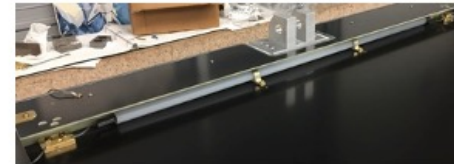


# CPA Changes after FDR

- Doubled HV Bus (PD2)
  - Recommendation from FDR – increase redundancy of connections
  - HV bus (both sides of CPA - connection redundancy > 8)
- FR4 insulating bead for exterior FSSs (Cold Tests)
  - Process time for manual application of glue bead – 25 minutes per meter of FSS edge (includes edge prep, mixing of epoxy, stiffener, application – **20 minute working time**)
  - For FD-HD, ~600 m of glue bead -> 6.5 weeks 1 FTE
  - FR4 bead – 10 minutes per FSS piece -> 2.5 weeks 1 FTE



# CPA Changes after FDR (cont.)

- Mounting clips used for all Profiles **(PD2)**
  - Easier mounting – self-centering – accommodates anti-rotation rod
- Anti-rotation rods connecting Panels **(PD2)**
  - Prevents "zig-zag" hanging of CPA Panels seen in ProtoDUNE SP
  - SS rods applied under Profiles through holes in clips
- 3D-printed PEEK PD diffusers **(PD2)**
  - On ProtoDUNE SP, SS diffuser housings machined individually
  - 3-D printing of PEEK diffuser housings - << cost

