

$^{44}\text{Ca}(\text{pol } p, \pi^-), ^{45}\text{Sc}(p, n)$ [1990An05, 1987Th02](#)

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	T. W. Burrows	NDS 109, 171 (2008)	30-Oct-2007

[1987Th02](#): $^{44}\text{Ca}(\text{pol } p, \pi^-)$ E=206 MeV. Measured $\sigma(30^\circ)$; mag spect, wire drift chamber. FWHM=200-300 keV. The absence of strong excitation of 5.42-MeV, $21/2^-$; 6.16-MeV, $23/2^-$; and 7.15-MeV, $27/2^-$ states, supports the two-nucleon model of (p, π^-) reactions.

[1990An05](#): $^{45}\text{Sc}(p, n)$. Target $J^\pi=7/2^-$. E=136 MeV. Measured $\sigma(\theta=0^\circ, 24^\circ, 45^\circ)$; scin, tof. FWHM \approx 320 keV. DWIA. The $^{45}\text{Sc}(p, n)$ reaction is expected to produce the same high-spin states As the $^{44}\text{Ca}(p, \pi^-)$ reaction.

 ^{45}Ti Levels

E(level) [†]	J^π [†]	Comments
0.0		
4.3×10^3 [‡]	$19/2^-$	J^π : $17/2^-$, $19/2^-$ from DWIA (1990An05). $19/2^-$ from the two-nucleon model and systematics of (p, π^-) reactions (1987Th02).
5.42×10^3 ?		
6.16×10^3 ?	$23/2^-$	
7.15×10^3 ?	$27/2^-$	

[†] From the Adopted Levels. Arguments based on these data given As a comment.

[‡] From [1990An05](#). Unresolved doublet from DWIA calculations; peak also noted In spectra of [1987Th02](#).