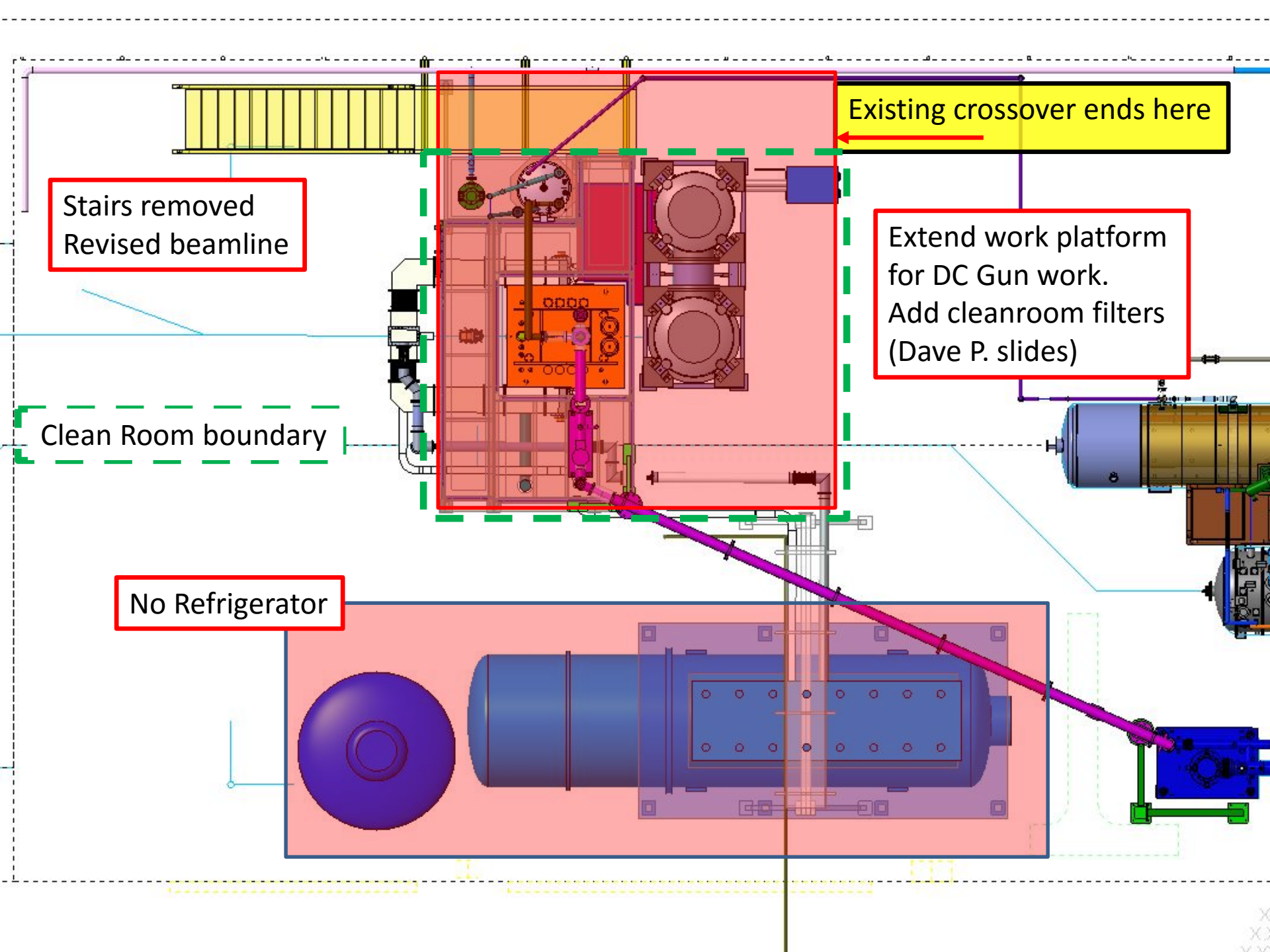
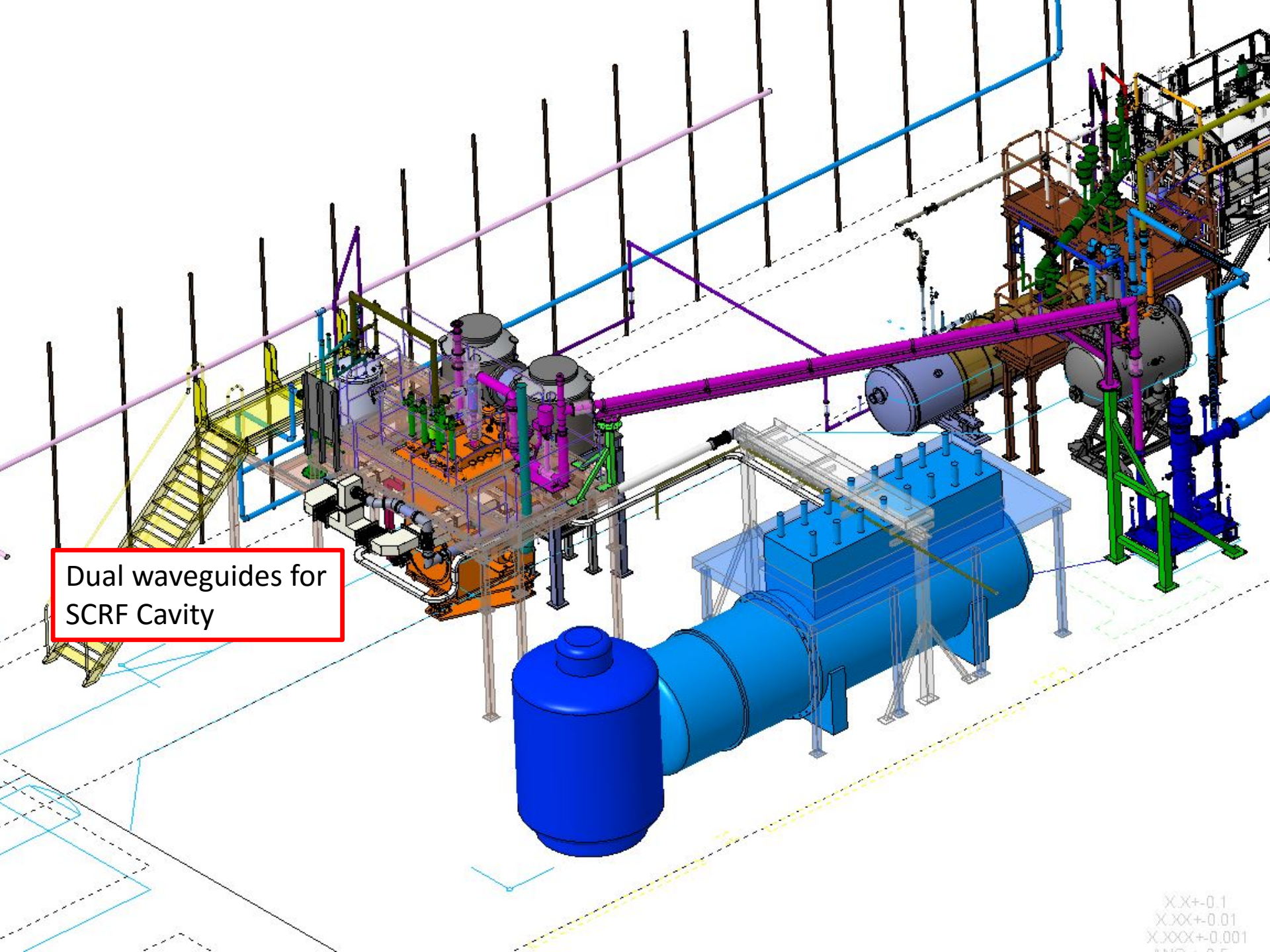
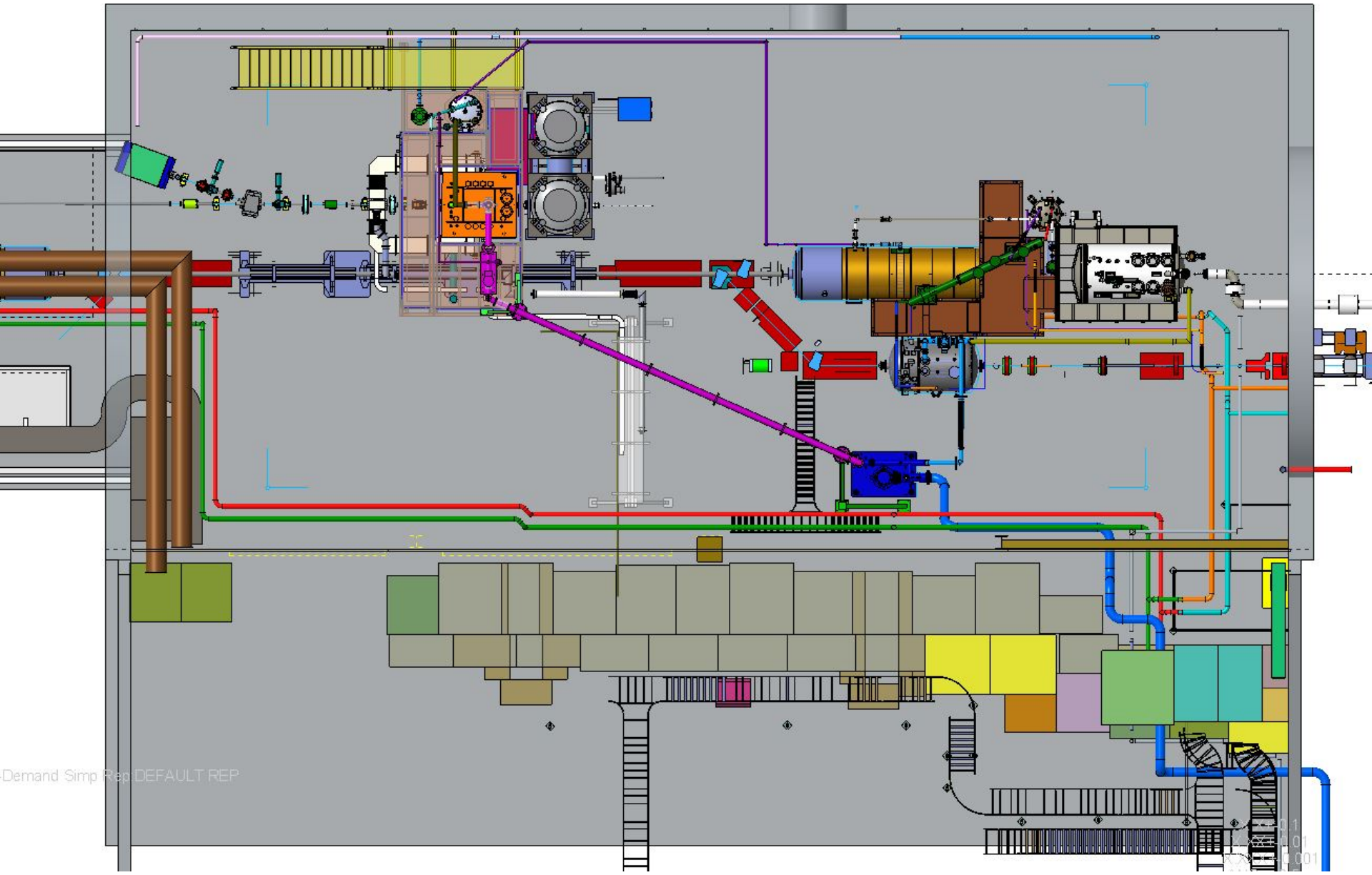
# Booster Cavity Installation Meeting 4 14 2016

Minutes: (Halinski, Meier, Tuozzolo, Brutus, McIntyre, Phillips, Than, Soria, Nayak, W. Xu, Smith, Arno, Fedotov, Zhao)

- **Noted from last meeting: G. McIntyre suggested removing the last section of the Gun to Booster transport line at the beginning of the 2017 shutdown and installing on a bracket off the cavity. This would allow the cavity to be translated into place, the clean room established, and the seal installed to re-establish the beamline. There are many advantages to this and no show stoppers were identified.**
- The above bullet led to a discussion on schedule. The Booster Cavity will be ready for installation in June 2017. Installing this section from the beamline will delay the cavity movement from 912 to 02:00 IP. The plan is that the cavity will be in 912 with the cleanroom installed on the upstream end so that the transport beam line can be removed from the tunnel at the same time the temporary beam line section is removed and the line upstream of the 2.1 GHz cavity is removed (all under clean conditions with the ends capped).
- Also noted that the SCRF booster cavity will be conditioned and tested in the ERL block house fully configured for tunnel installation with both isolation valves installed. The cavity will not be vented to atmosphere at any point during removal, upstream beamline installation, transport, and installation at 02:00.
- An air bottle to maintain vacuum valve pressure will be required to prevent it from opening during transport.
- A LHe dewar test after the SCRF booster cavity is installed will be scheduled into the installation. This will allow commissioning of the cryogenic system and the RF system well before the March 2018 start of the RHIC refrigerator.
- Bob Meier/V. Soria are near complete on the cryogenic line specification control drawings. Next step is the work platform detailed design and laser transport design.
- Dave Phillips showed conceptual design for the work platform using available materials instead of contracting out for construction of a work platform (which led to considerable schedule delays during the CeC construction).
- Extended discussion on the cleanroom boundaries, maintaining space for a not clean walk through, environment needed for SCRF cavity adjacent beamline installation, environment needed for laser table maintenance, etc.
- It was recommended that free standing doors for entrance be added to the clean room area to better control entry.
- After the meeting Z. Zhao met with L. Taddonio – detailed laser table layout will begin next week.


Existing crossover ends here
Stairs removed
Revised beamline
Extend work platform
for DC Gun work.
Add cleanroom filters
(Dave P. slides)
Clean Room boundary
No Refrigerator


Dual waveguides for
SCRF Cavity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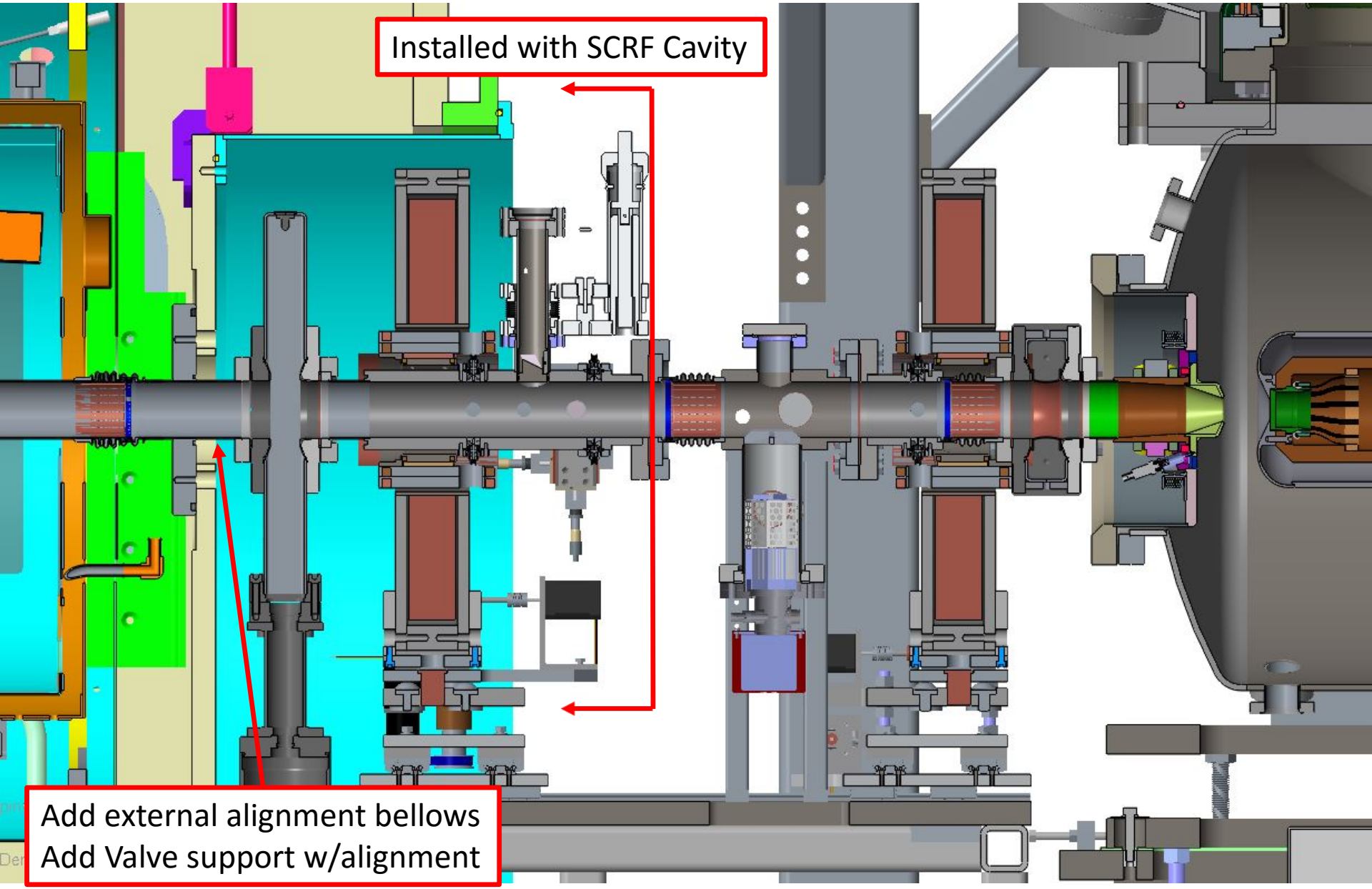
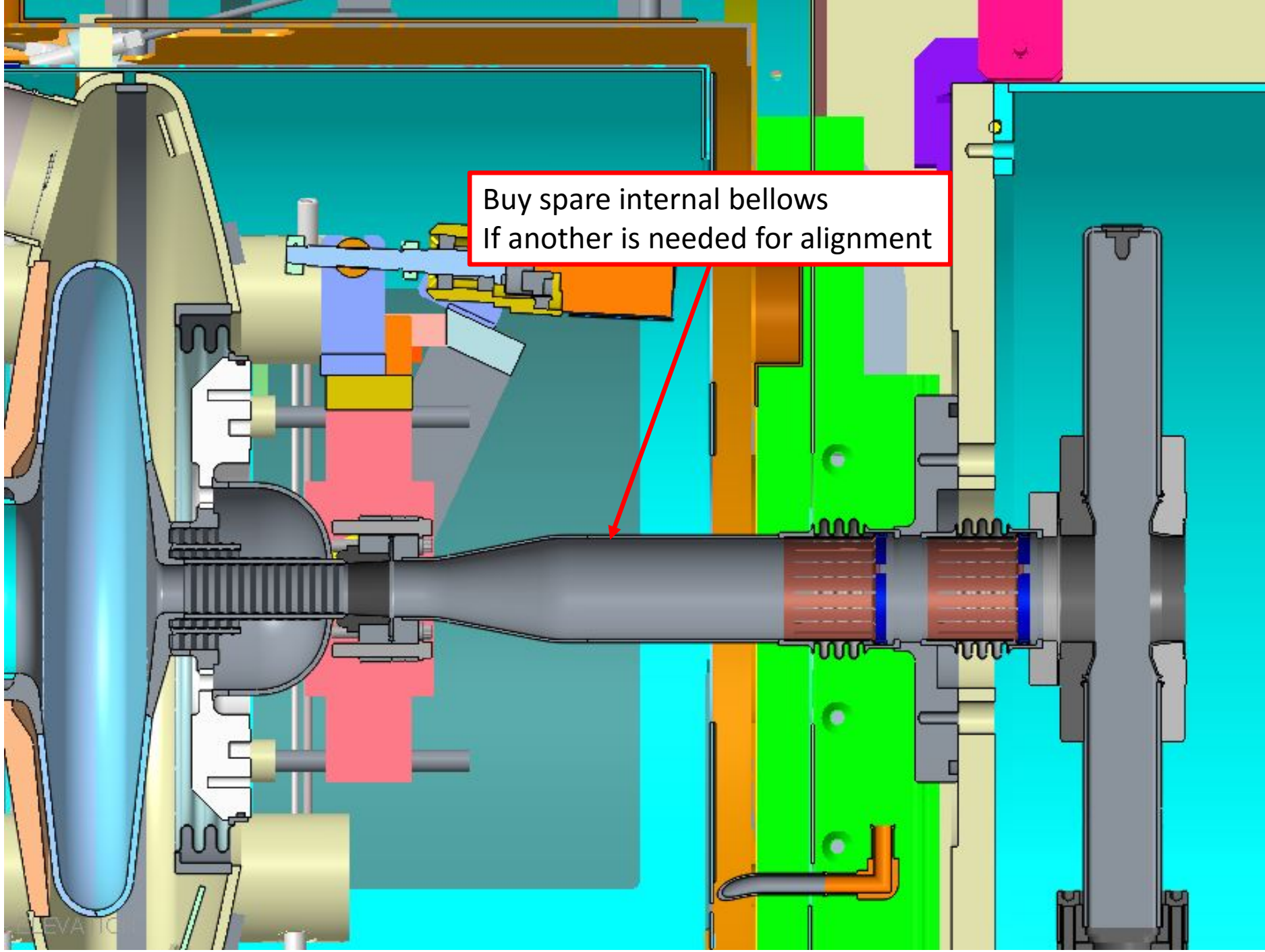
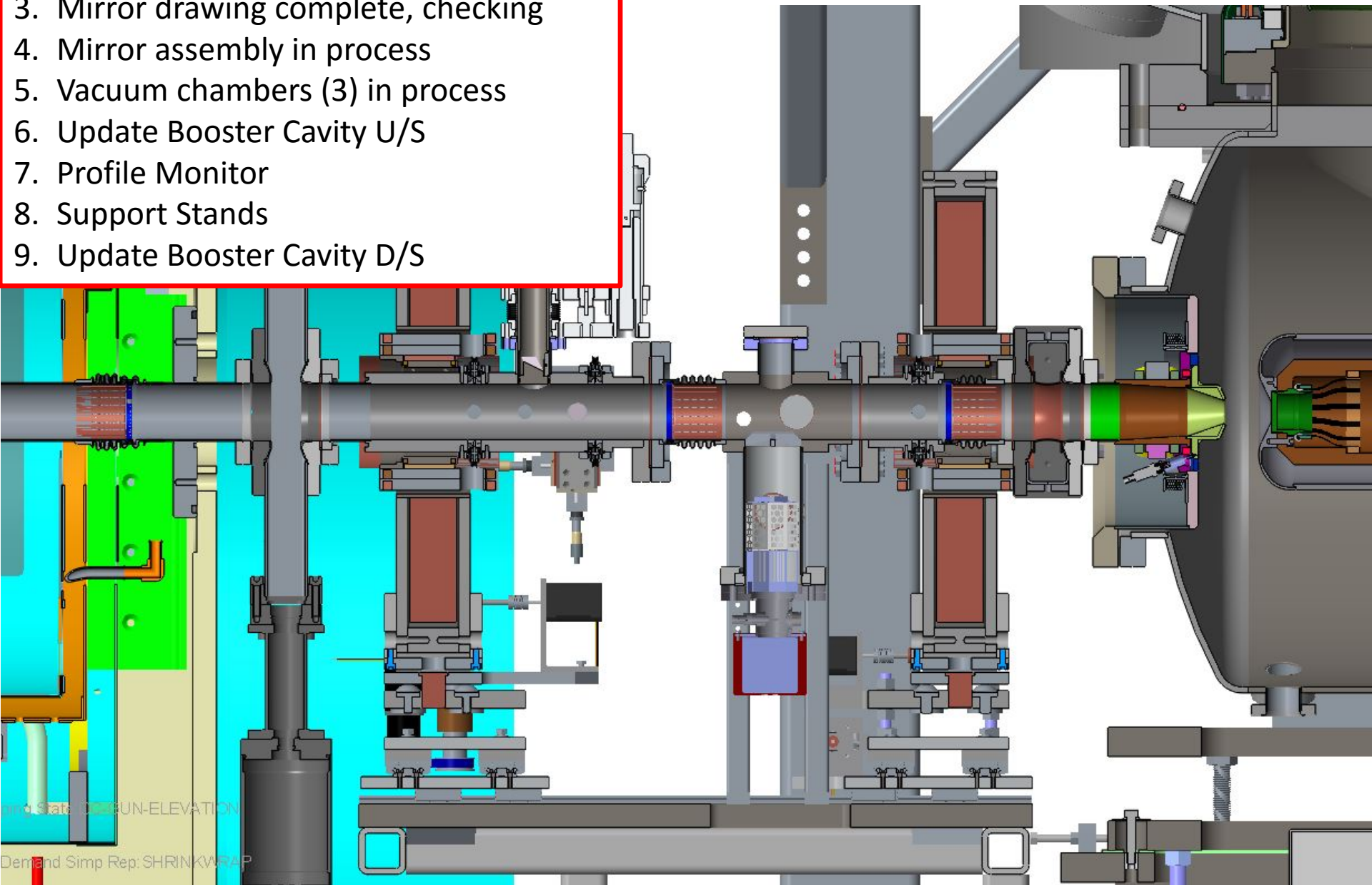

Installed with SCRF Cavity
Add external alignment bellows
Add Valve support w/alignment


Buy spare internal bellows
If another is needed for alignment

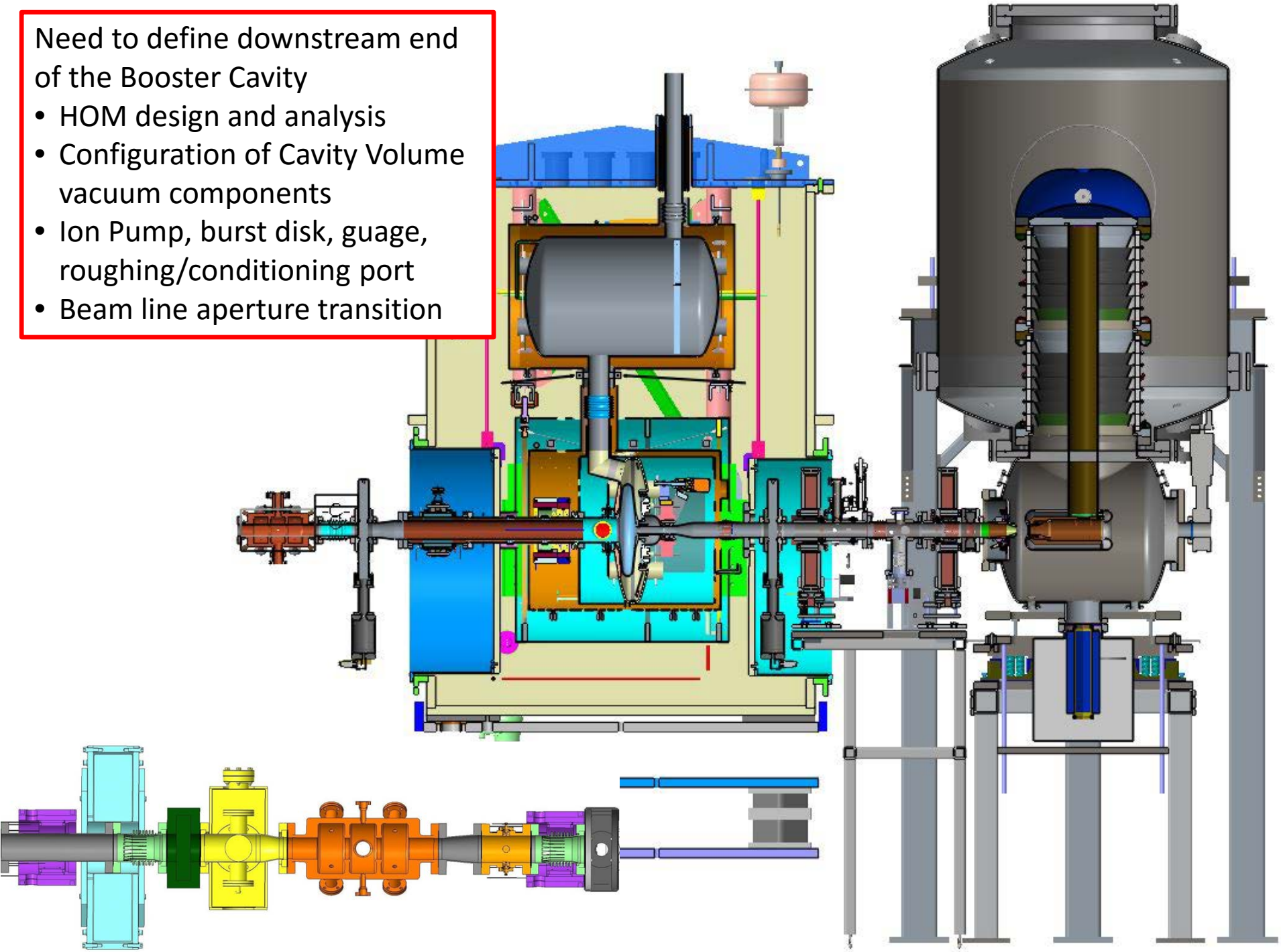
Status:

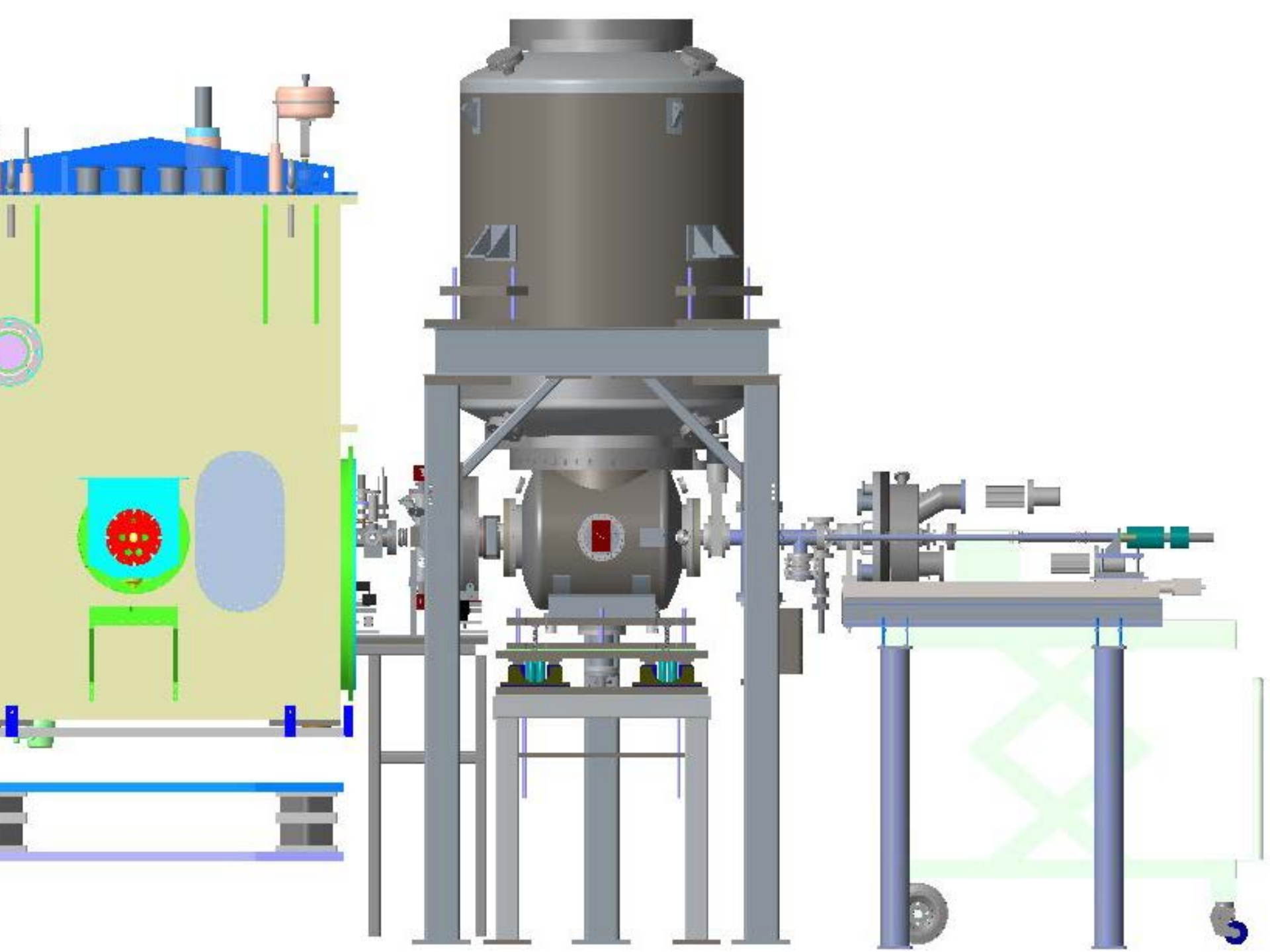
1. Solenoid drawings complete, checking
2. Corrector drawings complete, checking
3. Mirror drawing complete, checking
4. Mirror assembly in process
5. Vacuum chambers (3) in process
6. Update Booster Cavity U/S
7. Profile Monitor
8. Support Stands
9. Update Booster Cavity D/S

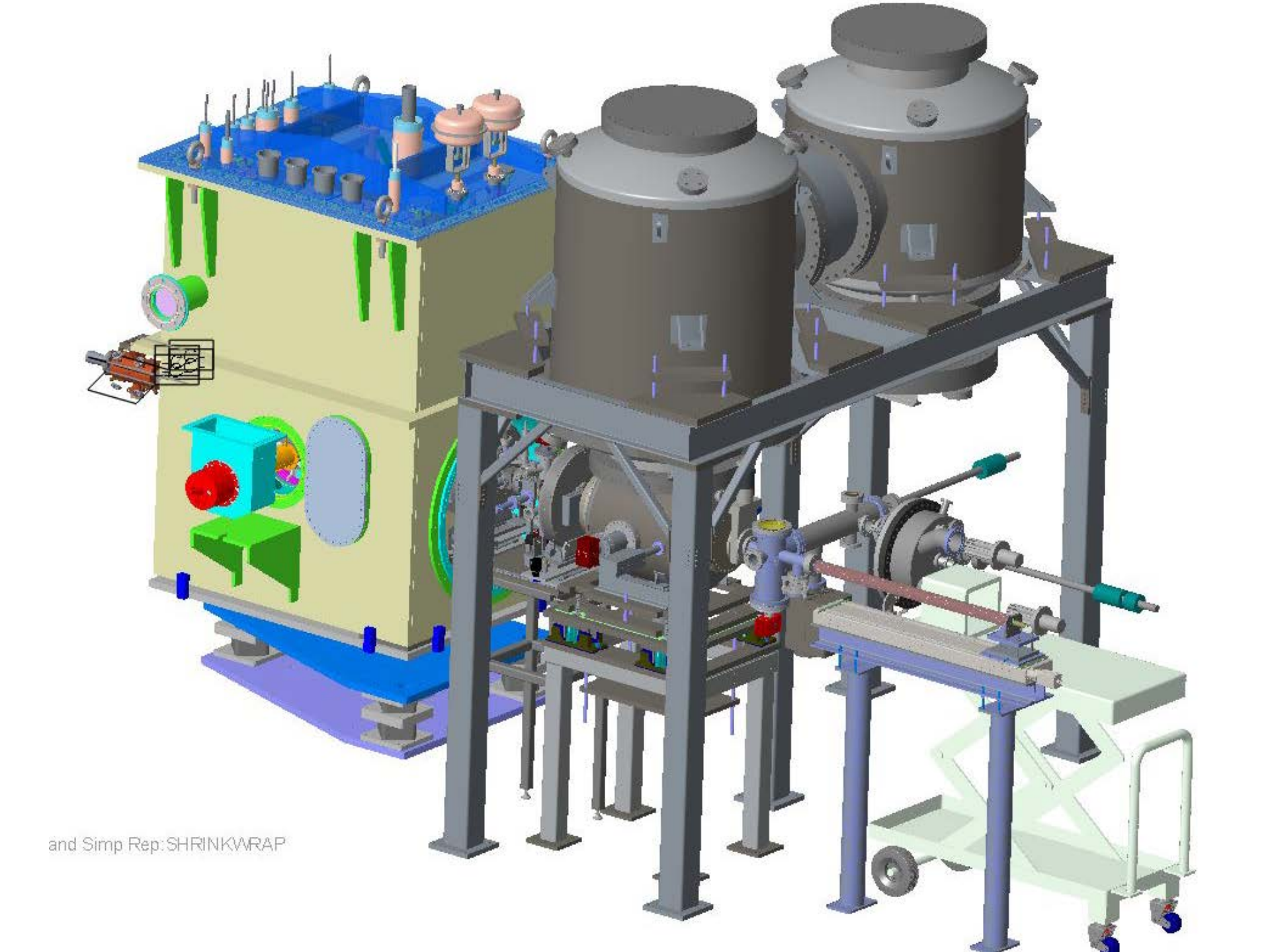


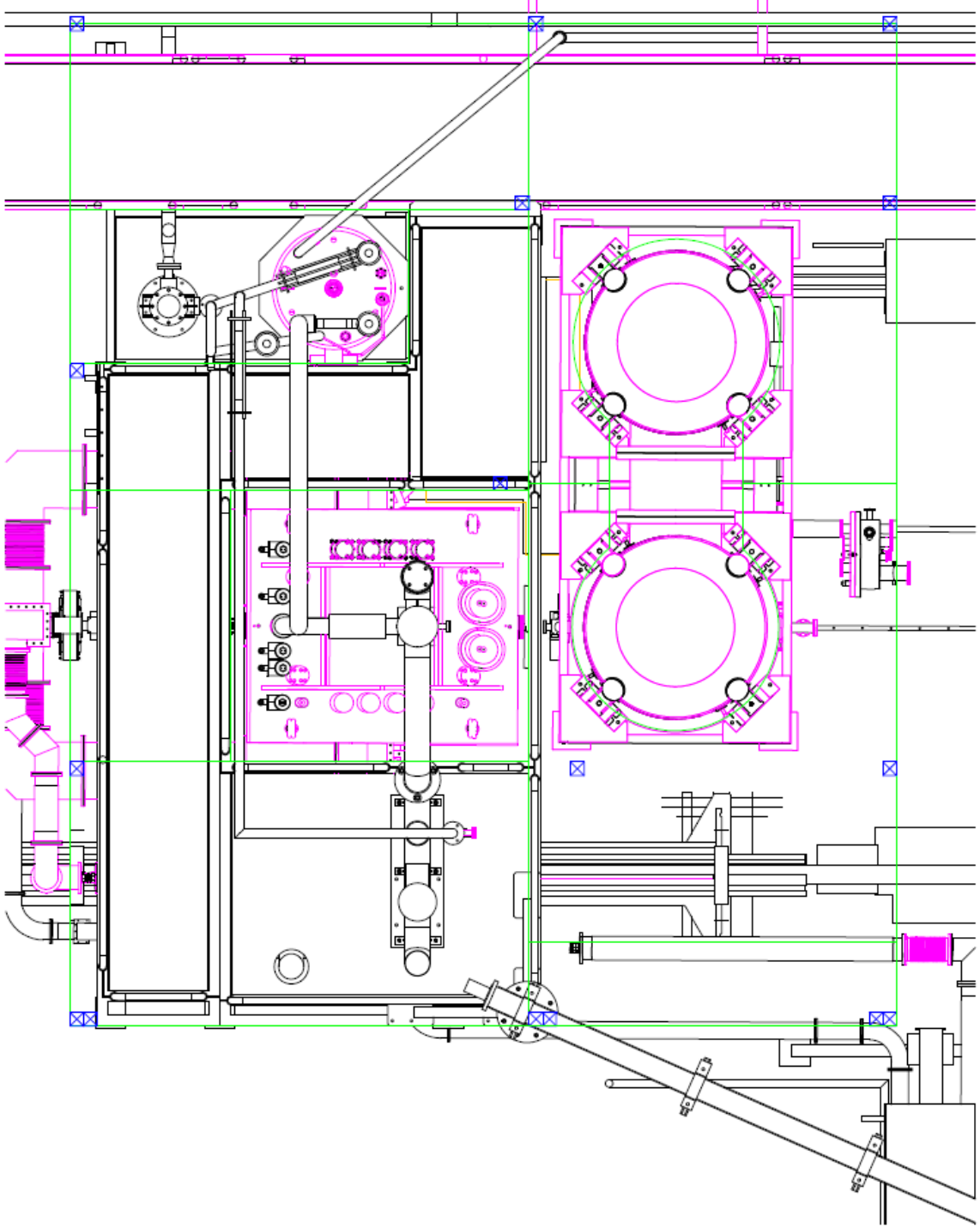
Need to define downstream end of the Booster Cavity

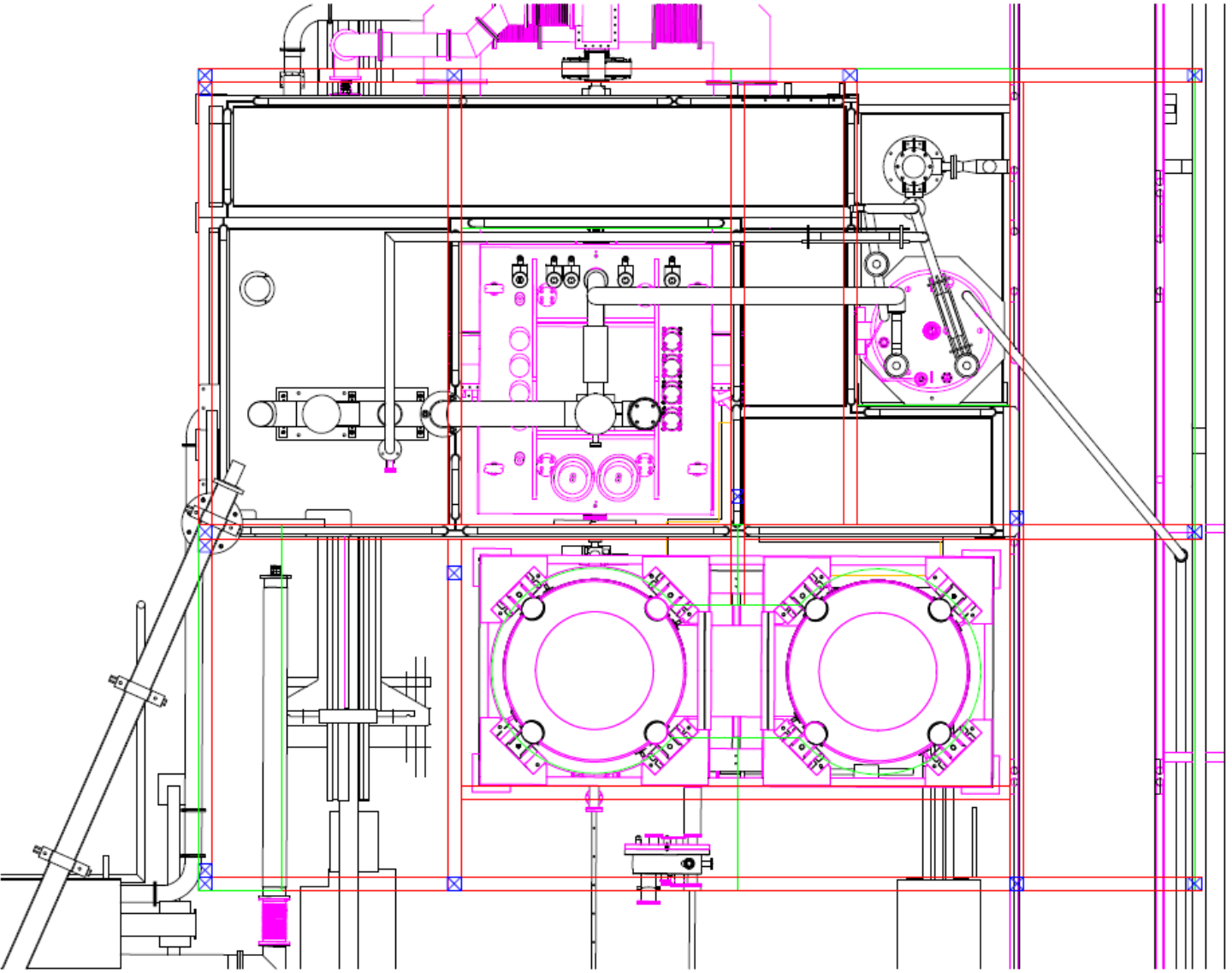
- HOM design and analysis
- Configuration of Cavity Volume vacuum components
- Ion Pump, burst disk, guage, roughing/conditioning port
- Beam line aperture transition

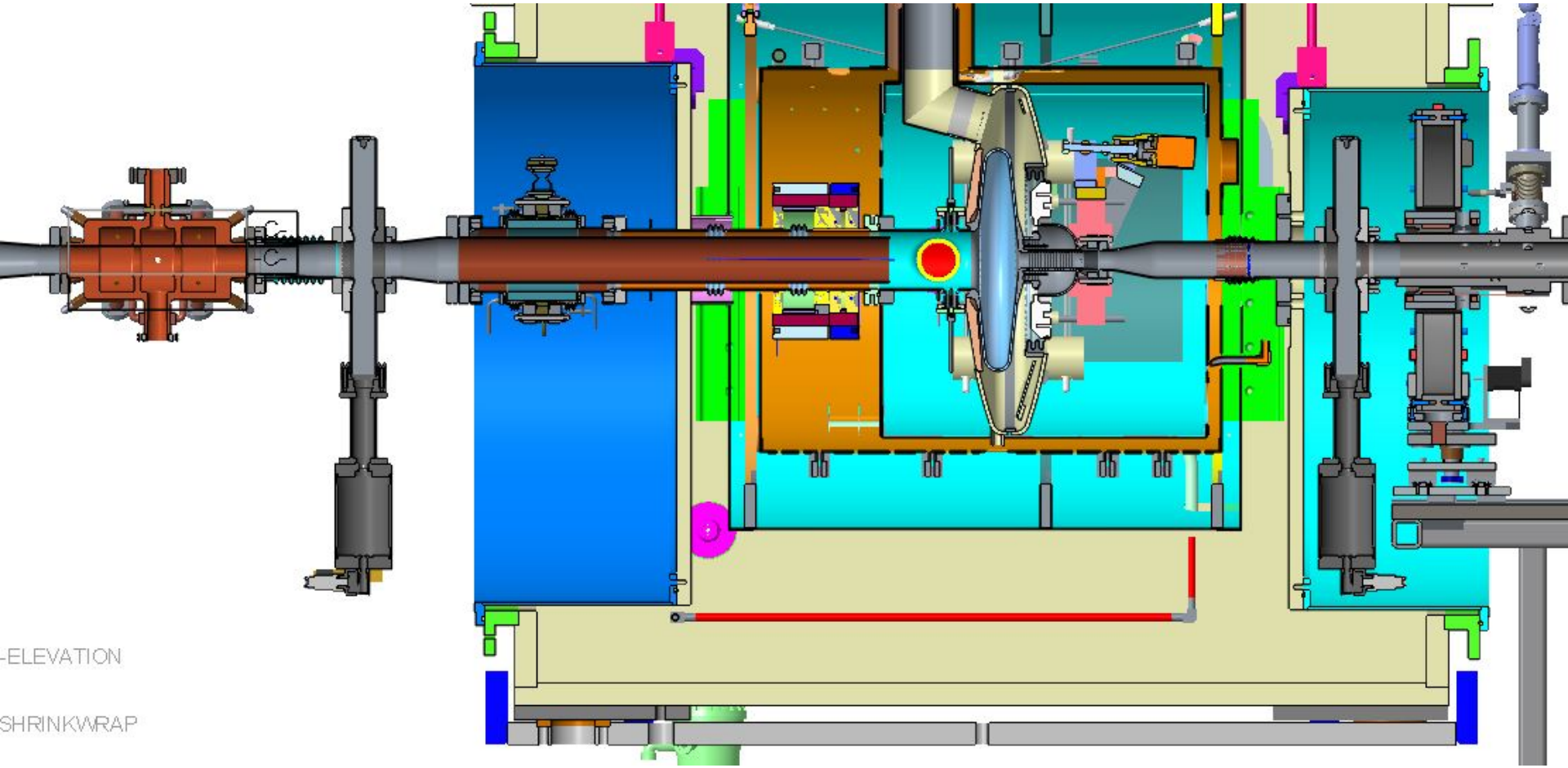





and Simp Rep:SHRINKWRAP







-ELEVATION

SHRINKWRAP