



Canadian Association
of Physicists

Association canadienne
des physiciens et physiciennes

Contribution ID: 114

Type: Oral (Non-Student) / Orale (non-étudiant(e))

Canada's involvement in the Electron Ion Collider

Monday 9 June 2025 15:00 (15 minutes)

The Electron-Ion Collider (EIC) is a new particle collider facility to be built in the US with significant participation of the EIC Canada Collaboration. At the EIC, polarized electrons will collide with polarized protons or ions to answer questions about the origin of mass and spin of protons. The EIC Canada Collaboration will provide two pieces of key infrastructure for the EIC and its primary detector.

On the accelerator side we will build the 394 MHz Superconducting Radiofrequency crab cavities that will increase ten-fold the probability of collisions necessary for scientific discovery. The construction of these crab cavities will cement Canada's position at the forefront of superconducting radiofrequency technology. Aside from providing critical training for Canadian scientists and engineers, superconducting accelerator technology reduces the size of medical accelerators for cancer therapy and isotope production.

Keyword-1

Particle Accelerator

Keyword-2

Nuclear Physics

Keyword-3

Superconducting RF

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Session Classification: (DAPI) M2-1 | (DPAI) Accelerator Topics

Track Classification: Technical Sessions / Sessions techniques: Applied Physics and Instrumentation / Physique appliquée et de l'instrumentation (DAPI / DPAI)