

New ideas for SVT

- items for the near future
 - increase SVT efficiency
 - improve purity
- priorities
 - use SVT improvements as soon as possible
 - then make more improvements
- names
 - SVT still need a lot of work
 - who wants to be involved?
- deadlines

Last week ideas

- barrel crossers
 - Bill has some ideas
 - how much will be the improvement?
- recover 4/4 in 4/5 (patterns are 5/5)
 - how much will be the improvement?
 - some study is needed
- use tracks with $P_T > 1.5$
 - how much will be the improvement?
- $P_T > 1.5?$ (new patterns)
- improve timing?

More ideas

- wedge crossers
 - may be more important than barrel crossers
 - how much will be the improvement? About 10% in efficiency?
- systematic calculation and monitoring of track purity
 - for a given trigger path
 - autoSVTMon?
- CA constants (internal alignment)
 - improve purity, reduce rate
 - program source “lost”
 - complications due to different treatment of signal and background can be eliminated by using hybrid tracks (negligible background)
 - new program for 4/5?
- 3/3 performance
 - i.p. resolution vs layermap

- rate
 - efficiency
 - purity
- 3/3 CA constants
 - are they useful?
- new SVT cuts for 4/5
 - χ^2 , Long clusters, Ntracks,...
- analysis of calibration run 156456
 - ntuples already available since 3 weeks
 - new ntuples with svtsim and offline prod available since last week
- analyze 4/5 runs
 - runs 156818,20,21: about 2 M events
 - compare with 4/4
 - yields, efficiency (vs i.p., vs P_T)
- new fcon (centered closer to the beam), 3/3 fcon
 - small non-linearity
 - better i.p. resolution

- better purity (?)
- automatic correction for non-linearity
 - if beam is not stable, new fcon are needed each time the beam moves
 - some ways to do that...
- pattern “library”
 - patterns generated at different beam positions
 - easier in 4/5 mode
- effects of beam shift
 - some work already done
 - some more to do?
 - e.g.: efficiency vs i.p., yields (K_S, D^0)
- where do we want the beam?
 - requirements
 - instruction for the shift crew to monitor the beam position
- documentation for the SVDD bank
 - update note 4152

- descriptions of SVDD words
- description of the 3D beam position card
(not used by autoSVTMon because non documented, 3D pos. recalculated)
- CDF note on 4/5?
- P.S.: track purity in 4/5 runs (stream A):
82%±1% confirmed
(see slides Jan. 7, 2003)
- NEW: patterns centered at different beam positions in different barrels