

DAQ testing in the TEDF

Thursday:

- Reverted to SSP readout (requires firmware update)
- Observed that pedestal noise seemed lower in SSP vs VME readout
- Took data but noticed that while the evio file at a glance seemed ok, Xinzhan's decoder did not see all the APVs. On closer look, we saw all except the last 2 APVs on each fiber. 35746 words per event seemed ok (expected 93 APVs).

Friday:

- Xinzhan observed that APV with id=0 was duplicated 3 times for each fiber. Updated a decoder version which shifted duplicate APV reads by 16 channels for readout.
- Ben saw that first word after SSP timestamp missing first MPD/fiber header in first event
- Ben implemented a firmware update over the weekend

Monday:

- Xinzhan updated decoder so we can calculate pedestals with SSP data.
- For some reason we still have 3 fibers that are showing duplicate APV signals

Tuesday:

- Generated a set of pedestals from run 204 (having 3 APVs reported as duplicate IDs)
- Run 205 used the pedestal subtraction.

Most recent runs of interest for looking at function and rates:

Run	Event rate	Data rate	Live time	notes
204	823 Hz	118 kb/s	43.1%	0x8
205	1 kHz	90 kb/s	58.5%	

Next step:

- Need eyes on data to verify that pedestals are ok and that data looks ok
- Common mode subtraction: How to generate CommonModeRange.txt?
- Push the rates with the pulser and verify
- Why do we have these duplicate APV reporting, and why does this go away in the pedestal subtracted data?
- Setup cosmic trigger