



Seminar, Department of Physical Sciences, Bose Institute, Kolkata



Prospects for exclusive proton-proton reactions with CBM at FAIR

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Abstract: The study of hadronic matter and its interactions is important for understanding Quantum Chromodynamics (QCD) in the context of hadron formation and structure. This talk will introduce briefly the hadron physics program of the upcoming Compressed Baryonic Matter (CBM) experiment at the Facility for Antiproton and Ion Research (FAIR) in Darmstadt. Here, the goal is to study hadron properties in proton-proton (pp) reactions with exclusively reconstructed final states.

Using the proton beams at energies up to 29 GeV ($\sqrt{s} = 7.6$ GeV) delivered by the SIS100 accelerator of FAIR, and the CBM experiment, we aim to explore the production of multi-strange and charm baryons, and to search for exotic resonances over a wide energy range. Preliminary feasibility studies on hadron production, spectroscopy, and hadron structure using exclusive final states in pp collisions with CBM will be presented.

- **Date/time: August 11, 2026 (Tuesday) at 03:00 PM**
- **Venue: Room 204, Physics Seminar Room, (Second floor, UAC, BI)**