C(^{24}O,n^{23}O) 2009Ka14

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. S. Basunia[#], A. Chakraborty[##]	NDS 171, 1 (2021)	1-Jun-2020

Based on XUNDL: Compiled by B. Singh (McMaster); May 1, 2009.
One-neutron knockout reaction.
2009Ka14: ^{24}O beam, E=920 MeV/nucleon, was produced from fragmentation of ^{48}Ca, E=1 GeV/nucleon, on a thick Be target at GSI facility. The nuclei produced in fragmentation process were separated and identified event-by-event using FRS and with the magnetic rigidity, energy loss (ΔE) and time-of-flight information. The charge of the incident nuclei was measured using a multisampling ionization chamber. The secondary (reaction) target was 4.05 g/cm^2 thick carbon. The outgoing ^{23}O fragments were tracked using two time-projection chambers and then transported for Bρ-ΔE-TOF analysis. Measured momentum distribution. Comparison of experimental spectroscopic factor with shell-model calculations using various interactions. The data in this experiment did not show any significant d-wave component for the population of first excited 5/2$^+$ state.

^{23}O Levels

E(level)	J^π	S	Comments
0.0	1/2$^+$	1.74 *19*	J^π: From Adopted Levels. Measured momentum distribution has a Gaussian width=99 MeV/c *4*. Measured one-neutron removal cross section=63 mb *7*.