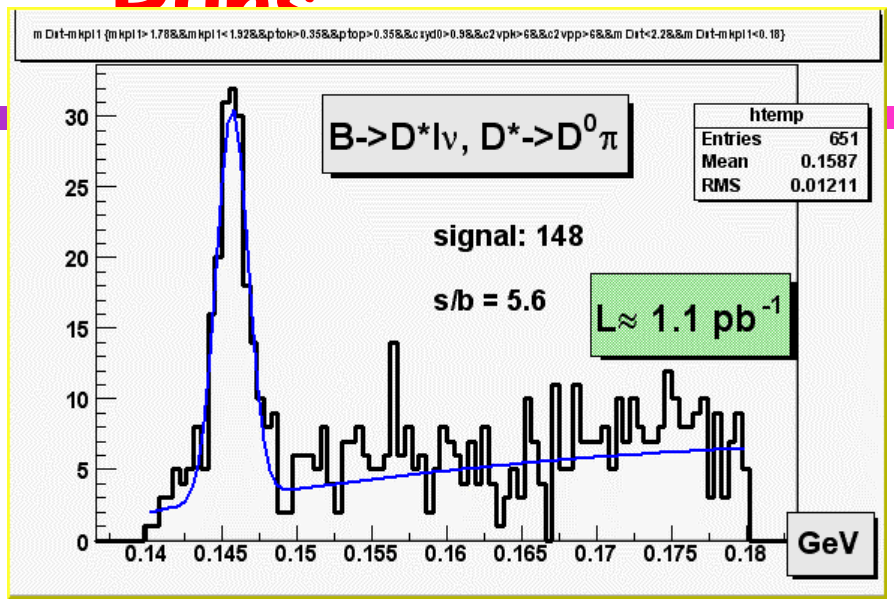
B triggers

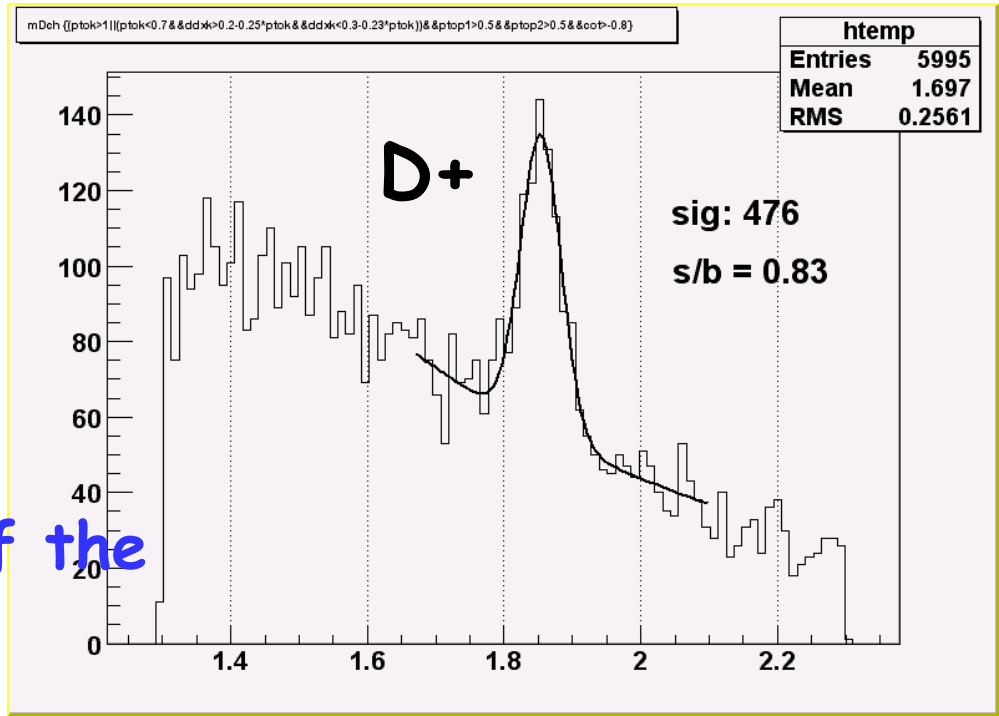
Andrei Nomerotski, Fermilab, 6/26/2003

- Looked what triggered D* & D+ events
- Motivations
  - Does it make sense?
  - Trigger based fast skimming
  - Trigger based monitoring of signals
- Used
  - Gennadi's samples as AADST
  - Sergey's analysis

Runs

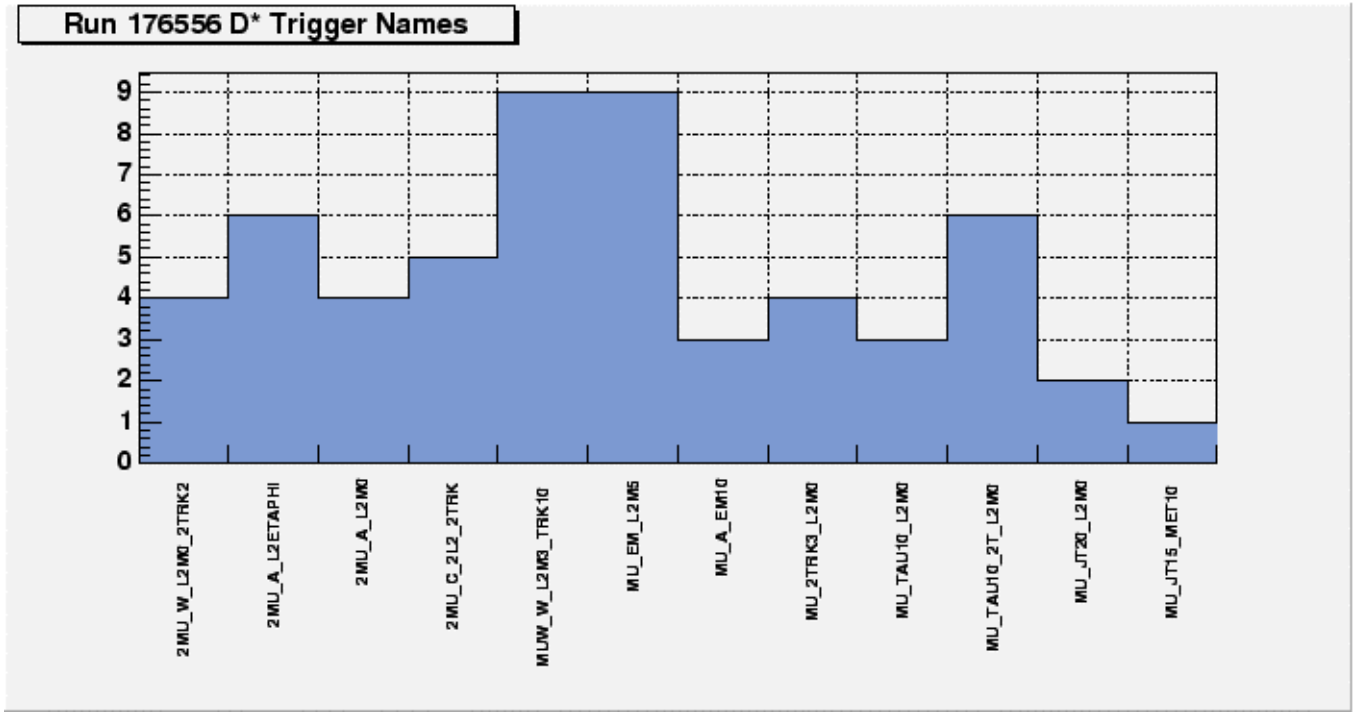
- Used the following runs
  - run 176556, 26 events D*, 73 events D+
    - taken 5/3/2003
    - trig.version 11.03
    - prescales 40 10^{30}
  - run 175515, 46 events D*
    - taken 4/9/2003
    - trig.version 11.02 (=11.03)
    - prescales 30 10^{30}
  - run 166893, 35 events D*
    - taken 10/27/2002
    - trig.version 8.41
    - prescales 17 10^{30}
- This is partial statistics of the samples





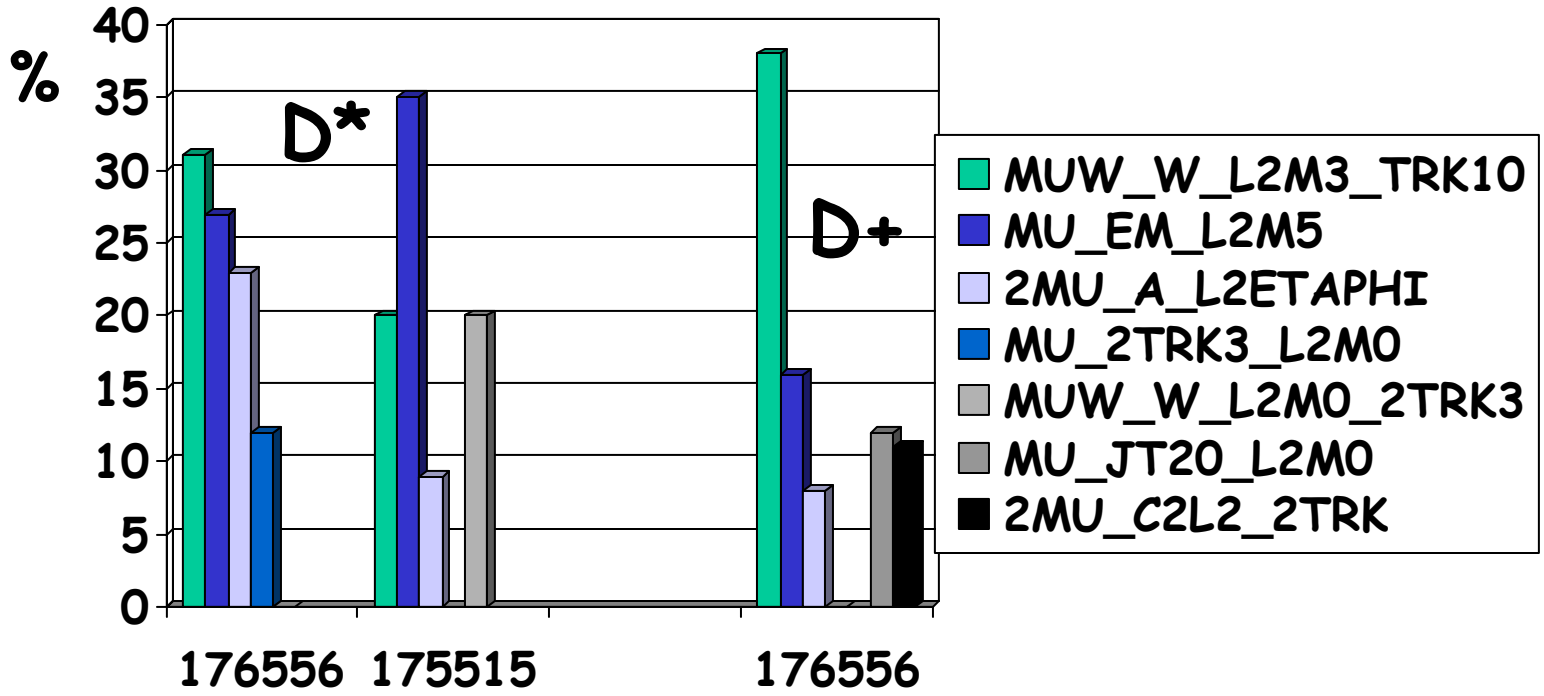
Results

- Procedure for each run
  - Find trigger with largest contribution
  - Remove events with this trigger to account for overlaps in triggers
  - Find the next largest trigger etc



Results

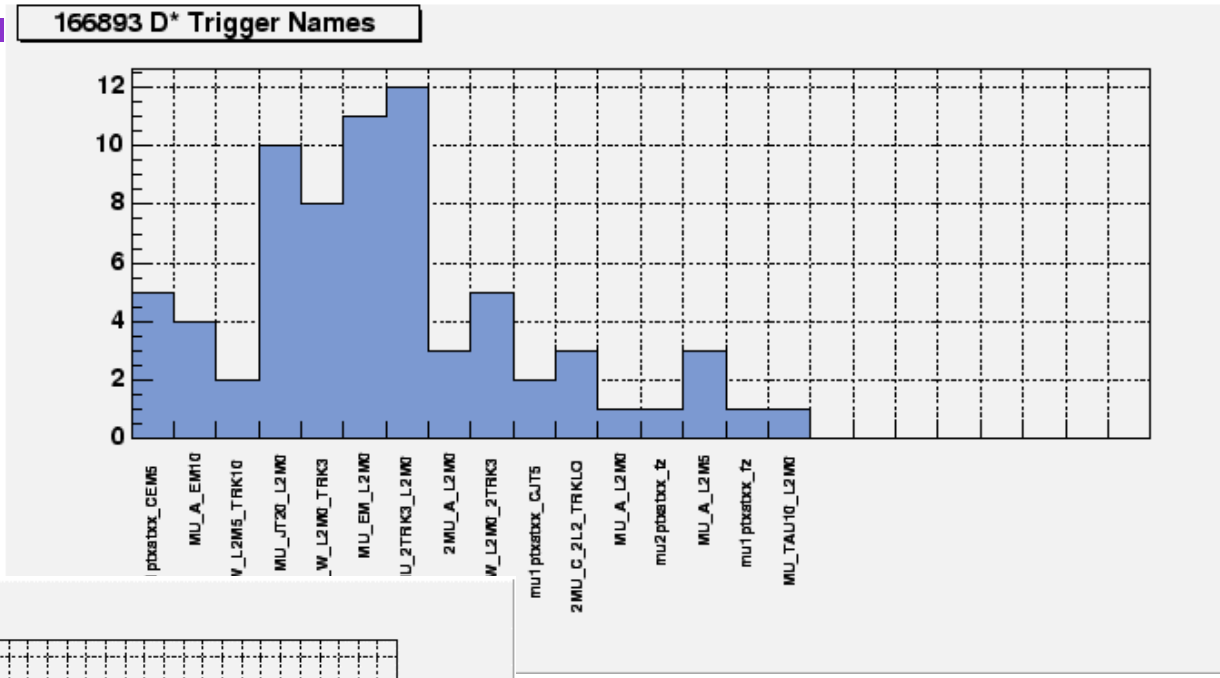
- Triggers - D* & D+ largest contributors

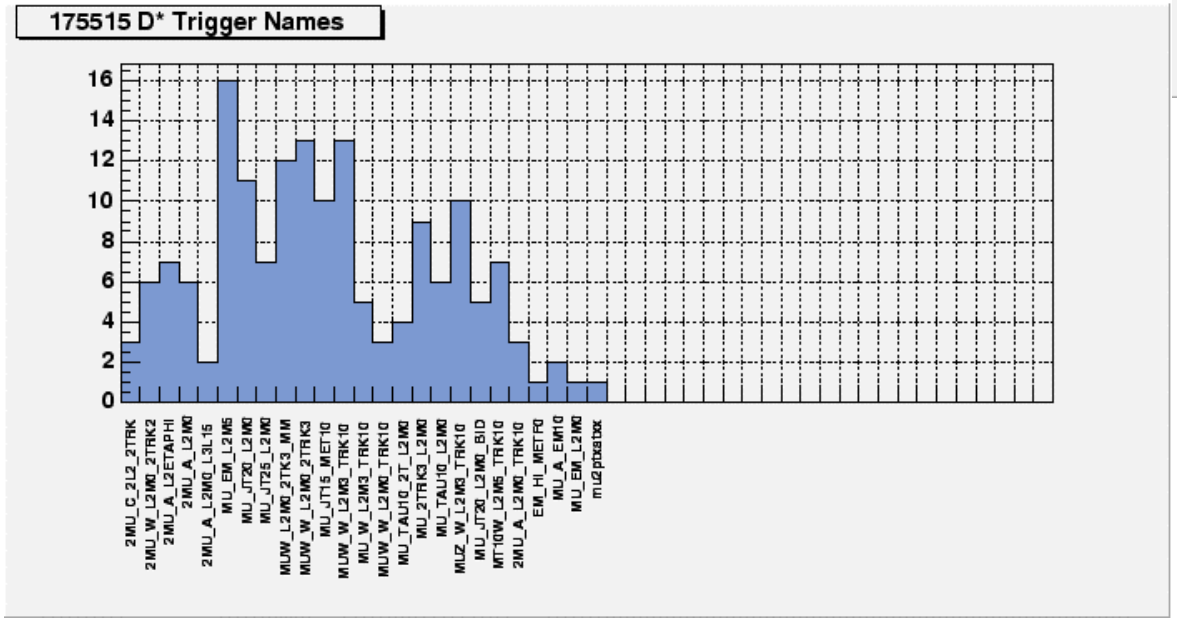


- All the triggers but two are NOT prescaled
  - MU_2TRK3_L2M0 : prescale 7
  - MUW_W_L2M0_2TRK3 : prescale 4

Results

- D* in other runs





Conslusions & Plans

- Top 4-5 triggers cover most of the signal
- Currently most of signal comes from unprescaled triggers
- Muon + L2 two tracks is a good trigger but prescaled
- Dimuon triggers are useful
- Muon + CAL triggers are useful

- Writing some code to automate the procedure
- Will look at new triggers