



Contribution ID: 2122 Contribution code: TUPM118

Type: **Poster Presentation**

## Tailoring transverse beam characteristics with the new CERN PS booster charge-exchange injection system

*Tuesday, 9 May 2023 16:30 (2 hours)*

A key aspect of the LHC Injectors Upgrade project is the connection of the PSB to the newly built Linac4 and the related installation of a new 160 MeV charge-exchange injection system. The new injection system was commissioned in winter 2020/21 and is now used operationally to tailor the transverse characteristics for the various beam types at CERN, such as high-intensity fixed target beams, LHC single bunch beams, and high-brightness beams for LHC.

This contribution outlines the different injection strategies for producing the various beam types and discusses the application of numerical optimization algorithms to adjust injection settings in operation efficiently.

### Funding Agency

### Footnotes

### I have read and accept the Privacy Policy Statement

Yes

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**Session Classification:** Tuesday Poster Session

**Track Classification:** MC4: Hadron Accelerators: MC4.T12: Beam Injection/Extraction and Transport