

General update

2024-07-12

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After additional truth information merging

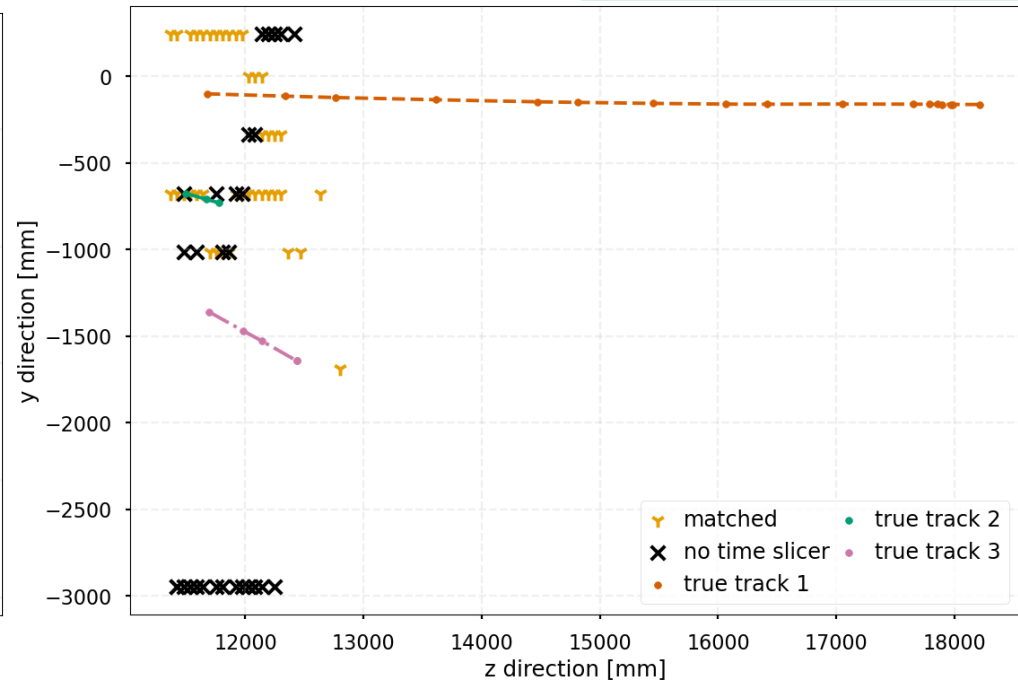
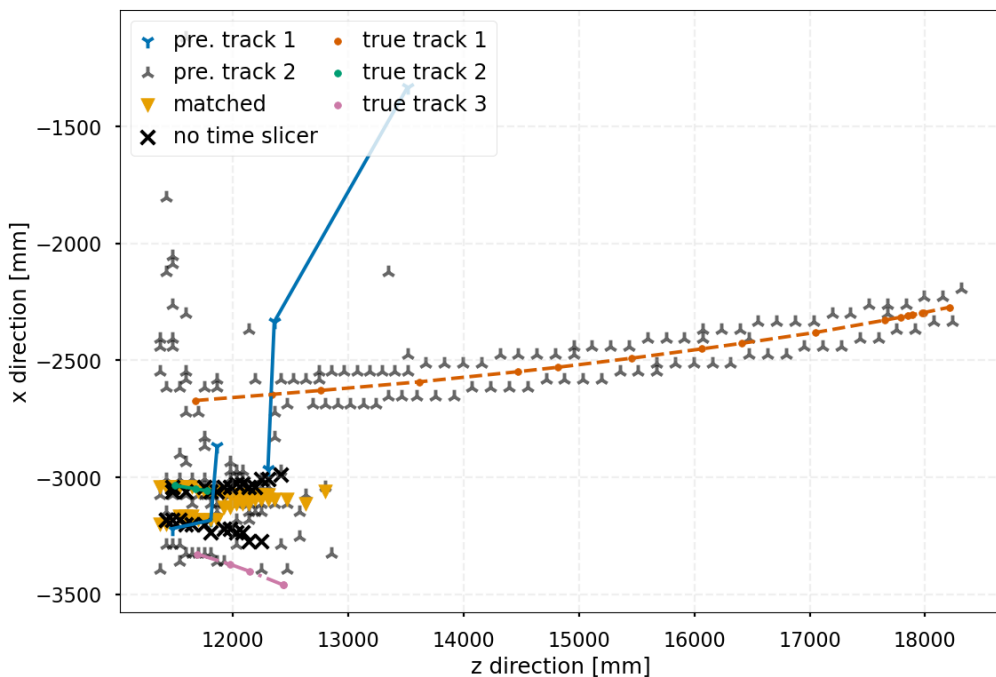
- Earlier this week the branch containing **additional truth information** from Jeffrey has been merged onto the **main branch**
- This info is important for the **track length comparison** of different geometries as it hopefully fixes the issues that we've seen so far with the track length calculation of true and reco tracks
- This new version runs successfully on 'traditional'/NERSC files, but with **Magnus' files** for different geometries I get **segmentation violations** even for the standard UV geometry
- Hopefully easy to fix by adding a `if(gRoo)` to `ConvertToTMSTree`
- Created git issue and assigned to Jeffrey



Problem event for Kalman filter

- Liam contacted me regarding a problematic event for the Kalman filter
 - Antineutrino.0... event #539
- Something is clearly going wrong. Need to further investigate

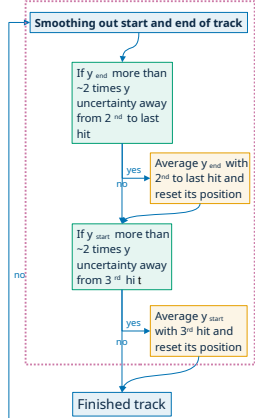
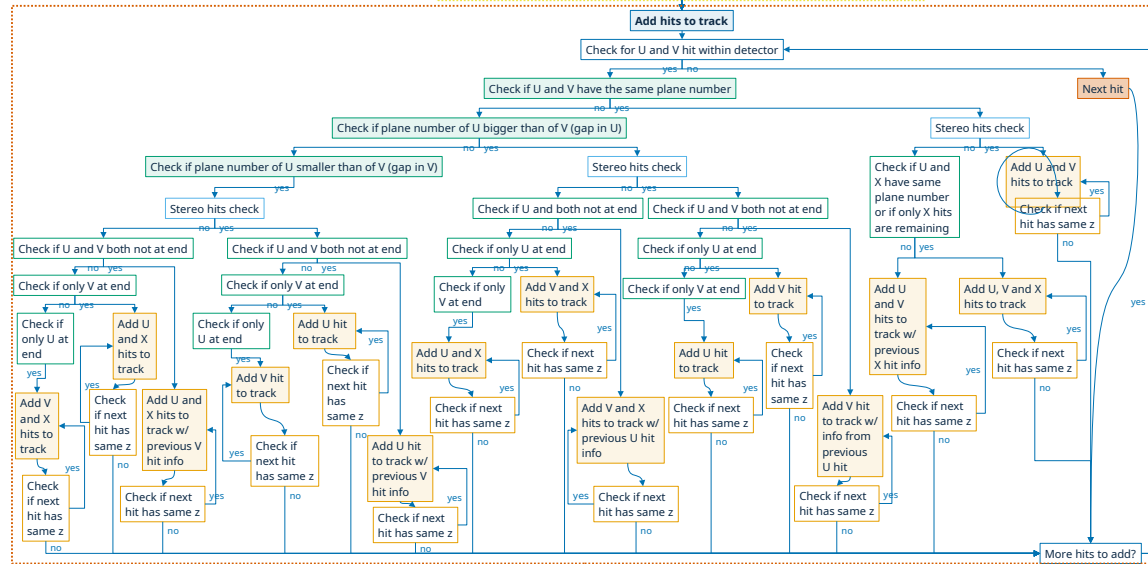
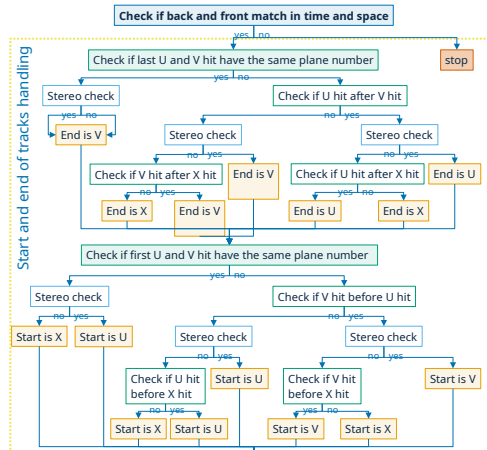
Also always only time slices 0 and 1 or 0 and 2





TrackMatching3D logic

If anyone ever wants to understand what is actually happening in the track matching





Thought about the reco-level geometry studies

- Want to compare **exiting vs. stopping muon** performance, **track length/momentum** and **charge identification**
- Looked already at exit vs. stop and track length (and soon both should work), also have to look at charge ID though
- Talked to Xiaoyan and discussed briefly whether to **add the charge ID also to the TMS_Track** directly instead of having to calculate it after/outside the reconstruction
 - There are some intricacies that will need to be taken care of
 - Work together with Xiaoyan on this once he has some time
- To properly do these studies I will **need more and more diverse data**. How do I get this?