^{56}Fe(e,e′) 1971He08,1970Pe15,1962Be18

History

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

Others: 1972Li28, 1972ToZI, 1973ToZL.
1962Be18: E=150 MeV, measured spectra of electrons, Born approximation analysis.
1970Pe15: E=60 MeV, measured σ(Ee′,θ), DWBA analysis.
1971He08: E=198, 250, 300 MeV, measured σ(E,θ), DWBA analysis.
1972Li28: E=150, 225 MeV, measured σ(E, θ).
1972ToZI: E=120, 170, 250 MeV, giant resonance.
1973ToZL: E=120-250 MeV, giant resonances.
2004De25: E=226 MeV, measured σ(E, θ).
For σ(E), see 1980Al04, 1980Wo02, and 1984Me06.
For charge density distribution, see 1978Sh20.
For quasielastic electron process, see 1983Ce03, 1983OrZY, and 1983RyZZ.
For E2 form factors, see 1989Na12.
See also 1971Li21 and 1974WoZM.
All data are from 1970Pe15, except as noted.

^{56}Fe Levels

E(level)	J$^{\pi}$[†]	T$_{1/2}$[&]	L[b]	Comments
0				
850		6.9 ps *4*	2	B(E2)↑=0.071 *5* (2004De25) B(E2)↑: Others: 0.094 *5* (1971He08), the B(E2) values are somewhat model dependent in the sense that the Coulomb excitation B(E2) to the 2$^+$ state is used as a constraint on the possible charge density model 0.125 *27* (1970Pe15), 0.068 *5* (1972Li28), 0.072 *4* (1962Be18).
2650		0.58[a] ps *+21−13*	2	B(E2)↑=0.0037 *10* (1970Pe15) BE2=0.0035 8 (2004De25).
2960		12 fs *6*	2,(0)	B(E2)↑=0.0021 *11* (1970Pe15)
3100			3	B(E3)↑=0.0036 (1962Be18) BE3=0.217 35 (2004De25).
3.2×10^3[@] *1*				B(E4)↑=13.1 *13* (2004De25)
3370		23 fs *6*	2	B(E2)↑=0.0041 *10* (1970Pe15) BE2=0.0047 10 (2004De25).
3600		0.18 ps *8*	2,(0)	B(E2)↑=0.0017 *7* (1970Pe15)
3800		37 fs *19*	2	B(E2)↑=0.0010 *5* (1970Pe15)
4320		37[a] fs *6*	2	B(E2)↑=0.0051 *8* (1971He08)
4510			3	B(E3)↑=0.017 *4* (1970Pe15) BE3=0.80 7 (2004De25).
4730		63[a] fs *+57−20*	2	B(E2)↑=0.0019 *9* (1970Pe15) BE2=0.0127 21 (2004De25).
5050			4	B(E4)↑=0.0011 (1962Be18); B(E2)↑=17.2 *17* (2004De25)
5230		20[a] fs *+20−10*	(2)	B(E2)↑=0.0036 *18* (1970Pe15)
6.6×10^3[@] *2*				B(E4)↑=10.2 *19* (2004De25)
7.2×10^3[@] *2*				B(E3)↑=0.547 *47* (2004De25)
13.3×10^3[‡] *2*	3$^-$			
16.1×10^3[‡] *2*	0$^+$,2$^+$			B(E2)↑=0.0672 The fraction of the sum rules with T=0 exhausted by the 16.1 MeV resonance state become about 80% and 140% for E2 and E0 assignments, respectively.
18.0×10^3[#]	1$^+$[#]			

Continued on next page (footnotes at end of table)

^{56}Fe(e,e′) 1971He08,1970Pe15,1962Be18 (continued)

^{56}Fe Levels (continued)

E(level)	J$^{\pi}$ †
19.0×10^3 ‡ *2*	
≈32×10^3 ‡	2$^+$

† From giant resonance analysis (1973ToZL), except as noted.
‡ Giant resonances, from 1973ToZL.
# From 1972ToZI.
@ From 2004De25.
& From B(E2) and adopted g.s. branching.
a g.s. branch not known. Upper limit value given is for 100% branching to g.s.
b Based on $\sigma(\theta)$ fits with DWBA.