Abstract Submitted
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Off-line commissioning of the University of Notre Dame Multi-Reflection Time-of-Flight mass spectrograph[1] MAXIME BRODEUR, JAMES KELLY, University of Notre Dame, BIYING LIU, Xi'an Jiao Tong University, BRAD SCHULTZ, TRIUMF — The production of exotic nuclei at the vicinity of the N = 126 peak of the rapid-neutron capture process as for a long time pose a challenge. A new facility currently under construction at Argonne National Laboratory aims at undertaking the challenge by producing these difficult nuclei via deep-inelastic reactions. The facility will first include a large-volume gas cell to collect and thermalize the reaction products. Then, upon extraction from the gas cell and radio-frequency ion guide, the ion beam will be separated by a high-resolution mass separator magnet and a multi-reflection time-of-flight mass spectrometer (MR-ToF) for the removal of isobaric contamination. This MR-ToF has been built and is being commissioned in an offline test setup at the University of Notre Dame. The commissioning results and off-line performance of the MR-ToF will be presented.

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