

$^{246}\text{Cm}(\alpha, t) \text{ E}=28, 29 \text{ MeV}$ [1979Ah03, 1977Ah01](#)

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	C. D. Nesaraja	NDS 125, 395 (2015)	31-Mar-2014

[1979Ah03](#): Thin ^{246}Cm target was bombarded by α -particles at the Argonne FN tandem Van de Graaff accelerator. Tritons were detected with Kodak NTB-50 photographic emulsion plates at 80° and 90° with bombarding α energies of 28.0 MeV and 29.0 MeV respectively. Elastically scattered α -particles were detected with a Au-Si surface barrier detector at 60° to determine the absolute differential cross sections.

[1977Ah01](#): Experimental evidence for the identification of the deformed proton orbital 1/2[521].

 ^{247}Bk Levels

E(level)	J^π	S^\dagger	E(level)	J^π	S^\dagger	E(level)	J^π	S^\dagger
0 [#]	3/2 ⁻	0.14 3	518 ^{&} 5	3/2 ⁺	0.09 3	828 ^c 5	9/2 ⁻	0.35 10
30 [#] 3	5/2 ⁻	0.18	541 ^a 3	9/2 ⁻	0.60 12	904 ^d 3	9/2 ⁻	1.36 20
72 [#] 3	7/2 ⁻	1.40 13	587 ^b 4	13/2 ⁺	0.22 7	983 3		
130 [#] 3	9/2 ⁻		704 ^c 4	1/2 ⁻	0.23 5	1149 4		
196 [@] 3	13/2 ⁺	3.82 28	743 ^c 3	5/2 ⁻	0.83 9	1166 ^e 4	13/2 ⁺	0.77 16
487 ^{&} 3	1/2 ⁺	0.21 5	815 ^c 4	7/2 ⁻	0.35 7			

[†] $(2J+1)S=(d\sigma/d\Omega)/N \theta(\text{DWBA})$, where $N=120$.

[‡] Spin and orbital assignments were based on comparison of the experimental and calculated spectroscopic factors.

[#] Band(A): 3/2[521] band member.

[@] Band(B): 7/2[633] band member.

[&] Band(C): 1/2[400] band member.

^a Band(D): 5/2[523] band member.

^b Band(E): 5/2[642] band member.

^c Band(F): 1/2[521] band member.

^d Band(G): 7/2[514] band member.

^e Band(H): 9/2[624] band member?

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						Band(F): 1/2[521] band member	
						<u>9/2⁻</u>	<u>828</u>
						<u>7/2⁻</u>	<u>815</u>
						<u>5/2⁻</u>	<u>743</u>
						Band(E): 5/2[642] band member	
						<u>1/2⁻</u>	<u>704</u>
						Band(D): 5/2[523] band member	
						<u>13/2⁺</u>	<u>587</u>
						Band(C): 1/2[400] band member	
						<u>9/2⁻</u>	<u>541</u>
						<u>3/2⁺</u>	<u>518</u>
						<u>1/2⁺</u>	<u>487</u>
						Band(B): 7/2[633] band member	
						<u>13/2⁺</u>	<u>196</u>
						Band(A): 3/2[521] band member	
						<u>9/2⁻</u>	<u>130</u>
						<u>7/2⁻</u>	<u>72</u>
						<u>5/2⁻</u>	<u>30</u>
						<u>3/2⁻</u>	<u>0</u>

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Band(G): 7/2[514] band member		Band(H): 9/2[624] band member?	
<u>9/2⁻</u>	<u>904</u>	<u>13/2⁺</u>	<u>1166</u>

²⁴⁷Bk₁₅₀