Contribution ID: **33** Type: **Talk**

The Compressed Baryonic Matter (CBM) Experiment at FAIR

Wednesday, 1 June 2016 11:30 (30 minutes)

The CBM Experiment is one of the main four scientific pillars of the new Facility for Antiproton and Ion Research (FAIR). Its main objective is the study of the QCD phase diagram in the region of high baryon-densities. With nucleus-nucleus collisions at the SIS100 accelerator at beam energies up to 14 A GeV strongly interacting matter with densities about 10 times as high as normal nuclear matter can be produced. The experimental setup is designed to cope with highest interaction rates (up to 10 MHz), which for the first time will also allow to measure rare probes (open charm, light and heavy vector mesons) in the FAIR energy regime. We will report on the current status of the CBM experiment. Many detector subsystems have already completed their technical design reports, or will finalize them in 2016. The main achievements and challenges of these developments will be discussed. Also, a lot of effort is being spend on evaluating the physics performance of the experiment. An overview on the main results in the context of the CBM physics program will be given.

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Session Classification: Plenary session