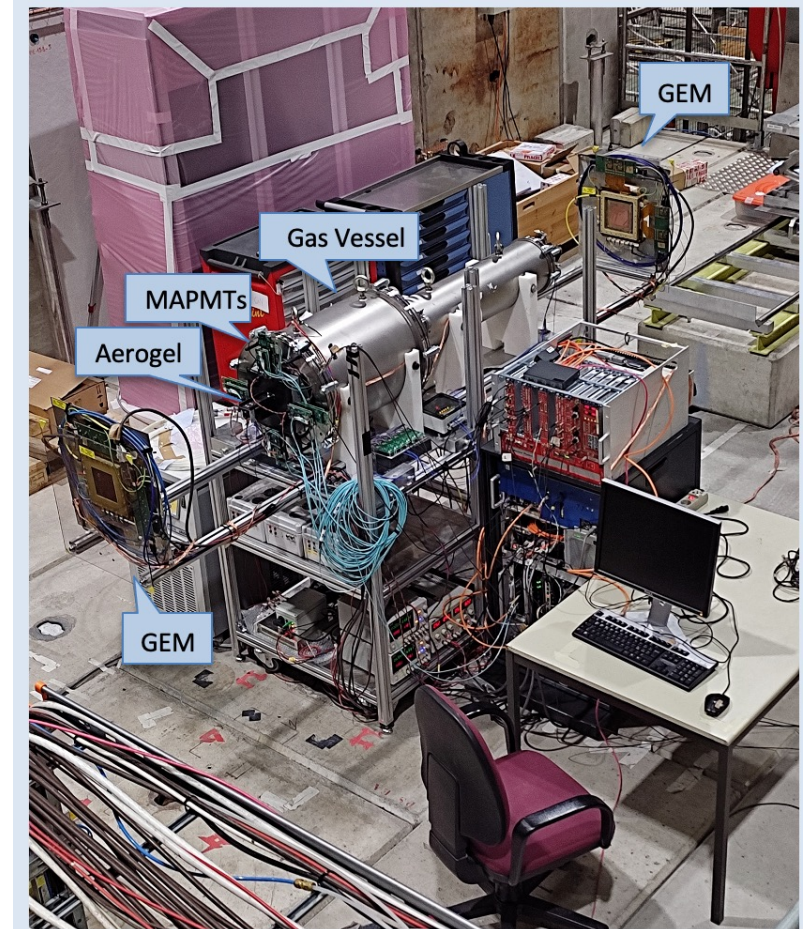
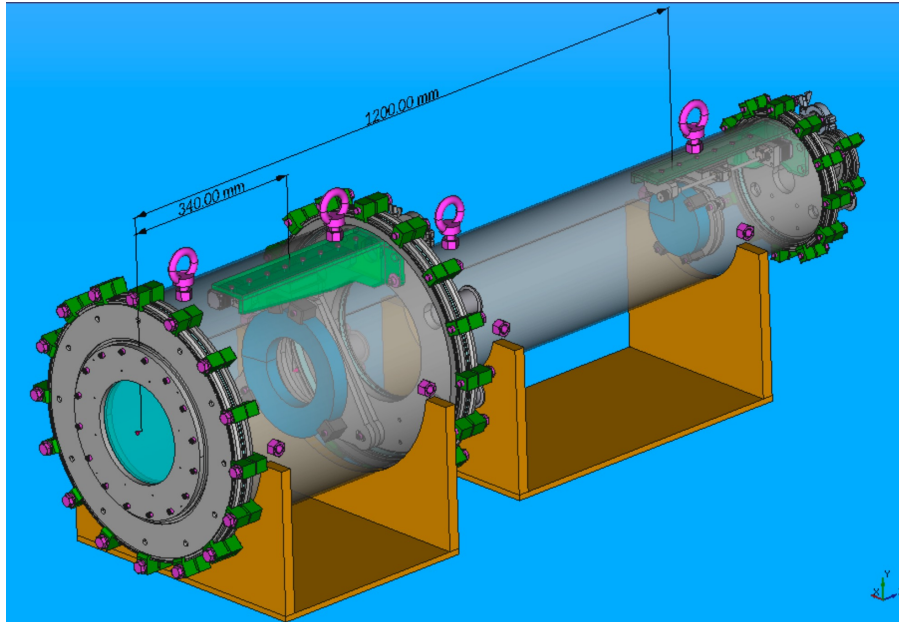
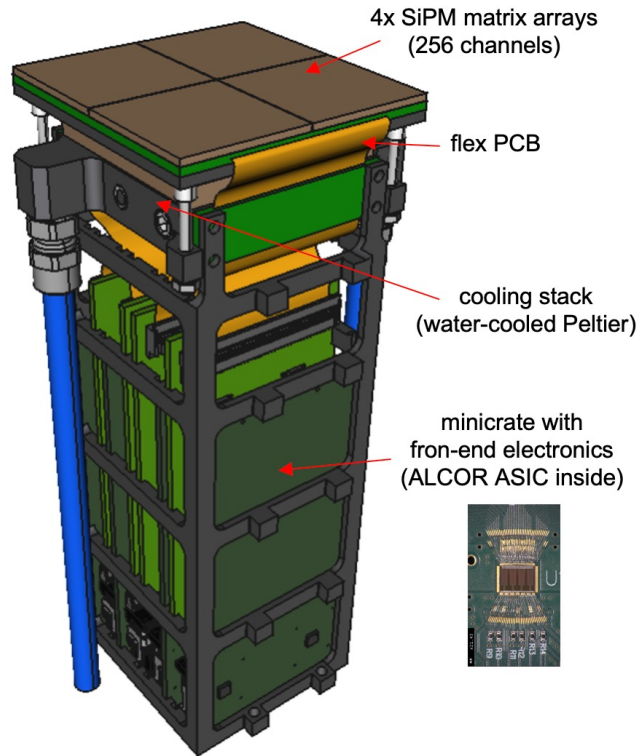


EIC dRICH Prototype

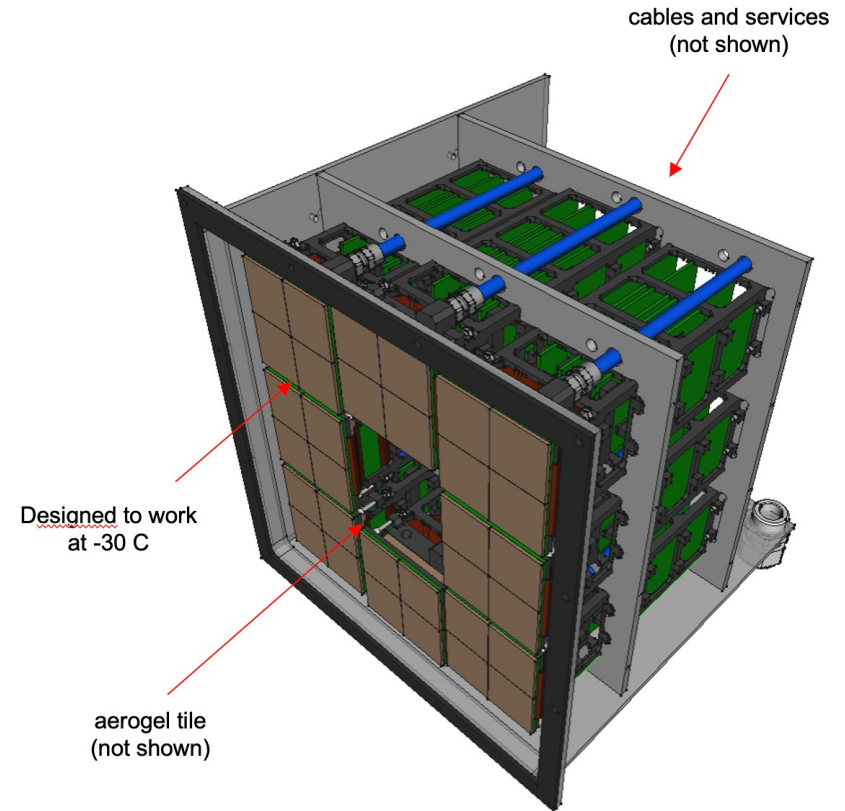
- Dual radiator (aerogel + C_2F_6)
3-50 extended momentum range
- SiPM readout
work in high (1T) magnetic field



Photon Detection Unit Streaming readout mode



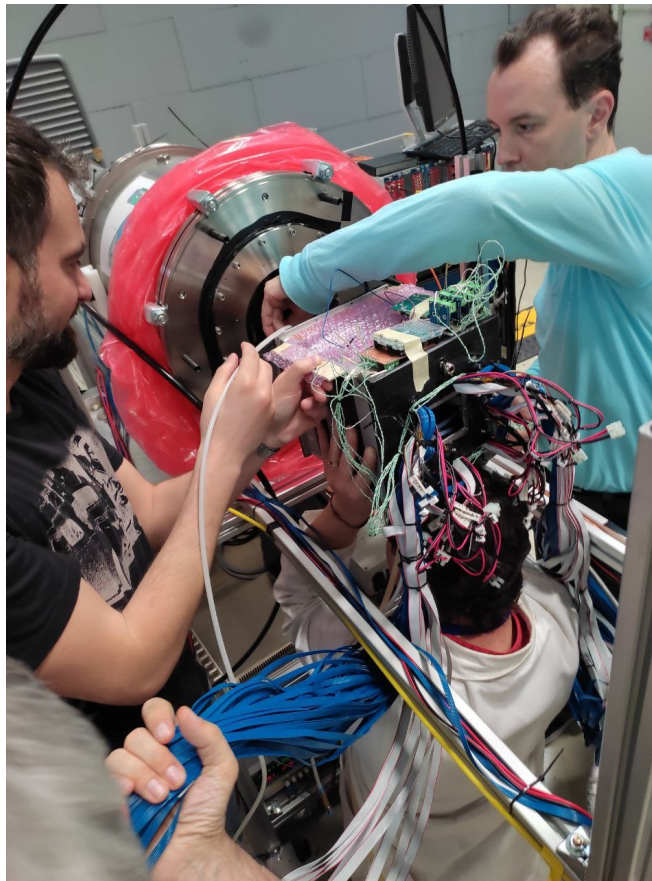
Readout Box Working Pooint -40:-20 C



SiPM Detector

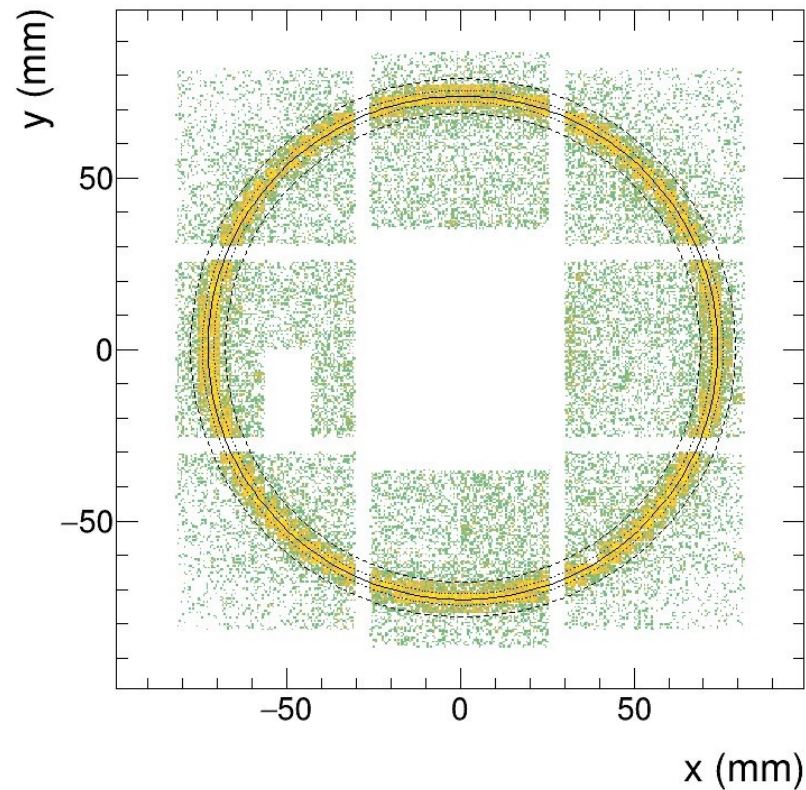


Detector Mounting



Tracking GEM+SciFi





$$X_0 = 0.72 \pm 0.01 \text{ mm}$$

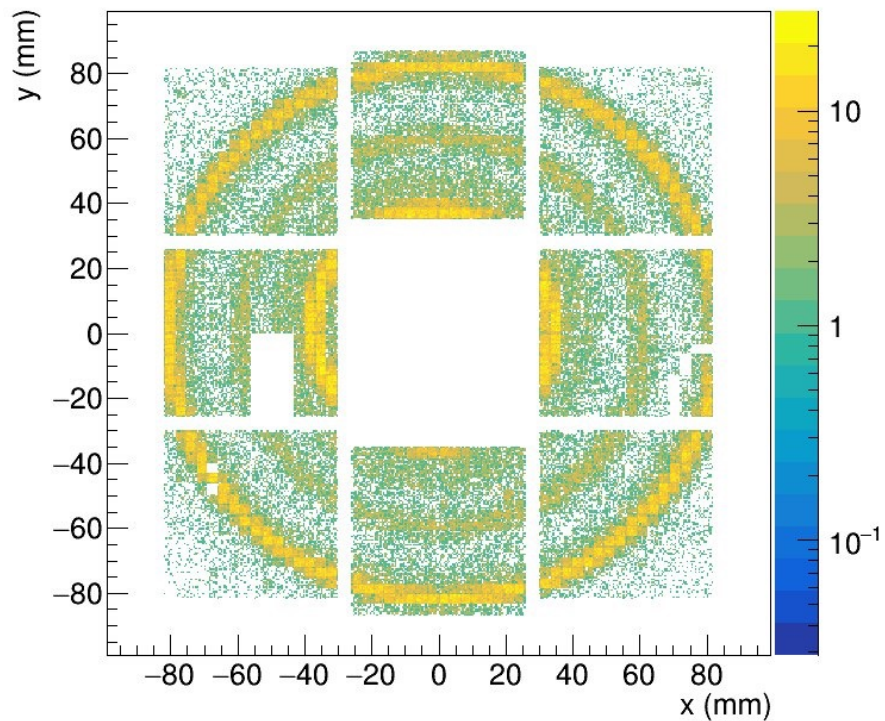
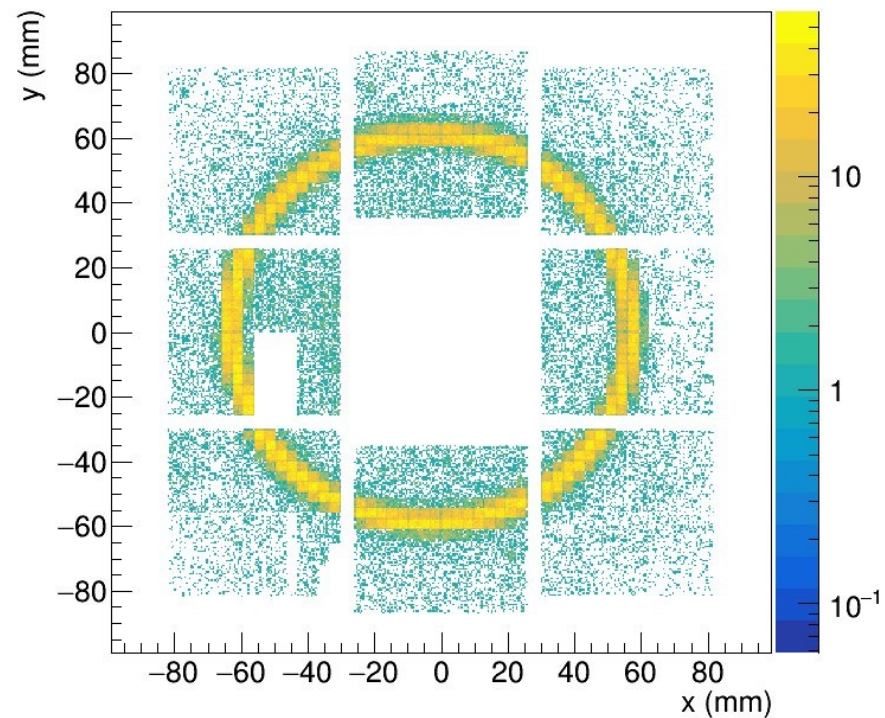
$$Y_0 = 0.50 \pm 0.01 \text{ mm}$$

$$R = 73.42 \pm 0.01 \text{ mm}$$

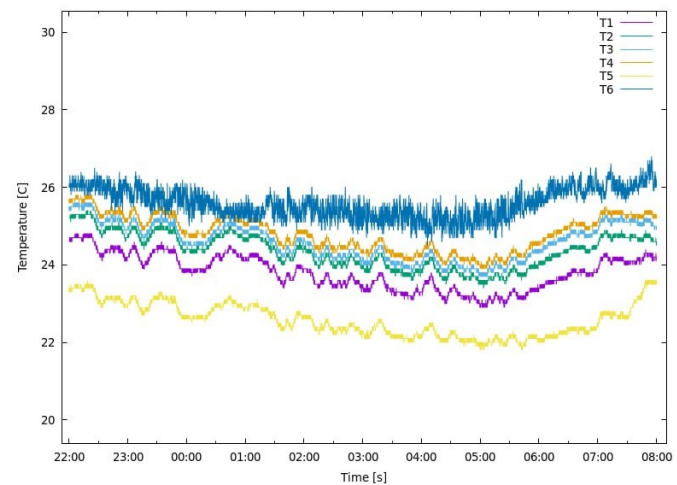
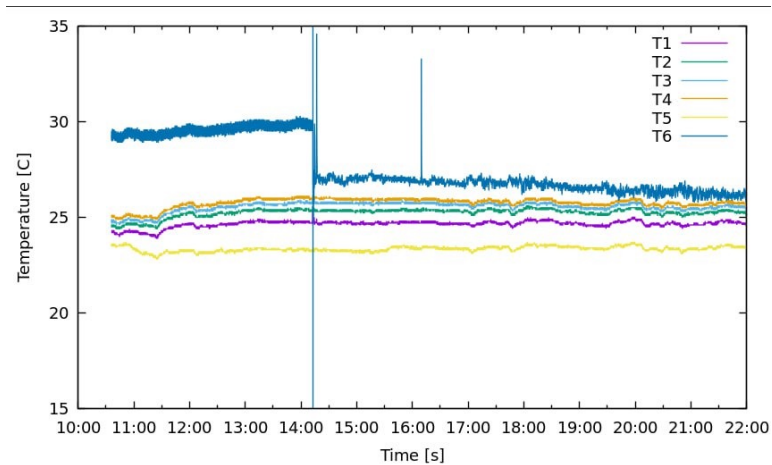
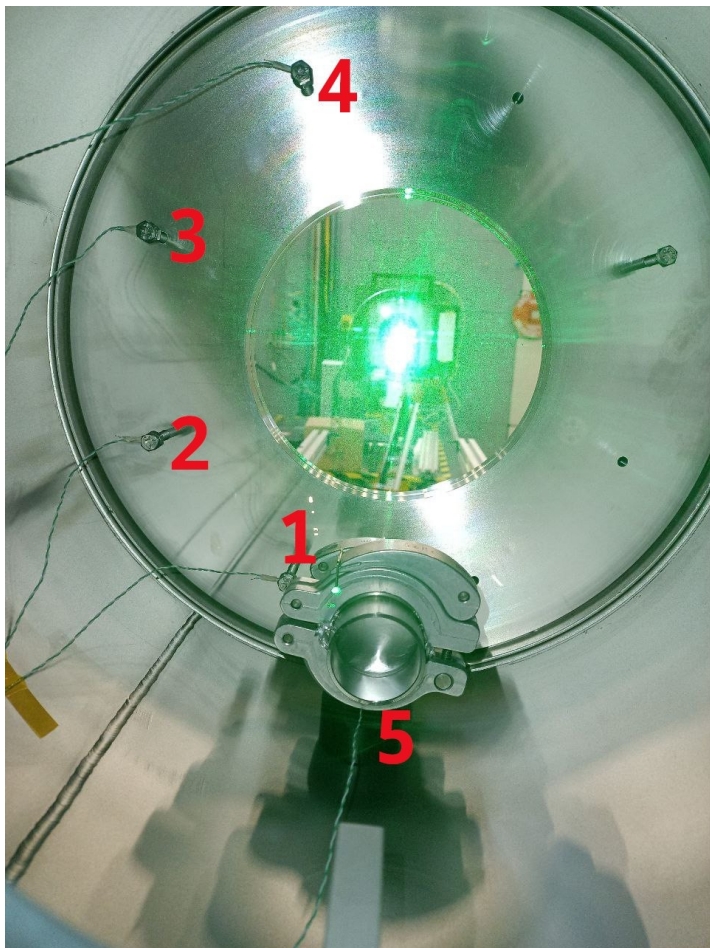
$$\sigma_R = 1.68 \pm 0.01 \text{ mm}$$

$$N_{\text{sig}} = 20.12 \pm 0.09$$

$$N_{\text{bkg}} = 12.55 \pm 0.10$$

Aerogel + C₂F₆ radiators, positive beam, 8 GeV/cC₄F₁₀ radiator, negative beam, 11 GeV/c

Induced Temperature Gradients



Goals: Refined performance study

Photon yield

Angular resolution

Efficiency

Photon wavelength dependence

PID Beam gas Cherenkov detector

Test-beam: Successful campaign

Mixed hadron beam 2-11 GeV/c

Various aerogel samples (1.020-1.026)

Two gas radiators (C_2F_6 , C_4F_{10})

Two SiPM working points (-40 C and -20 C)

Two tracking systems (GEM & SciFi)

Many optical filters

Beam line Cherenkov tagging

Many thanks to the beam physicists and all the CERN support teams