



Contribution ID: 318

Type: **Poster submission**

Toward realistic implementation of large imaging calorimeters

Thursday, August 8, 2019 10:40 AM (20 minutes)

Summary

The next generation of collider detectors will most likely make full use of Particle Flow algorithms, requiring precision tracking and imaging calorimeters. The latter, with granularity 2 to 3 orders of magnitude above existing devices, have been developed during the last 15 years by the CALICE collaboration and are now approaching maturity. The state-of-the-art and the remaining challenges will be presented for all the investigated readouts: silicon diodes and scintillator for a tungsten electromagnetic calorimeter, gaseous with semi-digital readout and scintillator with SiPM readout for a hadronic one. We will describe the commissioning, including beam tests, of large scale technological prototypes and where applicable, raw performances such as energy resolution and linearity and studies exploiting the distinct features of granular calorimeters regarding pattern recognition. Beyond these prototypes, the design of experiments addressing the requirements and potential of imaging calorimetry will be commented on. In addition, less established but promising techniques for dedicated devices will also be highlighted.

Presenter: KAWAGOE, Kiyotomo (Kyushu University (JP))

Session Classification: Poster Session (Thu/Fri)

Track Classification: Accelerators, Detectors and Computing for HEP