



Prompt Alignment in CRUZET-4

Jim Pivarski

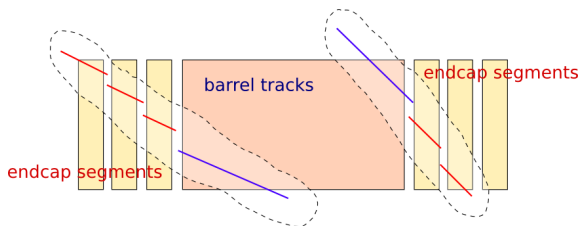
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- In CRUZETs 1–3, we needed to wait for tracks to be re-reconstructed with approximate geometry, but now we can align in one pass because we can identify parallel segments as a track (discontinuous due to z-shift misalignment)



identify disconnected tracks and segments if they are parallel

- If I understand correctly, CSC tracks have not been reconstructed due to moving disks: waiting for alignment
- First exercise of prompt AICaReco streams (practice for collisions)
- First alignment in 2_1_X (all the configuration files had to be rewritten in Python)

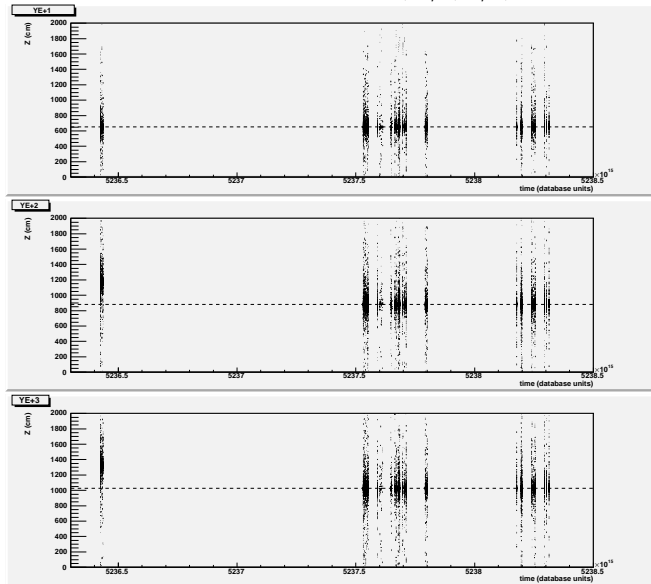
Closure of the endcaps

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Z measurement versus time for YE+1, +2, +3



dotted line is
nominal
position

YE+1 was
closed from
the start

YE+2 and +3
were closed
later

is there a
record for
comparison
(better
precision)?

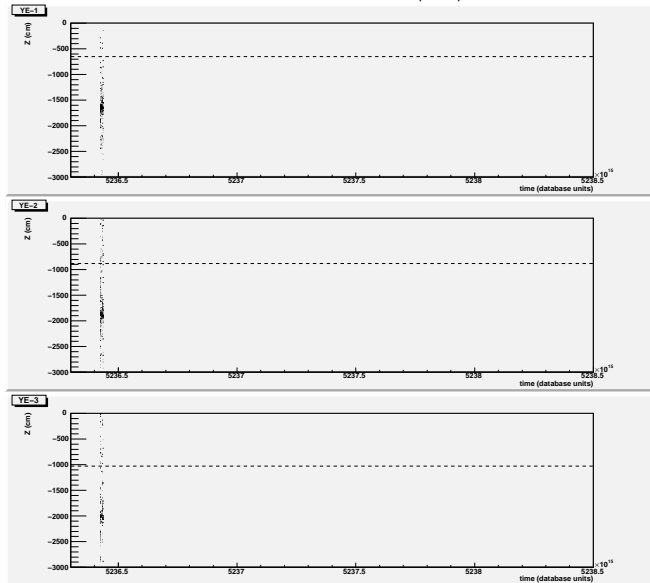
Disappearance of minus-side data

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Z measurement versus time for YE-1, -2, -3



only have early
block, before
minus-side
was closed

I'm pretty sure
the loss of
data happened
upstream of
AICaReco

has anyone
else seen this?



- ▶ Problem with the globalMuon AICaRecos: tracker hit positions are no longer stored, they *must* be re-computed from clusters
- ▶ MuonSelector didn't add clusters associated with tracks (but Javier just implemented that, awaiting validation)— however, cosmic ray AICaRecos already have *all* tracker clusters
- ▶ We need to reconfigure alignment procedure to use this information: not a solved problem yet, but it might be a configuration-file change (hopefully)
- ▶ In progress!
- ▶ Due to setback, manpower issues, and a lot of things happening at once, our first tracker-to-muon alignment may be in CRAFT (which is all we promised back in the spring)



- ▶ CRUZET-4 global tag due tomorrow; constants can be delivered on that timescale (I have the ntuples)
- ▶ My information is partial and low-statistics: if there's a record of disk positions, I'll cross-check what I can and use the best information to construct constants
This moving-disks era is a very special case for alignment
- ▶ All CRUZETs due next Tuesday: that leaves only CRUZET-3 (use Michael's skims as a starting point)
- ▶ CSC Overlaps procedure is progressing: more detail at a later meeting