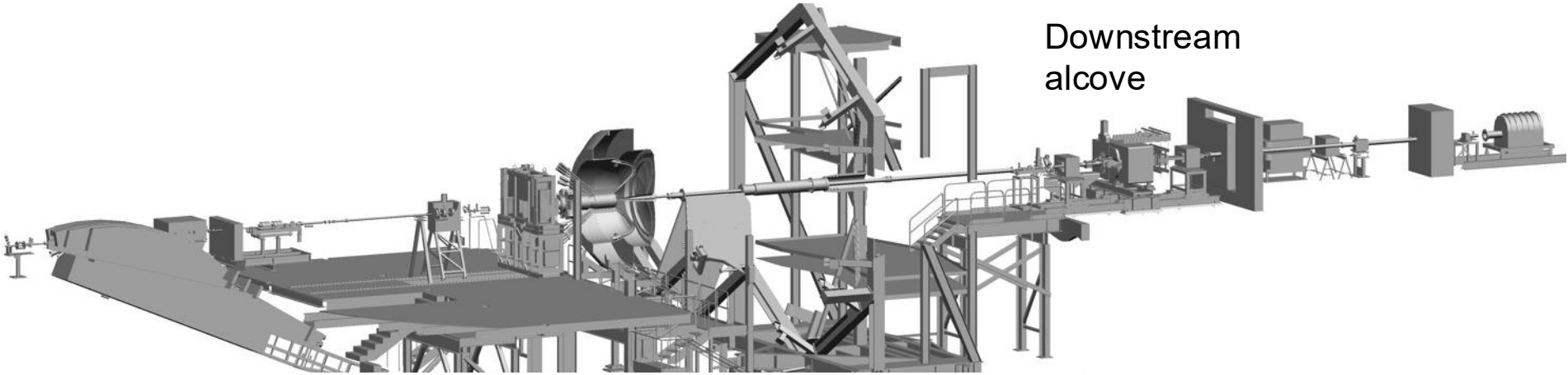
HPS detector

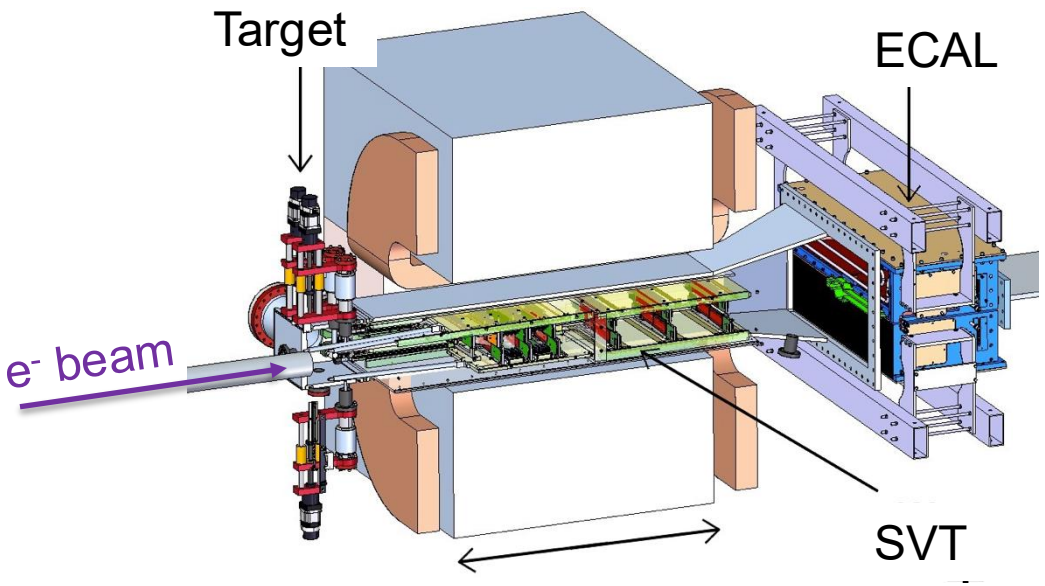
S. Stepanyan

HPS collaboration meeting

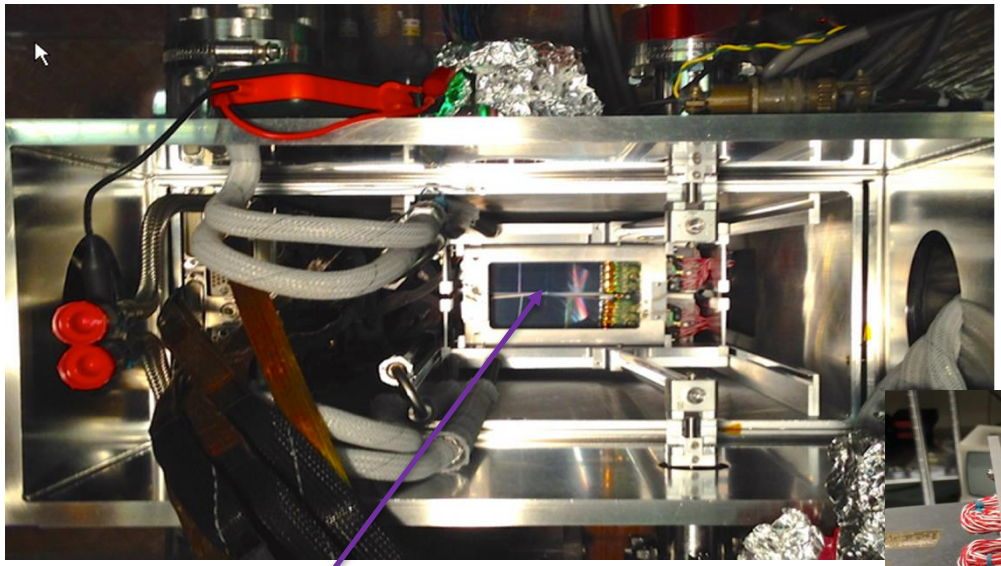
JLAB, June 3-5 2025

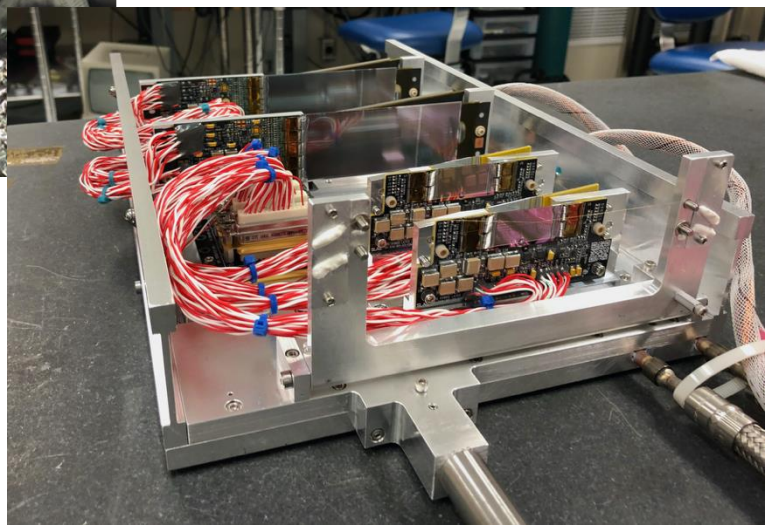
HPS in Hall B





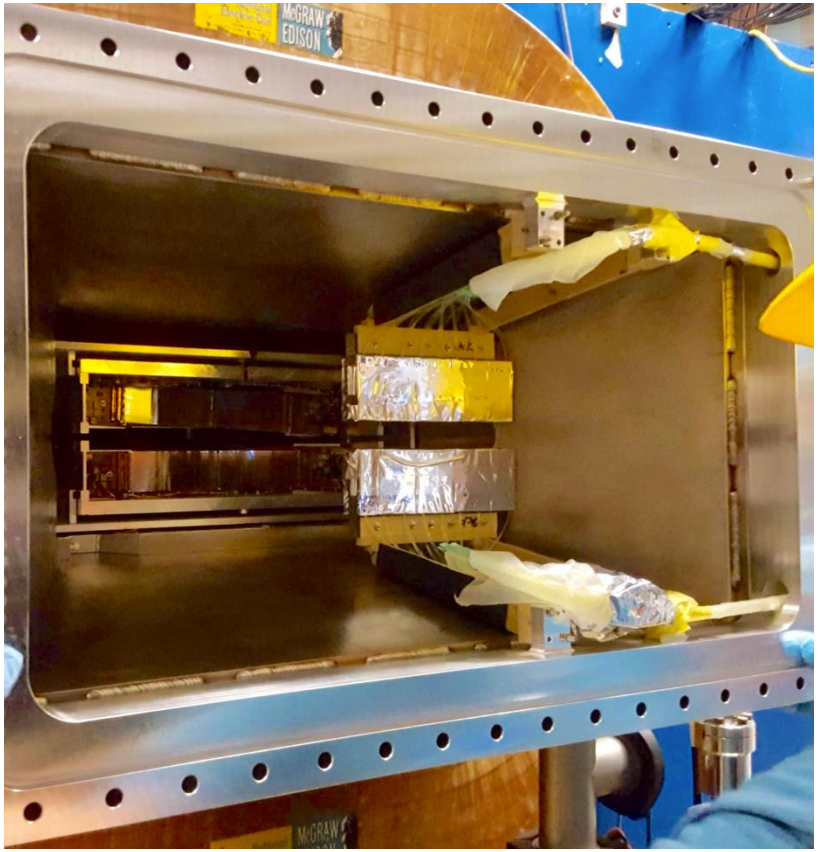
HPS in Hall B

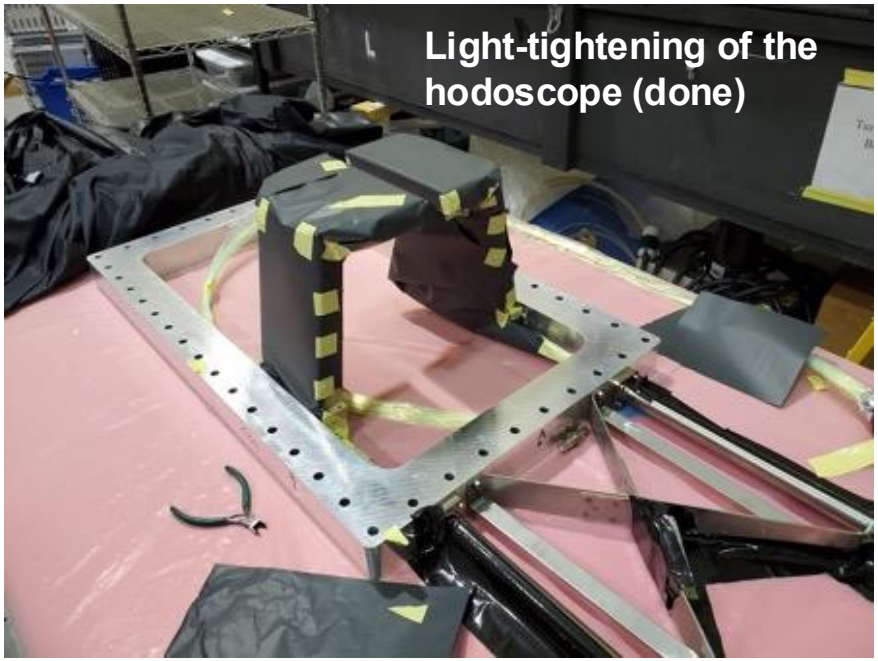


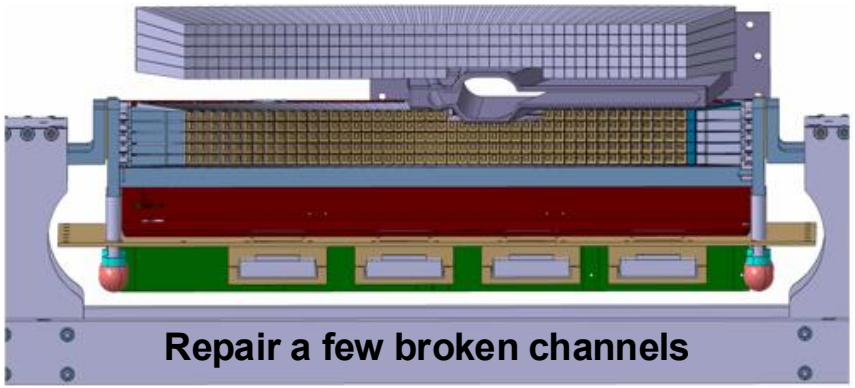


There is only a 1 mm gap in SVT to allow the beam to pass through, and we managed it consistently.

HPS in Hall B

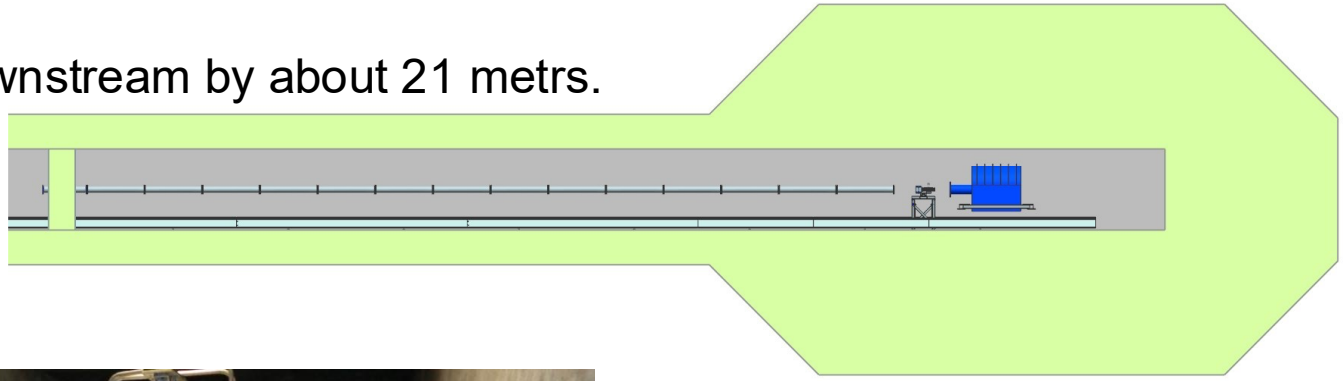

McGRAW EDISON


Light-tightening of the hodoscope (done)


Repair a few broken channels

Beamdump

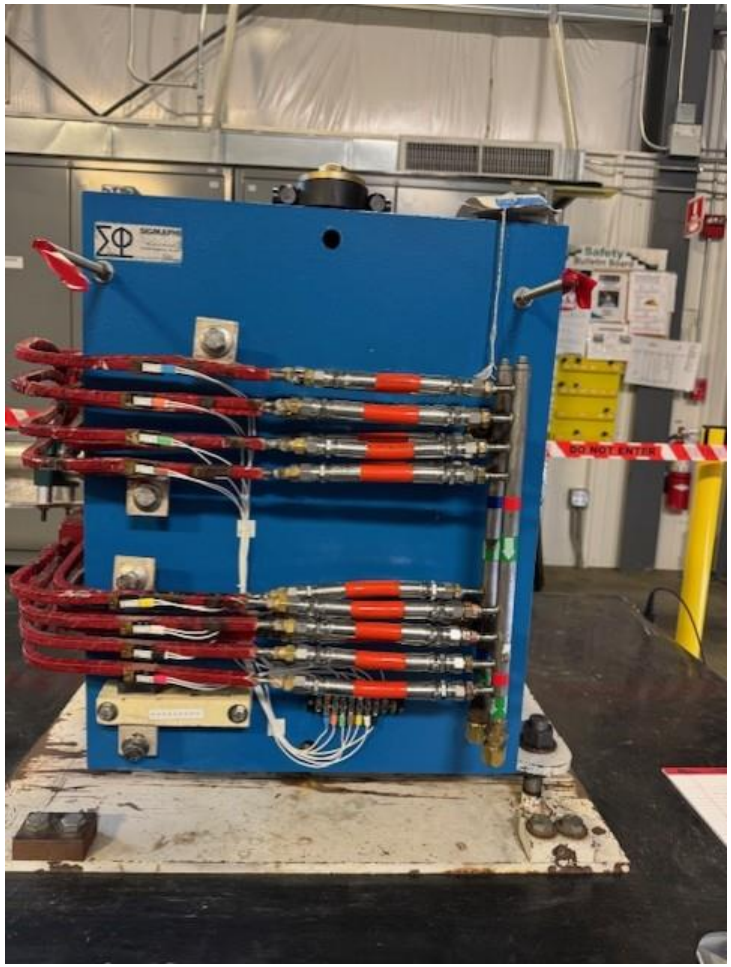
FC moved downstream by about 21 metrs.



If the next run happens after Phase II of the beam dump upgrade, there will be no Faraday cup reading. We will rely on BCMs.

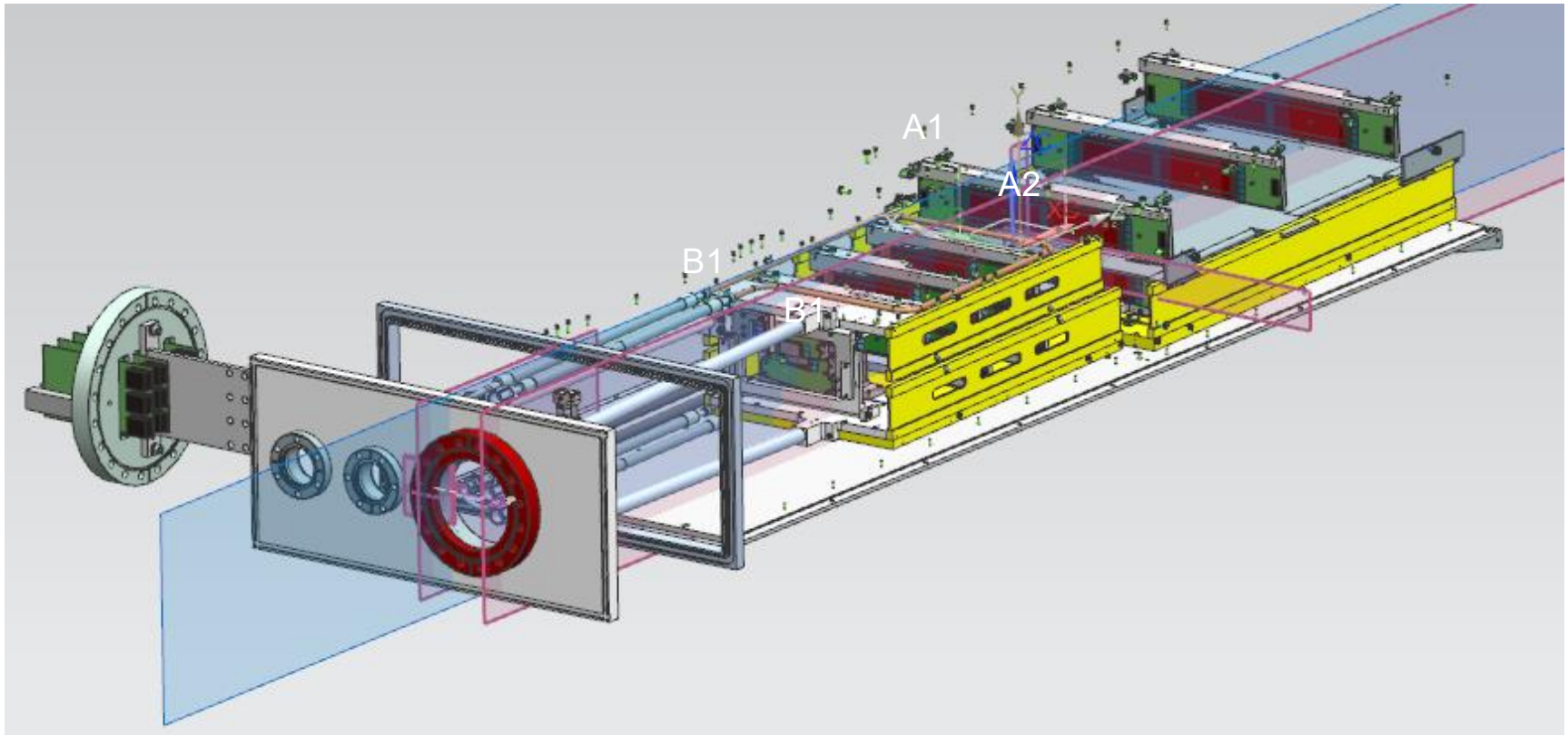
Repairs of the HPS chicane magnets

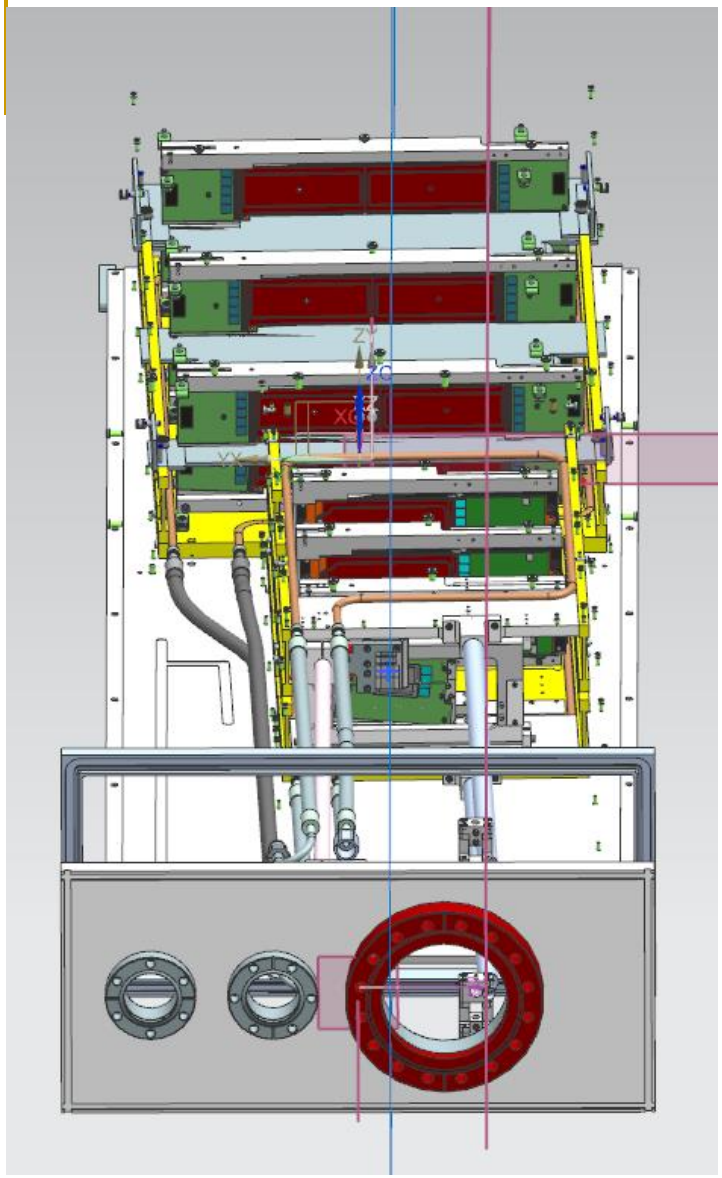
Refurbishment of Frascati magnets is completed (the magnet group).



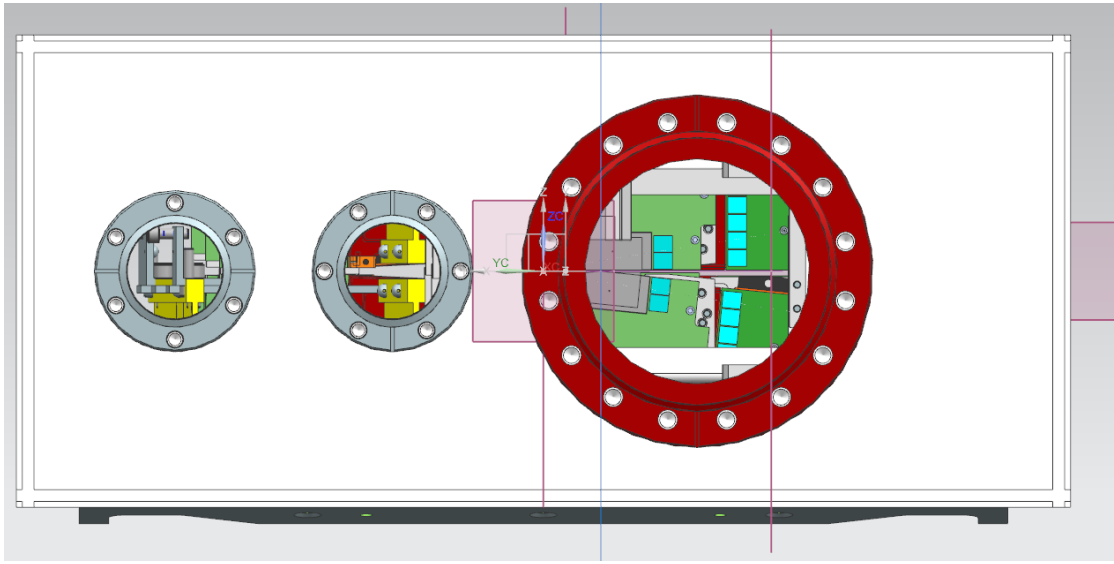
HPS SVT CAD Model

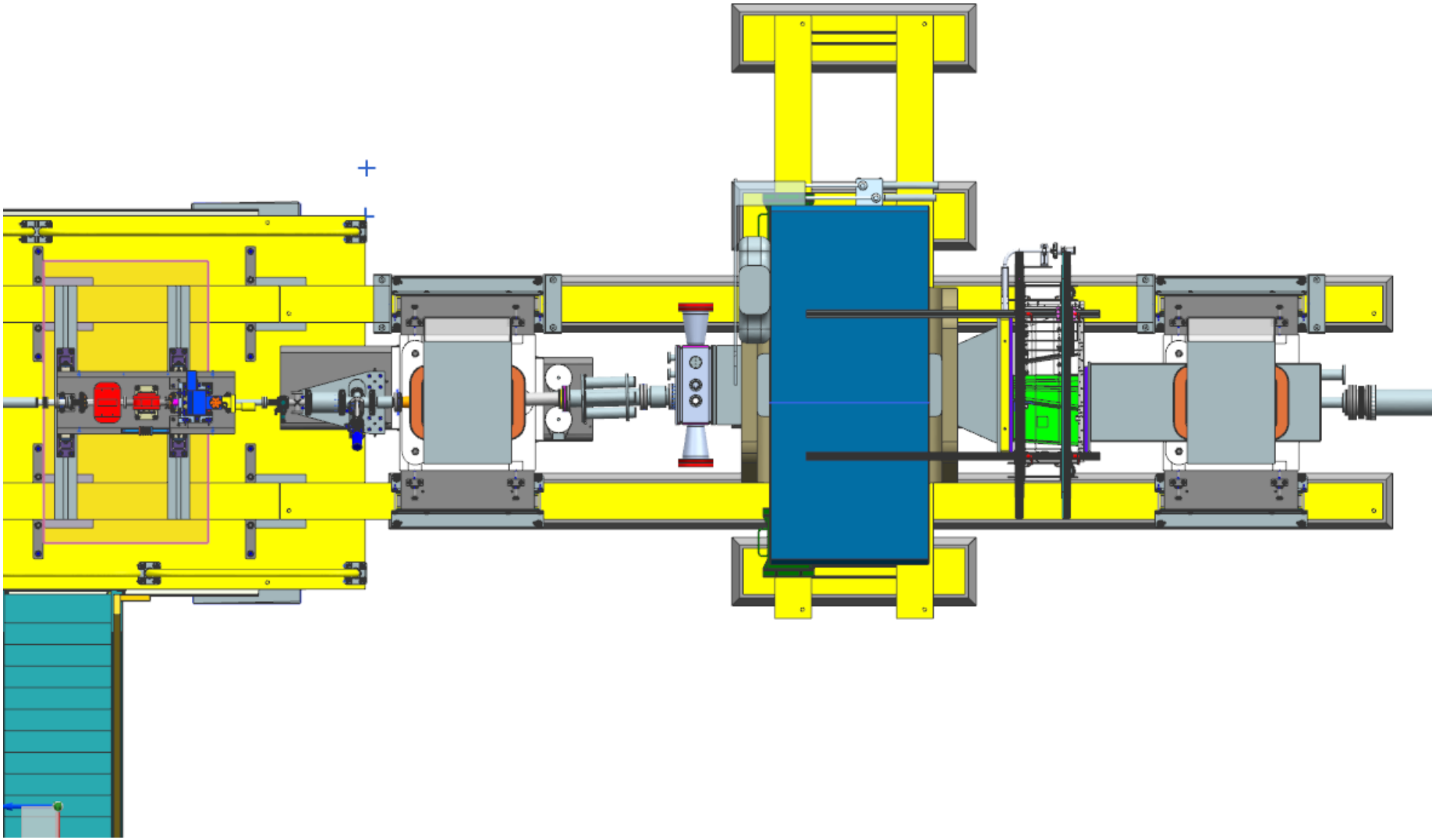
- Step. File imported into Siemens NX
  - JL0114033 / HPS-SVT Study
- Beam line drawing from HPS 2021
  - B11006-02-00-0002





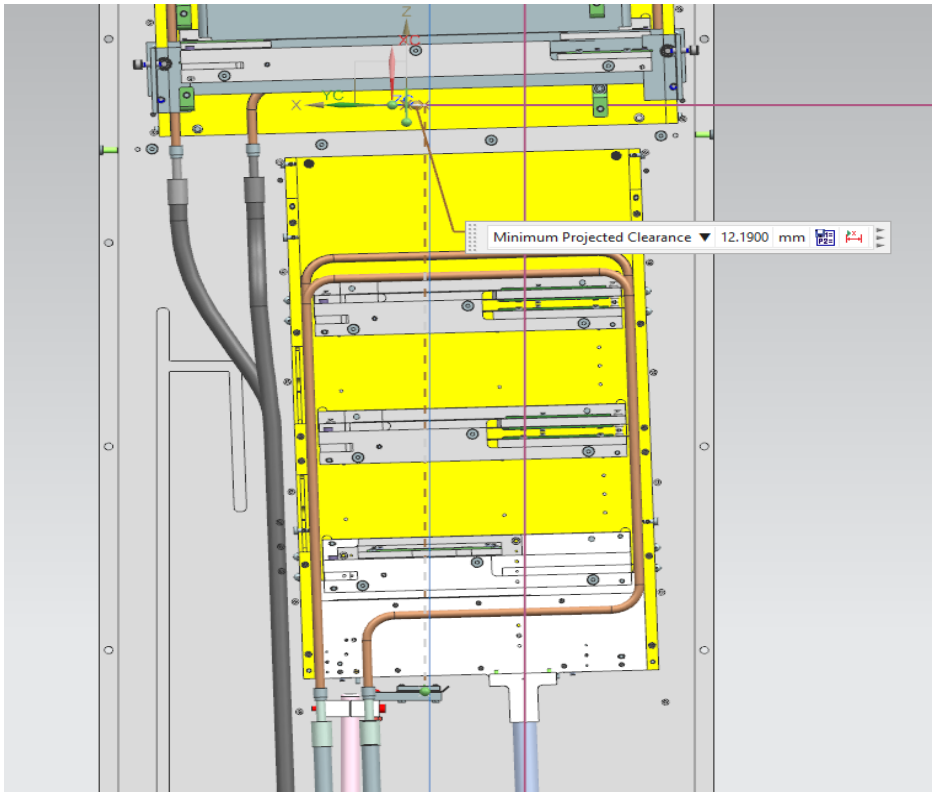
- PINK plane is the beam with the HPS magnet in the experiment position, offset 88.6 mm from the center fiducial holes.
- BLUE plane is the beam with the HPS magnet shifted 73.3 mm to the straight track position
  - Shows that the beam will:
    - Miss the upstream flange
    - Hit the target
    - Hit all SVT modules





Target Location

- The survey data did not show a target location
- In the model, a point was placed at the center of the target active area
- The target location in X was measured from this point to the survey CS YZ plane
- The center of the target is 12.19 mm right of the YZ plane



Slow controls