

# FastSim Summer 2010 Production

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FastSim meeting  
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# Goals

- Answer remaining detector geometry issues
  - physics reach run left till fall/winter 2010
- Factor of  $\sim 2$  more cores
- Factor of  $\sim 6$  more statistics
  - requires  $\sim 1$  month of dedicated manpower
  - need to focus on critical modes/questions
- Full backgrounds
  - Bhabhas and pairs
  - currently  $\sim 10X$  slower than Feb. production

# Main geometry issues

SVT Layer 0	Striplets @ 1.6cm if background is acceptable
SVT N Layers	5 + L0. Performance does not suffer. Redundancy important
SVT - DCH radius	Fixed by cryostats to allow easy installation
Backward EMC	Inexpensive device bringing 8-10% sensitivity improvements for $B \rightarrow \tau \nu$
Forward PID	Still open. Physics gain about 5% in $B \rightarrow K(^*) \nu \nu$ . Either very expensive or unproven technically. Extra material in front of EMC
Absorber in IFR	Optimization done. Reuse yoke.

# Known Issues

- Tagging
- Svt dE/dx
- muon ID (lfr)
- Volume navigation
- reco-based PID lists
  - leptons
  - protons
- BReco problems
  - 'duplicate' candidates
  - missing  $M_{ES}$  peak

# Issues (cont.)

- Background mitigation
  - pair electron rejection
  - Emc response modeling
- Reduction of combinatorics
  - more refined lists as input?
  - Use only clean(er) modes?
- Exploitation of new information
  - Forward PID, Backwards EMC
  - smaller beamspot

# Schedule

- Address outstanding issues in next month
  - must select/prioritize
- Code freeze at/before Elba meeting
  - results presented there?
- Production testing in June
- Production run in July
  - results available for September meeting