Contribution ID: **248** Type: **Poster**

Development of Si-W sampling Calorimeter for the ALICE FoCal upgrade

Monday 25 May 2020 17:05 (5 minutes)

The LHC-ALICE experiment plans to install a Forward Calorimeter (FoCal) for the measurement of direct photon at forward rapidity ($3.2 < \eta < 5.8$). By this , we expect to be able to access the gluon saturation region at small-x. It is a key to understand the initial state of nuclear collisions and Quark-Gluon Plasma(QGP). The FoCal is composed of an electromagnetic calorimeter (FoCal-E) and a hadron calorimeter (FoCal-H). The FoCal-E is a Si-W sampling calorimeter consisting of pad layer for a precise measurement of photon energy and pixel layers readout to distinguish between decay photons and direct photons.
We have constructed a prototype calorimeter consisting of 20 alternating layers of tungsten (W) and silicon (Si) pads. The performance of this prototype has been evaluated with positron and hadron beams at CERN PS and SPS in 2018. The results of these test beam measurements will be reported and the possibility of improvement about the readout system will be discussed.

Funding information

Primary authors: ESHITA, Momo (University of Tsukuba); FOR THE ALICE FOCAL COLLABORATION

Session Classification: Poster

Track Classification: Experiments