WBS 1.6 Software
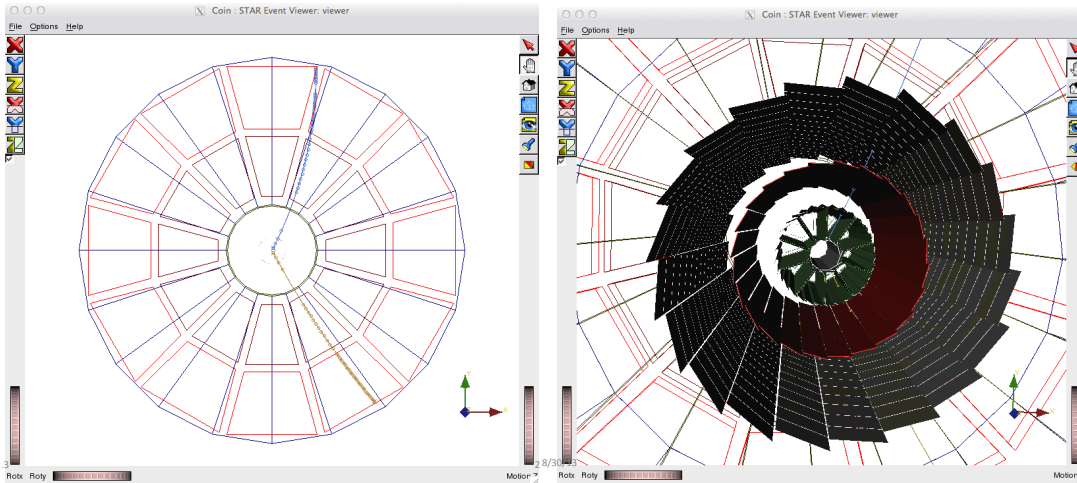
1) **Preparatory Work for Year-14**
   a) **Geometry:** A first pass on year-14 geometry [full HFT geometry including the IST and the SSD] was created and committed.
   b) The Offline (simulation) analysis chain was updated too and the first successful testing was performed.
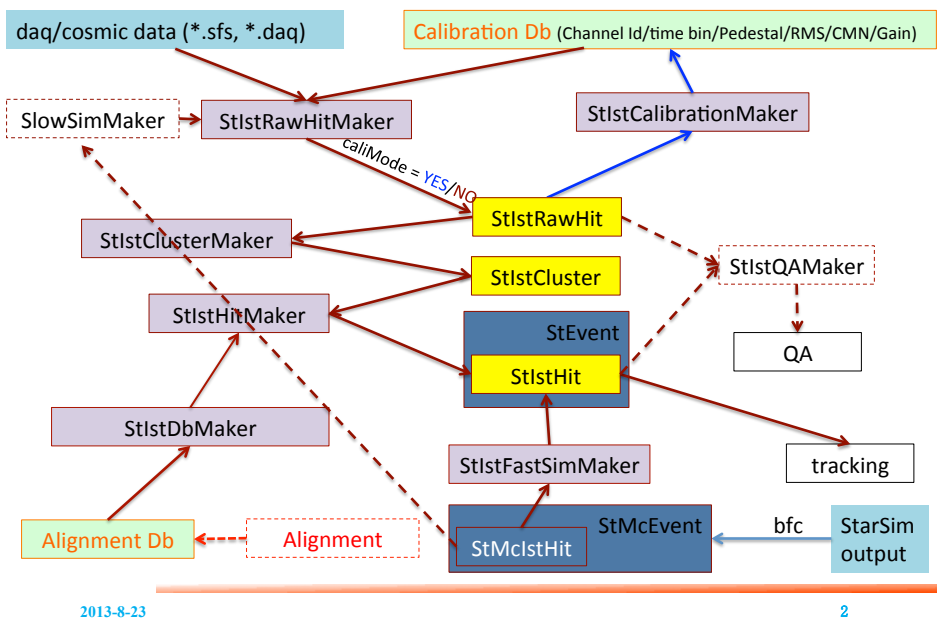   c) An Event Display utility was adopted to display the full HFT information (see figure below).

2) **PIXEL prototype Run-13 data analysis**

   a) Further work on PXL Alignment was performed with the results showing good convergence to goals.

3) **IST**

   a) A lot of activity in this area building up whatever is needed to receive and analyze the upcoming data. Work in finalizing structures (hit, cluster etc), Db calibration structures and code to use them, and in general the whole Offline IST software is building up with fast pace (see figure).

IST offline chain infrastructure – latest working version

daq/cosmic data (*.sfs, *.daq)

Calibration Db (Channel Id/time bin/Pedestal/RMS/CMN/Gain)

SlowSimMaker → StIstRawHitMaker

StIstCalibrationMaker

caliMode = YES/NO

StIstRawHit

StIstClusterMaker

StIstCluster

StIstQAMaker

StIstHitMaker

StEvent

StIstHit

QA

StIstDbMaker

StIstFastSimMaker

tracking

Alignment Db ← Alignment

StMcEvent   bfc   StarSim output

StMcIstHit

2013-8-23   2

b) Software reviews of IST structures and modules are in preparation

4) AOB

  a) Further simulation work to test and refine the alignment procedures and resolution is ongoing.

  b) Further simulation work, using the full HFT geometry, was performed in order to evaluate the Cellular Automaton (CA) track-seed finder in STAR in collaboration with the ALICE-GSI group. A possible deployment of the code in HLT (high level trigger) for fast event vertex finding is being discussed.