^{158}Ho ε decay (11.3 min+28 min) 1978An11,1974Al30,1975Ru02

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	N. Nica	NDS 141, 1 (2017)	1-Feb-2017

Parent: ^{158}Ho: E=0.0; $J^\pi=5^+$; $T_{1/2}$=11.3 min *4*; Q(ε)=4220 *27*; %ε+%$β^+$ decay=100.0

Parent: ^{158}Ho: E=67.20 *1*; $J^\pi=2^-$; $T_{1/2}$=28 min *2*; Q(ε)=4220 *27*; %ε+%$β^+$ decay<19.0

These activities have been studied in equilibrium following the decay of 2.4-h ^{158}Er which has been produced by spallation of Ta with 660-MeV protons with chemical separation or chemical and mass separation (1968Ab14,1974Al30) and by ^{150}Sm(^{12}C,4n) and ^{151}Eu(^{11}B,4n) reactions (1975Ru02,1978An11). The Ho activities have also been produced by Ta(p,x) (1974Al30) and ^{148}Nd(^{14}N,4n) (1975Ru02) reactions. Others: 2013KaZW, 1974AlZG, 1973Ch28, 1966La11, 1966Ab02, 1965St08, 1962Sc10, 1961Gr25, 1961Bo24, 1961Ba32, 1961Ab04, 1960Dn01, 1960Ba66, 1960Ab07.

^{158}Dy Levels

1978An11 have suggested the assignment of a number of excited states as members of octupole bands having $K^\pi=0^-$, 1^- and 2^-. The evaluator, however, has not adopted these band assignments.

E(level)†	Jπ‡	$T_{1/2}$#	Comments
0.0@	0^+		
98.901@ *10*	2^+	1.66 ns *3*	$T_{1/2}$: 1.63 NS 8 measured by 1970Mo39 by ce-G-delay coin.
317.101@ *14*	4^+	72 ps *4*	
637.641@ *23*	6^+	9.1 ps *10*	
946.29a *3*	2^+	0.85 ps *11*	
990.49& *5*	0^+		
1043.81@ *7*	8^+	2.9 ps *5*	
1044.562a *24*	3^+		
1085.54& *5*	2^+	0.53 ps *10*	
1163.71a *3*	4^+		
1279.96& *5*	4^+		
1314.73a *3*	5^+		
1371.70 *5*	$(1,2,3)^-$		
1397.14 *4*	3^-		
1441.74 *5*	1^-		
1486.32a *18*	6^+		
1501.13 *9*			
1513.52 *6*	$2^+,3,4^+$		
1518.42 *8*	$3^-,4^-$		
1528.00 *7*	5^-		
1547.28& *7*	6^+		
1607.98 *9*	$(2)^+$	>0.18 ps	
1618.50 *15*	$3^-,4^-,5^-$		
1634.50 *16*			
1671.61 *15*	$2^+,3,4^+$		
1675.76a *20*	7^+		
1710.30 *17*	$(^+)$		1713 postulated as 0^+ candidate by 2008VaZU.
1818.75 *10*			
1840.11 *14*	$2^+,3,4^+$		
1851.94b *6*	2^+		
1895.12c *3*	4^+	<0.11 ns	
1920.39 *8*	$3^+,4^+,5^+$		
1940.71b *4*	3^+		
1975.74 *10*	$1^+,2^+$		

Continued on next page (footnotes at end of table)

^{158}Ho ε decay (11.3 min+28 min) 1978An11,1974Al30,1975Ru02 (continued)

^{158}Dy Levels (continued)

E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡
2021.90[c] *6*	5^+	2382.42 *6*	4^+	2518.65 *13*	4^+	2989.28 *9*	2^+
2055.38[b] *4*	4^+	2388.75[b] *13*	(6^+)	2538.52 *11*	$3^+,4^+$	3530.16 *19*	4^+
2107.64 *4*	4^+	2409.53 *7*	$2^-,3^-,4^-$	2605.94 *11*	1^-	3547.75 *12*	(3^-)
2153.58[c] *11*	6^+	2409.67 *5*	4^+	2644.50 *7*	$(^+)$	3582.30 *22*	2^+
2211.06[b] *8*	(5^+)	2436.48 *6*	$3^+,4^+$	2672.29 *11*	4^+		

† From least-squares fit to the γ energies. χ^2 norm = 1.88 greater than χ^2 critical = 1.32.
‡ From Adopted Levels.
# From Adopted Levels. Measurements from this decay mode only are given in comments Adopted Levels for all values.
@ Band(A): $K^\pi=0^+$ ground-state band.
& Band(B): $K^\pi=0^+$ β-vibrational band.
a Band(C): $K^\pi=2^+$ γ-vibrational band.
b Band(D): $K^\pi=2^+$ band.
c Band(E): $K^\pi=4^+$ two-quasineutron band.

^{158}Ho ε decay (11.3 min+28 min) 1978An11,1974Al30,1975Ru02 (continued)

γ(^{158}Dy)

The longest list of γ′s is from 1978An11, but substantial lists are also given by 1968Ab14, 1974Al30, and 1975Ru02. There are many γ′s that are only reported by one or two authors. Any γ′s reported by only one author are flagged.
The coincidence data are from 1978An11.

E_γ[‡&]	I_γ[#@&]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[a]	α[†]	Comments
95.05[g] *1*	9.0[g] *10*	1085.54	2^+	990.49	0^+			
98.19[g] *9*	1.9[g] *9*	1044.562	3^+	946.29	2^+			
98.90 *1*	700 *50*	98.901	2^+	0.0	0^+	E2	2.83	α(K)=1.154 *17*; α(L)=1.286 *18*; α(M)=0.308 *5*; α(N+..)=0.0774 *11* α(N)=0.0691 *10*; α(O)=0.00830 *12*; α(P)=4.78×10^{-5} *7*
[x]105.6[e] *1*	1.5[e] *4*							
119.4[g] *1*	4.6[g] *4*	1163.71	4^+	1044.562	3^+			
150.97[g] *4*	3.0[g] *6*	1314.73	5^+	1163.71	4^+			
[x]186.77 *9*	3.0 *8*							I_γ: From 1978An11; other: 8.0 *20* (1974Al30).
213.6[e j] *2*	15[e] *4*	1528.00	5^-	1314.73	5^+			
217.4[e j] *10*	[e]	1163.71	4^+	946.29	2^+			E_γ: Shown (1978An11) in scheme, but not in γ list.
218.20 *1*	1000 *4*	317.101	4^+	98.901	2^+	E2	0.1772	α(K)=0.1225 *18*; α(L)=0.0422 *6*; α(M)=0.00987 *14*; α(N+..)=0.00252 *4* α(N)=0.00223 *4*; α(O)=0.000284 *4*; α(P)=5.97×10^{-6} *9*
[x]219.7[g] *2*	8[g] *4*							
[x]261.3[f] *5*	1.4[f] *6*							
270.22[g] *7*	2.6[g] *5*	1314.73	5^+	1044.562	3^+			
[x]275.2[e] *2*	0.6[e] *2*							
[x]294.1[e] *1*	2.7[e] *3*							
301.8[i] *2*	1.3[i] *5*	1920.39	$3^+,4^+,5^+$	1618.50	$3^-,4^-,5^-$			
301.8[i] *2*	1.3[i] *5*	2409.53	$2^-,3^-,4^-$	2107.64	4^+			E_γ: A γ of this energy might also depopulate the 2409.67 level.
320.51 *2*	111 *19*	637.641	6^+	317.101	4^+	E2	0.0528	α(K)=0.0401 *6*; α(L)=0.00989 *14*; α(M)=0.00227 *4*; α(N+..)=0.000587 *9* α(N)=0.000516 *8*; α(O)=6.83×10^{-5} *10*; α(P)=2.11×10^{-6} *3*
327.0	≤33	1371.70	$(1,2,3)^-$	1044.562	3^+			
[x]351.4[e] *1*	1.7[e] *2*							
[x]354.2[e] *1*	2.3[e] *3*							
406.11 *7*	1.9 *4*	1043.81	8^+	637.641	6^+			
[x]418.05 *7*	8.1 *10*					M1	0.0471	α(K)=0.0399 *6*; α(L)=0.00568 *8*; α(M)=0.001244 *18*; α(N+..)=0.000332 *5* α(N)=0.000288 *4*; α(O)=4.22×10^{-5} *6*; α(P)=2.44×10^{-6} *4*
425.36 *8*	18 *3*	1371.70	$(1,2,3)^-$	946.29	2^+			
442.10 *14*	1.9 *6*	2382.42	4^+	1940.71	3^+			
[x]447.2[e] *2*	1.4[e] *3*							
462.08 *7*	7.7 *8*	2382.42	4^+	1920.39	$3^+,4^+,5^+$	E2	0.0187	α(K)=0.01490 *21*; α(L)=0.00292 *4*; α(M)=0.000661 *10*;

^{158}Ho ε decay (11.3 min+28 min) 1978An11,1974Al30,1975Ru02 (continued)

γ(^{158}Dy) (continued)

E_γ‡&	I_γ#@&	E_i(level)	J_i^π	E_f	J_f^π	Mult.[a]	α†	Comments
								α(N+..)=0.0001725 *25* α(N)=0.0001510 *22*; α(O)=2.07×10^{-5} *3*; α(P)=8.27×10^{-7} *12*
473.9[g] *1*	4.9[g] *7*	1518.42	3$^-$,4$^-$	1044.562	3$^+$			
487.11 *17*	1.6 *6*	2382.42	4$^+$	1895.12	4$^+$	M1	0.0318	α(K)=0.0269 *4*; α(L)=0.00381 *6*; α(M)=0.000834 *12*; α(N+..)=0.000223 *4* α(N)=0.000193 *3*; α(O)=2.83×10^{-5} *4*; α(P)=1.644×10^{-6} *23*
x498.4[f] *8*	3[f] *1*							
508.2[g] *2*	6.1[g] *20*	1671.61	2$^+$,3,4$^+$	1163.71	4$^+$			
514.4[ig] *1*	11[ig] *3*	2409.53	2$^-$,3$^-$,4$^-$	1895.12	4$^+$			
514.4[ig] *1*	11[ig] *3*	2409.67	4$^+$	1895.12	4$^+$			
x517.3[g] *1*	10[g] *3*					E2	0.01388	α(K)=0.01121 *16*; α(L)=0.00208 *3*; α(M)=0.000467 *7*; α(N+..)=0.0001224 *18* α(N)=0.0001070 *15*; α(O)=1.479×10^{-5} *21*; α(P)=6.29×10^{-7} *9*
526.3 *3*	1.8 *9*	1163.71	4$^+$	637.641	6$^+$			
533.9 *6*	1.3 *5*	1975.74	1$^+$,2$^+$	1441.74	1$^-$			
538.8[g] *1*	3.5[g] *5*	1818.75		1279.96	4$^+$			
543.87 *19*	1.6 *5*	1940.71	3$^+$	1397.14	3$^-$			
x556.8 *3*	3.5 *6*					(M1)	0.0226	α(K)=0.0191 *3*; α(L)=0.00270 *4*; α(M)=0.000591 *9*; α(N+..)=0.0001579 *23* α(N)=0.0001367 *20*; α(O)=2.01×10^{-5} *3*; α(P)=1.167×10^{-6} *17*
560.1[g] *2*	1.7[g] *7*	1840.11	2$^+$,3,4$^+$	1279.96	4$^+$			
570.0[g] *1*	1.5[g] *7*	2388.75	(6$^+$)	1818.75				
580.23 *13*	6.0 *10*	1895.12	4$^+$	1314.73	5$^+$	(E2)		Mult.: (E1,E2) from 1978An11; E1 contradicts spin assignments.
615.9 *7*	3.5 *11*	1895.12	4$^+$	1279.96	4$^+$			
624.4[g] *3*	≈7[g]	1710.30	(+)	1085.54	2$^+$	(E2)	0.00869 *13*	α=0.00869 *13*; α(K)=0.00713 *10*; α(L)=0.001219 *18*; α(M)=0.000272 *4*; α(N+..)=7.16×10^{-5} *10* α(N)=6.24×10^{-5} *9*; α(O)=8.76×10^{-6} *13*; α(P)=4.05×10^{-7} *6*
629.2[g] *2*	8.5[g] *26*	946.29	2$^+$	317.101	4$^+$			
630.23 *9*	14 *4*	2605.94	1$^-$	1975.74	1$^+$,2$^+$	E1	0.00311 *5*	α=0.00311 *5*; α(K)=0.00265 *4*; α(L)=0.000360 *5*; α(M)=7.83×10^{-5} *11*; α(N+..)=2.08×10^{-5} *3* α(N)=1.80×10^{-5} *3*; α(O)=2.62×10^{-6} *4*; α(P)=1.462×10^{-7} *21*
642.63 *16*	4.5 *12*	1279.96	4$^+$	637.641	6$^+$	E2	0.00811 *12*	α=0.00811 *12*; α(K)=0.00667 *10*; α(L)=0.001128 *16*; α(M)=0.000251 *4*; α(N+..)=6.62×10^{-5} *10* α(N)=5.77×10^{-5} *8*; α(O)=8.11×10^{-6} *12*; α(P)=3.80×10^{-7} *6*
660.75 *7*	5.3 *9*	1940.71	3$^+$	1279.96	4$^+$	E2	0.00759 *11*	α=0.00759 *11*; α(K)=0.00625 *9*; α(L)=0.001047 *15*; α(M)=0.000233 *4*; α(N+..)=6.14×10^{-5} *9* α(N)=5.35×10^{-5} *8*; α(O)=7.54×10^{-6} *11*; α(P)=3.57×10^{-7} *5*
x668.7[e] *1*	4.2[e] *6*							
676.97 *4*	13.4 *24*	1314.73	5$^+$	637.641	6$^+$	E2	0.00717 *10*	α=0.00717 *10*; α(K)=0.00592 *9*; α(L)=0.000982 *14*; α(M)=0.000218 *3*; α(N+..)=5.76×10^{-5} *8* α(N)=5.02×10^{-5} *7*; α(O)=7.08×10^{-6} *10*; α(P)=3.38×10^{-7} *5* E_γ: Poor energy fit to scheme; level energies give 677.10 *3*.

$^{158}_{66}Dy_{92}$-4

^{158}Ho ε decay (11.3 min+28 min) 1978An11,1974Al30,1975Ru02 (continued)

γ(^{158}Dy) (continued)

E_γ ‡&	I_γ #@&	E_i(level)	J_i^π	E_f	J_f^π	Mult.[a]	α†	Comments
707.03 *16*	5.4 *8*	2021.90	5^+	1314.73	5^+	M1+E2	0.009 *3*	α=0.009 *3*; α(K)=0.008 *3*; α(L)=0.0012 *3*; α(M)=0.00026 *7*; α(N+..)=6.9×10^{-5} *18* α(N)=6.0×10^{-5} *15*; α(O)=8.6×10^{-6} *24*; α(P)=4.7×10^{-7} *17*
x715.4[e] *1*	2.4[e] *9*							
x726.4[e] *2*	10.0[e] *21*							
727.41 *4*	69.3 *25*	1044.562	3^+	317.101	4^+	E2	0.00608 *9*	α=0.00608 *9*; α(K)=0.00503 *7*; α(L)=0.000815 *12*; α(M)=0.000181 *3*; α(N+..)=4.78×10^{-5} *7* α(N)=4.16×10^{-5} *6*; α(O)=5.89×10^{-6} *9*; α(P)=2.88×10^{-7} *4*
731.42 *5*	58.1 *15*	1895.12	4^+	1163.71	4^+	E2	0.00600 *9*	α=0.00600 *9*; α(K)=0.00497 *7*; α(L)=0.000804 *12*; α(M)=0.0001784 *25*; α(N+..)=4.71×10^{-5} *7* α(N)=4.10×10^{-5} *6*; α(O)=5.81×10^{-6} *9*; α(P)=2.85×10^{-7} *4*
740.54 *7*	8.8 *12*	2055.38	4^+	1314.73	5^+	M1+E2	0.008 *3*	α=0.008 *3*; α(K)=0.0071 *23*; α(L)=0.0010 *3*; α(M)=0.00023 *6*; α(N+..)=6.1×10^{-5} *16* α(N)=5.3×10^{-5} *14*; α(O)=7.7×10^{-6} *21*; α(P)=4.2×10^{-7} *15*
766.40 *7*	6.3 *12*	1851.94	2^+	1085.54	2^+			
768.39 *7*	10.8 *9*	1085.54	2^+	317.101	4^+	(E2)		Mult.: (E1,E2) from 1978An11; E1 excluded by spin assignments. I_γ: From 1978An11. Other: ≈ 20 (1974Al30) and 23.1 *20* (1975Ru02).
775.6[g] *2*	5.8[g] *11*	2055.38	4^+	1279.96	4^+			
776.91 *8*	9.7 *12*	1940.71	3^+	1163.71	4^+	M1	0.00983 *14*	α=0.00983 *14*; α(K)=0.00834 *12*; α(L)=0.001164 *17*; α(M)=0.000254 *4*; α(N+..)=6.80×10^{-5} *10* α(N)=5.88×10^{-5} *9*; α(O)=8.65×10^{-6} *13*; α(P)=5.06×10^{-7} *7*
792.35 *9*	2.8 *11*	2107.64	4^+	1314.73	5^+	E2	0.00501 *7*	α=0.00501 *7*; α(K)=0.00417 *6*; α(L)=0.000658 *10*; α(M)=0.0001456 *21*; α(N+..)=3.85×10^{-5} *6* α(N)=3.35×10^{-5} *5*; α(O)=4.77×10^{-6} *7*; α(P)=2.40×10^{-7} *4* E_γ: γ energy is poor fit to scheme; from level energies, γ energy is 792.91 *4*.
807.13 *9*	10.5 *21*	1851.94	2^+	1044.562	3^+			I_γ: From 1978An11. Other: 7.5 (1968Ab14) and 6.1 *18* (1975Ru02).
x829.6[g] *2*	3.0[g] *7*							
838.47 *24*	12.9 *9*	2153.58	6^+	1314.73	5^+	E2	0.00443 *7*	α=0.00443 *7*; α(K)=0.00369 *6*; α(L)=0.000573 *8*; α(M)=0.0001267 *18*; α(N+..)=3.35×10^{-5} *5* α(N)=2.91×10^{-5} *4*; α(O)=4.16×10^{-6} *6*; α(P)=2.12×10^{-7} *3*
846.54 *9*	143 *20*	1163.71	4^+	317.101	4^+	E2	0.00433 *6*	α=0.00433 *6*; α(K)=0.00362 *5*; α(L)=0.000560 *8*; α(M)=0.0001238 *18*; α(N+..)=3.28×10^{-5} *5* α(N)=2.85×10^{-5} *4*; α(O)=4.07×10^{-6} *6*; α(P)=2.08×10^{-7} *3* I_γ: From 1978An11. Other: 220 *60* (1974Al30) and 256 *44* (1975Ru02). This difference is due to a different division of the total intensity for the 846.6 and 847.3 γ's.
847.27 *11*	336 *35*	946.29	2^+	98.901	2^+	E2	0.00433 *6*	α=0.00433 *6*; α(K)=0.00361 *5*; α(L)=0.000559 *8*; α(M)=0.0001235 *18*; α(N+..)=3.27×10^{-5} *5* α(N)=2.84×10^{-5} *4*; α(O)=4.06×10^{-6} *6*; α(P)=2.08×10^{-7} *3* I_γ: From 1978An11. Other: 290 *60* (1974Al30) and 262 *44* (1975Ru02). This difference is due to a different division of the total intensity for the 846.6 and 847.3 γ's.

$^{158}_{66}Dy_{92}$-5

^{158}Ho ε decay (11.3 min+28 min) 1978An11,1974Al30,1975Ru02 (continued)

γ(^{158}Dy) (continued)

E_γ‡&	I_γ#@&	E_i(level)	J_i^π	E_f	J_f^π	Mult.[a]	α†	Comments
850.50 *4*	213 *6*	1895.12	4^+	1044.562	3^+	E2	0.00429 *6*	α=0.00429 *6*; α(K)=0.00358 *5*; α(L)=0.000554 *8*; α(M)=0.0001224 *18*; α(N+..)=3.24×10^{-5} *5* α(N)=2.82×10^{-5} *4*; α(O)=4.03×10^{-6} *6*; α(P)=2.06×10^{-7} *3*
854.4[g] *2*	5.0[g] *9*	2382.42	4^+	1528.00	5^-			
858.20 *7*	18.5 *8*	2021.90	5^+	1163.71	4^+	E2	0.00421 *6*	α=0.00421 *6*; α(K)=0.00351 *5*; α(L)=0.000542 *8*; α(M)=0.0001197 *17*; α(N+..)=3.17×10^{-5} *5* α(N)=2.76×10^{-5} *4*; α(O)=3.94×10^{-6} *6*; α(P)=2.02×10^{-7} *3*
[x]875.19 *9*	8.8 *7*					E2	0.00403 *6*	α=0.00403 *6*; α(K)=0.00337 *5*; α(L)=0.000518 *8*; α(M)=0.0001142 *16*; α(N+..)=3.02×10^{-5} *5* α(N)=2.63×10^{-5} *4*; α(O)=3.76×10^{-6} *6*; α(P)=1.94×10^{-7} *3*
890.6 *4*	6.8 *14*	1528.00	5^-	637.641	6^+			I_γ: From 1978An11. Other: 26.2 (1968Ab14) and 22 *5* (1975Ru02).
891.65[i] *15*	26.4[i] *14*	990.49	0^+	98.901	2^+	(E2)	0.00387 *6*	α=0.00387 *6*; α(K)=0.00324 *5*; α(L)=0.000495 *7*; α(M)=0.0001093 *16*; α(N+..)=2.89×10^{-5} *4* α(N)=2.51×10^{-5} *4*; α(O)=3.60×10^{-6} *5*; α(P)=1.87×10^{-7} *3* Mult.: α_K(exp)=0.0048 *10* indicates M1,E2 for the multiplet. E2 multipolarity required by decay scheme for this placement.
891.65[i] *15*	26.4[i] *14*	2055.38	4^+	1163.71	4^+		0.0056 *16*	Mult.: α_K=0.0048 *10* for doubly placed γ. E2 is required by J^π's for component from 990 level which suggests M1 for this component.
893.8[g] *2*	4.3[g] *9*	1840.11	2^+,3,4^+	946.29	2^+			
896.08 *6*	27.0 *10*	1940.71	3^+	1044.562	3^+	E2	0.00383 *6*	α=0.00383 *6*; α(K)=0.00321 *5*; α(L)=0.000490 *7*; α(M)=0.0001080 *16*; α(N+..)=2.86×10^{-5} *4* α(N)=2.49×10^{-5} *4*; α(O)=3.56×10^{-6} *5*; α(P)=1.85×10^{-7} *3*
[x]908.75 *14*	4.4 *10*					E2	0.00372 *6*	α=0.00372 *6*; α(K)=0.00312 *5*; α(L)=0.000474 *7*; α(M)=0.0001044 *15*; α(N+..)=2.77×10^{-5} *4* α(N)=2.40×10^{-5} *4*; α(O)=3.45×10^{-6} *5*; α(P)=1.80×10^{-7} *3*
917.7[g] *3*	2.2[g] *6*	2436.48	3^+,4^+	1518.42	3^-,4^-			
933.93 *9*	3.0 *7*	2989.28	2^+	2055.38	4^+			Mult.: α_K(exp) gives M1+E2, but J^π's require E2.
944.2[g] *1*	22.[g] *3*	2107.64	4^+	1163.71	4^+			
945.61 *4*	366 *40*	1044.562	3^+	98.901	2^+	(E2)	0.00342 *5*	α=0.00342 *5*; α(K)=0.00287 *4*; α(L)=0.000432 *6*; α(M)=9.52×10^{-5} *14*; α(N+..)=2.52×10^{-5} *4* α(N)=2.19×10^{-5} *3*; α(O)=3.15×10^{-6} *5*; α(P)=1.654×10^{-7} *24*
946.14 *17*	177 *25*	946.29	2^+	0.0	0^+	(E2)	0.00342 *5*	α=0.00342 *5*; α(K)=0.00286 *4*; α(L)=0.000431 *6*; α(M)=9.50×10^{-5} *14*; α(N+..)=2.52×10^{-5} *4* α(N)=2.19×10^{-5} *3*; α(O)=3.14×10^{-6} *5*; α(P)=1.652×10^{-7} *24* Mult.: α_K(exp) is consistent with M1,E2, but J^π's require E2.
948.78 *5*	345 *10*	1895.12	4^+	946.29	2^+	E2	0.00340 *5*	α=0.00340 *5*; α(K)=0.00285 *4*; α(L)=0.000429 *6*; α(M)=9.44×10^{-5} *14*; α(N+..)=2.50×10^{-5} *4* α(N)=2.17×10^{-5} *3*; α(O)=3.12×10^{-6} *5*; α(P)=1.643×10^{-7} *23*
962.81 *7*	5.7 *7*	1279.96	4^+	317.101	4^+	(E0+E2)[b]		
977.34 *7*	22.5 *11*	2021.90	5^+	1044.562	3^+	E2	0.00319 *5*	α=0.00319 *5*; α(K)=0.00268 *4*; α(L)=0.000401 *6*; α(M)=8.82×10^{-5} *13*; α(N+..)=2.34×10^{-5} *4* α(N)=2.03×10^{-5} *3*; α(O)=2.92×10^{-6} *4*; α(P)=1.546×10^{-7} *22*

$^{158}_{66}Dy_{92}$-6

γ(^{158}Dy) (continued)

E_γ‡&	I_γ#@&	E_i(level)	J_i^π	E_f	J_f^π	Mult.[a]	α†	$I_{(\gamma+ce)}$	Comments
986.56 *21*	11.1 *10*	1085.54	2^+	98.901	2^+	(E0+E2)[b]			
989.94 *11*	10.9 *7*	2153.58	6^+	1163.71	4^+	[b]			
991.0[j] *2*	<3	990.49	0^+	0.0	0^+	E0		0.13	Mult.: α_K(exp) > 0.042.
994.47 *6*	86.3 *22*	1940.71	3^+	946.29	2^+	E2	0.00308 *5*		α=0.00308 *5*; α(K)=0.00259 *4*; α(L)=0.000385 *6*; α(M)=8.47×10^{-5} *12*; α(N+..)=2.25×10^{-5} *4* α(N)=1.95×10^{-5} *3*; α(O)=2.81×10^{-6} *4*; α(P)=1.492×10^{-7} *21*
997.58 *11*	59.1 *17*	1314.73	5^+	317.101	4^+	E2	0.00306 *5*		α=0.00306 *5*; α(K)=0.00257 *4*; α(L)=0.000382 *6*; α(M)=8.41×10^{-5} *12*; α(N+..)=2.23×10^{-5} *4* α(N)=1.94×10^{-5} *3*; α(O)=2.79×10^{-6} *4*; α(P)=1.483×10^{-7} *21*
1010.76 *11*	13.2 *13*	2055.38	4^+	1044.562	3^+	(E2)	0.00298 *5*		α=0.00298 *5*; α(K)=0.00250 *4*; α(L)=0.000371 *6*; α(M)=8.16×10^{-5} *12*; α(N+..)=2.17×10^{-5} *3* α(N)=1.88×10^{-5} *3*; α(O)=2.71×10^{-6} *4*; α(P)=1.444×10^{-7} *21* Mult.: α_K(exp) is consistent with E1 or E2, but J^π's require E2.
1012.6[i] *4*	4.3[i] *4*	2409.53	$2^-,3^-,4^-$	1397.14	3^-				
1012.6[i] *4*	4.3[i] *4*	2409.67	4^+	1397.14	3^-				
x1024.78[e] *21*	2.9[e] *5*								
1038.12 *19*	5.7 *12*	1675.76	7^+	637.641	6^+				
1043.8 *8*	4.6 *7*	3582.30	2^+	2538.52	$3^+,4^+$	M1	0.00479 *7*		α=0.00479 *7*; α(K)=0.00407 *6*; α(L)=0.000562 *8*; α(M)=0.0001226 *18*; α(N+..)=3.28×10^{-5} *5* α(N)=2.84×10^{-5} *4*; α(O)=4.18×10^{-6} *6*; α(P)=2.45×10^{-7} *4*
1047.34 *7*	15.7 *9*	2211.06	(5^+)	1163.71	4^+				
1063.06 *9*	25.0 *17*	2107.64	4^+	1044.562	3^+	(E2)	0.00268 *4*		α=0.00268 *4*; α(K)=0.00226 *4*; α(L)=0.000332 *5*; α(M)=7.29×10^{-5} *11*; α(N+..)=1.94×10^{-5} *3* α(N)=1.680×10^{-5} *24*; α(O)=2.42×10^{-6} *4*; α(P)=1.304×10^{-7} *19* Mult.: α_K(exp) is consistent with E1 or E2, but J^π's require E2.
1064.70 *15*	53.8 *20*	1163.71	4^+	98.901	2^+	E2	0.00267 *4*		α=0.00267 *4*; α(K)=0.00225 *4*; α(L)=0.000331 *5*; α(M)=7.26×10^{-5} *11*; α(N+..)=1.93×10^{-5} *3* α(N)=1.674×10^{-5} *24*; α(O)=2.42×10^{-6} *4*; α(P)=1.300×10^{-7} *19*
1080.10 *7*	10.4 *9*	1397.14	3^-	317.101	4^+				Mult.: (E2) adopted by 1978An11 contradicts spin assignments.
1085.53 *7*	10.6 *9*	1085.54	2^+	0.0	0^+	E2	0.00257 *4*		α=0.00257 *4*; α(K)=0.00217 *3*; α(L)=0.000317 *5*; α(M)=6.96×10^{-5} *10*; α(N+..)=1.85×10^{-5} *3* α(N)=1.603×10^{-5} *23*; α(O)=2.32×10^{-6} *4*; α(P)=1.251×10^{-7} *18*

$^{158}_{66}Dy_{92}$-7

γ(^{158}Dy) (continued)

E_γ‡&	I_γ#@&	E_i(level)	J_i^π	E_f	J_f^π	Mult.[a]	α†	Comments
1094.99 *11*	5.1 *10*	2409.67	4+	1314.73	5+	E2	0.00253 *4*	α=0.00253 *4*; α(K)=0.00213 *3*; α(L)=0.000311 *5*; α(M)=6.82×10^{-5} *10*; α(N+..)=1.81×10^{-5} *3* α(N)=1.573×10^{-5} *22*; α(O)=2.27×10^{-6} *4*; α(P)=1.230×10^{-7} *18*
1109.18 *7*	7.0 *11*	2055.38	4+	946.29	2+	[b]		
x1118.4[e] *2*	1.9[e] *5*							
1124.55 *19*	3.2 *9*	2672.29	4+	1547.28	6+	(E2)	0.00239 *4*	α=0.00239 *4*; α(K)=0.00202 *3*; α(L)=0.000293 *5*; α(M)=6.44×10^{-5} *9*; α(N+..)=1.779×10^{-5} *25* α(N)=1.484×10^{-5} *21*; α(O)=2.15×10^{-6} *3*; α(P)=1.166×10^{-7} *17*; α(IPF)=6.92×10^{-7} *11* Mult.: α_K(exp) is consistent with E1 or E2, but π′s require E2.
x1129.2[f] *4*	3[f] *1*							
1138.0[g] *3*	2.4[g] *7*	3547.75	(3−)	2409.67	4+			E_γ: the 1138 γ feeds the 2409.54 level and/or the 2409.67 level.
x1141.9[f] *5*	4[f] *1*							
x1143.1[e] *1*	5.6[e] *7*							
x1159.5[g] *2*	6.0[g] *13*							
1161.39 *14*	31.1 *14*	2107.64	4+	946.29	2+	E2	0.00225 *4*	α=0.00225 *4*; α(K)=0.00189 *3*; α(L)=0.000274 *4*; α(M)=6.00×10^{-5} *9*; α(N+..)=1.81×10^{-5} *3* α(N)=1.383×10^{-5} *20*; α(O)=2.00×10^{-6} *3*; α(P)=1.094×10^{-7} *16*; α(IPF)=2.17×10^{-6} *4*
1166.5[g] *2*	4.0[g] *7*	2538.52	3+,4+	1371.70	(1,2,3)−			
1169.21 *18*	7.7 *8*	1486.32	6+	317.101	4+	E2	0.00222 *4*	α=0.00222 *4*; α(K)=0.00187 *3*; α(L)=0.000270 *4*; α(M)=5.91×10^{-5} *9*; α(N+..)=1.84×10^{-5} *3* α(N)=1.363×10^{-5} *19*; α(O)=1.97×10^{-6} *3*; α(P)=1.080×10^{-7} *16*; α(IPF)=2.67×10^{-6} *4*
1181.0 *3*	18.0 *16*	1279.96	4+	98.901	2+	E2	0.00217 *3*	α=0.00217 *3*; α(K)=0.00183 *3*; α(L)=0.000264 *4*; α(M)=5.79×10^{-5} *9*; α(N+..)=1.89×10^{-5} *3* α(N)=1.334×10^{-5} *19*; α(O)=1.93×10^{-6} *3*; α(P)=1.059×10^{-7} *15*; α(IPF)=3.55×10^{-6} *6*
1196.40 *9*	7.5 *12*	1513.52	2+,3,4+	317.101	4+			
1201.32 *13*	13.3 *13*	1518.42	3−,4−	317.101	4+	E1	0.000917 *13*	α=0.000917 *13*; α(K)=0.000765 *11*; α(L)=0.0001007 *15*; α(M)=2.18×10^{-5} *3*; α(N+..)=2.99×10^{-5} α(N)=5.04×10^{-6} *7*; α(O)=7.38×10^{-7} *11*; α(P)=4.28×10^{-8} *6*; α(IPF)=2.41×10^{-5} *4*
1210.87 *7*	22.7 *10*	1528.00	5−	317.101	4+	E1	0.000909 *13*	α=0.000909 *13*; α(K)=0.000754 *11*; α(L)=9.93×10^{-5} *14*; α(M)=2.15×10^{-5} *3*; α(N+..)=3.37×10^{-5} *5* α(N)=4.97×10^{-6} *7*; α(O)=7.27×10^{-7} *11*; α(P)=4.22×10^{-8} *6*; α(IPF)=2.80×10^{-5} *4*
x1222.95 *14*	5 *2*							
1230.11 *7*	11.0 *13*	1547.28	6+	317.101	4+	E2	0.00201 *3*	α=0.00201 *3*; α(K)=0.001692 *24*; α(L)=0.000242 *4*; α(M)=5.30×10^{-5} *8*; α(N+..)=2.30×10^{-5} *4*

$^{158}_{66}Dy_{92}$-8

^{158}Ho ε decay (11.3 min+28 min) 1978An11,1974Al30,1975Ru02 (continued)

γ(^{158}Dy) (continued)

E_γ‡&	I_γ#@&	E_i(level)	J_i^π	E_f	J_f^π	Mult.[a]	α†	Comments
								α(N)=1.223×10^{-5} *18*; α(O)=1.774×10^{-6} *25*; α(P)=9.78×10^{-8} *14*; α(IPF)=8.85×10^{-6} *13*
1234.09 *22*	6.5 *10*	2605.94	1$^-$	1371.70	(1,2,3)$^-$	E2	0.00200 *3*	α=0.00200 *3*; α(K)=0.001681 *24*; α(L)=0.000240 *4*; α(M)=5.27×10^{-5} *8*; α(N+..)=2.34×10^{-5} *4* α(N)=1.214×10^{-5} *17*; α(O)=1.762×10^{-6} *25*; α(P)=9.72×10^{-8} *14*; α(IPF)=9.38×10^{-6} *14*
1238.3[g] *3*	1.6[g] *9*	2518.65	4$^+$	1279.96	4$^+$	[b]		
1245.94[i] *13*	3.3[i] *8*	2409.53	2$^-$,3$^-$,4$^-$	1163.71	4$^+$	[c]		
1245.94[i] *13*	3.3[i] *8*	2409.67	4$^+$	1163.71	4$^+$	[c]		
[x]1261.70 *23*	4.2 *12*					M1	0.00306 *5*	α=0.00306 *5*; α(K)=0.00259 *4*; α(L)=0.000356 *5*; α(M)=7.75×10^{-5} *11*; α(N+..)=3.61×10^{-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)=1.534×10^{-5} *22*
[x]1269.7[e] *1*	4.0[e] *7*							
1272.79[i] *6*	26.1[i] *12*	1371.70	(1,2,3)$^-$	98.901	2$^+$	[c]		
1272.79[i] *6*	26.1[i] *12*	2436.48	3$^+$,4$^+$	1163.71	4$^+$	[c]		
1272.79[i] *6*	26.1[i] *12*	2644.50	(+)	1371.70	(1,2,3)$^-$	[c]		
[x]1279.6 *5*	4.5 *11*							
[x]1284.1[g] *2*	3.4[g] *11*							
[x]1293.7[f] *7*	5[f] *3*							
1298.23 *5*	33.6 *17*	1397.14	3$^-$	98.901	2$^+$	E1	0.000847 *12*	α=0.000847 *12*; α(K)=0.000667 *10*; α(L)=8.76×10^{-5} *13*; α(M)=1.90×10^{-5} *3*; α(N+..)=7.39×10^{-5} *11* α(N)=4.38×10^{-6} *7*; α(O)=6.42×10^{-7} *9*; α(P)=3.73×10^{-8} *6*; α(IPF)=6.89×10^{-5} *10*
1301.3[g] *2*	5.6[g] *20*	1618.50	3$^-$,4$^-$,5$^-$	317.101	4$^+$	E1	0.000846 *12*	α=0.000846 *12*; α(K)=0.000664 *10*; α(L)=8.72×10^{-5} *13*; α(M)=1.89×10^{-5} *3*; α(N+..)=7.55×10^{-5} *11* α(N)=4.36×10^{-6} *7*; α(O)=6.39×10^{-7} *9*; α(P)=3.72×10^{-8} *6*; α(IPF)=7.05×10^{-5} *10*
1317.4[g] *2*	2.7[g] *13*	1634.50		317.101	4$^+$			
[x]1324.3[g] *5*	1.4[g] *7*							
[x]1332.2[g] *3*	2.7[g] *12*							
1337.75 *8*	7.7 *8*	2382.42	4$^+$	1044.562	3$^+$	E2	0.001725 *25*	α=0.001725 *25*; α(K)=0.001438 *21*; α(L)=0.000203 *3*; α(M)=4.44×10^{-5} *7*; α(N+..)=3.89×10^{-5} *6* α(N)=1.025×10^{-5} *15*; α(O)=1.491×10^{-6} *21*; α(P)=8.31×10^{-8} *12*; α(IPF)=2.71×10^{-5} *4*
1342.81 *6*	9.0 *10*	1441.74	1$^-$	98.901	2$^+$	E1	0.000828 *12*	α=0.000828 *12*; α(K)=0.000629 *9*; α(L)=8.25×10^{-5} *12*; α(M)=1.79×10^{-5} *3*; α(N+..)=9.88×10^{-5} *14* α(N)=4.12×10^{-6} *6*; α(O)=6.05×10^{-7} *9*; α(P)=3.52×10^{-8} *5*; α(IPF)=9.40×10^{-5} *14*
[x]1362.0[f] *8*	5[f] *2*							

γ(^{158}Dy) (continued)

E_γ‡&	I_γ#@&	E_i(level)	J_i^π	E_f	J_f^π	Mult.[a]	α†	Comments
1364.87 *12*	12.0 *11*	2409.53	2⁻,3⁻,4⁻	1044.562	3⁺	E1	0.000821 *12*	α=0.000821 *12*; α(K)=0.000611 *9*; α(L)=8.01×10⁻⁵ *12*; α(M)=1.736×10⁻⁵ *25*; α(N+..)=0.0001125 α(N)=4.01×10⁻⁶ *6*; α(O)=5.87×10⁻⁷ *9*; α(P)=3.43×10⁻⁸ *5*; α(IPF)=0.0001078 *16*
x1368.5[e] *1*	11.2[e] *12*							
1374.90 *24*	2.2 *8*	2538.52	3⁺,4⁺	1163.71	4⁺			
x1386.5[g] *2*	≈1[g]					(M1)	0.00248 *4*	α=0.00248 *4*; α(K)=0.00207 *3*; α(L)=0.000284 *4*; α(M)=6.19×10⁻⁵ *9*; α(N+..)=6.19×10⁻⁵ *9* α(N)=1.432×10⁻⁵ *20*; α(O)=2.11×10⁻⁶ *3*; α(P)=1.245×10⁻⁷ *18*; α(IPF)=4.53×10⁻⁵ *7*
1392.42[i] *16*	3.4[i] *10*	2436.48	3⁺,4⁺	1043.81	8⁺	*d*		
1392.42[i] *16*	3.4[i] *10*	2672.29	4⁺	1279.96	4⁺	*d*		
1402.22 *9*	5.4 *12*	1501.13		98.901	2⁺			Mult.: (E1,E2) from 1978An11.
1414.62 *7*	18.0 *18*	1513.52	2⁺,3,4⁺	98.901	2⁺	(E2)	0.001570 *22*	α=0.001570 *22*; α(K)=0.001292 *18*; α(L)=0.000181 *3*; α(M)=3.96×10⁻⁵ *6*; α(N+..)=5.72×10⁻⁵ *8* α(N)=9.14×10⁻⁶ *13*; α(O)=1.330×10⁻⁶ *19*; α(P)=7.47×10⁻⁸ *11*; α(IPF)=4.67×10⁻⁵ *7*
1417.72 *7*	8.6 *10*	2055.38	4⁺	637.641	6⁺			
1432.6 *4*	4.8 *8*	2518.65	4⁺	1085.54	2⁺	*b*		
1436.06 *10*	5.8 *8*	2382.42	4⁺	946.29	2⁺			
1441.73 *6*	10.6 *10*	1441.74	1⁻	0.0	0⁺	E1	0.000809 *12*	α=0.000809 *12*; α(K)=0.000557 *8*; α(L)=7.28×10⁻⁵ *11*; α(M)=1.577×10⁻⁵ *22*; α(N+..)=0.0001638 α(N)=3.64×10⁻⁶ *5*; α(O)=5.34×10⁻⁷ *8*; α(P)=3.12×10⁻⁸ *5*; α(IPF)=0.0001596 *23*
1452.8[g] *5*	1.3[g] *8*	2538.52	3⁺,4⁺	1085.54	2⁺			
1463.39 *4*	33.6 *9*	2409.67	4⁺	946.29	2⁺	(E2)	0.001489 *21*	α=0.001489 *21*; α(K)=0.001212 *17*; α(L)=0.0001692 *24*; α(M)=3.69×10⁻⁵ *6*; α(N+..)=7.11×10⁻⁵ α(N)=8.53×10⁻⁶ *12*; α(O)=1.243×10⁻⁶ *18*; α(P)=7.00×10⁻⁸ *10*; α(IPF)=6.13×10⁻⁵ *9* Mult.: α_K(exp) gives M1+E2, but J^π's require E2.
1489.8[g] *3*	1.9[g] *10*	2436.48	3⁺,4⁺	946.29	2⁺	*b*		
1494.1[g] *4*	1.6[g] *10*	2538.52	3⁺,4⁺	1044.562	3⁺			
1501.5 *4*	5.5 *9*	1818.75		317.101	4⁺			
1509.04 *9*	10.6 *12*	1607.98	(2)⁺	98.901	2⁺	(E2)		Mult.: (E1,E2) from 1978An11; E1 contradicts spin assignments.
x1521.6 *3*	22. *3*					E2	0.001406 *20*	α=0.001406 *20*; α(K)=0.001126 *16*; α(L)=0.0001565 *22*; α(M)=3.42×10⁻⁵ *5*; α(N+..)=8.95×10⁻⁵ α(N)=7.88×10⁻⁶ *11*; α(O)=1.150×10⁻⁶ *17*; α(P)=6.51×10⁻⁸ *10*; α(IPF)=8.04×10⁻⁵ *12*
1523.4[g] *5*	5.5[g] *22*	1840.11	2⁺,3,4⁺	317.101	4⁺			
x1564.3[g] *2*	3.1[g] *9*					M1	0.00195 *3*	α=0.00195 *3*; α(K)=0.001566 *22*; α(L)=0.000214 *3*; α(M)=4.65×10⁻⁵ *7*; α(N+..)=0.0001246 *18*

$^{158}_{66}Dy_{92}$-10

^{158}Ho ε decay (11.3 min+28 min) 1978An11,1974Al30,1975Ru02 (continued)

γ(^{158}Dy) (continued)

E_γ[‡&]	I_γ[#@&]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[a]	α[†]	Comments
								α(N)=1.076×10^{-5} *15*; α(O)=1.586×10^{-6} *23*; α(P)=9.38×10^{-8} *14*; α(IPF)=0.0001122 *16*
1572.40 *20*	5.3 *12*	1671.61	2$^+$,3,4$^+$	98.901	2$^+$			
1578.10 *5*	83. *5*	1895.12	4$^+$	317.101	4$^+$	E2	0.001338 *19*	α=0.001338 *19*; α(K)=0.001052 *15*; α(L)=0.0001455 *21*; α(M)=3.17×10^{-5} *5*; α(N+..)=0.000109 α(N)=7.33×10^{-6} *11*; α(O)=1.070×10^{-6} *15*; α(P)=6.08×10^{-8} *9*; α(IPF)=0.0001006 *14*
x1583.8[g] *1*	9.7[g] *13*							
1592.5 *8*	1.7 *7*	2538.52	3$^+$,4$^+$	946.29	2$^+$			
1603.81 *20*	5.7 *9*	1920.39	3$^+$,4$^+$,5$^+$	317.101	4$^+$	M1	0.00187 *3*	α=0.00187 *3*; α(K)=0.001478 *21*; α(L)=0.000201 *3*; α(M)=4.39×10^{-5} *7*; α(N+..)=0.0001416 *20* α(N)=1.015×10^{-5} *15*; α(O)=1.496×10^{-6} *21*; α(P)=8.85×10^{-8} *13*; α(IPF)=0.0001298 *19*
1608.3[g] *3*	2.8[g] *9*	1607.98	(2)$^+$	0.0	0$^+$			
1611.53 *19*	5.0 *9*	1710.30	($^+$)	98.901	2$^+$	[b]		
1623.78 *8*	62. *3*	1940.71	3$^+$	317.101	4$^+$	E2	0.001291 *18*	α=0.001291 *18*; α(K)=0.000997 *14*; α(L)=0.0001376 *20*; α(M)=3.00×10^{-5} *5*; α(N+..)=0.000126 α(N)=6.93×10^{-6} *10*; α(O)=1.012×10^{-6} *15*; α(P)=5.76×10^{-8} *8*; α(IPF)=0.0001181 *17*
x1637.2[e] *3*	2.6[e] *9*							
x1645.4[g] *4*	1.6[g] *9*							
x1678.04 *19*	11.4 *9*					E2	0.001243 *18*	α=0.001243 *18*; α(K)=0.000938 *14*; α(L)=0.0001290 *18*; α(M)=2.81×10^{-5} *4*; α(N+..)=0.000147 α(N)=6.49×10^{-6} *9*; α(O)=9.49×10^{-7} *14*; α(P)=5.42×10^{-8} *8*; α(IPF)=0.0001401 *20*
x1681.4[g] *2*	5.7[g] *11*							
1687.1[g] *4*	1.3[g] *7*	3582.30	2$^+$	1895.12	4$^+$			
x1690.5[g] *2*	3.5[g] *8*							
1698.12 *13*	8.2 *16*	2644.50	($^+$)	946.29	2$^+$			
1708.9[g] *3*	2.9[g] *8*	2989.28	2$^+$	1279.96	4$^+$			
1711.4 *3*	3.5 *8*	3530.16	4$^+$	1818.75				
x1715.6[e] *2*	2.3[e] *6*							
x1717.8[f] *5*	3[f] *1*							
x1719.2[e] *3*	1.8[e] *5*							
1738.50 *20*	14.4 *19*	2055.38	4$^+$	317.101	4$^+$	M1	0.001635 *23*	α=0.001635 *23*; α(K)=0.001227 *18*; α(L)=0.0001667 *24*; α(M)=3.63×10^{-5} *5*; α(N+..)=0.000205 α(N)=8.40×10^{-6} *12*; α(O)=1.238×10^{-6} *18*; α(P)=7.33×10^{-8} *11*; α(IPF)=0.000196 *3*
x1742.0[f] *2*	11[f] *2*							
1751.1[g] *5*	2.9[g] *16*	2388.75	(6$^+$)	637.641	6$^+$			
1753.47 *12*	6.1 *16*	1851.94	2$^+$	98.901	2$^+$	M1	0.001615 *23*	α=0.001615 *23*; α(K)=0.001203 *17*; α(L)=0.0001634 *23*;

^{158}Ho ε decay (11.3 min+28 min) 1978An11,1974Al30,1975Ru02 (continued)

γ(^{158}Dy) (continued)

E_γ‡&	I_γ#@&	E_i(level)	J_i^π	E_f	J_f^π	Mult.[a]	α†	Comments
								α(M)=3.56×10^{-5} *5*; α(N+..)=0.000213 α(N)=8.23×10^{-6} *12*; α(O)=1.214×10^{-6} *17*; α(P)=7.19×10^{-8} *10*; α(IPF)=0.000203 *3* E_γ: γ energy is a poor fit to scheme; from level energies, γ energy is 1753.03 *6*.
1772.3[g] *5*	1.8[g] *9*	2409.67	4$^+$	637.641	6$^+$			
x1784.15 *8*	15.9 *11*							
1790.62 *5*	234 *9*	2107.64	4$^+$	317.101	4$^+$	M1	0.001568 *22*	α=0.001568 *22*; α(K)=0.001146 *16*; α(L)=0.0001556 *22*; α(M)=3.39×10^{-5} *5*; α(N+..)=0.000232 α(N)=7.84×10^{-6} *11*; α(O)=1.156×10^{-6} *17*; α(P)=6.85×10^{-8} *10*; α(IPF)=0.000223 *4*
1796.2[g] *2*	8.3[g] *11*	1895.12	4$^+$	98.901	2$^+$			
x1828.0[f] *9*	<1.6[f]							
1841.95 *19*	4.5 *10*	1940.71	3$^+$	98.901	2$^+$			
1851.94[e] *19*	5.1[e] *7*	1851.94	2$^+$	0.0	0$^+$			I_γ: γ is not reported by 1978An11, I_γ=7.5 from 1968Ab14, and < 2.5 by 1974Al30.
x1856.9 *3*	8.8 *11*					M1+E2	0.00131 *19*	α=0.00131 *19*; α(K)=0.00092 *14*; α(L)=0.000124 *19*; α(M)=2.7×10^{-5} *4*; α(N+..)=0.000245 *21* α(N)=6.3×10^{-6} *10*; α(O)=9.2×10^{-7} *15*; α(P)=5.4×10^{-8} *9*; α(IPF)=0.000238 *20*
x1867.4[g] *4*	1.4[g] *8*							
1876.67 *17*	16.8 *9*	1975.74	1$^+$,2$^+$	98.901	2$^+$	M1	0.001476 *21*	α=0.001476 *21*; α(K)=0.001029 *15*; α(L)=0.0001396 *20*; α(M)=3.04×10^{-5} *5*; α(N+..)=0.000277 α(N)=7.03×10^{-6} *10*; α(O)=1.037×10^{-6} *15*; α(P)=6.14×10^{-8} *9*; α(IPF)=0.000268 *4*
1880.77 *23*	6.9 *8*	2518.65	4$^+$	637.641	6$^+$			
x1886.19 *13*	3.9 *8*					M1	0.001467 *21*	α=0.001467 *21*; α(K)=0.001017 *15*; α(L)=0.0001379 *20*; α(M)=3.00×10^{-5} *5*; α(N+..)=0.000282 α(N)=6.95×10^{-6} *10*; α(O)=1.024×10^{-6} *15*; α(P)=6.07×10^{-8} *9*; α(IPF)=0.000274 *4*
1894.00 *20*	3.8 *8*	2211.06	(5$^+$)	317.101	4$^+$			
x1899.5[g] *3*	1.7[g] *8*							
1913.23 *21*	2.0 *8*	3547.75	(3$^-$)	1634.50		[b]		
x1918.35 *21*	4.8 *8*							
x1937.79 *24*	2.5 *8*							
x1949.2 *3*	3.2 *10*							
1956.57 *19*	10.6 *12*	2055.38	4$^+$	98.901	2$^+$			Mult.: Assigned M1, but J^π's require E2.
x1969.64 *16*	3.8 *9*							
1976.01 *17*	2.3 *7*	1975.74	1$^+$,2$^+$	0.0	0$^+$			
x1996.7[g] *5*	1.6[g] *7*							
1998.6[g] *5*	1.5[g] *7*	2989.28	2$^+$	990.49	0$^+$			
2008.91 *18*	17.6 *14*	2107.64	4$^+$	98.901	2$^+$			Mult.: M1 adopted by 1978An11 contradictes spin assignments.

$^{158}_{66}Dy_{92}$-12

^{158}Ho ε decay (11.3 min+28 min) 1978An11,1974Al30,1975Ru02 (continued)

γ(^{158}Dy) (continued)

E_γ‡&	I_γ#@&	E_i(level)	J_i^π	E_f	J_f^π	Mult.[a]	α†	Comments
2019.2 *4*	2.4 *8*	3547.75	(3⁻)	1528.00	5⁻			
2029.73 *22*	9.9 *10*	3547.75	(3⁻)	1518.42	3⁻,4⁻	M1+E2	0.00122 *15*	α=0.00122 *15*; α(K)=0.00076 *10*; α(L)=0.000103 *14*; α(M)=2.2×10^{-5} *3*; α(N+..)=0.00033 *3* α(N)=5.2×10^{-6} *7*; α(O)=7.6×10^{-7} *11*; α(P)=4.5×10^{-8} *7*; α(IPF)=0.00033 *3*
2034.85 *25*	4.4 *9*	2672.29	4⁺	637.641	6⁺			
2065.37 *19*	32.3 *19*	2382.42	4⁺	317.101	4⁺	M1+E2	0.00121 *14*	α=0.00121 *14*; α(K)=0.00073 *10*; α(L)=9.9×10^{-5} *13*; α(M)=2.2×10^{-5} *3*; α(N+..)=0.00035 *3* α(N)=5.0×10^{-6} *7*; α(O)=7.3×10^{-7} *10*; α(P)=4.3×10^{-8} *7*; α(IPF)=0.00034 *3*
2071.6 *3*	5.4 *9*	2388.75	(6⁺)	317.101	4⁺			
x2076.00 *15*	8.3 *10*					M1	0.001339 *19*	α=0.001339 *19*; α(K)=0.000818 *12*; α(L)=0.0001106 *16*; α(M)=2.41×10^{-5} *4*; α(N+..)=0.000386 α(N)=5.57×10^{-6} *8*; α(O)=8.21×10^{-7} *12*; α(P)=4.87×10^{-8} *7*; α(IPF)=0.000380 *6*
2092.4[i] *3*	13.9[i] *18*	2409.53	2⁻,3⁻,4⁻	317.101	4⁺	[c]		
2092.4[i] *3*	13.9[i] *18*	2409.67	4⁺	317.101	4⁺	[c]		
x2095.0 *3*	7.2 *15*					M1+E2	0.00120 *14*	α=0.00120 *14*; α(K)=0.00071 *9*; α(L)=9.6×10^{-5} *13*; α(M)=2.1×10^{-5} *3*; α(N+..)=0.00037 *4* α(N)=4.8×10^{-6} *7*; α(O)=7.1×10^{-7} *10*; α(P)=4.2×10^{-8} *6*; α(IPF)=0.00036 *3*
2105.83 *19*	2.8 *7*	3547.75	(3⁻)	1441.74	1⁻			
2119.50 *16*	23.4 *14*	2436.48	3⁺,4⁺	317.101	4⁺	M1	0.001319 *19*	α=0.001319 *19*; α(K)=0.000780 *11*; α(L)=0.0001054 *15*; α(M)=2.29×10^{-5} *4*; α(N+..)=0.000410 α(N)=5.31×10^{-6} *8*; α(O)=7.83×10^{-7} *11*; α(P)=4.65×10^{-8} *7*; α(IPF)=0.000404 *6*
x2147.2 *3*	2.2 *8*					E2	0.001054 *15*	α=0.001054 *15*; α(K)=0.000598 *9*; α(L)=8.04×10^{-5} *12*; α(M)=1.748×10^{-5} *25*; α(N+..)=0.000359 α(N)=4.04×10^{-6} *6*; α(O)=5.93×10^{-7} *9*; α(P)=3.45×10^{-8} *5*; α(IPF)=0.000354 *5*
x2170.75 *23*	6.3 *11*							
x2188.4[e] *4*	3.4[e] *6*							
2201.95 *19*	47.7 *23*	2518.65	4⁺	317.101	4⁺	M1	0.001290 *18*	α=0.001290 *18*; α(K)=0.000716 *10*; α(L)=9.66×10^{-5} *14*; α(M)=2.10×10^{-5} *3*; α(N+..)=0.000456 *7* α(N)=4.86×10^{-6} *7*; α(O)=7.18×10^{-7} *10*; α(P)=4.26×10^{-8} *6*; α(IPF)=0.000450 *7*
2221.65 *19*	45.4 *26*	2538.52	3⁺,4⁺	317.101	4⁺	M1	0.001284 *18*	α=0.001284 *18*; α(K)=0.000702 *10*; α(L)=9.47×10^{-5} *14*; α(M)=2.06×10^{-5} *3*; α(N+..)=0.000467 *7* α(N)=4.77×10^{-6} *7*; α(O)=7.03×10^{-7} *10*; α(P)=4.18×10^{-8} *6*; α(IPF)=0.000462 *7*
x2236.0[g] *5*	1.5[g] *10*							
2282.6[g] *5*	0.8[g] *6*	2382.42	4⁺	98.901	2⁺			

$^{158}_{66}Dy_{92}$-13

^{158}Ho ε decay (11.3 min+28 min) 1978An11,1974Al30,1975Ru02 (continued)

γ(^{158}Dy) (continued)

E_γ‡&	I_γ#@&	E_i(level)	J_i^π	E_f	J_f^π	Mult.[a]	α†	Comments
x2289.9 *4*	2.9 *8*					(M1)	0.001269 *18*	α=0.001269 *18*; α(K)=0.000656 *10*; α(L)=8.84×10^{-5} *13*; α(M)=1.92×10^{-5} *3*; α(N+..)=0.000506 *7* α(N)=4.45×10^{-6} *7*; α(O)=6.56×10^{-7} *10*; α(P)=3.90×10^{-8} *6*; α(IPF)=0.000500 *7*
x2303.2[g] *2*	3.5[g] *8*					(E1)	0.001079 *16*	α=0.001079 *16*; α(K)=0.000259 *4*; α(L)=3.35×10^{-5} *5*; α(M)=7.24×10^{-6} *11*; α(N+..)=0.000778 *11* α(N)=1.673×10^{-6} *24*; α(O)=2.46×10^{-7} *4*; α(P)=1.458×10^{-8} *21*; α(IPF)=0.000776 *11*
2310.73[i] *24*	10.1[i] *9*	2409.53	2$^-$,3$^-$,4$^-$	98.901	2$^+$	c		
2310.73[i] *24*	10.1[i] *9*	2409.67	4$^+$	98.901	2$^+$	c		
2338.5 *4*	2.4 *8*	2436.48	3$^+$,4$^+$	98.901	2$^+$	(E2)	0.001045 *15*	α=0.001045 *15*; α(K)=0.000513 *8*; α(L)=6.86×10^{-5} *10*; α(M)=1.490×10^{-5} *21*; α(N+..)=0.000449 α(N)=3.44×10^{-6} *5*; α(O)=5.06×10^{-7} *7*; α(P)=2.96×10^{-8} *5*; α(IPF)=0.000445 *7*
2355.6 *4*	1.9 *8*	2672.29	4$^+$	317.101	4$^+$	b		
2367.7[g] *8*	1.0[g] *7*	3530.16	4$^+$	1163.71	4$^+$			
x2372.2 *4*	3.8 *7*							
x2393.8[e] *3*	3.9[e] *5*							
x2395.88 *18*	6.4 *13*					(E2)	0.001047 *15*	α=0.001047 *15*; α(K)=0.000491 *7*; α(L)=6.56×10^{-5} *10*; α(M)=1.424×10^{-5} *20*; α(N+..)=0.000476 α(N)=3.29×10^{-6} *5*; α(O)=4.83×10^{-7} *7*; α(P)=2.83×10^{-8} *4*; α(IPF)=0.000473 *7*
x2410.7 *5*	1.9 *8*							
2418.5[g] *3*	2.1[g] *7*	3582.30	2$^+$	1163.71	4$^+$			
2439.2[g] *5*	0.8[g] *6*	2538.52	3$^+$,4$^+$	98.901	2$^+$			
x2444.6 *5*	3.3 *10*					(E1,E2)		
x2465.2 *4*	2.5 *7*					b		
2486.19 *24*	2.8 *6*	3530.16	4$^+$	1044.562	3$^+$	M1	0.001250 *18*	α=0.001250 *18*; α(K)=0.000546 *8*; α(L)=7.34×10^{-5} *11*; α(M)=1.596×10^{-5} *23*; α(N+..)=0.000615 α(N)=3.69×10^{-6} *6*; α(O)=5.45×10^{-7} *8*; α(P)=3.24×10^{-8} *5*; α(IPF)=0.000611 *9*
x2492.62 *27*	3.1 *7*							
2507.1 *4*	11.4 *14*	2605.94	1$^-$	98.901	2$^+$	(E1,E2)		
x2514.25 *25*	7.6 *8*					(E1,E2)		
x2525.72 *18*	4.1 *6*					M1	0.001250 *18*	α=0.001250 *18*; α(K)=0.000527 *8*; α(L)=7.08×10^{-5} *10*; α(M)=1.540×10^{-5} *22*; α(N+..)=0.000637 α(N)=3.56×10^{-6} *5*; α(O)=5.26×10^{-7} *8*; α(P)=3.13×10^{-8} *5*; α(IPF)=0.000633 *9*
2545.90 *23*	33.2 *16*	2644.50	(+)	98.901	2$^+$	(E2)	0.001058 *15*	α=0.001058 *15*; α(K)=0.000441 *7*; α(L)=5.86×10^{-5} *9*; α(M)=1.273×10^{-5} *18*; α(N+..)=0.000546 *8* α(N)=2.94×10^{-6} *5*; α(O)=4.33×10^{-7} *6*; α(P)=2.54×10^{-8} *4*; α(IPF)=0.000543 *8*

$^{158}_{66}Dy_{92}$-14

^{158}Ho ε decay (11.3 min+28 min) 1978An11,1974Al30,1975Ru02 (continued)

γ(^{158}Dy) (continued)

E_γ ‡&	I_γ #@&	E_i(level)	J_i^π	E_f	J_f^π	Mult.[a]	α†	Comments
x2560.6 4	2.0 8							
2573.6 3	2.0 6	2672.29	4+	98.901	2+			
x2584.3[g] 4	1.1[g] 7							
x2593.6[g] 4	1.6[g] 6							
2605.85 23	70 3	2605.94	1−	0.0	0+	E1	0.001214 17	α=0.001214 17; α(K)=0.000215 3; α(L)=2.76×10^{-5} 4; α(M)=5.97×10^{-6} 9; α(N+..)=0.000966 14 α(N)=1.379×10^{-6} 20; α(O)=2.03×10^{-7} 3; α(P)=1.205×10^{-8} 17; α(IPF)=0.000964 14 E_γ: 2605.82 1 (2013KaZW). I_γ: 68.4 11 (2013KaZW).
x2621.6[h] 4	0.35[h] 11							
x2628.25[h] 14	0.81[h] 6							
x2634.5[h] 4	0.27[h] 11							
x2636.9[h] 4	0.51[h] 10							
x2641.23[h] 25	0.36[h] 11							
x2645.9 4	1.3 5							E_γ: 2646.00 12 (2013KaZW). I_γ: 1.55 10 (2013KaZW).
x2659.1 3	5.5 7							E_γ: 2658.93 3 (2013KaZW). I_γ: 5.17 13 (2013KaZW).
2672.3 3	3.2 6	2989.28	2+	317.101	4+			
x2672.64[h] 9	3.57[h] 9							
x2693.0[f] 9	2[f] 1							
x2744.2 6	1.2 5							E_γ: 2743.35 7 (2013KaZW). I_γ: 1.16 6 (2013KaZW).
x2751.15[h] 20	0.38[h] 5							
x2756.4 9	2.9 8							E_γ: 2757.82 4 (2013KaZW). I_γ: 2.33 11 (2013KaZW).
x2788.4[h] 3	0.32[h] 7							
x2792.07[h] 25	0.54[h] 7							
x2795.3[h] 5	0.32[h] 7							
x2804[f] 1	1.1[f] 7							E_γ: 2802.43 22 (2013KaZW). I_γ: 1.08 16 (2013KaZW).
x2812.10[h] 21	0.35[h] 6							
x2814[f] 1	1.5[f] 11							
x2820.6[h] 3	0.16[h] 7							
x2823.30[h] 22	0.64[h] 7							
x2827.6 3	2.2 4							E_γ: 2827.90 5 (2013KaZW). I_γ: 2.15 9 (2013KaZW).
x2842.8[g] 4	1.2[g] 4							E_γ: 2842.37 14 (2013KaZW). I_γ: 0.99 9 (2013KaZW).

$^{158}_{66}Dy_{92}$-15

γ(^{158}Dy) (continued)

E_γ‡&	I_γ#@&	E_i(level)	J_i^π	E_f	J_f^π	Comments
x2845.1[h] 3	0.43[h] 7					
x2850.5 4	1.5 7					E_γ: 2850.83 6 (2013KaZW). I_γ: 1.67 12 (2013KaZW).
x2854.9[h] 4	0.35[h] 7					
x2862.4[h] 3	0.36[h] 4					
x2874.5 4	2.1 4					E_γ: 2873.57 5 (2013KaZW). I_γ: 2.17 8 (2013KaZW).
x2877.43[h] 11	0.89[h] 6					
x2884.4[g] 3	1.3[g] 4					E_γ: 2884.42 5 (2013KaZW). I_γ: 1.60 6 (2013KaZW).
2892.6[g] 6	0.6[g] 4	3530.16	4+	637.641	6+	E_γ: 2892.02 22 (2013KaZW). I_γ: 0.38 9 (2013KaZW).
x2893.4[h] 3	0.55[h] 11					
x2897.0[h] 3	0.25[h] 8					
x2906.08[h] 19	0.62[h] 9					
x2908.6 3	2.3 6					E_γ: 2908.85 6 (2013KaZW). I_γ: 2.31 8 (2013KaZW).
x2922.6 4	1.4 4					E_γ: 2922.06 16 (2013KaZW). I_γ: 1.60 6 (2013KaZW).
x2924.4[h] 3	0.67[h] 13					
x2927.5[h] 4	0.43[h] 11					
x2929.6[g] 4	1.4[g] 4					E_γ: 2930.05 12 (2013KaZW). I_γ: 2.06 15 (2013KaZW).
x2934.67 20	3.6 4					E_γ: 2934.80 3 (2013KaZW). I_γ: 4.44 11 (2013KaZW).
x2939.5[g] 5	0.9[g] 4					E_γ: 2939.69 6 (2013KaZW). I_γ: 1.41 6 (2013KaZW).
x2947.78[h] 9	0.77[h] 5					
x2960.5[h] 3	0.19[h] 4					
x2965.9[h] 3	0.18[h] 4					
x2979.7[h] 4	0.16[h] 3					
x2993.44[h] 16	0.60[h] 5					
x2996.8[h] 4	0.16[h] 5					
x3019.1[g] 5	1.0[g] 4					E_γ: 3019.21 7 (2013KaZW). I_γ: 1.06 6 (2013KaZW).
x3026.8[h] 3	0.19[h] 4					
x3038.0[h] 3	0.28[h] 11					
x3040.0[g] 6	0.4[g] 3					E_γ: 3040.32 19 (2013KaZW). I_γ: 0.56 9 (2013KaZW).

$^{158}_{66}Dy_{92}$-16

^{158}Ho ε decay (11.3 min+28 min) 1978An11,1974Al30,1975Ru02 (continued)

γ(^{158}Dy) (continued)

E_γ ‡&	I_γ #@&	E_i(level)	Comments
x3045.0[h] 4	0.28[h] 5		
x3048.7[h] 3	0.27[h] 5		
x3055.0[h] 3	0.16[h] 5		
x3078.3[h] 4	0.40[h] 8		
x3081.6[h] 3	0.27[h] 7		
x3085.80[h] 18	0.53[h] 5		
x3091.70[h] 24	0.35[h] 45		
x3103.1[g] 6	0.4[g] 3		E_γ: 3102.46 10 (2013KaZW). I_γ: 0.86 5 (2013KaZW).
x3107.3[h] 3	0.29[h] 4		
x3126.9[g] 6	0.4[g] 3		E_γ: 3126.89 11 (2013KaZW). I_γ: 0.74 5 (2013KaZW).
x3140.6[h] 3	0.19[h] 4		
x3166.3[g] 7	0.5[g] 3		E_γ: 3166.35 14 (2013KaZW). I_γ: 0.44 4 (2013KaZW).
x3178.4[h] 3	0.18[h] 3		
x3184.2[h] 3	0.21[h] 3		
x3194.6[h] 3	0.15[h] 3		
x3197.75[h] 18	0.26[h] 5		
x3202.82[h] 21	0.21[h] 4		
x3205.11[h] 25	0.19[h] 4		
x3237.4[h] 6	0.20[h] 7		
x3248.4[h] 4	0.15[h] 3		
x3253.88[h] 24	0.24[h] 3		
x3259.1[h] 4	0.11[h] 3		
x3262.7[h] 4	0.21[h] 4		
x3268.1[h] 4	0.15[h] 3		
x3313.6[h] 3	0.15[h] 3		
x3327.7[h] 3	0.16[h] 3		
x3350.7[h] 5	0.12[h] 3		
x3359.4[h] 3	0.19[h] 3		
x3408.7[h] 3	0.22[h] 4		
x3416.6[h] 3	0.18[h] 3		
x3430.2[h] 10	0.13[h] 8		
x3514.59[h] 20	0.16[h] 3		
x3529.45[h] 21	0.13[h] 2		

$^{158}_{66}Dy_{92}$-17

^{158}Ho ε decay (11.3 min+28 min) 1978An11,1974Al30,1975Ru02 (continued)

γ(^{158}Dy) (continued)

E_γ ‡&	I_γ #@&	E_i(level)	J_i^π	E_f	J_f^π	Comments
x3534.9[h] 5	0.10[h] 3					
x3537.44[h] 25	0.21[h] 3					
x3541.7[h] 4	0.06[h] 2					
x3552.03[h] 19	0.14[h] 2					
3582.8[g] 7	0.5[g] 2	3582.30	2+	0.0	0+	E_γ: 3581.77 8 (2013KaZW). I_γ: 0.57 3 (2013KaZW).
x3593.3[h] 4	0.11[h] 3					
x3596.4[h] 4	0.12[h] 4					
x3598.96[h] 25	0.34[h] 6					
x3613.67[h] 13	0.27[h] 2					E_γ: 3615.8 10 (1978An11). I_γ: ≈0.2 (1978An11).
x3639.9[h] 3	0.13[h] 2					
x3650.83[h] 11	0.33[h] 3					E_γ: 3651.1 10 (1978An11). I_γ: ≈0.2 (1978An11).
x3685.61[h] 23	0.12[h] 2					
x3697.57[h] 24	0.12[h] 1					
x3709.3[h] 5	0.08[h] 3					
x3719.40[h] 21	0.13[h] 2					
x3738.57[h] 24	0.12[h] 2					
x3764.1[h] 5	≈0.04[h]					
x3780.2[h] 4	≈0.07[h]					
x3790.3[h] 5	≈0.04[h]					
x3840.0[h] 4	≈0.03[h]					
x3850.3[h] 5	≈0.04[h]					
x3873.0[g] 10	≈0.2[g]					
x3884.4[h] 4	≈0.02[h]					
x3939.9[h] 4	≈0.02[h]					
x3944.6[h] 4	≈0.03[h]					
x4005.1[h] 4	≈0.02[h]					

† Additional information 1.

‡ Weighted average of values from 1974Al30, 1975Ru02, and 1978An11 with the larger of the internal and external uncertainties used. This process may underestimate the uncertainties since 1975Ru02 and 1978An11 have a common author so these values may not be independent; this possibility is supported by the fact that a number of the energies are exactly the same in these two references. Other: 1968Ab14.

$^{158}_{66}Dy_{92}$-18

^{158}Ho ε decay (11.3 min+28 min) 1978An11,1974Al30,1975Ru02 (continued)

$\gamma(^{158}Dy)$ (continued)

[#] Relative I_γ. For $I_{(\gamma+ce)}$ as per 200 decays of the two parents multiply by 0.067.
[@] From 1978An11, unless noted otherwise. Other values that differ significantly are noted.
[&] 2013KaZW give a large set of gamma rays with Eγ>2600 keV (only three of them placed in the level scheme and 105 unplaced) with unrealistically precise intensities (for a very brief secondary reference with virtually no justification of their results) reason for which they were not included in the average with the other values.
[a] From ^{158}Dy Adopted Gammas, but they are as reported by 1978An11 from α_K(exp) values based on I_γ of 1978An11 and ce data of 1974Al30 and normalized to α_K(218.20)=0.125 as expected for an E2 γ.
[b] α_K(exp), including the uncertainty, exceeds the M1 value; mult=E0 + E2 is assigned when $\Delta J=0$, but there could also be an M1 component.
[c] Mult=E1,E2 for multiplet.
[d] Mult=E2 for multiplet.
[e] From 1975Ru02 only.
[f] From 1974Al30 only.
[g] From 1978An11 only.
[h] From 2013KaZW only (exceptions are noted in table comments).
[i] Multiply placed with undivided intensity.
[j] Placement of transition in the level scheme is uncertain.
[x] γ ray not placed in level scheme.

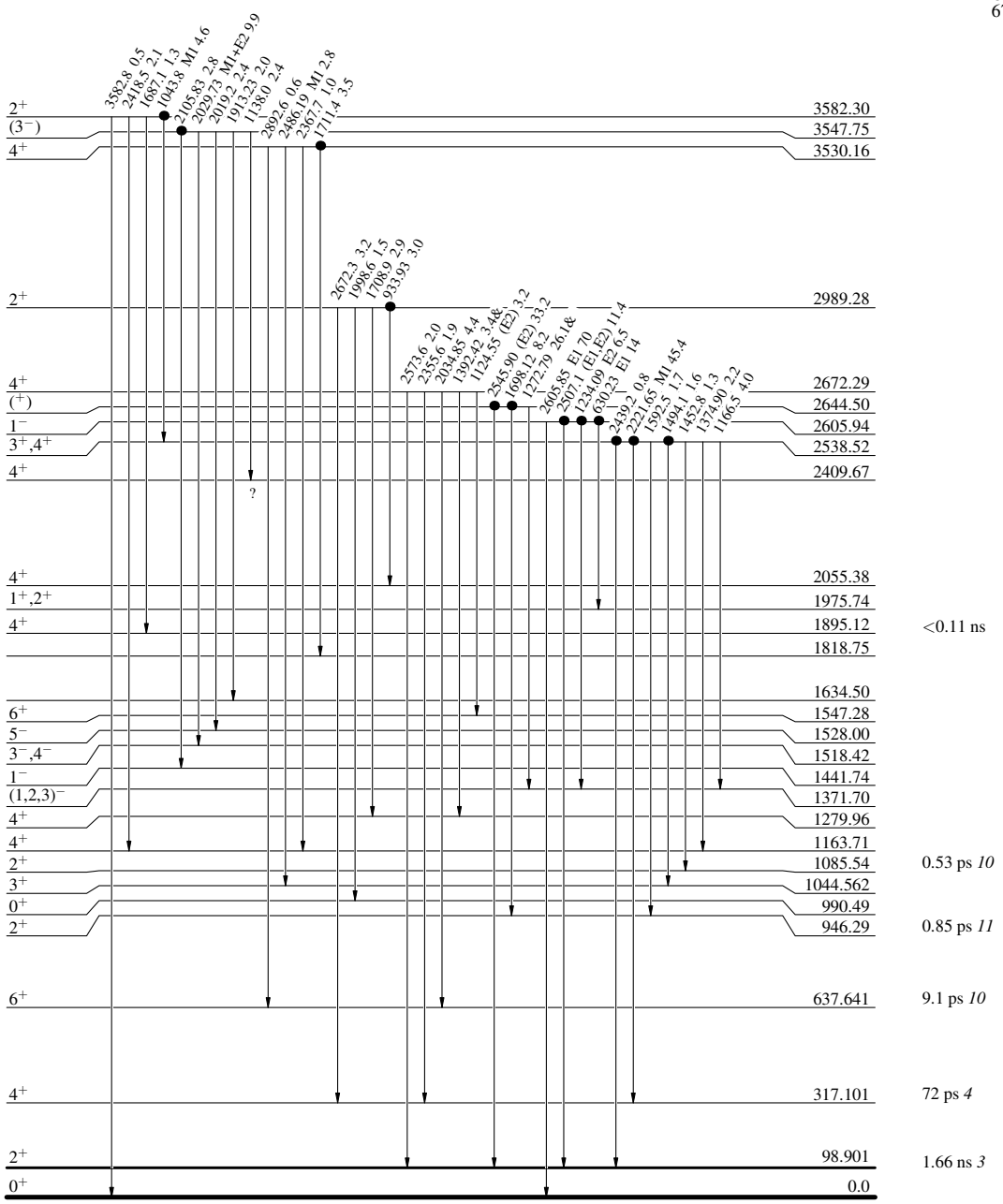
$^{158}_{66}Dy_{92}$-19

^{158}Ho ε decay (11.3 min+28 min) 1978An11,1974Al30,1975Ru02

Decay Scheme

Intensities: relative I_γ. For $I_{(\gamma+ce)}$ as per 200 decays of the two parents multiply by 0.067.multiply by 0.067.
& Multiply placed: undivided intensity given

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



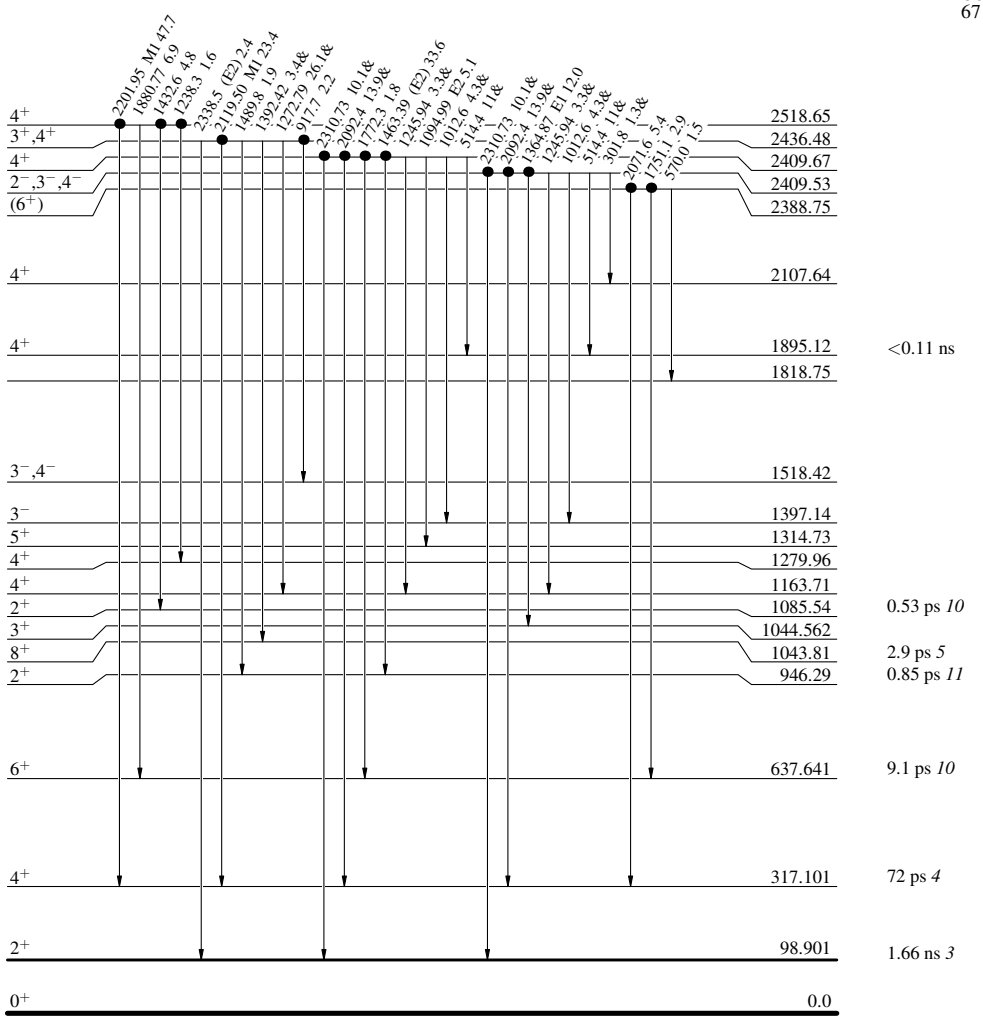
$^{158}_{66}Dy_{92}$

^{158}Ho ε decay (11.3 min+28 min) 1978An11,1974Al30,1975Ru02

Decay Scheme (continued)

Intensities: relative I_γ. For $I_{(\gamma+ce)}$ as per 200 decays of the two parents multiply by 0.067.multiply by 0.067.
& Multiply placed: undivided intensity given

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



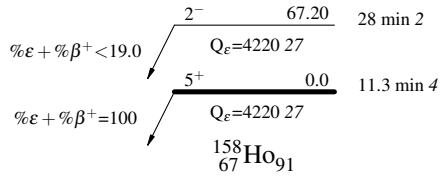
$^{158}_{66}Dy_{92}$

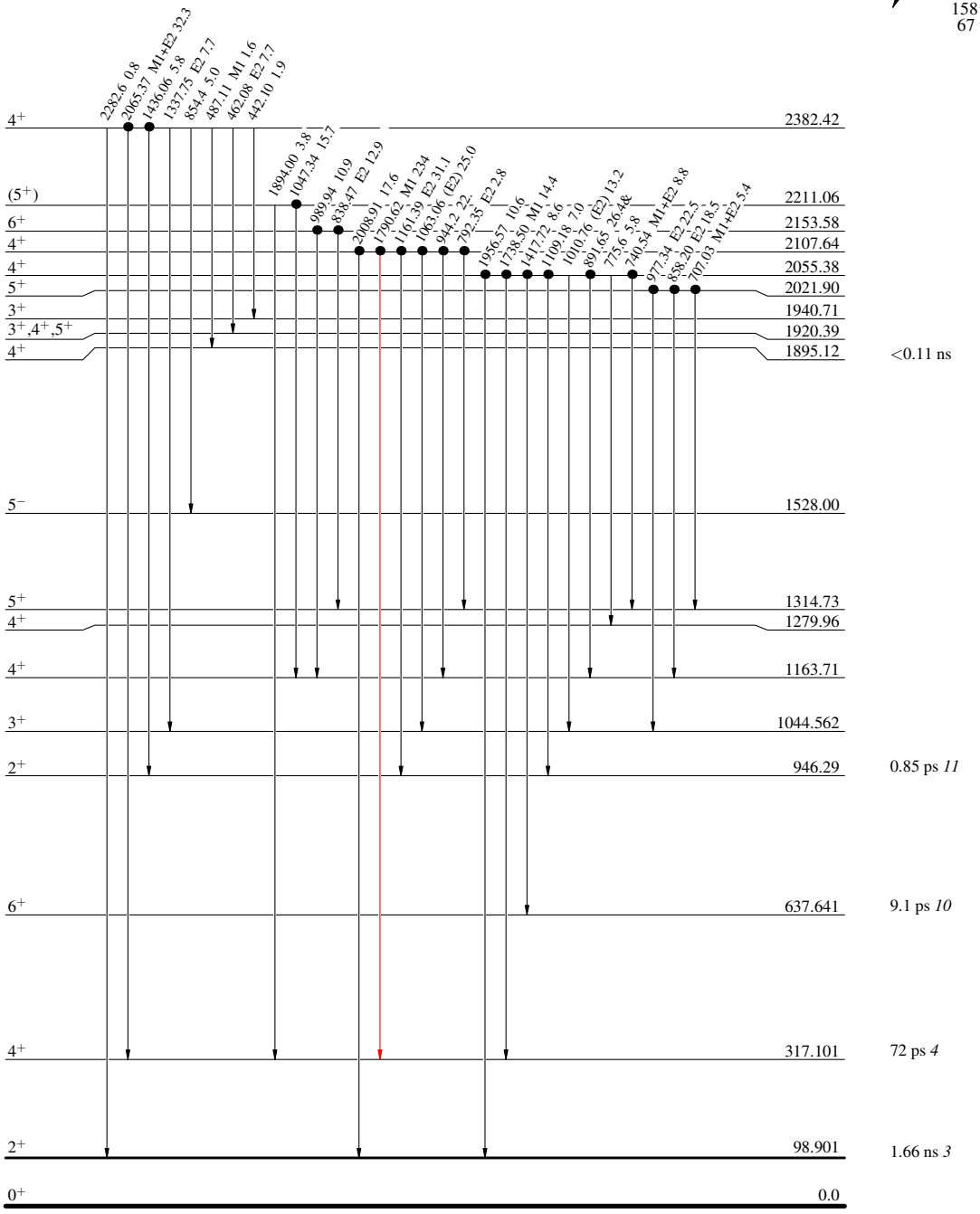
^{158}Ho ε decay (11.3 min+28 min) 1978An11,1974Al30,1975Ru02

Decay Scheme (continued)

Legend Intensities: relative I_γ. For $I_{(\gamma+ce)}$ as per 200 decays of the two parents multiply by 0.067.multiply by 0.067.
& Multiply placed: undivided intensity given

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





$^{158}_{66}Dy_{92}$

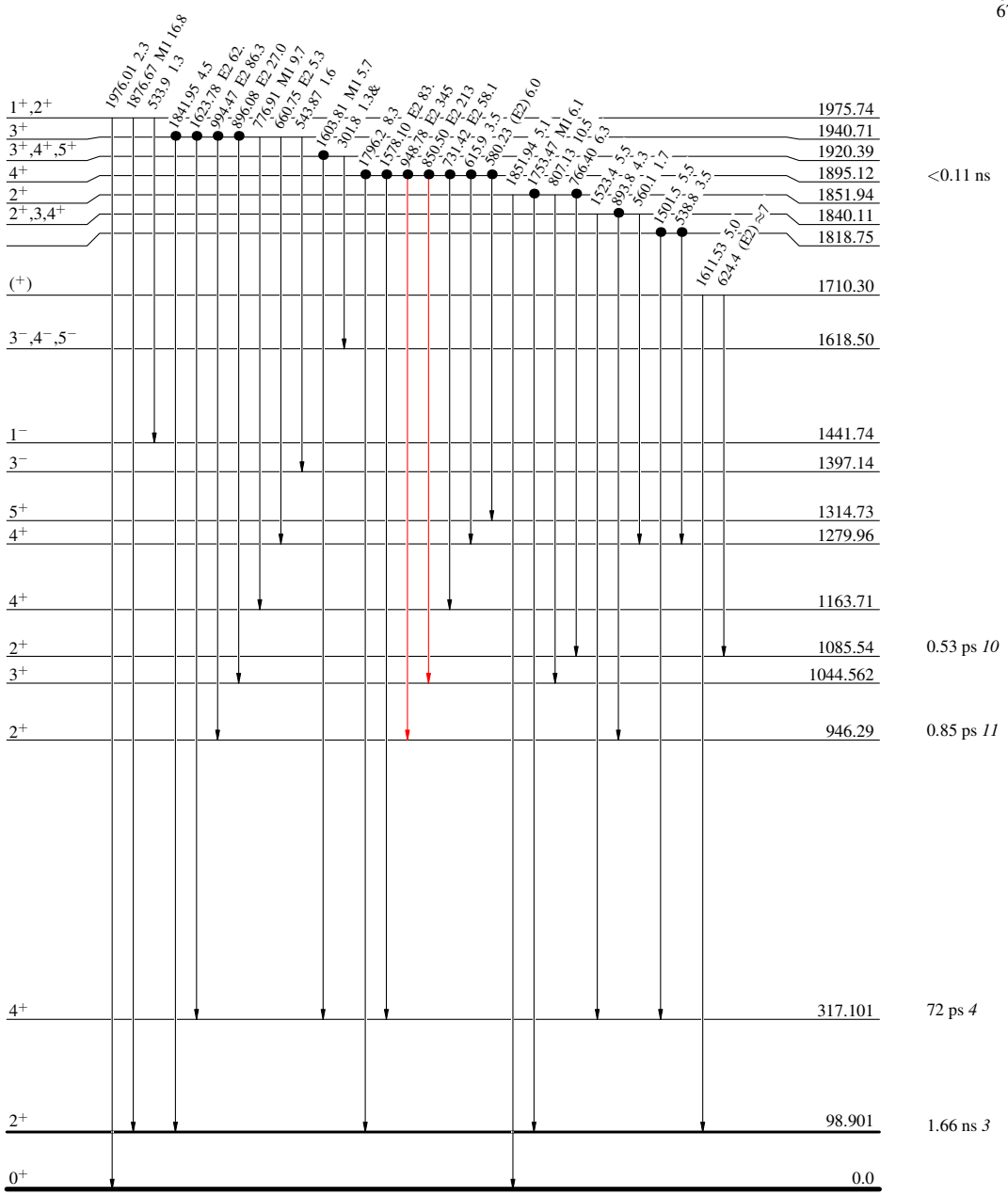
^{158}Ho ε decay (11.3 min+28 min) 1978An11,1974Al30,1975Ru02

Decay Scheme (continued)

Intensities: relative I_γ. For $I_{(\gamma+ce)}$ as per 200 decays of the two parents multiply by 0.067.multiply by 0.067.
& Multiply placed: undivided intensity given

Legend

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



$^{158}_{66}Dy_{92}$

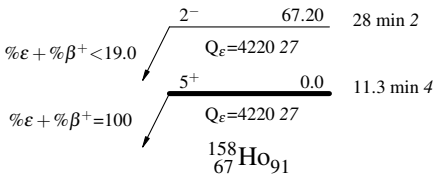
^{158}Ho ε decay (11.3 min+28 min) 1978An11,1974Al30,1975Ru02

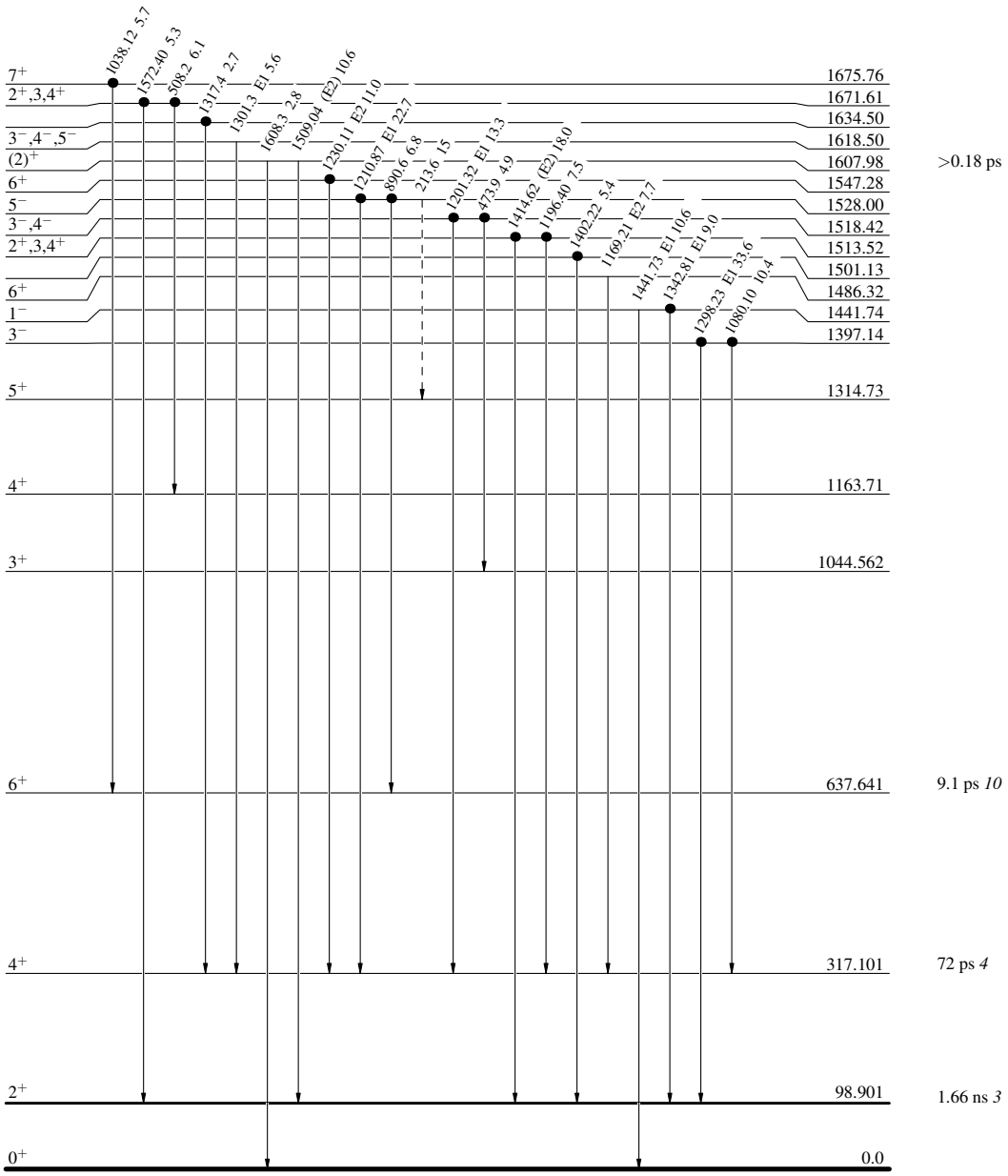
Decay Scheme (continued)

Legend

Intensities: relative I_γ. For $I_{(\gamma+ce)}$ as per 200 decays of the two parents multiply by 0.067.multiply by 0.067.

- $I_\gamma < 2\% \times I_\gamma^{max}$ & Multiply placed: undivided intensity given
- $I_\gamma < 10\% \times I_\gamma^{max}$
- $I_\gamma > 10\% \times I_\gamma^{max}$
- γ Decay (Uncertain)
- Coincidence

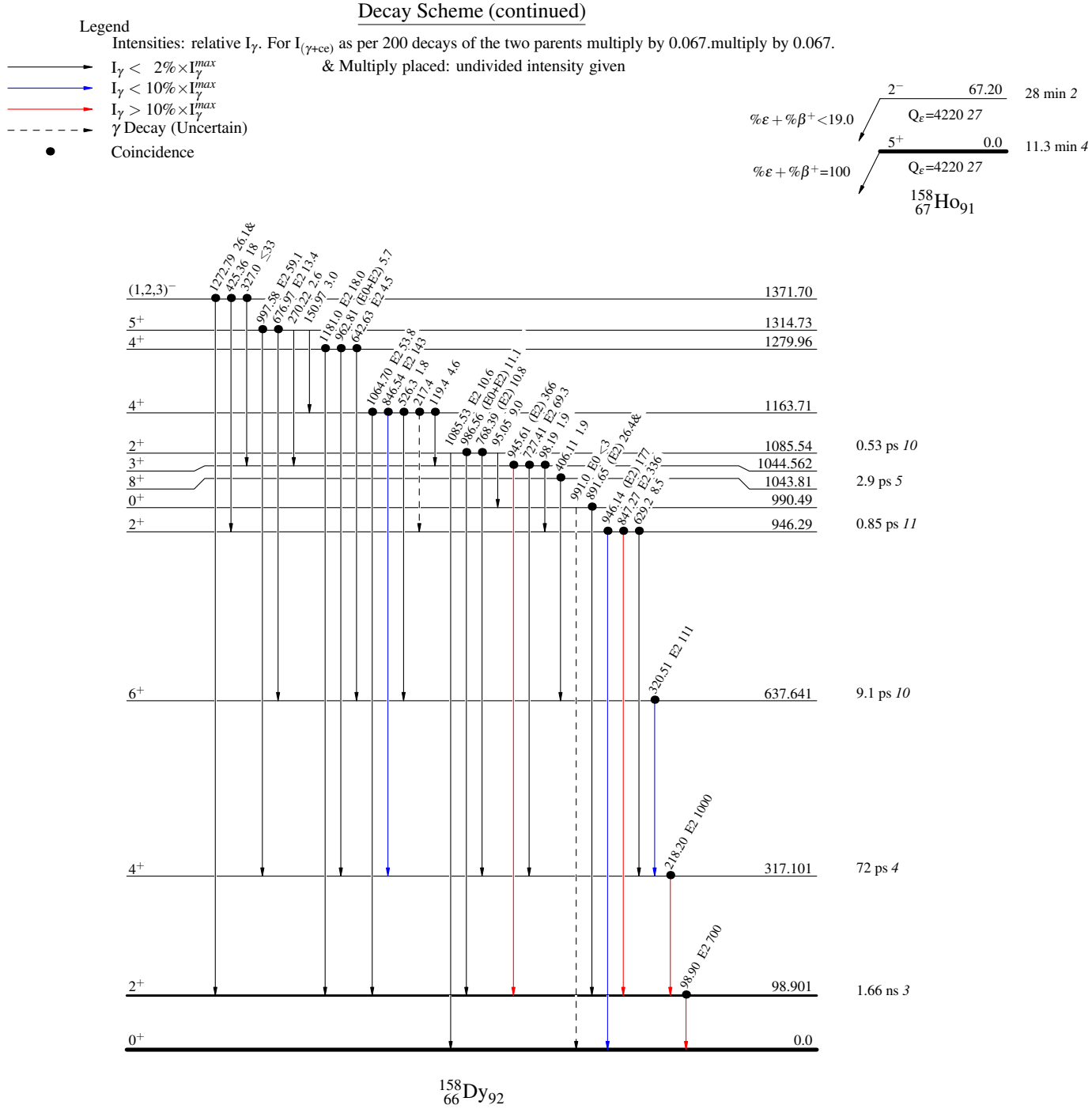




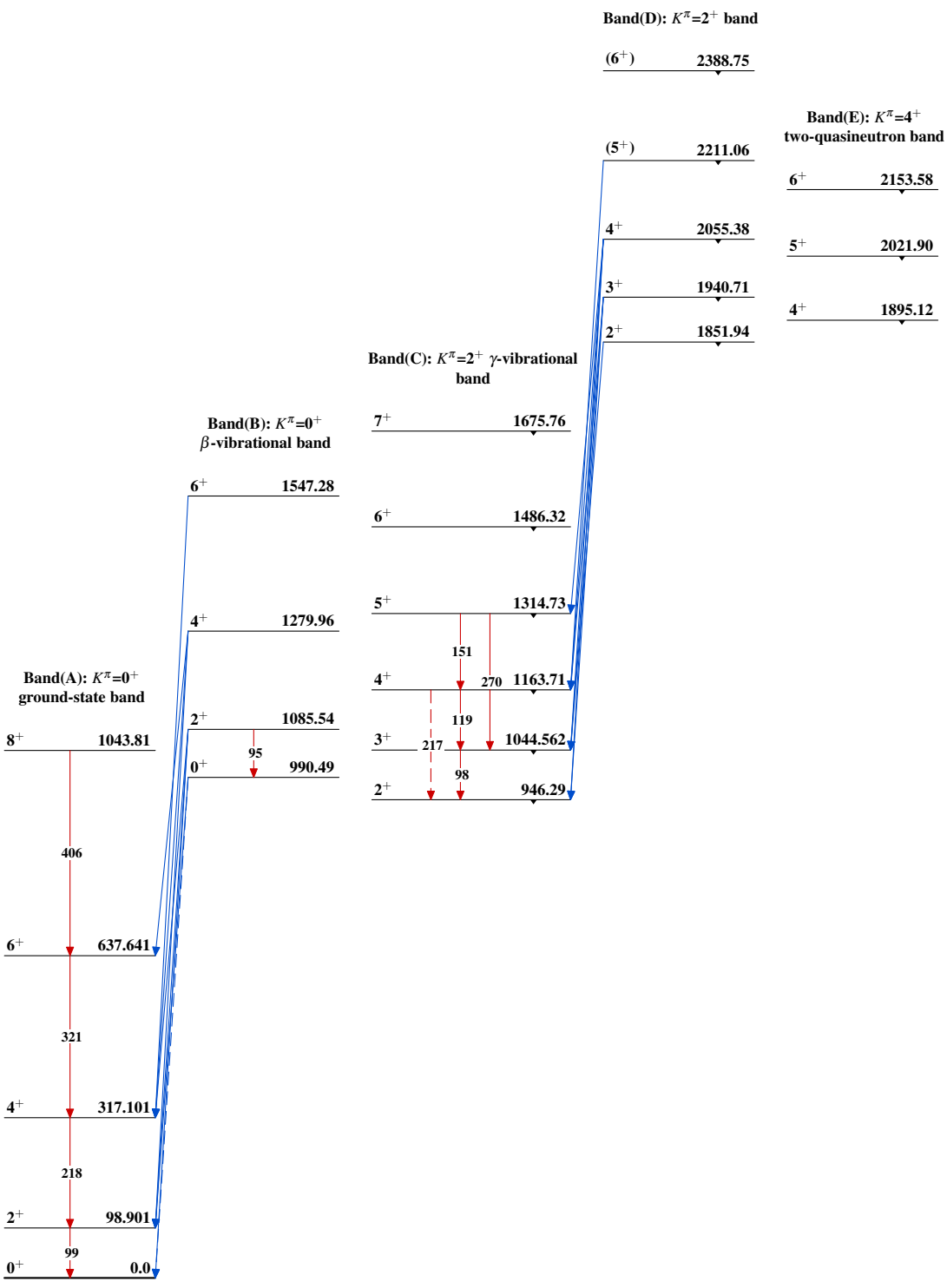
$^{158}_{66}Dy_{92}$

^{158}Ho ε decay (11.3 min+28 min) 1978An11,1974Al30,1975Ru02

Decay Scheme (continued)



^{158}Ho ε decay (11.3 min+28 min) 1978An11,1974Al30,1975Ru02



$^{158}_{66}Dy_{92}$