

$^{40}\text{Ar}(\text{p,t})$  1980Mi03,1970Ha10

Type	Author	History Citation	Literature Cutoff Date
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**1980Mi03:** E=51.9 MeV proton beam was produced from the INS synchro-cyclotron. Target was natural argon gas. Reaction products were momentum-analyzed with a broad-range magnetic spectrometer (FWHM=70 keV) and detected by an array of 200 proportional counters. Measured  $\sigma(E(t),\theta)$ . Deduced levels, J,  $\pi$ , L-transfers from DWBA analysis. Comparisons with available data. Report 11 levels up to 6520.

**1970Ha10:** E=45.0 MeV proton beam was produced from the Berkeley 88-inch cyclotron. Target was argon gas. Reaction products were detected with two  $\Delta E$ -E counter telescopes (FWHM $\approx$ 100 keV). Measured  $\sigma(E(t),\theta)$ . Deduced levels, J,  $\pi$ , L-transfers from DWBA analysis. Report 14 levels up to 18784.

 $^{38}\text{Ar}$  Levels

E(level) <sup>†</sup>	L <sup>‡</sup>	Comments
0	0	
2168	2	
3377	0	
3810	3	
3936	2	E(level): seen as doublet with 3810 in <a href="#">1970Ha10</a> and <a href="#">1980Mi03</a> .
4585	5	
4730	0	E(level): reported <a href="#">1980Mi03</a> only. It could be seen as doublet with 4585 in <a href="#">1970Ha10</a> .
5153	2	
6246		E(level): reported in <a href="#">1970Ha10</a> only.
6320	4	E(level): reported in <a href="#">1980Mi03</a> only.
6520	2	E(level): reported in <a href="#">1980Mi03</a> only.
8870		
11280		
13070		
13320		
13680		
18784 30	0	T=3 L: from <a href="#">1970Ha10</a> .

<sup>†</sup> From energy spectrum in Fig 8 of [1970Ha10](#), unless otherwise noted.

<sup>‡</sup> From DWBA fit to measured differential cross section in [1980Mi03](#), unless otherwise noted.