^{41}K(p,d) 1973Wi16

Type	Author	History Citation	Literature Cutoff Date
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$J^{\pi}(^{41}\text{K g.s.})=3/2^{+}$.

1973Wi16 (also thesis by 1973WiYW): E=15 MeV deuteron beam was produced from a tandem Van de Graaff accelerator. Targets were 100 and 200 μg/cm^2 KCOOH (99.18% in ^{41}K). Reaction products were momentum analyzed with a broad-range split-pole magnetic spectrograph (FWHM=15-30 keV) and detected by a triple counter telescope. Measured $\sigma(\theta)$. Deduced levels, J, π, L-transfer, spectroscopic factors from DWBA analysis. Comparisons with shell-model calculations.

All data are from 1973Wi16, unless otherwise noted.

^{40}K Levels

Spectroscopic factor is defined as $C^2S=(2j+1)/N\times\sigma_{exp}/\sigma_{DWBA}$ with N=3.33 and j the angular momentum of transferred particle.

E(level)[†]	L[‡]	C^2S[‡#]	Comments
0	3	0.51 *12*	
30	3	0.53 *11*	
800	3+1	0.074 *10*	C^2S: for L=3; 0.012 *3* for L=1.
891	3	0.28 *5*	

[†] Rounded values from Adopted Levels.

[‡] Extracted from comparisons of measured differential cross sections with DWBA calculations.

[#] $f_{7/2}$ orbital assumed for L=3 and $p_{3/2}$ orbital for L=1.