^{110}Cd(α,α') 1977Sp05,1967BaZV,1963Ha20

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	G. Gürdal and F. G. Kondev	NDS 113, 1315 (2012)	1-Aug-2011

1977Sp05: The alpha beams were accelerated to energies above the Coulomb barrier (10 MeV) at ANU tandem accelerator. Most data were taken at Eα=17.0 and 17.5 MeV. ≈8 μg/cm^2, 97.2% enriched ^{110}Cd target was used. Scattered particles were detected with a 200 μm thick surface barrier detector which subtended a solid angle of ≈40 msr at a mean laboratory scattering angle of 171.6°. The overall energy resolution of the system was ≈30 keV. Measured: Eα, θ=171.6°.

1963Ha20: Eα=14-20 MeV. Target: 96% enriched ^{110}Cd. Measured: Eγ, Iγ, $\alpha\gamma(\theta)$, θ from 135° to 165°.

1967BaZV: Eα=42 MeV. Target: 0.137 mg/cm^2 thick ^{110}Cd with a 0.045 mg/cm^2 thick gold backing. Measured: σ(Eα,θ), θ from 30° to 65°. DWBA analysis.

Others: 2004Lu05, 1981Mi08, 1960Cr05.

^{110}Cd Levels

β_L (deformation parameter) is from 1967BaZV.

E(level)[†]	L[‡]	Comments
0.0		
657 *3*	2	β_2=0.20
1475 *3*		
1539 *3*		
1785 *5*		
2076 *3*	3	β_3=0.18 B(E3)↑: 0.63, uncertainty 30% to 50% (1963Ha20). 1400 keV *3* γ-ray depopulating this state was observed by 1963Ha20.
2221		
2475		
2544		
2984		

[†] From 1977Sp05.

[‡] From β_L (deformation parameter) in 1967BaZV.