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# Operation and performance of the ALICE Muon IDentifier RPCs during LHC Run 3

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ALICE stands for “A Large Ion Collider Experiment”, and it is designed to study proton–proton and heavy-ion collisions at ultra-relativistic energies at the LHC. The main goal of ALICE is to assess the properties of quark gluon plasma (QGP), a state of matter reached in extreme conditions of temperature and energy density where quarks and gluons are deconfined.
One of the main observables used to study the QGP is the production of heavy quarks in Pb-Pb collisions. In order to detect heavy quarks via their muonic decays, ALICE is equipped with a forward muon spectrometer (MS).
During the LHC Run 1 and Run 2 the selection of interesting events for muon physics in ALICE was performed with a dedicated muon trigger system based on Resistive Plate Chambers operated in maxi-avalanche mode. During the long shutdown 2 (2019-2021) of LHC, ALICE achieved a major upgrade of its apparatus. The upgrade enables a new ambitious program of high-precision measurements. Moreover, in order to fully profit from the increased interaction rate to 50 kHz in Pb–Pb collisions (was 10 kHz in Run 2) the ALICE experiment is running in continuous readout (triggerless) mode, hence the muon trigger became the Muon IDentifier (MID).
In order to prevent ageing effects and to improve the RPC rate capability, it was chosen to operate the detector with a lower gain, keeping the same gas mixture and decreasing significantly the working voltage. The front-end and readout electronics of the Muon Identification System have been upgraded in order to support low-gain operation and triggerless readout.
The stability and performance of the MID RPCs during the first two and a half years of Run 3, at the unprecedented center-of-mass energies of 13.6 TeV for pp collisions and 5.36 TeV/nucleon pair for Pb–Pb collisions, will be discussed in this talk.

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