

The ePIC Barrel Imaging Calorimeter

Mechanics and Sectors

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News

CD3a Scintillating Fiber procurement in progress

New preliminary design for tracker mechanics and integration

Almost ready for Pb/ScFi test article production at Argonne

CD3a Procurement of Scintillating Fibers

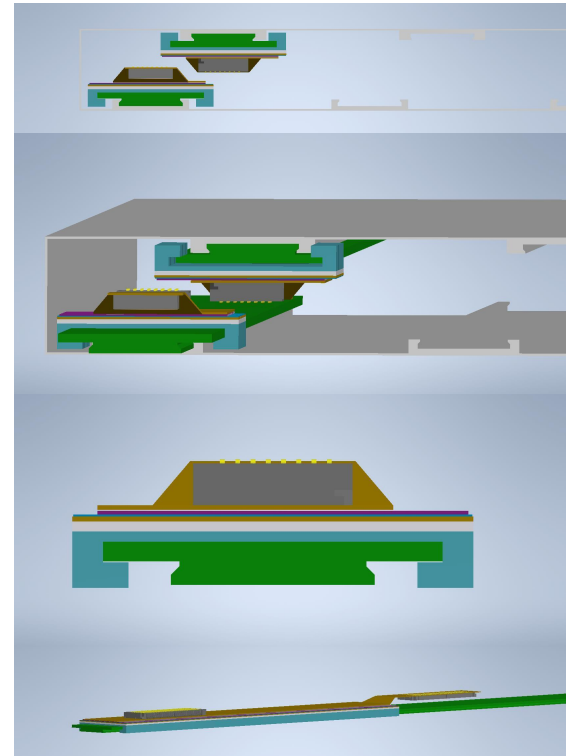


- Open bidding ongoing
- Bidding requires vendors to send sample of 100 fiber canes for testing, (canes are production length, i.e. 4.54m)
- Test results factor in ultimate choice of fiber vendor
- Multiple vendors are participating in the bidding, and all fibers for testing are currently at Argonne
- Next step is to send all fibers to U. Regina for testing
- Procedure to choose fiber vendor based on results will start in 4 weeks
- CD3a included a first portion of our fibers, CD3b will include a next batch
- Still TBD: *can we use CD3a fibers for preproduction or do we need a separate fiber order?*

BIC Mechanical Design

- New experienced engineer (Vic Guarino) for imaging layer mechanics working towards preliminary design
 - Concept: mount 9-chip AstroPix **modules** on **staves**, then slide **staves** on **rails** integrated in the CF frames
 - Components made out of extruded aluminum to minimize cost
 - Next step: manufacture first mockups to validate and improve design, due early April 2025
- Working on small contract with Purdue for delamination testing (both for CF-Pb interface and of the Pb/ScFi matrix itself)
- Expecting updated envelopes from EIC engineers soon
 - Likely pain-point on electron-going side where there is very little space between ESB and the DIRC lenses/expansion volumes (see Zisis' talk)

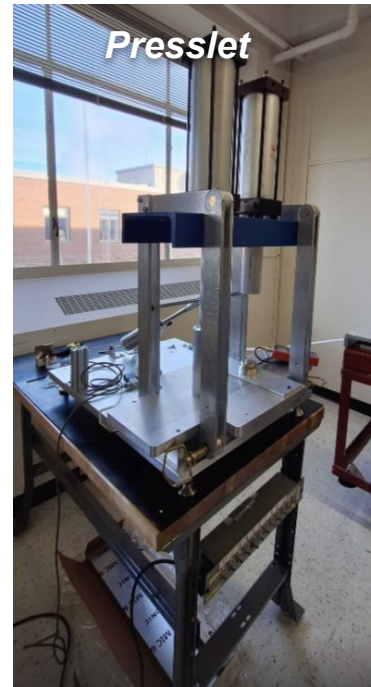
Imaging layer mechanical design (WIP)



Road Towards Test Articles

Sectors:

- Sector test article production setup, including swager, presslet (mini press) almost ready to build first test article (due by April 2025)
- 5500 sq. ft sector production space ready to move in equipment



THE END