TRIUMF Advanced Rare Isotope Laboratory (ARIEL)

Contribution ID: **61** Type: **Contributed poster presentation**

Fission Fragment Detection using the Photon Beam of ARIEL

The SCI-CASTER project at the SFU Nuclear Science Laboratory aims to develop position-sensitive ionization chamber detector technologies for precision charged particle measurements. Modern waveform digitization and analysis methods enable this by allowing for the direct application of the Shockley-Ramo theorem to the induced charge signals of the ionization chamber, yielding measurements of charge drift times and track proximity to detector electrodes. Thus far, all prototype detectors in the project have consisted of a single-sided geometry intended for decay measurements. In light of the advent of the ARIEL-era, it is proposed that a twin-chamber SCI-CASTER system be constructed and implemented at the ARIEL facility for investigation of photo-fission fragment detection employing high-energy photon beams from conversion of electrons accelerated by the e-linac impinging on heavy targets. The feasibility and preliminary design considerations of the detector will be presented.

Primary author: REDEY, Andrew (Simon Fraser University)

Co-authors: STAROSTA, Krzysztof (Krzysztof Starosta); ASCH, Heinz (Simon Fraser University); WOINOSKI, Alex; LO, Helena (Simon Fraser University)

Presenter: REDEY, Andrew (Simon Fraser University)

Session Classification: Reception & Poster Session