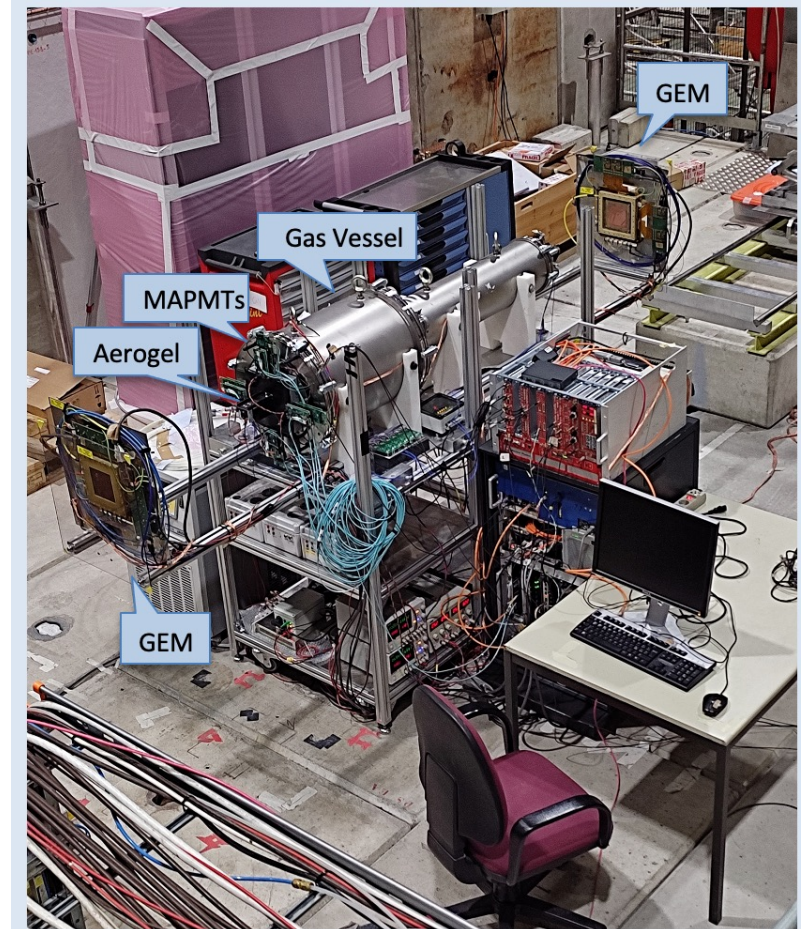
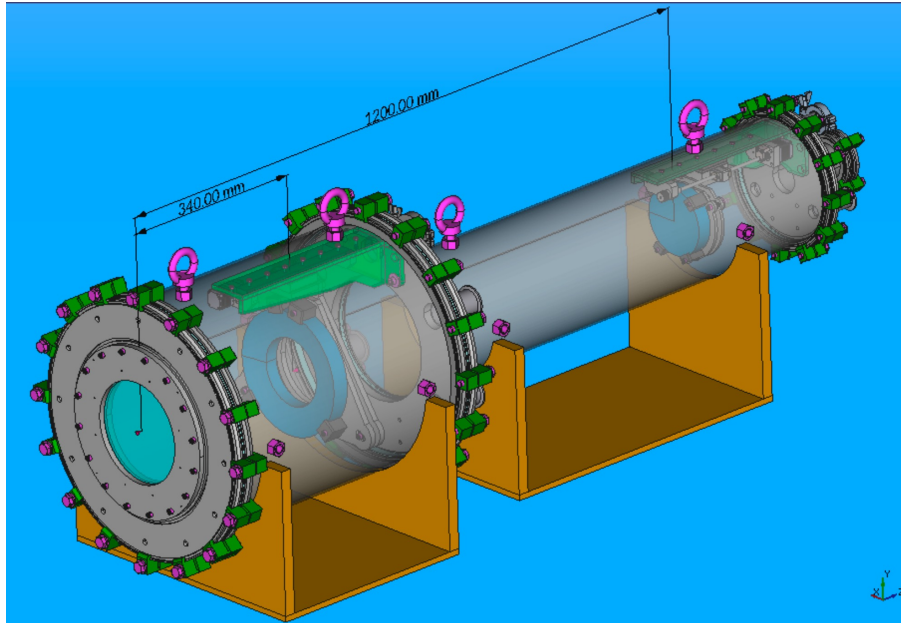
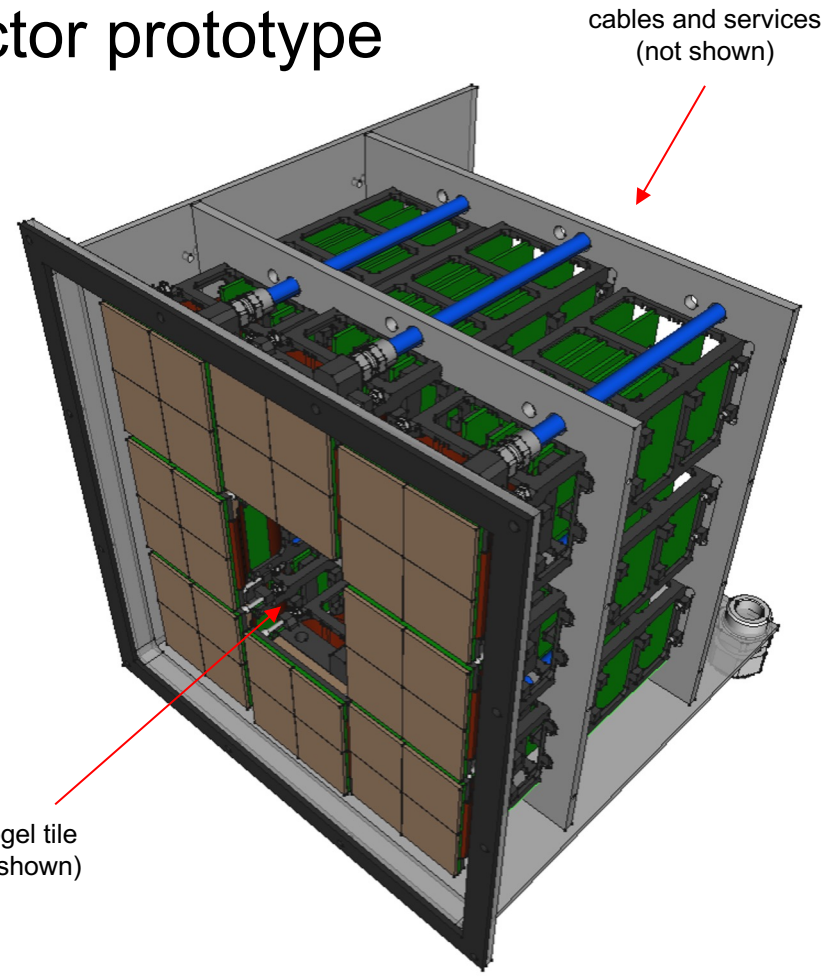
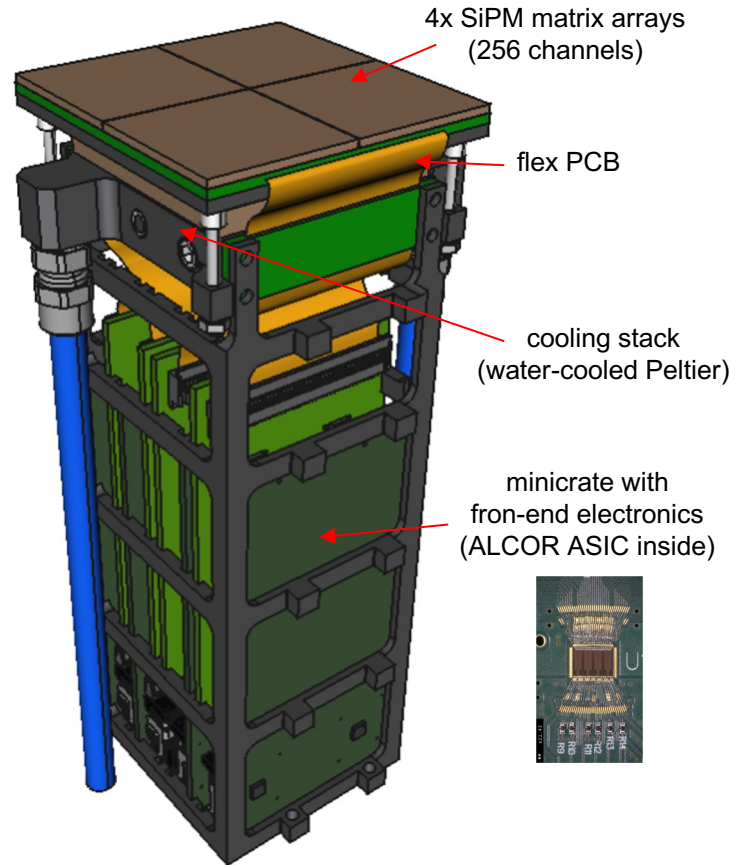


EIC dRICH Prototype

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



EIC ePIC-dRICH SiPM photodetector prototype



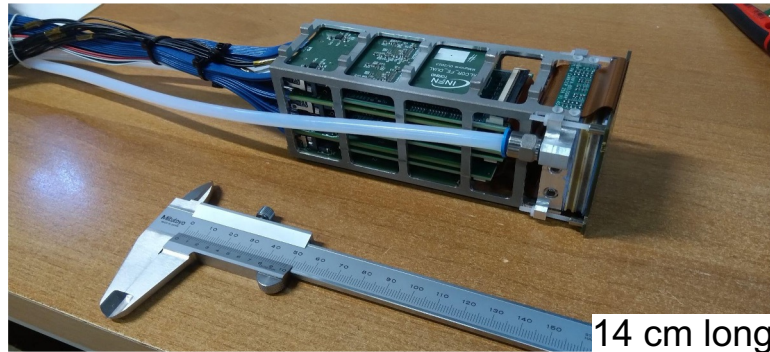
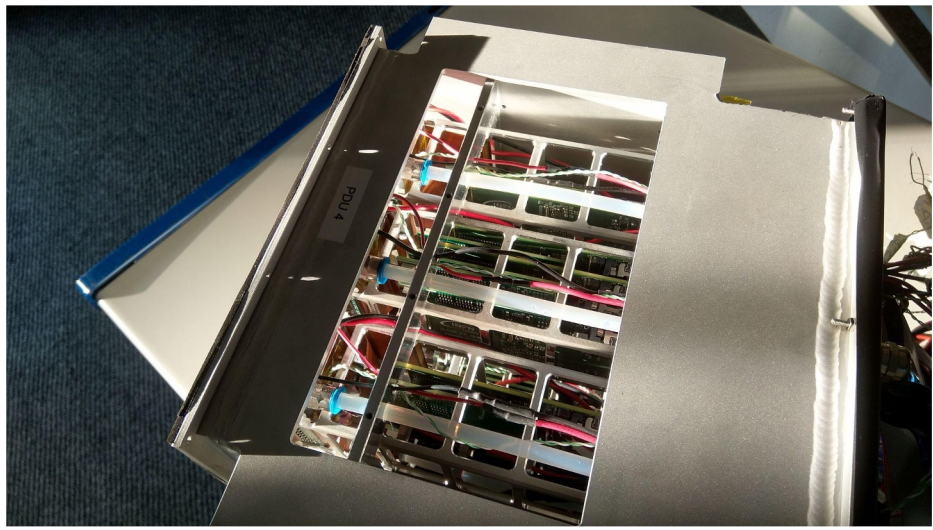
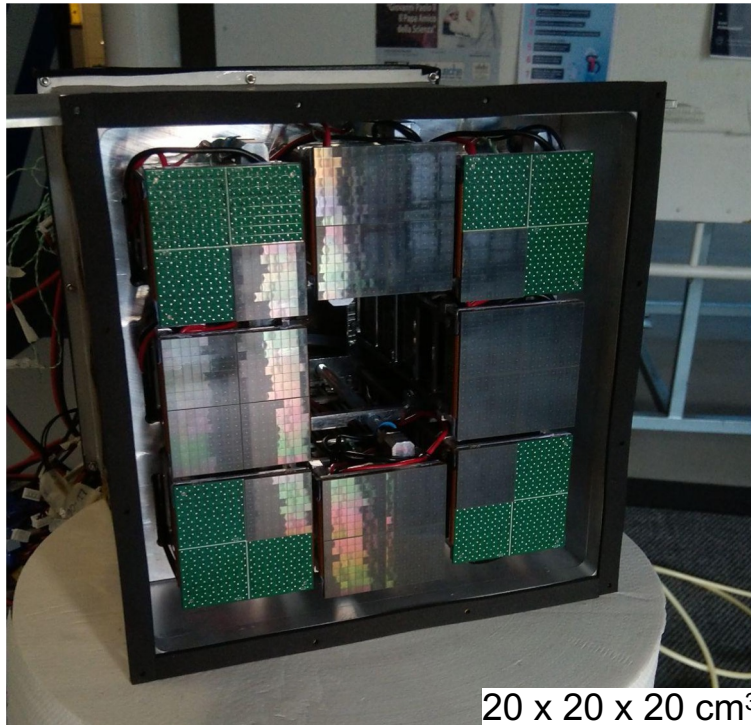
PhotoDetector Unit (PDU)

Readout Box

EIC ePIC-dRICH SiPM photodetector prototype

Readout Box (top)

Readout Box (front)



PDU

DAQ and DCS
computers

auxiliary control
electronics crates

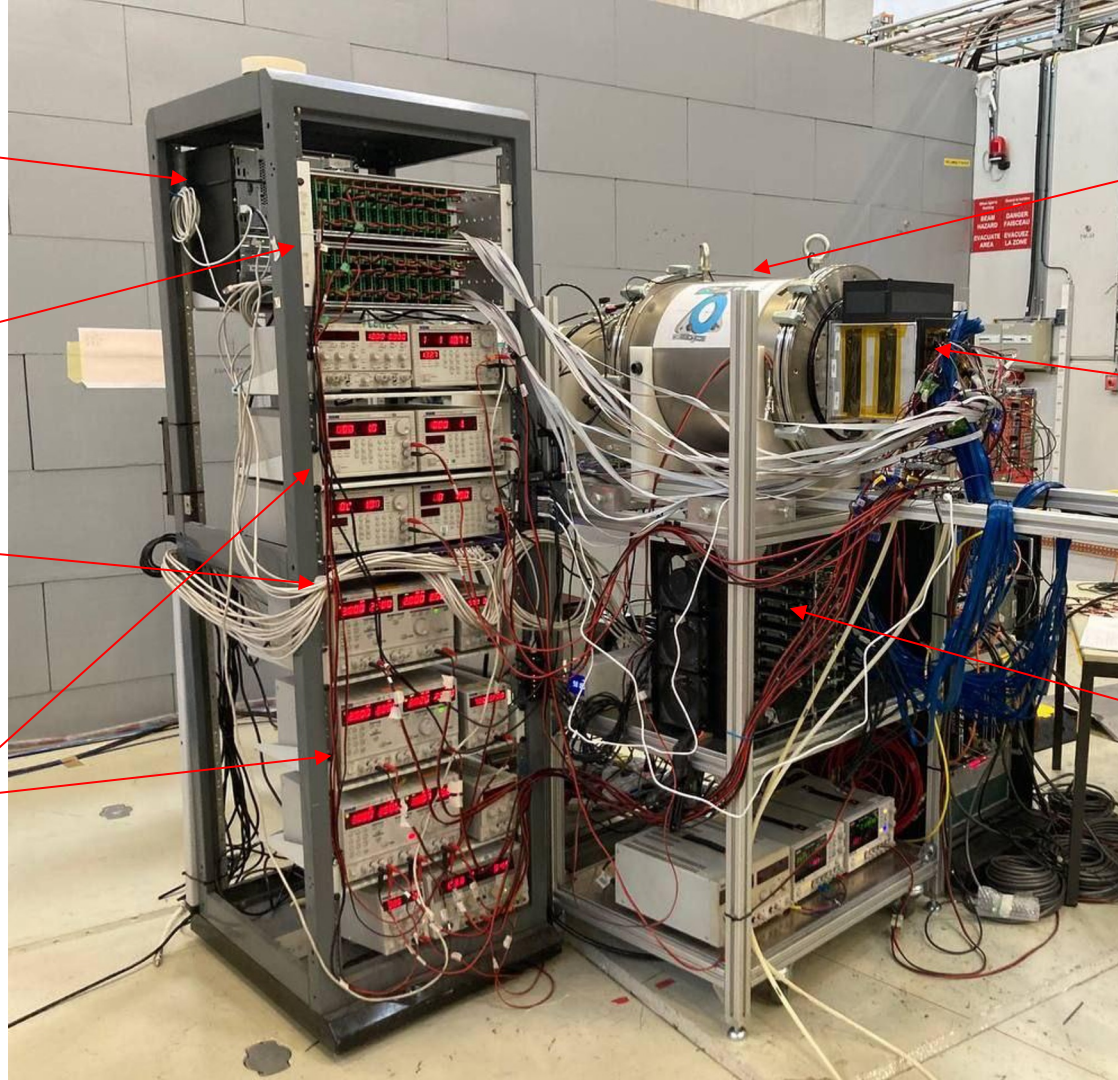
gigabit ETH
switch for DAQ
and DCS

low voltage and
high voltage
power supplies

dRICH
prototype

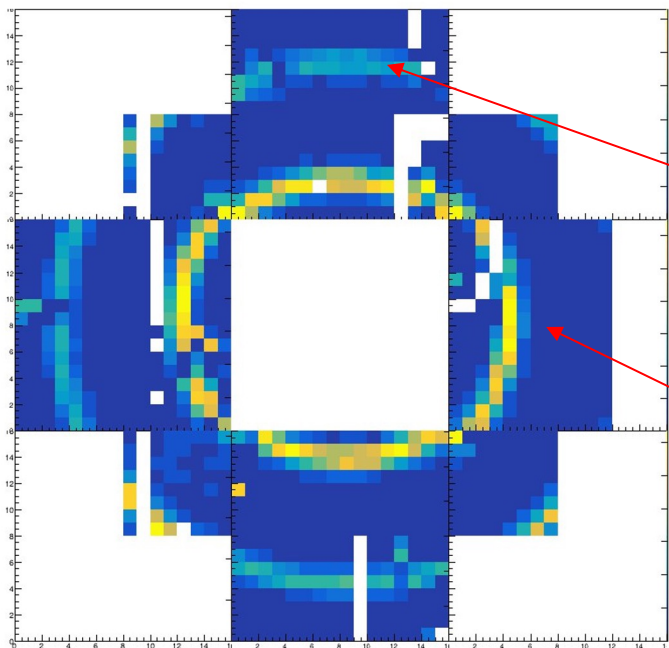
SiPM
photodetector
readout box

DAQ FPGAs and
clock distribution



Online monitors and QA plots:

10 GeV negative beam
(dual radiator configuration)

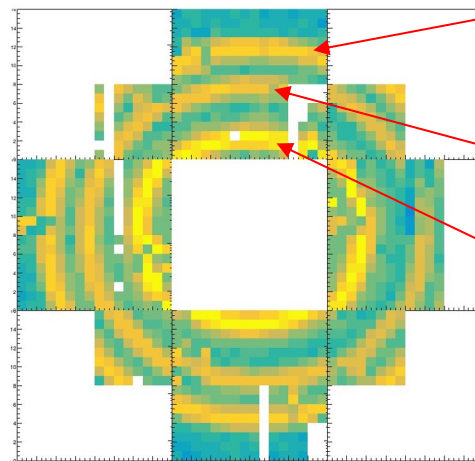


aerogel

C_2F_6 gas

PDU 1	PDU 2	PDU 3	PDU 4
bias voltage 53.0 v	bias voltage 53.0 v	bias voltage 53.0 v	bias voltage 53.0 v
PID control On	PID control On	PID control On	PID control On
setpoint -37 °C	setpoint -37 °C	setpoint -37 °C	setpoint -35 °C

low temperature SiPM operation



aerogel pions

aerogel protons

C_2F_6 pions

8 GeV positive beam

T10 configuration:

Mixed hadron beam 3-12 GeV/c

Beam gas Cherenkov detector

Goals: Refined performance study

Photon yield

Angular resolution

Efficiency

Photon wavelength dependence

PID Beam gas Cherenkov detector