

# From Nano Materials to Giant Resonances - ARIEL Target Ion Source Opportunities

*Wednesday, July 18, 2018 5:00 PM (30 minutes)*

ARIEL will dramatically increase the availability of radioactive ion beams by harvesting isotopes from three target stations simultaneously - a worldwide unprecedented technology - enhancing the scientific output of the laboratory. For the first time, high-power electrons (up to 500 kW) will be converted into gamma rays inducing photonuclear reactions in one target, while two others are being bombarded with protons from TRIUMF's 500 MeV cyclotron. The intrinsic properties of 35-50 MeV electrons are fundamentally different than of MeV neutrons or 0.1 to 2 GeV protons, commonly used for ISOL, calling for a wide range of target ion source development. ARIEL will open new avenues towards functionalized materials, advanced target concepts, and improved ion sources, tailored for meeting tomorrow's demand of exotic and pure radioisotope beams.

**Presenter:** Dr GOTTBURG, Alexander (TRIUMF)

**Session Classification:** New Directions for Ariel