
 $^{54}\text{Fe}(\pi,\pi')$ [1987Oa01,1988Oa01](#)

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Yang Dong, Huo Junde		NDS 121, 1 (2014)	20-Jun-2014

[Additional information 1.](#)

Includes $(\pi^-, \pi^{-'}), (\pi^+, \pi^{+'})$.

[1987Oa01](#), [1988Oa01](#): E=160 MeV, measured $\sigma(\theta)$, analyzed using DWIA calculations with collective model transition densities.

[1991Ra22](#): analysis of (π,π') data, extracted deformation parameters of first 2^+ state.

See also [1988Oa02](#).

All data are from [1987Oa01](#), except as noted.

 ^{54}Fe Levels

E(level)	J^π [†]	Comments
0.0	0^+	
1410	2^+	$\beta_L=0.094$ <i>I2</i> $(\pi^+, \pi^{+'})$ at 180 MeV, $\beta_L=0.10$ <i>2</i> $(\pi^-, \pi^{-'})$ at 180 MeV, see 1991Ra22 .
2540	4^+	
2960	2^+	
3170	2^+	
3300	4^+	
3830	4^+	
4050 [‡]	4^+ [‡]	
4260 [‡]	4^+ [‡]	
4580	2^+	
4780	3^-	
4950	$4^{(+)}$	
5150 [‡]	(0^+) [‡]	
5390 [‡]	2^+ [‡]	
5620 [‡]	3^- [‡]	
6340	3^-	
6400 [‡]	0^+ [‡]	

[†] From $\sigma(\theta)$.

[‡] From [1988Oa01](#).