

Performance Analysis of the AD Detector Control System in the ALICE Experiment

Abstract

The AD (ALICE Diffractive) detector in the ALICE Experiment for Run 2 of the LHC is the trigger detector for diffractive physics events in p-p collisions. It can also be used as a centrality trigger in Pb-Pb and p-Pb collisions. This detector consists of two sub-detectors: ADA and ADC, installed on the A and C sides of the ALICE experimental site, respectively. Each sub-detector consists of 8 scintillator pads assembled in two 2x2 arrays of pads. This document presents results on the AD detector performance during the 2015 and 2016 LHC runs. Also, comparisons of the control systems (DCS) main parameters for AD and some other ALICE detector and systems are presented for physics and cosmic runs. The parameters of the control system that are evaluated and compared in this report are: number and duration of runs in which each detector participates, data taking efficiency (DTE) of AD detector and ALICE experiment; the quantification of systems that caused the runs to stop (EORs, End of Runs), as well as Pause and Reconfiguration (PAR) procedures. Finally, AD Detector participation in the special runs called Standalone Pulse / Bunch Crossing (BC) is presented.

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