Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	C. D. Nesaraja	NDS 195,718 (2024)	12-Oct-2023

Q(β^-)=−2340 *syst*; S(n)=7200 *syst*; S(p)=3350 *syst*; Q(α)=6940 *syst* 2021Wa16
ΔQ(β^-)=30, ΔS(n)=60, ΔS(p)=30, ΔQ(α)=30 (syst,2021Wa16).
S(2n)=13550 *40*, S(2p)=8890 *30* (syst,2021Wa16).

^{249}Es Levels

Cross Reference (XREF) Flags

A ^{253}Md α decay (6 min)

E(level)	J$^\pi$	T$_{1/2}$	XREF	Comments
0	7/2$^+$	102.2 min *6*	A	%ε+%β^+=99.43 *8*; %α=0.57 *8* %α=0.57 *8* from α/K-xray= 0.007 *7* (1970Ah01), I(K-xray)= 81.8 *% 5* (1976Ah07) and Iα/I(α+ε)=5.7×10^{-3} *8* (1976Ah07). Configuration=(π7/2[633])(2012He09). J$^\pi$: From log *ft*=6.7 to 9/2$^-$ g.s. and log *ft*=7.2 to 5/2$^+$ level in ^{249}Cf limits J to 7/2; log *ft*=8.9 to 11/2$^-$ level in ^{249}Cf rules out J^π=7/2$^-$. T$_{1/2}$: From weighted average of half-lives from decay measurement of the 379.5γ from the ^{249}Es ε decay: 102 min *42* (1989Ha27), 102.2 m *6* (1976Ah07) and 1.7 h *1* (1970Ah01). Others: 1.8 h (1956Ha80).
49.0 *6*	(9/2$^+$)		A	J$^\pi$: Proposed in 2012He09 based on 304.2γ from 353, 7/2$^-$ level feeding this level.
353.2 *4*	(7/2$^-$)		A	E(level): from Eγ=353.2 *4*. Configuration=π7/2[514]. J$^\pi$: (E1) 353.2γ to 7/2$^+$ g.s; from favored α decay from (7/2$^-$) ^{253}Md. Alpha hindrance factor≈1 was deduced by 2012He09, based on a single 7103α branch with theoretical half-life from 1980Po10 and 1983Ru11.

$\gamma(^{249}Es)$

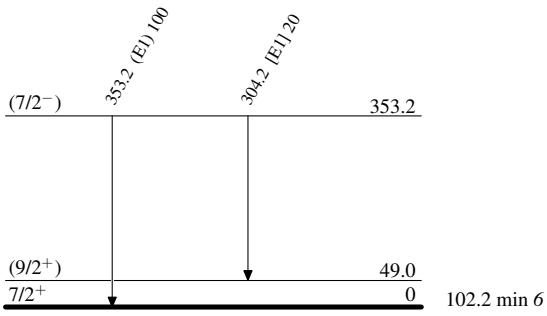
E$_i$(level)	J$_i^\pi$	E$_\gamma$[†]	I$_\gamma$[†]	E$_f$	J$_f^\pi$	Mult.	α[‡]	Comments
353.2	(7/2$^-$)	304.2 *4*	20	49.0	(9/2$^+$)	[E1]	0.0455 *6*	α(K)=0.0354 *5*; α(L)=0.00760 *11*; α(M)=0.001867 *27* α(N)=0.000516 *7*; α(O)=0.0001326 *19*; α(P)=2.411×10^{-5} *34*; α(Q)=1.075×10^{-6} *15*
		353.2 *4*	100	0	7/2$^+$	(E1)	0.0334 *5*	α(K)=0.0261 *4*; α(L)=0.00547 *8*; α(M)=0.001340 *19* α(N)=0.000370 *5*; α(O)=9.54×10^{-5} *14*; α(P)=1.748×10^{-5} *25*; α(Q)=8.06×10^{-7} *11* Mult.: From α(K)exp ≤0.06 (2005He27).

† From ^{253}Md α decay (2012He09).
‡ Additional information 1.

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level



$^{249}_{99}Es_{150}$