

Forward sTGC Tracker Upgrade for the RHIC-STAR Detector

Thursday, 10 October 2019 11:10 (20 minutes)

RHIC-STAR experiment is planning to upgrade the Forward Tracking System (FTS) which is consist of Forward Silicon Tracker (FST) and Forward sTGC Tracker (FTT). The small-strip Thin Gap Chambers (sTGC) are designed to provide precision position measurement at about 100um level for the charged particles in high luminosity, covering forward rapidity region ($2.5 < \eta < 4$). The extended rapidity coverage on particle identification enables lots of physics opportunities in pp, pA and AA programs beyond 2020 at STAR.

Two size of sTGC prototypes have been designed and produced at Shandong University. In this talk, we will present the sTGC prototype R&D details for the STAR forward upgrade. Some performance test results will be discussed together with the upgrade status and plan.

Abstract Type

Poster

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Session Classification: S4: 探测器和电子学及应用技术

Track Classification: 探测器和电子学及应用技术