

BToDInu Reskim

Status and plans

What is reskim?

- Skim skimmed-collections with additional conditions.
- Input = skims such as BToDInu skims.
Not AllEvents.
- Output = sub-skim = Data/MC collections.
- Merits
 - Reduce the size of data/MC
 - BToDInu Data skims: 0.7 TB
 - BToDInu MC skims: 2.5 TB, total 3.2 TB
 - If reduced to 40 % -> 1.3 TB, 10 % -> 320 GB
 - Faster than ntuple production.
Many different streams (reskimming) can be done at once.
 - Sub-skim -> Easy to change conditions and re-run.

BToDlnu reskim: Streams

- Double Tag (Kenji)
 - More than two non-overlap Dlnu candidates
 - Selection rate: $\sim 2\text{-}3\%$
- Additional Lepton (Silvie, David, ...)
 - More than one non-overlap lepton (electron or muon) in addition to Dlnu candidates
 - Electron list: PidLHElectrons, eMicroLoose ?
Momentum cut: $p^* > 0.5\text{GeV}$?
 - Muon list: MuonNNLoose, MuonNNVeryLoose ?
Momentum cut: $p^* > 0.8\text{GeV}$?
 - Selection rate: $\sim 30\text{-}40\%$
- BtoXGamma (Michael)
 - FilterTools/BtoXGammaFilter
 - Selection rate: $\sim 6\text{-}7\%$
- Low-multiplicity (Bipul)
 - $n\text{ChrgTraks} < 5$, $n\text{CarolNeutrals} < 10$, $n\text{NeutralHadrons} < 5$
 - Selection rate: $\sim 80\%$?
- D*Inu (Eugenio ?)?

BToDInu reskim: Production

- Release 14 skims only
- Use BToDInuMiniUser package
 - Including bug fixes of BToDInu skims
 - Missing $B \rightarrow D^* \text{enu}$ candidates will be added.
 - Missing User Data may be added (not yet ready).
- Data (Run1 – Run4)
 - Kenji will do the production.
- MC (SP5, SP6)
 - Shenjian is going to do the production. (Thanks!)
 - Need one or two more volunteer!!

BToDInu reskim: Plans

- Test production – early next week
 - ~2 fb⁻¹ of Run4 Data and BpBm SP6 MC sub-skims
 - I need feed back from you!!!
- Sub-skim production
 - Start early February
 - Is going to take
 - 3 - 4 weeks for Data
 - 10 – 12 weeks for MC if only one person does this.
 - Need more help!!!
 - Any idea to save CPU time by re-running CompositionSequences?
 - How to find luminosity of skimmed data/MC?
 - Do we need to keep record of selection rates?