^{54}Fe(p,d),(pol p,d) 1979Su01

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Huo Junde	NDS 110,2689 (2009)	31-Mar-2007

1979Su01: E=40.16 MeV, FWHM=15 keV, θ=6°−90°, measured σ(E,θ), a 50 CM long delay-line position-sensitive proportional counter combined with a ΔE proportional counter and a plastic scintillator in focal plane of an Enge-split-pole spectrograph, DWBA analysis.

1973Ne18, 1973Ne05: E=29 MeV, θ=15°−60°, measured σ(E,θ), counter telescopes, each telescope consisted of a 2000 um E-telector and a totally depleted 200 um ΔE detector, DWBA analysis.

1972Oh05: E=52 MeV, FWHM=80 keV, θ=4.8°−44.8°, measured σ(E,θ), an array of proportional counters in focal plane of a magnetic spectrometer, DWBA analysis.

1985Di12: polarized p, E=122.4 MeV, FWHM≈200 keV, θ=8°−40°. measured analyzing power and $\sigma(\theta)$, σ(E,θ), position-sensitive proportional chamber placed in the focal plane of QDDM magnetic spectrometer, DWBA analysis.

Others: 1965Sh06, 1964Le10, 1962Go16.

All data are from 1979Su01, except as noted.

^{53}Fe Levels

E(level)	J^{π}[#]	L	C^2S[†]	Comments
0.0	$7/2^-$	3	3.48	
745 *3*	$3/2^-$	1	0.05	
776 *3*	$1/2^-$	1	0.01	J^{π}: L=1 from (p,d).
1330 *3*				
1423 *3*	$5/2^-$	3	0.08	J^{π}: J dependence of $\sigma(\theta)$.
1693 *5*	$7/2^-$	3	0.006	L,C^2S: from 1985Di12.
2042 *3*	$3/2^-$	1	0.06	
2315 *5*				
2339 *4*				
2405 *4*				
2479				E(level): observed only in 1973Ne18.
2839 *4*	$7/2^-$[@]	3	0.39	
2915 *5*	$(7/2)^-$	3	0.06	
2944 *3*	$(3/2)^-$	1	0.05	
2976 *3*	$1/2^+$	0	1.31	
3333 *3*	$7/2^-$	3	0.58	
3399 *3*	$3/2^+$	2	0.97	
3567 *3*	$7/2^-$[@]	3	0.30	
3697 *3*	$(3/2)^-$	1	0.04	
3774 *5*	$(7/2)^-$	3	0.04	
3803 *5*	$(3/2)^-$	1	0.03	
3852 *5*	$(3/2)^-$	1	0.03	
3892 *5*	$(7/2)^-$	3	0.04	
4149 *5*				
4250 *3*	$7/2^-$[@]	3	2.11	E(level): IAS of ^{53}Mn(g.s.).
4451 *5*				
4557 *7*	$(7/2)^-$	3	0.04	
4604 *10*				
4671 *10*				
4764 *10*				
4801 *10*				
4884 *10*	$(7/2)^-$	3	0.04	
5093 *5*				
5185 *7*				
5454 *5*				
5478 *7*	$(3/2)^+$	2[‡]		

Continued on next page (footnotes at end of table)

^{54}Fe(p,d),(pol p,d) 1979Su01 (continued)

^{53}Fe Levels (continued)

E(level)	J^{π}[#]	L	C^2S[†]	Comments
5568 *7*		(3,1)[‡]		
5606 *8*				
5960 *6*				
5994 *9*				
6152 *9*				
6179 *8*				
6388 *8*	$1/2^+$	0	0.05	
6419 *9*				
6504 *9*	$1/2^+$	0	0.05	
6569 *10*	$3/2^-$	1	0.03	E(level): IAS of $3/2^-$ level in ^{53}Mn.
6800 *10*				
6831 *10*				
6942 *10*	$1/2^+$	0	0.23	
7028 *10*	$1/2^+$	0	1.65	E(level): IAS of $1/2^+$ level is ^{53}Mn.
7122 *10*	$1/2^+$	0	0.07	
7263 *10*	$3/2^+$	2	0.52	E(level): IAS of $3/2^+$ level is ^{53}Mn.
7304 *15*		2	0.09	
7364 *15*				

[†] From DWBA.
[‡] From 1972Oh05.
[#] Adopted values; values in parentheses were assumed for calculation of C^2S.
[@] Based on strong L=3 and analyzing-power data from 1985Di12.