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New Technique of Injecting Radioactive Ions into Charge Breeding ECR Ion Source

Cyclotron Institute at Texas A&M University started a project to develop the reacceleration of radioactive ions using the two operational cyclotrons and a Charge Breeding ECR ion source. The radioactive ions are produced primarily via (p,n) reactions using the well-known IGISOL technique. The reaction products are transported into a Charge Breeder ECR ion source where their charge state is boosted from 1+ to higher, depending on the product of interest and the operational state of the Charge Breeder ECR ion source. The transport of the products and the injection into the ion source are very important for the efficiency of charge breeding. Two techniques have been used: acceleration–deceleration method (classic) and low - energy RF-only sextupole ion guide transport and injection method (innovative technique). The last method appears to be very efficient and great charge breeding efficiency was observed. The presentation of the entire project, the new injection technique, experimental results, and future plans will be discussed.

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I have read the Code of Conduct to attend ICIS2023.

Yes

Presenter if not the submitter of this abstract

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