

DC/MID Alignment & SF Re-Decode

- DC/MID alignment problem highlighted at last collaboration meeting
- Misalignment “fix” by Patrick Berghaus ($\delta\theta_y$) was not implemented correctly in the decoder and events were not re-decoded after the fix was made

DC Re-Alignment

- Used 115 located muon CC events
- Deleted downstream hits on muon tracks
- Used midvxanal to identify DC/MID tracks
 - Uses MID space points & matching to DC tracks
- Compare $\delta\theta_y$ between muon emulsion/SF track and DC/MID muon track
- Re-decode events and rotate VC,KS,DC & MID plane hits in Y to make $\delta\theta_y = 0$
 - Need 6 mr rotation (see rdlev1.sf)

SF Re-Decode

- Discovered that re-decoded SF hits changed in pulse height & position
- SF decoder fiducial fiber maps were being read only on the first event
 - Code assumed that all events in one job were in the same run
- Modified decoder to read in fiducial fiber maps on every event
- Hit pulse heights are generally lower than before
 - Does this affect Byron's SF calorimeter code?

Status

- Located events have been re-decoded, re-aligned, re-tracked and written to
 - /data3/evnew
- Quality histograms generated (next talk)
- Working on not-located events
 - 900 events re-decoded/tracked & “new” vertex predictions made
 - 124 events to go
- Next steps
 - Re-classify not located events
 - Delete out of fiducial, etc events