Contribution ID: **133** Type: **20 min.**

Tasks and status of Forward Hadron Calorimeter at MPD

Friday 19 September 2025 12:30 (20 minutes)

This work discusses the current status of the Forward Hadron Calorimeter (FHCal) at MPD/NICA as its launch approaches. The main goal of FHCal is measurement of geometry of interaction by estimating of centrality and reaction plane orientation. Each arm of the FHCal will comprise 44 heterogeneous modules, and one of these arms has already been assembled in Dubna. A brief overview of the detector's current state will be provided. We have now focused on integration of the FHCal into the MPD detector. This integration process includes the development of a patch panel to streamline the separation of all FHCal cabling from the MPD system and enhance modularity. A developed simultaneous energy calibration method for the FHCal modules using cosmic muons, on a fully assembled FHCal arm will soon be tested. Preliminary tests on a small array of modules show that compared to a more traditional calibration method reliant on horizontal muons, our approach demonstrates good agreement in light collection efficiency. However, challenges arise due to the heterogeneous structure of the calorimeter, which complicates the reliability of muon tracks orthogonal to the module axis.

Authors: STRIZHAK, Alexander (INR RAS); BARANOV, Alexander

Presenter: STRIZHAK, Alexander (INR RAS)

Session Classification: Projects NICA/MPD/SPD/BM@N at JINR

Track Classification: Projects NICA/MPD/SPD/BM@N at JINR