

Abstract Submitted
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Fission of ^{238}U at 80 MeV/u and Search for New Neutron-Rich Isotopes C.M. FOLDEN III, A.M. AMTHOR, T.N. GINTER, M. HAUSMANN, D.J. MORRISSEY, A.S. NETTLETON, M. PORTILLO, B.M. SHERRILL, O.B. TARASOV, Michigan State University, T. KUBO, T. NAKAO, H. TAKEDA, RIKEN, W.D. LOVELAND, Oregon State University, S.L. MANIKONDA, Argonne National Laboratory, G.A. SOULIOTIS, Texas A&M University — Calculations for existing and future radioactive beam facilities indicate that fission of ^{238}U may provide the highest intensities for many secondary beams, although only limited data exist for uranium energies in the range 50-500 MeV/u. An experiment to measure the cross sections and momentum distributions of fragments produced via fission following abrasion of an 80-MeV/u ^{238}U beam with Be targets has been conducted at the National Superconducting Cyclotron Laboratory at Michigan State University. Recoiling fragments were spatially separated from the primary beam and identified using the A1900 fragment separator with magnetic rigidity varied in steps from 2.5 to 3.9 T m. Standard particle identification techniques were augmented through the observation of gamma decays originating from known microsecond isomers. Additionally, a search for new neutron-rich isotopes was conducted and preliminary analysis has shown the production of many events along the limit of presently known isotopes. The latest results on these experiments and comparisons with theoretical models will be presented.

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