^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	N. Nica	NDS 195,1 (2024)	19-Sep-2023

2006Ap01 compiled for XUNDL database by J. Roediger and B. Singh (McMaster).

2017Ap01 compiled for XUNDL database by J. Chen (NSCL/MSU).

2017Ap01: neutrons produced from high flux reactor at ILL Grenoble on 95% enriched Dy_2O_3 target. Measured Eγ and broadening of decay γ-ray lines with double-flat-crystal spectrometer GAMS4. Deduced lifetimes for 12 levels using Gamma-Ray-Induced-Doppler (GRID) broadening technique which produced rather large $T_{1/2}$ intervals listed in comments. Deduced transition strengths.

2006Ap01: E(n)=thermal. Measured Eγ, Iγ, $\gamma\gamma$, ce using the curved-crystal spectrometers GAMS 1, 2 and 3 for γ rays and the iron-free β-ray spectrometer BILL.

1995Be02: E(n)=thermal. Measured Eγ, Iγ, $\gamma\gamma$ using Ge detectors. Authors also quote some unpublished data from curved-crystal spectrometers.

1967Ba34: E(n)=thermal. Measured primary γ's with Ge detector, secondary γ's with curved-crystal spectrometer, and ce with magnetic spectrometer.

Data for the levels below 2 MeV are primarily from 2006Ap01, whose study does not extend above this energy. Above 2 MeV, the data are primarily from 1995Be02.

1995Be02 report levels at the following energies that are not confirmed by 2006Ap01: 1530.137; 1637.09; 1666.03; 1755.094; 1783.190; 1833.484; 1863.722; 1887.332; 1895.207; 1904.042; 1913.327; 1972.91; and 1982.107. These are not included in this data set. The existence of these levels has been established in other experiments; however it is not clear whether or not they were populated and observed in the ^{162}Dy(n,γ) E=th reaction.

^{162}Dy Levels

E(level)[†]	J$^\pi$[‡]	$T_{1/2}$	Comments
0.0[#]	0^+		
80.661[#] *3*	2^+		
265.663[#] *3*	4^+		
548.520[#] *3*	6^+		
888.161[@] *3*	2^+		$T_{1/2}$: 0.74 ps<$T_{1/2}$<3.24 ps (2017Ap01).
962.940[@] *3*	3^+		$T_{1/2}$: 0.25 ps<$T_{1/2}$<2.83 ps (2017Ap01).
1060.991[@] *3*	4^+		$T_{1/2}$: 0.491 ps<$T_{1/2}$<2.20 ps (2017Ap01).
1148.232[&] *3*	2^-		
1182.762[@] *3*	5^+		
1210.089[&] *3*	3^-		
1275.774[a] *4*	1^-	<0.15 ps	$T_{1/2}$: from 2017Ap01.
1297.006[&] *3*	4^-		
1324.465[@] *3*	6^+		
1357.930[a] *3*	3^-	<0.15 ps	$T_{1/2}$: from 2017Ap01.
1390.514[&] *3*	5^-		
1400.27[b] *6*	0^+		
1453.469[b] *5*	2^+		
1485.671[c] *3*	5^-	<2.02 ps	$T_{1/2}$: from 2017Ap01.
1518.426[a] *4*	5^-	<0.13 ps	$T_{1/2}$: from 2017Ap01.
1535.664[d] *3*	4^+		$T_{1/2}$: 0.10 ps<$T_{1/2}$<3.6 ps (2017Ap01).
1570.914[e] *3*	3^-		
1574.294[b] *4*	4^+		$T_{1/2}$: 0.75 ps<$T_{1/2}$<2.1 ps (2017Ap01).
1575.613[c] *4*	6^-		
1634.414[d] *3*	5^+		

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^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

^{162}Dy Levels (continued)

E(level)[†]	J$^\pi$[‡]	Comments
1637.197[f] 4	1$^-$	
1669.087[e] 3	4$^-$	
1691.341[f] 4	2$^-$	
1728.319[g] 4	2$^+$	T$_{1/2}$: 0.17 ps<T$_{1/2}$<0.7 ps (2017Ap01).
1739.000[f] 4	3$^-$	
1745.716[h] 7	1$^+$	
1751.880[d] 3	6$^+$	
1766.608[i] 3	3$^-$	
1826.747[i] 4	4$^-$	
1840.486[h] 4	3$^+$	
1851.812[f] 4	4$^-$	
1862.677[j] 3	4$^-$	T$_{1/2}$: 1.10 ps<T$_{1/2}$<1.98 ps (2017Ap01).
1886[g] 5	4$^+$	Level observed via primary γ (1967Ba34) but with contradictory deexcitation pattern. 1995Be02 found secondary deexciting γ's, which were not confirmed by 2006Ap01. This level was also observed in (n,n$'\gamma$), however its γ branching is quite different from that reported by 1995Be02. The evaluator decided not to list deexciting γ's for this level. The adopted γ branching is from 2002Go15, in (n,n$'\gamma$).
1910.430[k] 6	3$^-$	T$_{1/2}$: 0.17 ps<T$_{1/2}$<0.21 ps (2017Ap01).
1951.391 5	3$^+$,4$^+$	From resonance-averaged n capture, there may be more than one level at this energy. J$^\pi$: assigned as the 4$^+$ member of the K^π=1$^+$ band by 2006Ap01. However, 1995Be02 place that 4$^+$ state at 1904.13 keV. This latter assignment is not adopted by the evaluator. Note that, with the 4$^+$ level at 1951 keV, the implied band parameters seem unreasonable.
1963.598[f] 3	5$^-$	
1999.35 13	2$^+$	2006Ap01 reported a 1999.085 level with J^π=(3$^+$,4$^+$) but with a somewhat different γ branching. These authors, however, show it with a question mark. The evaluator has adopted the data from 1995Be02 for this level.
2009.802 5		J$^\pi$: assigned by 1995Be02 as the 5$^+$ member of the K^π=1$^+$ band at 1745 keV. However, this assignment is not adopted. See the comment in the Adopted Levels data set.
2053.541[k] 13	5$^-$	J$^\pi$: 1995Be02 show this value in parentheses.
2071.95 9	(4)	J$^\pi$: from 1995Be02.
2078.923 13	(2,3)	
2104.78 7	(2$^+$)	
2120.717 4	(4$^-$)	J$^\pi$: 1995Be02 report J=(3,4).
2125.228[l] 8	0$^+$	
2128.094 4	(2$^+$)	
2148.675 4	(2)	
2189.71[l] 18	(2$^+$)	
2238 3		
2276 5		
2297 5		
2315 4		
2340 6		
2350 5		
2371 5		
2410 5		
2437 5		
2457 5		
2490 5		
2516 6		
2563 6		
2583 4		
2639 6		

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^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

^{162}Dy Levels (continued)

E(level)[†]	J$^{\pi}$[‡]	Comments
2648 *5*		
2664 *5*		
2685 *5*		
2724 *6*		
2743 *5*		
2766 *5*		
2773 *6*		
2796 *5*		
2822 *4*		
2846 *5*		
2950 *5*		
2997 *5*		
3019 *5*		
3030 *5*		
3241 *5*		
8192.8 *30*	$2^+,3^+$	Thermal-neutron-capture state. E(level): S(n) as measured by 1967Ba34, which differs from S(n)=8196.99 *6* given in the mass evaluation of 2021Wa16. This latter value, together with the primary γ energies of 1967Ba34, leads to final-state level energies that differ systematically (although within the quoted uncertainties) from those known from other studies, indicating possible energy calibration problems of 1967Ba34. This dataset needs a new measurement. J$^{\pi}$: from s-wave n capture into the ^{161}Dy g.s. ($J^{\pi}=5/2^+$).

† From a least-squares fit to the listed Eγ values.
‡ From the adopted values.
# Band(A): $K^{\pi}=0^+$, g.s. band.
@ Band(B): $K^{\pi}=2^+$, γ band.
& Band(C): $K^{\pi}=2^-$ octupole-vibrational band.
a Band(D): $K^{\pi}=0^-$ octupole-vibrational band.
b Band(E): first excited $K^{\pi}=0^+$ band. S, or 'Super'band.
c Band(F): $K^{\pi}=5^-$ band.
d Band(G): $K^{\pi}=4^+$ band.
e Band(H): $K^{\pi}=3^-$ octupole-vibrational band.
f Band(I): $K^{\pi}=1^-$ octupole-vibrational band.
g Band(J): member of the second excited $K^{\pi}=0^+$ band.
h Band(K): $K^{\pi}=1^+$ band.
i Band(L): second excited $K^{\pi}=3^-$ band.
j Band(M): $K^{\pi}=4^-$ bandhead.
k Band(N): $K^{\pi}=2^-$ band member.
l Band(O): $K^{\pi}=0^+$ band.

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

$\gamma(^{162}Dy)$

Iγ normalization: From requiring that the sum of the I(γ+ce) values of the γ transitions feeding the g.s. be 100%. The resulting absolute Iγ values for the secondary γ's agree reasonably well with those reported by 1967Ba34, which were measured relative to ones previously determined for another Dy isotope.
Unplaced γ's are those listed by 2006Ap01 for which ce lines were observed.

E_γ [†]	I_γ [ad]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [b]	δ [bc]	α [e]	Comments
[x]41.043 *4*	0.040 *20*					M1		5.11	α(L)=4.00 *6*; α(M)=0.878 *13*; α(N+..)=0.234 *4* α(N)=0.203 *3*; α(O)=0.0296 *5*; α(P)=0.001684 *24* α(K)exp=2.9 *16* (2006Ap01) is wrong: there is no K ce at this energy, which is smaller than the K-shell binding energy.
74.783[h] *15*	0.070	962.940	3$^+$	888.161	2$^+$	[M1,E2]		6.9 *14*	E_γ: value from 1967Ba34. 1995Be02 and 2006Ap01 do not list this γ in their data. The evaluator has not included it in the Adopted Gammas.
[x]76.5198 *15*	0.135 *15*					E2		7.54	α(K)exp=5.4 *6* α(K)=2.01 *3*; α(L)=4.25 *6*; α(M)=1.022 *15*; α(N+..)=0.256 *4* α(N)=0.229 *4*; α(O)=0.0272 *4*; α(P)=8.60×10^{-5} *12*
[x]76.865 *4*	0.032 *12*								α(M1)exp=3 *1*
[x]77.288 *4*	0.053 *15*					E2		7.25	α(M1)exp=0.7 *2* α(K)=1.97 *3*; α(L)=4.06 *6*; α(M)=0.975 *14*; α(N+..)=0.244 *4* α(N)=0.218 *3*; α(O)=0.0259 *4*; α(P)=8.42×10^{-5} *12*
[x]80.6588 *7*	171 *8*					E2		6.14	α(K)exp=1.2 *1* α(K)=1.82 *3*; α(L)=3.32 *5*; α(M)=0.797 *12*; α(N+..)=0.200 *3* α(N)=0.1784 *25*; α(O)=0.0212 *3*; α(P)=7.66×10^{-5} *11*
80.659 *7*	171 *8*	80.661	2$^+$	0.0	0$^+$	E2		6.14	α(K)=1.82 *3*; α(L)=3.32 *5*; α(M)=0.797 *12*; α(N+..)=0.200 *3* α(N)=0.1784 *25*; α(O)=0.0212 *3*; α(P)=7.66×10^{-5} *11*
[x]84.801 *6*	0.062 *21*					E2		5.06	α(M2)exp=0.3 *1* α(K)=1.645 *23*; α(L)=2.62 *4*; α(M)=0.630 *9*; α(N+..)=0.1580 *23* α(N)=0.1411 *20*; α(O)=0.01683 *24*; α(P)=6.85×10^{-5} *10*
86.918 *1*	0.33 *2*	1297.006	4$^-$	1210.089	3$^-$	[M1,E2]		4.1 *6*	α(K)=2.3 *8*; α(L)=1.4 *10*; α(M)=0.33 *24*; α(N+..)=0.08 *6* α(N)=0.07 *6*; α(O)=0.009 *6*; α(P)=0.00013 *7*
[x]86.9184 *9*	0.334 *17*					M1		3.58	α(K)exp=5.2 *3* α(K)=3.01 *5*; α(L)=0.445 *7*; α(M)=0.0977 *14*; α(N+..)=0.0261 *4* α(N)=0.0226 *4*; α(O)=0.00330 *5*; α(P)=0.000188 *3*
[x]89.9420 *8*	1.35 *4*					M1		3.25	α(K)exp=3.4 *1* α(K)=2.73 *4*; α(L)=0.403 *6*; α(M)=0.0885 *13*; α(N+..)=0.0236 *4* α(N)=0.0205 *3*; α(O)=0.00299 *5*; α(P)=0.0001705 *24*
89.942 *1*	1.34 *4*	1575.613	6$^-$	1485.671	5$^-$	M1+E2	0.53 *3*	3.42	α(K)exp=3.4 *1* α(K)=2.45 *5*; α(L)=0.75 *4*; α(M)=0.174 *8*; α(N+..)=0.0448 *20* α(N)=0.0395 *18*; α(O)=0.00515 *21*; α(P)=0.000146 *3*
[x]92.793 *6*	0.052 *16*								α(M2)exp=4 *1*

γ(^{162}Dy) (continued)

E_γ †	I_γ ad	E_i(level)	J_i^π	E_f	J_f^π	Mult. b	δ bc	α e	Comments
x93.8972 *13*	0.226 *13*					E2(+M1)		3.2 *3*	α(K)exp=1.56 *11* α(K)=1.9 *6*; α(L)=1.0 *7*; α(M)=0.23 *16*; α(N+..)=0.06 *4* α(N)=0.05 *4*; α(O)=0.007 *4*; α(P)=0.00010 *5*
x94.679 *4*	0.44 *15*					E2		3.33	α(K)exp=0.69 *24* α(K)=1.283 *18*; α(L)=1.572 *22*; α(M)=0.377 *6*; α(N+..)=0.0947 *14* α(N)=0.0845 *12*; α(O)=0.01013 *15*; α(P)=5.30×10^{-5} *8*
95.158 *1*	0.45 *2*	1485.671	5$^-$	1390.514	5$^-$	[M1,E2]		3.0 *3*	α(K)=1.8 *6*; α(L)=0.9 *6*; α(M)=0.22 *15*; α(N+..)=0.06 *4* α(N)=0.05 *4*; α(O)=0.006 *4*; α(P)=0.00010 *5*
98.054 *3*	0.09 *1*	1060.991	4$^+$	962.940	3$^+$	M1		2.53	α(K)=2.13 *3*; α(L)=0.314 *5*; α(M)=0.0689 *10*; α(N+..)=0.0184 *3* α(N)=0.01595 *23*; α(O)=0.00233 *4*; α(P)=0.0001330 *19*
98.175 *6*	0.03 *1*	1669.087	4$^-$	1570.914	3$^-$	[M1,E2]		2.71 *20*	α(K)=1.6 *5*; α(L)=0.8 *5*; α(M)=0.19 *13*; α(N+..)=0.05 *3* α(N)=0.04 *3*; α(O)=0.005 *4*; α(P)=9.E−5 *5*
98.753 *1*	1.9 *1*	1634.414	5$^+$	1535.664	4$^+$	M1+E2	0.50 *4*	2.55	α(K)=1.90 *4*; α(L)=0.50 *3*; α(M)=0.116 *7*; α(N+..)=0.0300 *16* α(N)=0.0264 *15*; α(O)=0.00350 *17*; α(P)=0.000114 *3*
x108.1621 *9*	2.20 *6*								α(K)exp=2.46 *7*
114.245 *5*	4.7 *3*	1297.006	4$^-$	1182.762	5$^+$	E1		0.216	α(K)exp=0.190 *11* α(K)=0.181 *3*; α(L)=0.0276 *4*; α(M)=0.00605 *9*; α(N+..)=0.001572 *22* α(N)=0.001375 *20*; α(O)=0.000189 *3*; α(P)=8.51×10^{-6} *12*
x115.800 *10*	0.039 *10*								α(M2)exp=0.9 *2*
x116.767 *5*	0.39 *5*					E2		1.535	α(K)exp=0.73 *8* α(K)=0.750 *11*; α(L)=0.605 *9*; α(M)=0.1443 *21*; α(N+..)=0.0364 *5* α(N)=0.0324 *5*; α(O)=0.00393 *6*; α(P)=3.17×10^{-5} *5*
117.467 *1*	0.93 *4*	1751.880	6$^+$	1634.414	5$^+$	E2(+M1)	>2.3	1.503	α(K)exp=0.79 *3* α(K)=0.78 *5*; α(L)=0.56 *4*; α(M)=0.133 *9*; α(N+..)=0.0335 *20* α(N)=0.0298 *18*; α(O)=0.00363 *20*; α(P)=3.5×10^{-5} *4*
x118.2417 *21*	0.22 *6*					E2		1.467	α(L2)exp=0.20 *6* α(K)=0.724 *11*; α(L)=0.571 *8*; α(M)=0.1363 *19*; α(N+..)=0.0344 *5* α(N)=0.0306 *5*; α(O)=0.00372 *6*; α(P)=3.07×10^{-5} *5*
120.06‡	0.76‡	2120.717	(4$^-$)	1999.35	2$^+$				
x120.063 *8*	0.047 *11*					E2		1.388	α(L3)exp=0.4 *1* α(K)=0.695 *10*; α(L)=0.534 *8*; α(M)=0.1273 *18*; α(N+..)=0.0321 *5* α(N)=0.0286 *4*; α(O)=0.00347 *5*; α(P)=2.95×10^{-5} *5*
120.819 *6*	0.05 *1*	1574.294	4$^+$	1453.469	2$^+$	[E2]		1.357	α(K)=0.683 *10*; α(L)=0.519 *8*; α(M)=0.1237 *18*; α(N+..)=0.0312 *5* α(N)=0.0278 *4*; α(O)=0.00338 *5*; α(P)=2.90×10^{-5} *4*
121.774 *2*	0.14 *1*	1182.762	5$^+$	1060.991	4$^+$	E2(+M1)	>1.7	1.325 *20*	α(K)=0.73 *7*; α(L)=0.46 *5*; α(M)=0.109 *11*; α(N+..)=0.028 *3* α(N)=0.0245 *24*; α(O)=0.0030 *3*; α(P)=3.4×10^{-5} *6*
x122.435 *11*	0.042 *10*								α(L3)exp=0.7 *2*
x124.7931 *17*	0.239 *16*								α(L2)exp=0.12 *2*
x133.686 *3*	0.144 *17*					M1(+E2)		1.00 *6*	α(L1)exp=0.08 *2*

$^{162}_{66}Dy_{96}$-5

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

$\gamma(^{162}Dy)$ (continued)

E_γ [†]	I_γ [ad]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [b]	δ [bc]	α [e]	Comments
									α(K)=0.70 *19*; α(L)=0.23 *11*; α(M)=0.05 *3*; α(N+..)=0.014 *7* α(N)=0.012 *6*; α(O)=0.0016 *6*; α(P)=3.9×10^{-5} *17*
[x]135.7158 *24*	0.118 *13*					E1		0.1364	α(K)exp=0.16 *7* α(K)=0.1145 *16*; α(L)=0.01712 *24*; α(M)=0.00375 *6*; α(N+..)=0.000978 *14* α(N)=0.000854 *12*; α(O)=0.0001183 *17*; α(P)=5.51×10^{-6} *8*
[x]139.1022 *17*	0.85 *12*								α(K)exp=2.3 *3*
[x]142.080 *11*	0.045 *15*								α(K)exp=1.8 *6*
[x]148.297 *4*	0.440 *24*					M1(+E2)		0.72 *7*	α(K)exp=0.58 *4* α(K)=0.52 *14*; α(L)=0.15 *6*; α(M)=0.036 *15*; α(N+..)=0.009 *4* α(N)=0.008 *4*; α(O)=0.0011 *4*; α(P)=2.9×10^{-5} *12*
149.100 *2*	3.4 *1*	1210.089	3$^-$	1060.991	4$^+$	E1		0.1059	α(K)exp=0.076 *3* α(K)=0.0891 *13*; α(L)=0.01321 *19*; α(M)=0.00289 *4*; α(N+..)=0.000756 *11* α(N)=0.000660 *10*; α(O)=9.18×10^{-5} *13*; α(P)=4.35×10^{-6} *6*
150.653 *5*	2.77 *7*	1669.087	4$^-$	1518.426	5$^-$	M1+E2	0.92 *9*	0.689 *12*	α(K)exp=0.52 *2* α(K)=0.508 *15*; α(L)=0.140 *6*; α(M)=0.0323 *14*; α(N+..)=0.0083 *4* α(N)=0.0073 *4*; α(O)=0.00096 *4*; α(P)=2.87×10^{-5} *13*
154.026 *4*	0.073 *9*	1728.319	2$^+$	1574.294	4$^+$	[E2]		0.575	α(K)=0.343 *5*; α(L)=0.179 *3*; α(M)=0.0423 *6*; α(N+..)=0.01073 *15* α(N)=0.00953 *14*; α(O)=0.001179 *17*; α(P)=1.536×10^{-5} *22*
160.489 *4*	0.16 *1*	1518.426	5$^-$	1357.930	3$^-$	[E2]		0.499	α(K)=0.304 *5*; α(L)=0.1500 *21*; α(M)=0.0355 *5*; α(N+..)=0.00900 *13* α(N)=0.00799 *12*; α(O)=0.000991 *14*; α(P)=1.376×10^{-5} *20*
161.209 *5*	0.14 *2*	1485.671	5$^-$	1324.465	6$^+$	[E1]		0.0860	α(K)=0.0724 *11*; α(L)=0.01067 *15*; α(M)=0.00233 *4*; α(N+..)=0.000611 *9* α(N)=0.000533 *8*; α(O)=7.44×10^{-5} *11*; α(P)=3.57×10^{-6} *5*
[x]163.459 *6*	0.075 *9*					M1		0.594	α(K)exp=0.57 *9* α(K)=0.501 *7*; α(L)=0.0732 *11*; α(M)=0.01606 *23*; α(N+..)=0.00429 *6* α(N)=0.00372 *6*; α(O)=0.000544 *8*; α(P)=3.11×10^{-5} *5*
[x]164.413 *6*	0.095 *11*					E2		0.459	α(K)exp=0.19 *4* α(K)=0.283 *4*; α(L)=0.1354 *19*; α(M)=0.0320 *5*; α(N+..)=0.00812 *12* α(N)=0.00721 *10*; α(O)=0.000896 *13*; α(P)=1.289×10^{-5} *18*
[x]167.3410 *23*	1.44 *20*					E2		0.432	α(K)exp=0.19 *3* α(K)=0.269 *4*; α(L)=0.1256 *18*; α(M)=0.0297 *5*; α(N+..)=0.00753 *11* α(N)=0.00669 *10*; α(O)=0.000832 *12*; α(P)=1.229×10^{-5} *18*
168.093 *4*	0.18 *2*	1739.000	3$^-$	1570.914	3$^-$	M1(+E2)	<0.73	0.528 *23*	α(K)exp=0.45 *5* α(K)=0.43 *4*; α(L)=0.077 *10*; α(M)=0.0173 *25*; α(N+..)=0.0046 *6* α(N)=0.0040 *6*; α(O)=0.00056 *6*; α(P)=2.6×10^{-5} *3*

$^{162}_{66}Dy_{96}$-6

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

γ(^{162}Dy) (continued)

E_γ [†]	I_γ [ad]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [b]	δ [bc]	α [e]	Comments
[x]169.190 *6*	0.102 *16*					M1		0.540	α(K)exp=0.41 *7* α(K)=0.455 *7*; α(L)=0.0664 *10*; α(M)=0.01458 *21*; α(N+..)=0.00390 *6* α(N)=0.00337 *5*; α(O)=0.000494 *7*; α(P)=2.83×10^{-5} *4*
[x]172.074 *11*	0.16 *6*					E2		0.393	α(K)exp=0.018 *17* α(K)=0.248 *4*; α(L)=0.1117 *16*; α(M)=0.0263 *4*; α(N+..)=0.00669 *10* α(N)=0.00594 *9*; α(O)=0.000741 *11*; α(P)=1.140×10^{-5} *16*
172.835 *3*	0.82 *3*	1060.991	4$^+$	888.161	2$^+$	E2		0.387	α(K)exp=0.215 *9* α(K)=0.245 *4*; α(L)=0.1097 *16*; α(M)=0.0259 *4*; α(N+..)=0.00657 *10* α(N)=0.00583 *9*; α(O)=0.000728 *11*; α(P)=1.127×10^{-5} *16*
[x]174.706 *7*	0.125 *14*								α(K)exp=0.14 *3*
[x]177.4406 *18*	1.22 *18*					E1		0.0667	α(K)exp=0.035 *6* α(K)=0.0562 *8*; α(L)=0.00822 *12*; α(M)=0.00180 *3*; α(N+..)=0.000471 *7* α(N)=0.000411 *6*; α(O)=5.76×10^{-5} *8*; α(P)=2.80×10^{-6} *4*
177.699 *7*	0.17 *2*	1453.469	2$^+$	1275.774	1$^-$	[E1]		0.0664	α(K)=0.0560 *8*; α(L)=0.00818 *12*; α(M)=0.00179 *3*; α(N+..)=0.000469 *7* α(N)=0.000409 *6*; α(O)=5.73×10^{-5} *8*; α(P)=2.79×10^{-6} *4*
180.41	0.05	1390.514	5$^-$	1210.089	3$^-$				E_γ,I_γ: from figure 11 of 2006Ap01, not listed in authors′ tables 1 and 2.
[x]180.448 *12*	0.085 *14*								α(K)exp=1.8 *4*
[x]183.515 *11*	0.05 *3*								α(L1)exp=0.9 *6*
185.002 *1*	704 *7*	265.663	4$^+$	80.661	2$^+$	E2		0.307	α(K)=0.200 *3*; α(L)=0.0826 *12*; α(M)=0.0194 *3*; α(N+..)=0.00494 *7* α(N)=0.00438 *7*; α(O)=0.000550 *8*; α(P)=9.37×10^{-6} *14*
185.292 *1*	26.7 *11*	1148.232	2$^-$	962.940	3$^+$	[E1]		0.0594	α(K)=0.0501 *7*; α(L)=0.00731 *11*; α(M)=0.001597 *23*; α(N+..)=0.000419 *6* α(N)=0.000365 *6*; α(O)=5.13×10^{-5} *8*; α(P)=2.51×10^{-6} *4*
188.663 *3*	0.25 *2*	1485.671	5$^-$	1297.006	4$^-$	M1+E2	0.89 *19*	0.349 *14*	α(K)exp=0.276 *19* α(K)=0.271 *18*; α(L)=0.061 *4*; α(M)=0.0139 *9*; α(N+..)=0.00362 *20* α(N)=0.00317 *19*; α(O)=0.000428 *18*; α(P)=1.56×10^{-5} *14*
192.344 *5*	0.22 *2*	1826.747	4$^-$	1634.414	5$^+$	[E1]		0.0539	α(K)=0.0454 *7*; α(L)=0.00661 *10*; α(M)=0.001444 *21*; α(N+..)=0.000379 *6* α(N)=0.000330 *5*; α(O)=4.64×10^{-5} *7*; α(P)=2.29×10^{-6} *4*
[x]196.443 *11*	0.145 *12*					M1(+E2)		0.30 *6*	α(K)exp=0.28 *3* α(K)=0.23 *7*; α(L)=0.054 *11*; α(M)=0.012 *3*; α(N+..)=0.0032 *7* α(N)=0.0028 *6*; α(O)=0.00038 *6*; α(P)=1.3×10^{-5} *6*
[x]197.91 *3*	0.041 *12*								α(L3)exp=0.57 *16*

$^{162}_{66}Dy_{96}$-7

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

$\gamma(^{162}Dy)$ (continued)

E_γ [†]	I_γ [ad]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [b]	δ [bc]	α [e]	Comments
[x]199.1555 *24*	0.255 *12*					M1(+E2)		0.29 *6*	α(K)exp=0.23 *2* α(K)=0.23 *7*; α(L)=0.052 *10*; α(M)=0.012 *3*; α(N+..)=0.0031 *6* α(N)=0.0027 *6*; α(O)=0.00036 *5*; α(P)=1.3×10^{-5} *6*
[x]208.124 *7*	0.122 *9*					E2		0.207	α(K)exp=0.15 *2* α(K)=0.1410 *20*; α(L)=0.0510 *8*; α(M)=0.01195 *17*; α(N+..)=0.00305 *5* α(N)=0.00270 *4*; α(O)=0.000343 *5*; α(P)=6.79×10^{-6} *10*
211.711 *3*	0.59 *2*	1963.598	5$^-$	1751.880	6$^+$	(E1)		0.0419	α(K)exp=0.077 *11* α(K)=0.0354 *5*; α(L)=0.00511 *8*; α(M)=0.001117 *16*; α(N+..)=0.000293 *5* α(N)=0.000256 *4*; α(O)=3.61×10^{-5} *5*; α(P)=1.80×10^{-6} *3* Mult.: E1 or E2 from α(K)exp.
212.983 *1*	12.7 *2*	1570.914	3$^-$	1357.930	3$^-$	M1+E2	0.47 *7*	0.268 *6*	α(K)exp=0.225 *4* α(K)=0.221 *6*; α(L)=0.0371 *8*; α(M)=0.00826 *19*; α(N+..)=0.00218 *5* α(N)=0.00190 *4*; α(O)=0.000270 *5*; α(P)=1.34×10^{-5} *5*
216.193[f#] *13*	0.59[f#] *2*	1751.880	6$^+$	1535.664	4$^+$	E2		0.183	α(K)exp=0.117 *6* α(K)=0.1260 *18*; α(L)=0.0438 *7*; α(M)=0.01024 *15*; α(N+..)=0.00262 *4* α(N)=0.00232 *4*; α(O)=0.000295 *5*; α(P)=6.12×10^{-6} *9*
216.193[f#] *13*	0.59[f#] *2*	2078.923	(2,3)	1862.677	4$^-$				E_γ,I_γ: from 2006Ap01. 1995Be02 report Eγ=216.220 *3* and Iγ=0.7 *3*, with the peak being doubly placed, the other placement being from the 1574 level. 2006Ap01 place a weak 216.365 γ from this level and a 216.193 γ from the 1751 level. The evaluator has assumed that the 216.193 γ is doubly placed and that the 216.365 γ is a different transition.
216.365 *13*	0.060 *7*	1574.294	4$^+$	1357.930	3$^-$	[E1]		0.0396	α(K)=0.0334 *5*; α(L)=0.00482 *7*; α(M)=0.001054 *15*; α(N+..)=0.000277 *4* α(N)=0.000241 *4*; α(O)=3.41×10^{-5} *5*; α(P)=1.707×10^{-6} *24*
219.823 *1*	2.0 *1*	1182.762	5$^+$	962.940	3$^+$	E2		0.1729	α(K)exp=0.133 *9* α(K)=0.1199 *17*; α(L)=0.0410 *6*; α(M)=0.00958 *14*; α(N+..)=0.00245 *4* α(N)=0.00217 *3*; α(O)=0.000276 *4*; α(P)=5.85×10^{-6} *9*
[x]221.188 *5*	0.088 *10*								α(L2)exp=0.45 *7*
[x]221.7333 *12*	0.311 *9*					M1		0.256	α(K)exp=0.25 *1* α(K)=0.216 *3*; α(L)=0.0313 *5*; α(M)=0.00687 *10*; α(N+..)=0.00184 *3* α(N)=0.001590 *23*; α(O)=0.000233 *4*; α(P)=1.337×10^{-5} *19*
228.263 *1*	1.45 *3*	1862.677	4$^-$	1634.414	5$^+$	E1		0.0345	α(K)exp=0.0275 *25* α(K)=0.0291 *4*; α(L)=0.00418 *6*; α(M)=0.000914 *13*;

$^{162}_{66}Dy_{96}$-8

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

$\gamma(^{162}Dy)$ (continued)

E_γ[†]	I_γ[ad]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[b]	α[e]	Comments
								α(N+..)=0.000240 *4*
								α(N)=0.000209 *3*; α(O)=2.96×10^{-5} *5*; α(P)=1.495×10^{-6} *21*
230.943 *1*	0.54 *2*	1766.608	3$^-$	1535.664	4$^+$	[E1]	0.0334	α(K)=0.0283 *4*; α(L)=0.00406 *6*; α(M)=0.000886 *13*; α(N+..)=0.000233 *4*
								α(N)=0.000203 *3*; α(O)=2.87×10^{-5} *4*; α(P)=1.452×10^{-6} *21*
236.008 *4*	18.6 *9*	1297.006	4$^-$	1060.991	4$^+$	E1	0.0316	α(K)exp=0.0268 *16*
								α(K)=0.0267 *4*; α(L)=0.00383 *6*; α(M)=0.000837 *12*; α(N+..)=0.000220 *3*
								α(N)=0.000192 *3*; α(O)=2.72×10^{-5} *4*; α(P)=1.377×10^{-6} *20*
238.673 *6*	0.06 *1*	1535.664	4$^+$	1297.006	4$^-$	[E1]	0.0310	α(K)=0.0267 *4*; α(L)=0.00383 *6*; α(M)=0.000837 *12*; α(N+..)=0.000220 *3*
								α(N)=0.000192 *3*; α(O)=2.72×10^{-5} *4*; α(P)=1.377×10^{-6} *20*
240.1[@] *2*	17.3 *9*	2078.923	(2,3)	1840.486	3$^+$			γ shown as doubly placed by 1995Be02, with the other placement being from the 1535 level. 2006Ap01 show a weak 238.67 γ from this level.
243.95[‡@]	0.11[‡]	2071.95	(4)	1826.747	4$^-$			
[x]243.953 *12*	0.11 *4*					M1	0.197	α(K)exp=0.21 *8*
								α(K)=0.1663 *24*; α(L)=0.0241 *4*; α(M)=0.00528 *8*; α(N+..)=0.001412 *20*
								α(N)=0.001222 *18*; α(O)=0.000179 *3*; α(P)=1.029×10^{-5} *15*
[x]244.613 *13*	0.19 *3*					E2	0.1223	α(K)exp=0.077 *16*
								α(K)=0.0874 *13*; α(L)=0.0270 *4*; α(M)=0.00627 *9*; α(N+..)=0.001608 *23*
								α(N)=0.001420 *20*; α(O)=0.000183 *3*; α(P)=4.37×10^{-6} *7*
247.1479 *9*	11.2 *2*	1210.089	3$^-$	962.940	3$^+$	E1	0.0281	α(K)exp=0.0230 *5*
								α(K)=0.0237 *4*; α(L)=0.00339 *5*; α(M)=0.000741 *11*; α(N+..)=0.000195 *3*
								α(N)=0.0001699 *24*; α(O)=2.41×10^{-5} *4*; α(P)=1.229×10^{-6} *18*
[x]249.2151 *7*	2.37 *4*					M1(+E2)	0.15 *4*	α(K)exp=0.151 *3*
								α(K)=0.12 *4*; α(L)=0.0239 *13*; α(M)=0.0054 *5*; α(N+..)=0.00141 *9*
								α(N)=0.00124 *9*; α(O)=0.000170 *3*; α(P)=7.E−6 *3*
251.139 *24*	0.18 *4*	1575.613	6$^-$	1324.465	6$^+$	[E1]	0.0269	α(K)=0.0228 *4*; α(L)=0.00326 *5*; α(M)=0.000711 *10*; α(N+..)=0.000187 *3*
								α(N)=0.0001630 *23*; α(O)=2.31×10^{-5} *4*; α(P)=1.182×10^{-6} *17*
251.139 *24*	0.18 *4*	1826.747	4$^-$	1575.613	6$^-$	[E2]	0.1124	α(K)=0.0809 *12*; α(L)=0.0244 *4*; α(M)=0.00566 *8*; α(N+..)=0.001452 *21*
								α(N)=0.001282 *18*; α(O)=0.0001657 *24*; α(P)=4.07×10^{-6} *6*
[x]253.192 *4*	0.144 *11*					E2	0.1095	α(K)exp=0.071 *16*
								α(K)=0.0790 *11*; α(L)=0.0236 *4*; α(M)=0.00548 *8*; α(N+..)=0.001407 *20*
								α(N)=0.001243 *18*; α(O)=0.0001607 *23*; α(P)=3.98×10^{-6} *6*
[x]257.1138 *21*	0.804 *20*					M1	0.1709	α(K)exp=0.151 *4*
								α(K)=0.1442 *21*; α(L)=0.0209 *3*; α(M)=0.00458 *7*; α(N+..)=0.001222 *18*
								α(N)=0.001058 *15*; α(O)=0.0001552 *22*; α(P)=8.92×10^{-6} *13*
[x]258.0162 *21*	4.29 *8*					M1	0.1693	α(K)exp=0.142 *4*
								α(K)=0.1429 *20*; α(L)=0.0207 *3*; α(M)=0.00453 *7*; α(N+..)=0.001211 *17*
								α(N)=0.001048 *15*; α(O)=0.0001537 *22*; α(P)=8.84×10^{-6} *13*
260.067 *8*	129 *2*	1148.232	2$^-$	888.161	2$^+$	E1	0.0246	α(K)exp=0.0210 *4*
								α(K)=0.0209 *3*; α(L)=0.00297 *5*; α(M)=0.000649 *9*; α(N+..)=0.0001710 *24*
								α(N)=0.0001488 *21*; α(O)=2.11×10^{-5} *3*; α(P)=1.085×10^{-6} *16*

$^{162}_{66}Dy_{96}$-9

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

γ(^{162}Dy) (continued)

E_γ †	I_γ ad	E_i(level)	J_i^π	E_f	J_f^π	Mult. b	δ bc	α e	Comments
x263.088 *8*	0.45 *10*								α(L2)exp=0.06 *1*
263.472 *1*	1.23 *2*	1324.465	6+	1060.991	4+	E2		0.0958	α(K)exp=0.068 *3* α(K)=0.0699; α(L)=0.0200; α(M)=0.00463; α(N+..)=0.001191 α(N)=0.001050; α(O)=0.0001366; α(P)=3.55×10^{-6} α(K)exp gives δ(E2/M1)>5.4.
x265.794 *12*	0.081 *9*								α(K)exp=0.6 *6*
266.211	0.086 *9*	1751.880	6+	1485.671	5−				E_γ,I_γ: from level-scheme figure 7 and table 5 of 2006Ap01; not listed in authors′ tables 1 and 2.
269.575 *10*	0.07 *1*	1840.486	3+	1570.914	3−	[E1]		0.0225	α(K)=0.0190 *3*; α(L)=0.00271 *4*; α(M)=0.000591 *9*; α(N+..)=0.0001559 *22* α(N)=0.0001356 *19*; α(O)=1.93×10^{-5} *3*; α(P)=9.94×10^{-7} *14*
275.582 *4*	0.81 *4*	1485.671	5−	1210.089	3−	E2		0.0839	α(K)exp=0.063 *4* α(K)=0.0617 *9*; α(L)=0.01715 *24*; α(M)=0.00397 *6*; α(N+..)=0.001020 *15* α(N)=0.000900 *13*; α(O)=0.0001173 *17*; α(P)=3.16×10^{-6} *5*
276.92‡	0.02‡	2128.094	(2+)	1851.812	4−				
277.285 *12*	0.047 *7*	1574.294	4+	1297.006	4−	[E1]		0.0210	α(K)=0.01774 *25*; α(L)=0.00252 *4*; α(M)=0.000550 *8*; α(N+..)=0.0001450 *21* α(N)=0.0001261 *18*; α(O)=1.80×10^{-5} *3*; α(P)=9.28×10^{-7} *13*
278.572 *1*	1.88 *3*	1669.087	4−	1390.514	5−	M1(+E2)	<0.39	0.134 *5*	α(K)exp=0.117 *5* α(K)=0.113 *4*; α(L)=0.01676 *24*; α(M)=0.00369 *6*; α(N+..)=0.000983 *14* α(N)=0.000852 *12*; α(O)=0.0001240 *19*; α(P)=6.9×10^{-6} *3*
279.266 *14*	0.09 *2*	1637.197	1−	1357.930	3−	[E2]		0.0805	α(K)=0.0594 *9*; α(L)=0.01632 *23*; α(M)=0.00377 *6*; α(N+..)=0.000971 *14* α(N)=0.000856 *12*; α(O)=0.0001118 *16*; α(P)=3.05×10^{-6} *5*
280.937 *2*	0.52 *1*	1766.608	3−	1485.671	5−	E2		0.0790	α(K)exp=0.049 *7* α(K)=0.0584 *9*; α(L)=0.01597 *23*; α(M)=0.00369 *6*; α(N+..)=0.000949 *14* α(N)=0.000837 *12*; α(O)=0.0001094 *16*; α(P)=3.00×10^{-6} *5*
282.859 *2*	116.7 *19*	548.520	6+	265.663	4+	E2		0.0773	α(K)exp=0.058 *1* α(K)=0.0572 *8*; α(L)=0.01557 *22*; α(M)=0.00360 *5*; α(N+..)=0.000925 *13* α(N)=0.000816 *12*; α(O)=0.0001067 *15*; α(P)=2.95×10^{-6} *5*
x282.8591 *18*	116.7 *19*					E2		0.0773	α(K)exp=0.058 *1* α(K)=0.0572 *8*; α(L)=0.01557 *22*; α(M)=0.00360 *5*; α(N+..)=0.000925 *13* α(N)=0.000816 *12*; α(O)=0.0001067 *15*; α(P)=2.95×10^{-6} *5* uncertainty of 0.0001 (2006Ap01) for α(K)exp seems unrealistically low.
291.07 *4*	0.034 *9*	1826.747	4−	1535.664	4+	[E1]		0.0185	α(K)=0.01571 *22*; α(L)=0.00222 *4*; α(M)=0.000486 *7*;

$^{162}_{66}Dy_{96}$-10

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

γ(^{162}Dy) (continued)

E_γ [†]	I_γ [ad]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [b]	α [e]	Comments
								α(N+..)=0.0001281 *18* α(N)=0.0001114 *16*; α(O)=1.588×10^{-5} *23*; α(P)=8.26×10^{-7} *12*
292.241 *8*	0.090 *9*	1745.716	1$^+$	1453.469	2$^+$	[M1,E2]	0.10 *3*	α(K)=0.08 *3*; α(L)=0.0143 *5*; α(M)=0.00321 *5*; α(N+..)=0.000842 *25* α(N)=0.000735 *17*; α(O)=0.000102 *8*; α(P)=4.5×10^{-6} *18*
295.141 *1*	21.7 *4*	1570.914	3$^-$	1275.774	1$^-$	(E2)	0.070	α(K)exp=0.095 *3* α(K)exp gives δ(E2/M1)<0.47 but ΔJ^π requires E2.
302.880 [f#@] *20*	0.21 [f#] *7*	2053.541	5$^-$	1751.880	6$^+$			
302.880 [f#@] *20*	0.21 [f#] *7*	2128.094	(2$^+$)	1826.747	4$^-$			
302.909 [f#] *2*	0.38 [f#] *1*	1485.671	5$^-$	1182.762	5$^+$	E1	0.01679	α(K)=0.01423 *20*; α(L)=0.00201 *3*; α(M)=0.000439 *7*; α(N+..)=0.0001158 *17* α(N)=0.0001007 *14*; α(O)=1.437×10^{-5} *21*; α(P)=7.51×10^{-7} *11* Iγ: 1995Be02 report Iγ=0.21 *7* for the composite peak.
[x]303.348 *8*	0.090 *6*							α(K)exp=0.22 *3*
308.321 *6*	0.16 *2*	1826.747	4$^-$	1518.426	5$^-$	[M1,E2]	0.082 *23*	α(K)=0.067 *22*; α(L)=0.0121 *8*; α(M)=0.00270 *10*; α(N+..)=0.00071 *4* α(N)=0.00062 *3*; α(O)=8.7×10^{-5} *9*; α(P)=3.9×10^{-6} *16*
309.952 *5*	0.18 *2*	1634.414	5$^+$	1324.465	6$^+$	[M1,E2]	0.081 *23*	α(K)=0.066 *22*; α(L)=0.0119 *8*; α(M)=0.00266 *11*; α(N+..)=0.00070 *4* α(N)=0.00061 *3*; α(O)=8.5×10^{-5} *9*; α(P)=3.8×10^{-6} *16*
311.157 *1*	18.1 *9*	1669.087	4$^-$	1357.930	3$^-$	M1	0.1024	α(K)exp=0.095 *5* α(K)=0.0865 *13*; α(L)=0.01244 *18*; α(M)=0.00273 *4*; α(N+..)=0.000729 *11* α(N)=0.000631 *9*; α(O)=9.26×10^{-5} *13*; α(P)=5.33×10^{-6} *8*
[x]315.059 *4*	1.41 *6*					M1	0.0991	α(K)exp=0.088 *4* α(K)=0.0837 *12*; α(L)=0.01203 *17*; α(M)=0.00264 *4*; α(N+..)=0.000705 *10* α(N)=0.000610 *9*; α(O)=8.95×10^{-5} *13*; α(P)=5.16×10^{-6} *8*
[x]318.101 *3*	1.2 *4*					E1	0.01487	α(K)exp=0.010 *4* α(K)=0.01261 *18*; α(L)=0.001777 *25*; α(M)=0.000388 *6*; α(N+..)=0.0001024 *15* α(N)=8.90×10^{-5} *13*; α(O)=1.272×10^{-5} *18*; α(P)=6.68×10^{-7} *10*
[x]319.673 *5*	0.234 *15*							α(K)exp=0.026 *7*
321.928 [f#] *2*	16.8 [f#] *4*	1210.089	3$^-$	888.161	2$^+$	E1	0.01444	α(K)exp=0.0124 *4* α(K)=0.01224 *18*; α(L)=0.001724 *25*; α(M)=0.000376 *6*; α(N+..)=9.94×10^{-5} *14* α(N)=8.64×10^{-5} *12*; α(O)=1.235×10^{-5} *18*; α(P)=6.49×10^{-7} *9* E_γ,Iγ: 1995Be02 report Iγ=19 *2* (after renormalization of their intensity scale). Iγ: from Iγ(321.9γ)/Iγ(1129.3γ) in ^{162}Ho ε decay (67.0 min) and Iγ(1129.6γ), Iγ=30 *4*. Thus, most, if not all, of the intensity in this peak is associated with this placement.
321.928 [f#] *2*	16.8 [f#] *4*	2148.675	(2)	1826.747	4$^-$			E_γ,Iγ: from 2006Ap01. 1995Be02 report Iγ=19 *2* (after renormalization

$^{162}_{66}Dy_{96}$-11

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

γ(^{162}Dy) (continued)

E_γ †	I_γ ad	E_i(level)	J_i^π	E_f	J_f^π	Mult. b	δ bc	α e	Comments
									of their intensity scale). I_γ: most of the intensity of this peak is associated with the other placement. See the comment for the other placement.
x322.688 *12*	0.26 *6*					M1(+E2)		0.072 *21*	α(K)exp=0.06 *2* α(K)=0.059 *20*; α(L)=0.0105 *9*; α(M)=0.00234 *14*; α(N+..)=0.00062 *5* α(N)=0.00054 *4*; α(O)=7.5×10^{-5} *9*; α(P)=3.5×10^{-6} *14*
327.012 *1*	13.9 *2*	1862.677	4$^-$	1535.664	4$^+$	E1		0.01390	α(K)exp=0.0115 *2* α(K)=0.01178 *17*; α(L)=0.001658 *24*; α(M)=0.000362 *5*; α(N+..)=9.55×10^{-5} *14* α(N)=8.30×10^{-5} *12*; α(O)=1.188×10^{-5} *17*; α(P)=6.26×10^{-7} *9*
329.184 *1*	3.1 *2*	1963.598	5$^-$	1634.414	5$^+$	E1		0.01368	α(K)exp=0.0113 *15* α(K)=0.01159 *17*; α(L)=0.001631 *23*; α(M)=0.000356 *5*; α(N+..)=9.40×10^{-5} *14* α(N)=8.17×10^{-5} *12*; α(O)=1.168×10^{-5} *17*; α(P)=6.16×10^{-7} *9*
329.524 *2*	1.43 *3*	1390.514	5$^-$	1060.991	4$^+$	[E1]		0.01364	α(K)=0.01157 *17*; α(L)=0.001626 *23*; α(M)=0.000355 *5*; α(N+..)=9.37×10^{-5} *14* α(N)=8.15×10^{-5} *12*; α(O)=1.165×10^{-5} *17*; α(P)=6.14×10^{-7} *9*
x333.4002 *10*	2.10 *15*					M1(+E2)		0.066 *20*	α(K)exp=0.068 *15* α(K)=0.054 *19*; α(L)=0.0095 *9*; α(M)=0.00212 *15*; α(N+..)=0.00056 *5* α(N)=0.00049 *4*; α(O)=6.8×10^{-5} *9*; α(P)=3.2×10^{-6} *13*
334.063 *1*	79 *3*	1297.006	4$^-$	962.940	3$^+$	E1		0.01319	α(K)exp=0.0113 *4* α(K)=0.01119 *16*; α(L)=0.001572 *22*; α(M)=0.000343 *5*; α(N+..)=9.06×10^{-5} *13* α(N)=7.87×10^{-5} *11*; α(O)=1.127×10^{-5} *16*; α(P)=5.95×10^{-7} *9*
x336.324 *14*	0.08 *7*								α(K)exp=1.2 *10*
337.406 *9*	0.05 *1*	1634.414	5$^+$	1297.006	4$^-$	[E1]		0.01288	α(K)=0.01092 *16*; α(L)=0.001533 *22*; α(M)=0.000334 *5*; α(N+..)=8.84×10^{-5} *13* α(N)=7.68×10^{-5} *11*; α(O)=1.100×10^{-5} *16*; α(P)=5.81×10^{-7} *9*
339.82‡	0.10‡	2009.802		1669.087	4$^-$				
341.081 *3*	0.27 *3*	1826.747	4$^-$	1485.671	5$^-$	E2(+M1)	>1.5	0.049 *6*	α(K)exp=0.037 *8* α(K)=0.039 *6*; α(L)=0.0082 *3*; α(M)=0.00187 *6*; α(N+..)=0.000486 *17* α(N)=0.000426 *14*; α(O)=5.8×10^{-5} *3*; α(P)=2.2×10^{-6} *4*
x347.194 *3*	1.64 *8*								α(K)exp=0.020 *2*
x347.3750 *16*	9.66 *23*					E1		0.01200	α(K)exp=0.0096 *3* α(K)=0.01018 *15*; α(L)=0.001427 *20*; α(M)=0.000311 *5*; α(N+..)=8.22×10^{-5} *12* α(N)=7.15×10^{-5} *10*; α(O)=1.024×10^{-5} *15*; α(P)=5.43×10^{-7} *8*
348.49 *3*	0.37 *9*	1739.000	3$^-$	1390.514	5$^-$	(E2)		0.060	α(K)exp=0.068 *18* α(K)=0.049; α(L)=0.0083; α(M)=0.00186; α(N+..)=0.000490

$^{162}_{66}Dy_{96}$-12

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

$\gamma(^{162}Dy)$ (continued)

E_γ [†]	I_γ [ad]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [b]	δ [bc]	α [e]	Comments
									α(N)=0.000427; α(O)=6.0×10^{-5}; α(P)=2.8×10^{-6}
									α(K)exp gives δ(E2/M1)<0.92, but ΔJ^π requires E2.
x349.255 *10*	1.76 *7*					E2(+M1)		0.058 *18*	α(K)exp=0.049 *2*
									α(K)=0.048 *17*; α(L)=0.0082 *10*; α(M)=0.00184 *17*; α(N+..)=0.00048 *6*
									α(N)=0.00042 *5*; α(O)=5.9×10^{-5} *9*; α(P)=2.8×10^{-6} *12*
352.897 *6*	0.45 *8*	1535.664	4$^+$	1182.762	5$^+$	E2(+M1)	>1.3	0.046 *7*	α(K)exp=0.039 *7*
									α(K)=0.036 *6*; α(L)=0.0074 *4*; α(M)=0.00168 *7*; α(N+..)=0.000437 *20*
									α(N)=0.000383 *17*; α(O)=5.2×10^{-5} *4*; α(P)=2.0×10^{-6} *4*
x358.081 *7*	0.105 *11*								α(L1)exp=0.11 *4*
358.74‡	0.03‡	2104.78	(2$^+$)	1745.716	1$^+$				
360.824 *3*	0.54 *3*	1570.914	3$^-$	1210.089	3$^-$	M1(+E2)	<0.64	0.065 *5*	α(K)exp=0.057 *5*
									α(K)=0.054 *5*; α(L)=0.0081 *3*; α(M)=0.00179 *6*; α(N+..)=0.000476 *17*
									α(N)=0.000412 *14*; α(O)=6.0×10^{-5} *3*; α(P)=3.3×10^{-6} *3*
361.419 *2*	0.50 *6*	1637.197	1$^-$	1275.774	1$^-$	[M1,E2]		0.053 *16*	α(K)=0.043 *15*; α(L)=0.0074 *10*; α(M)=0.00166 *18*; α(N+..)=0.00044 *6*
									α(N)=0.00038 *5*; α(O)=5.4×10^{-5} *9*; α(P)=2.6×10^{-6} *11*
364.212 *8*	0.116 *7*	1574.294	4$^+$	1210.089	3$^-$	[E1]		0.01070	α(K)=0.00908 *13*; α(L)=0.001270 *18*; α(M)=0.000277 *4*; α(N+..)=7.32×10^{-5} *11*
									α(N)=6.36×10^{-5} *9*; α(O)=9.12×10^{-6} *13*; α(P)=4.86×10^{-7} *7*
x364.571 *11*	0.080 *6*								α(K)exp=0.18 *2*
x366.79 *6*	0.044 *11*								α(K)exp=0.6 *2*
370.389 *3*	0.45 *2*	1728.319	2$^+$	1357.930	3$^-$	[E1]		0.01028	α(K)=0.00873 *13*; α(L)=0.001219 *17*; α(M)=0.000266 *4*; α(N+..)=7.03×10^{-5} *10*
									α(N)=6.11×10^{-5} *9*; α(O)=8.76×10^{-6} *13*; α(P)=4.68×10^{-7} *7*
372.074 *3*	0.83 *2*	1669.087	4$^-$	1297.006	4$^-$	M1(+E2)	<0.48	0.061 *3*	α(K)exp=0.053 *3*
									α(K)=0.051 *3*; α(L)=0.00755 *20*; α(M)=0.00166 *4*; α(N+..)=0.000442 *12*
									α(N)=0.000383 *10*; α(O)=5.59×10^{-5} *18*; α(P)=3.14×10^{-6} *19*
372.597# *3*	1.70# *3*	2009.802		1637.197	1$^-$	E2		0.0339	α(K)exp=0.0257 *8*
									α(K)=0.0264 *4*; α(L)=0.00587 *9*; α(M)=0.001338 *19*; α(N+..)=0.000347 *5*
									α(N)=0.000305 *5*; α(O)=4.10×10^{-5} *6*; α(P)=1.424×10^{-6} *20*
									E_γ,I_γ: from 2006Ap01, who show this γ as unplaced. 1995Be02 report Eγ=372.40 *3* and Iγ=2.3 *2* (after renormalization of their intensity scale). They also show it as triply placed, with the other placements being from the 1904 and 1669 levels. This former level is not reported by 2006Ap01; and 2006Ap01 place a 372.074 γ from the latter level.
x373.904 *5*	0.193 *12*								α(K)exp=0.08 *1*

$^{162}_{66}Dy_{96}$-13

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

γ(^{162}Dy) (continued)

E_γ †	I_γ ad	E_i(level)	J_i^π	E_f	J_f^π	Mult. b	δ bc	α e	Comments
377.015 *5*	0.22 *1*	1862.677	4⁻	1485.671	5⁻	[M1,E2]		0.047 *15*	α(K)=0.039 *14*; α(L)=0.0065 *10*; α(M)=0.00146 *18*; α(N+..)=0.00039 *6* α(N)=0.00034 *5*; α(O)=4.7×10^{-5} *8*; α(P)=2.3×10^{-6} *10*
x378.125 *10*	0.124 *18*								α(K)exp=0.12 *3*
381.069 *3*	0.32 *2*	1739.000	3⁻	1357.930	3⁻	M1+E2	0.7 *4*	0.051 *7*	α(K)exp=0.044 *6* α(K)=0.042 *7*; α(L)=0.0067 *5*; α(M)=0.00147 *9*; α(N+..)=0.00039 *3* α(N)=0.000339 *22*; α(O)=4.9×10^{-5} *4*; α(P)=2.5×10^{-6} *5*
x385.635 *6*	0.77 *5*								α(L1)exp=0.011 *2*
387.017 *21*	0.09 *3*	1840.486	3⁺	1453.469	2⁺	[M1,E2]		0.044 *14*	α(K)=0.036 *13*; α(L)=0.0061 *9*; α(M)=0.00135 *18*; α(N+..)=0.00036 *6* α(N)=0.00031 *5*; α(O)=4.4×10^{-5} *8*; α(P)=2.1×10^{-6} *9*
387.976 *12*	0.10 *1*	1963.598	5⁻	1575.613	6⁻	[M1,E2]		0.044 *14*	α(K)=0.036 *13*; α(L)=0.0060 *9*; α(M)=0.00134 *18*; α(N+..)=0.00035 *6* α(N)=0.00031 *5*; α(O)=4.4×10^{-5} *8*; α(P)=2.1×10^{-6} *9*
391.541 *14*	0.22 *2*	1574.294	4⁺	1182.762	5⁺	[M1,E2]		0.044 *15*	
392.485 *10*	0.18 *2*	1453.469	2⁺	1060.991	4⁺	E2		0.0292	α(K)=0.0229 *4*; α(L)=0.00493 *7*; α(M)=0.001122 *16*; α(N+..)=0.000292 *4* α(N)=0.000256 *4*; α(O)=3.45×10^{-5} *5*; α(P)=1.246×10^{-6} *18*
392.851 *5*	0.54 *2*	1575.613	6⁻	1182.762	5⁺	[E1]		0.00894	α(K)=0.00759 *11*; α(L)=0.001057 *15*; α(M)=0.000230 *4*; α(N+..)=6.10×10^{-5} *9* α(N)=5.29×10^{-5} *8*; α(O)=7.61×10^{-6} *11*; α(P)=4.08×10^{-7} *6*
x393.096 *5*	1.42 *24*					M1		0.0553	α(K)exp=0.043 *7* α(K)=0.0468 *7*; α(L)=0.00668 *10*; α(M)=0.001463 *21*; α(N+..)=0.000391 *6* α(N)=0.000338 *5*; α(O)=4.97×10^{-5} *7*; α(P)=2.87×10^{-6} *4*
394.333 *3*	0.58 *3*	1691.341	2⁻	1297.006	4⁻	E2		0.0289	α(K)exp=0.018 *2* α(K)=0.0226 *4*; α(L)=0.00486 *7*; α(M)=0.001104 *16*; α(N+..)=0.000287 *4* α(N)=0.000252 *4*; α(O)=3.40×10^{-5} *5*; α(P)=1.231×10^{-6} *18*
x395.261 *6*	0.512 *21*					M1(+E2)		0.042 *13*	α(K)exp=0.038 *4* α(K)=0.034 *12*; α(L)=0.0057 *9*; α(M)=0.00127 *18*; α(N+..)=0.00034 *5* α(N)=0.00029 *5*; α(O)=4.1×10^{-5} *8*; α(P)=2.0×10^{-6} *8*
x398.932 *3*	1.8 *4*								α(L3)exp=0.016 *2*
399.3 f @ *4*	0.41 f *21*	2125.228	0⁺	1728.319	2⁺				
399.3 f *4*	0.4 f *2*	2128.094	(2⁺)	1728.319	2⁺				
x407.6027 *20*	0.78 *13*					M1		0.0503	α(K)exp=0.033 *6* α(K)=0.0426 *6*; α(L)=0.00607 *9*; α(M)=0.001329 *19*; α(N+..)=0.000355 *5* α(N)=0.000308 *5*; α(O)=4.51×10^{-5} *7*; α(P)=2.61×10^{-6} *4*

$^{162}_{66}Dy_{96}$-14

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

γ(^{162}Dy) (continued)

E_γ †	I_γ ad	E_i(level)	J_i^π	E_f	J_f^π	Mult. b	δ bc	α e	Comments
408.678 *5*	0.24 *1*	1766.608	3⁻	1357.930	3⁻	M1(+E2)	<1.0	0.044 *6*	α(K)exp=0.40 *9* α(K)=0.037 *6*; α(L)=0.0056 *5*; α(M)=0.00124 *9*; α(N+..)=0.000328 *25* α(N)=0.000285 *21*; α(O)=4.1×10^{-5} *4*; α(P)=2.2×10^{-6} *4*
x411.452 *14*	0.190 *25*					M1		0.0491	α(K)exp=0.056 *8* α(K)=0.0415 *6*; α(L)=0.00592 *9*; α(M)=0.001297 *19*; α(N+..)=0.000347 *5* α(N)=0.000300 *5*; α(O)=4.40×10^{-5} *7*; α(P)=2.55×10^{-6} *4*
415.569 *3*	2.7 *2*	1691.341	2⁻	1275.774	1⁻	M1+E2		0.036 *12*	α(K)exp=0.039 *2* α(K)=0.030 *11*; α(L)=0.0049 *9*; α(M)=0.00110 *17*; α(N+..)=0.00029 *5* α(N)=0.00025 *4*; α(O)=3.6×10^{-5} *7*; α(P)=1.8×10^{-6} *7*
x422.24 *3*	0.15 *4*								α(L1)exp=0.04 *2*
422.692 *9*	0.75 *9*	1570.914	3⁻	1148.232	2⁻	E2		0.0238	α(K)exp=0.015 *4* α(K)=0.0188 *3*; α(L)=0.00387 *6*; α(M)=0.000878 *13*; α(N+..)=0.000229 *4* α(N)=0.000200 *3*; α(O)=2.73×10^{-5} *4*; α(P)=1.032×10^{-6} *15*
424.676 *4*	0.48 *3*	1485.671	5⁻	1060.991	4⁺	[E1]		0.00745	α(K)=0.00633 *9*; α(L)=0.000877 *13*; α(M)=0.000191 *3*; α(N+..)=5.06×10^{-5} *7* α(N)=4.40×10^{-5} *7*; α(O)=6.33×10^{-6} *9*; α(P)=3.42×10^{-7} *5*
427.110 *2*	1.15 *6*	1637.197	1⁻	1210.089	3⁻	E2		0.0231	α(K)exp=0.018 *2* α(K)=0.0183 *3*; α(L)=0.00375 *6*; α(M)=0.000849 *12*; α(N+..)=0.000221 *3* α(N)=0.000194 *3*; α(O)=2.64×10^{-5} *4*; α(P)=1.006×10^{-6} *14*
427.433 *5*	0.50 *4*	1751.880	6⁺	1324.465	6⁺	M1+E2	1.3 *3*	0.031 *3*	α(K)exp=0.026 *5* α(K)=0.025 *3*; α(L)=0.00434 *22*; α(M)=0.00097 *5*; α(N+..)=0.000255 *13* α(N)=0.000222 *11*; α(O)=3.13×10^{-5} *18*; α(P)=1.49×10^{-6} *17*
x427.6607 *14*	4.6 *4*					E2		0.0230	α(K)exp=0.018 *1* α(K)=0.0182 *3*; α(L)=0.00373 *6*; α(M)=0.000846 *12*; α(N+..)=0.000220 *3* α(N)=0.000193 *3*; α(O)=2.63×10^{-5} *4*; α(P)=1.003×10^{-6} *14*
427.932 *2*	1.91 *3*	1963.598	5⁻	1535.664	4⁺	E1		0.00732	α(K)exp=0.0051 *8* α(K)=0.00622 *9*; α(L)=0.000862 *12*; α(M)=0.000188 *3*; α(N+..)=4.97×10^{-5} *7* α(N)=4.32×10^{-5} *6*; α(O)=6.21×10^{-6} *9*; α(P)=3.36×10^{-7} *5*
x431.020 *3*	0.51 *7*					M1		0.0435	α(K)exp=0.041 *7* α(K)=0.0368 *6*; α(L)=0.00524 *8*; α(M)=0.001148 *16*; α(N+..)=0.000307 *5* α(N)=0.000266 *4*; α(O)=3.90×10^{-5} *6*; α(P)=2.26×10^{-6} *4*
x433.449 *3*	0.512 *14*					E2		0.0222	α(K)exp=0.017 *3*

$^{162}_{66}Dy_{96}$-15

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

$\gamma(^{162}Dy)$ (continued)

E_γ[†]	I_γ[ad]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[b]	δ[bc]	α[e]	Comments
									α(K)=0.01759 *25*; α(L)=0.00357 *5*; α(M)=0.000810 *12*; α(N+..)=0.000211 *3*
									α(N)=0.000185 *3*; α(O)=2.52×10^{-5} *4*; α(P)=9.69×10^{-7} *14*
[x]434.96 *3*	0.081 *13*								α(K)exp=0.26 *5*
436.241 *4*	0.51 *2*	1826.747	4$^-$	1390.514	5$^-$	M1		0.0422	α(K)exp=0.0384 *23*
									α(K)=0.0357 *5*; α(L)=0.00508 *8*; α(M)=0.001112 *16*; α(N+..)=0.000297 *5*
									α(N)=0.000257 *4*; α(O)=3.78×10^{-5} *6*; α(P)=2.19×10^{-6} *3*
[x]437.423 *6*	0.23 *4*					M1		0.0419	α(K)exp=0.049 *9*
									α(K)=0.0354 *5*; α(L)=0.00504 *7*; α(M)=0.001104 *16*; α(N+..)=0.000295 *5*
									α(N)=0.000256 *4*; α(O)=3.75×10^{-5} *6*; α(P)=2.17×10^{-6} *3*
440.9[@] *3*	0.6 *2*	2128.094	(2$^+$)	1691.341	2$^-$				1995Be02 show this γ as doubly placed, but, for the other placement (from the 1738 level), 2006Ap01 report Eγ=441.988 *5*.
441.988 *5*	0.36 *2*	1739.000	3$^-$	1297.006	4$^-$	M1+E2	0.7 *4*	0.034 *5*	α(K)exp=0.029 *5*
									α(K)=0.029 *5*; α(L)=0.0044 *4*; α(M)=0.00097 *8*; α(N+..)=0.000258 *23*
									α(N)=0.000224 *19*; α(O)=3.2×10^{-5} *4*; α(P)=1.7×10^{-6} *3*
[x]442.220 *4*	0.52 *14*					M1		0.0407	α(K)exp=0.031 *9*
									α(K)=0.0345 *5*; α(L)=0.00490 *7*; α(M)=0.001073 *15*; α(N+..)=0.000287 *4*
									α(N)=0.000248 *4*; α(O)=3.64×10^{-5} *6*; α(P)=2.11×10^{-6} *3*
[x]442.979 *4*	0.599 *21*					M1		0.0405	α(K)exp=0.042 *3*
									α(K)=0.0343 *5*; α(L)=0.00488 *7*; α(M)=0.001068 *15*; α(N+..)=0.000286 *4*
									α(N)=0.000247 *4*; α(O)=3.63×10^{-5} *5*; α(P)=2.10×10^{-6} *3*
451.649 *2*	2.2 *2*	1634.414	5$^+$	1182.762	5$^+$	E2(+M1)	>1.8	0.0220 *23*	α(K)exp=0.0186 *15*
									α(K)=0.0178 *20*; α(L)=0.00332 *19*; α(M)=0.00075 *4*; α(N+..)=0.000195 *11*
									α(N)=0.000171 *9*; α(O)=2.36×10^{-5} *15*; α(P)=1.01×10^{-6} *14*
452.535 *8*	0.41 *7*	1728.319	2$^+$	1275.774	1$^-$	[E1]		0.00643	α(K)=0.00547 *8*; α(L)=0.000756 *11*; α(M)=0.0001646 *23*; α(N+..)=4.36×10^{-5} *7*
									α(N)=3.79×10^{-5} *6*; α(O)=5.46×10^{-6} *8*; α(P)=2.97×10^{-7} *5*
457.49 *4*	0.04 *1*	1518.426	5$^-$	1060.991	4$^+$	[E1]		0.00628	α(K)=0.00534 *8*; α(L)=0.000737 *11*; α(M)=0.0001605 *23*; α(N+..)=4.25×10^{-5} *6*
									α(N)=3.69×10^{-5} *6*; α(O)=5.32×10^{-6} *8*; α(P)=2.90×10^{-7} *4*
458.991[f#] *2*	1.6[f#] *2*	1669.087	4$^-$	1210.089	3$^-$	M1		0.0370	α(K)exp=0.035 *4*
									α(K)=0.0313 *5*; α(L)=0.00445 *7*; α(M)=0.000974 *14*; α(N+..)=0.000260 *4*
									α(N)=0.000225 *4*; α(O)=3.31×10^{-5} *5*; α(P)=1.92×10^{-6} *3*

$^{162}_{66}Dy_{96}$-16

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

γ(^{162}Dy) (continued)

E_γ[†]	I_γ[ad]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[b]	δ[bc]	α[e]	Comments
458.991[f#] *2*	1.6[f#] *2*	2128.094	(2$^+$)	1669.087	4$^-$				E_γ,I_γ: from 2006Ap01. 1995Be02 report Eγ=459.0 and Iγ=1.9 *2*.
[x]459.710 *10*	0.220 *14*								α(K)exp=0.089 *9*
463.224 *4*	0.9 *1*	1739.000	3$^-$	1275.774	1$^-$	E2		0.0225	α(K)exp=0.020 *3* α(K)=0.0183; α(L)=0.00322; α(M)=0.00072; α(N+..)=0.000190 α(N)=0.000165; α(O)=2.30×10^{-5}; α(P)=1.06×10^{-6}
[x]467.277 *7*	5.4 *4*								α(K)exp gives δ(E2/M1)=1.5 *3*, but ΔJ^π requires E2. α(L1)exp=0.0053 *4*
468.15 *31*	0.93 *21*	2104.78	(2$^+$)	1637.197	1$^-$				
[x]468.795 *5*	0.49 *6*					M1		0.0350	α(K)exp=0.029 *5* α(K)=0.0297 *5*; α(L)=0.00421 *6*; α(M)=0.000921 *13*; α(N+..)=0.000246 *4* α(N)=0.000213 *3*; α(O)=3.13×10^{-5} *5*; α(P)=1.81×10^{-6} *3*
469.602 *3*	1.00 *7*	1766.608	3$^-$	1297.006	4$^-$	M1+E2	0.58 *3*	0.0306 *6*	α(K)exp=0.0261 *24* α(K)=0.0257 *5*; α(L)=0.00384 *6*; α(M)=0.000845 *13*; α(N+..)=0.000225 *4* α(N)=0.000195 *3*; α(O)=2.83×10^{-5} *5*; α(P)=1.55×10^{-6} *3*
[x]471.89 *4*	0.138 *15*					M1		0.0344	α(K)exp=0.04 *1* α(K)=0.0292 *4*; α(L)=0.00414 *6*; α(M)=0.000906 *13*; α(N+..)=0.000242 *4* α(N)=0.000210 *3*; α(O)=3.08×10^{-5} *5*; α(P)=1.784×10^{-6} *25*
474.676 *4*	4.5 *3*	1535.664	4$^+$	1060.991	4$^+$	M1+E2	1.64 *13*	0.0219 *7*	α(K)exp=0.018 *1* α(K)=0.0179 *6*; α(L)=0.00307 *7*; α(M)=0.000685 *14*; α(N+..)=0.000180 *4* α(N)=0.000157 *4*; α(O)=2.21×10^{-5} *5*; α(P)=1.04×10^{-6} *4*
[x]475.3686 *15*	3.8 *7*					M1+E2		0.026 *9*	α(K)exp=0.023 *4* α(K)=0.021 *8*; α(L)=0.0034 *7*; α(M)=0.00075 *15*; α(N+..)=0.00020 *4* α(N)=0.00017 *4*; α(O)=2.5×10^{-5} *6*; α(P)=1.3×10^{-6} *5*
477.50[@] *10*	2.1 *2*	2009.802		1535.664	4$^+$				
486.322[f#] *8*	0.31[f#] *5*	1669.087	4$^-$	1182.762	5$^+$	[E1]		0.00546	α(K)=0.00465 *7*; α(L)=0.000640 *9*; α(M)=0.0001393 *20*; α(N+..)=3.69×10^{-5} *6* α(N)=3.21×10^{-5} *5*; α(O)=4.63×10^{-6} *7*; α(P)=2.53×10^{-7} *4*
486.322[f#] *8*	0.31[f#] *5*	2120.717	(4$^-$)	1634.414	5$^+$				E_γ,I_γ: from 2006Ap01. 1995Be02 report Eγ=485.70 *17* and Iγ=0.76 *14* (after renormalization of their intensity scale).
488.963 *5*	1.20 *9*	1637.197	1$^-$	1148.232	2$^-$	E2+M1		0.024 *8*	α(K)exp=0.018 *2* α(K)=0.020 *7*; α(L)=0.0031 *7*; α(M)=0.00069 *14*; α(N+..)=0.00018 *4* α(N)=0.00016 *4*; α(O)=2.3×10^{-5} *6*; α(P)=1.2×10^{-6} *5*
490.510 *8*	0.59 *3*	1453.469	2$^+$	962.940	3$^+$	E2(+M1)	≥4.1	0.0164 *5*	α(K)exp=0.016 *4*

$^{162}_{66}Dy_{96}$-17

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

$\gamma(^{162}Dy)$ (continued)

E_γ †	I_γ ad	E_i(level)	J_i^π	E_f	J_f^π	Mult. b	δ bc	α e	Comments
									α(K)=0.0132 *5*; α(L)=0.00247 *5*; α(M)=0.000556 *11*; α(N+..)=0.000146 *3* α(N)=0.000127 *3*; α(O)=1.76×10^{-5} *4*; α(P)=7.4×10^{-7} *3*
491.03 f *10*	3.2 f *3*	2125.228	0$^+$	1634.414	5$^+$				E_γ: large implied ΔJ suggests misplacement.
491.03 f *10*	3.2 f *3*	2128.094	(2$^+$)	1637.197	1$^-$				
493.885 *2*	3.0 *1*	1851.812	4$^-$	1357.930	3$^-$	M1(+E2)	<0.58	0.0288 *20*	α(K)exp=0.0242 *12* α(K)=0.0243 *18*; α(L)=0.00351 *17*; α(M)=0.00077 *4*; α(N+..)=0.000206 *10* α(N)=0.000178 *9*; α(O)=2.60×10^{-5} *14*; α(P)=1.48×10^{-6} *12*
x494.5212 *25*	1.8 *3*					E1		0.00526	α(K)exp=0.004 *1* α(K)=0.00448 *7*; α(L)=0.000616 *9*; α(M)=0.0001341 *19*; α(N+..)=3.55×10^{-5} *5* α(N)=3.08×10^{-5} *5*; α(O)=4.46×10^{-6} *7*; α(P)=2.44×10^{-7} *4*
497.926 *12*	0.20 *3*	1951.391	3$^+$,4$^+$	1453.469	2$^+$	[E2]		0.01532	α(K)=0.01233 *18*; α(L)=0.00233 *4*; α(M)=0.000524 *8*; α(N+..)=0.0001372 *20* α(N)=0.0001200 *17*; α(O)=1.654×10^{-5} *24*; α(P)=6.90×10^{-7} *10*
x509.876 *10*	0.65 *8*					E2		0.01440	α(K)exp=0.011 *3* α(K)=0.01162 *17*; α(L)=0.00217 *3*; α(M)=0.000488 *7*; α(N+..)=0.0001278 *18* α(N)=0.0001117 *16*; α(O)=1.543×10^{-5} *22*; α(P)=6.51×10^{-7} *10*
512.464 *5*	1.82 *7*	1060.991	4$^+$	548.520	6$^+$	E2		0.01422	α(K)exp=0.0156 *8* α(K)=0.01147 *16*; α(L)=0.00214 *3*; α(M)=0.000481 *7*; α(N+..)=0.0001258 *18* α(N)=0.0001100 *16*; α(O)=1.521×10^{-5} *22*; α(P)=6.43×10^{-7} *9*
513.314 *8*	0.51 *3*	1574.294	4$^+$	1060.991	4$^+$	[M1,E2]		0.021 *7*	α(K)exp gives δ(E2/M1)>5.6. α(K)=0.017 *6*; α(L)=0.0027 *6*; α(M)=0.00060 *13*; α(N+..)=0.00016 *4* α(N)=0.00014 *3*; α(O)=2.0×10^{-5} *5*; α(P)=1.0×10^{-6} *4*
x513.526 *11*	1.54 *17*								α(K)exp=0.037 *4*
x514.879 *7*	0.90 *7*					M1		0.0276	α(K)exp=0.028 *2* α(K)=0.0233 *4*; α(L)=0.00330 *5*; α(M)=0.000722 *11*; α(N+..)=0.000193 *3* α(N)=0.0001672 *24*; α(O)=2.46×10^{-5} *4*; α(P)=1.426×10^{-6} *20*
x518.376 *11*	0.45 *11*					M1		0.0271	α(K)exp=0.026 *7* α(K)=0.0229 *4*; α(L)=0.00324 *5*; α(M)=0.000710 *10*; α(N+..)=0.000190 *3* α(N)=0.0001643 *23*; α(O)=2.41×10^{-5} *4*; α(P)=1.401×10^{-6} *20*
520.890 *18*	0.11 *2*	1669.087	4$^-$	1148.232	2$^-$	[E2]		0.01363	α(K)=0.01102 *16*; α(L)=0.00204 *3*; α(M)=0.000458 *7*; α(N+..)=0.0001199 *17* α(N)=0.0001048 *15*; α(O)=1.450×10^{-5} *21*; α(P)=6.19×10^{-7} *9*

$^{162}_{66}Dy_{96}$-18

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

$\gamma(^{162}Dy)$ (continued)

E_γ [†]	I_γ [ad]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [b]	δ [bc]	α [e]	Comments
[x]523.174 *6*	1.81 *6*					M1		0.0265	α(K)exp=0.0228 *9* α(K)=0.0224 *4*; α(L)=0.00317 *5*; α(M)=0.000693 *10*; α(N+..)=0.000185 *3* α(N)=0.0001604 *23*; α(O)=2.36×10^{-5} *4*; α(P)=1.368×10^{-6} *20*
[x]528.64 *3*	0.75 *11*								α(L1)exp=0.11 *2*
528.901 *5*	7.2 *2*	1739.000	3$^-$	1210.089	3$^-$	M1(+E2)	<0.045	0.0257	α(K)exp=0.0212 *6* α(K)=0.0218 *3*; α(L)=0.00308 *5*; α(M)=0.000674 *10*; α(N+..)=0.000180 *3* α(N)=0.0001559 *22*; α(O)=2.29×10^{-5} *4*; α(P)=1.330×10^{-6} *19*
529.11 *7*	9.3 *10*	2104.78	(2$^+$)	1575.613	6$^-$				1995Be02 show this γ as multiply placed. But, for their placement from the 1826 level, 2006Ap01 report Eγ=529.749 *4* and, for their placement from the 1738 level, 2006Ap01 report Eγ=528.901 *5*.
529.749 *4*	3.24 *9*	1826.747	4$^-$	1297.006	4$^-$	M1+E2	0.47 *11*	0.0234 *10*	α(K)exp=0.0200 *6* α(K)=0.0197 *9*; α(L)=0.00286 *9*; α(M)=0.000629 *19*; α(N+..)=0.000168 *6* α(N)=0.000145 *5*; α(O)=2.12×10^{-5} *7*; α(P)=1.19×10^{-6} *6*
536.8[@] *3*	1.1 *10*	2053.541	5$^-$	1518.426	5$^-$				Shown as doubly placed by 1995Be02. The other placement, however, is from a 1895 level whose existence 2006Ap01 do not confirm.
543.107 *3*	4.8 *2*	1691.341	2$^-$	1148.232	2$^-$	M1+E2		0.018 *6*	α(K)exp=0.0177 *7* α(K)=0.015 *6*; α(L)=0.0023 *6*; α(M)=0.00052 *12*; α(N+..)=0.00014 *4* α(N)=0.00012 *3*; α(O)=1.7×10^{-5} *5*; α(P)=9.E−7 *4*
543.477 *4*	1.38 *8*	1840.486	3$^+$	1297.006	4$^-$	[E1]		0.00427	α(K)=0.00364 *5*; α(L)=0.000497 *7*; α(M)=0.0001083 *16*; α(N+..)=2.87×10^{-5} *4* α(N)=2.49×10^{-5} *4*; α(O)=3.61×10^{-6} *5*; α(P)=1.99×10^{-7} *3*
[x]544.319 *6*	0.87 *3*					E2		0.01219	α(K)exp=0.007 *2* α(K)=0.00989 *14*; α(L)=0.00179 *3*; α(M)=0.000402 *6*; α(N+..)=0.0001054 *15* α(N)=9.20×10^{-5} *13*; α(O)=1.279×10^{-5} *18*; α(P)=5.57×10^{-7} *8*
[x]550.911 *3*	2.17 *9*					E1		0.00415	α(K)exp=0.0047 *8* α(K)=0.00353 *5*; α(L)=0.000483 *7*; α(M)=0.0001051 *15*; α(N+..)=2.79×10^{-5} *4* α(N)=2.42×10^{-5} *4*; α(O)=3.50×10^{-6} *5*; α(P)=1.94×10^{-7} *3*
552.486 *21*	0.089 *13*	1910.430	3$^-$	1357.930	3$^-$	[M1,E2]		0.017 *6*	α(K)=0.015 *5*; α(L)=0.0022 *6*; α(M)=0.00049 *11*; α(N+..)=0.00013 *3* α(N)=0.00011 *3*; α(O)=1.6×10^{-5} *5*; α(P)=9.E−7 *4*
[x]554.802 *3*	4.7 *3*					M1		0.0228	α(K)exp=0.021 *1* α(K)=0.0193 *3*; α(L)=0.00273 *4*; α(M)=0.000596 *9*;

$^{162}_{66}Dy_{96}$-19

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

$\gamma(^{162}Dy)$ (continued)

E_γ [†]	I_γ [ad]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [b]	δ [bc]	α [e]	Comments
									α(N+..)=0.0001594 *23*
554.802 *3*	4.7 *3*	1851.812	4$^-$	1297.006	4$^-$	M1(+E2)	<0.20	0.0226	α(N)=0.0001379 *20*; α(O)=2.03×10^{-5} *3*; α(P)=1.178×10^{-6} *17* α(K)exp=0.0206 *12* α(K)=0.0191 *4*; α(L)=0.00271 *5*; α(M)=0.000592 *10*;
									α(N+..)=0.0001582 *25*
556.519 *2*	6.3 *4*	1766.608	3$^-$	1210.089	3$^-$	M1+E2	0.52 *19*	0.0203 *14*	α(N)=0.0001370 *22*; α(O)=2.01×10^{-5} *4*; α(P)=1.165×10^{-6} *21* α(K)exp=0.0174 *10* α(K)=0.0171 *13*; α(L)=0.00249 *13*; α(M)=0.00055 *3*;
									α(N+..)=0.000146 *8*
565.316 *12*	0.37 *6*	1453.469	2$^+$	888.161	2$^+$	[M1,E2]		0.016 *6*	α(N)=0.000126 *7*; α(O)=1.84×10^{-5} *11*; α(P)=1.03×10^{-6} *8* α(K)exp=0.0110 *3* α(K)=0.014 *5*; α(L)=0.0021 *5*; α(M)=0.00046 *11*;
									α(N+..)=0.00012 *3*
[x]566.27 *3*	0.45 *5*					E2		0.01104	α(N)=0.000107 *25*; α(O)=1.5×10^{-5} *4*; α(P)=8.E−7 *3* α(K)exp=0.013 *5* α(K)=0.00899 *13*; α(L)=0.001600 *23*; α(M)=0.000358 *5*;
									α(N+..)=9.40×10^{-5} *14*
569.129 *4*	1.44 *7*	1751.880	6$^+$	1182.762	5$^+$	E2(+M1)	>3.6	0.0113 *4*	α(N)=8.21×10^{-5} *12*; α(O)=1.144×10^{-5} *16*; α(P)=5.08×10^{-7} *8* α(K)exp=0.0086 *9* α(K)=0.0092 *4*; α(L)=0.00161 *5*; α(M)=0.000360 *9*;
									α(N+..)=9.47×10^{-5} *25*
572.724 *1*	21.8 *9*	1535.664	4$^+$	962.940	3$^+$	E2(+M1)	>2.8	0.0113 *6*	α(N)=8.27×10^{-5} *21*; α(O)=1.16×10^{-5} *4*; α(P)=5.24×10^{-7} *23* α(K)exp=0.0093 *4* α(K)=0.0093 *6*; α(L)=0.00160 *6*; α(M)=0.000358 *13*;
									α(N+..)=9.4×10^{-5} *4*
573.422 *2*	8.62 *23*	1634.414	5$^+$	1060.991	4$^+$	E2(+M1)	>2.2	0.0116 *9*	α(N)=8.2×10^{-5} *3*; α(O)=1.15×10^{-5} *5*; α(P)=5.3×10^{-7} *4* α(K)exp=0.0097 *7* α(K)=0.0095 *8*; α(L)=0.00163 *9*; α(M)=0.000363 *18*;
									α(N+..)=9.6×10^{-5} *5*
									α(N)=8.3×10^{-5} *5*; α(O)=1.17×10^{-5} *7*; α(P)=5.4×10^{-7} *6*
578.52[‡]	0.23[‡]	2148.675	(2)	1570.914	3$^-$				
584.05 *6*	10.4 *11*	2120.717	(4$^-$)	1535.664	4$^+$				E_γ: also shown as deexciting the 1982.1 level by 1995Be02, but the final level implied by this placement has not been confirmed.
[x]584.081 *3*	11.58 *17*					E1		0.00366	α(L1)exp=0.0006 *1* α(K)=0.00311 *5*; α(L)=0.000424 *6*; α(M)=9.23×10^{-5} *13*;
									α(N+..)=2.45×10^{-5} *4*
									α(N)=2.13×10^{-5} *3*; α(O)=3.08×10^{-6} *5*; α(P)=1.711×10^{-7} *24*
[x]585.66 *3*	0.55 *19*								α(L1)exp=0.010 *4*
[x]587.92 *3*	0.34 *11*								α(L1)exp=0.021 *7*
590.767 *3*	3.65 *9*	1739.000	3$^-$	1148.232	2$^-$	[M1,E2]		0.015 *5*	α(K)=0.012 *5*; α(L)=0.0019 *5*; α(M)=0.00041 *10*;

$^{162}_{66}Dy_{96}$-20

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

$\gamma(^{162}Dy)$ (continued)

E_γ [†]	I_γ [ad]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [b]	δ [bc]	α [e]	Comments
									α(N+..)=0.00011 *3*
									α(N)=9.5×10^{-5} *23*; α(O)=1.4×10^{-5} *4*; α(P)=7.E−7 *3*
597.43 *5*	0.20 *3*	1745.716	1+	1148.232	2−	[E1]		0.00348	α(K)=0.00297 *5*; α(L)=0.000404 *6*; α(M)=8.79×10^{-5} *13*;
									α(N+..)=2.33×10^{-5} *4*
									α(N)=2.02×10^{-5} *3*; α(O)=2.93×10^{-6} *5*; α(P)=1.632×10^{-7} *23*
[x]599.571 *21*	0.16 *4*								α(K)exp=0.09 *2*
601.41[‡]	0.097[‡]	2120.717	(4−)	1518.426	5−				
[x]607.10 *3*	0.252 *19*					E1		0.00337	α(K)exp=0.0046 *25*
									α(K)=0.00287 *4*; α(L)=0.000390 *6*; α(M)=8.48×10^{-5} *12*;
									α(N+..)=2.25×10^{-5} *4*
									α(N)=1.95×10^{-5} *3*; α(O)=2.83×10^{-6} *4*; α(P)=1.579×10^{-7} *23*
[x]609.47 *3*	0.90 *22*								α(L1)exp=0.0046 *11*
[x]610.769 *6*	1.07 *6*								α(K)exp=0.0051 *5*
611.23 *5*	0.12 *2*	1574.294	4+	962.940	3+	[M1,E2]		0.013 *5*	α(K)=0.011 *4*; α(L)=0.0017 *5*; α(M)=0.00038 *9*;
									α(N+..)=0.000100 *25*
									α(N)=8.7×10^{-5} *21*; α(O)=1.3×10^{-5} *4*; α(P)=6.7×10^{-7} *25*
[x]613.327 *13*	0.55 *6*					E2		0.00907	α(K)exp=0.007 *1*
									α(K)=0.00743 *11*; α(L)=0.001280 *18*; α(M)=0.000286 *4*;
									α(N+..)=7.52×10^{-5} *11*
									α(N)=6.56×10^{-5} *10*; α(O)=9.19×10^{-6} *13*; α(P)=4.22×10^{-7} *6*
[x]615.18 *4*	0.161 *25*					M1		0.01756	α(K)exp=0.015 *3*
									α(K)=0.01489 *21*; α(L)=0.00209 *3*; α(M)=0.000458 *7*;
									α(N+..)=0.0001224 *18*
									α(N)=0.0001059 *15*; α(O)=1.556×10^{-5} *22*; α(P)=9.06×10^{-7} *13*
[x]616.134 *12*	0.50 *3*					E2		0.00897	α(K)exp=0.007 *1*
									α(K)=0.00735 *11*; α(L)=0.001264 *18*; α(M)=0.000282 *4*;
									α(N+..)=7.42×10^{-5} *11*
									α(N)=6.47×10^{-5} *9*; α(O)=9.08×10^{-6} *13*; α(P)=4.18×10^{-7} *6*
[x]616.680 *4*	1.81 *4*					M1		0.01745	α(K)exp=0.0119 *4*
									α(K)=0.01479 *21*; α(L)=0.00208 *3*; α(M)=0.000455 *7*;
									α(N+..)=0.0001216 *17*
									α(N)=0.0001052 *15*; α(O)=1.547×10^{-5} *22*; α(P)=9.01×10^{-7} *13*
618.376 *3*	3.2 *1*	1766.608	3−	1148.232	2−	M1+E2	2.06 *13*	0.01050 *23*	α(K)exp=0.0088 *4*
									α(K)=0.00870 *20*; α(L)=0.00141 *3*; α(M)=0.000312 *6*;
									α(N+..)=8.25×10^{-5} *16*
									α(N)=7.18×10^{-5} *14*; α(O)=1.020×10^{-5} *20*; α(P)=5.06×10^{-7} *13*
[x]621.337 *23*	0.40 *4*					M1		0.01713	α(K)exp=0.012 *2*
									α(K)=0.01452 *21*; α(L)=0.00204 *3*; α(M)=0.000446 *7*;
									α(N+..)=0.0001193 *17*
									α(N)=0.0001033 *15*; α(O)=1.517×10^{-5} *22*; α(P)=8.84×10^{-7} *13*

$^{162}_{66}Dy_{96}$-21

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

γ(^{162}Dy) (continued)

E_γ [†]	I_γ [ad]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [b]	δ [bc]	α [e]	Comments
622.494 *3*	3.7 *1*	888.161	2+	265.663	4+	E2		0.00875	α(K)exp=0.0073 *3* α(K)=0.00718 *10*; α(L)=0.001229 *18*; α(M)=0.000274 *4*; α(N+..)=7.22×10^{-5} *11* α(N)=6.29×10^{-5} *9*; α(O)=8.83×10^{-6} *13*; α(P)=4.08×10^{-7} *6*
[x]623.82 *8*	0.10 *3*								α(L1)exp=0.038 *11*
[x]625.599 *16*	0.53 *21*					E1,E2			α(K)exp=0.005 *2*
[x]626.228 *6*	1.31 *11*					M1		0.01679	α(K)exp=0.016 *1* α(K)=0.01424 *20*; α(L)=0.00200 *3*; α(M)=0.000437 *7*; α(N+..)=0.0001170 *17* α(N)=0.0001012 *15*; α(O)=1.487×10^{-5} *21*; α(P)=8.66×10^{-7} *13*
[x]627.185 *21*	0.31 *3*					M1		0.01673	α(K)exp=0.012 *2* α(K)=0.01418 *20*; α(L)=0.00199 *3*; α(M)=0.000436 *6*; α(N+..)=0.0001165 *17* α(N)=0.0001008 *15*; α(O)=1.482×10^{-5} *21*; α(P)=8.63×10^{-7} *12*
[x]627.66 *8*	0.26 *4*								α(K)exp=0.009 *3*
630.398 *4*	2.3 *2*	1840.486	3+	1210.089	3−	E1		0.00311	α(K)exp=0.0024 *5* α(K)=0.00265 *4*; α(L)=0.000360 *5*; α(M)=7.82×10^{-5} *11*; α(N+..)=2.08×10^{-5} *3* α(N)=1.80×10^{-5} *3*; α(O)=2.61×10^{-6} *4*; α(P)=1.461×10^{-7} *21*
634.246 *2*	15.4 *5*	1182.762	5+	548.520	6+	E2+M1	−7 +2−20	0.00853 *19*	α(K)exp=0.0066 *2* α(K)=0.00701 *17*; α(L)=0.001184 *22*; α(M)=0.000264 *5*; α(N+..)=6.95×10^{-5} *13* α(N)=6.05×10^{-5} *11*; α(O)=8.52×10^{-6} *17*; α(P)=4.00×10^{-7} *10*
[x]636.88 *3*	0.18 *3*								α(K)exp=0.030 *7*
[x]638.009 *11*	0.38 *9*								α(K)exp=0.016 *4*
639.144 *11*	0.44 *6*	1963.598	5−	1324.465	6+	[E1]		0.00302	α(K)=0.00258 *4*; α(L)=0.000349 *5*; α(M)=7.59×10^{-5} *11*; α(N+..)=2.02×10^{-5} *3* α(N)=1.749×10^{-5} *25*; α(O)=2.54×10^{-6} *4*; α(P)=1.420×10^{-7} *20*
641.715 *4*	2.0 *2*	1851.812	4−	1210.089	3−	M1+E2	1.18 *16*	0.0113 *6*	α(K)exp=0.0097 *8* α(K)=0.0095 *5*; α(L)=0.00145 *6*; α(M)=0.000319 *13*; α(N+..)=8.5×10^{-5} *4* α(N)=7.3×10^{-5} *3*; α(O)=1.06×10^{-5} *5*; α(P)=5.6×10^{-7} *4*
643.989 *2*	4.3 *2*	1826.747	4−	1182.762	5+	E1		0.00297	α(K)exp=0.0017 *3* α(K)=0.00254 *4*; α(L)=0.000344 *5*; α(M)=7.47×10^{-5} *11*; α(N+..)=1.98×10^{-5} *3* α(N)=1.721×10^{-5} *24*; α(O)=2.50×10^{-6} *4*; α(P)=1.398×10^{-7} *20*
647.502 *2*	50.1 *8*	1535.664	4+	888.161	2+	E2		0.00794	α(K)exp=0.0068 *1* α(K)=0.00652 *10*; α(L)=0.00110 *2*; α(M)=0.000245 *5*; α(N+..)=6.44×10^{-5} *12*

$^{162}_{66}Dy_{96}$-22

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

$\gamma(^{162}Dy)$ (continued)

E_γ[†]	I_γ[ad]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[b]	δ[bc]	α[e]	Comments
									α(N)=5.62×10^{-5} *13*; α(O)=7.91×10^{-6} *15*; α(P)=3.72×10^{-7} *7* α(K)exp gives δ(E2/M1)>4.1. α(L2)exp=0.0082 *1*
[x]649.625 *14*	0.77 *6*								
652.581 *3*	2.92 *9*	1862.677	4$^-$	1210.089	3$^-$	E2		0.00782	α(K)exp=0.0058 *3* α(K)=0.00643 *9*; α(L)=0.001082 *16*; α(M)=0.000241 *4*; α(N+..)=6.35×10^{-5} *9* α(N)=5.53×10^{-5} *8*; α(O)=7.79×10^{-6} *11*; α(P)=3.67×10^{-7} *6*
654.381 *5*	2.2 *1*	1951.391	3$^+$,4$^+$	1297.006	4$^-$	E1		0.00288	α(K)exp=0.0019 *2* α(K)=0.00245 *4*; α(L)=0.000332 *5*; α(M)=7.22×10^{-5} *11*; α(N+..)=1.92×10^{-5} *3* α(N)=1.663×10^{-5} *24*; α(O)=2.41×10^{-6} *4*; α(P)=1.353×10^{-7} *19*
[x]656.55 *5*	0.44 *3*								α(K)exp=0.0071 *8*
[x]658.60 *5*	0.26 *6*					M1		0.01480	α(K)exp=0.011 *3* α(K)=0.01255 *18*; α(L)=0.001761 *25*; α(M)=0.000385 *6*; α(N+..)=0.0001029 *15* α(N)=8.91×10^{-5} *13*; α(O)=1.309×10^{-5} *19*; α(P)=7.63×10^{-7} *11*
663.41[‡]	0.21[‡]	2053.541	5$^-$	1390.514	5$^-$				
[x]664.76 *4*	0.21 *3*					M1		0.01446	α(K)exp=0.013 *3* α(K)=0.01226 *18*; α(L)=0.001720 *24*; α(M)=0.000376 *6*; α(N+..)=0.0001005 *14* α(N)=8.70×10^{-5} *13*; α(O)=1.279×10^{-5} *18*; α(P)=7.46×10^{-7} *11*
666.594 *7*	1.26 *5*	1963.598	5$^-$	1297.006	4$^-$	E2(+M1)	>2.3	0.0080 *6*	α(K)exp=0.0068 *3* α(K)=0.0066 *5*; α(L)=0.00108 *6*; α(M)=0.000239 *12*; α(N+..)=6.3×10^{-5} *4* α(N)=5.5×10^{-5} *3*; α(O)=7.8×10^{-6} *5*; α(P)=3.8×10^{-7} *4*
669.039 *12*	3.0 *2*	1851.812	4$^-$	1182.762	5$^+$	E1		0.00275	α(K)exp=0.0031 *2* α(K)=0.00234 *4*; α(L)=0.000317 *5*; α(M)=6.89×10^{-5} *10*; α(N+..)=1.83×10^{-5} *3* α(N)=1.587×10^{-5} *23*; α(O)=2.30×10^{-6} *4*; α(P)=1.294×10^{-7} *19*
[x]669.99 *9*	0.16 *7*					E2+M1		0.011 *4*	α(K)exp=0.017 *8* α(K)=0.009 *3*; α(L)=0.0013 *4*; α(M)=0.00030 *8*; α(N+..)=7.9×10^{-5} *20* α(N)=6.8×10^{-5} *17*; α(O)=1.0×10^{-5} *3*; α(P)=5.4×10^{-7} *20*
671.475 *2*	11.1 *3*	1634.414	5$^+$	962.940	3$^+$	E2		0.0072	α(K)exp=0.0066 *2* α(K)=0.0060 *1*; α(L)=0.00099 *2*; α(M)=0.000222 *4*; α(N+..)=5.8×10^{-5} *1* α(N)=5.11×10^{-5} *10*; α(O)=7.1×10^{-6} *1*; α(P)=3.43×10^{-7} *6* α(K)exp gives δ(E2/M1)>2.7.
[x]676.06 *9*	0.27 *5*					E2		0.00720	α(K)exp=0.007 *2* α(K)=0.00593 *9*; α(L)=0.000985 *14*; α(M)=0.000219 *3*;

$^{162}_{66}Dy_{96}$-23

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

γ(^{162}Dy) (continued)

E_γ [†]	I_γ [ad]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [b]	δ [bc]	α [e]	Comments
									α(N+..)=5.78×10^{-5} *8*
									α(N)=5.03×10^{-5} *7*; α(O)=7.10×10^{-6} *10*; α(P)=3.39×10^{-7} *5*
[x]677.706 *17*	1.64 *14*								α(L2)exp=0.0008 *3*
678.009 *3*	6.0 *2*	1739.000	3$^-$	1060.991	4$^+$	E1		0.00267	α(K)exp=0.0028 *1*
									α(K)=0.00228 *4*; α(L)=0.000308 *5*; α(M)=6.70×10^{-5} *10*;
									α(N+..)=1.780×10^{-5} *25*
									α(N)=1.543×10^{-5} *22*; α(O)=2.24×10^{-6} *4*; α(P)=1.259×10^{-7} *18*
678.52 *3*	0.55 *5*	1826.747	4$^-$	1148.232	2$^-$	[E2]		0.00714	α(K)=0.00588 *9*; α(L)=0.000976 *14*; α(M)=0.000217 *3*;
									α(N+..)=5.72×10^{-5} *8*
									α(N)=4.99×10^{-5} *7*; α(O)=7.04×10^{-6} *10*; α(P)=3.36×10^{-7} *5*
[x]681.47 *3*	0.32 *7*								α(L1)exp=0.006 *2*
682.77 *8*	0.13 *6*	1570.914	3$^-$	888.161	2$^+$	[E1]		0.00263	α(K)=0.00225 *4*; α(L)=0.000304 *5*; α(M)=6.60×10^{-5} *10*;
									α(N+..)=1.754×10^{-5} *25*
									α(N)=1.520×10^{-5} *22*; α(O)=2.21×10^{-6} *3*; α(P)=1.242×10^{-7} *18*
[x]684.410 *12*	0.62 *4*					M1		0.01345	α(K)exp=0.012 *8*
									α(K)=0.01141 *16*; α(L)=0.001598 *23*; α(M)=0.000349 *5*;
									α(N+..)=9.34×10^{-5} *13*
									α(N)=8.08×10^{-5} *12*; α(O)=1.188×10^{-5} *17*; α(P)=6.93×10^{-7} *10*
[x]685.362 *5*	1.75 *9*								α(K)exp=0.0031 *3*
686.15 *6*	0.29 *8*	1574.294	4$^+$	888.161	2$^+$	[E2]		0.00695	α(K)=0.00574 *8*; α(L)=0.000948 *14*; α(M)=0.000211 *3*;
									α(N+..)=5.56×10^{-5} *8*
									α(N)=4.84×10^{-5} *7*; α(O)=6.84×10^{-6} *10*; α(P)=3.28×10^{-7} *5*
686.15[f#] *6*	0.29[f#] *8*	2009.802		1324.465	6$^+$				E_γ,I_γ: from 2006Ap01. 1995Be02 report Eγ=685.3 *2* and Iγ=1.3 *2* (after renormalization of their intensity scale).
[x]687.20 *5*	0.17 *3*								α(K)exp=0.031 *8*
[x]687.54 *7*	0.27 *3*					M1		0.01330	α(K)exp=0.0158 *24*
									α(K)=0.01128 *16*; α(L)=0.001580 *23*; α(M)=0.000345 *5*;
									α(N+..)=9.23×10^{-5} *13*
									α(N)=7.99×10^{-5} *12*; α(O)=1.174×10^{-5} *17*; α(P)=6.85×10^{-7} *10*
[x]690.68 *3*	1.5 *3*					M1		0.01315	α(K)exp=0.0128 *23*
									α(K)=0.01115 *16*; α(L)=0.001562 *22*; α(M)=0.000341 *5*;
									α(N+..)=9.13×10^{-5} *13*
									α(N)=7.90×10^{-5} *11*; α(O)=1.161×10^{-5} *17*; α(P)=6.77×10^{-7} *10*
[x]693.869 *13*	1.22 *8*					M1		0.01300	α(L1)exp=0.0018 *4*
									α(K)=0.01102 *16*; α(L)=0.001544 *22*; α(M)=0.000337 *5*;
									α(N+..)=9.02×10^{-5} *13*
									α(N)=7.81×10^{-5} *11*; α(O)=1.148×10^{-5} *16*; α(P)=6.70×10^{-7} *10*
[x]695.30 *7*	0.28 *8*								α(K)exp=0.033 *10*
697.277 *2*	59.9 *24*	962.940	3$^+$	265.663	4$^+$	E2(+M1)	>45	0.00670	α(K)exp=0.0056 *2*

$^{162}_{66}Dy_{96}$-24

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

$\gamma(^{162}Dy)$ (continued)

E_γ [†]	I_γ [ad]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [b]	α [e]	Comments
								α(K)=0.00553 *8*; α(L)=0.000909 *13*; α(M)=0.000202 *3*; α(N+..)=5.33×10^{-5} *8* α(N)=4.64×10^{-5} *7*; α(O)=6.56×10^{-6} *10*; α(P)=3.17×10^{-7} *5* δ: 2006Ap01 report δ>4.5.
[x]703.041 *13*	1.08 *6*					E1	0.00248	α(K)exp=0.0020 *7* α(K)=0.00212 *3*; α(L)=0.000286 *4*; α(M)=6.21×10^{-5} *9*; α(N+..)=1.650×10^{-5} *23* α(N)=1.430×10^{-5} *20*; α(O)=2.08×10^{-6} *3*; α(P)=1.171×10^{-7} *17*
703.582 *13*	0.83 *4*	1851.812	4$^-$	1148.232	2$^-$	E2	0.00656	α(K)exp=0.0043 *6* α(K)=0.00542 *8*; α(L)=0.000888 *13*; α(M)=0.000197 *3*; α(N+..)=5.20×10^{-5} *8* α(N)=4.53×10^{-5} *7*; α(O)=6.41×10^{-6} *9*; α(P)=3.10×10^{-7} *5*
705.614 *7*	4.9 *5*	1766.608	3$^-$	1060.991	4$^+$	E1	0.00246	α(K)exp=0.0021 *3* α(K)=0.00210 *3*; α(L)=0.000283 *4*; α(M)=6.16×10^{-5} *9*; α(N+..)=1.637×10^{-5} *23* α(N)=1.419×10^{-5} *20*; α(O)=2.06×10^{-6} *3*; α(P)=1.162×10^{-7} *17*
[x]708.26 *8*	0.25 *6*							α(L1)exp=0.018 *6*
[x]709.79 *9*	0.10 *4*							α(L1)exp=0.031 *14*
[x]710.618 *23*	0.43 *5*					M1+E2	0.009 *3*	α(K)exp=0.009 *3* α(K)=0.008 *3*; α(L)=0.0012 *3*; α(M)=0.00025 *7*; α(N+..)=6.8×10^{-5} *18* α(N)=5.9×10^{-5} *15*; α(O)=8.5×10^{-6} *23*; α(P)=4.7×10^{-7} *17*
[x]711.426 *9*	1.3 *3*					M1	0.01221	α(K)exp=0.010 *3* α(K)=0.01036 *15*; α(L)=0.001450 *21*; α(M)=0.000317 *5*; α(N+..)=8.47×10^{-5} *12* α(N)=7.33×10^{-5} *11*; α(O)=1.078×10^{-5} *15*; α(P)=6.29×10^{-7} *9*
713.0 *6*	6.3 *3*	2009.802		1297.006	4$^-$			
714.444 *5*	6.9 *5*	1862.677	4$^-$	1148.232	2$^-$	E2	0.0063	α(K)exp=0.0055 *4* α(K)=0.0051; α(L)=0.00085; α(M)=0.000189; α(N+..)=5.00×10^{-5} α(N)=4.33×10^{-5}; α(O)=6.1×10^{-6}; α(P)=3.00×10^{-7} α(K)exp gives δ(E2/M1)>2.7.
[x]718.91 *7*	0.14 *4*					M1	0.01190	α(K)exp=0.018 *5* α(K)=0.01010 *15*; α(L)=0.001412 *20*; α(M)=0.000309 *5*; α(N+..)=8.25×10^{-5} *12* α(N)=7.14×10^{-5} *10*; α(O)=1.050×10^{-5} *15*; α(P)=6.13×10^{-7} *9*
[x]721.34 *5*	0.87 *14*					E1	0.00235	α(K)exp=0.0024 *5* α(K)=0.00201 *3*; α(L)=0.000271 *4*; α(M)=5.88×10^{-5} *9*; α(N+..)=1.564×10^{-5} *22* α(N)=1.356×10^{-5} *19*; α(O)=1.97×10^{-6} *3*; α(P)=1.112×10^{-7} *16*
[x]721.64 *11*	0.24 *7*					E2+M1	0.009 *3*	α(K)exp=0.009 *3* α(K)=0.0076 *25*; α(L)=0.0011 *3*; α(M)=0.00025 *6*; α(N+..)=6.5×10^{-5} *17* α(N)=5.7×10^{-5} *15*; α(O)=8.2×10^{-6} *22*; α(P)=4.5×10^{-7} *16*
[x]726.143 *17*	0.67 *6*					E1	0.00232	α(K)exp=0.0030 *6* α(K)=0.00198 *3*; α(L)=0.000267 *4*; α(M)=5.80×10^{-5} *9*; α(N+..)=1.543×10^{-5} *22* α(N)=1.337×10^{-5} *19*; α(O)=1.94×10^{-6} *3*; α(P)=1.098×10^{-7} *16*
728.384[f#] *15*	4.7[f#] *5*	1691.341	2$^-$	962.940	3$^+$	E1	0.00231	α(K)exp=0.0019 *2*

$^{162}_{66}Dy_{96}$-25

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

γ(^{162}Dy) (continued)

E_γ[†]	I_γ[ad]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[b]	α[e]	Comments
								α(K)=0.00197 *3*; α(L)=0.000265 *4*; α(M)=5.77×10^{-5} *8*; α(N+..)=1.533×10^{-5} *22* α(N)=1.329×10^{-5} *19*; α(O)=1.93×10^{-6} *3*; α(P)=1.091×10^{-7} *16*
728.384[f#] *15*	4.7[f#] *5*	2053.541	5$^-$	1324.465	6$^+$			E_γ,I_γ: from 2006Ap01. 1995Be02 report Eγ=728.8 *1* and Iγ=5.9 *7*.
[x]729.374 *8*	1.98 *16*					E1	0.00230	α(K)exp=0.0025 *3* α(K)=0.00197 *3*; α(L)=0.000265 *4*; α(M)=5.75×10^{-5} *8*; α(N+..)=1.528×10^{-5} *22* α(N)=1.325×10^{-5} *19*; α(O)=1.93×10^{-6} *3*; α(P)=1.088×10^{-7} *16*
[x]730.405 *16*	0.76 *7*					M1	0.01144	α(K)exp=0.0092 *9* α(K)=0.00971 *14*; α(L)=0.001357 *19*; α(M)=0.000297 *5*; α(N+..)=7.93×10^{-5} *12* α(N)=6.86×10^{-5} *10*; α(O)=1.009×10^{-5} *15*; α(P)=5.89×10^{-7} *9*
[x]733.296 *20*	0.77 *6*					E2+M1	0.009 *3*	α(K)exp=0.0068 *7* α(K)=0.0073 *24*; α(L)=0.0011 *3*; α(M)=0.00024 *6*; α(N+..)=6.3×10^{-5} *16* α(N)=5.4×10^{-5} *14*; α(O)=7.9×10^{-6} *22*; α(P)=4.3×10^{-7} *15*
[x]735.24 *3*	0.37 *14*							α(K)exp=0.0039 *21* Mult.: E1 or E2.
[x]737.33 *12*	0.25 *6*							α(L1)exp=0.012 *3*
[x]738.69 *7*	0.43 *8*					E2	0.00587	α(K)exp=0.0052 *15* α(K)=0.00486 *7*; α(L)=0.000784 *11*; α(M)=0.0001739 *25*; α(N+..)=4.59×10^{-5} *7* α(N)=4.00×10^{-5} *6*; α(O)=5.67×10^{-6} *8*; α(P)=2.79×10^{-7} *4*
741.313 *13*	1.60 *8*	1951.391	3$^+$,4$^+$	1210.089	3$^-$	[E1]	0.00223	α(K)=0.00190 *3*; α(L)=0.000256 *4*; α(M)=5.56×10^{-5} *8*; α(N+..)=1.478×10^{-5} *21* α(N)=1.281×10^{-5} *18*; α(O)=1.86×10^{-6} *3*; α(P)=1.054×10^{-7} *15*
[x]742.73 *8*	0.24 *5*							α(K)exp=0.029 *8*
[x]745.47 *6*	0.39 *6*							α(L1)exp=0.029 *4*
[x]747.208 *7*	3.90 *9*					E1	0.00219	α(K)exp=0.0016 *1* α(K)=0.00187 *3*; α(L)=0.000252 *4*; α(M)=5.47×10^{-5} *8*; α(N+..)=1.454×10^{-5} *21* α(N)=1.261×10^{-5} *18*; α(O)=1.83×10^{-6} *3*; α(P)=1.037×10^{-7} *15*
747.7 *1*	4.1 *5*	2071.95	(4)	1324.465	6$^+$			Shown as doubly placed by 1995Be02. The other placement is from a 1895 level, but this level is not confirmed by 2006Ap01. 2006Ap01 report an unplaced 747.208 γ, with Iγ=3.90, but its assigned mult, E1, is not consistent with the implied placement.
[x]749.026 *8*	1.86 *5*					M1	0.01075	α(K)exp=0.0075 *3* α(K)=0.00912 *13*; α(L)=0.001274 *18*; α(M)=0.000278 *4*; α(N+..)=7.44×10^{-5} *11* α(N)=6.44×10^{-5} *9*; α(O)=9.47×10^{-6} *14*; α(P)=5.53×10^{-7} *8*
[x]750.95 *11*	0.29 *4*					M1	0.01068	α(K)exp=0.0073 *21*

$^{162}_{66}Dy_{96}$-26

γ(^{162}Dy) (continued)

E_γ [†]	I_γ [ad]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [b]	δ [bc]	α [e]	Comments
									α(K)=0.00907 *13*; α(L)=0.001266 *18*; α(M)=0.000277 *4*; α(N+..)=7.40×10^{-5} *11*
									α(N)=6.40×10^{-5} *9*; α(O)=9.41×10^{-6} *14*; α(P)=5.50×10^{-7} *8*
753.500 *11*	1.8 *2*	1963.598	5$^-$	1210.089	3$^-$	E2		0.0056	α(K)exp=0.0048 *9*
									α(K)=0.0046; α(L)=0.00074; α(M)=0.000165; α(N+..)=4.3×10^{-5}
									α(N)=3.8×10^{-5}; α(O)=5.4×10^{-6}; α(P)=2.6×10^{-7}
									α(K)exp gives δ(E2/M1)>1.8.
[x]756.05 *5*	0.29 *5*								α(L1)exp=0.013 *3*
765.756 *9*	2.8 *2*	1826.747	4$^-$	1060.991	4$^+$	[E1]		0.00209	α(K)=0.001783 *25*; α(L)=0.000239 *4*; α(M)=5.20×10^{-5} *8*; α(N+..)=1.383×10^{-5} *20*
									α(N)=1.199×10^{-5} *17*; α(O)=1.745×10^{-6} *25*; α(P)=9.88×10^{-8} *14*
[x]768.702 *9*	3.46 *17*					M1		0.01009	α(K)exp=0.0081 *5*
									α(K)=0.00856 *12*; α(L)=0.001194 *17*; α(M)=0.000261 *4*; α(N+..)=6.98×10^{-5} *10*
									α(N)=6.04×10^{-5} *9*; α(O)=8.88×10^{-6} *13*; α(P)=5.19×10^{-7} *8*
769.0[@] *1*	6.7 *3*	2128.094	(2$^+$)	1357.930	3$^-$				
[x]770.78 *4*	0.90 *8*					E2+M1		0.0077 *24*	α(K)exp=0.008 *3*
									α(K)=0.0065 *21*; α(L)=0.00095 *25*; α(M)=0.00021 *6*; α(N+..)=5.5×10^{-5} *14*
									α(N)=4.8×10^{-5} *12*; α(O)=7.0×10^{-6} *19*; α(P)=3.8×10^{-7} *13*
775.941 *3*	11.0 *7*	1324.465	6$^+$	548.520	6$^+$	E2(+M1)	>2.3	0.0056 *4*	α(K)exp=0.0046 *3*
									α(K)=0.0047 *4*; α(L)=0.00073 *4*; α(M)=0.000162 *9*; α(N+..)=4.28×10^{-5} *23*
									α(N)=3.72×10^{-5} *20*; α(O)=5.3×10^{-6} *3*; α(P)=2.71×10^{-7} *21*
779.494 *6*	4.0 *3*	1840.486	3$^+$	1060.991	4$^+$	M1(+E2)	<0.55	0.0092 *6*	α(K)exp=0.0080 *6*
									α(K)=0.0078 *5*; α(L)=0.00110 *6*; α(M)=0.000240 *13*; α(N+..)=6.4×10^{-5} *4*
									α(N)=5.6×10^{-5} *3*; α(O)=8.2×10^{-6} *5*; α(P)=4.7×10^{-7} *3*
780.77 *4*	0.6 *1*	1963.598	5$^-$	1182.762	5$^+$	[E1]		0.00201	α(K)=0.001715 *24*; α(L)=0.000230 *4*; α(M)=5.00×10^{-5} *7*; α(N+..)=1.330×10^{-5} *19*
									α(N)=1.153×10^{-5} *17*; α(O)=1.678×10^{-6} *24*; α(P)=9.52×10^{-8} *14*
[x]782.021 *12*	1.64 *15*					E1		0.00200	α(K)exp=0.0019 *2*
									α(K)=0.001710 *24*; α(L)=0.000229 *4*; α(M)=4.98×10^{-5} *7*; α(N+..)=1.326×10^{-5} *19*
									α(N)=1.149×10^{-5} *16*; α(O)=1.673×10^{-6} *24*; α(P)=9.49×10^{-8} *14*
[x]787.81 *16*	0.26 *11*					E2		0.00508	α(K)exp=0.006 *3*
									α(K)=0.00422 *6*; α(L)=0.000667 *10*; α(M)=0.0001477 *21*; α(N+..)=3.91×10^{-5} *6*
									α(N)=3.40×10^{-5} *5*; α(O)=4.84×10^{-6} *7*; α(P)=2.43×10^{-7} *4*

$^{162}_{66}$Dy$_{96}$-27

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

γ(^{162}Dy) (continued)

E_γ[†]	I_γ[ad]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[b]	δ[bc]	α[e]	Comments
[x]790.167 *9*	4.43 *16*								α(K)exp=0.0025 *1*
790.6[@] *2*	3.7 *7*	1999.35	2+	1210.089	3−				
795.327 *3*	115 *5*	1060.991	4+	265.663	4+	E2+M1	+12 *+18−4*	0.00500 *8*	α(K)exp=0.0043 *2* α(K)=0.00416 *7*; α(L)=0.000655 *10*; α(M)=0.0001449 *22*; α(N+..)=3.83×10^{-5} *6* α(N)=3.33×10^{-5} *5*; α(O)=4.75×10^{-6} *8*; α(P)=2.39×10^{-7} *4*
[x]798.52 *11*	0.37 *9*					M1		0.00918	α(K)exp=0.012 *4* α(K)=0.00780 *11*; α(L)=0.001086 *16*; α(M)=0.000237 *4*; α(N+..)=6.35×10^{-5} *9* α(N)=5.49×10^{-5} *8*; α(O)=8.08×10^{-6} *12*; α(P)=4.72×10^{-7} *7*
798.52[‡@]	0.37[‡]	2009.802		1210.089	3−				
[x]801.65 *8*	0.50 *19*					M1		0.00910	α(K)exp=0.007 *3* α(K)=0.00772 *11*; α(L)=0.001076 *15*; α(M)=0.000235 *4*; α(N+..)=6.28×10^{-5} *9* α(N)=5.44×10^{-5} *8*; α(O)=8.00×10^{-6} *12*; α(P)=4.68×10^{-7} *7*
803.677 *8*	5.1 *2*	1766.608	3−	962.940	3+	(E1)		0.00190	α(K)exp=0.0038 *3* α(K)=0.001620 *23*; α(L)=0.000217 *3*; α(M)=4.72×10^{-5} *7*; α(N+..)=1.255×10^{-5} *18* α(N)=1.087×10^{-5} *16*; α(O)=1.584×10^{-6} *23*; α(P)=9.00×10^{-8} *13* Mult.: E1 or E2 from α(K)exp.
807.501 *2*	191 *5*	888.161	2+	80.661	2+	E2+M1	+57 *+∞−33*	0.00481	α(K)exp=0.0041 *1* α(K)=0.00400 *6*; α(L)=0.000628 *9*; α(M)=0.0001390 *20*; α(N+..)=3.68×10^{-5} *6* α(N)=3.20×10^{-5} *5*; α(O)=4.56×10^{-6} *7*; α(P)=2.30×10^{-7} *4* δ: 2006Ap01 report δ>5.4.
[x]809.42 *5*	1.52 *24*								α(L1)exp=0.0058 *12*
[x]816.13 *3*	0.82 *20*					E1		0.00184	α(K)exp=0.0022 *8* α(K)=0.001572 *22*; α(L)=0.000211 *3*; α(M)=4.57×10^{-5} *7*; α(N+..)=1.216×10^{-5} *17* α(N)=1.054×10^{-5} *15*; α(O)=1.536×10^{-6} *22*; α(P)=8.73×10^{-8} *13*
[x]819.547 *8*	3.44 *10*					M1		0.00862	α(K)exp=0.0070 *2* α(K)=0.00732 *11*; α(L)=0.001018 *15*; α(M)=0.000222 *4*; α(N+..)=5.95×10^{-5} *9* α(N)=5.15×10^{-5} *8*; α(O)=7.57×10^{-6} *11*; α(P)=4.43×10^{-7} *7*
[x]820.83 *6*	0.54 *6*								α(K)exp=0.021 *4*
[x]826.27 *9*	0.44 *8*								α(L1)exp=0.008 *2*
826.77[‡]	0.43[‡]	2009.802		1182.762	5+				
[x]834.39 *5*	1.18 *11*								α(L1)exp=0.0108 *11*
840.20 *6*	0.5 *2*	1728.319	2+	888.161	2+	[M1,E2]		0.0063 *19*	α(K)=0.0053 *16*; α(L)=0.00076 *20*; α(M)=0.00017 *5*;

$^{162}_{66}Dy_{96}$-28

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

γ(^{162}Dy) (continued)

E_γ[†]	I_γ[ad]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[b]	δ[bc]	α[e]	Comments
									α(N+..)=4.5×10^{-5} *12* α(N)=3.9×10^{-5} *10*; α(O)=5.6×10^{-6} *15*; α(P)=3.1×10^{-7} *11*
841.990 *4*	13.2 *4*	1390.514	5$^-$	548.520	6$^+$	E1		1.73×10^{-3}	α(K)exp=0.00178 *9* α(K)=0.001479 *21*; α(L)=0.000198 *3*; α(M)=4.30×10^{-5} *6*; α(N+..)=1.143×10^{-5} *16* α(N)=9.90×10^{-6} *14*; α(O)=1.444×10^{-6} *21*; α(P)=8.22×10^{-8} *12*
[x]843.061 *15*	2.32 *16*					E1		1.73×10^{-3}	α(K)exp=0.0016 *2* α(K)=0.001476 *21*; α(L)=0.000197 *3*; α(M)=4.28×10^{-5} *6*; α(N+..)=1.140×10^{-5} *16* α(N)=9.88×10^{-6} *14*; α(O)=1.440×10^{-6} *21*; α(P)=8.20×10^{-8} *12*
[x]844.85 *6*	0.49 *8*								α(K)exp=0.0122 *24*
[x]846.07 *8*	0.57 *10*					M1		0.00797	α(K)exp=0.0053 *11* α(K)=0.00677 *10*; α(L)=0.000941 *14*; α(M)=0.000206 *3*; α(N+..)=5.50×10^{-5} *8* α(N)=4.76×10^{-5} *7*; α(O)=6.99×10^{-6} *10*; α(P)=4.09×10^{-7} *6*
849.435[f#] *7*	7.1[f#] *2*	1910.430	3$^-$	1060.991	4$^+$	E1		1.70×10^{-3}	α(K)exp=0.00178 *9* α(K)=0.001454 *21*; α(L)=0.000194 *3*; α(M)=4.22×10^{-5} *6*; α(N+..)=1.123×10^{-5} *16* α(N)=9.73×10^{-6} *14*; α(O)=1.419×10^{-6} *20*; α(P)=8.09×10^{-8} *12*
849.435[f#] *7*	7.1[f#] *7*	2125.228	0$^+$	1275.774	1$^-$				E_γ,I_γ: from 2006Ap01. 1995Be02 report Eγ=850.4 *8* and Iγ=10.3 *10* (after renormalization of their intensity scale).
[x]852.33 *7*	0.95 *13*								α(K)exp=0.120 *17*
[x]852.76 *5*	0.96 *19*								α(K)exp=0.011 *4*
[x]854.08 *5*	1.22 *12*					M1		0.00779	α(K)exp=0.0073 *12* α(K)=0.00661 *10*; α(L)=0.000919 *13*; α(M)=0.000201 *3*; α(N+..)=5.37×10^{-5} *8* α(N)=4.65×10^{-5} *7*; α(O)=6.83×10^{-6} *10*; α(P)=4.00×10^{-7} *6*
857.562 *9*	5.2 *3*	1745.716	1$^+$	888.161	2$^+$	M1(+E2)	<0.29	0.00757 *18*	α(K)exp=0.0068 *4* α(K)=0.00643 *15*; α(L)=0.000896 *19*; α(M)=0.000196 *5*; α(N+..)=5.23×10^{-5} *11* α(N)=4.53×10^{-5} *10*; α(O)=6.66×10^{-6} *15*; α(P)=3.89×10^{-7} *10*
863.808 *5*	10.6 *2*	1826.747	4$^-$	962.940	3$^+$	[E1]		1.65×10^{-3}	α(K)=0.001408 *20*; α(L)=0.000188 *3*; α(M)=4.08×10^{-5} *6*; α(N+..)=1.087×10^{-5} *16* α(N)=9.41×10^{-6} *14*; α(O)=1.373×10^{-6} *20*; α(P)=7.83×10^{-8} *11*

$^{162}_{66}Dy_{96}$-29

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

γ(^{162}Dy) (continued)

E_γ [†]	I_γ [ad]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [b]	δ [bc]	α [e]	Comments
[x]865.24 *5*	0.87 *14*					M1		0.00754	α(K)exp=0.0058 *10* α(K)=0.00641 *9*; α(L)=0.000890 *13*; α(M)=0.000194 *3*; α(N+..)=5.20×10^{-5} *8* α(N)=4.50×10^{-5} *7*; α(O)=6.62×10^{-6} *10*; α(P)=3.88×10^{-7} *6*
[x]870.87 *7*	1.32 *16*					E2		0.00408	α(K)exp=0.0027 *6* α(K)=0.00341 *5*; α(L)=0.000524 *8*; α(M)=0.0001156 *17*; α(N+..)=3.06×10^{-5} *5* α(N)=2.66×10^{-5} *4*; α(O)=3.81×10^{-6} *6*; α(P)=1.96×10^{-7} *3*
[x]872.65 *9*	0.97 *14*					E2		0.00406	α(K)exp=0.0030 *5* α(K)=0.00339 *5*; α(L)=0.000521 *8*; α(M)=0.0001150 *17*; α(N+..)=3.05×10^{-5} *5* α(N)=2.65×10^{-5} *4*; α(O)=3.79×10^{-6} *6*; α(P)=1.95×10^{-7} *3*
877.537 *14*	3.0 *1*	1840.486	3$^+$	962.940	3$^+$	M1		0.00729	α(K)exp=0.0087 *4* α(K)=0.00619 *9*; α(L)=0.000860 *12*; α(M)=0.000188 *3*; α(N+..)=5.02×10^{-5} *7* α(N)=4.34×10^{-5} *6*; α(O)=6.39×10^{-6} *9*; α(P)=3.74×10^{-7} *6*
878.444 *6*	11.2 *3*	1766.608	3$^-$	888.161	2$^+$	(E1)		1.60×10^{-3}	α(K)exp=0.0023 *1* α(K)=0.001363 *19*; α(L)=0.000182 *3*; α(M)=3.95×10^{-5} *6*; α(N+..)=1.051×10^{-5} *15* α(N)=9.11×10^{-6} *13*; α(O)=1.328×10^{-6} *19*; α(P)=7.58×10^{-8} *11*
882.276 *3*	303 *12*	962.940	3$^+$	80.661	2$^+$	E2+M1	+41 *+34−13*	0.00397	Mult.: E1 or E2 from α(K)exp. α(K)exp=0.0032 *1* α(K)=0.00332 *5*; α(L)=0.000509 *8*; α(M)=0.0001123 *16*; α(N+..)=2.97×10^{-5} *5* α(N)=2.58×10^{-5} *4*; α(O)=3.70×10^{-6} *6*; α(P)=1.91×10^{-7} *3*
888.157 *3*	175 *4*	888.161	2$^+$	0.0	0$^+$	E2		0.00391	α(K)exp=0.0032 *1* α(K)=0.00327 *5*; α(L)=0.000500 *7*; α(M)=0.0001103 *16*; α(N+..)=2.92×10^{-5} *4* α(N)=2.54×10^{-5} *4*; α(O)=3.64×10^{-6} *5*; α(P)=1.88×10^{-7} *3*
[x]894.250 *10*	3.9 *4*					M1		0.00696	α(K)exp=0.0072 *7* α(K)=0.00591 *9*; α(L)=0.000821 *12*; α(M)=0.000179 *3*; α(N+..)=4.79×10^{-5} *7* α(N)=4.15×10^{-5} *6*; α(O)=6.10×10^{-6} *9*; α(P)=3.57×10^{-7} *5*
[x]896.43 *8*	1.6 *3*					E1		1.53×10^{-3}	α(K)exp=0.0022 *4* α(K)=0.001311 *19*; α(L)=0.0001749 *25*; α(M)=3.80×10^{-5} *6*; α(N+..)=1.010×10^{-5} *15* α(N)=8.75×10^{-6} *13*; α(O)=1.277×10^{-6} *18*; α(P)=7.30×10^{-8} *11*

$^{162}_{66}Dy_{96}$-30

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

$\gamma(^{162}Dy)$ (continued)

E_γ [†]	I_γ [ad]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [b]	δ [bc]	α [e]	Comments
[x]900.770 *9*	4.90 *15*					E1		1.52×10^{-3}	α(K)exp=0.00145 *7* α(K)=0.001299 *19*; α(L)=0.0001732 *25*; α(M)=3.76×10^{-5} *6*; α(N+..)=1.001×10^{-5} *14* α(N)=8.67×10^{-6} *13*; α(O)=1.265×10^{-6} *18*; α(P)=7.23×10^{-8} *11*
902.610 *20*	1.5 *1*	1963.598	5^-	1060.991	4^+	[E1]		1.51×10^{-3}	α(K)=0.001294 *19*; α(L)=0.0001725 *25*; α(M)=3.74×10^{-5} *6*; α(N+..)=9.97×10^{-6} *14* α(N)=8.64×10^{-6} *12*; α(O)=1.260×10^{-6} *18*; α(P)=7.21×10^{-8} *10*
[x]911.947 *8*	5.44 *21*					E2		0.00369	α(K)exp=0.0034 *1* α(K)=0.00309 *5*; α(L)=0.000470 *7*; α(M)=0.0001036 *15*; α(N+..)=2.74×10^{-5} *4* α(N)=2.38×10^{-5} *4*; α(O)=3.42×10^{-6} *5*; α(P)=1.782×10^{-7} *25*
[x]913.19 *12*	0.40 *9*								α(K)exp=0.016 *5*
917.092 *2*	81 *5*	1182.762	5^+	265.663	4^+	E2+M1	+50 *+50−2*	0.00365	α(K)exp=0.0030 *2* α(K)=0.00306 *5*; α(L)=0.000464 *7*; α(M)=0.0001022 *15*; α(N+..)=2.71×10^{-5} *4* α(N)=2.35×10^{-5} *4*; α(O)=3.38×10^{-6} *5*; α(P)=1.762×10^{-7} *25*
[x]929.30 *5*	1.10 *13*					E2		0.00355	α(K)exp=0.0033 *5* α(K)=0.00297 *5*; α(L)=0.000450 *7*; α(M)=9.91×10^{-5} *14*; α(N+..)=2.63×10^{-5} *4* α(N)=2.28×10^{-5} *4*; α(O)=3.28×10^{-6} *5*; α(P)=1.714×10^{-7} *24*
[x]933.01 *5*	1.50 *13*								α(K)exp=0.057 *5*
[x]934.09 *3*	2.23 *15*								α(K)exp=0.0158 *21*
937.144 *7*	12.0 *8*	1485.671	5^-	548.520	6^+	E1		1.41×10^{-3}	α(K)exp=0.00123 *9* α(K)=0.001205 *17*; α(L)=0.0001604 *23*; α(M)=3.48×10^{-5} *5*; α(N+..)=9.27×10^{-6} *13* α(N)=8.03×10^{-6} *12*; α(O)=1.172×10^{-6} *17*; α(P)=6.72×10^{-8} *10*
944.424 *5*	48.4 *22*	1210.089	3^-	265.663	4^+	E1+M2	−0.10 *+3−5*	0.00153 *18*	α(K)exp=0.00126 *6* α(K)=0.00130 *15*; α(L)=0.000176 *22*; α(M)=3.8×10^{-5} *5*; α(N+..)=1.02×10^{-5} *13* α(N)=8.8×10^{-6} *12*; α(O)=1.29×10^{-6} *17*; α(P)=7.4×10^{-8} *10*
947.484 *8*	8.9 *3*	1910.430	3^-	962.940	3^+	E1		1.38×10^{-3}	α(K)exp=0.00118 *5*

$^{162}_{66}Dy_{96}$-31

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

$\gamma(^{162}Dy)$ (continued)

E_γ [†]	I_γ [ad]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [b]	α [e]	Comments
								α(K)=0.001180 *17*; α(L)=0.0001570 *22*; α(M)=3.41×10^{-5} *5*; α(N+..)=9.07×10^{-6} *13*
								α(N)=7.86×10^{-6} *11*; α(O)=1.147×10^{-6} *16*; α(P)=6.58×10^{-8} *10*
952.42 *9*	0.7 *2*	1840.486	3$^+$	888.161	2$^+$	[M1,E2]	0.0047 *13*	α(K)=0.0040 *12*; α(L)=0.00056 *14*; α(M)=0.00012 *3*; α(N+..)=3.3×10^{-5} *9*
								α(N)=2.9×10^{-5} *7*; α(O)=4.2×10^{-6} *11*; α(P)=2.3×10^{-7} *8*
[x]952.93 *4*	1.77 *15*					M1	0.00597	α(K)exp=0.0051 *4*
								α(K)=0.00507 *7*; α(L)=0.000702 *10*; α(M)=0.0001533 *22*; α(N+..)=4.10×10^{-5} *6*
								α(N)=3.55×10^{-5} *5*; α(O)=5.22×10^{-6} *8*; α(P)=3.06×10^{-7} *5*
[x]955.53 *3*	5.0 *7*					E2	0.00335	α(L1)exp=0.0004 *1*
								α(K)=0.00281 *4*; α(L)=0.000422 *6*; α(M)=9.29×10^{-5} *13*; α(N+..)=2.46×10^{-5} *4*
								α(N)=2.14×10^{-5} *3*; α(O)=3.07×10^{-6} *5*; α(P)=1.618×10^{-7} *23*
[x]957.58 *6*	2.6 *6*							α(K)exp=0.00043 *17*
[x]959.32 *6*	1.70 *15*					E1	1.35×10^{-3}	α(K)exp=0.0011 *2*
								α(K)=0.001153 *17*; α(L)=0.0001533 *22*; α(M)=3.33×10^{-5} *5*; α(N+..)=8.86×10^{-6} *13*
								α(N)=7.67×10^{-6} *11*; α(O)=1.120×10^{-6} *16*; α(P)=6.43×10^{-8} *9*
969.908 *6*	10.9 *4*	1518.426	5$^-$	548.520	6$^+$	E1	1.32×10^{-3}	α(K)exp=0.00121 *5*
								α(K)=0.001130 *16*; α(L)=0.0001501 *21*; α(M)=3.26×10^{-5} *5*; α(N+..)=8.67×10^{-6} *13*
								α(N)=7.51×10^{-6} *11*; α(O)=1.097×10^{-6} *16*; α(P)=6.30×10^{-8} *9*
[x]973.23 *16*	0.55 *13*							α(L1)exp=0.0072 *19*
[x]975.562 *10*	14.1 *9*					E1	1.31×10^{-3}	α(K)exp=0.0013 *1*
								α(K)=0.001117 *16*; α(L)=0.0001485 *21*; α(M)=3.22×10^{-5} *5*; α(N+..)=8.58×10^{-6} *12*
								α(N)=7.43×10^{-6} *11*; α(O)=1.085×10^{-6} *16*; α(P)=6.23×10^{-8} *9*
[x]977.25 *12*	0.70 *15*					M1	0.00561	α(K)exp=0.0050 *18*
								α(K)=0.00477 *7*; α(L)=0.000660 *10*; α(M)=0.0001441 *21*; α(N+..)=3.85×10^{-5} *6*
								α(N)=3.33×10^{-5} *5*; α(O)=4.90×10^{-6} *7*; α(P)=2.88×10^{-7} *4*
980.335 *6*	67.9 *25*	1060.991	4$^+$	80.661	2$^+$	E2	0.00317	α(K)exp=0.0027 *1*
								α(K)=0.00266 *4*; α(L)=0.000398 *6*; α(M)=8.75×10^{-5} *13*; α(N+..)=2.32×10^{-5} *4*
								α(N)=2.02×10^{-5} *3*; α(O)=2.90×10^{-6} *4*; α(P)=1.536×10^{-7} *22*
								α(K)exp gives δ(E2/M1)>3.6.
987.15 *22*	0.5 *2*	1535.664	4$^+$	548.520	6$^+$	(E2)	0.0022	α(K)exp=0.0050 *25*
								α(K)=0.0025; α(L)=0.00039 *1*; α(M)=0.00008; α(N+..)=2.2×10^{-5}

$^{162}_{66}Dy_{96}$-32

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

$\gamma(^{162}Dy)$ (continued)

E_γ [†]	I_γ [ad]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [b]	δ [bc]	α [e]	Comments
									α(N)=1.9×10^{-5}; α(O)=2.8×10^{-6}; α(P)=1.5×10^{-7}
988.44 *4*	2.0 *2*	1951.391	3$^+$,4$^+$	962.940	3$^+$	M1(+E2)	<0.87	0.0050 *5*	α(K)exp gives M1 or E2. α(K)exp=0.0044 *6* α(K)=0.0042 *5*; α(L)=0.00059 *6*; α(M)=0.000128 *12*; α(N+..)=3.4×10^{-5} *4* α(N)=3.0×10^{-5} *3*; α(O)=4.4×10^{-6} *5*; α(P)=2.5×10^{-7} *3*
[x]992.838 *14*	4.54 *15*					E1		1.26×10^{-3}	α(K)exp=0.00083 *7* α(K)=0.001081 *16*; α(L)=0.0001436 *21*; α(M)=3.11×10^{-5} *5*; α(N+..)=8.29×10^{-6} *12* α(N)=7.18×10^{-6} *10*; α(O)=1.050×10^{-6} *15*; α(P)=6.03×10^{-8} *9*
994.0[@] *4*	4.0 *7*	2053.541	5$^-$	1060.991	4$^+$				
[x]994.52 *9*	2.16 *18*					M1		0.00538	α(K)exp=0.0046 *4* α(K)=0.00457 *7*; α(L)=0.000632 *9*; α(M)=0.0001380 *20*; α(N+..)=3.69×10^{-5} *6* α(N)=3.19×10^{-5} *5*; α(O)=4.70×10^{-6} *7*; α(P)=2.76×10^{-7} *4*
[x]997.96 *4*	0.99 *19*					M1		0.00533	α(K)exp=0.0040 *8* α(K)=0.00453 *7*; α(L)=0.000627 *9*; α(M)=0.0001369 *20*; α(N+..)=3.66×10^{-5} *6* α(N)=3.17×10^{-5} *5*; α(O)=4.66×10^{-6} *7*; α(P)=2.74×10^{-7} *4*
[x]1007.08 *8*	1.71 *21*					M1		0.00522	α(K)exp=0.0049 *6* α(K)=0.00444 *7*; α(L)=0.000613 *9*; α(M)=0.0001338 *19*; α(N+..)=3.58×10^{-5} *5* α(N)=3.10×10^{-5} *5*; α(O)=4.56×10^{-6} *7*; α(P)=2.68×10^{-7} *4*
[x]1008.16 *6*	1.5 *3*					E2+M1		0.0041 *11*	α(K)exp=0.0033 *8* α(K)=0.0035 *10*; α(L)=0.00049 *12*; α(M)=0.00011 *3*; α(N+..)=2.9×10^{-5} *7* α(N)=2.5×10^{-5} *6*; α(O)=3.6×10^{-6} *10*; α(P)=2.1×10^{-7} *6*
[x]1009.954 *10*	8.9 *6*					E1		1.22×10^{-3}	α(K)exp=0.0015 *1* α(K)=0.001048 *15*; α(L)=0.0001390 *20*; α(M)=3.01×10^{-5} *5*; α(N+..)=8.03×10^{-6} *12* α(N)=6.96×10^{-6} *10*; α(O)=1.016×10^{-6} *15*; α(P)=5.85×10^{-8} *9*
[x]1010.55 *6*	1.38 *20*					E1,E2			α(K)exp=0.0019 *5*
[x]1012.06 *6*	0.61 *25*					E1		1.22×10^{-3}	α(K)exp=0.0013 *7* α(K)=0.001044 *15*; α(L)=0.0001384 *20*; α(M)=3.00×10^{-5} *5*; α(N+..)=8.00×10^{-6} *12* α(N)=6.93×10^{-6} *10*; α(O)=1.012×10^{-6} *15*; α(P)=5.82×10^{-8} *9*

$^{162}_{66}Dy_{96}$-33

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

$\gamma(^{162}Dy)$ (continued)

E_γ †	I_γ ad	E_i(level)	J_i^π	E_f	J_f^π	Mult. b	α e	Comments
x1015.03 *4*	1.8 *3*					M1	0.00512	α(K)exp=0.0049 *7* α(K)=0.00435 *6*; α(L)=0.000602 *9*; α(M)=0.0001313 *19*; α(N+..)=3.51×10^{-5} *5* α(N)=3.04×10^{-5} *5*; α(O)=4.47×10^{-6} *7*; α(P)=2.63×10^{-7} *4*
x1020.39 *20*	0.68 *18*					M1	0.00506	α(K)exp=0.0062 *17* α(K)=0.00430 *6*; α(L)=0.000594 *9*; α(M)=0.0001296 *19*; α(N+..)=3.47×10^{-5} *5* α(N)=3.00×10^{-5} *5*; α(O)=4.41×10^{-6} *7*; α(P)=2.59×10^{-7} *4*
1022.278 *11*	8.3 *5*	1910.430	3$^-$	888.161	2$^+$	E1	1.20×10^{-3}	α(K)exp=0.00125 *8* α(K)=0.001024 *15*; α(L)=0.0001358 *19*; α(M)=2.95×10^{-5} *5*; α(N+..)=7.85×10^{-6} *11* α(N)=6.80×10^{-6} *10*; α(O)=9.93×10^{-7} *14*; α(P)=5.72×10^{-8} *8*
1025.753 *14*	5.0 *2*	1574.294	4$^+$	548.520	6$^+$	E2	0.0028	α(K)exp=0.0027 *2* α(K)=0.0024; α(L)=0.00036; α(M)=7.8×10^{-5}; α(N+..)=2.1×10^{-5} α(N)=1.81×10^{-5}; α(O)=2.6×10^{-6}; α(P)=1.40×10^{-7} α(K)exp gives δ(E2/M1)>1.2.
1027.15 *7*	3.5 *6*	1575.613	6$^-$	548.520	6$^+$			
x1027.73 *8*	1.12 *13*							α(L1)exp=0.0041 *8*
1031.36 *3*	2.2 *1*	1297.006	4$^-$	265.663	4$^+$			
x1050.27 *9*	0.63 *10*							α(L1)exp=0.0036 *17*
1058.779 *12*	6.5 *2*	1324.465	6$^+$	265.663	4$^+$	E2	0.00271	α(K)exp=0.0019 *1* α(K)=0.00228 *4*; α(L)=0.000335 *5*; α(M)=7.35×10^{-5} *11*; α(N+..)=1.95×10^{-5} *3* α(N)=1.694×10^{-5} *24*; α(O)=2.45×10^{-6} *4*; α(P)=1.314×10^{-7} *19*
x1063.85 *10*	1.20 *12*					E2	0.00268	α(K)exp=0.0019 *3* α(K)=0.00226 *4*; α(L)=0.000331 *5*; α(M)=7.28×10^{-5} *11*; α(N+..)=1.93×10^{-5} *3* α(N)=1.676×10^{-5} *24*; α(O)=2.42×10^{-6} *4*; α(P)=1.302×10^{-7} *19*
x1066.737 *22*	3.76 *16*					M1+E2	0.0036 *10*	α(K)exp=0.0032 *2* α(K)=0.0031 *9*; α(L)=0.00043 *11*; α(M)=9.4×10^{-5} *22*; α(N+..)=2.5×10^{-5} *6* α(N)=2.2×10^{-5} *6*; α(O)=3.2×10^{-6} *8*; α(P)=1.8×10^{-7} *6*
x1073.01 *14*	1.53 *14*					E1	1.10×10^{-3}	α(K)exp=0.0010 *5* α(K)=0.000937 *14*; α(L)=0.0001240 *18*; α(M)=2.69×10^{-5} *4*; α(N+..)=7.16×10^{-6} *10* α(N)=6.20×10^{-6} *9*; α(O)=9.07×10^{-7} *13*; α(P)=5.24×10^{-8} *8*
x1079.04 *6*	2.06 *23*					E2	0.00260	α(K)exp=0.0020 *2* α(K)=0.00219 *3*; α(L)=0.000321 *5*; α(M)=7.05×10^{-5} *10*;

$^{162}_{66}Dy_{96}$-34

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

γ(^{162}Dy) (continued)

E_γ[†]	I_γ[ad]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[b]	α[e]	Comments
								α(N+..)=1.87×10^{-5} *3* α(N)=1.624×10^{-5} *23*; α(O)=2.35×10^{-6} *4*; α(P)=1.266×10^{-7} *18*
[x]1080.25 *15*	0.98 *17*					E2	0.00260	α(K)exp=0.0026 *5* α(K)=0.00219 *3*; α(L)=0.000320 *5*; α(M)=7.03×10^{-5} *10*; α(N+..)=1.87×10^{-5} *3* α(N)=1.620×10^{-5} *23*; α(O)=2.34×10^{-6} *4*; α(P)=1.263×10^{-7} *18*
[x]1082.56 *5*	2.49 *21*					E2	0.00259	α(K)exp=0.0022 *3* α(K)=0.00218 *3*; α(L)=0.000319 *5*; α(M)=7.00×10^{-5} *10*; α(N+..)=1.86×10^{-5} *3* α(N)=1.613×10^{-5} *23*; α(O)=2.33×10^{-6} *4*; α(P)=1.257×10^{-7} *18*
1088.56[‡]	1.67[‡]	2148.675	(2)	1060.991	4$^+$			
[x]1088.57 *11*	1.7 *3*					E1,E2		α(K)exp=0.0015 *5*
1092.256 *6*	47 *3*	1357.930	3$^-$	265.663	4$^+$	E1	1.06×10^{-3}	α(K)exp=0.00089 *6* α(K)=0.000907 *13*; α(L)=0.0001200 *17*; α(M)=2.60×10^{-5} *4*; α(N+..)=6.93×10^{-6} *10* α(N)=6.00×10^{-6} *9*; α(O)=8.78×10^{-7} *13*; α(P)=5.07×10^{-8} *7*
[x]1096.61 *5*	1.9 *5*					E2+M1	0.0034 *9*	α(K)exp=0.0029 *10* α(K)=0.0029 *8*; α(L)=0.00040 *10*; α(M)=8.8×10^{-5} *21*; α(N+..)=2.4×10^{-5} *6* α(N)=2.0×10^{-5} *5*; α(O)=3.0×10^{-6} *8*; α(P)=1.7×10^{-7} *5*
[x]1098.69 *8*	0.62 *23*					M1	0.00423	α(K)exp=0.005 *3* α(K)=0.00360 *5*; α(L)=0.000496 *7*; α(M)=0.0001083 *16*; α(N+..)=2.89×10^{-5} *4* α(N)=2.50×10^{-5} *4*; α(O)=3.69×10^{-6} *6*; α(P)=2.17×10^{-7} *3*
[x]1100.58 *7*	1.52 *18*					E1	1.05×10^{-3}	α(K)exp=0.0009 *7* α(K)=0.000895 *13*; α(L)=0.0001183 *17*; α(M)=2.56×10^{-5} *4*; α(N+..)=8.56×10^{-6} *12* α(N)=5.92×10^{-6} *9*; α(O)=8.66×10^{-7} *13*; α(P)=5.00×10^{-8} *7*; α(IPF)=1.724×10^{-6} *25*
[x]1107.54 *11*	1.8 *4*					E2+M1	0.0033 *9*	α(K)exp=0.0023 *6* α(K)=0.0028 *8*; α(L)=0.00039 *10*; α(M)=8.6×10^{-5} *20*; α(N+..)=2.3×10^{-5} *6* α(N)=2.0×10^{-5} *5*; α(O)=2.9×10^{-6} *7*; α(P)=1.7×10^{-7} *5*; α(IPF)=4.0×10^{-7} *4*
1108.6[f@] *3*	4.0[f] *8*	1999.35	2$^+$	888.161	2$^+$			
1108.85 *18*	2.1 *3*	2071.95	(4)	962.940	3$^+$	M1	0.00414	α(K)exp=0.0041 *6* α(K)=0.00352 *5*; α(L)=0.000485 *7*; α(M)=0.0001059 *15*;

$^{162}_{66}Dy_{96}$-35

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

$\gamma(^{162}Dy)$ (continued)

E_γ [†]	I_γ [ad]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [b]	δ [bc]	α [e]	Comments
									α(N+..)=2.88×10^{-5} *4* α(N)=2.45×10^{-5} *4*; α(O)=3.61×10^{-6} *5*; α(P)=2.12×10^{-7} *3*; α(IPF)=4.52×10^{-7} *7* E_γ,I_γ: from 2006Ap01, who list this γ as unplaced. This placement is that of the evaluator. 1995Be02 report Eγ=1108.6 *3* and Iγ=4.0 *8* (after renormalization of their intensity scale). They also show this peak as doubly placed, the other placement being from the 1999 level. 2006Ap01 report a 1110.84 γ from the 1999 level.
[x]1111.46 *13*	1.7 *5*					M1+E2		0.0033 *9*	α(K)exp=0.0031 *10* α(K)=0.0028 *8*; α(L)=0.00039 *10*; α(M)=8.6×10^{-5} *20*; α(N+..)=2.3×10^{-5} *6* α(N)=2.0×10^{-5} *5*; α(O)=2.9×10^{-6} *7*; α(P)=1.7×10^{-7} *5*; α(IPF)=4.6×10^{-7} *4*
[x]1113.41 *5*	4.6 *6*					E1		1.03×10^{-3}	α(K)exp=0.00099 *13* α(K)=0.000876 *13*; α(L)=0.0001158 *17*; α(M)=2.51×10^{-5} *4*; α(N+..)=9.40×10^{-6} *14* α(N)=5.79×10^{-6} *9*; α(O)=8.47×10^{-7} *12*; α(P)=4.90×10^{-8} *7*; α(IPF)=2.71×10^{-6} *4*
1114.3[@] *3*	3.8 *8*	2078.923	(2,3)	962.940	3$^+$				
[x]1114.69 *6*	2.98 *19*					M1		0.00409	α(L1)exp=0.00077 *7* α(K)=0.00348 *5*; α(L)=0.000479 *7*; α(M)=0.0001045 *15*; α(N+..)=2.85×10^{-5} *4* α(N)=2.42×10^{-5} *4*; α(O)=3.56×10^{-6} *5*; α(P)=2.09×10^{-7} *3*; α(IPF)=5.64×10^{-7} *8*
1124.839 *10*	34.6 *9*	1390.514	5$^-$	265.663	4$^+$	E1		1.01×10^{-3}	α(K)exp=0.00095 *4* α(K)=0.000860 *12*; α(L)=0.0001136 *16*; α(M)=2.46×10^{-5} *4*; α(N+..)=1.049×10^{-5} *15* α(N)=5.68×10^{-6} *8*; α(O)=8.31×10^{-7} *12*; α(P)=4.81×10^{-8} *7*; α(IPF)=3.93×10^{-6} *6*
[x]1126.17 *4*	5.5 *3*					E1		1.01×10^{-3}	α(K)exp=0.00110 *15* α(K)=0.000858 *12*; α(L)=0.0001134 *16*; α(M)=2.46×10^{-5} *4*; α(N+..)=1.064×10^{-5} *15* α(N)=5.67×10^{-6} *8*; α(O)=8.30×10^{-7} *12*; α(P)=4.80×10^{-8} *7*; α(IPF)=4.10×10^{-6} *6*
1129.419 *6*	78.0 *20*	1210.089	3$^-$	80.661	2$^+$	E1+M2	+0.05 *+5−3*	0.00102 *7*	α(K)exp=0.00084 *3* α(K)=0.00087 *6*; α(L)=0.000115 *9*; α(M)=2.50×10^{-5} *18*; α(N+..)=1.12×10^{-5} *5*

$^{162}_{66}Dy_{96}$-36

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

γ(^{162}Dy) (continued)

E_γ [†]	I_γ [ad]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [b]	α [e]	Comments
								α(N)=5.8×10^{-6} *5*; α(O)=8.5×10^{-7} *7*; α(P)=4.9×10^{-8} *4*; α(IPF)=4.51×10^{-6} *7*
[x]1132.37 *7*	1.00 *13*					M1	0.00394	α(K)exp=0.0048 *9* α(K)=0.00335 *5*; α(L)=0.000461 *7*; α(M)=0.0001006 *14*; α(N+..)=2.80×10^{-5} *4* α(N)=2.33×10^{-5} *4*; α(O)=3.43×10^{-6} *5*; α(P)=2.02×10^{-7} *3*; α(IPF)=1.051×10^{-6} *15*
[x]1132.99 *14*	1.91 *13*					M1	0.00393	α(K)exp=0.0040 *4* α(K)=0.00334 *5*; α(L)=0.000461 *7*; α(M)=0.0001005 *14*; α(N+..)=2.79×10^{-5} *4* α(N)=2.32×10^{-5} *4*; α(O)=3.42×10^{-6} *5*; α(P)=2.01×10^{-7} *3*; α(IPF)=1.073×10^{-6} *16*
[x]1141.18 *10*	1.8 *5*					M1	0.00387	α(K)exp=0.0031 *9* α(K)=0.00329 *5*; α(L)=0.000453 *7*; α(M)=9.87×10^{-5} *14*; α(N+..)=2.78×10^{-5} *4* α(N)=2.28×10^{-5} *4*; α(O)=3.36×10^{-6} *5*; α(P)=1.98×10^{-7} *3*; α(IPF)=1.397×10^{-6} *20*
[x]1141.64 *7*	4.0 *6*					E1	9.85×10^{-4}	α(K)exp=0.0007 *2* α(K)=0.000837 *12*; α(L)=0.0001105 *16*; α(M)=2.40×10^{-5} *4*; α(N+..)=1.284×10^{-5} *18* α(N)=5.53×10^{-6} *8*; α(O)=8.09×10^{-7} *12*; α(P)=4.68×10^{-8} *7*; α(IPF)=6.46×10^{-6} *10*
1142.3 *3*	6.0 *8*	2104.78	(2$^+$)	962.940	3$^+$			
[x]1150.89 *11*	1.33 *15*							α(K)exp=0.0013 *2*
[x]1152.72 *7*	1.3 *4*					M1	0.00378	α(K)exp=0.0040 *11* α(K)=0.00321 *5*; α(L)=0.000442 *7*; α(M)=9.64×10^{-5} *14*; α(N+..)=2.77×10^{-5} *4* α(N)=2.23×10^{-5} *4*; α(O)=3.28×10^{-6} *5*; α(P)=1.93×10^{-7} *3*; α(IPF)=1.98×10^{-6} *3*
1156.2[@] *2*	1.5 *6*	2120.717	(4$^-$)	962.940	3$^+$			
[x]1156.80 *11*	2.0 *4*					E2	0.00226	α(K)exp=0.0013 *2* α(K)=0.00191 *3*; α(L)=0.000276 *4*; α(M)=6.05×10^{-5} *9*; α(N+..)=1.80×10^{-5} *3* α(N)=1.395×10^{-5} *20*; α(O)=2.02×10^{-6} *3*; α(P)=1.102×10^{-7} *16*; α(IPF)=1.91×10^{-6} *3*
[x]1159.86 *19*	0.63 *15*					M1	0.00372	α(K)exp=0.0036 *9* α(K)=0.00316 *5*; α(L)=0.000435 *6*; α(M)=9.49×10^{-5} *14*; α(N+..)=2.78×10^{-5} *4* α(N)=2.20×10^{-5} *3*; α(O)=3.23×10^{-6} *5*; α(P)=1.90×10^{-7} *3*; α(IPF)=2.41×10^{-6} *4*

$^{162}_{66}Dy_{96}$-37

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

γ(^{162}Dy) (continued)

E_γ [†]	I_γ [ad]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [b]	δ [bc]	α [e]	Comments
[x]1161.25 *9*	1.38 *18*					M1		0.00371	α(K)exp=0.0033 *5* α(K)=0.00315 *5*; α(L)=0.000434 *6*; α(M)=9.47×10^{-5} *14*; α(N+..)=2.78×10^{-5} *4* α(N)=2.19×10^{-5} *3*; α(O)=3.22×10^{-6} *5*; α(P)=1.90×10^{-7} *3*; α(IPF)=2.51×10^{-6} *4*
[x]1165.55 *9*	1.66 *17*					E2+M1		0.0030 *8*	α(K)exp=0.0024 *3* α(K)=0.0025 *7*; α(L)=0.00035 *8*; α(M)=7.7×10^{-5} *18*; α(N+..)=2.3×10^{-5} *5* α(N)=1.8×10^{-5} *4*; α(O)=2.6×10^{-6} *6*; α(P)=1.5×10^{-7} *4*; α(IPF)=2.62×10^{-6} *20*
[x]1167.60 *20*	0.82 *16*					E2		0.00222	α(K)exp=0.0014 *4* α(K)=0.00187 *3*; α(L)=0.000270 *4*; α(M)=5.93×10^{-5} *9*; α(N+..)=1.83×10^{-5} *3* α(N)=1.367×10^{-5} *20*; α(O)=1.98×10^{-6} *3*; α(P)=1.082×10^{-7} *16*; α(IPF)=2.56×10^{-6} *4*
[x]1169.423 *25*	3.8 *5*					M1		0.00365	α(K)exp=0.0041 *5* α(K)=0.00310 *5*; α(L)=0.000427 *6*; α(M)=9.31×10^{-5} *13*; α(N+..)=2.80×10^{-5} *4* α(N)=2.15×10^{-5} *3*; α(O)=3.17×10^{-6} *5*; α(P)=1.87×10^{-7} *3*; α(IPF)=3.11×10^{-6} *5*
[x]1173.12 *7*	0.89 *11*					M1		0.00362	α(K)exp=0.0030 *5* α(K)=0.00308 *5*; α(L)=0.000424 *6*; α(M)=9.24×10^{-5} *13*; α(N+..)=2.81×10^{-5} *4* α(N)=2.14×10^{-5} *3*; α(O)=3.15×10^{-6} *5*; α(P)=1.85×10^{-7} *3*; α(IPF)=3.41×10^{-6} *5*
[x]1174.80 *7*	0.4 *3*								α(K)exp=0.0012 *12*
[x]1177.14 *10*	1.35 *24*								α(K)exp=0.0014 *3*
[x]1178.209 *25*	6.1 *4*								α(K)exp=0.00107 *8*
[x]1181.69 *13*	1.3 *3*					E2+M1		0.0029 *7*	α(K)exp=0.0028 *6* α(K)=0.0024 *6*; α(L)=0.00034 *8*; α(M)=7.4×10^{-5} *17*; α(N+..)=2.4×10^{-5} *5* α(N)=1.7×10^{-5} *4*; α(O)=2.5×10^{-6} *6*; α(P)=1.4×10^{-7} *4*; α(IPF)=3.9×10^{-6} *3*
[x]1186.68 *13*	1.2 *3*					E2		0.00215	α(K)exp=0.0020 *6* α(K)=0.00182 *3*; α(L)=0.000261 *4*; α(M)=5.73×10^{-5} *8*; α(N+..)=1.93×10^{-5} *3* α(N)=1.320×10^{-5} *19*; α(O)=1.91×10^{-6} *3*; α(P)=1.048×10^{-7} *15*; α(IPF)=4.04×10^{-6} *6*
1186.8 *6*	2.3 *10*	2148.675	(2)	962.940	3$^+$				
1187.777 *12*	12.7 *3*	1453.469	2$^+$	265.663	4$^+$	E2		0.00215	α(K)exp=0.00178 *5* α(K)=0.00181 *3*; α(L)=0.000261 *4*; α(M)=5.71×10^{-5} *8*;

$^{162}_{66}Dy_{96}$-38

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

$\gamma(^{162}Dy)$ (continued)

E_γ †	I_γ ad	E_i(level)	J_i^π	E_f	J_f^π	Mult. b	α e	Comments
								α(N+..)=1.93×10^{-5} *3*
								α(N)=1.317×10^{-5} *19*; α(O)=1.91×10^{-6} *3*; α(P)=1.047×10^{-7} *15*;
								α(IPF)=4.14×10^{-6} *6*
1195.092 *7*	41 *3*	1275.774	1$^-$	80.661	2$^+$	E1	9.23×10^{-4}	α(K)exp=0.00079 *6*
								α(K)=0.000772 *11*; α(L)=0.0001017 *15*; α(M)=2.20×10^{-5} *3*;
								α(N+..)=2.75×10^{-5} *4*
								α(N)=5.09×10^{-6} *8*; α(O)=7.44×10^{-7} *11*; α(P)=4.32×10^{-8} *6*;
								α(IPF)=2.17×10^{-5} *3*
x1200.4 *3*	1.3 *3*					M1	0.00343	α(K)exp=0.0029 *6*
								α(K)=0.00291 *4*; α(L)=0.000401 *6*; α(M)=8.74×10^{-5} *13*;
								α(N+..)=2.96×10^{-5} *5*
								α(N)=2.02×10^{-5} *3*; α(O)=2.98×10^{-6} *5*; α(P)=1.753×10^{-7} *25*;
								α(IPF)=6.20×10^{-6} *10*
x1204.19 *5*	2.7 *3*					E2+M1	0.0028 *7*	α(K)exp=0.0023 *3*
								α(K)=0.0023 *6*; α(L)=0.00033 *8*; α(M)=7.1×10^{-5} *16*; α(N+..)=2.5×10^{-5} *5*
								α(N)=1.6×10^{-5} *4*; α(O)=2.4×10^{-6} *6*; α(P)=1.4×10^{-7} *4*; α(IPF)=6.2×10^{-6} *5*
x1206.639 *23*	6.3 *5*					M1	0.00339	α(K)exp=0.0031 *3*
								α(K)=0.00288 *4*; α(L)=0.000396 *6*; α(M)=8.63×10^{-5} *12*;
								α(N+..)=3.01×10^{-5} *5*
								α(N)=2.00×10^{-5} *3*; α(O)=2.94×10^{-6} *5*; α(P)=1.731×10^{-7} *25*;
								α(IPF)=6.97×10^{-6} *10*
x1209.01 *7*	1.9 *3*					M1	0.00338	α(K)exp=0.0028 *4*
								α(K)=0.00287 *4*; α(L)=0.000394 *6*; α(M)=8.59×10^{-5} *12*;
								α(N+..)=3.02×10^{-5} *5*
								α(N)=1.99×10^{-5} *3*; α(O)=2.93×10^{-6} *4*; α(P)=1.723×10^{-7} *25*;
								α(IPF)=7.28×10^{-6} *11*
x1214.02 *18*	5.0 *16*					E1	9.06×10^{-4}	α(K)exp=0.0011 *4*
								α(K)=0.000750 *11*; α(L)=9.88×10^{-5} *14*; α(M)=2.14×10^{-5} *3*;
								α(N+..)=3.51×10^{-5} *5*
								α(N)=4.94×10^{-6} *7*; α(O)=7.24×10^{-7} *11*; α(P)=4.20×10^{-8} *6*;
								α(IPF)=2.93×10^{-5} *5*
x1217.58 *5*	6.4 *7*					M1	0.00332	α(K)exp=0.0028 *3*
								α(K)=0.00282 *4*; α(L)=0.000387 *6*; α(M)=8.44×10^{-5} *12*;
								α(N+..)=3.10×10^{-5} *5*
								α(N)=1.95×10^{-5} *3*; α(O)=2.88×10^{-6} *4*; α(P)=1.695×10^{-7} *24*;
								α(IPF)=8.43×10^{-6} *12*
1219.98 *3*	26.6 *8*	1485.671	5$^-$	265.663	4$^+$	E1	9.01×10^{-4}	α(K)exp=0.00073 *4*
								α(K)=0.000744 *11*; α(L)=9.79×10^{-5} *14*; α(M)=2.12×10^{-5} *3*;

$^{162}_{66}Dy_{96}$-39

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

γ(^{162}Dy) (continued)

E_γ [†]	I_γ [ad]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [b]	α [e]	Comments
								α(N+..)=3.76×10^{-5} *6* α(N)=4.90×10^{-6} *7*; α(O)=7.17×10^{-7} *10*; α(P)=4.16×10^{-8} *6*; α(IPF)=3.19×10^{-5} *5*
[x]1222.97 *4*	7.5 *6*					E2	0.00203	α(K)exp=0.00171 *15* α(K)=0.001712 *24*; α(L)=0.000245 *4*; α(M)=5.37×10^{-5} *8*; α(N+..)=2.22×10^{-5} *4* α(N)=1.238×10^{-5} *18*; α(O)=1.79×10^{-6} *3*; α(P)=9.89×10^{-8} *14*; α(IPF)=7.95×10^{-6} *12*
1226.4 *2*	2.1 *6*	2189.71	(2$^+$)	962.940	3$^+$			
[x]1228.00 *8*	2.2 *8*					M1	0.00326	α(K)exp=0.0029 *11* α(K)=0.00276 *4*; α(L)=0.000379 *6*; α(M)=8.27×10^{-5} *12*; α(N+..)=3.20×10^{-5} *5* α(N)=1.91×10^{-5} *3*; α(O)=2.82×10^{-6} *4*; α(P)=1.660×10^{-7} *24*; α(IPF)=9.92×10^{-6} *14*
[x]1232.07 *7*	3.6 *5*					E2	0.00200	α(K)exp=0.00149 *22* α(K)=0.001687 *24*; α(L)=0.000241 *4*; α(M)=5.28×10^{-5} *8*; α(N+..)=2.32×10^{-5} *4* α(N)=1.218×10^{-5} *17*; α(O)=1.767×10^{-6} *25*; α(P)=9.74×10^{-8} *14*; α(IPF)=9.11×10^{-6} *13*
1252.74 *3*	26 *2*	1518.426	5$^-$	265.663	4$^+$	E1	8.76×10^{-4}	α(K)exp=0.00058 *5* α(K)=0.000710 *10*; α(L)=9.34×10^{-5} *13*; α(M)=2.02×10^{-5} *3*; α(N+..)=5.22×10^{-5} *8* α(N)=4.67×10^{-6} *7*; α(O)=6.84×10^{-7} *10*; α(P)=3.97×10^{-8} *6*; α(IPF)=4.68×10^{-5} *7*
[x]1258.00 *24*	3.1 *8*							α(K)exp=0.0015 *4*
[x]1261.41 *20*	1.7 *5*					M1	0.00306	α(K)exp=0.0025 *8* α(K)=0.00259 *4*; α(L)=0.000356 *5*; α(M)=7.76×10^{-5} *11*; α(N+..)=3.60×10^{-5} *5* α(N)=1.79×10^{-5} *3*; α(O)=2.64×10^{-6} *4*; α(P)=1.557×10^{-7} *22*; α(IPF)=1.529×10^{-5} *22*
1261.6 *4*	1.9 *4*	2148.675	(2)	888.161	2$^+$			
[x]1267.73 *20*	1.9 *9*					E2	0.00190	α(K)exp=0.0014 *8* α(K)=0.001596 *23*; α(L)=0.000227 *4*; α(M)=4.97×10^{-5} *7*; α(N+..)=2.74×10^{-5} *4* α(N)=1.147×10^{-5} *16*; α(O)=1.665×10^{-6} *24*; α(P)=9.22×10^{-8} *13*; α(IPF)=1.418×10^{-5} *20*
[x]1269.46 *7*	4.1 *6*					E1	8.64×10^{-4}	α(K)exp=0.00066 *15* α(K)=0.000693 *10*; α(L)=9.12×10^{-5} *13*; α(M)=1.98×10^{-5} *3*;

$^{162}_{66}Dy_{96}$-40

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

γ(^{162}Dy) (continued)

E_γ †	I_γ ad	E_i(level)	J_i^π	E_f	J_f^π	Mult. b	δ bc	α e	Comments
									α(N+..)=5.99×10^{-5} *9* α(N)=4.56×10^{-6} *7*; α(O)=6.68×10^{-7} *10*; α(P)=3.88×10^{-8} *6*; α(IPF)=5.47×10^{-5} *8*
1275.810 *18*	30.3 *8*	1275.774	1$^-$	0.0	0$^+$	E1		8.60×10^{-4}	α(K)exp=0.00063 *2* α(K)=0.000687 *10*; α(L)=9.03×10^{-5} *13*; α(M)=1.96×10^{-5} *3*; α(N+..)=6.29×10^{-5} *9* α(N)=4.52×10^{-6} *7*; α(O)=6.62×10^{-7} *10*; α(P)=3.85×10^{-8} *6*; α(IPF)=5.77×10^{-5} *8*
1277.271 *11*	64.3 *12*	1357.930	3$^-$	80.661	2$^+$	E1		8.59×10^{-4}	α(K)exp=0.00071 *1* α(K)=0.000686 *10*; α(L)=9.02×10^{-5} *13*; α(M)=1.95×10^{-5} *3*; α(N+..)=6.36×10^{-5} *9* α(N)=4.51×10^{-6} *7*; α(O)=6.61×10^{-7} *10*; α(P)=3.84×10^{-8} *6*; α(IPF)=5.84×10^{-5} *9*
x1281.69 *9*	2.1 *6*					M1+E2		0.0024 *6*	α(K)exp=0.0020 *6* α(K)=0.0020 *5*; α(L)=0.00028 *6*; α(M)=6.2×10^{-5} *13*; α(N+..)=3.4×10^{-5} *5* α(N)=1.4×10^{-5} *3*; α(O)=2.1×10^{-6} *5*; α(P)=1.2×10^{-7} *3*; α(IPF)=1.77×10^{-5} *13*
x1287.57 *9*	2.1 *5*					M1		0.00292	α(K)exp=0.0022 *5* α(K)=0.00247 *4*; α(L)=0.000339 *5*; α(M)=7.38×10^{-5} *11*; α(N+..)=3.98×10^{-5} *6* α(N)=1.708×10^{-5} *24*; α(O)=2.52×10^{-6} *4*; α(P)=1.483×10^{-7} *21*; α(IPF)=2.01×10^{-5} *3*
x1294.78 *13*	7.5 *12*								α(K)exp=0.00028 *6*
1308.627 *15*	24 *2*	1574.294	4$^+$	265.663	4$^+$	M1(+E2)	+0.04 +*8*–*10*	0.00281 *5*	α(K)exp=0.0021 *2* α(K)=0.00237 *4*; α(L)=0.000326 *5*; α(M)=7.10×10^{-5} *11*; α(N+..)=4.34×10^{-5} *7* α(N)=1.642×10^{-5} *24*; α(O)=2.42×10^{-6} *4*; α(P)=1.426×10^{-7} *22*; α(IPF)=2.44×10^{-5} *4*
x1312.10 *10*	6.9 *6*					E2		1.78×10^{-3}	α(K)exp=0.00160 *13* α(K)=0.001493 *21*; α(L)=0.000211 *3*; α(M)=4.63×10^{-5} *7*; α(N+..)=3.41×10^{-5} *5* α(N)=1.067×10^{-5} *15*; α(O)=1.550×10^{-6} *22*; α(P)=8.63×10^{-8} *12*; α(IPF)=2.18×10^{-5} *3*
x1317.49 *11*	4.6 *6*					E2		1.77×10^{-3}	α(K)exp=0.00117 *14* α(K)=0.001481 *21*; α(L)=0.000210 *3*; α(M)=4.59×10^{-5} *7*; α(N+..)=3.50×10^{-5} *5*

$^{162}_{66}Dy_{96}$-41

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

$\gamma(^{162}Dy)$ (continued)

E_γ [†]	I_γ [ad]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [b]	α [e]	Comments
								α(N)=1.058×10^{-5} *15*; α(O)=1.537×10^{-6} *22*; α(P)=8.56×10^{-8} *12*; α(IPF)=2.28×10^{-5} *4*
1319.60 *6*	5.9 *7*	1400.27	0$^+$	80.661	2$^+$	E2	1.77×10^{-3}	α(K)exp=0.0012 *3* α(K)=0.001477 *21*; α(L)=0.000209 *3*; α(M)=4.57×10^{-5} *7*; α(N+..)=3.54×10^{-5} *5* α(N)=1.054×10^{-5} *15*; α(O)=1.532×10^{-6} *22*; α(P)=8.53×10^{-8} *12*; α(IPF)=2.32×10^{-5} *4*
[x]1325.60 *22*	4.3 *17*							α(K)exp=0.00022 *10*
[x]1327.09 *17*	3.1 *12*					E1	8.34×10^{-4}	α(K)exp=0.0007 *3* α(K)=0.000642 *9*; α(L)=8.42×10^{-5} *12*; α(M)=1.82×10^{-5} *3*; α(N+..)=8.96×10^{-5} *13* α(N)=4.21×10^{-6} *6*; α(O)=6.17×10^{-7} *9*; α(P)=3.60×10^{-8} *5*; α(IPF)=8.47×10^{-5} *12*
[x]1330.07 *11*	4.7 *10*					E1	8.33×10^{-4}	α(K)exp=0.0009 *2* α(K)=0.000639 *9*; α(L)=8.39×10^{-5} *12*; α(M)=1.82×10^{-5} *3*; α(N+..)=9.13×10^{-5} *13* α(N)=4.20×10^{-6} *6*; α(O)=6.15×10^{-7} *9*; α(P)=3.58×10^{-8} *5*; α(IPF)=8.64×10^{-5} *13*
[x]1333.24 *9*	3.0 *5*					M1	0.00270	α(L1)exp=0.00030 *7* α(K)=0.00227 *4*; α(L)=0.000312 *5*; α(M)=6.79×10^{-5} *10*; α(N+..)=4.84×10^{-5} *7* α(N)=1.572×10^{-5} *22*; α(O)=2.32×10^{-6} *4*; α(P)=1.365×10^{-7} *20*; α(IPF)=3.02×10^{-5} *5*
[x]1342.59 *8*	5.1 *8*					E1	8.28×10^{-4}	α(K)exp=0.0005 *1* α(K)=0.000629 *9*; α(L)=8.25×10^{-5} *12*; α(M)=1.79×10^{-5} *3*; α(N+..)=9.87×10^{-5} *14* α(N)=4.13×10^{-6} *6*; α(O)=6.05×10^{-7} *9*; α(P)=3.52×10^{-8} *5*; α(IPF)=9.39×10^{-5} *14*
[x]1349.68 *9*	4.5 *5*							α(K)exp=0.00017 *4*
[x]1355.13 *14*	3.6 *7*					E1	8.24×10^{-4}	α(K)exp=0.0005 *1* α(K)=0.000619 *9*; α(L)=8.12×10^{-5} *12*; α(M)=1.758×10^{-5} *25*; α(N+..)=0.0001063 *15* α(N)=4.06×10^{-6} *6*; α(O)=5.95×10^{-7} *9*; α(P)=3.47×10^{-8} *5*; α(IPF)=0.0001016 *15*
[x]1362.14 *16*	2.4 *6*					E2	1.67×10^{-3}	α(K)exp=0.0013 *3* α(K)=0.001390 *20*; α(L)=0.000196 *3*; α(M)=4.28×10^{-5} *6*; α(N+..)=4.41×10^{-5} *7* α(N)=9.87×10^{-6} *14*; α(O)=1.436×10^{-6} *21*; α(P)=8.03×10^{-8} *12*; α(IPF)=3.27×10^{-5} *5*
[x]1364.05 *15*	2.7 *7*					E2	1.67×10^{-3}	α(K)exp=0.0009 *3* α(K)=0.001386 *20*; α(L)=0.000195 *3*; α(M)=4.27×10^{-5} *6*; α(N+..)=4.45×10^{-5} *7*

$^{162}_{66}Dy_{96}$-42

γ(^{162}Dy) (continued)

E_γ †	I_γ ad	E_i(level)	J_i^π	E_f	J_f^π	Mult. b	δ bc	α e	Comments
									α(N)=9.84×10^{-6} *14*; α(O)=1.432×10^{-6} *20*; α(P)=8.01×10^{-8} *12*; α(IPF)=3.32×10^{-5} *5*
x1365.8 *3*	12 *4*								α(K)exp=0.00008 *3*
1372.790 *21*	18.1 *8*	1453.469	2$^+$	80.661	2$^+$	M1+E2(+E0)	+0.40 *15*	0.00241 *9*	α(K)exp=0.00230 *9* α(K)=0.00202 *8*; α(L)=0.000277 *10*; α(M)=6.04×10^{-5} *22*; α(N+..)=5.65×10^{-5} *14* α(N)=1.40×10^{-5} *5*; α(O)=2.06×10^{-6} *8*; α(P)=1.21×10^{-7} *5*; α(IPF)=4.03×10^{-5} *8* Mult.,δ: from 2002Go15, (n,n′γ). From α(K)exp=0.00230, 2006Ap01 report mult=M1. See the comment on this point in the Adopted Gammas. α: value computed from the listed mult and δ. The contribution from a possible E0 component has not been included.
x1375.06 *22*	1.7 *7*					E2		1.65×10^{-3}	α(K)exp=0.0009 *4* α(K)=0.001365 *20*; α(L)=0.000192 *3*; α(M)=4.20×10^{-5} *6*; α(N+..)=4.71×10^{-5} *7* α(N)=9.68×10^{-6} *14*; α(O)=1.408×10^{-6} *20*; α(P)=7.88×10^{-8} *11*; α(IPF)=3.60×10^{-5} *5*
x1376.84 *15*	2.5 *9*					E1		8.18×10^{-4}	α(K)exp=0.00065 *25* α(K)=0.000602 *9*; α(L)=7.89×10^{-5} *11*; α(M)=1.710×10^{-5} *24*; α(N+..)=0.0001202 *17* α(N)=3.95×10^{-6} *6*; α(O)=5.78×10^{-7} *8*; α(P)=3.38×10^{-8} *5*; α(IPF)=0.0001156 *17*
x1385.14 *18*	3.0 *6*					M1		0.00249	α(L1)exp=0.00029 *9* α(K)=0.00208 *3*; α(L)=0.000284 *4*; α(M)=6.20×10^{-5} *9*; α(N+..)=6.15×10^{-5} *9* α(N)=1.435×10^{-5} *20*; α(O)=2.11×10^{-6} *3*; α(P)=1.247×10^{-7} *18*; α(IPF)=4.49×10^{-5} *7*
x1393.17 *15*	2.1 *5*					E1		8.15×10^{-4}	α(K)exp=0.00053 *13* α(K)=0.000590 *9*; α(L)=7.73×10^{-5} *11*; α(M)=1.675×10^{-5} *24*; α(N+..)=0.0001310 *19* α(N)=3.87×10^{-6} *6*; α(O)=5.67×10^{-7} *8*; α(P)=3.31×10^{-8} *5*; α(IPF)=0.0001265 *18*
x1394.55 *18*	2.5 *5*					E1		8.15×10^{-4}	α(K)exp=0.00077 *18* α(K)=0.000589 *9*; α(L)=7.72×10^{-5} *11*; α(M)=1.672×10^{-5} *24*; α(N+..)=0.0001319 *19* α(N)=3.86×10^{-6} *6*; α(O)=5.66×10^{-7} *8*; α(P)=3.30×10^{-8} *5*; α(IPF)=0.0001274 *18*

$^{162}_{66}$Dy$_{96}$-43

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

$\gamma(^{162}Dy)$ (continued)

E_γ [†]	I_γ [ad]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [b]	δ [bc]	α [e]	Comments
1403.25 *11*	4.1 *15*	1669.087	4^-	265.663	4^+	E1		8.13×10^{-4}	α(K)exp=0.00045 *19* α(K)=0.000583 *9*; α(L)=7.63×10^{-5} *11*; α(M)=1.654×10^{-5} *24*; α(N+..)=0.0001377 *20* α(N)=3.82×10^{-6} *6*; α(O)=5.60×10^{-7} *8*; α(P)=3.27×10^{-8} *5*; α(IPF)=0.0001333 *19*
[x]1404.78 *10*	4.2 *11*					E2		1.59×10^{-3}	α(L1)exp=0.00015 *5* α(K)=0.001310 *19*; α(L)=0.000184 *3*; α(M)=4.02×10^{-5} *6*; α(N+..)=5.46×10^{-5} *8* α(N)=9.27×10^{-6} *13*; α(O)=1.349×10^{-6} *19*; α(P)=7.57×10^{-8} *11*; α(IPF)=4.39×10^{-5} *7*
[x]1413.32 *25*	1.5 *5*					E1		8.12×10^{-4}	α(K)exp=0.00061 *23* α(K)=0.000576 *8*; α(L)=7.54×10^{-5} *11*; α(M)=1.633×10^{-5} *23*; α(N+..)=0.0001445 *21* α(N)=3.77×10^{-6} *6*; α(O)=5.53×10^{-7} *8*; α(P)=3.23×10^{-8} *5*; α(IPF)=0.0001401 *20*
1415.30 *18*	2.2 *6*	1963.598	5^-	548.520	6^+	[E1]		8.12×10^{-4}	α(K)=0.000574 *8*; α(L)=7.52×10^{-5} *11*; α(M)=1.629×10^{-5} *23*; α(N+..)=0.0001458 *21* α(N)=3.76×10^{-6} *6*; α(O)=5.51×10^{-7} *8*; α(P)=3.22×10^{-8} *5*; α(IPF)=0.0001415 *20*
[x]1422.44 *24*	2.9 *8*					E2		1.56×10^{-3}	α(K)exp=0.0013 *4* α(K)=0.001279 *18*; α(L)=0.000179 *3*; α(M)=3.91×10^{-5} *6*; α(N+..)=5.94×10^{-5} *9* α(N)=9.03×10^{-6} *13*; α(O)=1.315×10^{-6} *19*; α(P)=7.39×10^{-8} *11*; α(IPF)=4.89×10^{-5} *7*
[x]1428.16 *15*	2.5 *7*					E2		1.55×10^{-3}	α(K)exp=0.0009 *3* α(K)=0.001270 *18*; α(L)=0.0001777 *25*; α(M)=3.88×10^{-5} *6*; α(N+..)=6.10×10^{-5} *9* α(N)=8.96×10^{-6} *13*; α(O)=1.304×10^{-6} *19*; α(P)=7.33×10^{-8} *11*; α(IPF)=5.06×10^{-5} *7*
[x]1437.33 *24*	2.5 *6*					E1		8.09×10^{-4}	α(K)exp=0.00070 *20* α(K)=0.000559 *8*; α(L)=7.32×10^{-5} *11*; α(M)=1.586×10^{-5} *23*; α(N+..)=0.0001608 *23* α(N)=3.66×10^{-6} *6*; α(O)=5.37×10^{-7} *8*; α(P)=3.14×10^{-8} *5*; α(IPF)=0.0001566 *22*
[x]1438.60 *10*	6.5 *8*					E1		8.09×10^{-4}	α(K)exp=0.00032 *7* α(K)=0.000558 *8*; α(L)=7.31×10^{-5} *11*; α(M)=1.583×10^{-5} *23*; α(N+..)=0.0001617 *23* α(N)=3.65×10^{-6} *6*; α(O)=5.36×10^{-7} *8*; α(P)=3.13×10^{-8} *5*; α(IPF)=0.0001575 *22*
[x]1442.56 *21*	5.7 *12*								α(K)exp=0.00017 *4*
[x]1456.6 *4*	12 *6*					E1		8.08×10^{-4}	α(K)exp=0.00021 *9* α(K)=0.000547 *8*; α(L)=7.15×10^{-5} *10*; α(M)=1.549×10^{-5} *22*; α(N+..)=0.0001741 *25*

$^{162}_{66}Dy_{96}$-44

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

γ(^{162}Dy) (continued)

E_γ †	I_γ ad	E_i(level)	J_i^π	E_f	J_f^π	Mult. b	α e	Comments
								α(N)=3.58×10^{-6} *5*; α(O)=5.24×10^{-7} *8*; α(P)=3.07×10^{-8} *5*; α(IPF)=0.0001700 *24*
x1460.26 *12*	1.6 *5*					E1	8.08×10^{-4}	α(K)exp=0.00066 *20* α(K)=0.000544 *8*; α(L)=7.12×10^{-5} *10*; α(M)=1.542×10^{-5} *22*; α(N+..)=0.0001766 *25* α(N)=3.56×10^{-6} *5*; α(O)=5.22×10^{-7} *8*; α(P)=3.05×10^{-8} *5*; α(IPF)=0.0001725 *25*
1462.69 f *8*	4.1 f *7*	1728.319	2$^+$	265.663	4$^+$	(E2)	1.49×10^{-3}	α(K)exp=0.00082 *14* α(K)=0.001213 *17*; α(L)=0.0001694 *24*; α(M)=3.70×10^{-5} *6*; α(N+..)=7.09×10^{-5} *10* α(N)=8.53×10^{-6} *12*; α(O)=1.243×10^{-6} *18*; α(P)=7.01×10^{-8} *10*; α(IPF)=6.11×10^{-5} *9* Mult.: E1 or E2 from α(K)exp.
1462.69 f#@ *8*	4.1 f# *7*	2009.802		548.520	6$^+$			E_γ,I_γ: from 2006Ap01. 1995Be02 report Eγ=1463.2 *5* and Iγ=4.5 *10* (after renormalization of their intensity scale).
x1464.42 *9*	3.3 *7*					E1	8.08×10^{-4}	α(K)exp=0.00032 *8* α(K)=0.000542 *8*; α(L)=7.09×10^{-5} *10*; α(M)=1.535×10^{-5} *22*; α(N+..)=0.000180 *3* α(N)=3.54×10^{-6} *5*; α(O)=5.20×10^{-7} *8*; α(P)=3.04×10^{-8} *5*; α(IPF)=0.0001754 *25*
1473.26 *5*	4.5 *5*	1739.000	3$^-$	265.663	4$^+$	E1	8.07×10^{-4}	α(K)exp=0.00059 *7* α(K)=0.000536 *8*; α(L)=7.01×10^{-5} *10*; α(M)=1.519×10^{-5} *22*; α(N+..)=0.000186 *3* α(N)=3.51×10^{-6} *5*; α(O)=5.14×10^{-7} *8*; α(P)=3.01×10^{-8} *5*; α(IPF)=0.000182 *3*
x1483.14 *24*	6.7 *17*					E1	8.07×10^{-4}	α(K)exp=0.00037 *10* α(K)=0.000530 *8*; α(L)=6.93×10^{-5} *10*; α(M)=1.501×10^{-5} *21*; α(N+..)=0.000193 *3* α(N)=3.47×10^{-6} *5*; α(O)=5.08×10^{-7} *8*; α(P)=2.97×10^{-8} *5*; α(IPF)=0.000189 *3*
x1504.57 *12*	2.6 *6*					M1	0.00210	α(K)exp=0.00293 *6* α(K)=0.001713 *24*; α(L)=0.000234 *4*; α(M)=5.10×10^{-5} *8*; α(N+..)=0.0001009 *15* α(N)=1.179×10^{-5} *17*; α(O)=1.738×10^{-6} *25*; α(P)=1.027×10^{-7} *15*; α(IPF)=8.72×10^{-5} *13*
1505.2 *7*	0.55 *3*	2053.541	5$^-$	548.520	6$^+$			
1523.3 *10*	0.34 *28*	2071.95	(4)	548.520	6$^+$			
1556.50 *7*	7.8 *11*	1637.197	1$^-$	80.661	2$^+$	E1	8.12×10^{-4}	α(K)exp=0.00041 *8* α(K)=0.000489 *7*; α(L)=6.38×10^{-5} *9*; α(M)=1.381×10^{-5} *20*;

$^{162}_{66}Dy_{96}$-45

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

$\gamma(^{162}Dy)$ (continued)

E_γ [†]	I_γ [ad]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [b]	α [e]	Comments
								α(N+..)=0.000246 *4* α(N)=3.19×10^{-6} *5*; α(O)=4.68×10^{-7} *7*; α(P)=2.74×10^{-8} *4*; α(IPF)=0.000242 *4*
1574.66 *9*	4.9 *6*	1840.486	3$^+$	265.663	4$^+$	(E2)	1.34×10^{-3}	α(K)exp=0.00077 *4* α(K)=0.001056 *15*; α(L)=0.0001461 *21*; α(M)=3.19×10^{-5} *5*; α(N+..)=0.0001079 *16* α(N)=7.36×10^{-6} *11*; α(O)=1.074×10^{-6} *15*; α(P)=6.10×10^{-8} *9*; α(IPF)=9.94×10^{-5} *14* Mult.: E2 or E1 from α(K)exp.
1585.83 *25*	5.7 *17*	1851.812	4$^-$	265.663	4$^+$	E1	8.16×10^{-4}	α(K)exp=0.00028 *9* α(K)=0.000474 *7*; α(L)=6.18×10^{-5} *9*; α(M)=1.338×10^{-5} *19*; α(N+..)=0.000268 *4* α(N)=3.09×10^{-6} *5*; α(O)=4.53×10^{-7} *7*; α(P)=2.66×10^{-8} *4*; α(IPF)=0.000264 *4*
1647.62 *7*	12.7 *11*	1728.319	2$^+$	80.661	2$^+$	M1(+E0,E2)	1.78×10^{-3}	α(K)exp=0.0018 *1* α(K)=0.001387 *20*; α(L)=0.000189 *3*; α(M)=4.11×10^{-5} *6*; α(N+..)=0.0001613 *23* α(N)=9.52×10^{-6} *14*; α(O)=1.403×10^{-6} *20*; α(P)=8.30×10^{-8} *12*; α(IPF)=0.0001503 *21*
1665.17 *11*	3.3 *8*	1745.716	1$^+$	80.661	2$^+$	M1,E2	0.00150 *25*	α(K)exp=0.0011 *3* α(K)=0.00115 *21*; α(L)=0.00016 *3*; α(M)=3.4×10^{-5} *6*; α(N+..)=0.000156 *14* α(N)=7.9×10^{-6} *14*; α(O)=1.17×10^{-6} *21*; α(P)=6.8×10^{-8} *13*; α(IPF)=0.000147 *13*
1685.79 *14*	5.4 *11*	1951.391	3$^+$,4$^+$	265.663	4$^+$	(E2)	1.24×10^{-3}	α(K)exp=0.00067 *15* α(K)=0.000930 *13*; α(L)=0.0001278 *18*; α(M)=2.78×10^{-5} *4*; α(N+..)=0.0001508 *22* α(N)=6.43×10^{-6} *9*; α(O)=9.39×10^{-7} *14*; α(P)=5.37×10^{-8} *8*; α(IPF)=0.0001433 *20* Mult.: E2 or E1 from α(K)exp.
[x]1756.7 *4*	4.6 *13*							α(K)exp=0.0010 *5*
1759.8 *5*	5.7 *15*	1840.486	3$^+$	80.661	2$^+$	[M1,E2]	0.00139 *22*	α(K)=0.00103 *17*; α(L)=0.000140 *23*; α(M)=3.0×10^{-5} *5*; α(N+..)=0.000199 *18* α(N)=7.0×10^{-6} *12*; α(O)=1.03×10^{-6} *17*; α(P)=6.0×10^{-8} *11*; α(IPF)=0.000191 *16*
[x]1773.72 *19*	7.0 *11*					M1	1.59×10^{-3}	α(K)exp=0.00106 *16* α(K)=0.001171 *17*; α(L)=0.0001590 *23*; α(M)=3.46×10^{-5} *5*; α(N+..)=0.000223 *4* α(N)=8.01×10^{-6} *12*; α(O)=1.181×10^{-6} *17*; α(P)=7.00×10^{-8} *10*; α(IPF)=0.000214 *3*

$^{162}_{66}Dy_{96}$-46

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

$\gamma(^{162}Dy)$ (continued)

E_γ †	I_γ ad	E_i(level)	J_i^π	E_f	J_f^π	Mult. b	α e	Comments
x1782.0 *4*	11 *4*					E1	8.65×10^{-4}	α(K)exp=0.00031 *13* α(K)=0.000391 *6*; α(L)=5.08×10^{-5} *8*; α(M)=1.099×10^{-5} *16*; α(N+..)=0.000413 *6* α(N)=2.54×10^{-6} *4*; α(O)=3.73×10^{-7} *6*; α(P)=2.19×10^{-8} *3*; α(IPF)=0.000410 *6*
1786.9 *3*	5.3 *6*	2053.541	5^-	265.663	4^+			
x1786.99 *21*	7.0 *11*					E1	8.67×10^{-4}	α(K)exp=0.00053 *8* α(K)=0.000389 *6*; α(L)=5.05×10^{-5} *7*; α(M)=1.094×10^{-5} *16*; α(N+..)=0.000417 *6* α(N)=2.53×10^{-6} *4*; α(O)=3.71×10^{-7} *6*; α(P)=2.18×10^{-8} *3*; α(IPF)=0.000414 *6*
1814.62@ *7*	14.8 *12*	2078.923	(2,3)	265.663	4^+	E2	1.15×10^{-3}	α(L1)exp=0.00008 *1* α(K)=0.000812 *12*; α(L)=0.0001107 *16*; α(M)=2.41×10^{-5} *4*; α(N+..)=0.000206 *3* α(N)=5.57×10^{-6} *8*; α(O)=8.15×10^{-7} *12*; α(P)=4.69×10^{-8} *7*; α(IPF)=0.000199 *3* E_γ,I_γ: from 2006Ap01, who show it as unplaced. γ shown doubly placed by 1995Be02, with the other placement being from a 1895 level. 2006Ap01 do not report this latter level. 1995Be02 report Eγ=1814.2 *7* and Iγ=14.7 *14* (after renormalization of their intensity scale).
1918.4 *2*	6.5 *6*	1999.35	2^+	80.661	2^+			
1989.9@ *3*	3.3 *4*	2071.95	(4)	80.661	2^+			
1999.5g *5*	1.5g *5*	1999.35	2^+	0.0	0^+			I_γ: from Iγ(1918γ)/Iγ(1999γ) in ^{162}Tb β^- decay and Iγ(1918γ). Iγ=14.5 *5* for the composite peak (1995Be02).
1999.5g *5*	13.0g *7*	2078.923	(2,3)	80.661	2^+			
2024.9 *11*	2.6 *12*	2104.78	(2^+)	80.661	2^+			
2046.6@ *3*	4.2 *8*	2125.228	0^+	80.661	2^+			
2048.1 *3*	1.3 *3*	2128.094	(2^+)	80.661	2^+			
2079.8 *5*	2.1 *4*	2078.923	(2,3)	0.0	0^+			
2104.5 *7*	1.0 *7*	2104.78	(2^+)	0.0	0^+			
2110.0 *4*	3.2 *5*	2189.71	(2^+)	80.661	2^+			
2129.3 *20*	1.0 *3*	2128.094	(2^+)	0.0	0^+			
2190.8 *6*	0.7 *3*	2189.71	(2^+)	0.0	0^+			
4952 *4*	1.9 *6*	8192.8	$2^+,3^+$	3241				
5163 *4*	3.6 *11*	8192.8	$2^+,3^+$	3030				
5174 *4*	3.6 *11*	8192.8	$2^+,3^+$	3019				
5196 *4*	3.0 *9*	8192.8	$2^+,3^+$	2997				
5243 *4*	3.6 *11*	8192.8	$2^+,3^+$	2950				
5347 *4*	0.69 *17*	8192.8	$2^+,3^+$	2846				
5371 *3*	3.7 *9*	8192.8	$2^+,3^+$	2822				
5397 *4*	0.54 *14*	8192.8	$2^+,3^+$	2796				
5420& *5*	1.1 *3*	8192.8	$2^+,3^+$	2773				
5427 *4*	1.7 *4*	8192.8	$2^+,3^+$	2766				

$^{162}_{66}Dy_{96}$-47

γ(^{162}Dy) (continued)

E_γ †	I_γ ad	E_i(level)	J_i^π	E_f	J_f^π	Comments
5450 *4*	1.7 *4*	8192.8	$2^+,3^+$	2743		
5469& *5*	0.97 *24*	8192.8	$2^+,3^+$	2724		
5508 *4*	0.49 *13*	8192.8	$2^+,3^+$	2685		
5529 *4*	1.6 *4*	8192.8	$2^+,3^+$	2664		
5545 *4*	2.3 *6*	8192.8	$2^+,3^+$	2648		
5554& *5*	1.4	8192.8	$2^+,3^+$	2639		
5610& *3*	4.4	8192.8	$2^+,3^+$	2583		
5630& *5*	3.3 *9*	8192.8	$2^+,3^+$	2563		
5677& *5*	0.73 *19*	8192.8	$2^+,3^+$	2516		
5703& *4*	2.7 *7*	8192.8	$2^+,3^+$	2490		
5736 *4*	1.7 *4*	8192.8	$2^+,3^+$	2457		
5756 *4*	1.9 *4*	8192.8	$2^+,3^+$	2437		
5783 *4*	0.47 *11*	8192.8	$2^+,3^+$	2410		
5822 *4*	0.84 *21*	8192.8	$2^+,3^+$	2371		
5843 *4*	2.4 *6*	8192.8	$2^+,3^+$	2350		
5853& *5*	0.54 *14*	8192.8	$2^+,3^+$	2340		
5878 *3*	4.1 *10*	8192.8	$2^+,3^+$	2315		
5896 *4*	1.2 *3*	8192.8	$2^+,3^+$	2297		
5917 *4*	0.64 *20*	8192.8	$2^+,3^+$	2276		
5955 *3*	5.1 *11*	8192.8	$2^+,3^+$	2238		
6006& *5*	0.69 *23*	8192.8	$2^+,3^+$	2189.71	(2^+)	
6075 *4*	0.41 *13*	8192.8	$2^+,3^+$	2120.717	(4^-)	
6221 *4*	0.90 *23*	8192.8	$2^+,3^+$	1963.598	5^-	
6241& *5*	0.64 *21*	8192.8	$2^+,3^+$	1951.391	$3^+,4^+$	
6282 *3*	1.2 *3*	8192.8	$2^+,3^+$	1910.430	3^-	
6307@ *4*	0.53 *13*	8192.8	$2^+,3^+$	1886	4^+	
6328 *3*	1.3 *3*	8192.8	$2^+,3^+$	1862.677	4^-	
6361& *5*	1.3 *4*	8192.8	$2^+,3^+$	1826.747	4^-	
6524 *3*	1.4 *4*	8192.8	$2^+,3^+$	1669.087	4^-	
6622 *3*	3.9 *7*	8192.8	$2^+,3^+$	1570.914	3^-	
6654 *4*	0.39 *11*	8192.8	$2^+,3^+$	1535.664	4^+	I_γ: 1967Ba34 report ΔIγ=1.1, which may be a misprint.
6896 *3*	1.4 *3*	8192.8	$2^+,3^+$	1297.006	4^-	
6982 *3*	1.1 *3*	8192.8	$2^+,3^+$	1210.089	3^-	
7045 *3*	3.1 *6*	8192.8	$2^+,3^+$	1148.232	2^-	
7132 *3*	1.4 *4*	8192.8	$2^+,3^+$	1060.991	4^+	
7233 *5*	0.33 *14*	8192.8	$2^+,3^+$	962.940	3^+	
7305 *5*	0.49 *17*	8192.8	$2^+,3^+$	888.161	2^+	
7926 *5*	0.34 *14*	8192.8	$2^+,3^+$	265.663	4^+	
8113 *5*	0.41 *14*	8192.8	$2^+,3^+$	80.661	2^+	

$\gamma(^{162}Dy)$ (continued)

† For secondary γ rays, energies are from Ge semiconductor detectors (1995Be02), curved-crystal spectrometers (2006Ap01), or unpublished curved-crystal spectrometer measurements quoted in 1995Be02. Energies for primary γ rays are from Ge semiconductor measurements (1967Ba34).

‡ Quoted in 1995Be02 from unpublished curved-crystal spectrometer data.

γ given a multiple placement by 1995Be02. The evaluator has assumed that the γ reported by 2006Ap01 is one of these.

@ Poor energy fit.

& Complex peak (1967Ba34).

a Values for the secondary γ's are from 2006Ap01 (from levels below 2 MeV) and from 1995Be02 (for levels above 2 MeV). The data from 1995Be02 have been multiplied by the factor 0.69 (from the sum of the Iγ values of the 80, 185, 282, 807, 888 γ's in the two studies) to normalize the intensity scale in this study to that of 2006Ap01. Those for the primary γ's are from 1967Ba34 and are expressed in γ's per 100 n captures.

b Assignments and values are from the ^{162}Dy Adopted γ radiations and are based on the following: ce data from (n,γ) (1967Ba34,2006Ap01), (α,2nγ) (1982Fi15), and ^{162}Ho ε decay (1961Ha23,1961Jo10); $\gamma(\theta)$ following (α,2nγ) (1982Fi15) and (n,n$'\gamma$) (1977Ho11); and $\gamma\gamma(\theta)$ following (n,γ) (1980Hu06) and Coulomb excitation (1972Do01). Where these differ significantly from the values for (n,γ), this is pointed out.

c See comments in ^{162}Dy Adopted γ radiations for limits on M2 content for several E1 transitions.

d For intensity per 100 neutron captures, multiply by 0.070.

e Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

f Multiply placed with undivided intensity.

g Multiply placed with intensity suitably divided.

h Placement of transition in the level scheme is uncertain.

x γ ray not placed in level scheme.

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34

Level Scheme

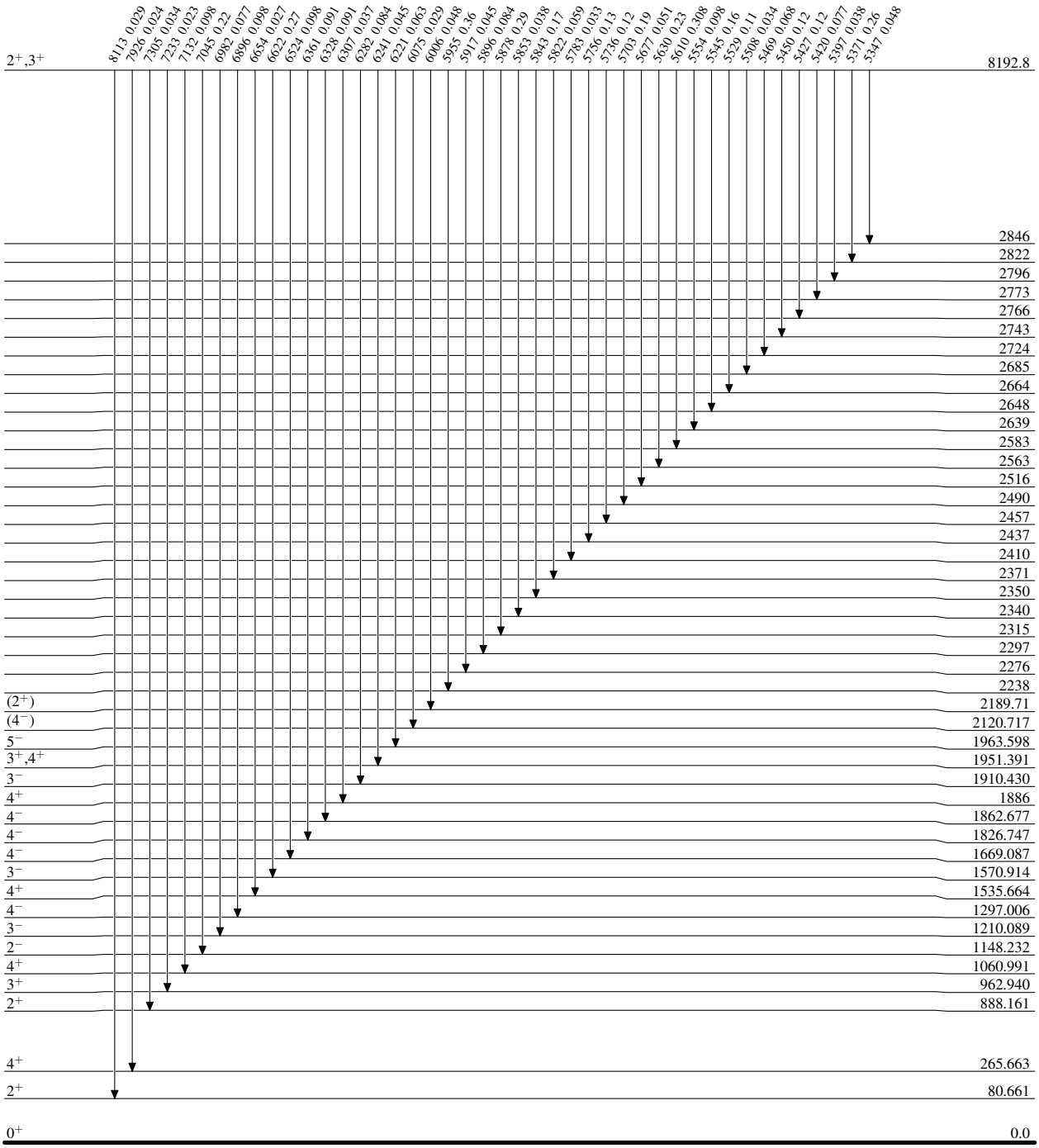
Intensities: I_γ per 100 neutron captures

Legend

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

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

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



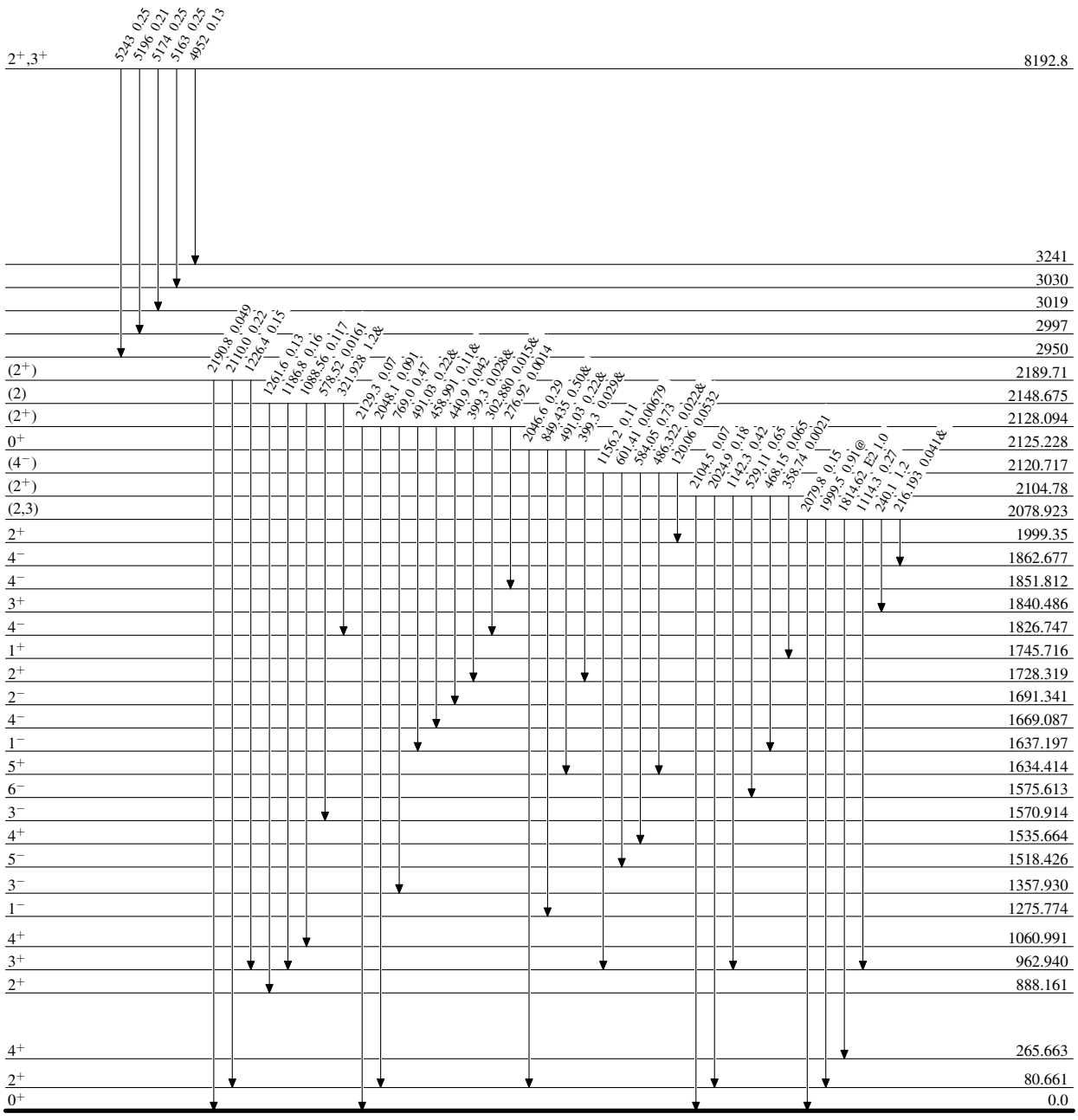
$^{162}_{66}Dy_{96}$

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34

Level Scheme (continued)

Intensities: I_γ per 100 neutron captures
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

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



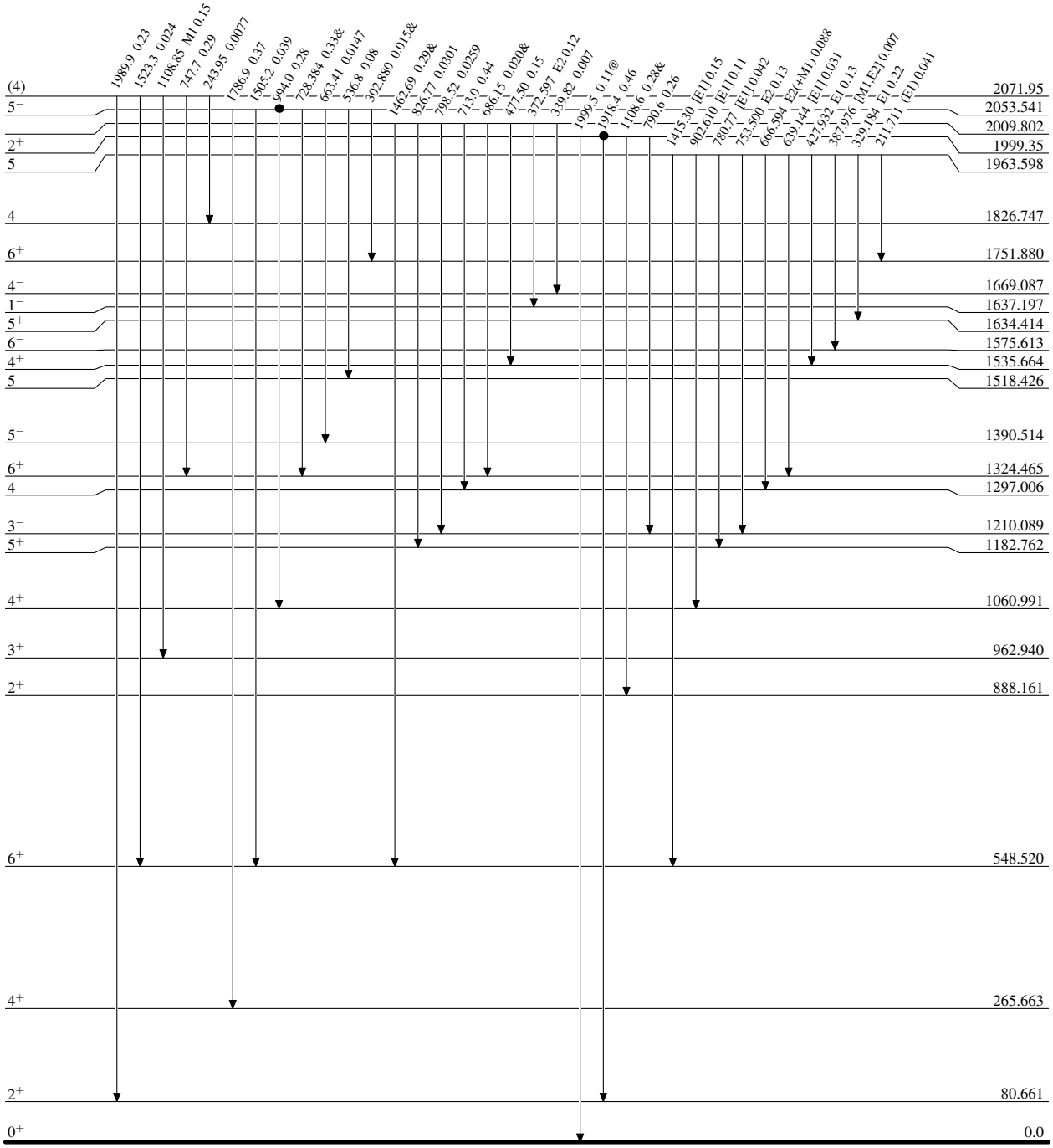
$^{162}_{66}Dy_{96}$

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34

Level Scheme (continued)

Intensities: I_γ per 100 neutron captures
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

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

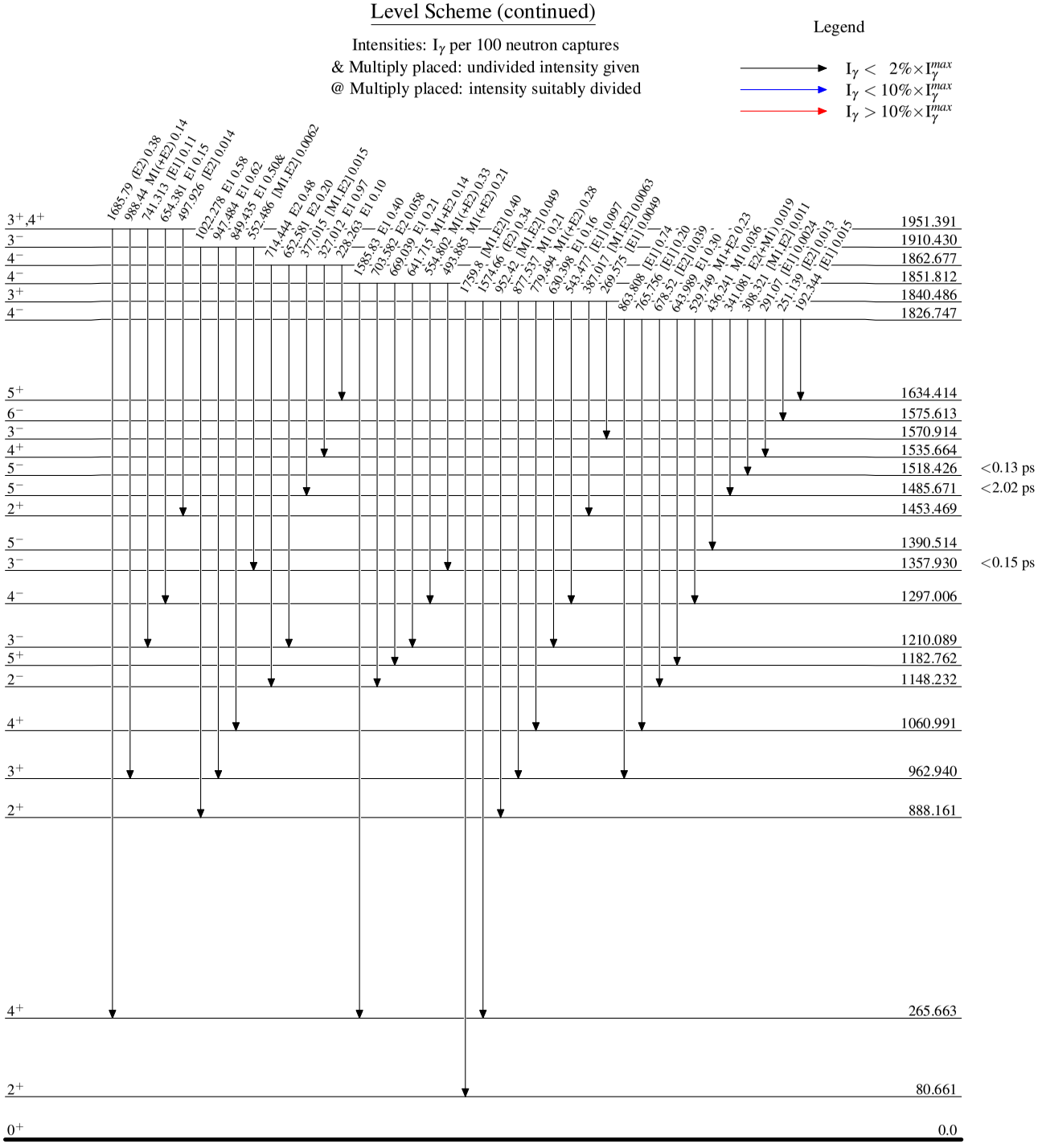


$^{162}_{66}Dy_{96}$

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34

Level Scheme (continued)

Intensities: I_γ per 100 neutron captures
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided



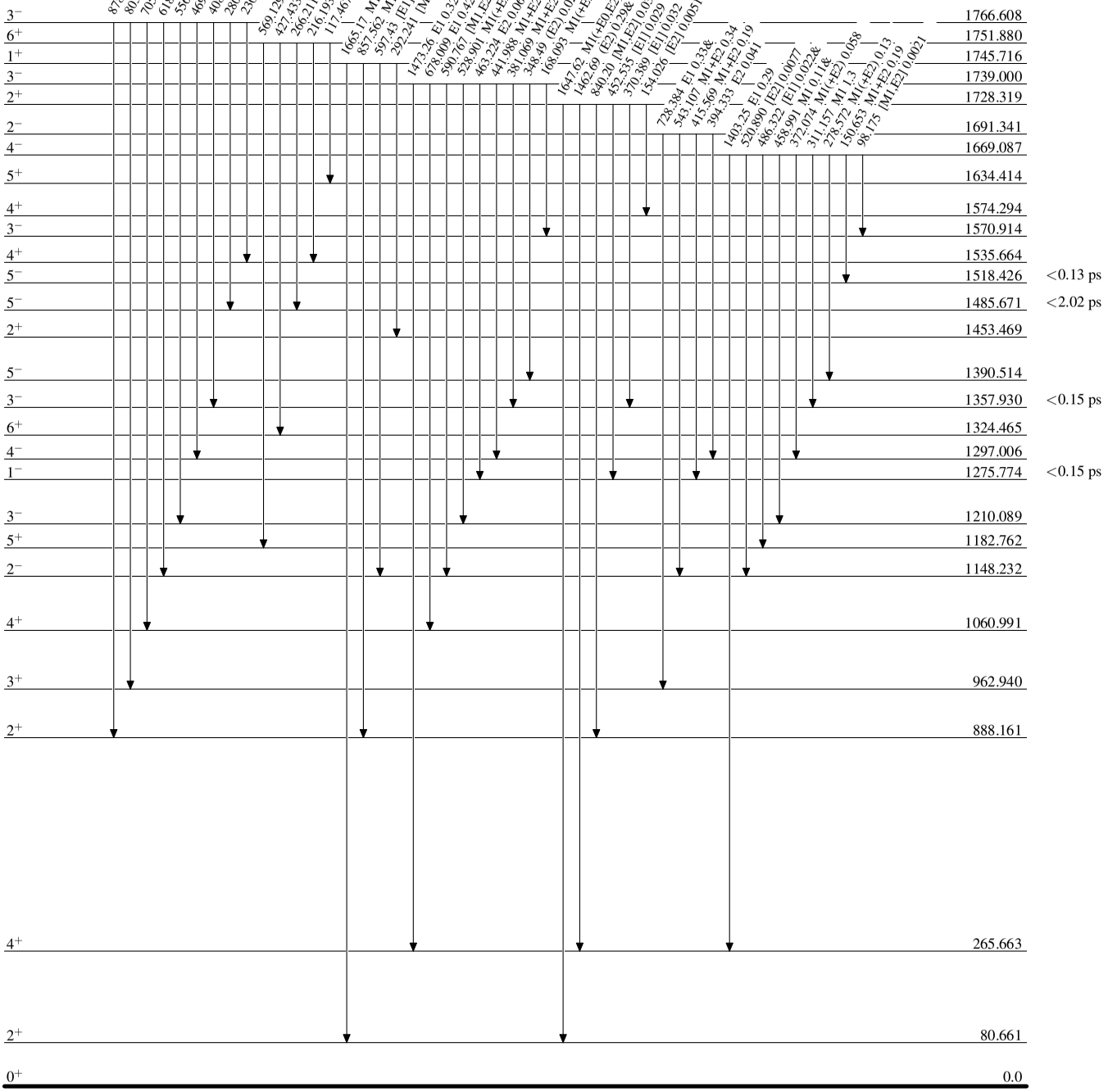
$^{162}_{66}Dy_{96}$

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34

Level Scheme (continued)

Intensities: I_γ per 100 neutron captures
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

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

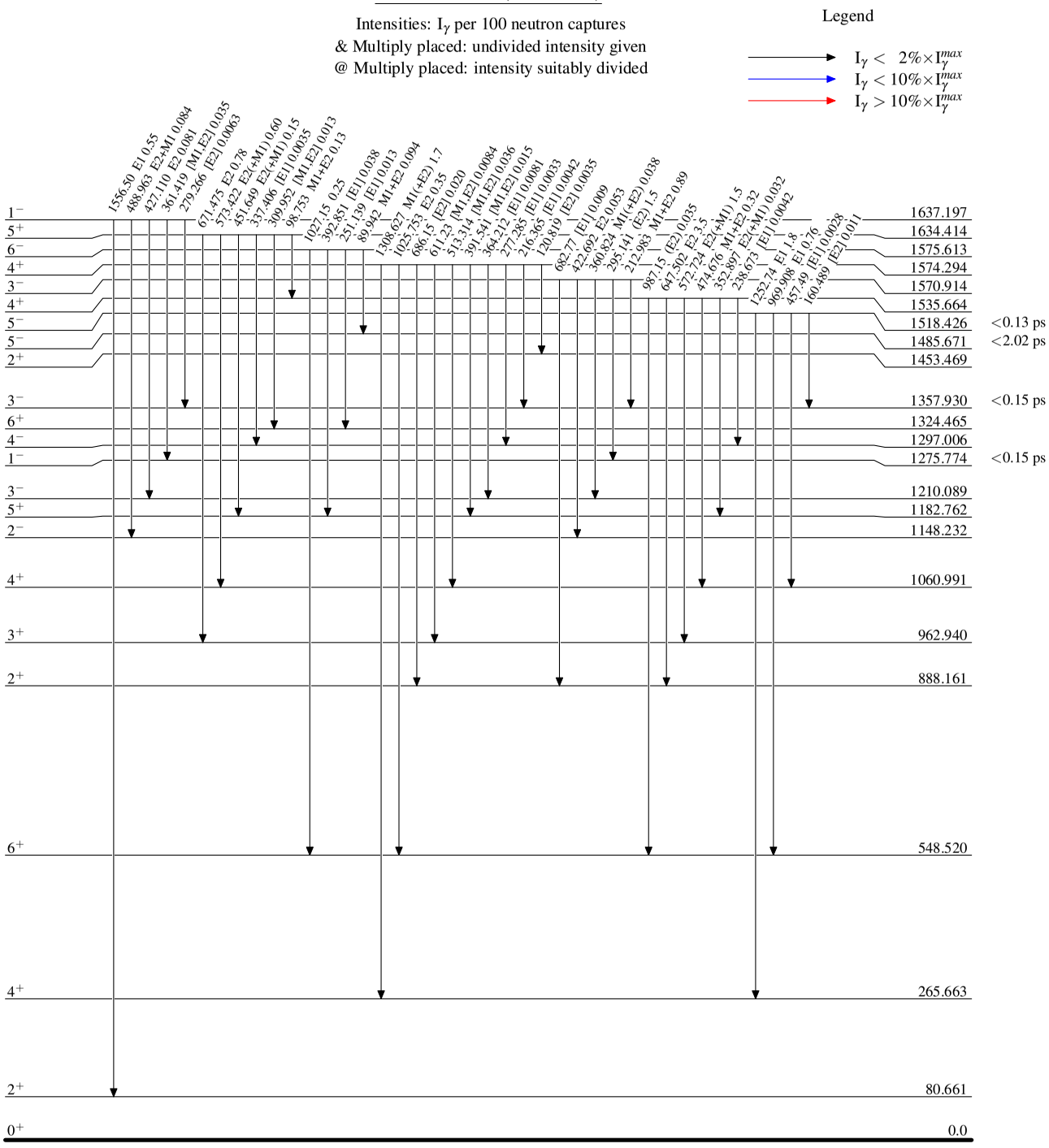


$^{162}_{66}Dy_{96}$

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34

Level Scheme (continued)

Intensities: I_γ per 100 neutron captures
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided



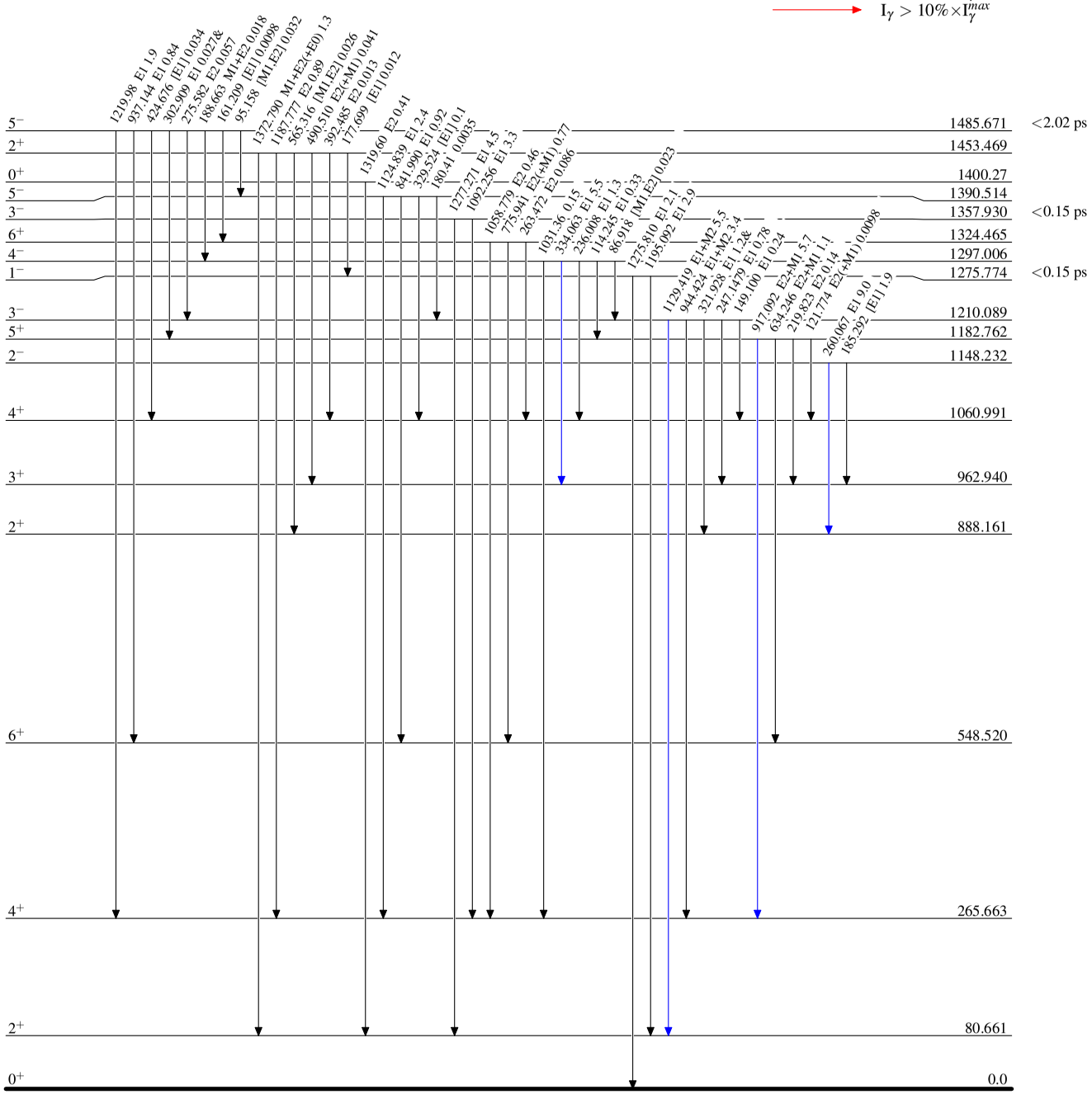
$^{162}_{66}Dy_{96}$

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34

Level Scheme (continued)

Intensities: I_γ per 100 neutron captures
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

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



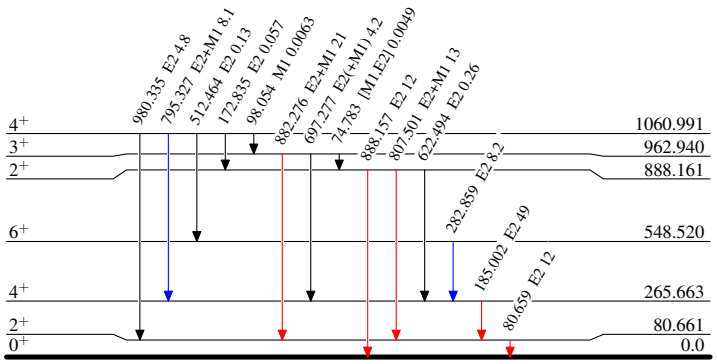
$^{162}_{66}Dy_{96}$

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34

Level Scheme (continued)

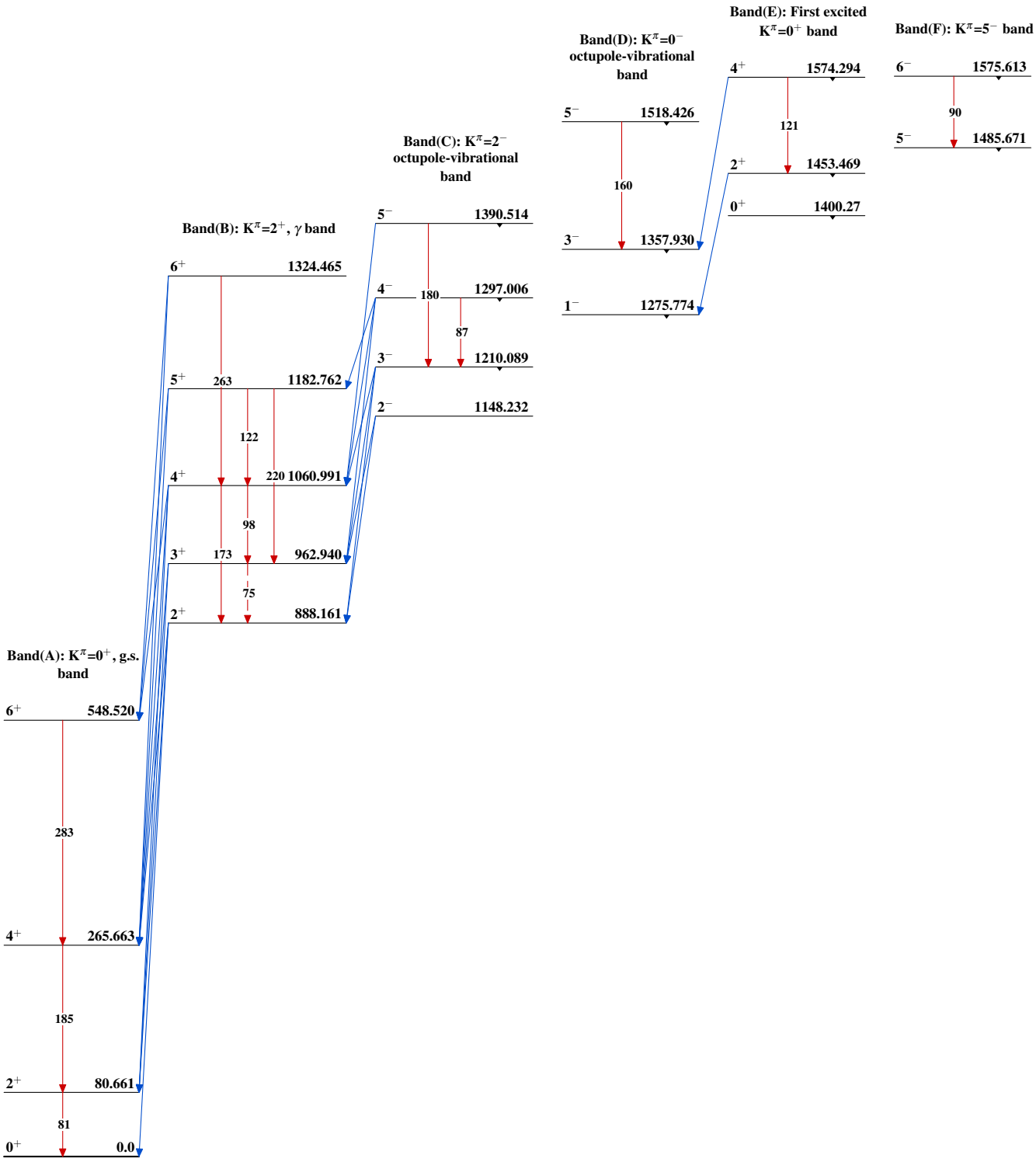
Intensities: I_γ per 100 neutron captures
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

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)



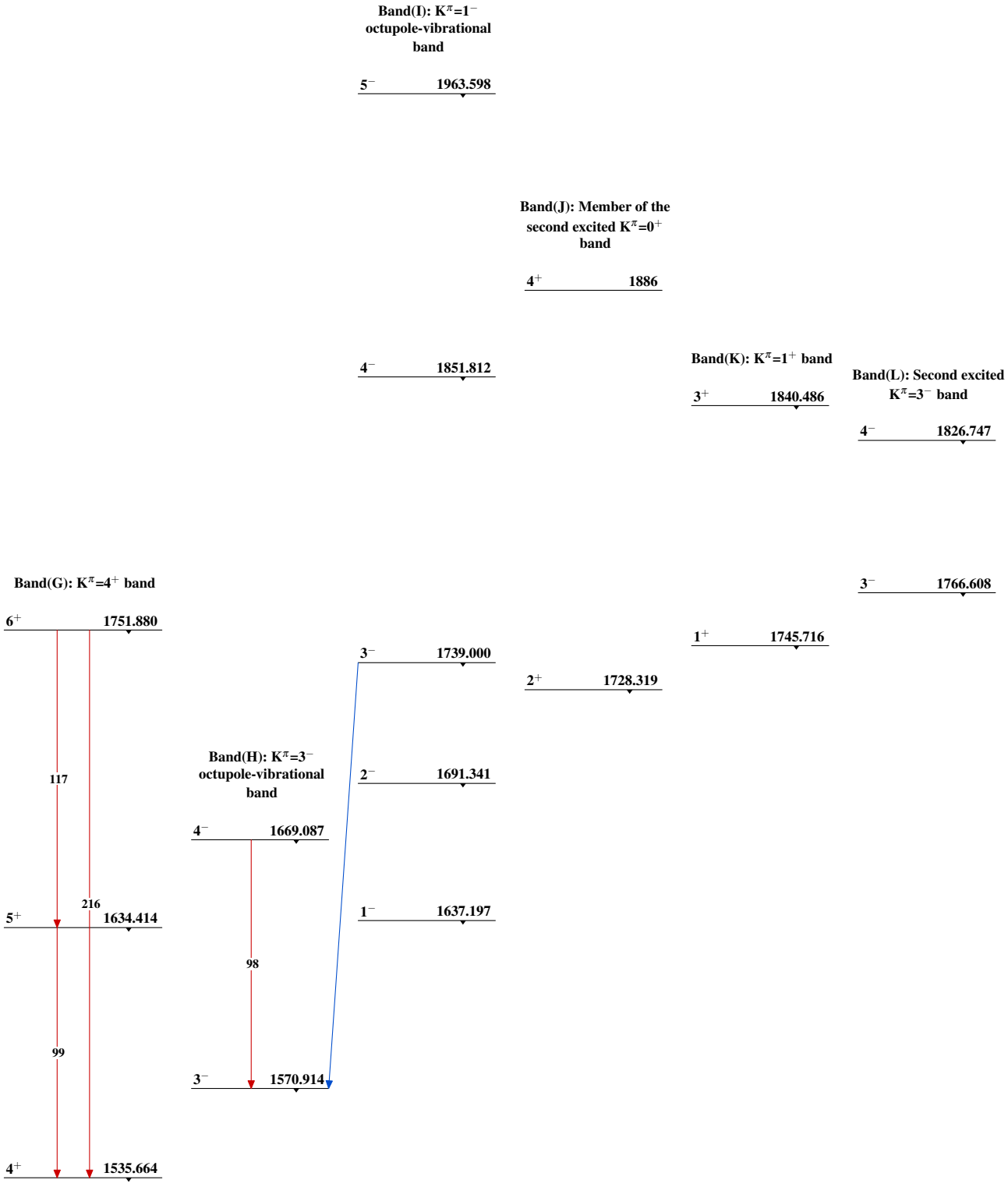
$^{162}_{66}Dy_{96}$

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34



$^{162}_{66}Dy_{96}$

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)



$^{162}_{66}Dy_{96}$

^{161}Dy(n,γ) E=th 2006Ap01,1995Be02,1967Ba34 (continued)

Band(O): $K^{\pi}=0^{+}$ band

(2^{+}) 2189.71

Band(N): $K^{\pi}=2^{-}$ band member

5^{-} 2053.541

0^{+} 2125.228

3^{-} 1910.430

Band(M): $K^{\pi}=4^{-}$ bandhead

4^{-} 1862.677

$^{162}_{66}Dy_{96}$