

Silica aerogel characterization for the ePIC dRICH detector

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The ePIC detector is specifically designed to address the entire physics program at the Electron-Ion Collider (EIC). It consists of several sub-detectors, each tailored to address specific physics channels. One of the key sub-systems of ePIC is the dual-radiator Ring Imaging Cherenkov (dRICH) detector, which is a high-momentum particle-identification system located in the hadronic end-cap. For this purpose, silica aerogel has been chosen as a solid radiator. The optical and geometrical characteristics of the aerogel tiles play a critical role in enhancing the particle identification performance. Intensive R&D efforts are currently underway to optimize these properties. Ongoing studies are focused on defining and refining the aerogel tiles to ensure optimal performance. The measurement of the transmittance of several aerogel tiles with different refractive indices, including the setup and the measurement method, will be presented.

Alternate track

1. Operation, Performance and Upgrade (incl. HL-LHC) of Present Detectors

I read the instructions above

Yes

Primary author: ALTAMURA, Anna Rita (INFN, Bari)

Presenter: ALTAMURA, Anna Rita (INFN, Bari)

Session Classification: Detectors for Future Facilities, R&D, Novel Techniques

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