^{241}Am(d,p)   1976Gr19

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. J. Martin, C. D. Nesaraja	NDS 186, 261 (2022)	31-Dec-2021

E(d)=12.1 MeV (1976Gr19).
FWHM=15 keV.
Q(d,p)=3308 15 (1976Gr19).
θ=90°, 120° (1976Gr19).
$J^{\pi}(^{241}$Am)=5/2$^-$.

^{242}Am Levels

E(level)†	J$^{\pi a}$	E(level)†	J$^{\pi a}$	E(level)†	J$^{\pi a}$	E(level)†	J$^{\pi a}$
0^b	1$^-$	290^d	4$^{-@}$	873^f	(2$^-$)	1012^i	(2$^+$)$^{\&}$
49^b	3$^{-\ddagger}$	290^e	2$^{-@}$	900^g	(3$^-$)	1012^h	(4$^+$)$^{\&}$
49^c	5$^{-\ddagger}$	322^e	3$^-$	916		1068^h	(5$^+$)
75^b	(2$^-$)	340^d	(5$^-$)	935		1121	
114^c	6$^-$	371^e	(4$^-$)	951		1144	
149^b	(4$^-$),5$^{-\#}$	436^e	(5$^-$)	972^h	(3$^+$)	1168	
190^c	7$^-$	790		992			
245^d	3$^-$	823					

† The authors do not give uncertainties. From a comparison with energies in Adopted Levels the values are accurate to $\approx$2 keV.

‡ The peak at 49 keV is interpreted by the authors as a doublet consisting of the 3$^-$ member of the K^{π}=0$^-$ band and the 5$^-$ member of the K^{π}=5$^-$ band.

$^{\#}$ The peak at 149 keV is interpreted by the authors as a doublet consisting of the 4$^-$ and 5$^-$ members of the K^{π}=0$^-$ band. The authors label the 5$^-$ assignment with an A and the 5$^-$ with a B. See the general comment on J.

$^{@}$ The peak at 290 keV is interpreted by the authors as a doublet consisting of the 4$^-$ member of the K^{π}=3$^-$ band and the 2$^-$ member of the K^{π}=2$^-$ band.

$^{\&}$ The peak at 1012 keV is interpreted by the authors as a doublet consisting of the 2$^+$ member of the K^{π}=2$^+$ band and the 4$^+$ member of the K^{π}=3$^+$ band.

^{a} From 1976Gr19 based on a comparison of observed and theoretical cross section patterns, and on the rotational-band parameters. The authors′ degree of confidence for each assignment is expressed by labels A to C, with A being the most certain. The evaluators have assigned parens to assignments labeled by B or C.

^{b} Seq.(H): K^{π}=0$^-$: (π 5/2[523]-ν 5/2[622]).

^{c} Band(A): K^{π}=5$^-$: (π 5/2[523]+ν 5/2[622]).

^{d} Band(B): K^{π}=3$^-$: (π 5/2[523]+ν 1/2[631]).

^{e} Band(C): K^{π}=2$^-$: (π 5/2[523]-ν 1/2[631]).

^{f} Band(D): K^{π}=2$^-$: (π 5/2[523]-ν 1/2[620]).

^{g} Band(E): K^{π}=3$^-$: (π 5/2[523]+ν 1/2[620]).

^{h} Band(F): K^{π}=3$^+$: (π 5/2[523]+ν 1/2[501]).

^{i} Band(G): K^{π}=2$^+$: (π 5/2[523]-ν 1/2[501]).

^{241}**Am(d,p)**   **1976Gr19**

Band(F): $K^\pi=3^+$: (π 5/2[523]+ν 1/2[501])

(5$^+$)   1068

(4$^+$)   1012

Band(E): $K^\pi=3^-$: (π 5/2[523]+ν 1/2[620])

(3$^+$)   972

Band(D): $K^\pi=2^-$: (π 5/2[523]-ν 1/2[620])

(3$^-$)   900

(2$^-$)   873

Band(C): $K^\pi=2^-$: (π 5/2[523]-ν 1/2[631])

(5$^-$)   436

Band(B): $K^\pi=3^-$: (π 5/2[523]+ν 1/2[631])

(4$^-$)   371

(5$^-$)   340

3$^-$ 322

4$^-$ 290

2$^-$ 290

3$^-$ 245

Band(A): $K^\pi=5^-$: (π 5/2[523]+ν 5/2[622])

7$^-$ 190

6$^-$ 114

5$^-$ 49

$^{242}_{95}Am_{147}$

^{241}Am(d,p)   1976Gr19 (continued)

Band(G): K^π=2$^+$: (π 5/2[523]-ν 1/2[501])

(2$^+$)   1012

Seq.(H): K^π=0$^-$: (π 5/2[523]-ν 5/2[622])

(4$^-$),5$^-$ 149

(2$^-$)   75

3$^-$ 49

1$^-$ 0

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