^{16}O(^{18}O,^{17}O) 2018Li59

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	C. G. Sheu, J. H. Kelley, J. Purcell	ENSDF	5-Aug-2021

1975Re15: ^{16}O(^{18}O,^{17}O), E=42,52 MeV; measured σ(E(^{17}O),θ); deduced reaction mechanism.
2018Li59: XUNDL dataset compiled by TUNL, 2019.
An 84 MeV beam of ^{18}O ions, from the INFN-Catania tandem, impinged on a 210 μg/cm^2 WO_3 foil that was placed at the MAGNEX target position. The ^{17}O reaction products were momentum analyzed in the MAGNEX spectrometer and identified in the focal plane. Differential cross sections are reported for ^{17}O*(0, 0.87, 3.15, 5.20 MeV) for $\theta_{c.m.}\approx 7°$ to 24°.
Spectroscopic amplitudes were deduced via shell model analysis of (^{18}O,^{17}O) reaction data on ^{28}Si and ^{64}Ni targets using the NUSHELLX code.
See also (1977Pe08).

^{17}O Levels

E(level)	J$^\pi$	Comments
0[†]	5/2$^+$	
0.87×10^3[†]	1/2$^+$	E(level): The single excitation and mutual ^{16}O(^{18}O,^{17}O*(870))^{17}O*(870) reactions are observed.
3.15×10^3	1/2$^-$	
5.20×10^3	3/2$^+$	

[†] Also populated in (1975Re15).