

MICE-NOTE-GEN-362

Before & after South Mezzanine modifications

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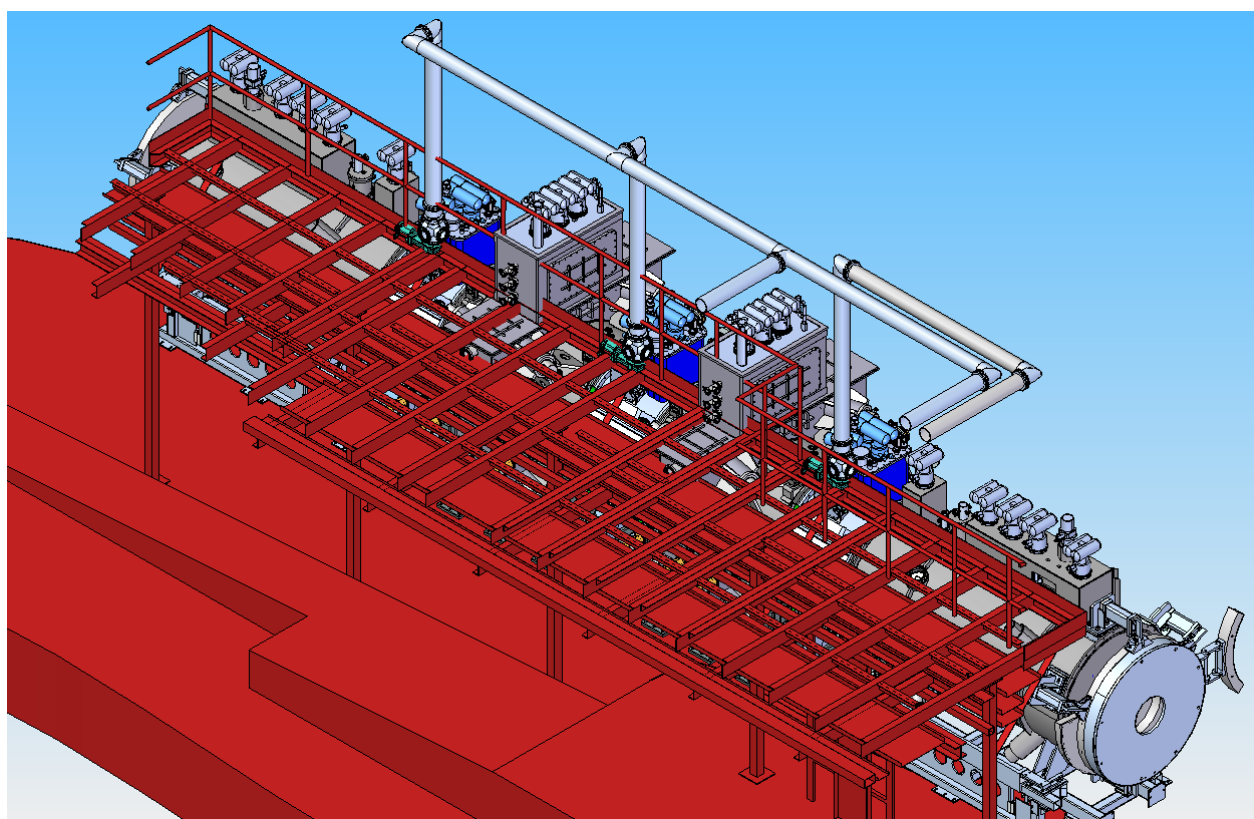
Introduction

This note shows the before and after of modification to the South Mezzanine and how they alleviate problems of clashes between the South Mezzanine and the MICE Cooling Channel

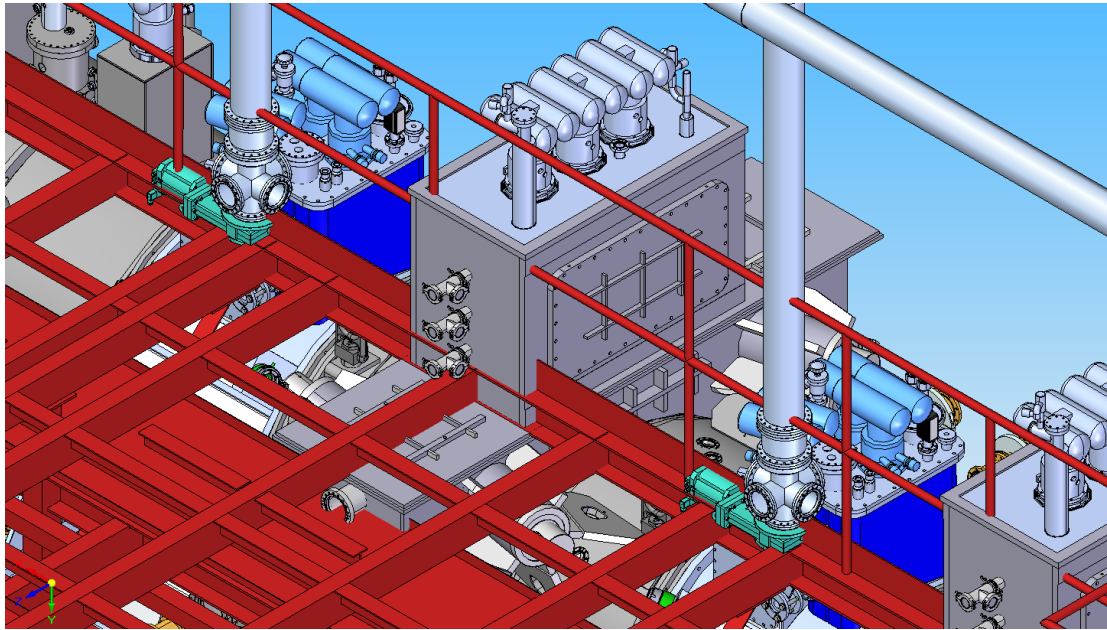
Fit with the Step VI model

The following views are taken from model TD-1152-9409 with TD-1152-1110

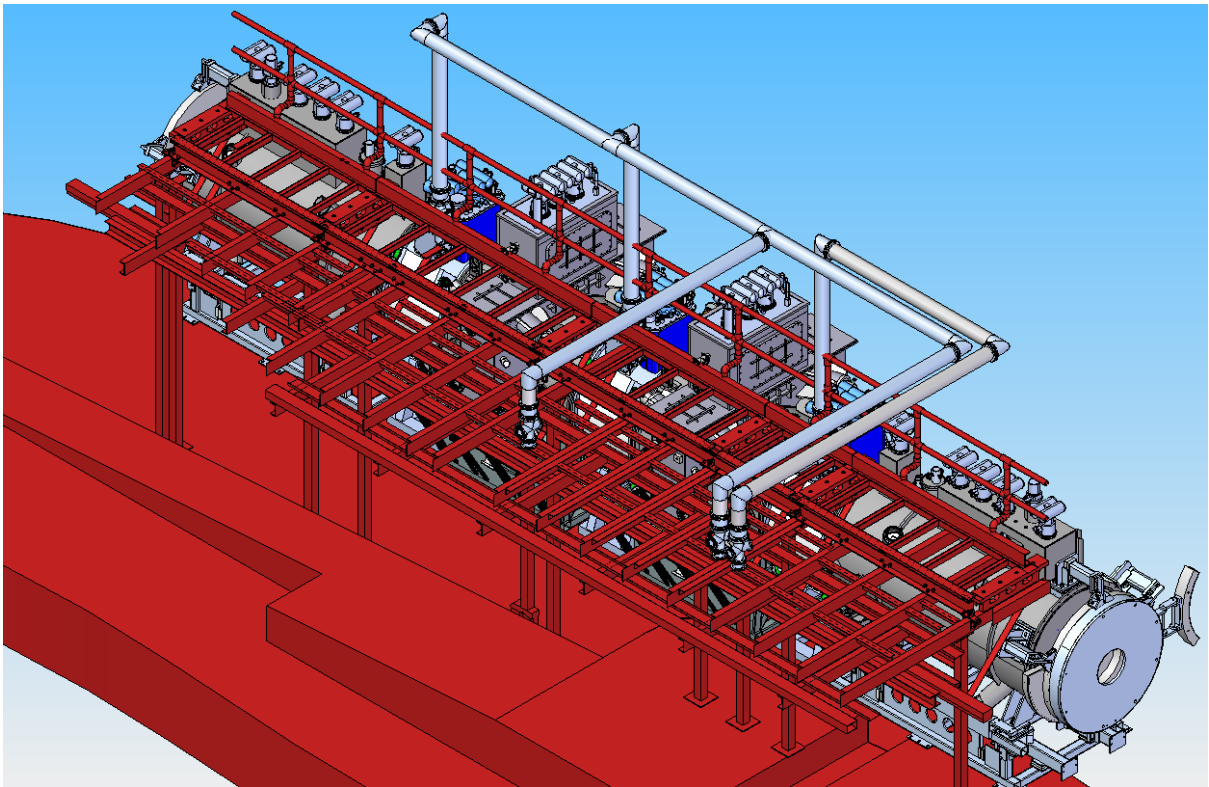
The following shows the problems with the current South Mezzanine and the MICE cooling channel.



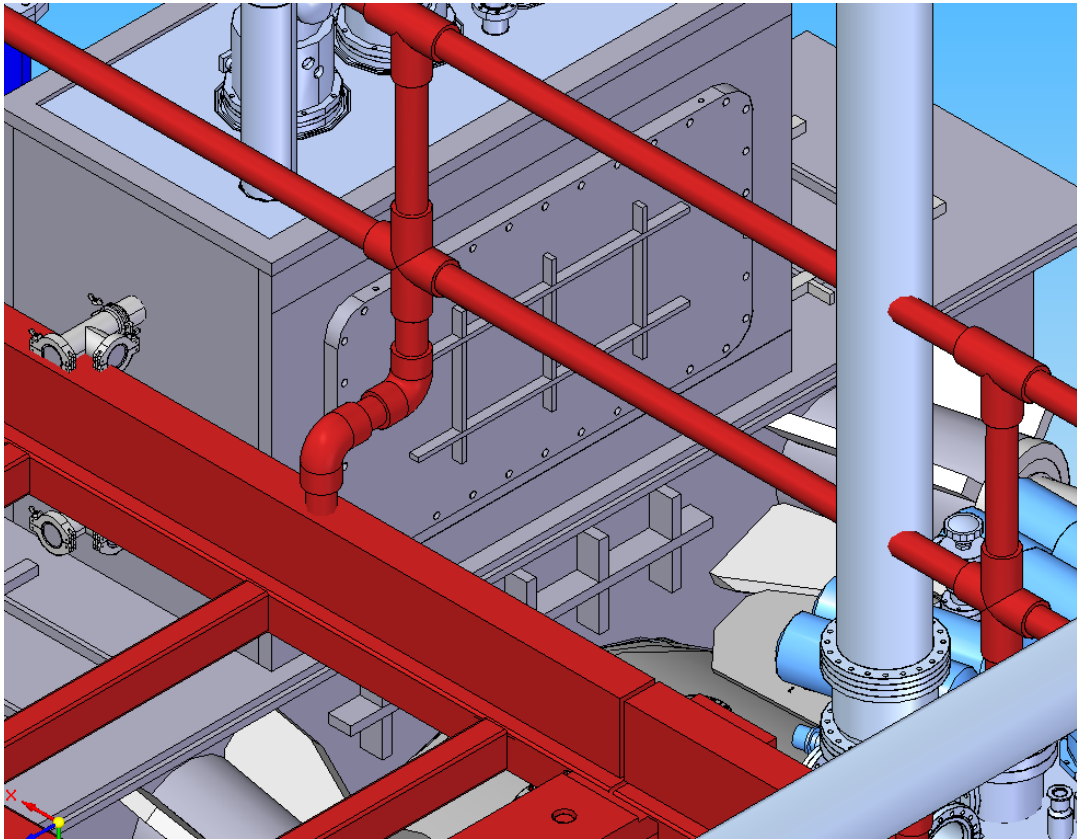
This view shows the current South Mezzanine with the top floor plates removed



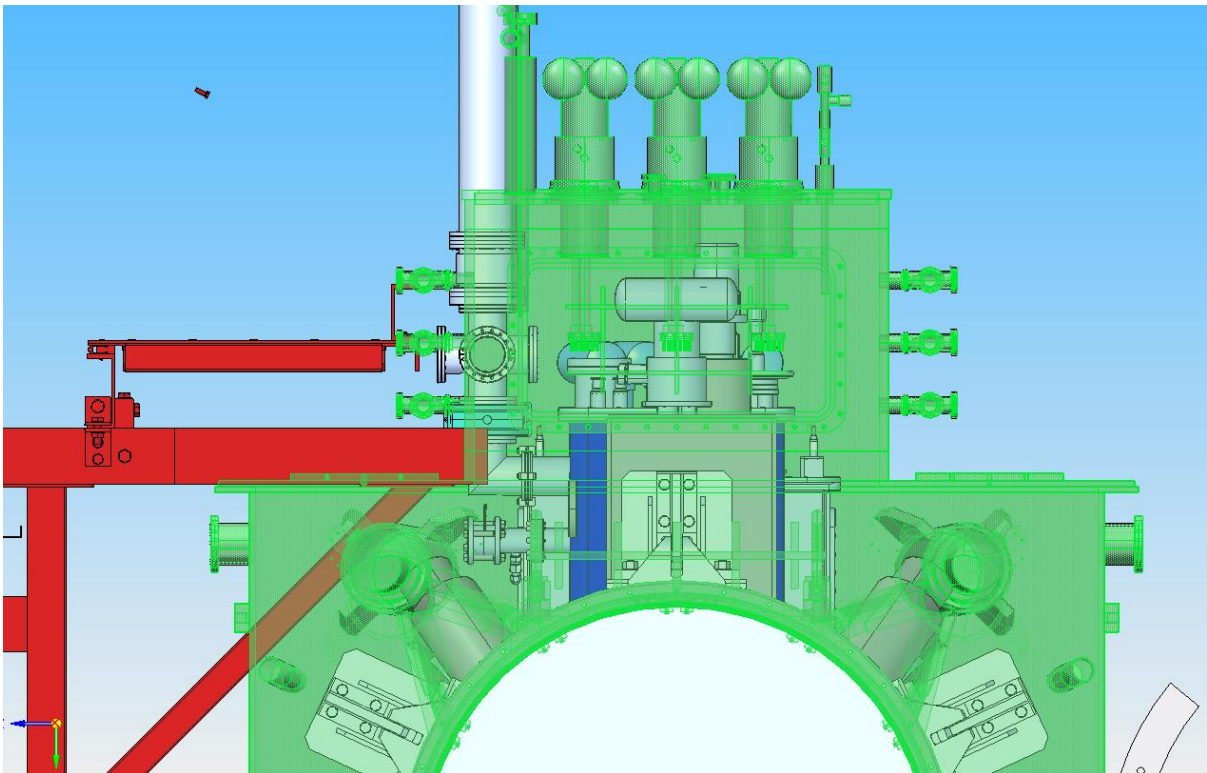
This view is a close-up of the above view showing how the RFCC body and turret and the AFC services clash with the front of the South Mezzanine



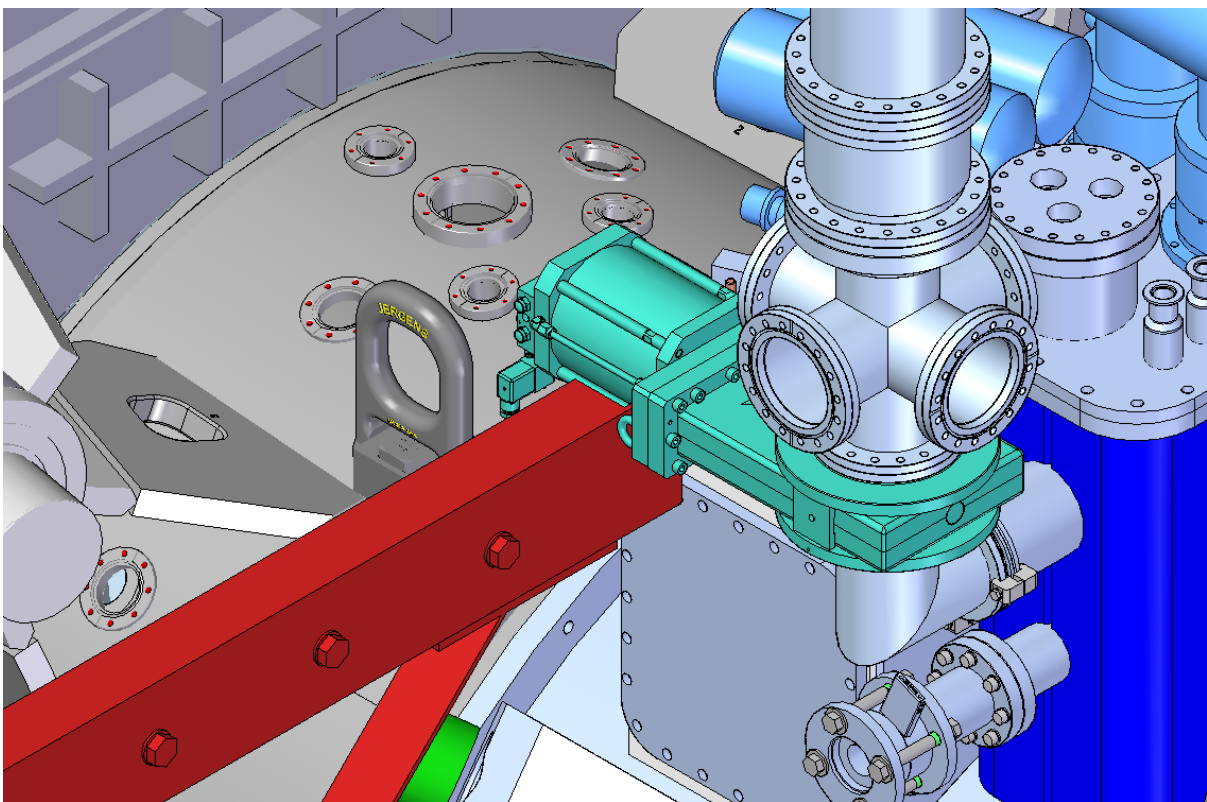
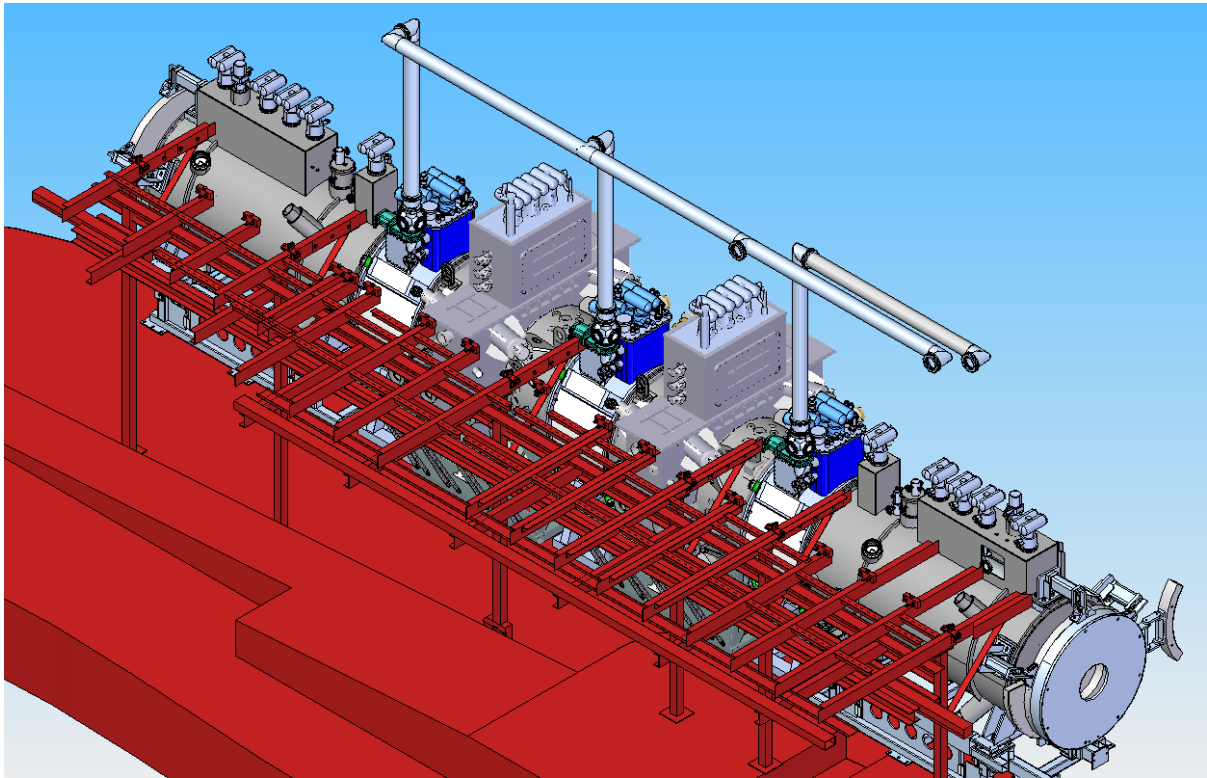
This view shows the proposed South Mezzanine, again with the top floor plates and hinged platform plates removed



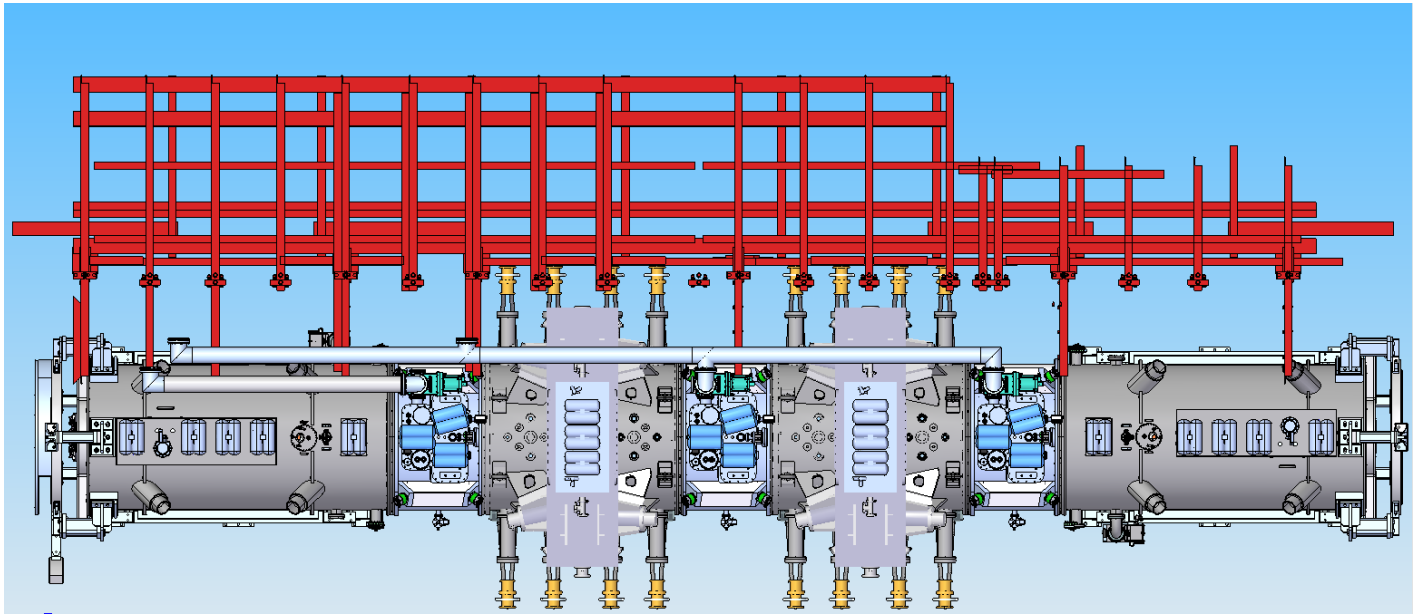
This view shows how there is now clearance between the front of the South Mezzanine and the RFCC. The vacuum connections shown clashing with the Mezzanine are being moved to the other side. There is still a clash with the AFC services shown however the handrail will be locally modified to avoid this. Bringing the whole handrail back to avoid the clash will overly restrict access along the now shortened and raised gangway.



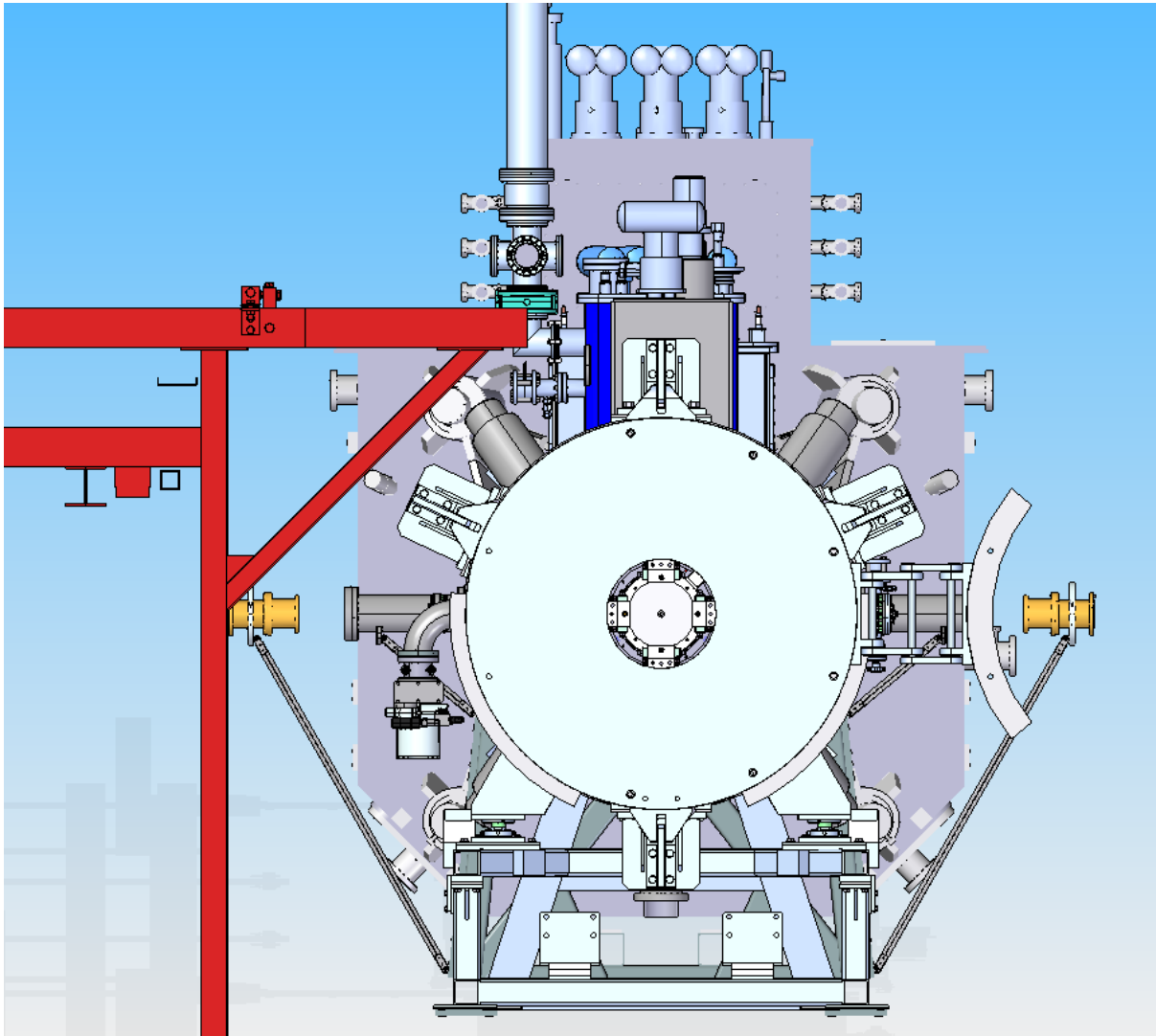
This view shows the RFCC (highlighted in green) with the hinged platform, the only clash will be the vacuum ports which are being moved to the opposite side of the RFCC turret. There looks like there might be a clash between the RFCC and the cantilever beams, however this is just the angle of view as shown below the cantilever beams do not align with the RFCC along the direction of the experiment axis.



There is a potential clash between one of the cantilever beams and the AFC services (dependant on final placement of the devices) however this is easily resolved by cropping the end of the aluminium alloy beam.

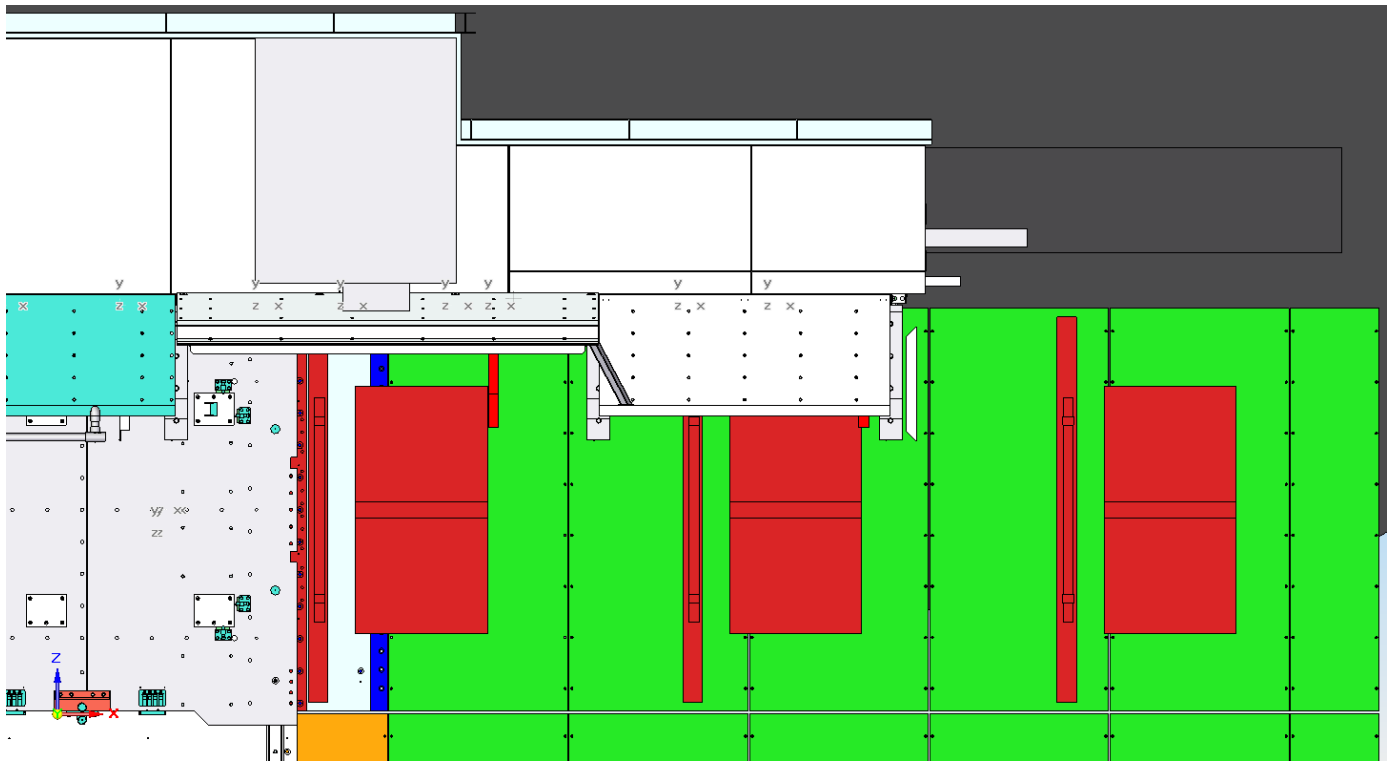


Top view showing the position of the cantilever beams with the devices of the MICE cooling channel



This shows how the supported cantilever beam has sufficient clearance from the Spectrometer Solenoid and AFC devices.

EMR compatibility with hinged platforms



This view shows the EMR in Step IV, V & VI positions. It can be seen with the hinged platform raised (Step IV position) that there is full access over the EMR to crane it in.