Contribution ID: **729** Contribution code: **WEPM108** Type: **Poster Presentation**

Towards operational optics measurements with AC Dipole excitations in the CERN SPS

Wednesday 4 June 2025 16:00 (2 hours)

In the CERN Super Proton Synchrotron (SPS), a new AC dipole excitation functionality has been implemented with the aid of the Beam-Based Feedback and Diagnostic Systems. This feature facilitates precise and systematic optics measurements, presenting a robust alternative to the conventional single-kick excitation method. Comparative studies of AC dipole and single-kick excitations have been performed, employing linear and nonlinear optics measurements. Experimental results highlight the reliability and accuracy of the AC dipole implementation, underscoring its potential for integration in standard SPS operations for routine optics measurements.

Footnotes

Paper preparation format

LaTeX

Region represented

Europe

Funding Agency

Author: ZISOPOULOS, Panagiotis (European Organization for Nuclear Research)

Co-authors: MACLEAN, Ewen (European Organization for Nuclear Research); LI, Kevin (European Organization for Nuclear Research); PARASCHOU, Konstantinos (European Organization for Nuclear Research)

Presenter: LI, Kevin (European Organization for Nuclear Research)

Session Classification: Wednesday Poster Session

Track Classification: MC5: Beam Dynamics and EM Fields: MC5.D01 Beam Optics Lattices, Correction Schemes, Transport