

# Energy Loss Signals in ALICE TRD and Application in Particle Identification

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The ALICE experiment is one of the four major experiments at the LHC at CERN.

The ALICE TRD is a cylindrical detector system located in radius between 2.9 and 3.7 meters from the beamline and segmented in 6 layers. Each layer consists of a radiator and a drift chamber with pad readout of very good granularity, optimized for Pb-Pb operation. Employing a cosmic-ray trigger and taking advantage of the reconstruction in the complete ALICE setup,

we have measured the energy loss of cosmic muons in the TRD in the momentum range 1 to 300 GeV/c, with and without the contribution of transition radiation.

Together with the energy loss signals from protons and pions measured in proton-proton collisions, the TRD energy loss spectra are extended down to Lorentz factor  $\beta\gamma$  below 1.

In this talk, I will present the details of the measurements and the particle identification using the TRD.

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