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Commissioning and calibration of the ALICE Zero Degree Calorimeters

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Summary

The Zero Degree Calorimeters (ZDCs) for the ALICE experiment will measure the energy of the spectator nucleons in heavy ion collisions at the CERN LHC.

The ZDCs consist of a neutron (ZN) calorimeter, placed between the two beam pipes, and a proton (ZP) calorimeter, positioned externally to the outgoing beam pipe at 116 m from the interaction point.

The ZDCs are spaghetti calorimeters, which detect the Cherenkov light produced by the shower particles in silica optical fibers embedded in a dense absorber.

In summer 2007 the ZN and ZP calorimeters have been integrated on the surface on a movable platform and then installed in the LHC tunnel.

The results of the commissioning on the surface, in particular the solutions adopted to control the stability of the PMTs response will be shown: light injection with a laser diode and cosmic rays.

The foreseen physical calibration in Pb-Pb collisions will be also discussed.

Finally the first measurements of the commissioning in the LHC tunnel will be presented.

Primary author: Dr DE MARCO, Nora (INFN Torino)

Co-authors: Dr MASONI, Alberto (INFN-CA); Prof. DE FALCO, Alessandro (Universita' di Cagliari and INFN-CA); Dr FERRETTI, Alessandro (Universita' di Torino and INFN-TO); Dr MUSSO, Alfredo (INFN-TO); Dr PICCOTTI, Anna (INFN-TO); Dr OPPEDISANO, Chiara (INFN-TO); Dr CICALO', Corrado (INFN-CA); Dr STOCCO, Diego (Universita' di Torino and INFN-TO); Dr SIDDI, Elisabetta (Universita' di Cagliari and INFN-CA); Prof. CHI-AVASSA, Emilio (Universita' di Torino and INFN-TO); Dr SCOMPARIN, Enrico (INFN-TO); Prof. VERCELLIN, Ermanno (Universita' di Torino and INFN-TO); Dr POGGIO, Francesca (Universita' di Torino and INFN-TO); Prof.

USAI, Gianluca (Universita' di Cagliari and INFN-CA); Prof. PUDDU, Giovanna (Universita' di Cagliari and INFN-CA); Prof. DELLACASA, Giuseppe (Universita' del Piemonte Orientale and INFN-TO); Dr LUPARELLO, Grazia (Universita' di Torino and INFN-TO); Dr GAGLIARDI, Martino (Universita' di Torino and INFN-TO); Prof. GALLIO, Mauro (Universita' di Torino and INFN-TO); Dr FLORIS, Michele (Universita' di Cagliari and INFN-CA); Dr MEREU, Paolo (INFN-TO); Dr CORTESE, Pietro (Universita' del Piemonte Orientale and INFN-TO); Dr ARNALDI, Roberta (INFN-TO); Dr GEMME, Roberto (Universita' del Piemonte Orientale and INFN-TO); Prof. SERCI, Sergio (Universita' di Cagliari and INFN-CA)

Presenter: Dr DE MARCO, Nora (INFN Torino)

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