New split-arch banks

● All patterns use $300 + 300 + 500 = 1.1$B muons
● Banks cover all 8 regions
● 8L: SS=16
  ● Available 160M pattts/region; using ~64M
● 4L: pixel = 25x36; pseudo = 8sig, 6sig, 4sig
  ● Per-region size: 9M (8sig), 15M (6sig), 20M (4sig)
  ● Usually using all 4L patterns
● 4L constants are also available, but code not finalized to use 8L fit params directly
  ● But lookup-based simulation already works
Run parameters

- chi2/dof = 4 everywhere
- 8L has roadwarrior and *in-road hitwarrior*
  - HW_NDIFF=3
- 4L/11L does not have roadwarrior, but has final *global hitwarrior*
  - HW_NDIFF=6
- No fit optimizations: all fits are done in all roads independent of 11/11 chi2.
  - Only exception: majority recovery is skipped in all superstrips with >3 hits
Single muon efficiency

8L efficiency
4L, 8sigma efficiency
4L, 4sigma efficiency
Whbb @ 3E34: b-daughter eff

8L efficiency
4L, 8sigma efficiency
4L, 4sigma efficiency
Some dataflow numbers

- In an efficiency-maximizing configuration
- 8L: 45k roads (AM), 30k roads (RW), 290k fits (incl. Majority), 20k 8/8 fits, 120k 7/8 road fits
- 4L: 3 numbers are for $8\sigma$, $6\sigma$, $4\sigma$
- # roads out of AM:
  - 120k, 77k, 47k
- # of fits (total, including majority)
  - 364k, 190k, 105k
- # of 11/11 fits
  - 11.5k, 6.5k, 3k
- # of 10/11 fits in 10/11 roads
  - 243k, 126k, 68k
Timing per 100 events

- How long 3E34 jobs took on tier3 using fairly large 8L and 4L banks?
- 8L is split into 16 subregions:
  - RF=13min, TF=3min
  - RF jobs run in parallel on tier3, but would run sequentially on the grid (so RF=13*16=200min)
- 4L (4sigma) is split into 1 subregion:
  - RF=30min, TF=3min
- 4L (8sigma) is split into 1 subregion:
  - RF=50min, TF=7min