Fast Sim Requests for the Feb 2010 production cycle

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21st Jan 2010

Two Body Decays

- PacTwoBodyUser contains the analysis/tcl for the following decay combinations:
    - ππ, Kπ, KK (all charge permutations)
- Would like to see the $\pi^+\pi^-$ and $\pi^0\pi^0$ modes included in the production for generic backgrounds: Generic-B and u,d,s,c so that we can study these.
- Would be nice to have a few /ab equivalent of generic background to make sensitivity extrapolations for the TDR.
- We expect that this data sample will be sufficient for the TDR.

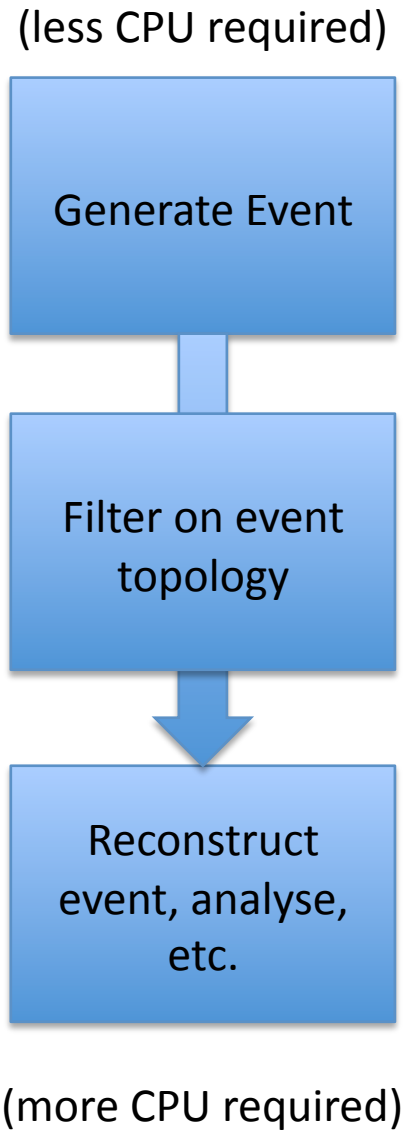
tau-LFV

- Need to add the τ→μμμ mode to PacTauUser.
- Would like to have as much generic background included in this production as possible:
  - Generic-B, Generic-Tau, u,d,s,c, BhaBha (electron and muon)
  - Aim to do put the code into the package over the next few days.

FastSim Event Level Filter

- These analyses will use event level filters that have been tuned to identify a minimum topology to reconstruct the 'signal'.
- They can be used to remove background where this minimum topology can not be achieved.
- The PacTwoBodyUser/TbuSimTrkFlt is an example of this, it can be cloned and tailored for your needs.
- See the following URL for more details:

http://mailman.fe.infn.it/superbwiki/index.php/PacTwoBodyUser



What cuts are in the filter?

Variable Name	Description
minCandidatesNeutral	Minimum number of neutral candidates passing momentum and acceptance cuts (Default = -1).
maxCandidatesNeutral	Maxmum number of neutral candidates passing momentum and acceptance cuts (Default = 200).
minThetaNeutral	Minimum angle in theta that will be accepted for neutral sim tracks (Default = 0 degrees).
maxThetaNeutral	Maximum angle in theta that will be accepted for neutral sim tracks (Default = 180 degrees).
minPNeutral	Minimum momentum that will be accepted for neutral sim tracks (Default = 0.01 GeV/c).
maxPNeutral	Maximum momentum that will be accepted for neutral sim tracks (Default = 11.00 GeV/c).
minTwoBodyMassNeutral	Minimum invariant mass cut for combinations of any two neutral sim tracks (Default = 0.0 GeV/c^2 : cut switched off by default)
maxTwoBodyMassNeutral	Maximum invariant mass cut for combinations of any two neutral sim tracks (Default = 100.0 GeV/c^2 : cut switched off by default)
minThreeBodyMassNeutral	Minimum invariant mass cut for combinations of any three neutral sim tracks (Default = 0.0 GeV/c^2 : cut switched off by default)
maxThreeBodyMassNeutral	Maximum invariant mass cut for combinations of any three neutral sim tracks (Default = 100.0 GeV/c^2 : cut switched off by default)
minCandidatesCharged	Minimum number of charged candidates passing momentum and acceptance cuts (Default = -1).
maxCandidatesCharged	Maxmum number of charged candidates passing momentum and acceptance cuts (Default = 200).
minThetaCharged	Minimum angle in theta that will be accepted for charged sim tracks (Default = 0 degrees).
maxThetaCharged	Maximum angle in theta that will be accepted for charged sim tracks (Default = 180 degrees).
minPCharged	Minimum momentum that will be accepted for charged sim tracks (Default = 0.01 GeV/c).
maxPCharged	Maximum momentum that will be accepted for charged sim tracks (Default = 11.00 GeV/c).
minTwoBodyMassCharged	Minimum invariant mass cut for combinations of any two charged sim tracks (Default = 0.0 GeV/c^2 : cut switched off by default)
maxTwoBodyMassCharged	Maximum invariant mass cut for combinations of any two charged sim tracks (Default = 100.0 GeV/c^2 : cut switched off by default)
minThreeBodyMassCharged	Minimum invariant mass cut for combinations of any three charged sim tracks (Default = 0.0 GeV/c^2 : cut switched off by default)
maxThreeBodyMasscharged	Maximum invariant mass cut for combinations of any three charged sim tracks (Default = 100.0 GeV/c^2 : cut switched off by default)