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Production of C-14 and Stable Ion Beams at the Argonne Tandem Linac Accelerator System with the ECR3 Ion Source

The Argonne Tandem Linac Accelerator System (ATLAS) at Argonne National Laboratory paused production of carbon-14 ion beams with the removal of the Tandem Van de Graaff in 2013. Installation of ECR3, an Electron Cyclotron Resonance Ion Source, returned that production capability to ATLAS, with the first C-14 beam delivered in December 2020. Information is presented on C-14 beam current, gas consumption and N-14 filtering techniques using stripping foils at different sections of ATLAS. ECR3 also fulfilled an operational goal, adding flexibility to ATLAS, after stable beam commissioning completion in October 2019. Beneficial impacts to ATLAS operation, beam development and experimental programs are discussed.

E-mail for contact person

rscott@anl.gov

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Primary author: Mr SCOTT, Robert (Argonne National Laboratory)

Co-authors: VONDRASEK, Richard (Argonne National Laboratory); MCLAIN, Jake (Argonne National Laboratory)

Presenter: Mr SCOTT, Robert (Argonne National Laboratory)

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