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Beam measurements in high-current ECR ion source

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Korea University(KU) has installed 14 GHz Electron Cyclotron Resonance Ion Source (ECRIS) for researches on material science and bio science. The high voltage platform of KU-ECRIS had been upgraded from 10kV to 30kV. During the upgrade, the geometry of the plasma electrode is changed due to arc discharge occurred in cone-shaped plasma electrode. According to positions of plasma electrode, effects of the total current and currents of multi charged ions were investigated. The informations about position of plasma electrode and beam size were obtained using SIMION simulations. The comparison of experimental results between total current and current of multi charged ions with two faraday cups will be reported in this paper. We will introduce the status of beam measurements for the KU-ECRIS.

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Primary authors: KIM, Jisoo (Dept. of Accelerator Science, Korea University, Sejong, South Korea); Dr LEE, Byoung Seob (Center of Scientific Instrument, Korea Basic Science Institute); Prof. KIM, Eun-San (Dept. of Accelerator Science, Korea University, Sejong, South Korea); Prof. PARK, HyangKyu (Dept. of Accelerator Science, Korea University, Sejong, South Korea); Dr BAHNG, Jungbea (Dept. of Accelerator Science, Korea University, Sejong, South Korea); Dr NAM, Seung-Hee (Dept. of Accelerator Science, Korea University, Sejong, South Korea); Mr YU, Jinsung (Dept. of Accelerator Science, Korea University, Sejong, South Korea)

Presenter: KIM, Jisoo (Dept. of Accelerator Science, Korea University, Sejong, South Korea)

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