^{37}Cl(p,t) 1971Vi02

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen, John Cameron and Balraj Singh	NDS 112,2715 (2011)	20-Oct-2011

1971Vi02: E=40 MeV protons produced from the Grenoble variable energy cyclotron with intensities of 20-200 nA depending on the scattering angle, 90 keV energy resolution. Targets: a gas target of natural purified chlorine, 100 mm in diameter and 25 mm in high. Detectors: two separate counter telescopes with each consisting of a 200μm phosphorous-drifted silicon ΔE detector, a 2 mm lithium-drifted silicon E detector and a 3 mm lithium-drifted silicon E-reject detector Typical energy resolution(FWHM): 180 keV for ^{3}He. Measured σ(E(^{3}He),θ). Deduced levels, L.

^{35}Cl Levels

Target ^{37}Cl $J^\pi=3/2^+$.

E(level)[†]	L[†#]	S[@]
0	0+2	100
1220 *40*		0
1750 *40*	2	41
2650[‡] *40*	2	41
3000 *40*		5
5650 *50*	0+2	22
7250 *50*		9

[†] From 1971Vi02.
[‡] Unresolved doublet 2645-2694.
[#] Extracted from the comparison of $\sigma(\theta)$ distributions with the DWBA predictions.
[@] Relative peak intensity.