^{155}Ho ε decay 1979Ab18,1979Al31

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	N. Nica	NDS 160, 1 (2019)	21-Oct-2019

Parent: ^{155}Ho: E=0.0; J^π=5/2$^+$; $T_{1/2}$=48 min *2*; Q(ε)=3116 *17*; %ε+%β^+ decay=100.0
Additional information 1.
Other references: 1972To07, 1972Ki21, 1970To17, 1967Av03.

^{155}Dy Levels

E(level)†	J^π‡	$T_{1/2}$	Comments
0.0	3/2$^-$	9.9 h *2*	
39.384 *9*	5/2$^-$	3.34 ns *3*	$T_{1/2}$: adopted value. $T_{1/2}$: from 1990AbZW,1990AbZS, γce(t). Others: 3.4 ns *1* (1979Al31), 5.5 ns *3* (1972Ki21), γce(t).
86.767 *12*	7/2$^-$	1.1 ns *2*	$T_{1/2}$: from γce(t) (1972Ki21).
132.195 *22*	9/2$^+$		
136.320 *9*	5/2$^-$	<0.4 ns	$T_{1/2}$: from γce(t) (1979Al31). Other: <0.5 ns (1972Ki21).
154.48 *5*	13/2$^+$		
202.413 *12*	3/2$^-$	<0.4 ns	$T_{1/2}$: from γce(t) (1979Al31). Other: <0.5 ns (1972Ki21).
224.532 *13*	7/2$^-$	≤5 ns	$T_{1/2}$: from $\gamma\gamma$(t) (1979Al31).
225.285 *16*	9/2$^-$		
234.33 *3*	11/2$^-$	6 μs *1*	$T_{1/2}$: from 1970Bo02, γ(t).
240.196 *12*	3/2$^+$	≤0.7 ns	$T_{1/2}$: from γce(t) (1972Ki21).
247.791 *13*	5/2$^+$	≤1 ns	$T_{1/2}$: from γce(t) (1979Al31).
325.406 *13*	5/2$^-$,(3/2)$^-$		J^π: existence of an M1 component in the 238 γ to 7/2$^-$ would rule out 3/2$^-$.
349.002 *12*	5/2$^+$		
351.106 *19*	5/2$^+$,7/2$^+$		
375.401 *24*	5/2$^-$,7/2$^-$		
382.89 *8*	3/2$^-$,(1/2)$^-$		
408.533 *14*	3/2$^+$,5/2$^+$		
423.33 *4*	5/2$^-$,7/2$^-$		
440.341 *14*	5/2$^+$,7/2$^+$		
448.98 *3*	1/2$^-$,3/2$^-$		
456.218 *24*	5/2$^-$		
483.73 *3*	5/2$^+$		
557.550 *19*	5/2$^-$,7/2$^-$		
569.11 *6*	3/2$^-$,5/2$^-$,7/2$^-$		
702.73 *20*			
752.70 *8*	3/2$^+$,5/2$^+$		
902.06 *5*	3/2$^+$,5/2$^+$		
1033.47 *4*	3/2$^+$,5/2$^+$		
1217.75 *3*	3/2$^+$,5/2$^+$		

† Listed values obtained from a least-squares fit to the γ-ray energies. χ^2 norm = 3.3 greater than χ^2 critical = 1.4.
‡ From adopted values.

$\gamma(^{155}Dy)$

Iγ normalization: Average of 0.154 *19* (1979Ab18) and 0.092 *20* (1967Av03). From Iβ^+/Ice(K 240γ)=16 *3*, 1979Ab18 deduce Iβ^+=40 *3*, relative to Iγ(240γ)=100. From their measured I(K x ray) and ce data, they obtain Iε=610 *80*. Requiring Iε+Iβ^+=100% yields Iγ normalization=0.154 *19*. From the sum of the I(γ+ce) values of the γ transitions feeding the g.s. (=650 *100*, relative to Iγ(240γ)=100), 1979Ab18 conclude that only a small fraction of the ^{155}Ho ε+β^+ decays goes to the ^{155}Dy g.s. From Ice(L 39γ)=24% *5* and Ice(K 136γ)=3.0% *6* (both values corrected to the different absolute intensity of the 226.9 γ from the ^{155}Dy decay), 1967Av03 deduce Iγ normalization=0.095 *20* and Iγ normalization=0.090 *18*, respectively.

Iγ normalization: With Q(ε)=3120 keV and levels reported only up to 1218 keV, together with many unplaced γ's, the decay scheme is incomplete. This suggests that using the proposed scheme to deduce β-feeding intensities may be problematic. For example, using the present data to deduce β-feeding intensities, one finds Iβ^+/Ice(K 240γ)=49 *12*, instead the measured value 16 *3*, from 1979Ab18. The evaluator has thus chosen not to quote β feedings.

1979Ab18 state that the intensity of the unplaced transitions is not more than 12% of the ^{155}Ho decays.

1979Al31 state that the errors in the Ice values are no more than 20%.

Normalization of the electron intensity scale, relative to that of the γ rays, was accomplished by requiring that α(K)exp=0.0256 for the prominent 240.19 γ, which is the theoretical value for an E1 transition. An E1 multipolarity for this transition has been established from the L-subshell ratios, as measured by, for example, 1979Ab18.

E_γ[†]	I_γ[†‡c]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[#]	δ[@b]	α[&a]	$I_{(\gamma+ce)}$[c]	Comments
9.1 *1*	0.0026 *3*	234.33	11/2$^-$	225.285	9/2$^-$	M1+E2	0.0189 *21*	≈530	1.4 *2*	Photons not observed. 1979Al31 and 1979Ab18 report Ice(M1)=7, Ice(M2)=6, Ice(M3)≈1 (relative to Ice(K)=2.56 for the prominent 240.19 E1 transition) and 1975GrYW report Ice(M1)=50, Ice(M2)=10, Ice(M3)=5 and Ice(N1)=10. I_γ: calculated from the listed α and I(γ+ce) values. δ: weighted average of the values calculated by evaluator from conversion electron subshell ratios listed above (with 10% relative unc): 0.0212 *+22−20* (1979Al31) and 0.0169 *20* (1975GrYW). α: since this Eγ value is quite close to the binding energy of the L1 subshell (9.05 keV), there is a question as to whether or not L1 conversion occurs for this transition. The listed α value was computed by the evaluator assuming that (1) L1 conversion does take place, (2) α(M)/α(L)=0.22, a value typical for M1,E2 transitions in this energy and Z region, (3) α(N+..)/α(M)=0.33, (4) δ=0.0189 for this ΔJ=1, $\Delta\pi$=no transition, and M-tot=90.5 for the 9.1 γ. $I_{(\gamma+ce)}$: value chosen to reproduce the relative Iγ values of the 138 and 147 (and 79) gammas observed in the decay of this level, studied as a 6−μs isomer (1970Bo02). The listed uncertainty in this value is an estimate by the evaluator which reflects the range of I(γ+ce) over which these relative Iγ values can be reasonably well reproduced. This choice of I(γ+ce) appears to conflict with other available data. From the

$\gamma(^{155}Dy)$ (continued)

E_γ [†]	I_γ [†‡c]	E_i(level)	J^π_i	E_f	J^π_f	Mult. [#]	α [&a]	$I_{(\gamma+ce)}$ [c]	Comments
									M-conversion-electron intensities of 1979Al31, one computes I(γ+ce)=19, neglecting L conversion. Including L conversion, as discussed in conjunction with the α value for this transition, one calculates I(γ+ce)=84. This latter value is much too large, since it leads to an unacceptably poor intensity balance at the 225.28 level. From intensity-balance considerations at the 225.28 level, assuming no $\varepsilon+\beta^+$ feeding, one computes I(γ+ce)(9.1γ)=14 (which is thus an upper limit).
22.15[d] *5*	0.00042 *8*	154.48	13/2$^+$	132.195	9/2$^+$	[E2]	2.39×10^3 *5*	1.0 *2*	ce(L)/(γ+ce)=0.771 *10*; ce(M)/(γ+ce)=0.183 *5* ce(N)/(γ+ce)=0.0407 *11*; ce(O)/(γ+ce)=0.00474 *12*; ce(P)/(γ+ce)=1.47×10^{-6} *4* α(L)=1.84×10^3 *4*; α(M)=437 *8* α(N)=97.2 *18*; α(O)=11.32 *21*; α(P)=0.00350 *7* I_γ: computed from α and I(γ+ce). This transition is assumed by the evaluator to be distinct from the 22.15 γ presumed to deexcite the 224.5 level. No 22.15-keV photons are observed. The values Ice(L1)=2, Ice(L2)=0.8, reported to be associated with the 22.15 γ and not characteristic of a pure E2 transition, are presumed to be largely due to the other 22.15 γ. $I_{(\gamma+ce)}$: deduced by the evaluator from I(γ+ce)(79.7γ)=1.0 *2*, which must equal the I(γ+ce) value of this transition, according to the decay scheme.
22.15[d] *5*		224.532	7/2$^-$	202.413	3/2$^-$	[E2]	2.39×10^3 *5*		α(L)=1.84×10^3 *4*; α(M)=437 *8* α(N)=97.2 *18*; α(O)=11.32 *21*; α(P)=0.00350 *7* Photons not observed. 1979Ab18 report Ice(L1)=2, Ice(L2)=0.8, relative to Ice(K)=2.56 for the prominent 240.19 E1 transition. δ: from Ice(L1)/Ice(L2)=4.0, the evaluator computes mult=M1+E2, with δ=0.07 *+3−2*. The L1/L2 ratio used was 4.0, which differs from that (=2.5) given by 1979Ab18, since their Ice(L2) value includes a contribution from the "other" 22.15 γ, which, as placed in the level scheme, deexcites the 154.6 level and must have mult=E2. From the I(γ+ce) value of this latter transition and α(L2), Ice(L2)=0.3 is deduced, leaving 0.5 units for the 22.15 γ deexciting the 224.53 level. (Note that the contribution of this other 22.15 γ to the L1 is negligible.) however, the placement of this transition requires mult=E2. The evaluator has chosen to adopt the listed J^π value, which leaves the discrepancy with this mult and δ value unexplained.
37.80 *4*	10.7 *20*	240.196	3/2$^+$	202.413	3/2$^-$	(E1)	0.778		α(L)=0.609 *9*; α(M)=0.1347 *20* α(N)=0.0300 *5*; α(O)=0.00375 *6*; α(P)=0.0001244 *18* I_γ: calculated from α(L1)(E1) and the measured Ice(L1)=3.

From ENSDF

γ(^{155}Dy) (continued)

E_γ[†]	I_γ[†‡c]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[#]	δ[@b]	α[&a]	Comments
39.39 *2*	26.5 *13*	39.384	5/2⁻	0.0	3/2⁻	M1+E2	0.222 *4*	11.9 *3*	α(L)=9.26 *21*; α(M)=2.13 *5* α(N)=0.484 *12*; α(O)=0.0629 *14*; α(P)=0.00183 *3* δ: weighted average of: 0.212 *6*, from L- and M-subshell ratios (1975GrYW); 0.239 *13* (1979Al31), 0.216 *4* (1986GrZQ), and 0.227 *3* (1987BaZB), from L-subshell ratios.
45.38 *5*	36 *26*	132.195	9/2⁺	86.767	7/2⁻	E1		0.467	α(L)=0.366 *6*; α(M)=0.0806 *12* α(N)=0.0180 *3*; α(O)=0.00230 *4*; α(P)=8.14×10^{-5} *12* I_γ: the listed value was deduced from the measured values I(Kα_1 x ray)=306 *30* and I(Kα_2 x ray)+Iγ(45.4γ)=207 *20*, together with I(Kα_2 x ray)/I(Kα_1 x ray)=0.559. Using a somewhat different I(Kα_2 x ray)/I(Kα_1 x ray) value (≈0.53), 1979Ab18 deduce Iγ=45 *20*.
47.37 *2*	18 *2*	86.767	7/2⁻	39.384	5/2⁻	M1+E2	0.115 *10*	4.03 *14*	α(L)=3.14 *11*; α(M)=0.702 *25* α(N)=0.161 *6*; α(O)=0.0227 *7*; α(P)=0.001093 *16* δ: weighted average of: 0.108 *17*, from L- and M-subshell ratios (1975GrYW); and 0.118 *12*, from L-subshell ratios (1979Al31).
49.52 *5*	0.60 *12*	136.320	5/2⁻	86.767	7/2⁻	M1+E2	0.11 *3*	3.4 *3*	α(L)=2.68 *24*; α(M)=0.60 *6* α(N)=0.138 *13*; α(O)=0.0195 *15*; α(P)=0.000961 *15* I_γ: computed from Ice(L1)=1.2 and the theoretical α(L1).
66.12 *3*	1.31 *6*	202.413	3/2⁻	136.320	5/2⁻	M1+E2	0.42 *5*	8.74 *22*	α(K)=6.01 *16*; α(L)=2.11 *24*; α(M)=0.49 *6* α(N)=0.111 *13*; α(O)=0.0143 *15*; α(P)=0.000371 *11*
74.33[f] *3*	0.33 *3*	423.33	5/2⁻,7/2⁻	349.002	5/2⁺				Mult.,δ: from α(K)exp=3.6 *8*, the evaluator computes mult=M1+E2, with δ=0.9 *+9−5*. However, placement requires Δπ=yes. Note that the placement of this γ is questionable.
79.72 *5*	0.24 *2*	234.33	11/2⁻	154.48	13/2⁺	E1+M2	0.23 *3*	3.3 *7*	α(K)=2.4 *5*; α(L)=0.66 *16*; α(M)=0.16 *4* α(N)=0.036 *9*; α(O)=0.0051 *12*; α(P)=0.00024 *6* δ: computed by the evaluator from α(K)exp=2.5 *5*.
86.75 *2*	6.2 *3*	86.767	7/2⁻	0.0	3/2⁻	E2		4.63	α(K)=1.567 *22*; α(L)=2.36 *4*; α(M)=0.566 *8* α(N)=0.1269 *18*; α(O)=0.01515 *22*; α(P)=6.50×10^{-5} *10*
88.26 *5*	0.17 *4*	224.532	7/2⁻	136.320	5/2⁻	M1		3.43	α(K)=2.88 *4*; α(L)=0.425 *6*; α(M)=0.0935 *14* α(N)=0.0216 *3*; α(O)=0.00316 *5*; α(P)=0.000180 *3*
91.35 *3*	0.6 *1*	440.341	5/2⁺,7/2⁺	349.002	5/2⁺	M1		3.11	α(K)=2.61 *4*; α(L)=0.385 *6*; α(M)=0.0846 *12* α(N)=0.0196 *3*; α(O)=0.00286 *4*; α(P)=0.0001631 *23*
92.22 *6*	0.3 *1*	224.532	7/2⁻	132.195	9/2⁺	[E1]		0.383	α(K)=0.319 *5*; α(L)=0.0501 *7*; α(M)=0.01100 *16* α(N)=0.00249 *4*; α(O)=0.000338 *5*; α(P)=1.455×10^{-5} *21*
96.91 *2*	8.3 *4*	136.320	5/2⁻	39.384	5/2⁻	M1+E2	0.22 *4*	2.64	α(K)=2.16 *4*; α(L)=0.375 *20*; α(M)=0.084 *5* α(N)=0.0192 *11*; α(O)=0.00272 *12*; α(P)=0.0001335 *24*
100.84 *6*	0.38 *13*	325.406	5/2⁻,(3/2)⁻	224.532	7/2⁻	[M1,E2]		2.48 *15*	α(K)=1.53 *44*; α(L)=0.73 *45*; α(M)=0.17 *11* α(N)=0.039 *25*; α(O)=0.0049 *28*; α(P)=8.4×10^{-5} *39* I_γ: deduced by the evaluator from Ice(K)=0.6 and α(K). 1979Ab18 report Iγ(100.84γ+101.34γ)=0.8 *2*.

From ENSDF

$^{155}_{66}$Dy$_{89}$-4

γ(^{155}Dy) (continued)

E_γ †	I_γ †‡c	E_i(level)	J^π_i	E_f	J^π_f	Mult.#	δ@b	α&a	Comments
101.34 *7*	0.52 *18*	349.002	5/2$^+$	247.791	5/2$^+$	[M1,E2]		2.44 *15*	α(K)=1.51 *43*; α(L)=0.72 *44*; α(M)=0.17 *11* α(N)=0.038 *24*; α(O)=0.0048 *27*; α(P)=8.3×10^{-5} *38* I_γ: deduced by the evaluator from Ice(K)=0.8 and α(K). 1979Ab18 report Iγ(100.84γ+101.34γ)=0.8 *2*.
102.16 *3*	0.51 *6*	234.33	11/2$^-$	132.195	9/2$^+$	E1+M2	0.45 *6*	3.8 *8*	α(K)=2.8 *6*; α(L)=0.74 *16*; α(M)=0.17 *4* α(N)=0.040 *9*; α(O)=0.0057 *13*; α(P)=0.00028 *6* δ: computed by the evaluator from α(K)exp=2.9 *7*.
103.89 *2*	17.4 *9*	240.196	3/2$^+$	136.320	5/2$^-$	E1		0.279	α(K)=0.233 *4*; α(L)=0.0360 *5*; α(M)=0.00788 *11* α(N)=0.00179 *3*; α(O)=0.000244 *4*; α(P)=1.080×10^{-5} *16*
108.79 *2*	3.7 *2*	349.002	5/2$^+$	240.196	3/2$^+$	M1		1.88	α(K)=1.584 *23*; α(L)=0.233 *4*; α(M)=0.0511 *8* α(N)=0.01183 *17*; α(O)=0.001730 *25*; α(P)=9.87×10^{-5} *14*
111.47 *3*	0.92 *6*	247.791	5/2$^+$	136.320	5/2$^-$	E1		0.231	α(K)=0.193 *3*; α(L)=0.0295 *5*; α(M)=0.00647 *9* α(N)=0.001472 *21*; α(O)=0.000202 *3*; α(P)=9.05×10^{-6} *13*
^{x}115.3 *1*									Shown deexciting the 440 level by 1979Al31, but 1979Ab18 do not place it in the level scheme.
115.5 *1*	6.6 *3*	247.791	5/2$^+$	132.195	9/2$^+$	E2		1.597	α(K)=0.772 *11*; α(L)=0.635 *10*; α(M)=0.1516 *22* α(N)=0.0340 *5*; α(O)=0.00412 *6*; α(P)=3.26×10^{-5} *5*
123.10 *6*	0.2	325.406	5/2$^-$,(3/2)$^-$	202.413	3/2$^-$	(M1)		1.323	α(K)=1.114 *16*; α(L)=0.1634 *23*; α(M)=0.0359 *5* α(N)=0.00830 *12*; α(O)=0.001215 *17*; α(P)=6.94×10^{-5} *10*
124.54 *5*	2.5 *1*	349.002	5/2$^+$	224.532	7/2$^-$	E1		0.1715	α(K)=0.1438 *21*; α(L)=0.0217 *3*; α(M)=0.00476 *7* α(N)=0.001082 *16*; α(O)=0.0001493 *21*; α(P)=6.84×10^{-6} *10*
136.30 *2*	40 *2*	136.320	5/2$^-$	0.0	3/2$^-$	M1+E2	0.195 *24*	0.987	α(K)=0.822 *12*; α(L)=0.1290 *25*; α(M)=0.0285 *6* α(N)=0.00658 *13*; α(O)=0.000949 *17*; α(P)=5.08×10^{-5} *8*
137.76 *4*	2.5 *6*	224.532	7/2$^-$	86.767	7/2$^-$	M1		0.961	α(K)=0.810 *12*; α(L)=0.1186 *17*; α(M)=0.0261 *4* α(N)=0.00603 *9*; α(O)=0.000882 *13*; α(P)=5.04×10^{-5} *7*
138.46 *4*	7.0 *7*	225.285	9/2$^-$	86.767	7/2$^-$	E2(+M1)	>2.4	0.843 *15*	α(K)=0.49 *3*; α(L)=0.272 *13*; α(M)=0.064 *4* α(N)=0.0145 *8*; α(O)=0.00179 *8*; α(P)=2.26×10^{-5} *22* δ: deduced by the evaluator from the α(K)exp value of 1979Ab18.
146.57 *2*	5.5 *6*	349.002	5/2$^+$	202.413	3/2$^-$	E1		0.1109	α(K)=0.0932 *13*; α(L)=0.01385 *20*; α(M)=0.00303 *5* α(N)=0.000691 *10*; α(O)=9.61×10^{-5} *14*; α(P)=4.54×10^{-6} *7* Mult.: from α(K)exp=0.08, as reported by 1972To07. 1979Ab18 quote mult=E1, but list no Ice data for this transition.
147.63 *6*	0.42 *6*	234.33	11/2$^-$	86.767	7/2$^-$	[E2]		0.666	α(K)=0.388 *6*; α(L)=0.215 *3*; α(M)=0.0509 *8* α(N)=0.01146 *17*; α(O)=0.001412 *20*; α(P)=1.721×10^{-5} *25*
149.24 *4*	1.0 *1*	557.550	5/2$^-$,7/2$^-$	408.533	3/2$^+$,5/2$^+$				

From ENSDF

$^{155}_{66}$Dy$_{89}$-5

γ(^{155}Dy) (continued)

E_γ [†]	I_γ [†‡c]	E_i(level)	J^π_i	E_f	J^π_f	Mult. [#]	δ [@b]	α [&a]	Comments
150.09 *6*	0.4 *1*	375.401	5/2⁻,7/2⁻	225.285	9/2⁻				
160.55	2.0 *4*	569.11	3/2⁻,5/2⁻,7/2⁻	408.533	3/2⁺,5/2⁺	[E1]		0.0870	α(K)=0.0732 *11*; α(L)=0.01079 *16*; α(M)=0.00236 *4* α(N)=0.000539 *8*; α(O)=7.52×10^{-5} *11*; α(P)=3.61×10^{-6} *5* I_γ: computed by the evaluator using Ice(K)=0.15 from 1979Ab18 and α(K) for an E1 transition.
160.76 *4*	7.5 *15*	408.533	3/2⁺,5/2⁺	247.791	5/2⁺	M1(+E2)		0.56 *7*	α(K)=0.41 *12*; α(L)=0.113 *37*; α(M)=0.0260 *92* α(N)=0.0059 *21*; α(O)=7.8×10^{-4} *21*; α(P)=2.32×10^{-5} *95* I_γ: deduced by the evaluator from Ice(K)=4 and α(K) for a pure M1 transition. 1979Ab18 report Iγ(160.76γ+160.82γ+161.08γ)=9.3 *9*, while 1979Al31 report Iγ(160.55γ+160.76γ+161.08γ)=10 *3*. Presumably the 160.55 γ should also have been included in the summed Iγ value of 1979Ab18. For mult=[M1,E2] for this 160.76 γ, the summed γ intensity for this multiplet is 13.5 *24*, somewhat larger than the measured value. For a pure M1, however, the sum is 11.5 *16*. The evaluator has assumed that this transition is, at least largely, M1. α: value for a pure M1 transition.
ˣ160.82 *5*									Ice(K)=0.3, from 1979Ab18. 1979Al31 do not report this γ. From the Iγ values deduced for the members of the γ-ray multiplet at ≈160 keV, the intensity of this γ must be small (see comment on the 160.76 γ from the 408.53 level).
161.08 *8*	2.0 *4*	247.791	5/2⁺	86.767	7/2⁻	[E1]		0.0862	α(K)=0.0726 *11*; α(L)=0.01069 *15*; α(M)=0.00234 *4* α(N)=0.000534 *8*; α(O)=7.46×10^{-5} *11*; α(P)=3.58×10^{-6} *5* I_γ: computed by the evaluator using ce(K)=0.15 and α(K) for an E1 transition.
163.02 *2*	7.9 *4*	202.413	3/2⁻	39.384	5/2⁻	M1(+E2)	<1.7	0.55 *5*	α(K)=0.43 *8*; α(L)=0.098 *25*; α(M)=0.0225 *64* α(N)=0.0051 *14*; α(O)=0.00069 *15*; α(P)=2.46×10^{-5} *68* δ: computed by the evaluator from α(K)exp=0.44 *9*.
185.13 *2*	18 *1*	224.532	7/2⁻	39.384	5/2⁻	M1		0.420	α(K)=0.354 *5*; α(L)=0.0516 *8*; α(M)=0.01134 *16* α(N)=0.00262 *4*; α(O)=0.000384 *6*; α(P)=2.20×10^{-5} *3*
185.89 *2*	2.7 *2*	225.285	9/2⁻	39.384	5/2⁻	E2		0.302	α(K)=0.197 *3*; α(L)=0.0810 *12*; α(M)=0.0190 *3* α(N)=0.00430 *6*; α(O)=0.000540 *8*; α(P)=9.25×10^{-6} *13*
189.09 *2*	2.0 *2*	325.406	5/2⁻,(3/2)⁻	136.320	5/2⁻	M1		0.396	α(K)=0.334 *5*; α(L)=0.0487 *7*; α(M)=0.01069 *15* α(N)=0.00247 *4*; α(O)=0.000362 *5*; α(P)=2.07×10^{-5} *3*
200.17 *2*	3.4 *3*	440.341	5/2⁺,7/2⁺	240.196	3/2⁺	E2		0.236	α(K)=0.1583 *23*; α(L)=0.0598 *9*; α(M)=0.01401 *20* α(N)=0.00317 *5*; α(O)=0.000400 *6*; α(P)=7.56×10^{-6} *11*
200.86 *7*	12.2 *5*	240.196	3/2⁺	39.384	5/2⁻	E1		0.0481	α(K)=0.0406 *6*; α(L)=0.00588 *9*; α(M)=0.001286 *18* α(N)=0.000294 *5*; α(O)=4.14×10^{-5} *6*; α(P)=2.05×10^{-6} *3*
202.41 *2*	13.6 *7*	202.413	3/2⁻	0.0	3/2⁻	M1		0.328	α(K)=0.277 *4*; α(L)=0.0403 *6*; α(M)=0.00884 *13* α(N)=0.00205 *3*; α(O)=0.000300 *5*; α(P)=1.718×10^{-5} *24*
206.08 *8*	1.5	408.533	3/2⁺,5/2⁺	202.413	3/2⁻	E1		0.0450	α(K)=0.0380 *6*; α(L)=0.00549 *8*; α(M)=0.001200 *17* α(N)=0.000275 *4*; α(O)=3.87×10^{-5} *6*; α(P)=1.93×10^{-6} *3*

From ENSDF

γ(^{155}Dy) (continued)

Eγ[†]	Iγ[†‡c]	Ei(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[@b]	α[&a]	Comments
206.52 2	4 1	557.550	5/2−,7/2−	351.106	5/2+,7/2+	E1		0.0447	α(K)=0.0377 6; α(L)=0.00546 8; α(M)=0.001193 17 α(N)=0.000273 4; α(O)=3.85×10^{-5} 6; α(P)=1.92×10^{-6} 3
208.41 2	12.9 6	247.791	5/2+	39.384	5/2−	E1		0.0437	α(K)=0.0369 6; α(L)=0.00533 8; α(M)=0.001165 17 α(N)=0.000266 4; α(O)=3.76×10^{-5} 6; α(P)=1.87×10^{-6} 3
212.70 2	3.4 2	349.002	5/2+	136.320	5/2−	E1+M2	0.12 +3−5	0.062 14	α(K)=0.051 11; α(L)=0.0084 22; α(M)=0.00187 51 α(N)=4.3×10^{-4} 12; α(O)=6.1×10^{-5} 17; α(P)=3.12×10^{-6} 88 δ: computed by the evaluator from α(K)exp=0.053 9.
215.03 2	2.1 1	440.341	5/2+,7/2+	225.285	9/2−	E1		0.0402	α(K)=0.0340 5; α(L)=0.00490 7; α(M)=0.001071 15 α(N)=0.000245 4; α(O)=3.46×10^{-5} 5; α(P)=1.733×10^{-6} 25
218.93 2	11.4 6	351.106	5/2+,7/2+	132.195	9/2+	E2		0.1753	α(K)=0.1213 17; α(L)=0.0417 6; α(M)=0.00974 14 α(N)=0.00220 3; α(O)=0.000281 4; α(P)=5.91×10^{-6} 9
224.55 2	1.2 4	224.532	7/2−	0.0	3/2−	E2		0.1613	α(K)=0.1126 16; α(L)=0.0377 6; α(M)=0.00880 13 α(N)=0.00199 3; α(O)=0.000254 4; α(P)=5.52×10^{-6} 8
238.54 9	0.5 2	325.406	5/2−,(3/2)−	86.767	7/2−	E2(+M1)		0.17 4	α(K)=0.135 42; α(L)=0.0277 21; α(M)=0.0063 7 α(N)=0.00143 14; α(O)=0.000196 7; α(P)=7.8×10^{-6} 32
240.19 2	100 5	240.196	3/2+	0.0	3/2−	E1		0.0302	α(K)=0.0255 4; α(L)=0.00366 6; α(M)=0.000799 12 α(N)=0.000183 3; α(O)=2.59×10^{-5} 4; α(P)=1.318×10^{-6} 19 Mult.: mult=E1, from L-subshell ratios (1979Ab18). Note that this transition is the one which serves as the normalization point for the electron and γ-ray intensity scales.
243.55 3	2.3 3	483.73	5/2+	240.196	3/2+	M1		0.198	α(K)=0.1670 24; α(L)=0.0242 4; α(M)=0.00531 8 α(N)=0.001228 18; α(O)=0.000180 3; α(P)=1.034×10^{-5} 15
247.77 2	12.4 6	247.791	5/2+	0.0	3/2−	E1		0.0279	α(K)=0.0236 4; α(L)=0.00337 5; α(M)=0.000737 11 α(N)=0.0001688 24; α(O)=2.39×10^{-5} 4; α(P)=1.221×10^{-6} 18
259.09 7	1.9 1	483.73	5/2+	224.532	7/2−	E1		0.0249	α(K)=0.0211 3; α(L)=0.00300 5; α(M)=0.000656 10 α(N)=0.0001503 21; α(O)=2.13×10^{-5} 3; α(P)=1.095×10^{-6} 16
262.23 3	9.0 10	349.002	5/2+	86.767	7/2−	E1		0.0241	α(K)=0.0204 3; α(L)=0.00291 4; α(M)=0.000635 9 α(N)=0.0001457 21; α(O)=2.07×10^{-5} 3; α(P)=1.063×10^{-6} 15
264.35 14	1.3 2	351.106	5/2+,7/2+	86.767	7/2−	[E1]		0.0236	α(K)=0.0200 3; α(L)=0.00285 4; α(M)=0.000622 9 α(N)=0.0001427 20; α(O)=2.03×10^{-5} 3; α(P)=1.043×10^{-6} 15
[x]266.4 1	<2.6								

From ENSDF

$^{155}_{66}$Dy$_{89}$-7

γ(^{155}Dy) (continued)

E_γ[†]	I_γ[†‡c]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[#]	δ[@b]	α[&a]	$I_{(\gamma+ce)}$[c]	Comments
272.22 *2*	5.7 *10*	408.533	3/2+,5/2+	136.320	5/2−	E1		0.0220		α(K)=0.0186 *3*; α(L)=0.00264 *4*; α(M)=0.000577 *8* α(N)=0.0001322 *19*; α(O)=1.88×10^{-5} *3*; α(P)=9.71×10^{-7} *14*
[x]281.22 *8*	1.1 *1*					E2		0.0787		α(K)=0.0582 *9*; α(L)=0.01591 *23*; α(M)=0.00367 *6* α(N)=0.000834 *12*; α(O)=0.0001090 *16*; α(P)=2.99×10^{-6} *5* 1979Al31 place this γ between the 483.7 and the 202.4 levels. This placement requires a parity change, which is inconsistent with the indicated mult. 1979Ab18 show this γ as unplaced in the level scheme.
286.02 *2*	5.0 *3*	325.406	5/2−,(3/2)−	39.384	5/2−	M1		0.1283		α(K)=0.1083 *16*; α(L)=0.01562 *22*; α(M)=0.00343 *5* α(N)=0.000793 *11*; α(O)=0.0001162 *17*; α(P)=6.69×10^{-6} *10*
288.64 *4*	4.7 *4*	375.401	5/2−,7/2−	86.767	7/2−	M1		0.1252		α(K)=0.1057 *15*; α(L)=0.01524 *22*; α(M)=0.00334 *5* α(N)=0.000773 *11*; α(O)=0.0001134 *16*; α(P)=6.53×10^{-6} *10*
304.02 *2*	3.1 *2*	440.341	5/2+,7/2+	136.320	5/2−	E1		0.01664		α(K)=0.01410 *20*; α(L)=0.00199 *3*; α(M)=0.000435 *6* α(N)=9.97×10^{-5} *14*; α(O)=1.424×10^{-5} *20*; α(P)=7.44×10^{-7} *11*
309.65[e] *4*	7.7[e] *7*	349.002	5/2+	39.384	5/2−	E1		0.01590		α(K)=0.01347 *19*; α(L)=0.00190 *3*; α(M)=0.000415 *6* α(N)=9.52×10^{-5} *14*; α(O)=1.360×10^{-5} *19*; α(P)=7.12×10^{-7} *10* 1979Al31 show this γ as being questionably placed here but also as deexciting the 557.5 level. 1979Ab18, however, show it as deexciting this level and not the 557.5 level.
309.65[e] *4*	7.7[e] *7*	557.550	5/2−,7/2−	247.791	5/2+	E1		0.01590		α(K)=0.01347 *19*; α(L)=0.00190 *3*; α(M)=0.000415 *6* α(N)=9.52×10^{-5} *14*; α(O)=1.360×10^{-5} *19*; α(P)=7.12×10^{-7} *10* 1979Al31 show this γ as deexciting this level. However, 1979Ab18 place it as a γ deexciting the 349.0 level.
311.85 *3*	4.3 *4*	351.106	5/2+,7/2+	39.384	5/2−	E1		0.01562		α(K)=0.01324 *19*; α(L)=0.00187 *3*; α(M)=0.000408 *6* α(N)=9.35×10^{-5} *13*; α(O)=1.336×10^{-5} *19*; α(P)=7.00×10^{-7} *10*
321.31 *6*	5.4 *3*	569.11	3/2−,5/2−,7/2−	247.791	5/2+	E1		0.01451		α(K)=0.01230 *18*; α(L)=0.001732 *25*; α(M)=0.000378 *6* α(N)=8.68×10^{-5} *13*; α(O)=1.240×10^{-5} *18*; α(P)=6.52×10^{-7} *10*
325.40 *2*	22 *1*	325.406	5/2−,(3/2)−	0.0	3/2−	M1		0.0909		α(K)=0.0768 *11*; α(L)=0.01104 *16*; α(M)=0.00242 *4* α(N)=0.000560 *8*; α(O)=8.21×10^{-5} *12*; α(P)=4.73×10^{-6} *7*

From ENSDF

$^{155}_{66}$Dy$_{89}$-8

γ(^{155}Dy) (continued)

Eγ[†]	Iγ[†‡c]	Ei(level)	J^π_i	E_f	J^π_f	Mult.[#]	δ[@b]	α[&a]	Comments
336.02 *3*	3.7 *4*	375.401	5/2⁻,7/2⁻	39.384	5/2⁻	M1+E2	1.0 +*13*−*6*	0.065 *14*	α(K)=0.053 *13*; α(L)=0.0092 *7*; α(M)=0.00207 *12* α(N)=0.00047 *3*; α(O)=6.7×10^{-5} *7*; α(P)=3.11×10^{-6} *90* δ: computed by the evaluator from α(K)exp=0.054 *13*.
344.18 *8*	5.6 *8*	752.70	3/2⁺,5/2⁺	408.533	3/2⁺,5/2⁺	M1		0.0784	α(K)=0.0662 *10*; α(L)=0.00950 *14*; α(M)=0.00208 *3* α(N)=0.000482 *7*; α(O)=7.07×10^{-5} *10*; α(P)=4.08×10^{-6} *6*
348.99 *3*	5.6 *3*	349.002	5/2⁺	0.0	3/2⁻	E1		0.01186	α(K)=0.01006 *14*; α(L)=0.001410 *20*; α(M)=0.000308 *5* α(N)=7.07×10^{-5} *10*; α(O)=1.012×10^{-5} *15*; α(P)=5.37×10^{-7} *8*
353.49 *9*	1.5 *9*	440.341	5/2⁺,7/2⁺	86.767	7/2⁻	E1		0.01150	α(K)=0.00976 *14*; α(L)=0.001366 *20*; α(M)=0.000298 *5* α(N)=6.85×10^{-5} *10*; α(O)=9.81×10^{-6} *14*; α(P)=5.21×10^{-7} *8*
369.10 *10*	4.5 *9*	408.533	3/2⁺,5/2⁺	39.384	5/2⁻	[E1]		0.01037	α(K)=0.00880 *13*; α(L)=0.001229 *18*; α(M)=0.000268 *4* α(N)=6.16×10^{-5} *9*; α(O)=8.83×10^{-6} *13*; α(P)=4.71×10^{-7} *7* Iγ: deduced by the evaluator from Ice(K)=0.04 and α(K) for an E1 transition. 1979Ab18 report Iγ(369.10γ+369.30γ)=6.5 *3*.
369.30 *10*	2.0 *10*	456.218	5/2⁻	86.767	7/2⁻	(M1)		0.0651	α(K)=0.0551 *8*; α(L)=0.00788 *11*; α(M)=0.001726 *25* α(N)=0.000399 *6*; α(O)=5.86×10^{-5} *9*; α(P)=3.38×10^{-6} *5* Iγ: computed by the evaluator from Iγ (369.10γ)=4.5 *9* and Iγ(369.10γ+369.30γ)=6.5 *3* (1979Ab18). Mult.: from Ice(K)=0.20 and the deduced Iγ value, one obtains α(K)exp=0.10 +*10*−*4*. The placement in the level scheme indicates mult=M1,E2. Since α(K)=0.056 and 0.027 for M1 and E2, respectively, the deduced α(K)exp value indicates a preference for M1.
^{x}373.26 *4*	3.2 *3*								
^{x}377.6 *2*	0.8 *2*								
382.88 *14*	4.5 *5*	382.89	3/2⁻,(1/2)⁻	0.0	3/2⁻	M1		0.0592	α(K)=0.0501 *7*; α(L)=0.00716 *10*; α(M)=0.001568 *22* α(N)=0.000363 *5*; α(O)=5.32×10^{-5} *8*; α(P)=3.08×10^{-6} *5*
383.95[f] *14*	7.9 *8*	423.33	5/2⁻,7/2⁻	39.384	5/2⁻				Mult.: mult reported as E1, but this is inconsistent with the placement. Note that this placement is questionable.
^{x}391.15 *10*	1.3 *2*					E2		0.0295	α(K)=0.0231 *4*; α(L)=0.00499 *7*; α(M)=0.001135 *16* α(N)=0.000259 *4*; α(O)=3.49×10^{-5} *5*; α(P)=1.257×10^{-6} *18*
397.14 *15*	1.4 *2*	483.73	5/2⁺	86.767	7/2⁻	E1		0.00871	α(K)=0.00740 *11*; α(L)=0.001029 *15*; α(M)=0.000224 *4* α(N)=5.16×10^{-5} *8*; α(O)=7.41×10^{-6} *11*; α(P)=3.98×10^{-7} *6*
408.58 *2*	9.9 *5*	408.533	3/2⁺,5/2⁺	0.0	3/2⁻	E1		0.00815	α(K)=0.00692 *10*; α(L)=0.000962 *14*; α(M)=0.000210 *3* α(N)=4.82×10^{-5} *7*; α(O)=6.93×10^{-6} *10*; α(P)=3.73×10^{-7} *6*
416.84 *3*	2.7 *2*	456.218	5/2⁻	39.384	5/2⁻	M1		0.0475	α(K)=0.0402 *6*; α(L)=0.00572 *8*; α(M)=0.001253 *18* α(N)=0.000290 *4*; α(O)=4.26×10^{-5} *6*; α(P)=2.46×10^{-6} *4*
420.97 *3*	5.6 *3*	557.550	5/2⁻,7/2⁻	136.320	5/2⁻	M1		0.0463	α(K)=0.0391 *6*; α(L)=0.00558 *8*; α(M)=0.001221 *17* α(N)=0.000283 *4*; α(O)=4.15×10^{-5} *6*; α(P)=2.40×10^{-6} *4* Placement of this γ in the level scheme is that of 1979Al31. 1979Ab18 show it as unplaced.

γ(^{155}Dy) (continued)

Eγ†	Iγ†‡c	Ei(level)	J^π_i	Ef	J^π_f	Mult.#	α&a	Comments
x430.70 *14*	1.05 *10*							
x439.71 *3*	4.2 *2*					M1	0.0413	α(K)=0.0350 *5*; α(L)=0.00498 *7*; α(M)=0.001089 *16* α(N)=0.000252 *4*; α(O)=3.70×10^{-5} *6*; α(P)=2.14×10^{-6} *3*
x444.3 *1*	0.4 *1*					M1	0.0402	α(K)=0.0341 *5*; α(L)=0.00484 *7*; α(M)=0.001060 *15* α(N)=0.000245 *4*; α(O)=3.60×10^{-5} *5*; α(P)=2.09×10^{-6} *3*
448.98 *3*	5.9 *3*	448.98	1/2$^-$,3/2$^-$	0.0	3/2$^-$	M1	0.0392	α(K)=0.0331 *5*; α(L)=0.00471 *7*; α(M)=0.001032 *15* α(N)=0.000239 *4*; α(O)=3.50×10^{-5} *5*; α(P)=2.03×10^{-6} *3*
456.23 *4*	5.6 *3*	456.218	5/2$^-$	0.0	3/2$^-$	M1	0.0376	α(K)=0.0318 *5*; α(L)=0.00452 *7*; α(M)=0.000989 *14* α(N)=0.000229 *4*; α(O)=3.36×10^{-5} *5*; α(P)=1.95×10^{-6} *3*
x460.73 *5*	4.8 *3*					M1	0.0366	α(K)=0.0310 *5*; α(L)=0.00441 *7*; α(M)=0.000964 *14* α(N)=0.000223 *4*; α(O)=3.28×10^{-5} *5*; α(P)=1.90×10^{-6} *3*
x476.42 *9*	3.2 *2*					E2,M1	0.0254 *83*	α(K)=0.0211 *74*; α(L)=0.0033 *7*; α(M)=0.00074 *15* α(N)=0.00017 *4*; α(O)=2.4×10^{-5} *6*; α(P)=1.25×10^{-6} *49*
478.2 *2*	≤5.2	702.73		224.532	7/2$^-$			Iγ: 1979Ab18 report Iγ(478.2γ + 479.13γ)=5.2 *3*.
x479.13 *4*	≤5.2							Iγ: 1979Ab18 report Iγ(478.2γ + 479.13γ)=5.2 *3*.
493.3 *3*	1.10 *11*	902.06	3/2$^+$,5/2$^+$	408.533	3/2$^+$,5/2$^+$	E2	0.01570	α(K)=0.01262 *18*; α(L)=0.00240 *4*; α(M)=0.000539 *8* α(N)=0.0001234 *18*; α(O)=1.700×10^{-5} *24*; α(P)=7.05×10^{-7} *10*
x495.3 *3*	1.10 *11*							
x502.9 *3*	1.0 *5*							
x515.62 *7*	3.4 *3*							
518.43 *15*	1.2 *5*	557.550	5/2$^-$,7/2$^-$	39.384	5/2$^-$			
x523.66 *5*	1.87 *14*							
x529.4 *3*	0.7 *2*							
x533.1 *3*	0.5 *2*							
x536.6 *1*	0.76 *8*							
x542.50 *7*	0.97 *16*							
x554.0 *2*								Ice(K)=0.015 *3*.
x555.9 *2*	≤2.8							Iγ: 1979Ab18 report Iγ(555.9γ + 557.6γ)=2.8 *3*.
557.6 *2*	≤2.8	557.550	5/2$^-$,7/2$^-$	0.0	3/2$^-$			Iγ: 1979Ab18 report Iγ(555.9γ + 557.6γ)=2.8 *3*.
x566.28 *4*	2.73 *14*							
569.2 *2*	2.3 *8*	569.11	3/2$^-$,5/2$^-$,7/2$^-$	0.0	3/2$^-$	E2	0.01090	α(K)=0.00887 *13*; α(L)=0.001576 *23*; α(M)=0.000353 *5* α(N)=8.09×10^{-5} *12*; α(O)=1.128×10^{-5} *16*; α(P)=5.02×10^{-7} *7*
x576.74 *10*	0.89 *9*							
x599.22 *15*	0.8 *3*							
x615.7 *3*	3.2 *4*							
616.2 *4*	0.8 *3*	752.70	3/2$^+$,5/2$^+$	136.320	5/2$^-$	E1	0.00326	α(K)=0.00278 *4*; α(L)=0.000378 *6*; α(M)=8.21×10^{-5} *12* α(N)=1.89×10^{-5} *3*; α(O)=2.74×10^{-6} *4*; α(P)=1.531×10^{-7} *22*
x623.9 *3*	0.6 *2*							
x648.45 *8*	0.99 *13*							
654.16 *9*	1.8 *2*	902.06	3/2$^+$,5/2$^+$	247.791	5/2$^+$			
659.6 *2*	1.3 *2*	1217.75	3/2$^+$,5/2$^+$	557.550	5/2$^-$,7/2$^-$			
x687.19 *10*	1.11 *9*							
x689.07 *11*	0.98 *13*							

From ENSDF

$^{155}_{66}$Dy$_{89}$-10

γ(^{155}Dy) (continued)

E_γ [†]	I_γ [†‡c]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [#]	α [&a]	Comments
[x]692.29 *12*	0.97 *10*							
699.50 *15*	1.22 *10*	902.06	3/2+,5/2+	202.413	3/2−			
752.5 *4*		752.70	3/2+,5/2+	0.0	3/2−			
765.85 *7*	1.82 *11*	902.06	3/2+,5/2+	136.320	5/2−			
[x]768.72 *6*	2.0 *10*							
[x]791.75 *8*	1.15 *10*							
[x]802.94 *6*	2.6 *2*							
[x]825.5 *3*	1.6 *2*							
[x]828.4 *2*	1.2 *2*							
834.85 *9*	1.7 *4*	1217.75	3/2+,5/2+	382.89	3/2−,(1/2)−	E1	1.76×10^{-3}	α(K)=0.001504 *21*; α(L)=0.000201 *3*; α(M)=4.37×10^{-5} *7* α(N)=1.007×10^{-5} *15*; α(O)=1.468×10^{-6} *21*; α(P)=8.36×10^{-8} *12* Mult.: from α(K)exp=0.0024 *5*, mult is E1 or E2. Placement in the level scheme requires Δπ=yes.
[x]867.6 *2*	1.2 *2*							
[x]872.42 *12*	1.0 *2*							
[x]875.40 *12*	1.2 *2*							
892.2 *2*	4.3 *5*	1217.75	3/2+,5/2+	325.406	5/2−,(3/2)−	E1	1.55×10^{-3}	α(K)=0.001323 *19*; α(L)=0.0001765 *25*; α(M)=3.83×10^{-5} *6* α(N)=8.83×10^{-6} *13*; α(O)=1.289×10^{-6} *18*; α(P)=7.37×10^{-8} *11*
897.14 *7*	8.0 *4*	1033.47	3/2+,5/2+	136.320	5/2−	E1	1.53×10^{-3}	α(K)=0.001309 *19*; α(L)=0.0001746 *25*; α(M)=3.79×10^{-5} *6* α(N)=8.74×10^{-6} *13*; α(O)=1.275×10^{-6} *18*; α(P)=7.29×10^{-8} *11*
902.03 *11*	2.6 *2*	902.06	3/2+,5/2+	0.0	3/2−			
[x]955.09 *14*	0.8 *2*							
994.10 *7*	6.0 *5*	1033.47	3/2+,5/2+	39.384	5/2−	E1	1.26×10^{-3}	α(K)=0.001079 *16*; α(L)=0.0001432 *20*; α(M)=3.11×10^{-5} *5* α(N)=7.17×10^{-6} *10*; α(O)=1.047×10^{-6} *15*; α(P)=6.02×10^{-8} *9*
[x]1010.8 *3*	1.3 *2*							
1015.35 *6*	4.8 *4*	1217.75	3/2+,5/2+	202.413	3/2−	E1	1.21×10^{-3}	α(K)=0.001038 *15*; α(L)=0.0001376 *20*; α(M)=2.98×10^{-5} *5* α(N)=6.88×10^{-6} *10*; α(O)=1.006×10^{-6} *14*; α(P)=5.79×10^{-8} *9*
[x]1027.9 *2*	1.1 *4*							
1033.47 *4*	8.5 *4*	1033.47	3/2+,5/2+	0.0	3/2−	E1	1.17×10^{-3}	α(K)=0.001004 *14*; α(L)=0.0001331 *19*; α(M)=2.89×10^{-5} *4* α(N)=6.66×10^{-6} *10*; α(O)=9.73×10^{-7} *14*; α(P)=5.61×10^{-8} *8*
[x]1057.2 *2*	1.3 *2*							
1081.40 *6*	5.5 *5*	1217.75	3/2+,5/2+	136.320	5/2−	E1	1.08×10^{-3}	α(K)=0.000924 *13*; α(L)=0.0001222 *18*; α(M)=2.65×10^{-5} *4* α(N)=6.12×10^{-6} *9*; α(O)=8.94×10^{-7} *13*; α(P)=5.16×10^{-8} *8*
1178.39 *4*	4.5 *2*	1217.75	3/2+,5/2+	39.384	5/2−	E1	9.40×10^{-4}	α(K)=0.000791 *11*; α(L)=0.0001043 *15*; α(M)=2.26×10^{-5} *4* α(N)=5.22×10^{-6} *8*; α(O)=7.64×10^{-7} *11*; α(P)=4.43×10^{-8} *7*; α(IPF)=1.572×10^{-5} *22*
1218.0 *3*	1.18 *14*	1217.75	3/2+,5/2+	0.0	3/2−			
[x]1259.21 *9*	1.2 *2*							
[x]1270.95 *14*	1.1 *2*							
[x]1327.48 *7*	1.60 *12*							
[x]1332.63 *12*	0.91 *12*							
[x]1371.9 *4*	0.99 *9*							
[x]1398.0 *6*	0.7 *2*							

From ENSDF

γ(^{155}Dy) (continued)

E_γ[†]	I_γ[†‡c]	E_i(level)	E_γ[†]	I_γ[†‡c]	E_i(level)	E_γ[†]	I_γ[†‡c]	E_i(level)	E_γ[†]	I_γ[†‡c]	E_i(level)
[x]1471.1 *3*	0.56 *11*		[x]1693.6 *2*	0.7 *2*		[x]2018.9 *2*	1.7 *4*		[x]2184.6 *2*	0.5 *2*	
[x]1476.5 *5*	0.6 *2*		[x]1696.0 *3*	0.6 *2*		[x]2045.0 *2*	0.65 *15*		[x]2192.1 *2*	1.4 *2*	
[x]1504.8 *4*	0.6 *2*		[x]1700.7 *2*	1.0 *2*		[x]2063.5 *2*	1.3 *2*		[x]2200.9 *1*	1.8 *2*	
[x]1516.6 *3*	0.5 *2*		[x]1708.3 *5*	0.8 *3*		[x]2069.2 *1*	2.1 *5*		[x]2207.3 *2*	1.2 *2*	
[x]1530.2 *2*	1.0 *2*		[x]1883.0 *15*	1.1 *4*		[x]2113.2 *2*	1.2 *2*		[x]2218.5 *3*	0.6 *2*	
[x]1535.9 *2*	1.1 *2*		[x]1935.3 *3*	1.1 *3*		[x]2128.6 *2*	1.1 *3*		[x]2222.1 *4*	0.7 *2*	
[x]1540.0 *2*	1.2 *2*		[x]1939.7 *2*	1.3 *2*		[x]2150.3 *2*	1.8 *2*		[x]2241.3 *1*	3.5 *2*	
[x]1613.6 *2*	1.7 *3*		[x]1943.0 *3*	0.8 *2*		[x]2167.8 *2*	1.0 *2*				
[x]1672.5 *3*	0.7 *2*		[x]1972.8 *3*	1.1 *2*		[x]2170.7 *2*	1.2 *2*				
[x]1679.4 *4*	0.5 *2*		[x]1994.7 *2*	0.9 *2*		[x]2182.1 *2*	0.6 *2*				

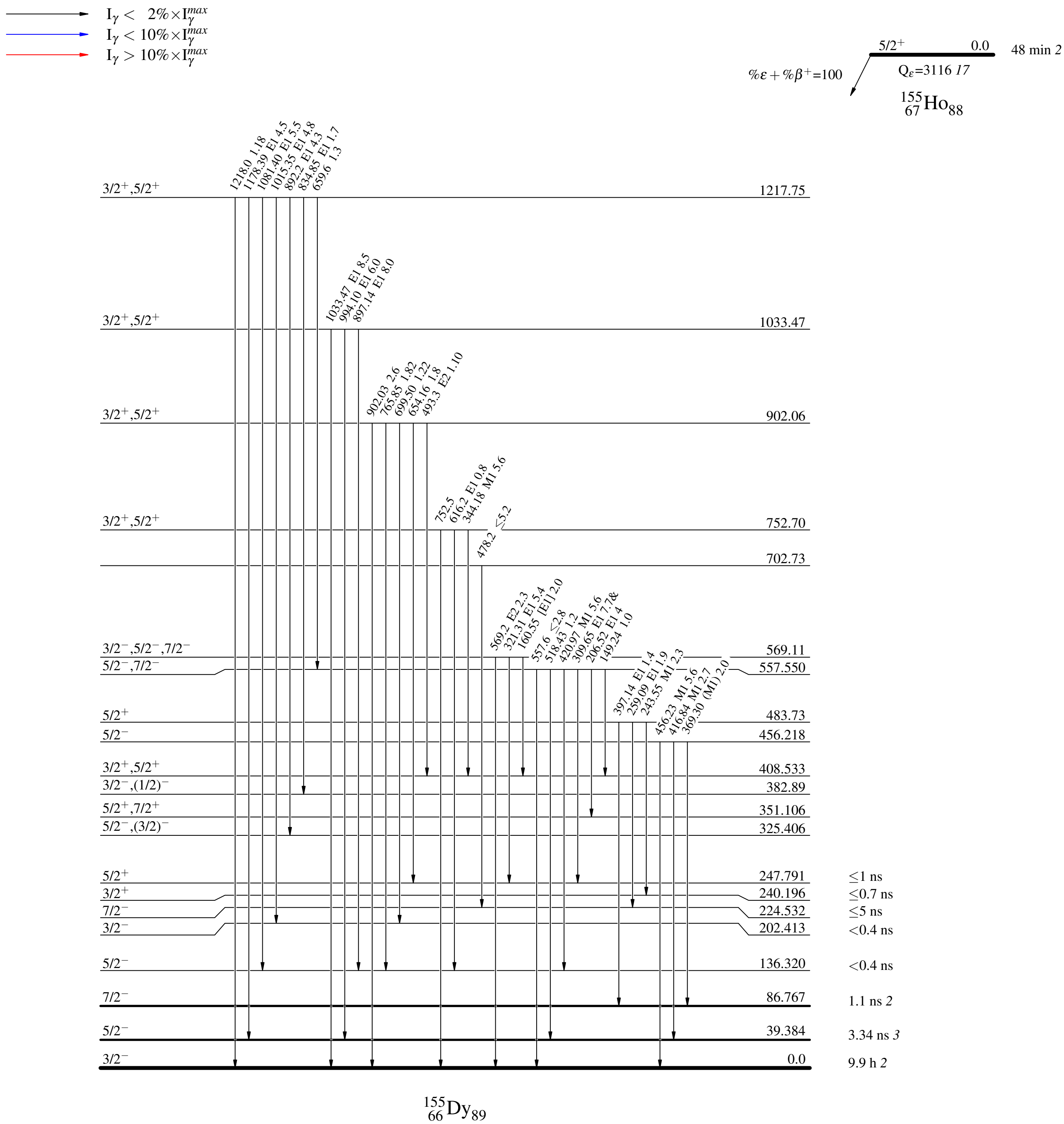
[†] From 1979Ab18.
[‡] I(Dy Kα_1 x ray)=306 *30* (1979Ab18).
[#] Deduced from the α(K)exp data of 1979Ab18, unless noted otherwise.
[@] Calculated from the measured L-subshell ratios of 1979Al31, unless otherwise noted.
[&] For mixed transitions for which δ is not known, the listed value was calculated assuming δ=1.
[a] Additional information 2.
[b] If no value given it was assumed δ=1.00 for E2/M1, δ=1.00 for E3/M2 and δ=0.10 for the other multipolarities.
[c] For absolute intensity per 100 decays, multiply by 0.125 *15*.
[d] Multiply placed.
[e] Multiply placed with undivided intensity.
[f] Placement of transition in the level scheme is uncertain.
[x] γ ray not placed in level scheme.

$^{155}_{66}Dy_{89}$-12

^{155}Ho ε decay 1979Ab18,1979Al31

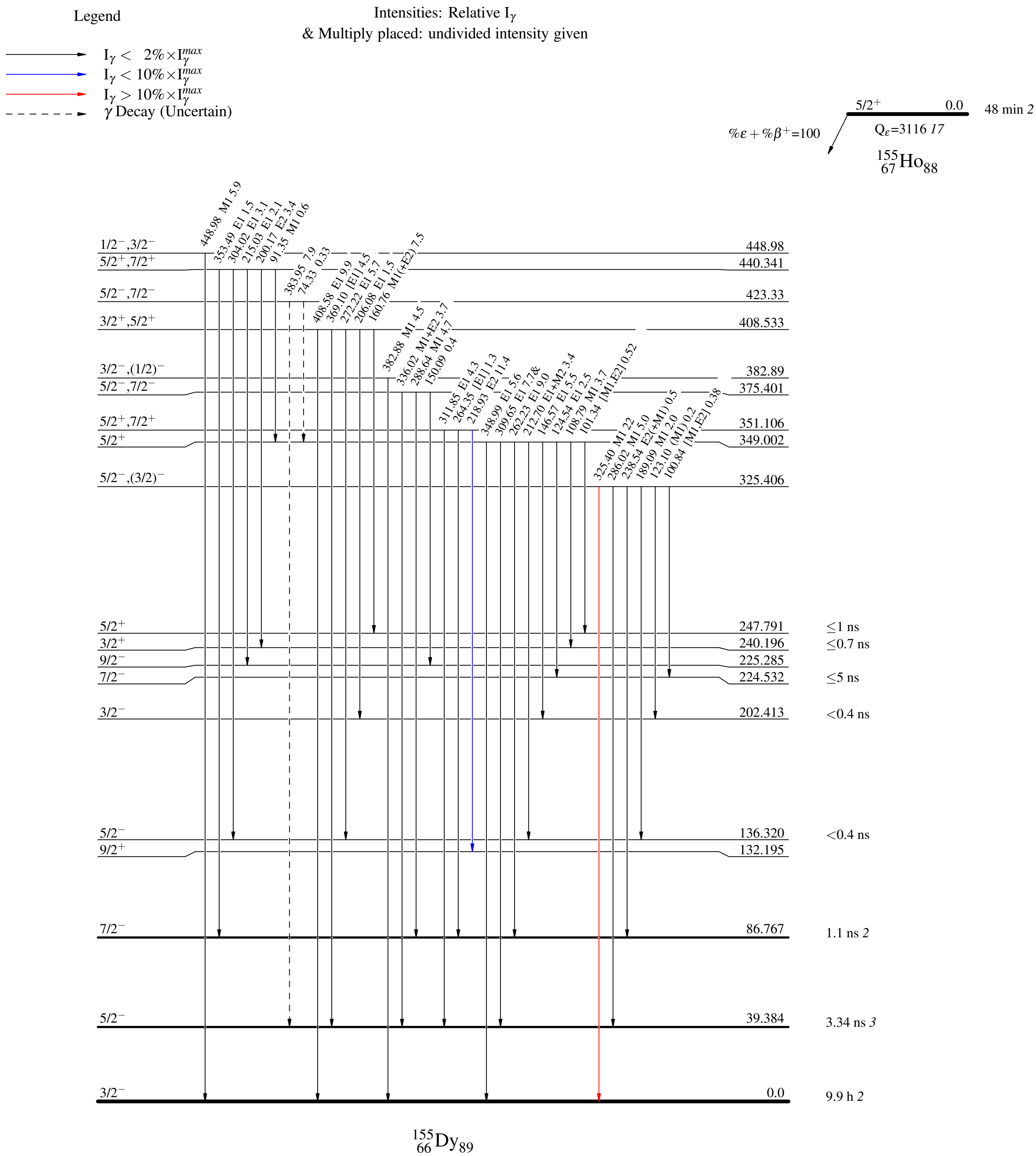
Decay Scheme

Intensities: Relative I_γ
& Multiply placed: undivided intensity given



^{155}Ho ε decay 1979Ab18,1979Al31

Decay Scheme (continued)



^{155}Ho ε decay 1979Ab18,1979Al31

Decay Scheme (continued)

Intensities: Relative I_γ
& Multiply placed: undivided intensity given