^{239}Am α decay 1971Go01

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli	NDS 122, 205 (2014)	1-Feb-2014

Parent: ^{239}Am: E=0; $J^\pi=(5/2)^-$; $T_{1/2}$=11.9 h *1*; Q(α)=5922.4 *14*; %α decay=0.010 *1*
^{239}Am-Q(α): From 2012Wa38.
^{239}Am-%α decay: from 1972Po04.

^{235}Np Levels

E(level)	J^π	$T_{1/2}$	Comments
0	$5/2^+$	396.1 d *12*	$T_{1/2}$: from Adopted Levels.
48.8 *9*	$(5/2)^-$		
91.6 *3*	$(7/2)^-$		
146.8 *7*	$(9/2)^-$		

α radiations

Eα	E(level)	Iα[‡]	HF[†]	Comments
5680 *2*	146.8	1.98 *3*	17	
5734 *2*	91.6	13.75 *7*	5.0	
5774.2 *15*	48.8	83.7 *4*	1.4	Eα: from 1991Ry01.
5825 *4*	0	0.33 *2*	630	

[†] Using $r_0(^{239}Am)$=1.5036, average of $r_0(^{235}U)$=1.5122 and $r_0(^{235}Pu)$≈1.4949 (1998Ak04).
[‡] For absolute intensity per 100 decays, multiply by 0.00010 *1*.

γ(^{235}Np)

E_γ	I_γ[‡#]	E_i(level)	J_i^π	E_f	J_f^π	Mult.	α[†]	Comments
48.8 *9*	50 *10*	48.8	$(5/2)^-$	0	$5/2^+$	E1	0.85 *5*	α(L)=0.63 *4*; α(M)=0.158 *9*; α(N+..)=0.053 *3* α(N)=0.0421 *23*; α(O)=0.0097 *5*; α(P)=0.00155 *8*; α(Q)=5.45×10^{-5} *23*

[†] Additional information 1.
[‡] From 1955As48.
[#] For absolute intensity per 100 decays, multiply by 0.00010 *1*.

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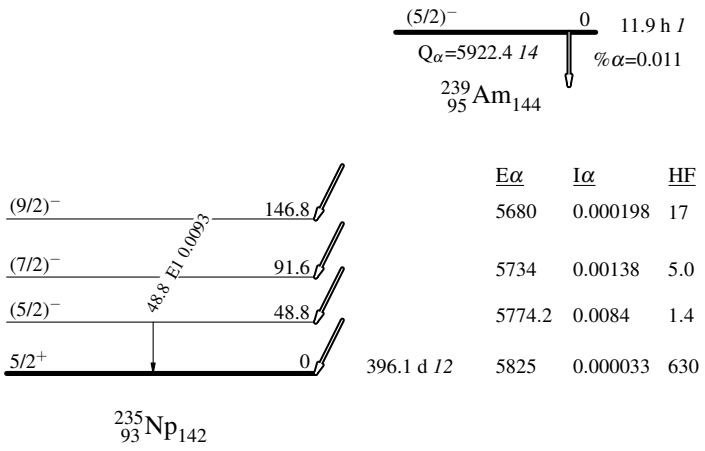
Decay Scheme

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



	Eα	Iα	HF
	5680	0.000198	17
	5734	0.00138	5.0
	5774.2	0.0084	1.4
	5825	0.000033	630