STAR Computing Week Dec 1999

Status of FTPC Software

J.Seyboth

Contents

- MPI STAR Library Releases
- Simulations
- Reconstruction Software
- Dst
- QA

MPI STAR Library Releases

J. Seyboth

- starnew

  SL99g_7

  ROOT_LEVEL 2.22.10

- stardev

  up-to-date version of committed code

  ROOT_LEVEL 2.23.09

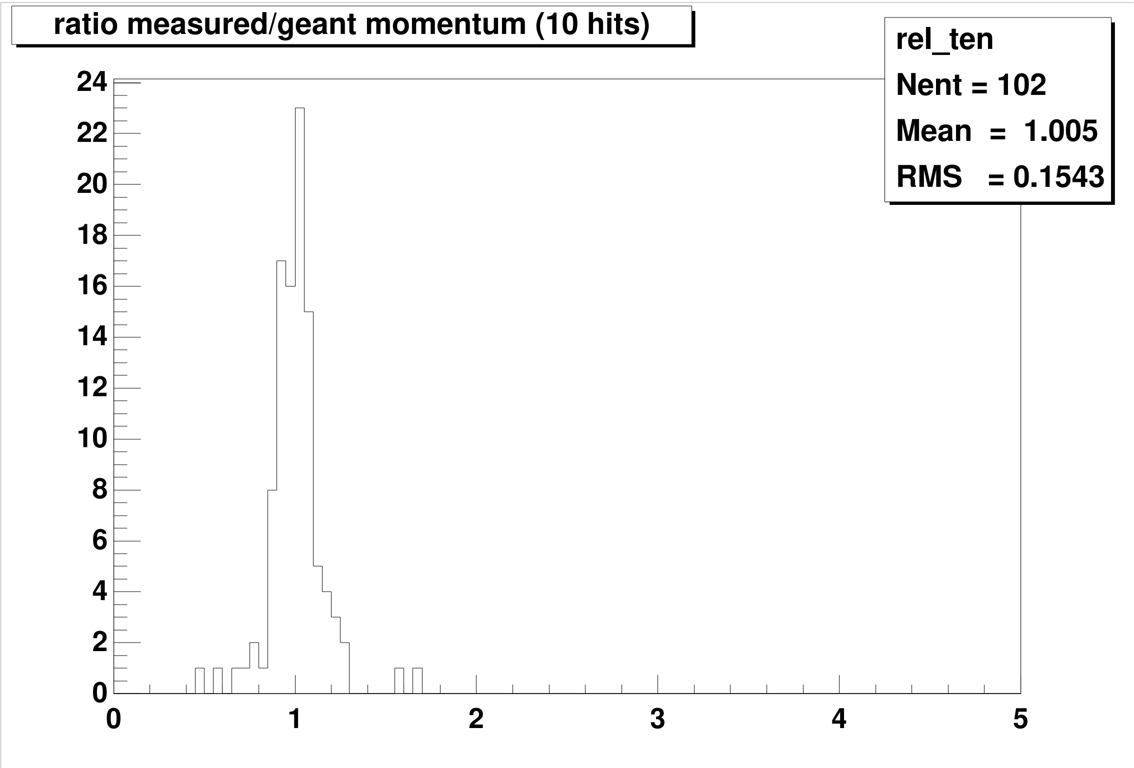
Simulations

- Half Field Momentum Resolution Study: H. Hümmler

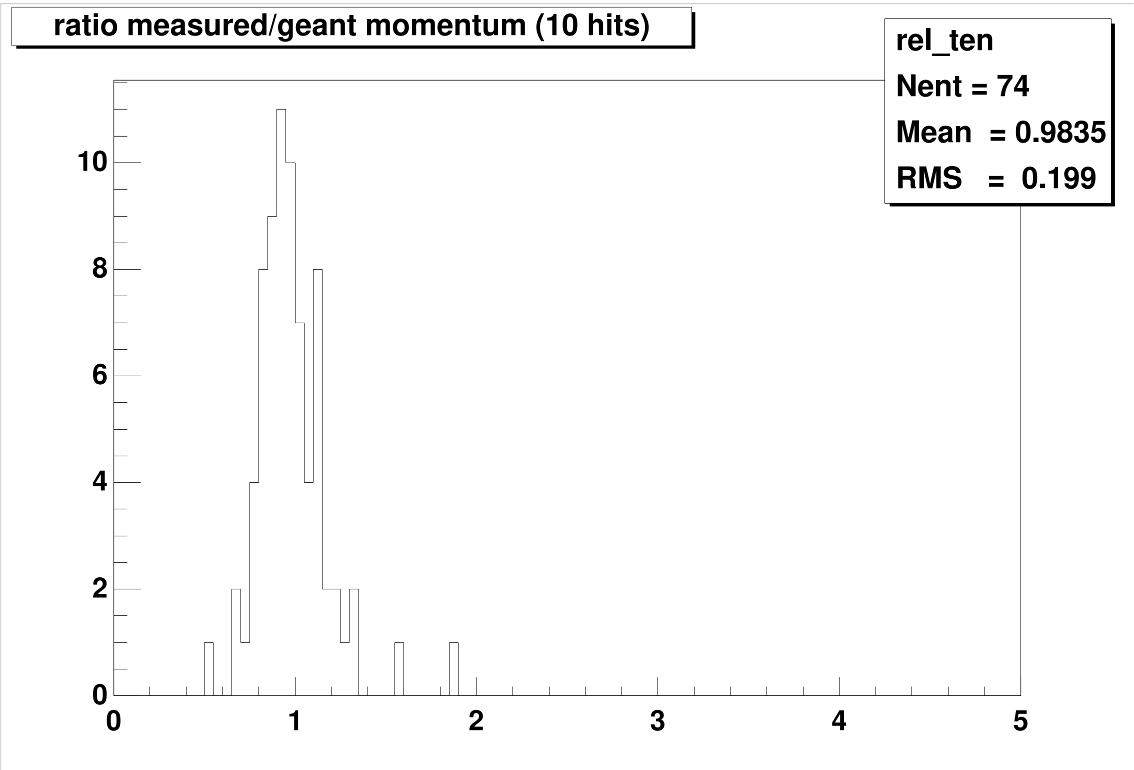
http://www.star.bnl.gov/STAR/html/ftpc_l/ftpc_doc/halffield.html

- GEANT geometry: H. Hümmler
  - svttgeo.g - added beam pipe supports and svt shields
  - supogeo.g - FTPC supports

- New simulation data required:
  - to study effect of additional material on FTPC acceptance
  - for physics and Holm's thesis
  - 5000 central + 5000 non-central events



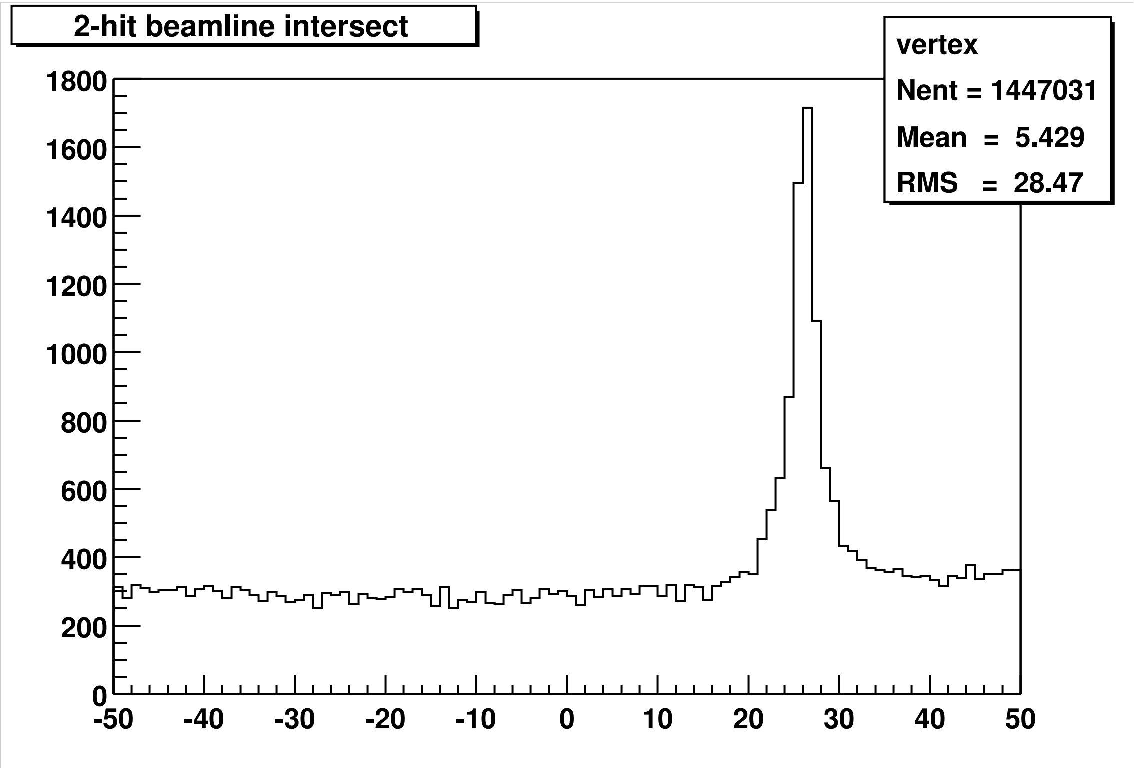
Full field



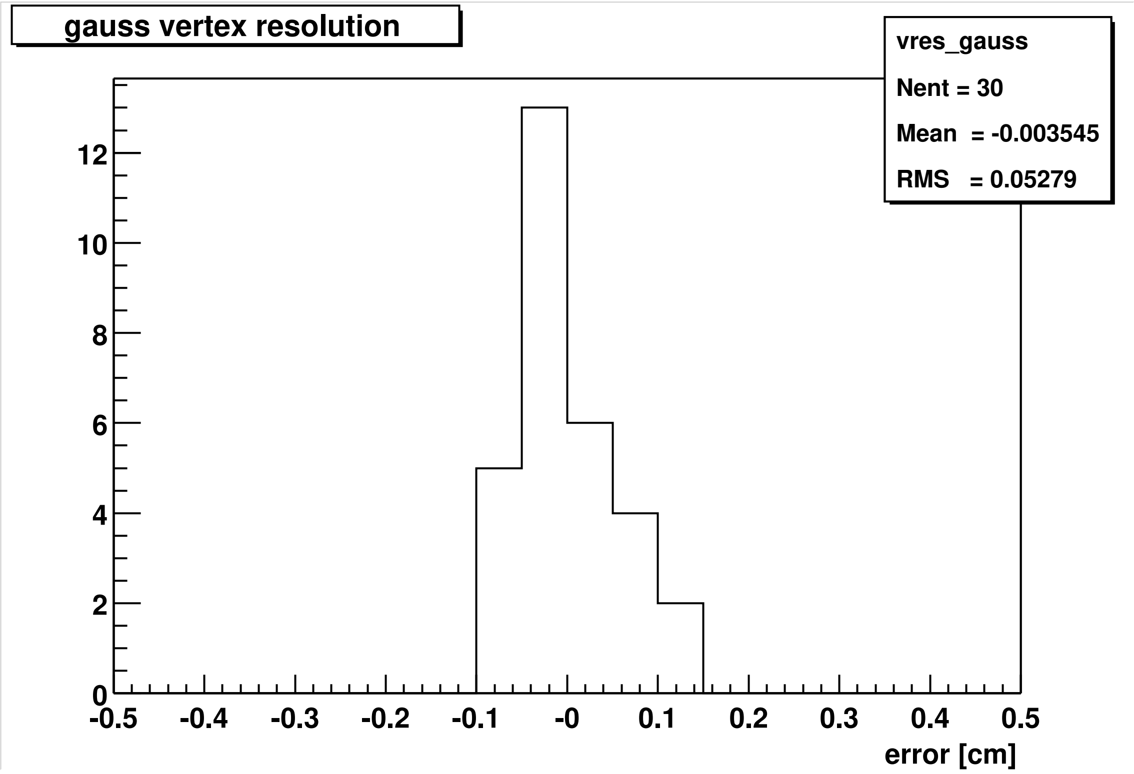
Half field

Reconstruction Software

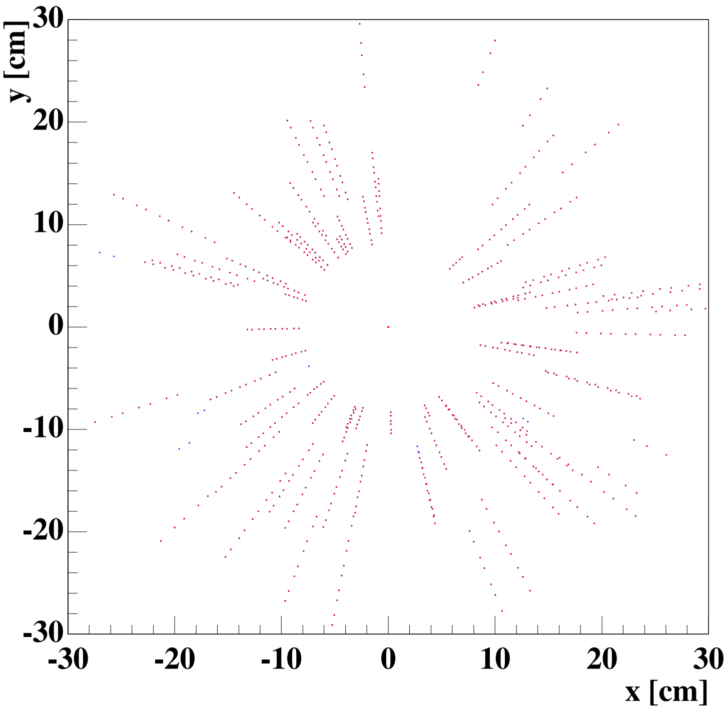
- FMG - FTPC Drift Map Generator: H. Hümmler
  - Automatically recalculates drift and ExB distortion map for the FTPCs from parameters like gas composition, drift voltage and temperature
  - The magnetic field is taken from the current gufld
  - Status - implemented
- StFtpcClusterMaker: H. Hümmler
  - C++ replacement for pams/ftpc/ffs,fcl and StRoot/St_fcl_Maker
  - Status - implemented
- primary vertex finder: H. Hümmler
  - determine primary vertex z-coordinate from the FTPC hits for use in FTPC tracker
  - Status - implemented



primary vertex coordinate(Geant): $z = 26.2741$

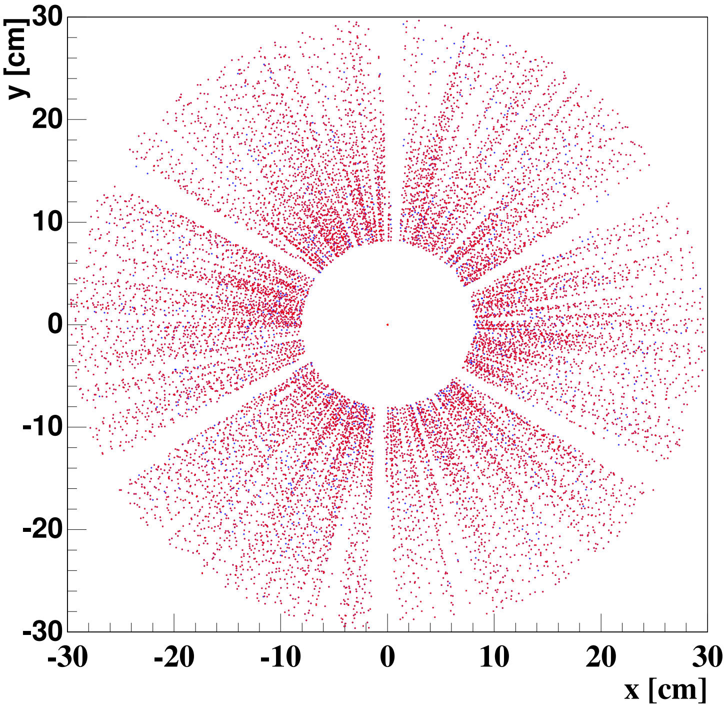


- StFtpcTrkMaker: M. Oldenburg, A. Schüttauf
  - new tracking algorithm
    conformal mapper with local follow your nose method
    (see P.Yepes NIM A 360(1996) 582-585)
  - will find primary and secondary tracks
  - Status - development



For 100 simulated primary tracks:

- hit sorting - 0.62sec
- tracking - 0.13 sec
- finds 93 tracks



For 2000 simulated primary tracks:

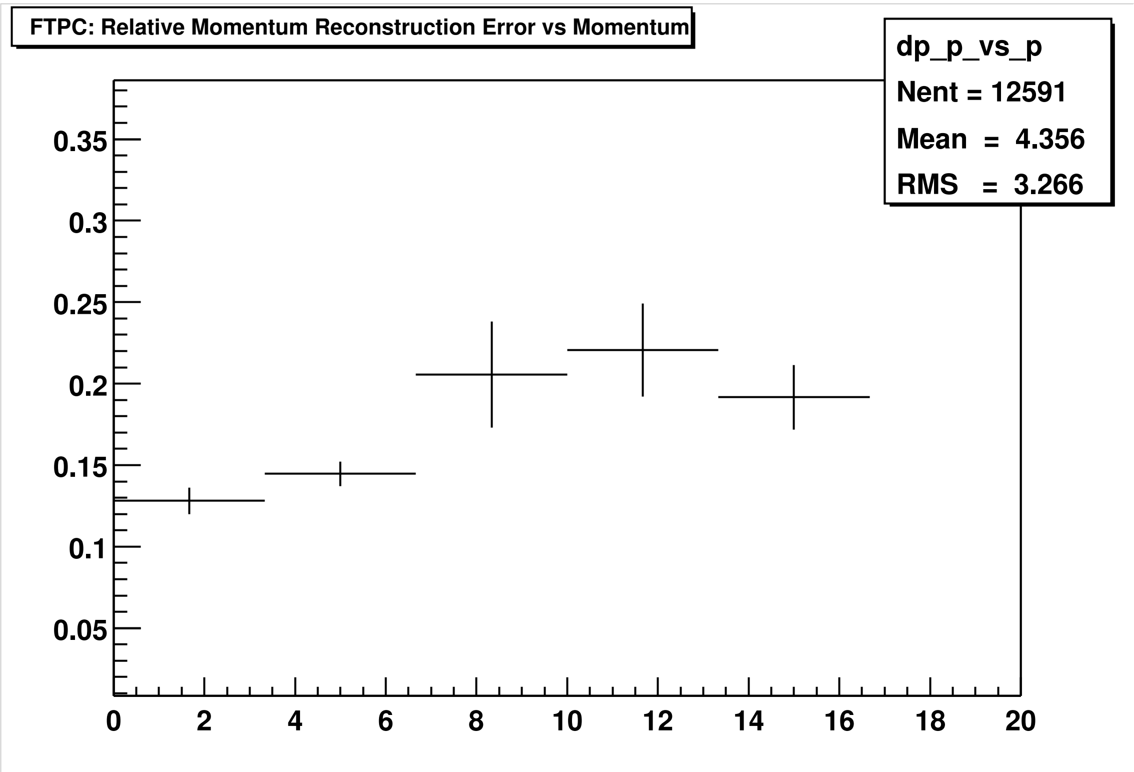
- hit sorting - 2sec
- tracking - 3 sec
- finds 3000 tracks

- StFtpcMomentumFit: H. Hümmler

  - iterative fit method

http://www.star.bnl.gov/STAR/html/ftpc_l/ftpc_soft/fte.html

  - C++ class - replaces fte.F
  - Status - implemented



Very soon

all FTPC FORTRAN code will be replaced by

C++ code !

Dst

J. Seyboth

- Conversion to new dst tables completed

QA

K. Turner,J. Seyboth

- Booking and filling globtrk QA histograms for FTPC east and west being implemented