DREB 2012 - Direct Reactions with Exotic Beams



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Evidence for the ground-state resonance of 26O

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Evidence for the ground-state resonance of 26O was observed through a three-body coincidence measurement of 24O+n+n using the Modular Neutron Array (MoNA) at the National Superconducting Cyclotron Laboratory. The ground-state of the unbound 26O was populated through a single proton-knockout reaction from a 82 MeV/u 27F beam. A Monte Carlo simulation, which included the population of an excited state in 26O and the ground-state of 25O through a 1p-1n knockout reaction, was used to fit the data. The 26O ground-state was determined to be unbound by less than 200 keV, in agreement with recent shell-model calculations.

Primary author: KOHLEY, Zachary (National Superconducting Cyclotron Laboratory)
Co-author: COLLABORATON, MoNA (National Superconducting Cyclotron Laboratory)
Presenter: KOHLEY, Zachary (National Superconducting Cyclotron Laboratory)
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