

SeaQuest Production - Feature #13831

R006: kTrack rate in the periods of "resolved" signal-timing shift

09/10/2016 04:43 PM - Kenichi Nakano

Status:	Closed	Start date:	09/10/2016
Priority:	Normal	Due date:	
Assignee:		% Done:	0%
Category:		Estimated time:	0.00 hour
Target version:			

Description

The (large) signal-timing shift happened twice in roadset 59 and once in roadset 70, as recorded in <http://twiki.npl.illinois.edu/bin/view/E906/DamagedDataList>

It has been (mostly) resolved by shifting the measured drift time in kTracker.

I checked the number of reconstructed kTracks to judge if these data are fine for physics analysis.

I applied a R005-like selection as follows to count only good target kTracks;

```
select spillID, count(*) from kTrack where roadID != 0 and z0 between -200 and -50 and chisq/(numHits-5) < 5 and numHits >= 15 and (numHits = 18 or pz1 > 18) group by spillID
```

Two plots attached show the kTrack rate in roadsets 59 and 70. The periods of signal-timing shifts are drawn. The kTrack rate is lower by a few percent (by eye) than the normal period. Is it high enough and fine for physics analysis?

History

#1 - 09/15/2016 09:39 AM - Kenichi Nakano

- Tracker changed from Bug to Feature

- Status changed from New to Closed

This was discussed at the analysis meeting on Sep. 13. No one claimed any problem on this kTrack rate. Just we should check it again once the track/dimuon selection is updated/fixed for R006.

Files

ktrk_rate_rs59.png	51.6 KB	09/10/2016	Kenichi Nakano
nktrk_rs70.png	52.5 KB	09/10/2016	Kenichi Nakano