



Contribution ID: 329

Type: Oral presentation using Zoom

Test of a 3D-printed cooling plate for a TPC using 2-phase CO₂

Thursday, 28 October 2021 19:00 (20 minutes)

A cooling plate has been realized using Aluminum additive manufacturing. It was tested at DESY using a TRACI closed-loop CO₂ compressor ensuring a circulation of 2-phase CO₂ under a pressure of 60 bars at a temperature of 19 degrees in a Micromegas TPC readout module.

The temperature of the front-end readout cards was continuously monitored for several days using 6 probes. This system allowed to lower the temperature of the electronic from 50 degrees to 24-26 °C, and to maintain it with a stability of O(0.1 °C) over several days.

Prospects for the cooling of the ILD TPC are addressed.

1st preferred time slot for your oral presentation

19:00-21:00 JST (12:00-14:00 CEST, 6:00-8:00 EDT, 3:00-5:00 PDT)

2nd preferred time slot for your oral presentation

15:30-17:30 JST (8:30-10:30 CEST, 2:30-4:30 EDT, 23:30-1:30 PDT)

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Session Classification: C-3: Tracking detectors

Track Classification: Parallel sessions: Detectors: Session C: Tracking detectors