^{48}Ca(^{18}O,^{17}C) 1977No08

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	J. H. Kelley, G. C. Sheu	ENSDF	01-May-2017

1977No08: The authors studied the low-lying excitations of ^{17}C. A beam of E(^{18}O)=102 MeV ions, from the Heidelberg tandem, impinged on a 25 μg/cm^2 ^{48}Ca target. Reaction products were momentum analyzed using a Q3D spectrograph that was positioned at θ=7.4° and θ=8.1°. The focal plane comprised a set of position sensitive detectors alond with ΔE-E detectors for particle identification of the ^{17}C products. The ground state and an excited state were clearly identified in the spectrum; a much smaller third group was also visible in the spectrum. In addition, groups corresponding to excited ^{49}Ti were present at positions on the focal plane that would correspond to neutron-unbound ^{17}C states. Lastly, there was inconclusive discussion on shell structure and a comparison to ^{17}O states. Also see (1977BhZC).

The mass excess,ΔM=21023 keV *35*, was deduced using (1971Wa37); a comparison with (2012Wa38) is similar, having nearly offsetting changes in the ^{48}Ca and ^{49}Ti masses. The excited state was observed with E_x=292 keV *20*.

1982Fi10: The authors measured the Q(β^-)value for ^{48}Ca(^{18}O,^{17}C) along with that of the ^{48}Ca(^{18}O,^{17}C) reaction. A beam of 112 MeV ^{18}O ions from the Australian National University Pelletron impinged on a 97% enriched 100 μg/cm^2 ^{48}Ca target. The reaction products were momentum analyzed at θ=5° using an Enge split-pole spectrometer with ΔE≈200 keV (FWHM). The ground state was observed with ΔM=21039 keV *20* and an excited state was found at E_x=295 keV *10*. There was no indication of other excited states.

^{17}C Levels

E(level)	Comments
0	
294 *9*	E(level): Average of reported values.