INITIAL RESULTS OF THE ECR CHARGE BREEDER FOR THE 252CF FISSION SOURCE PROJECT (CARIBU) AT ATLAS

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Abstract

The construction of the Californium Rare Ion Breeder Upgrade (CARIBU), a new radioactive beam facility for the Argonne Tandem Linac Accelerator System (ATLAS), is in progress. The facility will use fission fragments from a 1 Ci 252Cf source; thermalized and collected into a low-energy particle beam by a helium gas catcher. In order to reaccelerate these beams, the existing ATLAS ECR1 ion source has been redesigned to function as a charge breeder source. An additional high voltage platform has been constructed to accommodate a low charge state stable beam source for charge breeding development work. The design features and initial results of this charge breeder configuration will be discussed.

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