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Status and Development with CANREB at TRIUMF

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The Canadian Rare isotope facility with Electron Beam ion source (CANREB) is part of the Advanced Rare Isotope Laboratory (ARIEL) at TRIUMF. CANREB will be used for charge state breeding of rare isotope beams for post-acceleration to experiments in ISAC. Beams injected into CANREB are first bunched using an RFQ cooler buncher and energy matched into an electron beam ion source (EBIS). The EBIS was designed for a maximum electron beam current of 500 mA at a maximum magnetic field of 6 Tesla. Ions are charge bred to A/q < 6 within 10 ms and extracted at energies up to 12 keV x q. The highly charged ions are mass separated using a Nier spectrometer before being injected into the ISAC linear accelerator chain. Recent development efforts will be discussed, as well as an update on EBIS technical limitations.

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