

$^{56}\text{Fe}(\alpha,\alpha')$ 1989Ba53,1970Br07,2006Lu04

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Huo Junde, Huo Su, Yang Dong		NDS 112, 1513 (2011)	29-Oct-2009

1978Ro12: E=15, 18, 19 MeV, measured $\sigma(\theta)$.

1989Ba53: E=25 MeV, FWHM: 150-250 keV, measured $\sigma(E,\theta)$.

1970Br07: E=44 MeV, FWHM: 250-keV, measured $\sigma(E\alpha',\theta)$; DWBA analyses.

1976Yo02: E=96,115 MeV; measured $\sigma(E\alpha',\theta)$, giant resonance analysis.

1996Yo02: E=210 MeV, measured σ at small angles including 0° , DWBA analyses.

2006Lu04: E=240 MeV, measured σ at small angles including 0° , multipole-dipole-multipole spectrometer, DWBA analyses.

See also other references: 1972Ca05, 1977Pa17, 1977Yu02, 1979Pa21, 1980Bu29, 1982En04.

All data are from 1970Br07, except as noted.

 ^{56}Fe Levels

E(level)	L&	β_{LR} , fm [@]	Comments
0.0			
847 [†]	2	1.0	$\beta_2=0.24$ (1975Gi04). $\beta_2=0.181$ (1978Ro12).
2085 [†]			
2658 [†]	2	0.27	
3070	(3)	(0.28)	
3123 [†]			
3389 [†]			
3756 [†]			
4370	3	0.59	
4510 [†]			
5040	4	0.35	
13.13×10^3 [#]			IGR (Isoscalar Giant Resonance) (2006Lu04).
16.15×10^3 [‡]	2		$\Gamma=5.52$ MeV (1996Yo02) GQR (1996Yo02).
1670×10^1 30	2		$\Gamma=5.7$ MeV 5 (1976Yo02) E(level): from 1976Yo02. GQR (1976Yo02).
19.2×10^3 [‡]			$\Gamma=745$ MeV (1996Yo02) GQR (1996Yo02).
25.09×10^3 [#]			IGR (Isoscalar Giant Resonance) (2006Lu04).

[†] From 1989Ba53.

[‡] From 1996Yo02.

[#] From 2006Lu04.

[@] From $\sigma(\theta)$ DWBA calculations (1970Br07).

[&] From $\sigma(\theta)$ fits with DWBA.