

More Phase3 z-Trigger Analysis

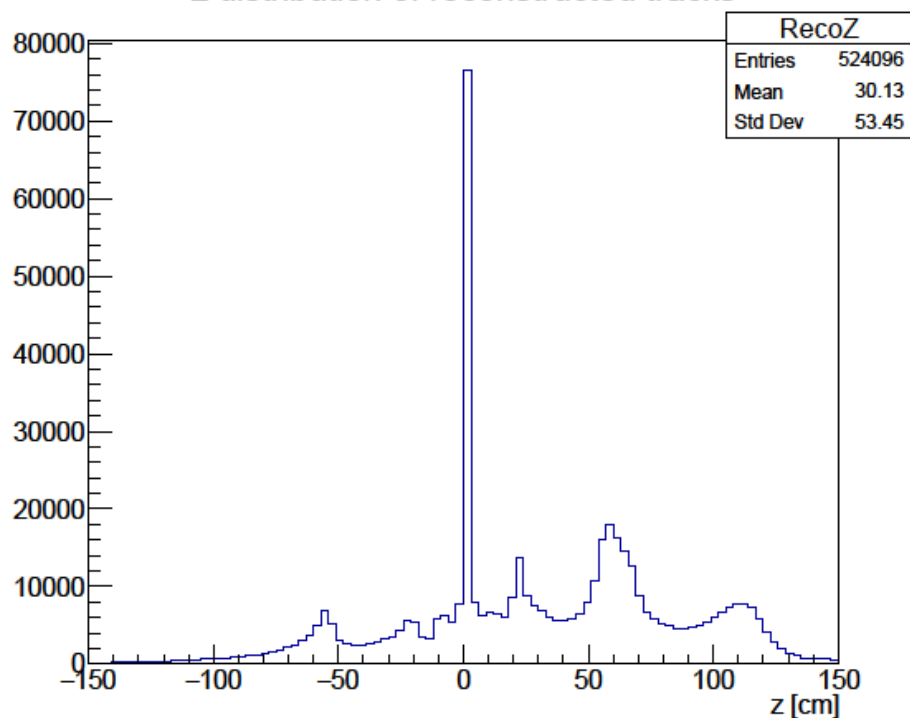
Purpose:

Study a „good luminosity run“,
defined from the trigger side

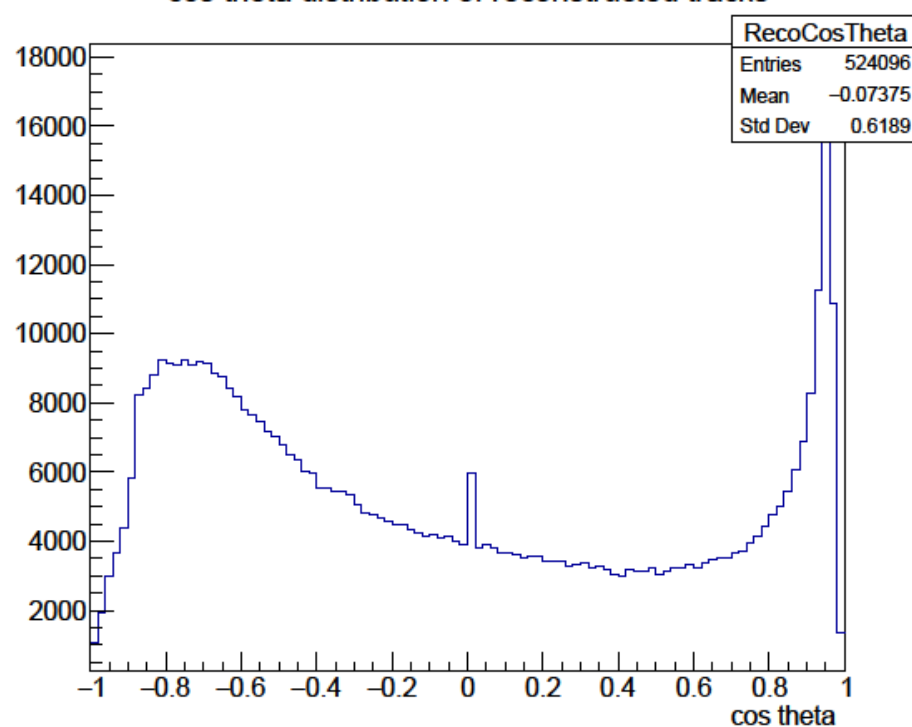
Data reconstruction: BASF2 release-03-01-00

Input: DST from run 1152, March 28, 2019, 8:31 JST

z distribution of reconstructed tracks



cos theta distribution of reconstructed tracks

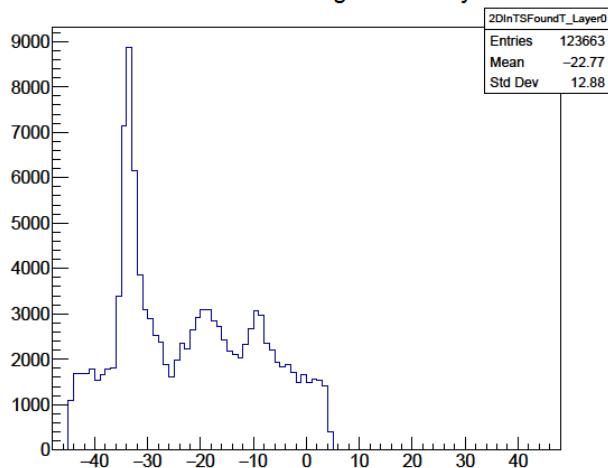


Total of 524,000 tracks

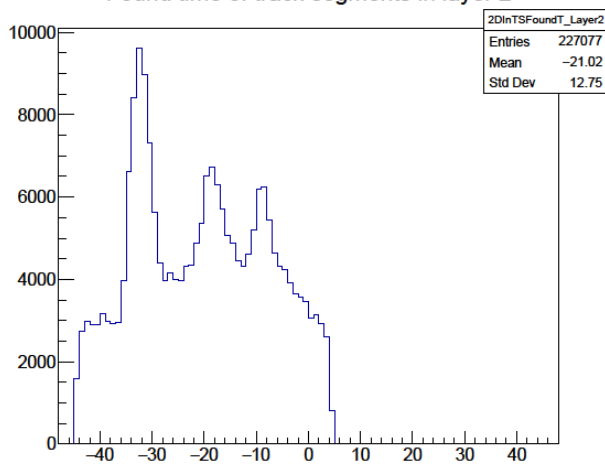
Data Analysis



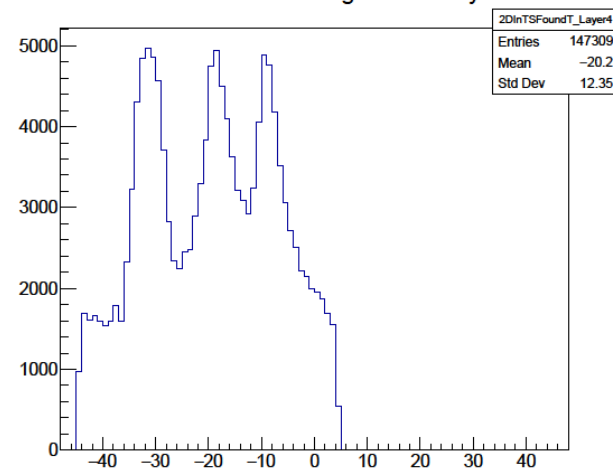
Found time of track segments in layer 0



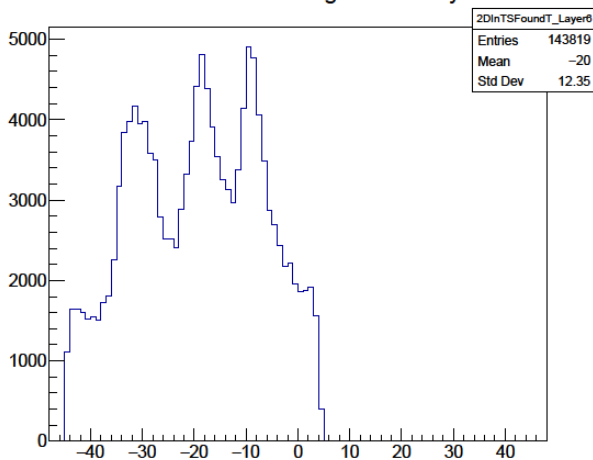
Found time of track segments in layer 2



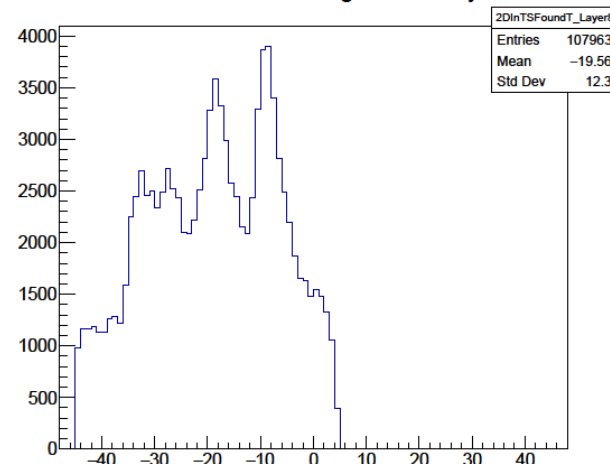
Found time of track segments in layer 4



Found time of track segments in layer 6

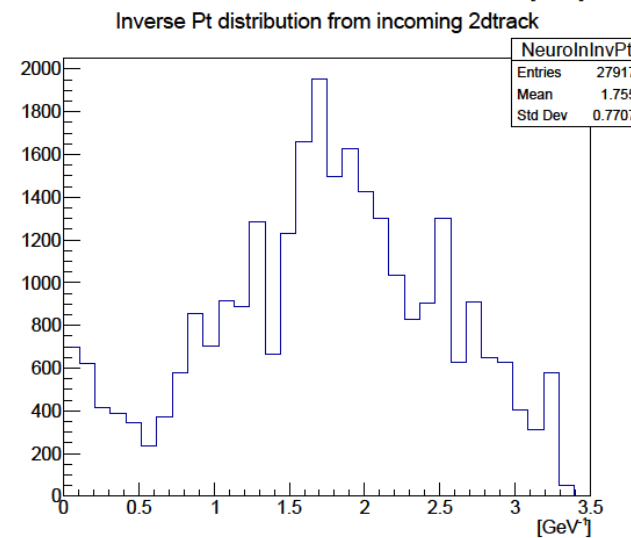
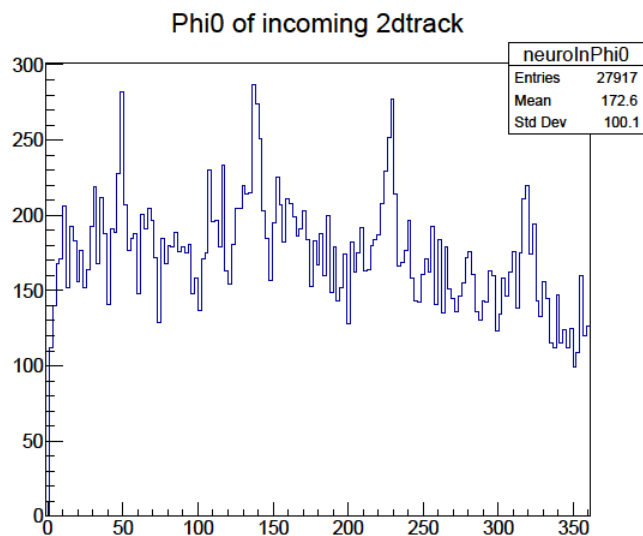
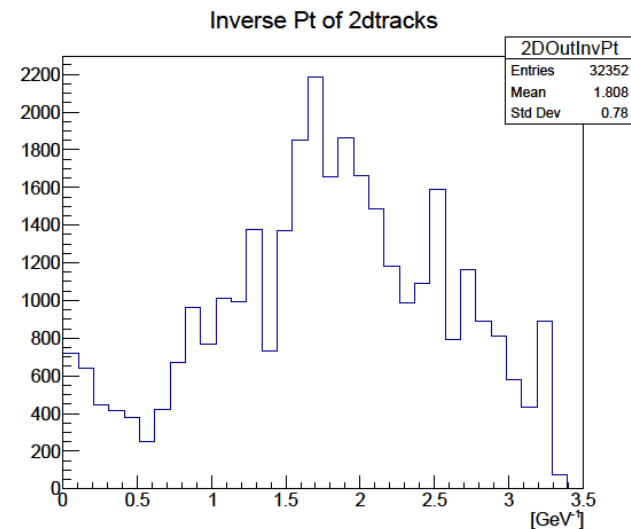
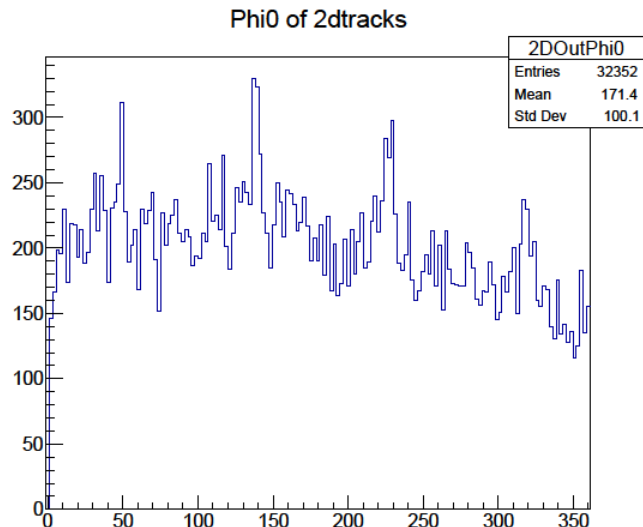


Found time of track segments in layer 8



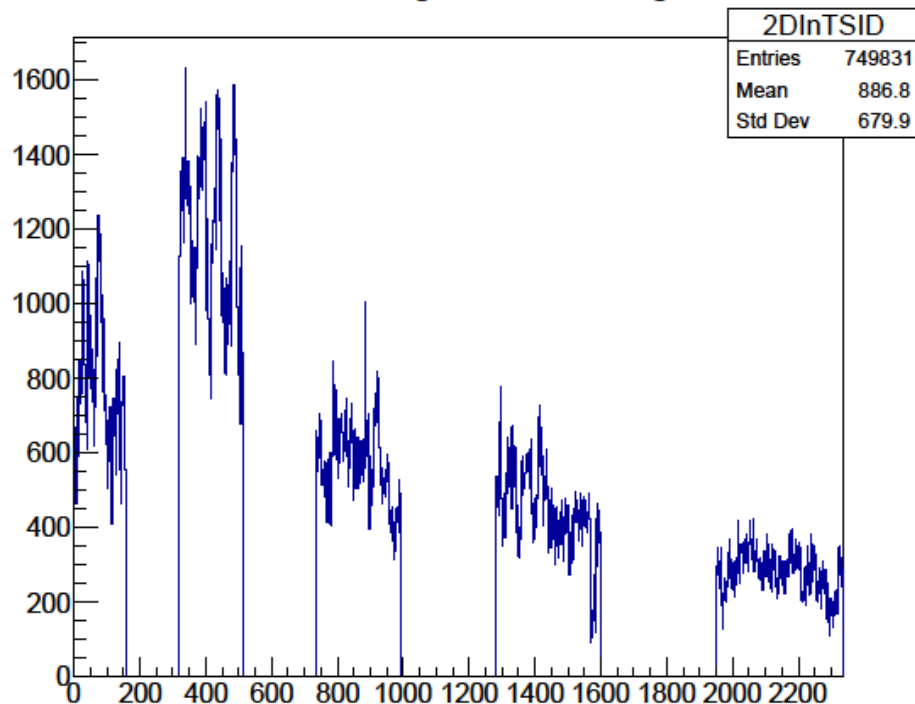
2D tracks: $\sim 140,000$ (?) (for 524,000 reco tracks) $\sim 27\%$

Data Analysis



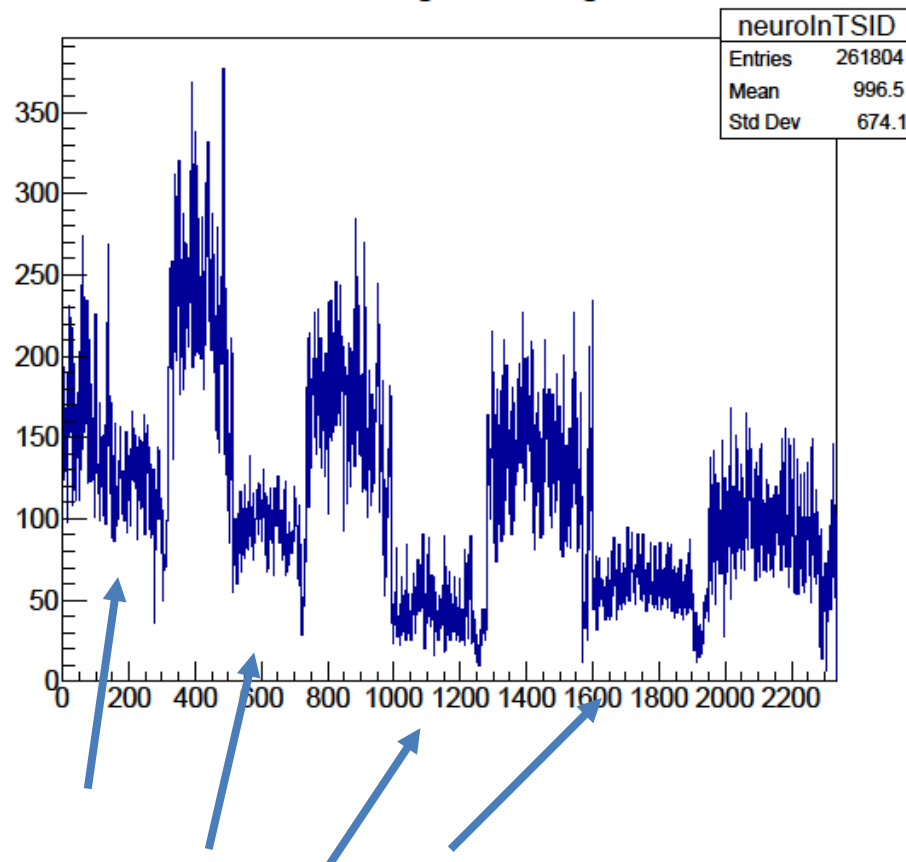
2D tracks 32,000 tracks -> 28,000 neuro tracks (from 524,000 reco tracks) $\sim 5\%$

ID of 2D incoming axial track segments



Only about 1/3 of axial
TS from 2D lead to a
neuro track !??

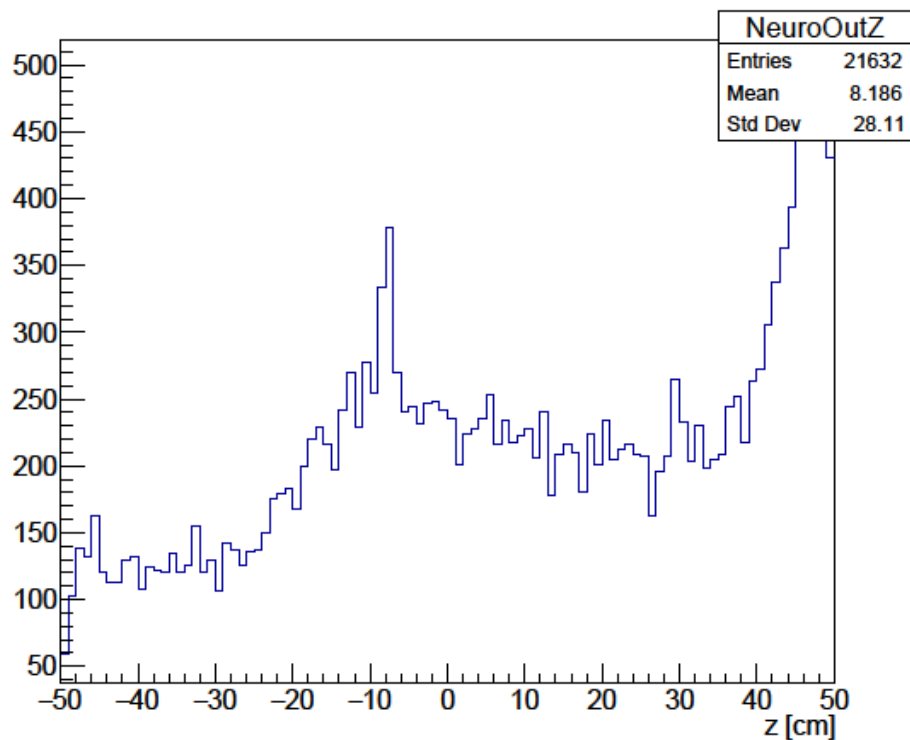
ID of incoming track segments



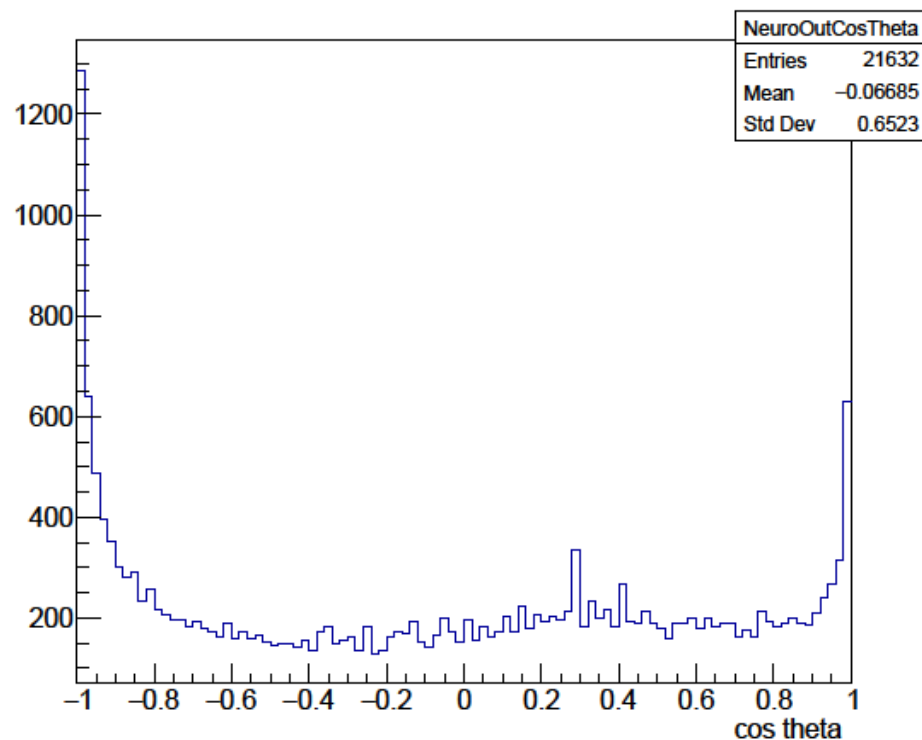
much less stereo track
segments compared to axials

Data Analysis

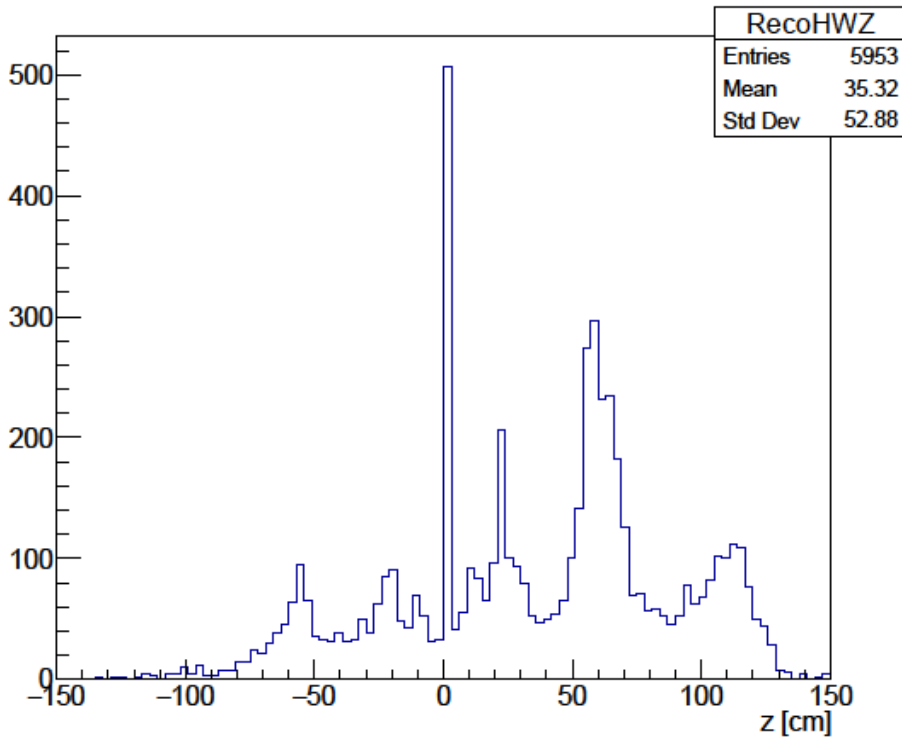
z distribution of neuro tracks



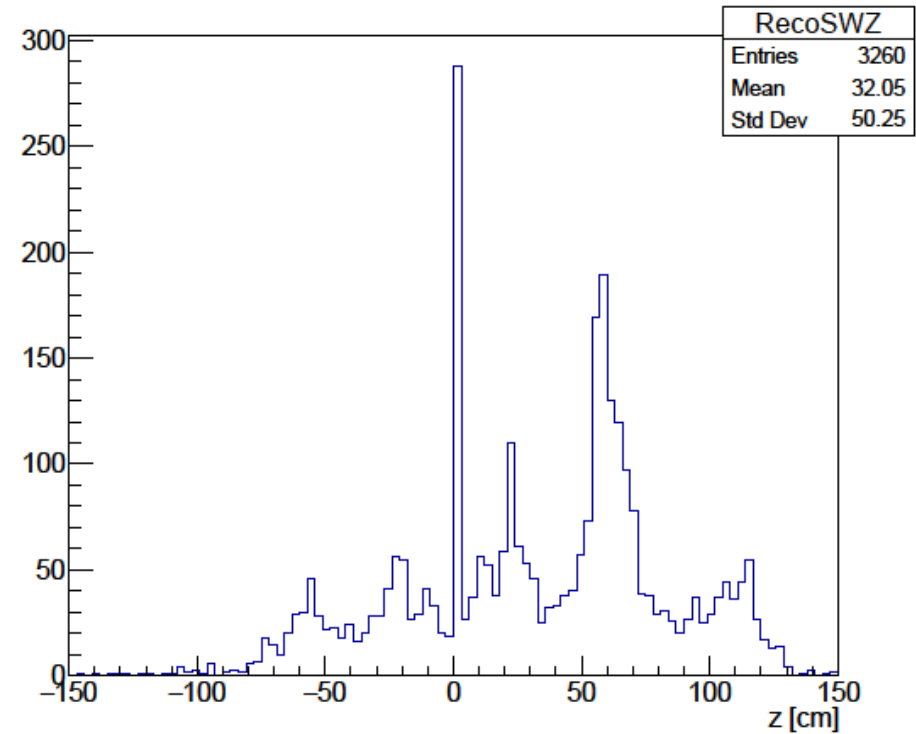
cos theta distribution of neuro tracks



hw matched z distribution of reconstructed tracks

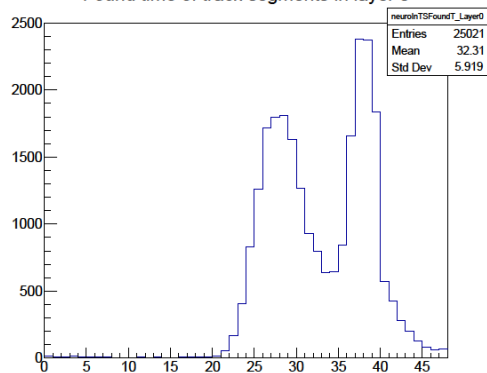


sw matched z distribution of reconstructed tracks

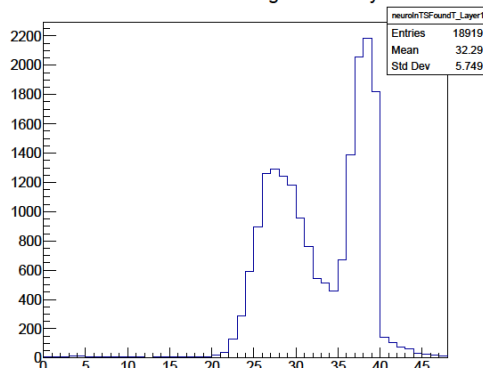


Data Analysis

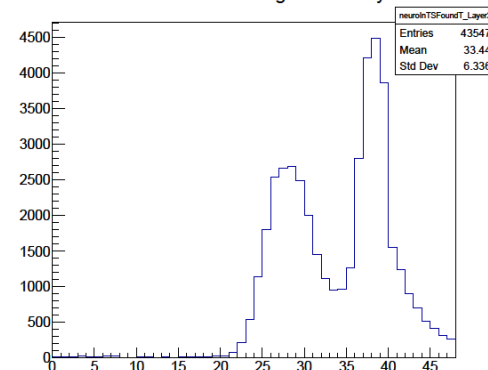
Found time of track segments in layer 0



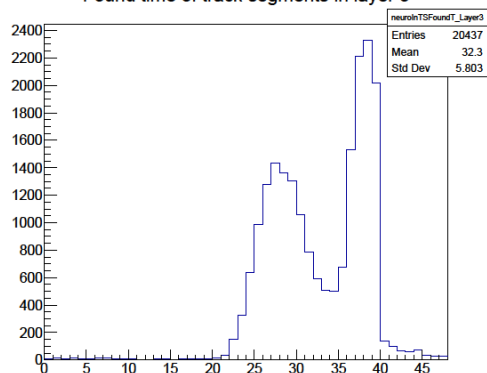
Found time of track segments in layer 1



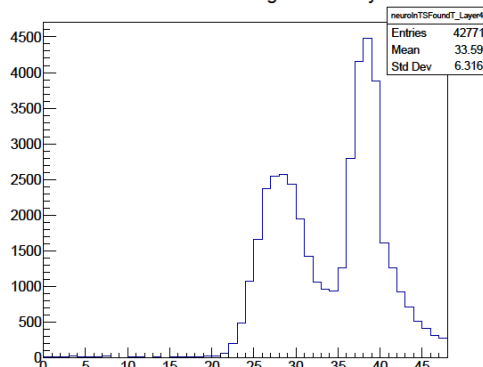
Found time of track segments in layer 2



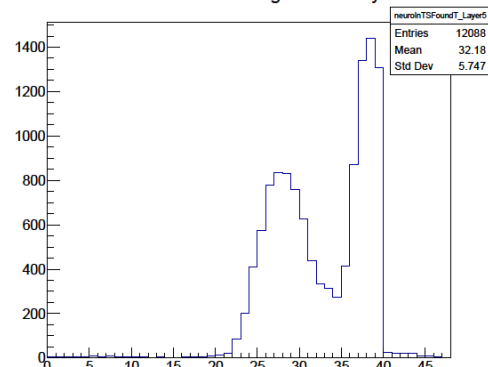
Found time of track segments in layer 3



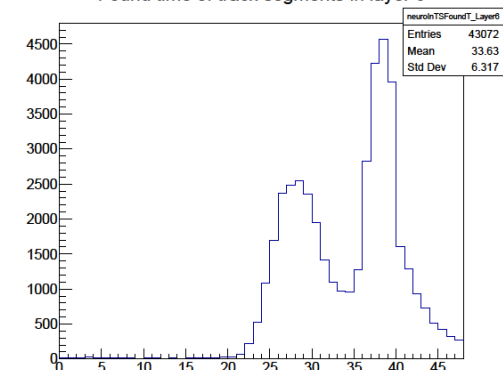
Found time of track segments in layer 4



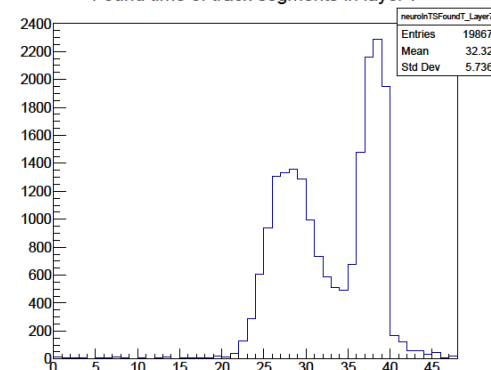
Found time of track segments in layer 5



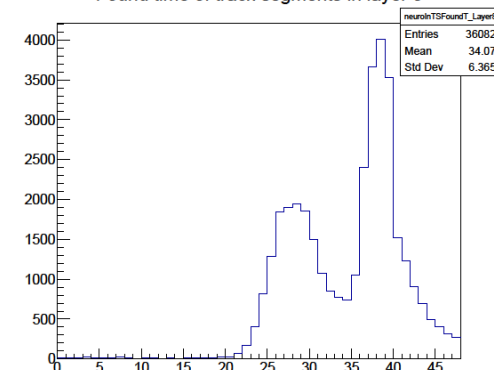
Found time of track segments in layer 6



Found time of track segments in layer 7



Found time of track segments in layer 8



Look a lumi run classified as „good“

- Qualitatively similar to the run 1020
- But in total now about 5% of tracks also result in neuro-tracks (1020 was about 1%)
- Still massive loss in the trigger chain from tracks to 2D tracks.