$$^{248}\text{Cm}(\alpha,\alpha'),(d,d') \quad \textbf{1975Th11,1975Ya13}$$

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	M. J. Martin	NDS 122, 377 (2014)	1-Sep-2014

B(EL) values given here are from 1975Th11. The values were normalized to B(E3)(1094 level)=0.41, obtained in Coulomb excitation, but note that the uncertainty of 0.10 In this normalization value is not included.

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1975Th11: E(d)=15 MeV.   FWHM ≈ 8 keV.   θ=90°, 125°
1975Ya13: E(d)=16 MeV.   FWHM ≈ 14 keV.  θ=90°, 125°
          E(α)=29 MeV.   θ=125°
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^{248}Cm Levels

E(level)[†]	J$^\pi$ [@]	Comments
0	0^{+}[&]	
43 *1*	2^{+}[&]	
144 *1*	4^{+}[&]	
299 *2*	6^{+}[&]	
509[#] *4*	(8^{+})	
1050[‡] *2*	(2^{+})[b]	B(E2)=0.17 *4*.
1050?[‡] *2*	(1^{-})[a]	
1095 *2*	3^{-}[a]	BE3=0.41 (normalization value from Coulomb excitation).
1131[#] *3*	2^{+}[c]	
1144 *2*	(4^{+})[b]	
1172 *3*	(5^{-})[a]	
1222 *4*	4^{+}[c]	
1236 *2*	(3^{-})	B(E3)=0.15.
1305 *3*	(3^{-})	
1319[#] *3*		
1358[#] *3*		
1399[#] *3*		
1440[#] *3*		
1469[#] *4*		
1484 *2*	(3^{-})	B(E3)=0.10.
1514[#] *3*		
1552[#] *4*		
1651 *4*		
1883 *3*		
1938 *4*		
1969 *4*		
2000 *4*		E(level): weakly populated. Seen only At 125°.

[†] From 1975Ya13, except where noted otherwise.

[‡] The peak At 1950 has a B(E2) value agreeing with that for a 2^{+} excitation At this energy In Coulomb excitation, suggesting that the main contribution to this peak is from this same 2^{+} level; however, based on the members of the K$^\pi$=1^{-} band seen In Coulomb excitation beginning At the 7^{-} member (E=1295), and with the assumption that the 3^{-} and 5^{-} band members are the levels seen here At 1094 and 1172, respectively, the 1^{-} band head energy is expected At 1050. The peak At this energy In (d,d') thus possibly includes both a 2^{+} and a 1^{-} level.

^{248}Cm(α,α'),(d,d')   **1975Th11,1975Ya13 (continued)**

^{248}Cm Levels (continued)

[#] From 1975Th11. From a comparison with Adopted Levels, the energies of these authors are≈5 keV too low. The evaluator has increased the authors' values by 5 keV.

[@] From the ratio of cross sections at 90° and 125°, and a fit to a rotational band (1975Th11,1975Ya13). The assignment for the 1131 and 1222 levels comes from ADOPTED levels.

[&] $K^{\pi}=0^+$ g.s. band.

[a] $K^{\pi}=1^-$ octupole-vibrational band.

[b] $K^{\pi}=2^+$ γ-vibrational band.

[c] $K^{\pi}=0^+$ band.