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## Wire scanner assessment of transverse beam size in the Fermilab side-coupled linac

*Wednesday, 22 May 2024 16:00 (2 hours)*

The Fermilab Side-Coupled Linac contains seven 805 MHz modules accelerating H- beam from 116 MeV to 400 MeV. Each module contains at least one wire scanner, yielding beam intensity at positions along a transverse direction. These wire scanners each contain three wires, mounted at different angles: “X”, “Y”, and 45° between “X” and “Y” to analyze coupling. Recently, a significant amount of transverse X-Y coupling was identified within wire scanner data from the Side-Coupled Linac, which has been present in data from the past decade. This realization has prompted an investigation into the wire scanner’s utility as a diagnostic tool in the Fermilab Linac. This work presents efforts to better characterize the wire scanners’ limitations and the phenomenon occurring in the Side-Coupled Linac.

### Footnotes

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North America

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