

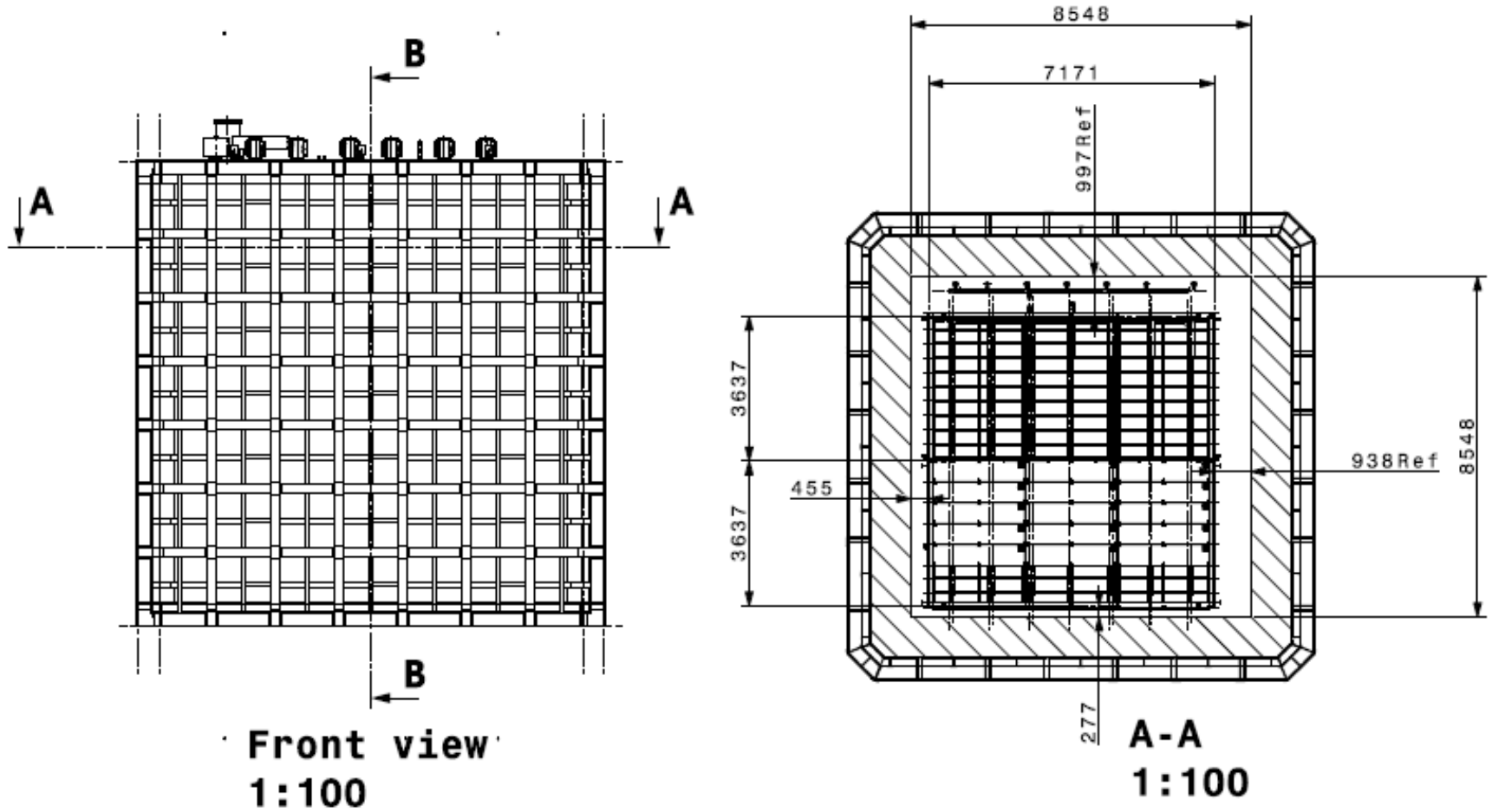
ProtoDUNE TPC Mechanical Interface discussions Summary

Russ Rucinski/Dan Wenman/Jack Fowler/Diamanto/Dimitar
Discussions from afternoon 10-Nov-2015

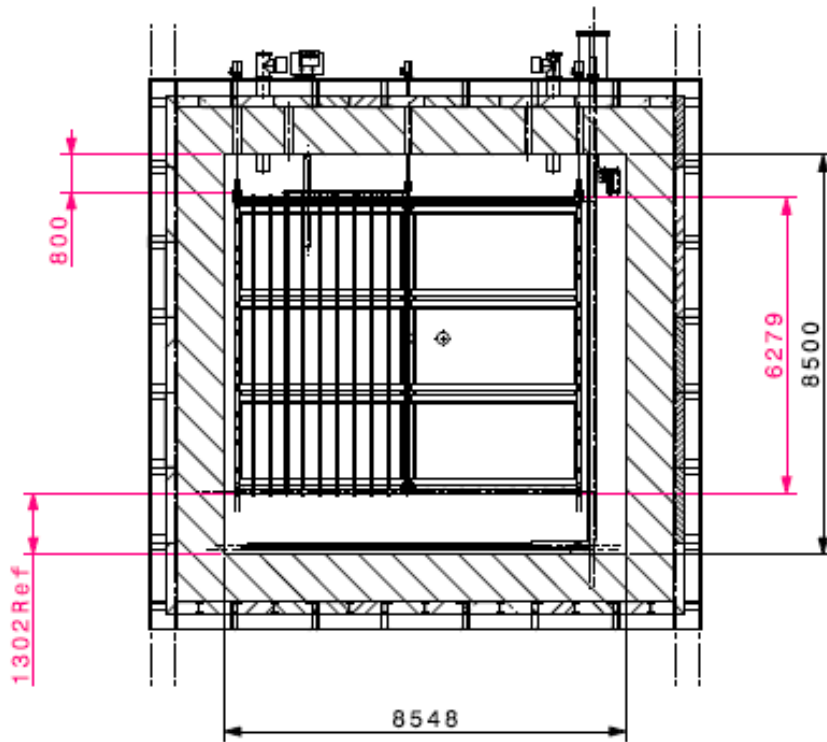
Points

- Located the TPC in the cryostat in X, Y, and Z. Set some dimensions as Governing Dimensions.
 - X location, distance from HV (CPA tube OD) to ground in FD = 359 mm.
Centerline of CPA tube to membrane flat (359+25+70) = **455 mm**.
Centerline of CPA tube to membrane flat at East end = 938 mm.
 - Y location, distance from APA outer grid plane to knuckle = 150 mm.
Centerline of APA to south wall (150+57+70) = **277 mm**.
Centerline of APA to north wall = 997 mm.
 - Z location, distance from APA fin to membrane = **800 mm**.
- Diamanto and Benoit adjusted the integrated model TPC location, ports and created a drawing on next slide.

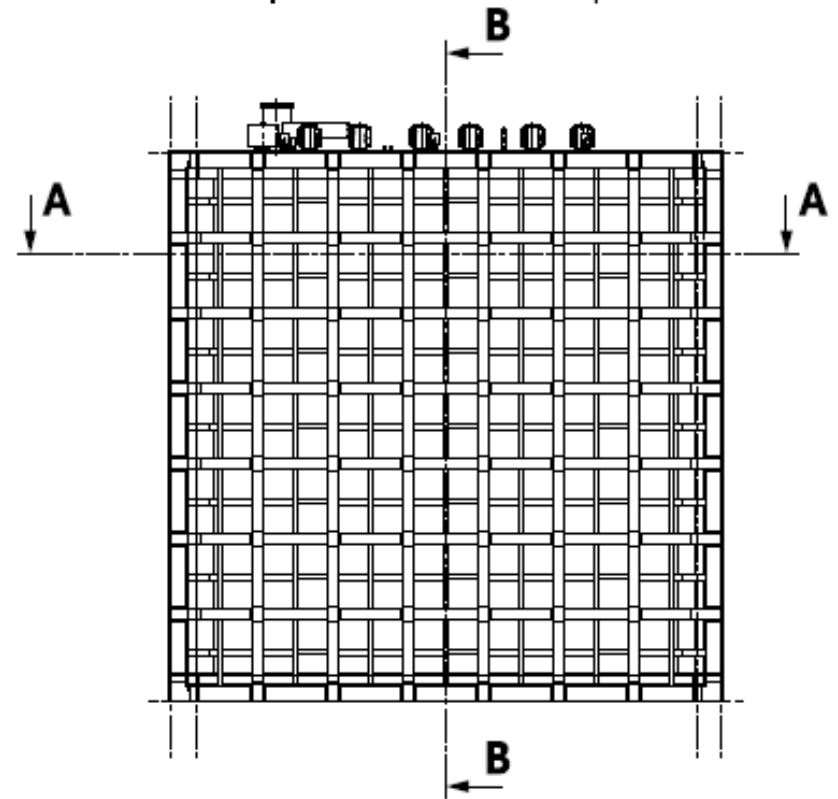
Drawing showing placement of TPC in cryostat



Drawing showing placement of TPC in cryostat



B-B
1:100



Front view
1:100

Points

- Verified TPC model Center to Center distance APA rows to CPA rows as 3637 mm. APA pitch center to center 2320 mm.
- Decided TPC support fixed point that we shrink to would be in the North West Corner. Fixed location at flange of feedthrough port. This would be similar to a quadrant of the Far Detector where center APA row is fixed. Not a firm decision. We are also considering West Center instead to limit movement away from Beam pipe.
- Discussed HV port concerns, proximity to vertical FC support beams, donut distance to CPA support rail, to ground.
- Update ProtoDUNE parameters spreadsheet. Corrected internal cryostat size 8458 mm square x 8000 mm high. Added placement of TPC to cryostat governing dimensions.