Contribution ID: **22** Type: **Poster**

Evaluation of Plasma Behavior in an 14.5 GHz ECR Ion Source in RAON

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RAON (Rare isotope Accelerator complex for ON-line experiments) is a heavy ion accelerator under construction in Daejeon, South Korea. RAON plans to operate a 28 GHz Electron Cyclotron Resonance Ion Source (ECRIS) with a fully superconducting magnet and is currently operating a 14.5 GHz ECR ion source with a fully permanent magnet. The 14.5 GHz ECRIS was manufactured by PANTECHNIK and installed in our beamline in September 2020. The initial beam conditioning of RAON was conducted using the 14.5 GHz ECR ion source with 40Ar9+ and 40Ar8+ beams. During extended beam extraction experiments in the ion source, signals indicating changes in the ECR plasma were observed, despite no alterations in various parameter settings. To analyze the causes of these plasma changes, experiments were conducted to evaluate the effects of gas injection rate and RF power. This paper discusses the results of these experiments.

Paper submission Plan

Best Presentation

Contribution track

ICABU WG1. Accelerator Systems

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