^{58}Fe(p,p′) 1971Ma35,1964Sp03

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Caroline D. Nesaraja, Scott D. Geraedts and Balraj Singh	NDS 111, 897 (2010)	12-Jan-2010

1971Ma35: E=49.35 MeV. Measured $\sigma(\theta)$ using a double- focusing magnetic spectrometer. FWHM=70 keV (As stated In author′s earlier paper 1971Ma16). DWBA analysis of $\sigma(\theta)$ data.
1964Sp03: E=7 MeV. Measured protons with a magnetic spectrograph, FWHM≈14 keV.
1964Be07: E=10 MeV. Measured $\sigma(\theta)$ for g.s. and first 2^+ state.
2009Sh19: E=200 MeV. Measured proton spectra with a K600 spectrometer and FWHM=35-50 keV. Excitation energy range covered was up to 20 MeV. Deduced isoscalar giant quadrupole resonance (ISGQR).
Additional information 1.

^{58}Fe Levels

E(level)[#]	L[‡]	Relative intensity[†]	Comments
0	0	100	
799 *5*	2	5.0	β_2=0.229, β_2R=1.028 (1971Ma35). Additional information 2.
1663 *5*	2	2.1	β_2=0.056, β_2R=0.251 (1971Ma35). Additional information 3.
2085[@] *30*	4		
2123[&] *5*		1.6	
2251[&] *5*		0.7	
2586 *5*	4	0.5	Additional information 4. β_4=0.084, β_4R=0.38 (1971Ma35).
2773[&] *5*		1.8	
2864[&] *5*		1.1	
2970[@] *30*	5		β_5=0.024, β_5R=0.108 (1971Ma35).
3072[&] *5*		0.8	
3123 *5*	4	1.0	β_4=0.055, β_4R=0.247 (1971Ma35). Additional information 5.
3222[&] *5*		0.9	E(level): probable doublet.
3389[@] *30*	2		β_2=0.03, β_2R=0.148 (1971Ma35).
3453[&] *5*		0.5	
3532 *5*	2	0.5	β_2=0.03, β_2R=0.135 (1971Ma35). Additional information 6.
3613 *5*			J^π,L: $\sigma(\theta)$ is not In agreement with L=2 (1971Ma35). Additional information 7.
3845[@] *30*	3		
4079[@] *30*	3+4		E(level),L: probable doublet with L=3+4.
4230[@] *30*	3+5		β_3=0.019, β_5=0.021 (1971Ma35).
4289[@] *30*	2		β_2=0.036, β_2R=0.162 (1971Ma35).
4441[@] *30*	3		β_3=0.132, β_2R=0.59 (1971Ma35).

[†] From 1964Sp03.
[‡] From $\sigma(\theta)$ data of 1971Ma35.
[#] From 1964Sp03 for levels with uncertainty of 5 keV and from 1971Ma35 for levels with uncertainty of 30 keV (as in 1971Ma16). The evaluators note that energies in 1964Sp03 are systematically lower by 11 keV as compared to those in 'Adopted Levels levels′. This correction has been considered in 'Adopted Levels' in XREF column.
[@] From 1971Ma35 only.
[&] From 1964Sp03 only.