Contribution ID: **10** Type: **Oral**

Performance studies of GEM detectors for future heavy ion experiment

Friday 5 September 2025 15:15 (15 minutes)

Gas Electron Multiplier (GEM) detectors are widely used in high-energy physics experiments because of their high rate handling capability and outstanding position resolution. In the Muon Chamber (MuCh) of the future Compressed Baryonic Matter (CBM) experiment, detector efficiency is a key performance parameter.
This study focuses on the behavior of different GEM detectors under prolonged irradiation using a radioactive source. Gain and energy resolution are also studied. Different behavior in performance is observed at the start of operation and after the conditioning effect. The charge-up in the Kapton of GEM foil is also studied along with the stability in performance. The details of the experimental setup, methodology, and results will be presented.

Author: Mr MANDAL, SUBIR (Bose Institute)

Co-authors: Dr GOPE, Somen (Bose Institute); Ms GHOSH, Srotoshi (Presidency University and Bose Institute); Prof. DAS, Supriya (Bose Institute); Dr BISWAS, Saikat (Bose Institute)

Presenter: Mr MANDAL, SUBIR (Bose Institute)

Session Classification: Parallel Session