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A Brief Look at Post-Shutdown Data

All DØ Meeting

12th March 2004

What's this about

- There are three main parts each talk should have:
  - $\surd$ Tell them, what you're going to tell them
  - $\surd$ Tell them
  - $\surd$ Tell them, what you've told them:)
- OK, so this is just my brief look at some post-shutdown skims

Data ("Tell them")

- Post-shutdown skims, Nefertiti top_analyzed
  (Top group samples + a part of one CSskim)

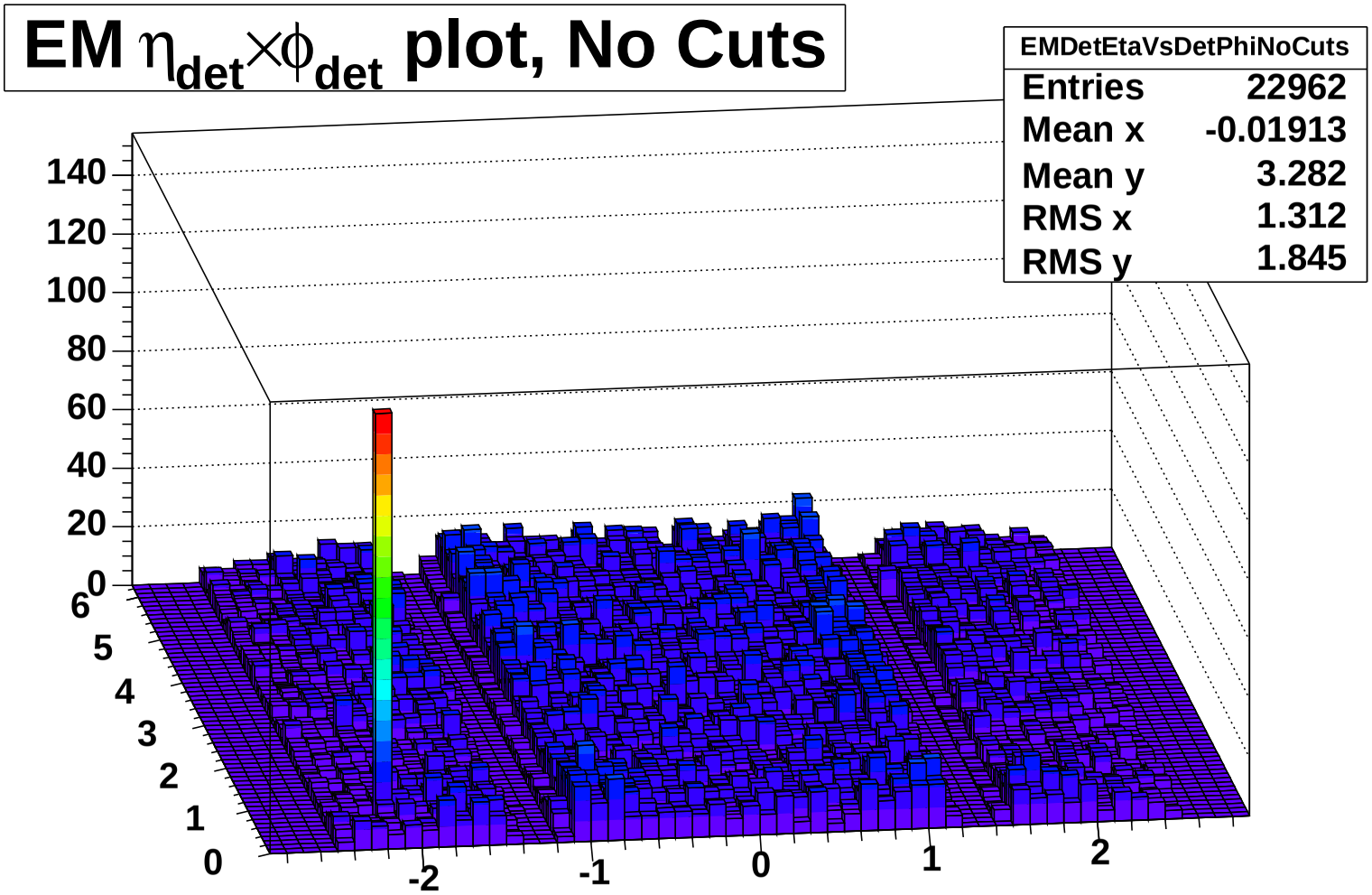
skim	events	in GR only	GR rejected
EM_RECO_EFF	121486	113805	7681
MUQCD	221180	207740	13440
MU_RECO_EFF	61653	57898	3755
CSskim_EMMU	153657	140011	13646
DIEM_EXTRALOOSE	224623	207456	17167
EMQCD	888284	832703	55581

What I have looked at

- Basicaly no cuts introduced
- Combined the Database Bad Run List for $\langle 180956, 189907 \rangle$ and excluded all runs with bad LBN runs presented at ADM last week.
- Cuts only for leading–subleading jet ϕ study:

  $n_{\text{jets}} \geq 2$, $\Delta\phi > 2.9$, ej_met$< 0.5\, p_T^{\text{jet}}$ leading
- Multiplicities (jet, EM, μ)
- p_T, ϕ and η (physical & detector) distributions
- Missing E_T, METx, METy ...
- For jets and EMs: $\phi \times \eta$ plane
- For jets treated separatly leading and subleading ϕ and η spectra.

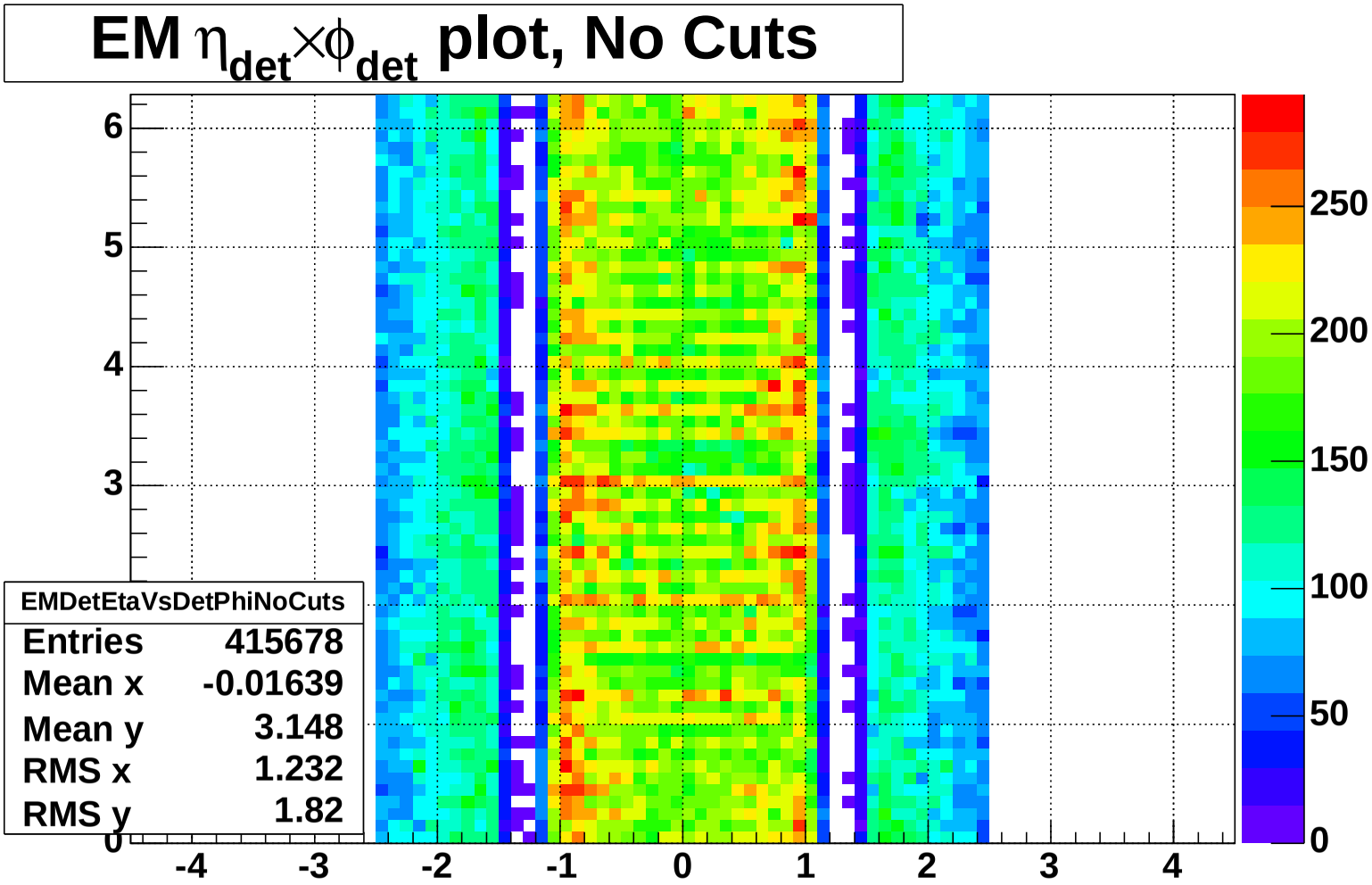
Spike in EM $\eta \times \phi$ plot, CS EMMU Run 187180



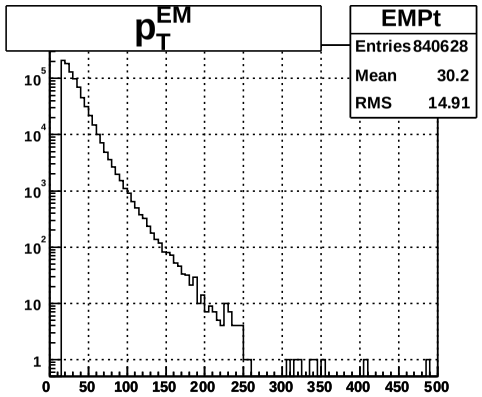
Spike in EM $\eta \times \phi$

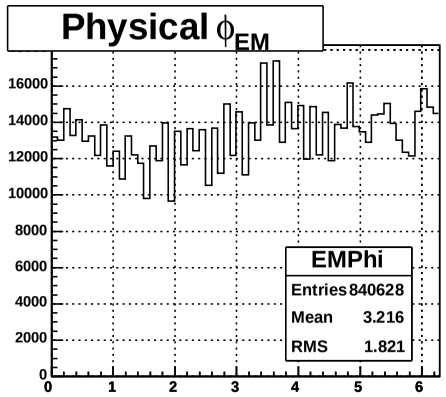
- Spike in EM $\eta \times \phi = (-2.2,\ 0.6)$ CSskim EMMU: **Run 187180** (138 such events, 3 from other runs)
- What was already found (see last ADM) around were runs 187177, 187178, 188155 (CSskim-2EMhighpt) - but different η, ϕ.
- This run wasn't in bad runs in online database $\Rightarrow$ bad run candidate:)

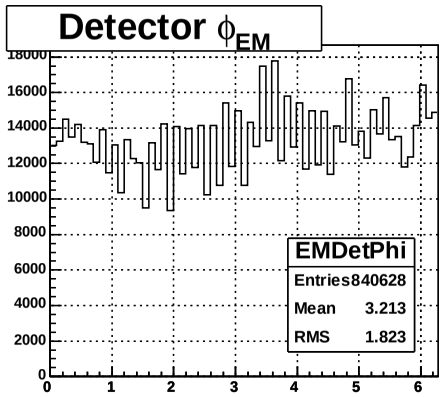
No spike in EM $\eta \times \phi$ plot for DIEM skim

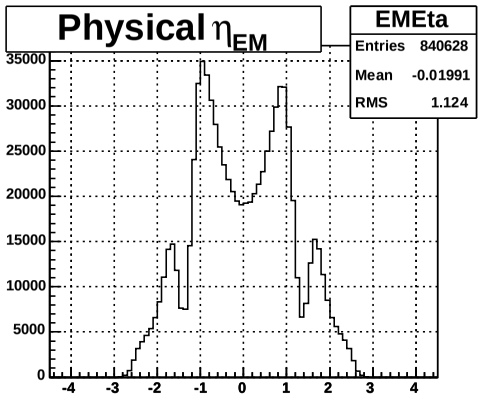


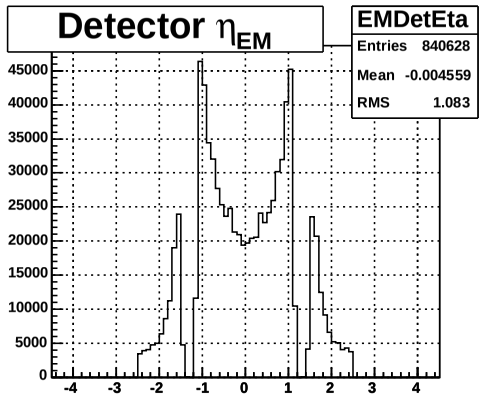
Some EMs facts, EMQCD skim

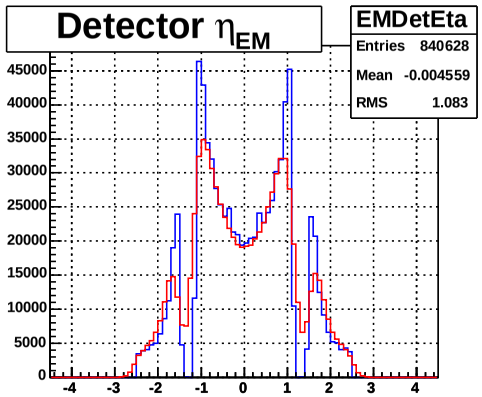




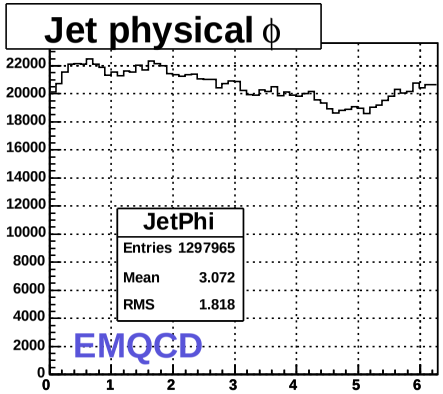


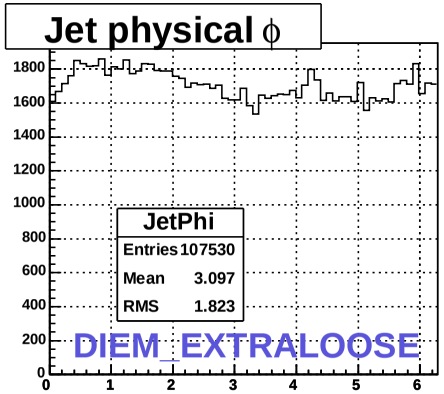


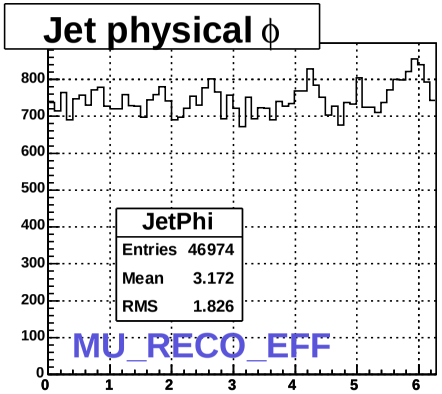


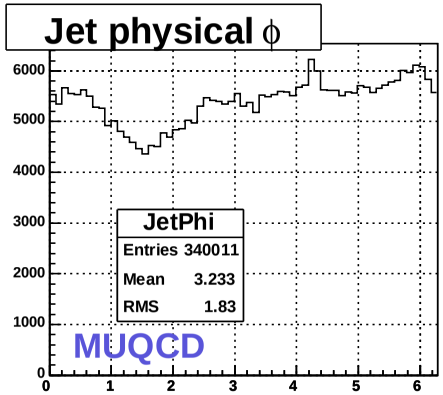


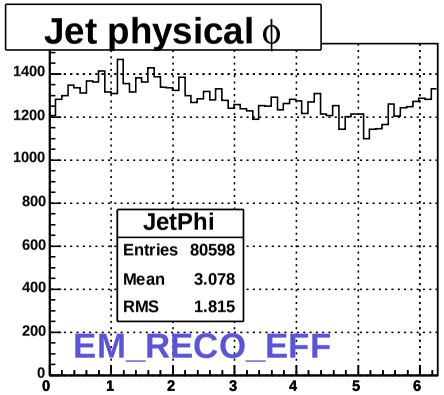
Jet Phi Spectrum

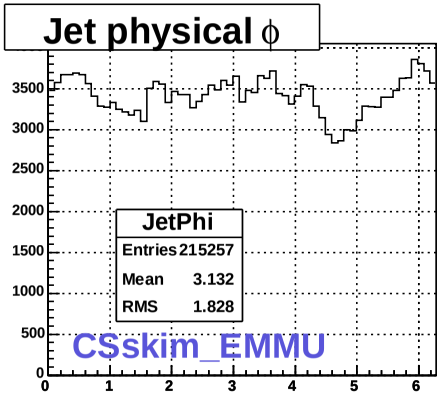




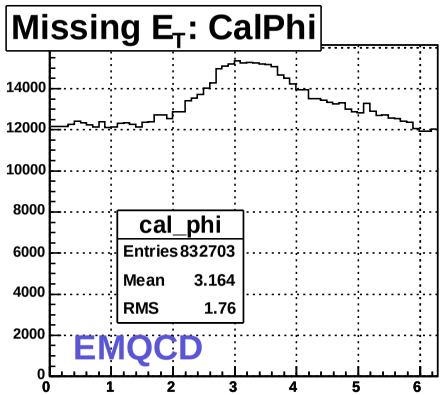


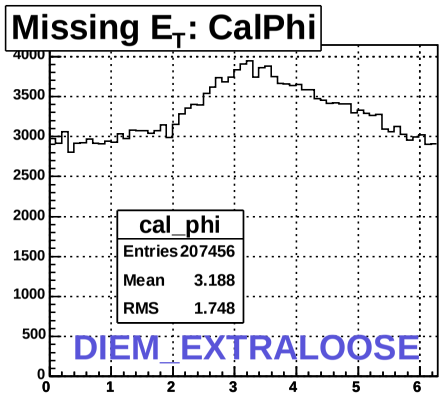


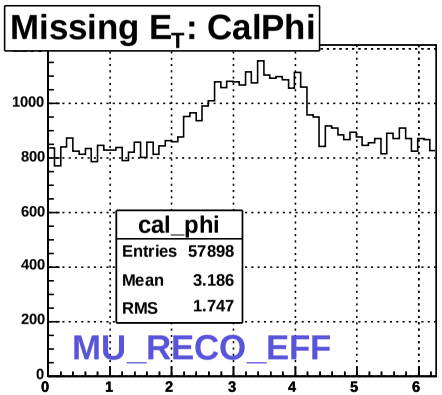


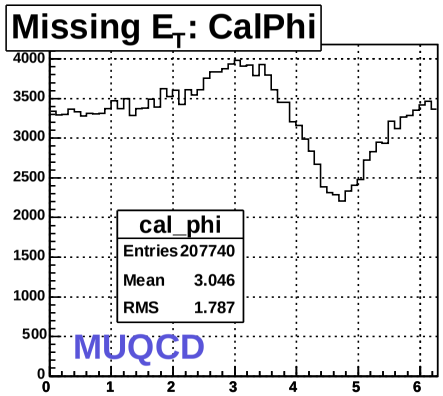


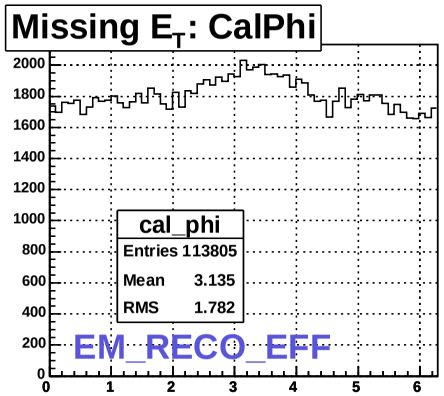
Missing E_T – CalPhi

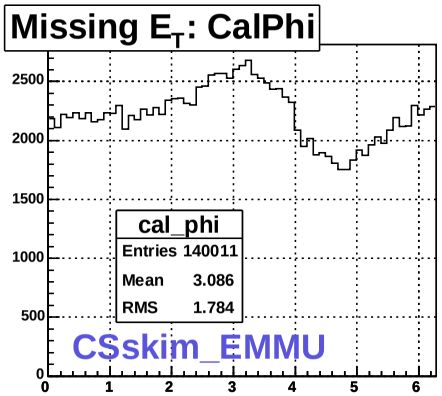












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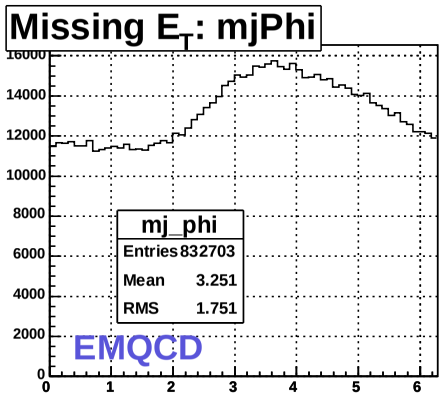
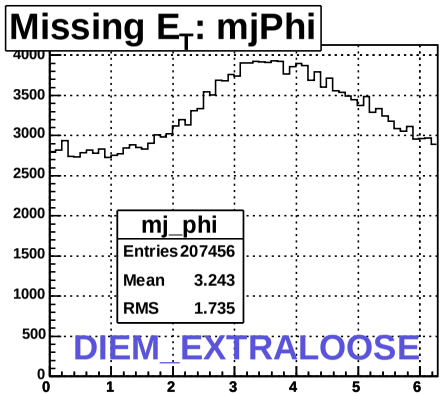
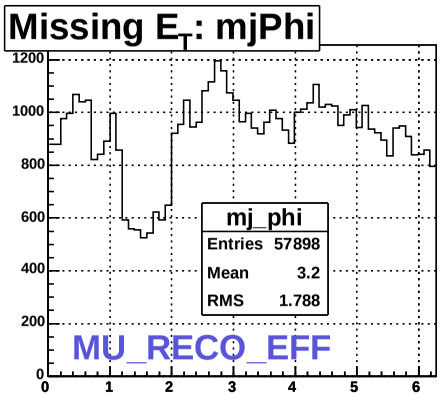
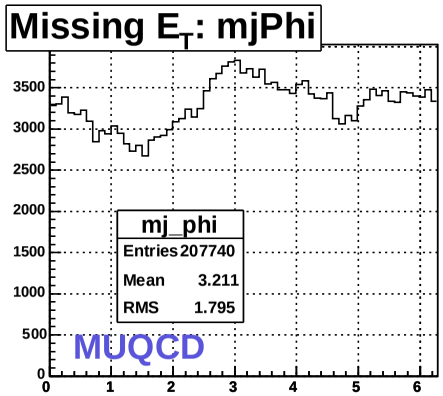
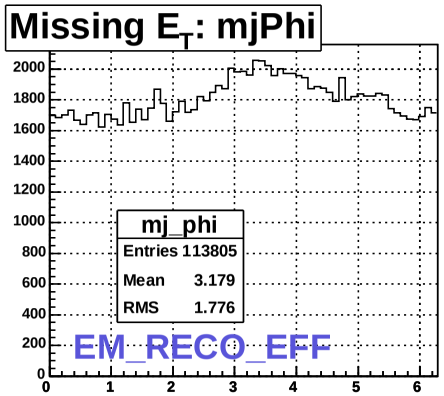
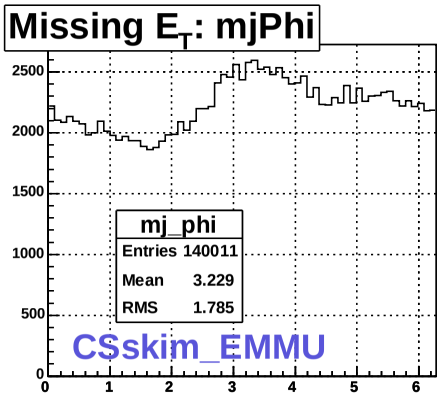




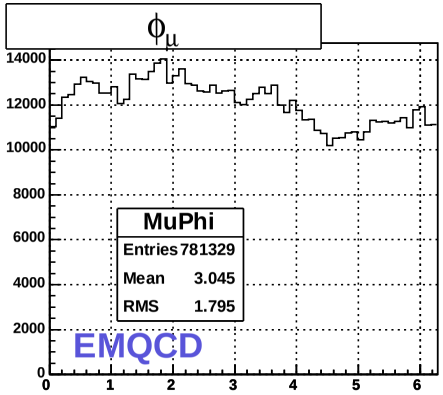


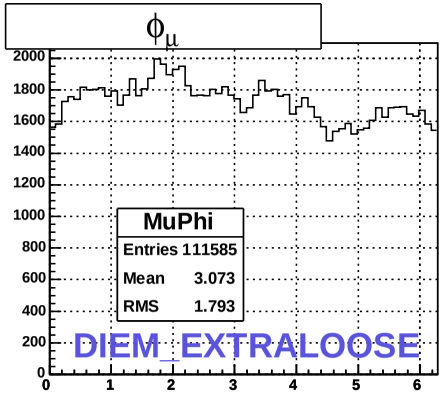


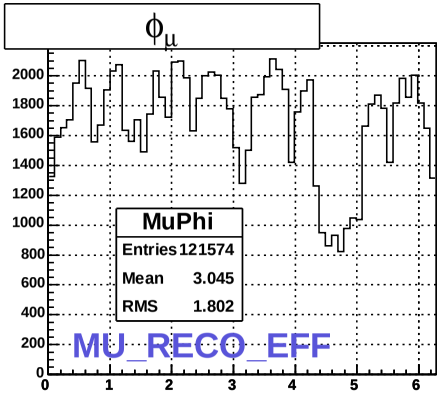


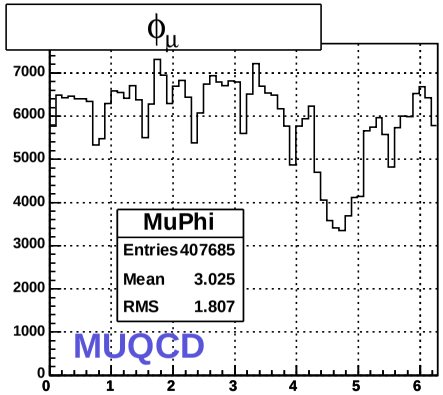


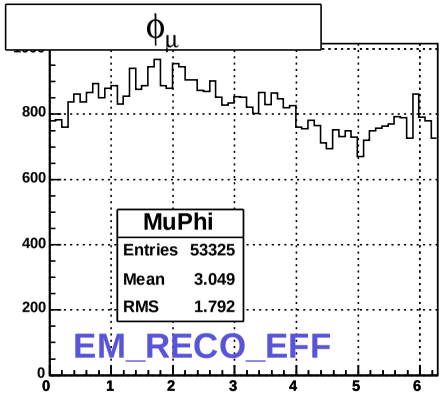
Muon Phi Spectrum

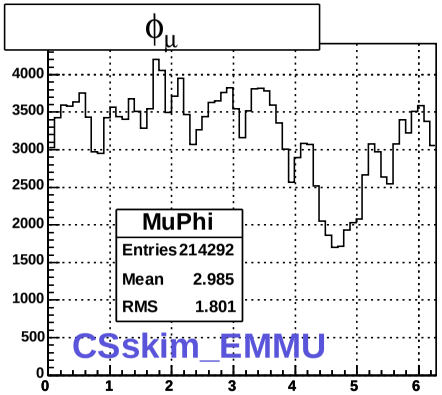




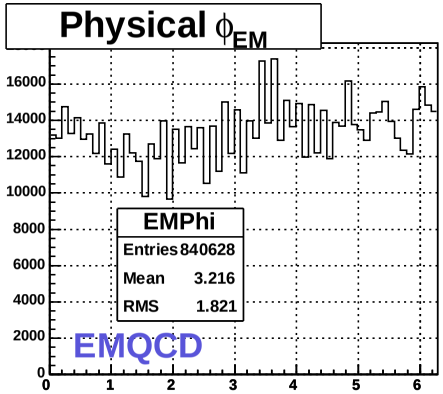


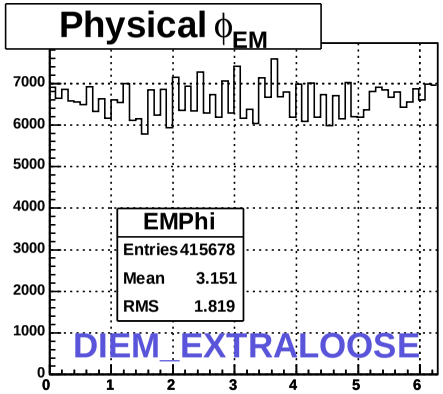


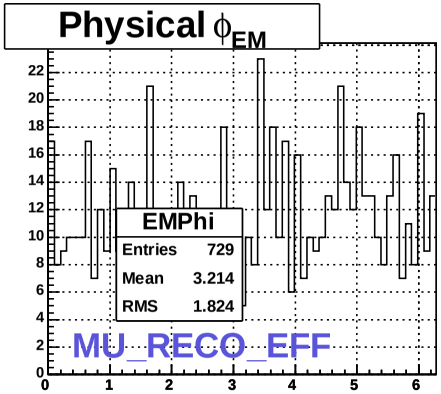


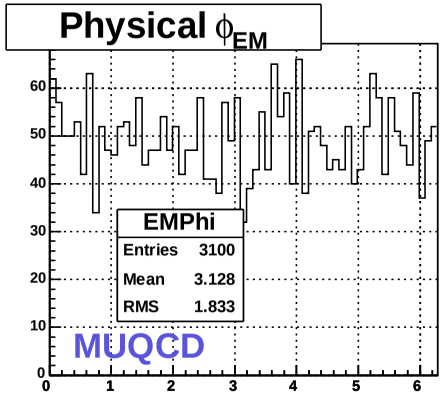


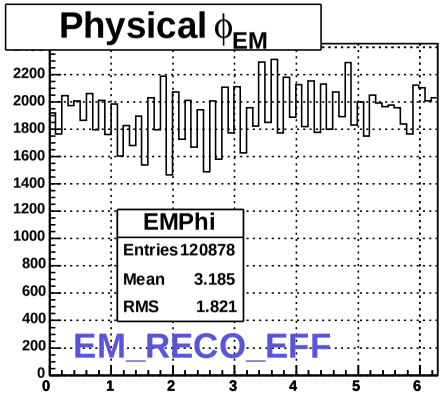
EM Phi Spectrum

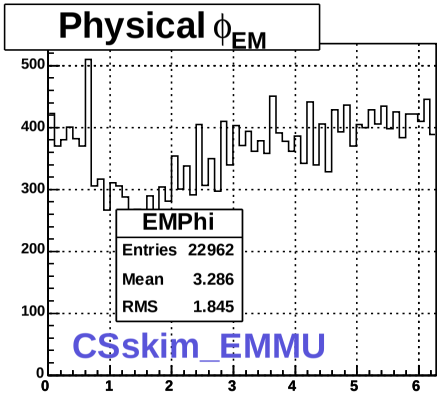




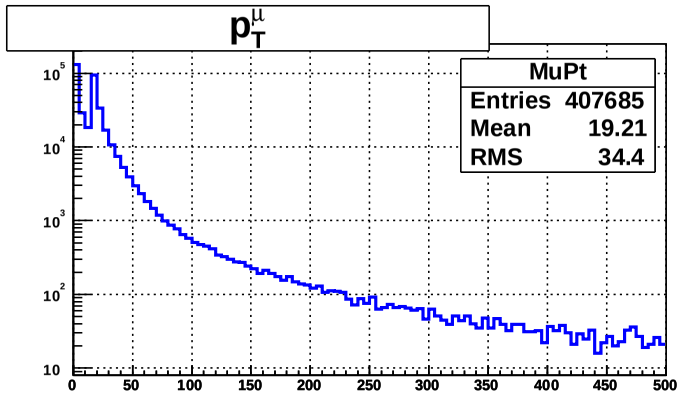


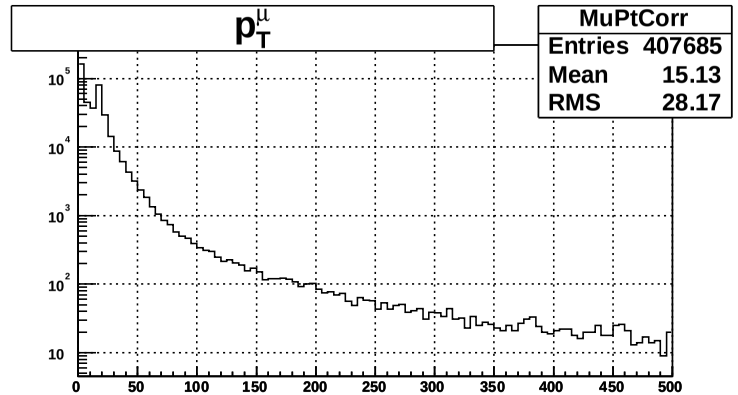


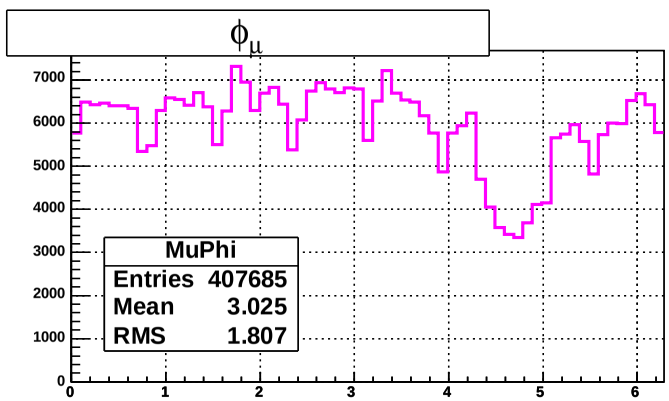


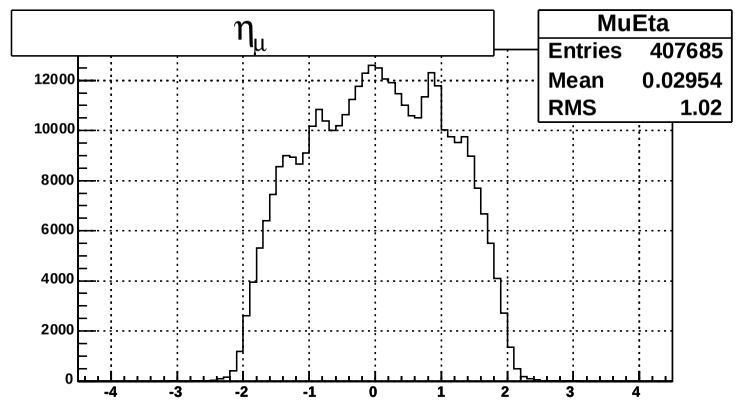


Muons p_T, ϕ, η – MUQCD skim

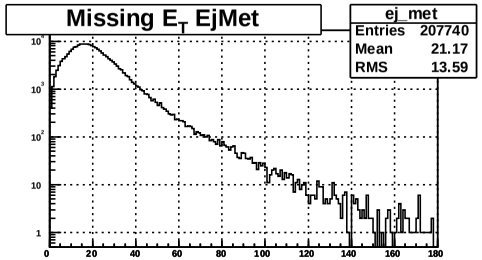


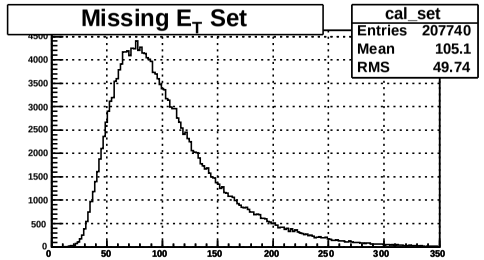


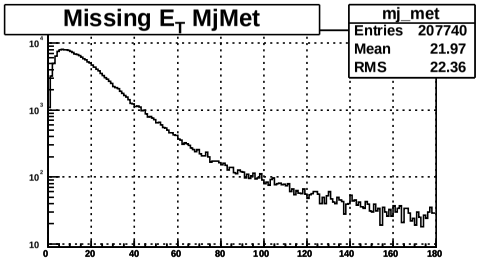


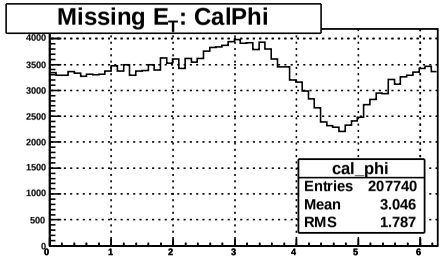


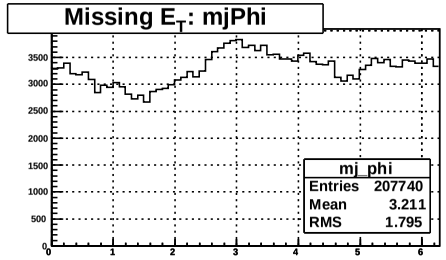
Missing E_T – MUQCD skim

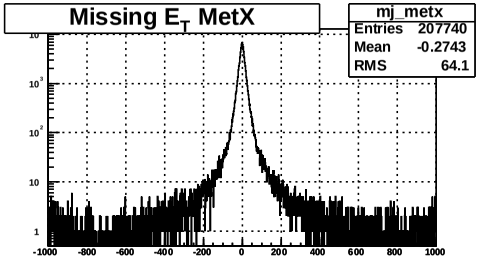


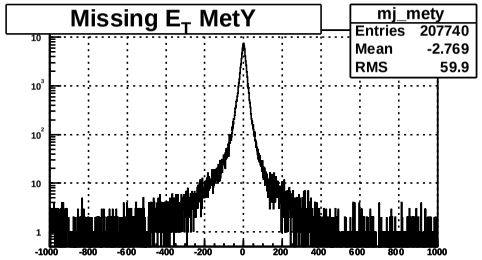


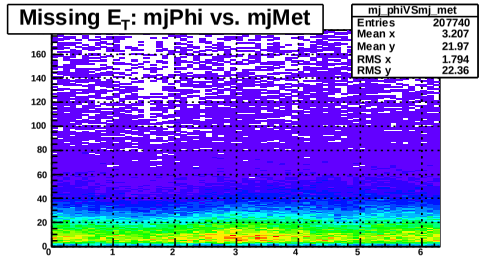


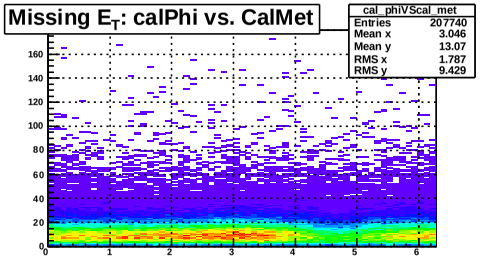




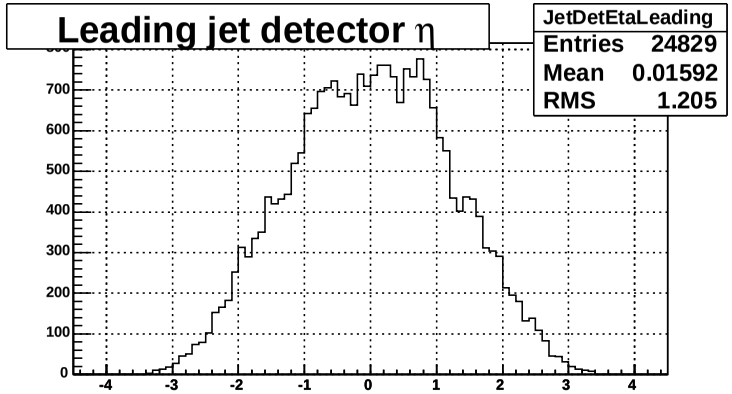


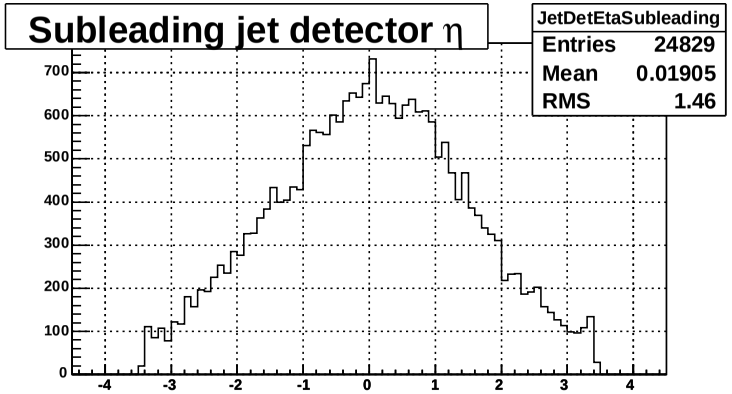


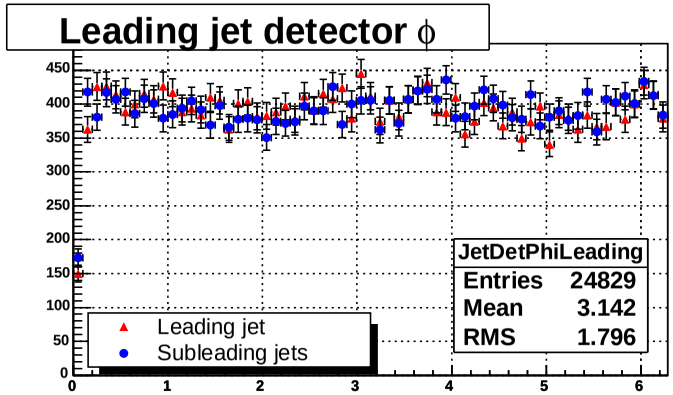




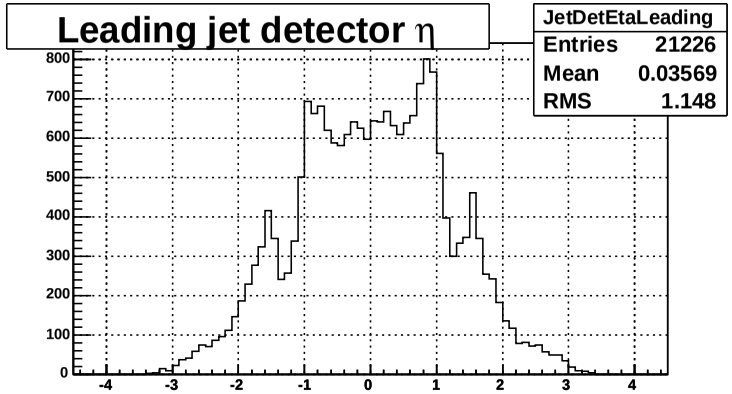
Jet ϕ study, EMQCD skim

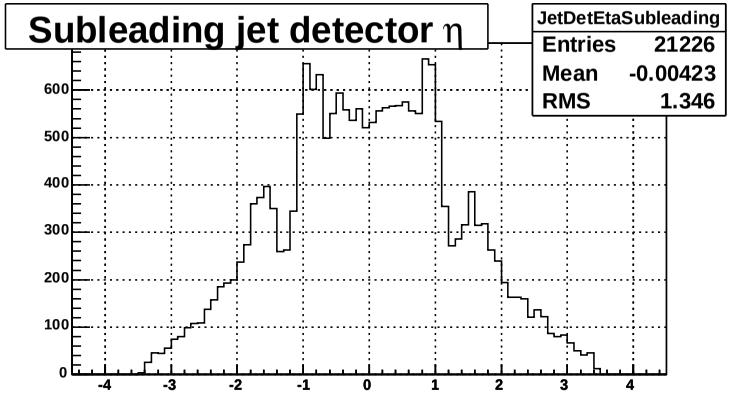


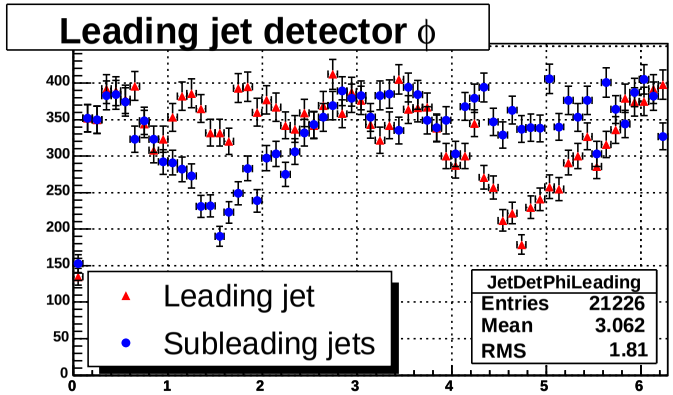




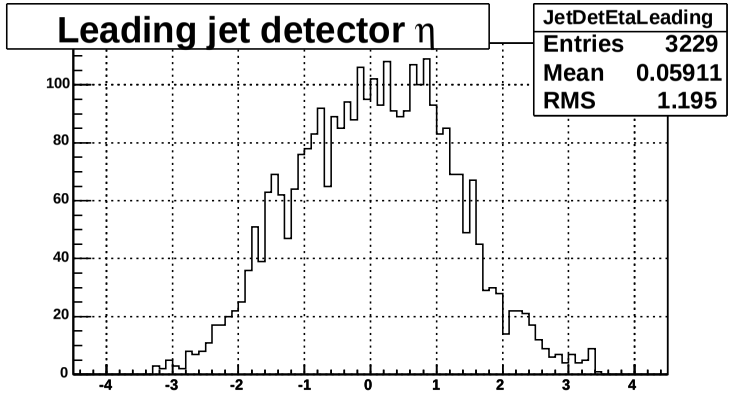
Jet ϕ study, CSskim_EMMU

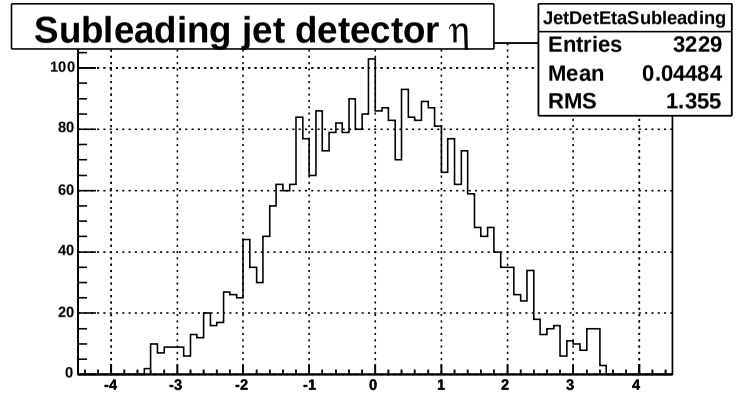


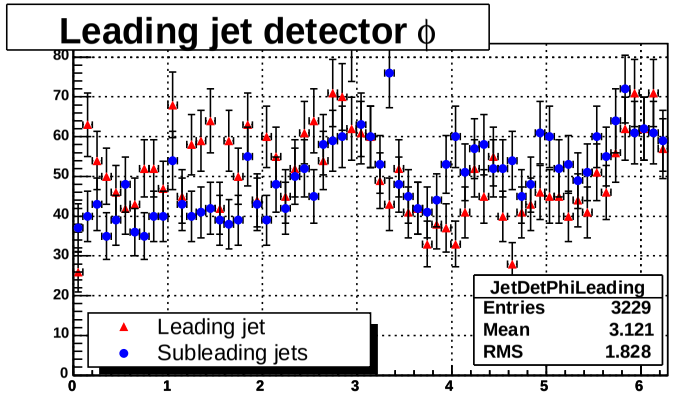




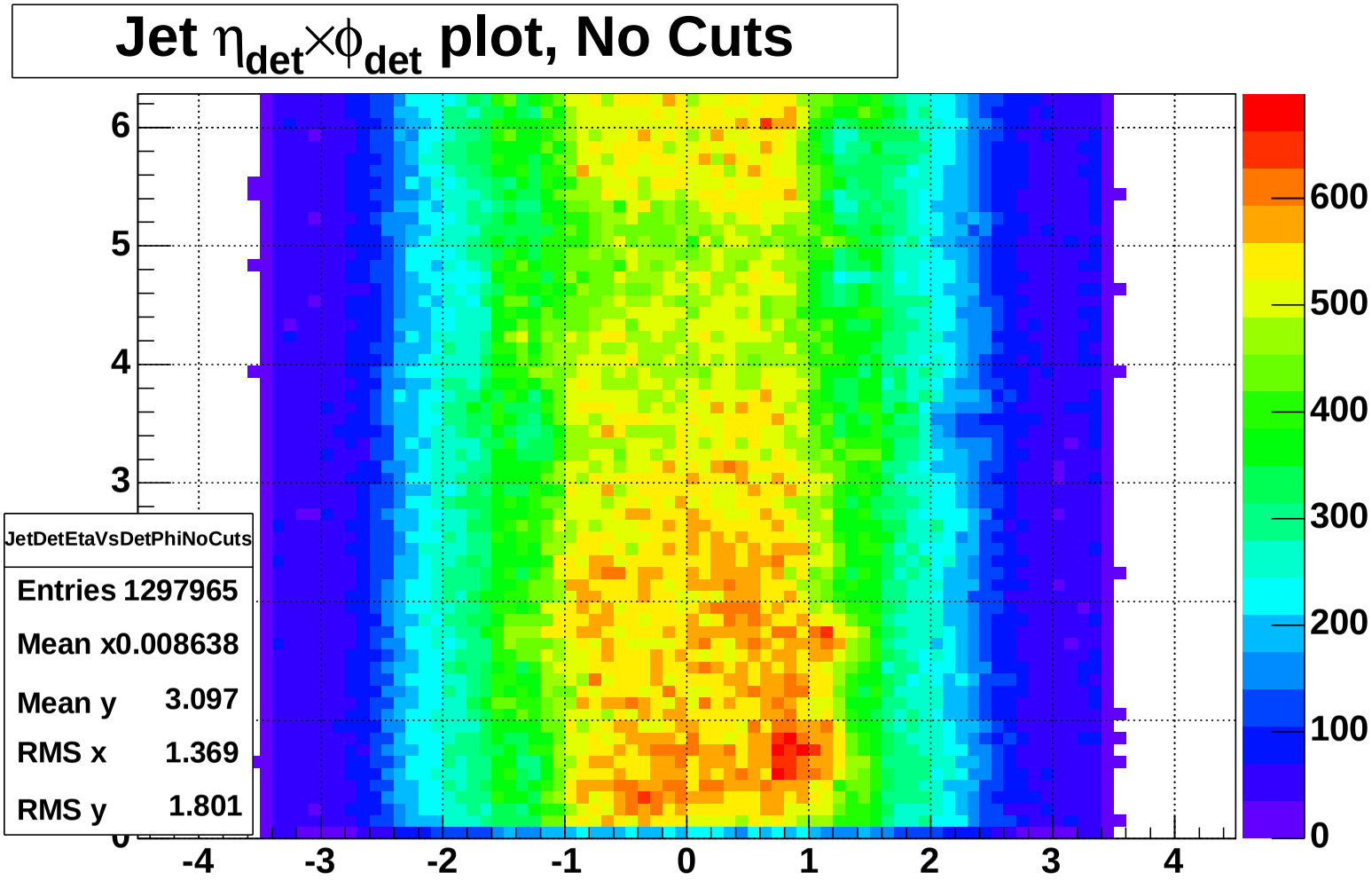
Jet ϕ study, MU_RECO_EFF skim



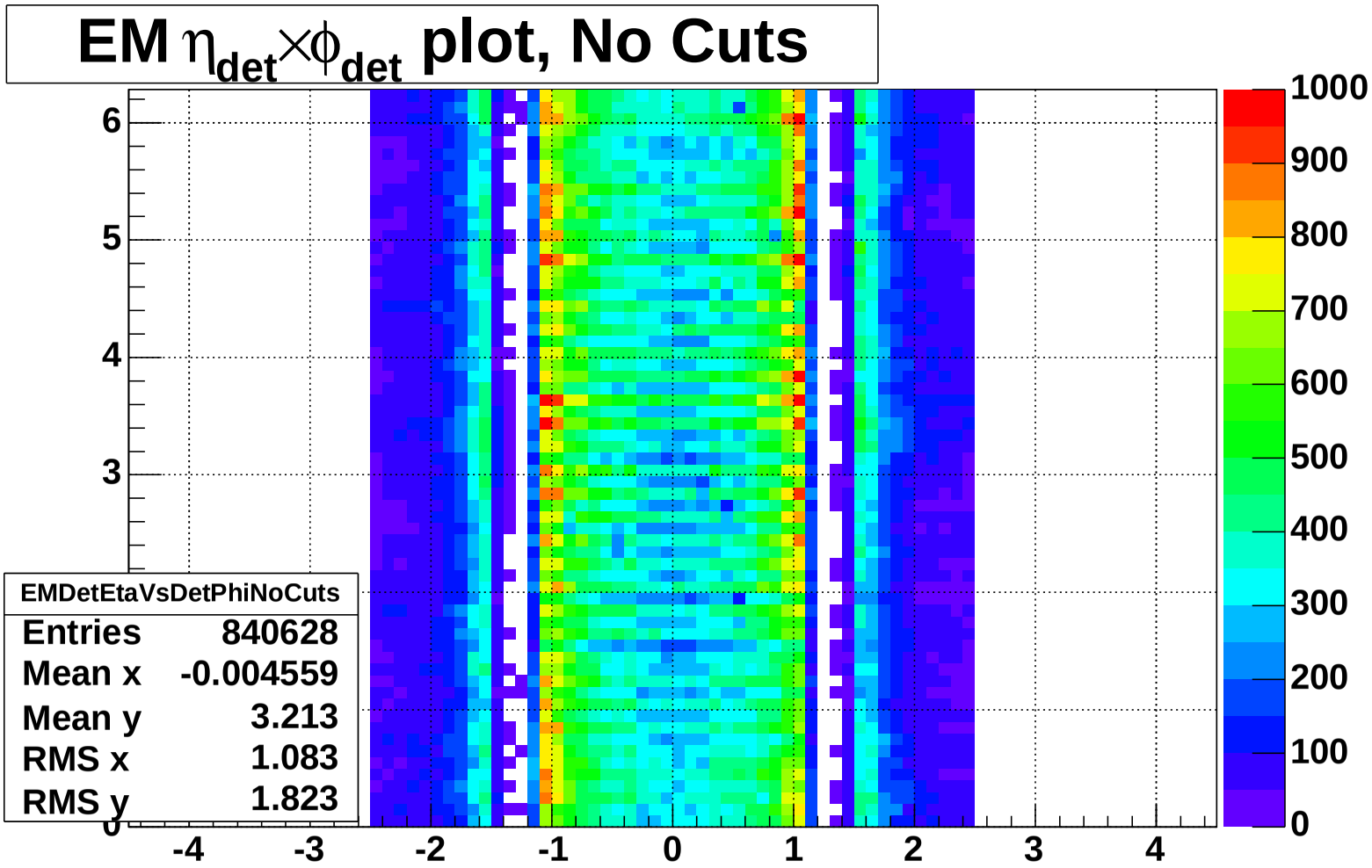




Jets $\eta \times \phi$ plot, trigger bias, EMQCD skim



EM colder region in $\eta \times \phi$ plot?



Summary ("Tell them, what you've told them":)

- Spike in EM $\eta \times \phi = (-2.2,\ 0.6)$ CSskim EMMU: **Run 187180**
- DIEM skim was lucky: For this run, only event 52205081 from EMMU appears in DIEM. However I haven't analyzed the whole EMMU, there are no spikes in DIEM anyway.
- EMQCD skim:
  - Losing muons in the bottom part of DØ causes seeing less associated jets in that region.
  - This could explain the Jet $\eta \times \phi$ pattern
  - However, there seems to be some colder region in EMs.
- You're welcomed to see jpgs at **http://www-d0.fnal.gov/~kvita/plots/index.html** !:)