

# The Muon Identifier detector for the ALICE 3 experiment

*Friday 19 July 2024 20:40 (20 minutes)*

ALICE 3 is a new detector proposed to operate during the LHC Run 5 and 6. The Muon Identifier (MID) detector is one of the ALICE 3 subsystems optimized to detect muons down to momenta below 1.5 GeV/c for rapidities  $|y| < 1.3$  for the reconstruction of  $J/\psi$  vector mesons down to zero transverse momentum at midrapidity. The ALICE 3 tracker large-acceptance will offer access to rare charmonium and exotic states that decay to  $J/\psi$ , pions, and photons. The MID detector will be installed outside the superconducting magnet and includes an absorber with variable thickness (70 cm to 38 cm), Plastic scintillator, multi-wire proportional chambers, and resistive proportional chambers technologies are considered for the construction of MID.

This talk presents an overview of the detector and its physics goals. Emphasis is made on recent results from a beam test with plastic scintillators and MWPC, the status of the MID simulation, and the plans for the R&D.

## Alternate track

### I read the instructions above

Yes

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