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St. George a first step toward a recoil separator for FRIB¹ MA-NOEL COUDER, GEORG P. BERG, JOACHIM GOERRES, LARRY O. LAMM, P.J. LEBLANC, EDWARD STECH, MICHAEL WIESCHER, University of Notre Dame — In explosive environments, nuclear reactions involving radioactive ions play a crucial role. The advent of high intensity radioactive beams triggered the development of recoil separators to study proton and α radiative capture. However, existing devices have typically been designed based on a single reaction which limits, de facto, their specifications. At the University of Notre Dame, a large acceptance recoil separator to study radiative capture induced by stable beams (A<40) has been developed. Based on our experience we will expose the possible directions of a separator for FRIB (Facility for Rare-isotope Beams) dedicated to the study of reaction of astrophysical interest.

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