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# The frontend electronics of the CBM Silicon Tracking System

The Compressed Baryonic Matter (CBM) experiment is a fixed-target heavy-ion physics experiment. Its construction is being prepared at the Facility for Antiproton and Ion Research (FAIR) in Darmstadt, Germany. The CBM physics program aims at exploring the QCD phase diagram at very high baryon densities, where a first order phase transition from hadronic to partonic matter as well as a chiral phase transition is expected to occur. CBM is consequently designed to cope with very high interaction rates up to 10 MHz. To achieve this high rate capability, the CBM experiment will be equipped with fast and radiation hard detectors employing free-streaming readout electronics. The Silicon Tracking System (STS) is the essential component for tracking up to 1000 tracks per event in A+A collision. With the resulting 1.8 million channels, it poses the most demanding requirements in terms of bandwidth and density of all CBM detectors. The STS-XYTER is a dedicated ASIC for the readout of the double-sided silicon micro-strip sensors. It is a low power, self-triggering ASIC with 128 channels, 5-bit ADC charge and 14-bit timing information. Several tests are carried out to check chip functionalities, full detector modules, system performance, and integration aspects. An overview of the frontend electronic, module tests and some experimental results will be presented.

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