

Status of Xe-doping in ProtoDUNE-SP

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Reminder: Xe doping status last Friday!

Current status and conclusions

- Finalized preparations and started Xe-injection on Thursday, February 13th
- Injected ~1ppm of Xe so far
- **Observed quick drop in electron lifetime (~8ms → ~3ms)**
- **Stopped Xe-doping on February 14 at ~noon**
- **Xe is brought to CERN EP-DT-FS department for analysis**
 - Chromatograph + mass spectrometer analyzer, ppm level sensitivity → monday
- **Taking PrM run in every 2h and will monitor the system during the weekend**

Electron lifetime measurements by Purity Monitors

- Slow increase in the lifetime: ~3ms to ~3.7ms in a week



Ongoing investigation and analysis work

- Analysis of Xe cylinder for possible contaminations:
 - Mara Corbetta from CERN EP-DT → next talk
- Comparison of NP04 and 182 test stand Xe cylinders
- Analysis of the data collected with photon detection system
 - Dante, Niccolo and Umut