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Performance of the large Time-Of-Flight detector of ALICE

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The Time-Of-Flight detector of ALICE has set a new record in the realm of large-area highly-segmented gaseous timing detectors. The apparatus covers the ALICE central barrel with high-performance MRPC strip detectors for a total active area of 140 square metres segmented into about 150000 readout channels, delivering crucial particle-identification information and contributing to a diverse set of physics measurements. Thanks to a new calibration campaign and the larger data sample available with the Run-2 data-taking at the LHC, a deeper and more refined knowledge of the detector characteristics is possible. As a consequence a significant improvement of its timing performance was achieved reaching a global time resolution better than 60 ps. After almost ten years of operations at the LHC with proton and nuclear collisions, the TOF detector of ALICE continues to show very high efficiency and top performance. The results of a comprehensive analysis of the ALICE TOF detector will be presented as well as the plans for its upgrade programme for a continuous readout mode in LHC Run3 and Run4.

Content type

Experiment

Collaboration

ALICE

Centralised submission by Collaboration

Presenter name already specified

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