

Charge breeding for HIE-ISOLDE

Tuesday, 26 November 2013 09:30 (20 minutes)

To take full advantage of the HIE-ISOLDE upgrade and to make possible all experiments with TSR@ISOLDE a new charge breeder in the ISOLDE reacceleration branch is required. In this contribution we would like to raise the awareness of the user community on how charge breeding at ISOLDE can affect their experiments, outline the new opportunities and define the limits. The ultimate goals of the new charge breeder are: to increase the extraction repetition rate and therefore lower the instantaneous particle flux at the experiments; give access to higher beam energies in the 10-17 MeV/u range by lowering the A/g ratios down to 3; create the possibility for injecting HCI into the TSR at A/q 3 and provide by request few electron configurations of heavy ions up to Li-like uranium. We would also like to report on our recent experimental progress in our design study of a new generation high performance charge breeder suitable for HIE-ISOLDE and TSR@ISOLDE. The strategy and tentative time planning for the high-performance breeder will be presented as well.

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Session Classification: Technical HIE_ISOLDE