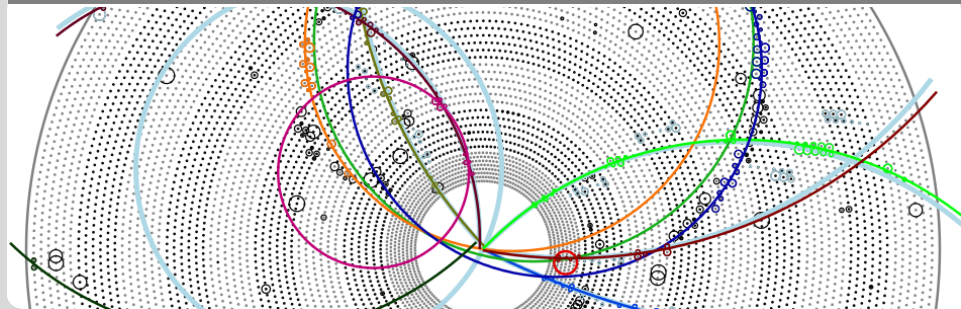


Common code basis and segment track combiner

Biweekly tracking meeting.

Nils Braun | 8.5.2015

KIT



Common code basis in the CDC tracking package - progress

Things we have

- The Legendre TrackHit is now based on the CDCWireHit.
- The CDCLegendreModule and the CDCLegendreHistogrammingModule are now based on TrackFinderCDCBaseModule.
- The Legendre TrackCandidate can be transformed from/to a CDCTrack.
- The BaseModule has some new parameters:
 - TracksStoreObjNameIsInput
 - WriteGFTrackCands
 - SkipHitsPreparation

Common code basis in the CDC tracking package - progress

Things we need

- The Legendre `TrackCandidate` should be based on the `CDCTrack` also (we can reuse all postprocessing then).
- The `LocalTrackingModules` should be adapted to the new “intramodular” model.
- The `TakenFlag` of the `CDCWireHits` has many meanings now...

My last study has shown that a Riemann-fit-based combination does not work:

- Problems with high energy loss.
- Problems if the track has a bad fit result in the beginning.
- Problems with sz-fit.

The new idea: Try to work with geometrical information and hit patterns as far as possibly. Preliminary results:

	Legendre	Combination
Finding Efficiency	84.18 %	83.68 %
Hit Efficiency	79.19 %	82.60 %
Clone Rate	10.81 %	10.79 %
Fake Rate	16.95 %	17.47 %