Contribution ID: **552** Contribution code: **TUPB017** Type: **Poster Presentation**

First results of the new eddy current septum for the CERN PS fast extraction

Tuesday 3 June 2025 16:00 (2 hours)

CERN has developed a new fast pulsed septum magnet to replace the aging PS proton extraction septum. The aim is to increase the refurbishment intervals of the magnet and to phase out the old power converter, while allowing energy savings during operation.

The new system includes a novel under vacuum eddy current septum magnet, a new third-harmonic fast pulse generator and dedicated control system with post pulse fault analysis for achieving the required flat top precision.

This paper will briefly describe the system development and focus on the lessons learned from its construction and report the results of the testing phase.

Footnotes

Paper preparation format

Word

Region represented

Europe

Funding Agency

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Session Classification: Tuesday Poster Session

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