^{39}K(p,^{3}He) 1978Na04,1973Be23

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	John Cameron, Jun Chen and Balraj Singh, Ninel Nica	NDS 113, 365 (2012)	15-Jan-2012

$J^{\pi}(^{39}K)=3/2^{+}$.

All references used essentially same setup At Michigan State University and also studied the (p,t) reaction for comparison.

1978Na04: E=40 MeV, used Enge split-pole magnetic spectrograph and position-sensitive proportional counter. Measured $d\sigma/d\Omega$(3° *5555*°) and did DWBA analysis.

1976Na18: similar to 1978Na04 (same authors) but only ^{3}He group leading to ^{37}Ar g.s. was observed.

1973Be23: E=40.1, 42.2 MeV, used Si position-sensitive detector and position-sensitive proportional counter (30-40 keV resolution).

^{37}Ar Levels

Given In comments are the relative yields At 14° (extracted by evaluators from fig. 1 "Spectra of ^{39}K(p,t) and ^{39}K(p,^{3}He) REACTIONS" of 1978Na04).

E(level)[†]	J^{π}	L	Yield (relative)
0	$^{+}$	0	30
1410	$^{+}$	2	37
2220			25
2800			100
3170			45
3610			50
3940			7
4730			25
4993[‡] *6*			20[#]
6670[‡] *20*			8[#]

[†] From 1978Na04, except when noted otherwise.

[‡] From 1973Be23.

[#] Relative to the yield of 4993 At 8° (from 1973Be23 by evaluators).