

Beam test of CBM-ToF MRPC prototype

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The Compressed Baryonic Matter spectrometer(CBM) is expected to be operational in the year 2024 at the Facility for Anti-proton and Ion Research(FAIR) in Darmstadt, Germany.CBM aims to study strongly interacting matter under extreme conditions.The key tool providing hadron identification at incident energies between 2 and 10AeV is a Time-of-Flight(TOF) wall covering the polar angular range from 2.5° – 25° and full azimuth. According to simulations, the necessary particle identification capabilities require of a TOF wall system time resolution of 80 ps at high efficiency. The existing conceptual design foresees a 120 \times ToF-wall composed of Multi-gap Resistive Plate Chambers (MRPC) which is subdivided in five rate depending concentric arranged regions named A to D where A is the area having fluxes below 1 kHz/ cm^2 in average. For this region A which covers approximately 55% of the total area we developed a Multistrip-MRPC containing thin float glass as resistive electrode material. In this talk I will present the structure of this prototype MRPC and in particular results obtained during in beam tests at E3line at Beijing.

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