

Week 47 (November 21-27): last week of proton run

- **Monday:** LHC filling process in the morning. Stable beam from 13.30 to 19.30. Electron-seeded hosing with $1E11p$ beam.
- **Tuesday:** beam between LHC fills: 10-12, 13.30-18.30. Proton/laser timing scans at $1/2/3E11p$ intensity for plasma light studies
- **Wednesday:** Machine Development. Access for small interventions
- **Thursday:** beam between LHC fills: 10.30-15.30. Proton/laser timing scans at increased plasma density (from 1 to $2E14/cm^3$). Electron/laser timing scans after protons stopped.
- **Friday:** stable beam from 10 to 18.30. Increased plasma density to $4E14/cm^3$, performed proton/laser timing scans and electron-seeded self-modulation studies. Also studied self-modulation with wide-bunch proton optics
- **Saturday:** access in the morning, then stable beam from 12 to 18. Proton/laser timing scans with nominal optics and wide-bunch optics at increased density ($7E14/cm^3$, nominal).
- **Sunday:** protons from 9 to 12, then 14 to 16. Wide-bunch optics at $7E14/cm^3$ density in the morning, proton/laser timing at $4E14/cm^3$ in the afternoon. Started a dataset with a plasma density gradient, but SPS power issue stopped beam.

Plan for week 48: magnets/RP/access interventions on Monday/Tuesday. Electron beam steering algorithm tests on Wednesday-Friday.

- Giovanni Zevi Della Porta