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CERN Proton Synchrotron Booster High-Intensity Operation

Tuesday, October 21, 2025 4:00 PM (30 minutes)

The CERN Proton Synchrotron Booster (PSB) produces a wide variety of high intensity and high brightness beams for the fixed target experiments and the Large Hadron Collider (LHC). As part of the LHC Injectors Upgrade (LIU) project, many upgrades were made to the accelerator, including a new injector, Linac4, increased injection and extraction energies, charge exchange injection and new RF systems. With the approval of the Search for Hidden Particles (SHiP) facility, a new era of PSB operation approaches that will require higher intensities to ensure the requirements of existing facilities are still met. This contribution will discuss optimisations that have been implemented for present and upcoming operational beams as well as longer term studies to probe the ultimate performance limit of the accelerator.

Footnotes

Funding Agency

I have read and accept the Privacy Policy Statement

Yes

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