# CDC cosmic test

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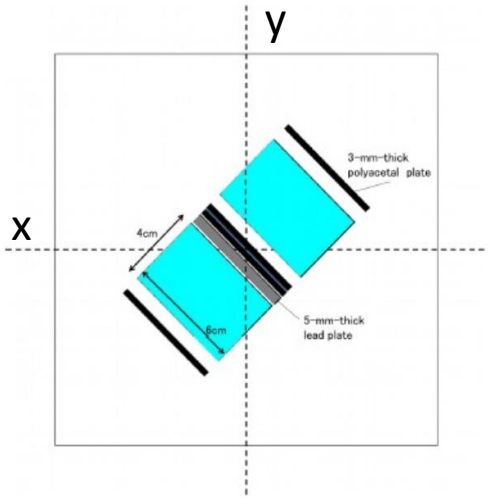
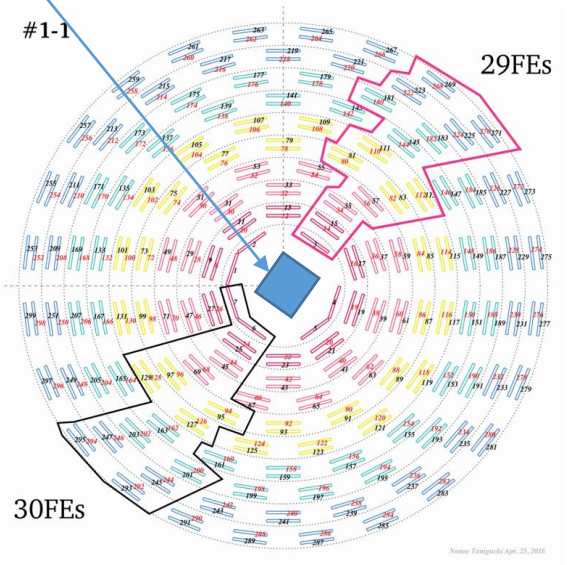
# Setup

- We use 59 Boards to take data
- Trigger : Scintillator + TSF(Slay6)
- Trigger counter rotate 45Deg

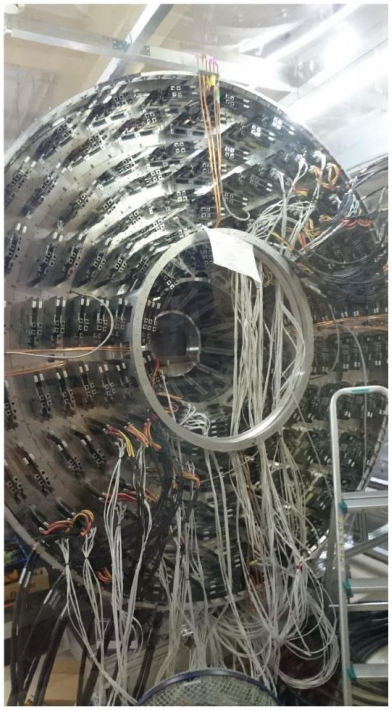



Trigger

## Hardware setup: CDC



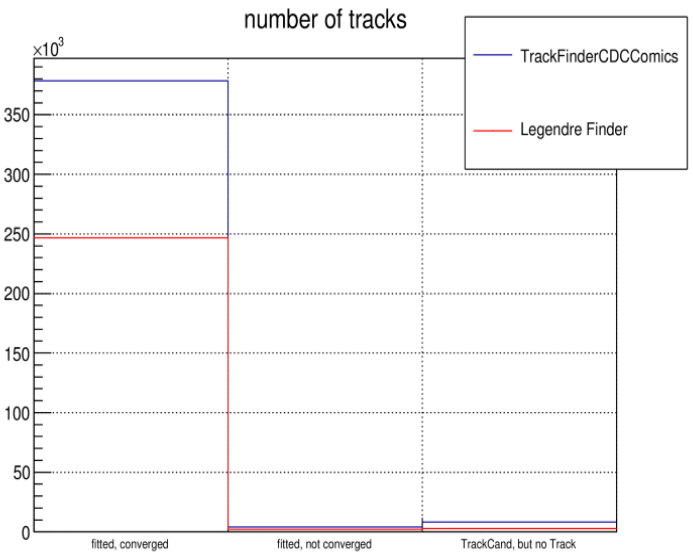

Taniguchi-san

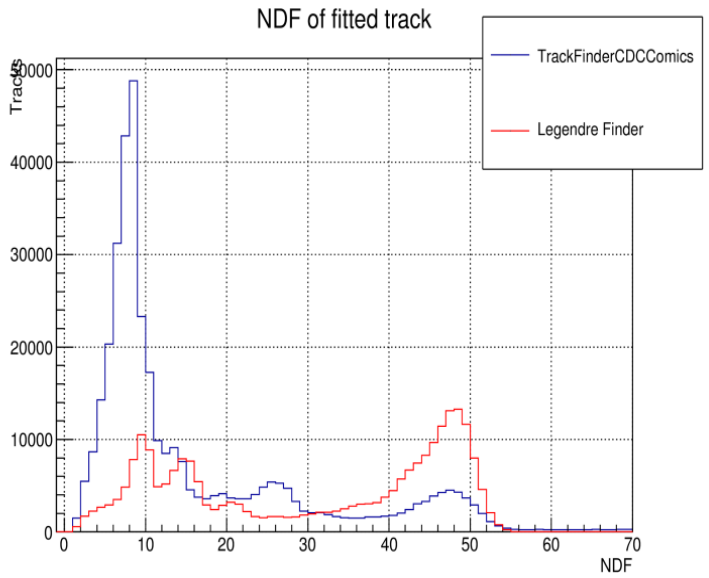


June 22nd 2016

**Reconfiguration completed on June 10th**

# Default Finder vs Cosmic Finder



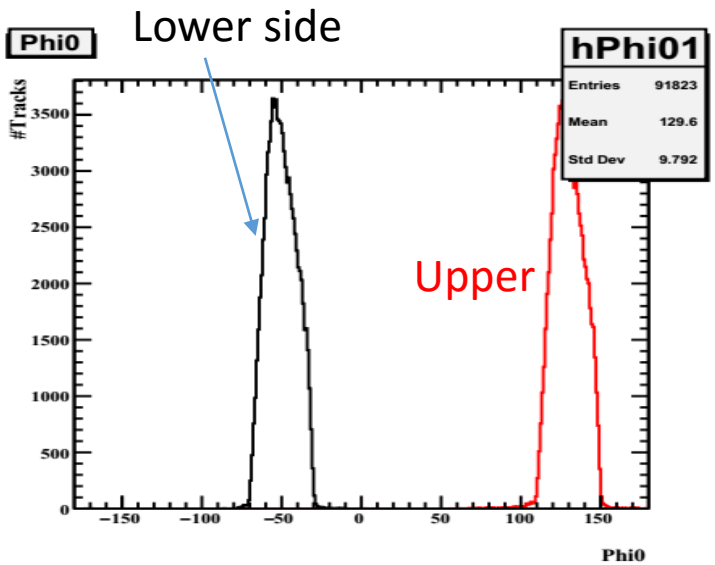



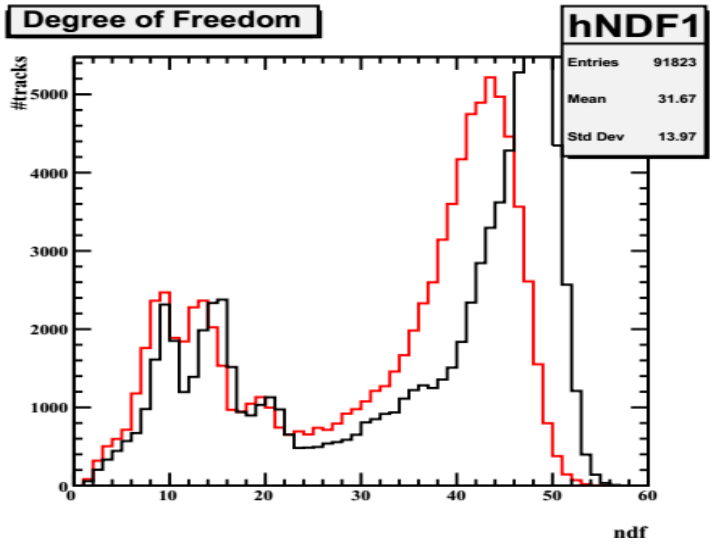

- For this setup (limit of read out) cosmic finder does not work well as we expected compare to default track finder.

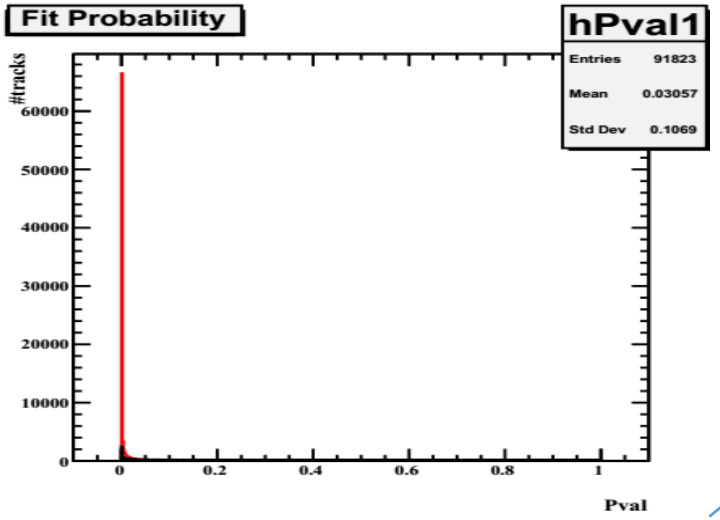
# Analysis setting

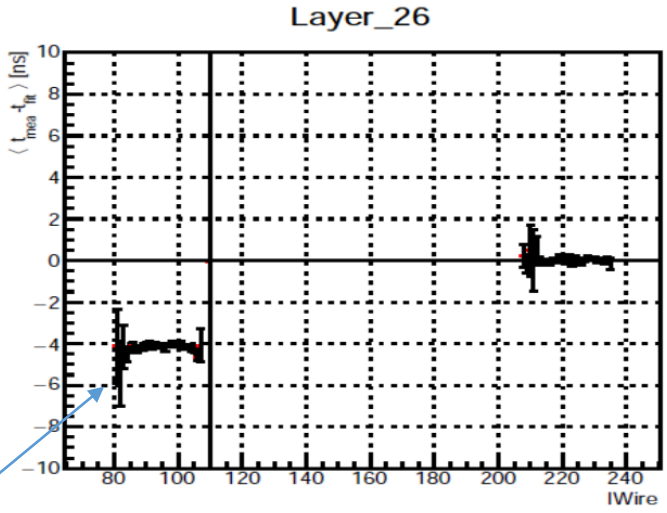
- Before:
  - Track Finding:Belle2 default Track finding (add_cdc_track_finding)
  - Track Fitting: DAFRecoFitter+ Ozaki-san modification
    (Ozaki-san revert time of flight of incoming track)
- After:
  - Track Finding: New track finding function for cosmic (add_cdc_cr_track_finding)
  - PlaneTriggerTimeEstimator for time seed
  - Track Fitter: DAFRecoFitter (Default setting)

# Use Belle2 default Track Finding function



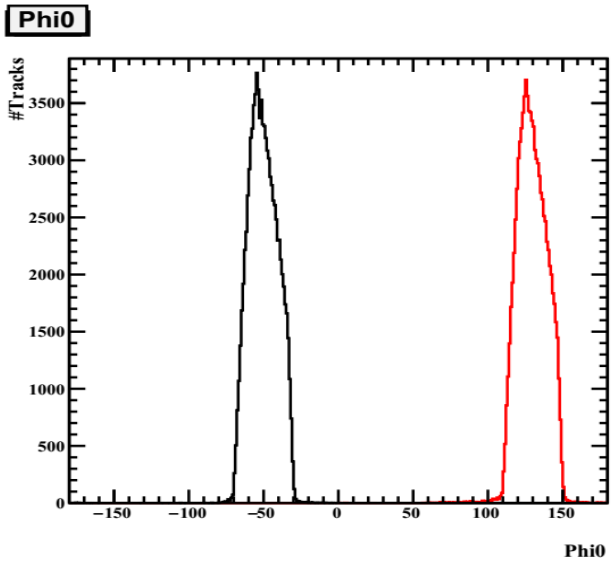



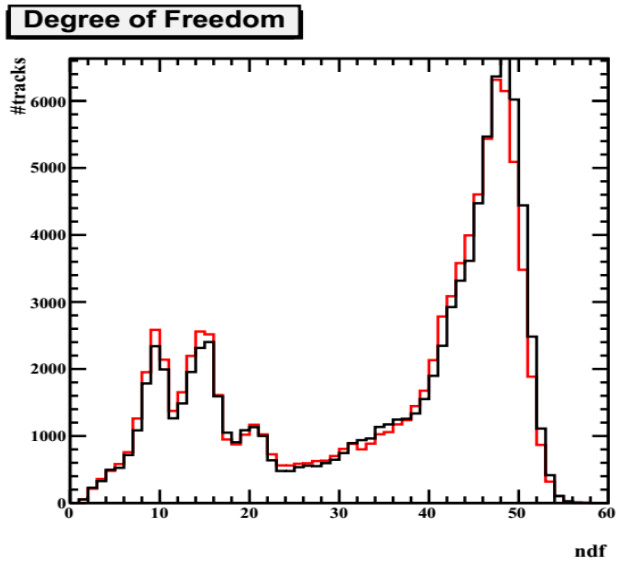



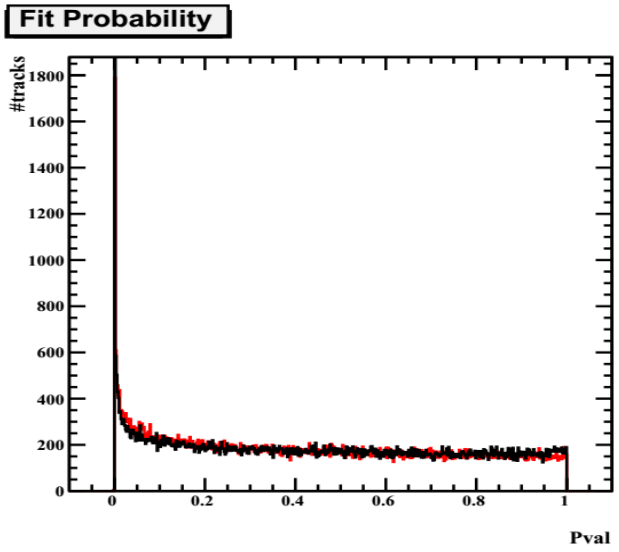



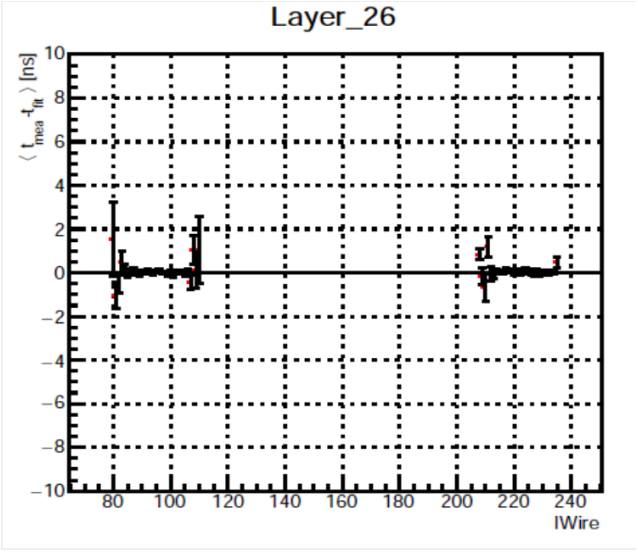

Upper tracks do not fit well, due to timing problem.

# Use default belle2 Track Finder + Ozaki-san modification

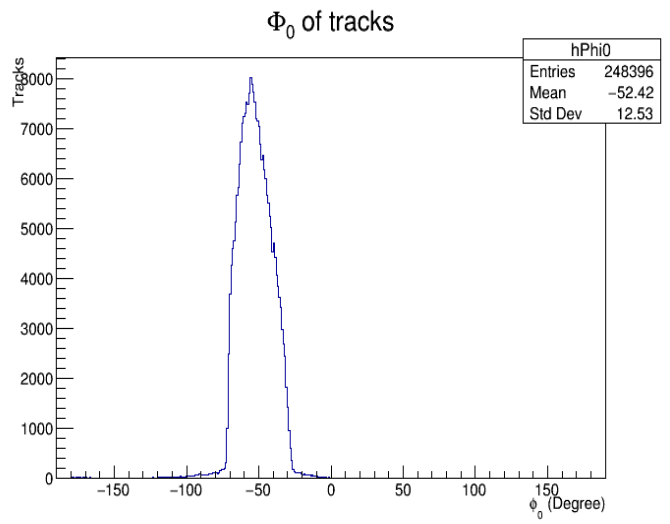


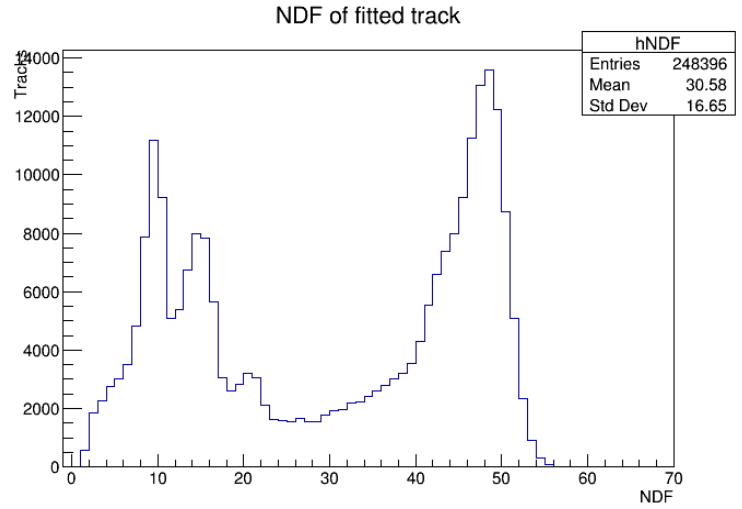



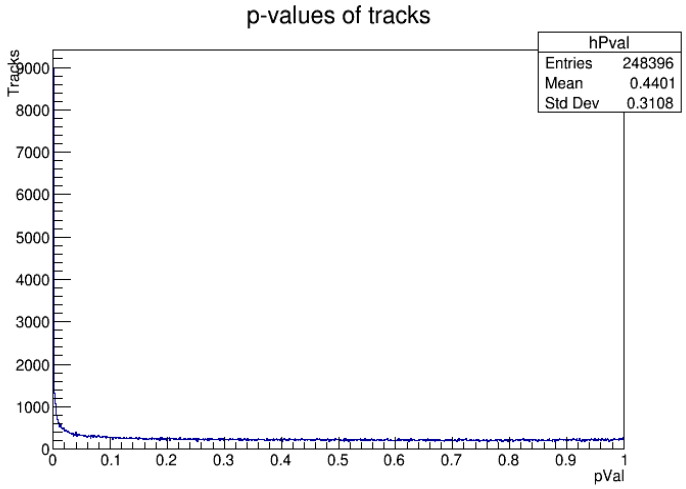



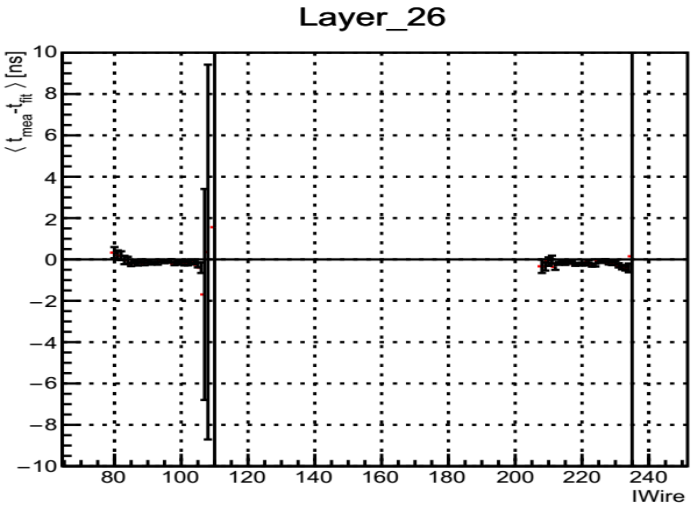



# New function of track finding for cosmic case.
# + PlaneTriggerTimeEstimator module




It seem that new function for cosmic finder + PlaneTriggerTimeEstimator work well

We have not identified up and down tracks

# Summary

- Default Track finder is better than CosmicFinder for this setup.
- New track finding function seems to work well now.