



Track Trigger Update

Status:

- Track Trigger installed and functioning since July
 - *July test runs showed the board functioning correctly*
 - *Track Trigger ® PreFred interface verified*

- this week: test runs taken with the Track Trigger generating triggers
 - table: TEST_TWO_TRACK
 - run 125487 (also 125495)
 - *verifies Track Trigger ® PreFred ® Fred*
 - *track trigger cross sections low (~25%) due to COT SL2, but full functionality check*



Summary

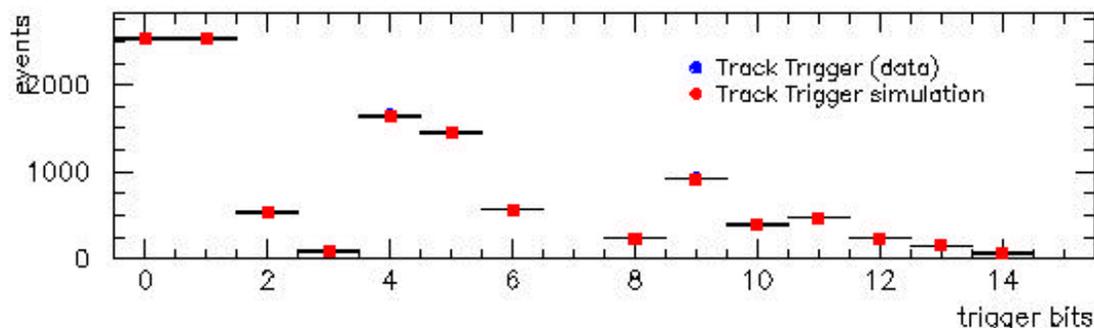
- Track Trigger makes correct decisions
 - limitation: a couple of segments where XTRP databoard is not properly sending its tracks to the Track Trigger (cured with new databoards)
- Track Trigger output = PreFred bits
- Track Trigger output = Fred bits (*after bit-mapping*)
- Trigger Table works
 - Track Triggers show expected rates
 - relative rates ok, too
- We can begin implementing Track Triggers in Physics tables
 - move single-track triggers here, too



Track Trigger Performance

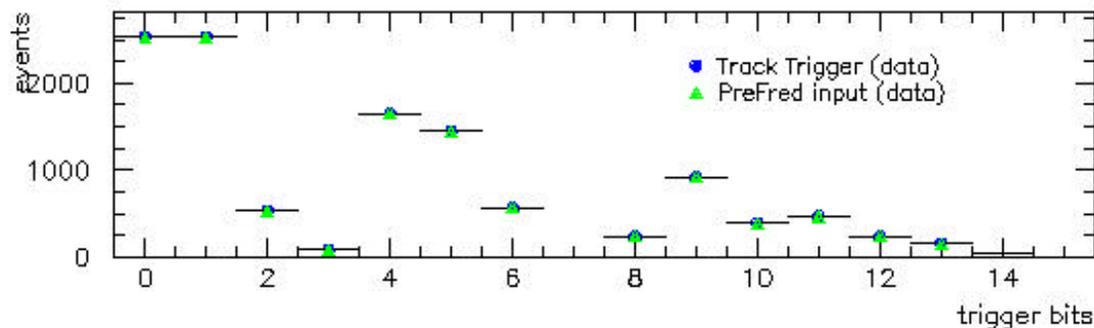
- Track Trigger data/sim

- good agreement, not perfect
- differences understood as bad XTRP segments (will be corrected)



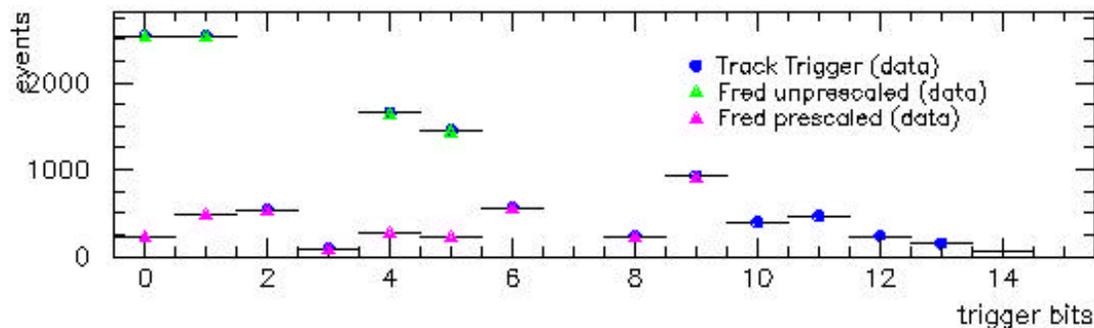
- Track Trigger/Prefred

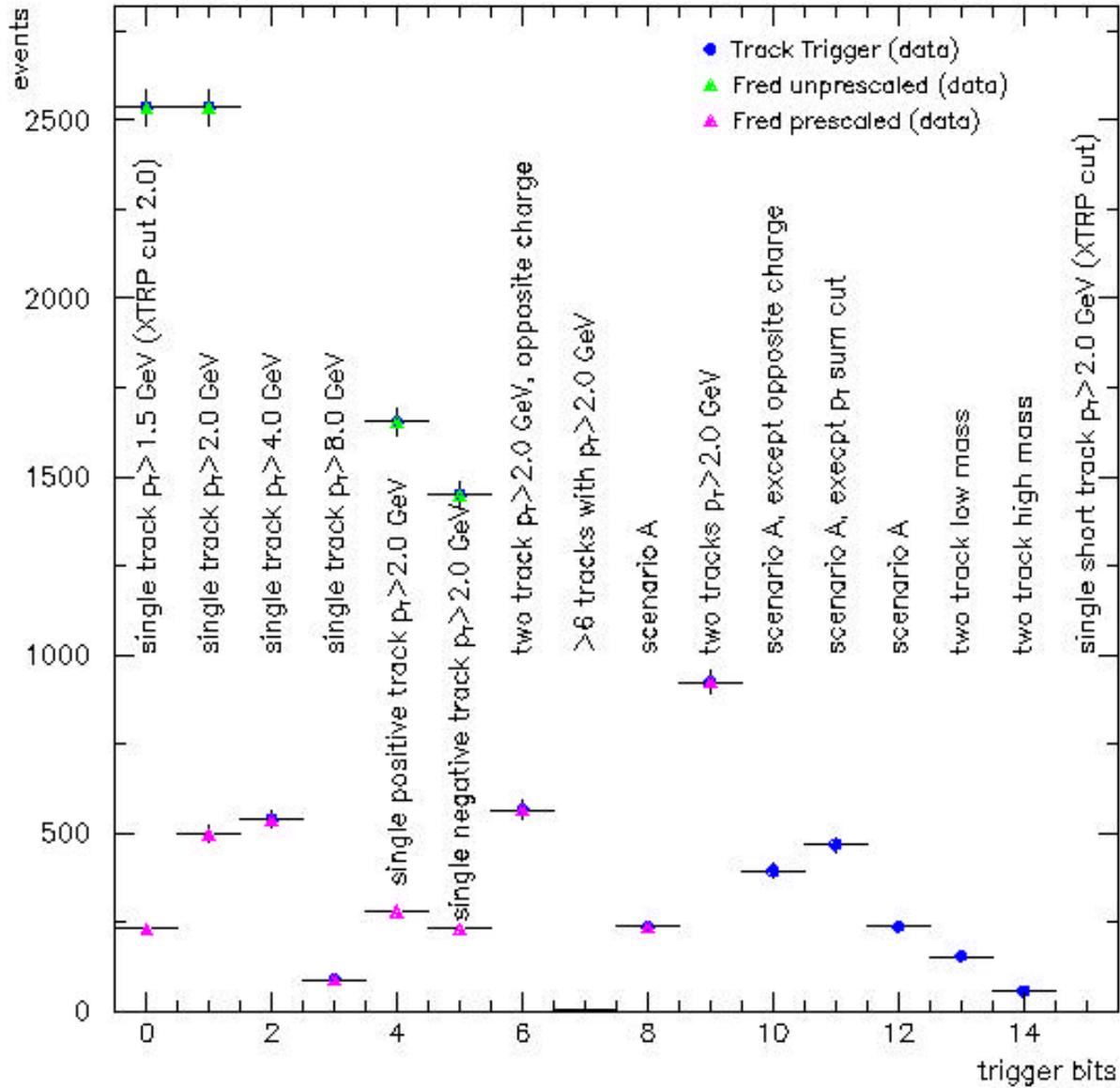
- 100% agreement



- Track Trigger/Fred

- 100% agreement







Outstanding Issues

- Have not yet been through 100% of data from run.

- Not yet generating Track Trigger maps from database
 - near term: must coordinate trigger table with map generation
 - should be ok, number of near-term triggers used will be small and stable
 - longer term: generate maps from trigger table

- Currently 10 triggers available (9 + six track bit)
 - will have two more (12 total) with new PreFred bit-map
 - Track Trigger can generate 16 different triggers