

$^{48}\text{Ca}(^{16}\text{O}, ^{16}\text{O}')$ 1982Re03,1982Hu10,1973Be13

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jun Chen	NDS 179, 1 (2022)	30-Nov-2021

1982Hu10: E=158 MeV ^{16}O beam from the Argonne superconducting linac. Measured $\sigma(\theta_{\text{c.m.}}=5^\circ$ to 23°) with two Si ΔE -E telescopes (FWHM \approx 500 keV). Deduced L-transfers from DWBA analysis.

1982Re03: E=56 MeV ^{16}O beam from the Argonne FN tandem. Measured $\sigma(\theta=4^\circ$ to $45^\circ)$ with a split-pole magnetic spectrograph (FWHM<100 keV) with a position-sensitive ionization chamber. Deduced levels. Data fit better with coupled-channel calculations than with DWBA.

1973Be13: E=60 MeV ^{16}O from an HVEC model FN tandem Van de Graaff at the Niels Bohr Institute tandem laboratory. Scattered ^{16}O were detected with an array of Si surface-barrier counters (FWHM=200-400 keV). Measured $\sigma(\theta_{\text{c.m.}}=20^\circ$ to $80^\circ)$. Deduced deformation parameters from DWBA analysis.

 ^{48}Ca Levels

E(level) [†]	L [‡]	β_L [#]	Comments
0.0			
3833	2	0.06	
4506	3	0.08	
5146			Strongly suppressed in this reaction (1982Re03).

[†] From 1982Re03.

[‡] From DWBA analysis of measured $\sigma(\theta)$ in 1982Hu10.

[#] From DWBA analysis in 1973Be13.