

Abstract Submitted
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Unbound Excited States in ^{28}Ne and ^{25}F JENNA SMITH, B. ALEX BROWN, GREG CHRISTIAN, SHEA MOSBY, JOHN F. NOVAK, STEVEN J. QUINN, JESSE SNYDER, ARTEMIS SPYROU, MICHAEL J. STRONGMAN, MICHAEL THOENNESSEN, NSCL/Michigan State University, THOMAS BAUMANN, ZACHARY KOHLEY, NSCL, JOSEPH E. FINCK, Central Michigan University, CALEM R. HOFFMAN, ANL/Florida State University — The neutron dripline has only been conclusively mapped out to $Z = 8$. The unbound structure of isotopes with $Z > 8$ has not been studied until recently, when multiple studies have focused on unbound states in neutron-rich fluorine isotopes. Unbound states in ^{28}Ne and ^{25}F were populated in the reaction of a 102 MeV/nucleon ^{29}Na beam on a beryllium target. This is the first such state in ^{28}Ne and the second such state in ^{25}F . The measured decay energy of 32(22) keV in the $^{27}\text{Ne} + n$ system corresponds to an unbound excited state in ^{28}Ne of 3.86(11) MeV. The decay energy of the $^{24}\text{F} + n$ system was measured as 300(170) keV, which places the second measured unbound state of ^{25}F at 4.66(17) MeV. Measured decay energy spectra and a discussion of results will be presented.

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