Contribution ID: **399** Contribution code: **MOPB060** Type: **Poster Presentation**

Emittance measurements with wire scanners in the Fermilab side-coupled linac

Monday 26 August 2024 16:00 (2 hours)

The Fermilab Side-Coupled Linac accelerates H- beam from 116 MeV to 400 MeV through seven 805 MHz modules. Twelve wire scanners are present in the Side Coupled Linac and four are present in the transfer line between the Linac and the Booster synchrotron ring. These wire scanners act as important diagnostic instruments to directly collect information on the beam's transverse distribution. The manipulation of the conditions of wire scanner data collection enables further characterization of the beam-line, such as calculating emittance and the Twiss parameters of the beam at select regions, which we present here.

Footnotes

Funding Agency

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Session Classification: Monday Poster Session

Track Classification: MC4: Technology: MC4.1 Beam diagnostics