Contribution ID: **10** Type: **not specified**

Gain Calibration of the ALICE TRD using a Krypton Source

Wednesday, 14 September 2011 11:40 (20 minutes)

The TRD is an important subsystem of the ALICE experiment at the LHC at CERN. Segmented into 18 super modules, each consisting of 30 readout drift chambers filled with Xe-CO2 [85-15], the ALICE TRD is designed to be an effective tool in terms of separation of electrons and pions, reconstruction of tracks of charged particles and fast trigger capabilities. Each readout chamber consists of a radiator and a multi-wire proportional chamber, which is segmented into either 16x144 or 12x144 readout pads, giving a total number of 1,118,952 pads. For an early and effective calibration at the level of individual pads, which is crucial for a good particle identification, a dedicated calibration run with a Krypton source has been carried out. We have recorded 2.1 billion decays of metastable 83mKr in the 10 super modules presently installed. We present an overview of the obtained results in terms of gain uniformity over chambers and energy resolution. The obtained gain factors can be used in the front-end electronics, an important ingredient for the TRD trigger.

Primary author: STILLER, Johannes (Physikalisches Institut Ruprecht-Karls-Universität Heidelberg)

Presenter: STILLER, Johannes (Physikalisches Institut Ruprecht-Karls-Universität Heidelberg)