^{6}Li(^{18}O,^{17}O) 2014Ru06

History

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

2014Ru06: XUNDL dataset compiled by TUNL, 2014.

A beam of 114 MeV ^{18}O ions, from the Warsaw cyclotron facility, impinged on a ≈900 μg/cm^2 85% enriched ^{6}Li target. The reaction products were detected using a set of three ΔE-E telescopes that were positioned with an accuracy of about 0.3°. Population of ^{7}Li*(0,0.48,4.65,6.60,7.45 MeV) and ^{17}O*(0,0.87,3.06,3.84,5.08,5.38 MeV) were observed in the energy spectra for one-neutron transfer reactions. The ^{6}Li+^{18}O elastic and inelastic scattering was measured simultaneously (2014Ru01).

The data were analyzed using the coupled-reaction-channels (CRC) method using optical model potentials in the entrance and exit channels. The ^{7}Li+^{17}O optical potential is deduced and compared with those deduced from analysis of ^{6,7}Li+^{18}O and ^{6}Li+^{16}O scatterings.

See also (2015Ru04: theory).

^{17}O Levels

E(level)†	Jπ†
0	5/2$^+$
871	1/2$^+$
3055	1/2$^-$
3841	5/2$^-$
4553	
5086	
5380	

† Reported in (2014Ru06).