Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	E. Browne	NDS 107,2579 (2006)	1-Nov-2004

Q(β^-)=3706 *14*; S(n)=4680 *19*; S(p)=6351 *18*; Q(α)=3360 *19* 2012Wa38
Note: Current evaluation has used the following Q record 3700 syst 4840 SY6540 SY3680 syst 2003Au03.

^{232}Ac Levels

Cross Reference (XREF) Flags

A ^{232}Ra β^- decay

E(level)	J$^\pi$	T$_{1/2}$	XREF	Comments
0	(1$^+$)	119 s *5*	A	%β^-=100 %β^-: No β^- delayed fission (<10×10^{-4}%) (1990Me13). T$_{1/2}$: β^-, x-rays, 665.0γ followed (1986Gi08). Assignment: spallation of tungsten followed by mass separation (1986Gi08). Other: 1973Ch24. J$^\pi$: From Nilsson orbital syst (1972El21), one expects the proton configuration for the g.s. to be 3/2[651] and the neutron configuration to be 7/2[743], 1/2[631], or 5/2[622], resulting in J^π=5$^-$,1$^+$ or 4$^+$, respectively. Other possible proton configurations are: 1/2[400] and 1/2[530]. log ft's of ≈7 to 1$^-$, 1$^+$, 2$^+$, and 3$^-$ levels, require J^π=1$^+$ or 2. From the expected Nilsson orbitals the probable J^π is 1$^+$ with configuration=((π 3/2[651])(ν 1/2[631]))1$^+$ or configuration=((π 1/2[400])(ν 1/2[631]))1$^+$. All other couplings will have J^π≥3 for the lower member of the Gallagher-Moszkowski doublets.
7.5 *2*			A	
105.2 *2*	(0$^-$,1)†		A	
478.5 *4*	(0$^-$,1)†		A	

† Strong β^- feeding from 0$^+$ ^{232}Ra would require J^π=0$^-$ or 1; however, the decay scheme is incomplete.

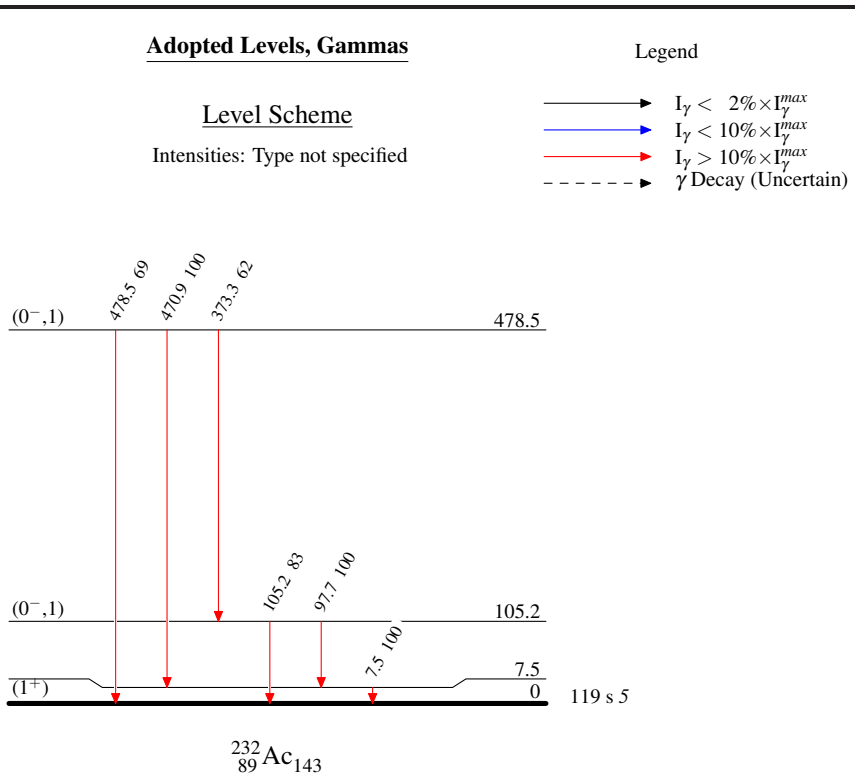
$\gamma(^{232}Ac)$

E$_i$(level)	J$_i^\pi$	E$_\gamma$	I$_\gamma$	E$_f$	J$_f^\pi$
7.5		(7.5 *calc*)	100	0	(1$^+$)
105.2	(0$^-$,1)	97.7 *2*	100 *10*	7.5	
		105.2 *4*	83 *25*	0	(1$^+$)
478.5	(0$^-$,1)	373.3 *4*	62 *31*	105.2	(0$^-$,1)
		470.9 *4*	100 *34*	7.5	
		478.5 *4*	69 *32*	0	(1$^+$)

Adopted Levels, Gammas

Level Scheme

Intensities: Type not specified



$^{232}_{89}Ac_{143}$