

# Commissioning progress & next steps

- Source at 100KV
  - Beam spot on the injection BTV is moving
- Pbars available Monday, Wednesday, Friday until end of July for ELENA commissioning.
- Several Pbars days lost due to the dedicated MD or access in the injectors
- Electron Cooler
  - Installed
  - Electric validation done
  - heat-run done

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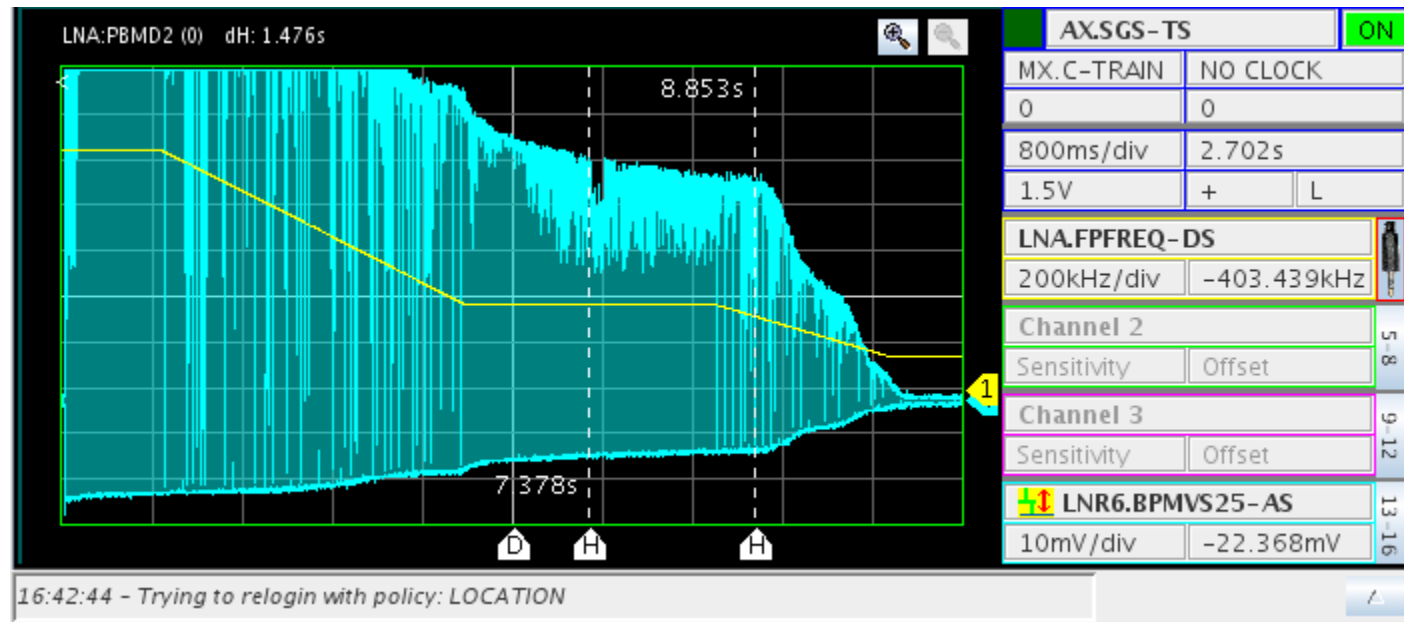
- Debugging of orbit and tune measurements with Pbars & H- beams
  - systematic inversion between the Madx sign convention and the polarities of steering magnets
  - Orbit response is close to expectations
  - Horizontal tune excitation did not work due to a broken "strip-line". Now the opposite strip-line is used to excite the beam
- Optimisations of the first ramp with Pbars
  - Working point adjustments
  - Additional data are required in order to use Qh & Qv parameters of cycle editor

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- Tests of the scraper with Pbars & H- beams
  - Bug in the acquisition of the blade velocity
- Debugging of the injection oscillation correction application
- RF cycles setting up
  - Cavity loop, RF-trains, Phase loop, Radial loop etc.
- BTrain
  - fluctuation of 0.03 G at all energies. Noise?
- H- beam is kicked out but cannot be observed in the transfer line to Gbar

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- Pbars beam close to the last flat-top



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- Electron Cooler
  - Compensation of the perturbations due to the electron cooler
  - Establish electron beam, can be done in parallel with circulating beam
  - Establish cooling (need pause on plateau)
- Extension of the working points accessible via trims from the cycle editor
- Working point optimisations
- Studies with the scraper
- Setting up of (pseudo-)adiabatic de-bunching at the intermediate plateau around 35 MeV/c

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- Debugging the uWire in LNI line
- Optimise deceleration cycle => efficiency, final emittances/lifetime