^{119}Sn(α,α'),(d,d') 1968Ku20,1966Ki04

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	D. M. Symochko, E. Browne, J. K. Tuli	NDS 110,2945 (2009)	1-Dec-2008

1968Ku20 report L-values and deformation parameters, β_L. But due to poor resolution, it is difficult to combine their results with levels given here. β_2=0.105 *10* for 950+1350 level with L=2; β_3=0.116 *10* for 2250+2500 level with L=3; β_4=0.049 for 2950 level with L=4, where E(level) were given by 1968Ku20.

(α,α') 1968Ku20: E=34.4 MeV, 71.7% enriched target (1.87 nγ/cm^2 thick); semi FWHM=180 keV; DWBA
1982Ok01: E=109 MeV, semi counter-telescope
(d,d') 1966Ki04: E=15 MeV, magnetic spectrograph FWHM=40-50 keV; 85.9% enriched target (2.54 mg/cm^2 thick)

^{119}Sn Levels

E(level)[†]	J$^\pi$[‡]	L	Comments
0			
900	+		
1060	+		
1210			
1340	+		
1510			
1590			
1730	+		
1900	+		
2240	−		
2360	−		
2550			E(level): 2750 in 1966Ki04, may be misprint.
2700			
2770	−		
2890			
2940	−		
3060	+		
3130	−		
≈12900[#]		2	Γ=4.2 MeV L: GQR.

[†] From 1966Ki04.
[‡] Parity values are those from 1966Ki04 based on the ratio of dσ/dΩ at 60° and 40°. When ratio is >0.69 the parity is odd, it is even when the ratio is <0.46.
[#] From 1982Ok01, the authors studied (α,α'n) and observed fast-neutron emission from the giant quadrupole res.