

8th May 2018

FOOT collaboration



Global Tracking Updates



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Momentum Resolution

- VT Reso: 0.001cm

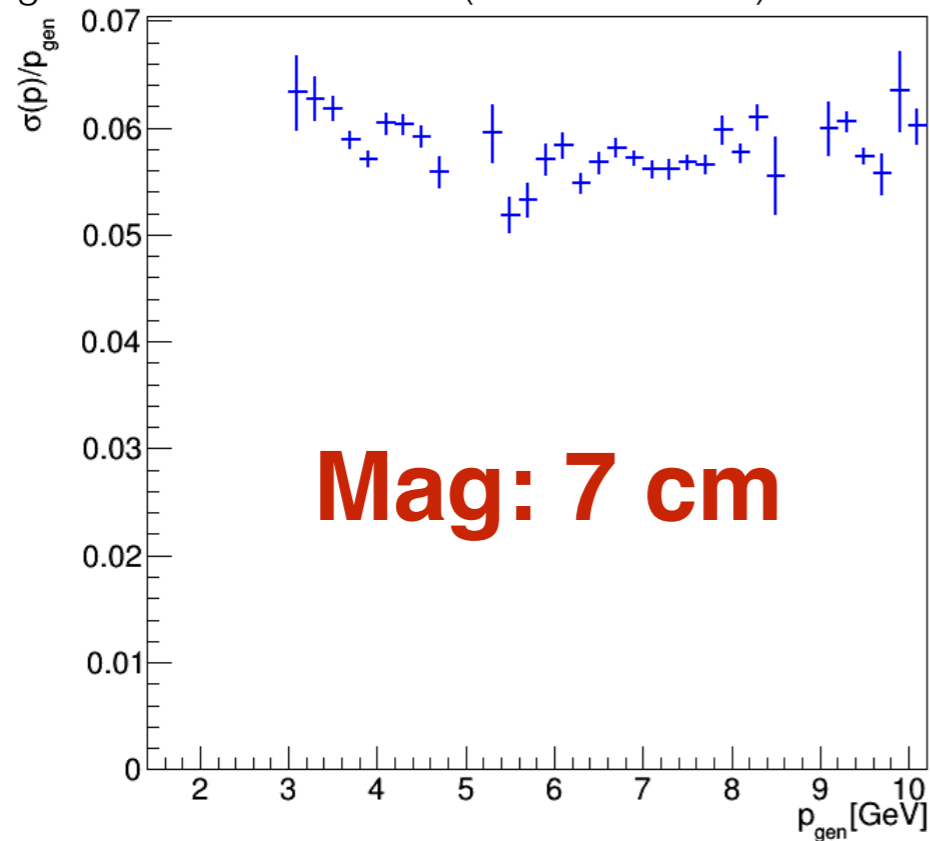
- IT Reso: 0.001cm

- MSD Reso: 0.001cm

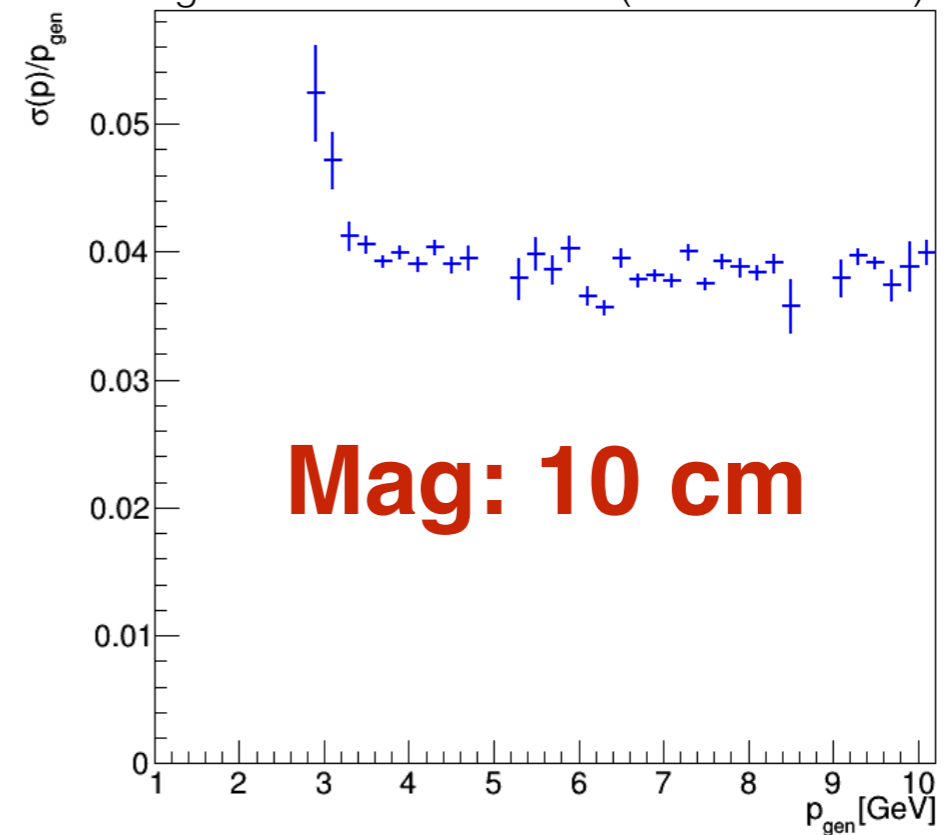
- Single pixel hits considered for VT and IT

- Smearred MC track coordinate for MSD

Total mag field on the FOOT axis (from 0 to 40 cm) = 85.7861 kG



Total mag field on the FOOT axis (from 0 to 40 cm) = 248.985 kG



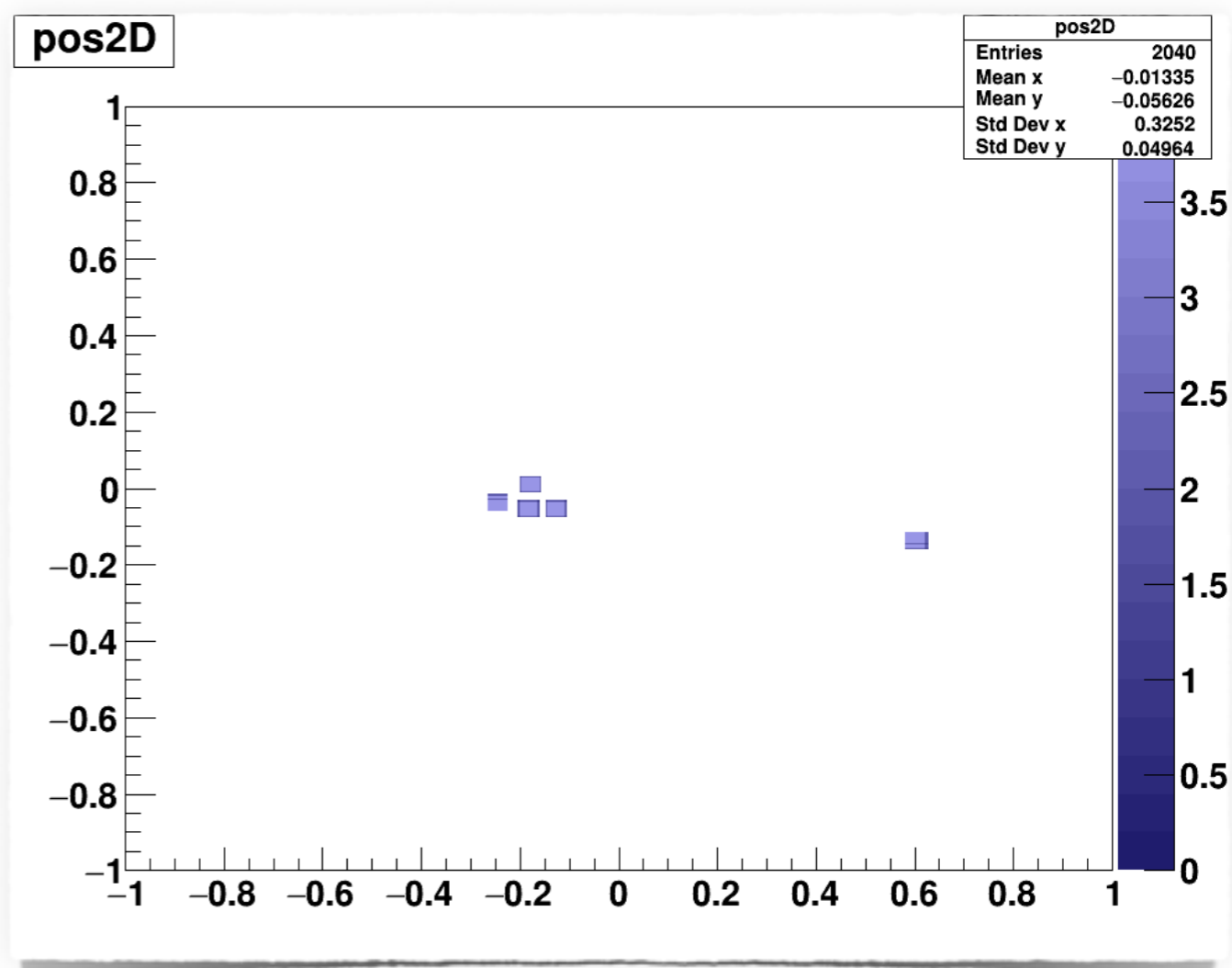
News/Discussion

- Magnetic map in local or global coordinate for the future?
- v14 MC samples produced using the SHOE geometry. Tested and fully works! (big thanks to Serena's effort)
- We have one git branch for each MC sample version to avoid confusion
- This time branch/ntuple name does not match, we'll do better next time :)
 - ▶ branch v14 → ntuple v14.1.1
 - ▶ branch v14.1.0 → ntuple v14.0.1

cluster

- Building a clusterisation class to make pixel clusters. Now working for VTX, usable by global tracking.
- Can clusterize separately hits with different origins (MC, digitisation, noise,...). Not possible before.
- Separate and subsequent to digitisation.

I built a 20px square around the single MC pixel hit for testing



- Digitisation status: mergeing between different branches, solving code conflict. Christian is finishing the development and extending to ITR.

next steps

- Extends clustering to ITR, pretty straight forward;
- Include digitisation.
- Include MSD digitisation (thanks to Leonello patient explanation)
- Include everything in v14 (now still on v13)
- Testing!!
- Perform Global Tracking with cluster and more realistic MSD!!!!
- More news from Alberto (multi-tracking an more)