

Abstract Submitted
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Observation of a Low-Lying Neutron Unbound State in ^{25}F A.R. SMITH, M. KASPERCZYK, Illinois Wesleyan University, N. FRANK, Illinois Wesleyan, T. BAUMANN, D. BAZIN, B.A. BROWN, Michigan State University, J. BROWN, Wabash College, P.A. DEYOUNG, Hope College, J.E. FINCK, Central Michigan University, A. GADE, Michigan State University, J. HINNEFELD, Indiana University at South Bend, R. HOWES, Marquette University, J.-L. LECOUEY, Michigan State University, B. LUTHER, Concordia College, W.A. PETERS, H. SCHEIT, A. SCHILLER, M. THOENNESSEN, Michigan State University, J. TOSTEVIN, University of Surrey, MONA COLLABORATION — A low energy neutron unbound state of ^{25}F has been observed. The ^{25}F isotopes were produced by one-proton removal from an 86 MeV/u ^{26}Ne beam on a Beryllium target at the fast-fragmentation radioactive beam facility of the National Superconducting Cyclotron Laboratory at Michigan State University. The subsequent decay of the ^{25}F isotopes resulted in ^{24}F and neutrons that were detected in coincidence. The properties of the charged particles and neutrons were used to reconstruct a decay energy spectrum for ^{25}F , which was compared to simulations. The simulations include a stripping reaction model, decay energy line-shapes, and, detector resolutions and acceptances. Results and simulation details will be discussed.

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