TECS.21602: Beam Interlock Change Proposal for RUN3

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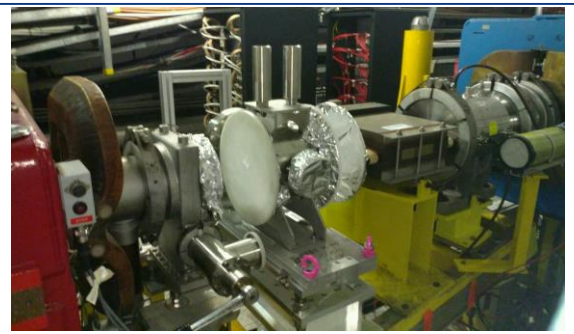
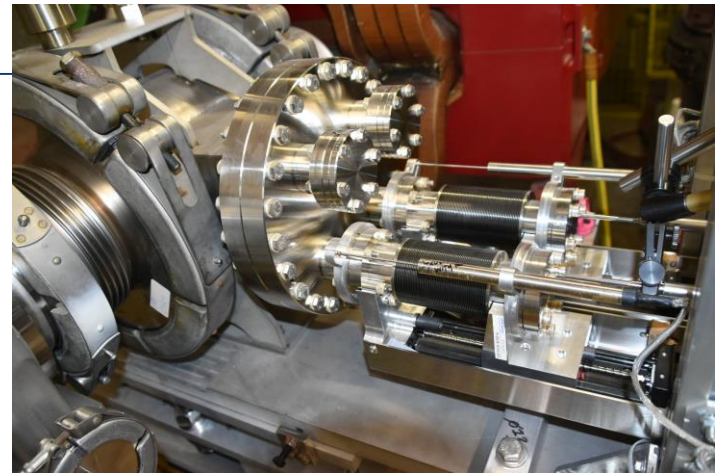
Thanks to the inputs from Yury Gavrikov, EN-STI, TE-ABT

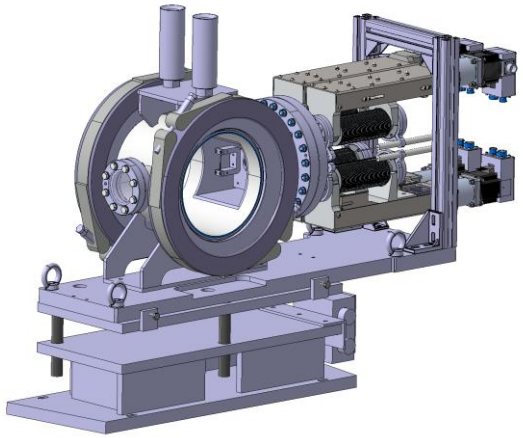
TECS.21602 - SPS Compact Goniometer for septa shadowing experiment

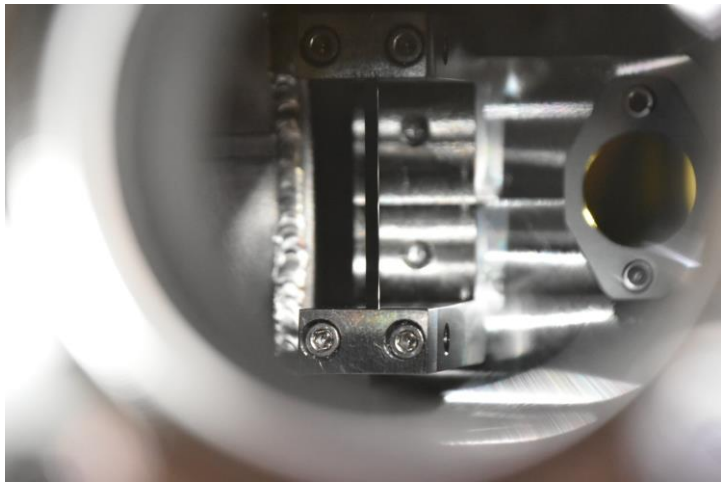
- 2 independent linear axis
- 2 position end-switches (in and out) for each linear axis
- 2 LVDTs to acquire positions
- After LS2 adjustments, linear stroke of each axis is approx. 95 mm,
- ✓ nominal position has ~ 10 mm distance wrt inner switch and ~ 85 mm distance wrt outer switch





Goniometer installed in TS2-





Crystal picture taken during LS2

Beam Interlock Change Proposal for RUN3

- For RUN2, as the rest of the SPS UA9 devices used during MDs, beam hardware interlock was active if the device had one of the 2 linear axis out switches not active (*device in beam*)

- In RUN3, for having it during “normal” operation (*device in beam*), beam hardware interlock should be triggered if one of the 2 linear axis out switches will be active (device out of beam)
  - ✓ Small modification/inversion of the logic in the low level control (same as the LHC Collimators)

- A software interlock should be implemented based on the position of the LVDTs on each axis to have the crystal in beam path

- No infrastructure/cabling modification needed

Thank you for your attention

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