

Short Update

PF

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U.S. DEPARTMENT OF
ENERGY

Stanford
University

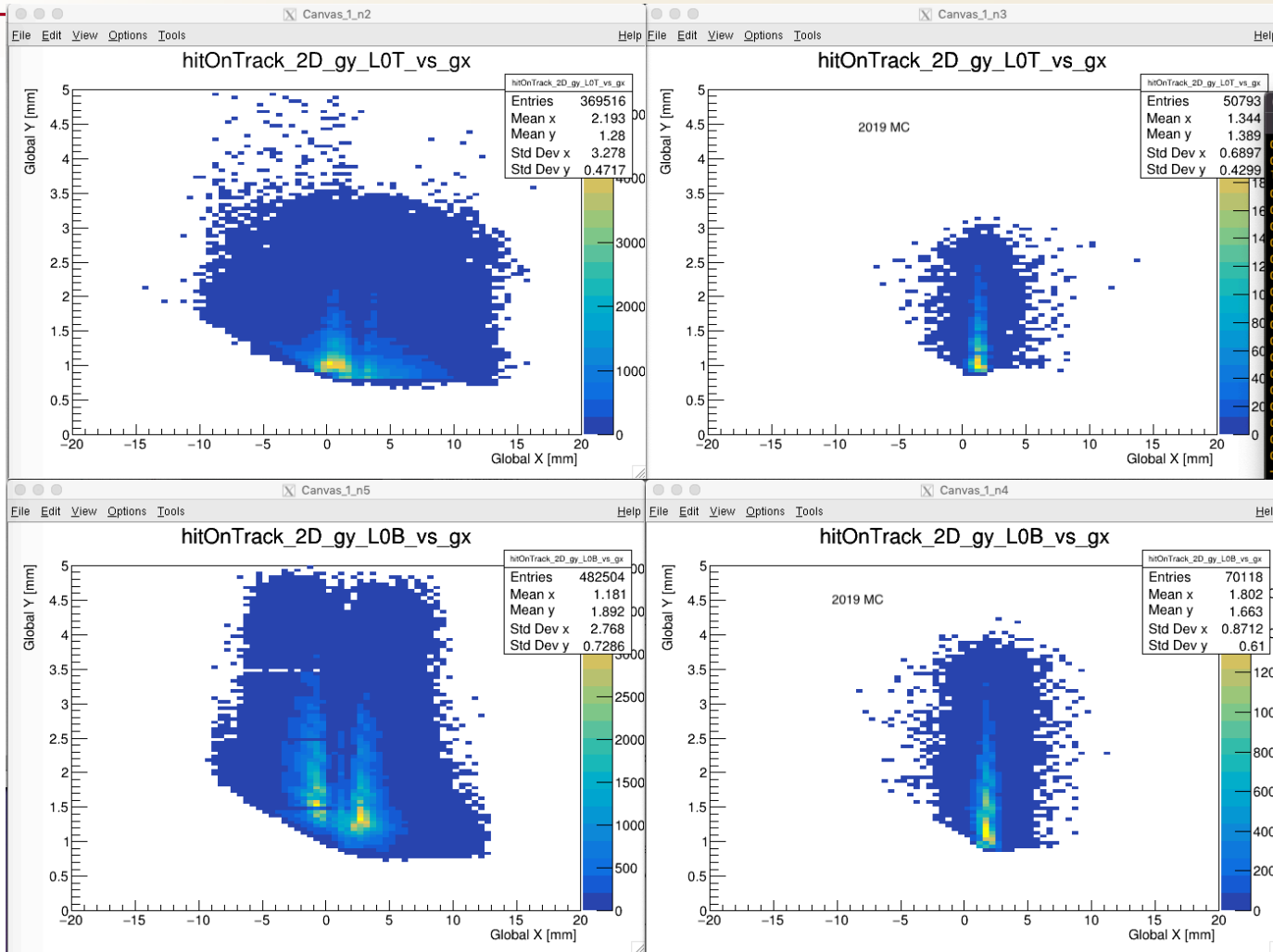
SLAC NATIONAL
ACCELERATOR
LABORATORY

- Starting from trident stdhep provided by MattS
/nfs/slac/g/hps_data2/mc_production/tritrig/4pt55/stdhep/00/
I've produced slcio's files up to reco level using:
<https://github.com/pbutti/simpleMCgeneration>
- However I do not have much information on the content of the stdhep files - a proper simulation would be important to then understand what plots we will be looking at at reco level
- Steering files:
 - **Reco steering file is OK**, the nominal jobOption work fine on MC. I've created a reco steering file without DQM for faster processing
 - **Readout steering-file I used is outdated** (as doesn't include Hodoscope readout)
 - Is there a more recent and "official" readout file?

Track reconstruction updates

- Found a mistake in geometry definition:
 - Thin layers were 20mm in length instead of 30
 - Corrected and created iss617
<https://github.com/JeffersonLab/hps-java/tree/iss617>
which should go in 2019 master branch (if 'epic merge' allows)
- Still observing large amount of dropped tracks due to unchanged position of the hits

Track reconstruction updates



Check on position of hits on track in globalY and globalX:

- Global X not rotated (shouldn't matter)
- All GBL reco tracks used

Observed a “double peaked” structure in the hits-on-track in bottom layer. Not expected. MC doesn't show it. Investigating sources, but ideas?

Alignment steering files checks

- Started checking the alignment steering files
 - GBLOutputDriver doesn't seem to produce anymore the .gbl file necessary for millipede (has been removed by MD, perhaps located somewhere else). It only produces biased residuals and hit positions in u/v
- Unbiased residuals driver doesn't really produce unbiased residuals
 - Logic is bit strange as tracking is re-run on n-1 layers
 - Should use refit tracks using n-1 hits.
 - Planning to rewrite this in next days

Backup
