^{30}Si(^{3}He,p) 1975Na05,1972Fo12

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jun Chen	NDS 201,1 (2025)	31-Oct-2024

1975Na05: E=28 MeV ^{3}He beam was produced from the MP tandem accelerator of the Max Planck Institute in Heidelberg. Targets were self-supporting foils of enriched SiO_2 (98% ^{30}Si). Reaction products were momentum-analyzed in a magnetic multigap spectrometer (FWHM=40-45 keV) and detected with nuclear emulsion detectors. Measured $\sigma(E_p,\theta)$, θ_{cm}=5° to 60°. Deduced levels, J, π, L-transfers from DWBA analysis. Comparisons with DWBA calculations using different sets of wave functions. Report levels up to 3000.

1972Fo12: E=8.02 MeV ^{3}He beam was produced from the 4-MV Van de Graaff accelerator of the Institut de Physique Nucleaire at Orsay. Target was self-supporting ^{30}Si (95% enriched) with a thickness of 83 μg/cm^2 *5*. Reaction products were detected with a surface-barrier detector (FWHM=300 keV). Measured $\sigma(E_p,\theta)$, $\theta_{cm}\approx$10° to 150°. Deduced levels, L-transfer for 5073 level from DWBA analysis. 1972Fo12 also report data on (^{3}He,pγ).

^{32}P Levels

E(level)[†]	L[‡]	Comments
0	2(+0)	
78	2	E(level): other: 80 (1975Na05).
513		E(level): other: 510 (1975Na05).
1149	0(+2)	E(level): other: 1150 (1975Na05).
1323	2	E(level): other: 1320 (1975Na05).
1755	2+4	E(level): other: 1750 (1975Na05).
2180	2+4	E(level): from 1975Na05 only.
2220		E(level): reported in 1975Na05 only; not resolved with 2230 level.
2230	2(+0)	E(level): also from 1975Na05.
2657	2	E(level): other: 2660 (1975Na05).
2743	2(+0)	E(level): other: 2740 (1975Na05).
3005	2+4	E(level): other: 3000 (1975Na05).
3264		
3323		
3445		
3798		
4036		
4158		
4560		
4663		
4877		
4944		
5073	0	T=2 L: from 1972Fo12.
5232		
5350		
5510		

[†] From 1972Fo12, unless otherwise noted.
[‡] From 1975Na05, unless otherwise noted. L-transfers are extracted from DWBA analysis of measured $\sigma(\theta)$.