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OR15 - Automated Profile and Beam Intensity Measurements at TRIUMF

Wednesday, 13 September 2023 11:40 (20 minutes)

During operation of a particle accelerator, frequent diagnostic checks along the beam path using multiple devices are needed to determine the quality and properties of the delivered beam. A high-level application (HLA) has been built that automates this process, moving devices in and out while collecting and saving diagnostic data, beam properties and all relevant optics settings into a permanent database. Operators can now search through and compare multiple past measurements using tables, graphs, and statistics. A related HLA has been further developed which gives Operators the ability to load any past configuration into the beamline optics with the click of a button. With enough data automatically collected over time we can consider training machine learning agents on this data set toward automated tuning, or simply design more analytic programs using this data for other purposes such as orbit correction.

Presenter: STRINGER, Blair (TRIUMF)

Session Classification: Operator Made Tools