^{240}Pu(α,t) 1975Er01

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	C. D. Nesaraja	NDS 130, 183 (2015)	30-Sep-2015

1975Er01: 29 MeV beams of α particles from the University of Minnesota MP tandem Van de Graaff accelerator was used to bombard ^{240}Pu targets. The reaction products were studies with an Enge split-pole magnetic spectrograph. Absolute cross sections were determined using two silicon monitor detectors.

^{241}Am Levels

E(level)	J$^{\pi}$[†]	(dσ_{exp}/dΩ)/(2J+1)σ (DWBA)[‡]	Comments
95[#]	9/2$^-$	0.66 *5*	
158[#] *2*	11/2$^-$	0.027 *4*	
235[@] *5*	7/2$^+$	0.037 *20*	
272[@] *2*	9/2$^+$	0.070 *10*	
323[@] *4*	11/2$^+$	0.084 *20*	
380[@] *1*	13/2$^+$	0.35 *2*	
475[&] *4*	3/2$^-$	0.11 *5*	
504[&] *3*	5/2$^-$	0.14 *5*	
549[&] *1*	7/2$^-$	0.60 *5*	
625[a] *3*	(1/2$^+$)		
653[a] *4*	(3/2$^+$,5/2$^+$)		
682[&] *3*	(11/2$^-$)		J$^{\pi}$: Assignment considered by the authors (1975Er01) from the expected energy for the band member.
732[b] *4*	(11/2$^+$)		
822[b] *4*	(13/2$^+$)	0.24 *3*	
884 *4*			
1020 *4*			
1064 *4*			
1106 *4*			
1132 *5*			
1163[c] *3*	(9/2$^-$)		
1227 *3*			

[†] Spin and orbital assignments were made by 1975Er01 based on a comparison with theory of the experimental spectroscopic factors, fit to rotational bands, and previous assignments known from ^{245}Bk α decay. These assignments are consistent with the adopted values.

[‡] See 1975Er01 for theoretical spectroscopic factors calculated with Coriolis mixing and pairing effects.

[#] Band(A): 5/2[523] band.

[@] Band(B): 5/2[624] band.

[&] Band(C): 3/2[521] band.

[a] Band(D): possibly 1/2[400] band?

[b] Band(E): probably 7/2[633] band.

[c] Band(F): 7/2[514] band?

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Band(F): 7/2[514] band?

(9/2$^-$) 1163

Band(E): Probably 7/2[633] band

(13/2$^+$) 822

(11/2$^+$) 732

Band(C): 3/2[521] band

(11/2$^-$) 682

Band(D): Possibly 1/2[400] band?

(3/2$^+$,5/2$^+$) 653

(1/2$^+$) 625

7/2$^-$ 549

5/2$^-$ 504

3/2$^-$ 475

Band(B): 5/2[624] band

13/2$^+$ 380

11/2$^+$ 323

9/2$^+$ 272

7/2$^+$ 235

Band(A): 5/2[523] band

11/2$^-$ 158

9/2$^-$ 95

$^{241}_{95}Am_{146}$