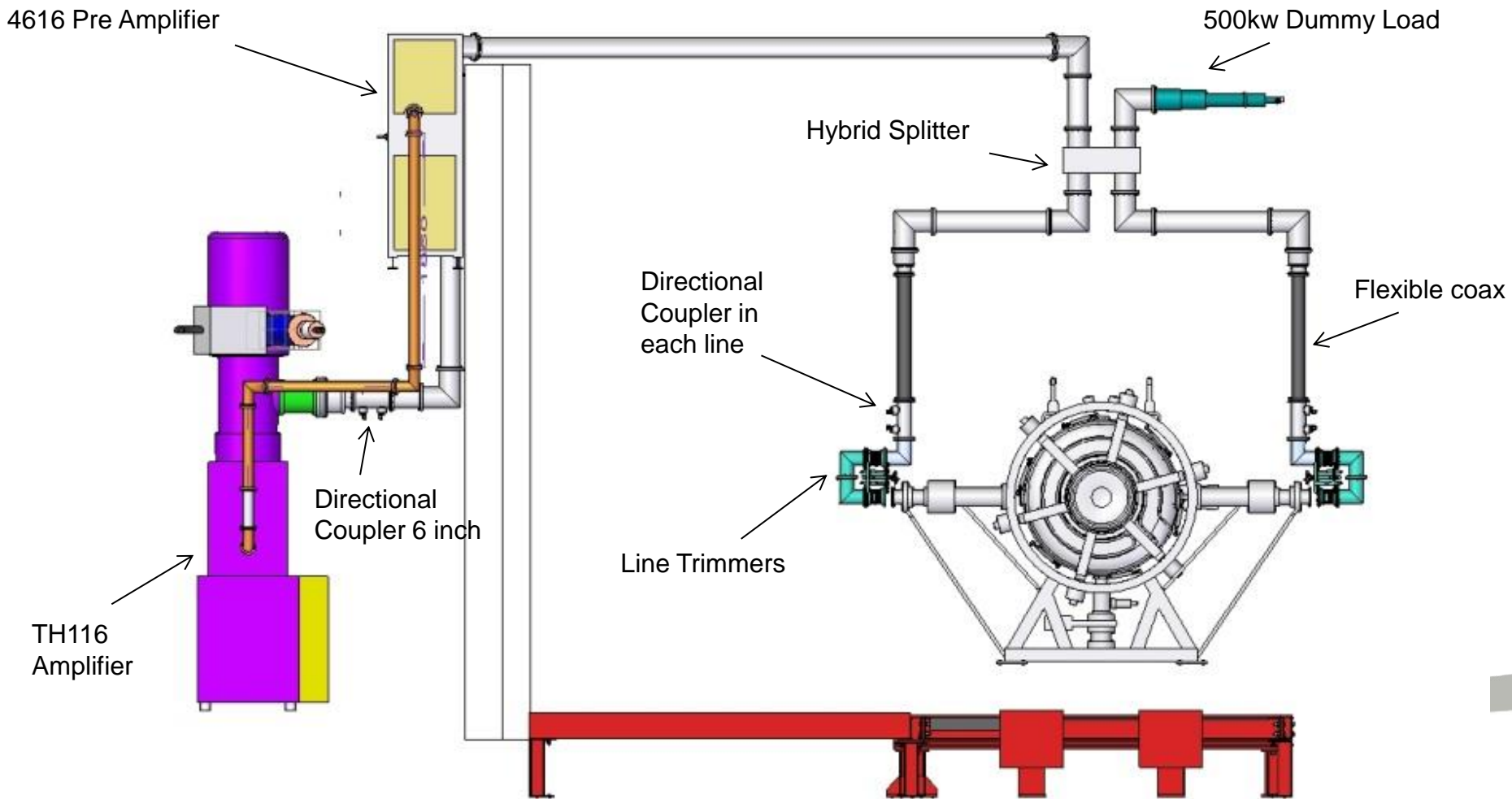




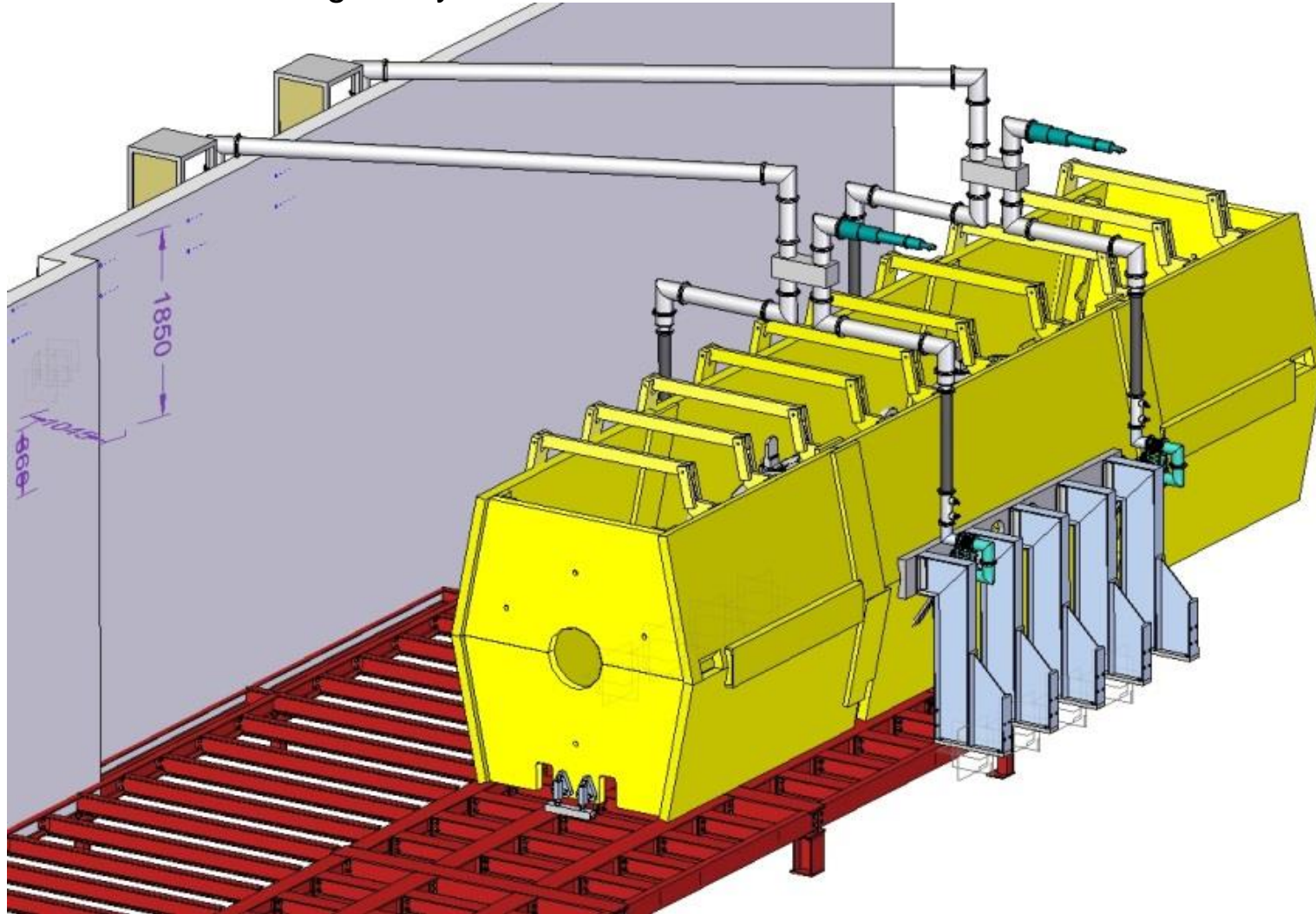
RF Layout 3pi/2 for Discussion

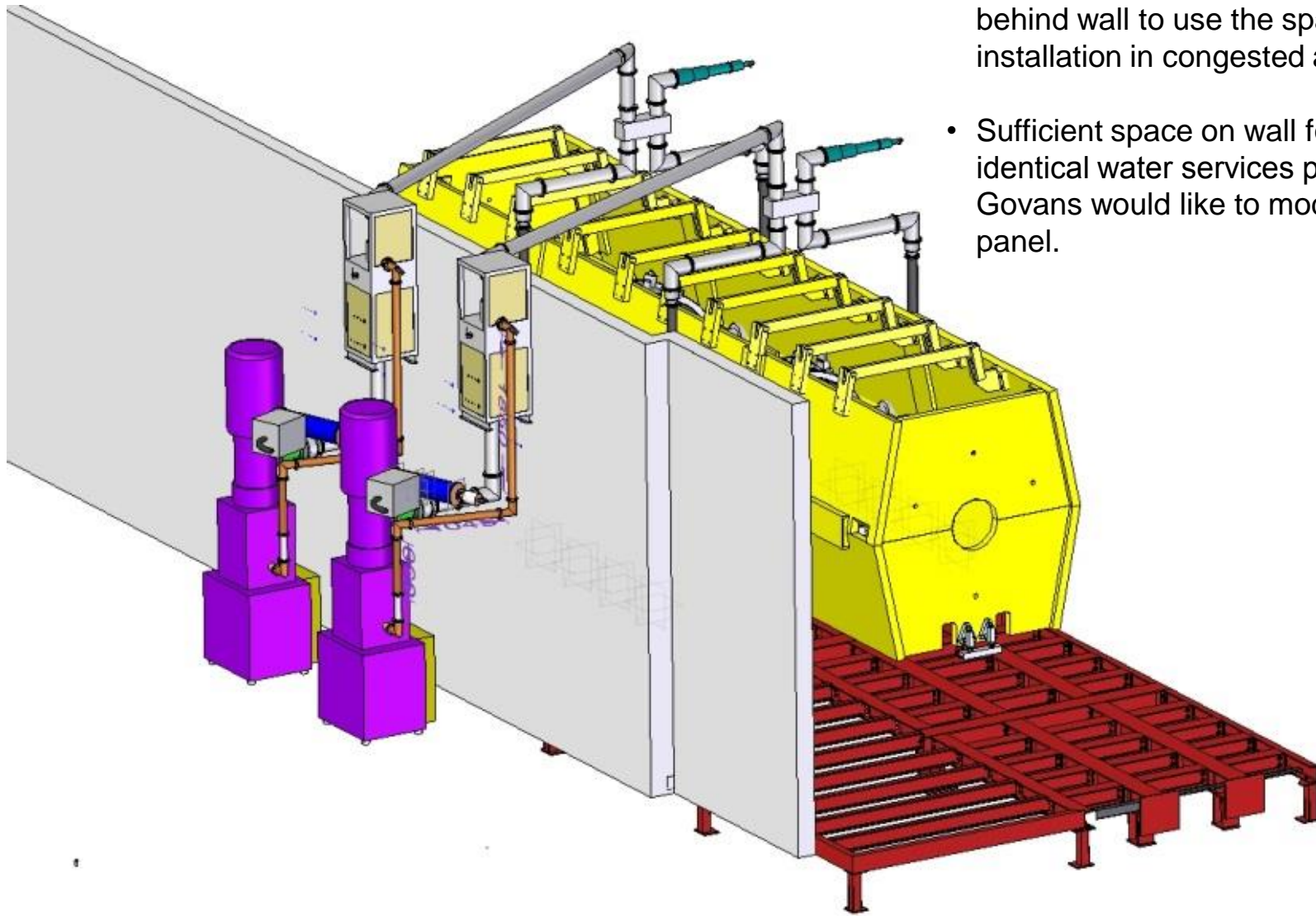
- Output line from amplifier is lower than the PRY, needs to go high to clear PRY to couple to South RF couplers
- Already have the 6" coax to go over the wall
- No advantage in going through the wall



RF Distribution – Neglecting Vacuum Support Platform

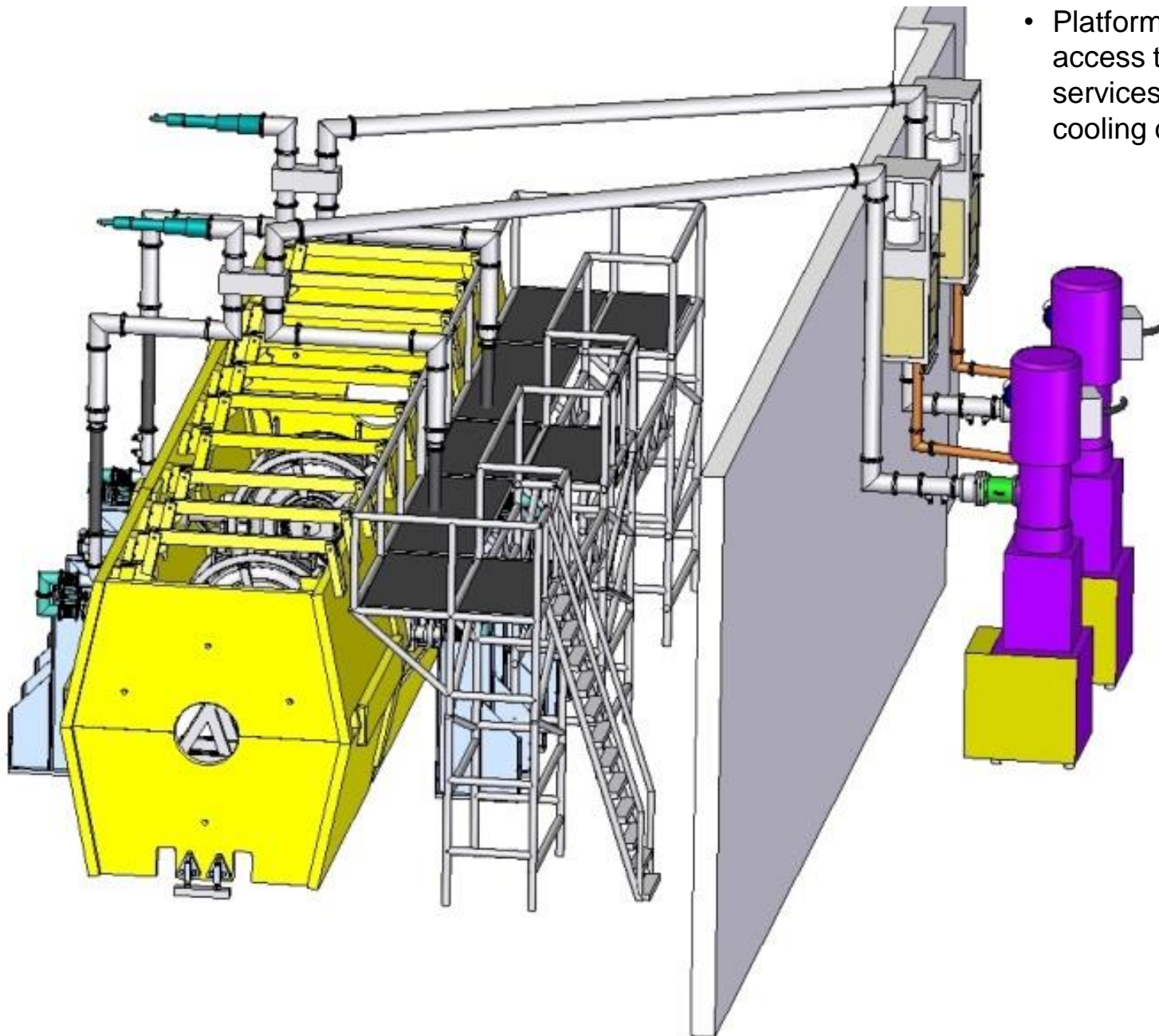
- MTA advised not to use ‘T’ splitters, suggested hybrid splitter was a far better solution as it isolated the cavity couplers from each other.
- Propose to have 1off dummy load on the hybrid splitter to each RF cavity.
- Crane hook height fully retracted does not clash with the coax over the wall.





- 2nd TH116 amplifier moved to 3rd position behind wall to use the space and ease installation in congested area
- Sufficient space on wall for additional identical water services panel.....John Govans would like to modify existing panel.

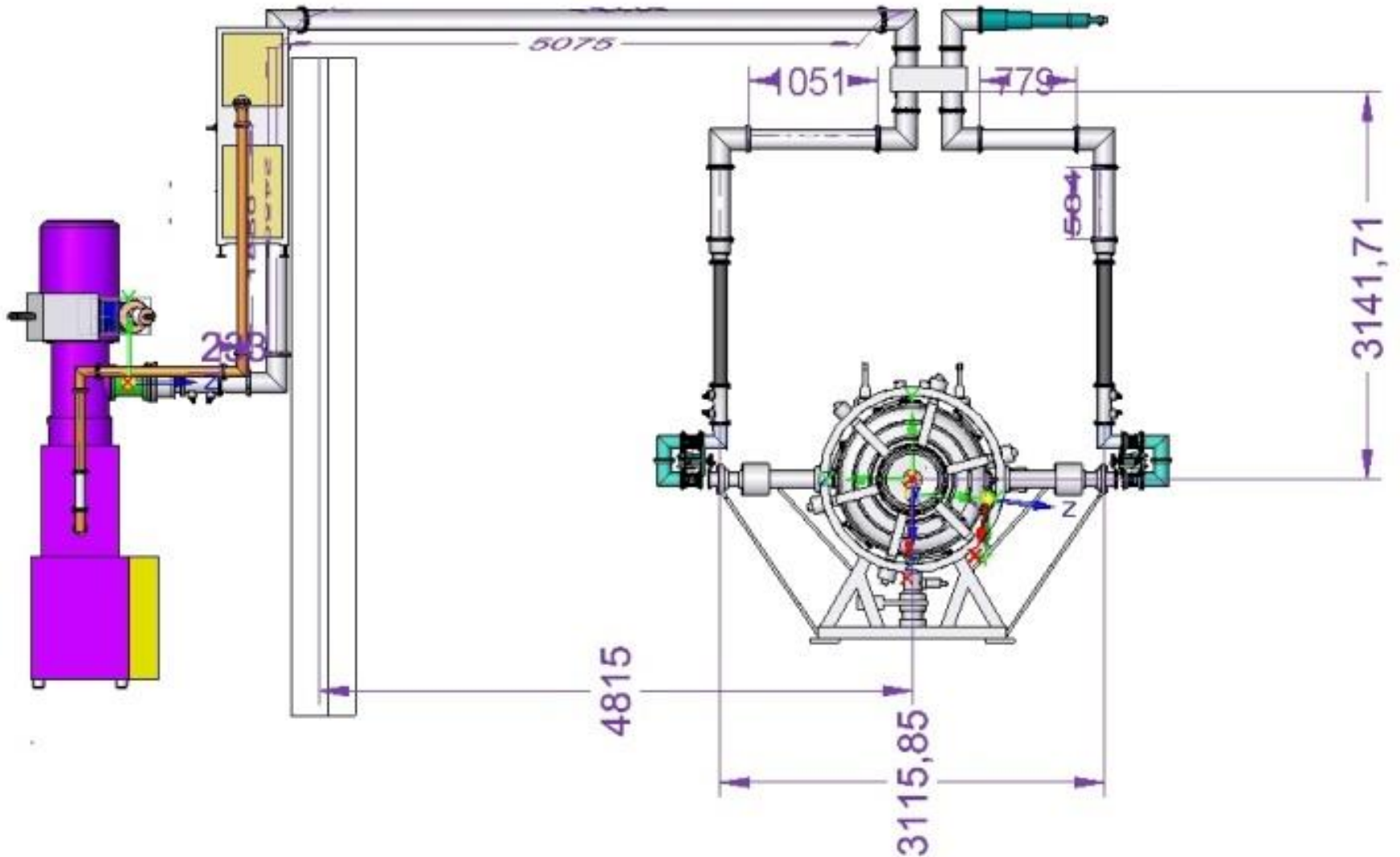


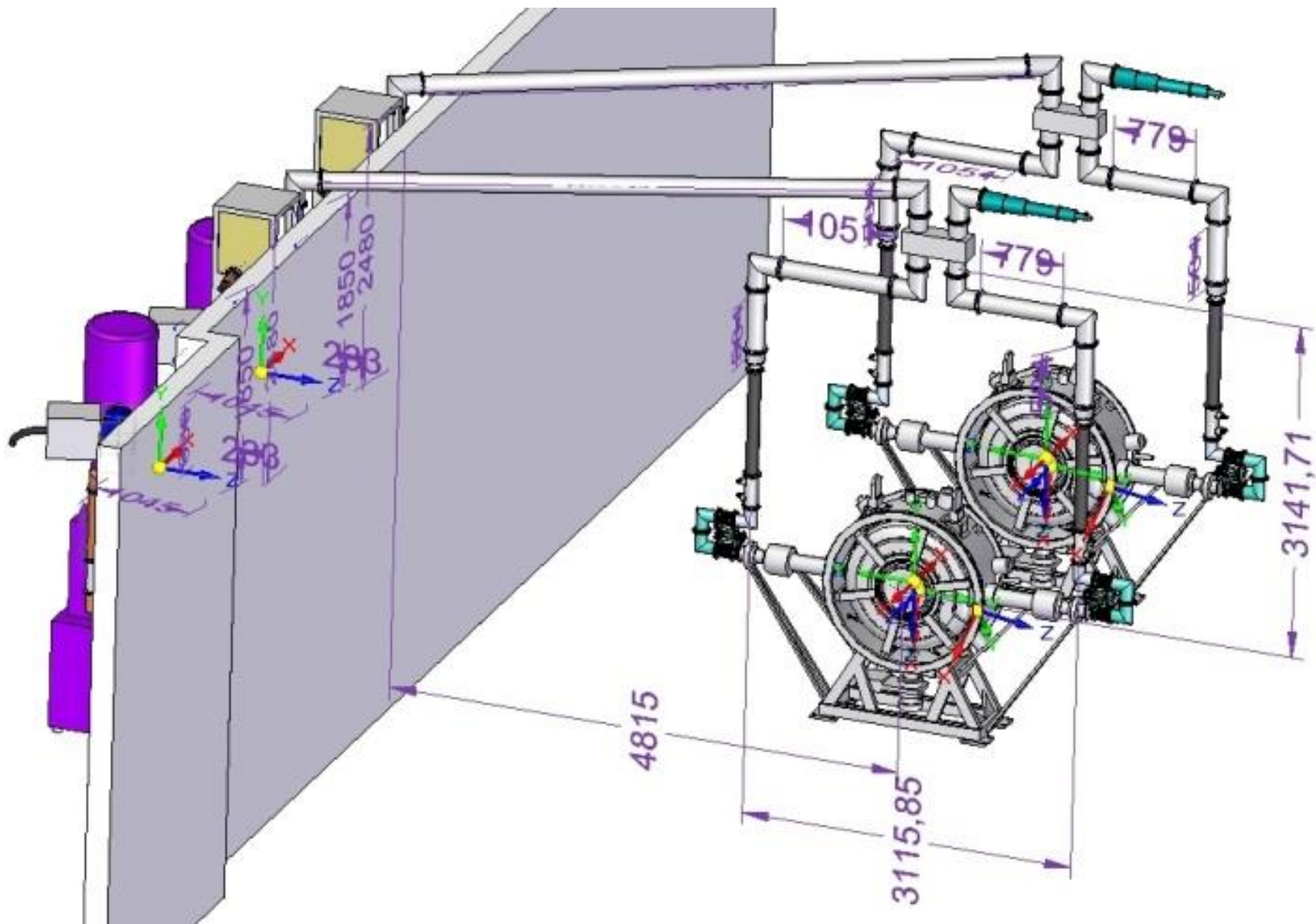


- Platform scaffolding reqd to gain access to equipment and services running on top of the cooling channel

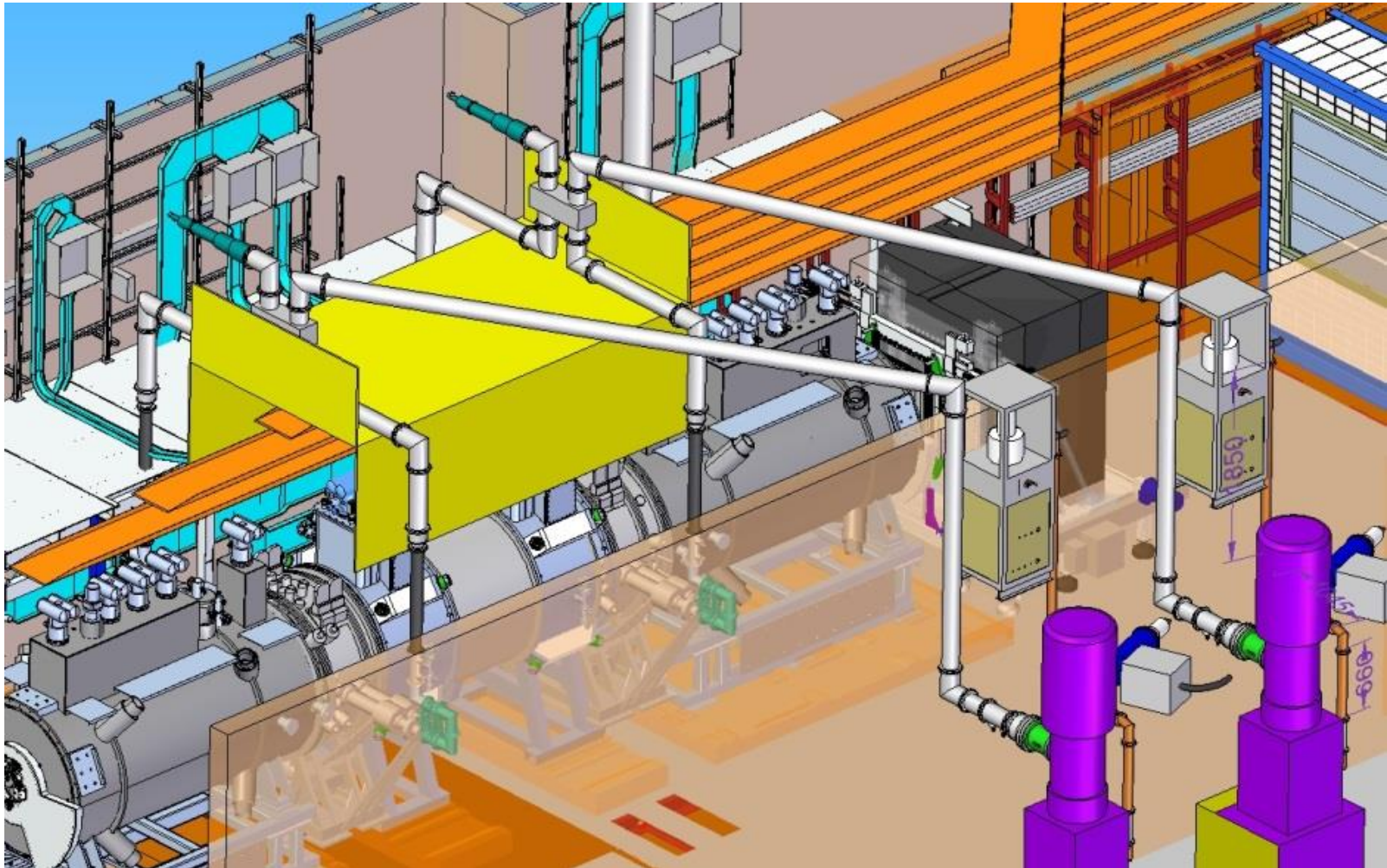
RF Distribution – With Vacuum Support Platform

- Coax over the wall raised to avoid clash with vacuum support platform
- Crane hook height fully retracted may cause a potential clash with the coax.....need to check
- Option for crane operation maybe to skate equipment under high level coax line
- Services to dummy loads not yet been considered.....need to speak to Jason

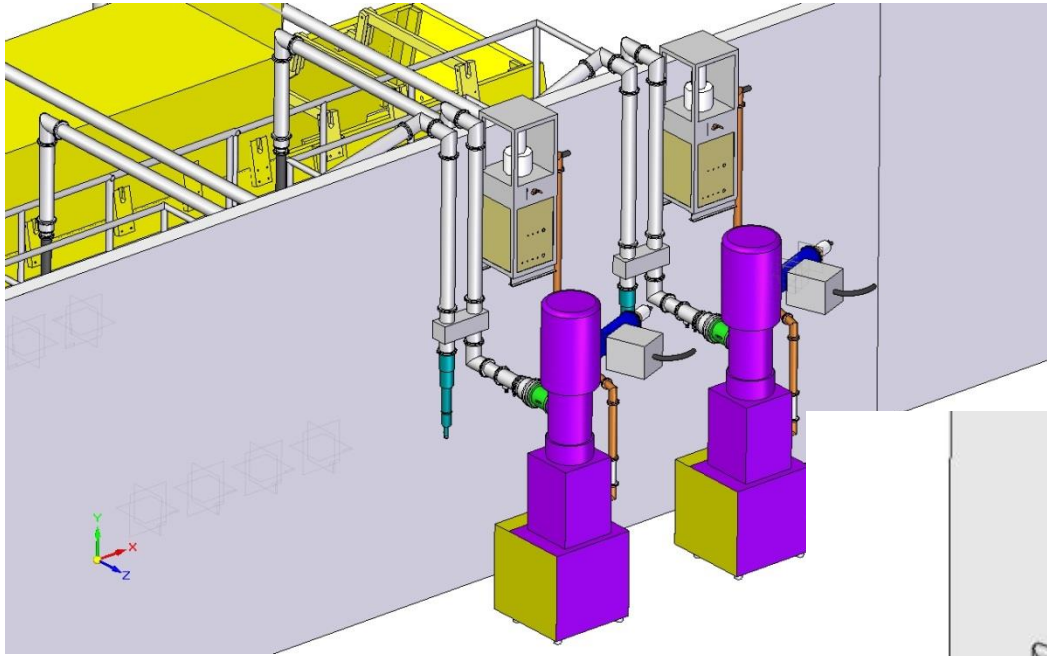




- RF components routed over SS vacuum support platform “Dog Kennel”
- “Dog Kennel” can provide shielding for RF components
- Raised the height of the coax line over the wall from 242mm to 410mm.....will have to check crane height (potential clash)
- Hybrids splitters can move upstream & downstream & lowered to avoid any potential clashes, achieved by setting correct rotation angles on coax lines
- Suggest mounting coax supports off PRY steel work & “Dog Kennel”need to liaise with Jason & Steve Plate



RF Distribution – Hybrids Behind North Wall

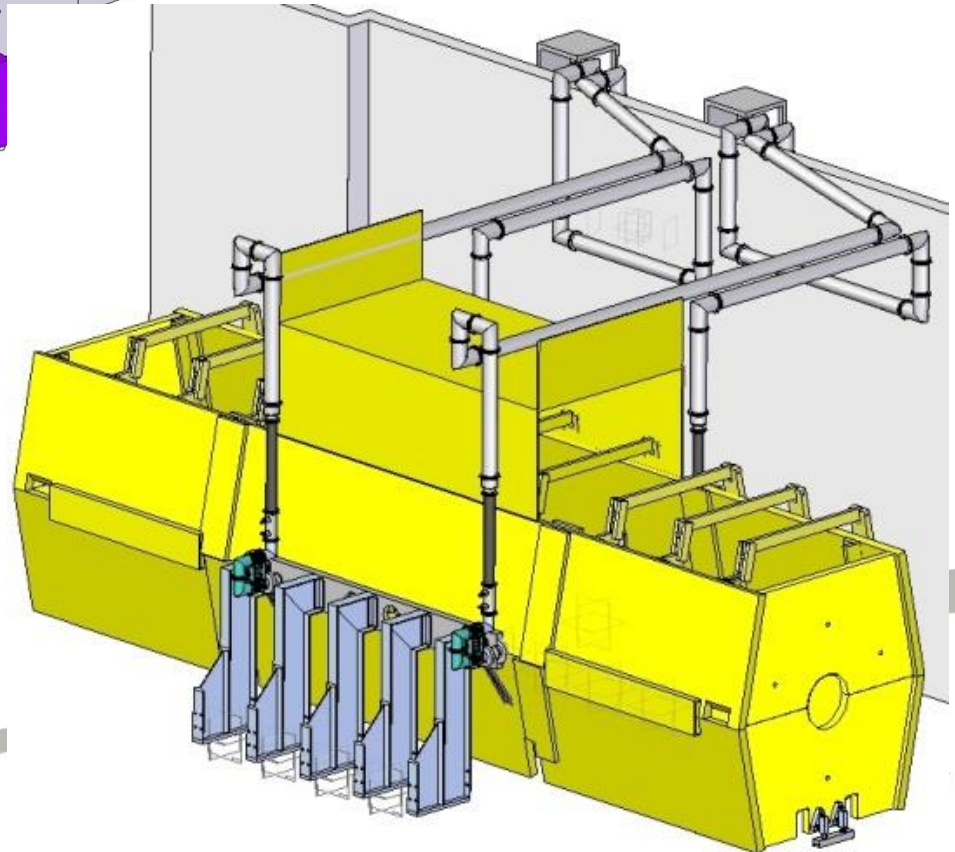


Pros

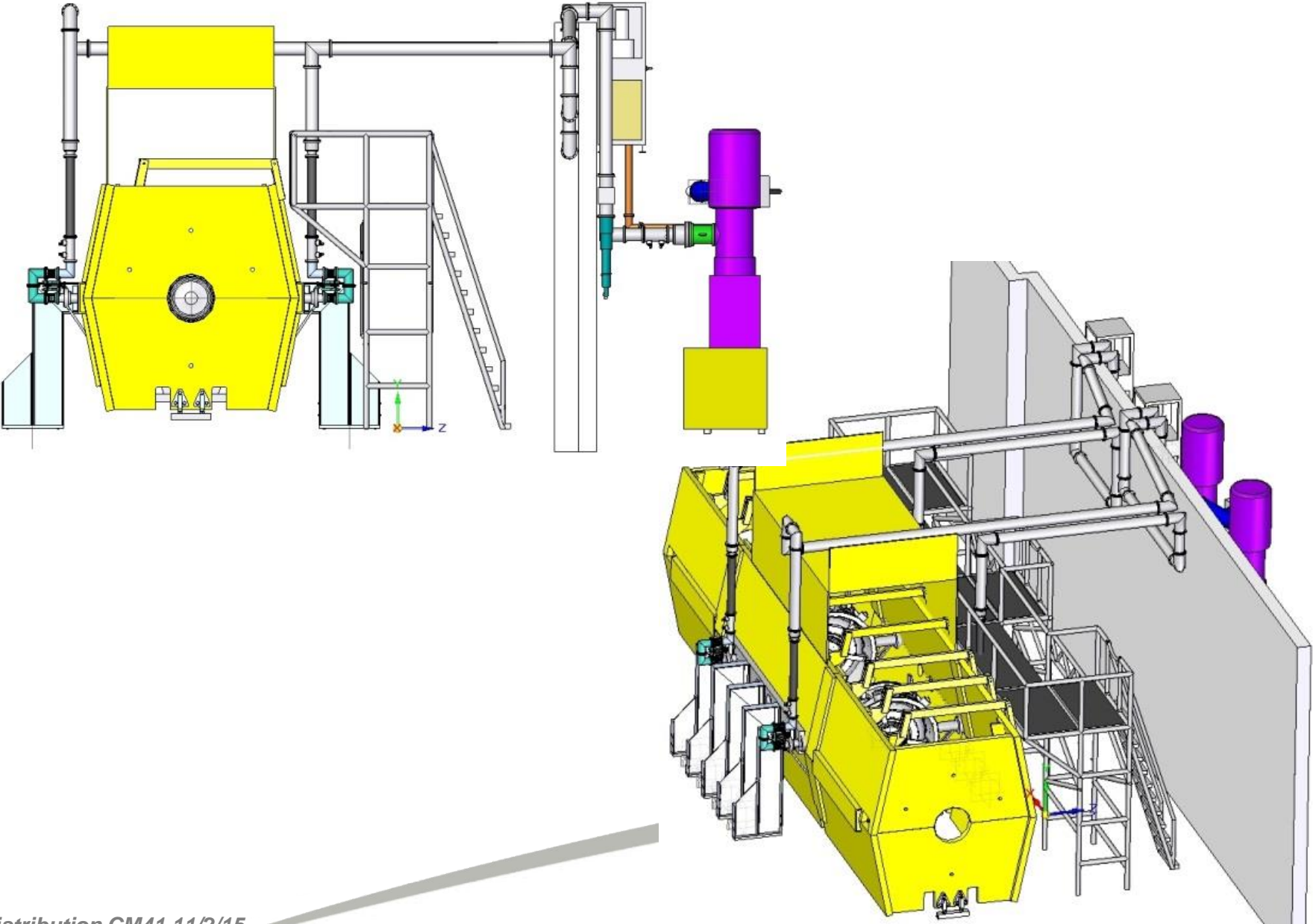
- Hybrids and elbows no longer above cooling channel reducing stray field effects.....if stray field is a problem!!!
- Coax can run lower once over the wall
- Services to dummy loads might be easier

Cons

- More coax required to match lengths to each side of the cavity
- More elbows required.....need same number of elbows to each side of the cavity to equalise the losses to both sides
- Generally more losses due to increased lengths of runs
- Larger SF6 volume required



RF Distribution – Hybrids Behind North Wall



Comments

- Output line from amplifier is lower than the PRY, so needs to go high to clear PRY to couple to South RF couplers. True for all options.
- No advantage of going through the wall.
- Crane hook height fully retracted may clash with the coax. Original height of coax above wall was 242mm, increases to 410mm for vac services platform option. May need to skate loads under high level coax lines to avoid venting and refilling with SF6.
- Directional couplers included in layout 3 in total (1 off 6 inch, 2 off 4 inch).....these have been delivered
- 4" flexible coax 1m long shown in vertical lines.....these have been delivered
- Line trimmers to take up any length corrections.....these have been delivered
- Hybrid shown with existing 500KW loads (2off)these have been delivered
- Moved the second amplifier to position 3 behind wall to allow more space
- Run coax in 6inch as far as possible to the flexible coax line
- Will require additional and/or modified 6inch coax line lengths
- Current scheme is 4" coax under floor, be very difficult to run 6" coax under the floor

