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Status of the CBM Time-of-Flight (TOF) project

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The Compressed Baryonic Matter (CBM) experiment is a future heavy ion (HI) experiment planned to be installed at the Facility for Anti-proton and Ion Research (FAIR) which is currently under construction close to Darmstadt/Germany. The uniqueness of CBM is the operation at, for HI experiments, unprecedented interaction rates of up to 10 MHz for Au+Au collisions at beam energies between 2 and 12 AGeV imposing enormous rate capability requirements for all subsystem detectors. The main subsystem for charged hadron identification is a 120 m² large TOF wall composed of Multigap Resistive Plate Chambers (MRPC) with different granularities and electrode materials depending on their experimental demands. An effect which comes along with operation of gaseous detectors at high particle fluxes (up to 30 Hz/cm²) is an increased gas-aging and -pollution. An status overview on the CBM TOF project and our strategy how to mitigate counter aging will be discussed during this conference.

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