Contribution ID: **760** Type: **Parallel session talk**

MPGD-based Hadronic calorimeter for a future experiment at Muon Collider

Saturday 20 July 2024 15:21 (17 minutes)

A multi-Tev muon collider has been proposed as a powerful tool to investigate the Standard Model with unprecedented precision, after the High-Luminosity LHC era. However muons are not stable particles and it is of extremely important to develop technologies able to distinguish collisions from the background radiation induced by the beam itself. In this context, an innovative hadronic calorimeter (HCAL), based on Micro Pattern Gas Detectors (MPGD) as active layers, has been proposed. MPGDs represent the ideal technology, featuring high rate capability, spatial and good time resolution, good response uniformity and, moreover, they are radiation hard and allow for high granularity (1x1 cm2 cell size). The response of MPGD HCAL to the incoming particles is studied in Monte Carlo simulations and presented. The tests performed at SPS with muons of 100 GeV, for the MPGDs characterization, and at PS with pions of few GeV, for a HCAL cell prototype study, are also shown.

Alternate track

I read the instructions above

Yes

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