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Operation and R&D of liquid lithium charge stripper at FRIB

Tuesday 12 August 2025 15:10 (20 minutes)

Charge stripping is an essential technique for the efficient acceleration of heavy ions. The Facility for Rare Isotope Beams (FRIB) utilizes the Liquid Lithium Charge Stripper (LLCS) to produce the world's most powerful heavy ion beams, so far demonstrated up to 20 kW with 200 MeV/u energy. In the FRIB driver linac, electrons are stripped by a thin film jet of liquid lithium flowing at 50 m/s. The LLCS has been in operation with FRIB's linac since 2022 and will support the future ramp-up of the beam power to 400 kW. Our operation experiences have revealed that the performance of the LLCS will be further improved by increasing the film thickness twice and enhancing the uniformity and stability of the film. In this presentation, we report on the operational experiences with the current LLCS and various R&D activities for its future upgrade.

Please consider my poster for contributed oral presentation

Yes

Would you like to submit this poster in student poster session on Sunday (August 10th)

No

Footnotes

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Yes

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