^{150}Pm β^- decay (2.68 h) 1970Ba16

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	S. K. Basu, A. A. Sonzogni	NDS 114, 435 (2013)	1-Apr-2013

Parent: ^{150}Pm: E=0.0; J^π=(1$^-$); $T_{1/2}$=2.698 h *15*; Q(β^-)=3454 *20*; %β^- decay=100.0

γ-ray transitions following the β decay of ^{150}Pm were studied using Ge(Li) detectors (resolution=2.7 keV FWHM at 1332 keV). Because of the short half-life of ^{150}Pm, coincidence information was obtained by means of a well-type Ge(Li) detector using summing techniques. A total of 140 γ rays were observed and 117 of these were placed in a proposed decay scheme with 34 levels. In constructing the decay scheme the authors referred to an earlier publication (1968Ku10) on the decay of 12.8-h ^{150}Eu.

^{150}Sm Levels

E(level)	J^π	Comments
0.	0$^+$	
333.95 *1*	2$^+$	
740.42 *4*	0$^+$	
773.35 *1*	4$^+$	
1046.14 *1*	2$^+$	
1071.40 *1*	3$^-$	
1165.75 *2*	1$^-$	
1193.81	2$^+$	
1255.50 *2*	0$^+$	
1417.33 *1*	2$^+$	371.08 γ not included as it is not adopted.
1504.53 *1*	3$^+$	
1658.41 *4*	2$^{(-)}$	
1684.21? *2*	3$^-$	
1713.27 *6*	1	
1786.2 *1*	(≤3)	
1963.72 *3*	1$^-$	
2070.23 *2*	2$^{(-)}$	
2259.92 *4*	(1$^-$)	
2367.4 *1*	(3$^+$)	
2507.3 *6*	(1$^-$,2$^+$)	
2529.2 *3*	1,2$^+$	
2550.5 *3*	1,2$^+$	
2602.0 *10*		
2679.5 *6*		
2812.9 *3*	(1$^-$,2)	
2893.1 *5*	(1$^-$,2$^+$)	
3012.8 *10*		
3022.7 *15*	1,2$^+$	
3038.2 *7*	1,2$^+$	
3050.1 *8*	1,2$^+$	
3080.5 *15*	1,2$^+$	
3090.0 *15*	1,2$^+$	
3137.8 *8*	1,2$^+$	
3212.5 *10*	1,2,3	

β^- radiations

The β-decay branch to each level was deduced from the γ-ray intensity imbalance at each level. Iβ(g.s.)<3% (1962Go04) and 10% *2* (1972GrYP). The evaluators adopt Iβ(g.s.)<10%.

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^{150}Pm β^- decay (2.68 h) 1970Ba16 (continued)

β^- radiations (continued)

E(decay)	E(level)	Iβ^-[†]	Log *ft*	Comments
(242 *20*)	3212.5	0.17 *3*	6.35 *15*	av Eβ=67.0 *62*
(316 *20*)	3137.8	0.14 *3*	6.81 *13*	av Eβ=90.3 *64*
(364 *20*)	3090.0	0.29 *4*	6.69 *10*	av Eβ=105.7 *66*
(374 *20*)	3080.5	0.102 *16*	7.18 *11*	av Eβ=108.8 *67*
(404 *20*)	3050.1	0.143 *22*	7.15 *10*	av Eβ=118.9 *67*
(416 *20*)	3038.2	0.10 *3*	7.35 *15*	av Eβ=122.8 *68*
(431 *20*)	3022.7	0.163 *24*	7.19 *10*	av Eβ=128.1 *68*
(441 *20*)	3012.8	0.19 *3*	7.15 *10*	av Eβ=131.4 *69*
(561 *20*)	2893.1	0.61 *6*	7.00 *7*	av Eβ=173.1 *72*
(641 *20*)	2812.9	1.42 *10*	6.83 *6*	av Eβ=202.1 *74*
(775 *20*)	2679.5	0.11 *3*	8.23 *13*	av Eβ=252.1 *77*
(852 *20*)	2602.0	0.20 *3*	8.11 *8*	av Eβ=281.9 *78*
(904 *20*)	2550.5	0.39 *5*	7.92 *7*	av Eβ=302.0 *79*
(925 *20*)	2529.2	0.44 *5*	7.90 *6*	av Eβ=310.4 *80*
(947 *20*)	2507.3	0.58 *7*	7.82 *7*	av Eβ=319.1 *80*
(1087 *20*)	2367.4	1.04 *9*	7.78 *5*	av Eβ=375.3 *82*
(1194 *20*)	2259.92	3.26 *17*	7.44 *4*	av Eβ=419.4 *83*
(1384 *20*)	2070.23	17.5 *8*	6.95 *4*	av Eβ=498.9 *85*
(1490 *20*)	1963.72	5.5 *3*	7.57 *4*	av Eβ=544.2 *86*
(1668 *20*)	1786.2	0.16 *4*	9.30 *11*	av Eβ=620.7 *88*
(1741 *20*)	1713.27	3.5 *3*	8.03 *5*	av Eβ=652.5 *88*
(1770 *20*)	1684.21?	0.089 *25*	9.65 *13*	av Eβ=665.2 *88*
(1796 *20*)	1658.41	19.4 *12*	7.34 *4*	av Eβ=676.5 *88*
(2260 *20*)	1193.81	0.6 *7*	9.2 *5*	av Eβ=882.7 *90*
(2288 *20*)	1165.75	25.9 *14*	7.63 *3*	av Eβ=895.3 *90*
(2408 *20*)	1046.14	1.3 *4*	9.02 *14*	av Eβ=949.2 *91*
(2714 *20*)	740.42	1.5 *6*	9.17 *18*	av Eβ=1087.6 *91*
(3120 *20*)	333.95	9.4 *18*	8.62 *9*	av Eβ=1273.3 *92*
(3454 *20*)	0.	≤10	≥8.8	av Eβ=1426.7 *92*

[†] Absolute intensity per 100 decays.

$\gamma(^{150}Sm)$

Iγ normalization: Assuming Σ Iγ(g.s.)=95% *5*.

Eγ	Iγ[†#]	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.[‡]	α[@]	Comments
209.45 *12*	0.09 *2*	1255.50	0$^+$	1046.14	2$^+$	[E2]	0.179	α(K)=0.1302 *19*; α(L)=0.0379 *6*; α(M)=0.00858 *13*; α(N)=0.00190 *3*; α(O)=0.000253 *4* α(P)=6.52×10^{-6} *10*; α(N+..)=0.00216 *3*
[x]218.1 *8*	≈0.01							
225.0[a] *8*	≈0.01	3038.2	1,2$^+$	2812.9	(1$^-$,2)			
237.4 *6*	0.06 *1*	3050.1	1,2$^+$	2812.9	(1$^-$,2)			
241.5 *4*	≈0.02	1658.41	2$^{(-)}$	1417.33	2$^+$			
251.60 *10*	0.26 *4*	1417.33	2$^+$	1165.75	1$^-$	E1	0.0231	α(K)=0.0197 *3*; α(L)=0.00269 *4*; α(M)=0.000575 *8*; α(N)=0.0001294 *19*; α(O)=1.89×10^{-5} *3* α(P)=1.066×10^{-6} *15*; α(N+..)=0.0001493 *21*
[x]259.3 *10*	≈0.01							
272.8 *10*	0.09 *3*	1046.14	2$^+$	773.35	4$^+$			
276.5 *5*	0.14 *5*	3090.0	1,2$^+$	2812.9	(1$^-$,2)			
297.9 *2*	0.17 *3*	1071.40	3$^-$	773.35	4$^+$	E1	0.01498	α(K)=0.01277 *18*; α(L)=0.001735 *25*;

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^{150}Pm β^- decay (2.68 h) 1970Ba16 (continued)

$\gamma(^{150}Sm)$ (continued)

E_γ	I_γ[†][#]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡]	α[@]	Comments
								α(M)=0.000370 *6*; α(N)=8.33×10^{-5} *12* α(O)=1.224×10^{-5} *18*; α(P)=7.02×10^{-7} *10*; α(N+..)=9.63×10^{-5} *14*
305.7 *2*	0.16 *3*	1046.14	2$^+$	740.42	0$^+$	E2	0.0530	α(K)=0.0414 *6*; α(L)=0.00908 *13*; α(M)=0.00202 *3*; α(N)=0.000450 *7*; α(O)=6.21×10^{-5} *9* α(P)=2.23×10^{-6} *4*; α(N+..)=0.000515 *8*
333.92 *3*	100	333.95	2$^+$	0.	0$^+$	E2	0.0405	α(K)=0.0320 *5*; α(L)=0.00665 *10*; α(M)=0.001476 *21*; α(N)=0.000329 *5*; α(O)=4.57×10^{-5} *7* α(P)=1.750×10^{-6} *25*; α(N+..)=0.000377 *6*
345.93 *8*	0.64 *7*	1417.33	2$^+$	1071.40	3$^-$	E1	0.01031	α(K)=0.00880 *13*; α(L)=0.001187 *17*; α(M)=0.000253 *4*; α(N)=5.70×10^{-5} *8*; α(O)=8.40×10^{-6} *12* α(P)=4.89×10^{-7} *7*; α(N+..)=6.59×10^{-5} *10*
358.8 *8*	0.05 *2*	3038.2	1,2$^+$	2679.5				
406.51 *3*	8.2 *5*	740.42	0$^+$	333.95	2$^+$	E2	0.0227	α(K)=0.0183 *3*; α(L)=0.00343 *5*; α(M)=0.000756 *11*; α(N)=0.0001691 *24*; α(O)=2.39×10^{-5} *4* α(P)=1.031×10^{-6} *15*; α(N+..)=0.000194 *3*
420.1[a] *5*	0.16 *3*	1193.81	2$^+$	773.35	4$^+$	(E2)	0.0207	α(K)=0.01674 *24*; α(L)=0.00309 *5*; α(M)=0.000679 *10*; α(N)=0.0001520 *22* α(O)=2.15×10^{-5} *4*; α(P)=9.46×10^{-7} *14*; α(N+..)=0.000174 *3*
425.33 *7*	0.71 *8*	1165.75	1$^-$	740.42	0$^+$			
439.38 *7*	1.13 *8*	773.35	4$^+$	333.95	2$^+$	E2	0.0182	α(K)=0.01482 *21*; α(L)=0.00268 *4*; α(M)=0.000588 *9*; α(N)=0.0001317 *19*; α(O)=1.87×10^{-5} *3* α(P)=8.42×10^{-7} *12*; α(N+..)=0.0001512 *22*
453.48 *16*	0.21 *4*	1193.81	2$^+$	740.42	0$^+$	(E2)	0.01671	α(K)=0.01362 *20*; α(L)=0.00243 *4*; α(M)=0.000532 *8*; α(N)=0.0001192 *17* α(O)=1.695×10^{-5} *24*; α(P)=7.76×10^{-7} *11*; α(N+..)=0.0001369 *20*
458.4 *2*	0.05 *1*	1504.53	3$^+$	1046.14	2$^+$	E2	0.01622	α(K)=0.01323 *19*; α(L)=0.00235 *4*; α(M)=0.000514 *8*; α(N)=0.0001153 *17* α(O)=1.640×10^{-5} *23*; α(P)=7.55×10^{-7} *11*; α(N+..)=0.0001324 *19*
465.1 *6*	0.07 *1*	1658.41	2$^{(-)}$	1193.81	2$^+$			
492.56 *8*	0.50 *6*	1658.41	2$^{(-)}$	1165.75	1$^-$			
499.4 *10*	≈0.02	3050.1	1,2$^+$	2550.5	1,2$^+$			
532.3[&a] *8*	0.04[&] *2*	2602.0		2070.23	2$^{(-)}$			
532.3[&] *8*	0.04[&] *2*	3212.5	1,2,3	2679.5				
542.9 *8*	0.06 *2*	3050.1	1,2$^+$	2507.3	(1$^-$,2$^+$)			
547.4 *8*	0.06 *2*	1713.27	1	1165.75	1$^-$			
565.70 *3*	1.93 *14*	2070.23	2$^{(-)}$	1504.53	3$^+$			
572.8[a] *8*	≈0.02	3080.5	1,2$^+$	2507.3	(1$^-$,2$^+$)			
587.02 *8*	1.97 *14*	1658.41	2$^{(-)}$	1071.40	3$^-$			
[x]600.8 *10*	≈0.02							
612.25 *8*	1.37 *10*	1658.41	2$^{(-)}$	1046.14	2$^+$			

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^{150}Pm β^- decay (2.68 h) 1970Ba16 (continued)

$\gamma(^{150}Sm)$ (continued)

E_γ	I_γ[†][#]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡]	α[@]	Comments
620.8 *4*	0.18 *3*	1786.2	(≤3)	1165.75	1^-			
[x]627.9 *10*	≈0.02							
633.5 *6*	0.10 *2*	2893.1	$(1^-,2^+)$	2259.92	(1^-)			
652.84 *9*	0.49 *6*	2070.23	$2^{(-)}$	1417.33	2^+			
667.3 *3*	0.23 *4*	1713.27	1	1046.14	2^+			
712.22 *4*	6.4 *4*	1046.14	2^+	333.95	2^+	E2+E0+M1	0.0071 *19*	α(K)=0.0060 *16*; α(L)=0.00085 *18*; α(M)=0.00018 *4*; α(N)=4.1×10^{-5} *9*; α(O)=6.1×10^{-6} *14* α(P)=3.7×10^{-7} *11*; α(N+..)=4.8×10^{-5} *10*
731.06 *16*	0.41 *7*	1504.53	3^+	773.35	4^+	E2	0.00498	α(K)=0.00417 *6*; α(L)=0.000630 *9*; α(M)=0.0001362 *19*; α(N)=3.07×10^{-5} *5*; α(O)=4.49×10^{-6} *7* α(P)=2.46×10^{-7} *4*; α(N+..)=3.54×10^{-5} *5*
737.50 *8*	3.31 *23*	1071.40	3^-	333.95	2^+	E1	0.00187	α(K)=0.001605 *23*; α(L)=0.000209 *3*; α(M)=4.44×10^{-5} *7*; α(N)=1.005×10^{-5} *14* α(O)=1.499×10^{-6} *21*; α(P)=9.24×10^{-8} *13*; α(N+..)=1.164×10^{-5} *17*
761.3 *8*	0.16 *3*	3022.7	$1,2^+$	2259.92	(1^-)			
[x]812.1 *8*	0.14 *3*							
831.85 *4*	17.5 *7*	1165.75	1^-	333.95	2^+	(E1)	1.47×10^{-3}	α(K)=0.001262 *18*; α(L)=0.0001634 *23*; α(M)=3.47×10^{-5} *5*; α(N)=7.86×10^{-6} *11* α(O)=1.174×10^{-6} *17*; α(P)=7.28×10^{-8} *11*; α(N+..)=9.10×10^{-6} *13*
842.55 *12*	0.60 *7*	2259.92	(1^-)	1417.33	2^+			
848.1[a] *5*	≈0.02	2507.3	$(1^-,2^+)$	1658.41	$2^{(-)}$			
859.95 *4*	5.0 *3*	1193.81	2^+	333.95	2^+	E2+M1(+E0)	0.0045 *11*	α(K)=0.0039 *10*; α(L)=0.00053 *12*; α(M)=0.000114 *24*; α(N)=2.6×10^{-5} *6*; α(O)=3.9×10^{-6} *9* α(P)=2.4×10^{-7} *7*; α(N+..)=3.0×10^{-5} *7*
876.41 *4*	10.7 *5*	2070.23	$2^{(-)}$	1193.81	2^+			
889.2 *5*	0.21 *4*	2602.0		1713.27	1			
904.46 *8*	1.34 *9*	2070.23	$2^{(-)}$	1165.75	1^-			
911.0 *6*	0.10 *2*	1684.21?	3^-	773.35	4^+	E1	1.23×10^{-3}	α(K)=0.001058 *15*; α(L)=0.0001365 *20*; α(M)=2.90×10^{-5} *4*; α(N)=6.56×10^{-6} *10* α(O)=9.81×10^{-7} *14*; α(P)=6.12×10^{-8} *9*; α(N+..)=7.60×10^{-6} *11*

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^{150}Pm β^- decay (2.68 h) 1970Ba16 (continued)

$\gamma(^{150}Sm)$ (continued)

E_γ	I_γ[†][#]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡]	α[@]	Comments
917.44 *16*	0.70 *10*	1963.72	1^-	1046.14	2^+			
921.61 *16*	1.25 *10*	1255.50	0^+	333.95	2^+	E2	0.00296	α(K)=0.00250 *4*; α(L)=0.000359 *5*; α(M)=7.71×10^{-5} *11*; α(N)=1.740×10^{-5} *25*; α(O)=2.57×10^{-6} *4* α(P)=1.486×10^{-7} *21*; α(N+..)=2.01×10^{-5} *3*
972.2 *8*	0.14 *2*	1713.27	1	740.42	0^+			
999.0[a] *10*	0.09 *3*	2070.23	$2^{(-)}$	1071.40	3^-			
1004.44 *12*	1.18 *8*	2259.92	(1^-)	1255.50	0^+			
1024.13 *6*	1.08 *8*	2070.23	$2^{(-)}$	1046.14	2^+			
1046.12 *8*	0.52 *6*	1046.14	2^+	0.	0^+	(E2)	0.00226	α(K)=0.00192 *3*; α(L)=0.000269 *4*; α(M)=5.76×10^{-5} *8*; α(N)=1.302×10^{-5} *19*; α(O)=1.93×10^{-6} *3* α(P)=1.142×10^{-7} *16*; α(N+..)=1.507×10^{-5} *21*
1066.00 *16*	0.66 *7*	2259.92	(1^-)	1193.81	2^+			
1083.33 *8*	0.26 *4*	1417.33	2^+	333.95	2^+	M1+E0(+E2)	0.0027 *6*	α(K)=0.0023 *5*; α(L)=0.00031 *6*; α(M)=6.6×10^{-5} *13*; α(N)=1.5×10^{-5} *3*; α(O)=2.2×10^{-6} *5* α(P)=1.4×10^{-7} *4*; α(N+..)=1.7×10^{-5} *4*
1093.5 *8*	0.11 *2*	2259.92	(1^-)	1165.75	1^-			
1097.1 *10*	0.05 *2*	2602.0		1504.53	3^+			
[x]1120.8 *8*	0.13 *2*							
1128.6[&] *8*	0.10[&] *2*	2812.9	$(1^-,2)$	1684.21?	3^-			
1128.6[&a] *8*	0.10[&] *2*	3090.0	$1,2^+$	1963.72	1^-			
1154.64 *16*	1.00 *7*	2812.9	$(1^-,2)$	1658.41	$2^{(-)}$			
1165.77 *6*	23.3 *9*	1165.75	1^-	0.	0^+	E1	7.92×10^{-4}	α(K)=0.000670 *10*; α(L)=8.56×10^{-5} *12*; α(M)=1.82×10^{-5} *3*; α(N)=4.11×10^{-6} *6*; α(O)=6.16×10^{-7} *9* α(P)=3.88×10^{-8} *6*; α(N+..)=1.83×10^{-5} *3*
1170.9 *3*	1.56 *18*	1504.53	3^+	333.95	2^+	E2(+M1)	0.0023 *5*	α(K)=0.0019 *4*; α(L)=0.00026 *5*; α(M)=5.5×10^{-5} *11*; α(N)=1.25×10^{-5} *24*; α(O)=1.9×10^{-6} *4* α(P)=1.2×10^{-7} *3*; α(N+..)=1.8×10^{-5} *3*
1179.6 *6*	0.15 *3*	2893.1	$(1^-,2^+)$	1713.27	1			
1193.87 *6*	7.1 *4*	1193.81	2^+	0.	0^+	E2	1.73×10^{-3}	α(K)=0.001469 *21*; α(L)=0.000201 *3*; α(M)=4.31×10^{-5} *6*; α(N)=9.75×10^{-6} *14*

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^{150}Pm β^- decay (2.68 h) 1970Ba16 (continued)

$\gamma(^{150}Sm)$ (continued)

E_γ	I_γ[†][#]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡]	α[@]	Comments
								α(O)=1.452×10^{-6} *21*; α(P)=8.75×10^{-8} *13*; α(N+..)=1.635×10^{-5} *23*
1201.8 *5*	0.11 *2*	2367.4	(3$^+$)	1165.75	1$^-$			
1213.72 *8*	1.52 *11*	2259.92	(1$^-$)	1046.14	2$^+$			
1223.28 *6*	4.16 *29*	1963.72	1$^-$	740.42	0$^+$			
[x]1269.3 *10*	0.10 *3*							
[x]1296.1 *8*	0.10 *3*							
1324.51 *6*	25.7 *10*	1658.41	2$^{(-)}$	333.95	2$^+$			
1340.9 *5*	0.08 *2*	2507.3	(1$^-$,2$^+$)	1165.75	1$^-$			
1350.7[&][a] *5*	0.13[&] *2*	1684.21?	3$^-$	333.95	2$^+$	E1	7.04×10^{-4}	α(K)=0.000516 *8*; α(L)=6.57×10^{-5} *10*; α(M)=1.393×10^{-5} *20*; α(N)=3.15×10^{-6} *5*; α(O)=4.73×10^{-7} *7* α(P)=3.00×10^{-8} *5*; α(N+..)=0.0001079 *16*
1350.7[&] *5*	0.13[&] *2*	3137.8	1,2$^+$	1786.2	(≤3)			
[x]1358.5 *8*	0.09 *2*							
1364.1[a] *8*	0.03 *1*	3022.7	1,2$^+$	1658.41	2$^{(-)}$			
1379.32 *6*	4.63 *32*	1713.27	1	333.95	2$^+$			
1436.6 *4*	0.39 *7*	2507.3	(1$^-$,2$^+$)	1071.40	3$^-$			
1452.9 *10*	0.19 *5*	1786.2	(≤3)	333.95	2$^+$			
1485.6 *8*	0.07 *2*	2679.5		1193.81	2$^+$			
1499.6 *6*	0.11 *2*	3212.5	1,2,3	1713.27	1			
1507.1[a] *6*	≈0.1	3012.8		1504.53	3$^+$			
1519.53 *12*	0.39 *7*	2259.92	(1$^-$)	740.42	0$^+$			
1629.79 *4*	1.17 *8*	1963.72	1$^-$	333.95	2$^+$			
1647.20 *25*	0.37 *6*	2812.9	(1$^-$,2)	1165.75	1$^-$			
1670.7 *5*	0.13 *2*	3090.0	1,2$^+$	1417.33	2$^+$			
1713.31 *12*	0.52 *6*	1713.27	1	0.	0$^+$			
1726.9 *6*	0.28 *5*	2893.1	(1$^-$,2$^+$)	1165.75	1$^-$			
1736.40 *8*	10.2 *5*	2070.23	2$^{(-)}$	333.95	2$^+$			
1766.7[&] *3*	0.28[&] *5*	2507.3	(1$^-$,2$^+$)	740.42	0$^+$			
1766.7[&] *3*	0.28[&] *5*	2812.9	(1$^-$,2)	1046.14	2$^+$			
1789.8 *8*	0.02 *1*	2529.2	1,2$^+$	740.42	0$^+$			
1810.5 *6*	0.06 *2*	2550.5	1,2$^+$	740.42	0$^+$			
1821.9 *8*	0.05 *3*	2893.1	(1$^-$,2$^+$)	1071.40	3$^-$			
1833.3 *10*	0.04 *3*	3090.0	1,2$^+$	1255.50	0$^+$			
1848.0[a] *10*	≈0.005	3012.8		1165.75	1$^-$			
[x]1865.2 *10*	0.10 *2*							
[x]1874.1 *10*	0.10 *2*							
[x]1893.2 *10*	0.07 *2*							
1906.3 *6*	0.11 *2*	2679.5		773.35	4$^+$			
1915.9[a] *6*	0.11 *2*	3080.5	1,2$^+$	1165.75	1$^-$			
1926.04 *8*	0.50 *10*	2259.92	(1$^-$)	333.95	2$^+$			
1940.6 *3*	0.10 *2*	3012.8		1071.40	3$^-$			
1963.71 *8*	2.16 *15*	1963.72	1$^-$	0.	0$^+$			
2003.4 *10*	0.04 *2*	3050.1	1,2$^+$	1046.14	2$^+$			
2017.8 *8*	0.06 *2*	3212.5	1,2,3	1193.81	2$^+$			
2033.46 *8*	1.42 *10*	2367.4	(3$^+$)	333.95	2$^+$			
2173.7 *8*	0.08 *3*	2507.3	(1$^-$,2$^+$)	333.95	2$^+$			
2195.6 *6*	0.13 *3*	2529.2	1,2$^+$	333.95	2$^+$			
2216.5 *3*	0.35 *6*	2550.5	1,2$^+$	333.95	2$^+$			
2259.8 *8*	0.10 *3*	2259.92	(1$^-$)	0.	0$^+$			
[x]2371.0 *8*	0.11 *3*							

Continued on next page (footnotes at end of table)

^{150}Pm β^- decay (2.68 h) 1970Ba16 (continued)

$\gamma(^{150}Sm)$ (continued)

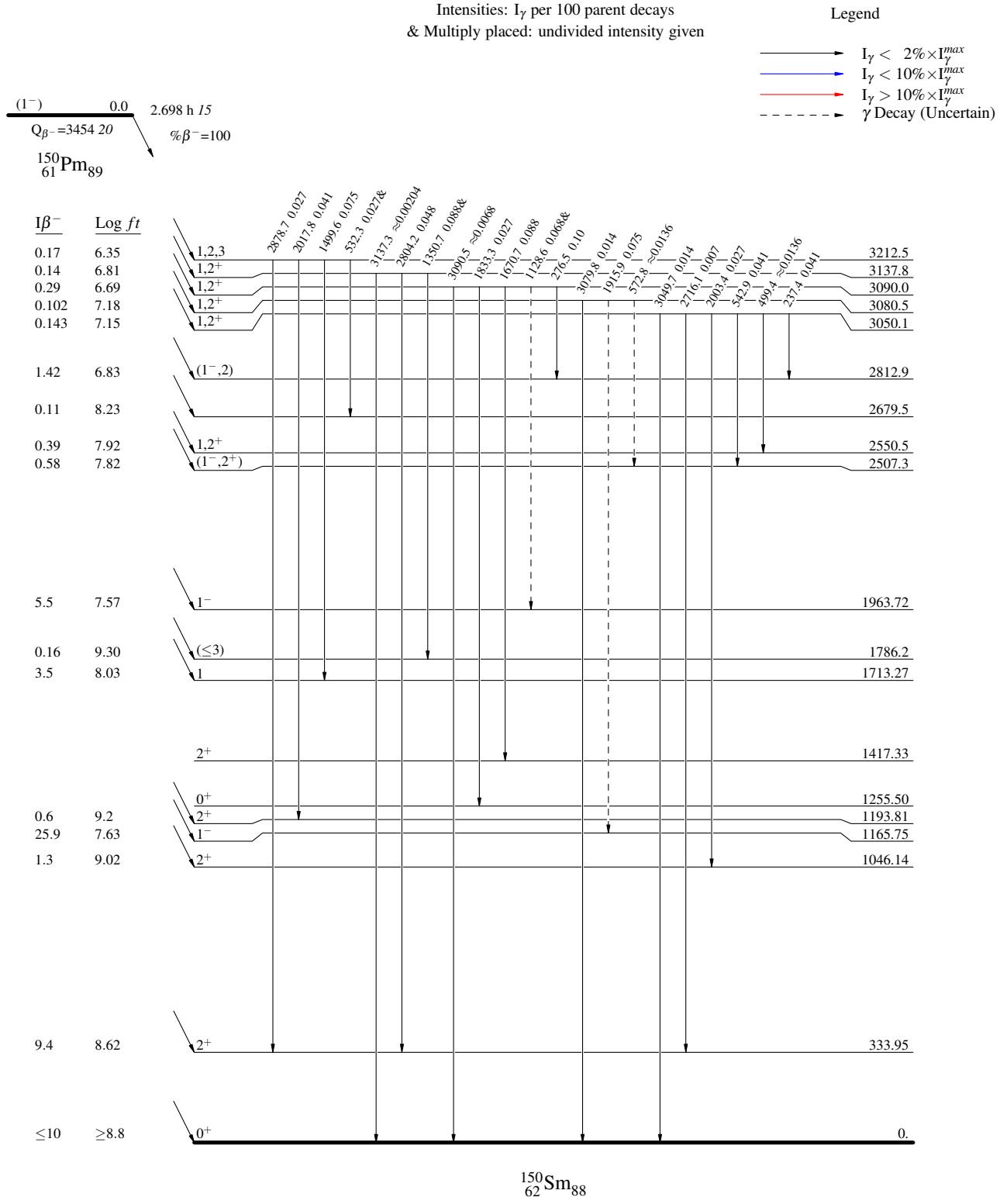
E_γ	I_γ †#	E_i(level)	J_i^π	E_f	J_f^π	E_γ	I_γ †#	E_i(level)	J_i^π	E_f	J_f^π
x2453.1 *10*	0.02 *1*					2804.2 *5*	0.07 *3*	3137.8	1,2$^+$	333.95	2$^+$
2478.6 *2*	0.55 *6*	2812.9	(1$^-$,2)	333.95	2$^+$	x2855.8 *8*	0.010 *5*				
2507.3 *6*	0.08 *3*	2507.3	(1$^-$,2$^+$)	0.	0$^+$	2878.7 *8*	0.04 *2*	3212.5	1,2,3	333.95	2$^+$
2529.2 *3*	0.49 *6*	2529.2	1,2$^+$	0.	0$^+$	x2883.3 *8*	0.04 *2*				
x2546.1 *7*	0.05 *2*					2893.1 *5*	0.31 *5*	2893.1	(1$^-$,2$^+$)	0.	0$^+$
2550.5 *5*	0.18 *4*	2550.5	1,2$^+$	0.	0$^+$	x2932.2 *10*	≈0.003				
x2623.5 *6*	0.06 *2*					x2941.0 *10*	≈0.003				
x2651.7 *10*	0.03 *1*					3022.7 *20*	0.04 *1*	3022.7	1,2$^+$	0.	0$^+$
2679.5&a *6*	0.07& *3*	2679.5		0.	0$^+$	3037.8 *10*	0.02 *1*	3038.2	1,2$^+$	0.	0$^+$
2679.5& *6*	0.07& *3*	3012.8		333.95	2$^+$	3049.7 *10*	0.02 *1*	3050.1	1,2$^+$	0.	0$^+$
2691.0a *8*	0.010 *5*	3022.7	1,2$^+$	333.95	2$^+$	3079.8 *10*	0.02 *1*	3080.5	1,2$^+$	0.	0$^+$
x2699.8 *5*	0.08 *3*					3090.5 *10*	≈0.01	3090.0	1,2$^+$	0.	0$^+$
2704.6 *7*	0.06 *3*	3038.2	1,2$^+$	333.95	2$^+$	3137.3 *10*	≈0.003	3137.8	1,2$^+$	0.	0$^+$
2716.1 *8*	0.010 *5*	3050.1	1,2$^+$	333.95	2$^+$	x3187.8 *20*	≈0.005				

† Normalized to 100 for the 2$^+$ to g.s. γ-ray transition.
‡ From adopted gammas.
# For absolute intensity per 100 decays, multiply by 0.68 *4*.
@ 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.
& Multiply placed with undivided intensity.
a Placement of transition in the level scheme is uncertain.
x γ ray not placed in level scheme.

^{150}Pm β^- decay (2.68 h) 1970Ba16

Decay Scheme

Intensities: I_γ per 100 parent decays
& Multiply placed: undivided intensity given

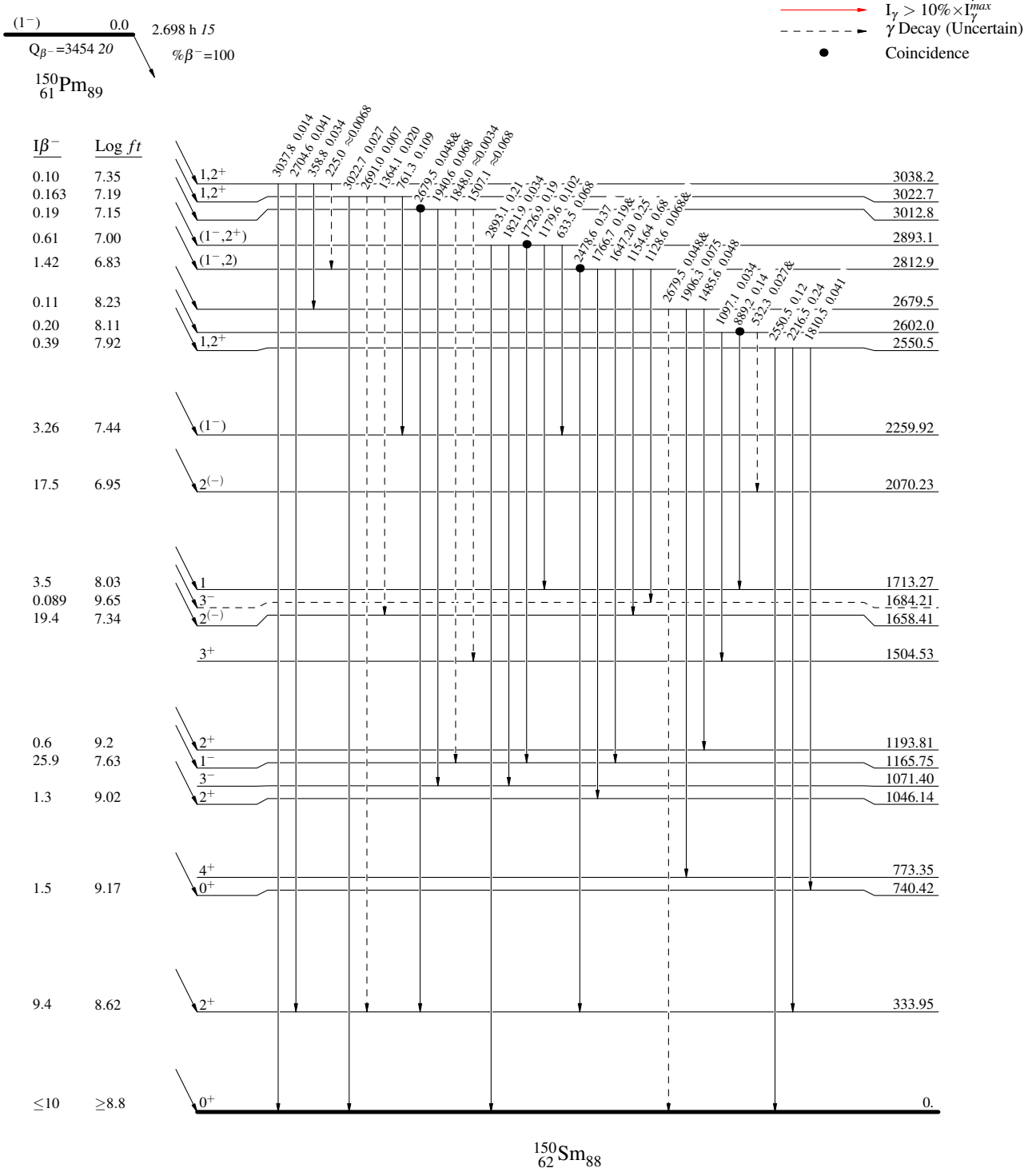


^{150}Pm β^- decay (2.68 h) 1970Ba16

Decay Scheme (continued)

Intensities: I_γ per 100 parent decays
& Multiply placed: undivided intensity given

Legend
- $I_\gamma < 2\% \times I_\gamma^{max}$
- $I_\gamma < 10\% \times I_\gamma^{max}$
- $I_\gamma > 10\% \times I_\gamma^{max}$
- γ Decay (Uncertain)
- Coincidence

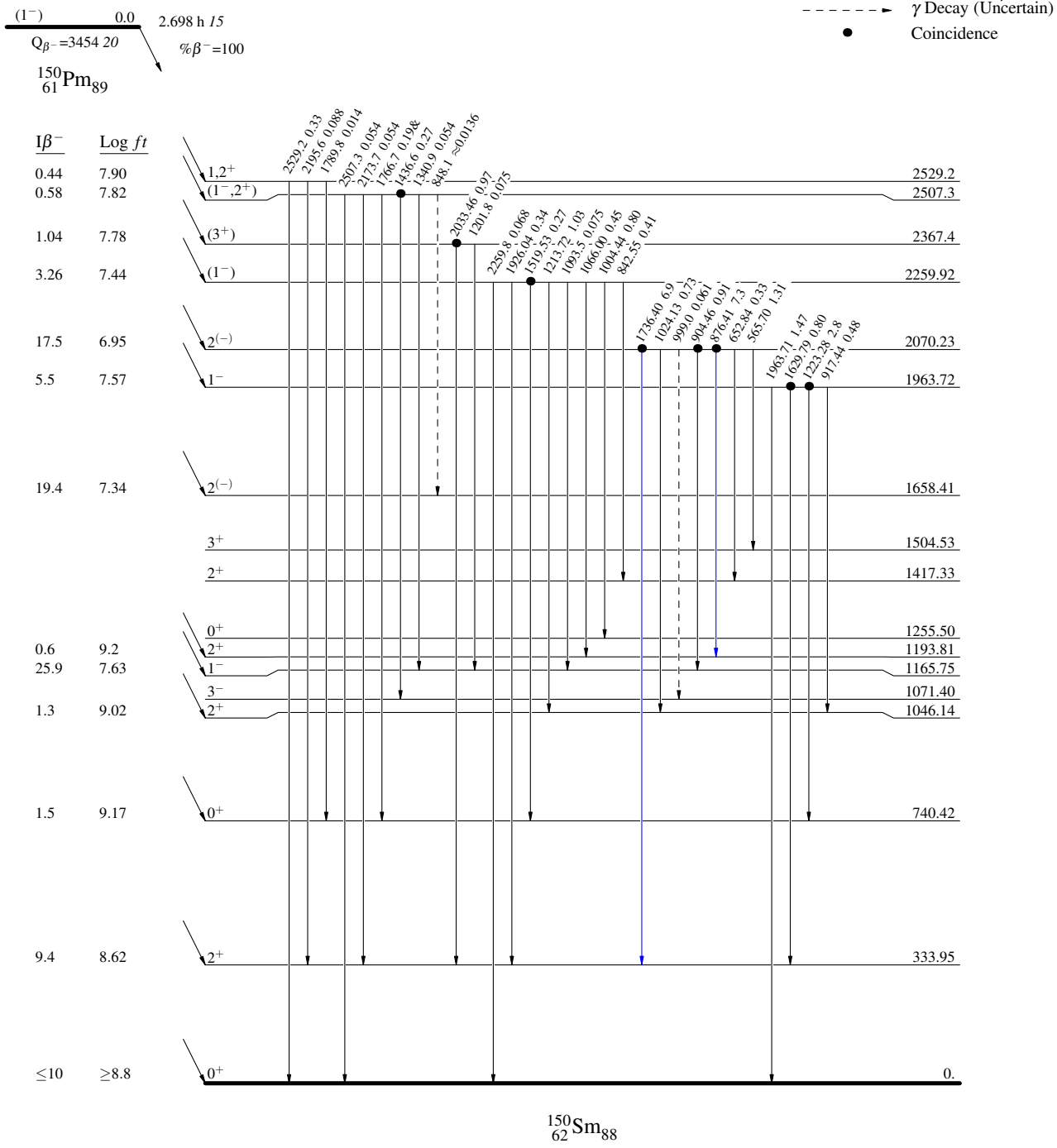


^{150}Pm β^- decay (2.68 h) 1970Ba16

Decay Scheme (continued)

Intensities: I_γ per 100 parent decays
& Multiply placed: undivided intensity given

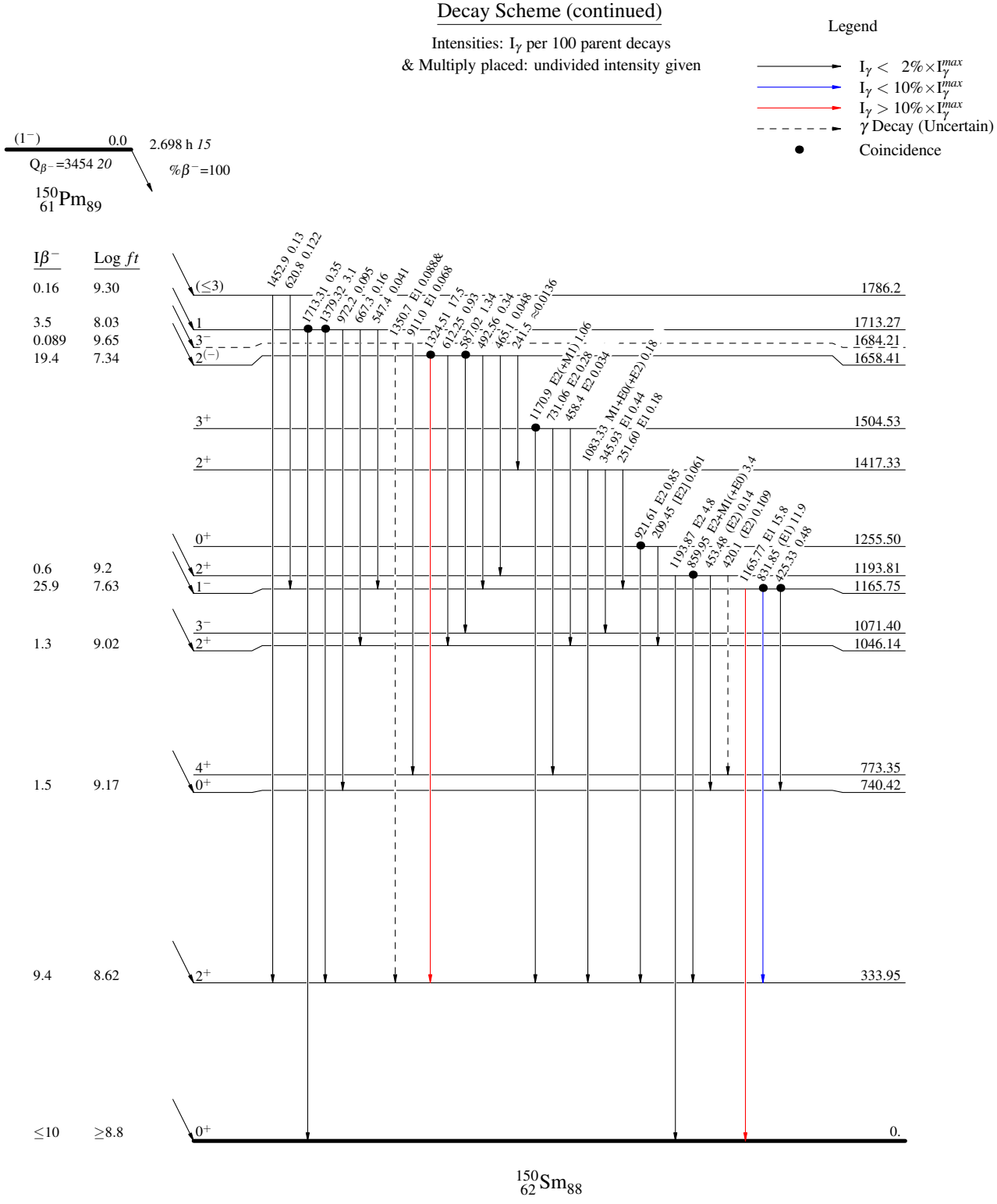
Legend
- $I_\gamma < 2\% \times I_\gamma^{max}$
- $I_\gamma < 10\% \times I_\gamma^{max}$
- $I_\gamma > 10\% \times I_\gamma^{max}$
- γ Decay (Uncertain)
- Coincidence



^{150}Pm β^- decay (2.68 h) 1970Ba16

Decay Scheme (continued)

Intensities: I_γ per 100 parent decays
& Multiply placed: undivided intensity given



$^{150}_{62}Sm_{88}$

^{150}Pm β^- decay (2.68 h) 1970Ba16

Decay Scheme (continued)

Intensities: I_γ per 100 parent decays
& Multiply placed: undivided intensity given