Propagation of Reconstructed Tracks to Muon Layers

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Propagation of Reconstructed Tracks to Muon Layers

Setup

- Full Panda Geometry in PandaRoot (Geant3)
- Iron Yoke from MDT code (official yoke -> not implemented yet)
- Realistic Field Maps

Analysis Tools

- Full Digitization and Reconstruction (no MC information)
- MVD + TPC + GEM Tracking
- Tracking Packages: LHETRACK (prefit) and GENFIT (Kalman)
- Extrapolation to MDT first layer: GEANE package
- Code inside svn trunk repository (official)

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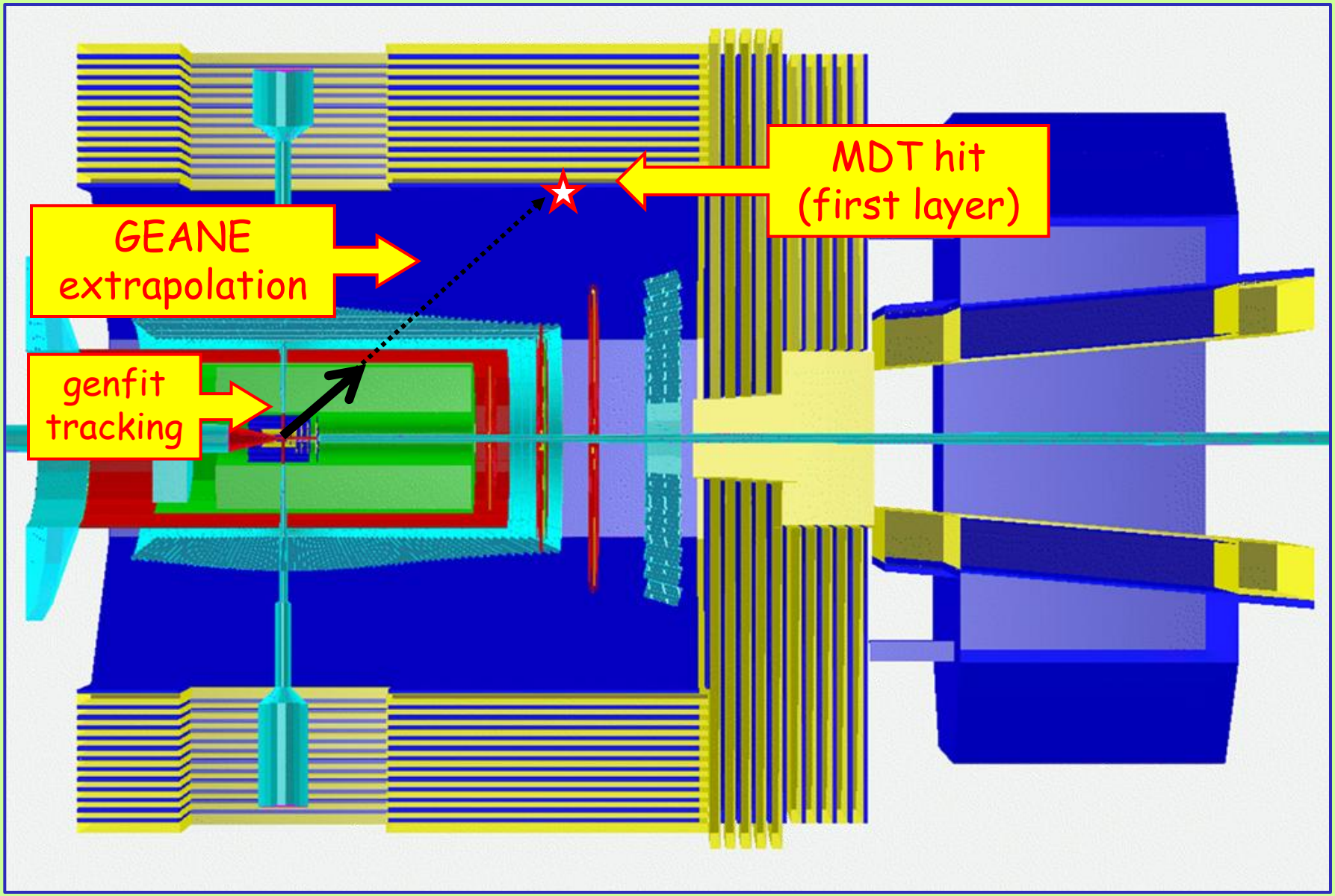
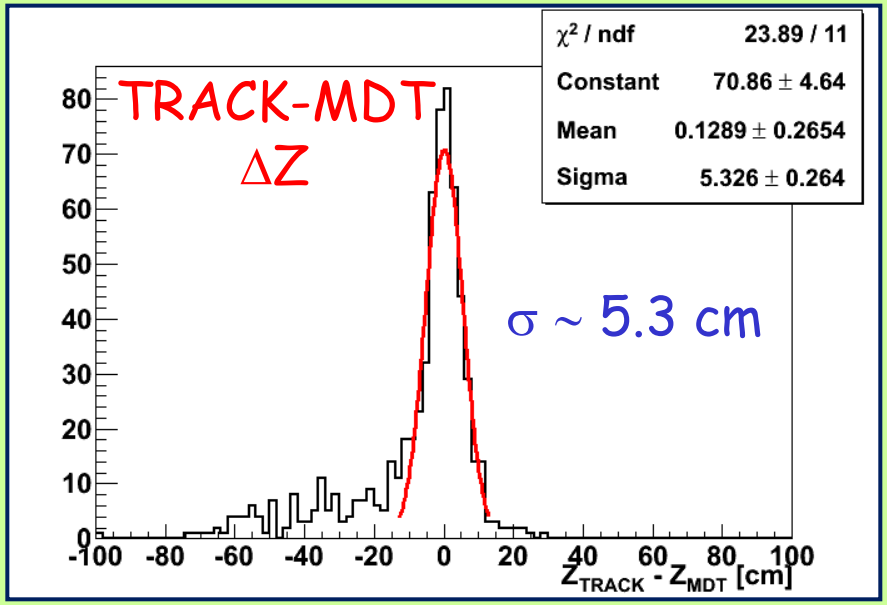
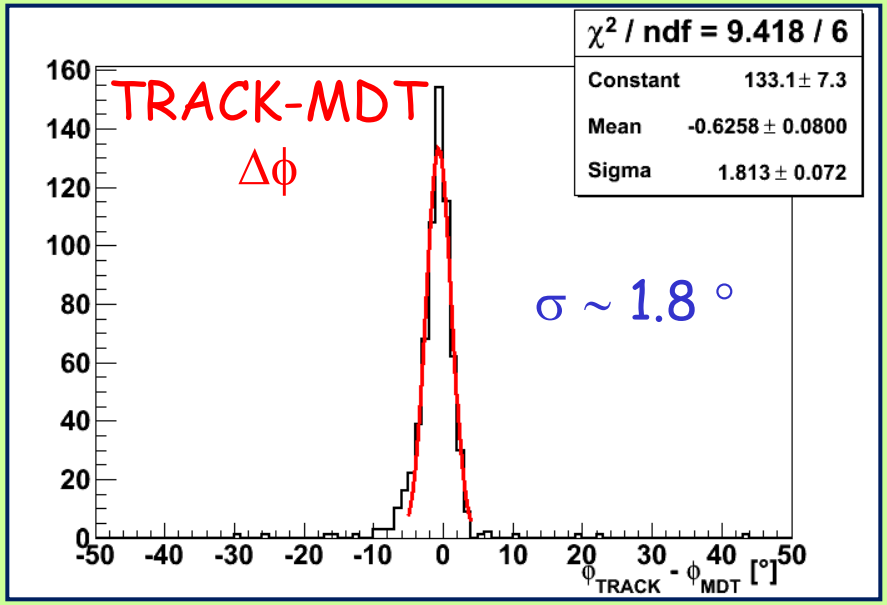
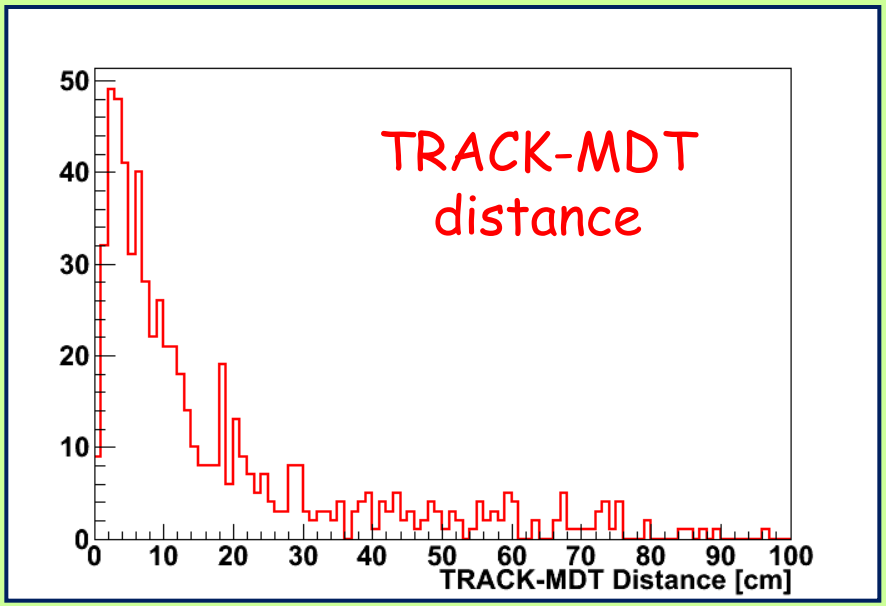


Correlation: Barrel

1000 μ^- @ 2GeV/c θ [5°, 140°]

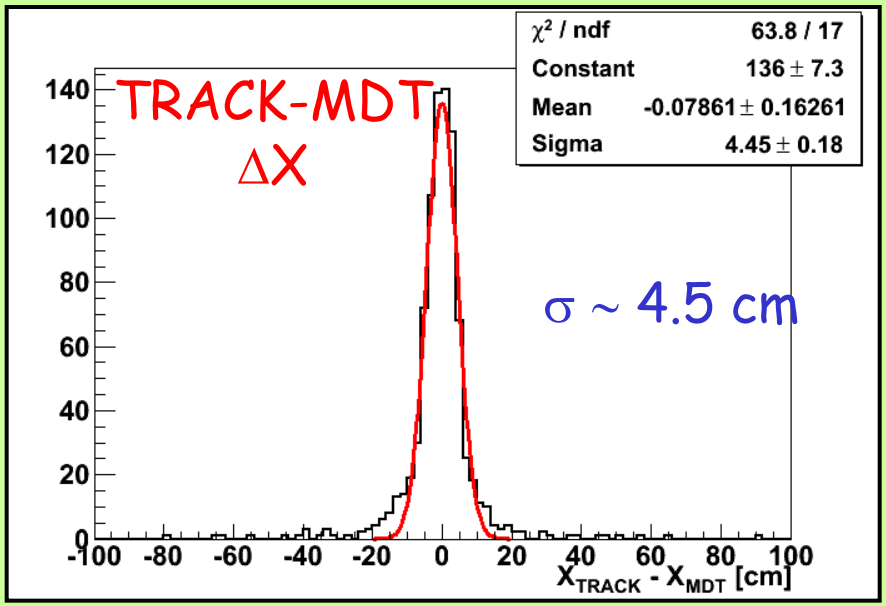


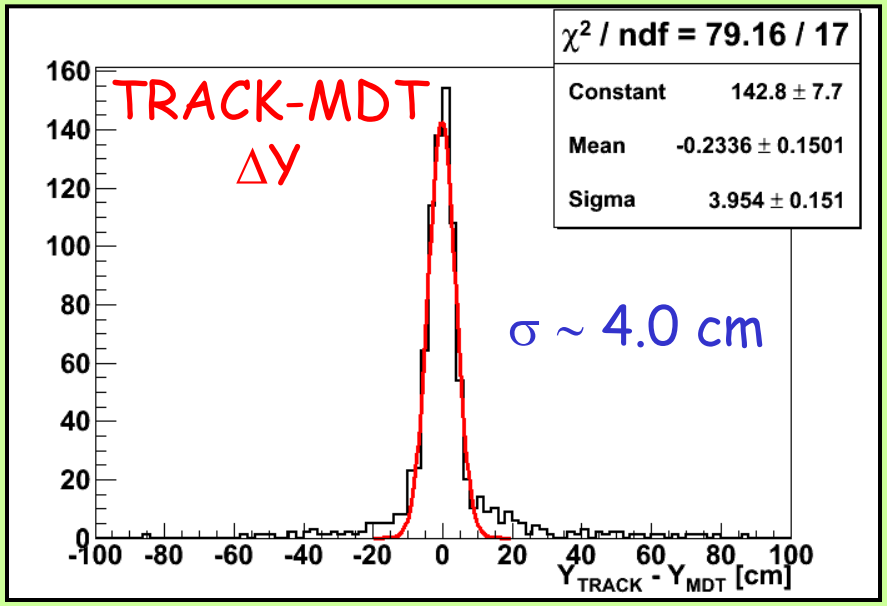


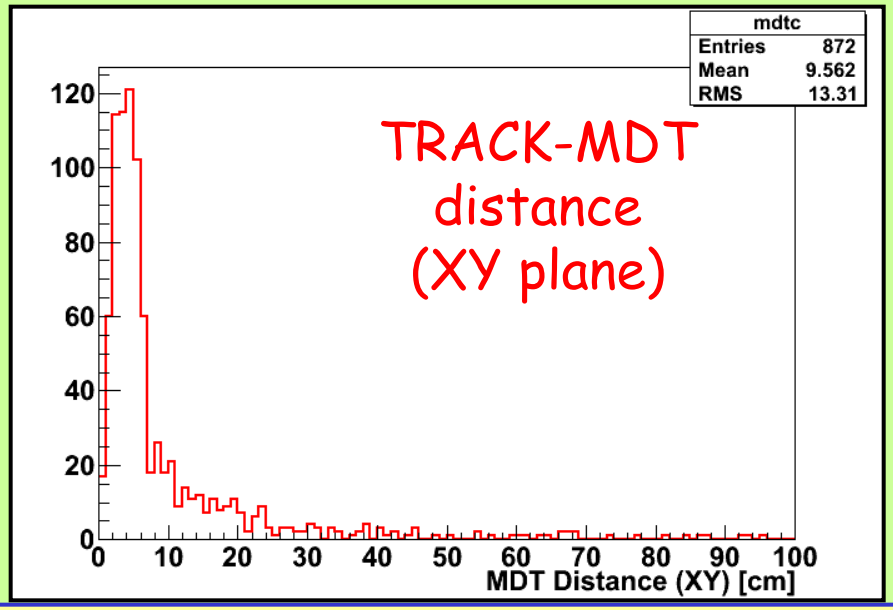


Correlation: Endcap

1000 μ^- @ 2GeV/c θ [5°, 25°]







Outlook

- ✓ MDT geometry (and iron) implemented in PandaRoot
- ✓ "Realistic" tracking working for the TS
- ✓ Track propagation into MDT (1° layer) implemented
- ✓ Propagated position resolution ~ 10 cm

Next step: Muon Tracking