^{41}Ca(d,^{3}He) 1979Ro05

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jun Chen	NDS 140, 1 (2017)	30-Sep-2015

$J^{\pi}(^{41}\text{Ca g.s.})=7/2^{-}$.

1979Ro05: E=20 MeV deuteron beam was produced from the Oxford EN tandem accelerators. Target was 20 μg/cm^2 radioactive ^{41}Ca evaporated onto a 100 μg/cm^2 carbon backing. Reaction products were momentum analyzed with a muti-gap magnetic spectrometer (FWHM=15-20 keV) and detected in nuclear emulsions. Measured $\sigma(\theta)$. Deduced levels, J, π, L-transfers, spectroscopic factors from DWBA analysis.

1975Be45: E=40 MeV deuteron beam was produced from the University of Groningen cyclotron. Target was about 160 μg/cm^2 99.9% pure calcium. Reaction products were detected in separate counter telescopes of two silicon surface barrier detectors (FWHM=120 keV). Measured $\sigma(\theta)$. Deduced levels, J, π, L-transfers, spectroscopic factors from DWBA analysis.

All data are from 1979Ro05, unless otherwise noted.

^{40}K Levels

E(level)	L[@]	C^{2}S[#@]	Comments
0	2	1.03 *12*	C^{2}S: other: 2.15 for 0+30 doublet in 1975Be45.
30	2	0.86 *6*	C^{2}S: other: 2.15 for 0+30 doublet in 1975Be45.
800	2	0.57 *7*	C^{2}S: other: 2.36 for 800+890 doublet in 1975Be45.
892	2	1.46 *17*	C^{2}S: other: 2.36 for 800+890 doublet in 1975Be45.
2070	0	0.30 *2*	C^{2}S: other: 0.39 in 1975Be45.
2398	0	0.73 *8*	C^{2}S: other: 1.28 in 1975Be45.
2800[†]	0	0.61 *23*	C^{2}S: other: 0.21 for a broad peak in 1975Be45.
3260[‡]	(0)	0.22	E(level),L,C^{2}S: from 1975Be45.

† Broad structure observed in 1979Ro05 and 1975Be45.
‡ Broad structure observed only in 1975Be45.
# Relative values from 1979Ro05. The absolute values are 19% lower with an uncertainty of 20%, unless otherwise noted.
@ Extracted from DWBA fits to measured differential cross sections.