^{30}Si(e,e′) 1994Pe08

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. S. Basunia, A. Chakraborty	NDS 197,1 (2024)	31-May-2024

1994Pe08: ^{30}Si target (thickness=25.3 mg/cm^2), E_e=24 to 64 MeV; performed at the 180° electron scattering facility, University of Illinois at Urbaba-Champaign; two runs were performed: 1) data obtained at 180° with E_e=63.4, 53.2, 42.9, 33.0, 32.8 MeV, and also at 135° with E_e=56.9 MeV; 2) at 180° with E_e=56.5, 54.6, 45.7, 34.9, and 28.4 MeV; measured electron spectra, σ, deduced M1, M2 transition strength. FWHM=100 keV.

Other: 1997We01.

^{30}Si Levels

E(level)[†]	Comments
8940 *10*	B(M1,ω)=0.33 μ_N^2 *3* (1994Pe08 − strong).
9360 *10*	B(M1,ω)=1.52 μ_N^2 *7* (1994Pe08 − strong).
9770 *10*	B(M1,ω)=0.23 μ_N^2 *3* (1994Pe08 − medium).
9960 *10*	B(M2,ω)=20 μ_N^2 fm^2 *6* (1994Pe08 − medium).
10270 *10*	B(M2,ω)=15 μ_N^2 fm^2 *2* (1994Pe08 − weak and with a (M1) component − considerable longitudinal strength).
10480 *10*	B(M1,ω)=0.37 μ_N^2 *3* (1994Pe08 − strong).
10620 *10*	B(M1,ω)=0.13 μ_N^2 *1* (1994Pe08 − medium).
10760 *10*	B(M1,ω)=0.08 μ_N^2 *2* (1994Pe08 − weak − considerable longitudinal strength).
10930 *10*	B(M2,ω)=20 μ_N^2 fm^2 *6* (1994Pe08 − medium).
11180 *10*	B(M2,ω)=12 μ_N^2 fm^2 *4* (1994Pe08 − weak).
11360 *10*	B(M1,ω)=0.11 μ_N^2 *2* (1994Pe08 − weak).
11700 *10*	B(M1,ω)=0.09 μ_N^2 *2* (1994Pe08 − medium).
11840 *10*	B(M2,ω)=22 μ_N^2 fm^2 *6* (1994Pe08 − medium).
12020 *10*	B(M2,ω)=33 μ_N^2 fm^2 *7* (1994Pe08 − medium).
12200 *10*	B(M1,ω)=0.10 μ_N^2 *2* (1994Pe08 − weak).
12400 *10*	B(M2,ω)=24 μ_N^2 fm^2 *6* (1994Pe08 − medium).
12700 *10*	B(M2,ω)=30 μ_N^2 fm^2 *8* (1994Pe08 − weak).
12830 *10*	B(M2,ω)=21 μ_N^2 fm^2 *7* (1994Pe08 − weak).
13030 *10*	B(M1,ω)=0.10 μ_N^2 *3* (1994Pe08 − medium).
13140 *10*	B(M2,ω)=20 μ_N^2 fm^2 *4* (1994Pe08 − weak).
13400 *10*	B(M2,ω)=30 μ_N^2 fm^2 *2* (1994Pe08 − medium − considerable longitudinal strength).
13600 *10*	B(M1,ω)=0.09 μ_N^2 *3* (1994Pe08 − medium).
13790 *10*	B(M1,ω)=0.50 μ_N^2 *5*, B(M2,ω)=47 μ_N^2 fm^2 *12* (1994Pe08 − medium).
14000 *10*	B(M2,ω)=36 μ_N^2 fm^2 *13* (1994Pe08 − medium).
14200 *10*	B(M2,ω)=18 μ_N^2 fm^2 *3* (1994Pe08 − weak).
14630 *10*	B(M1,ω)=0.11 μ_N^2 *2* (1994Pe08 − weak).

[†] From 1994Pe08. An uncertainty of 10 keV suggested by the authors. Transition strengths are listed in the comments as strong, medium, and weak denoted by symbols and Chi-squares fit in Table 1.