



Contribution ID: 13

Type: **Talk**

## A machine learning procedure for the selection of muon track candidates in the CBM experiment.

*Tuesday, 31 August 2021 12:30 (30 minutes)*

The mission of the Compressed Baryonic Matter (CBM) experiment at the future Facility for Antiproton and Ion Research (FAIR) in Darmstadt is to explore the QCD phase diagram at high net baryon densities likely to exist in the core of neutron stars. The CBM detector system is designed to perform multi-differential measurements of hadrons and leptons in central gold-gold collisions at beam energies between 2 and 11 A GeV with unprecedented precision and statistics. In order to reduce the systematic errors of the lepton measurements, which generally suffer from a large combinatorial background, both electrons and muons will be measured with the same acceptance. Up to now, no di-muon measurements have been performed in heavy-ion collisions at beam energies below 158A GeV. Results of performance simulations for muon identification in the CBM experiment using machine learning procedures will be presented.

### Is this abstract from experiment?

Yes

### Name of experiment and experimental site

CBM @ FAIR

### Is the speaker for that presentation defined?

Yes

### Details

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### Internet talk

No

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