Abstract Submitted
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Construction of a multi-reflection time-of-flight spectrometer at the University of Notre Dame[1] BRAD SCHULTZ, Univ of Notre Dame — The simultaneous production of rare isotopes and isobaric contaminants is a significant problem for precision measurements in nuclear and particle physics, which often require pure samples of a single species. Thus, a high-resolution, high efficiency beam purification method is required which is compatible with both low yields and the short half-life of the desired radionuclide. A multi-reflection time-of-flight mass spectrometer meets these criteria, while achieving resolving powers $> 10^5$. Such a device has been constructed at the University of Notre Dame and will be installed in the ATLAS facility at Argonne National Lab for use as an isobaric purifier. The motivation and design will be presented.

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Brad Schultz
Univ of Notre Dame

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