^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	C. W. Reich, Balraj Singh	NDS 111, 1211 (2010)	12-Apr-2010

Additional information 1.

Includes E=th, 2 keV and 24 keV.

1989Sc31: E=th, 2 keV, 24 keV. Measured secondary (at E=th) Eγ, Iγ with curved-crystal spectrometers (GAMS1 for 25-500 keV with FWHM=25 eV at 150 keV in the second order of reflection; GAMS2/3 for 100-1800 keV with FWHM=90 eV at 700 keV in the fifth order of reflection). Measured ce for E=th in the range 16-1800 keV using a magnetic spectrometer. Measured primary Eγ, Iγ for E=th, 2 keV and 24 keV (ARC data) with a pair spectrometer. Measured $\gamma\gamma$ for E=th with two Ge detectors. Deduced S(n)= 6271.04 keV *9*.

1967Sc05: E=th. Measured secondary Eγ, Iγ with a curved-crystal spectrometer between 30− 1200 keV; ce with a mag spectrometer from 113− 950 keV; primary γ's with a Ge(Li) detector.

1986Bo43, 1988Bo19: E=th. Measured Eγ, $\gamma\gamma$ coin, Iγ (intensities of two-quanta γ cascades using sum coin spectra with Ge detectors).

1982Is05 (also 1983Is05,1984Pr03): E=th. Measured primary Eγ of nine transitions. Deduced S(n)= 6270.98 *11*.

Others:

1999Vo02: E=3− 225 keV. Measured capture cross sections.

1999Mi27: E=10− 90 keV, 550 keV. Measured Eγ, Iγ.

1999Su03, 1999Bo14, 1997Su29: analyzed 2-quantum cascade data for E=th.

1995Be37: E=th. Measured Eγ, Iγ, $\gamma\gamma$. Deduced two-step cascades and transition strengths.

1968Na21: measured $T_{1/2}$ from $\gamma\gamma$(t).

1967Bo48: measured E(ce), I(ce).

1966Ne06: measured γ.

From the analysis of data from two-step γ cascades following thermal- and 90-100-keV neutron capture, 2004Kr08 and 2006KrZZ propose the existence of M1 scissors-mode structures built on the excited states (As well As the ground state) of ^{163}Dy.

^{163}Dy Levels

E(level)†	J$^{\pi}$‡	E(level)†	J$^{\pi}$‡	E(level)†	J$^{\pi}$‡
0.0[b]	5/2$^-$	793.3941[e] *20*	(1/2)$^-$	1208.0[#] *7*	(5/2$^-$)[#]
73.4448[b] *4*	7/2$^-$	801.312[j] *7*	(7/2)$^-$	1253.160 *7*	(3/2$^+$)
167.3452[b] *12*	9/2$^-$	820.7956[e] *18*	(3/2)$^-$	1258.214[m] *5*	5/2$^-$
250.8895[f] *12*	5/2$^+$	851.124[g] *3*	(7/2$^+$)	1277.172 *6*	(5/2$^+$)
281.5717[b] *21*	11/2$^-$	859.287[h] *3*	(3/2)$^+$	1299.7[#] *4*	(5/2$^-$)[#]
285.5955[f] *9*	7/2$^+$	883.0139[e] *20*	(5/2)$^-$	1430.239 *7*	(3/2$^+$)
336.5441[f] *24*	(9/2)$^+$	884.2945[l] *17*	1/2$^+$	1439.054 *8*	(1/2$^-$,3/2$^-$)
351.1497[c] *10*	(1/2)$^-$	915.6575[h] *24*	5/2$^+$	1483.263 *19*	(5/2$^-$)
389.7532[c] *11*	3/2$^-$	935.142[l] *5*	(3/2)$^+$	1489.104 *8*	(3/2$^-$)
412.382[f] *5*	(11/2$^+$)	946.003[e] *4*	(7/2)$^-$	1501.665 *5*	(5/2$^+$)
421.8440[d] *11*	(3/2)$^-$	949.3369[l] *23*	(5/2)$^+$	1529.326 *11*	(1/2$^-$,3/2$^-$)
427.6801[c] *9*	(5/2)$^-$	1049.0725[k] *16*	3/2$^-$	1585.250 *6*	1/2$^+$,3/2$^+$
475.3884[d] *10*	(5/2)$^-$	1055.7577[k] *23*	(1/2)$^-$	1615.113 *5*	1/2$^-$,3/2$^-$
514.5522[c] *12*	7/2$^-$	1058.4675[i] *18*	1/2$^+$	1692.675 *6*	(3/2)$^-$
553.0197[d] *14*	7/2$^-$	1084.349[i] *3*	(3/2)$^+$	1834.9	5/2$^+$
587.9293[c] *25*	(9/2)$^-$	1129.759[i] *4*	5/2$^+$	1874.13 *7*	(5/2$^-$,7/2$^-$)
646.249[d] *4*	9/2$^-$	1135.494[k] *3*	(5/2)$^-$	1950.771 *6*	3/2$^-$
711.4718[j] *21*	5/2$^-$	1147.455[n] *3*	3/2$^+$	2109.4	
737.6586[g] *15*	1/2$^+$	1160.547[m] *6*	(1/2)$^-$	2135.1	
766.2075[g] *18*	(3/2)$^+$	1196.051[m] *3*	(3/2)$^-$	2197.0	(3/2$^-$)
781.0994[g] *15*	5/2$^+$	1202.529[n] *6*	(5/2)$^+$	2222.0	

Continued on next page (footnotes at end of table)

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43 (continued)

^{163}Dy Levels (continued)

E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡
2242.9		2583.3		2996.9		3497.2	
2270.1	(3/2$^+$)	2606.9	(5/2$^-$)	3048.0		3612.8	
2339.2		2615.6		3067.1		3737.9	
2349.5		2627.7		3104.7		3884.3	
2361.2		2648.0	(3/2$^-$)	3119.1		4740.1	
2432.5		2728.4		3182.2		4928.2	
2459.8		2755.3		3217.2		(6271.01@ *5*)	1/2$^+$
2471.6		2835.4	(3/2,5/2$^-$)	3230.6		S(n)+2&	
2475.4		2872.1		3314.7		S(n)+24[a]	
2525.3		2912.0		3335.0			
2562.2		2978.1		3353.0	(3/2,5/2$^-$)		

† From least-squares adjustment to Eγ′s.
‡ From Adopted Levels, except as noted. Many assignments are based on resonance-averaged n capture data (1989Sc31).
# From resonance-averaged n capture (1989Sc31).
@ S(n) value (from 2009AuZZ,2003Au03).
& S(n)=6271.01, E(n)= 2 keV.
[a] S(n)=6271.01, E(n)= 24 keV resonance.
[b] Band(A): 5/2[523] g.s. band.
[c] Band(B): mixed 1/2[521]+(5/2[523]-Q_{22}), $K^\pi=1/2^-$ band.
[d] Band(C): 3/2[521] band.
[e] Band(D): mixed (5/2[523]-Q_{22})+1/2[521], $K^\pi=1/2^-$ band.
[f] Band(E): 5/2[642] band.
[g] Band(F): K-2 γ vibration built on the 5/2[523] g.s..
[h] Band(G): 3/2[402] band.
[i] Band(H): 1/2[400] band.
[j] Band(I): 5/2[512] band.
[k] Band(J): 1/2[530] band.
[l] Band(K): $K^\pi=2^-$ octupole vibration built on the 5/2[523] g.s..
[m] Band(L): 1/2[510] band.
[n] Band(M): 3/2[651] band.

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43 (continued)

$\gamma(^{163}Dy)$

E_γ [†]	I_γ [‡ s]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[#]	Comments
x33.8728 *15*	0.025 *9*							
x35.9630 *21*	0.044 *13*							
x37.9227[b] *16*	0.02[b]							
x38.3069 *22*	0.026 *8*							
38.6037 *12*	0.087 *12*	389.7532	3/2$^-$	351.1497	(1/2)$^-$			
39.163 *4*	0.029 *14*	514.5522	7/2$^-$	475.3884	(5/2)$^-$			
x39.4199 *22*	0.023 *8*							
x42.511 *5*	0.030 *10*							
x43.010 *3*	0.032 *9*							
47.7071 *8*	0.076 *7*	475.3884	(5/2)$^-$	427.6801	(5/2)$^-$			
x50.170 *4*	0.047 *24*							
50.942 *4*	0.011 *5*	336.5441	(9/2)$^+$	285.5955	7/2$^+$			
x51.386 *4*	0.029 *9*							
x56.888 *4*	0.028 *6*							
70.6950 *9*	0.089 *5*	421.8440	(3/2)$^-$	351.1497	(1/2)$^-$	E2		α(K)exp= 2.11 *3*.
x70.830 *7*	0.027 *8*							
73.4448 *4*	1.91 *7*	73.4448	7/2$^-$	0.0	5/2$^-$	E2+M1	1.98 *10*	δ: from L-subshell ratios (1989Sc31). α(K)exp= 1.95 *8*.
x74.304 *7*	0.039 *9*							
76.5268 *15*	0.087 *11*	427.6801	(5/2)$^-$	351.1497	(1/2)$^-$	E2		α(K)exp= 2.0 *3*.
77.6298 *21*	0.054 *6*	553.0197	7/2$^-$	475.3884	(5/2)$^-$	M1(+E2)	0.23 *+12−23*	δ: from L-subshell ratios (1989Sc31). α(K)exp=3.4 *4* gives 0.8 *3*.
x77.879 *12*	0.038 *12*							
83.573 *9*	0.027 *7*	1585.250	1/2$^+$,3/2$^+$	1501.665	(5/2$^+$)			
x86.239 *11*	0.010 *5*							
x86.338 *14*	0.014 *5*							
86.875 *3*	0.033 *4*	514.5522	7/2$^-$	427.6801	(5/2)$^-$	M1,E2		α(K)exp= 1.55 *20*.
93.902 *3*	0.262 *25*	167.3452	9/2$^-$	73.4448	7/2$^-$	E2+M1	1.9 *3*	δ: from L-subshell ratios (1989Sc31). α(K)exp= 1.20 *11*.
x94.654 *9*	0.076 *20*							
99.738 *4*	0.023 *3*	1049.0725	3/2$^-$	949.3369	(5/2)$^+$			
x99.756 *8*	0.014 *7*							
x103.774 *13*	0.021 *5*							
x104.088 *10*	0.027 *5*							
x104.110 *5*	0.017 *3*							
x108.904 *13*	0.019 *4*							
x110.62 *3*	0.006 *3*							
x111.017 *17*	0.012 *5*							
x114.22[b] *6*	0.004[b]							
x115.150 *23*	0.017 *6*							
118.062 *9*	0.051 *7*	884.2945	1/2$^+$	766.2075	(3/2)$^+$			
118.2518 *19*	0.211 *7*	285.5955	7/2$^+$	167.3452	9/2$^-$			
x119.428 *22*	0.009 *3*							
120.55 *3*	0.012 *5*	1055.7577	(1/2)$^-$	935.142	(3/2)$^+$			

$^{163}_{66}Dy_{97}$-3

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43 (continued)

$\gamma(^{163}Dy)$ (continued)

E_γ[†]	I_γ[‡ s]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	Comments
124.237 *3*	0.0239 *24*	475.3884	(5/2)$^-$	351.1497	(1/2)$^-$	E2	Mult.: from α(L3)exp (1989Sc31). α(K)exp=0.24 *4* gives δ=0.57 *12*.
x124.681 *13*	0.025 *4*						
x124.767 *8*	0.054 *18*						
124.7985 *12*	0.189 *9*	514.5522	7/2$^-$	389.7532	3/2$^-$	E2	α(K)exp= 0.69 *3*.
125.217 *13*	0.013 *4*	946.003	(7/2)$^-$	820.7956	(3/2)$^-$		
x130.83[b] *4*	0.003[b]						
131.178 *4*	0.0228 *20*	553.0197	7/2$^-$	421.8440	(3/2)$^-$	E2	α(K)exp= 0.55 *5*.
x132.395 *11*	0.011 *4*					(M1)	α(K)exp= 2.0 *7*.
x133.272 *19*	0.019 *4*						
x137.48[b] *4*	0.005[b]						
142.0861 *20*	0.0254 *21*	427.6801	(5/2)$^-$	285.5955	7/2$^+$	E1	α(K)exp= 0.13 *3*.
x143.797 *15*	0.012 *3*						
x143.967 *22*	0.008 *3*						
146.6342 *25*	0.0185 *17*	884.2945	1/2$^+$	737.6586	1/2$^+$	M1	α(K)exp= 0.68 *9* gives M1(+E2), ΔJ^π allows only M1.
x150.484 *8*	0.012 *3*						
x154.019[b] *6*	0.054[b] *8*						
x160.14 *3*	0.015 *3*						
160.244 *3*	0.0855 *18*	587.9293	(9/2)$^-$	427.6801	(5/2)$^-$		
163.269 *7*	0.0097 *13*	553.0197	7/2$^-$	389.7532	3/2$^-$	E2	α(K)exp= 0.27 *6*.
164.774 *3*	0.025 *3*	1049.0725	3/2$^-$	884.2945	1/2$^+$		
166.063 *4*	0.0285 *10*	1049.0725	3/2$^-$	883.0139	(5/2)$^-$		
x166.83[b] *6*	0.003[b]						
167.345 *4*	1.32 *3*	167.3452	9/2$^-$	0.0	5/2$^-$	E2	α(K)exp= 0.275 *8*. Additional information 3.
x168.24[b] *6*	0.003[b]						
169.203 *4*	0.111 *3*	336.5441	(9/2)$^+$	167.3452	9/2$^-$	E1	α(K)exp= 0.079 *17*.
170.901[f] *10*	0.0113 *12*	646.249	9/2$^-$	475.3884	(5/2)$^-$		Level-energy difference=170.861.
170.947 *15*	0.009 *3*	421.8440	(3/2)$^-$	250.8895	5/2$^+$		
171.464 *4*	0.0294 *19*	1055.7577	(1/2)$^-$	884.2945	1/2$^+$		
x172.37[b] *6*	0.0050[b] *15*						
x175.564 *5*	0.0330 *19*						
176.790 *9*	0.0141 *18*	427.6801	(5/2)$^-$	250.8895	5/2$^+$		α(K)exp=0.70 *10* gives (M1) in conflict with E1 from adopted ΔJ^π.
177.106 *16*	0.0091 *23*	1430.239	(3/2$^+$)	1253.160	(3/2$^+$)	(M1,E2)	α(K)exp= 0.32 *12*.
177.4481 *21*	1.14 *3*	250.8895	5/2$^+$	73.4448	7/2$^-$	E1	α(K)exp= 0.0535 *16*. Additional information 4.
x177.964 *16*	0.013 *4*						
177.964 *16*	0.013 *4*	915.6575	5/2$^+$	737.6586	1/2$^+$		
178.009 *10*	0.0091 *11*	514.5522	7/2$^-$	336.5441	(9/2)$^+$		
185.875 *18*	0.019 *3*	1439.054	(1/2$^-$,3/2$^-$)	1253.160	(3/2$^+$)		
186.03 *7*	0.014 *3*	1135.494	(5/2)$^-$	949.3369	(5/2)$^+$		α(K)exp= 0.25 *5* gives (M1,E2) in conflict with E1 from adopted ΔJ^π.
x188.64[b] *7*	0.0025[b]						

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43 (continued)

γ(^{163}Dy) (continued)

E_γ †	I_γ ‡ s	E_i(level)	J_i^π	E_f	J_f^π	Mult. #	Comments
x189.83 b 7	0.003 b						
x190.24 b 7	0.005 b						
x195.00 3	0.0044 17						
x196.45 b 5	0.005 b						
x200.21 b 10	0.0015 b						
x203.141 21	0.014 4						
208.1256 24	0.113 5	281.5717	11/2$^-$	73.4448	7/2$^-$	E2	α(K)exp= 0.145 7.
209.162 9	0.018 4	1258.214	5/2$^-$	1049.0725	3/2$^-$		
x210.917 15	0.043 6						
212.1493 13	1.71 4	285.5955	7/2$^+$	73.4448	7/2$^-$	E1	α(K)exp= 0.0554 22. Additional information 6.
224.516 f 5	0.063 3	475.3884	(5/2)$^-$	250.8895	5/2$^+$		Level-energy difference=224.499. Placement from 1967Sc05, unplaced in 1989Sc31.
228.074 t 14	0.0200 t 16	781.0994	5/2$^+$	553.0197	7/2$^-$		
228.074 t 14	0.0200 t 16	1277.172	(5/2$^+$)	1049.0725	3/2$^-$		
x228.480 13	0.057 10						
228.960 13	0.0158 16	514.5522	7/2$^-$	285.5955	7/2$^+$		
232.980 4	0.0598 18	514.5522	7/2$^-$	281.5717	11/2$^-$	E2	α(K)exp= 0.110 8.
x233.96 3	0.016 5						
x234.02 4	0.011 5						
x234.100 10	0.060 3						
234.42 6	0.006 3	946.003	(7/2)$^-$	711.4718	5/2$^-$		
x234.838 25	0.017 5						
234.965 8	0.0267 19	1055.7577	(1/2)$^-$	820.7956	(3/2)$^-$	M1	α(K)exp= 0.180 18.
237.708 14	0.078 4	1058.4675	1/2$^+$	820.7956	(3/2)$^-$		
x238.10 4	0.008 3						
x241.14 8	0.033 5						
245.036 4	0.0260 23	412.382	(11/2$^+$)	167.3452	9/2$^-$		
246.75 t 6	0.0060 t 21	1129.759	5/2$^+$	883.0139	(5/2)$^-$		
246.75 t 6	0.0060 t 21	1196.051	(3/2)$^-$	949.3369	(5/2)$^+$		
x246.87 3	0.023 3						
x247.03 3	0.012 7						
x247.288 17	0.062 3						
x247.559 11	0.0317 22						
247.75 7	0.0105 22	1049.0725	3/2$^-$	801.312	(7/2)$^-$		
248.42 t 6	0.0122 t 23	801.312	(7/2)$^-$	553.0197	7/2$^-$		
248.42 t 6	0.0122 t 23	1501.665	(5/2$^+$)	1253.160	(3/2$^+$)		
250.8865 22	10.37 21	250.8895	5/2$^+$	0.0	5/2$^-$	E1	α(K)exp= 0.0205 4. Additional information 5.
252.128 20	0.0103 25	1529.326	(1/2$^-$,3/2$^-$)	1277.172	(5/2$^+$)		
255.6797 22	0.074 3	1049.0725	3/2$^-$	793.3941	(1/2)$^-$	M1	α(K)exp= 0.133 8.
x258.55 b 6	0.030 b 6						

$^{163}_{66}Dy_{97}$-5

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43 (continued)

γ(^{163}Dy) (continued)

E_γ [†]	I_γ [‡ s]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [#]	Comments
260.3291 [f] *17*	1.073 *20*	427.6801	(5/2)$^-$	167.3452	9/2$^-$	E2	Level-energy difference=260.3344. α(K)exp= 0.0657 *13*. Additional information 13.
262.366 *8*	0.053 *4*	1055.7577	(1/2)$^-$	793.3941	(1/2)$^-$	M1	α(K)exp= 0.122 *12*.
263.109 *6*	0.456 *21*	336.5441	(9/2)$^+$	73.4448	7/2$^-$	E1	α(K)exp= 0.0228 *18*. Additional information 8.
263.190 *5*	0.155 *11*	851.124	(7/2$^+$)	587.9293	(9/2)$^-$		
266.548 *3*	0.979 *24*	781.0994	5/2$^+$	514.5522	7/2$^-$	E1	α(K)exp= 0.0161 *6*. Additional information 27.
267.421 *18*	0.0159 *22*	553.0197	7/2$^-$	285.5955	7/2$^+$		
267.968 *3*	1.26 *3*	1049.0725	3/2$^-$	781.0994	5/2$^+$	E1	α(K)exp= 0.0176 *7*. Additional information 43.
276.231 *11*	0.0283 *25*	1135.494	(5/2)$^-$	859.287	(3/2)$^+$		
276.30 [t] *4*	0.021 [t] *5*	1160.547	(1/2)$^-$	884.2945	1/2$^+$		
276.30 [t] *4*	0.021 [t] *5*	1529.326	(1/2$^-$,3/2$^-$)	1253.160	(3/2$^+$)		Level-energy difference=276.17.
[x]278.8 [b] *2*	0.010 [b]						
[x]281.218 *11*	0.060 *4*						
[x]281.41 *3*	0.012 *3*					(M1,E2)	α(K)exp= 0.11 *5*.
[x]282.863 *3*	0.351 *7*					E2	α(K)exp= 0.0443 *18*.
284.372 *3*	0.372 *10*	1135.494	(5/2)$^-$	851.124	(7/2$^+$)	E1	α(K)exp= 0.0141 *13*. Additional information 48.
285.5931 *18*	1.74 *3*	285.5955	7/2$^+$	0.0	5/2$^-$	E1	α(K)exp= 0.0151 *3*. Additional information 7.
289.547 *4*	1.34 *3*	1055.7577	(1/2)$^-$	766.2075	(3/2)$^+$	E1	α(K)exp= 0.0190 *6*. Additional information 45.
290.795 *20*	0.0210 *20*	766.2075	(3/2)$^+$	475.3884	(5/2)$^-$		
291.625 *10*	0.0353 *21*	1439.054	(1/2$^-$,3/2$^-$)	1147.455	3/2$^+$		
292.250 *8*	0.041 *5*	1058.4675	1/2$^+$	766.2075	(3/2)$^+$	M1,E2	α(K)exp= 0.074 *14*.
299.73 *3*	0.0203 *15*	946.003	(7/2)$^-$	646.249	9/2$^-$		
[x]302.0 [b] *3*	0.03 [b]						
305.710 *10*	0.042 *5*	781.0994	5/2$^+$	475.3884	(5/2)$^-$		
306.316 *14*	0.047 *6*	587.9293	(9/2)$^-$	281.5717	11/2$^-$	M1	α(K)exp= 0.120 *22*.
[x]309.167 *7*	0.119 *8*						
311.413 *3*	1.07 *5*	1049.0725	3/2$^-$	737.6586	1/2$^+$	E1	α(K)exp= 0.0136 *9*. Additional information 44.
313.056 *14*	0.031 *5*	1196.051	(3/2)$^-$	883.0139	(5/2)$^-$	M1,E2	α(K)exp= 0.068 *18*.
[x]313.614 *21*	0.047 *9*						
314.698 *12*	0.027 *4*	1135.494	(5/2)$^-$	820.7956	(3/2)$^-$	M1,E2	α(K)exp= 0.063 *16*.
316.311 *3*	5.89 *13*	389.7532	3/2$^-$	73.4448	7/2$^-$	E2	K/L= 4.4 *14* (1967Sc05). α(K)exp= 0.0397 *12*. Additional information 10.
318.103 *4*	0.96 *3*	1055.7577	(1/2)$^-$	737.6586	1/2$^+$	E1	α(K)exp= 0.0164 *7*. Additional information 46.
320.822 *11*	0.047 *5*	1058.4675	1/2$^+$	737.6586	1/2$^+$	M1	α(K)exp= 0.086 *13*.

$^{163}_{66}Dy_{97}$-6

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43 (continued)

γ(^{163}Dy) (continued)

E_γ [†]	I_γ [‡ s]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	Comments
x322.94 b 20	0.015 b 5						
x325.764 23	0.017 6						
326.72 t 4	0.016 t 3	1147.455	3/2+	820.7956	(3/2)−		
326.72 t 4	0.016 t 3	1529.326	(1/2−,3/2−)	1202.529	(5/2)+		
x329.885 25	0.21 5						
330.012 7	0.265 7	883.0139	(5/2)−	553.0197	7/2−	M1	α(K)exp= 0.0803 24. Additional information 35.
332.10 4	0.021 5	1585.250	1/2+,3/2+	1253.160	(3/2+)	M1(+E2)	α(K)exp= 0.11 3.
x336.49 7	0.010 3						
338.523 3	2.96 9	766.2075	(3/2)+	427.6801	(5/2)−	E1	α(K)exp= 0.0107 3. Additional information 24.
x341.74 b 4	0.055 b 11						
x343.45 3	0.032 4						
344.392 17	0.043 7	766.2075	(3/2)+	421.8440	(3/2)−		
345.405 4	1.36 4	820.7956	(3/2)−	475.3884	(5/2)−	M1	α(K)exp= 0.0648 19. Additional information 30.
347.216 5	0.84 3	514.5522	7/2−	167.3452	9/2−	M1,E2	α(K)exp= 0.0460 18. Additional information 18.
347.905 5	3.64 10	737.6586	1/2+	389.7532	3/2−	E1	α(K)exp= 0.0094 3. Additional information 22.
x349.57 b 15	0.02 b						
351.144 3	21.4 5	351.1497	(1/2)−	0.0	5/2−	E2	K/L/M=100 5/22 4/4.0 12 (1967Sc05). α(K)exp=0.0307 6. Additional information 9.
353.434 22	0.095 15	781.0994	5/2+	427.6801	(5/2)−		
354.227 3	6.21 22	427.6801	(5/2)−	73.4448	7/2−	E2	α(K)exp= 0.0365 15. Additional information 14.
358.05 3	0.054 7	946.003	(7/2)−	587.9293	(9/2)−	M1,E2	α(K)exp= 0.040 8.
359.255 12	0.082 10	781.0994	5/2+	421.8440	(3/2)−		
x361.708 12	0.115 7						
362.650 20	0.045 6	915.6575	5/2+	553.0197	7/2−		
363.47 13	0.012 5	1129.759	5/2+	766.2075	(3/2)+		
364.71 8	0.020 5	646.249	9/2−	281.5717	11/2−		
x364.99 5	0.038 7						
367.14 3	0.040 6	1160.547	(1/2)−	793.3941	(1/2)−	M1	α(K)exp= 0.074 13.
368.42 3	0.063 10	883.0139	(5/2)−	514.5522	7/2−	(M1)	α(K)exp= 0.14 3.
369.267 9	0.514 21	1135.494	(5/2)−	766.2075	(3/2)+	E1	Mult.: from α(K)exp<0.013 (1967Sc05).
371.523 9	1.78 3	793.3941	(1/2)−	421.8440	(3/2)−	M1	K/L= 4.8 15 (1967Sc05). α(K)exp= 0.0564 11. Additional information 29.
376.463 13	0.46 3	766.2075	(3/2)+	389.7532	3/2−	E1	α(K)exp= 0.0111 12. Additional information 25.
381.240 14	0.0176 18	1147.455	3/2+	766.2075	(3/2)+		
383.896 7	0.1137 16	859.287	(3/2)+	475.3884	(5/2)−		
385.680 7	0.352 14	553.0197	7/2−	167.3452	9/2−	M1,E2	α(K)exp= 0.0389 16.

$^{163}_{66}Dy_{97}$-7

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43 (continued)

$\gamma(^{163}Dy)$ (continued)

E_γ [†]	I_γ [‡ s]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	Comments
[x]386.04[b] *10*	0.40[b] *12*					(M1,E2)	α(K)exp= 0.056 *23* (1967Sc05).
386.508 *3*	2.24 *4*	737.6586	$1/2^+$	351.1497	$(1/2)^-$	E1	α(K)exp= 0.00770 *20*. Additional information 23.
389.749 *3*	15.1 *5*	389.7532	$3/2^-$	0.0	$5/2^-$	E2,M1	K/L= 6.0 *16* (1967Sc05). α(K)exp= 0.0319 *13*. Additional information 11.
391.345 *6*	1.83 *4*	781.0994	$5/2^+$	389.7532	$3/2^-$	E1	α(K)exp= 0.00780 *20*. Additional information 28.
392.979 *6*	0.065 *6*	946.003	$(7/2)^-$	553.0197	$7/2^-$		
393.118 *3*	1.40 *3*	820.7956	$(3/2)^-$	427.6801	$(5/2)^-$	M1	α(K)exp= 0.0466 *9*. Additional information 31.
394.745 *11*	0.0212 *22*	1196.051	$(3/2)^-$	801.312	$(7/2)^-$		
396.310 *5*	0.1653 *20*	949.3369	$(5/2)^+$	553.0197	$7/2^-$		
[x]396.646 *9*	0.060 *3*						
398.950 *4*	1.57 *5*	820.7956	$(3/2)^-$	421.8440	$(3/2)^-$	M1	α(K)exp=0.0647 *19*. α(K)exp=0.037 *8* (1967Sc05) is in disagreement.
[x]400.659 *13*	0.0153 *22*						
401.952 *4*	3.20 *6*	475.3884	$(5/2)^-$	73.4448	$7/2^-$	M1	K/L= 5.1 *16* (1967Sc05). α(K)exp= 0.0451 *9*. Additional information 16.
403.653 *8*	0.093 *7*	793.3941	$(1/2)^-$	389.7532	$3/2^-$	M1,E2	α(K)exp= 0.038 *10*.
407.625 *4*	0.663 *15*	883.0139	$(5/2)^-$	475.3884	$(5/2)^-$	M1	α(K)exp= 0.0471 *14*. Additional information 36.
409.802 *6*	0.0680 *18*	1147.455	$3/2^+$	737.6586	$1/2^+$	M1	α(K)exp= 0.050 *5*.
412.605 *14*	0.0139 *18*	1615.113	$1/2^-$,$3/2^-$	1202.529	$(5/2)^+$		
415.060 *3*	3.09 *8*	766.2075	$(3/2)^+$	351.1497	$(1/2)^-$	E1	α(K)exp= 0.0111 *3*. Additional information 26.
[x]418.17 *3*	0.123 *20*						
420.598 *5*	0.0514 *22*	587.9293	$(9/2)^-$	167.3452	$9/2^-$		
421.848 *3*	13.9 *3*	421.8440	$(3/2)^-$	0.0	$5/2^-$	M1	K/L/M=100 *10*/19 *4*/4.4 *22* (1967Sc05). α(K)exp=0.0369 *7*. Additional information 12.
423.451 *4*	0.425 *11*	851.124	$(7/2^+)$	427.6801	$(5/2)^-$		Mult.: α(K)exp=0.017 *6* (1967Sc05) gives (M1,E2) in conflict with E1 from adopted ΔJ^π.
427.692[f] *3*	3.65 *15*	427.6801	$(5/2)^-$	0.0	$5/2^-$	E2,M1	Level-energy difference=427.679. K/L= 8.5 *27* (1967Sc05). α(K)exp= 0.0265 *11*. Additional information 15.
431.045 *6*	0.56 *3*	820.7956	$(3/2)^-$	389.7532	$3/2^-$	M1	α(K)exp= 0.038 *3*. Additional information 32.
431.537[g] *22*	0.079 *19*	859.287	$(3/2)^+$	427.6801	$(5/2)^-$		Level-energy difference=431.606.
433.377 *12*	0.0184 *24*	1489.104	$(3/2^-)$	1055.7577	$(1/2)^-$		
434.790 *6*	0.60 *4*	949.3369	$(5/2)^+$	514.5522	$7/2^-$		α(K)exp<0.027 (1967Sc05).
436.004 *22*	0.0266 *17*	1147.455	$3/2^+$	711.4718	$5/2^-$		α(K)exp=0.068 *14* gives M1 in conflict with E1 from adopted ΔJ^π.
437.450 *4*	0.236 *14*	859.287	$(3/2)^+$	421.8440	$(3/2)^-$	(E1)	α(K)exp= 0.0102 *15* gives E2, E1; ΔJ^π requires E1.
440.225 *21*	0.0429 *17*	915.6575	$5/2^+$	475.3884	$(5/2)^-$		
441.123 *6*	1.08 *3*	514.5522	$7/2^-$	73.4448	$7/2^-$	M1,E2	α(K)exp= 0.0263 *8*. Additional information 19.

$^{163}_{66}Dy_{97}$-8

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43 (continued)

γ(^{163}Dy) (continued)

E_γ †	I_γ ‡ s	E_i(level)	J_i^π	E_f	J_f^π	Mult. #	Comments
442.249 *3*	0.545 *25*	793.3941	$(1/2)^-$	351.1497	$(1/2)^-$	M1	α(K)exp= 0.0318 *16*.
x444.578 *4*	0.147 *7*					E2(+M1)	α(K)exp= 0.015 *4*.
449.079 t *8*	0.0575 t *17*	1160.547	$(1/2)^-$	711.4718	$5/2^-$		
449.079 t *8*	0.0575 t *17*	1950.771	$3/2^-$	1501.665	$(5/2^+)$		Level-energy difference=449.105.
455.341 *6*	0.054 *3*	883.0139	$(5/2)^-$	427.6801	$(5/2)^-$	M1	α(K)exp= 0.060 *7*.
x456.035 *18*	0.030 *3*						
459.737 u *5*	0.205 *7*	935.142	$(3/2)^+$	475.3884	$(5/2)^-$		α(K)exp= 0.0278 *17* gives M1,E2 in conflict with E1 from adopted ΔJ^π. Thus, the placement is uncertain, although γγ coin is seen (1989Sc31).
460.578 *5*	0.0481 *20*	711.4718	$5/2^-$	250.8895	$5/2^+$		
461.169 *5*	0.146 *6*	883.0139	$(5/2)^-$	421.8440	$(3/2)^-$	M1	α(K)exp= 0.034 *3*.
x462.203 *6*	0.220 *8*					M1	α(K)exp= 0.0326 *16*. Additional information 2.
462.453 *5*	0.189 *7*	884.2945	$1/2^+$	421.8440	$(3/2)^-$		
467.656 *4*	0.041 *3*	1615.113	$1/2^-$,$3/2^-$	1147.455	$3/2^+$		
x469.623 *5*	0.0417 *20*						
470.614 *5*	0.0354 *16*	946.003	$(7/2)^-$	475.3884	$(5/2)^-$	M1	α(K)exp= 0.056 *12*.
472.111 *23*	0.015 *3*	1253.160	$(3/2^+)$	781.0994	$5/2^+$		
x472.55 *3*	0.0125 *23*						
x474.284 *7*	0.0321 *21*						
x475.005 *9*	0.047 *5*						
475.389 *4*	3.37 *14*	475.3884	$(5/2)^-$	0.0	$5/2^-$	M1	K/L= 12 *4* (1967Sc05). α(K)exp= 0.0285 *11*. Additional information 17.
x478.037 *19*	0.028 *5*						
478.923 *9*	0.034 *4*	646.249	$9/2^-$	167.3452	$9/2^-$		
479.5749 *23*	0.615 *16*	553.0197	$7/2^-$	73.4448	$7/2^-$	M1	α(K)exp=0.0301 *15*. α(K)exp=0.017 *4* (1967Sc05) is in disagreement.
480.596 f *4*	0.090 *3*	766.2075	$(3/2)^+$	285.5955	$7/2^+$		Level-energy difference=480.611.
x483.034 *7*	0.022 *4*						
484.580 *4*	0.038 *4*	1196.051	$(3/2)^-$	711.4718	$5/2^-$	(M1,E2)	α(K)exp= 0.025 *8*.
485.341 *15*	0.011 *3*	1615.113	$1/2^-$,$3/2^-$	1129.759	$5/2^+$		
486.7684 *20*	0.392 *7*	737.6586	$1/2^+$	250.8895	$5/2^+$		Mult.: α(K)exp<0.027 (1967Sc05).
x488.84 *4*	0.0128 *23*						
492.011 *13*	0.0178 *15*	1258.214	$5/2^-$	766.2075	$(3/2)^+$		
493.257 *4*	0.0614 *20*	883.0139	$(5/2)^-$	389.7532	$3/2^-$	(M1,E2)	α(K)exp= 0.020 *5*.
493.823 *7*	0.0503 *24*	915.6575	$5/2^+$	421.8440	$(3/2)^-$		
494.546 *5*	1.75 *3*	884.2945	$1/2^+$	389.7532	$3/2^-$	E1	α(K)exp= 0.00490 *10*. Additional information 37.
495.510 *6*	0.367 *5*	781.0994	$5/2^+$	285.5955	$7/2^+$	M1,E2	α(K)exp= 0.0189 *8*.
496.072 t *7*	0.063 t *4*	1049.0725	$3/2^-$	553.0197	$7/2^-$		
496.072 t *7*	0.063 t *4*	1277.172	$(5/2^+)$	781.0994	$5/2^+$		
x496.90 b *20*	0.20 b						
x498.232 *14*	0.0168 *18*						
x499.44 b *20*	0.07 b						

$^{163}_{66}Dy_{97}$-9

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43 (continued)

γ(^{163}Dy) (continued)

E_γ [†]	I_γ [‡ s]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [#]	Comments
[x]501.03 *4*	0.032 *4*					(M1,E2)	α(K)exp= 0.026 *9*.
[x]503.223 *7*	0.0345 *19*						
507.454 *7*	0.715 *8*	935.142	(3/2)$^+$	427.6801	(5/2)$^-$	E1	α(K)exp= 0.0060 *7*. Additional information 40.
508.132 *5*	0.058 *8*	859.287	(3/2)$^+$	351.1497	(1/2)$^-$		
[x]509.476 *8*	0.28 *3*						
[x]512.254 *13*	0.072 *8*						
514.540 *4*	0.240 *4*	514.5522	7/2$^-$	0.0	5/2$^-$	M1	α(K)exp= 0.0236 *12*.
515.349 *13*	0.253 *20*	766.2075	(3/2)$^+$	250.8895	5/2$^+$	E2	α(K)exp= 0.0116 *15*.
527.490 *4*	0.0547 *14*	949.3369	(5/2)$^+$	421.8440	(3/2)$^-$		
[x]527.877 *20*	0.0133 *17*						
[x]528.919 *7*	0.029 *7*						
530.2067 *17*	0.1264 *24*	781.0994	5/2$^+$	250.8895	5/2$^+$	M1,E2	α(K)exp= 0.0148 *22*.
533.142 *3*	0.634 *7*	884.2945	1/2$^+$	351.1497	(1/2)$^-$	E1	α(K)exp= 0.0043 *4*. Additional information 38.
[x]538.6[b] *5*	0.25[b]						
545.3772[u] *19*	0.266 *8*	935.142	(3/2)$^+$	389.7532	3/2$^-$		α(K)exp=0.0089 *12* gives E2 in conflict with E1 from adopted ΔJ^π. Thus, the placement is uncertain, although γγ coin is seen (1989Sc31).
[x]548.45 *4*	0.0195 *19*						
[x]548.774 *8*	0.026 *6*					(M1,E2)	α(K)exp= 0.037 *13*.
[x]549.415 *19*	0.0177 *11*						
553.024 *5*	0.1540 *16*	553.0197	7/2$^-$	0.0	5/2$^-$	M1	α(K)exp= 0.0205 *16*.
[x]556.796 *24*	0.0247 *17*						
559.402 *23*	0.07 *3*	1615.113	1/2$^-$,3/2$^-$	1055.7577	(1/2)$^-$		
559.568 *15*	0.595 *25*	949.3369	(5/2)$^+$	389.7532	3/2$^-$	E1	α(K)exp= 0.0034 *6*. Additional information 42.
562.900 *18*	0.011 *5*	1692.675	(3/2)$^-$	1129.759	5/2$^+$		
[x]563.263 *12*	0.0249 *17*						
566.046 *19*	0.0286 *16*	1615.113	1/2$^-$,3/2$^-$	1049.0725	3/2$^-$		
[x]569.643 *9*	0.069 *8*					M1,E2	α(K)exp= 0.021 *4*.
572.786[f] *5*	0.047 *6*	646.249	9/2$^-$	73.4448	7/2$^-$		Level-energy difference=572.803.
[x]573.666 *5*	0.175 *11*					M1	α(K)exp= 0.0193 *23*.
579.108 *13*	0.0217 *16*	915.6575	5/2$^+$	336.5441	(9/2)$^+$		
[x]579.272 *21*	0.0329 *20*						
[x]579.513 *14*	0.0248 *11*						
580.371 *11*	0.0300 *11*	1055.7577	(1/2)$^-$	475.3884	(5/2)$^-$		
583.987 *9*	1.26 *3*	935.142	(3/2)$^+$	351.1497	(1/2)$^-$	(E1)	α(K)exp= 0.0057 *3* gives E1, E2; ΔJ^π requires E1. Additional information 41.
585.976[f] *8*	0.101 *18*	1501.665	(5/2$^+$)	915.6575	5/2$^+$	(M1,E2)	Level-energy difference=586.005. α(K)exp= 0.009 *3*.
597.49 *6*	0.0146 *20*	883.0139	(5/2)$^-$	285.5955	7/2$^+$		
608.401 *8*	1.32 *3*	859.287	(3/2)$^+$	250.8895	5/2$^+$	M1	α(K)exp= 0.0170 *5*. Additional information 34.

$^{163}_{66}Dy_{97}$-10

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43 (continued)

$\gamma(^{163}Dy)$ (continued)

E_γ [†]	I_γ [‡ s]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	Comments
609.462 *5*	0.072 *7*	946.003	(7/2)$^-$	336.5441	(9/2)$^+$		
[x]611.192 *9*	0.052 *10*						
615.213 *9*	0.120 *5*	1129.759	5/2$^+$	514.5522	7/2$^-$		
[x]617.680 *18*	0.032 *3*						
618.645 *9*	0.111 *3*	1501.665	(5/2$^+$)	883.0139	(5/2)$^-$		
[x]620.474 *23*	0.0187 *19*						
[x]620.61 *3*	0.041 *3*						
620.916 *18*	0.0292 *21*	1135.494	(5/2)$^-$	514.5522	7/2$^-$		
621.397 *10*	0.149 *9*	1049.0725	3/2$^-$	427.6801	(5/2)$^-$	M1	α(K)exp= 0.025 *3*.
[x]625.20 *7*	0.0118 *22*						
627.242 *7*	0.203 *5*	1049.0725	3/2$^-$	421.8440	(3/2)$^-$	M1	α(K)exp= 0.0169 *15*.
630.049 *5*	0.550 *16*	915.6575	5/2$^+$	285.5955	7/2$^+$	M1	α(K)exp= 0.0149 *7*. Additional information 39.
[x]633.452 *6*	0.072 *5*						
633.926 *10*	0.340 *20*	1055.7577	(1/2)$^-$	421.8440	(3/2)$^-$	M1	α(K)exp= 0.0120 *11*.
636.616 *4*	0.182 *5*	1058.4675	1/2$^+$	421.8440	(3/2)$^-$		
636.919 *7*	0.154 *14*	1692.675	(3/2)$^-$	1055.7577	(1/2)$^-$	M1,E2	α(K)exp= 0.0139 *24*.
638.025 *3*	0.374 *9*	711.4718	5/2$^-$	73.4448	7/2$^-$	M1	α(K)exp= 0.0140 *8*. Additional information 20.
[x]643.290 *5*	0.078 *3*						
[x]644.383 *24*	0.025 *3*						
649.06 *3*	0.031 *6*	1430.239	(3/2$^+$)	781.0994	5/2$^+$		
649.488 *18*	0.137 *14*	1202.529	(5/2)$^+$	553.0197	7/2$^-$		
[x]653.22 *4*	0.0163 *19*						
[x]654.270 *21*	0.068 *9*					(M1,E2)	α(K)exp= 0.013 *4*.
656.667 *4*	0.191 *6*	1084.349	(3/2)$^+$	427.6801	(5/2)$^-$	(E1)	α(K)exp= 0.0045 *12* gives E1, E2; ΔJ^π requires E1.
660.093 *7*	0.101 *5*	1135.494	(5/2)$^-$	475.3884	(5/2)$^-$	M1	α(K)exp= 0.019 *3*.
662.507 *8*	0.138 *7*	1084.349	(3/2)$^+$	421.8440	(3/2)$^-$		
663.773[f] *8*	0.059 *3*	949.3369	(5/2)$^+$	285.5955	7/2$^+$		Level-energy difference=663.739.
664.767 *3*	0.186 *5*	915.6575	5/2$^+$	250.8895	5/2$^+$	(M1,E2)	α(K)exp= 0.0084 *20*.
[x]667.03 *3*	0.035 *4*						
668.7126 *19*	0.88 *3*	1058.4675	1/2$^+$	389.7532	3/2$^-$		α(K)exp= 0.007 *4* (1967Sc05).
672.060 *4*	0.307 *12*	1147.455	3/2$^+$	475.3884	(5/2)$^-$		
[x]673.7765 *21*	0.178 *24*						
680.88 *3*	0.014 *3*	1501.665	(5/2$^+$)	820.7956	(3/2)$^-$		
684.257 *7*	0.065 *3*	935.142	(3/2)$^+$	250.8895	5/2$^+$		
[x]691.504 *25*	0.030 *3*						
692.578[t] *8*	0.0937[t] *19*	1430.239	(3/2$^+$)	737.6586	1/2$^+$	(M1,E2)	α(K)exp= 0.011 *4*.
692.578[t] *8*	0.0937[t] *19*	1950.771	3/2$^-$	1258.214	5/2$^-$	(M1,E2)	
694.591 *10*	0.107 *6*	1084.349	(3/2)$^+$	389.7532	3/2$^-$		
[x]694.99 *4*	0.023 *4*						
697.924 *10*	0.132 *5*	1049.0725	3/2$^-$	351.1497	(1/2)$^-$	(M1,E2)	α(K)exp= 0.014 *4*.
698.424 *15*	0.033 *4*	949.3369	(5/2)$^+$	250.8895	5/2$^+$		

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43 (continued)

$\gamma(^{163}Dy)$ (continued)

E_γ †	I_γ ‡ s	E_i(level)	J_i^π	E_f	J_f^π	Mult. #	Comments
704.616 *13*	0.346 *20*	1055.7577	$(1/2)^-$	351.1497	$(1/2)^-$	M1	α(K)exp= 0.0100 *12* gives M1(+E2), ΔJ^π allows only M1.
705.141 *23*	0.063 *3*	1258.214	$5/2^-$	553.0197	$7/2^-$		
707.320 *5*	0.495 *16*	1058.4675	$1/2^+$	351.1497	$(1/2)^-$	E1	α(K)exp= 0.0020 *7*.
707.92 t *6*	0.067 t *5*	1129.759	$5/2^+$	421.8440	$(3/2)^-$		
707.92 t *6*	0.067 t *5*	1135.494	$(5/2)^-$	427.6801	$(5/2)^-$		
707.92 t *6*	0.067 t *5*	1489.104	$(3/2^-)$	781.0994	$5/2^+$		
x708.313 *9*	0.163 *15*						
711.480 *5*	1.11 *5*	711.4718	$5/2^-$	0.0	$5/2^-$	M1	α(K)exp= 0.0107 *5*. Additional information 21.
x714.003 *18*	0.096 *3*						
x715.511 *19*	0.111 *17*						
x718.22 *8*	0.019 *3*						α(K)exp= 0.036 *13*.
x718.34 *6*	0.014 *3*						α(K)exp= 0.047 *18*.
x720.600 *7*	0.079 *4*					(M1,E2)	α(K)exp= 0.010 *3*.
725.619 *6*	0.531 *18*	1147.455	$3/2^+$	421.8440	$(3/2)^-$	E1	α(K)exp= 0.0014 *4*.
727.152 *11*	0.074 *5*	1202.529	$(5/2)^+$	475.3884	$(5/2)^-$		
727.864 *8*	0.093 *7*	801.312	$(7/2)^-$	73.4448	$7/2^-$	M1(+E2)	α(K)exp= 0.012 *3*.
733.195 *6*	0.233 *8*	1084.349	$(3/2)^+$	351.1497	$(1/2)^-$		
x734.55 *12*	0.044 *3*						
735.94 *3*	0.028 *7*	1529.326	$(1/2^-,3/2^-)$	793.3941	$(1/2)^-$		
x737.79 *3*	0.026 *3*						
738.69 *3*	0.044 *4*	1160.547	$(1/2)^-$	421.8440	$(3/2)^-$		
740.012 *8*	0.180 *4*	1129.759	$5/2^+$	389.7532	$3/2^-$		
743.672 *9*	0.256 *9*	1258.214	$5/2^-$	514.5522	$7/2^-$	M1	α(K)exp= 0.0091 *9*.
745.743 *8*	0.136 *9*	1135.494	$(5/2)^-$	389.7532	$3/2^-$	(M1,E2)	α(K)exp= 0.0086 *17*.
747.351 *4*	0.433 *12*	820.7956	$(3/2)^-$	73.4448	$7/2^-$	E2	α(K)exp= 0.0049 *5*.
x751.84 *4*	0.024 *8*						
x753.61 *3*	0.031 *3*						
757.665 *24*	0.040 *8*	1147.455	$3/2^+$	389.7532	$3/2^-$		
x762.79 *4*	0.026 *3*						
x764.500 *9*	0.087 *8*						
768.363 *5*	0.698 *22*	1196.051	$(3/2)^-$	427.6801	$(5/2)^-$	M1	α(K)exp= 0.0075 *5*.
770.771 *10*	0.95 *5*	1160.547	$(1/2)^-$	389.7532	$3/2^-$	M1	α(K)exp= 0.0079 *5*.
774.33 g *4*	0.028 *7*	1196.051	$(3/2)^-$	421.8440	$(3/2)^-$		Level-energy difference=774.21.
x778.49 *5*	0.040 *4*						
780.71 *4*	0.152 *18*	1202.529	$(5/2)^+$	421.8440	$(3/2)^-$		
x782.394 *12*	0.069 *9*						
791.88 *3*	0.057 *10*	1585.250	$1/2^+,3/2^+$	793.3941	$(1/2)^-$		
793.387 *8*	0.77 *6*	793.3941	$(1/2)^-$	0.0	$5/2^-$	E2	α(K)exp= 0.0041 *4*.
796.28 *3*	0.037 *4*	1147.455	$3/2^+$	351.1497	$(1/2)^-$		
x800.20 *3*	0.16 *3*						
801.37 *4*	0.080 *8*	801.312	$(7/2)^-$	0.0	$5/2^-$		
806.32 *5*	0.152 *12*	1196.051	$(3/2)^-$	389.7532	$3/2^-$	(M1,E2)	α(K)exp= 0.0096 *20*.

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43 (continued)

γ(^{163}Dy) (continued)

E_γ †	I_γ ‡ s	E_i(level)	J_i^π	E_f	J_f^π	Mult. #	Comments
807.66 *6*	1.12 *4*	1058.4675	$1/2^+$	250.8895	$5/2^+$		E_γ: from unplaced γ′s in (n,n′γ). 1989Sc31 report this γ in the level-scheme table, but not in the table of Eγ values. I_γ: from branching ratio (1989Sc31).
809.491 t *25*	0.454 t *12*	883.0139	$(5/2)^-$	73.4448	$7/2^-$	M1	Level-energy difference=809.57. α(K)exp= 0.0061 *6*.
809.491 t *25*	0.454 t *12*	1160.547	$(1/2)^-$	351.1497	$(1/2)^-$	M1	Level-energy difference=809.40. α(K)exp= 0.0061 *6*.
815.279 *14*	0.118 *9*	1950.771	$3/2^-$	1135.494	$(5/2)^-$		
819.061 *13*	0.068 *8*	1585.250	$1/2^+,3/2^+$	766.2075	$(3/2)^+$	(M1,E2)	α(K)exp= 0.010 *3*.
x820.29 *5*	0.19 *5*						
820.793 *6*	0.96 *4*	820.7956	$(3/2)^-$	0.0	$5/2^-$	(E2)	α(K)exp= 0.0045 *3*. Additional information 33.
x831.57 *3*	0.045 *4*						
833.469 *9*	0.692 *25*	1084.349	$(3/2)^+$	250.8895	$5/2^+$	M1	α(K)exp= 0.0063 *6*. Additional information 47.
x839.34 *4*	0.059 *4*						
x841.95 *6*	0.031 *5*						
x842.616 *18*	0.134 *15*						
844.148 *6*	0.285 *8*	1129.759	$5/2^+$	285.5955	$7/2^+$	M1	α(K)exp= 0.0072 *10*.
844.898 *5*	0.779 *12*	1196.051	$(3/2)^-$	351.1497	$(1/2)^-$	M1	α(K)exp= 0.0065 *3*. Additional information 49.
x845.28 *10*	0.14 *5*						
847.589 *9*	0.134 *4*	1585.250	$1/2^+,3/2^+$	737.6586	$1/2^+$	M1	α(K)exp= 0.0090 *15*.
x857.18 *3*	0.044 *4*						
x860.73 *8*	0.022 *4*						
861.73 *6*	0.027 *15*	1147.455	$3/2^+$	285.5955	$7/2^+$		
x862.36 *7*	0.11 *3*						
863.43 *3*	0.25 *4*	1253.160	$(3/2^+)$	389.7532	$3/2^-$		
x863.716 *24*	0.060 *5*						
866.43 *3*	0.095 *4*	1950.771	$3/2^-$	1084.349	$(3/2)^+$		α(K)exp= 0.0043 *21*.
868.462 *8*	0.244 *13*	1258.214	$5/2^-$	389.7532	$3/2^-$	M1	α(K)exp= 0.0067 *9*.
x869.110 *13*	0.148 *6*						
871.79 *8*	0.024 *5*	1692.675	$(3/2)^-$	820.7956	$(3/2)^-$		
872.54 *5*	0.066 *9*	946.003	$(7/2)^-$	73.4448	$7/2^-$		
878.886 *18*	0.177 *4*	1129.759	$5/2^+$	250.8895	$5/2^+$		
883.00 *3*	0.175 *7*	883.0139	$(5/2)^-$	0.0	$5/2^-$	(M1,E2)	α(K)exp= 0.0040 *12*.
896.568 *12*	0.83 *3*	1147.455	$3/2^+$	250.8895	$5/2^+$	M1	α(K)exp= 0.0059 *3*.
902.016 *15*	0.217 *8*	1253.160	$(3/2^+)$	351.1497	$(1/2)^-$		α(K)exp= 0.0049 *10* gives M1,E2 in conflict with E1 from adopted ΔJ^π.
x904.92 *4*	0.110 *10*					(M1,E2)	α(K)exp= 0.0058 *19*.
x908.83 *8*	0.071 *4*						
x910.49 *3*	0.034 *15*						
x914.62 *11*	0.017 *5*						
x915.89 *3*	0.072 *5*						
916.950 *11*	0.506 *11*	1202.529	$(5/2)^+$	285.5955	$7/2^+$	E2(+M1)	α(K)exp= 0.0032 *4*.

$^{163}_{66}Dy_{97}$-13

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43 (continued)

$\gamma(^{163}Dy)$ (continued)

E_γ[†]	I_γ[‡s]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	Comments
[x]918.11 *8*	0.23 *5*						
[x]920.06 *5*	0.15 *4*						
[x]920.56 *10*	0.023 *4*						
[x]922.31 *4*	0.053 *5*						
926.43 *4*	0.107 *13*	1692.675	$(3/2)^-$	766.2075	$(3/2)^+$		
[x]936.87 *5*	0.022 *23*						
[x]937.99 *11*	0.12 *4*						
951.574[g] *19*	0.164 *6*	1202.529	$(5/2)^+$	250.8895	$5/2^+$		Level-energy difference=951.636.
[x]952.48 *11*	0.025 *6*						
[x]955.44 *4*	0.122 *7*						
[x]962.76 *3*	0.061 *5*						
[x]965.70 *6*	0.041 *6*						
967.54 *10*	0.033 *6*	1253.160	$(3/2^+)$	285.5955	$7/2^+$		
[x]967.73 *10*	0.24 *6*						
968.50 *10*	0.026 *7*	1483.263	$(5/2^-)$	514.5522	$7/2^-$		
[x]970.22 *11*	0.024 *6*						
[x]971.39 *5*	0.053 *6*						
975.58 *4*	0.056 *6*	1049.0725	$3/2^-$	73.4448	$7/2^-$		
[x]980.206 *22*	0.153 *7*						
[x]982.58 *5*	0.094 *9*						
[x]982.97 *3*	0.103 *15*						
[x]983.36 *8*	0.060 *8*						
[x]986.98 *10*	0.026 *6*						
[x]989.23 *14*	0.14 *6*						
[x]989.97 *7*	0.039 *6*						
[x]990.58 *12*	0.18 *6*						
[x]991.723 *11*	0.373 *8*						
[x]993.02 *3*	0.097 *7*						
[x]994.03 *12*	0.045 *13*						
[x]1001.21 *4*	0.204 *9*						
1002.261 *12*	1.07 *5*	1253.160	$(3/2^+)$	250.8895	$5/2^+$	M1,E2	α(K)exp= 0.00400 *20*. Additional information 50.
1008.21 *8*	0.038 *5*	1430.239	$(3/2^+)$	421.8440	$(3/2)^-$		
[x]1010.29 *11*	0.035 *6*						
1011.35 *11*	0.034 *6*	1439.054	$(1/2^-,3/2^-)$	427.6801	$(5/2)^-$		
1013.0[@u]		1489.104	$(3/2^-)$	475.3884	$(5/2)^-$		
1017.22 *3*	0.118 *7*	1439.054	$(1/2^-,3/2^-)$	421.8440	$(3/2)^-$		
[x]1019.46 *8*	0.043 *6*						
[x]1022.51 *4*	0.103 *7*						
[x]1023.68 *11*	0.045 *6*						
1026.33[t] *4*	0.248[t] *9*	1277.172	$(5/2^+)$	250.8895	$5/2^+$	(M1,E2)	α(K)exp= 0.0031 *8*.
1026.33[t] *4*	0.248[t] *9*	1501.665	$(5/2^+)$	475.3884	$(5/2)^-$		α(K)exp= 0.0031 *8* gives (M1,E2) in conflict with E1 from adopted ΔJ^π.
[x]1037.82 *6*	0.060 *7*						

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43 (continued)

$\gamma(^{163}Dy)$ (continued)

E_γ [†]	I_γ [‡ s]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [#]	Comments
1040.47 *3*	0.467 *8*	1430.239	(3/2$^+$)	389.7532	3/2$^-$		
[x]1041.99 *7*	0.052 *7*						
[x]1047.49 *4*	0.091 *7*						
1049.239 [g] *18*	0.315 *20*	1439.054	(1/2$^-$,3/2$^-$)	389.7532	3/2$^-$	(M1,E2)	Level-energy difference=1049.296. α(K)exp= 0.0030 *9*.
[x]1050.45 *7*	0.060 *7*						
1055.70 [g] *4*	0.100 *7*	1483.263	(5/2$^-$)	427.6801	(5/2)$^-$		Level-energy difference=1055.58.
[x]1058.16 *7*	0.140 *9*						
1061.398 [t] *21*	0.246 [t] *7*	1483.263	(5/2$^-$)	421.8440	(3/2)$^-$		
1061.398 [t] *21*	0.246 [t] *7*	1489.104	(3/2$^-$)	427.6801	(5/2)$^-$		
[x]1067.02 *3*	0.128 *8*						
[x]1069.26 *8*	0.051 *7*						
1073.95 *3*	0.194 *10*	1501.665	(5/2$^+$)	427.6801	(5/2)$^-$		
1079.22 *6*	0.36 *4*	1430.239	(3/2$^+$)	351.1497	(1/2)$^-$	(E1)	α(K)exp= 0.0015 *6*.
[x]1080.25 *9*	0.079 *9*						
1087.891 *18*	0.402 *8*	1439.054	(1/2$^-$,3/2$^-$)	351.1497	(1/2)$^-$	(M1,E2)	α(K)exp= 0.0025 *6*.
[x]1095.87 *8*	0.155 *7*					(M1,E2)	α(K)exp= 0.0052 *16*.
1099.316 *14*	0.285 *21*	1489.104	(3/2$^-$)	389.7532	3/2$^-$		α(K)exp= 0.0018 *7*.
[x]1101.09 *6*	0.083 *7*						α(K)exp= 0.06 *3*.
[x]1103.87 *11*	0.040 *8*						
1107.450 *22*	0.197 *21*	1529.326	(1/2$^-$,3/2$^-$)	421.8440	(3/2)$^-$		
[x]1110.31 *5*	0.099 *8*						
[x]1113.32 *8*	0.062 *8*						
[x]1116.98 *14*	0.036 *9*						
[x]1119.27 *13*	0.076 *15*						
[x]1120.31 *24*	0.051 *15*						
[x]1121.71 *6*	0.114 *10*						
[x]1124.84 *8*	0.106 *13*						
[x]1125.87 *8*	0.118 *13*						
[x]1129.46 *5*	0.268 *22*						α(K)exp= 0.0017 *7*.
[x]1134.54 *7*	0.19 *5*						
[x]1136.96 *6*	0.39 *4*					(M1,E2)	α(K)exp= 0.0021 *5*.
1137.99 *4*	0.399 *20*	1489.104	(3/2$^-$)	351.1497	(1/2)$^-$		
1139.54 *5*	0.272 *23*	1529.326	(1/2$^-$,3/2$^-$)	389.7532	3/2$^-$		
[x]1141.45 *6*	0.169 *9*						
[x]1146.89 *7*	0.170 *10*						
1150.50 *4*	0.134 *25*	1501.665	(5/2$^+$)	351.1497	(1/2)$^-$		
[x]1158.68 *12*	0.046 *8*						
[x]1164.34 *6*	0.101 *8*						
[x]1167.16 *10*	0.056 *8*						
[x]1168.97 *15*	0.042 *9*						
[x]1173.77 *6*	0.088 *9*						
1178.25 *3*	0.219 *16*	1529.326	(1/2$^-$,3/2$^-$)	351.1497	(1/2)$^-$		

$^{163}_{66}Dy_{97}$-15

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43 (continued)

γ(^{163}Dy) (continued)

E_γ †	I_γ ‡ s	E_i(level)	J_i^π	E_f	J_f^π	Mult. #	Comments
1184.49 t 11	0.094 t 15	1258.214	5/2⁻	73.4448	7/2⁻		
1184.49 t 11	0.094 t 15	1950.771	3/2⁻	766.2075	(3/2)⁺		
x1185.69 15	0.097 15						
1187.39 7	0.115 12	1615.113	1/2⁻,3/2⁻	427.6801	(5/2)⁻	(M1,E2)	α(K)exp= 0.0059 19.
x1191.11 10	0.30 8						
1193.33 7	0.095 10	1615.113	1/2⁻,3/2⁻	421.8440	(3/2)⁻		
1195.44 6	0.30 3	1585.250	1/2⁺,3/2⁺	389.7532	3/2⁻		
1197.11 20	0.039 10	1483.263	(5/2⁻)	285.5955	7/2⁺		
1202.55 10	0.062 9	1202.529	(5/2)⁺	0.0	5/2⁻		
x1205.05 9	0.072 9						
x1211.23 5	0.217 19						
x1214.00 6	0.108 10						
1217.19 4	0.182 10	1692.675	(3/2)⁻	475.3884	(5/2)⁻		
x1219.04 17	0.096 20						
x1220.29 10	0.162 19						
x1221.91 14	0.079 10						
x1223.56 5	0.233 12						
x1227.45 5	0.188 10						
x1229.97 9	0.094 9						
1233.92 18	0.050 10	1585.250	1/2⁺,3/2⁺	351.1497	(1/2)⁻		
x1238.9 @							
1238.9 @		1489.104	(3/2⁻)	250.8895	5/2⁺		
x1246.0 @							
x1249.23 4	0.156 11						
1253.12 7	0.108 10	1253.160	(3/2⁺)	0.0	5/2⁻		
x1260.37 11	0.055 14						
1265.06 11	0.075 10	1692.675	(3/2)⁻	427.6801	(5/2)⁻		
1270.831 12	0.521 22	1692.675	(3/2)⁻	421.8440	(3/2)⁻	M1(+E2)	α(K)exp= 0.0029 4.
x1275.38 13	0.091 11						
x1275.71 18	0.064 10						
1277.35 g 6	0.13 3	1277.172	(5/2⁺)	0.0	5/2⁻		Level-energy difference=1277.167.
x1280.77 4	0.167 24						
x1283.72 9	0.106 10						
x1292.15 15	0.062 11						
x1297.91 12	0.076 11						
1302.94 3	0.31 3	1692.675	(3/2)⁻	389.7532	3/2⁻	M1(+E2)	α(K)exp= 0.0032 7.
x1304.92 12	0.094 12						
x1308.37 7	0.150 11						
x1312.23 7	0.146 11						
1315.89 18	0.063 11	1483.263	(5/2⁻)	167.3452	9/2⁻		
x1324.75 13	0.081 11						
x1334.10 6	0.149 25						
x1338.24 7	0.146 11						

$^{163}_{66}Dy_{97}$-16

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43 (continued)

$\gamma(^{163}Dy)$ (continued)

E_γ †	I_γ ‡ s	E_i(level)	J_i^π	E_f	J_f^π
1342.6 @		(6271.01)	1/2+	4928.2	
x1342.88 13	0.085 11				
x1360.32 14	0.084 12				
x1367.04 16	0.074 12				
x1371.98 7	0.210 12				
x1374.29 9	0.148 12				
x1382.55 12	0.115 12				
x1391.94 5	0.288 14				
x1398.75 7	0.192 14				
1398.75 p 7	0.192 14	1874.13	(5/2−,7/2−)	475.3884	(5/2)−
x1402.21 9	0.151 13				
x1407.8 @					
1411.8 @		1834.9	5/2+	421.8440	(3/2)−
1416.1 @		1489.104	(3/2−)	73.4448	7/2−
x1423.41 6	0.271 14				
x1428.9 3	0.049 13				
x1433.35 9	0.161 16				
x1448.68 6	0.24 6				
1449.8 @ u		1874.13	(5/2−,7/2−)	421.8440	(3/2)−
x1454.63 10	0.122 13				
x1458.30 8	0.199 14				
x1462.05 11	0.154 14				
x1464.90 6	0.39 5				
1474.2 @		1950.771	3/2−	475.3884	(5/2)−
x1474.53 17	0.151 20				
x1476.39 18	0.204 20				
1489.09 3	0.488 16	1489.104	(3/2−)	0.0	5/2−
x1494.02 13	0.157 14				
1501.43 13	0.214 23	1501.665	(5/2+)	0.0	5/2−
x1503.39 24	0.118 21				
1523.02 5	0.36 5	1950.771	3/2−	427.6801	(5/2)−
1528.99 4	0.49 6	1950.771	3/2−	421.8440	(3/2)−
x1532.18 5	0.44 5				
1532.3 @ u		(6271.01)	1/2+	4740.1	
x1535.75 5	0.31 7				
x1541.25 6	0.36 6				
x1543.2 4	0.09 3				
x1568.01 9	0.238 20				
x1574.8 @					
x1580.4 @					
x1590.8 3	0.081 18				
x1595.47 21	0.105 17				
1599.66 15	0.154 20	1950.771	3/2−	351.1497	(1/2)−
1614.87 10	0.34 4	1615.113	1/2−,3/2−	0.0	5/2−
1620.6		1692.675	(3/2)−	73.4448	7/2−
1634.8		2109.4		475.3884	(5/2)−
x1653.9					
1686.6		2109.4		421.8440	(3/2)−
x1722.8 n					
x1740.7					
1748.0		2222.0		475.3884	(5/2)−
1759.5		1834.9	5/2+	73.4448	7/2−
x1773.7 j					
1775.07 & pu 13	0.41 & 5	2197.0	(3/2−)	421.8440	(3/2)−
x1782.8 j					
x1800.3 n					
1808.7		2197.0	(3/2−)	389.7532	3/2−
1819.5		2242.9		421.8440	(3/2)−
x1823.3 j					
1837.9 hu		1834.9	5/2+	0.0	5/2−
1843.1		2270.1	(3/2+)	427.6801	(5/2)−
1846.2		2197.0	(3/2−)	351.1497	(1/2)−
1851.1		2242.9		389.7532	3/2−
1869.8		2222.0		351.1497	(1/2)−
1875.2		1950.771	3/2−	73.4448	7/2−
1879.5		2270.1	(3/2+)	389.7532	3/2−
1894.6 hu		2242.9		351.1497	(1/2)−
x1906.4					
1912.8		2339.2		427.6801	(5/2)−
1919.7		2270.1	(3/2+)	351.1497	(1/2)−
1922.8		2349.5		427.6801	(5/2)−
x1936.2 o					
1939.0		2361.2		421.8440	(3/2)−
1944.5		2197.0	(3/2−)	250.8895	5/2+
1953.9 hu		1950.771	3/2−	0.0	5/2−
x1979.9 l					
1987.2		2339.2		351.1497	(1/2)−
2001.7		2475.4		475.3884	(5/2)−
2009.7		2361.2		351.1497	(1/2)−
2051.6		2475.4		421.8440	(3/2)−
2060.8		2135.1		73.4448	7/2−
2080.5		2432.5		351.1497	(1/2)−
x2081.7					
2081.7		2471.6		389.7532	3/2−

$^{163}_{66}Dy_{97}$-17

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43 (continued)

$\gamma(^{163}Dy)$ (continued)

E_γ †	E_i(level)	J_i^π	E_f	J_f^π
2086.0	2562.2		475.3884	$(5/2)^-$
x2098.3 l				
2101.7	2525.3		421.8440	$(3/2)^-$
2108.3	2583.3		475.3884	$(5/2)^-$
2120.5	2471.6		351.1497	$(1/2)^-$
x2130.1 o				
x2132.1 i				
2136.1	2135.1		0.0	$5/2^-$
2141.5	2562.2		421.8440	$(3/2)^-$
2152.9	2627.7		475.3884	$(5/2)^-$
x2153.7 i				
2161.8	2583.3		421.8440	$(3/2)^-$
x2165.1 o				
2175.2	2525.3		351.1497	$(1/2)^-$
2189.0	2615.6		427.6801	$(5/2)^-$
2190.9 hu	2583.3		389.7532	$3/2^-$
x2191.2 o				
2196.8	2197.0	$(3/2^-)$	0.0	$5/2^-$
x2197.1 k				
2199.7	2627.7		427.6801	$(5/2)^-$
2208.5	2459.8		250.8895	$5/2^+$
2210.4	2562.2		351.1497	$(1/2)^-$
2216.8	2606.9	$(5/2^-)$	389.7532	$3/2^-$
2224.2	2648.0	$(3/2^-)$	421.8440	$(3/2)^-$
x2237.4 o				
2238.4	2627.7		389.7532	$3/2^-$
2254.8	2728.4		475.3884	$(5/2)^-$
2255.8	2606.9	$(5/2^-)$	351.1497	$(1/2)^-$
2264.4	2615.6		351.1497	$(1/2)^-$
2278.7	2755.3		475.3884	$(5/2)^-$
x2302.8 m				
x2324.1 l				
2332.7	2755.3		421.8440	$(3/2)^-$
x2338.6 l				
2339.6	2339.2		0.0	$5/2^-$
x2341.7 k				
x2343.2 o				
x2344.1 i				
2349.9	2349.5		0.0	$5/2^-$
x2353.2 i				
x2382.0 j				
2387.0	(6271.01)	$1/2^+$	3884.3	
2405.9	2755.3		351.1497	$(1/2)^-$
2411.7	2835.4	$(3/2,5/2^-)$	421.8440	$(3/2)^-$
x2432.6 k				
2433.5	2432.5		0.0	$5/2^-$
x2434.6 l				
x2437.5 i				
x2453.8 i				
2460.3	2459.8		0.0	$5/2^-$
x2467.7 k				
2476.1	2728.4		250.8895	$5/2^+$
2484.1	2835.4	$(3/2,5/2^-)$	351.1497	$(1/2)^-$
x2487.4 k				
2489.3	2912.0		421.8440	$(3/2)^-$
x2507.6 k				
x2511.5 o				
x2515.6 n				
2522.0	2872.1		351.1497	$(1/2)^-$
2533.5	(6271.01)	$1/2^+$	3737.9	
x2551.6 o				
x2556.3 i				
x2557.4 j				
2560.9	2912.0		351.1497	$(1/2)^-$
x2573.2 o				
2573.8	2996.9		421.8440	$(3/2)^-$
2575.9	2648.0	$(3/2^-)$	73.4448	$7/2^-$
2585.2	2583.3		0.0	$5/2^-$
2586.3	2835.4	$(3/2,5/2^-)$	250.8895	$5/2^+$
2627.9	2627.7		0.0	$5/2^-$
2628.3	2978.1		351.1497	$(1/2)^-$
x2630.0 m				
2630.2	3104.7		475.3884	$(5/2)^-$
2658.7	(6271.01)	$1/2^+$	3612.8	
2676.4	3067.1		389.7532	$3/2^-$
2678.1	3104.7		427.6801	$(5/2)^-$
x2681.6 o				
2693.1	3119.1		427.6801	$(5/2)^-$
2698.3	3048.0		351.1497	$(1/2)^-$
2715.9	3067.1		351.1497	$(1/2)^-$
2724.1 hu	2978.1		250.8895	$5/2^+$
2729.1	3119.1		389.7532	$3/2^-$

$^{163}_{66}Dy_{97}$-18

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43 (continued)

γ(^{163}Dy) (continued)

E_γ †	E_i(level)	J_i^π	E_f	J_f^π
x2732.8 j				
x2746.8				
x2748.0 i				
2754.4	3104.7		351.1497	(1/2)−
2755.5	3182.2		427.6801	(5/2)−
2756.2	3230.6		475.3884	(5/2)−
x2765.5 j				
2767.1	3119.1		351.1497	(1/2)−
2773.6	(6271.01)	1/2+	3497.2	
x2788.3 o				
2793.1	3217.2		421.8440	(3/2)−
x2811.1 i				
2816.6	3067.1		250.8895	5/2+
2835.1	2835.4	(3/2,5/2−)	0.0	5/2−
2859.3	3335.0		475.3884	(5/2)−
2871.2	2872.1		0.0	5/2−
x2896.7 k				
x2904.1 n				
2907.1	3335.0		427.6801	(5/2)−
2918.5	(6271.01)	1/2+	3353.0	(3/2,5/2−)
2931.5	3182.2		250.8895	5/2+
2937.3	(6271.01)	1/2+	3335.0	
x2938.1 j				
x2943.1 n				
2946.1	3335.0		389.7532	3/2−
x2947.6 o				
2956.7	(6271.01)	1/2+	3314.7	
x2973.4 o				
2979.2	3230.6		250.8895	5/2+
2979.8	2978.1		0.0	5/2−
2984.3	3335.0		351.1497	(1/2)−
x2984.4 k				
x2987.5 n				
2997.5	2996.9		0.0	5/2−
3004.9 hu	3353.0	(3/2,5/2−)	351.1497	(1/2)−
x3033.4 n				
x3035.9 i				
3041.2	(6271.01)	1/2+	3230.6	
3046.7	3048.0		0.0	5/2−
3054.1	(6271.01)	1/2+	3217.2	
3063.7	3314.7		250.8895	5/2+
3067.6	3067.1		0.0	5/2−
3074.6	3497.2		421.8440	(3/2)−
x3077.8 n				
x3084.5 j				
3090.3	(6271.01)	1/2+	3182.2	
x3099.0 i				
3099.9	3353.0	(3/2,5/2−)	250.8895	5/2+
3102.9	3104.7		0.0	5/2−
x3116.8 n				
x3132.7 o				
3153.0	(6271.01)	1/2+	3119.1	
3167.8	(6271.01)	1/2+	3104.7	
x3188.1 j				
3204.2	(6271.01)	1/2+	3067.1	
3214.3 hu	3217.2		0.0	5/2−
3223.5	(6271.01)	1/2+	3048.0	
x3239.4 o				
3241.5	3314.7		73.4448	7/2−
3259.9	3612.8		351.1497	(1/2)−
3273.9	(6271.01)	1/2+	2996.9	
x3290.8 i				
3293.3	(6271.01)	1/2+	2978.1	
x3334.6 j				
x3347.8 o				
3347.9	3737.9		389.7532	3/2−
3352.1	3353.0	(3/2,5/2−)	0.0	5/2−
3358.5	(6271.01)	1/2+	2912.0	
x3362.5 l				
x3369.4 o				
x3373.4 k				
x3392.1 i				
x3393.7 k				
3399.3	(6271.01)	1/2+	2872.1	
x3409.5 io				
3410.7	3884.3		475.3884	(5/2)−
x3413.3 k				
3435.5	(6271.01)	1/2+	2835.4	(3/2,5/2−)
x3448.5 k				
x3458.4 l				
3461.2	3884.3		421.8440	(3/2)−
x3472.1 l				

$^{163}_{66}Dy_{97}$-19

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43 (continued)

$\gamma(^{163}Dy)$ (continued)

E_γ †	E_i(level)	J_i^π	E_f	J_f^π
3488.7	3737.9		250.8895	$5/2^+$
x3494.1 i				
3497.4	3497.2		0.0	$5/2^-$
x3503.3 i				
x3505.3 n				
x3507.2 j				
3515.8	(6271.01)	$1/2^+$	2755.3	
3536.1 hu	3884.3		351.1497	$(1/2)^-$
x3539.3 k				
x3539.9 j				
3543.4	(6271.01)	$1/2^+$	2728.4	
x3568.7 m				
x3577.8 o				
3614.7	3612.8		0.0	$5/2^-$
3622.6	(6271.01)	$1/2^+$	2648.0	$(3/2^-)$
3644.7	(6271.01)	$1/2^+$	2627.7	
3656.9	(6271.01)	$1/2^+$	2615.6	
3664.3	(6271.01)	$1/2^+$	2606.9	$(5/2^-)$
x3683.6 o				
x3683.9 k				
3687.9	(6271.01)	$1/2^+$	2583.3	
x3693.5 i				
x3698.9 l				
3708.9	(6271.01)	$1/2^+$	2562.2	
x3715.0 i				
x3715.2 j				
x3729.8 o				
3736.5	3737.9		0.0	$5/2^-$
3745.2	(6271.01)	$1/2^+$	2525.3	
x3755.9 o				
x3790.9 o				
3795.8	(6271.01)	$1/2^+$	2475.4	
3799.5	(6271.01)	$1/2^+$	2471.6	
3811.6	(6271.01)	$1/2^+$	2459.8	
x3817.2 l				
3838.9	(6271.01)	$1/2^+$	2432.5	
3880.6 hu	3884.3		0.0	$5/2^-$
x3890.7 j				
x3895.9 m				
3909.3	(6271.01)	$1/2^+$	2361.2	
3923.2	(6271.01)	$1/2^+$	2349.5	

$^{163}_{66}Dy_{97}$-20

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43 (continued)

γ(^{163}Dy) (continued)

E_γ [†]	I_γ [‡ s]	E_i(level)	J_i^π	E_f	J_f^π	Comments
3933.1		(6271.01)	1/2+	2339.2		
x3984.8 o						
4002.0	0.97 20	(6271.01)	1/2+	2270.1	(3/2+)	Additional information 51.
4027.7	0.54 14	(6271.01)	1/2+	2242.9		Additional information 52.
4049.8	0.25 7	(6271.01)	1/2+	2222.0		Additional information 53.
4073.6	0.78 18	(6271.01)	1/2+	2197.0	(3/2−)	Additional information 54.
x4110 b 4	0.16 b 5					
4136.5	<0.20	(6271.01)	1/2+	2135.1		Additional information 55.
4161.7	0.28 9	(6271.01)	1/2+	2109.4		Additional information 56.
x4220.8 n						
x4226 b 4	0.15 b 4					
4264.8		4740.1		475.3884	(5/2)−	
x4268 b 4	0.63 b 14					
x4298.1 n						
4312.8		4740.1		427.6801	(5/2)−	
4321.1	1.5 3	(6271.01)	1/2+	1950.771	3/2−	Additional information 57.
x4348 b 4	0.37 b 9					
4349.2		4740.1		389.7532	3/2−	
4398.5	0.16 3	(6271.01)	1/2+	1874.13	(5/2−,7/2−)	Additional information 58.
4435.9	0.20 6	(6271.01)	1/2+	1834.9	5/2+	Additional information 59.
x4449.4 j						
x4473.3 k						
x4489.9 j						
x4499.0 j						
4506.3		4928.2		421.8440	(3/2)−	
4577.6	0.51 12	(6271.01)	1/2+	1692.675	(3/2)−	
4579.9 e 3		S(n)+2		1692.675	(3/2)−	
x4588.0 i						
x4601.0 i						
4601.9 e 3		S(n)+24		1692.675	(3/2)−	
x4611 ab 4	0.07 b					
4652 bu 4	0.18 b 6	(6271.01)	1/2+	1615.113	1/2−,3/2−	
4658.1 e 3		S(n)+2		1615.113	1/2−,3/2−	
x4679.9 j						
4680.1 e 3		S(n)+24		1615.113	1/2−,3/2−	
4685.6 & 1	0.060 &	(6271.01)	1/2+	1585.250	1/2+,3/2+	
4739 bu 4	0.14 b 4	(6271.01)	1/2+	1529.326	(1/2−,3/2−)	
4741.6		4740.1		0.0	5/2−	
x4742.8 o						
4743.5 e 3		S(n)+2		1529.326	(1/2−,3/2−)	

$^{163}_{66}Dy_{97}$-21

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43 (continued)

$\gamma(^{163}Dy)$ (continued)

E_γ †	I_γ ‡ s	E_i(level)	J_i^π	E_f	J_f^π	Comments
x4747.1 n						
4765.5 e 3		S(n)+24		1529.326	(1/2$^-$,3/2$^-$)	
4771.1 e 4		S(n)+2		1501.665	(5/2$^+$)	
4782.8	0.60 14	(6271.01)	1/2$^+$	1489.104	(3/2$^-$)	Additional information 60.
4783.5 e 3		S(n)+2		1489.104	(3/2$^-$)	
4793.1 e 4		S(n)+24		1501.665	(5/2$^+$)	
4805.5 e 3		S(n)+24		1489.104	(3/2$^-$)	
4811.6 e 6		S(n)+24		1483.263	(5/2$^-$)	
x4813.5 l						
4833.4	0.15 4	(6271.01)	1/2$^+$	1439.054	(1/2$^-$,3/2$^-$)	Additional information 61.
4833.6 e 4		S(n)+2		1439.054	(1/2$^-$,3/2$^-$)	
4842.5 e 4		S(n)+2		1430.239	(3/2$^+$)	
4854.1		4928.2		73.4448	7/2$^-$	
4855.6 e 4		S(n)+24		1439.054	(1/2$^-$,3/2$^-$)	
4864.5 e 4		S(n)+24		1430.239	(3/2$^+$)	
x4877.9 i						
x4885.2 j						
x4899.4 j						
x4963.2 n						
x4992.6 n						
4995.1 d 4	45 d 5	S(n)+24		1299.7	(5/2$^-$)	
4996.6 c 7	2.6 c 6	S(n)+2		1277.172	(5/2$^+$)	
5016.2		(6271.01)	1/2$^+$	1253.160	(3/2$^+$)	
5018.6 d 7	52 d 5	S(n)+24		1277.172	(5/2$^+$)	
5019.5 c 3	11.7 c 10	S(n)+2		1253.160	(3/2$^+$)	
5041.5 d 3	70 d 6	S(n)+24		1253.160	(3/2$^+$)	
5070.2 c 6	4.2 c 7	S(n)+2		1202.529	(5/2)$^+$	
5075.0 & 1	0.54 & 3	(6271.01)	1/2$^+$	1196.051	(3/2)$^-$	
5076.8 c 3	57 c 3	S(n)+2		1196.051	(3/2)$^-$	
x5077.5 i						
x5080.6 l						
5086.8 d 7	27 d 5	S(n)+24		1208.0	(5/2$^-$)	
5092.2 d 6	29 d 10	S(n)+24		1202.529	(5/2)$^+$	
5098.8 d 3	112 d 8	S(n)+24		1196.051	(3/2)$^-$	
5110.6 &g 1	0.286 & 14	(6271.01)	1/2$^+$	1160.547	(1/2)$^-$	
5112.3 c 3	24.5 c 15	S(n)+2		1160.547	(1/2)$^-$	
5123.7 &g 1	0.250 & 13	(6271.01)	1/2$^+$	1147.455	3/2$^+$	
5125.8 c 3	14.7 c 11	S(n)+2		1147.455	3/2$^+$	

$^{163}_{66}Dy_{97}$-22

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43 (continued)

$\gamma(^{163}Dy)$ (continued)

E_γ †	I_γ ‡ s	E_i(level)	J_i^π	E_f	J_f^π
5134.3 d 3	59 d 7	S(n)+24		1160.547	(1/2)$^-$
5143.3 c 5	3.4 c 6	S(n)+2		1129.759	5/2$^+$
5147.8 d 3	73 d 6	S(n)+24		1147.455	3/2$^+$
x5160 b 4	0.07 b 2				
5165.3 d 5	40 d 4	S(n)+24		1129.759	5/2$^+$
5186.6 & 1	0.129 & 7	(6271.01)	1/2$^+$	1084.349	(3/2)$^+$
5188.7 c 3	10.3 c 8	S(n)+2		1084.349	(3/2)$^+$
5210.7 d 3	58 d 5	S(n)+24		1084.349	(3/2)$^+$
5214.2 c 9	13.7 c 9	S(n)+2		1058.4675	1/2$^+$
5214.7 &q	0.75 & 4	(6271.01)	1/2$^+$	1055.7577	(1/2)$^-$
5217.2 c 4	34.7 c 18	S(n)+2		1055.7577	(1/2)$^-$
x5217.6 j	1.9 r 4				
x5218.2 k	1.9 r 4				
5221.9 & 1	0.91 & 5	(6271.01)	1/2$^+$	1049.0725	3/2$^-$
5223.9 c 3	59 c 3	S(n)+2		1049.0725	3/2$^-$
5236.2 d 9	40 d 8	S(n)+24		1058.4675	1/2$^+$
5239.2 d 4	113 d 10	S(n)+24		1055.7577	(1/2)$^-$
5245.9 d 3	82 d 6	S(n)+24		1049.0725	3/2$^-$
x5249.1 m					
x5289.1 i					
5321.6 au	<0.002	(6271.01)	1/2$^+$	949.3369	(5/2)$^+$
5322.7 c 5	3.3 c 5	S(n)+2		949.3369	(5/2)$^+$
5335.9 & 1	0.229 & 11	(6271.01)	1/2$^+$	935.142	(3/2)$^+$
5338.1 c 3	9.7 c 9	S(n)+2		935.142	(3/2)$^+$
5344.7 d 5	34 d 4	S(n)+24		949.3369	(5/2)$^+$
5356.5 c 4	3.4 c 5	S(n)+2		915.6575	5/2$^+$
5360.1 d 3	54 d 4	S(n)+24		935.142	(3/2)$^+$
5378.5 d 4	62 d 5	S(n)+24		915.6575	5/2$^+$
5386.7 & 1	0.163 & 8	(6271.01)	1/2$^+$	884.2945	1/2$^+$
5388.3 c 3	12.3 c 9	S(n)+2		884.2945	1/2$^+$
5410.3 d 3	85 d 6	S(n)+24		884.2945	1/2$^+$
5411.5 & 1	0.153 & 8	(6271.01)	1/2$^+$	859.287	(3/2)$^+$
5413.6 c 3	13.6 c 9	S(n)+2		859.287	(3/2)$^+$
5435.6 d 3	65 d 5	S(n)+24		859.287	(3/2)$^+$
5450.3 & 1	2.08 & 10	(6271.01)	1/2$^+$	820.7956	(3/2)$^-$
5452.1 c 3	38.0 c 21	S(n)+2		820.7956	(3/2)$^-$
5474.1 d 3	84 d 6	S(n)+24		820.7956	(3/2)$^-$
5477.7 & 1	0.0352 & 21	(6271.01)	1/2$^+$	793.3941	(1/2)$^-$
5479.3 c 3	30.1 c 7	S(n)+2		793.3941	(1/2)$^-$
5489.8 au	0.010 4	(6271.01)	1/2$^+$	781.0994	5/2$^+$
5492.1 c 4	3.8 c 5	S(n)+2		781.0994	5/2$^+$
5501.3 d 3	95 d 6	S(n)+24		793.3941	(1/2)$^-$
5504.9 & 1	0.183 & 9	(6271.01)	1/2$^+$	766.2075	(3/2)$^+$
5506.6 c 3	12.8 c 6	S(n)+2		766.2075	(3/2)$^+$
x5514.0 m					
5514.1 d 4	44 d 4	S(n)+24		781.0994	5/2$^+$
5528.6 d 3	86 d 6	S(n)+24		766.2075	(3/2)$^+$
5533.4 & 1	0.266 & 13	(6271.01)	1/2$^+$	737.6586	1/2$^+$
5535.2 c 3	13.5 c 9	S(n)+2		737.6586	1/2$^+$
5557.2 d 3	98 d 6	S(n)+24		737.6586	1/2$^+$
5583.6 d 5	19 d 3	S(n)+24		711.4718	5/2$^-$
x5606.3 j					
x5675.1 j					
5819.1 d 4	20.7 d 22	S(n)+24		475.3884	(5/2)$^-$
5849.1 & 1	0.95 & 5	(6271.01)	1/2$^+$	421.8440	(3/2)$^-$
5851.1 c 3	35.0 c 20	S(n)+2		421.8440	(3/2)$^-$
5867.5 d 5	22 d 3	S(n)+24		427.6801	(5/2)$^-$
5873.1 d 3	53 d 4	S(n)+24		421.8440	(3/2)$^-$
5881.2 & 1	0.95 & 5	(6271.01)	1/2$^+$	389.7532	3/2$^-$
5883.1 c 3	100 c 5	S(n)+2		389.7532	3/2$^-$
5905.1 d 3	100 d 5	S(n)+24		389.7532	3/2$^-$
5919.9 & 1	0.047 & 3	(6271.01)	1/2$^+$	351.1497	(1/2)$^-$
5921.7 c 3	44 c 3	S(n)+2		351.1497	(1/2)$^-$
5943.7 d 3	99 d 6	S(n)+24		351.1497	(1/2)$^-$
6020.0 au	<0.003	(6271.01)	1/2$^+$	250.8895	5/2$^+$
6021.9 c 3	1.8 c 6	S(n)+2		250.8895	5/2$^+$
6043.9 d 3	8.4 d 19	S(n)+24		250.8895	5/2$^+$
6294.8 d 4	13.8 d 17	S(n)+24		0.0	5/2$^-$

$^{163}_{66}Dy_{97}$-23

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43 (continued)

$\gamma(^{163}Dy)$ (continued)

† Secondary Eγ: from 1989Sc31 up to 1615 keV and from 1986Bo43 above this energy, unless otherwise stated. Uncertainties from 1989Sc31 are statistical. Systematic error of 10 ppm should be added. Primary Eγ for E=th: from 1986Bo43, unless otherwise stated. Primary Eγ for E(n)= 2 keV and 24 keV: deduced from S(n) and level energies from table 2 of 1989Sc31.

‡ Per 100 n-captures. Secondary γ: from 1989Sc31 up to 1615 keV and from 1986Bo43 above this energy, unless otherwise stated. Uncertainties from 1989Sc31 are statistical. Systematic error of 20% should be added. Primary γ for E=th: from 1967Sc05, unless otherwise stated. Primary γ from E=2 keV and 24 keV: from 1989Sc31 (see table 2). The values are reduced (by a factor of Eγ^5) intensities relative to 100, in each case, for the reduced intensity of primary γ to 389.7 level.

From 1989Sc31 based on authors′ ce data, unless otherwise stated. Only the dominant multipolarity indicated by ce data is given, small admixtures of the competing multipolarity cannot be discounted.

@ From 1986Bo43.

& From 1989Sc31. Uncertainty of 0.1 keV assigned (evaluators) to primary Eγ based on Δ(S(n))=0.09 (1989Sc31).

a Tentative γ from 1984Pr03.

b From 1967Sc05. Treated as uncertain (evaluators) since it is not confirmed by 1989Sc31 (as secondary γ) and 1986Bo43 (as primary γ).

c Energy of primary γ from E(n)= 2 keV data deduced from S(n) and E(level) given in table 2 of 1989Sc31. Intensity (from 1989Sc31) is the reduced (by Eγ^5) value relative to 100 for the reduced intensity of primary γ to 387.9 level.

d Energy of primary γ from E(n)= 24 keV data deduced from S(n) and E(level) given in table 2 of 1989Sc31. Intensity (from 1989Sc31) is the reduced (by Eγ^5) value relative to 100 for the reduced intensity of primary γ to 387.9 level.

e Deduced from S(n) and E(level) listed in column 2 of table 4 in 1989Sc31. This is a primary γ observed in E(n)=2 keV and/or E(n)=24 keV data as implied by 1989Sc31.

f Energy fit is within 2 to 3 σ of the quoted uncertainty. The deviation between Eγ and level-energy difference is < 0.05 keV.

g Energy fit is within 2 to 3 σ of the quoted uncertainty. The deviation between Eγ and level-energy difference is 0.06-0.3 keV.

h Poor energy fit. Placement is considered as uncertain since Eγ differs from level-energy difference by ≈ 3 keV.

i Observed (1986Bo43) in $\gamma\gamma$ where sum of two Eγ′s=S(n)−427.8.

j Observed (1986Bo43) in $\gamma\gamma$ where sum of two Eγ′s=S(n).

k Observed (1986Bo43) in $\gamma\gamma$ where sum of two Eγ′s=S(n)−389.7.

l Observed (1986Bo43) in $\gamma\gamma$ where sum of two Eγ′s=S(n)−474.7.

m Observed (1986Bo43) in $\gamma\gamma$ where sum of two Eγ′s=S(n)−73.44.

n Observed (1986Bo43) in $\gamma\gamma$ where sum of two Eγ′s=S(n)−250.88.

o Observed (1986Bo43) in $\gamma\gamma$ where sum of two Eγ′s=S(n)−351.1.

p Unplaced γ in 1989Sc31. Placement from 1986Bo43.

q Doublet, feeding 1056 and 1058 levels.

r Total intensity for unresolved 5217.6+5218.2.

s Intensity per 100 neutron captures.

t Multiply placed with undivided intensity.

u Placement of transition in the level scheme is uncertain.

x γ ray not placed in level scheme.

$^{163}_{66}Dy_{97}$-24

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43

Level Scheme

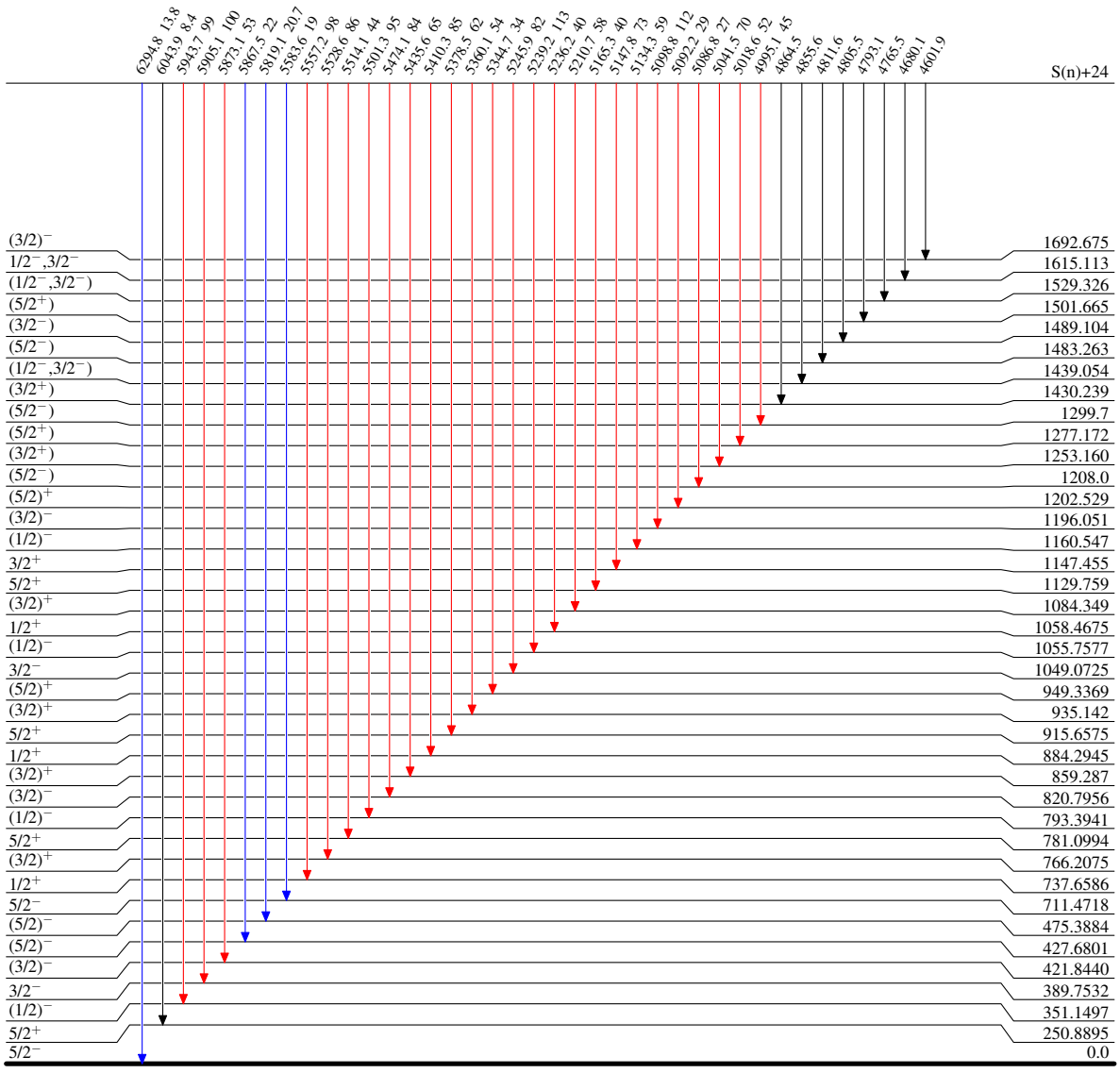
Intensities: Per 100 N-captures

Legend

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

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

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



$^{163}_{66}Dy_{97}$

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43

Level Scheme (continued)

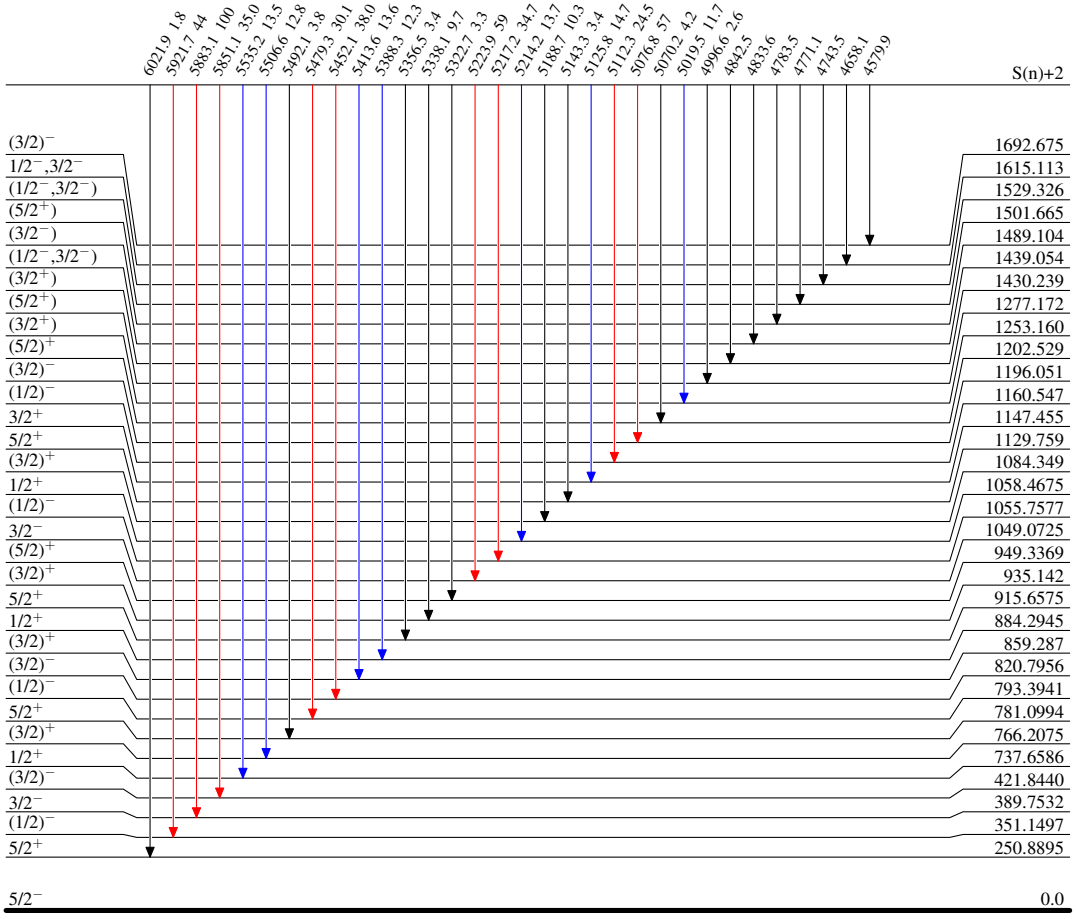
Intensities: Per 100 N-captures

Legend

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

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

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



$^{163}_{66}Dy_{97}$

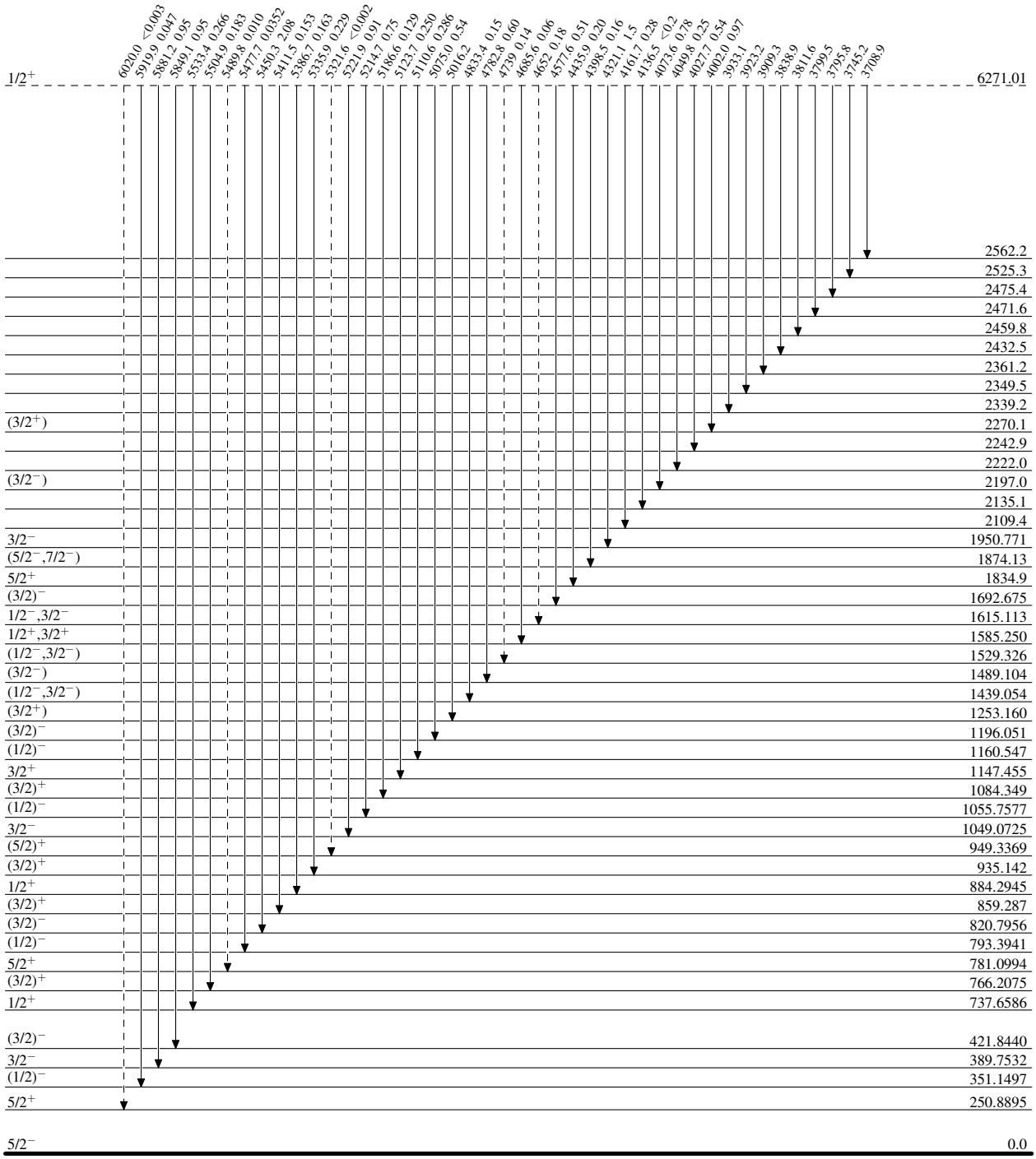
^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43

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)

Level Scheme (continued)

Intensities: Per 100 N-captures



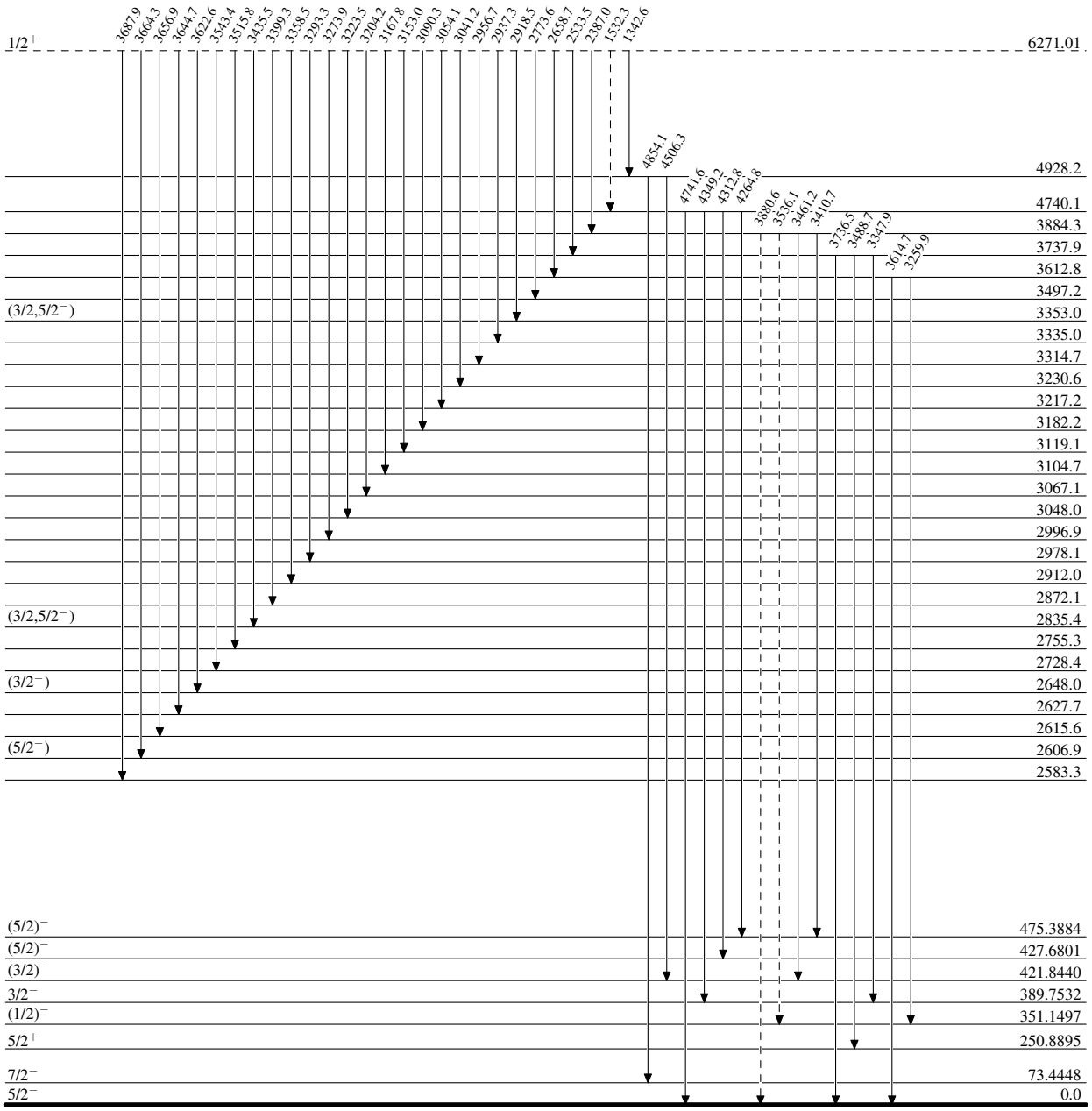
$^{163}_{66}Dy_{97}$

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43 Legend

Level Scheme (continued)

Intensities: Per 100 N-captures

γ Decay (Uncertain)



$^{163}_{66}Dy_{97}$

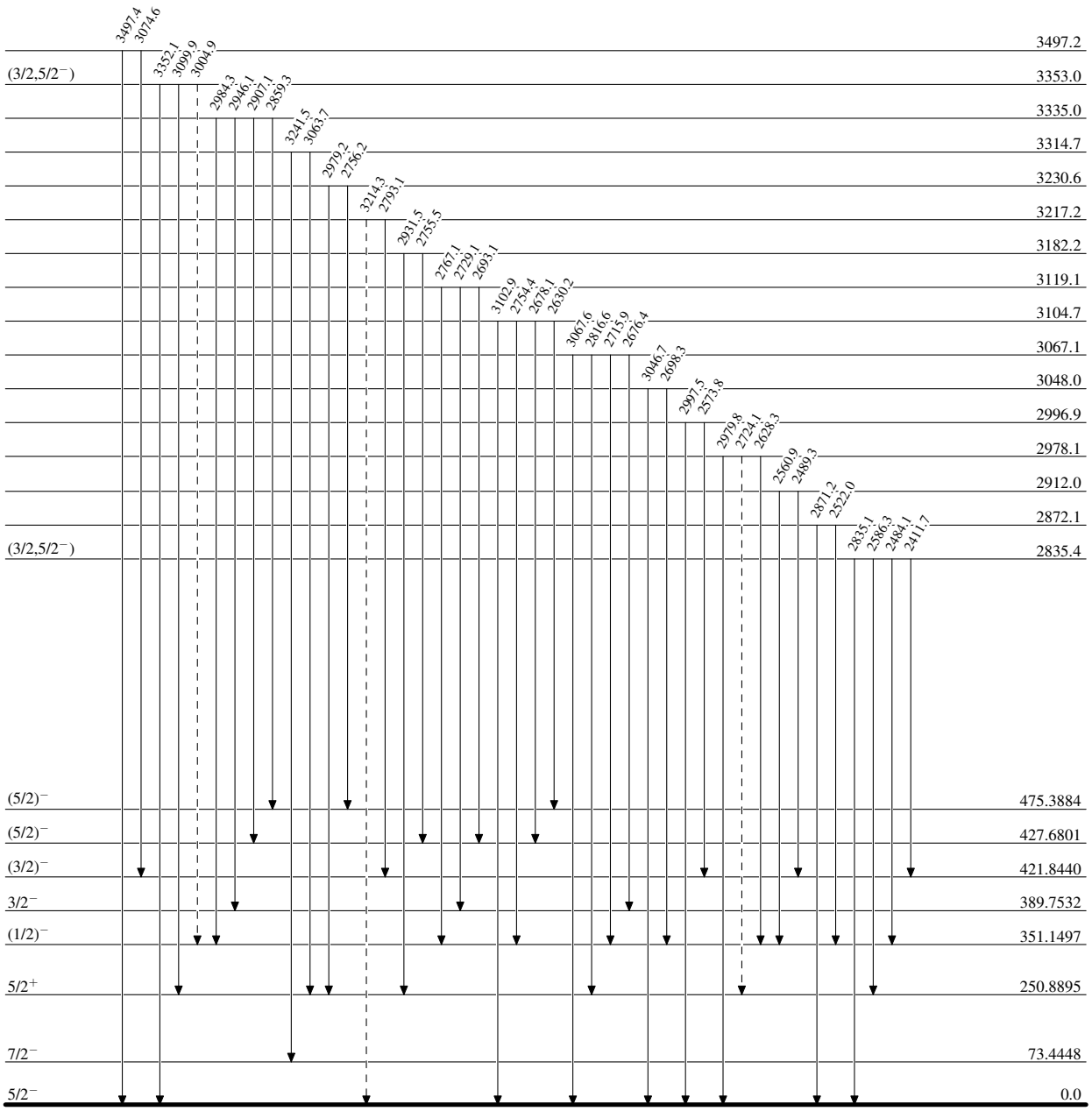
^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43

Legend

Level Scheme (continued)

Intensities: Per 100 N-captures

– – – – – – ► γ Decay (Uncertain)



$^{163}_{66}Dy_{97}$

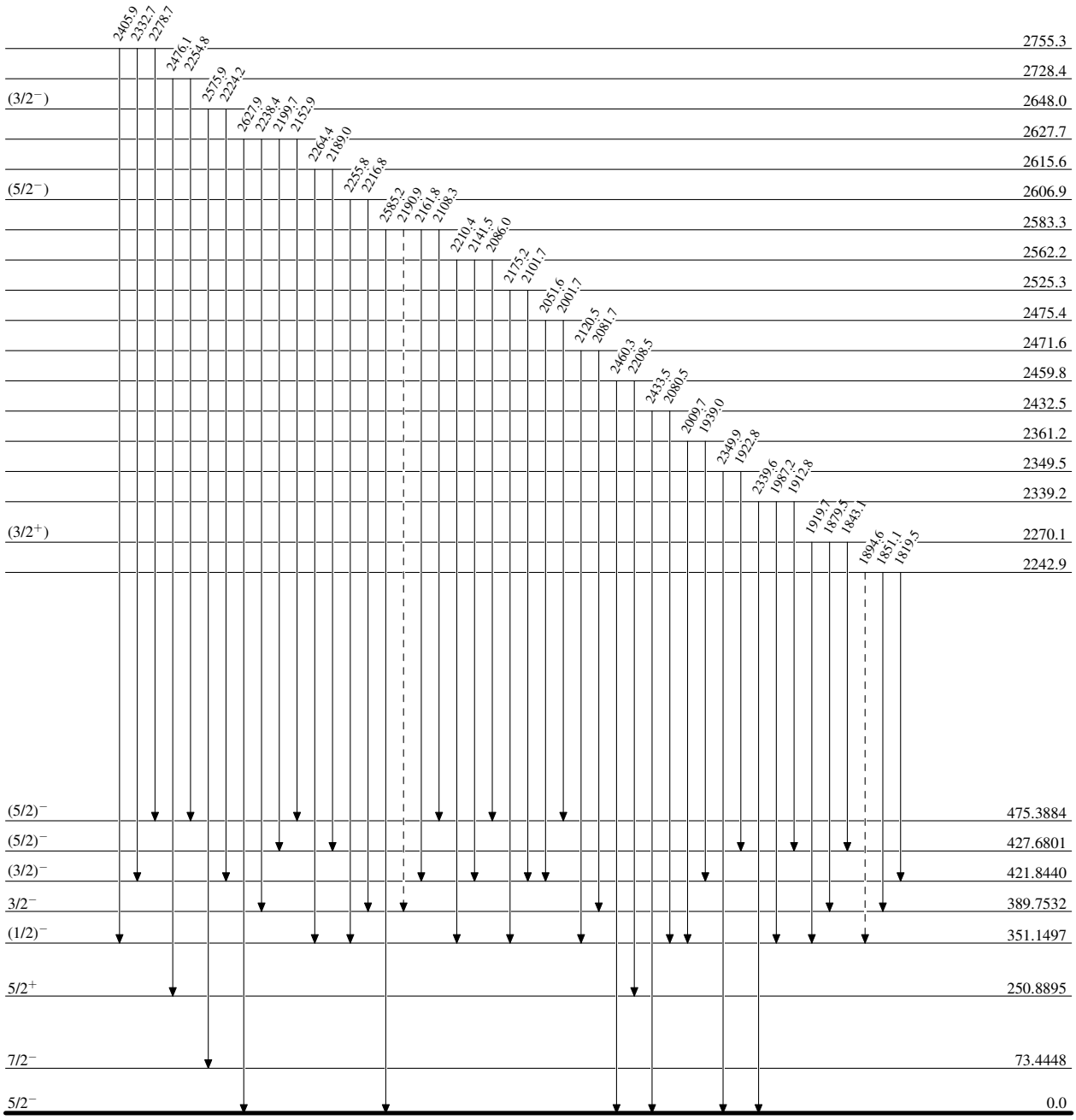
^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43

Legend

Level Scheme (continued)

Intensities: Per 100 N-captures

– – – – – – ► γ Decay (Uncertain)

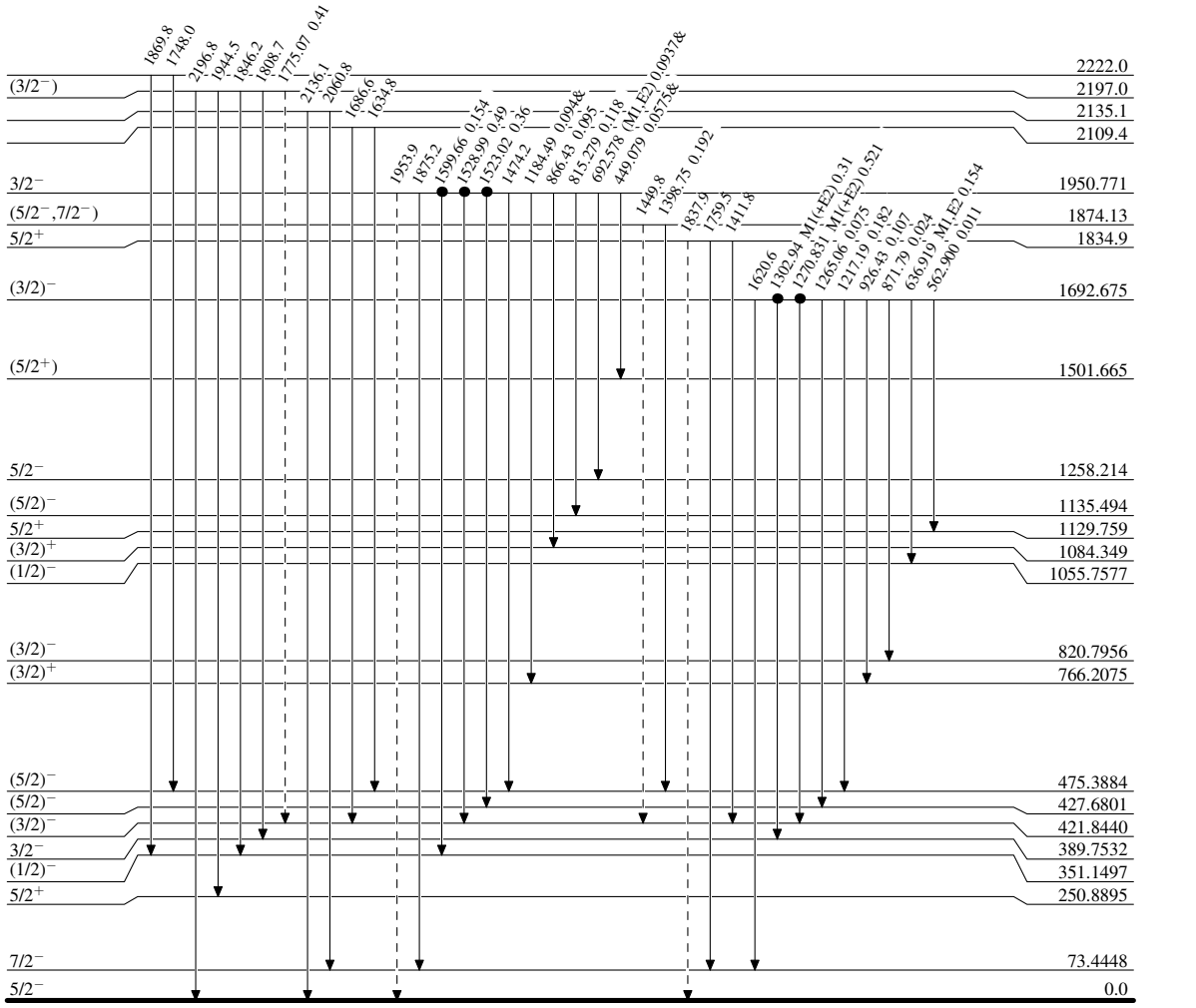


$^{163}_{66}Dy_{97}$

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43

Level Scheme (continued)

Intensities: Per 100 N-captures
& Multiply placed: undivided intensity given



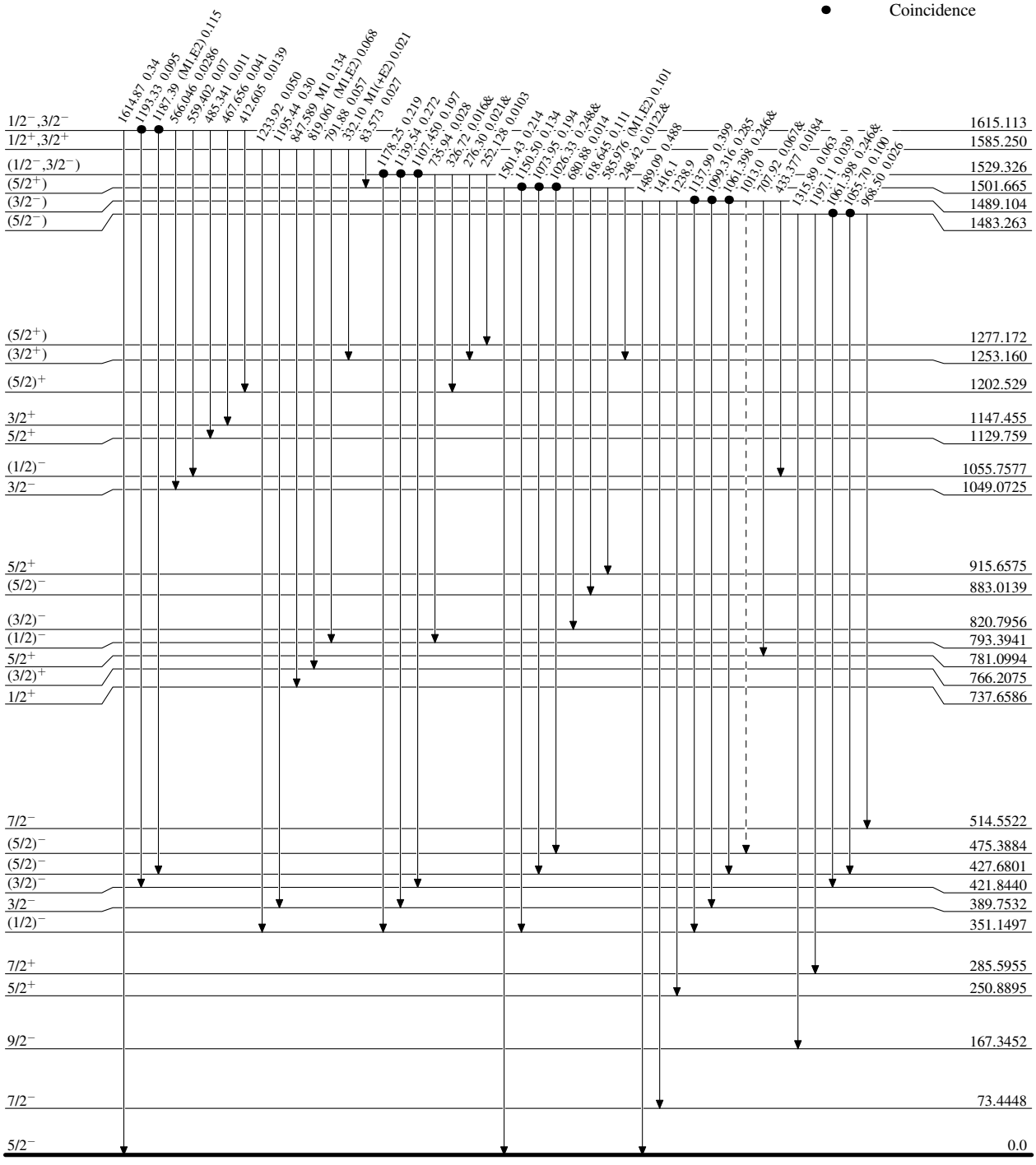
$^{163}_{66}Dy_{97}$

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43

Level Scheme (continued)

Intensities: Per 100 N-captures
& 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)
- Coincidence



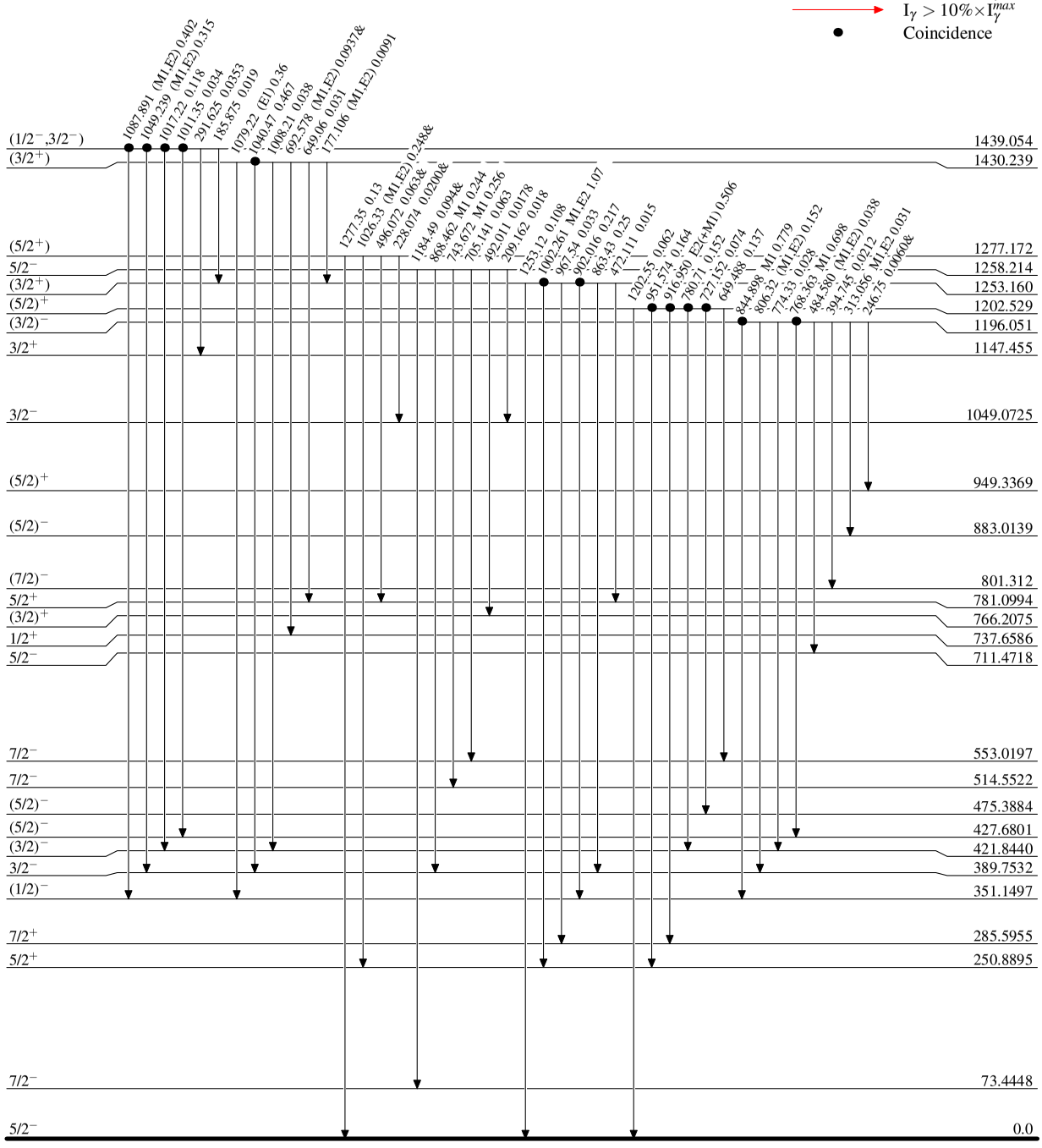
$^{163}_{66}Dy_{97}$

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43

Level Scheme (continued)

Intensities: Per 100 N-captures
& 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

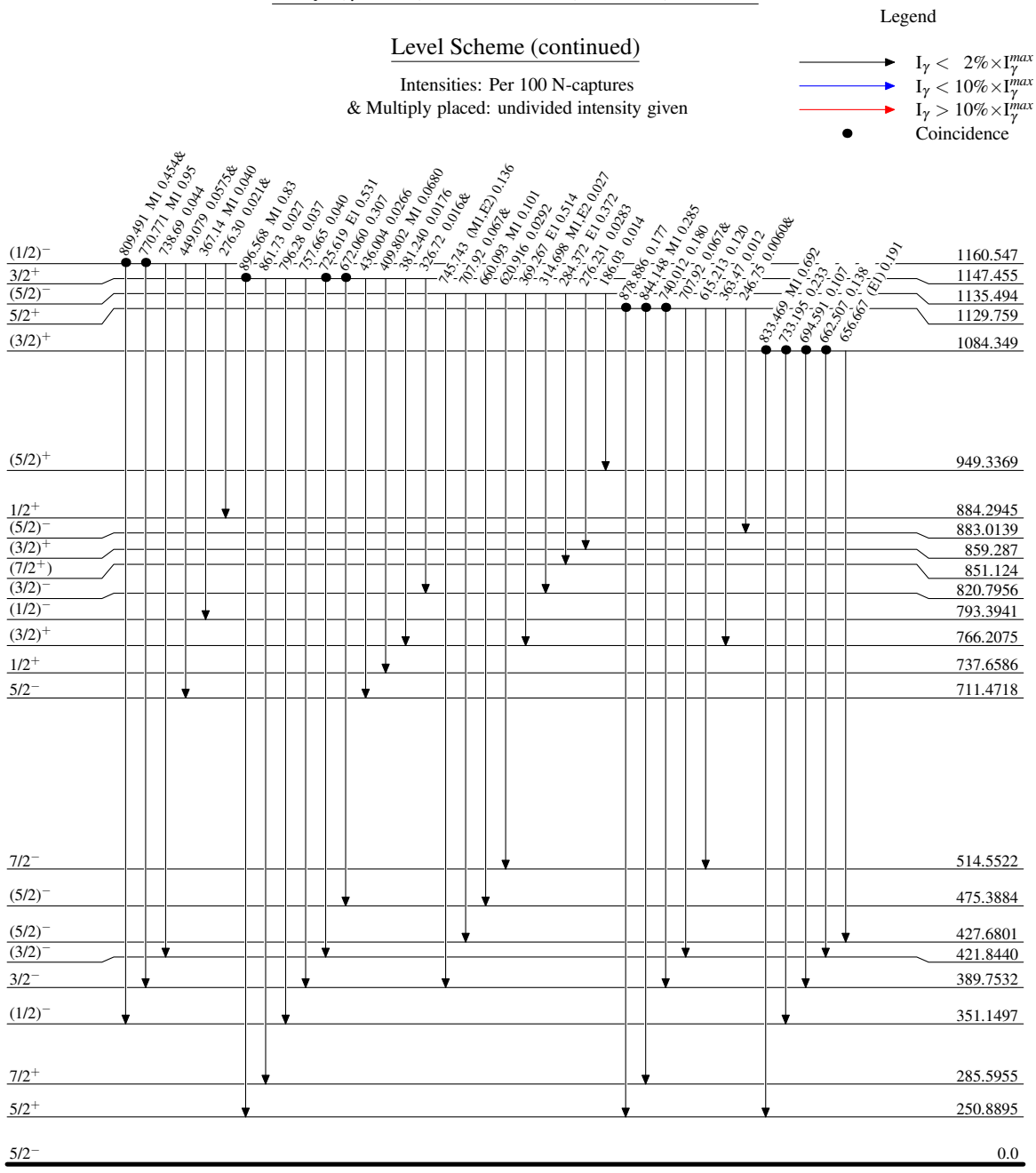


$^{163}_{66}Dy_{97}$

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43

Level Scheme (continued)

Intensities: Per 100 N-captures
& Multiply placed: undivided intensity given



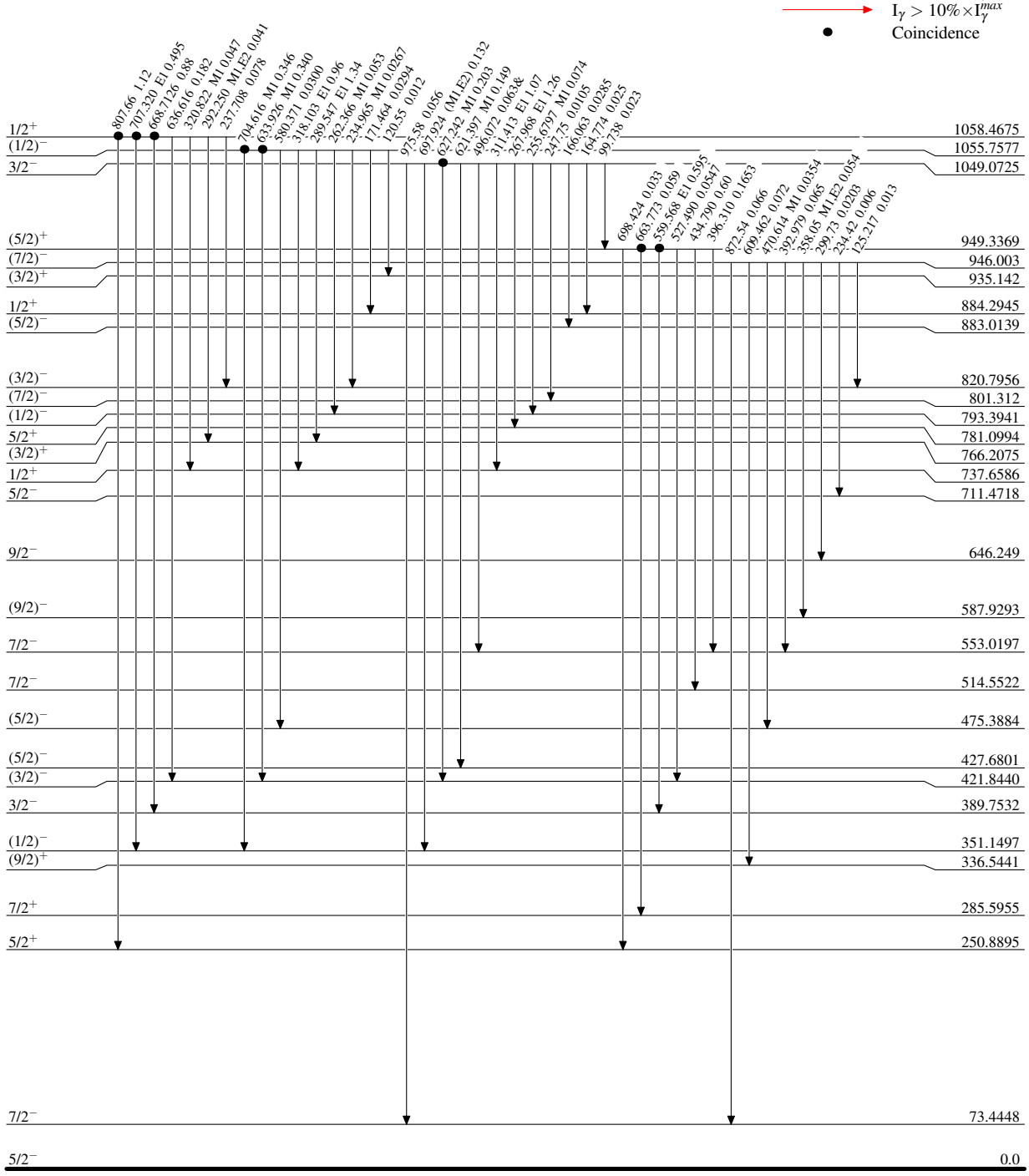
$^{163}_{66}Dy_{97}$

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43

Level Scheme (continued)

Intensities: Per 100 N-captures
& 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



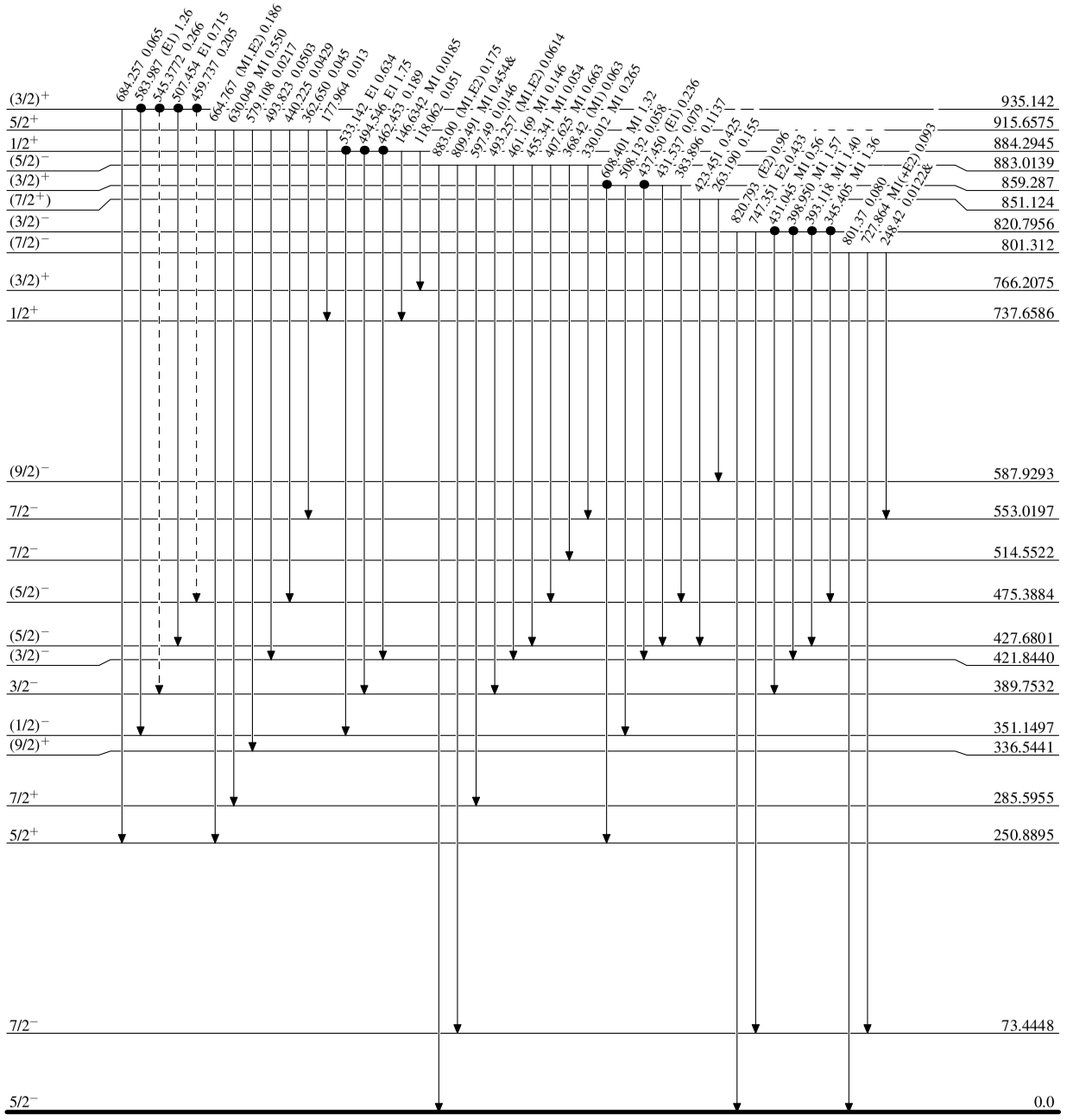
$^{163}_{66}Dy_{97}$

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43

Level Scheme (continued)

Intensities: Per 100 N-captures
& 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)
- Coincidence

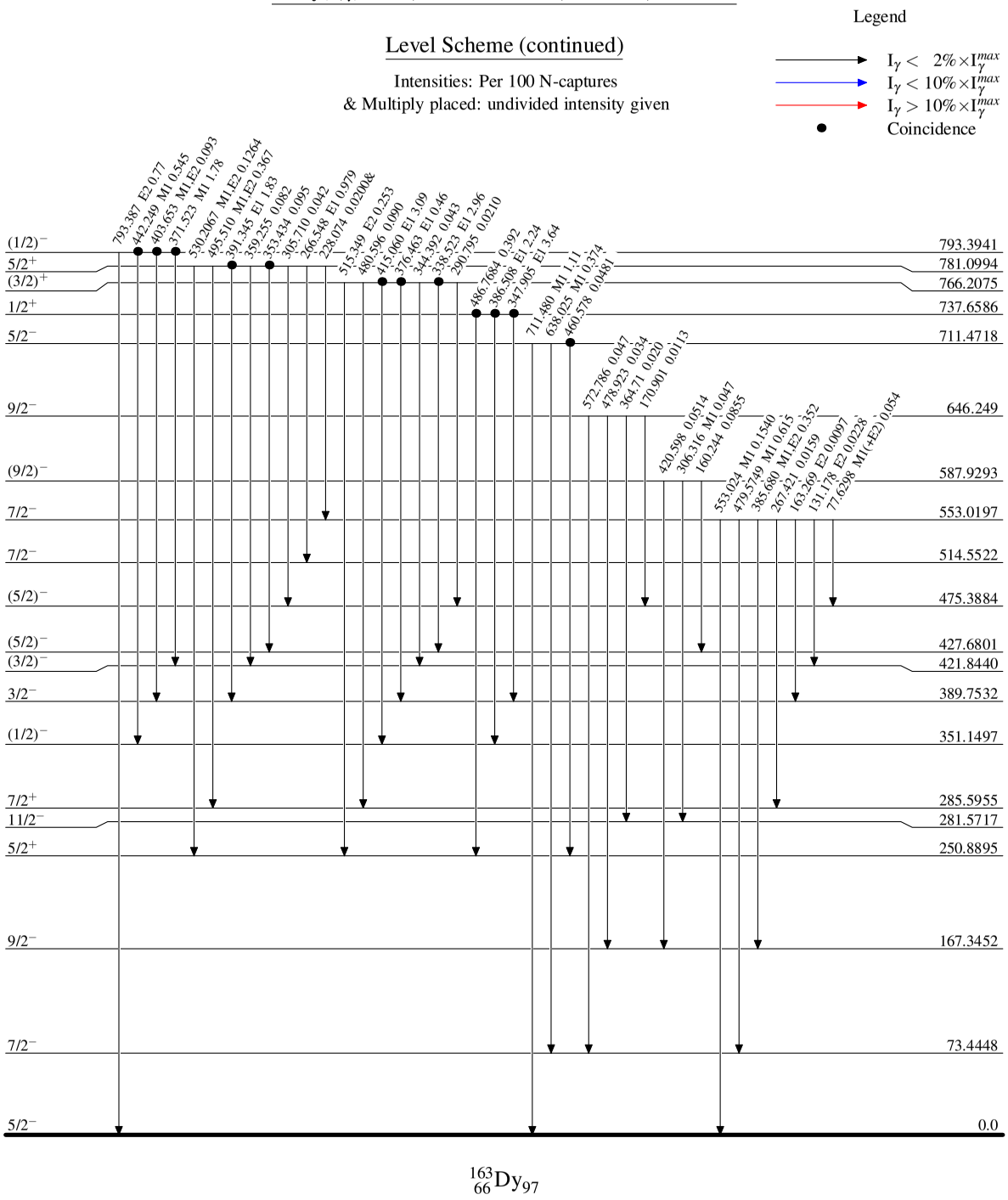


$^{163}_{66}Dy_{97}$

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43

Level Scheme (continued)

Intensities: Per 100 N-captures
& Multiply placed: undivided intensity given



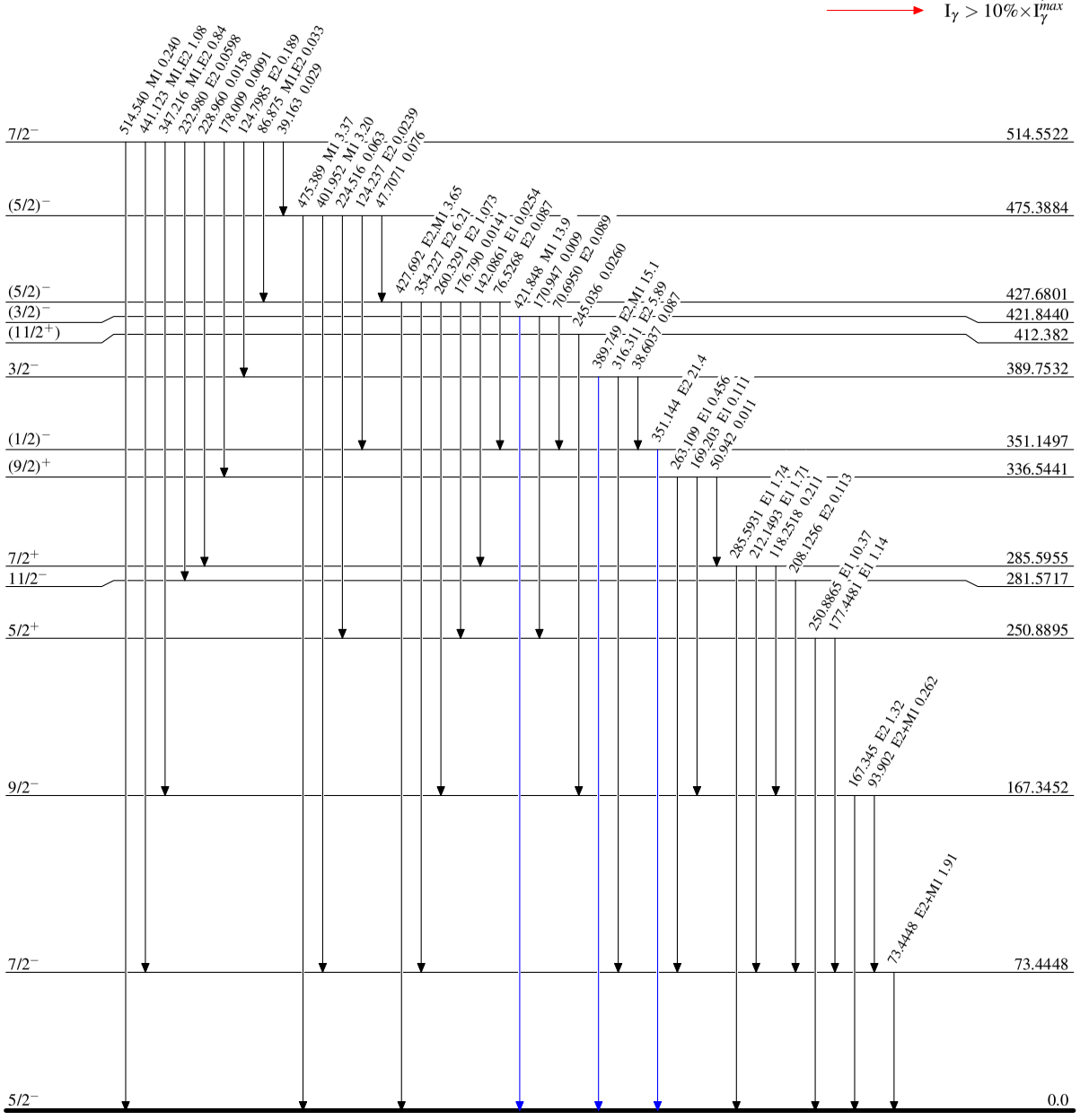
$^{163}_{66}Dy_{97}$

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43

Level Scheme (continued)

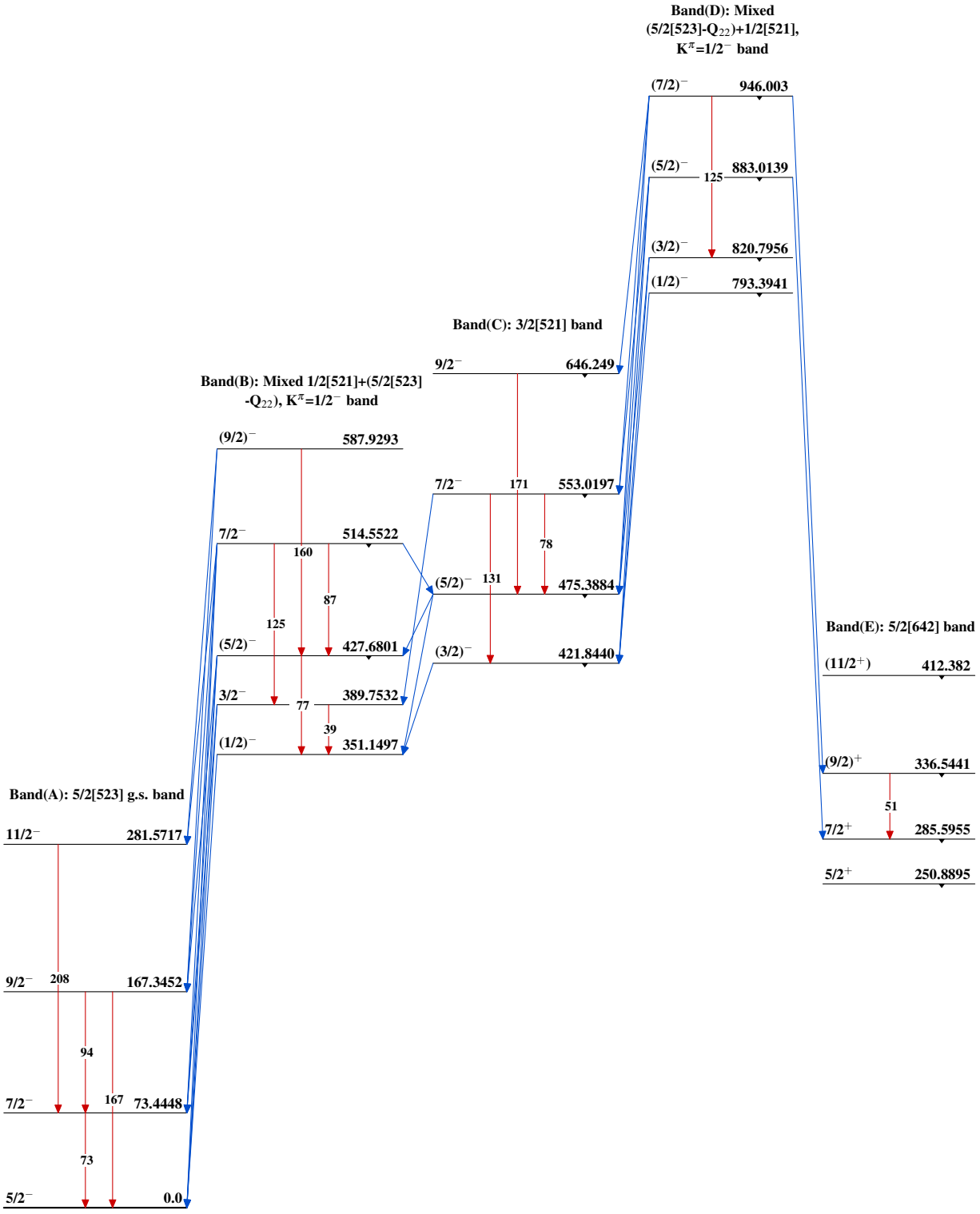
Intensities: Per 100 N-captures
& Multiply placed: undivided intensity given

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



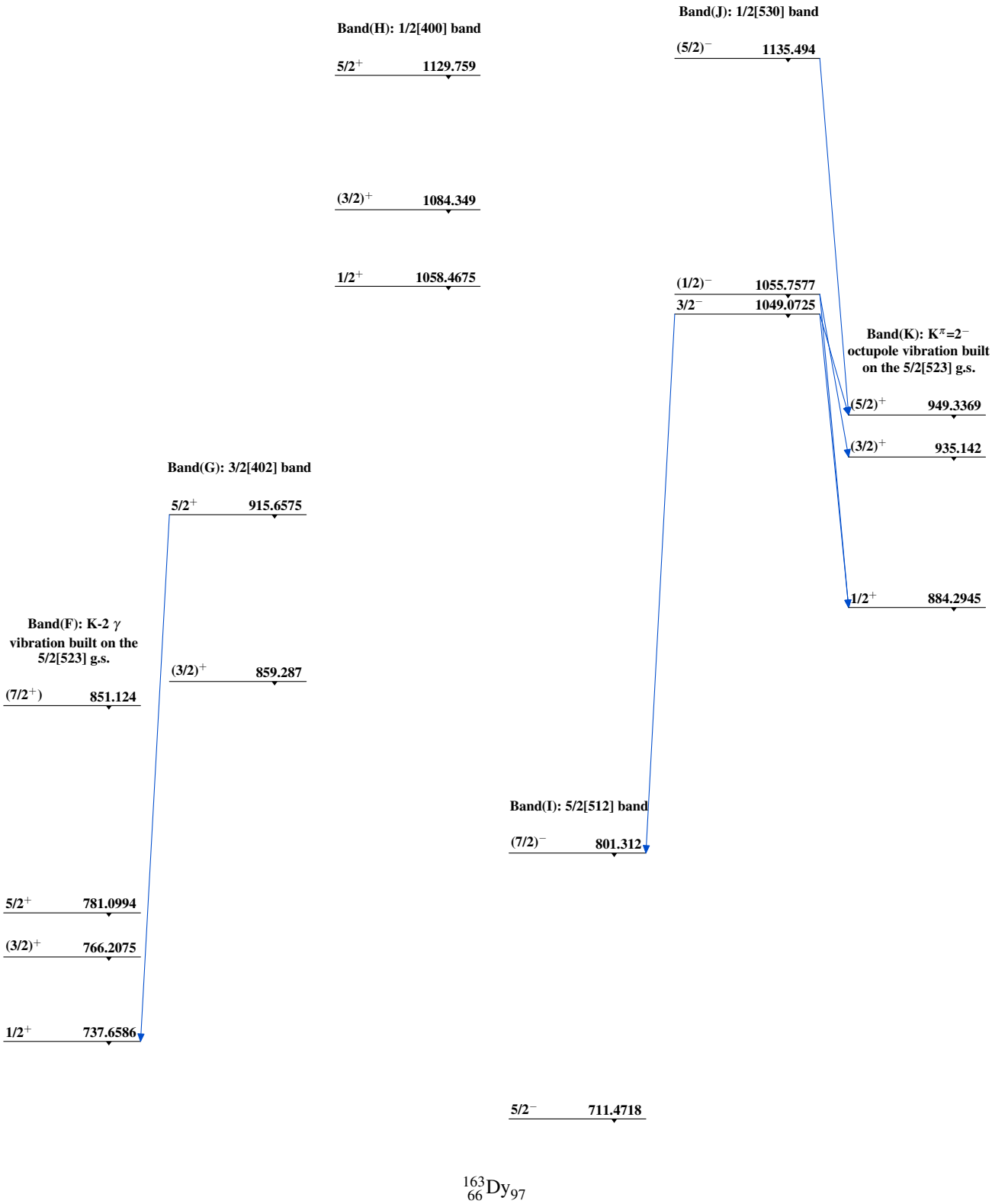
$^{163}_{66}Dy_{97}$

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43



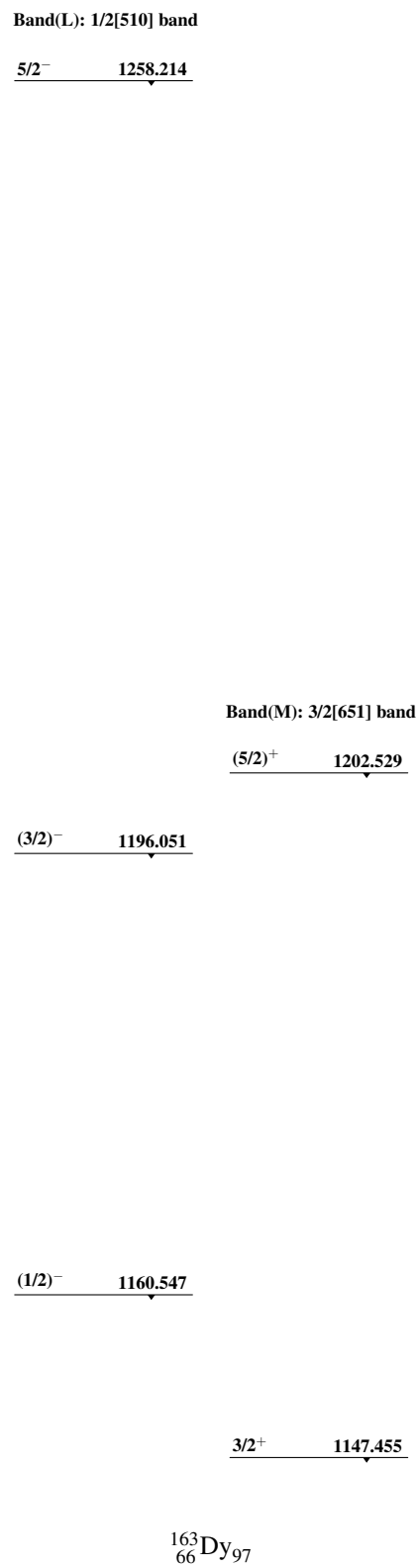
$^{163}_{66}Dy_{97}$

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43 (continued)



$^{163}_{66}Dy_{97}$

^{162}Dy(n,γ):E=th, res 1989Sc31,1967Sc05,1986Bo43 (continued)



$^{163}_{66}Dy_{97}$