

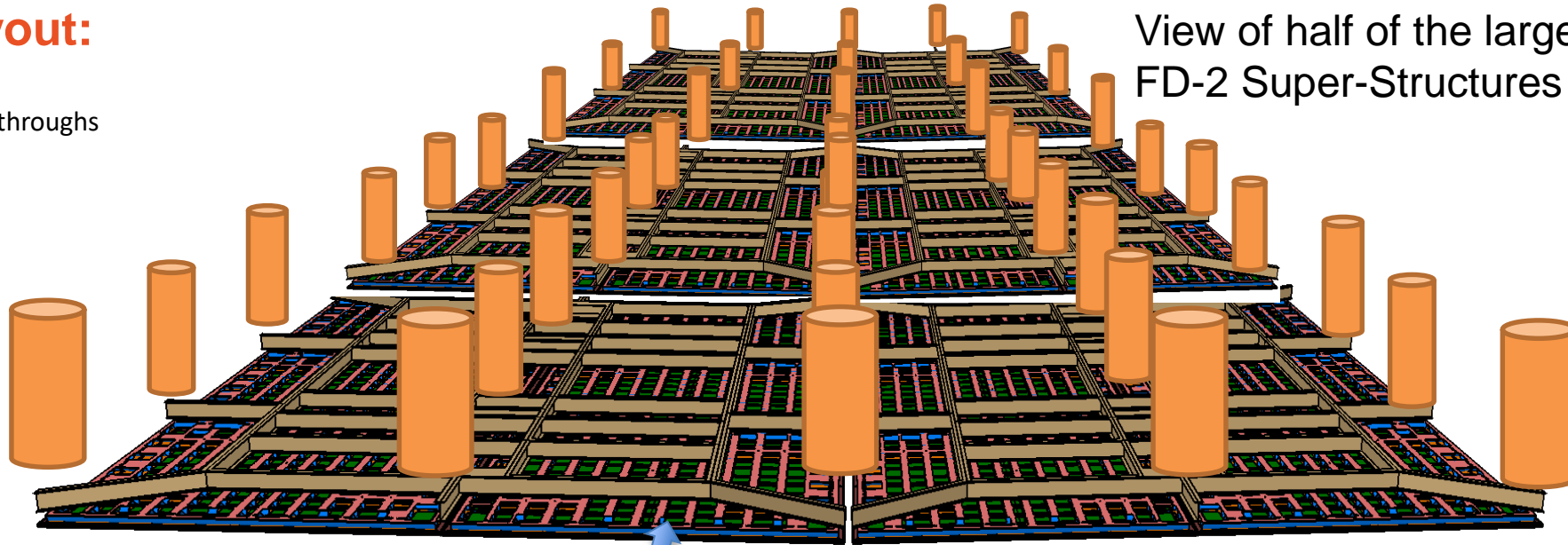
CRP consortium meeting: 23/06/2021

- Status of first CRP preparation
- Activities on CRP for FD-2
 - Studies on top CRP installation and cabling procedure going on
 - Bottom CRP installation under discussion and organization being set up

Chimney layout:

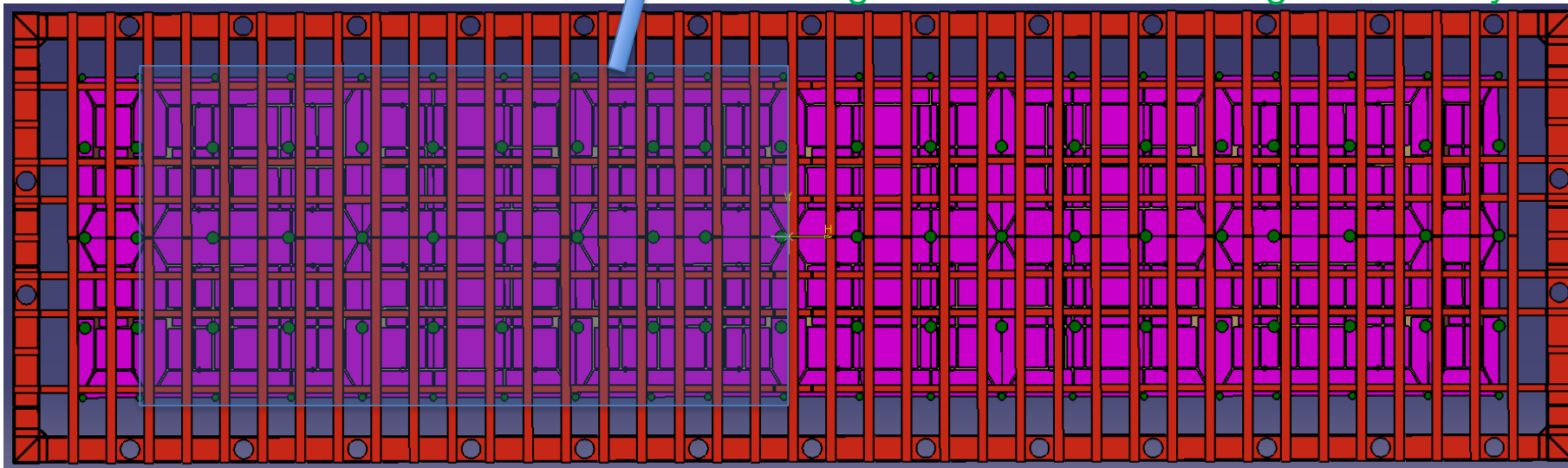
- Total 105 feedthroughs

View of half of the large
FD-2 Super-Structures



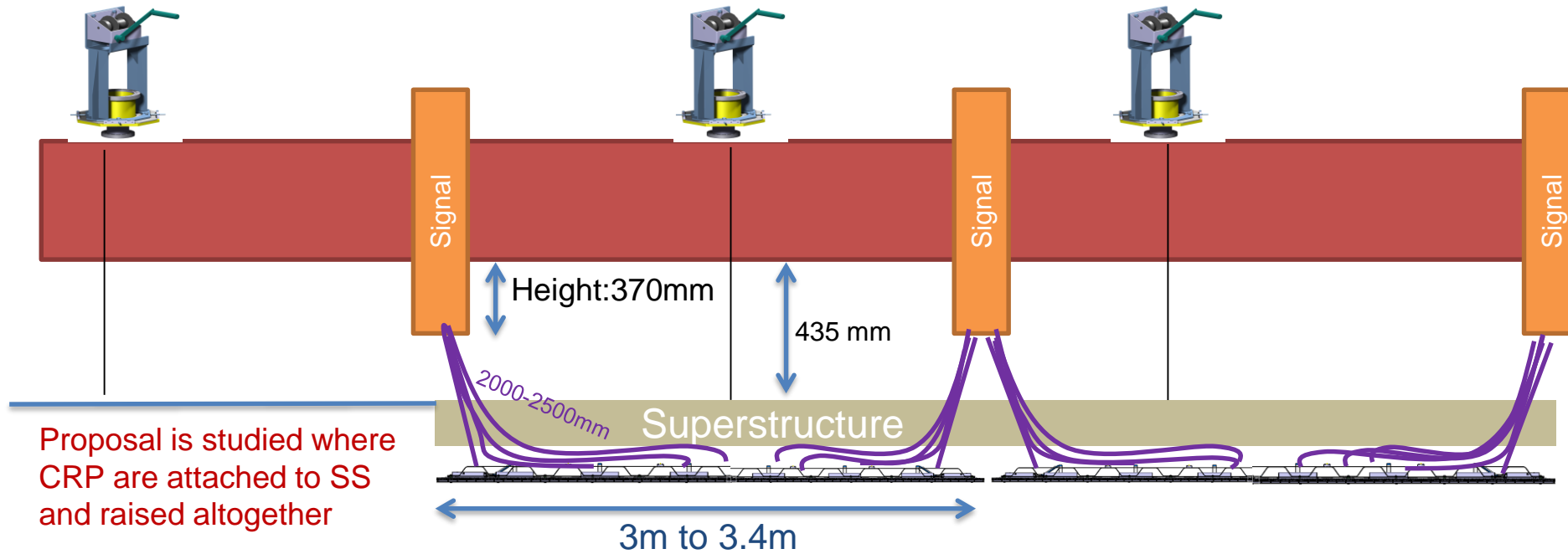
The position of the signal feedthroughs have been defined to avoid interference with the cryostat structure

All green circles are the signal chimneys



Top CRP cabling procedure:

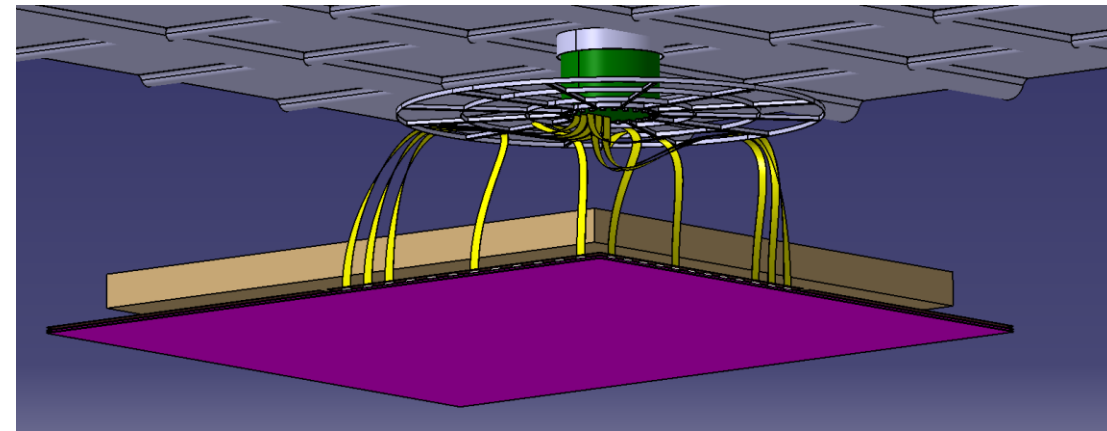
The CRP installation procedure with a full cabling scenario is being developed



Proposal is studied where CRP are attached to SS and raised altogether

Signal cables are routed on the super-structure for each CRP, and have to be connected manually to chimneys.

Details being studied:
=> proposal in the coming week

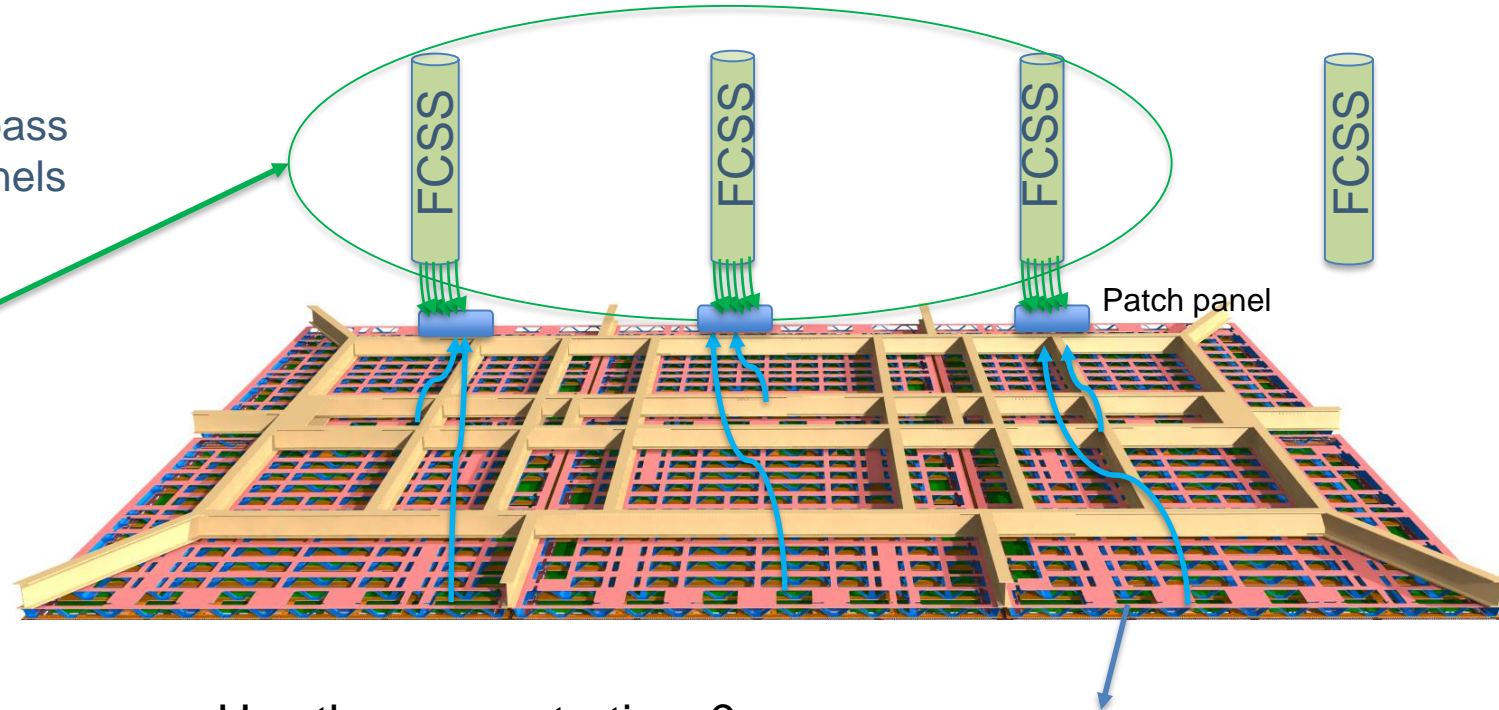
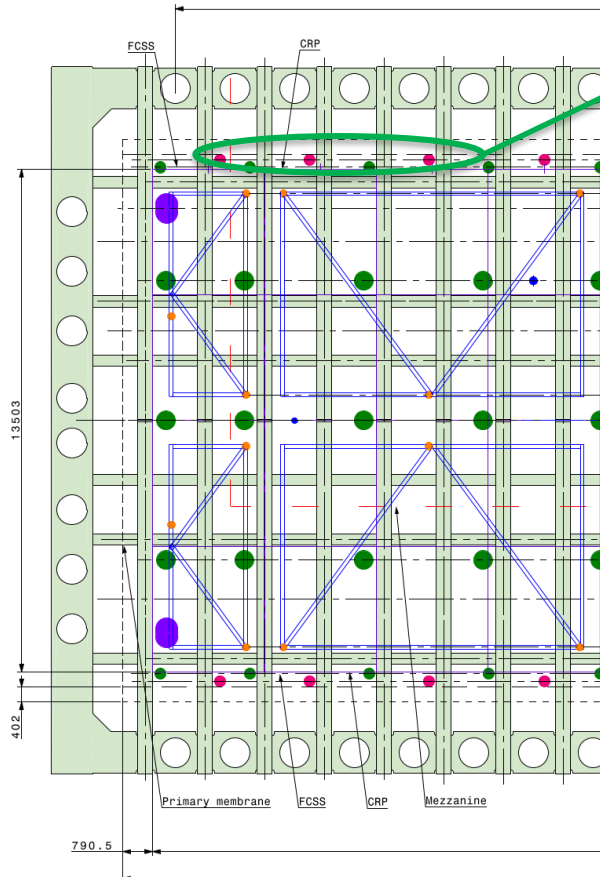


Top CRP anode bias cables and routing:

Top Anode bias voltage distribution: Need 3 cables / unit connected (CRU or CRP)

=> 18 cables to route on a superstructure to the border of the detector where there are the FCSS

and use free space inside to pass cables to connect to patch panels



Use these penetrations?

Pos.	Diameter [mm]	Quantity	Description
1	Ø200	48	DSS
2	Ø500	63	Top Center CRP Cables
3	Ø300	42	Top Side CRP Cables & FCSS
4	Ø300	40	Bottom CRP Cables
5	Ø250	2	High voltage
6	Ø250	4	Instrumentation
7	Ø800	4	Manholes

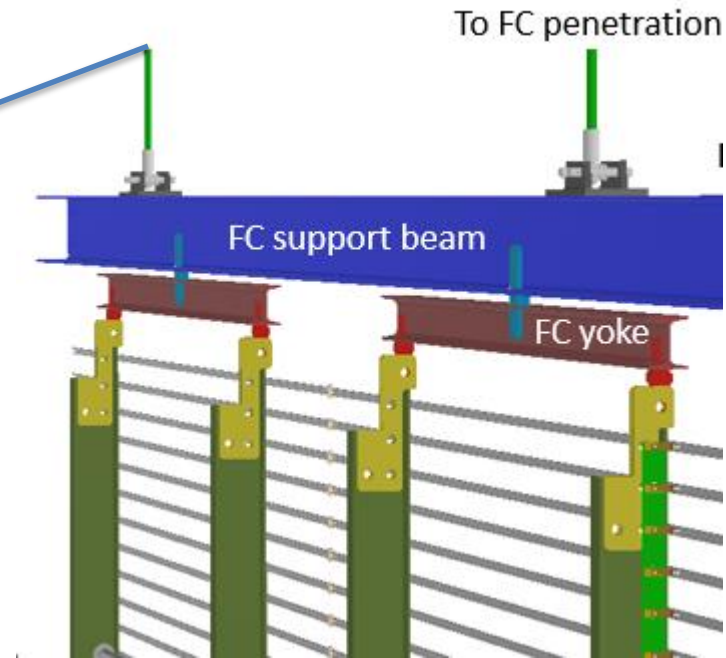
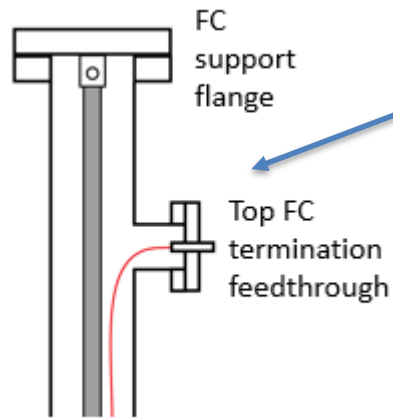
Each blue line represents a bundle of 3 HV cables/CRP to bias the 3 anode layers connected to 1 CRP connector board



Top CRP anode bias cables and routing: use a similar path as the FC termination cable

The new CRP/cathode installation scheme makes it very difficult to connect the top FC termination cables to the CE penetrations. A possible solution is to add the FC termination cable feedthrough to the FC support penetration using a side port feedthrough

Bo's presentation
at the HV internal
review June 14th
2021



Since those penetrations are regularly positioned along the external borders of the CRP superstructure could envisage to use them also to host the bias voltage cables (3/CRP) for the anodes?
=> 1 penetration could cover 2 CRP then 6 cables.

This would require to have the side port (on slide 14) a bit larger with a flange to host 7 SHV.

