
 $^{204}\text{Hg}(\alpha, \alpha')$ **1981Ba45**

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	C. J. Chiara and F. G. Kondev		NDS 111,141 (2010)	1-Oct-2009

1981Ba45: HgS target enriched to 84% ^{204}Hg between thin C layers; $E(\alpha)=27$ MeV; annular surface-barrier detector for $E(\alpha')$ at 171° in lab frame, FWHM=40 keV, magnetic spectrograph for $\alpha'(\theta)$. Coupled-channels analysis.

 ^{204}Hg Levels

E(level)	J^π [†]	Comments
0	0^+	
437 5	2^+	$\beta_2=0.061$ using scattering potential from optical model fit to elastic scattering data.
1128 5		
2272 5		
2674 5	3^-	$\beta_3=0.076$ octupole vibration using scattering potential from optical model fit to elastic scattering data.
J^π : Assignment supported by angular distributions from inelastic scattering, which agree with octupole phonon coupled-channels predictions.		

[†] From **1981Ba45** based on $\alpha'(\theta)$.