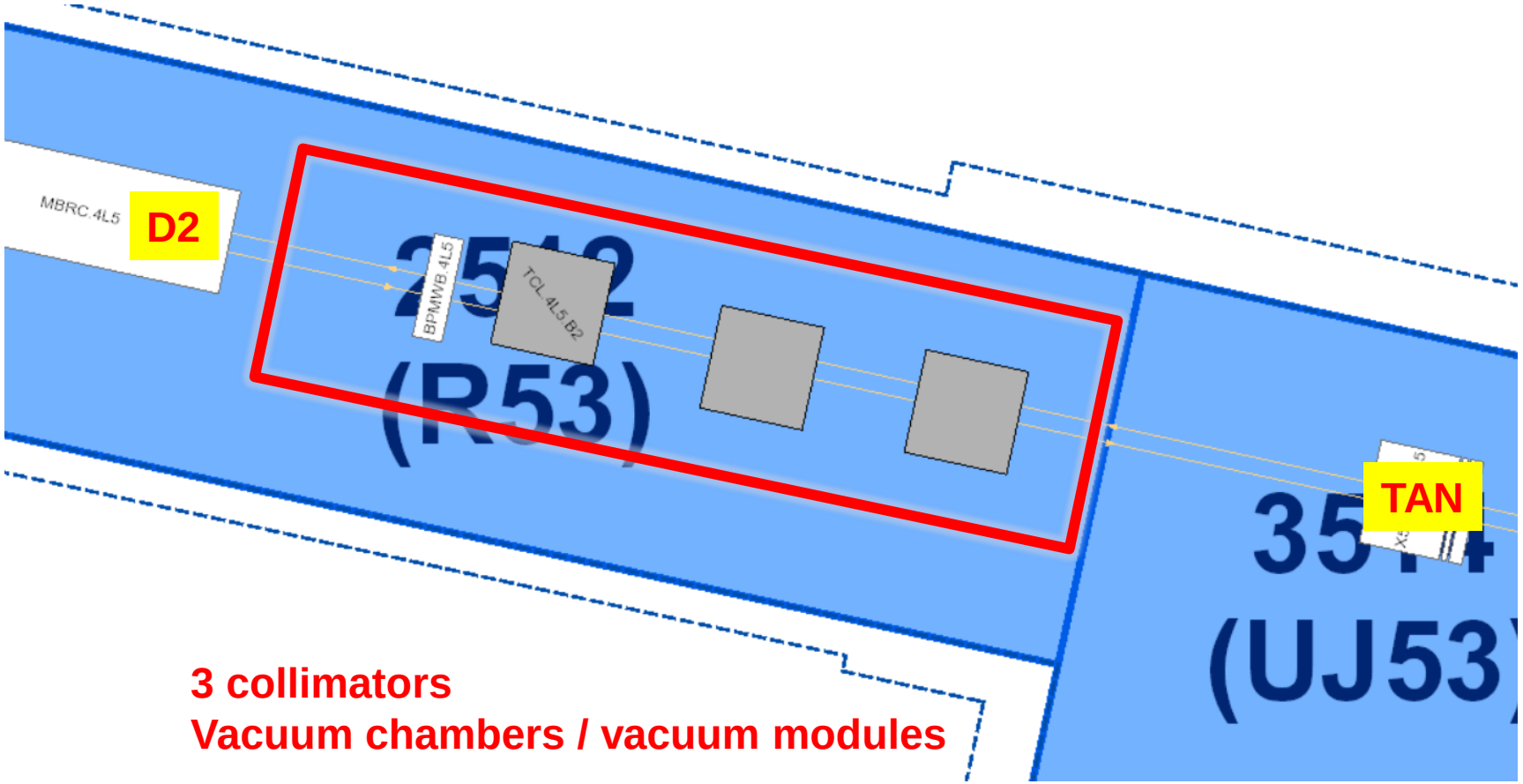
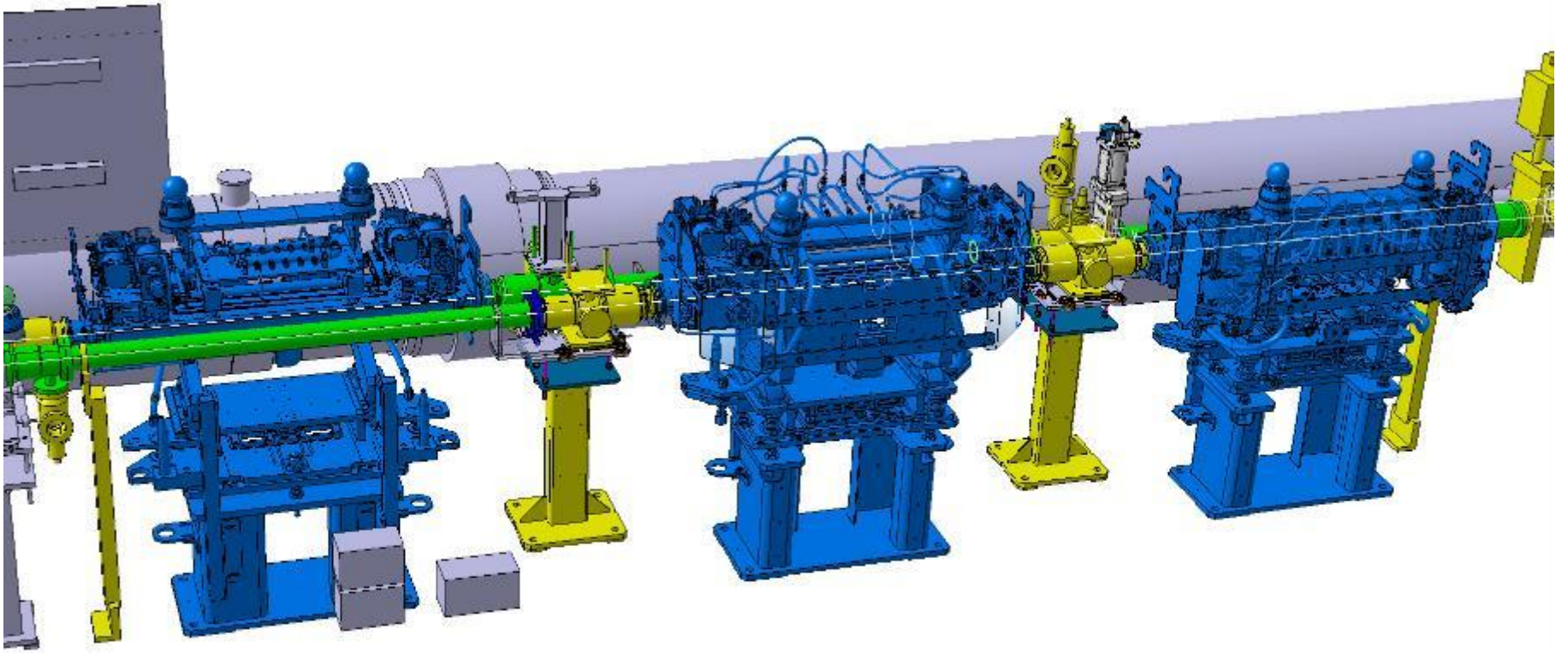
YETS 2016
Vacuum Alignments (LSS1 / LSS5)

Jean-Frederic FUCHS

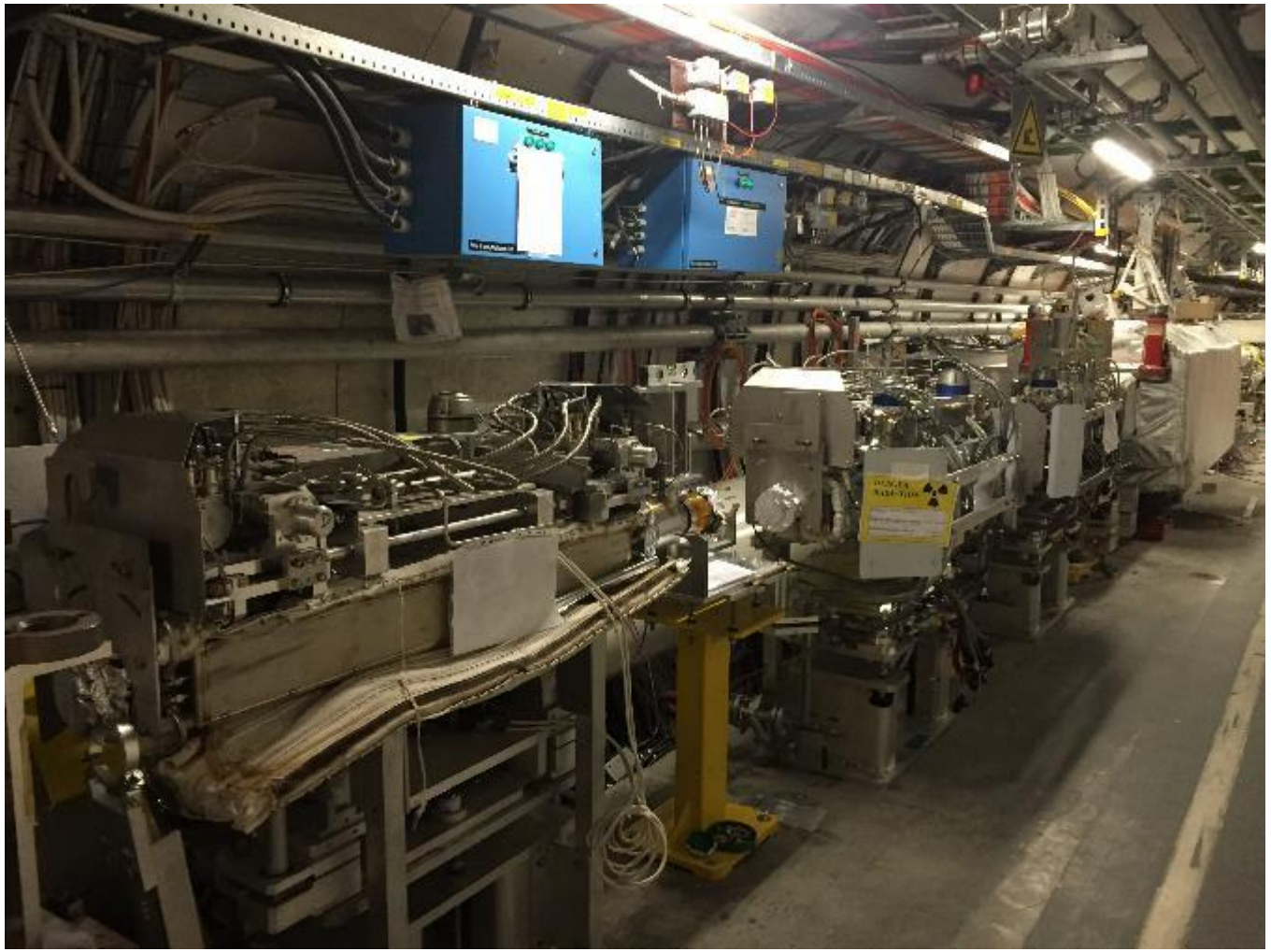
Top view : 4L5 (example)



General view

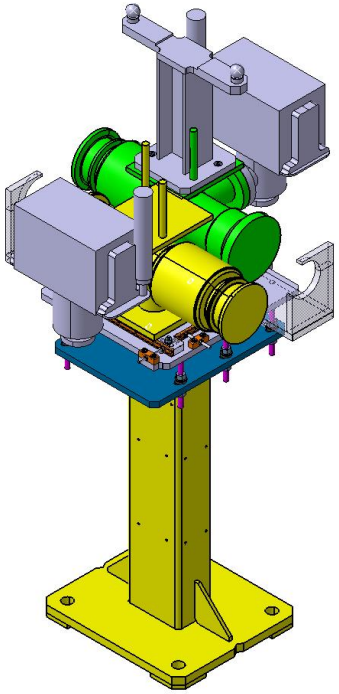


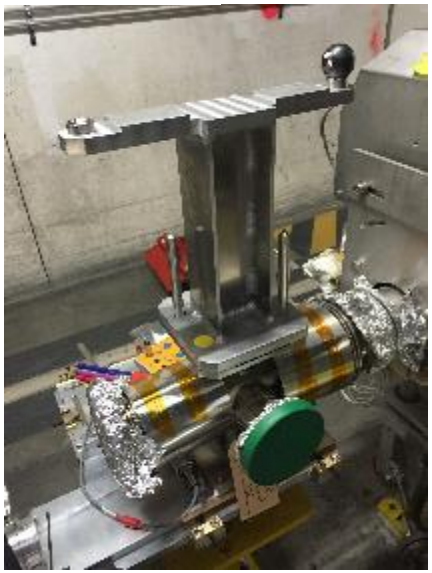
General view



Survey activities

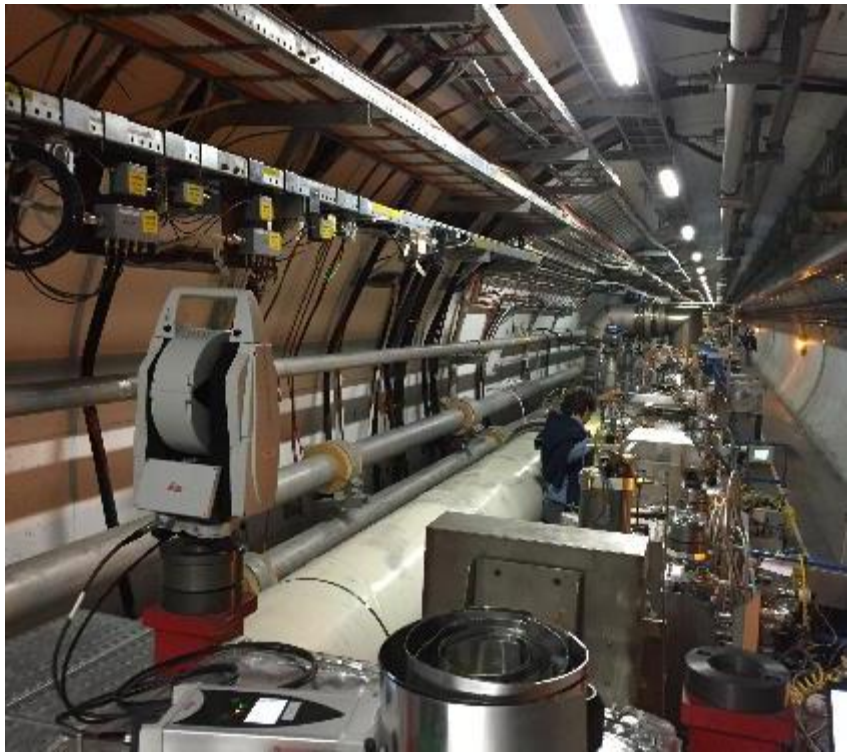
- Insertion of the “vacuum data” in GEODE
- Fiducialisation of the 8 modules (metrology lab)
- Tracing the position of the 8 feet (vacuum modules) and the new position of the collimators
- For each LSS side (x4) :
  - Alignment of collimators (x3) : 2D + 1
  - Alignment of vacuum modules (x2) : 3D



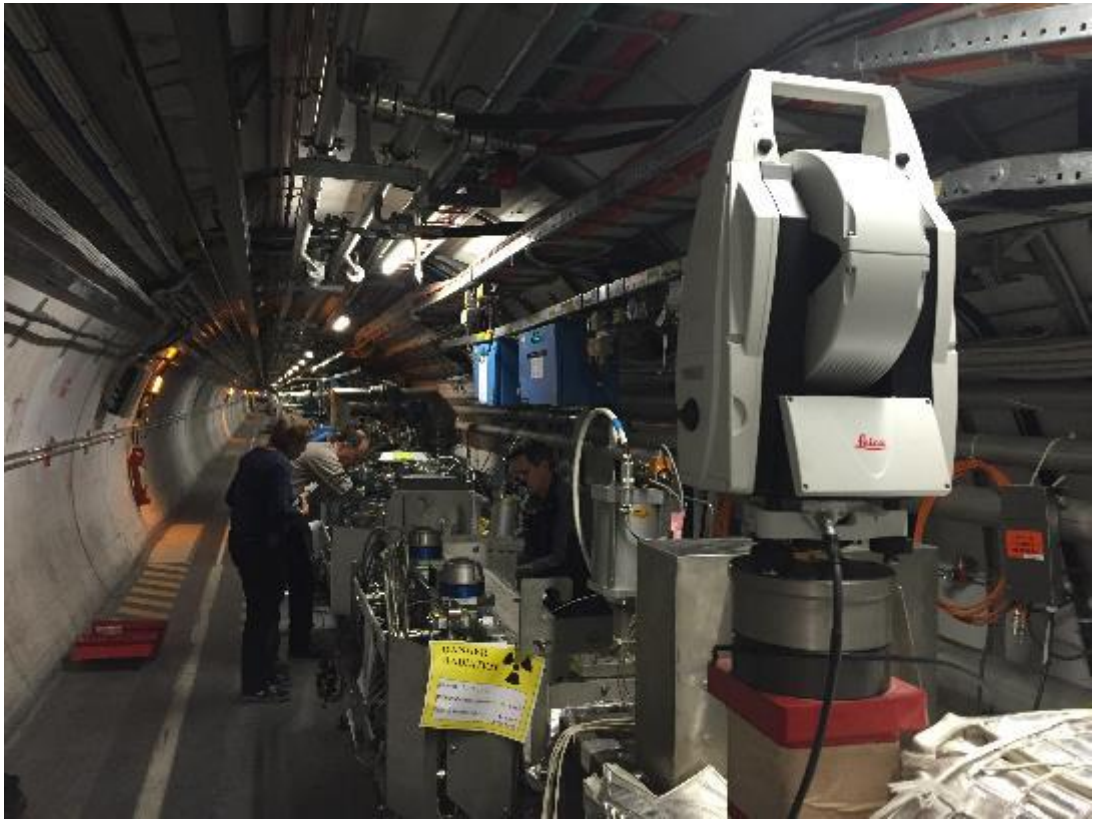


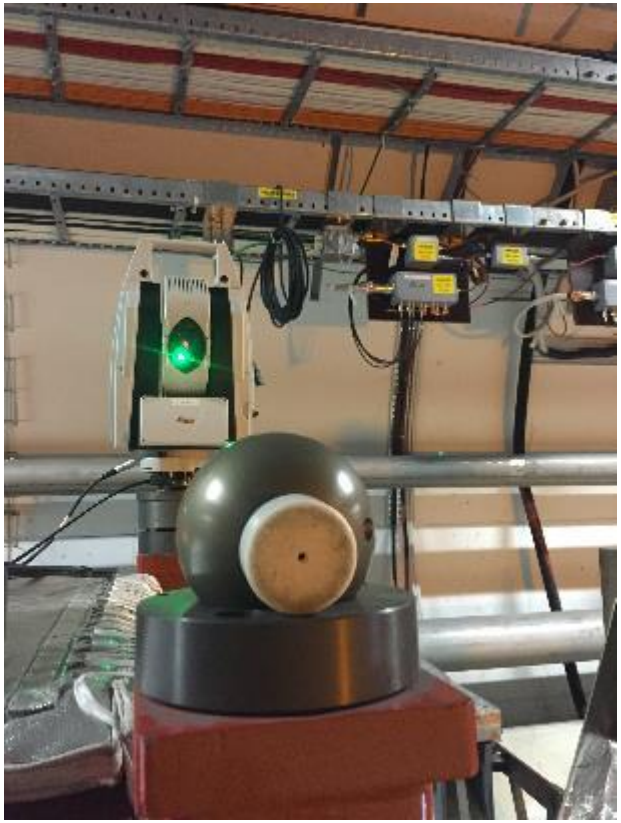
- The vacuum modules have been re-re-aligned for various reasons :
  - Loss of the fiducialisation,
  - Installation of the vacuum chambers : conflict with the collimator !
  - Ask for optimization of the vacuum chamber position (BE/ABP)

- Many obstacles, work on QRL side, access,



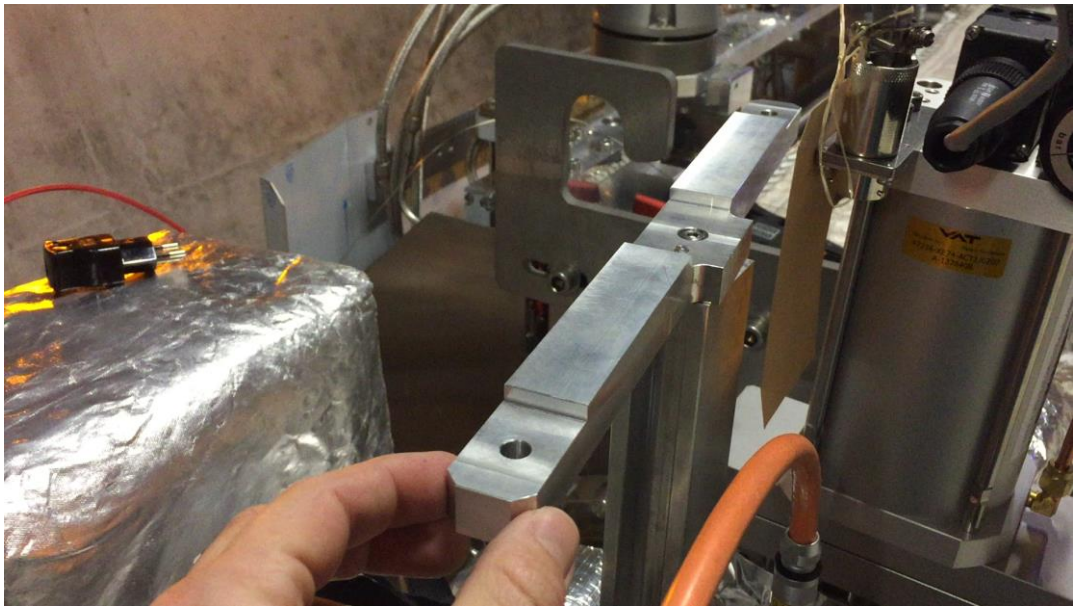
- SU need “references” : TAN + D2





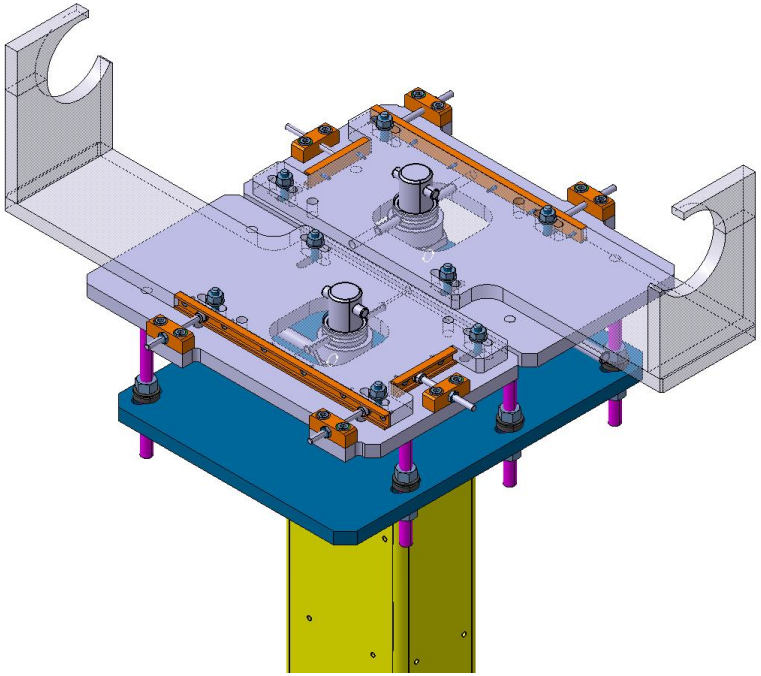
To be improved …..

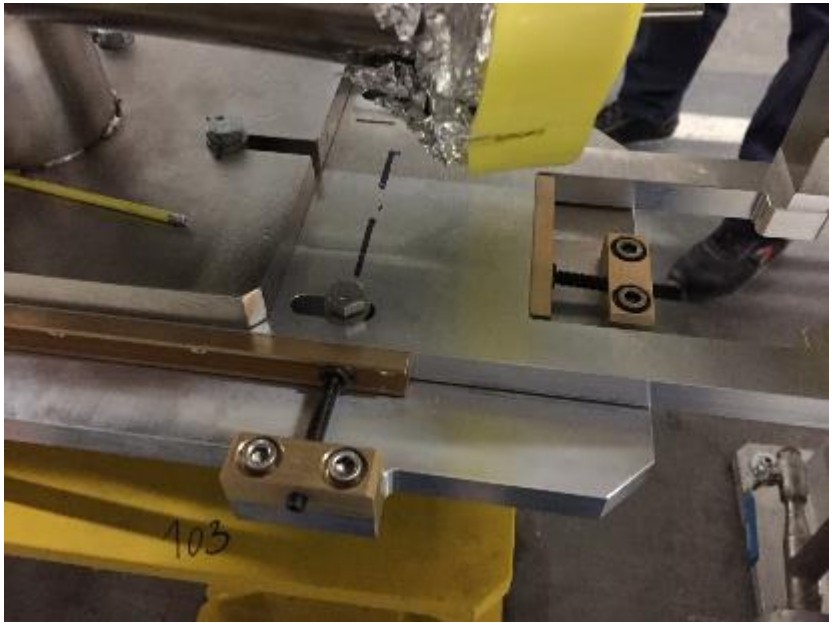
- Some target supports in the vacuum modules were not well usable (stability, not fixed, ….)
- Tilt surface !



To be improved …..

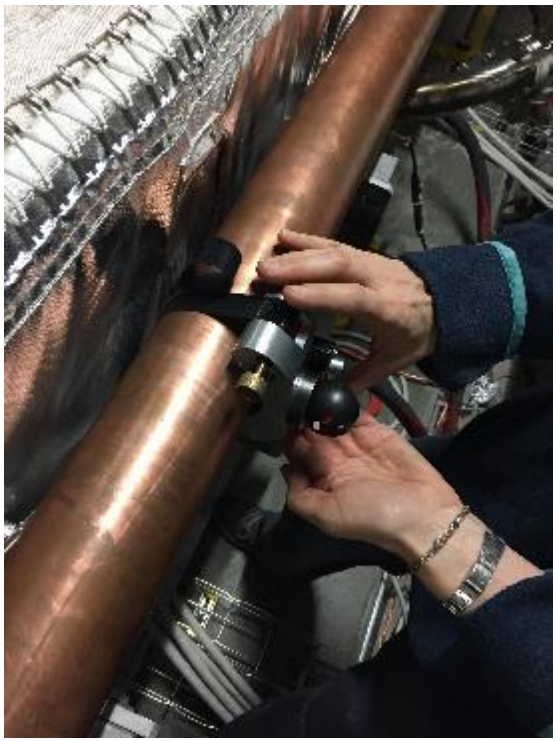
- Alignment system need to be optimized

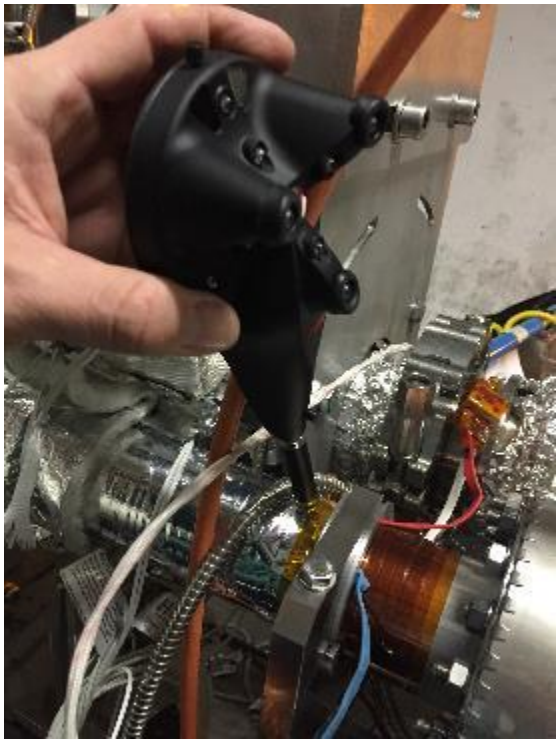


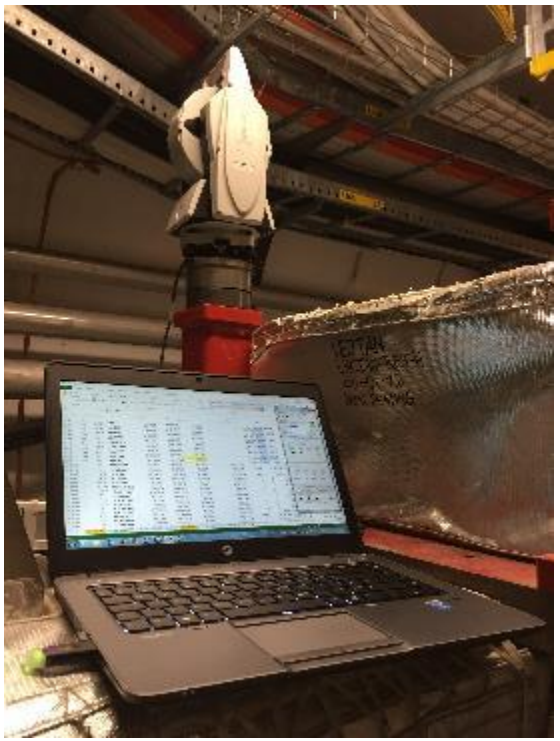


At the end …. SU measured the chamber axis

- Many obstacles ….
- Cannot be used for the alignment process







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- SURVEY is not in charge of the vacuum chamber alignments
- SU need (ask for) a management decision
- Many improvements are needed
  - Input data / fiducialisation
  - Alignment systems
  - “Targets” on the object / stability
  - Survey corridors
  - …….


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