Jets in the “Colliding Beams” run 122314

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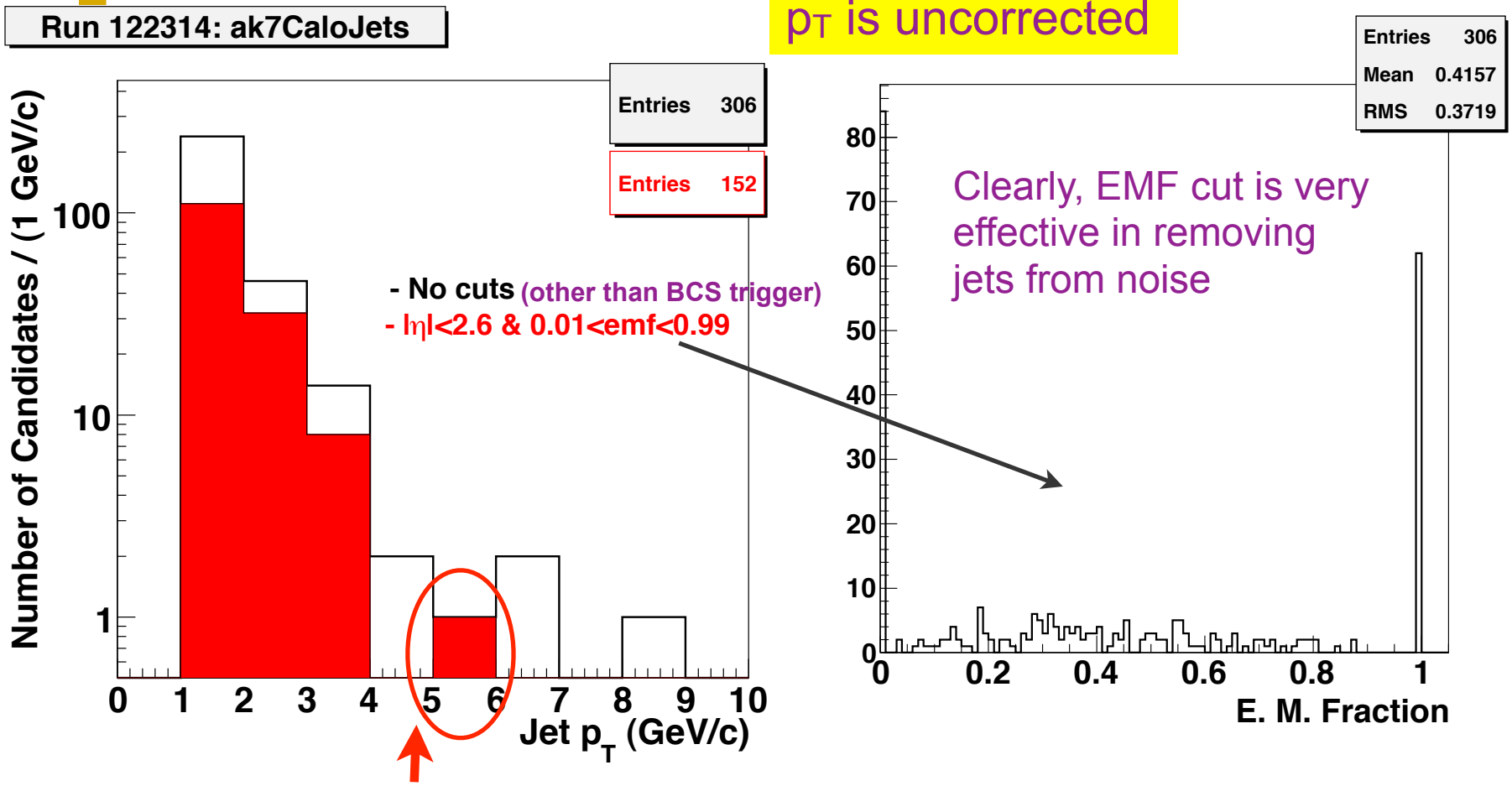
Data sample

- This preliminary analysis uses the "golden run" 122314
  - 1 mb^{-1} Min Bias data at $\sqrt{s}$ = 900 GeV, 147 events
  - B-field off, tracker TOB on
- Skim events with BSC (beam crossing) technical triggers

  /afs/cern.ch/cms/CAF/CMSCOMM/COMM_GLOBAL/Run122314_BSCSkim_MinBiasPD_ReTracking.root
- Use uncorrected anti-kt 0.7 CaloJets, CMSSW 3.3.4

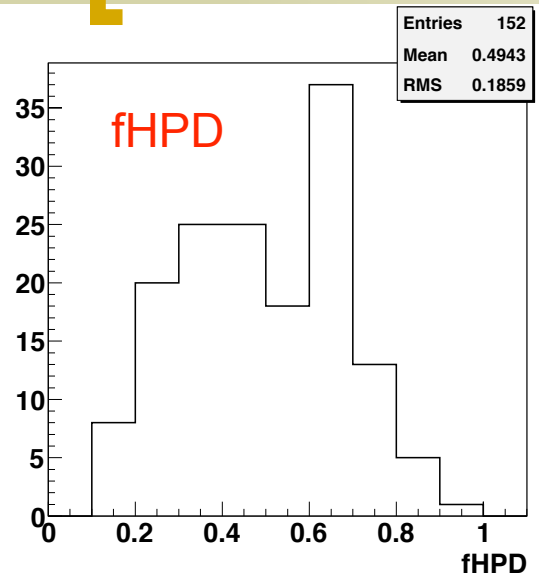
Purpose: take a look at "jet" p_T distribution and jet Id variables

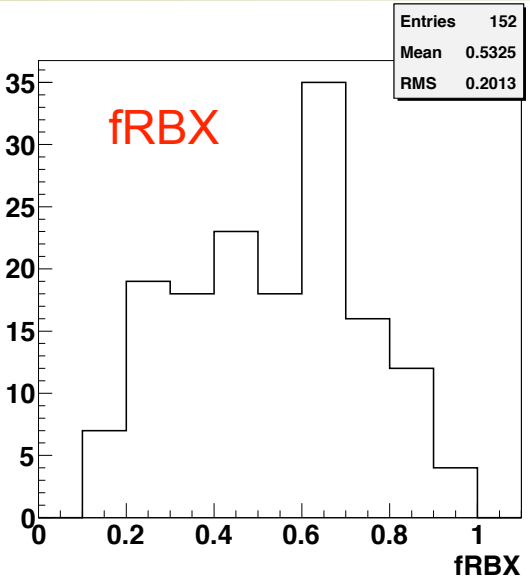
p_T distribution

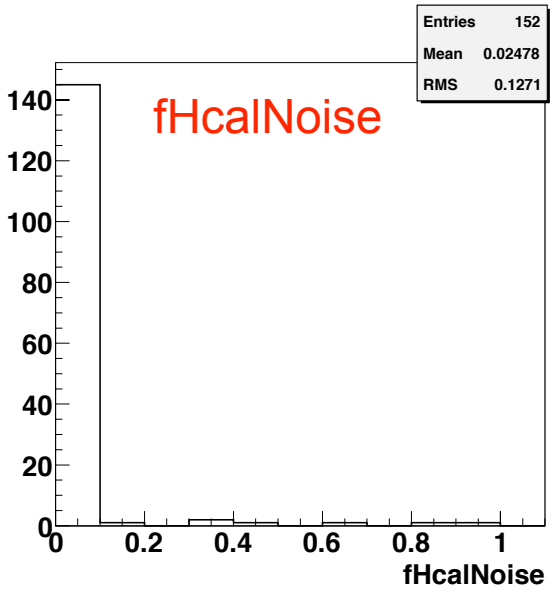


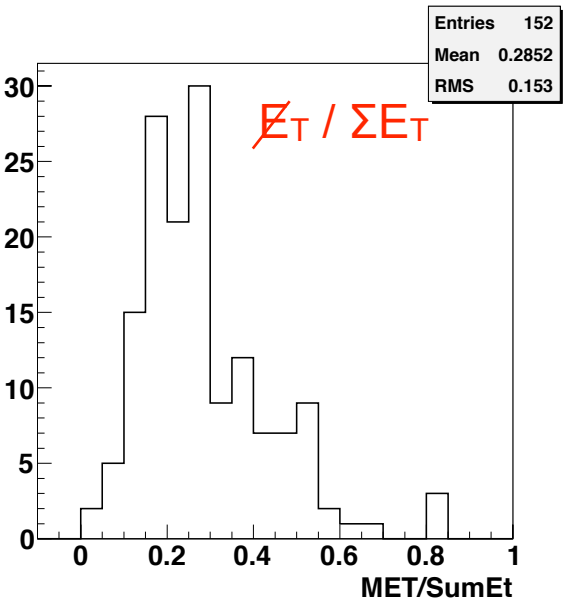
This is the famous event (#20386885) that Robert Harris posted on the JetMET hypernews as being the most convincing jet candidate. It has 5 GeV uncorrected p_T and an EMF of 0.15. http://indico.cern.ch/materialDisplay.py?contribId=17&materialId=slides&confId=75029

Jet Id variables after EMF cut









There is no obvious value to cut on *fHPD* or *fRBX*. The official "loose" (0.98) and "tight" (0.95) cuts [optimized from CRAFT data] do not help in reducing residual noise after EMF cut.

A cut on *fHcalNoise* (say < 0.1) also does not help much. A cut on missing E_T over sum E_T in the event (say, <0.3) seems to be somewhat effective even at this low energy.