

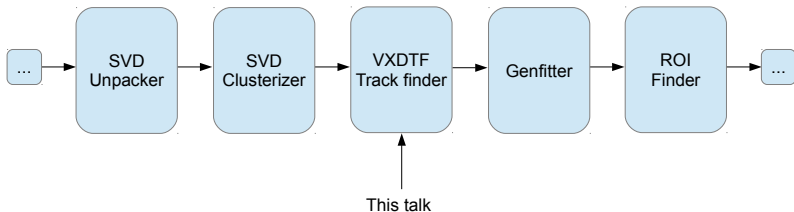
Combined TB - Status of Reconstruction software

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Chain of execution for HLT



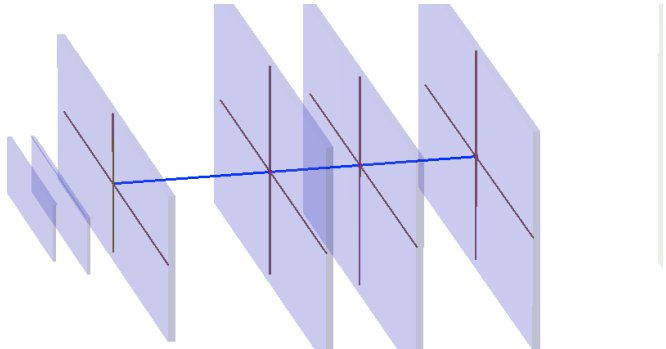
Testbeam - What has been done so far

Already done:

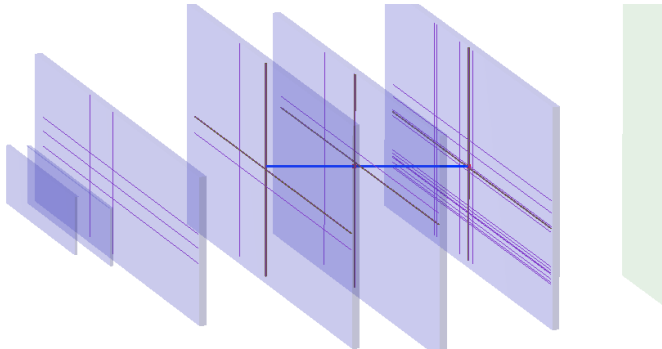
- Successful tracking in the TB
- Producing seeds for ROI-finding in the case of no magnetic field
- Capability of finding tracks in nontrivial cases
- Prepared for activating magnetic field (when is it planned to activate this?)



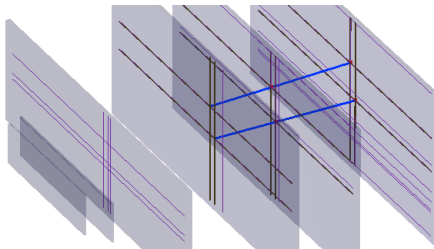
Success trivial case



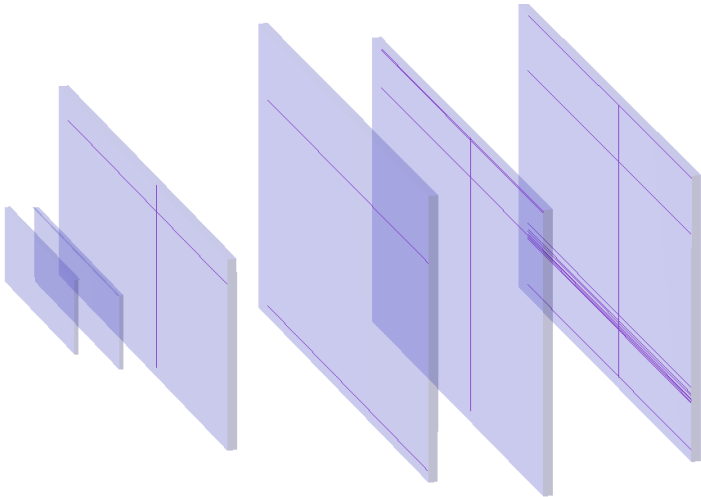
Success interesting case



Success interesting case - II

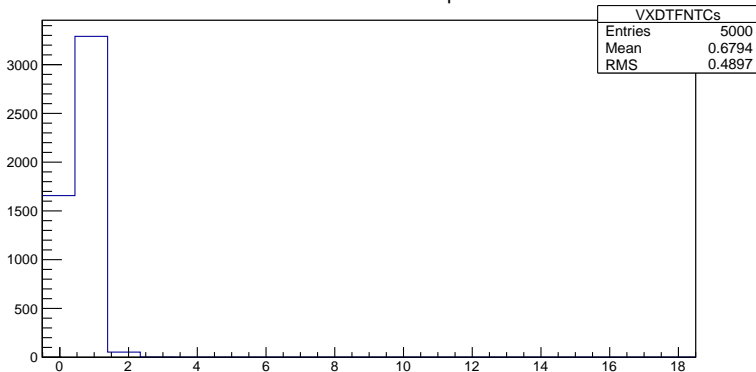


Fail



Number of TCs per event - online setup (run104)

VXDTF: Total num of TCs per event

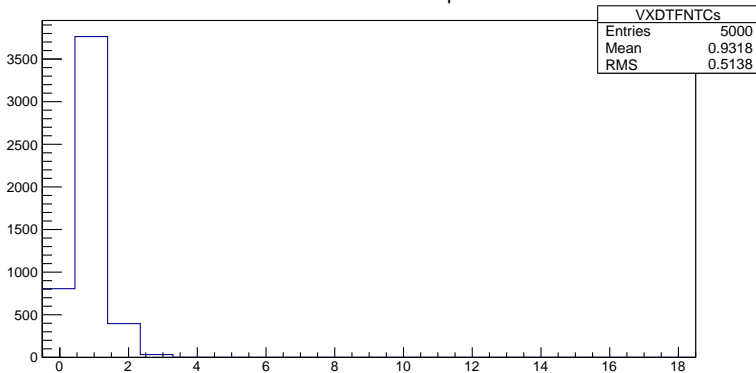


average time consumption: $250\mu\text{s}$, max segment threshold: 75



Number of TCs per event - local extended setup (run104)

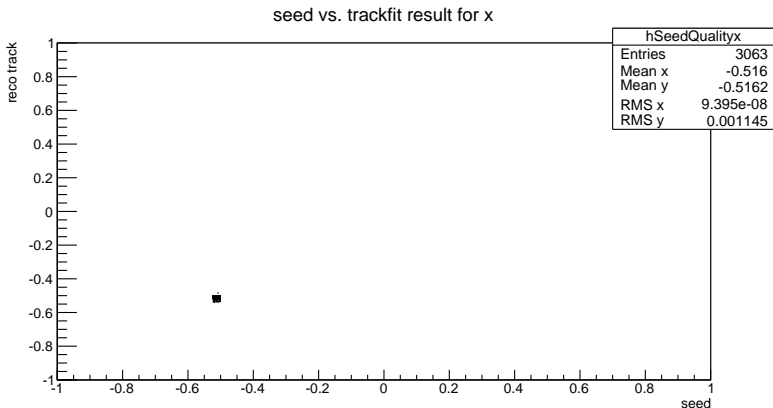
VXDTF: Total num of TCs per event



average time consumption: $2330\mu\text{s}$, max segment threshold:
1000



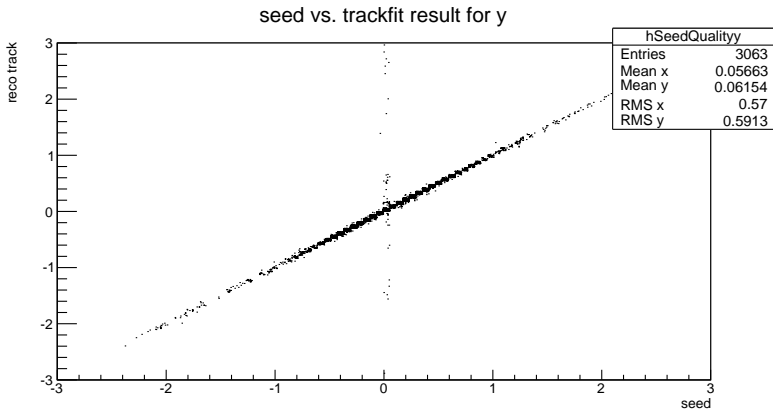
extrapolated Position X (run104)



mode: taking seed, extrapolate to layer 6 and back again →
difference to initial point



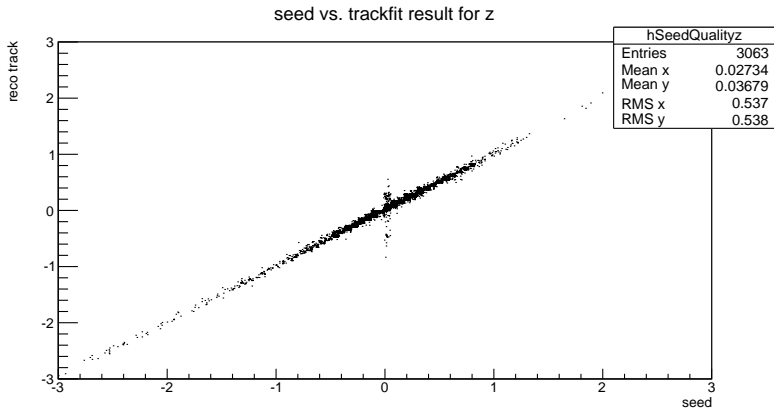
extrapolated Position Y (run104)



mode: taking seed, extrapolate to layer 6 and back again →
difference to initial point



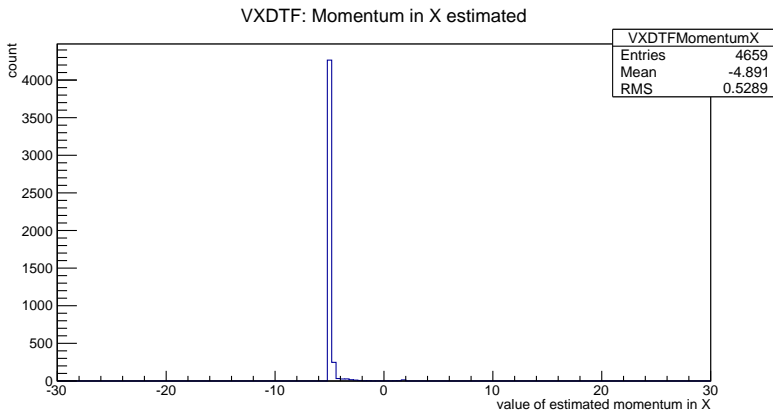
extrapolated Position Z (run104)

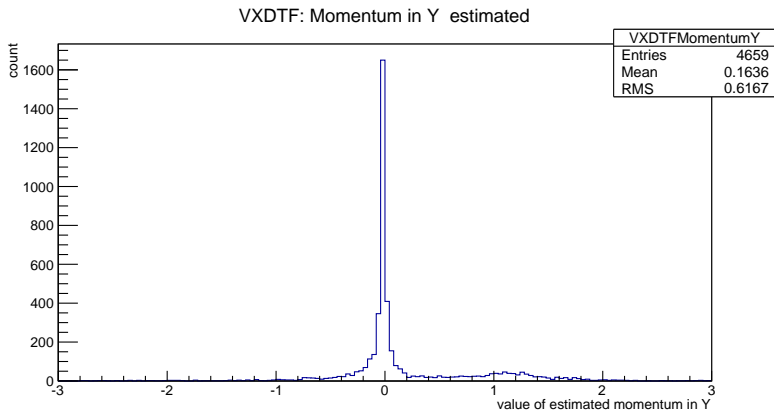


mode: taking seed, extrapolate to layer 6 and back again →
difference to initial point

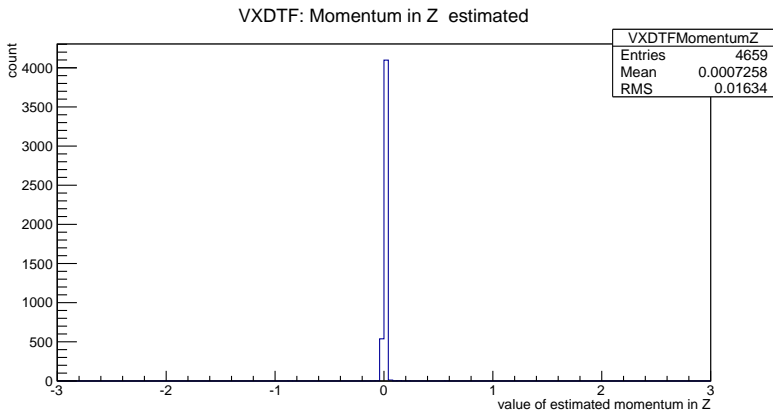


Seed momentum X (run104)

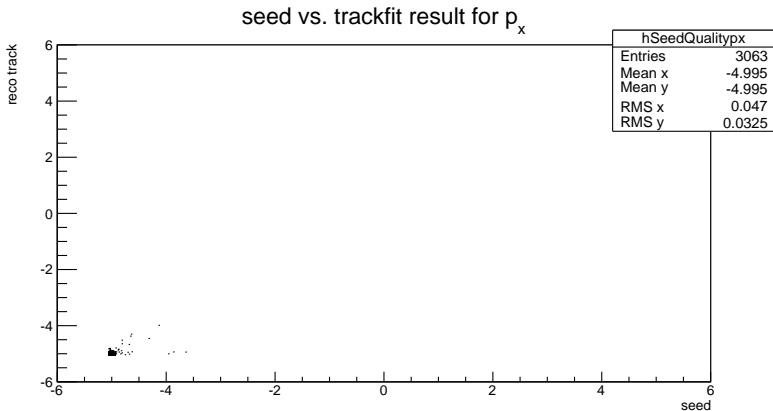


Seed momentum Y (run104)

Seed momentum Z (run104)

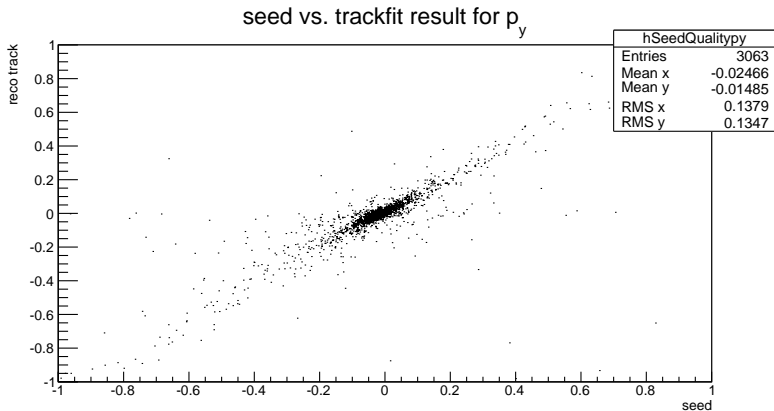


extrapolated momentum X (run104)



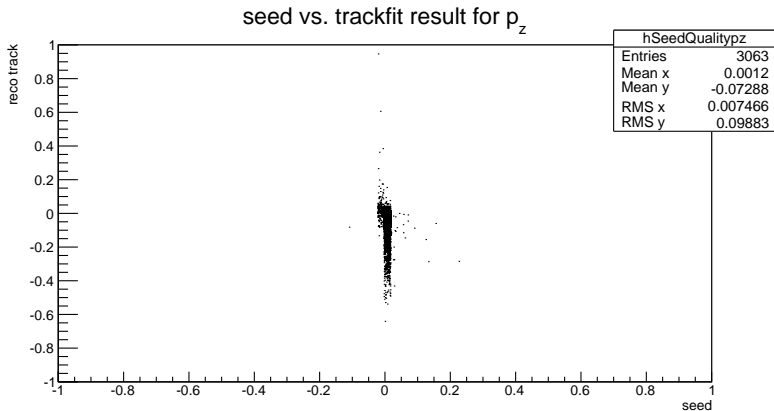
mode: taking seed, extrapolate to layer 6 and back again →
difference to seed momentum



extrapolated momentum Υ (run104)

mode: taking seed, extrapolate to layer 6 and back again →
difference to seed momentum



extrapolated momentum Z (run104)

mode: taking seed, extrapolate to layer 6 and back again →
difference to seed momentum



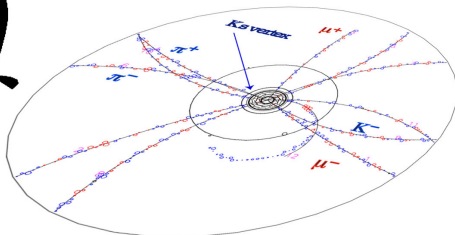
Testbeam - Outlook

To do:

- Track finding with activated magnetic field
- Check seeds for PXD-ROI
- Fixing remaining bugs (often L3 is ignored, although there seems no offset in Hits)
- Telescope support (planned before end of TB)
- Thorough analysis of all runs available



that's all, folks!

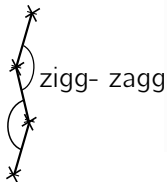
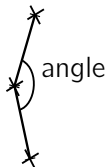
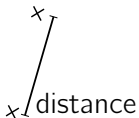


Any suggestions, ideas or requests?

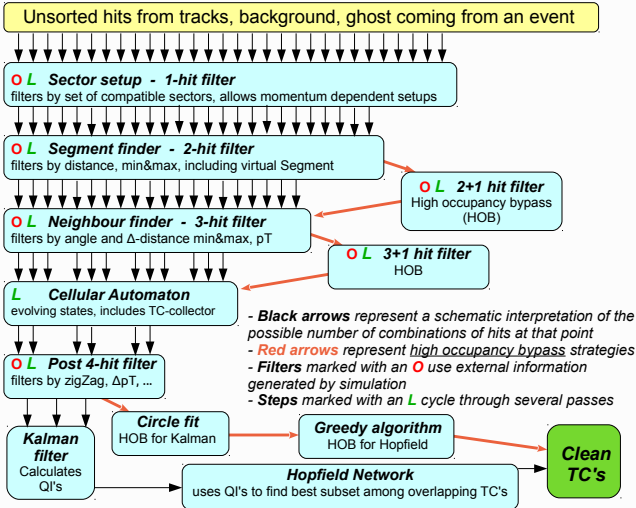
Jakob.Lettenbichler@oeaw.ac.at



Algorithm for reducing combinatorics

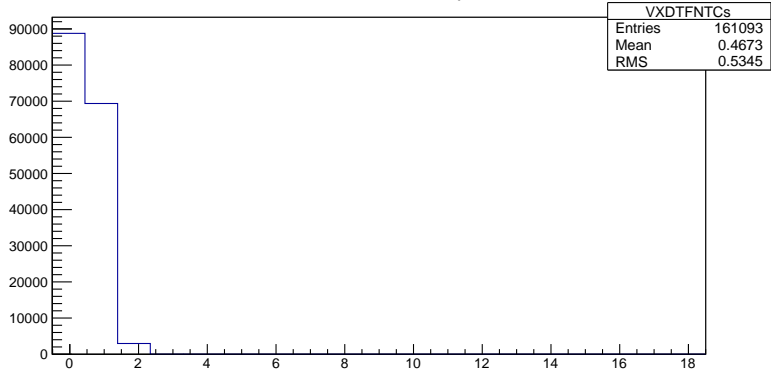


Schematic view of the low momentum track finder in Belle II



Number of TCs per event - online setup (run414)

VXDTF: Total num of TCs per event

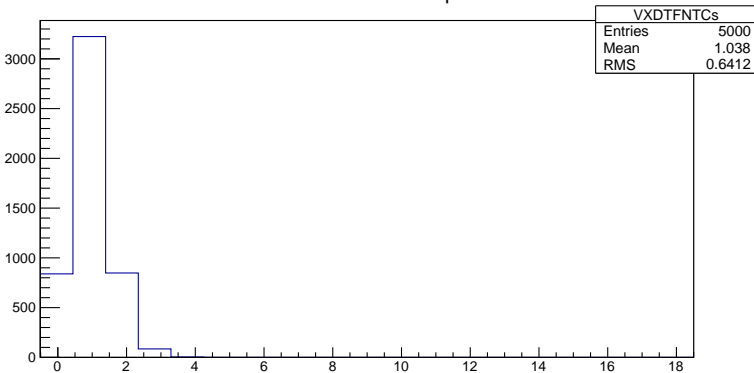


average time consumption: 250 μ s, max segment threshold: 75



Number of TCs per event - local extended setup (run414)

VXDTF: Total num of TCs per event

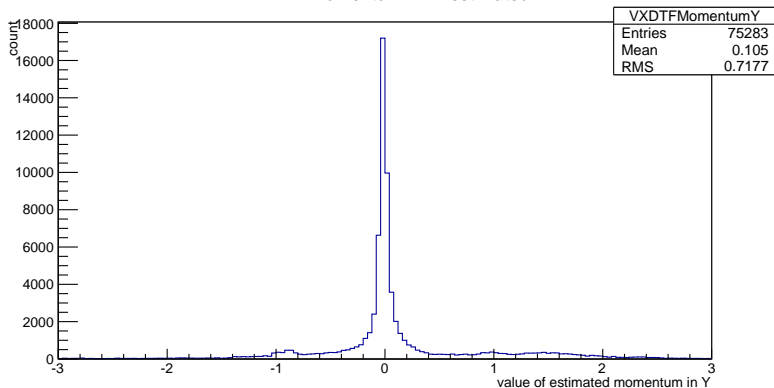


average time consumption: $2330\mu\text{s}$, max segment threshold:
1000



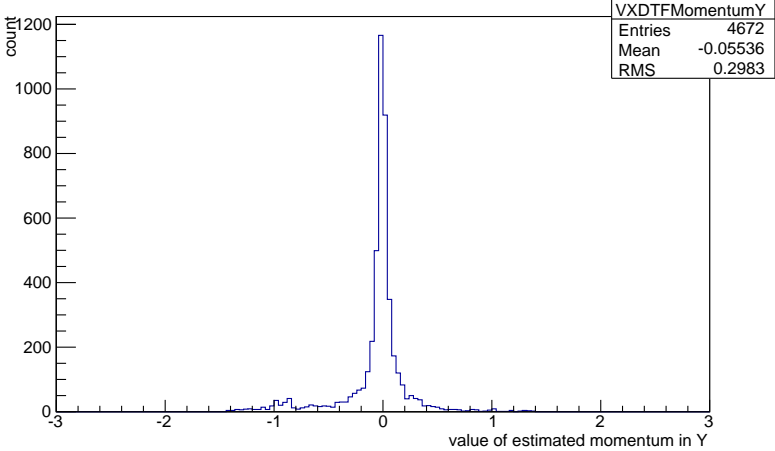
Seed momentum Υ (run414)

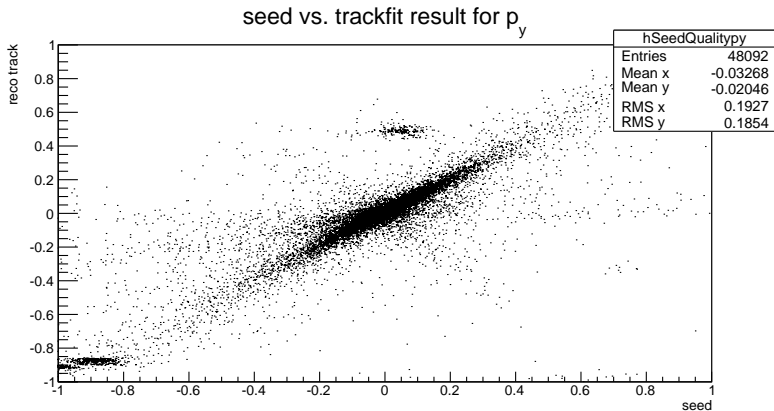
VXDTF: Momentum in Y estimated



Seed momentum Y - no baseline (run414)

VXDTF: Momentum in Y estimated



extrapolated momentum Y (run414)

mode: taking seed, extrapolate to layer 6 and back again →
difference to seed momentum

