^{41}K(d,t) 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^{2}S[#@]	Comments
0	3	0.61 *9*	
30	3	0.60 *9*	
800	3+1	0.074 *10*	C^{2}S: for L=3, 0.0053 *10* for L=1.
891	3	0.34 *5*	
1644	2	0.06 *2*	
1959	2+0	0.07 *2*	C^{2}S: for L=2, 0.015 *5* for L=0.
≈2000			E(level): unresolved multiplet.
2260	2	0.86 *3*	
2290	2(+0)	0.09 *2*	C^{2}S: for L=2, 0.11 *20* for L=0.
2385[‡] *10*	2	0.16 *6*	
2566[‡] *10*	2	0.07 *2*	

[†] Rounded values from Adopted Levels.
[‡] From 1973Wi16.
[#] Extracted from comparisons of measured differential cross sections with DWBA calculations.
[@] The following orbitals are assumed for different L transfers: $s_{1/2}$ for L=0, $p_{3/2}$ for L=1, $d_{3/2}$ for L=2, $f_{7/2}$ for L=3.