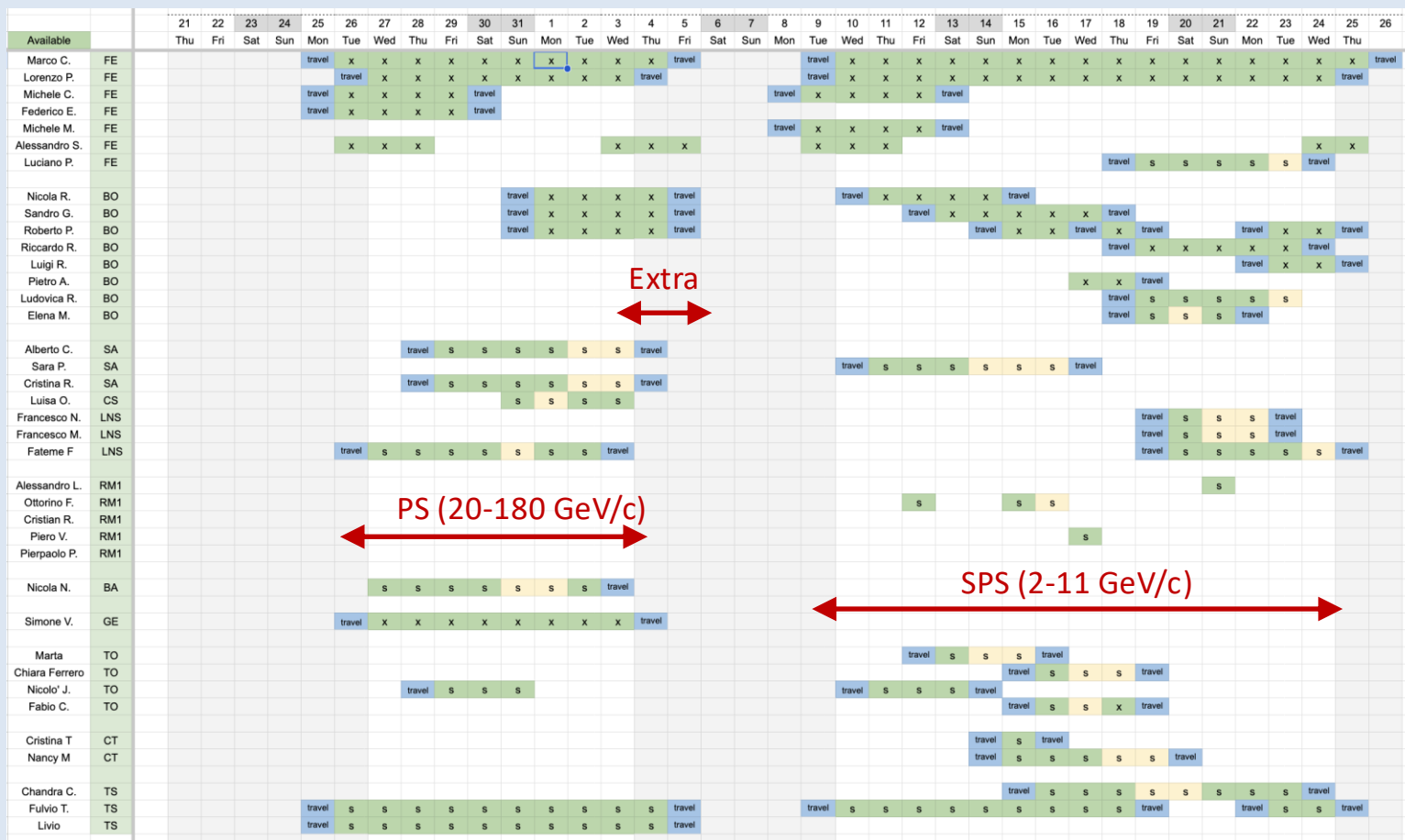
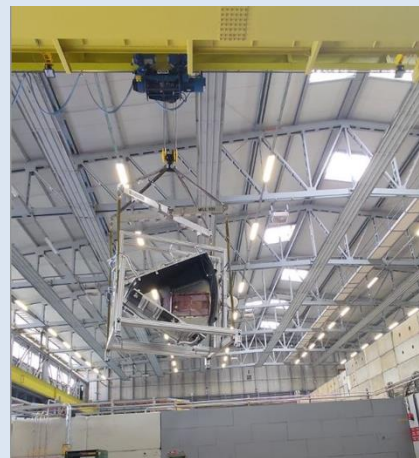
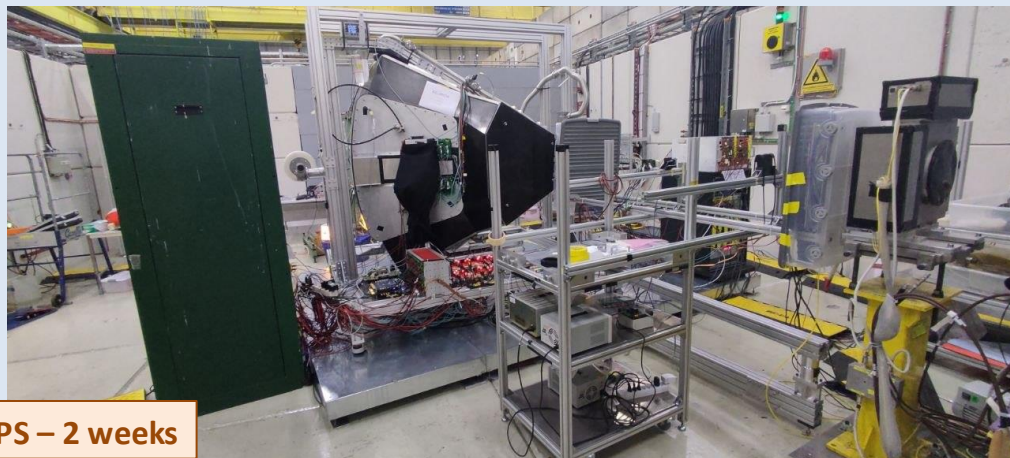
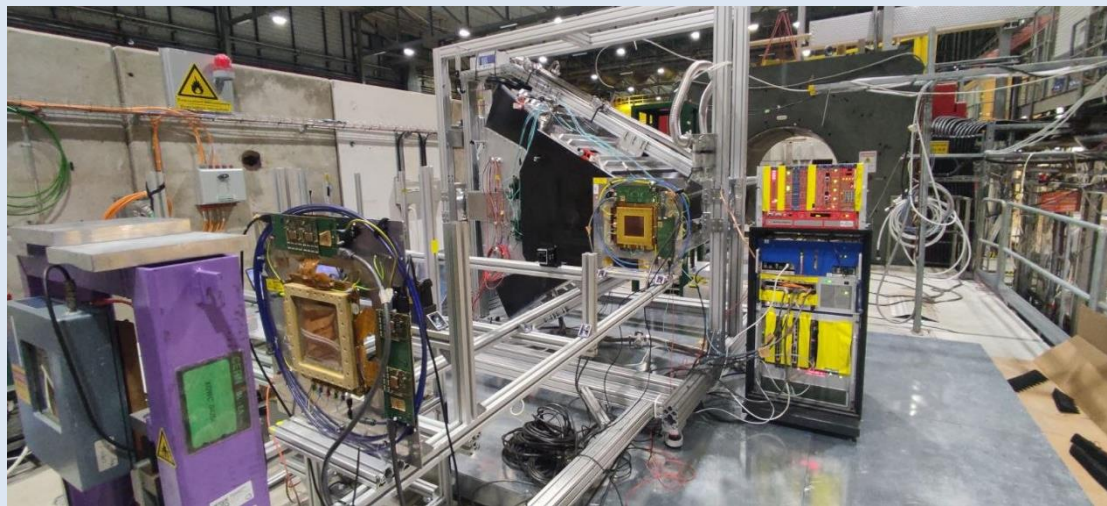
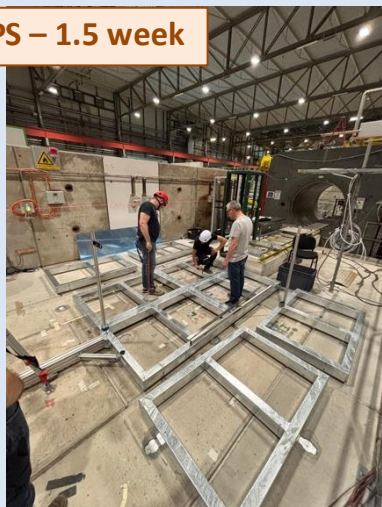


Significant effort to cover 1 month of activity. Distribute participation. Nice bootcamp for new/young collaborators.



Real-Scale Prototype

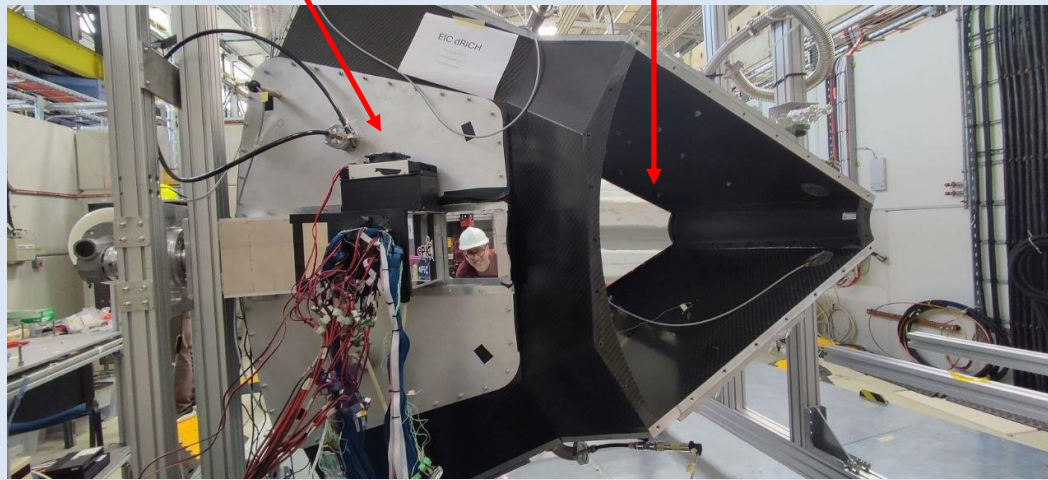
SPS – 1.5 week



PS – 2 weeks

SiPM detector box

Carbon fiber mirror



Aerogel demonstrator



Quartz window and curved active surface mockup



CO-C10 membranes



Real-scale volume is 2 m³ (1/6 of dRICH):
a full gas-system is required

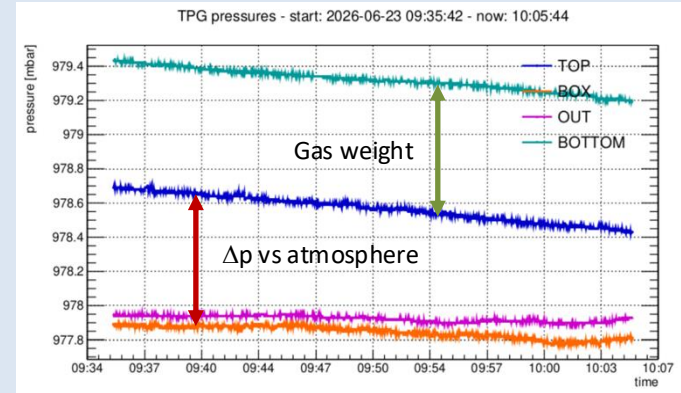
Successful gas operations:

Air --> N₂ flushing --> CO₂ filling --> C₂F₆ filling

Successful purging and recovery of C₂F₆

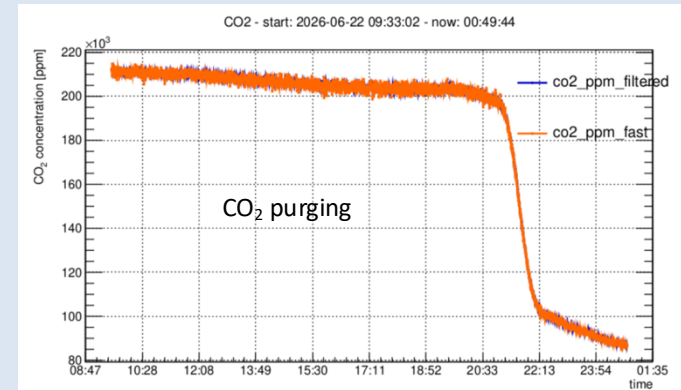
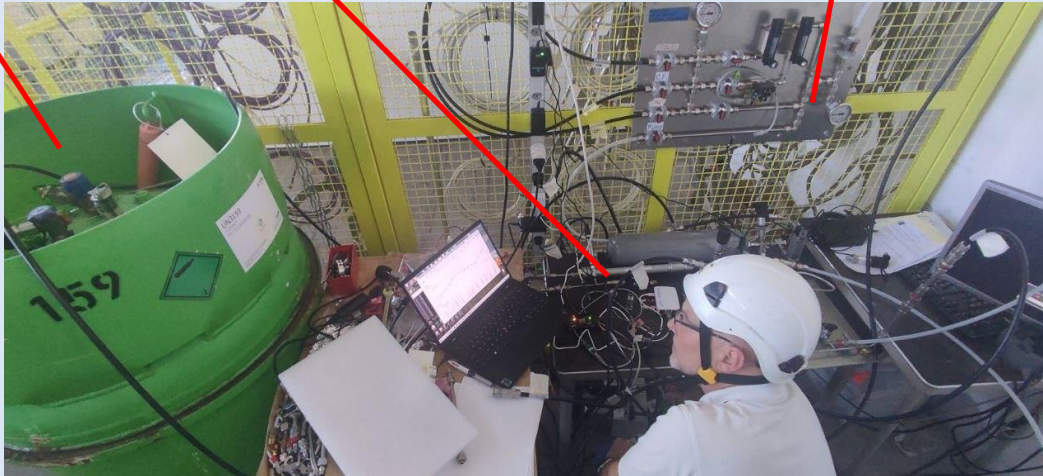
Re-use of the same gas in the two test-beams

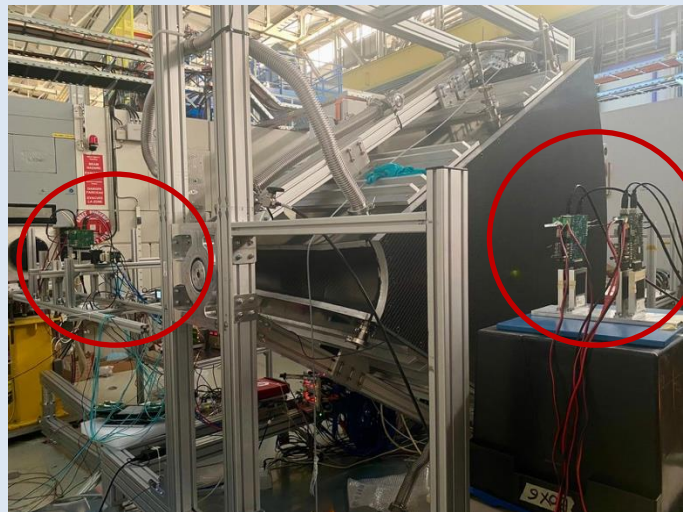
Validation of the C₂F₆ gas system concept



Recovery

Gas panel

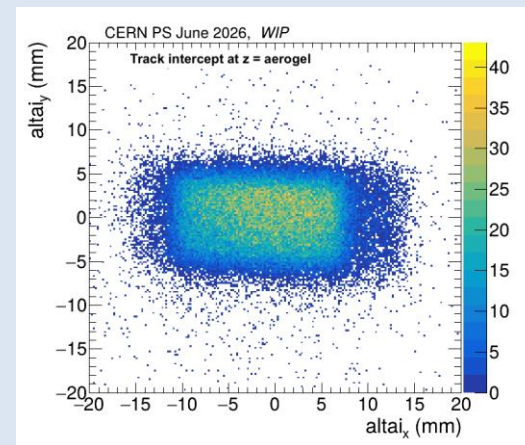




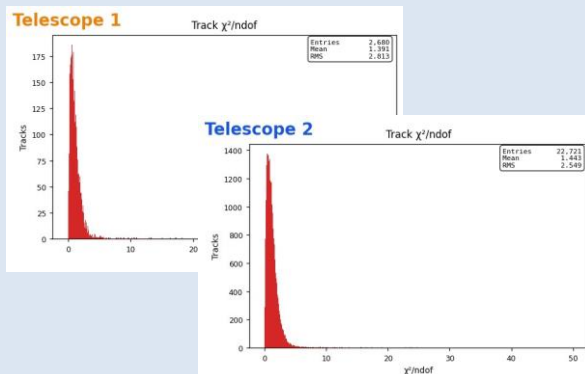
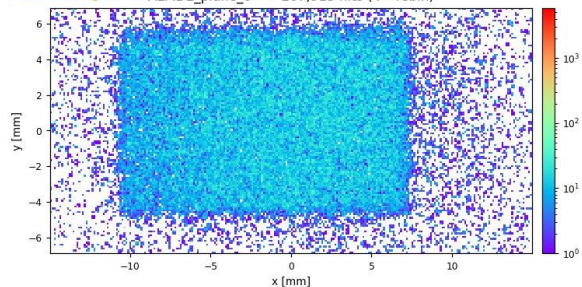
Beam track information propagated to the aerogel mid-point

Front and back tracking for

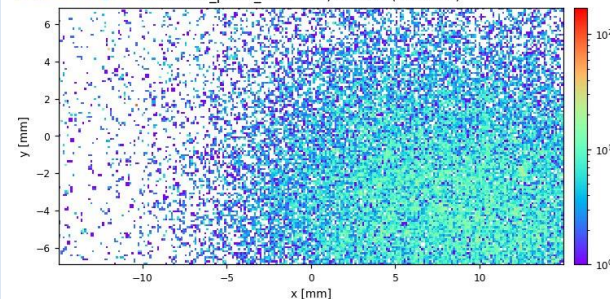
- multi-track events
- multiple-scattering study
- beam divergence study



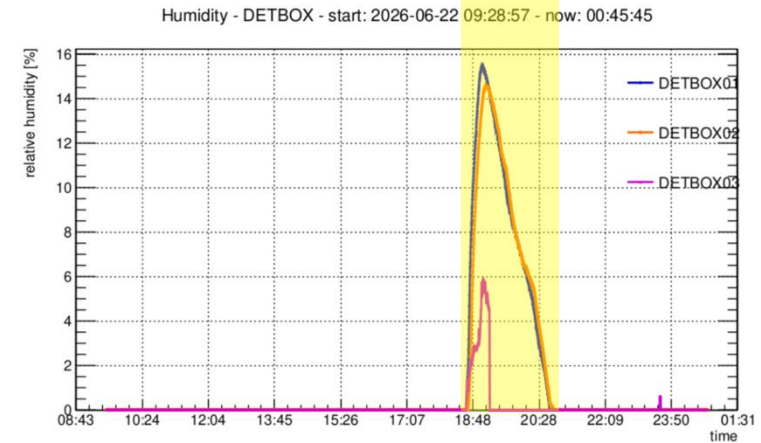
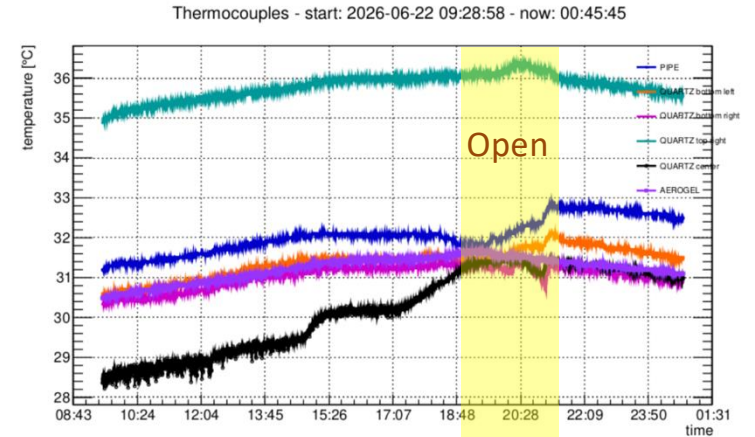
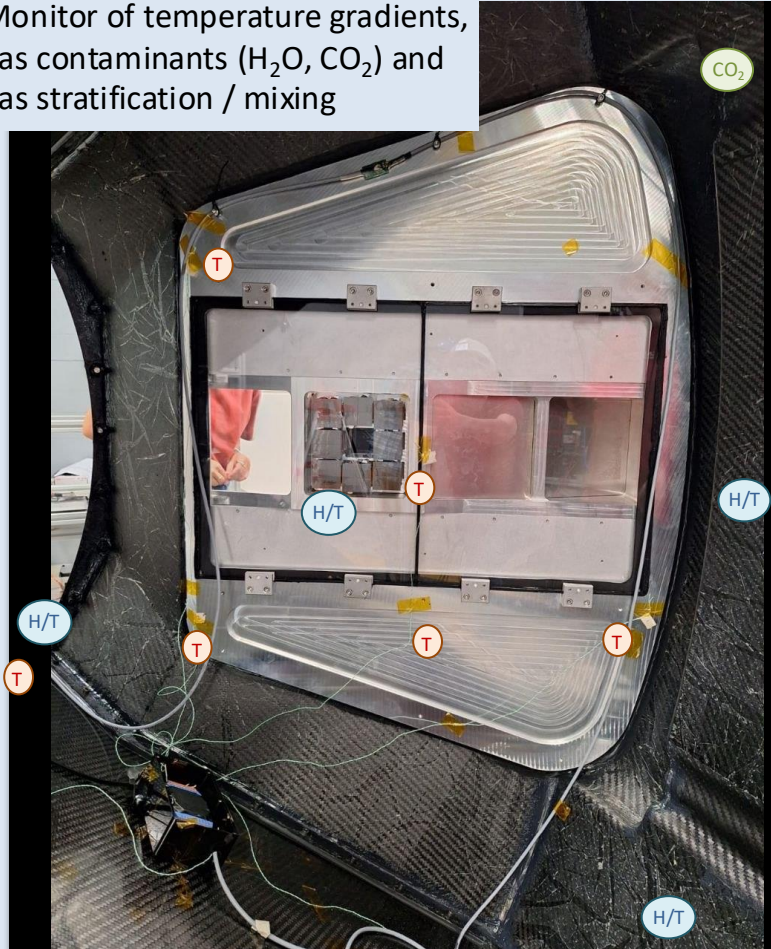
Telescope 1 ALPIDE_plane_0 — 207,913 hits (4x rebin)



Telescope 2 ALPIDE_plane_0 — 100,608 hits (4x rebin)

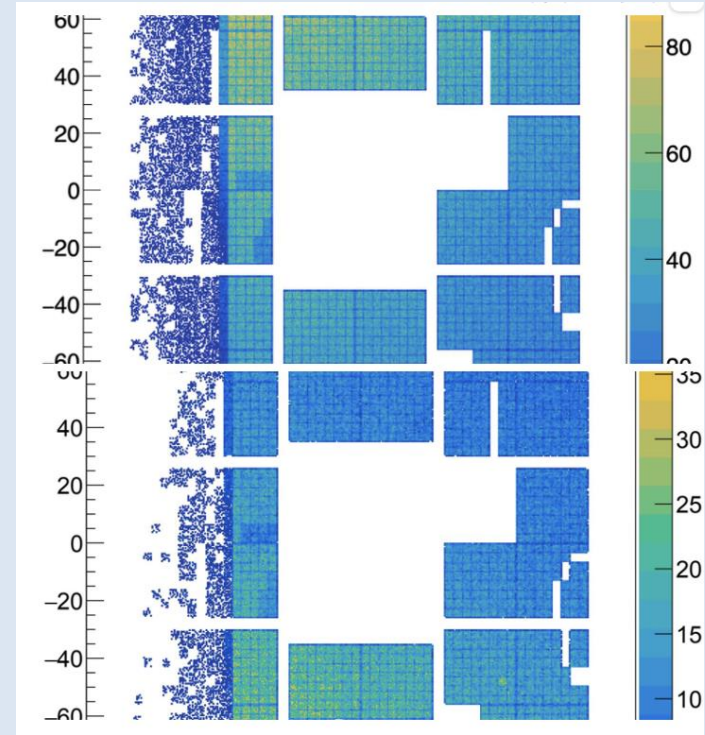
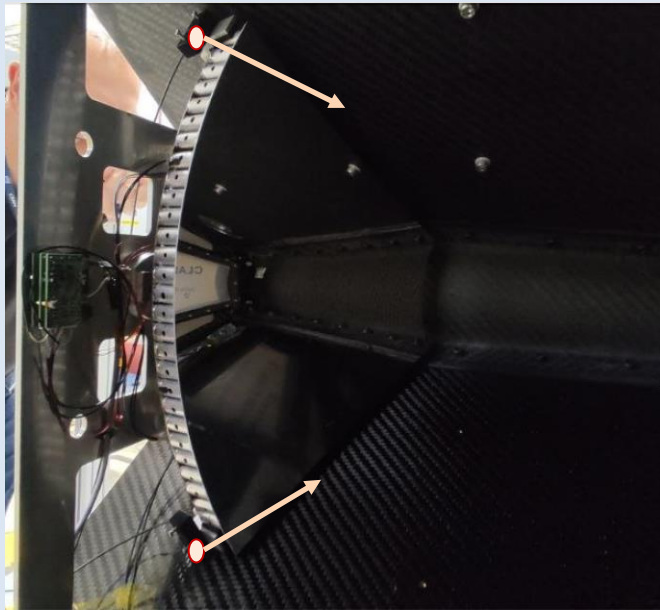


Monitor of temperature gradients,
gas contaminants (H_2O , CO_2) and
gas stratification / mixing



Done several runs with different bias overvoltage and thresholds.
Single (leading) time vs time-over-threshold readout.

Tested a prototype of fiber distributor for a pico-second pulsed laser to accomplish an online time calibration.



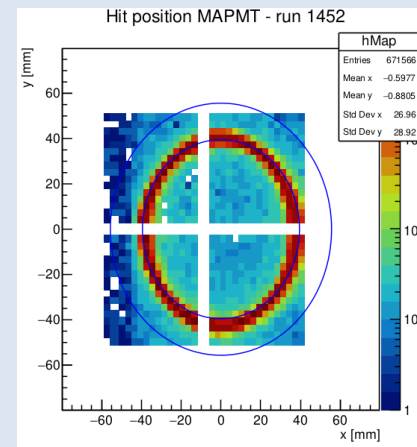
Highlight SPS: performance (MaPMTs) in the ball-park of ePIC simulations

PRELIMINARY

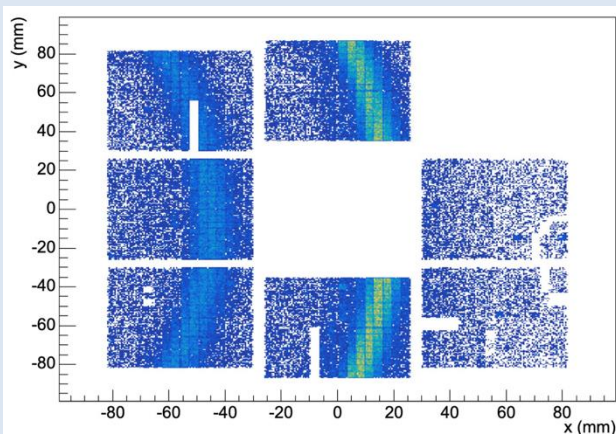
Beam	N. photoelectrons	Singl-photon resolution	Track resolution
180 GeV/c proton	20	1.3	0.45
ePIC	18	1.2	0.3

Highlight PS: 2% kaons ID on aerogel after tagging pions/electrons with gas

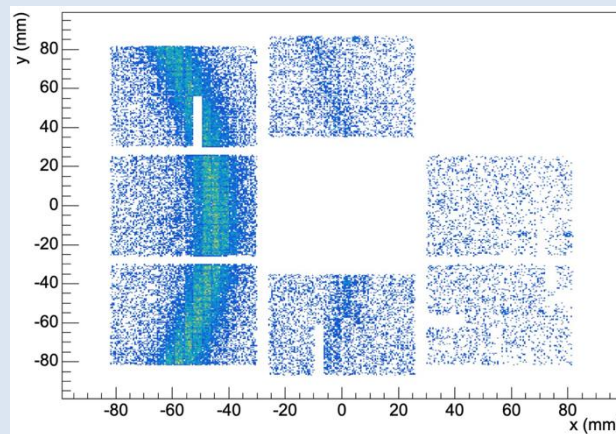
PRELIMINARY



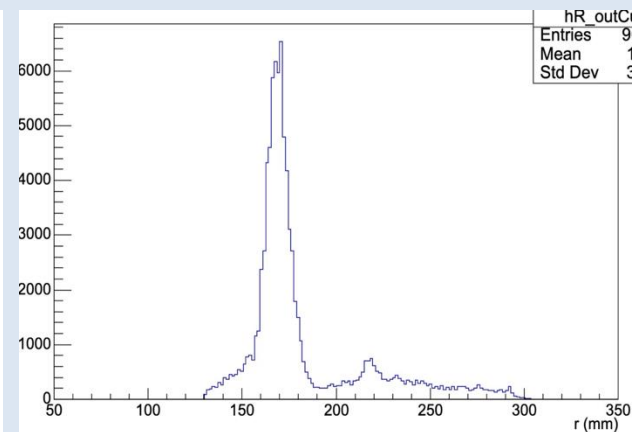
Before tagging



After tagging



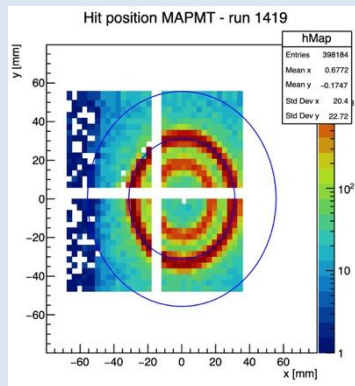
Projection



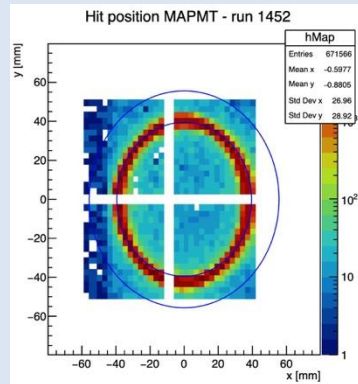
Vibrant community engaged in realizing and running an almost complete experiment mimicking ePIC

Successful test-beam collecting all the ongoing developments

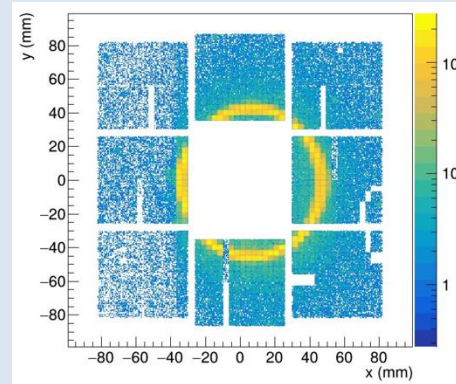
CO₂ at 40 GeV/c



C₂F₆ at 180 GeV/c



C₂F₆ at 180 GeV/c



Aerogel at 10 GeV/c

