



Contribution ID: 2478 Contribution code: THPL094

Type: **Poster Presentation**

Beam loss monitoring with fixed and translating scintillation detectors along the Fermilab drift-tube linac

Thursday, 11 May 2023 16:30 (2 hours)

The Fermilab Linac is a roughly 145 meter linear accelerator that accelerates H- beam from 750 keV to 400 MeV and provides beam for the Booster and the rest of the accelerator chain. The first section of the Linac is a Drift-Tube Linac (DTL), which in its current state, suffers from a lack of instrumentation along its length. As a result, operational staff do not have access to the diagnostic information needed to tune the critical components of this accelerator, such as the quadrupole magnets within the drift tubes. This work presents an effort to utilize both fixed and translating scintillation detectors to investigate beam loss along the first two tanks of the Drift-Tube Linac.

Funding Agency

Footnotes

I have read and accept the Privacy Policy Statement

Yes

Primary author: STANTON, John (Fermi National Accelerator Laboratory)

Co-authors: SHARANKOVA, Ralitsa (Fermi National Accelerator Laboratory); SEIYA, Kiyomi (Fermi National Accelerator Laboratory); WESLEY, Michael (Fermi National Accelerator Laboratory)

Presenter: SHARANKOVA, Ralitsa (Fermi National Accelerator Laboratory)

Session Classification: Thursday Poster Session

Track Classification: MC6: Beam Instrumentation, Controls, Feedback and Operational Aspects: MC6.T03: Beam Diagnostics and Instrumentation