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P0153 IRIS

IRIS Scattering Chamber Status
and IRIS Ionization Chamber Status

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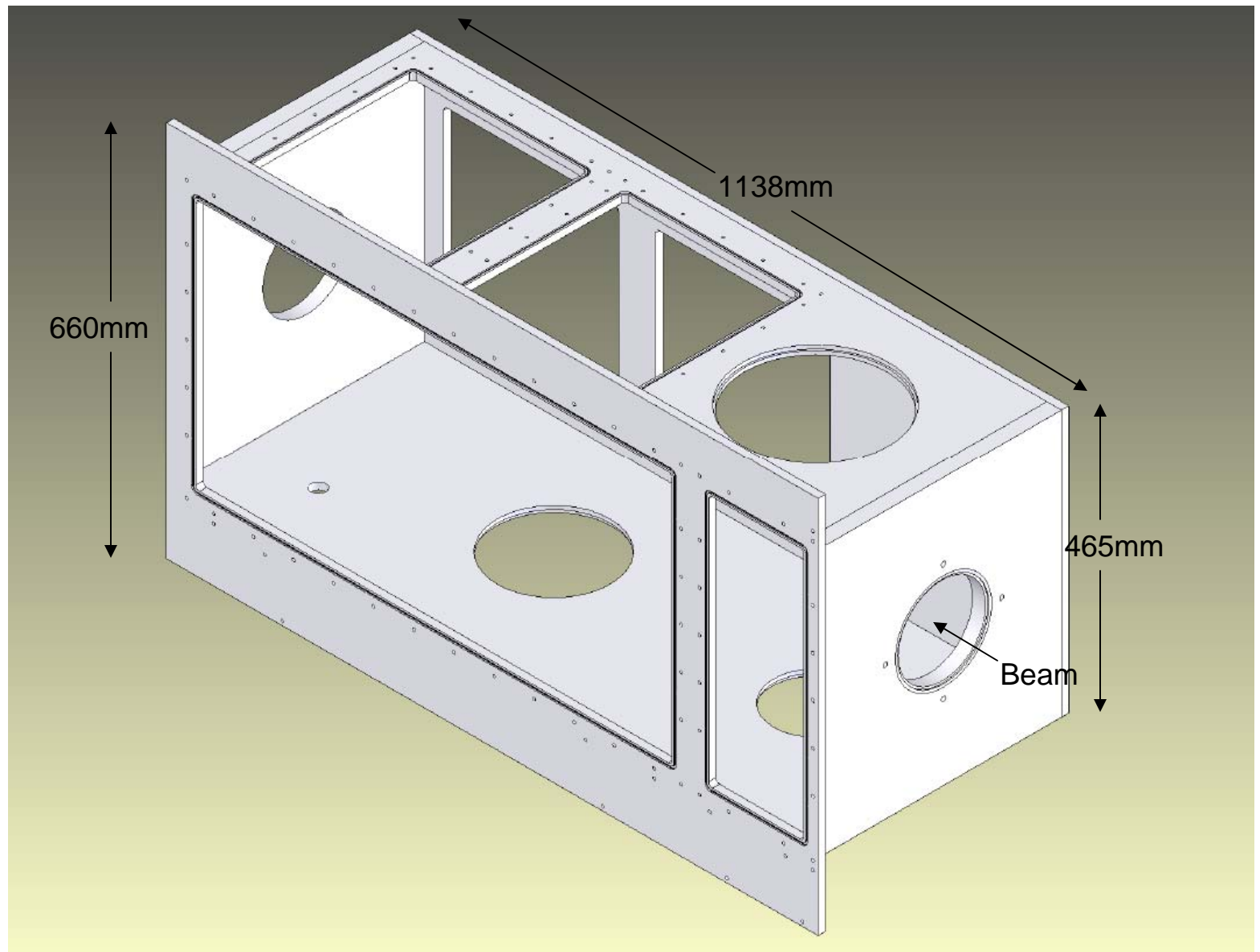


Fig.1 IRIS Scattering Chamber. Welded Stainless. Large and small detector flanges (DS and US). Four other large access holes etc. Structural analysis for vacuum loading about to start.

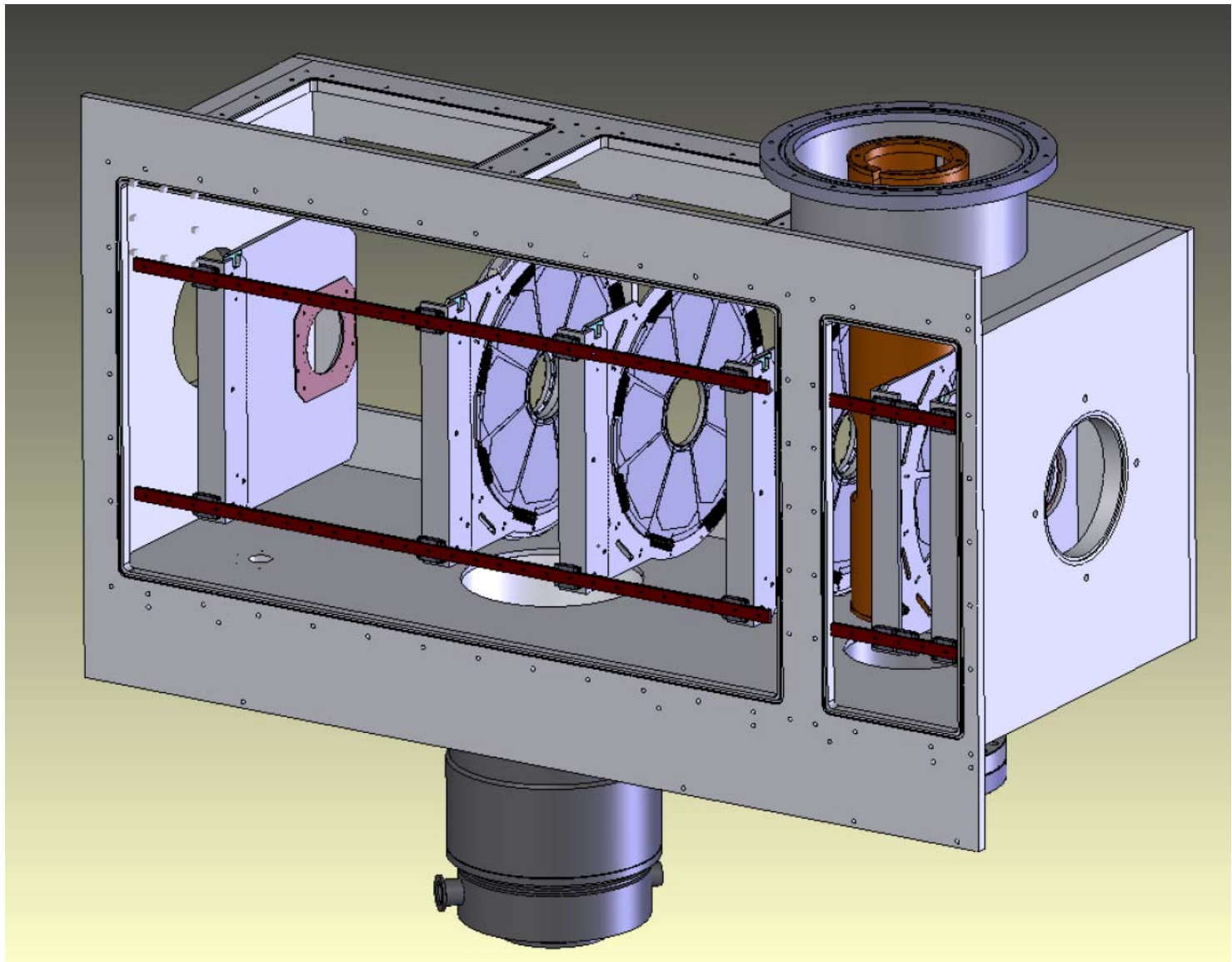


Fig.2 The shows the scattering chamber with target flanges, vacuum pump etc. To see the rails and detectors etc, the detector plates are also absent.

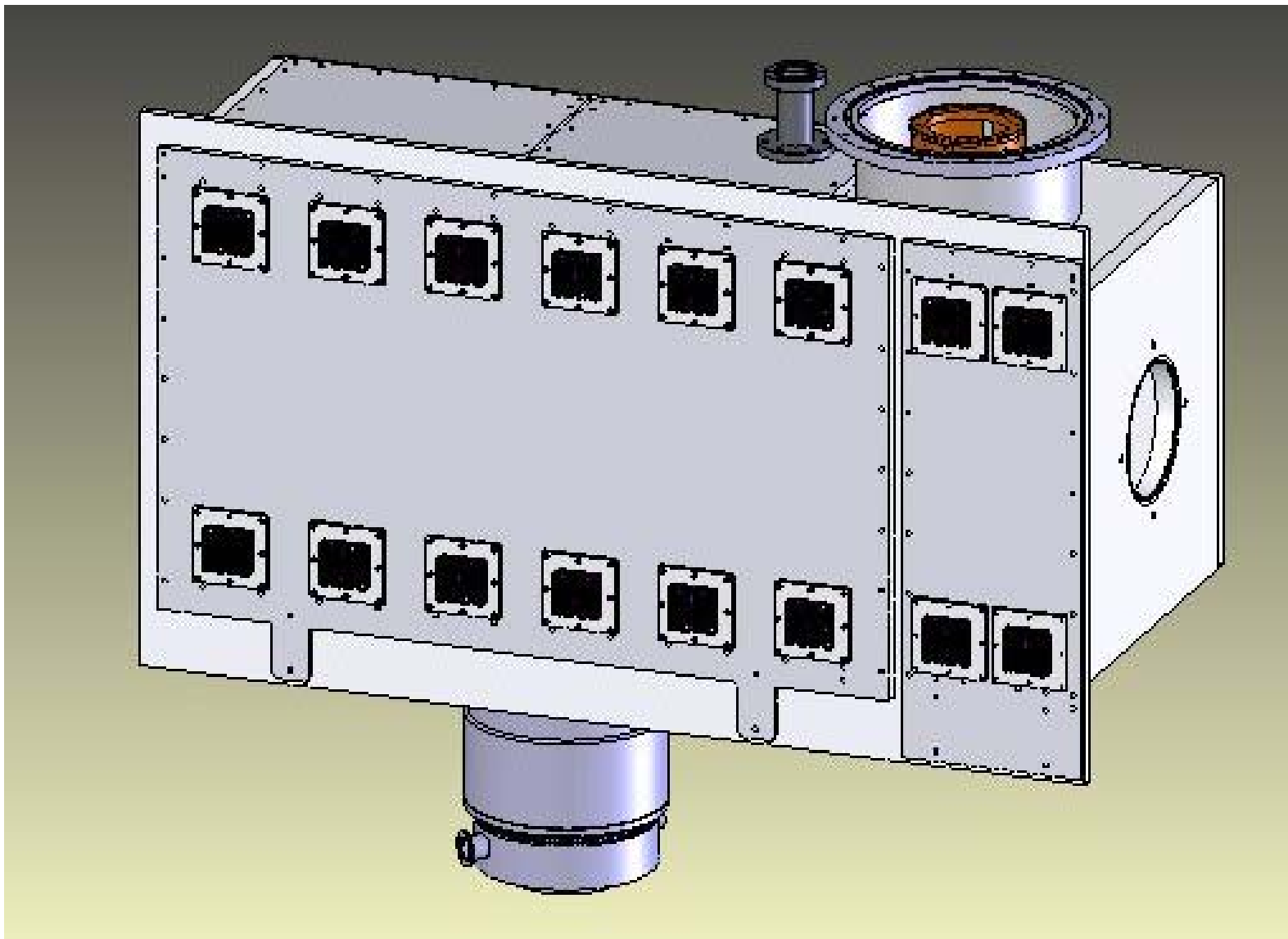


Fig.3 The shows the scattering chamber with target flanges, vacuum pump etc. The detector plates are now shown with their sets of output feethrus.

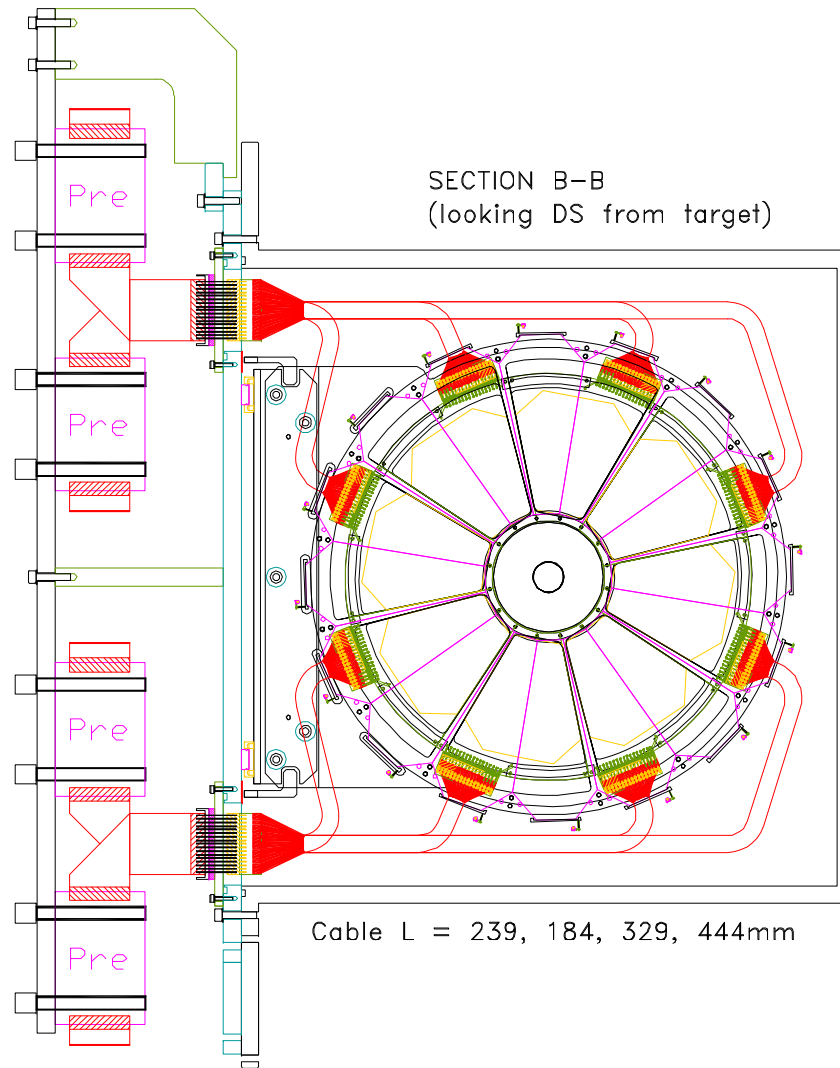


Fig.4 Side of Scattering chamber. This shows the Detector plate (cyan) with the detector 'wheel' mounted on rails. The view is through signal output feedthrus. The cabling shown (red) are bundles of 16 high-vacuum coax (2.2mm dia.). The simple attached preamp assembly allows short external cables to Swan preamps.

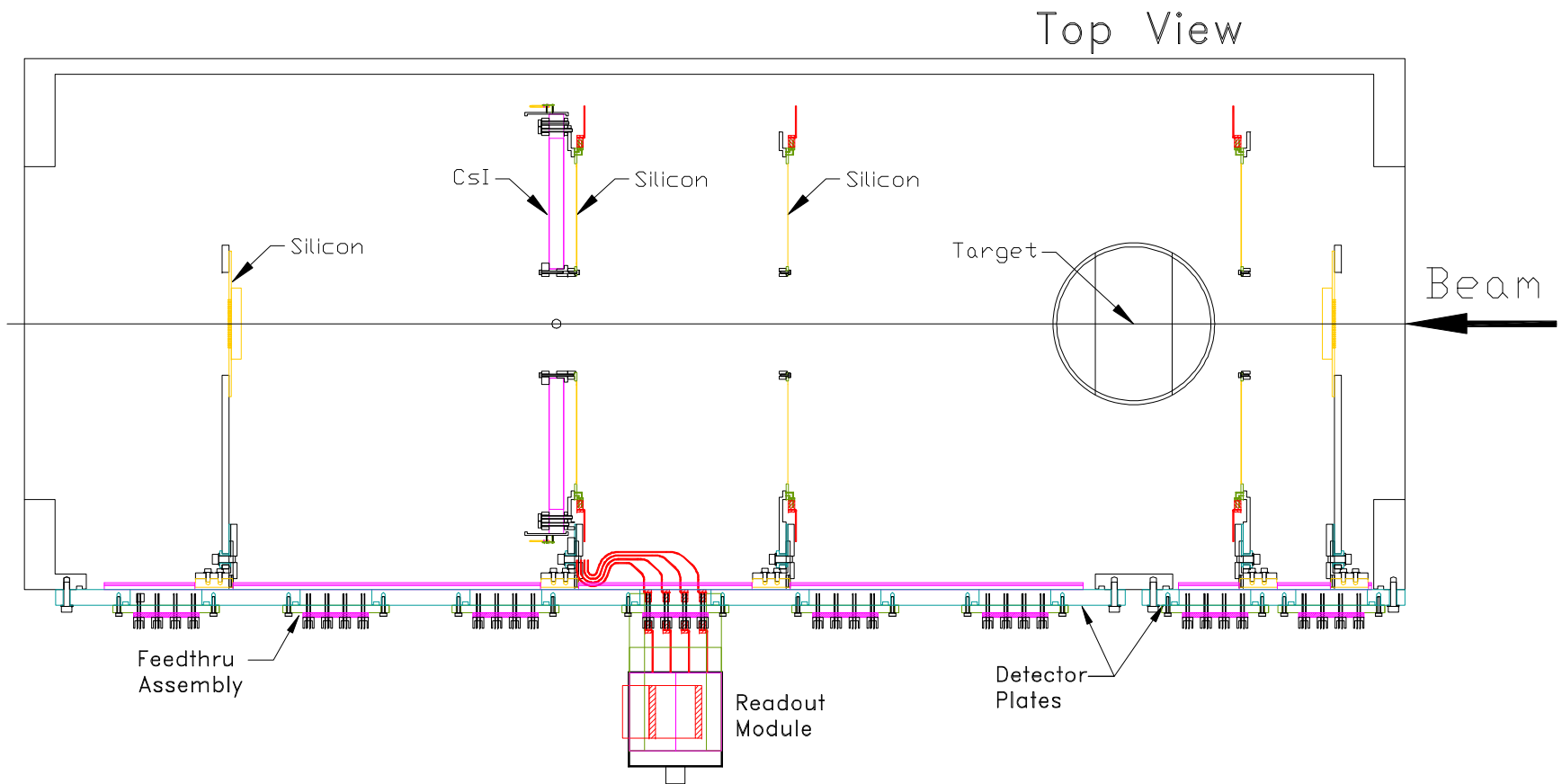


Fig.5 Side Segment View of Scattering chamber showing Silicon and CsI detectors inside scattering chamber (arb. Positions). It also shows one readout assembly attached to vessel. Most of the pieces already drawn. Small issues about choice of internal rails and carriages, then drawings will be finalized. Most of machining will be done in the Scintillator shop.

Scattering Chamber Status

Scattering chamber – Needs analysis and some minor mods

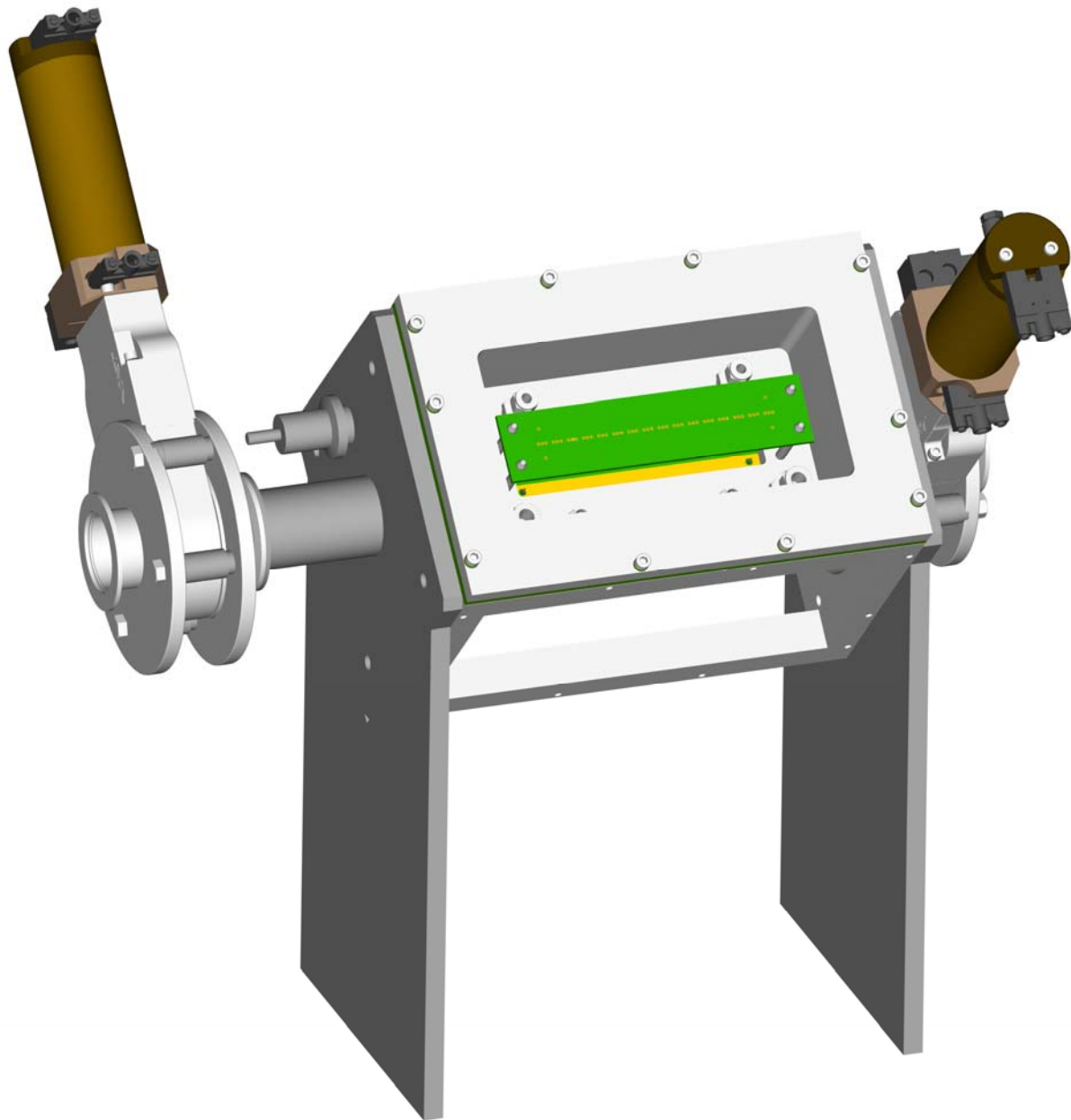
Detector Hardware – Pretty good shape, rails/carriages need to be finalized.

Target Interface – Minor alterations to flanges etc, looks good.

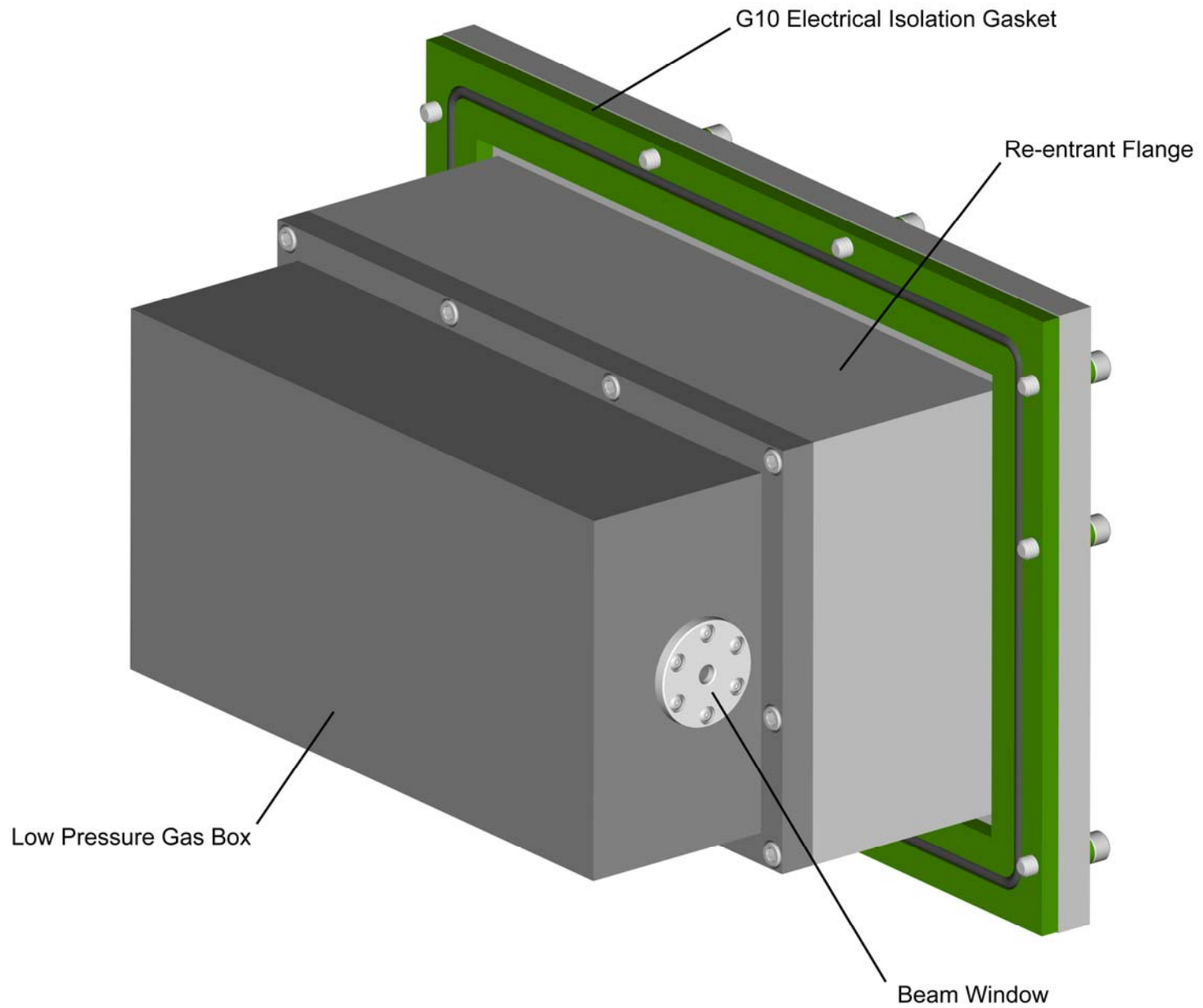
Work Required and Issues

- 1) Structural analysis of Scattering chamber has been delayed by Naimat's long holiday and heavy load. Thinks ~9 days work and will be done over next 4 weeks.
- 2) Decided against using 'cart' to move IRIS. It will be craned to storage location. Existing cart design will be modified to simpler stand (position reproducible).
- 3) Overall beamline layout needs to be done. Not too difficult. Leaf bellows for Ionization chamber isolation etc.
- 4) External Detector plate installation rails system needs to be drawing, as does the very simple readout assembly.

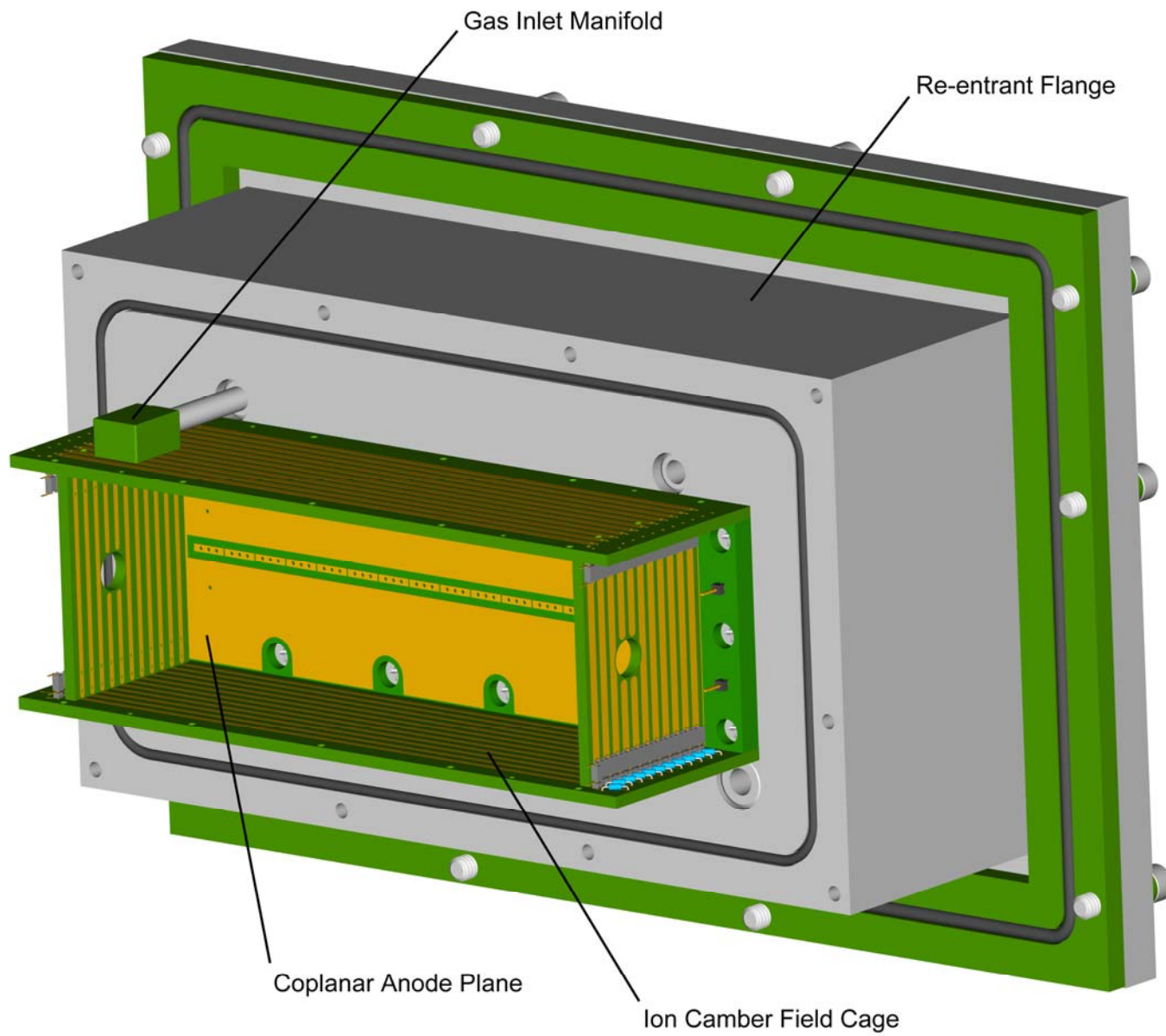
Some indicated steps on timetable will definitely slip.



IRIS Ionization Chamber in Beamline Diagnostic Box



IRIS Ionization Chamber - Gas Box & Re-entrant Flange



IRIS Ionization Chamber - Gas Box & Cathode Plane Removed

Ionization Chamber Status

Design is essentially complete.

Machining of Aluminum pieces has started

PCBs will go out for manufacture within ~1 month.

The Ionization chamber will need considerable bench testing before installation into IRIS.

The End