Abstract Submitted
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Measurement of Neutron knockout cross-section of ^{24}O to the ground-state of ^{23}O[1] DILUPAMA DIVARATNE[2], CARL BRUNE[3], PAUL KING[4], HARSHA ATTANAYAKE[5], STEVEN GRIMES[6], Ohio University, MICHAEL THOENNESSEN[7], DANIEL BAZIN[8], Michigan State University, MONA COLLABORATION — This research provides an understanding of the structure of the ground state wave-function of ^{24}O through measuring the neutron knockout cross section of ^{24}O to the $\frac{1}{2}^+$ ground state of ^{23}O. The experiment was conducted at the National Superconducting Cyclotron Laboratory using the S800 spectrograph and 470 mg/cm^2 Be reaction target with 92.3 MeV/u ^{24}O beam energy. The cross section values to the different final states of ^{23}O along with the related spectroscopic factors will convey to us information regarding how doubly magic ^{24}O is. Specific details of this investigation, analysis, interpretation of resulting cross sections and parallel and perpendicular momentum of the residual will be discussed.

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