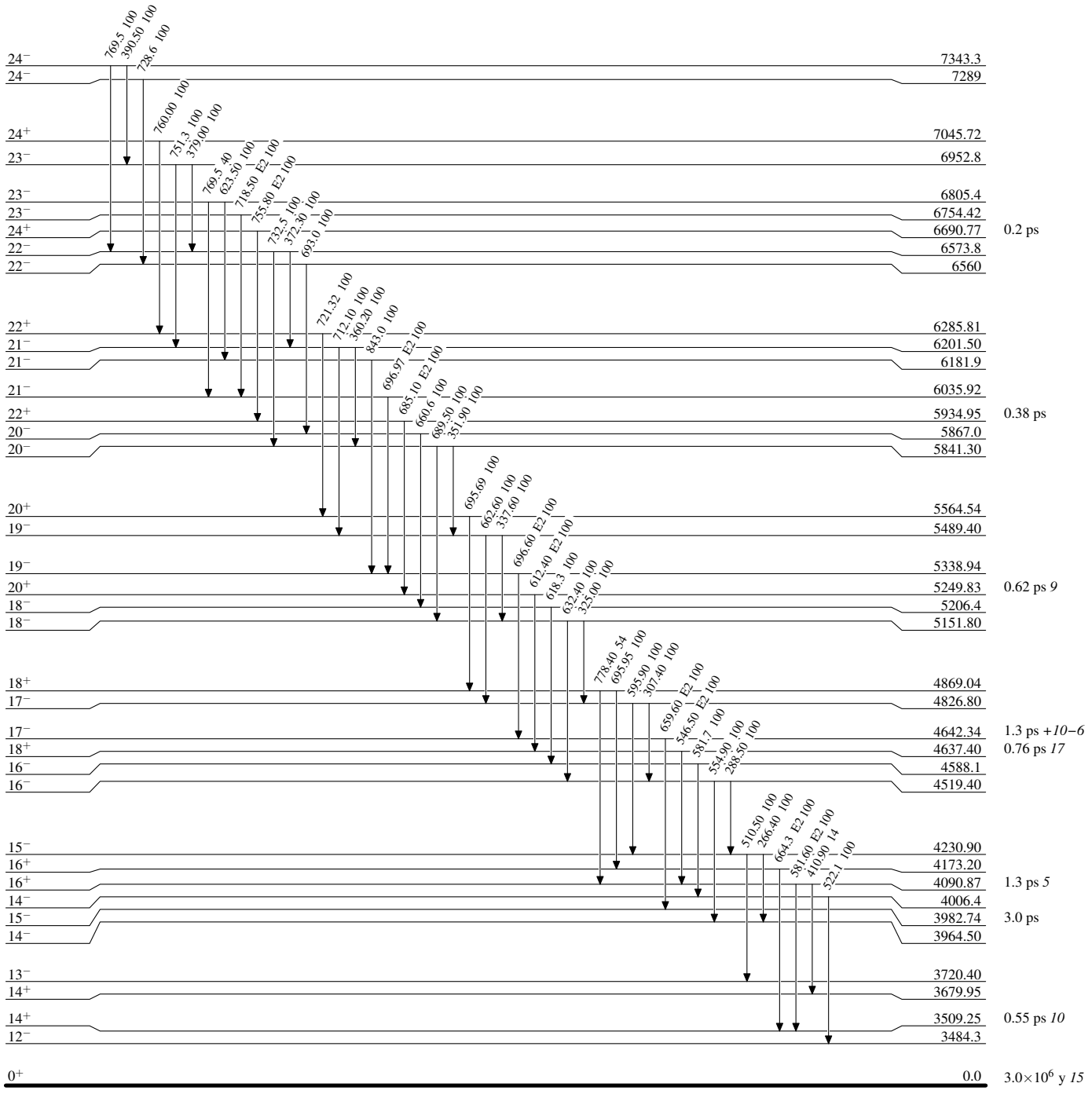


$^{154}_{66}Dy_{88}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

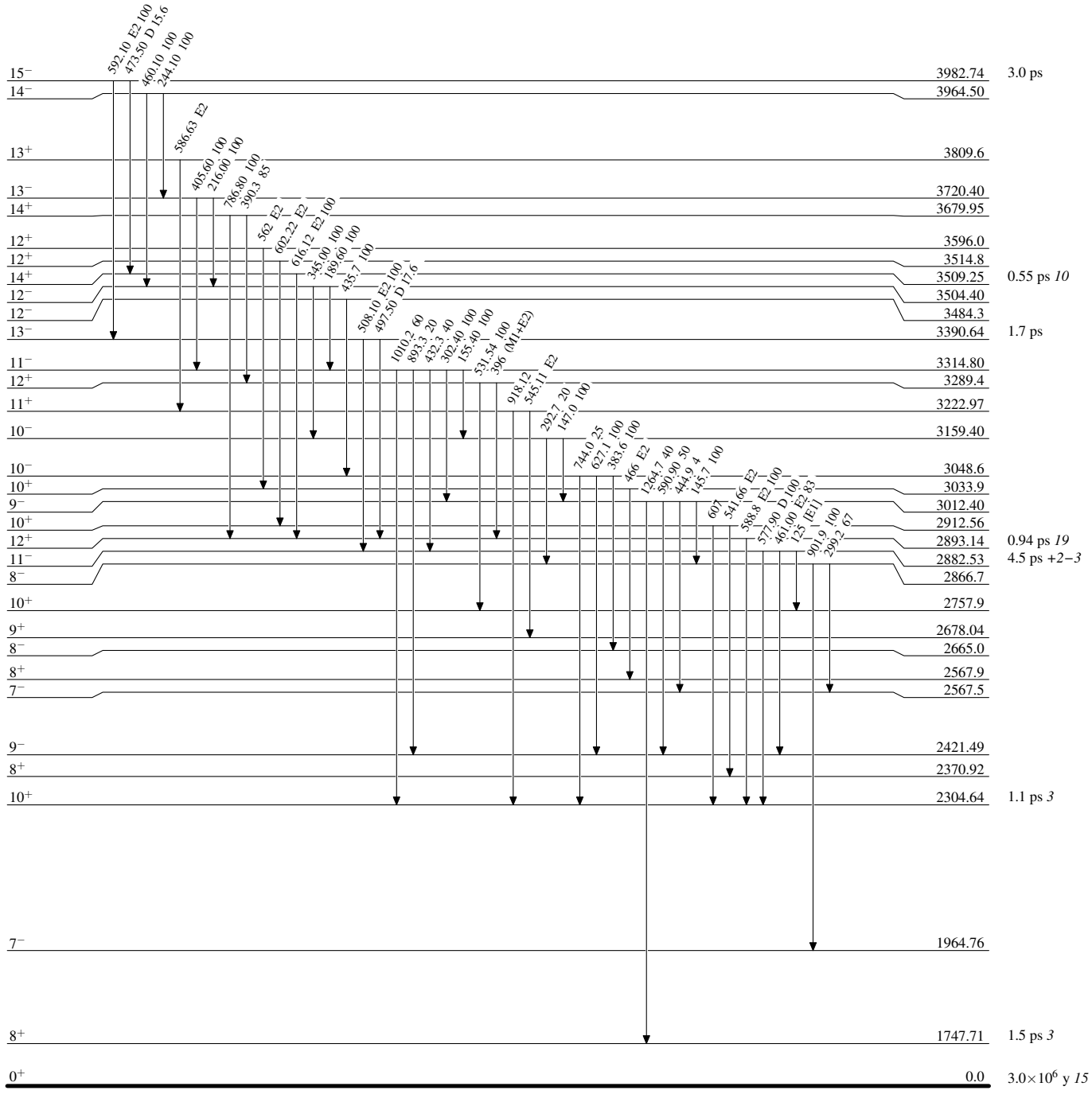


$^{154}_{66}Dy_{88}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

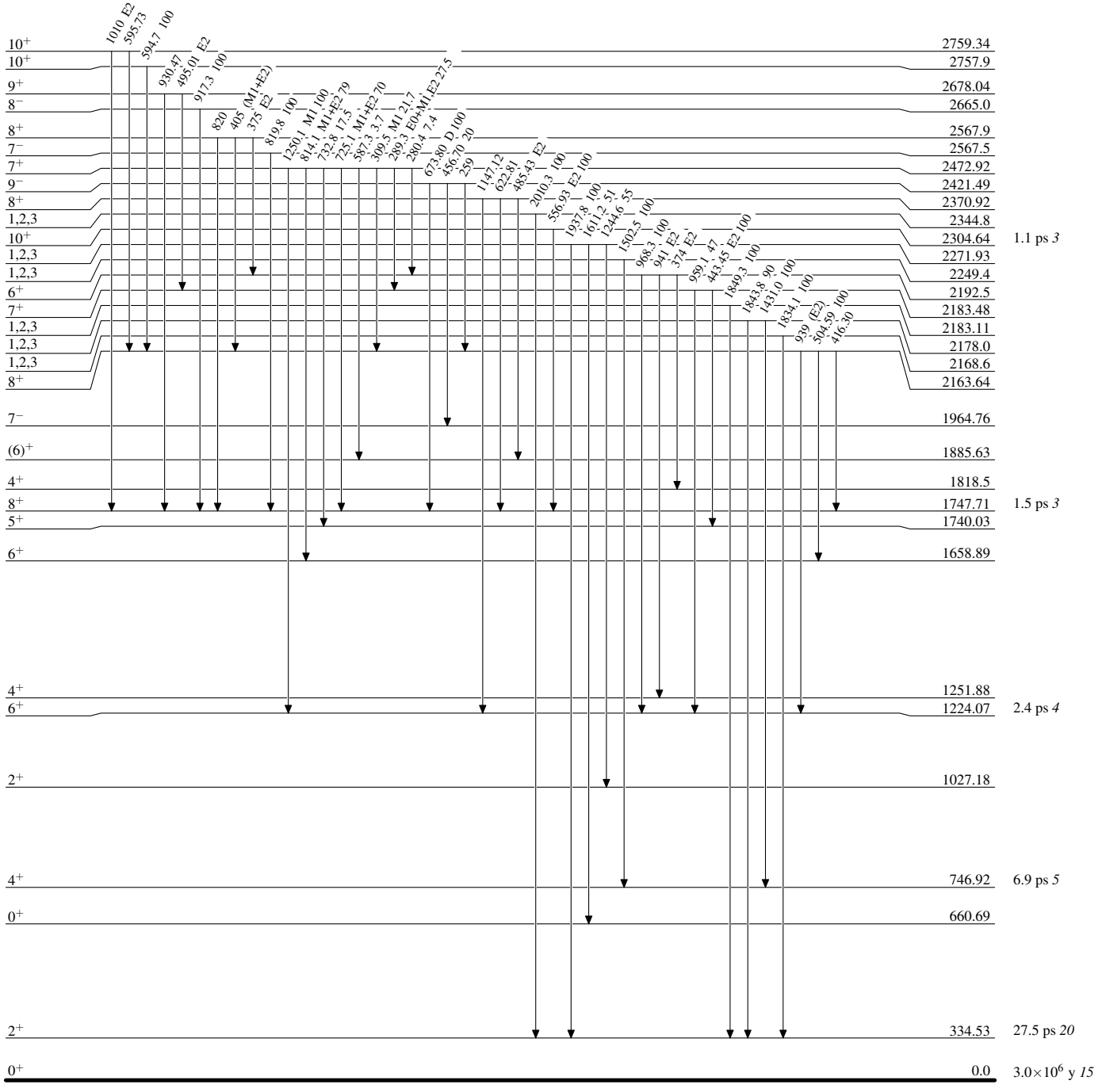


$^{154}_{66}Dy_{88}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

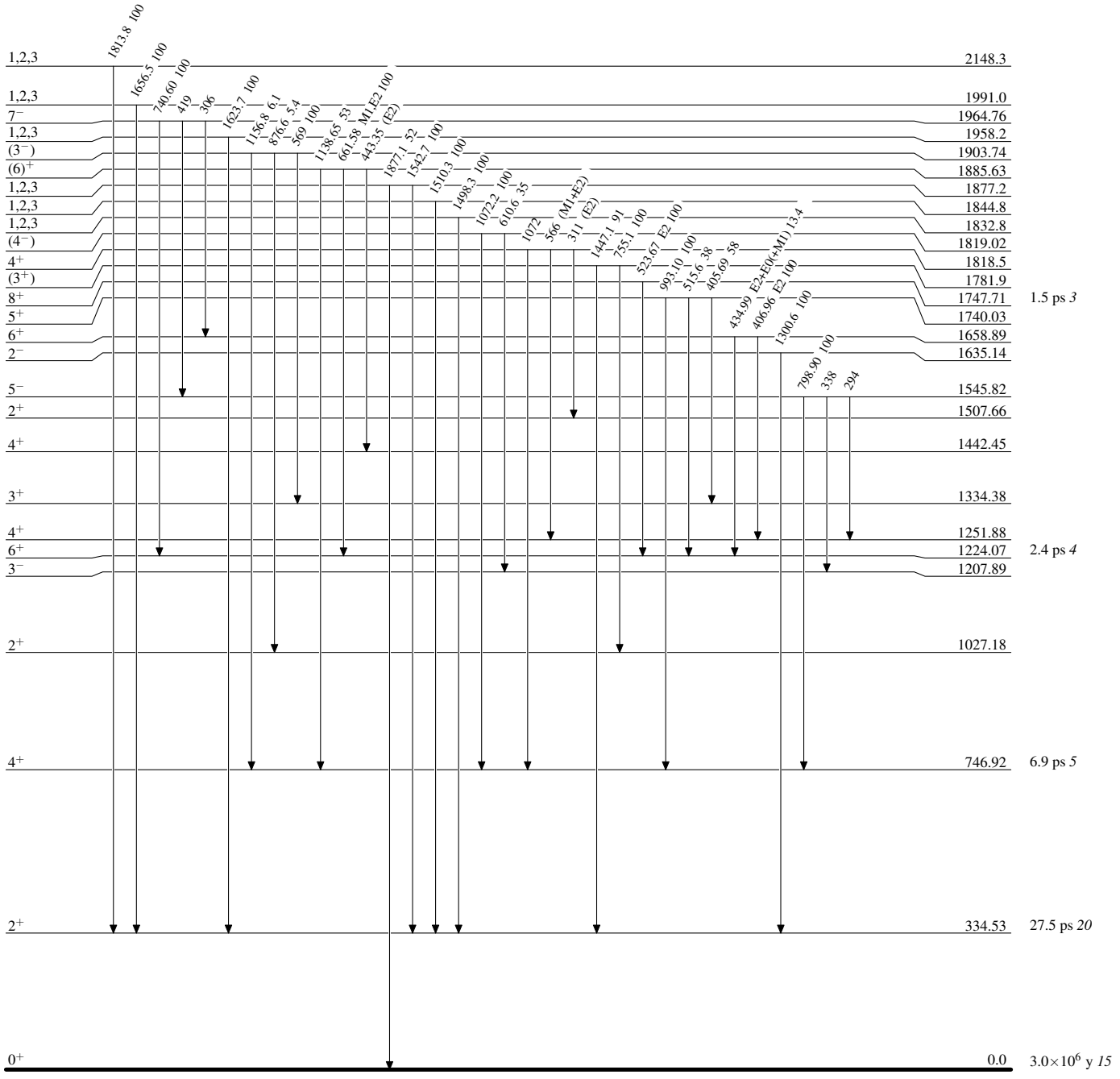


$^{154}_{66}Dy_{88}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

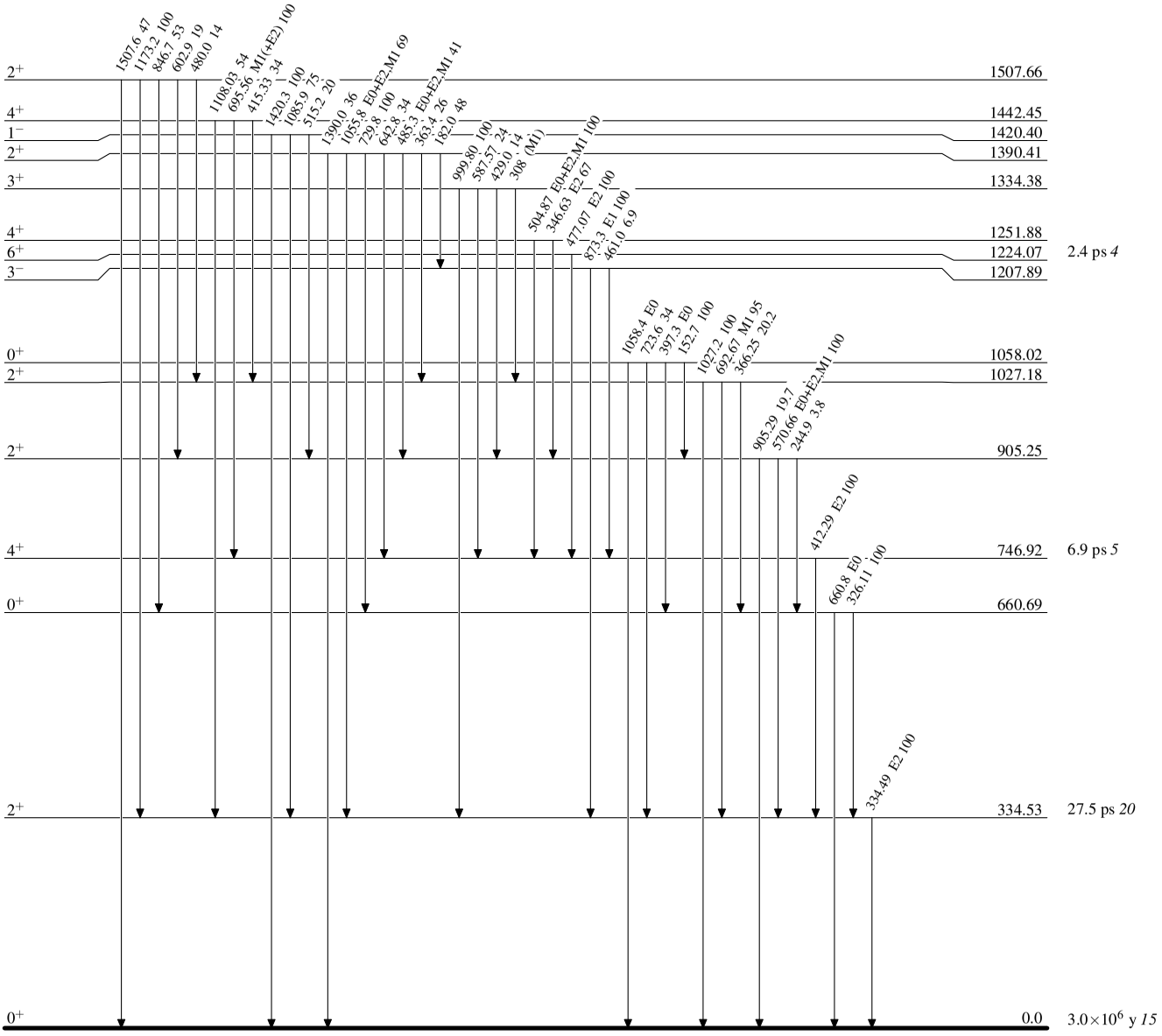


$^{154}_{66}Dy_{88}$

Adopted Levels, Gammas

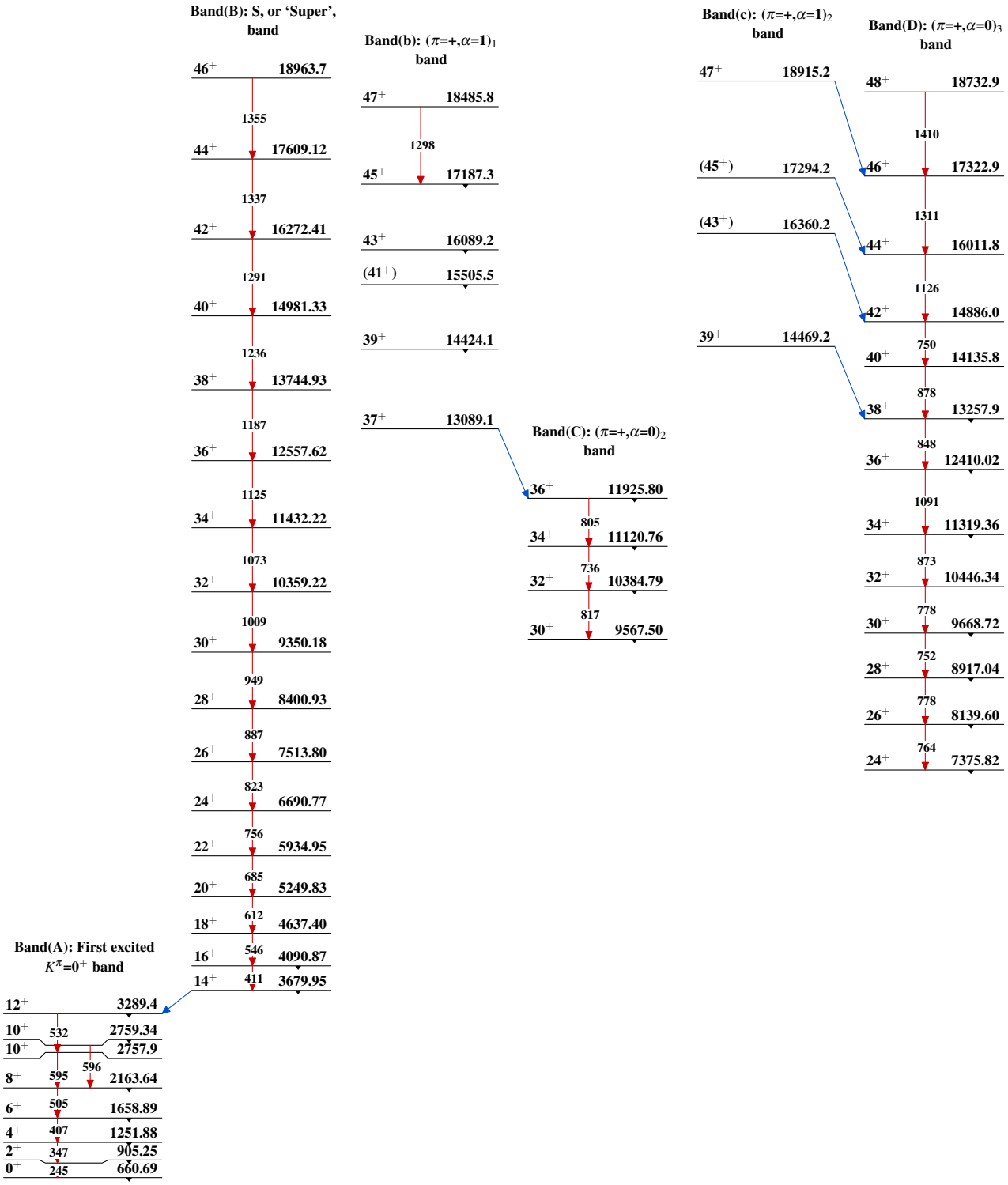
Level Scheme (continued)

Intensities: Relative photon branching from each level



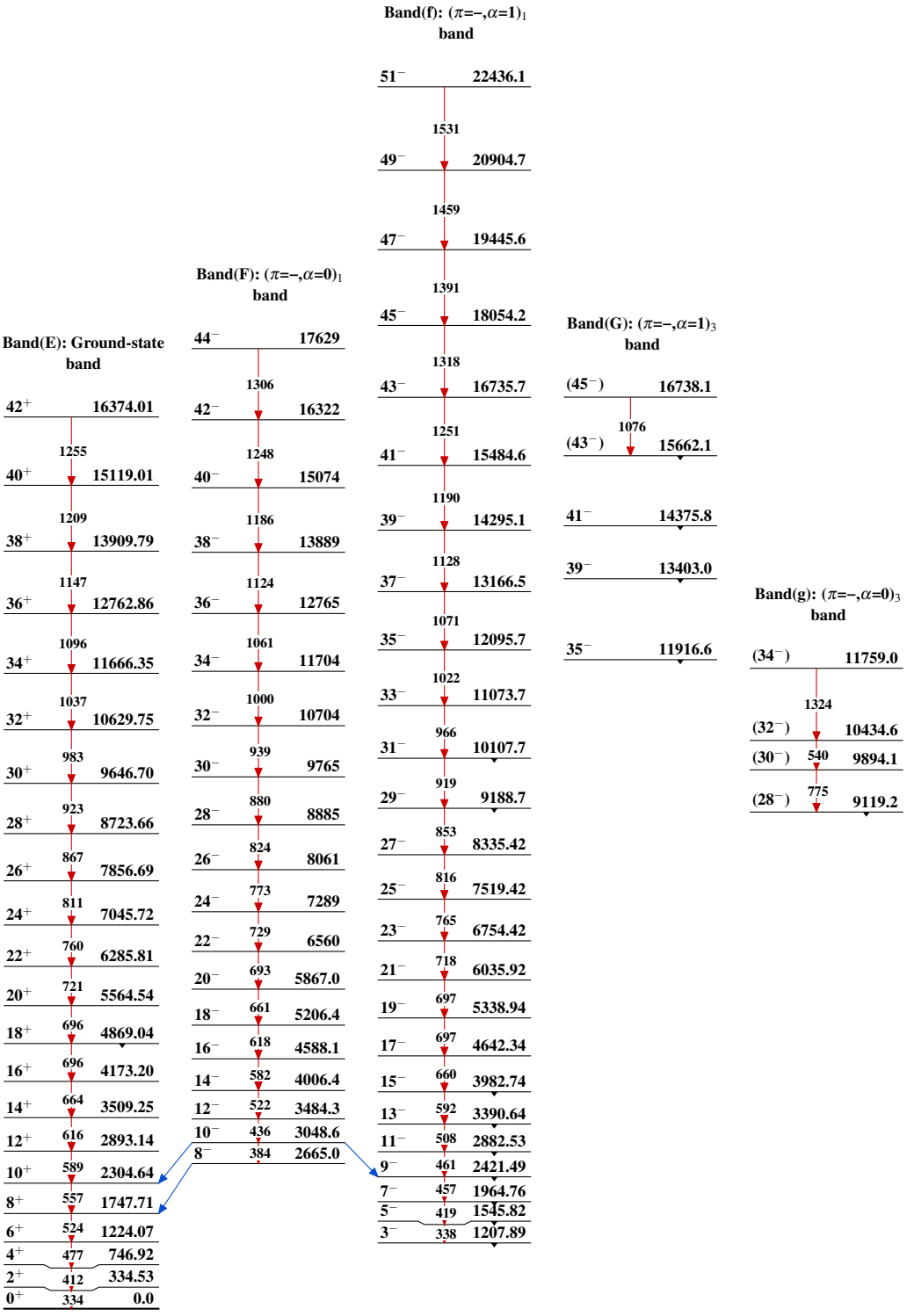
$^{154}_{66}Dy_{88}$

Adopted Levels, Gammas



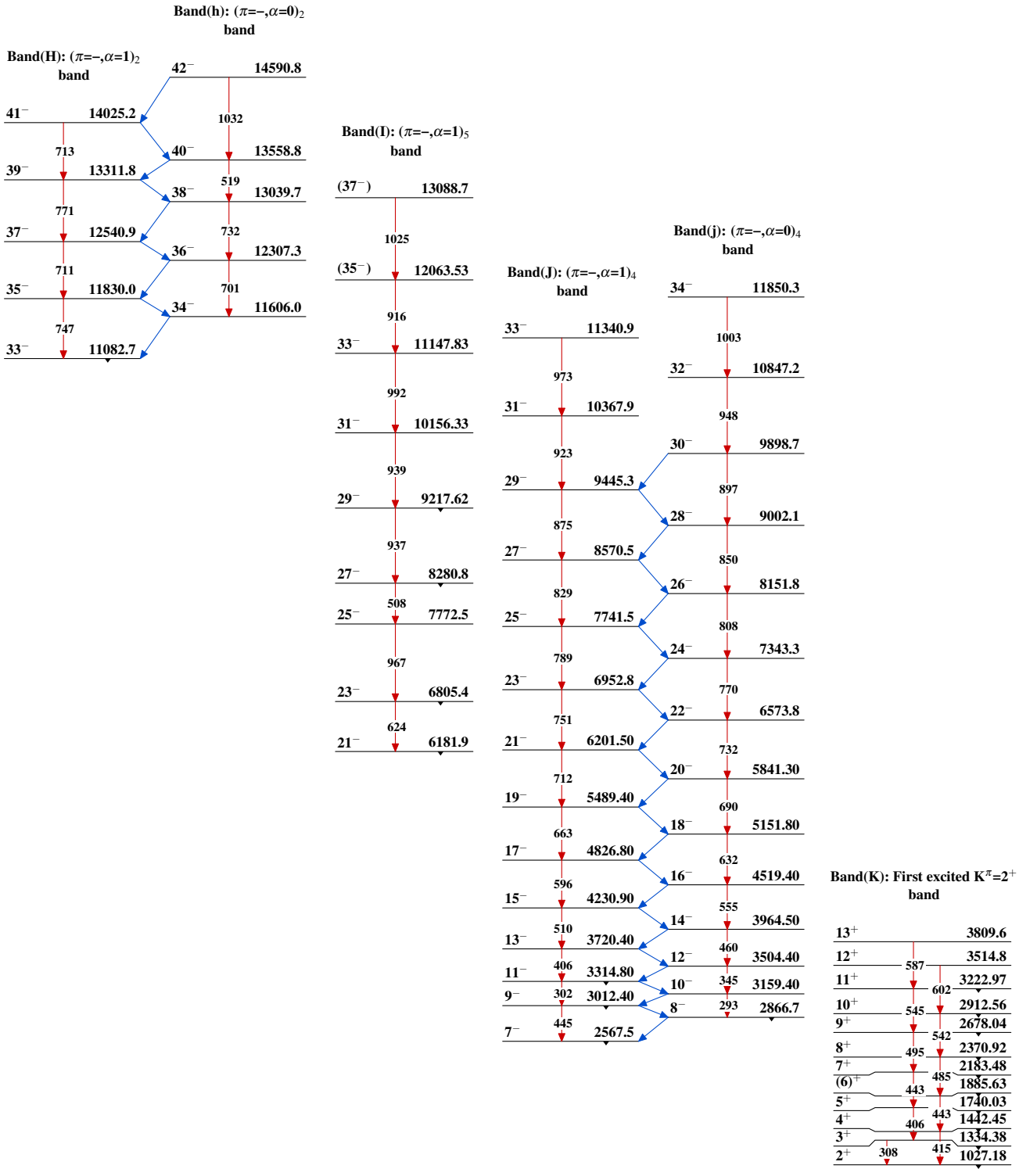
$^{154}_{66}Dy_{88}$

Adopted Levels, Gammas (continued)



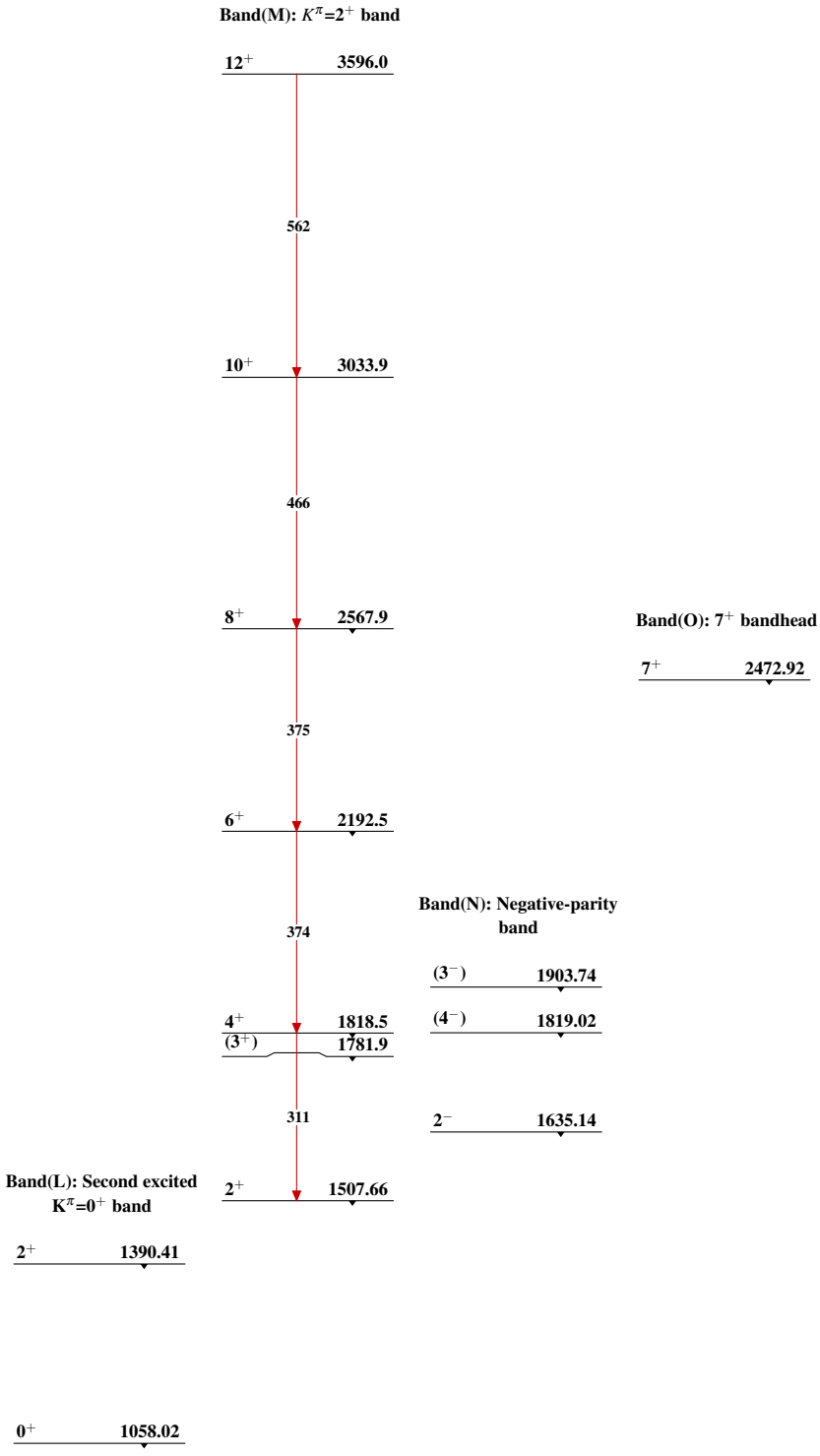
$^{154}_{66}Dy_{88}$

Adopted Levels, Gammas (continued)



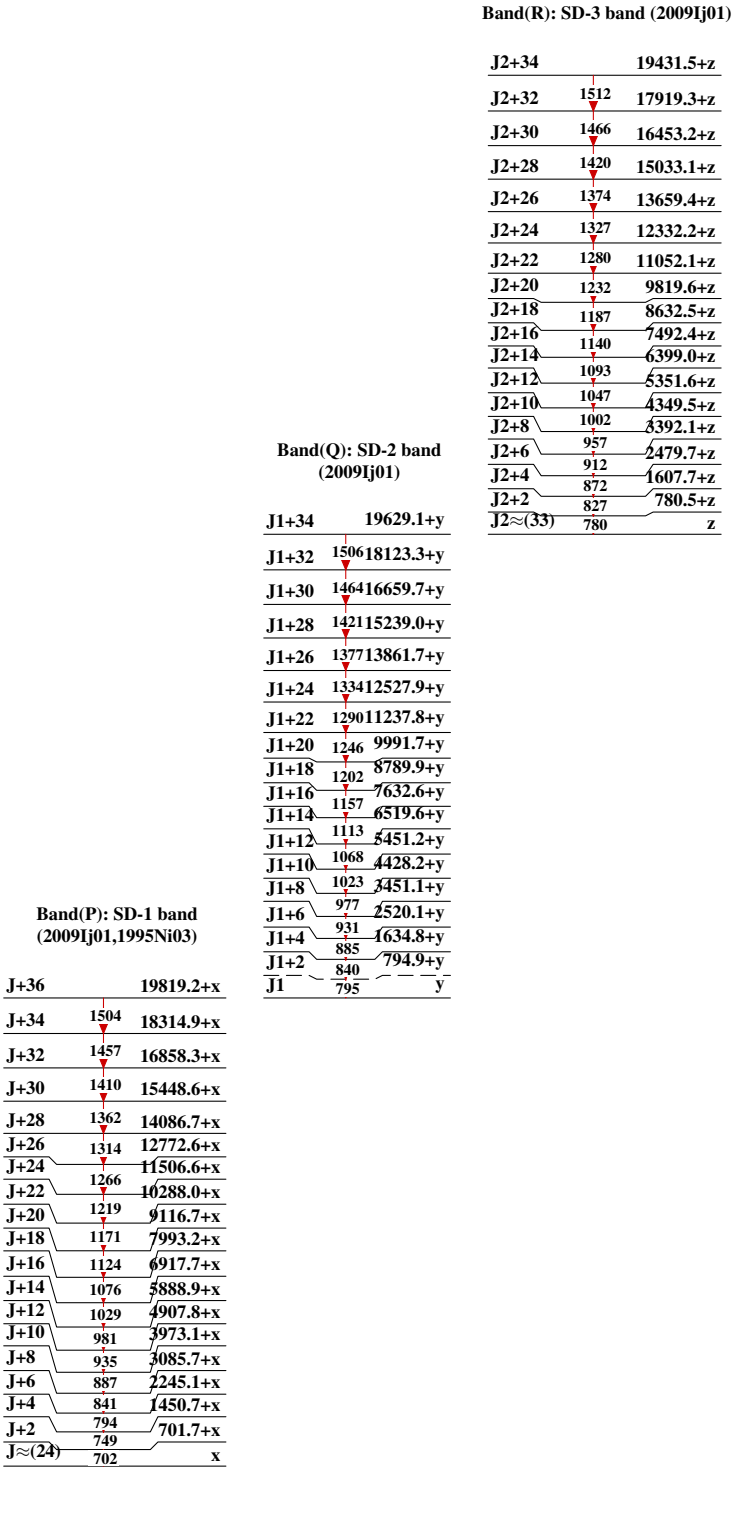
$^{154}_{66}Dy_{88}$

Adopted Levels, Gammas (continued)



$^{154}_{66}Dy_{88}$

Adopted Levels, Gammas (continued)



$^{154}_{66}Dy_{88}$

Adopted Levels, Gammas (continued)

Band(S): SD-4 band (2009Ij01)

J3+36		20204.0+u
J3+34	1507	18696.8+u
J3+32	1464	17232.4+u
J3+30	1421	15811.3+u
J3+28	1377	14434.5+u
J3+26	1332	13102.4+u
J3+24	1287	11815.4+u
J3+22	1242	10573.6+u
J3+20	1196	9377.2+u
J3+18	1151	8226.3+u
J3+16	1106	7120.8+u
J3+14	1059	6061.8+u
J3+12	1012	5050.1+u
J3+10	963	4086.8+u
J3+8	914	3172.5+u
J3+6	865	2307.1+u
J3+4	817	1490.1+u
J3+2	769	721.1+u
J3	721	u

Band(T): SD-5 band (2009Ij01), α=1

J4+34		20385+v
J4+34	1525	18859+v
J4+32	1479	17380+v
J4+30	1434	15946+v
J4+28	1387	14559.2+v
J4+26	1341	13218.0+v
J4+24	1294	11923.6+v
J4+22	1249	10675.0+v
J4+20	1203	9471.9+v
J4+18	1157	8315.0+v
J4+16	1111	7204.4+v
J4+14	1064	6140.2+v
J4+12	1017	5122.8+v
J4+10	970	4152.5+v
J4+8	924	3229.0+v
J4+6	876	2352.5+v
J4+4	830	1522.6+v
J4+2	784	738.6+v
J4≈(31)	739	v

Band(t): SD-6 band (2009Ij01), α=0 Proposed configuration: $(\pi 6)^4(\nu 7)^2\otimes(\nu 5/2[402])\otimes(\nu 3/2[761])$

J5+28		16185+w
J5+26	1456	14728.7+w
J5+24	1410	13318.5+w
J5+22	1364	11954.2+w
J5+20	1318	10636.2+w
J5+18	1272	9364.4+w
J5+16	1226	8138.9+w
J5+14	1179	6959.5+w
J5+12	1133	5826.2+w
J5+10	1087	4739.3+w
J5+8	1041	3698.4+w
J5+6	994	2704.1+w
J5+4	948	1756.4+w
J5+2	901	855.2+w
J5≈(36)	855	w