



Contribution ID: 314 Contribution code: WEPCO27

Type: Poster Presentation

MEASUREMENT OF CRABBING ANGLE WITH PHASE INFORMATION FROM BPM

Wednesday 10 September 2025 16:00 (2 hours)

The Electron-Ion Collider is being constructed at the Brookhaven National Laboratory. The crab cavities will be utilized for the increase of the luminosity. While the initial set-up of crab cavities can be based on the orbit measurements during dedicated development time, we need to utilize a less invasive approach for monitoring the longitudinal beam tilt during operations. We propose to measure a phase shift between two beam position monitor channels for this purpose. The signal can be easily incorporated into the RF system feedback to suppress noise in the system. Theoretical considerations as well as tests with the electron beams are presented.

Footnotes

Funding Agency

Work supported by Brookhaven Science Associates, LLC under Contract No. DE-SC0012704 with the U.S. Department of Energy.

I have read and accept the Conference Policies

Yes

Author: PINAYEV, Igor (Brookhaven National Laboratory)

Presenter: PINAYEV, Igor (Brookhaven National Laboratory)

Session Classification: WEP

Track Classification: MC03: Beam Position Monitors