PID Review: Detector Integration Status/CAD Design

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Summary

- ePIC model
- pfRICH (Alex Eslinger)
- hpDIRC (Avishay Mizrahi)
- AC-LGAD/TOF (Barrel) (Andreas Jung)
- dRICH (Alex Eslinger)
- AC-LGAD (Forward) (Andreas Jung)

*Do we combine the AC-LGADs to keep the discussion brief?

Presentation Format

- Each subdetector should get a set of slides following this pattern:
  1. Overall CAD Model design with 1 or 2 details highlighted (details such as conceptual services routing, subcomponent-level detail, etc)
  2. A slide for the assembly process of the detector itself or a detailed look at some of the subcomponents and their fabrication methods
  3. Support structure and Installation concept slide
  4. A summary slide for ongoing design or integration discussions (examples: design decisions waiting on more information or support/installation options that are being investigated)

*I will populate the pfRICH and dRICH slides but I will need to reach out to Avishay and Andreas for additional input

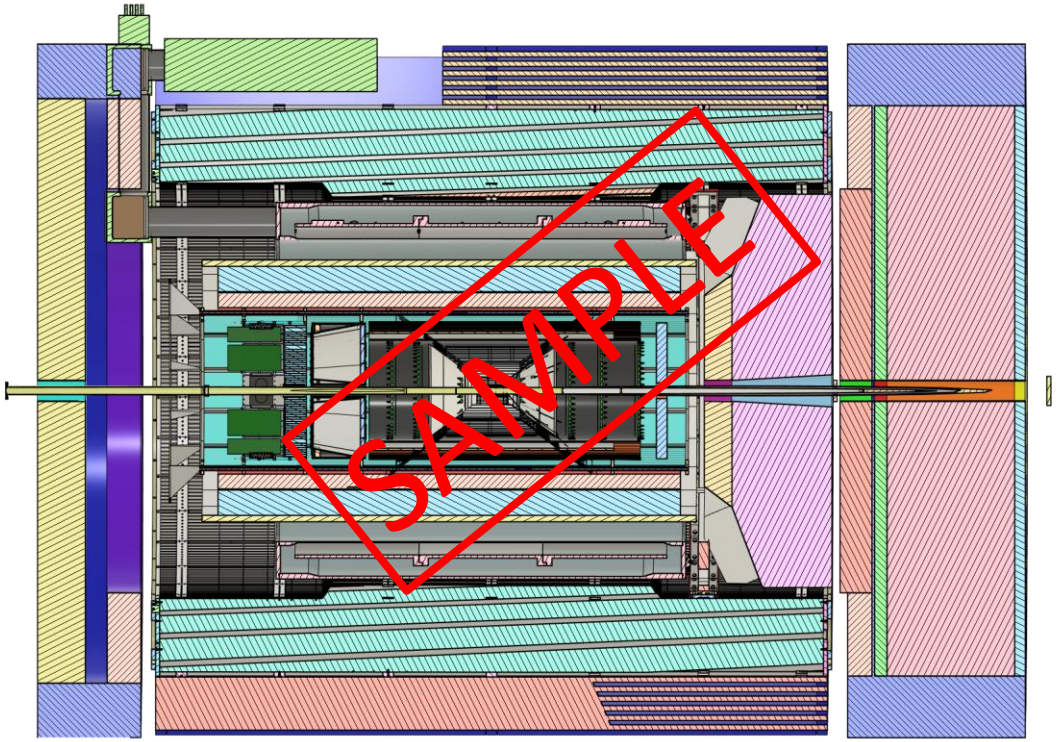
** 4 Slides per detector = 16-20 slides… The intention is to have ~1-1.5 minutes worth of information per slide

*** The charge discusses ES&H and QA incorporation into the current designs, not sure how to fit this into the presentation

**** I've populated some sample pictures for the pfRICH slide pattern, similar pictures and information will be present for each PID detector

ePIC Model

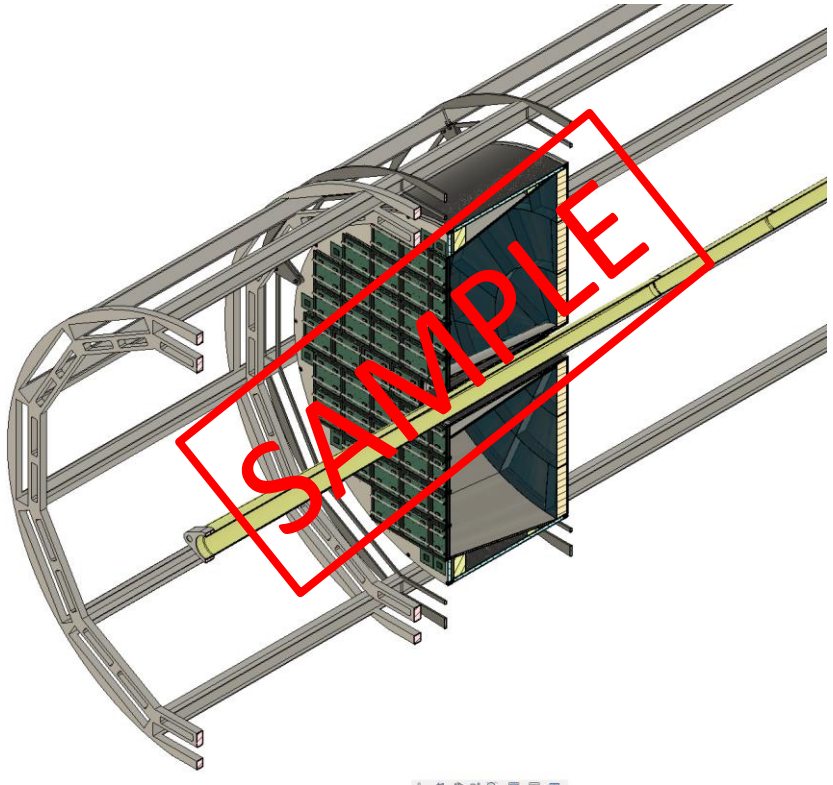
- Show the overall model/locations of PID Detectors

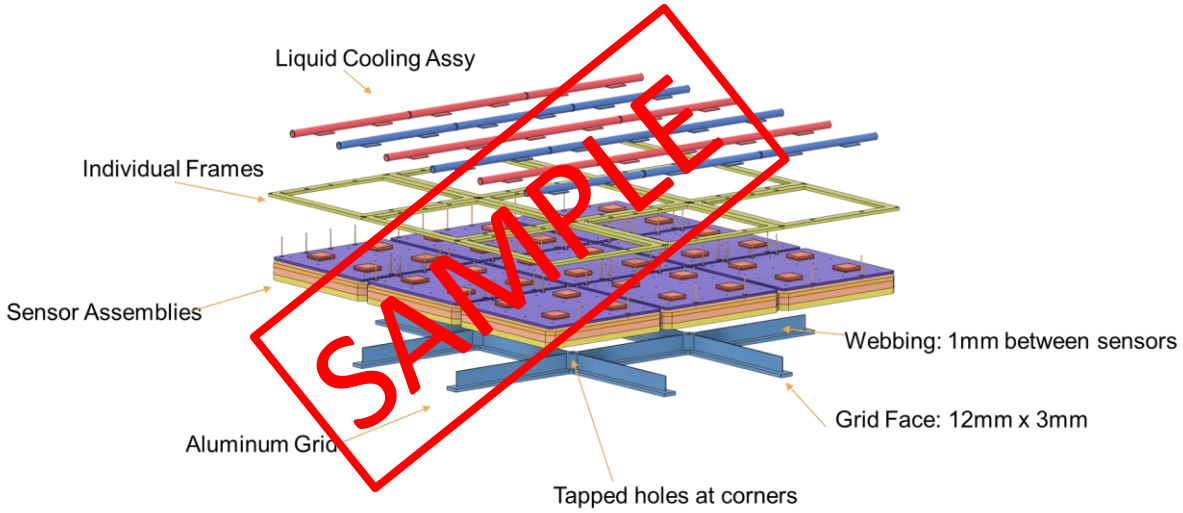


pfRICH

*Are the fabrication and assembly plans for the various particle identification detector systems consistent with the overall project and detector schedule?

- Slide to show overall model and maybe 1-2 details (including services or subcomponent level detail.





pfRICH (cont'd)

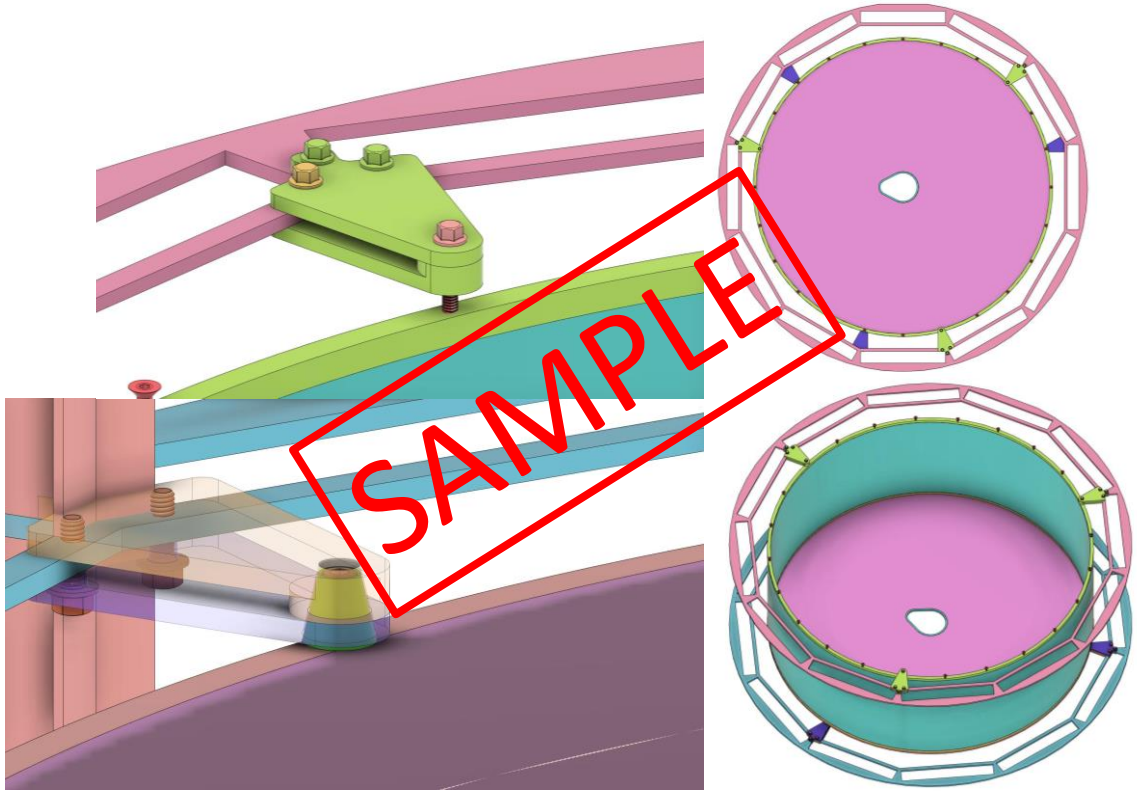
*Are the fabrication and assembly plans for the various particle identification detector systems consistent with the overall project and detector schedule?

- Slide to show assembly process concept/additional model details

pfRICH (cont'd)

*Are the plans for detector integration in the EIC detector appropriately developed for the present phase of the project?

- Slide to show support structure concept/Installation concept



pfRICH (cont’d)

- Slide to summarize status/any ongoing design or integration discussions (Ex: installation options or relevant outstanding design decisions waiting on more information)

hpDIRC

- Slide to show overall model and maybe 1-2 details (“Current CAD Model”)
- Detail shown: FEA for support structure?*

hpDIRC (cont’d)

- Slide to show assembly process concept

hpDIRC (cont’d)

- Slide to show support structure concept/Installation concept

hpDIRC (cont’d)

- Slide to summarize status/any ongoing design or integration discussions (Ex: installation options or relevant outstanding design decisions waiting on more information)

AC-LGAD/TOF (Barrel)

- Slide to show overall model and maybe 1-2 details (“Current CAD Model”)
- Detail shown: services routing concept

AC-LGAD/TOF (Barrel)

- Slide to show assembly process concept/additional model details of interest

AC-LGAD/TOF (Barrel)

- Slide to show support structure concept/Installation concept

AC-LGAD/TOF (Barrel)

- Slide to summarize status/any ongoing design or integration discussions (Ex: installation options or relevant outstanding design decisions waiting on more information)

dRICH

- Slide to show overall model and maybe 1-2 details (“Current CAD Model”)
- Detail shown: services routing concept

dRICH (cont’d)

- Slide to show assembly process concept/additional model details

dRICH (cont’d)

- Slide to show support structure concept/Installation concept

dRICH (cont’d)

- Slide to summarize status/any ongoing design or integration discussions (Ex: installation options or relevant outstanding design decisions waiting on more information)

AC-LGAD (Forward)

- Slide to show overall model and maybe 1-2 details (“Current CAD Model”)
- Detail shown: services routing concept

AC-LGAD (Forward) (cont’d)

- Slide to show assembly process concept/additional model details of interest

AC-LGAD (Forward) (cont’d)

- Slide to show support structure concept/Installation concept

AC-LGAD (Forward) (cont’d)

- Slide to summarize status/any ongoing discussions