^{1}H(^{14}O,P):NSCL 2003Pe23

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	J. Kelley, T. Truong, C. G. Sheu	ENSDF	05-July-2016

2003Pe23:

The authors evaluated the ^{1}H(^{14}O,p) elastic scattering reaction in Thick Target Inverse Kinematics (TTIK). E_{res}, E_x and Γ were deduced from the analysis.

A beam of 115 MeV/nucleon ^{14}O ions, produced by fragmentation of an ^{16}O beam at the NSCL, was degraded in energy to obtain an 8 MeV/nucleon beam. This low energy beam impinged on a 181.3 μm polyethylene target that stopped the beam. Protons from elastic scattering reactions were detected around θ=0° in a ΔE-E (75.3 μm and 1000 μm) Si detector telescope. The excitation function was analyzed using the VLADCS potential model code to deduce resonance energies.

^{15}F Levels

E(level)	J^{π}	Γ	E(p+^{14}O)$_{cm}$ (keV)	Comments
0	$1/2^{+}$	≈1.2 MeV	1.51×10^{3} *11*	E(level): mass excess=16.81 MeV *11*.
1.34×10^{3} *12*	$5/2^{+}$	≈340 keV	2853 *45*	