

STAR FST Module Survey Data Analysis

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The Solenoidal Tracker at RHIC (STAR) experiment at BNL investigates proton structure and strong interactions through proton-proton, proton-nucleus, and nucleus-nucleus collisions. In order to measure events at lower angles (closer to the colliding beams), the STAR Forward Upgrade is being implemented. This upgrade includes the addition of a Forward Silicon Tracker, which can be used to track the locations and momenta of charged particles. To interpret measurements from this tracker appropriately, a detailed understanding of the physical layout is needed-- in particular, quantifying offsets between the intended and actual positions of the tracking detectors. In order to account for these offsets, alignment matrices are created by comparing the measured positions of reference points on the tracker with their ideal positions. These matrices can be applied to measurements in order to shift them from the ideal coordinates into the real-world coordinates. The processes involved in constructing the alignment matrices will be presented.