^{40}Ca(^{12}C,^{8}Be) 1976Ma12,1977Mo06

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen and Balraj Singh	NDS 190,1 (2023)	20-Jun-2023

1976Ma12: E=56 and 56.6 MeV ^{12}C beam was the Munich MP tandem. Target was 100 μg/cm^2 ^{40}Ca on a carbon backing. Charged-particle detectors. Measured $\sigma(\theta)$. Deduced levels, spectroscopic factors from DWBA analysis.

1977Mo06 (also 1975Mo33): E=45 MeV ^{12}C beam produced from the Florida State University Super FN Tandem Van de Graaff. Target of natural calcium evaporated onto thin carbon or gold foil (96.94% ^{40}Ca). Si(Li) detectors. Measured $\sigma(\theta)$. Deduced levels, J^π, spectroscopic factors from DWBA analysis.

^{44}Ti Levels

E(level)‡	J^π	S†‡	Comments
0	0^+	1	
1080 *30*	2^+	0.78	E(level),S: from 1977Mo06. Other: 1100 *200* with S=0.22 (1976Ma12).
2.5×10^3 *2*	4^+	0.14	
3340	4^+		E(level): from 1977Mo06. Other: 3400 *200* (1976Ma12).
4.1×10^3 *2*			
5.3×10^3 *2*			
8.6×10^3 *2*			
10.4×10^3 *2*			
11.6×10^3 *2*			
12.4×10^3 *2*			

† Relative spectroscopic strength.

‡ From 1976Ma12, unless otherwise noted.