^{150}Eu ε decay (36.9 y) 1977Si12,1978MeZK

History

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

Parent: ^{150}Eu: E=0.0; $J^\pi=5^-$; $T_{1/2}$=36.9 y *9*; Q(ε)=2259 *6*; %ε+%$β^+$ decay=100.0

1973MeZX: private communication giving precision spectrometer measurements of Eγ (which appear in improved form in 1978MeZK). Also given are Iγ, ce(K), and ce(L). εK(exp) and εL(exp) are deduced, as are multipolarities. No experimental details are given. A complete listing of this work appears in 1976Ba18.

1977Si12: this published work agrees remarkably with 1973MeZX and reports most, but not all, of the photons seen by 1973MeZX. Eγ, Iγ are given.

Others: 1990Me15.

The decay scheme is based on that of 1977Si12, but some unplaced γ rays reported in 1977Si12 or 1978MeZK have been placed in the scheme on the basis of energy fit, multipolarities, and other experiments.

α: Additional information 1.

^{150}Sm Levels

E(level)	J^π†	E(level)	J^π†	E(level)	J^π†	E(level)	J^π†
0.0	0^+	1357.636 *13*	5^-	1821.871 *22*	$(4)^+$	2095.62 *3*	$(5)^+$
333.962 *10*	2^+	1417.260 *14*	2^+	1822.443 *17*	$(3)^-$	2107.389 *18*	$(6)^+$
740.49 *4*	0^+	1449.210 *15*	4^+	1832.96?‡ *3*	$(2)^+$	2117.123 *13*	4^+
773.392 *12*	4^+	1504.580 *14*	3^+	1970.447 *15*	4^+	2119.29‡ *3*	(3^-)
1046.207 *13*	2^+	1642.665 *13*	4^+	2020.378 *14*	5^+	2152.56 *3*	4^+
1071.364 *12*	3^-	1684.159 *15*	3^-	2024.648 *14*	4^+	2194.207 *18*	(4^+)
1165.776 *19*	1^-	1713.09 *6*	1	2035.368 *25*	5^-		
1193.852 *12*	2^+	1764.637? *24*	7^-	2044.0? *10*	$(3^+,4^+)$		
1278.846 *16*	6^+	1819.420 *12*	4^+	2070.0? *8*	$2^{(-)}$		

† Adopted values.

‡ Level suggested by 1973MeZX.

ε,$β^+$ radiations

Iε deduced from γ-ray intensity balance at each level.

E(decay)	E(level)	Iε†	Log *ft*	I(ε+$β^+$)†	Comments
(65 *6*)	2194.207	0.784 *18*	8.96 *17*	0.784 *18*	εK=0.34 *12*; εL=0.49 *9*; εM+=0.17 *4*
(106 *6*)	2152.56	0.195 *14*	10.32 *9*	0.195 *14*	εK=0.662 *20*; εL=0.256 *15*; εM+=0.082 *6*
174 *12*	2119.29	0.13 *4*	10.84 *15*	0.13 *4*	εK=0.728 *9*; εL=0.207 *7*; εM+=0.0649 *22*
(142 *6*)	2117.123	4.53 *16*	9.31 *6*	4.53 *16*	εK=0.731 *8*; εL=0.205 *6*; εM+=0.0641 *21*
(152 *6*)	2107.389	1.90 *8*	9.77 *6*	1.90 *8*	εK=0.742 *7*; εL=0.197 *5*; εM+=0.0613 *17*
(163 *6*)	2095.62	0.313 *20*	10.64 *6*	0.313 *20*	εK=0.753 *6*; εL=0.189 *4*; εM+=0.0584 *14*
(224 *6*)	2035.368	0.570 *12*	10.72 *4*	0.570 *12*	εK=0.7853 *22*; εL=0.1648 *17*; εM+=0.0499 *6*
(234 *6*)	2024.648	2.14 *6*	10.20 *4*	2.14 *6*	εK=0.7889 *20*; εL=0.1622 *15*; εM+=0.0490 *5*
(239 *6*)	2020.378	4.28 *5*	9.91 *3*	4.28 *5*	εK=0.7902 *19*; εL=0.1612 *14*; εM+=0.0487 *5*
(289 *6*)	1970.447	2.97 *6*	10.27 *3*	2.97 *6*	εK=0.8021 *12*; εL=0.1524 *9*; εM+=0.0456 *3*
(437 *6*)	1822.443	7.45 *20*	10.272 *21*	7.45 *20*	εK=0.8192 *5*; εL=0.1396 *4*; εM+=0.04116 *12*
(437 *6*)	1821.871	0.75 *8*	11.27 *5*	0.75 *8*	εK=0.8193 *5*; εL=0.1396 *4*; εM+=0.04115 *12*
(440 *6*)	1819.420	10.57 *14*	10.127 *18*	10.57 *14*	εK=0.8195 *5*; εL=0.1394 *4*; εM+=0.04110 *11*
(616 *6*)	1642.665	3.05 *8*	10.985 *18*	3.05 *8*	εK=0.8280 *2*; εL=0.13308 *15*; εM+=0.03892 *6*
(754 *6*)	1504.580	0.14 *3*	12.51 *10*	0.14 *3*	εK=0.8317 *2*; εL=0.1303 *1*; εM+=0.03798 *4*
(901 *6*)	1357.636	49.7 *14*	10.122 *18*	49.7 *14*	εK=0.83428 *9*; εL=0.12840 *7*; εM+=0.03731 *3*
(980 *6*)	1278.846	2.64 *10*	11.473 *21*	2.64 *10*	εK=0.8353; εL=0.12762 *6*; εM+=0.03705 *2*

Continued on next page (footnotes at end of table)

^{150}Eu ε decay (36.9 y) 1977Si12,1978MeZK (continued)

ϵ,β^+ radiations (continued)

E(decay)	E(level)	Iβ^+ †	Iε†	Log *ft*	I($\varepsilon+\beta^+$)†	Comments
(1486 *6*)	773.392	0.019 *6*	7.4 *22*	11.40 *13*	7.4 *22*	av Eβ=220.8 *27*; εK=0.8372; εL=0.12431 *4*; εM+=0.03594 *2*

† Absolute intensity per 100 decays.

^{150}Eu ε decay (36.9 y) 1977Si12,1978MeZK (continued)

γ(^{150}Sm)

Iγ normalization: From Σ I(γ+ce) to g.s.=100.

The γ-ray data below are taken from 1977Si12 and from 1978MeZK which has been reproduced in part in 1990Me15. 1977Si12 used the ^{150}Sm(d,2n) E=14 MeV reaction on Sm enriched to 99.7% in ^{150}Sm to obtain ^{150}Eu. A period of 3 years was allowed to pass before beginning spectroscopic studies. A Ge(Li) detector with 9.5% efficiency and 2.1-keV resolution at 1332 keV was used.

α(K)exp,α(L)exp: deduced from ce(K), ce(L) by 1973MeZX.

E_γ[†]	I_γ[†&]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[@]	α	Comments
78.7[d] *3*	0.86 *8*	1357.636	5^-	1278.846	6^+	E1	0.526 *10*	α(K)=0.441 *8*; α(L)=0.0671 *12*; α(M)=0.0144 *3*; α(N)=0.00319 *6*; α(O)=0.000445 *8* α(P)=2.07×10^{-5} *4*; α(N+..)=0.00365 *7*
125[‡d]	0.02 *1*	2095.62	$(5)^+$	1970.447	4^+			Placement suggested by 1976Ba18.
135.05[‡] *17*	0.12 *3*	1819.420	4^+	1684.159	3^-			
205.15[‡d] *8*	0.31 *4*	2024.648	4^+	1819.420	4^+	M1[#]	0.225	α(K)=0.191 *3*; α(L)=0.0268 *4*; α(M)=0.00574 *8*; α(N)=0.001302 *19*; α(O)=0.000195 *3* α(P)=1.214×10^{-5} *17*; α(N+..)=0.001509 *22*
251.596 *25*	1.80 *9*	1417.260	2^+	1165.776	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*
272.79[c] *9*	0.16[c] *6*	1046.207	2^+	773.392	4^+			
272.79[cd] *9*	0.24[c] *8*	2095.62	$(5)^+$	1822.443	$(3)^-$			E_γ: γ ray assigned to 2095-keV level only by 1973MeZX.
284.995 *26*	1.74 *8*	1642.665	4^+	1357.636	5^-	E1	0.01676	α(K)=0.01429 *20*; α(L)=0.00195 *3*; α(M)=0.000415 *6*; α(N)=9.34×10^{-5} *13*; α(O)=1.370×10^{-5} *20* α(P)=7.82×10^{-7} *11*; α(N+..)=0.0001079 *16* Mult.: from α(K)exp (1973MeZX).
286.293[c] *15*	1.03[c] *15*	1357.636	5^-	1071.364	3^-			I_γ: Iγ(peak)=2.35. 1976Ba18 deduced Iγ from (n,γ) data.
286.293[cd] *15*	0.7[c] *4*	1970.447	4^+	1684.159	3^-			I_γ: Iγ(peak)=2.35. 1976Ba18 deduced Iγ from (n,γ) data. Coincidence data of 1977Si12 do not support this placement.
286.293[cd] *15*	0.6[c] *4*	2119.29	(3^-)	1832.96?	$(2)^+$			E_γ: given 2119-keV level origin only by 1973MeZX.
298.061 *14*	6.71 *16*	1071.364	3^-	773.392	4^+	E1	0.01496	α(K)exp=0.0124 α(K)=0.01276 *18*; α(L)=0.001733 *25*; α(M)=0.000370 *6*; α(N)=8.32×10^{-5} *12* α(O)=1.222×10^{-5} *18*; α(P)=7.01×10^{-7} *10*; α(N+..)=9.61×10^{-5} *14*
305.70 *8*	0.35 *6*	1046.207	2^+	740.49	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*
310.82[‡] *8*	0.31 *6*	1504.580	3^+	1193.852	2^+			
315.0[‡] *2*	0.18 *6*	1819.420	4^+	1504.580	3^+			
333.971 *12*	1000	333.962	2^+	0.0	0^+	E2	0.0405	α(K)=0.0320 *5*; α(L)=0.00665 *10*; α(M)=0.001475 *21*; α(N)=0.000329

^{150}Eu ε decay (36.9 y) 1977Si12,1978MeZK (continued)

γ(^{150}Sm) (continued)

E_γ [†]	I_γ [†&]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [@]	α	Comments
								5; α(O)=4.57×10^{-5} *7* α(P)=1.749×10^{-6} *25*; α(N+..)=0.000376 *6*
335.7[‡d] *1*	0.38 *15*	2095.62	(5)$^+$	1764.637?	7$^-$			Not listed in 1978MeZK.
340.38 *4*	1.63 *15*	2024.648	4$^+$	1684.159	3$^-$	(M1)	0.0580	α(K)=0.0493 *7*; α(L)=0.00680 *10*; α(M)=0.001458 *21*; α(N)=0.000331 *5*; α(O)=4.97×10^{-5} *7* α(P)=3.11×10^{-6} *5*; α(N+..)=0.000383 *6* Mult.: a 340-342 doublet interpreted by 1973MeZX as M1/E2. 1976Ba18, from other data, consider an E0/E1 mix. 1977Si12 assign this γ ray to the 2024.60 level, noting the difficulties with the multipolarity assignment.
342.56[‡d] *4*	1.77 *15*	2107.389	(6)$^+$	1764.637?	7$^-$			See comment for 340.4-keV γ ray.
345.955 *19*	4.15 *15*	1417.260	2$^+$	1071.364	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*
370.721[c] *25*	0.83[c] *17*	1417.260	2$^+$	1046.207	2$^+$	(E2+E0)		E_γ: 1973MeZX give Eγ=370.71 *2* and place this transition as originating from levels 1417 and 1819. I_γ: from Iγ/Iγ(346γ)=0.20 *4* in β-decay.
370.721[c] *25*	0.29[c] *19*	1819.420	4$^+$	1449.210	4$^+$			I_γ: from Iγ=1.12 *9* for the doubly placed transition and Iγ=0.83 *17* deduced for the component from the 1417 level.
372.728 *25*	2.49 *9*	1821.871	(4)$^+$	1449.210	4$^+$			
377.728[b] *27*	1.18[b] *8*	2020.378	5$^+$	1642.665	4$^+$			E_γ: γ ray assigned to 2020-keV level only by 1973MeZX.
377.73[b] *3*	1.18[b] *8*	1449.210	4$^+$	1071.364	3$^-$			
381.99 *3*	1.17 *8*	2024.648	4$^+$	1642.665	4$^+$			Problems with the placement of this γ ray are discussed in 1976Ba18, page 259, under 2024 level.
402.152 *12*	8.13 *8*	1819.420	4$^+$	1417.260	2$^+$	(E2)	0.0234	α(K)=0.0189 *3*; α(L)=0.00356 *5*; α(M)=0.000783 *11*; α(N)=0.0001752 *25*; α(O)=2.47×10^{-5} *4* α(P)=1.061×10^{-6} *15*; α(N+..)=0.000201 *3* Mult.: from α(K)exp (1973MeZX).
403.36[‡] *10*	2.5 *1*	1449.210	4$^+$	1046.207	2$^+$	E2	0.0232	α(K)=0.0187 *3*; α(L)=0.00352 *5*; α(M)=0.000776 *11*; α(N)=0.0001735 *25*; α(O)=2.45×10^{-5} *4* α(P)=1.052×10^{-6} *15*; α(N+..)=0.000199 *3*
406.52[d] *5*	1.46 *15*	740.49	0$^+$	333.962	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* E_γ: 1977Si12 do not see this line in singles, but have inconclusive coincidence evidence for its presence in spectra gated by the 584.26-keV γ ray.
[x]420.55 *22*	0.14 *6*							
439.401 *15*	837 *17*	773.392	4$^+$	333.962	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)=1.0×10^{-5} *10*; α(N+..)=0.0015 *14*
448.789 *12*	2.7 *1*	1642.665	4$^+$	1193.852	2$^+$			

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^{150}Eu ε decay (36.9 y) 1977Si12,1978MeZK (continued)

γ(^{150}Sm) (continued)

E_γ[†]	I_γ[†&]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[@]	α	Comments
453.38[d] *10*	0.27 *5*	1193.852	2^+	740.49	0^+	E1,E2		I_γ: 453.58 *10* reported in 1990Me15 is a misprint.
458.36[‡] *6*	0.46 *5*	1504.580	3^+	1046.207	2^+			
461.761 *15*	8.6 *2*	1819.420	4^+	1357.636	5^-	E1	0.00517 *8*	α(K)exp=0.0043 α(K)=0.00443 *7*; α(L)=0.000589 *9*; α(M)=0.0001255 *18*; α(N)=2.83×10^{-5} *4*; α(O)=4.19×10^{-6} *6* α(P)=2.50×10^{-7} *4*; α(N+..)=3.28×10^{-5} *5*
464.11[c] *7*	4.0[c] *8*	1821.871	$(4)^+$	1357.636	5^-	E1	0.00511 *8*	α(K)exp=0. α(K)=0.00438 *7*; α(L)=0.000582 *9*; α(M)=0.0001240 *18*; α(N)=2.80×10^{-5} *4*; α(O)=4.14×10^{-6} *6* α(P)=2.47×10^{-7} *4*; α(N+..)=3.24×10^{-5} *5* I_γ: from Iγ(464)/Iγ(372) in (n,γ) and Iγ(372) in ε. Mult.: from (n,γ).
464.11[cd] *7*	0.8[c] *8*	2107.389	$(6)^+$	1642.665	4^+			I_γ: from Iγ=4.8 *8* for the 464 peak and Iγ=4.0 *8* for placement from the 1821 level.
474.498[‡] *25*	1.51 *7*	2117.123	4^+	1642.665	4^+	(E2+M1+E0)	0.020 *5*	α(K)=0.017 *5*; α(L)=0.0025 *4*; α(M)=0.00054 *8*; α(N)=0.000121 *18*; α(O)=1.8×10^{-5} *3* α(P)=1.0×10^{-6} *4*; α(N+..)=0.000140 *21*
476.89[b‡d] *13*	0.19[b] *5*	1642.665	4^+	1165.776	1^-			Seen only by 1973MeZX, 1978MeZK.
476.89[b] *13*	0.19[b] *5*	2119.29	(3^-)	1642.665	4^+			
485.931[‡] *20*	1.72 *7*	1764.637?	7^-	1278.846	6^+	(E1)	0.00460 *7*	α(K)=0.00394 *6*; α(L)=0.000523 *8*; α(M)=0.0001113 *16*; α(N)=2.51×10^{-5} *4*; α(O)=3.73×10^{-6} *6* α(P)=2.23×10^{-7} *4*; α(N+..)=2.91×10^{-5} *4*
505.521 *25*	50 *1*	1278.846	6^+	773.392	4^+	E2	0.01246	α(K)exp=0.0102; α(L)exp=0.00175 α(K)=0.01023 *15*; α(L)=0.001743 *25*; α(M)=0.000381 *6*; α(N)=8.55×10^{-5} *12* α(O)=1.225×10^{-5} *18*; α(P)=5.89×10^{-7} *9*; α(N+..)=9.83×10^{-5} *14* Mult.: from K/L (1973MeZX).
509.84[bd] *5*	1.3[b] *1*	2152.56	4^+	1642.665	4^+			
509.84[b] *5*	1.3[b] *1*	2194.207	(4^+)	1684.159	3^-			
515.792 *5*	10.3 *2*	2020.378	5^+	1504.580	3^+	E2	0.01181	α(K)exp=0.00975; α(L)exp=0.0016 α(K)=0.00972 *14*; α(L)=0.001642 *23*; α(M)=0.000359 *5*; α(N)=8.05×10^{-5} *12* α(O)=1.155×10^{-5} *17*; α(P)=5.61×10^{-7} *8*; α(N+..)=9.26×10^{-5} *13* Mult.: from α(K)exp, α(L)exp (1973MeZX).
520.085 *19*	4.8 *1*	2024.648	4^+	1504.580	3^+	E2+M1	0.016 *4*	α(K)=0.013 *4*; α(L)=0.0019 *4*; α(M)=0.00042 *7*; α(N)=9.4×10^{-5} *16*; α(O)=1.4×10^{-5} *3* α(P)=7.9×10^{-7} *25*; α(N+..)=0.000109 *19*
540.55 *6*	0.90 *7*	1819.420	4^+	1278.846	6^+			
542.972 *25*	1.40 *7*	1821.871	$(4)^+$	1278.846	6^+	(E2)	0.01033	α(K)exp≈0.009 α(K)=0.00853 *12*; α(L)=0.001414 *20*; α(M)=0.000308 *5*;

$^{150}_{62}Sm_{88}$-5

^{150}Eu ε decay (36.9 y) 1977Si12,1978MeZK (continued)

γ(^{150}Sm) (continued)

E_γ [†]	I_γ [†&]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [@]	α	Comments
								α(N)=6.92×10^{-5} *10* α(O)=9.96×10^{-6} *14*; α(P)=4.94×10^{-7} *7*; α(N+..)=7.97×10^{-5} *12*
553.20[‡d] *10*	0.34 *7*	1970.447	4$^+$	1417.260	2$^+$			
571.259[b] *15*	4.3[b] *1*	1642.665	4$^+$	1071.364	3$^-$	E1	0.00321 *5*	α(K)=0.00275 *4*; α(L)=0.000362 *5*; α(M)=7.70×10^{-5} *11*; α(N)=1.740×10^{-5} *25*; α(O)=2.59×10^{-6} *4* α(P)=1.568×10^{-7} *22*; α(N+..)=2.01×10^{-5} *3*
571.259[bd] *15*	4.3[b] *1*	2020.378	5$^+$	1449.210	4$^+$	(E1)	0.00321 *5*	α(K)=0.00275 *4*; α(L)=0.000362 *5*; α(M)=7.70×10^{-5} *11*; α(N)=1.740×10^{-5} *25*; α(O)=2.59×10^{-6} *4* α(P)=1.568×10^{-7} *22*; α(N+..)=2.01×10^{-5} *3*
575.51[‡] *8*	0.32 *8*	2024.648	4$^+$	1449.210	4$^+$	(E2+E0)		
584.274 *12*	548 *15*	1357.636	5$^-$	773.392	4$^+$	E1	0.00305 *5*	α(K)exp=0.00262; α(L)exp=0.00030 α(K)=0.00262 *4*; α(L)=0.000344 *5*; α(M)=7.33×10^{-5} *11*; α(N)=1.655×10^{-5} *24*; α(O)=2.46×10^{-6} *4* α(P)=1.495×10^{-7} *21*; α(N+..)=1.92×10^{-5} *3*
590.71[‡] *11*	0.33 *5*	2095.62	(5)$^+$	1504.580	3$^+$			
596.53[c] *4*	0.55[c] *10*	1642.665	4$^+$	1046.207	2$^+$			I_γ: from I(596)/I(1308)=0.059 *10* in (n,γ) (1976Ba18).
607.32 *3*	1.74 *5*	2024.648	4$^+$	1417.260	2$^+$	(E2)	0.00777 *11*	α(K)exp=0.007 α(K)=0.00646 *9*; α(L)=0.001030 *15*; α(M)=0.000224 *4*; α(N)=5.04×10^{-5} *7*; α(O)=7.30×10^{-6} *11* α(P)=3.77×10^{-7} *6*; α(N+..)=5.80×10^{-5} *9*
612.693[b] *28*	0.97[b] *6*	1684.159	3$^-$	1071.364	3$^-$			
612.693[bd] *28*	0.97[b] *6*	1970.447	4$^+$	1357.636	5$^-$			E_γ: γ ray assigned to 1970-keV level only by 1973MeZX.
612.693[bd] *28*	0.97[b] *6*	2117.123	4$^+$	1504.580	3$^+$			E_γ: γ ray assigned to 2117-keV level only by 1973MeZX.
[x]615.16 *4*	0.84 *4*							
625.568 *20*	3.23 *7*	1819.420	4$^+$	1193.852	2$^+$	(E2)	0.00723 *11*	α(K)=0.00602 *9*; α(L)=0.000950 *14*; α(M)=0.000206 *3*; α(N)=4.64×10^{-5} *7*; α(O)=6.74×10^{-6} *10* α(P)=3.52×10^{-7} *5*; α(N+..)=5.35×10^{-5} *8* Mult.: from α(K)exp (1973MeZX).
637.826[bd] *24*	0.15[b] *7*	1684.159	3$^-$	1046.207	2$^+$			
[x]658.28 *6*	0.55 *5*							
662.66[‡] *15*	0.16 *4*	2020.378	5$^+$	1357.636	5$^-$	(E1)	0.00233 *4*	α(K)exp=0.003 α(K)=0.00200 *3*; α(L)=0.000262 *4*; α(M)=5.57×10^{-5} *8*; α(N)=1.259×10^{-5} *18*; α(O)=1.88×10^{-6} *3* α(P)=1.148×10^{-7} *16*; α(N+..)=1.458×10^{-5} *21* Mult.: from α(K)exp (1973MeZX).
667.050[bd] *25*	2.7[b] *1*	1832.96?	(2)$^+$	1165.776	1$^-$			Placed on basis of energy fit.
667.050[b] *25*	2.7[b] *1*	2024.648	4$^+$	1357.636	5$^-$			
667.050[ad] *25*	≤2.7	2117.123	4$^+$	1449.210	4$^+$			Assigned on basis of energy fit.
675.856 *25*	5.3 *1*	1449.210	4$^+$	773.392	4$^+$	E2+E0+M1	0.0081 *21*	α(K)=0.0068 *19*; α(L)=0.00097 *20*; α(M)=0.00021 *5*;

$^{150}_{62}Sm_{88}$-6

^{150}Eu ε decay (36.9 y) 1977Si12,1978MeZK (continued)

γ(^{150}Sm) (continued)

E_γ[†]	I_γ[†&]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[@]	α	$I_{(\gamma+ce)}$[&]	Comments
									α(N)=4.7×10^{-5} *10*; α(O)=7.0×10^{-6} *16* α(P)=4.2×10^{-7} *13*; α(N+..)=5.5×10^{-5} *12*
676.81[‡d]	≤0.20	1417.260	2$^+$	740.49	0$^+$				
699.5[‡d] *3*	0.06 *4*	2117.123	4$^+$	1417.260	2$^+$				
712.205 *15*	11.3 *3*	1046.207	2$^+$	333.962	2$^+$	M1(+E0+E2)	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* α(K),α(L): calculated for M1 transition.
731.220 *24*	3.5 *1*	1504.580	3$^+$	773.392	4$^+$	E2	0.00497 *7*		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*
737.455 *15*	100 *2*	1071.364	3$^-$	333.962	2$^+$	E1	0.00187 *3*		α(K)exp=0.00161; α(L)exp=0.00021; α(M)exp=0.00006 α(K)=0.001606 *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* Mult.: from K/L ratio (1973MeZX).
740.6[‡d]		740.49	0$^+$	0.0	0$^+$	E0		0.020	$I_{(\gamma+ce)}$: for ce(K)+ce(L).
741.467 *17*	8.9 *1*	2020.378	5$^+$	1278.846	6$^+$	E2	0.00481 *7*		α(K)=0.00404 *6*; α(L)=0.000608 *9*; α(M)=0.0001314 *19*; α(N)=2.96×10^{-5} *5*; α(O)=4.34×10^{-6} *6* α(P)=2.38×10^{-7} *4*; α(N+..)=3.42×10^{-5} *5*
748.057 *12*	54 *1*	1819.420	4$^+$	1071.364	3$^-$	E1	0.00182 *3*		α(K)=0.001560 *22*; α(L)=0.000203 *3*; α(M)=4.31×10^{-5} *6*; α(N)=9.75×10^{-6} *14* α(O)=1.456×10^{-6} *21*; α(P)=8.98×10^{-8} *13*; α(N+..)=1.130×10^{-5} *16*
749.80[‡] *3*	7.0 *1*	2107.389	(6)$^+$	1357.636	5$^-$	E1	0.00181 *3*		α(K)exp=0.0015; α(L)exp=0.0002 α(K)=0.001552 *22*; α(L)=0.000202 *3*; α(M)=4.29×10^{-5} *6*; α(N)=9.71×10^{-6} *14* α(O)=1.449×10^{-6} *21*; α(P)=8.94×10^{-8} *13*; α(N+..)=1.125×10^{-5} *16*
751.068 *14*	22.3 *5*	1822.443	(3)$^-$	1071.364	3$^-$	M1(+E2)	0.0063 *16*		α(K)exp=0.0047; α(L)exp=0.00061 α(K)=0.0053 *14*; α(L)=0.00074 *16*; α(M)=0.00016 *4*; α(N)=3.6×10^{-5} *8*; α(O)=5.4×10^{-6} *12* α(P)=3.2×10^{-7} *10*; α(N+..)=4.2×10^{-5} *9* Mult.: from α(K)exp, α(L)exp (1973MeZX).
756.51[‡] *3*	1.18 *7*	2035.368	5$^-$	1278.846	6$^+$	(E1)	0.001776 *25*		α(K)exp=0.0016 α=0.001776 *25*; α(K)=0.001525 *22*; α(L)=0.000198 *3*; α(M)=4.22×10^{-5} *6*

$^{150}_{62}Sm_{88}$-7

^{150}Eu ε decay (36.9 y) 1977Si12,1978MeZK (continued)

γ(^{150}Sm) (continued)

E_γ [†]	I_γ [†&]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [@]	α	Comments
								α(O)=1.422×10^{-6} *20*; α(P)=8.78×10^{-8} *13*; α(N+..)=1.104×10^{-5} *16* Mult.: from α(K)exp (1973MeZX).
759.57[‡d] *9*	0.80 *7*	2117.123	4$^+$	1357.636	5$^-$			
762.03[‡] *9*	0.29 *5*	2119.29	(3$^-$)	1357.636	5$^-$	(E2)	0.00452 *7*	α(K)exp=0.0038 α(K)=0.00380 *6*; α(L)=0.000567 *8*; α(M)=0.0001226 *18*; α(N)=2.76×10^{-5} *4*; α(O)=4.05×10^{-6} *6* α(P)=2.24×10^{-7} *4*; α(N+..)=3.19×10^{-5} *5* Mult.: from 1973MeZX.
773.283 *15*	6.3 *1*	1819.420	4$^+$	1046.207	2$^+$	(E2)	0.00437 *7*	α(K)exp=0.00322; α(L)exp=0.0005 α(K)=0.00368 *6*; α(L)=0.000547 *8*; α(M)=0.0001181 *17*; α(N)=2.66×10^{-5} *4*; α(O)=3.91×10^{-6} *6* α(P)=2.17×10^{-7} *3*; α(N+..)=3.07×10^{-5} *5* Mult.: from α(K)exp, α(L)exp, K/L (1973MeZX).
777[d]	0.07 *3*	1970.447	4$^+$	1193.852	2$^+$			Reported by 1973MeZX, but not by 1978MeZK.
788[‡d]	0.04 *3*	1832.96?	(2)$^+$	1046.207	2$^+$			Reported by 1973MeZX, but not by 1978MeZK.
816.44[‡] *8*	0.51 *5*	2095.62	(5)$^+$	1278.846	6$^+$	E2+M1	0.0051 *13*	α(K)=0.0044 *11*; α(L)=0.00061 *13*; α(M)=0.00013 *3*; α(N)=2.9×10^{-5} *7*; α(O)=4.4×10^{-6} *10* α(P)=2.7×10^{-7} *8*; α(N+..)=3.4×10^{-5} *8*
828.562 *14*	6.1 *2*	2107.389	(6)$^+$	1278.846	6$^+$			
830.816 *21*	5.54 *12*	2024.648	4$^+$	1193.852	2$^+$	(E2)	0.00372 *6*	α(K)=0.00313 *5*; α(L)=0.000459 *7*; α(M)=9.88×10^{-5} *14*; α(N)=2.23×10^{-5} *4*; α(O)=3.28×10^{-6} *5* α(P)=1.85×10^{-7} *3*; α(N+..)=2.58×10^{-5} *4*
831.92 *25*	0.7 *2*	1165.776	1$^-$	333.962	2$^+$	(E1)	0.001469 *21*	α=0.001469 *21*; α(K)=0.001262 *18*; α(L)=0.0001634 *23*; α(M)=3.47×10^{-5} *5* α(O)=1.174×10^{-6} *17*; α(P)=7.28×10^{-8} *11*; α(N+..)=9.10×10^{-6} *13*
836.58 *3*	3.2 *1*	2194.207	(4$^+$)	1357.636	5$^-$			E_γ: placement from 1977Si12.
838.40 *8*	0.6 *1*	2117.123	4$^+$	1278.846	6$^+$			
859.867 *18*	6.1 *1*	1193.852	2$^+$	333.962	2$^+$	M1(+E2)	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*
869.256 *14*	19.3 *2*	1642.665	4$^+$	773.392	4$^+$	E2+E0(+M1)	0.0044 *11*	α(K)=0.0038 *10*; α(L)=0.00052 *11*; α(M)=0.000111 *23*; α(N)=2.5×10^{-5} *6*; α(O)=3.8×10^{-6} *9* α(P)=2.3×10^{-7} *7*; α(N+..)=2.9×10^{-5} *7*
899.071 *15*	9.8 *1*	1970.447	4$^+$	1071.364	3$^-$	E1	0.001263 *18*	α(K)exp=0.00108; α(L)exp=0.00011 α=0.001263 *18*; α(K)=0.001085 *16*; α(L)=0.0001401 *20*; α(M)=2.98×10^{-5} *5* α(O)=1.007×10^{-6} *14*; α(P)=6.27×10^{-8} *9*; α(N+..)=7.80×10^{-6} *11*
910.88 *4*	0.9 *1*	1684.159	3$^-$	773.392	4$^+$	E1	0.001232 *18*	α(K)exp=0.0011 α=0.001232 *18*; α(K)=0.001058 *15*; α(L)=0.0001365 *20*; α(M)=2.90×10^{-5} *4* α(O)=9.81×10^{-7} *14*; α(P)=6.12×10^{-8} *9*; α(N+..)=7.60×10^{-6} *11*

$^{150}_{62}Sm_{88}$-8

^{150}Eu ε decay (36.9 y) 1977Si12,1978MeZK (continued)

γ(^{150}Sm) (continued)

E_γ [†]	I_γ [†&]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [@]	α	Comments
915.28[‡] *12*	0.17 *7*	2194.207	(4^+)	1278.846	6^+			
923.267[bd] *19*	3.2[b] *1*	2117.123	4^+	1193.852	2^+	(E2)	0.00295 *5*	α(K)exp=0.0022 α(K)=0.00249 *4*; α(L)=0.000357 *5*; α(M)=7.68×10^{-5} *11*; α(N)=1.733×10^{-5} *25*; α(O)=2.56×10^{-6} *4* α(P)=1.480×10^{-7} *21*; α(N+..)=2.00×10^{-5} *3* Mult.: from α(K)exp, α(L)exp (1973MeZX).
953.20[‡] *8*	0.47 *7*	2024.648	4^+	1071.364	3^-			
978.47[‡] *5*	0.21 *5*	2024.648	4^+	1046.207	2^+			
1045.873[b] *12*	9.5[b] *7*	1819.420	4^+	773.392	4^+			1973MeZX declare this to be a double linewidth Iγ=10.4 *7*. See 1976Ba18, page 252, for discussion. Iγ(tot. Peak)=10.4 *7*. From β^- decay 0.92 *12* may be placed from the 1046.14 level leaving Iγ=9.5 *7* for placement from the 1819 and 2117 levels.
1045.873[b] *12*	9.5[b] *7*	2117.123	4^+	1071.364	3^-			See placement from 1819 level.
1046.12 *8*	0.92 *12*	1046.207	2^+	0.0	0^+			E_γ: Eγ from β^- decay. I_γ: from Iγ/Iγ(712γ)=0.081 *10* in β^- decay.
1049.043 *25*	56 *2*	1822.443	$(3)^-$	773.392	4^+	E1	0.000944 *14*	α(K)exp=0.00081; α(L)exp=0.00015 α=0.000944 *14*; α(K)=0.000812 *12*; α(L)=0.0001041 *15*; α(M)=2.21×10^{-5} *3* α(O)=7.49×10^{-7} *11*; α(P)=4.70×10^{-8} *7*; α(N+..)=5.80×10^{-6} *9* Mult.: from α(K)exp, α(L)exp (1973MeZX).
1071.002[d] *25*	1.5 *1*	2117.123	4^+	1046.207	2^+	(E2)	0.00215 *3*	α(K)exp=0.0016 α(K)=0.00183 *3*; α(L)=0.000255 *4*; α(M)=5.47×10^{-5} *8*; α(N)=1.236×10^{-5} *18*; α(O)=1.83×10^{-6} *3* α(P)=1.088×10^{-7} *16*; α(N+..)=1.430×10^{-5} *20* Mult.: from α(K)exp (1973MeZX).
1081.46[‡] *8*	0.3 *1*	2152.56	4^+	1071.364	3^-			
1083.34 *3*	1.7 *1*	1417.260	2^+	333.962	2^+	M1+E0[#]		
1122.855 *15*	3.5 *1*	2194.207	(4^+)	1071.364	3^-			E_γ: placement from 1977Si12.
1165.74 *3*	1.1 *1*	1165.776	1^-	0.0	0^+	E1	0.000792 *11*	α=0.000792 *11*; 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+..)=1.82×10^{-5} *3*
1170.587 *24*	13.9 *2*	1504.580	3^+	333.962	2^+	E2	0.00180 *3*	α(K)exp=0.00155; α(L)exp=0.00015 α(K)=0.001528 *22*; α(L)=0.000210 *3*; α(M)=4.50×10^{-5} *7*; α(N)=1.017×10^{-5} *15* α(O)=1.514×10^{-6} *22*; α(P)=9.10×10^{-8} *13*; α(N+..)=1.479×10^{-5} *21*
1193.826 *24*	8.3 *3*	1193.852	2^+	0.0	0^+	E2	0.001731 *25*	α(K)exp=0.00145 α=0.001731 *25*; α(K)=0.001470 *21*; α(L)=0.000201 *3*; α(M)=4.31×10^{-5} *6* α(O)=1.452×10^{-6} *21*; α(P)=8.75×10^{-8} *13*; α(N+..)=1.635×10^{-5} *23*
1197.108 *24*	11.8 *4*	1970.447	4^+	773.392	4^+	(E2+E0+M1)	0.0022 *5*	α(K)=0.0018 *4*; α(L)=0.00025 *5*; α(M)=5.3×10^{-5} *10*;

^{150}Eu ε decay (36.9 y) 1977Si12,1978MeZK (continued)

γ(^{150}Sm) (continued)

E_γ [†]	I_γ [†&]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [@]	α	Comments
								α(N)=1.19×10^{-5} *23*; α(O)=1.8×10^{-6} *4* α(P)=1.12×10^{-7} *25*; α(N+..)=1.9×10^{-5} *3*
1246.968 *24*	19.9 *5*	2020.378	5$^+$	773.392	4$^+$	E2	0.001593 *23*	α(K)exp=0.00136; α(L)exp=0.00018 α=0.001593 *23*; α(K)=0.001348 *19*; α(L)=0.000184 *3*; α(M)=3.93×10^{-5} *6* α(O)=1.324×10^{-6} *19*; α(P)=8.03×10^{-8} *12*; α(N+..)=2.21×10^{-5} *3*
1251.25 *3*	1.7 *1*	2024.648	4$^+$	773.392	4$^+$	(M1)	0.00234 *4*	α(K)exp=0.0023 α(K)=0.00199 *3*; α(L)=0.000263 *4*; α(M)=5.61×10^{-5} *8*; α(N)=1.272×10^{-5} *18*; α(O)=1.92×10^{-6} *3* α(P)=1.227×10^{-7} *18*; α(N+..)=2.80×10^{-5} *4*
1261.98 *3*	4.8 *1*	2035.368	5$^-$	773.392	4$^+$	E1	0.000730 *11*	α(K)exp=0.00052 α=0.000730 *11*; α(K)=0.000581 *9*; α(L)=7.41×10^{-5} *11*; α(M)=1.572×10^{-5} *22* α(O)=5.34×10^{-7} *8*; α(P)=3.38×10^{-8} *5*; α(N+..)=5.92×10^{-5} *9*
1308.675 *23*	9.3 *2*	1642.665	4$^+$	333.962	2$^+$	E2	0.001459 *21*	Mult.: from α(K)exp (1973MeZX). α(K)exp=0.00124; α(L)exp=0.00015 α=0.001459 *21*; α(K)=0.001226 *18*; α(L)=0.0001660 *24*; α(M)=3.55×10^{-5} *5* α(O)=1.198×10^{-6} *17*; α(P)=7.30×10^{-8} *11*; α(N+..)=3.14×10^{-5} *5*
1321.91 *3*	1.8 *1*	2095.62	(5)$^+$	773.392	4$^+$	E2	0.001433 *20*	Mult.: K/L (1973MeZX) confirms assignment. α=0.001433 *20*; α(K)=0.001202 *17*; α(L)=0.0001626 *23*; α(M)=3.48×10^{-5} *5* α(O)=1.173×10^{-6} *17*; α(P)=7.16×10^{-8} *10*; α(N+..)=3.39×10^{-5} *5*
1334.06 *3*	4.3 *1*	2107.389	(6)$^+$	773.392	4$^+$	E2	0.001411 *20*	Mult.: from 1973MeZX. α(K)exp=0.00117; α(L)exp=0.00015 α=0.001411 *20*; α(K)=0.001181 *17*; α(L)=0.0001595 *23*; α(M)=3.41×10^{-5} *5* α(O)=1.151×10^{-6} *17*; α(P)=7.03×10^{-8} *10*; α(N+..)=3.64×10^{-5} *5*
1343.777 *22*	27.0 *7*	2117.123	4$^+$	773.392	4$^+$	M1+E2	0.0017 *3*	Mult.: from α(K)exp, α(L)exp (1973MeZX). α(K)exp=0.00137; α(L)exp=0.00019 α(K)=0.0014 *3*; α(L)=0.00019 *4*; α(M)=4.1×10^{-5} *7*; α(N)=9.2×10^{-6} *16*; α(O)=1.38×10^{-6} *25* α(P)=8.7×10^{-8} *18*; α(N+..)=4.1×10^{-5} *3*
1346.40[‡] *7*	0.30 *7*	2119.29	(3$^-$)	773.392	4$^+$			Mult.: from α(K)exp and α(L)exp (1973MeZX).
1350.29 *3*	1.8 *1*	1684.159	3$^-$	333.962	2$^+$	E1	0.000704 *10*	α(K)exp=0.00051 α=0.000704 *10*; α(K)=0.000517 *8*; α(L)=6.57×10^{-5} *10*; α(M)=1.393×10^{-5} *20* α(O)=4.74×10^{-7} *7*; α(P)=3.00×10^{-8} *5*; α(N+..)=0.0001077 *15*
1379.12[b] *6*	0.41[b] *5*	1713.09	1	333.962	2$^+$	(E2+M1)	0.0016 *3*	α(K)=0.00135 *25*; α(L)=0.00018 *3*; α(M)=3.8×10^{-5} *7*; α(N)=8.7×10^{-6} *15*; α(O)=1.30×10^{-6} *23* α(P)=8.2×10^{-8} *16*; α(N+..)=5.0×10^{-5} *4*

$^{150}_{62}Sm_{88}$-10

γ(^{150}Sm) (continued)

E_γ [†]	I_γ [†&]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [@]	α	Comments
								Seen only by 1973MeZX, 1978MeZK; placed on basis of energy fit. I_γ: 0.41 *5* is value for multiplet.
1379.12[b] *6*	0.41[b] *5*	2152.56	4^+	773.392	4^+	(E2)	0.001334 *19*	α=0.001334 *19*; α(K)=0.001107 *16*; α(L)=0.0001490 *21*; α(M)=3.18×10^{-5} *5* α(O)=1.076×10^{-6} *15*; α(P)=6.59×10^{-8} *10*; α(N+..)=4.68×10^{-5} *7* E_γ: given 2152-keV level origin only by 1973MeZX.
1417[‡]	0.0025 *15*	1417.260	2^+	0.0	0^+			
1420[‡d]	0.07 *3*	2194.207	(4^+)	773.392	4^+			
1485.49 *3*	19.8 *8*	1819.420	4^+	333.962	2^+	E2	0.001193 *17*	α(K)exp=0.00097; α(L)exp=0.00014 α=0.001193 *17*; α(K)=0.000960 *14*; α(L)=0.0001282 *18*; α(M)=2.74×10^{-5} *4* α(O)=9.26×10^{-7} *13*; α(P)=5.72×10^{-8} *8*; α(N+..)=7.76×10^{-5} *11*
1499.35[‡] *10*	0.41 *2*	1832.96?	$(2)^+$	333.962	2^+	(M1+E2)	0.00140 *22*	α(K)=0.00113 *19*; α(L)=0.000149 *24*; α(M)=3.2×10^{-5} *5*; α(N)=7.2×10^{-6} *12*; α(O)=1.08×10^{-6} *18* α(P)=6.8×10^{-8} *13*; α(N+..)=8.7×10^{-5} *5* Mult.: from 1973MeZX.
1636.53 *3*	7.5 *1*	1970.447	4^+	333.962	2^+	E2	0.001060 *15*	α(K)exp=0.00085; α(L)exp=0.00013 α=0.001060 *15*; α(K)=0.000799 *12*; α(L)=0.0001058 *15*; α(M)=2.25×10^{-5} *4* α(O)=7.65×10^{-7} *11*; α(P)=4.76×10^{-8} *7*; α(N+..)=0.0001321 *19*
1690.668 *17*	1.6 *5*	2024.648	4^+	333.962	2^+	(E2)	0.001027 *15*	α=0.001027 *15*; α(K)=0.000752 *11*; α(L)=9.92×10^{-5} *14*; α(M)=2.11×10^{-5} *3*; α(N)=4.79×10^{-6} *7* α(O)=7.18×10^{-7} *10*; α(P)=4.48×10^{-8} *7*; α(N+..)=0.0001541 *22*
1710[‡d]	0.006 *2*	2044.0?	$(3^+,4^+)$	333.962	2^+			
1736.0[‡d] *8*	0.002 *1*	2070.0?	$2^{(-)}$	333.962	2^+			
1783.19 *5*	1.07 *3*	2117.123	4^+	333.962	2^+	E2	0.000983 *14*	α(K)exp=0.00075; α(L)exp=0.00011 α=0.000983 *14*; α(K)=0.000681 *10*; α(L)=8.95×10^{-5} *13*; α(M)=1.91×10^{-5} *3*; α(N)=4.32×10^{-6} *6* α(O)=6.47×10^{-7} *9*; α(P)=4.06×10^{-8} *6*; α(N+..)=0.000194 *3* Mult.: from α(K)exp (1973MeZX).
1818.52[‡] *8*	0.040 *5*	2152.56	4^+	333.962	2^+			
1833.30[‡] *15*	0.027 *5*	1832.96?	$(2)^+$	0.0	0^+	(E2)	0.000966 *14*	α=0.000966 *14*; α(K)=0.000647 *9*; α(L)=8.48×10^{-5} *12*; α(M)=1.81×10^{-5} *3*; α(N)=4.09×10^{-6} *6* α(O)=6.14×10^{-7} *9*; α(P)=3.85×10^{-8} *6*; α(N+..)=0.000216 *3* Mult.: from 1973MeZX.

[†] From 1978MeZK, unless otherwise stated.
[‡] γ ray reported only by 1973MeZX. Placement made on basis of energy fit and multipolarities.

$^{150}_{62}Sm_{88}$-11

^{150}Eu ε decay (36.9 y) 1977Si12,1978MeZK (continued)

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

From 1973MeZX.
@ From adopted gammas, unless otherwise noted.
& For absolute intensity per 100 decays, multiply by 0.09516.
a Multiply placed.
b Multiply placed with undivided intensity.
c Multiply placed with intensity suitably divided.
d Placement of transition in the level scheme is uncertain.
x γ ray not placed in level scheme.

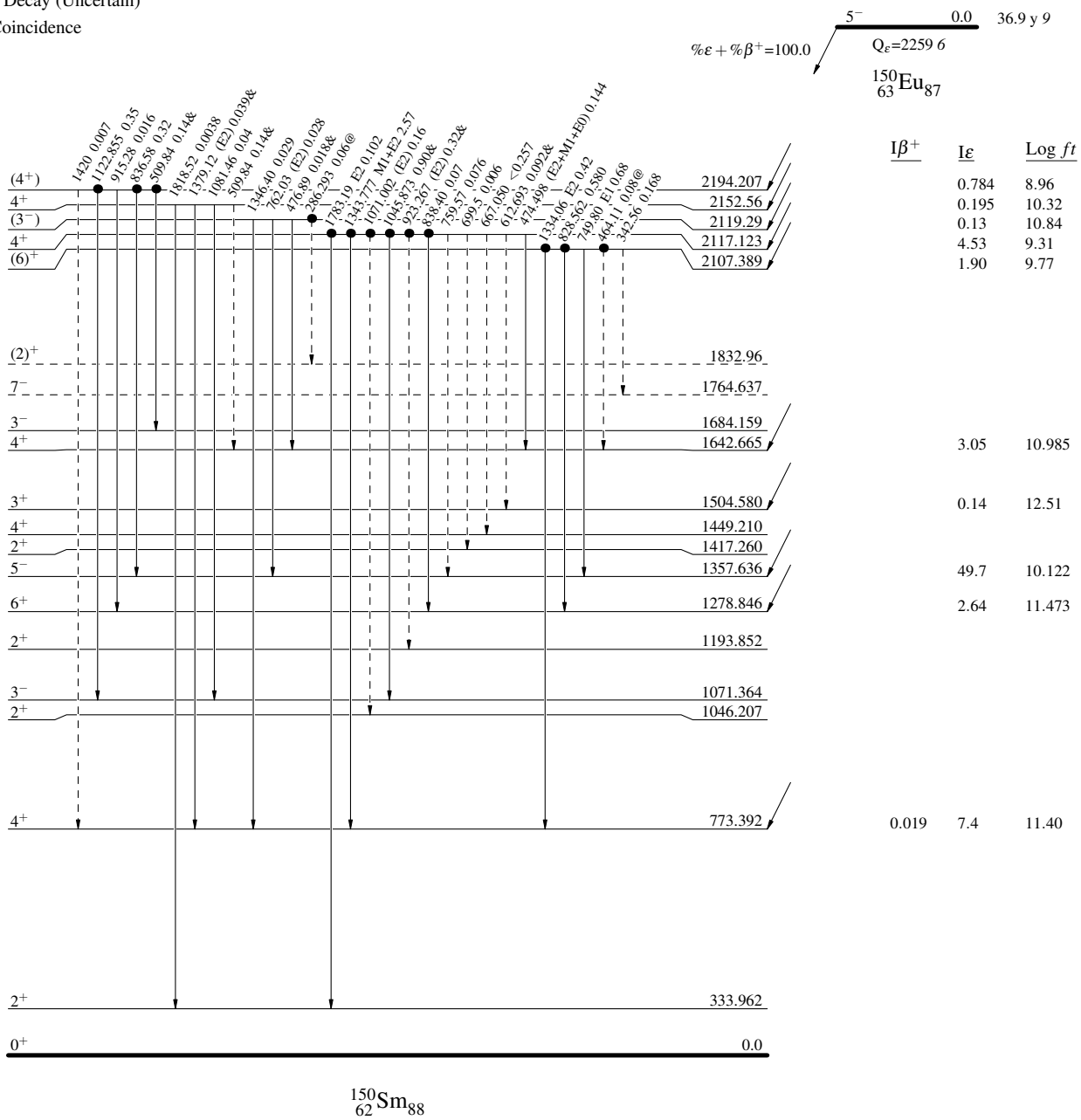
$^{150}_{62}Sm_{88}$-12

^{150}Eu ε decay (36.9 y) 1977Si12,1978MeZK

Decay Scheme

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

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



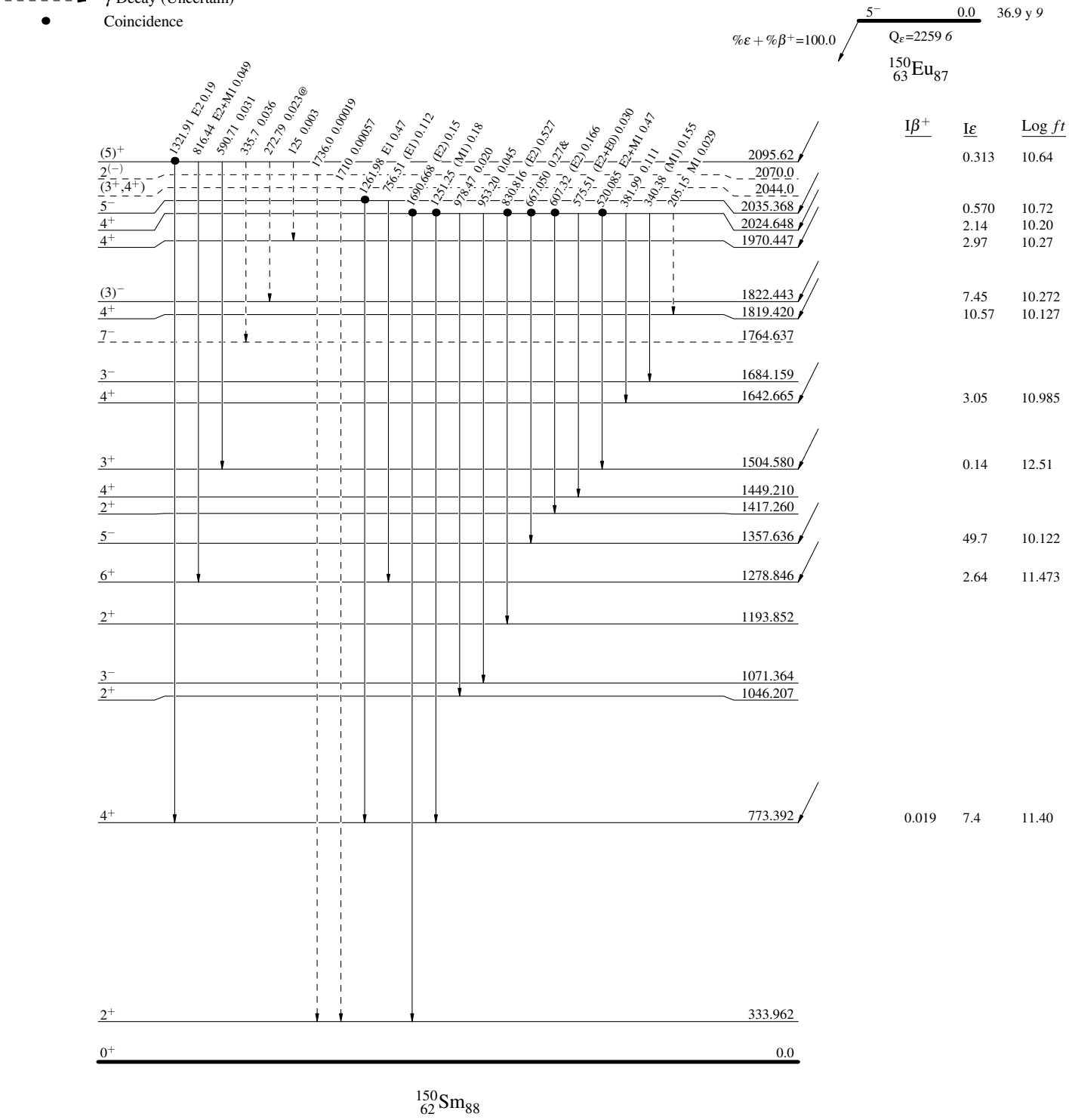
	Iβ⁺	Iε	Log *ft*
2194.207		0.784	8.96
2152.56		0.195	10.32
2119.29		0.13	10.84
2117.123		4.53	9.31
2107.389		1.90	9.77
1642.665		3.05	10.985
1504.580		0.14	12.51
1357.636		49.7	10.122
1278.846		2.64	11.473
773.392	0.019	7.4	11.40

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

^{150}Eu ε decay (36.9 y) 1977Si12,1978MeZK

Decay Scheme (continued)

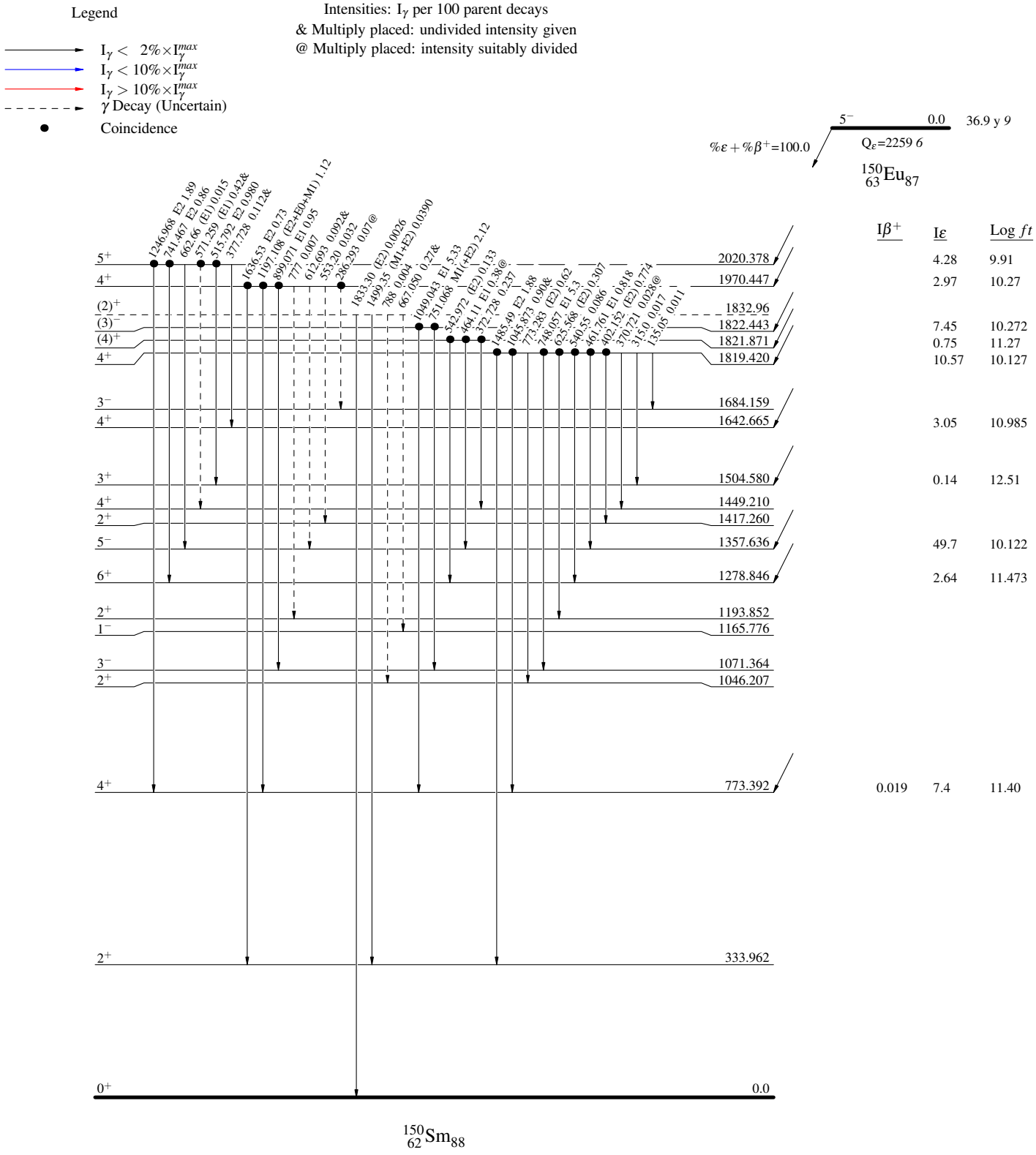
Intensities: I_γ per 100 parent decays
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided



^{150}Eu ε decay (36.9 y) 1977Si12,1978MeZK

Decay Scheme (continued)

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



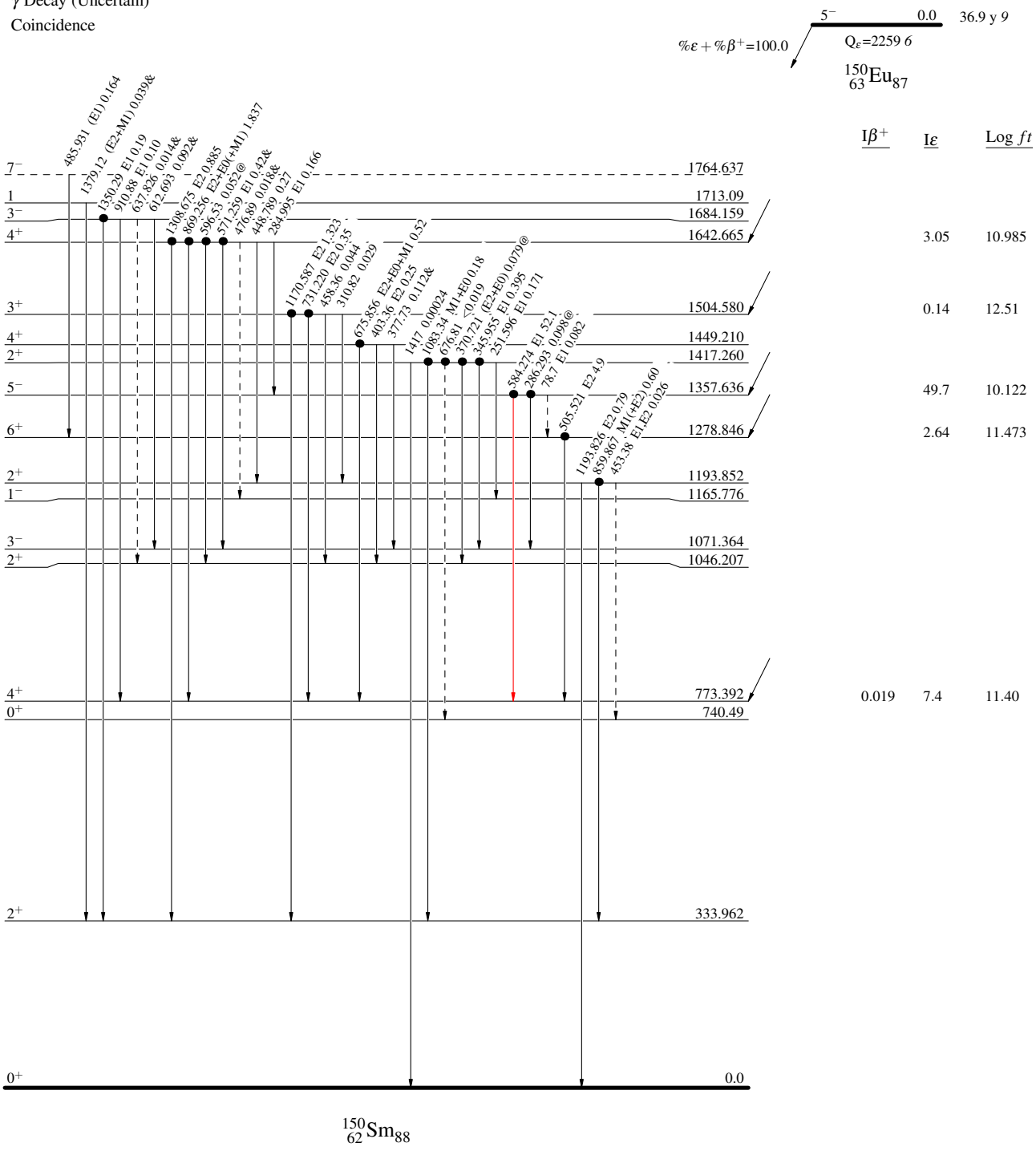
$^{150}_{62}Sm_{88}$

^{150}Eu ε decay (36.9 y) 1977Si12,1978MeZK

Decay Scheme (continued)

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

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



^{150}Eu ε decay (36.9 y) 1977Si12,1978MeZK

Decay Scheme (continued)

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