^{145}Eu ε decay 1986Ad06

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli	NDS 110, 507 (2009)	1-Oct-2008

Parent: ^{145}Eu: E=0.0; J$^{\pi}$=5/2^{+}; $T_{1/2}$=5.93 d *4*; Q(ε)=2659.3 *27*; %ε+%β^{+} decay=100.0

Measured: γ (1986Ad06,1984Me09,1982De26,1978VyZX,1977BaZP,1973Ne01,1968Ad04,1967Dr01,1967Hi05), $\gamma\gamma$ (1986Ad06,1978VyZX,1977BaZP,1973Ne01), ceγ, $\beta\gamma$ (1968Ad04), $\gamma(\theta)$ from oriented nuclei (1983Va02,1982De26), ce (1978VyZX,1977BaZP,1967Hi05), $\beta\gamma$(t) (1976Be09), $\gamma\gamma(\theta)$ (1978VyZX,1977BaZP,1976Be09,1975BuZA,1967Ob03,1966Go08), probability of ε (1983Sc28,1983BeZF).

1998Om01: measured γ, ce, $\gamma\gamma$, $\gamma\gamma(\theta)$. Authors report only weak γ's.

Decay scheme, Eγ, Iγ are from 1986Ad06 with additional weaker transitions reported by 1998Om01.

1996Vy01 give level feedings and level J$^{\pi}$ assignments and a few multipolarities. No Iγ given. 1996OmZZ (perhaps the same group) give several Eγ, Iγ, I(ce) but no decay scheme.

^{145}Sm Levels

E(level)	J$^{\pi}$	Comments
0.0	7/2^{-}	
893.788 *18*	3/2^{-}	
1423.24 *3*	9/2^{-}	
1436.364 *25*	1/2^{+}	
1547.302 *23*	3/2^{+}	
1607.28 *3*	1/2^{-}	
1627.74 *4*	3/2^{+}	
1658.562 *20*	5/2^{-}	J$^{\pi}$: 1996Vy01 give 3/2^{-}.
1780.32 *9*	9/2^{-}	
1804.24 *4*	5/2^{+}	
1848.1 *3*	9/2^{+}	
1857.69 *3*	7/2^{+}	
1876.64 *4*	7/2^{-}	
1950.81† *9*	$^{-}$	J$^{\pi}$: 1996Vy01 give 5/2^{-},7/2^{-}.
1963.30† *18*	1/2^{+},3/2^{+}	
1972.719 *21*	3/2^{-}	
1996.959 *24*	5/2^{-}	
2110.60 *5*	5/2^{-},7/2^{-},9/2^{-}	
2133.420 *25*	3/2^{-}	
2155.50 *5*	(5/2^{-},7/2^{-})	
2192.99 *5*	5/2^{-},7/2^{-},9/2^{-}	
2276.55 *4*	5/2^{+}	J$^{\pi}$: 1996Vy01 give 5/2^{-},7/2^{-},9/2^{-}.
2292.82 *12*	9/2^{+}	J$^{\pi}$: 1996Vy01 give 5/2^{-},7/2^{-}.
2329.30 *9*	5/2^{-},7/2^{-},3/2^{-}	
2340.62 *7*		J$^{\pi}$: 1996Vy01 give 5/2^{+},7/2^{+},9/2^{+} from 463γ E1 to 7/2^{-}.
2346.39 *3*	5/2^{-}	
2385.89 *4*	3/2^{+}	
2387.61 *7*	($^{-}$)	J$^{\pi}$: 1996Vy01 give 3/2^{+},5/2^{+}.
2425.95 *3*	5/2^{-}	
2482.15 *6*		J$^{\pi}$: 1996Vy01 give 3/2^{+},5/2^{+},7/2^{+} from 485γ E1 to 5/2^{-}.
2508.31 *7*	5/2^{-},7/2^{-}	J$^{\pi}$: 1996Vy01 give 3/2^{+},5/2^{+},7/2^{+}.
2512.98 *9*	$^{-}$	J$^{\pi}$: 1996Vy01 give 5/2^{-},7/2^{-}.
2558.88 *10*		J$^{\pi}$: 1996Vy01 give 3/2^{+},5/2^{+},7/2^{+}.

† Level from 1996Om01,1998Om01.

^{145}Eu ε decay 1986Ad06 (continued)

ε,$β^+$ radiations

E(decay)†	E(level)	Iβ+ &	Iε†&	Log ft	I(ε+β+)&	Comments
(100 3)	2558.88		0.00127 20	9.10 8	0.00127 20	εK=0.650 11; εL=0.265 8; εM+=0.086 3
(146 3)	2512.98		0.0221 20	8.33 5	0.0221 20	εK=0.739 4; εL=0.1989 25; εM+=0.0620 9
(151 3)	2508.31		0.0402 33	8.10 5	0.0402 33	εK=0.744 3; εL=0.1954 23; εM+=0.0607 8
(177 3)	2482.15		0.0603 31	8.10 3	0.0603 31	εK=0.7645 20; εL=0.1802 15; εM+=0.0553 5
(233 3)	2425.95		0.56 20	7.43 16	0.56 20	εK=0.7894 10; εL=0.1618 7; εM+=0.04885 25
(272 3)	2387.61		0.0315 21	8.83 4	0.0315 21	εK=0.7992; εL=0.1545 5; εM+=0.04631 17
(273 3)	2385.89		0.342 15	7.80 2	0.342 15	εK=0.7996; εL=0.1542 5; εM+=0.04621 17
(313 3)	2346.39		0.456 17	7.81 2	0.456 17	εK=0.8066; εL=0.1490 4; εM+=0.04439 12
(319 3)	2340.62		0.029 20	9.0 3	0.029 20	εK=0.8075; εL=0.1483 4; εM+=0.04417 12
(330 3)	2329.30		0.192 10	8.24 3	0.192 10	εK=0.8091; εL=0.1472 3; εM+=0.04377 11
(366 3)	2292.82		0.0054‡ 7	9.89 6	0.0054 7	εK=0.8134; εL=0.14394 24; εM+=0.04265 9
(383 3)	2276.55		0.135 7	8.54 2	0.135 7	εK=0.8150; εL=0.14273 22; εM+=0.04224 8
(466 3)	2192.99		0.036 2	9.30 3	0.036 2	εK=0.8214; εL=0.1380; εM+=0.04061 5
(504 3)	2155.50		0.127 7	8.83 3	0.127 7	εK=0.8235; εL=0.1364; εM+=0.04007
(526 3)	2133.420		0.465 16	8.30 2	0.465 16	εK=0.8246; εL=0.1356; εM+=0.03980
(549 3)	2110.60		0.036 3	9.45 4	0.036 3	εK=0.8256; εL=0.1349; εM+=0.03954
(662 3)	1996.959		7.4 4	7.31 2	7.4 4	εK=0.8295; εL=0.1320; εM+=0.03854
(687 3)	1972.719		0.611 26	8.43 2	0.611 26	εK=0.8301; εL=0.1315; εM+=0.03837
(783 3)	1876.64		1.33 7	8.21 2	1.33 7	εK=0.8323; εL=0.1299; εM+=0.03782
(802 3)	1857.69		0.603 23	8.58 2	0.603 23	εK=0.8327; εL=0.1296; εM+=0.03772
(855 3)	1804.24		1.17 6	8.35 2	1.17 6	εK=0.8336; εL=0.1289; εM+=0.03749
(879 3)	1780.32		0.011 2	10.84[1u] 8	0.011 2	εK=0.8340; εL=0.1286; εM+=0.03739
(1001 3)	1658.562		16.4 10	7.3 1	16.4 10	εK=0.8356; εL=0.1274; εM+=0.03698
(1032 3)	1627.74		0.65 4	8.77 3	0.65 4	εK=0.8360; εL=0.1272; εM+=0.03689
(1052 3)	1607.28		0.047 15	10.53[1u] 14	0.047 15	εK=0.8362; εL=0.1270; εM+=0.03683
(1112 3)	1547.302		19.3 8	7.37 2	19.3 8	εK=0.8368; εL=0.1265; εM+=0.03668
(1236 3)	1423.24		0.12 2	10.41[1u] 8	0.12 2	εK=0.8377; εL=0.1258; εM+=0.03641
(1766@ 3)	893.788	0.37 4	43@ 4	7.43 4	43 4	av Eβ=345.0 14; εK=0.8272; εL=0.1218; εM+=0.03515
(2659# 3)	0.0	1.54# 3	5.71 10	8.66 1	7.25 11	av Eβ=740.1 14; εK=0.6803 8; εL=0.09863 12; εM+=0.02841 4

† εK(exp)(1658 level)=0.841 24, εK(exp)(1996 level)=0.835 15 (1983BeZF), εK(exp)(2508+2513)/εK(exp)(1997)=0.941 17, Q($β^-$)=2647 +14−10 from εK(exp)(2425)/εK(exp)(1997) (1983Sc28).

‡ Iε deduced from balance of Iγ is too large and log ft=9.9 too small for ΔJ=2, Δπ=no. Expected for such transitions log ft>12.8.

\# Eβ+=1688 15 (Iβ=1.00) (1968Ad04), 1724 30 (1967Hi05), 1740 40 (Iβ=1.00) (1966Zh01), 1670 50 (Iβ=1.00) (1967Ob03).

@ Eβ+=794 15 (Iβ=0.24 10) (1968Ad04), 786 40 (1967Hi05), 800 40 (Iβ=0.33 6) (1966Zh01), 780 50 (Iβ=0.32 11) (1967Ob03).

& Absolute intensity per 100 decays.

γ(^{145}Sm)

Iγ normalization: From Σ Iγ(g.s)+(ε+β$^+$)(g.s)=100%, B(893)/B(0)=0.24 *10*, B(893)/ce(K)(893γ)=2.1 *3* (1968Ad04). Iγ normalization=0.0695 if direct branch to gs is 2% as given by 1996Vy01 based perhaps on Kα_1 x ray=80.7 *21*, Kα_2 x ray=45.0 *7*, Kβ_1 x ray=24.8 *2*, Kβ_2 x ray=6.3 *1*.

$\gamma^{\pm}$/894g=0.066 *5* (1973Ne01).

E_γ [&]	I_γ [&c]	E_i(level)	J^π_i	E_f	J^π_f	Mult. [a]	δ [b]	α [†]	Comments
80.46 *10*	0.22 *2*	1627.74	3/2$^+$	1547.302	3/2$^+$				
110.943 *24*	29.2 *16*	1547.302	3/2$^+$	1436.364	1/2$^+$	M1+E2	−1.98 *6*	1.538	α(K)=0.924 *13*; α(L)=0.477 *8*; α(M)=0.1097 *19*; α(N+..)=0.0273 *5* α(N)=0.0241 *4*; α(O)=0.00309 *5*; α(P)=4.45×10^{-5} *7* Mult.: α(K)exp=0.87 *6*. Other: 0.81 *4* (1978VyZX).
120.44 *8*	0.26 *10*	1996.959	5/2$^-$	1876.64	7/2$^-$				
^{x}136.325 *70*	0.05 *1*								
160.70 *6*	0.24 *2*	2133.420	3/2$^-$	1972.719	3/2$^-$				
172.4[‡] *4*	0.015[‡] *5*	2512.98	$^-$	2340.62					
176.62[#] *9*	0.12 *1*	1804.24	5/2$^+$	1627.74	3/2$^+$				
185.2[‡] *4*	0.009[‡] *5*	2340.62		2155.50	(5/2$^-$,7/2$^-$)				
191.38 *3*	9.1 *5*	1627.74	3/2$^+$	1436.364	1/2$^+$	M1+E2	+0.084 *16*	0.272	α(K)=0.231 *4*; α(L)=0.0326 *5*; α(M)=0.00700 *10*; α(N+..)=0.00184 *3* α(N)=0.001586 *23*; α(O)=0.000238 *4*; α(P)=1.466×10^{-5} *21* Mult.: α(K)exp=0.183 *12*. Other: 0.224 *7* (1978VyZX).
199.14 *3*	0.45 *5*	1857.69	7/2$^+$	1658.562	5/2$^-$				
212.94[#] *6*	0.32 *2*	2346.39	5/2$^-$	2133.420	3/2$^-$	E2		0.1693	α(K)=0.1237 *18*; α(L)=0.0355 *5*; α(M)=0.00803 *12*; α(N+..)=0.00202 *3* α(N)=0.001777 *25*; α(O)=0.000237 *4*; α(P)=6.22×10^{-6} *9* Mult.: α(K)exp=0.126 *11*. Other: 0.039 *22* (1978VyZX).
218.11 *9*	0.14 *2*	1876.64	7/2$^-$	1658.562	5/2$^-$				
218.19[‡] *11*	0.011[‡] *2*	2558.88		2340.62					
^{x}225.44[#] *22*	0.06 *1*								
230.0 *2*	0.05 *1*	2340.62		2110.60	5/2$^-$,7/2$^-$,9/2$^-$				
249.5[‡] *6*	[‡]	1876.64	7/2$^-$	1627.74	3/2$^+$				Ice(K)=0.09 *5* (1998Om01).
256.89 *7*	0.33 *3*	1804.24	5/2$^+$	1547.302	3/2$^+$	M1		0.1223	α(K)=0.1039 *15*; α(L)=0.01446 *21*; α(M)=0.00310 *5*; α(N+..)=0.000816 *12* α(N)=0.000704 *10*; α(O)=0.0001056 *15*; α(P)=6.58×10^{-6} *10* Mult.: α(K)exp=0.118 *12*. Other: 0.107 *25* (1978VyZX).
269.1[‡] *3*	0.004[‡] *2*	1876.64	7/2$^-$	1607.28	1/2$^-$				Mult.: E2 In 1996Vy01 based on α(K)exp is In conflict with J$^\pi$ assignment.
270.5 *3*	0.04 *1*	2425.95	5/2$^-$	2155.50	(5/2$^-$,7/2$^-$)	(E2)		0.0778	α(K)=0.0596 *9*; α(L)=0.01419 *21*; α(M)=0.00318 *5*;

$\gamma(^{145}Sm)$ (continued)

E_γ[&]	I_γ[&c]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[a]	δ[b]	α[†]	Comments
									α(N+..)=0.000805 *12* α(N)=0.000706 *11*; α(O)=9.62×10^{-5} *14*; α(P)=3.15×10^{-6} *5* Mult.: α(K)exp=0.044 *28*. Other: 0.047 *37* (1978VyZX).
292.25[‡] *9*	0.037[‡] *4*	1950.81	−	1658.562	5/2$^-$				
292.47 *4*	0.38 *3*	2425.95	5/2$^-$	2133.420	3/2$^-$	M1		0.0865	α(K)=0.0735 *11*; α(L)=0.01019 *15*; α(M)=0.00219 *3*; α(N+..)=0.000575 *8* α(N)=0.000496 *7*; α(O)=7.44×10^{-5} *11*; α(P)=4.65×10^{-6} *7* Mult.: α(K)exp=0.083 *8*. Other: 0.09 *1* (1978VyZX). δ: −5.97≤δ≤+0.12.
^{x}309.7[‡] *3*	0.005[‡] *2*								
314.13 *3*	0.69 *4*	1972.719	3/2$^-$	1658.562	5/2$^-$	M1+(E2)	+0.04 *+27−29*	0.0715 *22*	α(K)=0.0608 *22*; α(L)=0.00842 *12*; α(M)=0.00181 *3*; α(N+..)=0.000475 *7* α(N)=0.000409 *6*; α(O)=6.15×10^{-5} *10*; α(P)=3.84×10^{-6} *17* Mult.: α(K)exp=0.065 *10*. Other: 0.061 *10* (1978VyZX).
338.37 *3*	0.81 *5*	1996.959	5/2$^-$	1658.562	5/2$^-$	M1+E2	+1.9 *+14−8*	0.043 *5*	α(K)=0.035 *5*; α(L)=0.00647 *16*; α(M)=0.00142 *3*; α(N+..)=0.000366 *9* α(N)=0.000319 *7*; α(O)=4.51×10^{-5} *18*; α(P)=2.0×10^{-6} *4* Mult.: α(K)exp=0.049 *5*. Other: 0.040 *4* (1978VyZX).
344.92 *10*	0.14 *2*	1972.719	3/2$^-$	1627.74	3/2$^+$				
349.43 *5*	0.42 *3*	2346.39	5/2$^-$	1996.959	5/2$^-$	M1		0.0541	α(K)=0.0460 *7*; α(L)=0.00635 *9*; α(M)=0.001360 *19*; α(N+..)=0.000358 *5* α(N)=0.000308 *5*; α(O)=4.63×10^{-5} *7*; α(P)=2.90×10^{-6} *4* Mult.: α(K)exp=0.051 *5*. Other: 0.059 *6* (1978VyZX).
355.2[‡] *4*	0.010[‡] *5*	1963.30	1/2$^+$,3/2$^+$	1607.28	1/2$^-$	E1		0.00966 *14*	α=0.00966 *14*; α(K)=0.00825 *12*; α(L)=0.001111 *16*; α(M)=0.000237 *4*; α(N+..)=6.17×10^{-5} *9* α(N)=5.34×10^{-5} *8*; α(O)=7.87×10^{-6} *12*; α(P)=4.59×10^{-7} *7* Mult.: from Ice(K)=0.0008 *2* (1998Om01).
365.51 *5*	0.76 *5*	1972.719	3/2$^-$	1607.28	1/2$^-$	M1+E2	−2.2 *+7−13*	0.0339 *24*	α(K)=0.0275 *23*; α(L)=0.00501 *13*; α(M)=0.001101 *24*; α(N+..)=0.000283 *7* α(N)=0.000247 *6*; α(O)=3.50×10^{-5} *12*; α(P)=1.58×10^{-6} *17* Mult.: α(K)exp=0.036 *5*. Other: 0.031 *5* (1978VyZX).
^{x}368.15 *23*	0.05 *2*								
373.68 *4*	0.95 *5*	2346.39	5/2$^-$	1972.719	3/2$^-$	M1+(E2)	−0.19 *+21−41*	0.045 *4*	α(K)=0.038 *4*; α(L)=0.00529 *20*; α(M)=0.00113 *4*;

γ(^{145}Sm) (continued)

E_γ[&]	I_γ[&c]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[a]	δ[b]	α[†]	Comments
									α(N+..)=0.000298 *11* α(N)=0.000257 *9*; α(O)=3.86×10^{-5} *18*; α(P)=2.4×10^{-6} *3* Mult.: α(K)exp=0.032 *4*. Other: 0.042 *5* (1978VyZX).
388.95[‡] *18*	0.018[‡] *5*	2192.99	5/2$^-$,7/2$^-$,9/2$^-$	1804.24	5/2$^+$				Mult.: M1,E2 from α(K)exp=0.035 *24* In conflict with placement. Other: α(K)exp=0.021 *14* (1978VyZX).
422.40[‡] *19*	0.008[‡] *5*	2385.89	3/2$^+$	1963.30	1/2$^+$,3/2$^+$				
425.48 *7*	0.28 *2*	1972.719	3/2$^-$	1547.302	3/2$^+$	E1		0.00626 *9*	α=0.00626 *9*; α(K)=0.00535 *8*; α(L)=0.000715 *10*; α(M)=0.0001524 *22*; α(N+..)=3.98×10^{-5} *6* α(N)=3.44×10^{-5} *5*; α(O)=5.08×10^{-6} *8*; α(P)=3.01×10^{-7} *5* Mult.: α(K)exp=0.0045 *27*. Other: 0.006 *3* (1978VyZX).
425.50[@] *14*	0.024 *4*	2558.88		2133.420	3/2$^-$				
429.25 *15*	0.10 *2*	2425.95	5/2$^-$	1996.959	5/2$^-$				
434.43 *4*	2.58 *14*	1857.69	7/2$^+$	1423.24	9/2$^-$	E1		0.00596 *9*	α=0.00596 *9*; α(K)=0.00510 *8*; α(L)=0.000680 *10*; α(M)=0.0001450 *21*; α(N+..)=3.78×10^{-5} *6* α(N)=3.27×10^{-5} *5*; α(O)=4.84×10^{-6} *7*; α(P)=2.87×10^{-7} *4* Mult.: α(K)exp=0.0050 *9*.
449.7[‡] *4*	[‡]	1996.959	5/2$^-$	1547.302	3/2$^+$				Ice(K)=0.18 *7* (1998Om01).
453.42 *6*	0.54 *4*	1876.64	7/2$^-$	1423.24	9/2$^-$	M1+(E2)	+0.03 *12*	0.0276 *5*	α(K)=0.0235 *4*; α(L)=0.00321 *5*; α(M)=0.000688 *11*; α(N+..)=0.000181 *3* α(N)=0.0001560 *24*; α(O)=2.34×10^{-5} *4*; α(P)=1.47×10^{-6} *3* Mult.: α(K)exp=0.019 *3*. Other: 0.022 *4* (1978VyZX).
463.7[‡] *6*	0.026[‡] *11*	2340.62		1876.64	7/2$^-$	E1		0.00512 *8*	α=0.00512 *8*; α(K)=0.00438 *7*; α(L)=0.000583 *9*; α(M)=0.0001242 *18*; α(N+..)=3.24×10^{-5} *5* α(N)=2.80×10^{-5} *4*; α(O)=4.15×10^{-6} *6*; α(P)=2.48×10^{-7} *4* Mult.: from 1996Vy01 based on α(K)exp. Mult not consistent with suggested π=− for 2340 level In 1996Vy01.
469.66 *10*	0.39 *14*	2346.39	5/2$^-$	1876.64	7/2$^-$	M1		0.0252	α(K)=0.0215 *3*; α(L)=0.00293 *5*; α(M)=0.000628 *9*; α(N+..)=0.0001652 *24* α(N)=0.0001425 *20*; α(O)=2.14×10^{-5} *3*; α(P)=1.348×10^{-6} *19* Mult.: α(K)exp=0.027 *10*.

From ENSDF

$\gamma(^{145}Sm)$ (continued)

E_γ[&]	I_γ[&c]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[a]	δ[b]	α[†]	Comments
474.89[#] *10*	0.38 *5*	2133.420	3/2⁻	1658.562	5/2⁻				
485.1[‡] *6*	0.09[‡] *5*	2482.15		1996.959	5/2⁻	E1		0.00462 *7*	α=0.00462 *7*; α(K)=0.00395 *6*; α(L)=0.000525 *8*; α(M)=0.0001118 *16*; α(N+..)=2.92×10^{-5} *5* α(N)=2.52×10^{-5} *4*; α(O)=3.74×10^{-6} *6*; α(P)=2.24×10^{-7} *4* Mult.: from 1996Vy01 based on α(K)exp.
497.32[#] *43*	0.06 *1*	2155.50	(5/2⁻,7/2⁻)	1658.562	5/2⁻				
526.10 *4*	1.47 *9*	2133.420	3/2⁻	1607.28	1/2⁻	M1+E2	+0.31 *+10−9*	0.0183 *5*	α(K)=0.0155 *5*; α(L)=0.00214 *5*; α(M)=0.000458 *10*; α(N+..)=0.000120 *3* α(N)=0.0001038 *23*; α(O)=1.56×10^{-5} *4*; α(P)=9.7×10^{-7} *3* Mult.: α(K)exp=0.0161 *14*. Other: 0.0156 *11* (1978VyZX).
536.15 *10*	0.40 *9*	1972.719	3/2⁻	1436.364	1/2⁺				
542.57 *3*	68 *4*	1436.364	1/2⁺	893.788	3/2⁻	E1		0.00359 *5*	α=0.00359 *5*; α(K)=0.00308 *5*; α(L)=0.000406 *6*; α(M)=8.65×10^{-5} *13*; α(N+..)=2.26×10^{-5} *4* α(N)=1.95×10^{-5} *3*; α(O)=2.90×10^{-6} *4*; α(P)=1.752×10^{-7} *25* Mult.: εK(exp)=0.00322 *32* (normalization value).
549.34 *12*	0.25 *5*	2425.95	5/2⁻	1876.64	7/2⁻	E2,M1,(E1)			Mult.: α(K)exp=0.014 *7*.
560.24 *13*	0.06 *1*	2340.62		1780.32	9/2⁻				
560.40[@] *17*	0.016 *5*	1996.959	5/2⁻	1436.364	1/2⁺				
^{x}564.86 *15*	0.05 *1*								
573.55 *12*	0.10 *2*	1996.959	5/2⁻	1423.24	9/2⁻				
581.60 *12*	0.30 *3*	2385.89	3/2⁺	1804.24	5/2⁺				
586.06[#] *9*	0.31 *5*	2133.420	3/2⁻	1547.302	3/2⁺				
621.79 *8*	0.08 *1*	2425.95	5/2⁻	1804.24	5/2⁺				
653.512 *25*	229 *11*	1547.302	3/2⁺	893.788	3/2⁻	E1		0.00240 *4*	α=0.00240 *4*; α(K)=0.00206 *3*; α(L)=0.000270 *4*; α(M)=5.74×10^{-5} *8*; α(N+..)=1.502×10^{-5} *21* α(N)=1.297×10^{-5} *19*; α(O)=1.93×10^{-6} *3*; α(P)=1.182×10^{-7} *17* Mult.: α(K)exp=0.00213 *12* (normalization). Other: 0.00215 *15* (1978VyZX).
674.33[‡] *17*	0.004[‡] *2*	2110.60	5/2⁻,7/2⁻,9/2⁻	1436.364	1/2⁺	M2		0.0289	α(K)=0.0243 *4*; α(L)=0.00362 *5*; α(M)=0.000784 *11*; α(N+..)=0.000206 *3* α(N)=0.0001780 *25*; α(O)=2.66×10^{-5} *4*; α(P)=1.634×10^{-6} *23* Mult.: from 1996Vy01 based on α(K)exp.

γ(^{145}Sm) (continued)

Eγ[&]	Iγ[&c]	Ei(level)	J^{π}_i	E_f	J^{π}_f	Mult.[a]	δ[b]	α[†]	Comments
687.83[#] *6*	0.45 *4*	2346.39	5/2⁻	1658.562	5/2⁻	M1		0.00972 *14*	α=0.00972 *14*; α(K)=0.00830 *12*; α(L)=0.001118 *16*; α(M)=0.000239 *4*; α(N+..)=6.29×10⁻⁵ *9* α(N)=5.42×10⁻⁵ *8*; α(O)=8.16×10⁻⁶ *12*; α(P)=5.17×10⁻⁷ *8* Mult.: α(K)exp=0.0056 *29*. Other: 0.088 *50* (1978VyZX).
713.48 *5*	3.57 *19*	1607.28	1/2⁻	893.788	3/2⁻	M1		0.00888 *13*	α=0.00888 *13*; α(K)=0.00759 *11*; α(L)=0.001020 *15*; α(M)=0.000218 *3*; α(N+..)=5.74×10⁻⁵ *8* α(N)=4.95×10⁻⁵ *7*; α(O)=7.45×10⁻⁶ *11*; α(P)=4.72×10⁻⁷ *7* Mult.: α(K)exp=0.0077 *10*. Other: 0.0081 *9* (1978VyZX).
727.34 *10*	0.75 *17*	2385.89	3/2⁺	1658.562	5/2⁻				
729.09 *14*	0.41 *5*	2276.55	5/2⁺	1547.302	3/2⁺				
733.5[‡] *4*	0.014[‡] *5*	1627.74	3/2⁺	893.788	3/2⁻	E1,M2		0.012 *11*	α(K)=0.010 *9*; α(L)=0.0015 *13*; α(M)=0.0003 *3*; α(N+..)=9.E−5 *8* α(N)=7.E−5 *7*; α(O)=1.1×10⁻⁵ *10*; α(P)=7.E−7 *6* Mult.: from 1996Vy01 based on α(K)exp.
758.13 *6*	0.71 *6*	2385.89	3/2⁺	1627.74	3/2⁺	M1,E2		0.0061 *16*	α=0.0061 *16*; α(K)=0.0052 *14*; α(L)=0.00073 *16*; α(M)=0.00016 *4*; α(N+..)=4.1×10⁻⁵ *9* α(N)=3.5×10⁻⁵ *8*; α(O)=5.3×10⁻⁶ *12*; α(P)=3.2×10⁻⁷ *9* Mult.: α(K)exp=0.0056 *19*. Other: 0.0067 *45* (1978VyZX).
764.74 *4*	25.6 *13*	1658.562	5/2⁻	893.788	3/2⁻	M1+E2	+0.16 *7*	0.00742 *13*	α=0.00742 *13*; α(K)=0.00634 *12*; α(L)=0.000852 *15*; α(M)=0.000182 *3*; α(N+..)=4.79×10⁻⁵ *8* α(N)=4.13×10⁻⁵ *7*; α(O)=6.22×10⁻⁶ *11*; α(P)=3.94×10⁻⁷ *7* Mult.: α(K)exp=0.0065 *6*. Other: 0.0069 *4* (1978VyZX).
778.60 *7*	0.55 *5*	2385.89	3/2⁺	1607.28	1/2⁻				
823.3[‡] *5*	0.006[‡] *2*	2482.15		1658.562	5/2⁻	M2		0.01658	α(K)=0.01400 *20*; α(L)=0.00203 *3*; α(M)=0.000438 *7*; α(N+..)=0.0001153 *17* α(N)=9.95×10⁻⁵ *14*; α(O)=1.492×10⁻⁵ *21*; α(P)=9.24×10⁻⁷ *13* Mult.: from 1996Vy01 based on α(K)exp. Suggested mult=E1 for 485γ In conflict with mult=M2 for 823γ.
838.61 *4*	1.62 *10*	2385.89	3/2⁺	1547.302	3/2⁺	M1		0.00600 *9*	α=0.00600 *9*; α(K)=0.00513 *8*; α(L)=0.000686 *10*; α(M)=0.0001465 *21*; α(N+..)=3.85×10⁻⁵ *6* α(N)=3.32×10⁻⁵ *5*; α(O)=5.00×10⁻⁶ *7*; α(P)=3.18×10⁻⁷ *5* Mult.: α(K)exp=0.0061 *7*. Other: 0.039 *25* (1978VyZX).
869.6[‡] *3*	0.008[‡] *4*	2292.82	9/2⁺	1423.24	9/2⁻				Mult.: mult=M1,E2, from Ice(K)=0.022 *5*, suggested by 1998Om01 is In conflict with Jπ.
893.73 *3*	1000 *50*	893.788	3/2⁻	0.0	7/2⁻	E2		0.00316 *5*	α=0.00316 *5*; α(K)=0.00267 *4*; α(L)=0.000385 *6*; α(M)=8.29×10⁻⁵ *12*; α(N+..)=2.16×10⁻⁵ *3* α(N)=1.87×10⁻⁵ *3*; α(O)=2.76×10⁻⁶ *4*; α(P)=1.586×10⁻⁷ *23* Mult.: α(K)exp=0.00248 *20* (normalization); K/L=5.9 *5* in 1961An04.
910.47 *11*	1.04 *6*	1804.24	5/2⁺	893.788	3/2⁻	E1		0.001233 *18*	α=0.001233 *18*; α(K)=0.001059 *15*; α(L)=0.0001367 *20*;

γ(^{145}Sm) (continued)

E_γ[&]	I_γ[&c]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[a]	δ[b]	α[†]	Comments
									α(M)=2.90×10^{-5} *4*; α(N+..)=7.61×10^{-6} α(N)=6.57×10^{-6} *10*; α(O)=9.82×10^{-7} *14*; α(P)=6.12×10^{-8} *9* Mult.: α(K)exp=0.0032 *7*. Other: 0.0028 *6* (1978VyZX).
917.13[‡] *20*	0.018[‡] *7*	2340.62		1423.24	9/2$^-$				
923.15 *19*	0.09 *2*	2346.39	5/2$^-$	1423.24	9/2$^-$				
949.53 *5*	1.17 *6*	2385.89	3/2$^+$	1436.364	1/2$^+$	M1		0.00445 *7*	α=0.00445 *7*; α(K)=0.00381 *6*; α(L)=0.000507 *8*; α(M)=0.0001083 *16*; α(N+..)=2.85×10^{-5} *4* α(N)=2.46×10^{-5} *4*; α(O)=3.70×10^{-6} *6*; α(P)=2.36×10^{-7} *4* Mult.: α(K)exp=0.0041 *11*. Other: 0.0040 *2* (1978VyZX).
^{x}959.97[‡] *20*	0.011[‡] *3*								
963.8[‡] *3*	0.010[‡] *3*	1857.69	7/2$^+$	893.788	3/2$^-$				
965.1 *3*	0.06 *1*	2387.61	($^-$)	1423.24	9/2$^-$				
982.62 *16*	0.03 *1*	1876.64	7/2$^-$	893.788	3/2$^-$				
1002.77 *10*	0.16 *3*	2425.95	5/2$^-$	1423.24	9/2$^-$				
1058.75 *12*	0.18 *2*	2482.15		1423.24	9/2$^-$				
^{x}1063.5[‡] *4*	0.077[‡] *4*					M1		0.00340 *5*	α=0.00340 *5*; α(K)=0.00291 *4*; α(L)=0.000387 *6*; α(M)=8.25×10^{-5} *12*; α(N+..)=2.17×10^{-5} *3* α(N)=1.87×10^{-5} *3*; α(O)=2.82×10^{-6} *4*; α(P)=1.80×10^{-7} *3* Mult.: from Ice(K)=0.082 *12* (1998Om01).
1078.91 *3*	6.6 *4*	1972.719	3/2$^-$	893.788	3/2$^-$	M1+E2	+0.04 *1*	0.00329 *5*	α=0.00329 *5*; α(K)=0.00281 *4*; α(L)=0.000373 *6*; α(M)=7.97×10^{-5} *12*; α(N+..)=2.10×10^{-5} *3* α(N)=1.81×10^{-5} *3*; α(O)=2.72×10^{-6} *4*; α(P)=1.738×10^{-7} *25* Mult.: α(K)exp=0.0031 *7*. Other: 0.0034 *7* (1978VyZX).
1103.22[#] *12*	0.09 *1*	1996.959	5/2$^-$	893.788	3/2$^-$				
1239.60 *4*	1.84 *10*	2133.420	3/2$^-$	893.788	3/2$^-$	M1+E2	−0.61 *+7−9*	0.00218 *6*	α=0.00218 *6*; α(K)=0.00185 *5*; α(L)=0.000246 *6*; α(M)=5.26×10^{-5} *13*; α(N+..)=2.51×10^{-5} *5* α(N)=1.19×10^{-5} *3*; α(O)=1.79×10^{-6} *5*; α(P)=1.13×10^{-7} *3*; α(IPF)=1.124×10^{-5} *17* Mult.: α(K)exp=0.0018 *4*. Other: 0.0021 *5* (1978VyZX).
1261.90 *17*	0.06 *1*	2155.50	(5/2$^-$,7/2$^-$)	893.788	3/2$^-$				
^{x}1266.64 *14*	0.19 *3*								
1423.19 *5*	5.5 *3*	1423.24	9/2$^-$	0.0	7/2$^-$	M1+E2	+0.48 *+6−3*	0.00169 *3*	α=0.00169 *3*; α(K)=0.00140 *3*; α(L)=0.000184 *4*; α(M)=3.93×10^{-5} *8*; α(N+..)=6.46×10^{-5} *10*

From ENSDF

γ(^{145}Sm) (continued)

Eγ[&]	Iγ[&c]	Ei(level)	$J^π_i$	Ef	$J^π_f$	Mult.[a]	δ[b]	α[†]	Comments
									α(N)=8.92×10⁻⁶ 17; α(O)=1.343×10⁻⁶ 25; α(P)=8.56×10⁻⁸ 17; α(IPF)=5.43×10⁻⁵ 8 Mult.: α(K)exp=0.00145 25. Other: 0.00153 19 (1978VyZX).
1452.60[#] 5	1.07 7	2346.39	5/2⁻	893.788	3/2⁻	(M1)		0.001713 24	α=0.001713 24; α(K)=0.001413 20; α(L)=0.000186 3; α(M)=3.96×10⁻⁵ 6; α(N+..)=7.53×10⁻⁵ 11 α(N)=8.98×10⁻⁶ 13; α(O)=1.354×10⁻⁶ 19; α(P)=8.69×10⁻⁸ 13; α(IPF)=6.49×10⁻⁵ 9 Mult.: α(K)exp=0.0026 7. Other: 0.0032 10 (1978VyZX). Ice(K)=0.11 3 (1998Om01).
1532.14 7	5.2 3	2425.95	5/2⁻	893.788	3/2⁻	M1		0.001554 22	α=0.001554 22; α(K)=0.001251 18; α(L)=0.0001642 23; α(M)=3.50×10⁻⁵ 5; α(N+..)=0.000103 α(N)=7.94×10⁻⁶ 12; α(O)=1.198×10⁻⁶ 17; α(P)=7.69×10⁻⁸ 11; α(IPF)=9.43×10⁻⁵ 14 Mult.: α(K)exp=0.00151 21. Other: 0.00164 24 (1978VyZX).
1547.30[#] 8	0.82 6	1547.302	3/2⁺	0.0	7/2⁻	M2+E3	+0.62 +12−10	0.00292 11	α=0.00292 11; α(K)=0.00245 9; α(L)=0.000338 12; α(M)=7.25×10⁻⁵ 25; α(N+..)=5.81×10⁻⁵ 10 α(N)=1.64×10⁻⁵ 6; α(O)=2.47×10⁻⁶ 9; α(P)=1.54×10⁻⁷ 6; α(IPF)=3.90×10⁻⁵ 6 Mult.: α(K)exp=0.0032 7. Other: 0.0010 2 (1978VyZX). Ice(K)=0.103 22, Iγ=0.108 13 (1998Om01).
1588.42[#] 20	0.17 3	2482.15		893.788	3/2⁻				
1614.67[#] 15	0.14 4	2508.31	5/2⁻,7/2⁻	893.788	3/2⁻				Mult.: d,E2 from α(K)exp=0.010 5. Other: 0.0088 47 (1978VyZX) mult=(M2) In 1996Vy01 based on α(K)exp is In conflict with J^π.
1658.53 5	227 12	1658.562	5/2⁻	0.0	7/2⁻	E2+M1	−2.07 6	0.001107 16	α=0.001107 16; α(K)=0.000830 12; α(L)=0.0001095 16; α(M)=2.33×10⁻⁵ 4; α(N+..)=0.000143 α(N)=5.28×10⁻⁶ 8; α(O)=7.93×10⁻⁷ 12; α(P)=4.98×10⁻⁸ 8; α(IPF)=0.0001377 20 Mult.: α(K)exp=0.00082 8. Other: 0.00087 5 (1978VyZX).
1780.27 10	0.23 3	1780.32	9/2⁻	0.0	7/2⁻				
1804.26 5	16.3 8	1804.24	5/2⁺	0.0	7/2⁻	E1		0.000804 12	α=0.000804 12; α(K)=0.000318 5; α(L)=4.01×10⁻⁵ 6; α(M)=8.50×10⁻⁶ 12; α(N+..)=0.000438 7 α(N)=1.92×10⁻⁶ 3; α(O)=2.89×10⁻⁷ 4; α(P)=1.85×10⁻⁸ 3; α(IPF)=0.000436 6 Mult.: α(K)exp=0.00031 4 (normalization). Other: 0.00023 4 (1978VyZX).
1848.12 26	0.11 3	1848.1	9/2⁺	0.0	7/2⁻				

γ(^{145}Sm) (continued)

E_γ[&]	I_γ[&c]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[a]	δ[b]	α[†]	Comments
1857.66 *5*	6.0 *3*	1857.69	7/2$^+$	0.0	7/2$^-$	E1		0.000827 *12*	α=0.000827 *12*; α(K)=0.000303 *5*; α(L)=3.82×10^{-5} *6*; α(M)=8.10×10^{-6} *12*; α(N+..)=0.000477 *7* α(N)=1.83×10^{-6} *3*; α(O)=2.76×10^{-7} *4*; α(P)=1.765×10^{-8} *25*; α(IPF)=0.000475 *7* Mult.: α(K)exp=0.00035 *5*. Other: 0.00045 *5* (1978VyZX).
1876.67 *6*	20.3 *10*	1876.64	7/2$^-$	0.0	7/2$^-$	E2+M1	−1.29 *+6−7*	0.001039 *16*	α=0.001039 *16*; α(K)=0.000685 *11*; α(L)=8.95×10^{-5} *14*; α(M)=1.91×10^{-5} *3*; α(N+..)=0.000246 *4* α(N)=4.32×10^{-6} *7*; α(O)=6.50×10^{-7} *10*; α(P)=4.13×10^{-8} *7*; α(IPF)=0.000241 *4* Mult.: α(K)exp=0.00067 *8*. Other: 0.00072 *7* (1978VyZX).
1950.76[‡] *21*	0.019[‡] *2*	1950.81	$^-$	0.0	7/2$^-$	M1		0.001143 *16*	α=0.001143 *16*; α(K)=0.000728 *11*; α(L)=9.48×10^{-5} *14*; α(M)=2.02×10^{-5} *3*; α(N+..)=0.000301 *5* α(N)=4.58×10^{-6} *7*; α(O)=6.91×10^{-7} *10*; α(P)=4.45×10^{-8} *7*; α(IPF)=0.000295 *5* Mult.: from Ice(K)=0.0008 *2* (1998Om01).
1972.77 *4*	1.47 *9*	1972.719	3/2$^-$	0.0	7/2$^-$	E2		0.000935 *13*	α=0.000935 *13*; α(K)=0.000566 *8*; α(L)=7.38×10^{-5} *11*; α(M)=1.570×10^{-5} *22*; α(N+..)=0.000280 α(N)=3.56×10^{-6} *5*; α(O)=5.34×10^{-7} *8*; α(P)=3.37×10^{-8} *5*; α(IPF)=0.000276 *4* Mult.: α(K)exp=0.00101 *14*. Other: 0.00118 *15* (1978VyZX), γ(θ).
1997.00 *4*	109 *6*	1996.959	5/2$^-$	0.0	7/2$^-$	M1+E2	+0.241 *11*	0.001115 *16*	α=0.001115 *16*; α(K)=0.000683 *10*; α(L)=8.90×10^{-5} *13*; α(M)=1.89×10^{-5} *3*; α(N+..)=0.000323 *5* α(N)=4.30×10^{-6} *6*; α(O)=6.48×10^{-7} *10*; α(P)=4.17×10^{-8} *6*; α(IPF)=0.000318 *5* Mult.: α(K)exp=0.00068 *8*. Other: 0.00073 *8* (1978VyZX).
2110.58 *5*	0.60 *4*	2110.60	5/2$^-$,7/2$^-$,9/2$^-$	0.0	7/2$^-$	M1		0.001094 *16*	α=0.001094 *16*; α(K)=0.000611 *9*; α(L)=7.95×10^{-5} *12*; α(M)=1.693×10^{-5} *24*; α(N+..)=0.000386 α(N)=3.84×10^{-6} *6*; α(O)=5.80×10^{-7} *9*; α(P)=3.74×10^{-8} *6*; α(IPF)=0.000381 *6* Mult.: α(K)exp=0.00072 *37*. Other: 0.00091 *5* (1978VyZX).
^{x}2129.9[‡] *4*	0.018[‡] *3*								
2133.42 *9*	3.35 *17*	2133.420	3/2$^-$	0.0	7/2$^-$	E2		0.000924 *13*	α=0.000924 *13*; α(K)=0.000491 *7*; α(L)=6.37×10^{-5} *9*; α(M)=1.354×10^{-5} *19*; α(N+..)=0.000356 *5* α(N)=3.07×10^{-6} *5*; α(O)=4.61×10^{-7} *7*; α(P)=2.92×10^{-8} *4*; α(IPF)=0.000353 *5* Mult.: α(K)exp=0.00029 *8*. Other: 0.00033 *9* (1978VyZX).

γ(^{145}Sm) (continued)

$E_γ$[&]	$I_γ$[&c]	E_i(level)	$J_i^π$	E_f	$J_f^π$	Mult.[a]	δ[b]	α[†]	Comments
2155.46 5	1.82 10	2155.50	(5/2$^-$,7/2$^-$)	0.0	7/2$^-$	M1		0.001086 16	α=0.001086 16; α(K)=0.000584 9; α(L)=7.59×10^{-5} 11; α(M)=1.615×10^{-5} 23; α(N+..)=0.000410 α(N)=3.66×10^{-6} 6; α(O)=5.53×10^{-7} 8; α(P)=3.57×10^{-8} 5; α(IPF)=0.000406 6 Mult.: α(K)exp=0.0012 2. Other: 0.0012 2 (1978VyZX).
2192.96 5	0.54 3	2192.99	5/2$^-$,7/2$^-$,9/2$^-$	0.0	7/2$^-$	M1		0.001081 16	α=0.001081 16; α(K)=0.000562 8; α(L)=7.30×10^{-5} 11; α(M)=1.555×10^{-5} 22; α(N+..)=0.000430 α(N)=3.53×10^{-6} 5; α(O)=5.32×10^{-7} 8; α(P)=3.43×10^{-8} 5; α(IPF)=0.000426 6 Mult.: α(K)exp=0.0014 7 (1978VyZX).
2276.54 4	1.61 9	2276.55	5/2$^+$	0.0	7/2$^-$	E1+(M2)	+0.067 30	0.001026 15	α=0.001026 15; α(K)=0.000224 6; α(L)=2.81×10^{-5} 7; α(M)=5.95×10^{-6} 15; α(N+..)=0.000768 11 α(N)=1.35×10^{-6} 4; α(O)=2.03×10^{-7} 5; α(P)=1.31×10^{-8} 4; α(IPF)=0.000766 11 Mult.: α(K)exp=0.00025 11. Other: 0.00028 12 (1978VyZX).
2292.80 13	0.08 1	2292.82	9/2$^+$	0.0	7/2$^-$				Mult.: α(K)exp=0.0015 9. Other: 0.0022 15 (1978VyZX).
2329.28 9	2.87 15	2329.30	5/2$^-$,7/2$^-$,3/2$^-$	0.0	7/2$^-$	E2,(M1)		0.00100 8	α=0.00100 8; α(K)=0.00046 4; α(L)=5.9×10^{-5} 5; α(M)=1.26×10^{-5} 11; α(N+..)=0.00048 3 α(N)=2.85×10^{-6} 25; α(O)=4.3×10^{-7} 4; α(P)=2.8×10^{-8} 3; α(IPF)=0.00047 3 Mult.: α(K)exp=0.00042 7. Other: 0.00046 7 (1978VyZX).
2340.64 9	0.32 3	2340.62		0.0	7/2$^-$				
2346.42 10	2.99 16	2346.39	5/2$^-$	0.0	7/2$^-$	M1+E2	+0.81 +18−10	0.001019 20	α=0.001019 20; α(K)=0.000457 10; α(L)=5.91×10^{-5} 13; α(M)=1.26×10^{-5} 3; α(N+..)=0.000491 9 α(N)=2.85×10^{-6} 7; α(O)=4.30×10^{-7} 10; α(P)=2.76×10^{-8} 7; α(IPF)=0.000487 9 Mult.: α(K)exp=0.00041 6. Other: 0.00047 7 (1978VyZX).
2385.2[‡] 3	0.008[‡] 2	2385.89	3/2$^+$	0.0	7/2$^-$				
2387.55 7	0.41 3	2387.61	($^-$)	0.0	7/2$^-$	(M1)		0.001075 15	α=0.001075 15; α(K)=0.000467 7; α(L)=6.06×10^{-5} 9; α(M)=1.289×10^{-5} 18; α(N+..)=0.000535 8 α(N)=2.92×10^{-6} 4; α(O)=4.41×10^{-7} 7; α(P)=2.85×10^{-8} 4; α(IPF)=0.000531 8 Mult.: α(K)exp=0.0007 3. Other: 0.00037 18 (1978VyZX).
[x]2422.0[‡] 4	0.007[‡] 1								
2425.96 6	2.05 11	2425.95	5/2$^-$	0.0	7/2$^-$	M1		0.001078 15	α=0.001078 15; α(K)=0.000452 7; α(L)=5.85×10^{-5} 9;

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γ(^{145}Sm) (continued)

E_γ[&]	I_γ[&c]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[a]	α[†]	Comments
								α(M)=1.245×10^{-5} *18*; α(N+..)=0.000555 *8*
								α(N)=2.82×10^{-6} *4*; α(O)=4.26×10^{-7} *6*; α(P)=2.75×10^{-8} *4*; α(IPF)=0.000552 *8*
								Mult.: α(K)exp=0.00060 *9*. Other: 0.00067 *9* (1978VyZX).
2482.17 *6*	0.55 *3*	2482.15		0.0	7/2$^-$			Mult.: α(K)exp=0.00079 *19*. Other: 0.00089 *20* (1978VyZX).
2508.24 *8*	0.46 *3*	2508.31	5/2$^-$,7/2$^-$	0.0	7/2$^-$	M1+E2	0.00102 *7*	α=0.00102 *7*; α(K)=0.00039 *3*; α(L)=5.1×10^{-5} *4*; α(M)=1.08×10^{-5} *8*; α(N+..)=0.00057 *4*
								α(N)=2.45×10^{-6} *18*; α(O)=3.7×10^{-7} *3*; α(P)=2.37×10^{-8} *19*; α(IPF)=0.00056 *4*
								Mult.: α(K)exp=0.00084 *27*. Other: 0.00086 *28* (1978VyZX).
2512.95 *9*	0.33 *3*	2512.98	$^-$	0.0	7/2$^-$	E2,M1	0.00102 *7*	α=0.00102 *7*; α(K)=0.00039 *3*; α(L)=5.1×10^{-5} *4*; α(M)=1.08×10^{-5} *8*; α(N+..)=0.00057 *4*
								α(N)=2.44×10^{-6} *18*; α(O)=3.7×10^{-7} *3*; α(P)=2.36×10^{-8} *19*; α(IPF)=0.00057 *4*
								Mult.: α(K)exp=0.00051 *23*. Other: 0.00059 *25* (1978VyZX).
2559.4 *4*	0.019 *3*	2558.88		0.0	7/2$^-$			Mult.: α(K)exp=0.0025 *13*. Other: 0.00272 *190* (1978VyZX).

[†] Additional information 1.
[‡] From 1998Om01.
[#] Also reported In 1998Om01.
[@] Placement In 1998Om01 differs from earlier placement.
[&] For additional questionable γ's see 1978VyZX.
[a] α(K)exp from Iγ (1986Ad06) and ce (1978VyZX) normalized to α(K) of γ's: 542, 653, 764, 894, 1423, 1658, 1804 with mult known from $\gamma(\theta)$ in oriented nuclei (1982De26).
[b] From $\gamma(\theta)$ in decay of oriented nuclei (1982De26).
[c] For absolute intensity per 100 decays, multiply by 0.0657 *25*.
[x] γ ray not placed in level scheme.

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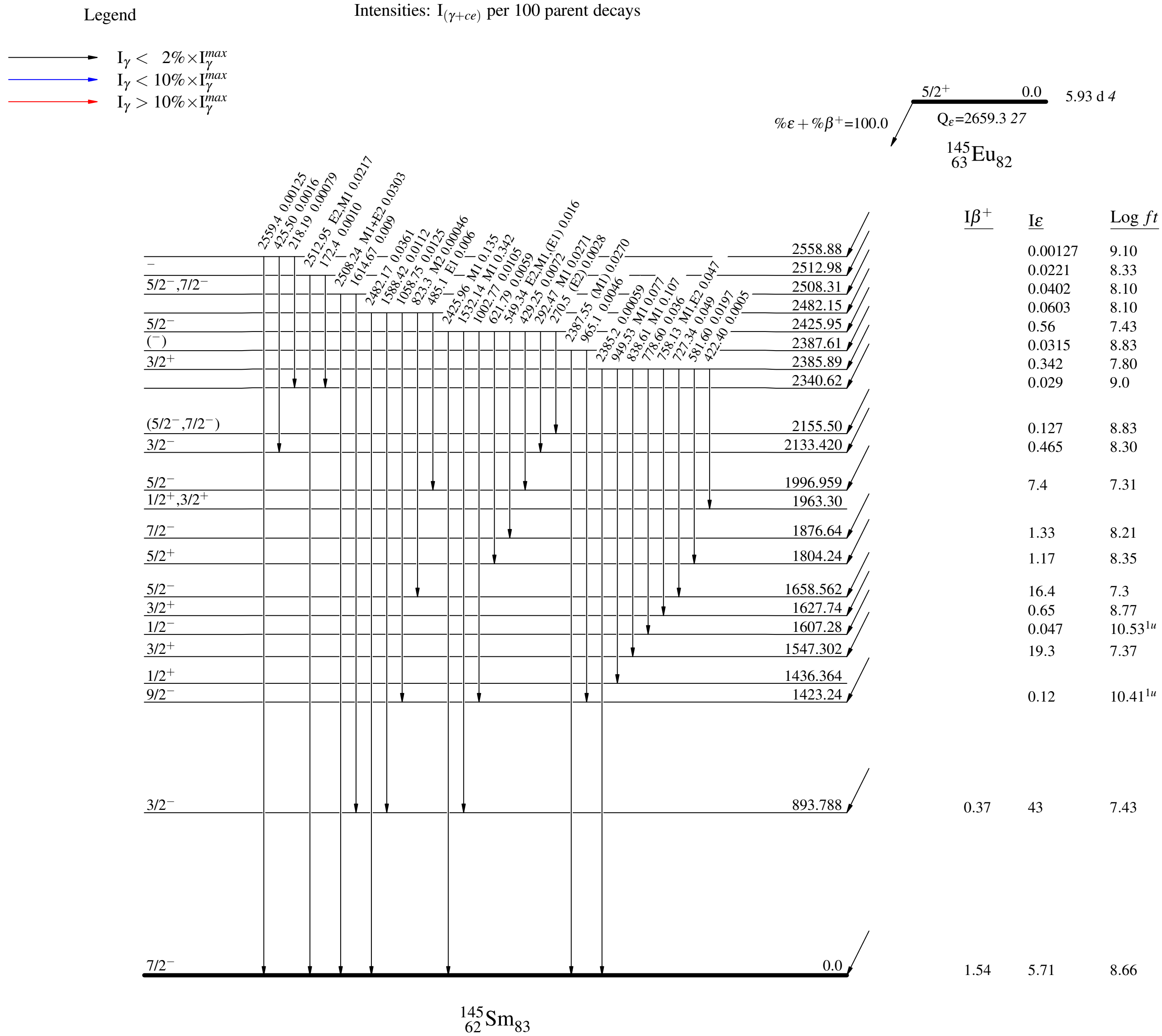
^{145}Eu ε decay 1986Ad06

Decay Scheme

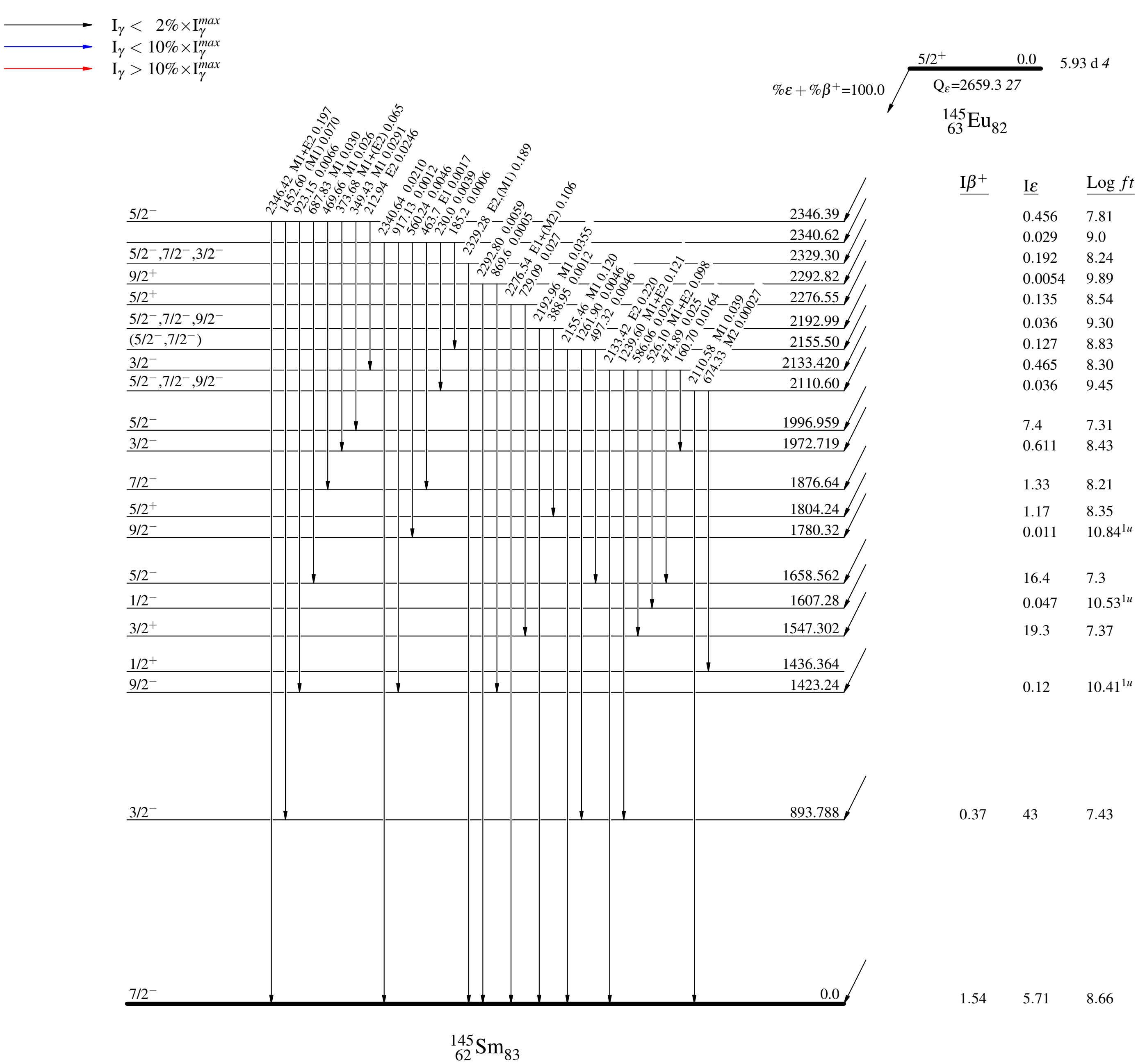
Intensities: $I_{(\gamma+ce)}$ per 100 parent decays



^{145}Eu ε decay 1986Ad06

Decay Scheme (continued)

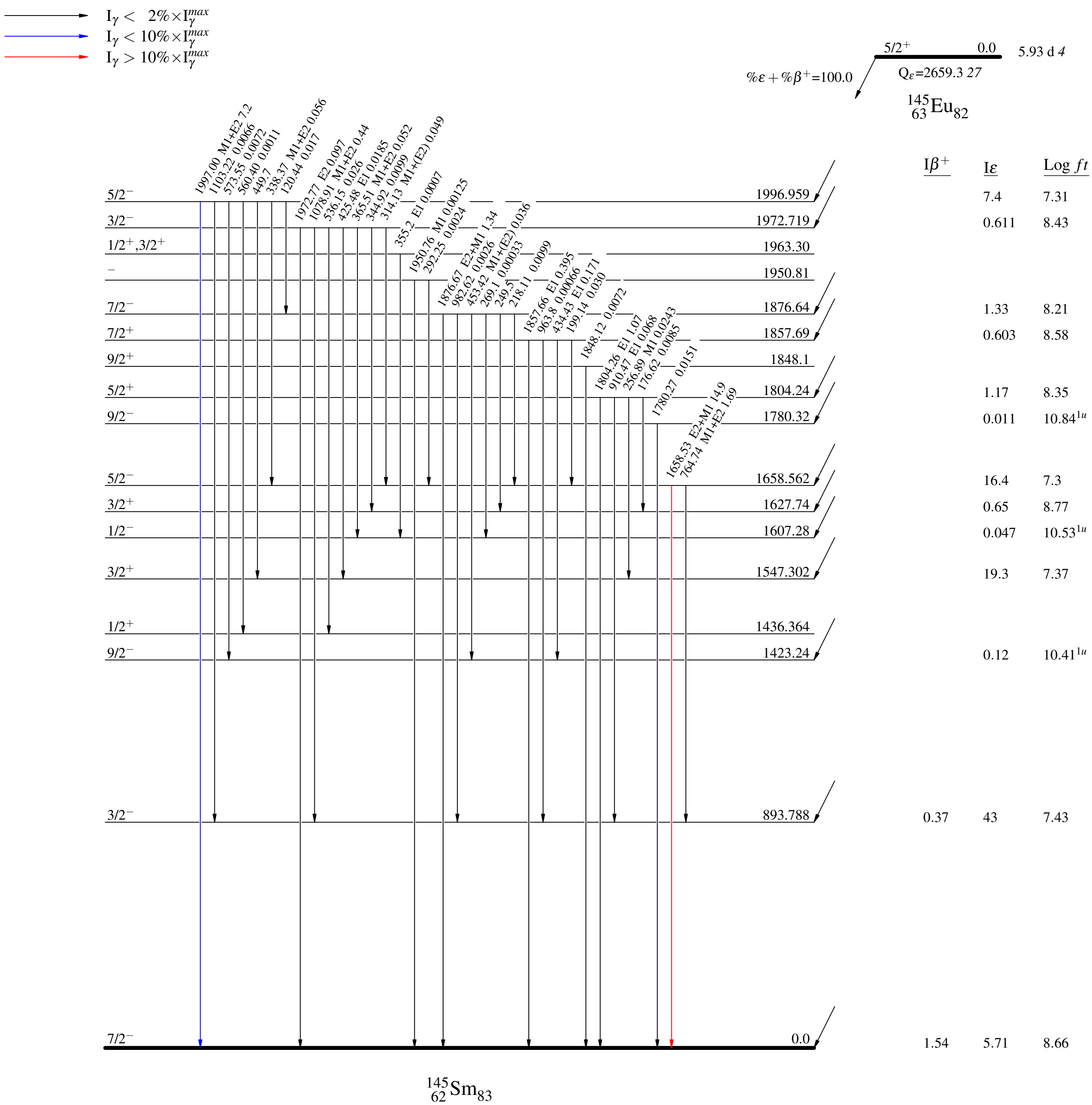
Intensities: $I_{(\gamma+ce)}$ per 100 parent decays



^{145}Eu ε decay 1986Ad06

Decay Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays



^{145}Eu ε decay 1986Ad06

Decay Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays