

RHIC forward experiment to study \sqrt{s} dependence of forward particle production

Takashi Sako (ISEE/KMI, Nagoya university) for the LHCf collaboration

Particle production in the hadronic collisions relevant to the cosmic-ray physics are extensively studied at LHC. To extend the knowledge beyond (or even below) the LHC energy equivalent tests at lower collision energy are important. Relativistic Heavy Ion Collider (RHIC) realizing proton-proton collisions at \sqrt{s} below 510 GeV provides the best opportunity for such study. The RHIC forward experiment uses one of the LHCf detectors and measures forward particle production at pseudo rapidity > 6 at $\sqrt{s}=510$ GeV in 2017. Combining with the LHCf data, forward particle production from 10^{14} eV to 10^{17} eV in cosmic-ray energy is covered by collider experiments.