

$^{56}\text{Fe}(\text{d,t}),(\text{pol d,t})$ [1981Za04](#),[1962Ma21](#),[1973Ma58](#)

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Huo Junde	NDS 109, 787 (2008)	30-Apr-2007

Additional information 1.

[1962Ma21](#): E=21.6 MeV; measured $\sigma(\text{ET},\theta)$ and absolute cross sections; energy spectra: 12° – 30° in 3° steps; NaI;

[1973Ma58](#): E=12 MeV; photographic plates; data were analyzed in terms of the DWBA theory of direct reaction.

[1981Za04](#): E=12 MeV; enriched target ($100 \mu\text{g}/\text{cm}^2$); tritiums were recorded simultaneously at 24 angles (5° – 175° in 7.5° steps) in emulsion; DWBA analysis.

[1991A114](#): E(pol d)=15, 16, 18 MeV; measured vector analyzing power, 10° – 55° , position-sensitive counter telescope in the focal plane of an Enge spectrograph; DWBA analysis.

All data are from [1981Za04](#), except as noted.

 ^{55}Fe Levels

E(α),L(α) From [1962Ma21](#).

E(level)	J^π [‡]	L	C^2S [#]
0.0	$3/2^-$	1	0.67,0.90
411	$1/2^-$	1	0.25,0.28
931 [†]	$5/2^-$	3	0.35,0.40
1316 [†]	$7/2^-$	3	0.73,0.84
1409	$7/2^-$	3	2.91,3.48
$2.0 \times 10^3?$		1	
$2.5 \times 10^3?$		3	

[†] There is a difference of level energy value on fig. 1 and table ii in [1981Za04](#). Evaluator gives the level energy value referred to [1973Ma58](#).

[‡] From [1981Za04](#). Based on $\sigma(\text{E}(\text{t}),\theta)$ measurements, DWBA analysis, and S extractions.

[#] Used two sets of optical-model parameters, from [1981Za04](#).