

Abstract Submitted
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The STAR Forward GEM Tracker BERND SURROW, MIT, STAR COLLABORATION — The STAR collaboration is preparing a tracking detector upgrade, the Forward GEM Tracker (FGT), which will focus on novel spin physics measurements in high-energy polarized proton-proton collisions at a center-of-mass energy of 500 GeV, determining the flavor dependence ($\Delta\bar{u}$ versus $\Delta\bar{d}$) of the polarized sea. STAR plans to probe these polarized distribution functions using parity violating W production in the electron/positron decay mode. This upgrade will consist of six triple-GEM detectors with two dimensional readout arranged in disks along the beam axis. The FGT project has completed an extensive R&D program of industrially produced GEM foils at Tech-Etch Inc. in comparison to GEM foils produced at CERN based on optical measurements, testbeam and ^{55}Fe source measurements of a triple-GEM prototype detector using $10 \times 10\text{cm}^2$ GEM foils. The FGT project requires large GEM foils ($\sim 40 \times 40\text{cm}^2$) which are currently being tested. The FGT design, the status of large GEM foil tests, the performance of triple-GEM prototype detectors based on industrially produced GEM foils along with the status of the FGT construction and the installation schedule will be presented.

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