

**Coulomb excitation** [1982Be12](#)

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	C. D. Nesaraja	NDS 195,718 (2024)	12-Oct-2023

[1982Be12](#): Coulomb excitation studied via the  $^{249}\text{Bk}(\alpha, \alpha')$  reaction with  $E(\alpha)=17$  MeV from the Oak Ridge EN tandem Van de Graaff bombarding  $\approx 20\mu\text{g}/\text{cm}^2$  enriched  $^{249}\text{Bk}$  target. Scattered  $^4\text{He}$  ions were observed at  $\theta=150^\circ$  using the split-pole magnetic spectrometer with a position-sensitive focal plane detector. Winther De-Boer analysis assuming rigid-rotor model and pure E2 excitation. The values of the inelastic-cross sections to the g.s.  $7/2[633]$  band members are consistent with intrinsic-quadrupole moment  $Q(20)=12.70$  24 and g.s. spectroscopic quadrupole moment  $Q=5.93$  11 ([1982Be12](#)).

 $^{249}\text{Bk}$  Levels

E(level) <sup>†</sup>	J $\pi$ <sup>†</sup>	Comments
0	7/2 <sup>+</sup>	
41.805 7	9/2 <sup>+</sup>	BE2=6.81 25 (from F. K. McGowan priv. comm. 1988; evaluator is unable to obtain the private communication).
93.759 8	11/2 <sup>+</sup>	B(E2)=1.75 25 (from F. K. McGowan priv. comm. 1988; evaluator is unable to obtain the private communication).
155.854 10	13/2 <sup>+</sup>	
229.242 11	(15/2 <sup>+</sup> )	

<sup>†</sup> From Adopted Levels.