^{60}Ni(α,α') 1982Ku18,1987Ba78,1985Al24

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli	NDS 114, 1849 (2013)	31-Dec-2012

Eα=28.5 MeV. FWHM≈70 keV. Measured $\sigma(\theta)$. θ=15°−110°. Enriched target (1982Ku18). See also 1968In03 below from the same group.

Eα=34.4 MeV. Measured $\sigma(\theta)$. Magnetic spectrograph, FWHM=70 keV, θ=15°−40°. Semi, FWHM=150 keV, θ=40°−60°. Enriched target (1968In03).

Eα= 25 MeV. FWHM≈ 200 keV. Measured $\sigma(\theta)$ (1987Ba78).

Eα= 172.5 MeV. FWHM≈ 250 keV. Measured $\sigma(\theta)$ (1985Al24).

Giant quadrupole res, Eα= 129 MeV (1992Yo01): E= 16.31 MeV *13*, Γ= 5.89 MeV *25* energy wt sum rule= 76% *14* other: 1976Yo02.

Others: 1989Ai02, 1978Ro12, 1978Fa03, 1975Gi10, 1974Tr04, 1974Le28, 1974Co28, 1972Re15, 1970Br07.

^{60}Ni Levels

E(level)[†]	L[#]	β_L[@]	Comments
0			
1330	2	0.200	β_2=0.153 (1987Ba78); 0.140 *3* or 0.171 *3* (1985Al24).
2160[‡]			
2290[‡]			
2500[‡]			β_4=0.057 (1987Ba78); 0.05 (1985Al24).
3110	2	0.061	β_2=0.070 (1987Ba78).
3350	2	0.035	
3700	4	0.042	
4040	3	0.160	β_3=0.121 (1987Ba78); 0.103 *2* or 0.116 *2* (1985Al24). E(level): 1992Yo01: E=4010, βR=0.73.
4300	2+4		
4500	2	0.038	
5010	5	0.080	β_5=0.139 (1987Ba78).
5110	4	0.072	
5250	2	0.047	
5390	3	0.049	
5600	3	0.062	
5800	2	0.041	
5980	5	0.035	
6160	3	0.072	
6340	2	0.046	
6530	3	0.038	
7000			L: L=(3,4), β_3=0.063, β_4=0.063 (1968In03).

[†] From 1982Ku18.

[‡] Two-phonon states. For calculation of deformation parameters with diffraction model and coupled-channel calculations, see 1968In03 and 1982Ku18, respectively.

[#] From comparison with DWBA (1982Ku18). For E(level)> 3 MeV the peaks contain more than one level and the L-value given is for the dominating one.

[@] Determined by normalizing dσ/dΩ(DWBA) to dσ/dΩ(expt) (1982Ku18). See also other values in comments.