Contribution ID: **48** Contribution code: **THP021** Type: **Poster Presentation**

Design of a GammaT-Jump System for Fermilab Booster

Thursday 14 August 2025 16:00 (2 hours)

A gammaT scheme may be required for the PIP-II era performance or ACE-MIRT era performance of the Booster. PIP-II era operations of the Fermilab proton complex will require the Fermilab Booster to increase beam intensity from 4.5e12 to 6.5e12 protons, while also increasing its ramp from 15 Hz to 20 Hz. These changes pose particular challenges for transition-crossing in the Booster, where longitudinal beam quality must be controlled in order to facilitate slip-stacking in the Recycler Ring later in the Main Injector cycle. Two novel gammaT jump schemes are proposed, termed “double gammaT jump”and “partial gammaT jump” , which optimize the magnitude of the gammaT jump within optics and power supply constraints.

Please consider my poster for contributed oral presentation

Yes

Would you like to submit this poster in student poster session on Sunday (August 10th)

No

Footnotes

Funding Agency

I have read and accept the Privacy Policy Statement

Yes

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