^{68}Zn(α,α') 1971Al18

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. A. Mccutchan	NDS 113, 1735 (2012)	1-Mar-2012

1990Bu25: Eα=50.5 MeV. Measured $\sigma(\theta)$, θ=10°−80°; DWBA and coupled channel analysis; extracted β_L.
1988Ba71: Eα=25 MeV. Measured $\sigma(\theta)$ (FWHM=100-200 keV); coupled channel calculations based on asymmetric rotor model and the vibrational model.
1971Al18: Eα=30.55 MeV. Measured $\sigma(\theta)$ (FWHM=70-120 keV); DWBA analysis, deduced β_L.
1975Ba77: Eα=29, 38, 50.5 MeV. Measured $\sigma(\theta)$; DWBA analysis, deduced β_L.
1971Go36,1968Go35: Eα=38-40 MeV. Measured $\sigma(\theta)$; diffraction theory analysis.
1965Wi04: Eα=22.2 MeV. Measured $\sigma(\theta)$; DWBA analysis, deduced β_L.
Others: 1979Pa21, 1974Yu02, 1963Br13, 1962Br37.

^{68}Zn Levels

E(level)†	L‡	β_LR fm†	Comments
0			
1080 *30*	2	1.03 *5*	β_2: 0.18 (1965Wi04), −0.20 (1968Go35), 0.16 (1971Al18), −0.23 (1971Go36), 0.20 (1975Ba77), 0.220 (1990Bu25, DWBA), 0.206 (1990Bu25, coupled channel). β_LR fm: Other: 0.886 (harmonic vibrational model), 1.015 (asymmetric rotor model) both from 1988Ba71 coupled channel calculations.
1650 *30*			
1880 *30*			
2340 *30*			
2420 *30*			
2750 *30*	3	1.03 *5*	β_3: 0.17 (1968Go35), 0.16 (1971Al18), 0.19 (1975Ba77). β_LR fm: Other: 0.899 (1988Ba71).
2960 *30*	4	0.46 *3*	
3170 *30*	(5)	0.17 *2*	
3450 *30*	5	0.35 *3*	
3600 *30*			
3720 *30*	3	0.27 *4*	
3850 *30*			
3940 *30*			
4230 *30*			
4340 *30*			

† From 1971Al18.
‡ From DWBA fits to $\sigma(\theta)$ (1971Al18).