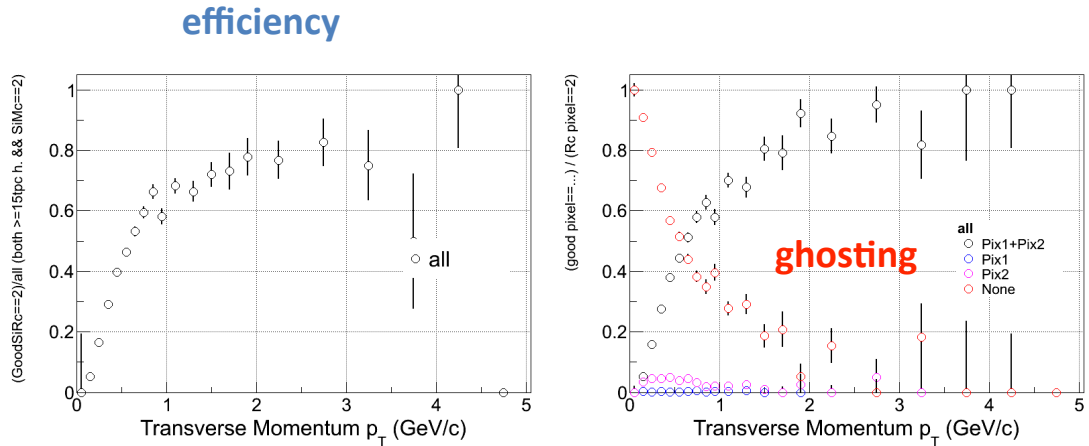
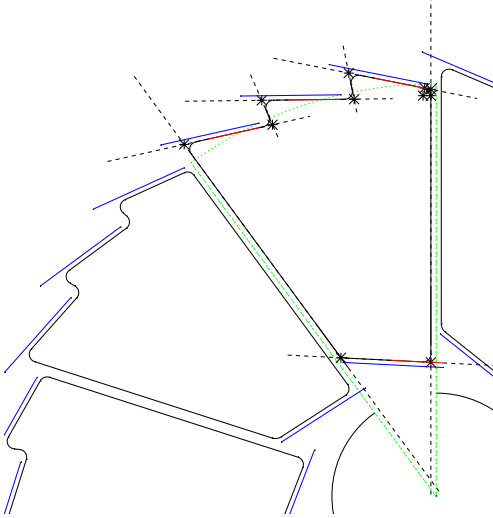


WBS 1.6 Software

1. We finished the first phase of the tracking studies with ONLY the TPC + PIXEL-prototype. The goal is to determine possible physics capabilities of the mechanical PXL prototype in Run-13. The figure below shows on the left the tracking efficiency of the system TPC+PXL (only, w/out SSD and IST), and on the right the percentage of ghost tracks (red points) as a function of transverse momentum. The amount of simulated pileup hits is for the case of 1X the standard RHIC-II luminosity, slightly overestimated. This efficiency leaves room for some possibility of physics capabilities with the prototype. The ghosting is severe in the low p_T region ($< 1\text{GeV}/c$). After clarifying some technical questions we will have estimates of event samples needed for a given physics observable.



2. A first step in translating Geometry information from Solid-works models into what we need was done with the writing of a Root macro that encodes/translates/abstracts structures into vectors using geant3 shapes. This information together with material radiation thickness (X_0) information can then be combined to produce the desired geometry format. The figure below was generated directly from this macro.



3. During the STAR Collaboration, and HFT TC meeting at LBL we had the opportunity to visit the CMM lab and talk to its director, Bob Connors. Several things about the new machine were clarified that impact the procedural details of survey measurements.