^{54}Fe(pol p,p′),(pol P,P′γ) 1980Ad03,1967Fr12

History

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

Also includes ^{54}Fe(p,p),(pol p,p) E=10-800 MeV.

1980Ad03: E=800 MeV. P=0.76, high resolution spectrometer, θ=4° to 24°, FWHM=140 keV, measured σ(θ), A(θ), DWBA, DWIA, deduced Bn2/B(E2). Bn2 is the neutron equivalent of the B(E2) value.

1977Va16, 1967Fr12, 1969He21, 1970Ah03, 1970Ka10: E=10-40 MeV. Measured σ(θ), p(θ), analyzing power A(E,θ); σ(E(p)′,θ), left-right asymmetry(θ), σ(E(p)′,Eγ,θ), DWBA, deduced deformation parameter β_L, spin-flip probabilities, anomalous spin-orbit deformation.

1979Sa38, 1978Ho18, 1982Sa37, 1977Pl03: E=65-800 MeV. Measured elastic analyzing powers and differential cross sections, deduced the relation between the mean square radius of the real central scattering part of the optical potential and $A^{2/3}$, gave the range of the effective two-body interaction, information concerning the neutron density distributions.

Other references: 1975Mo16, 1970Ma46, 1978Ve02.

All data are from 1980Ad03, except as noted.

^{54}Fe Levels

E(level)	L	Comments
0		
1408	2	β_LR=0.86 (1980Ad03). β_L=0.15 (1977Va16), β_L=0.14 (1970Ka10), β_L+0.22 (1980Ad03).
2538		β_LR=0.36 (1980Ad03). β_L=0.091 (1980Ad03).
2960	2	β_LR=0.51 (1980Ad03). β_L=0.16 (1967Fr12), β_L=0.13 (1980Ad03) and (1977Va16).
3166	2	β_LR=0.30 (1980Ad03). β_L=0.076 (1980Ad03).
3846 *15*	4	β_LR=0.43 (1980Ad03). β_L=0.11 (1980Ad03).
4279 *18*	4	β_LR=0.35 (1980Ad03). β_L=0.090 (1980Ad03).
4553 *36*	2	β_LR=0.26 (1980Ad03). β_L=0.066 (1980Ad03).
4782 *12*	3	β_LR=0.47 (1980Ad03). β_L=0.13 (1967Fr12), β_L=0.12 (1980Ad03).
6355 *14*	3	β_LR=0.63 (1980Ad03). β_L=0.16 (1967Fr12) and (1980Ad03).