

MSD efficiency - STATUS

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MSD sensor efficiency : 3 methods

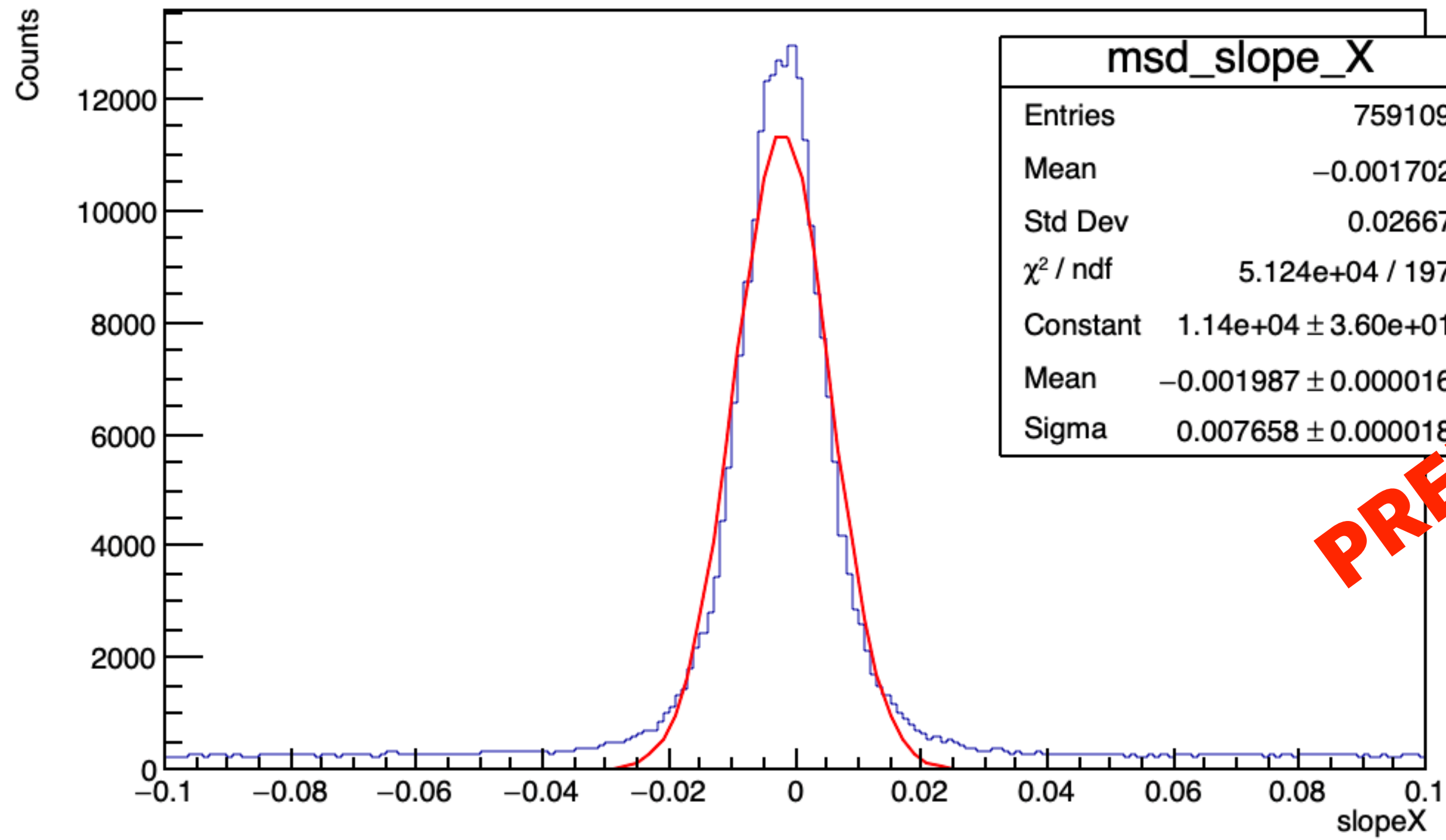
1. from MSD tracks with 2 MSD clusters
 - => proj on MSD sensor not involved in the track (in MSD RF)
 - => look for best cluster of sensor
 - Cuts:
 - max track slope (select straight tracks)
 - max distance btw cluster on the third sensor and proj track (select best cluster)
2. from VT tracklets
 - => proj on MSD sensor (in MSD RF)
 - => look for best cluster of sensor
 - Cuts:
 - 1 VTX with 1 VT tracklet
 - VT track BM matched
3. from GLB tracking (Straight Tracks)
 - => look for MSD clusters associated to the track
 - Cuts:
 - 1 VTX with 1 VT tracklet
 - VT track BM matched
 - at least 2 MSD clusters

p 200 MeV no tgt no B

1. From MSD tracks

Run 8001: **p 200 no tgt no B**

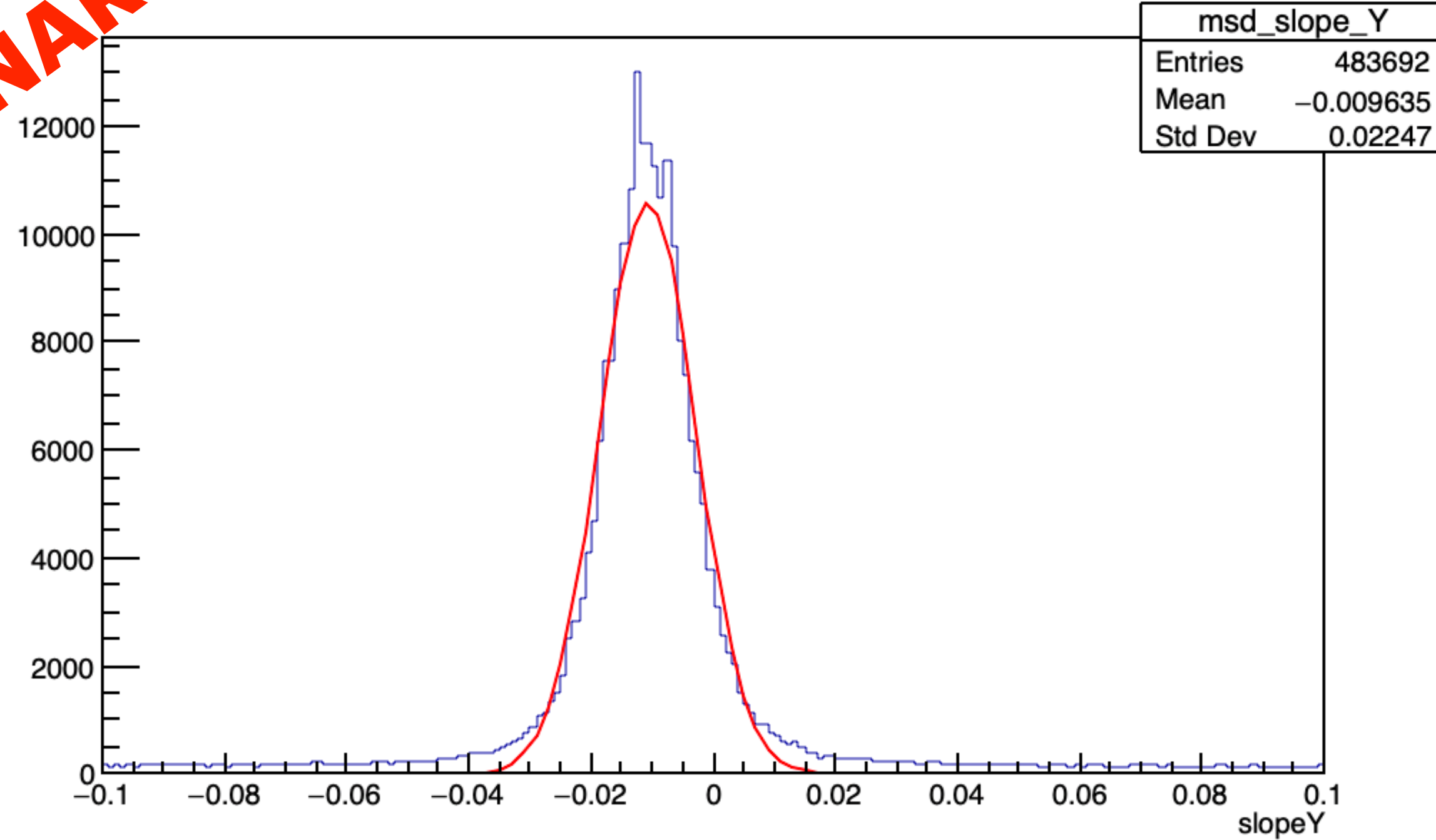
MSD trk slope btw 2 sensors



maxSlopeX = 0.03

PRELIMINARY

MSD trk slope btw 2 sensors

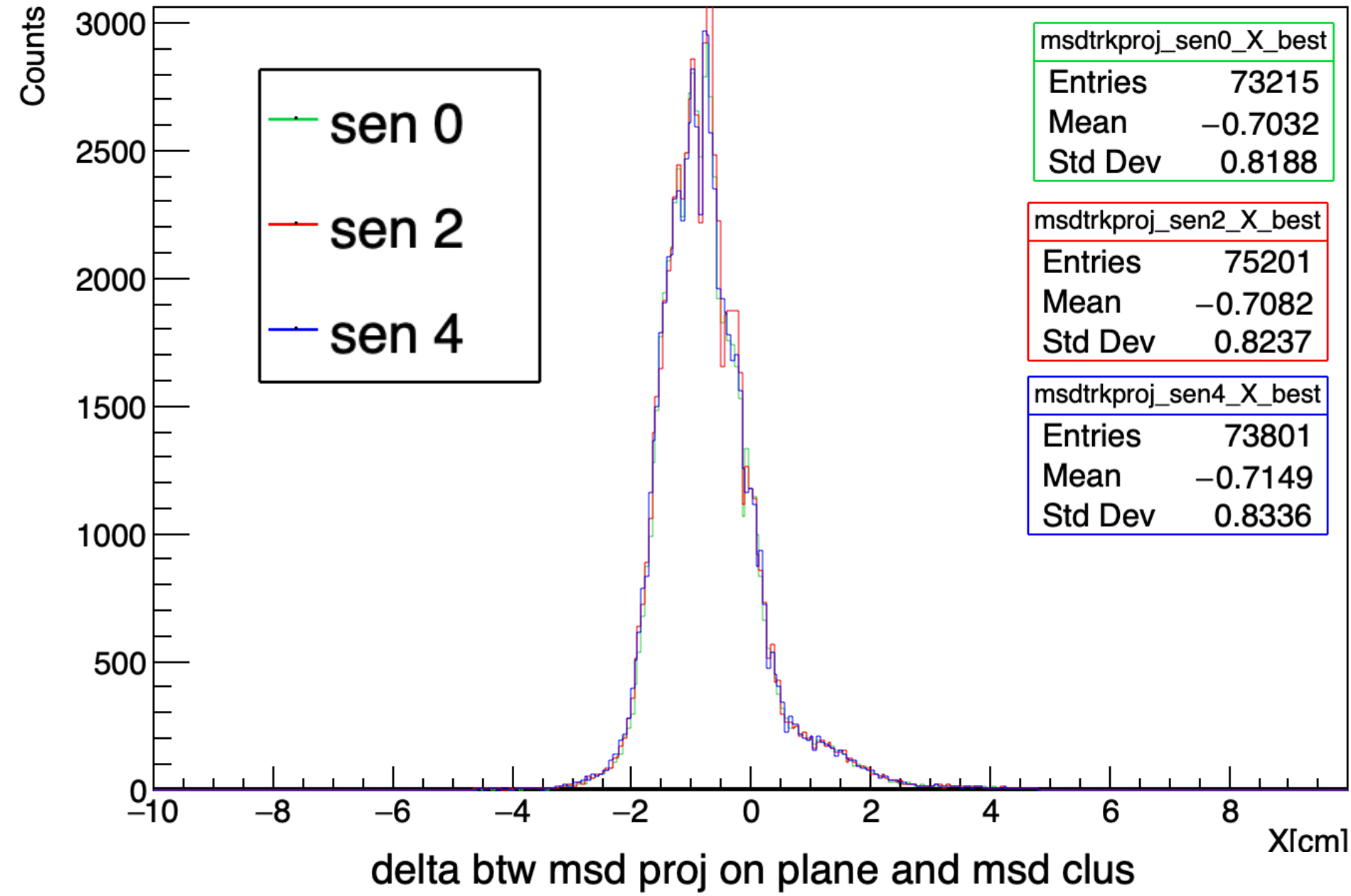


maxSlopeY_m = -0.04;
maxSlopeY_M = 0.02;

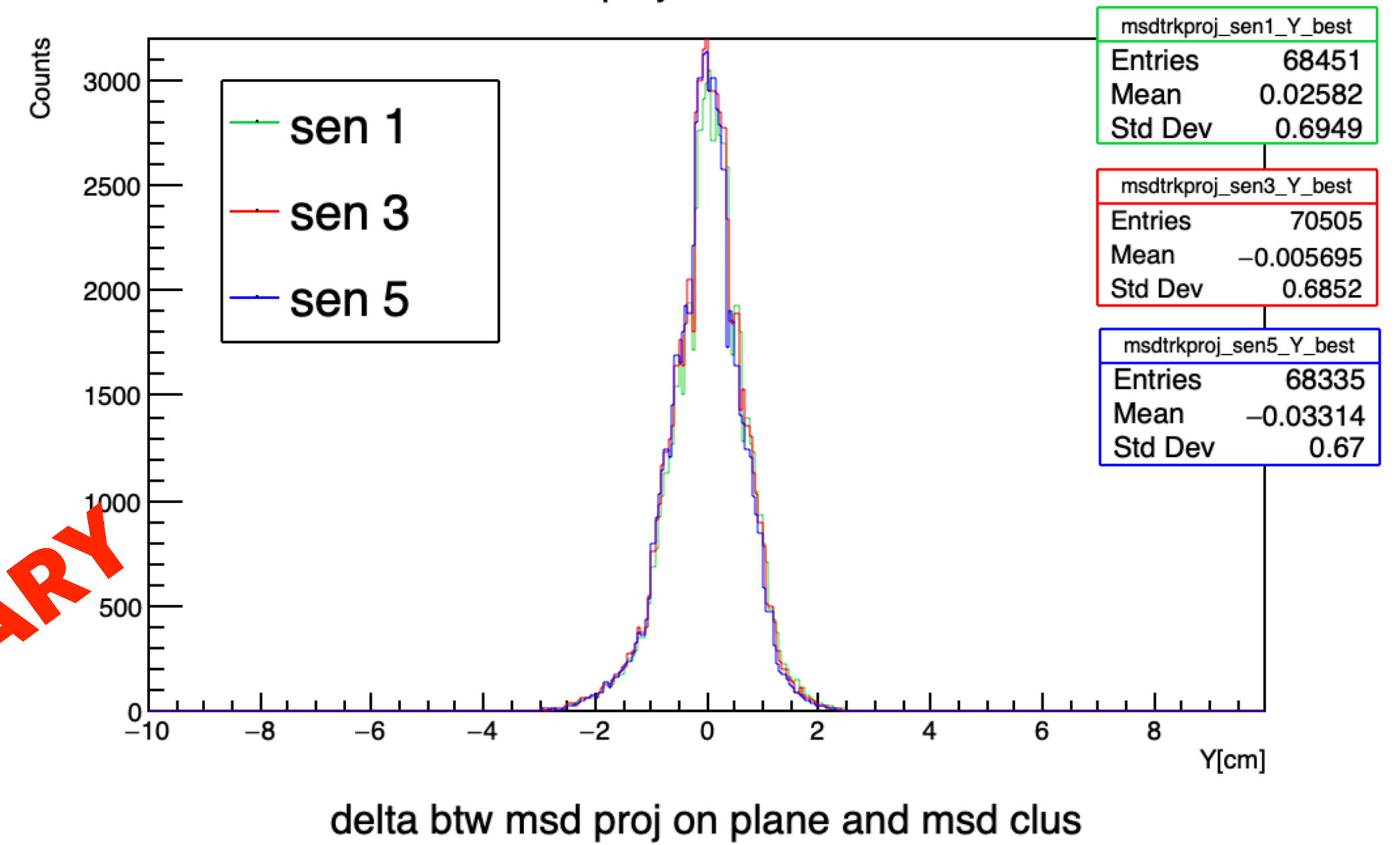
1. From MSD tracks

Run 8001: p 200 no tgt no B

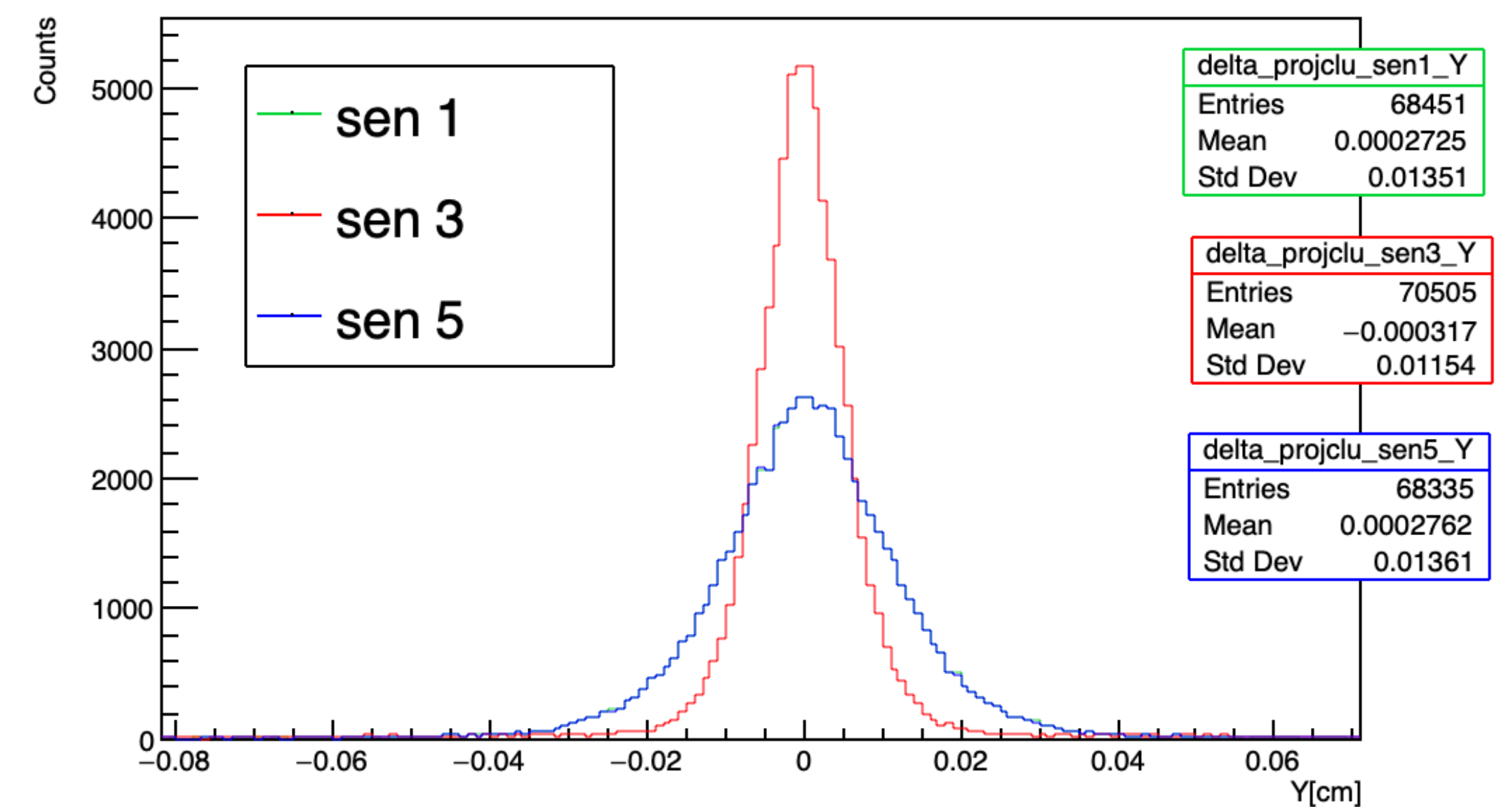
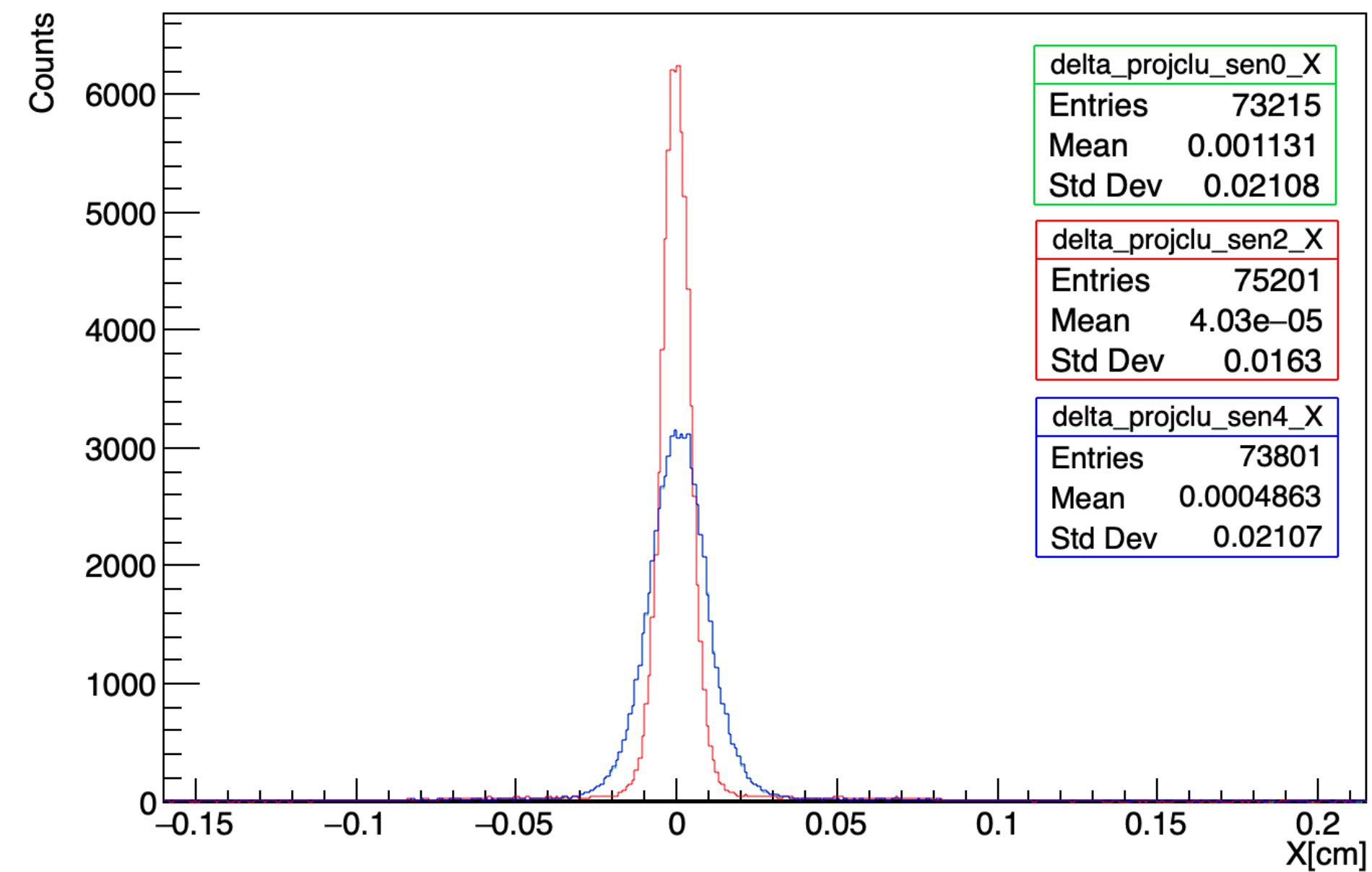
MSD trk proj on Sensor - best



MSD trk proj on Sensor - best



PRELIMINARY

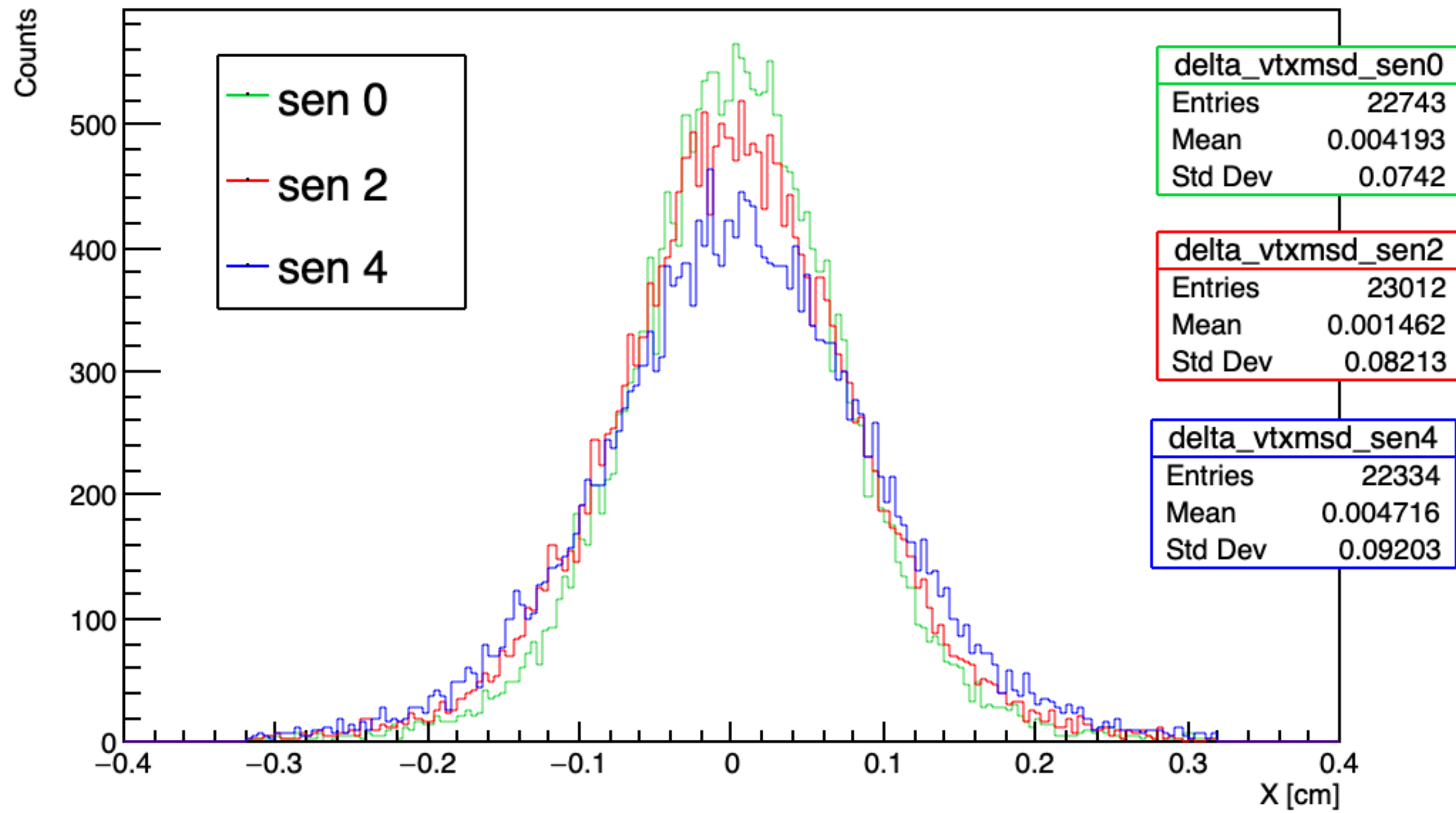


2. From VT tracks

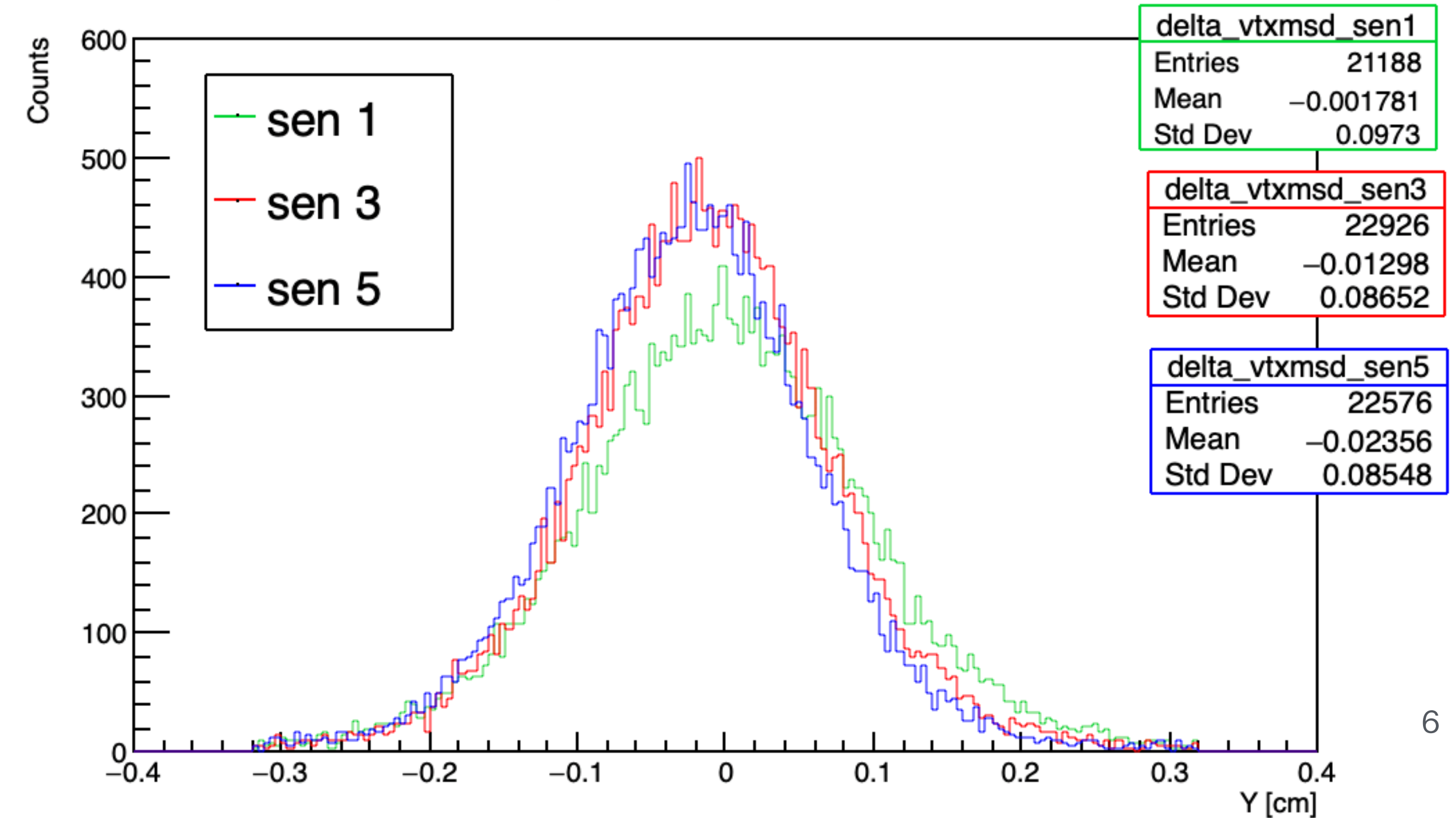
PRELIMINARY

maxDelta = 0.32

Distance btw vtx proj on msd sen in msd RF and msd best clust

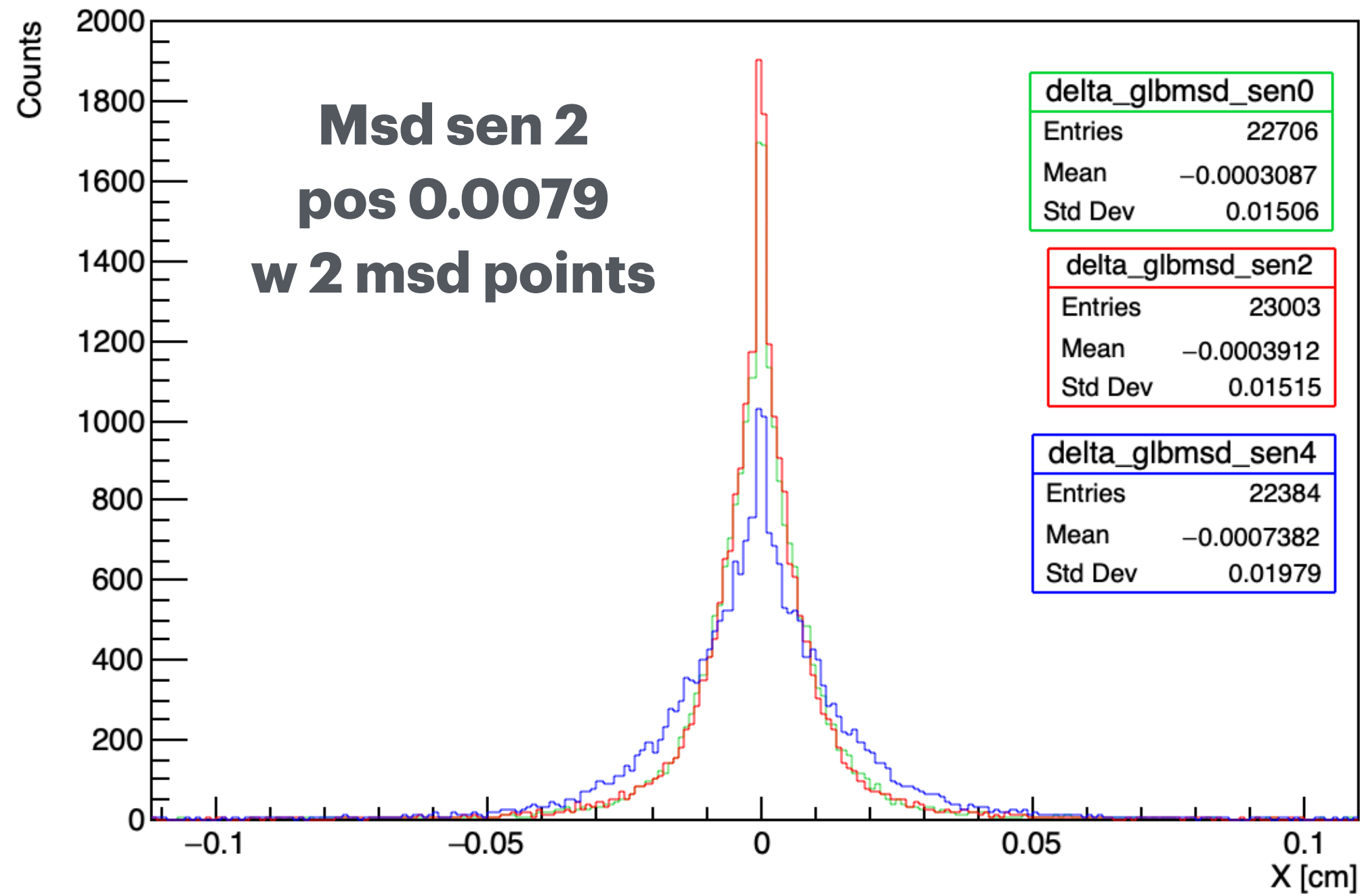


Distance btw vtx proj on msd sen in msd RF and msd best clust



3. From GLB tracks

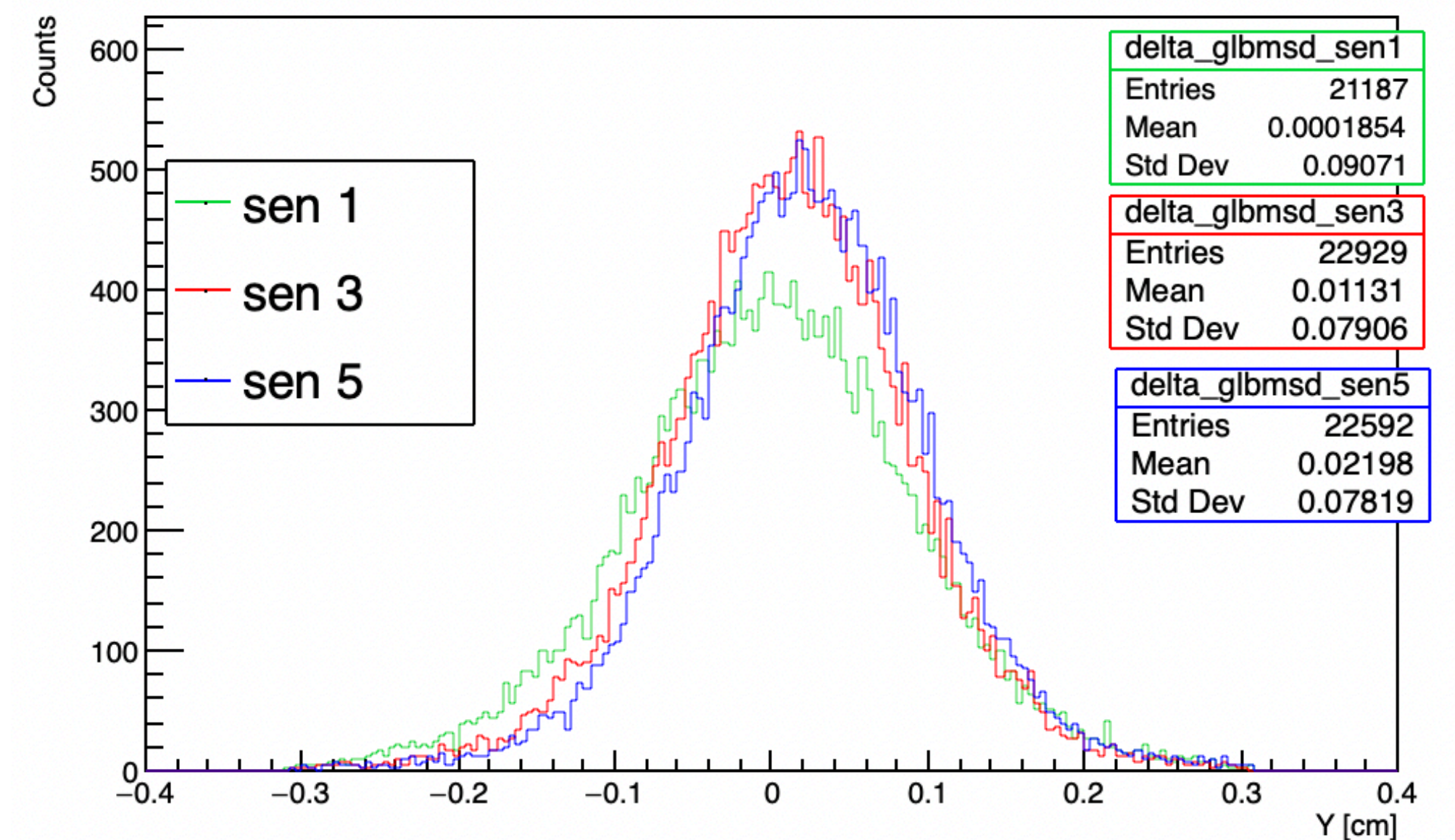
Distance btw glb trk proj on msd sen in msd RF and msd clust of glb trk



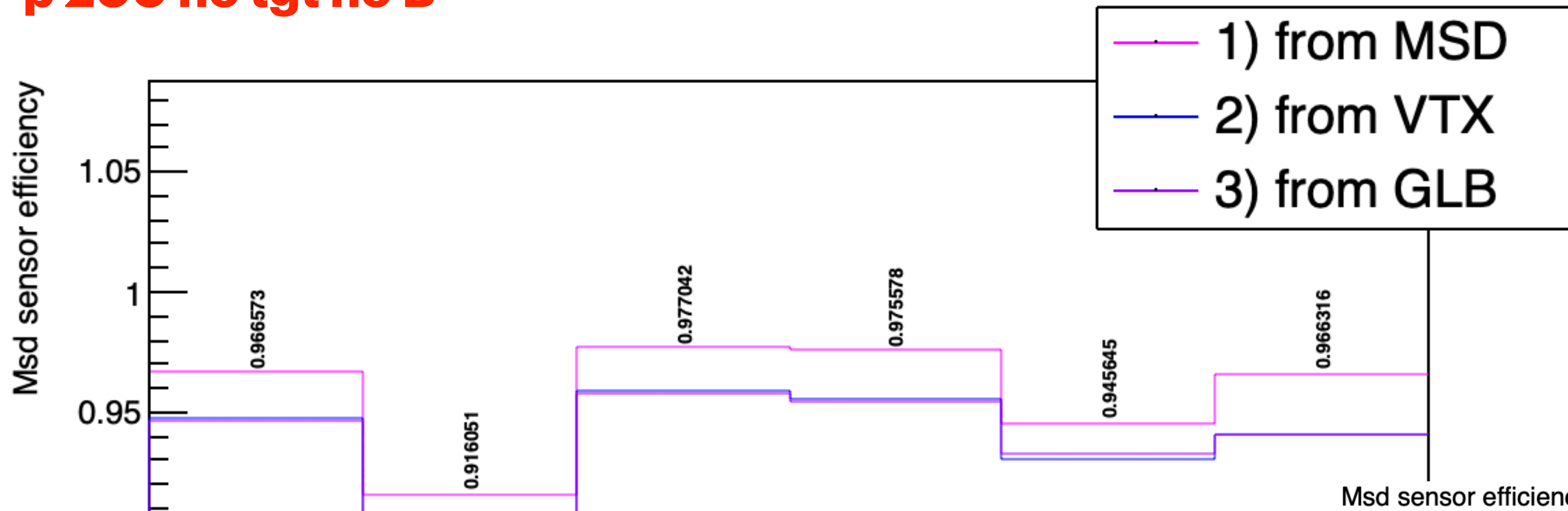
PRELIMINARY

maxDelta = 0.32

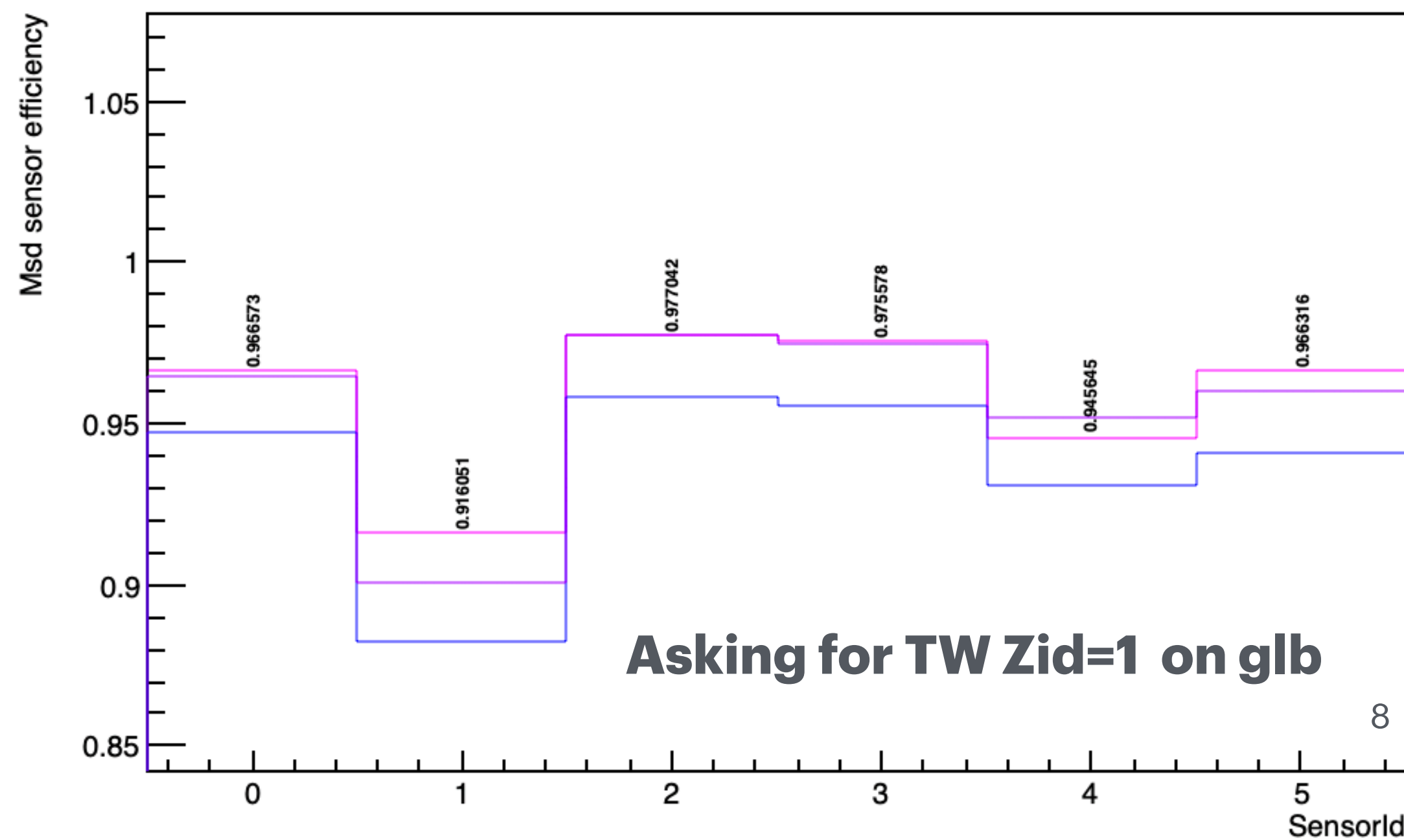
Distance btw glb trk proj on msd sen in msd RF and msd clust of glb trk



p 200 no tgt no B



PRELIMINARY

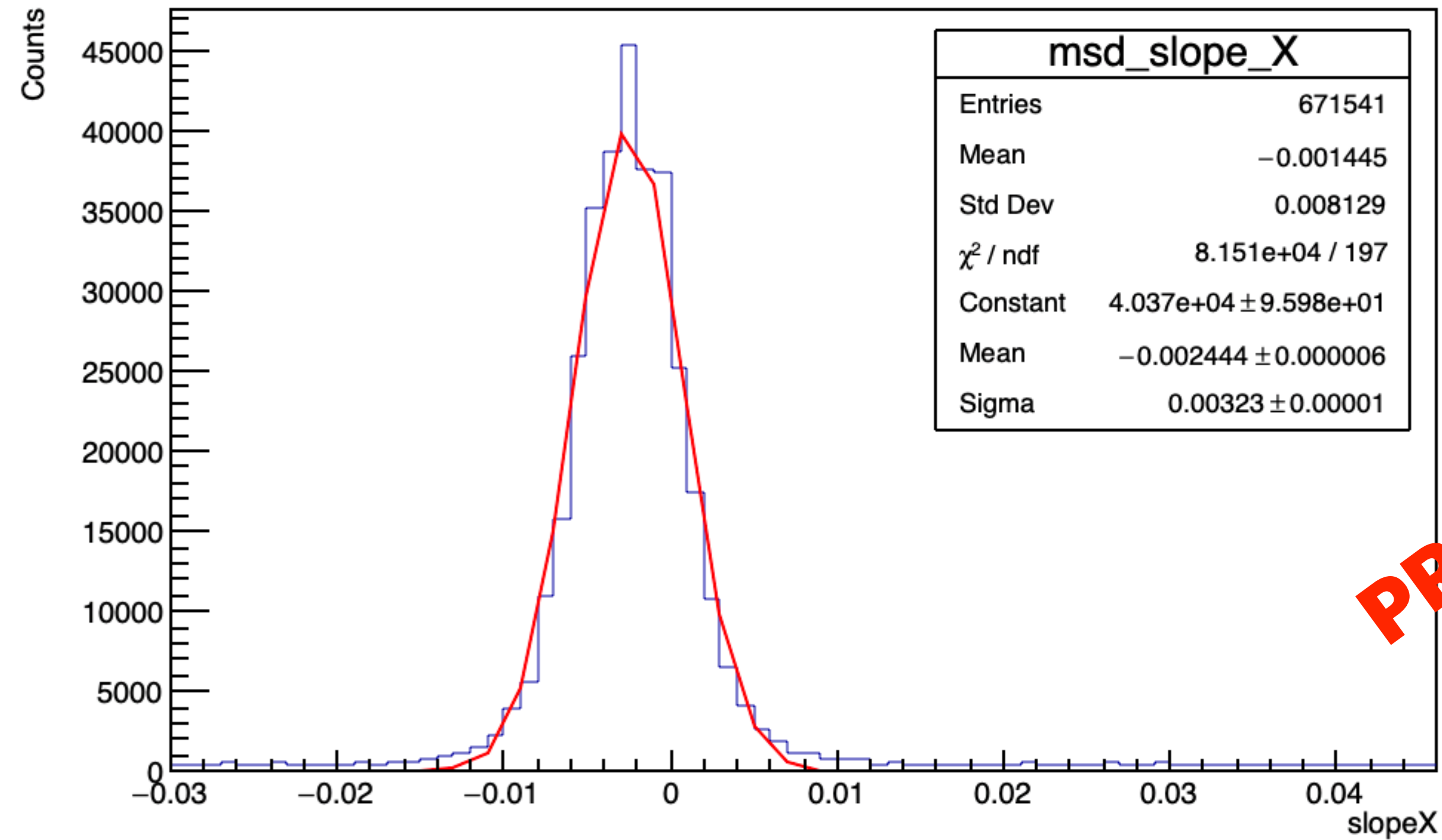


^{12}C 200 MeV no tgt no B

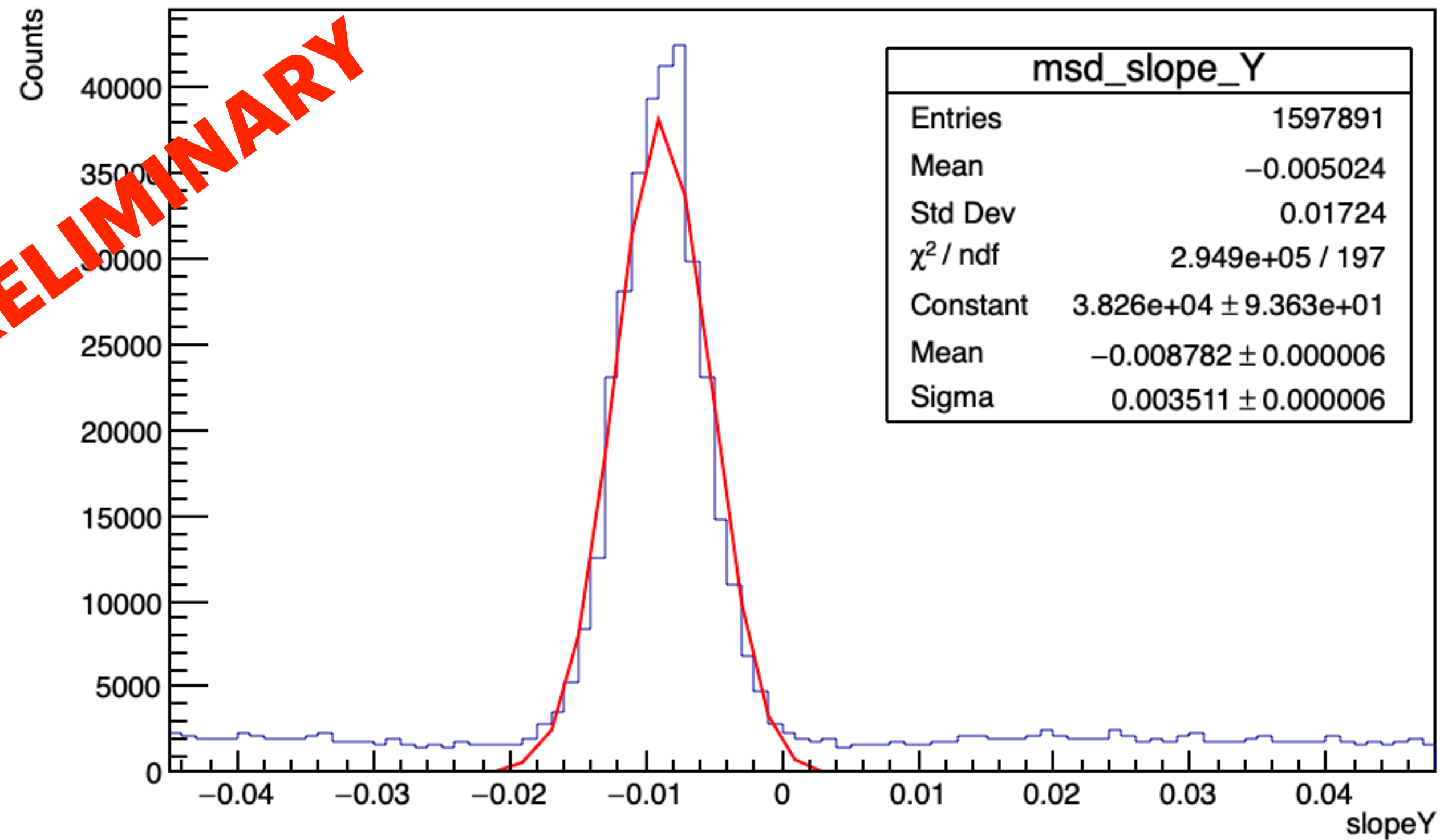
1. From MSD tracks

Run 8027: **C 200 no tgt no B**

MSD trk slope btw 2 sensors



MSD trk slope btw 2 sensors



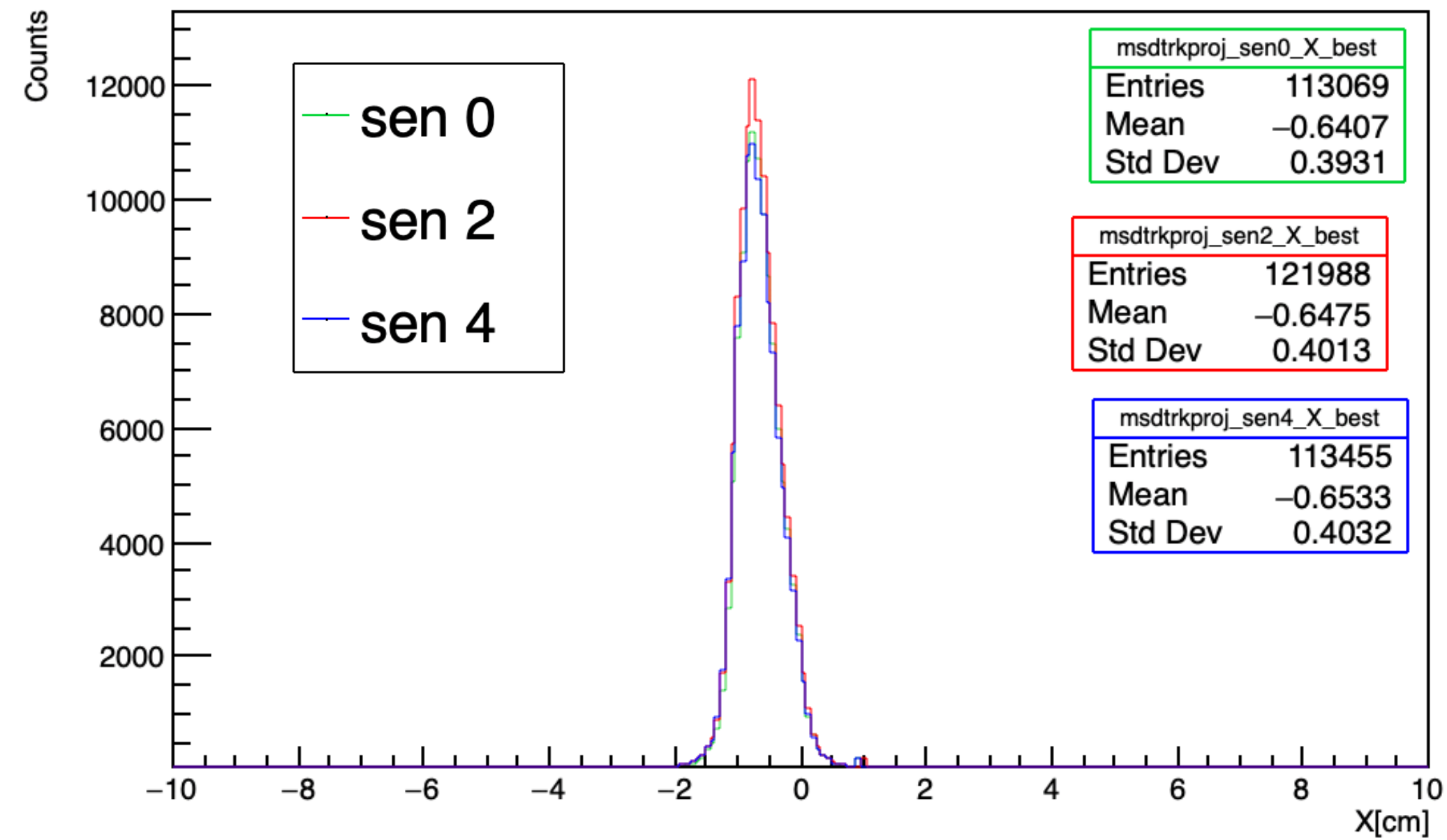
maxSlopeX = 0.03

maxSlopeY_m = -0.04;
maxSlopeY_M = 0.02;

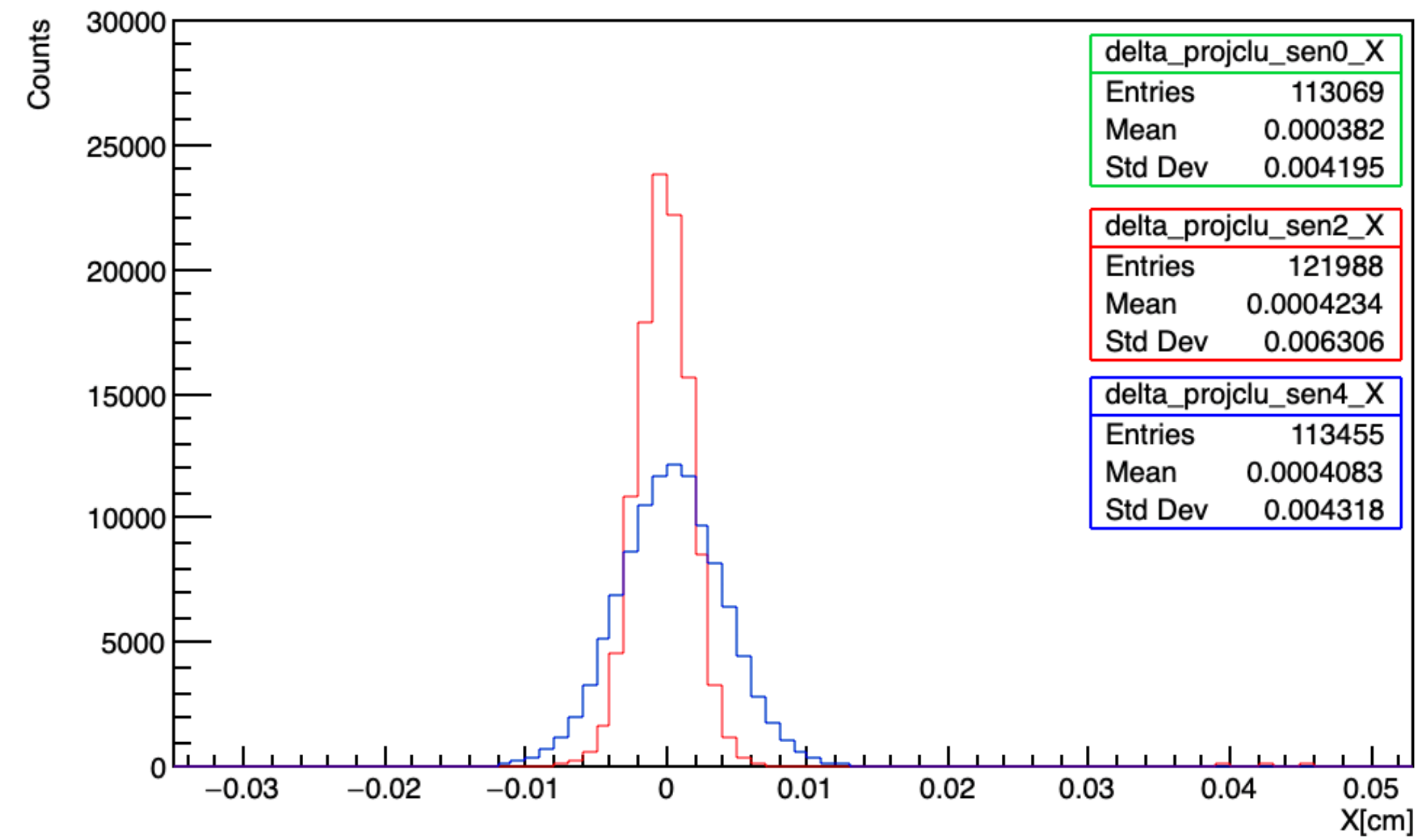
1. From MSD tracks

MSD trk proj on Sensor - best

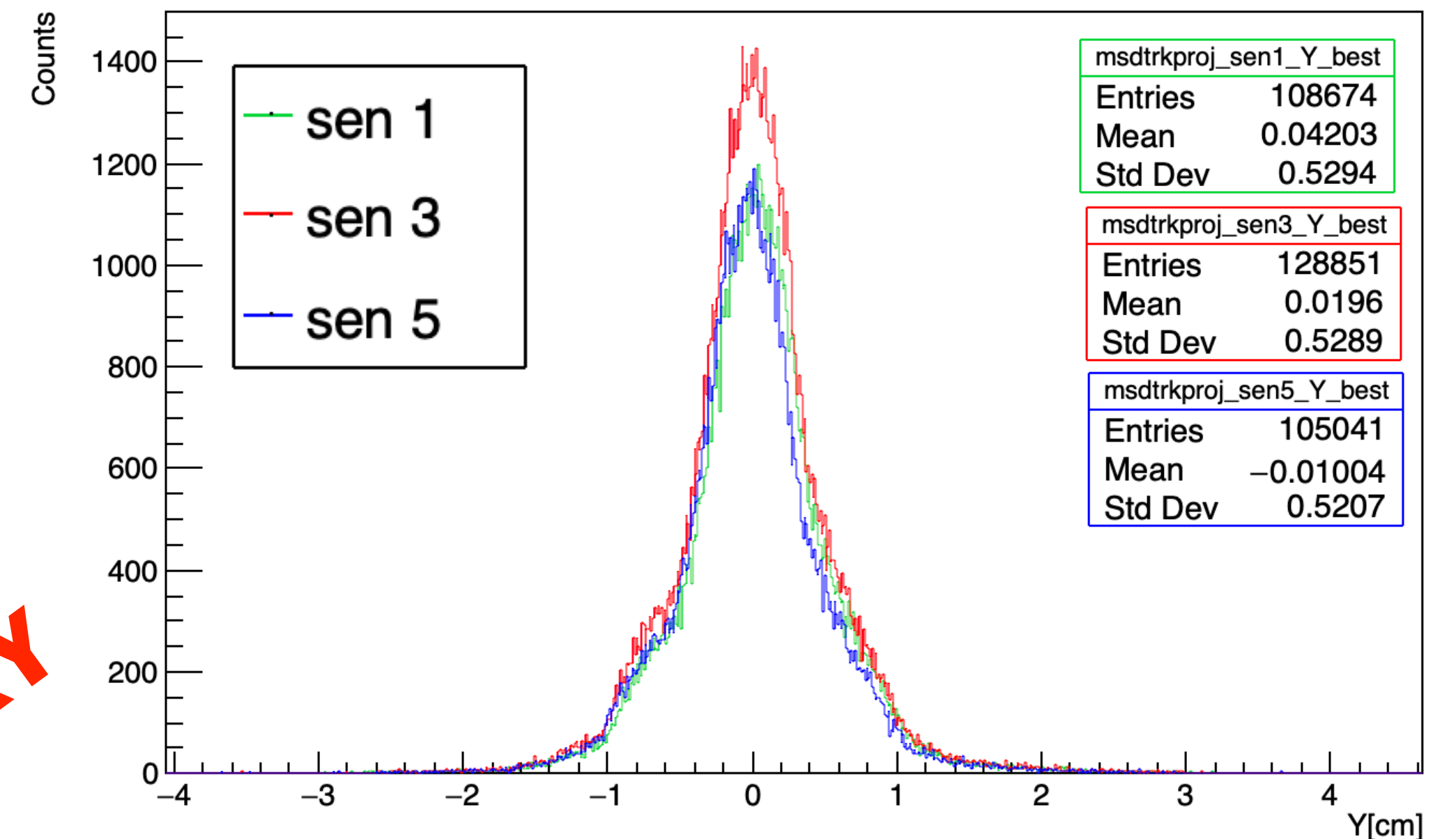
C 200 no tgt no B



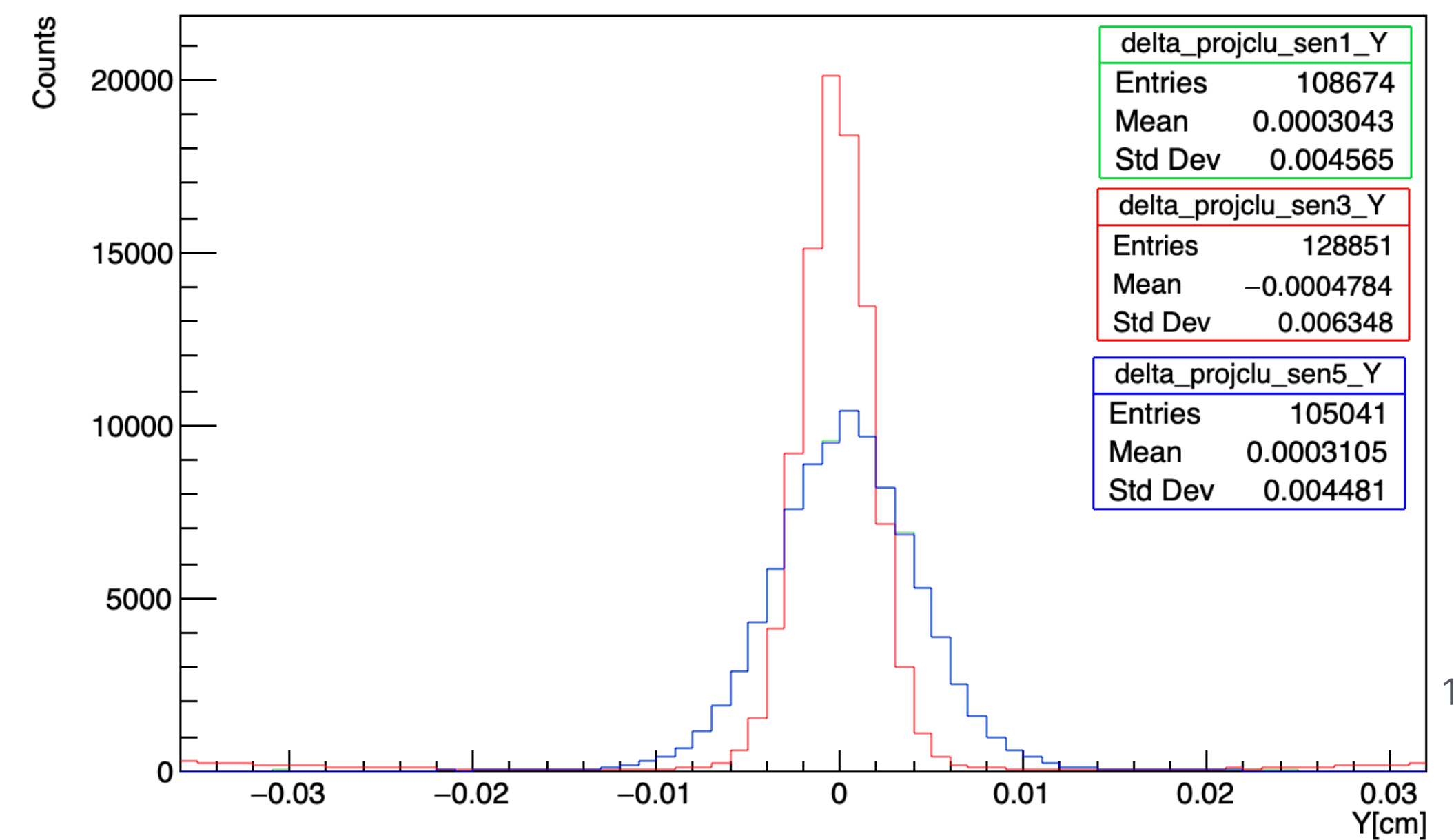
delta btw msd proj on plane and msd clus



MSD trk proj on Sensor - best



delta btw msd proj on plane and msd clus

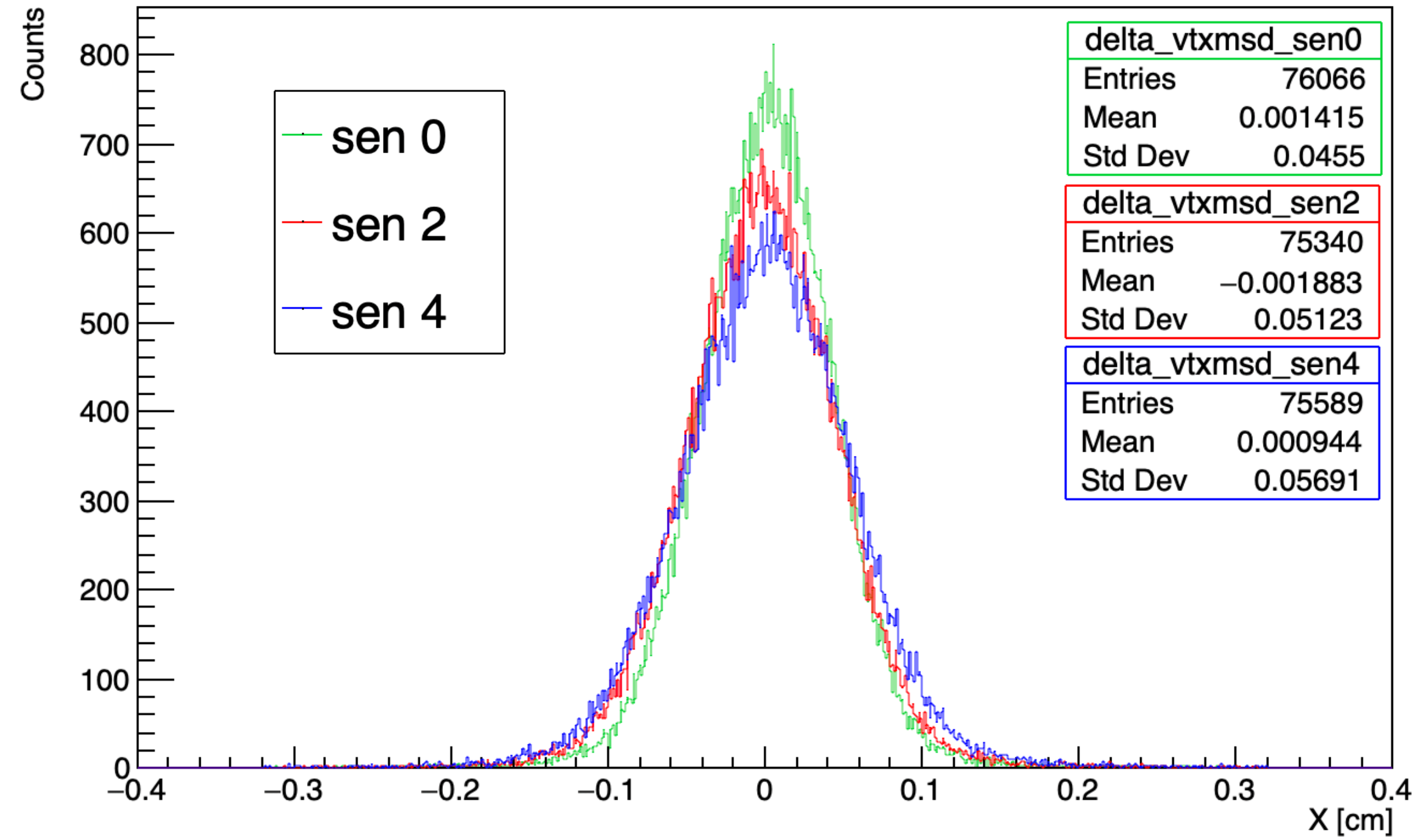


PRELIMINARY

2. From VT tracks

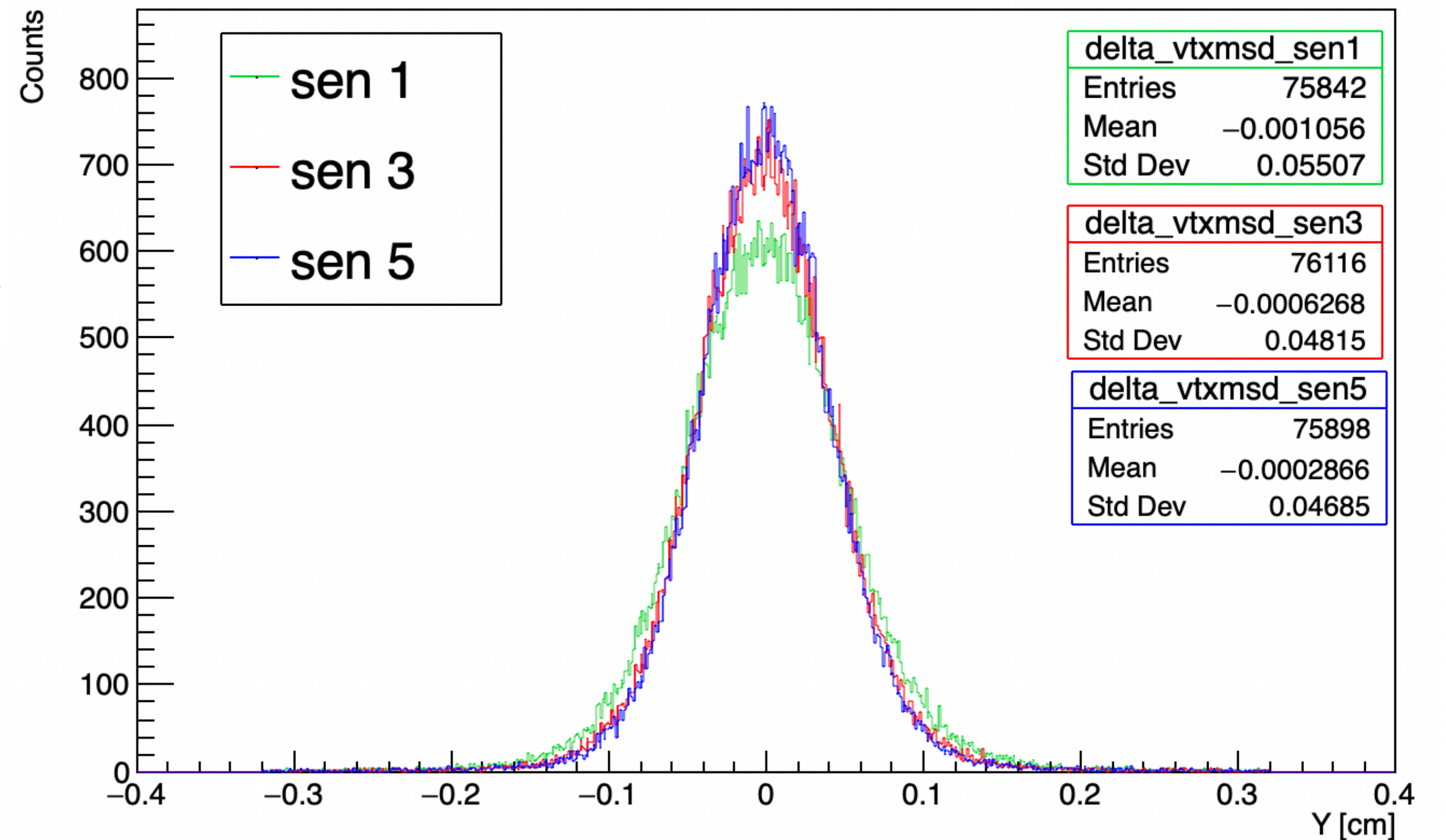
C 200 no tgt no B

Distance btw vtx proj on msd sen in msd RF and msd best clust



PRELIMINARY

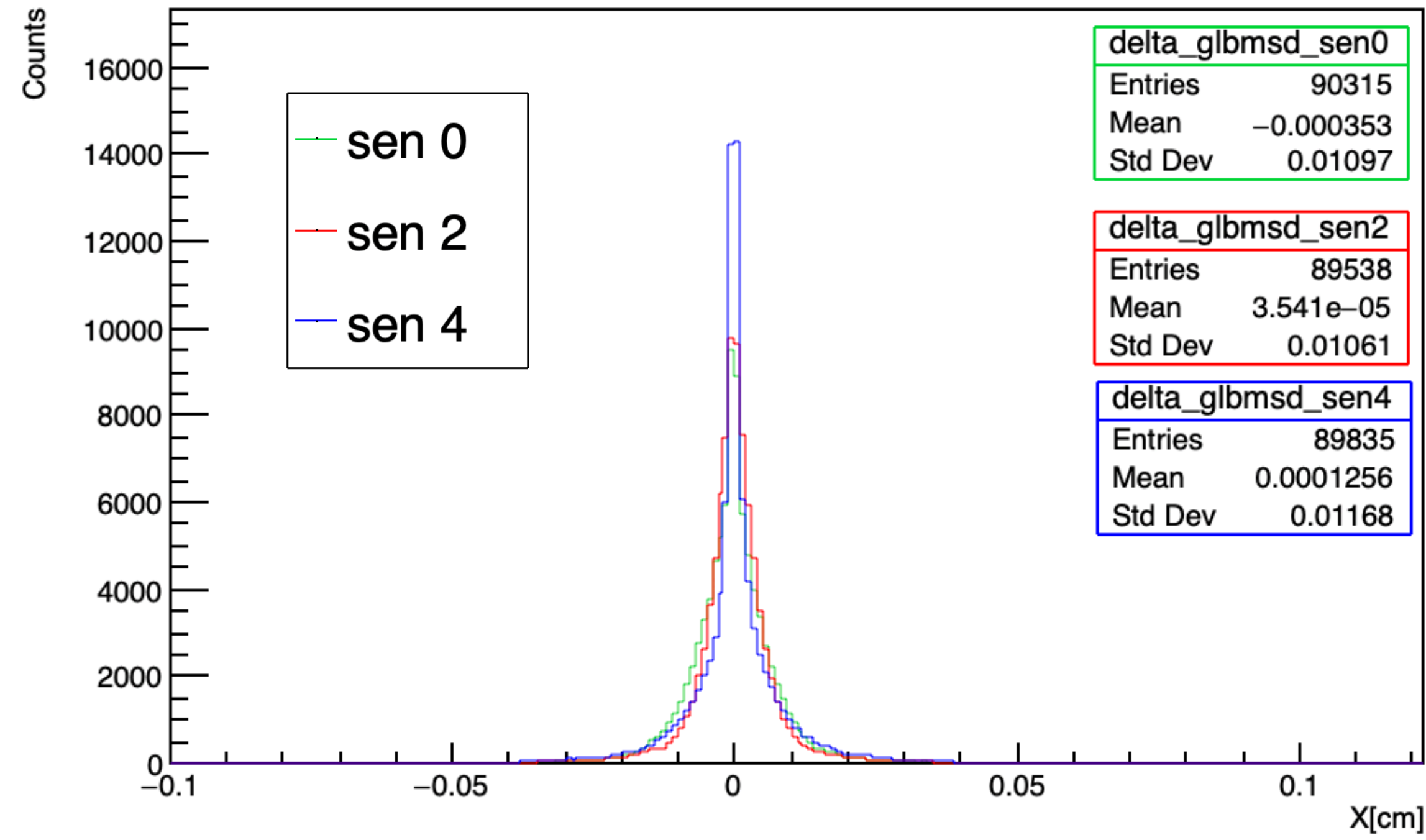
Distance btw vtx proj on msd sen in msd RF and msd best clust



3. From GLB tracks

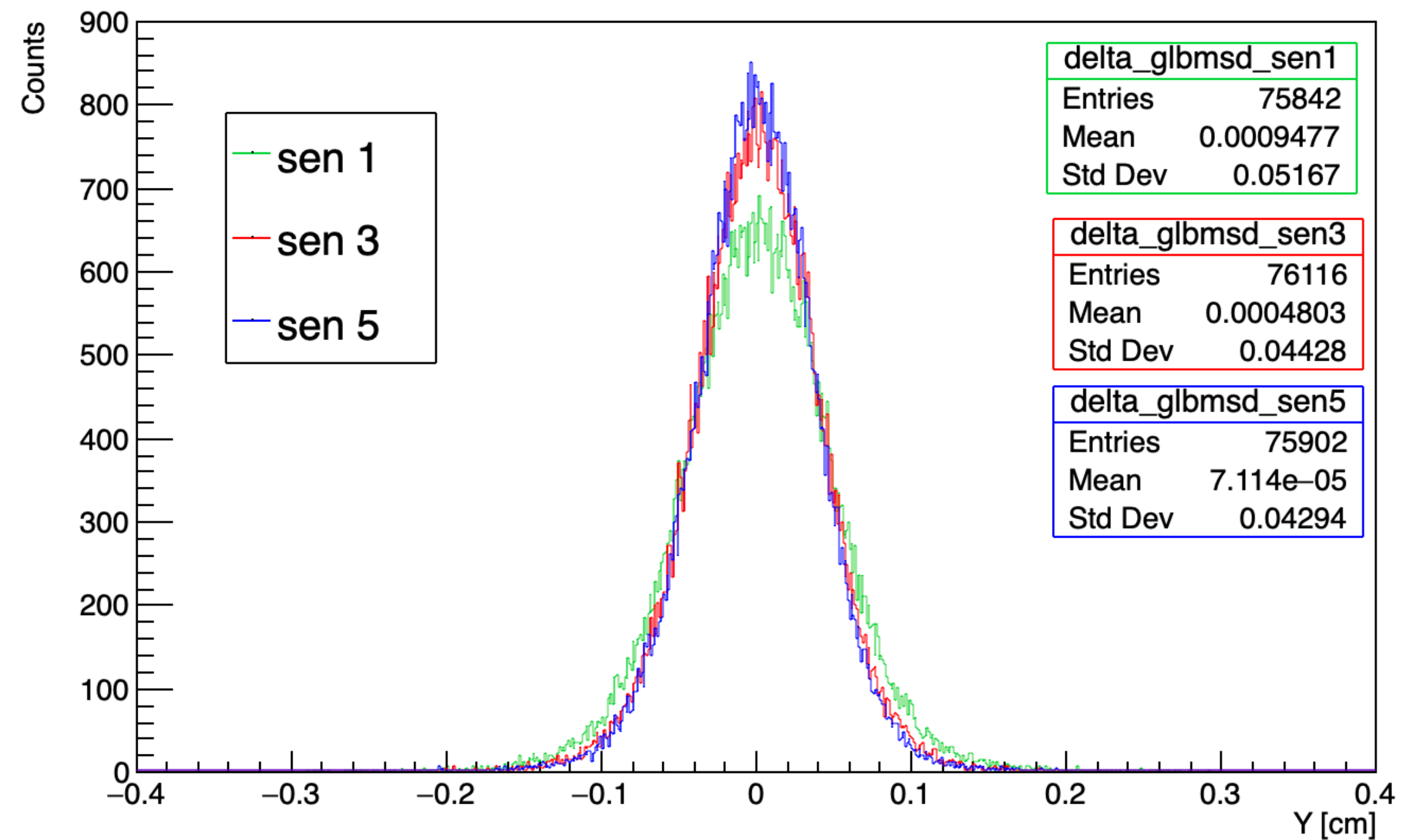
C 200 no tgt no B

Distance btw glb trk proj on msd sen in msd RF and msd clust of glb trk



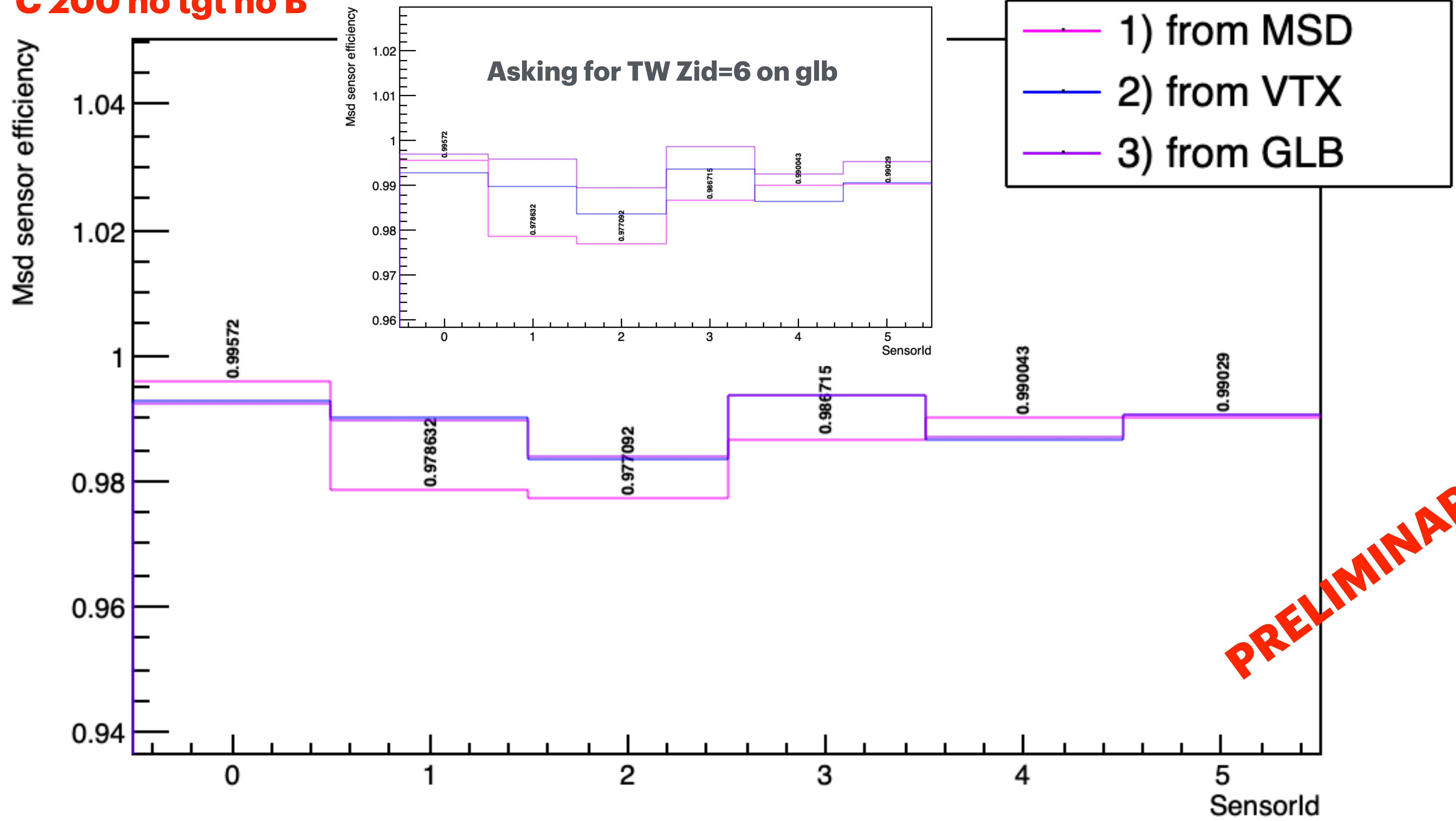
PRELIMINARY

Distance btw glb trk proj on msd sen in msd RF and msd clust of glb trk



C 200 no tgt no B

Msd sensor efficiency per track



PRELIMINARY

This is a very preliminary analysis status: many things have been changed so far and I did not had the time to re-run everything and look at the updated histos

To Do:

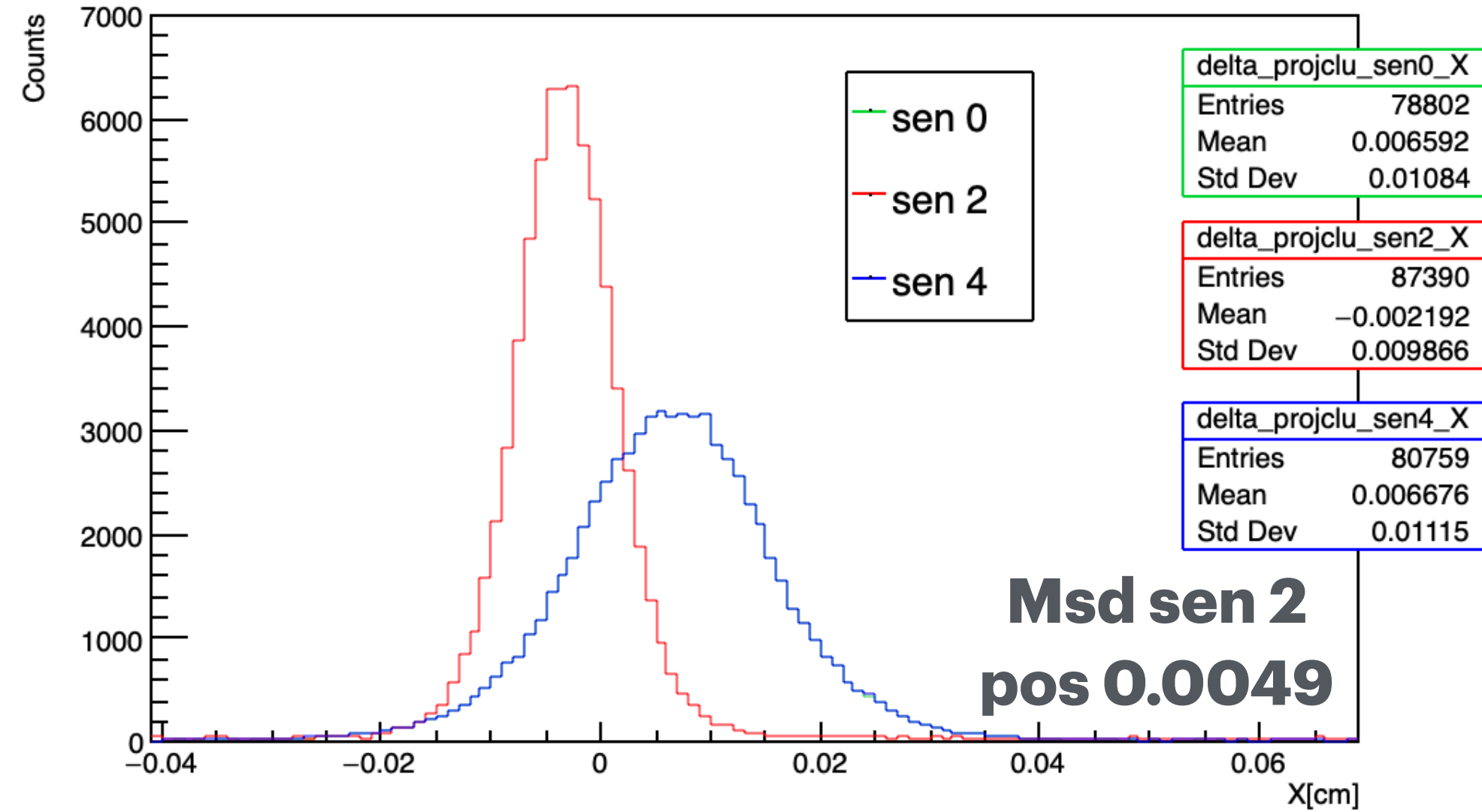
- To be sure we are not using MSD clusters from noise:
 - a) rise up the seed threshold (at least in 12C runs - now it was at seed = 9, fired = 2 for almost all sens)
 - b) check on Eloss of clusters
- After doing the Sensor Efficiency we can perform the Plane Efficiency:
 - a) implement/correct the TAMSDntuPoint class with front-rear cluster Zid match from Eloss (see TWntuPoint class)

N.B.: To perform the efficiency scan, we will implement our own DecodeMsd where we can set the fired and seed thresholds by command line (as suggested by Yun)

backup

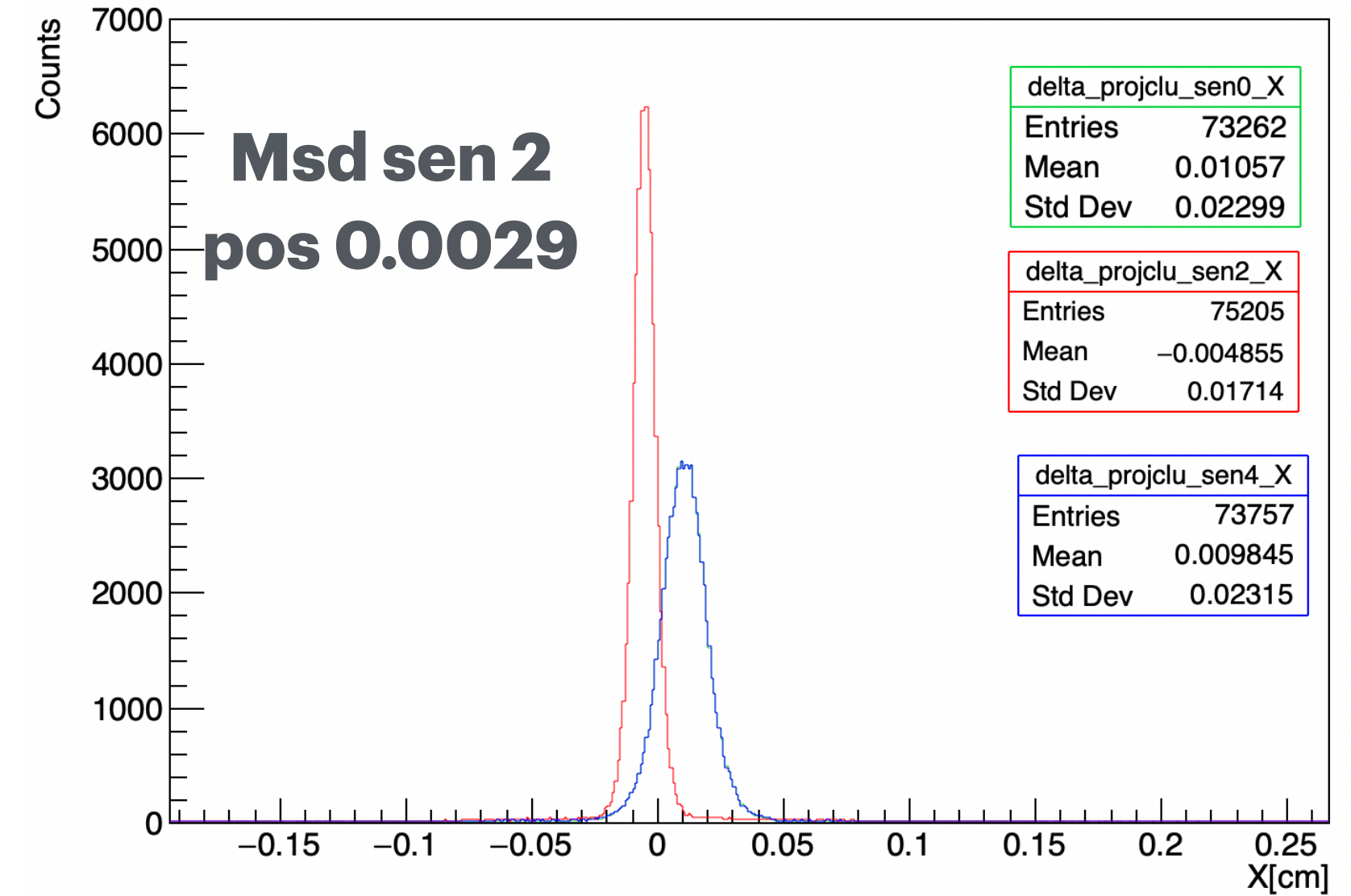
1. From MSD tracks

delta btw msd proj on plane and msd clus

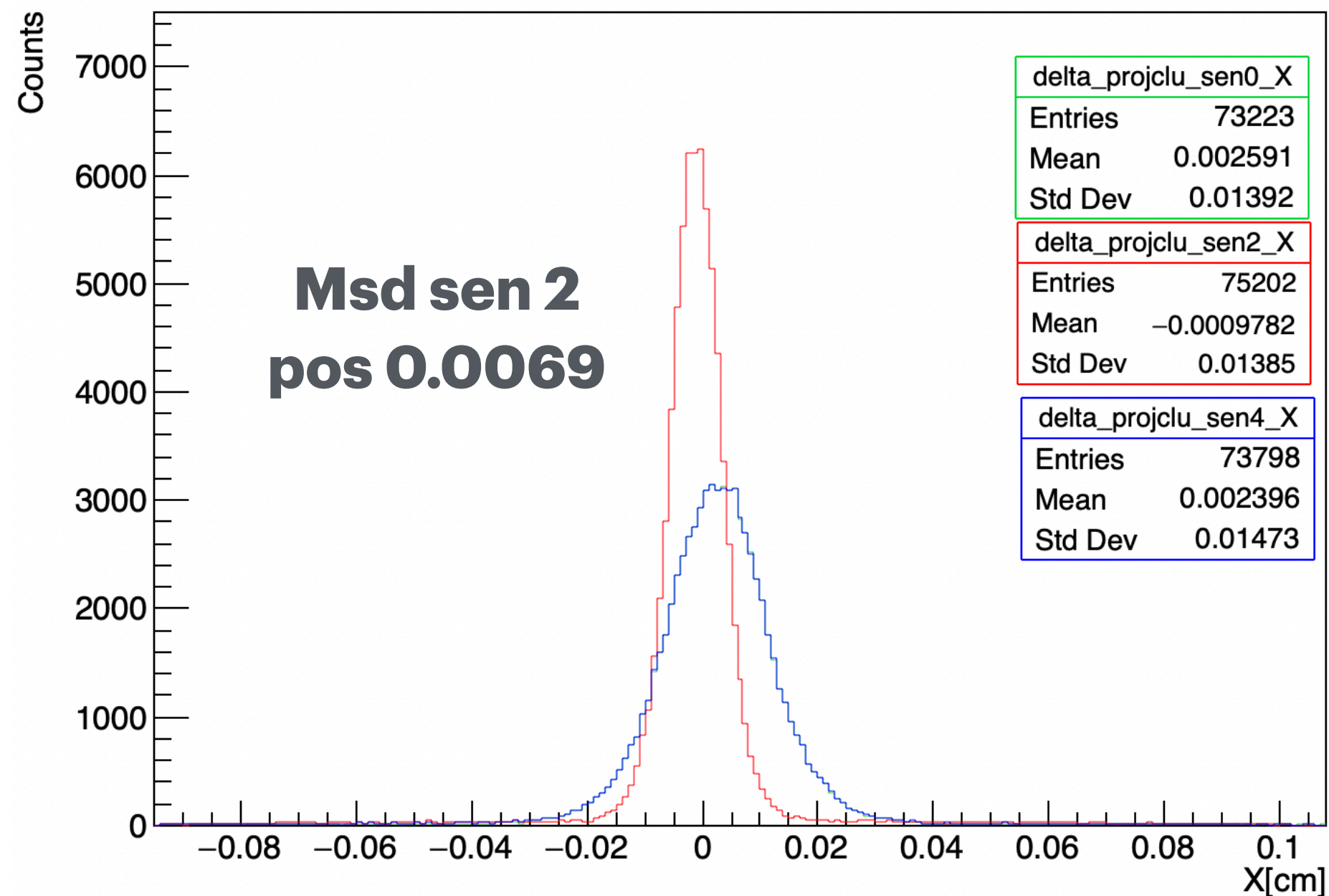


Run 8001: **p 200 no tgt no B**

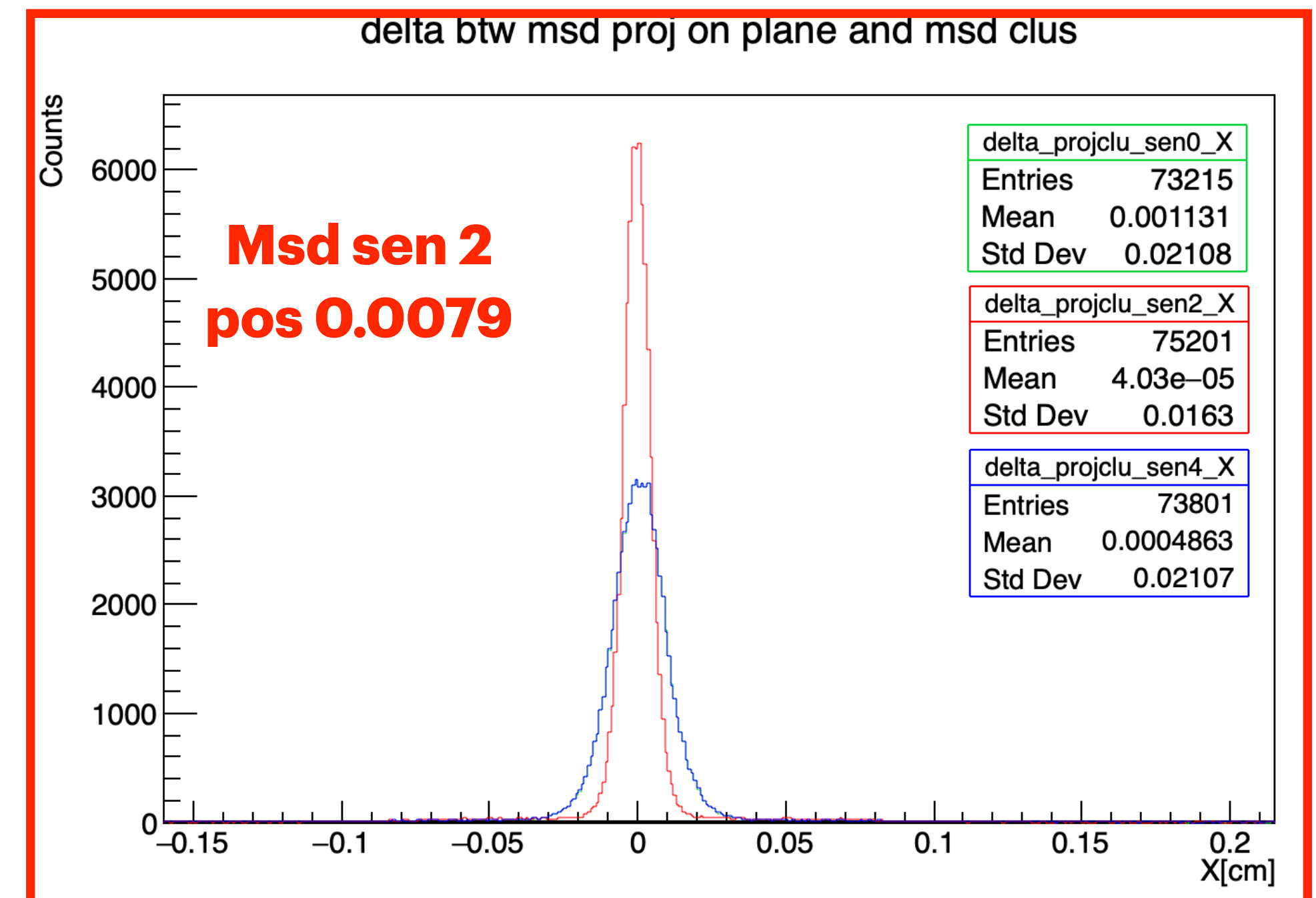
delta btw msd proj on plane and msd clus



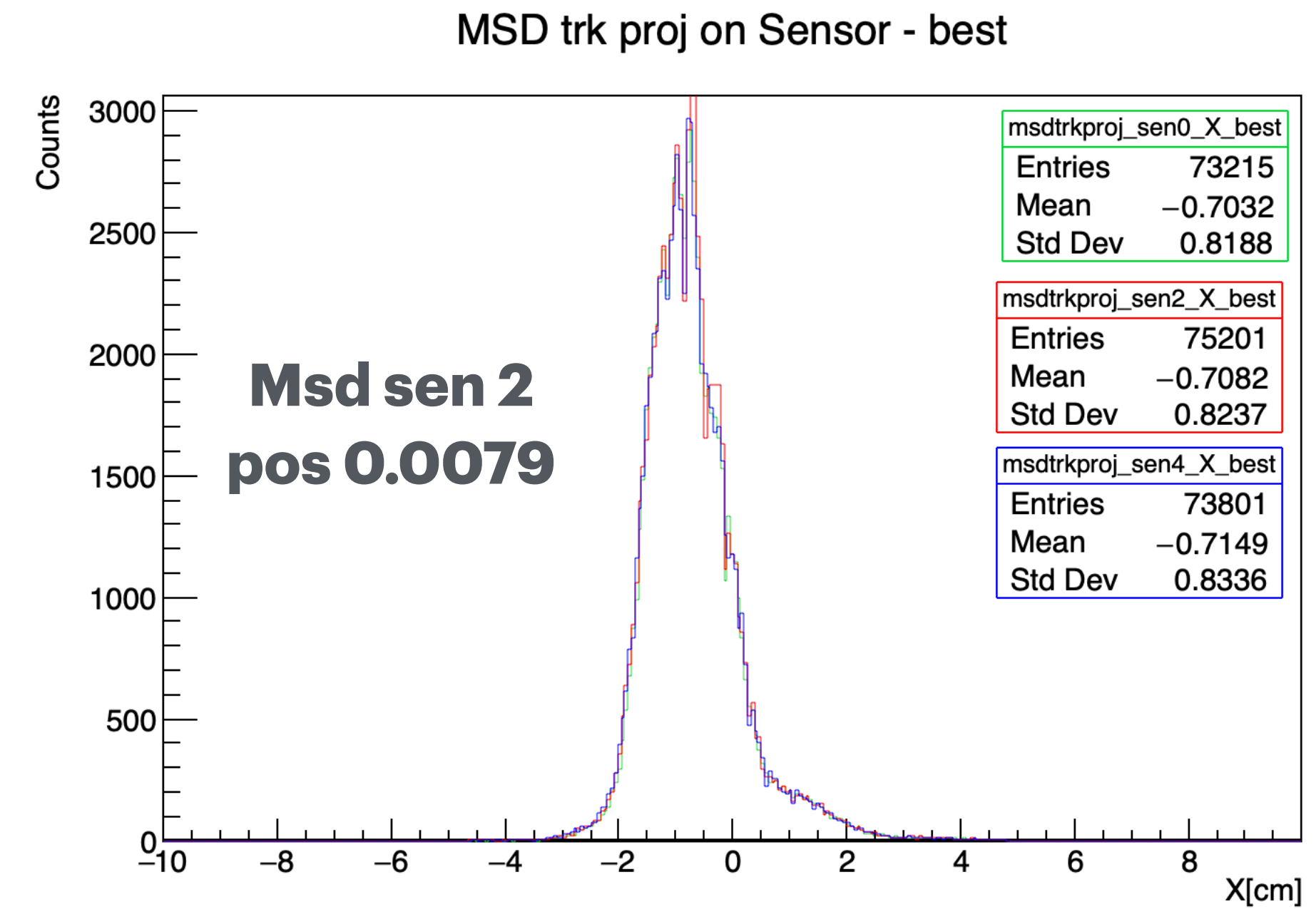
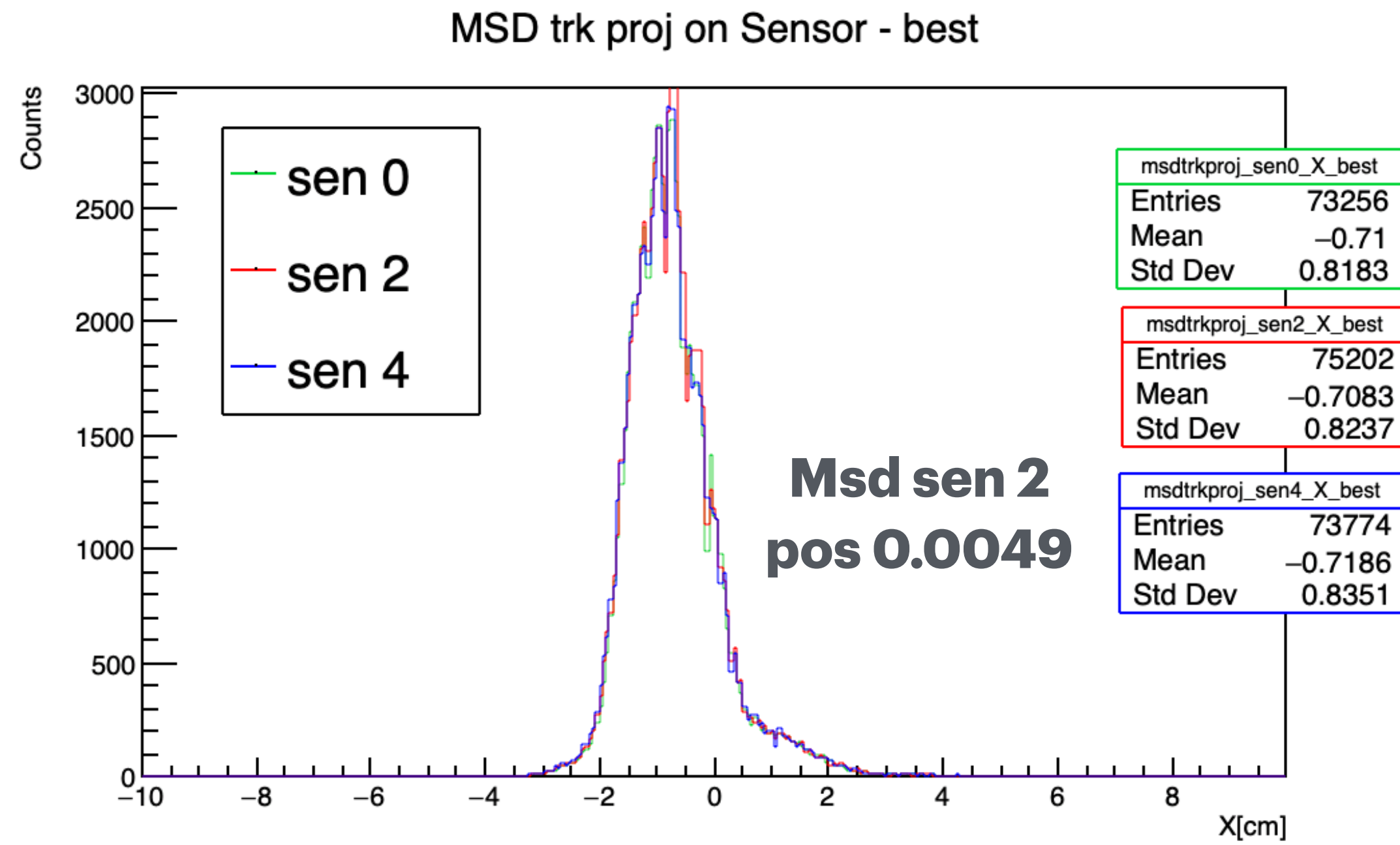
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delta btw msd proj on plane and msd clus



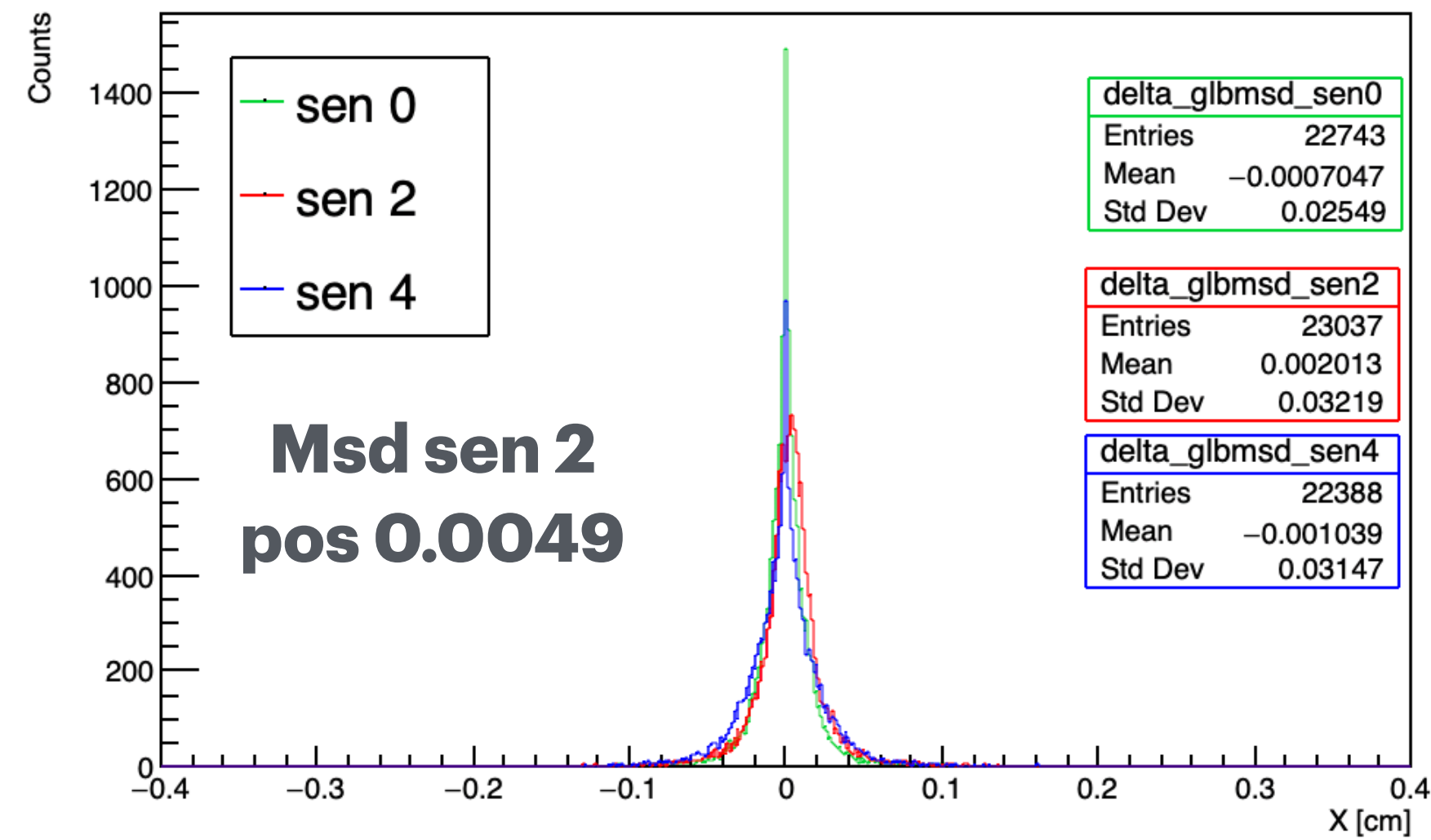
1. From MSD tracks



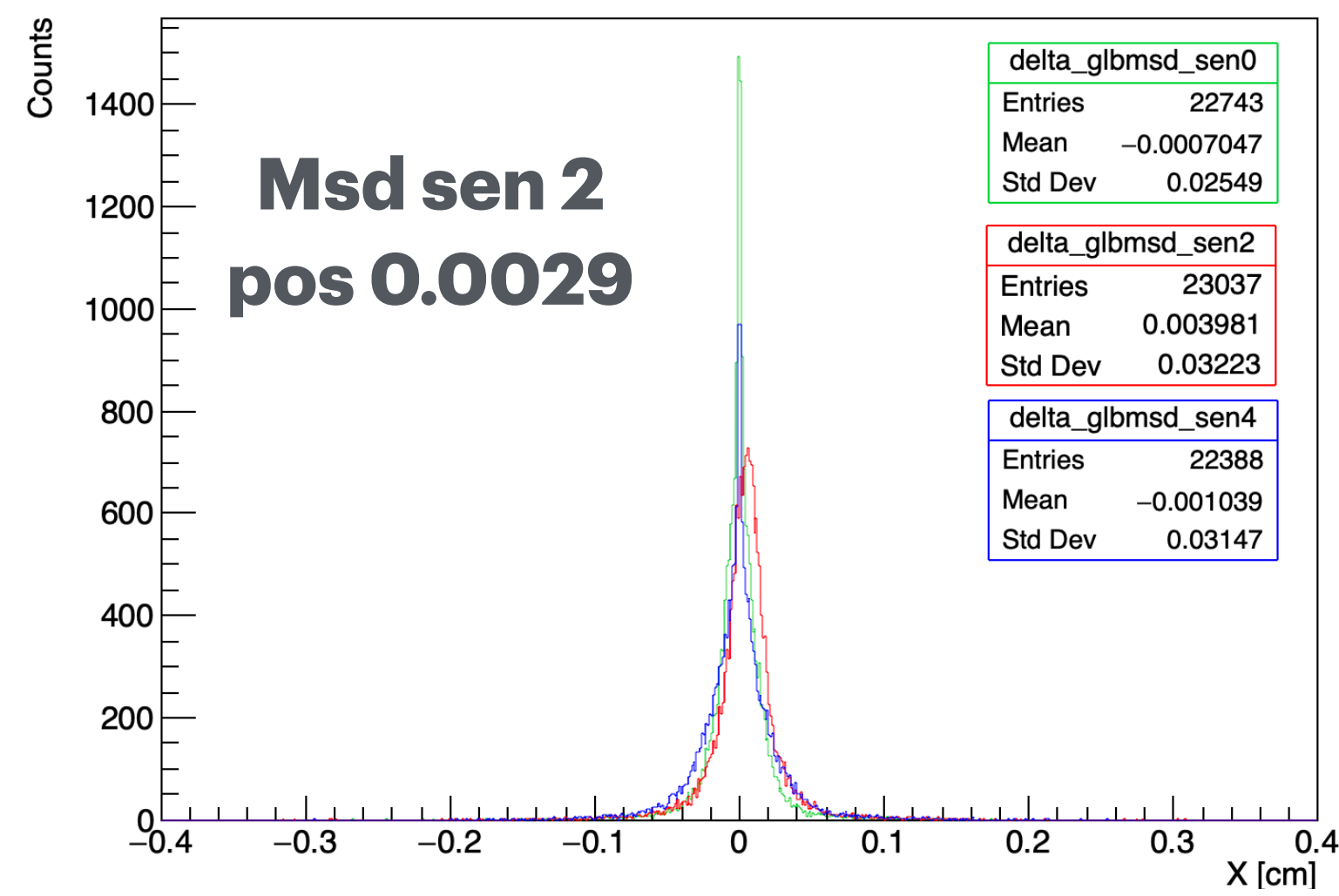
3. From GLB tracks

p 200 no tgt no B

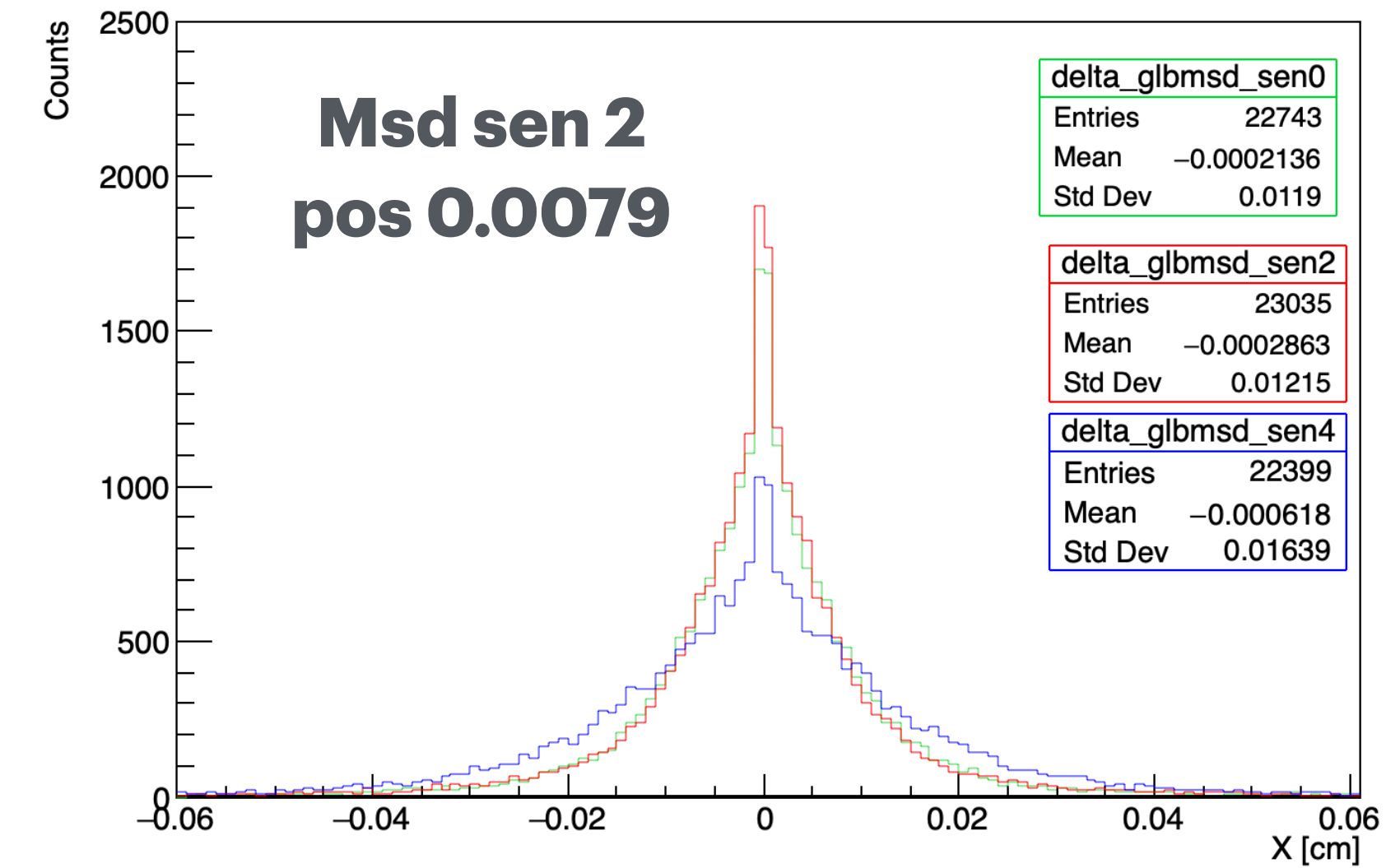
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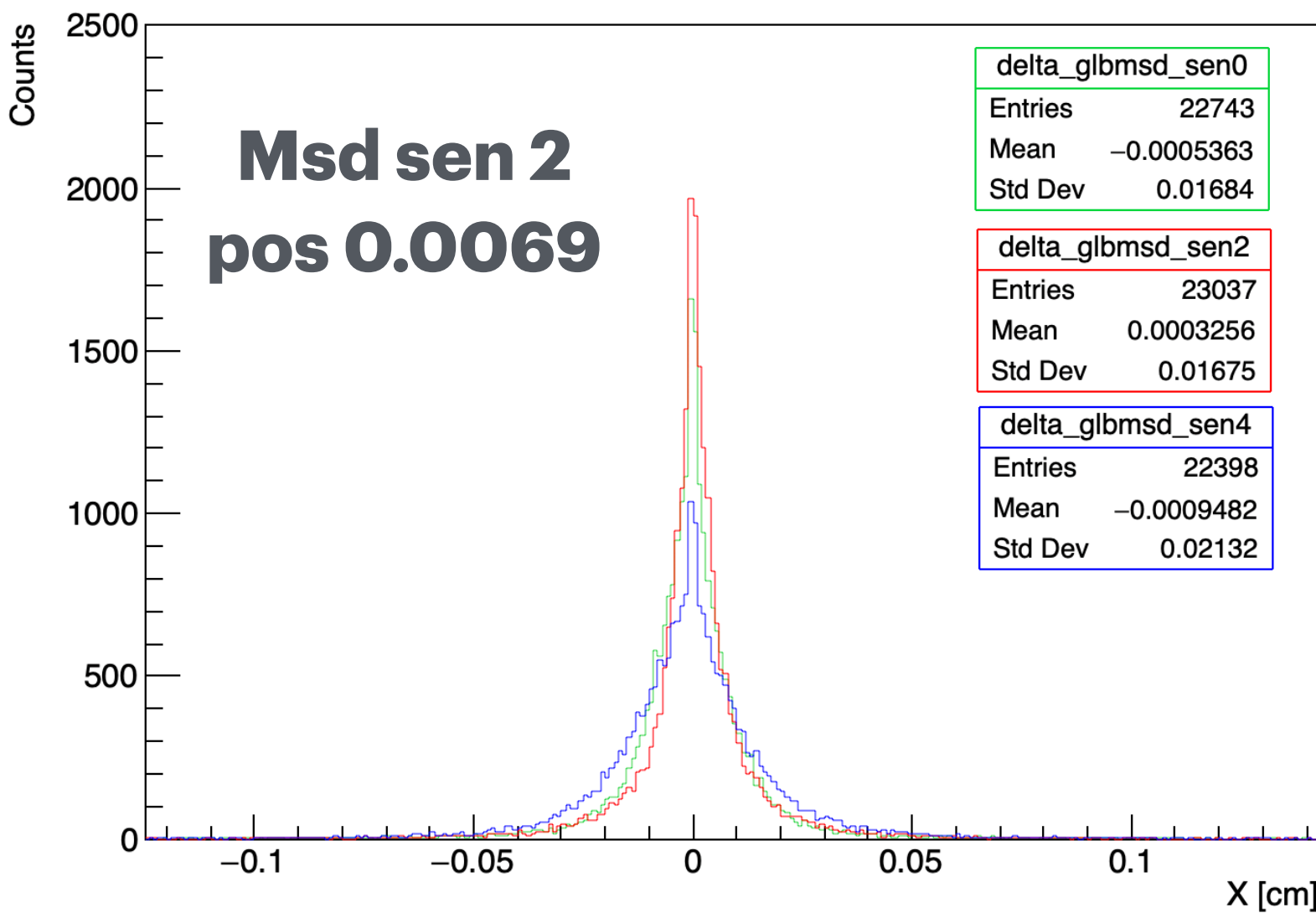
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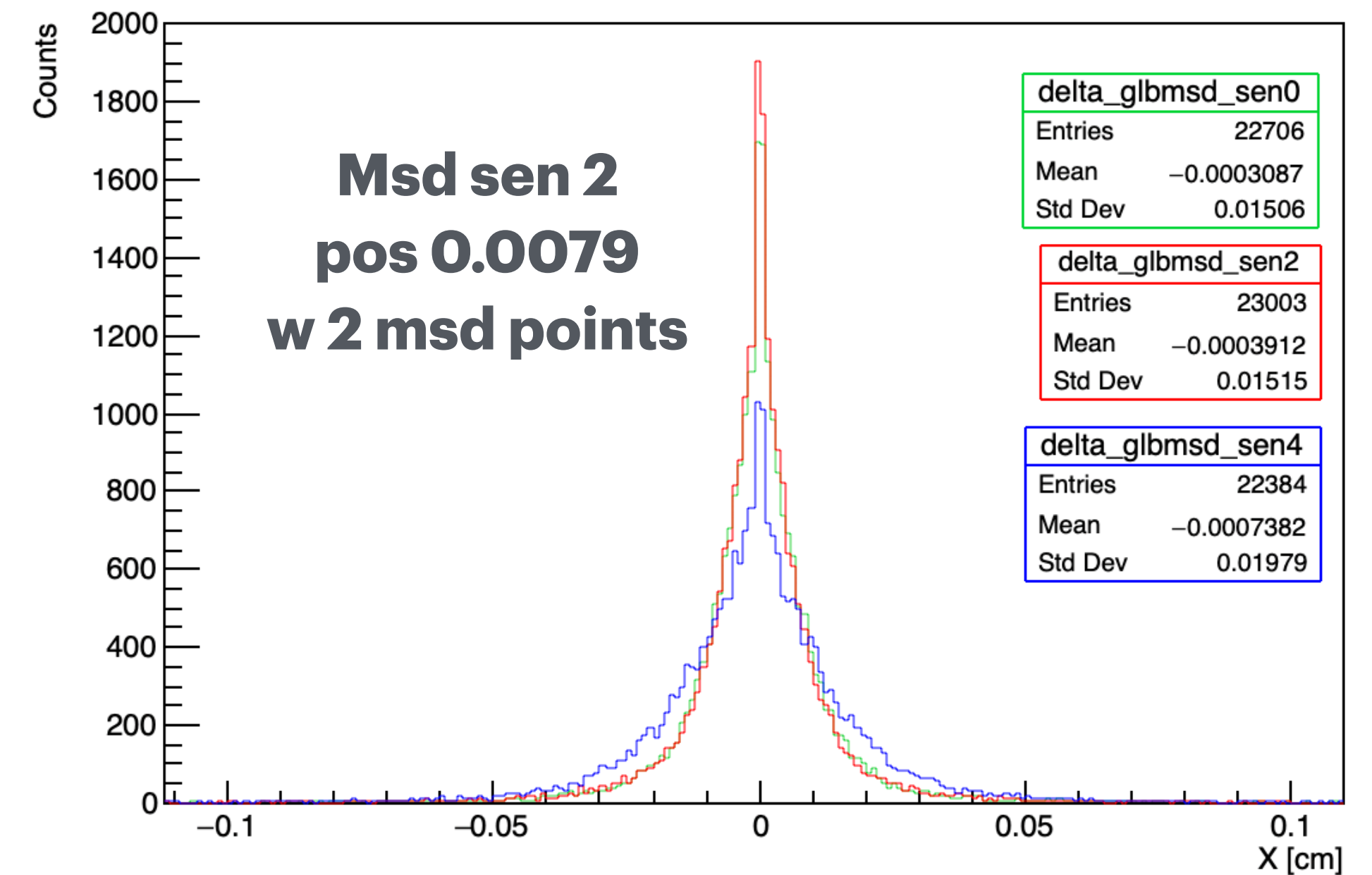
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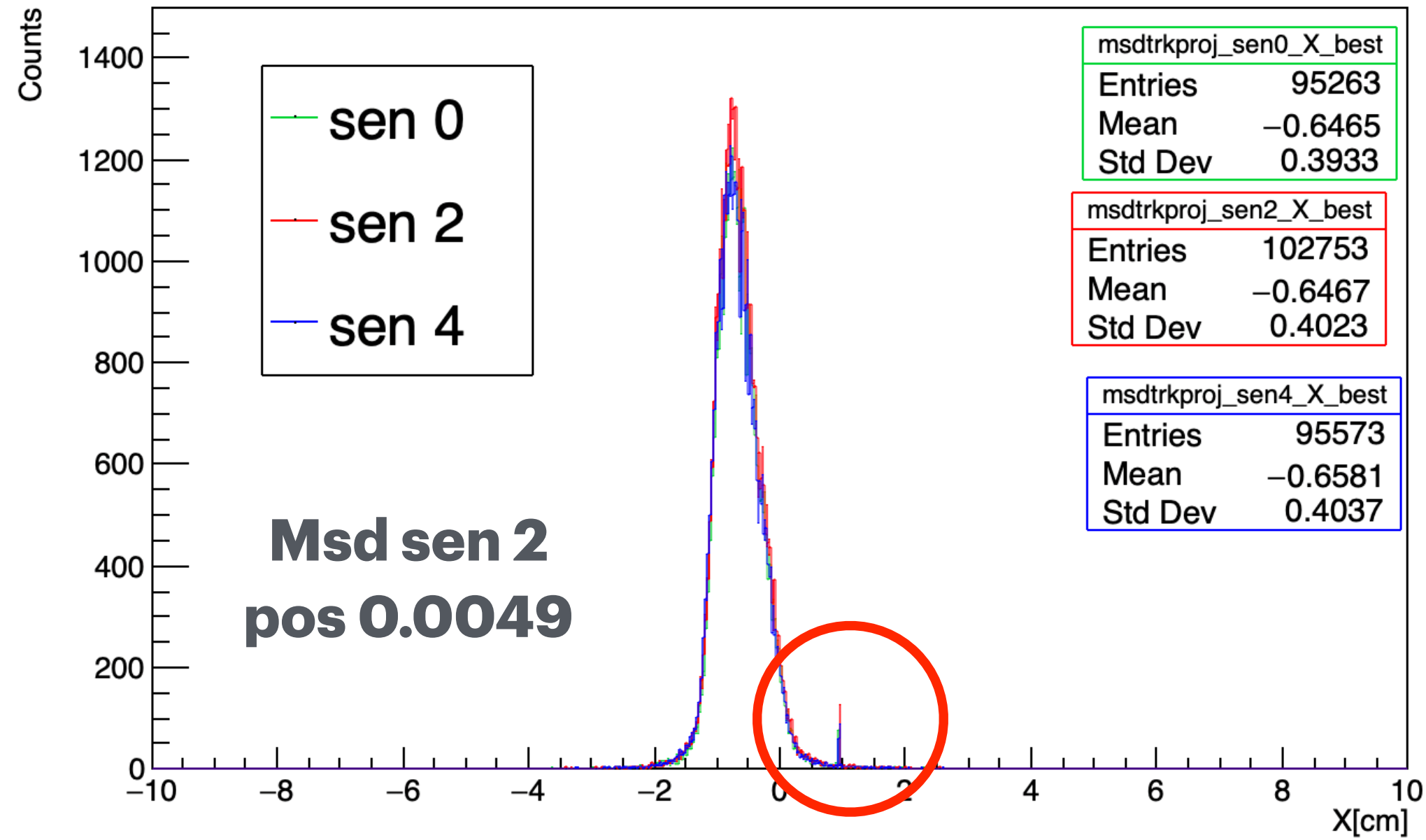
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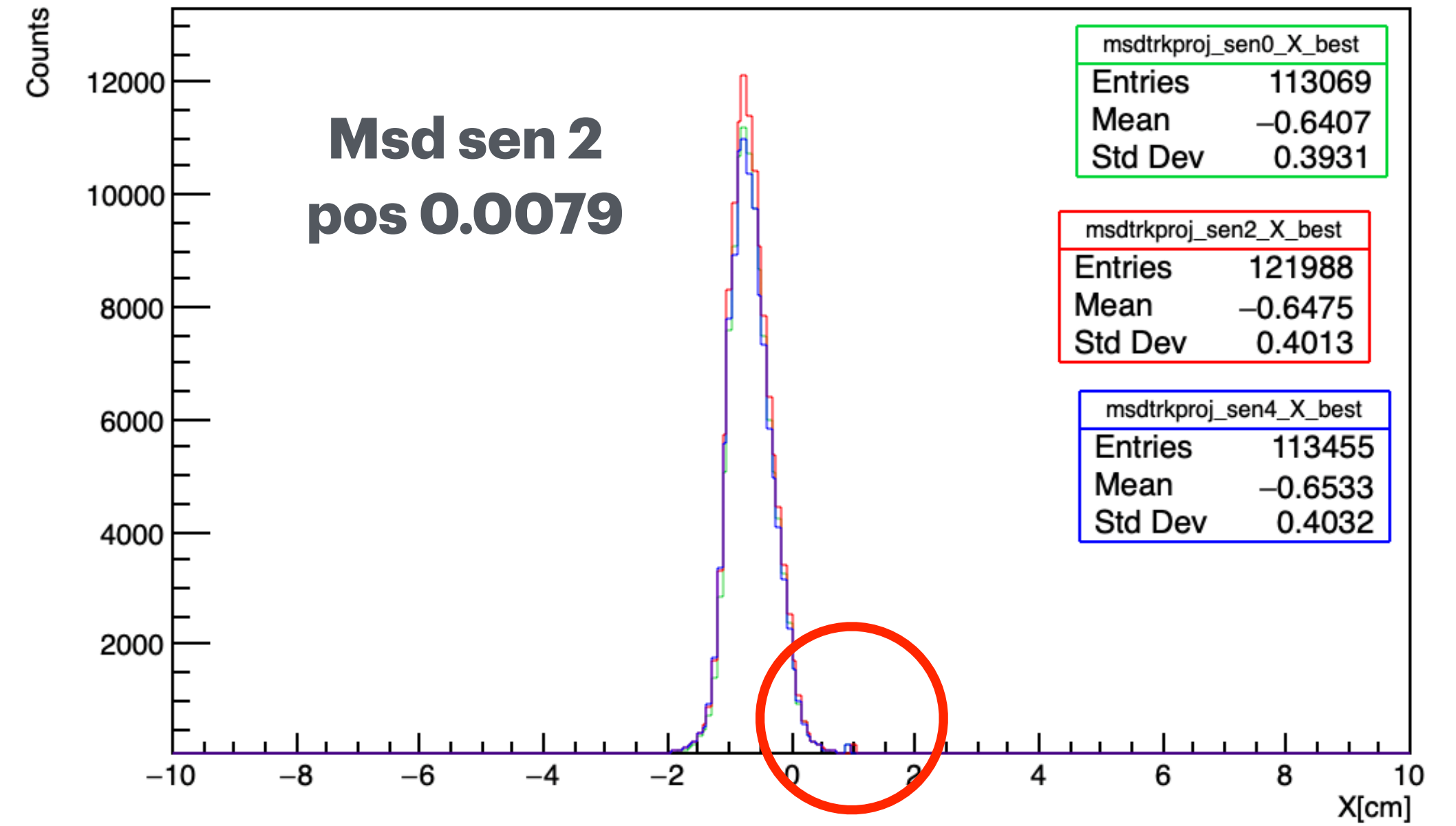
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C 200 no tgt no B

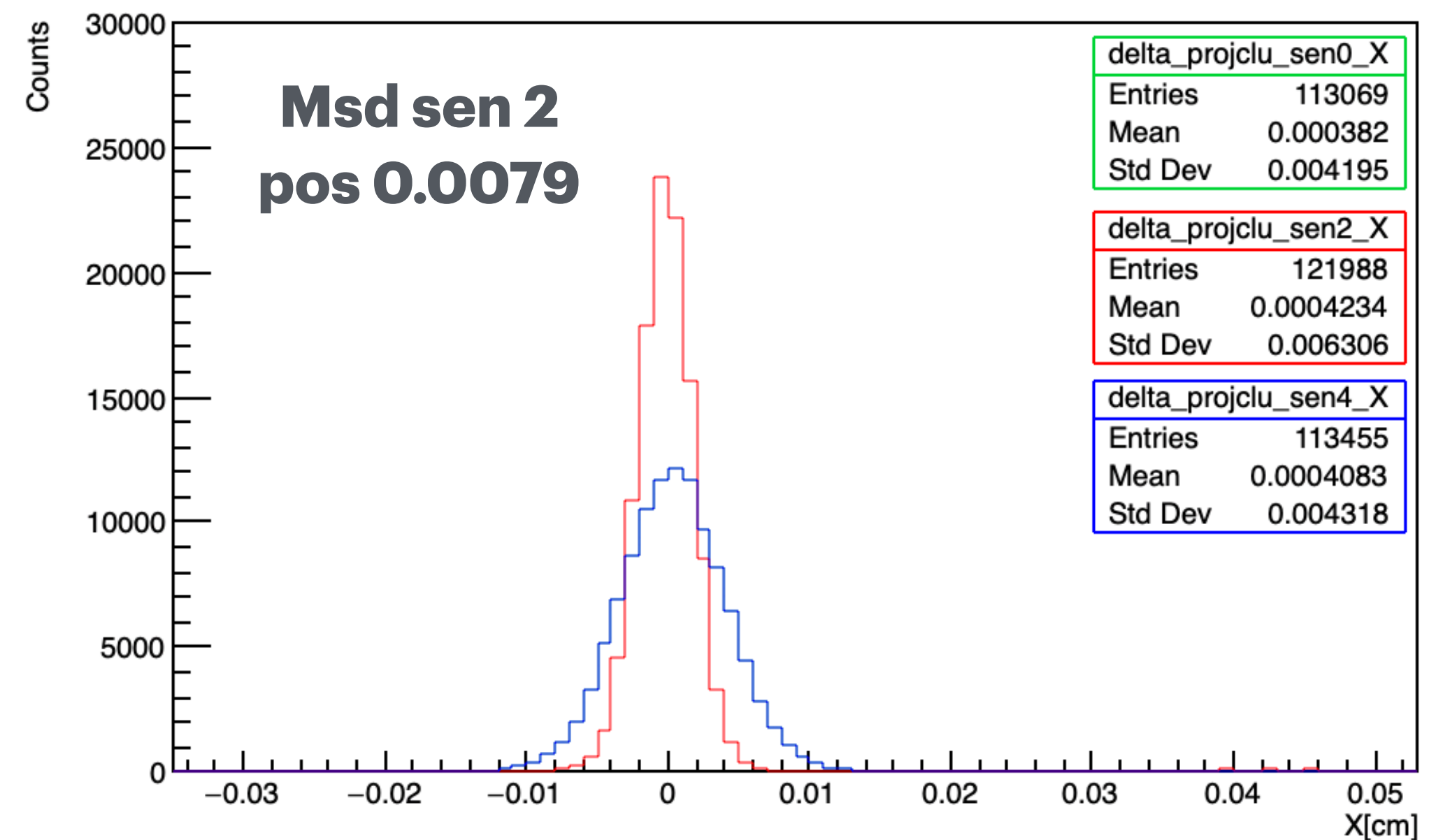
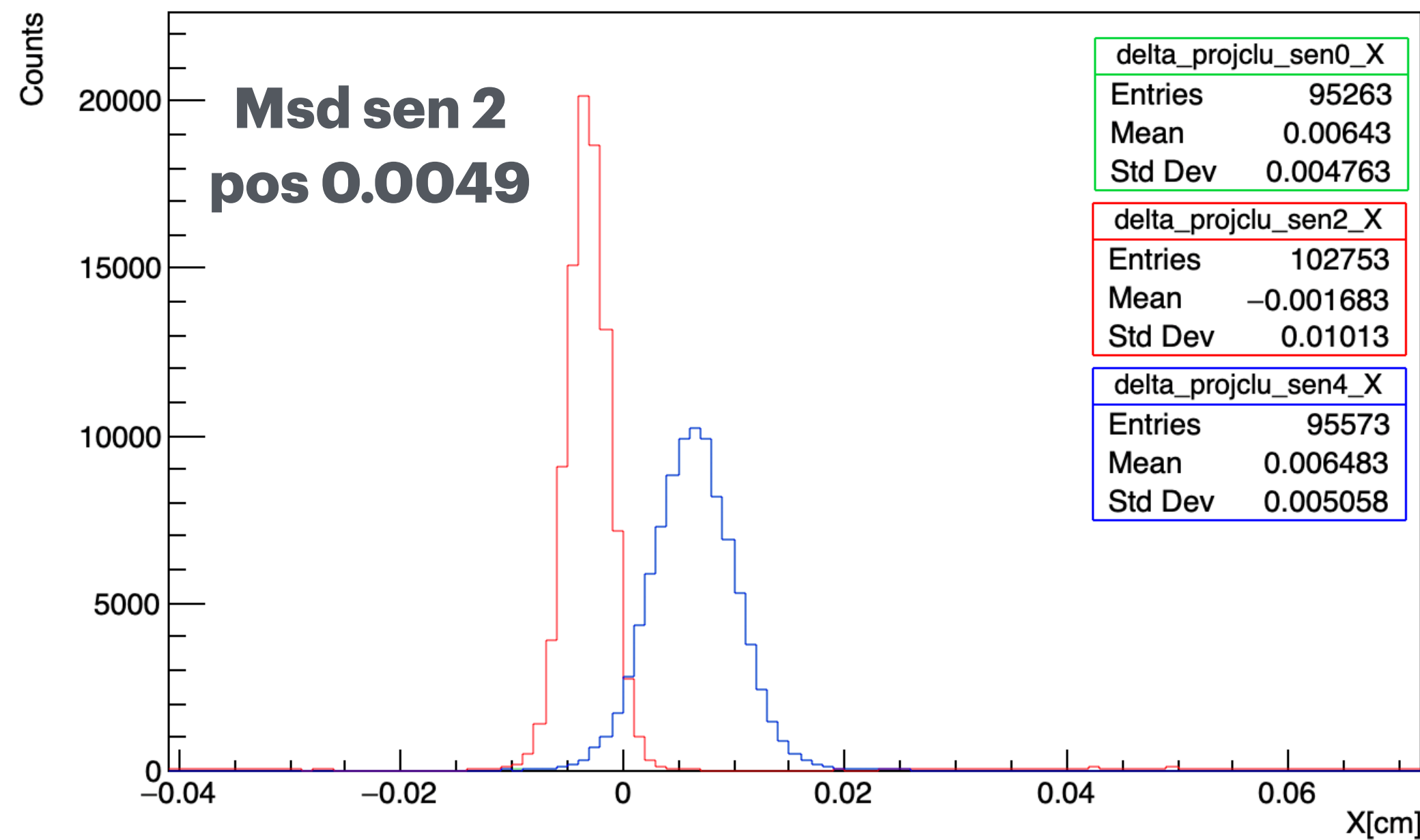
MSD trk proj on Sensor - best



MSD trk proj on Sensor - best



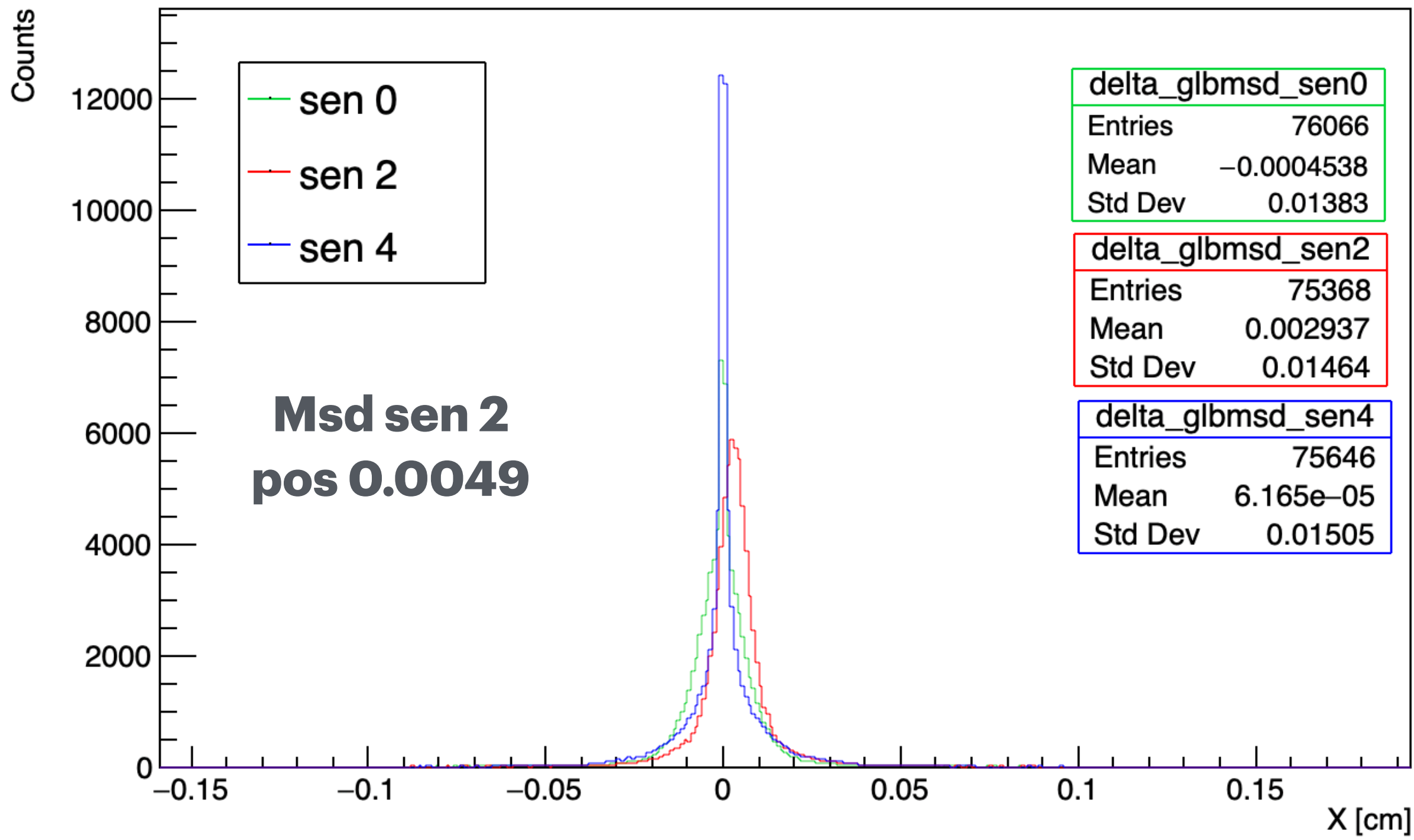
delta btw msd proj on plane and msd clus



3. From GLB tracks

C 200 no tgt no B

Distance btw glb trk proj on msd sen in msd RF and msd clust of glb trk



Distance btw glb trk proj on msd sen in msd RF and msd clust of glb trk

