

pfRICH-related R&D / PED “proposals” in FY24

- It is now decided that this activity will be packaged for the FY24 R&D call with a brand “a full chain prototype test”
 - July 7 deadline applies

R&D Milestones & Timeline

February 26, 2023

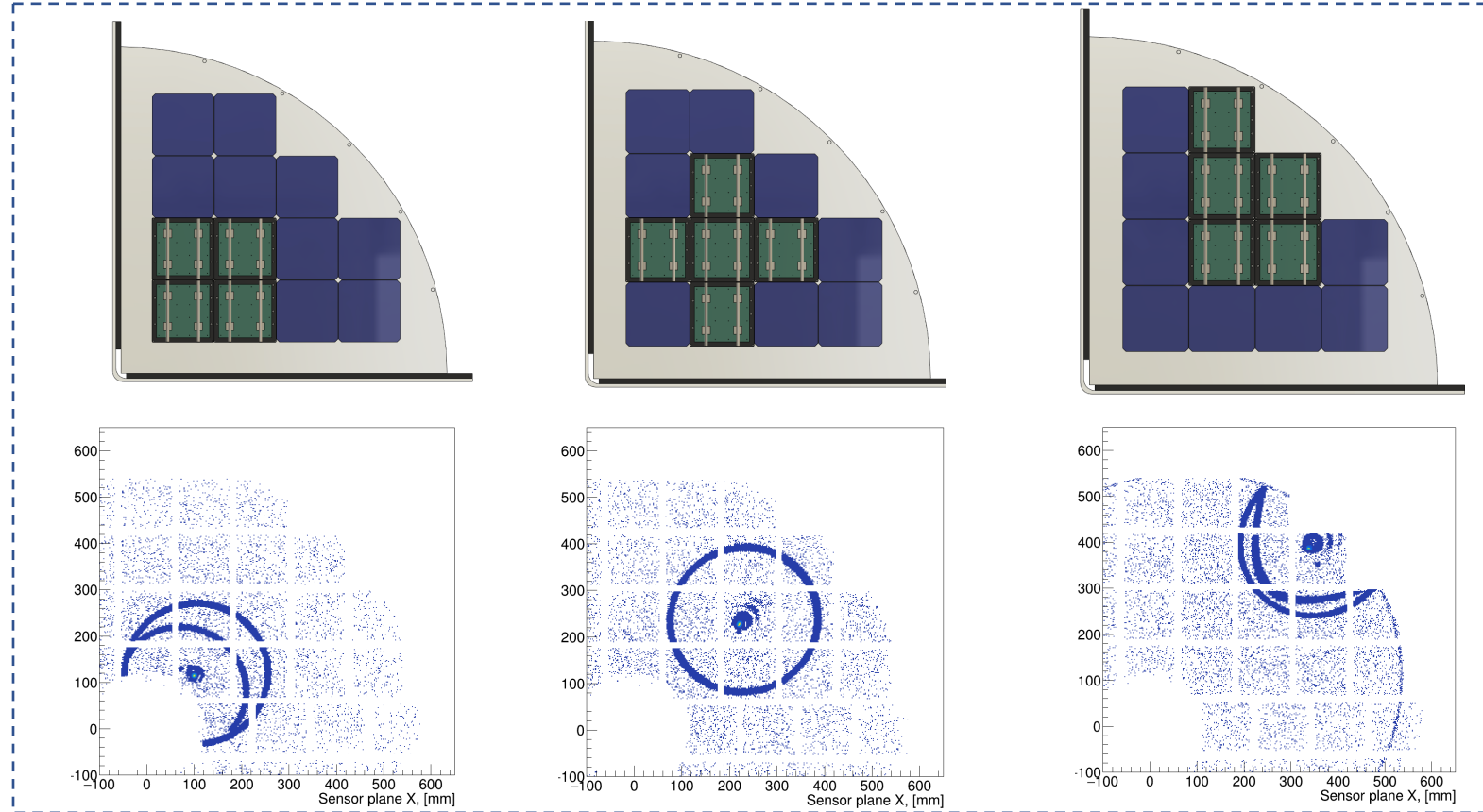
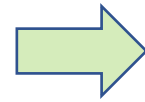
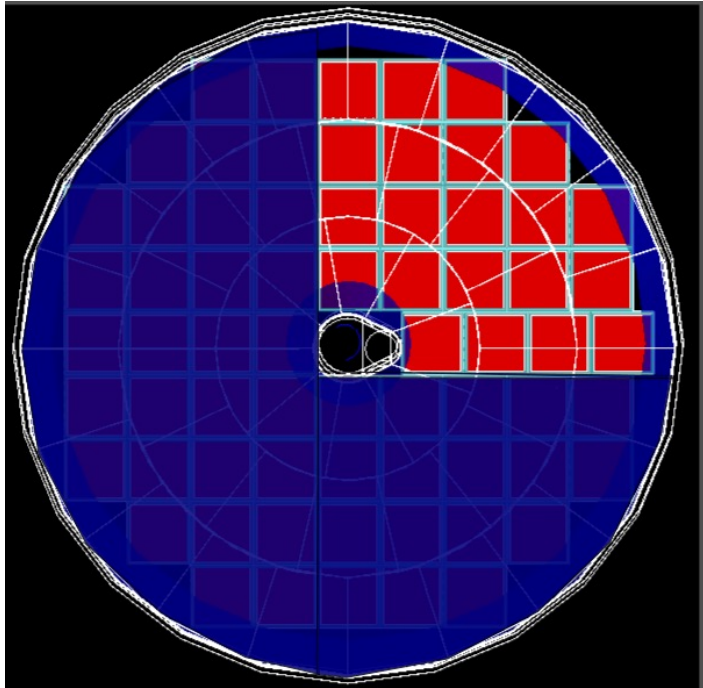
Particle ID

eRD101 (mRICH)

- Validate production readiness of a Ring-Imaging Cherenkov Detector as matched with photosensors and readout electronics on the electron-side end cap of the EIC detector, including validation by prototypes that the EIC requirements can be met. [March 2025]

- Complementary efforts:
 - HRPPD R&D under eRD109 / eRD110 proposals (including HGCROC3-based ASIC interface)
 - HRPPD QA station setup at Yale (PED funding request)
 - Aerogel QA station at Temple (PED funding request)

pfRICH prototyping in FY24



See also minutes of the June 20th meeting: <https://indico.bnl.gov/event/19938/>

pfRICH FY24 R&D proposal

Overleaf link: <https://www.overleaf.com/project/648b344db08070a3adf96ddd> (to be structured by Thursday)

Introduction, objectives, overall structure	AK
Overall mechanical design	Alex
HC / CF part of the vessel	Stony Brook [...]
Mirrors	Stony Brook [...]
3D printed part of the vessel	Andreas
Aerogel	Matt
HRPPDs, ASIC readout, etc	AK
Cooling system mockup	Daniel
HV & LV	AK
Gas system mockup (?)	Prashanth

Focus of this
meeting

- Finalize the scope (see also Alex's slides)
- Suggest milestones (including our internal ones in FY23)
- Come up with a budget proposal for the agreed upon vessel / mirror configuration