

# CERN update

## 17/05/2024

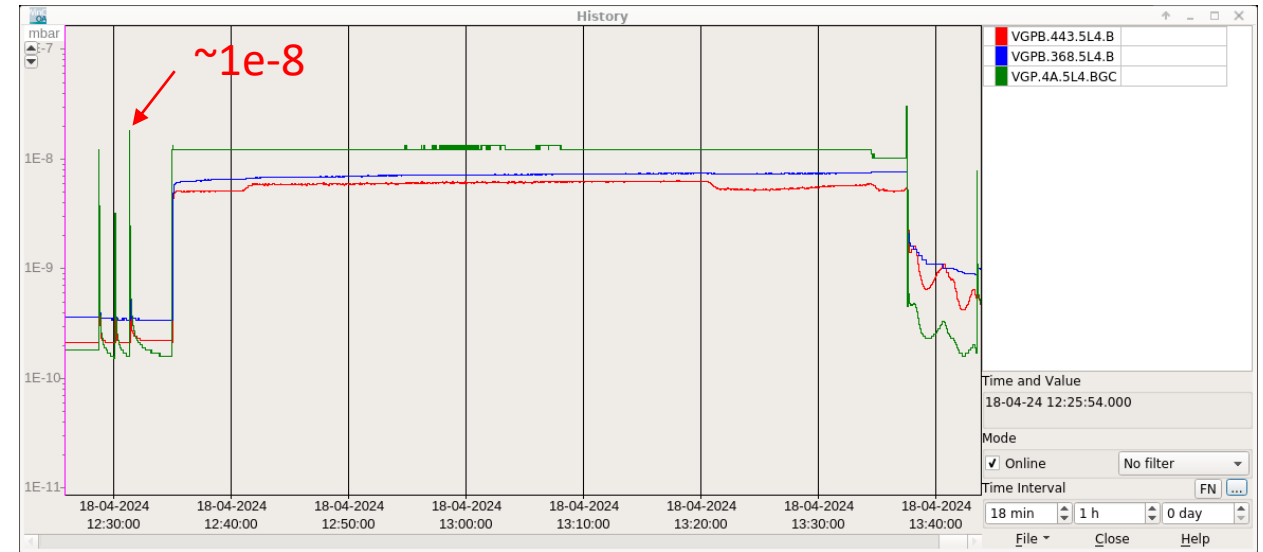
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# Status of gas injection tests

Last injection performed on **18/04/2024**,  
in stable beams with **1800b**

No anomalous vacuum spikes while opening valves

No detectable effect on losses



## Qualitative results

Proton beam clearly visible with a few minutes exposure already at end of 1800b fill

So far, we couldn't find a clear minimum scanning the optics focus

- linear stage limits moved during quick access to grant maximum stroke
- systematic scan needed with max beam intensity to find the usual focusing parabola (hopefully)

So far, assessed emittance seems to be larger than BSRT and emittance scans

- systematic checks needed (optics focus, INJ vs FT, reproducibility...)



## Next steps

LHC will resume physics from next week with max beam intensity (2352b). At first available fill:

- start gas injection before machine filling
- check signal quality during INJ and RAMP
- once at flat-top, perform systematic focus scan

# Acquisition tools

## Expanded expert GUI functionalities

- full control of processing parameters (through UCAP)
- real-time display of processed data (both stacking and counting)

NXCALS subscriptions activated for results of “batch” analysis.

Single frames deliberately not stored (too much data).

Storing single frames for other studies up to discussion (rolling buffer? on demand?)

Scripts for automatic focus scan prepared

