

# Regit vs Regit with HiDetchedTripletStep



**Emilien, Songkyo, Geonhee,  
Prashant, Vineet**

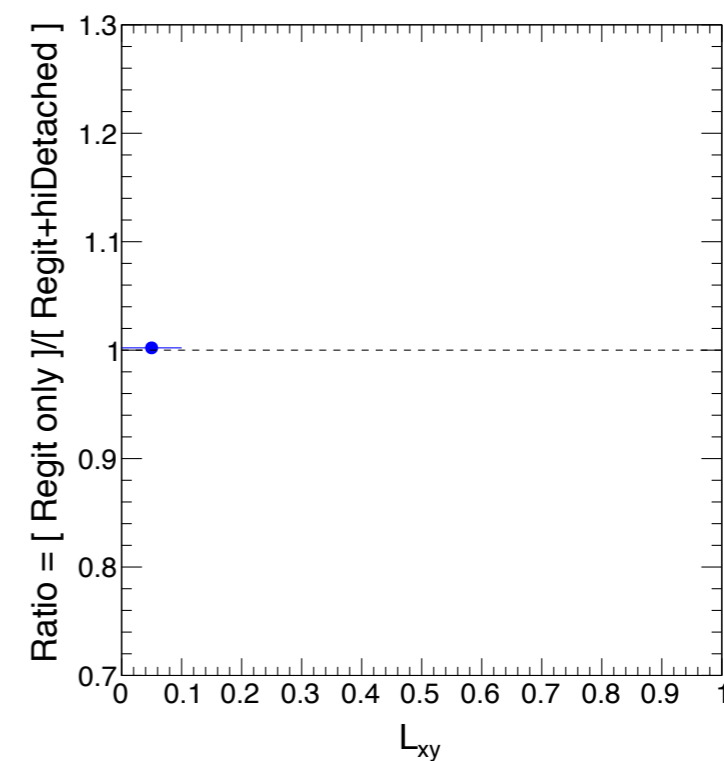
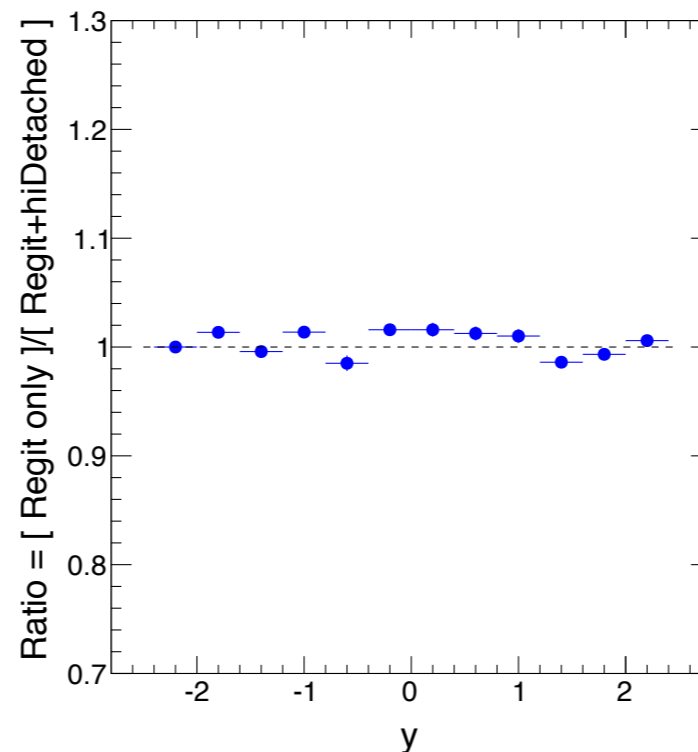
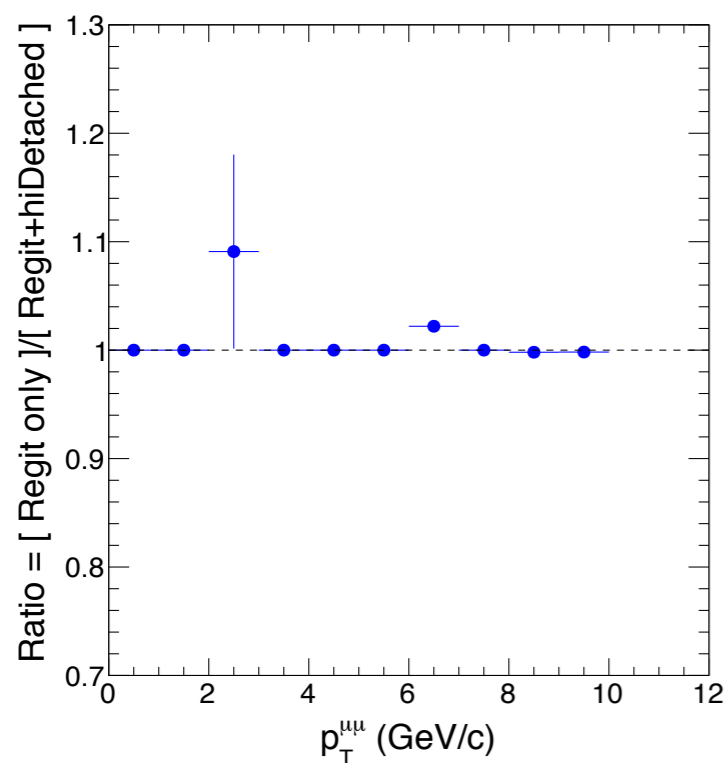
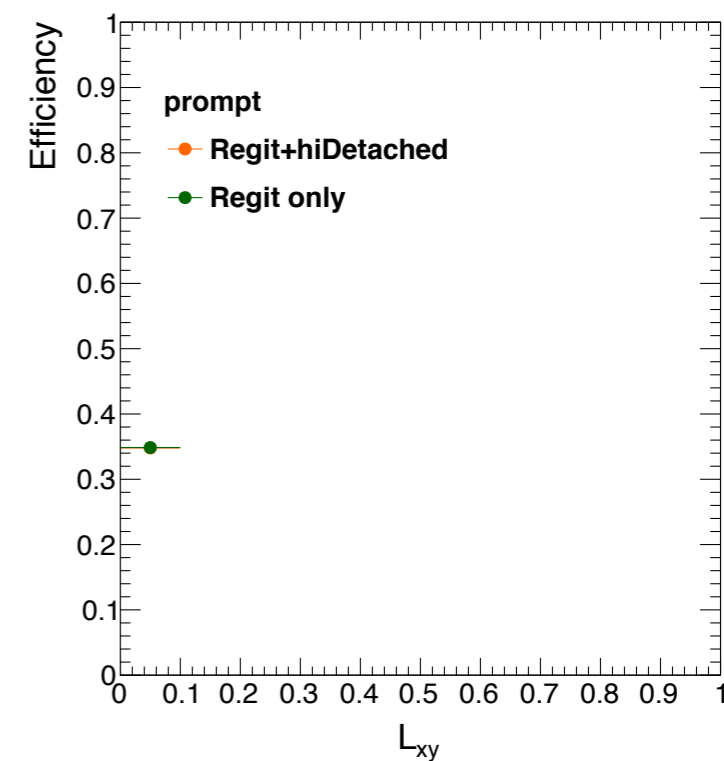
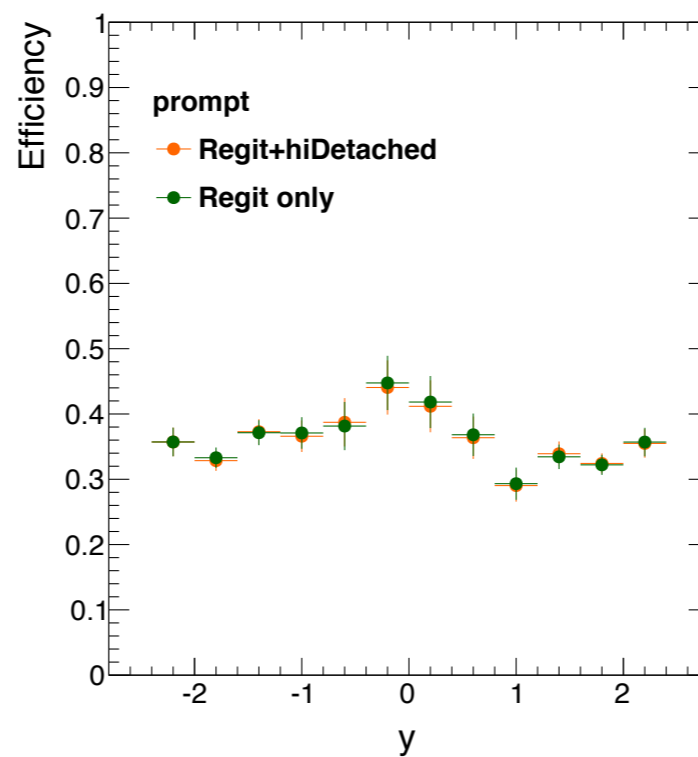
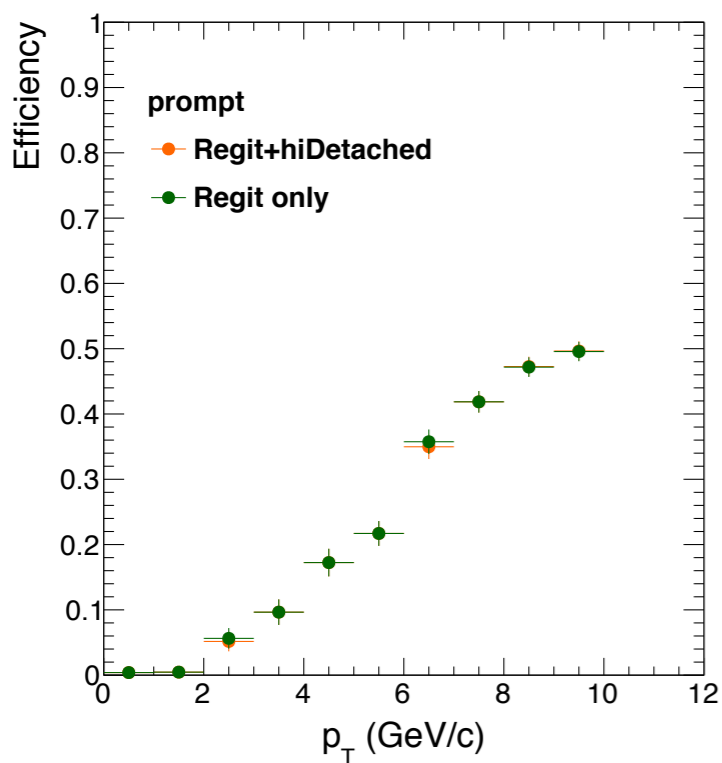


After following the instruction for regit in 740pre3

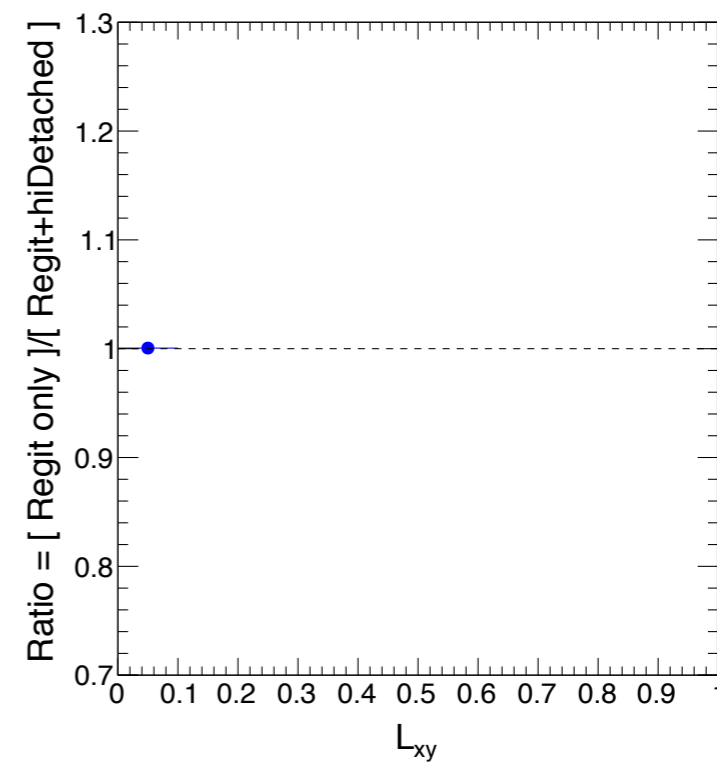
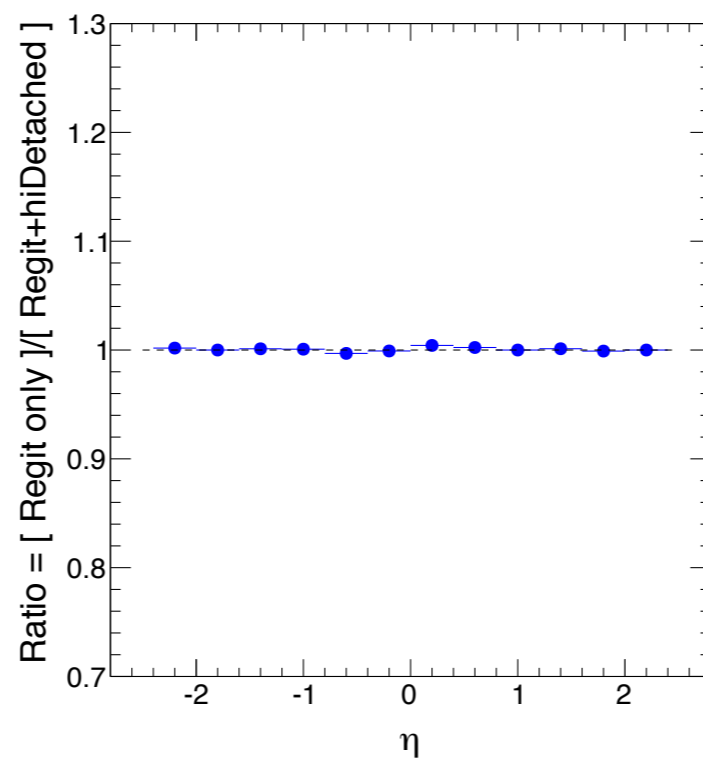
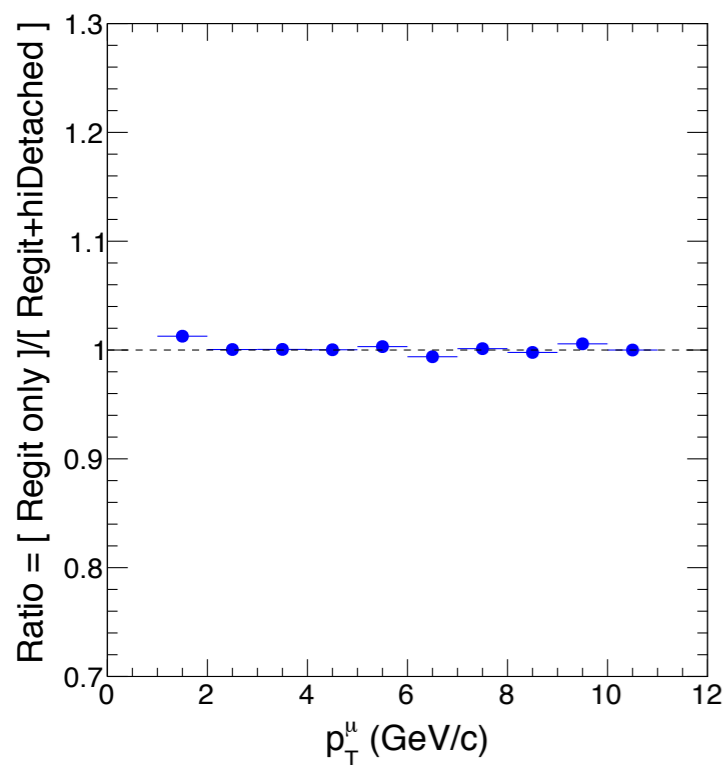
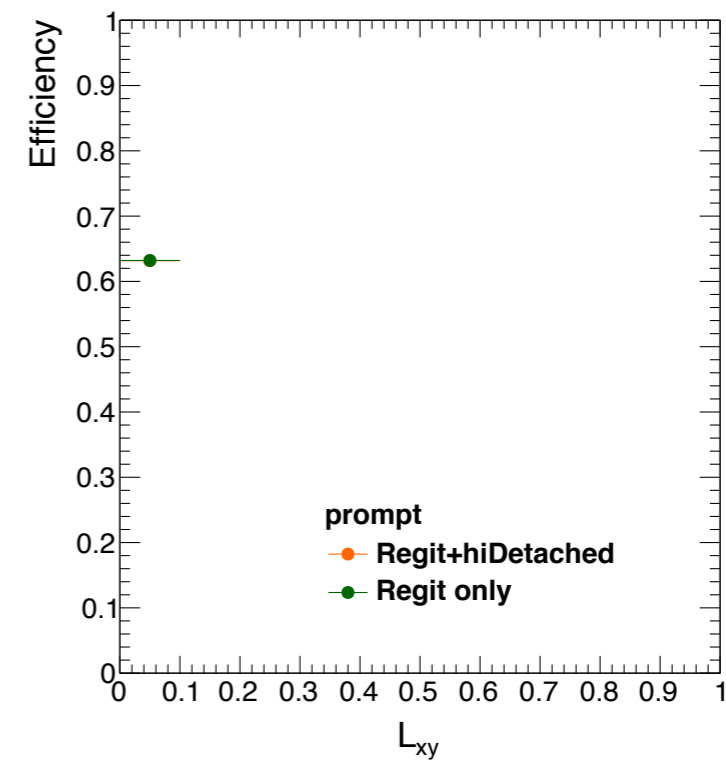
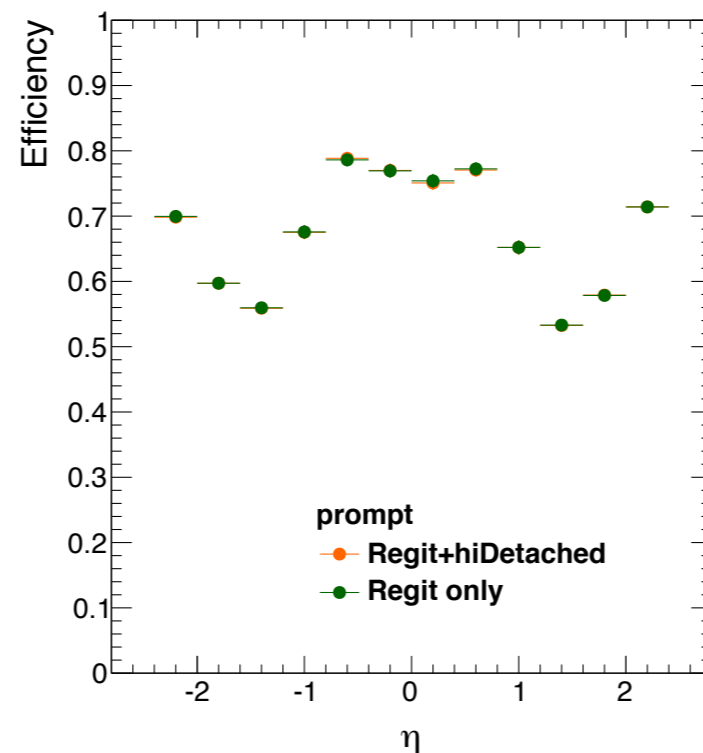
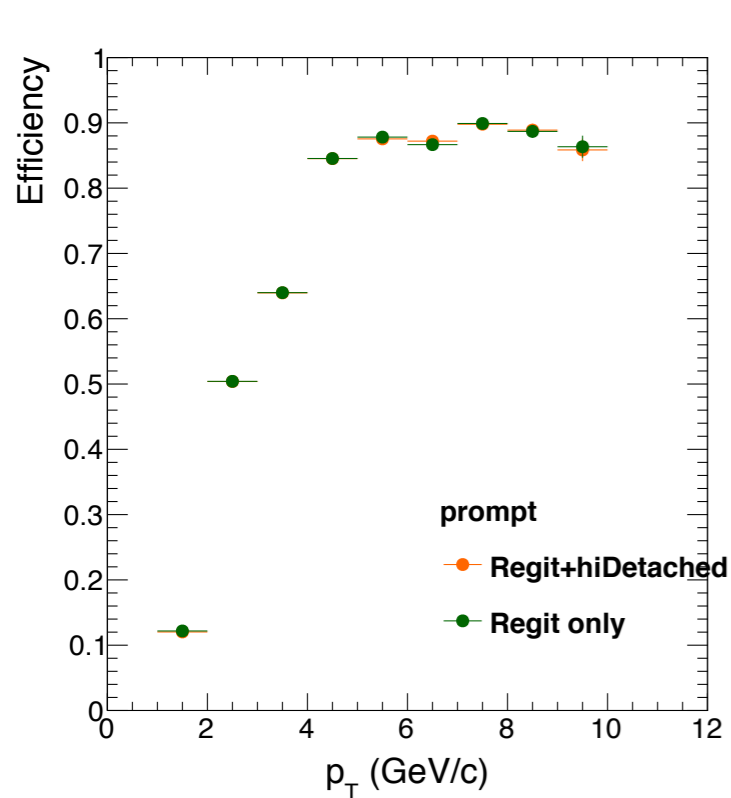
- ] cms-addpkg RecoHI/HiTracking
- ] git cherry-pick a69d7293ccce1a33d907262fc3406fbbce16edb2
- ] git cherry-pick 1ce5a6dc47849a8fc96a69162a49746242b1c9d8
- ] git cherry-pick 94e518c4bd9d138ded9f9bd49dc5a006f759cbad
- ] scram b

```
[kyolee@lxplus0035 src]$ git cms-addpkg RecoHI/HiTracking
Checking out package RecoHI/HiTracking
[kyolee@lxplus0035 src]$ git cherry-pick a69d7293ccce1a33d907262fc3406fbbce16edb2
error: addinfo_cache failed for path 'HLTrigger/HLTcore/src/TriggerExpressionL1Reader.cc'
error: addinfo_cache failed for path 'HLTrigger/HLTcore/src/TriggerExpressionHLReader.cc'
error: addinfo_cache failed for path 'HLTrigger/HLTcore/interface/TriggerExpressionL1Reader.h'
error: addinfo_cache failed for path 'HLTrigger/HLTcore/interface/TriggerExpressionHLReader.h'
error: addinfo_cache failed for path 'DataFormats/JetReco/interface/CATopJetTagInfo.h'
[from-CMSSW_7_4_0_pre3 2defd3b] hiDetachedTripletStep added
Author: Stanislav <istaslis@gmail.com>
4 files changed, 215 insertions(+), 6 deletions(-)
create mode 100644 RecoHI/HiTracking/python/hiDetachedTripletStep_cff.py
[kyolee@lxplus0035 src]$ git cherry-pick 1ce5a6dc47849a8fc96a69162a49746242b1c9d8
error: addinfo_cache failed for path 'HLTrigger/HLTcore/src/TriggerExpressionL1Reader.cc'
error: addinfo_cache failed for path 'HLTrigger/HLTcore/src/TriggerExpressionHLReader.cc'
error: addinfo_cache failed for path 'HLTrigger/HLTcore/interface/TriggerExpressionL1Reader.h'
error: addinfo_cache failed for path 'HLTrigger/HLTcore/interface/TriggerExpressionHLReader.h'
error: addinfo_cache failed for path 'DataFormats/JetReco/interface/CATopJetTagInfo.h'
[from-CMSSW_7_4_0_pre3 85dc77d] Parameters updated
Author: Stanislav <istaslis@gmail.com>
1 file changed, 5 insertions(+), 6 deletions(-)
[kyolee@lxplus0035 src]$ git cherry-pick 94e518c4bd9d138ded9f9bd49dc5a006f759cbad
error: addinfo_cache failed for path 'HLTrigger/HLTcore/src/TriggerExpressionL1Reader.cc'
error: addinfo_cache failed for path 'HLTrigger/HLTcore/src/TriggerExpressionHLReader.cc'
error: addinfo_cache failed for path 'HLTrigger/HLTcore/interface/TriggerExpressionL1Reader.h'
error: addinfo_cache failed for path 'HLTrigger/HLTcore/interface/TriggerExpressionHLReader.h'
error: addinfo_cache failed for path 'DataFormats/JetReco/interface/CATopJetTagInfo.h'
[from-CMSSW_7_4_0_pre3 74e4512] Update hiDetachedTripletStep_cff.py
Author: mandrenguyen <matthew.nguyen@cern.ch>
1 file changed, 1 insertion(+), 1 deletion(-)
```

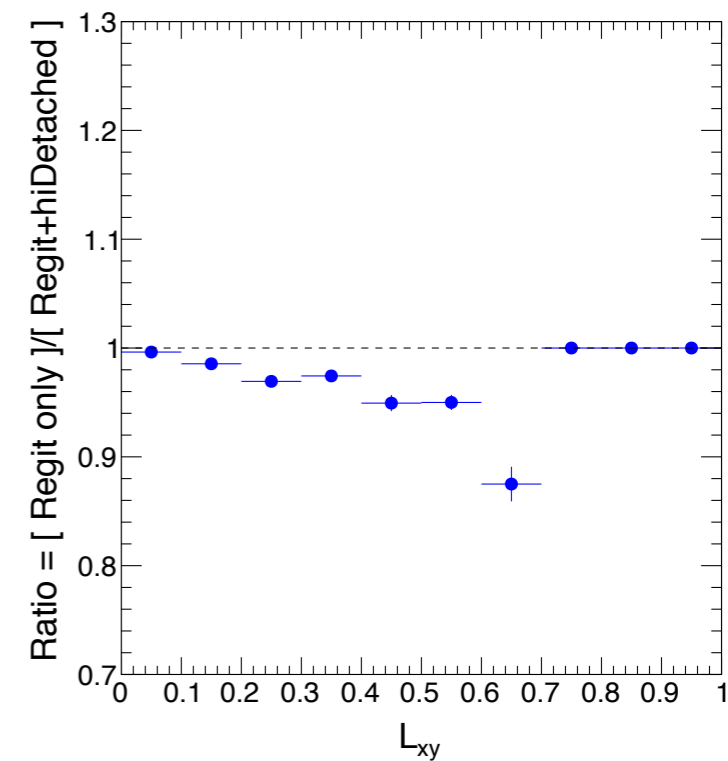
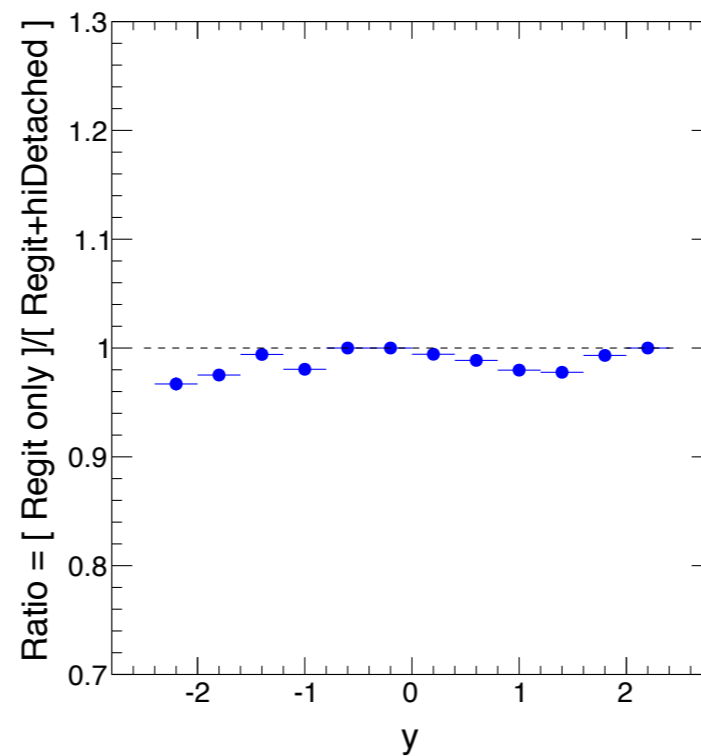
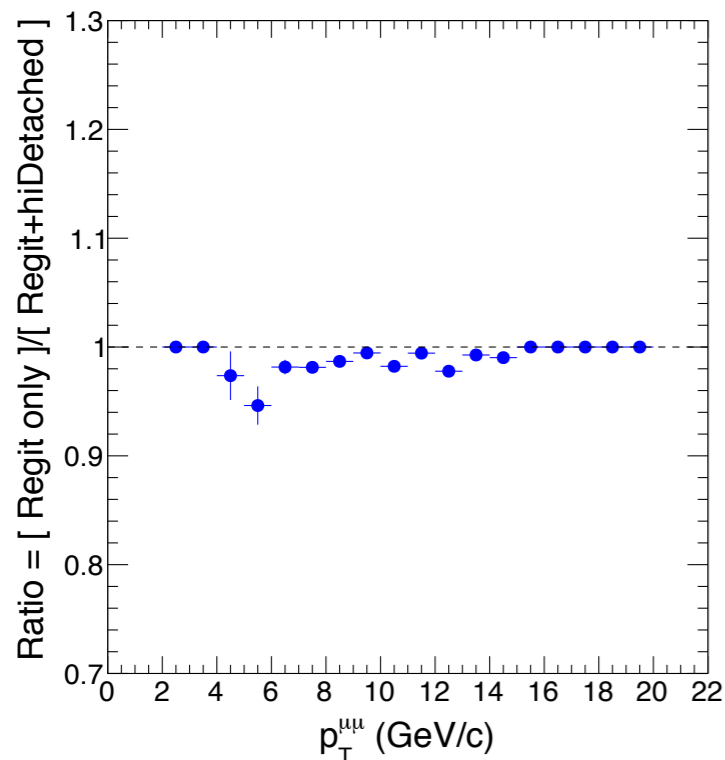
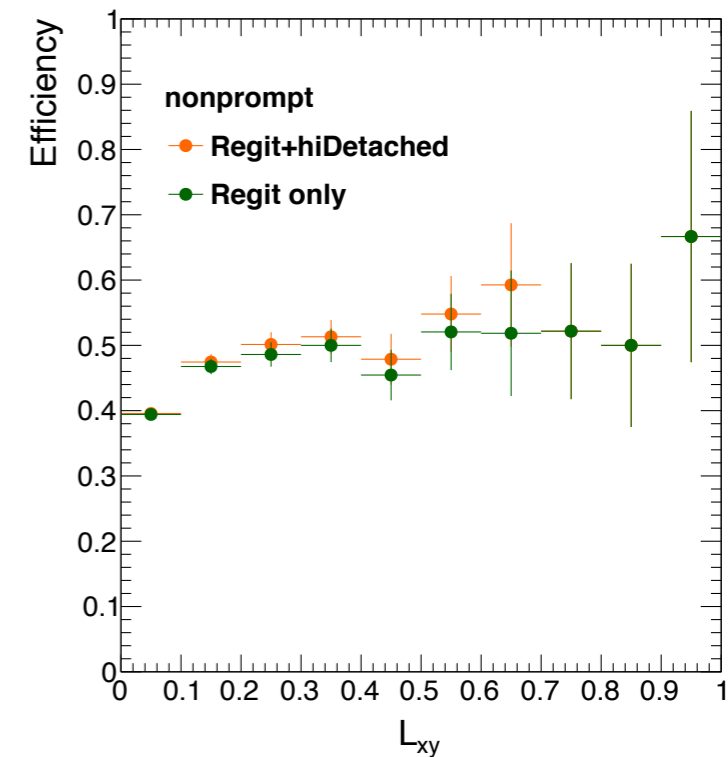
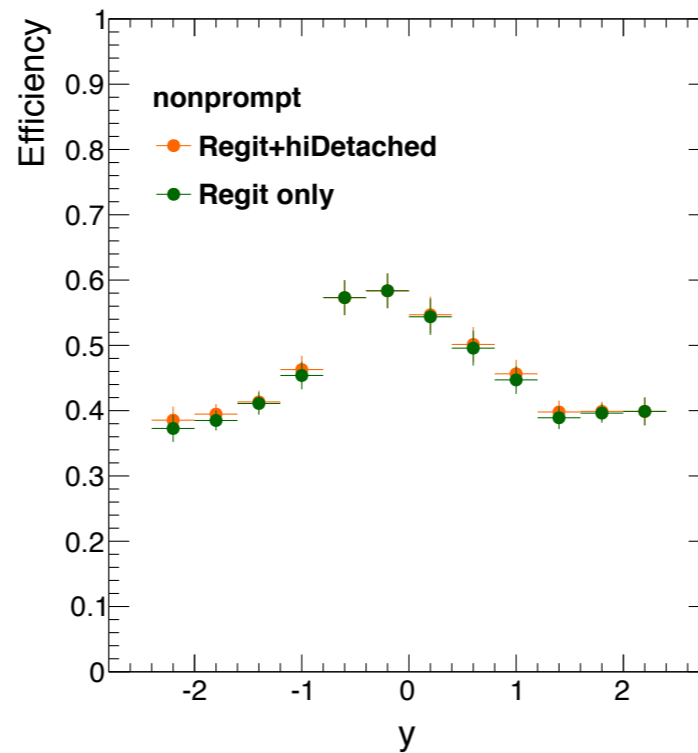
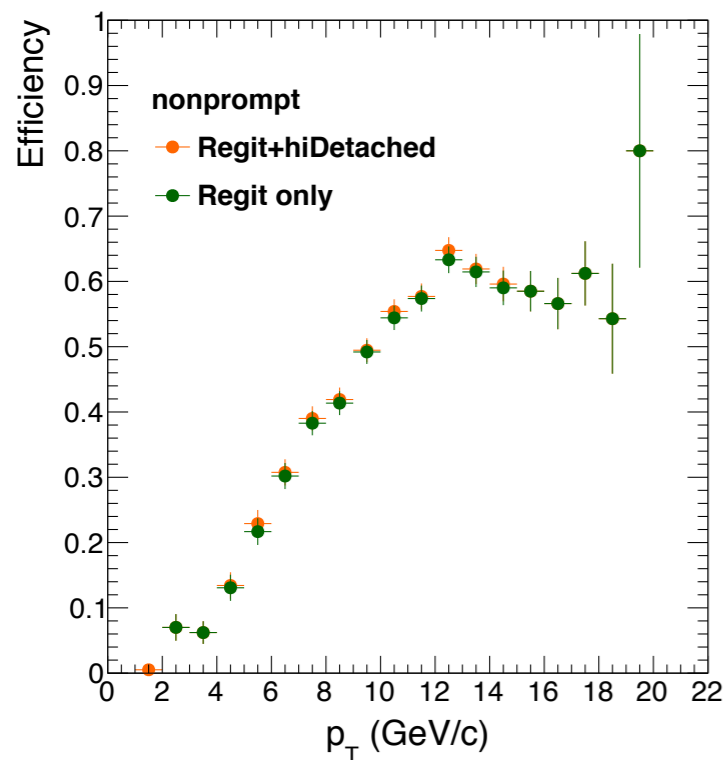
## Ⓜ Prompt J/psi (dimuon pairs)



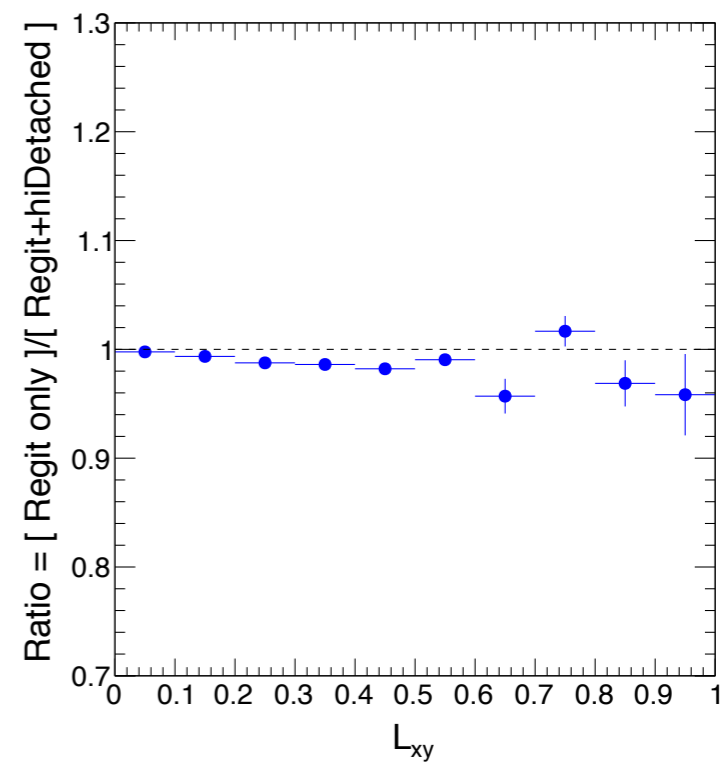
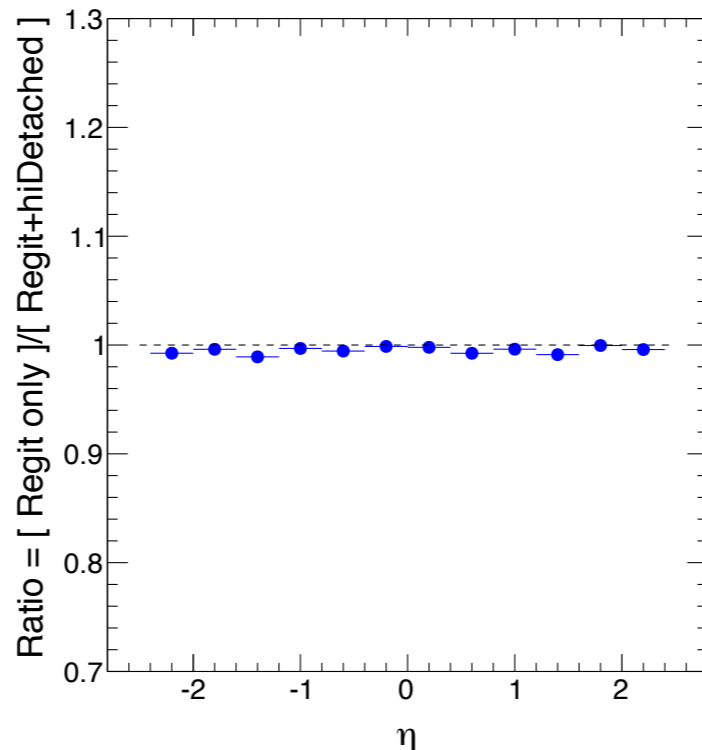
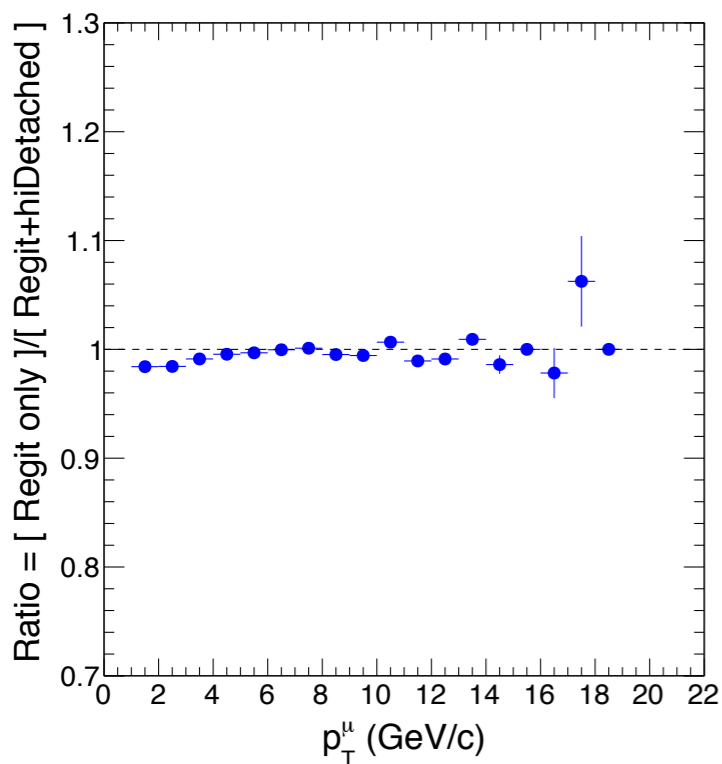
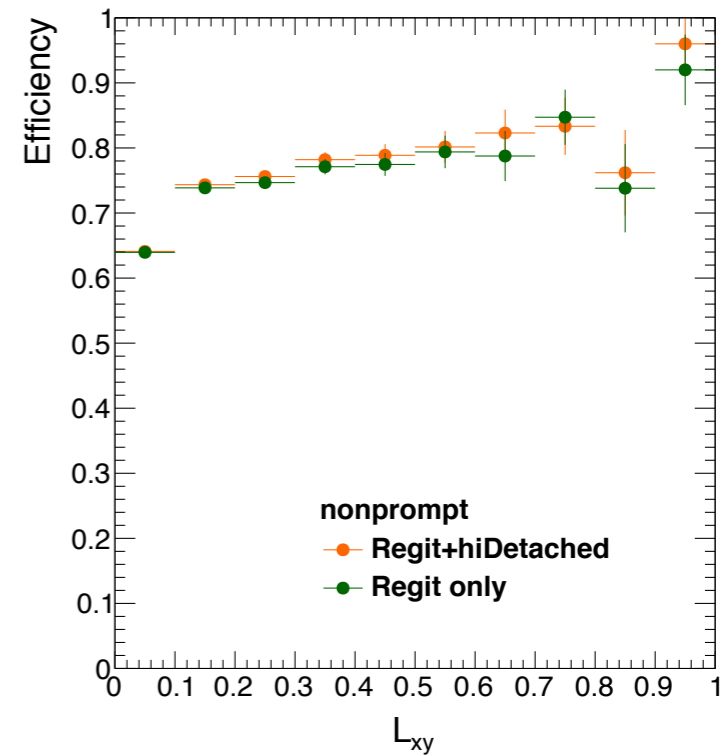
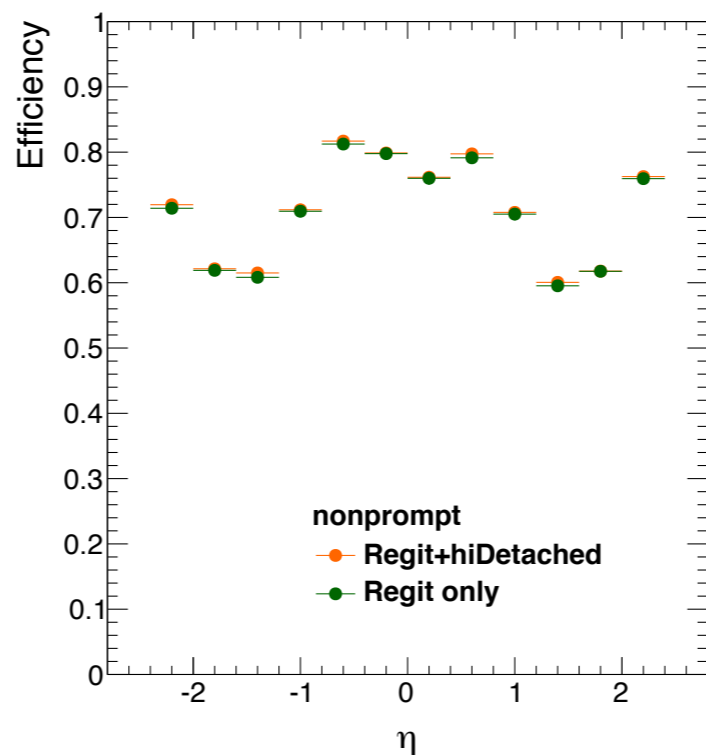
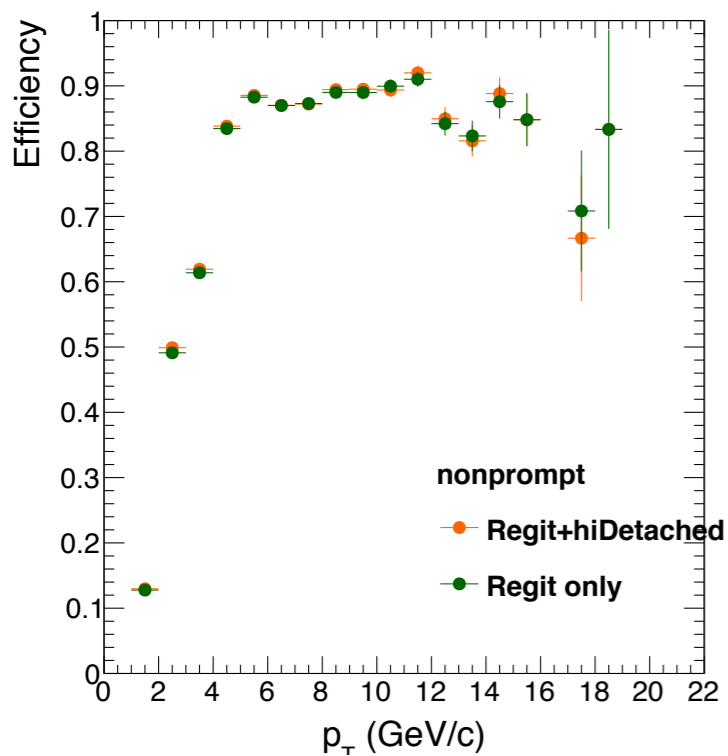
## Ⓜ Prompt J/psi (single tracks)



## Ⓜ B to J/psi (dimuon pairs)



## ⊗ B to J/psi (single tracks)





# BACK UP



# embedded samples in 740\_pre3



## Ⓜ used MC samples

- [https://twiki.cern.ch/twiki/bin/viewauth/CMS/HIRegitMu2014#MC\\_samples\\_AN1](https://twiki.cern.ch/twiki/bin/viewauth/CMS/HIRegitMu2014#MC_samples_AN1)
- embedded prompt J/psi :  $3 < p_T < 10$  GeV
- embedded non-prompt J/psi :  $p_T < 20$  GeV

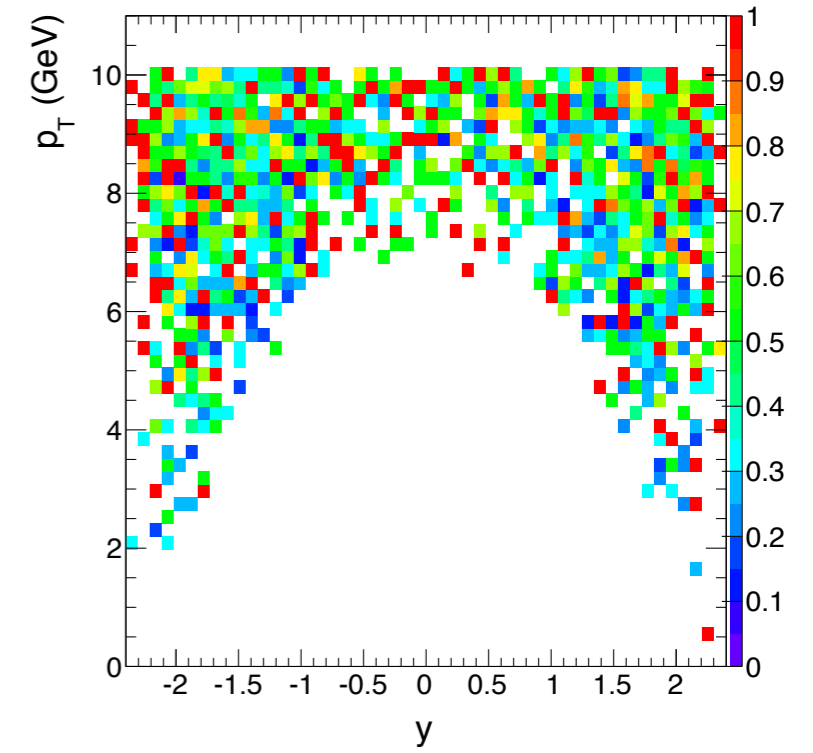
## Ⓜ used macros

- <https://github.com/CmsHI/pPbJPsiAnalysis/tree/master/regit>
- JpsiStyle.C and KYOcommonOpt.h are just for drawing
- makeEfficiency\_74X\_setBr.C
  - :60, set “isPtCut” and “doWeight” as false
    - > “isPrompt” true or false = prompt or non-prompt
    - > “isPair” true or false = pair or track
    - > “isEmbedded” true or false = embedded or non-embedded
  - :317–370, is the acceptance cut and muon ID cut part
    - > current cut is the same as makeEfficiency.C
  - :83, results (pdf and root files) will be saved in the dir. “strDir”, which you need to make before running the macro.

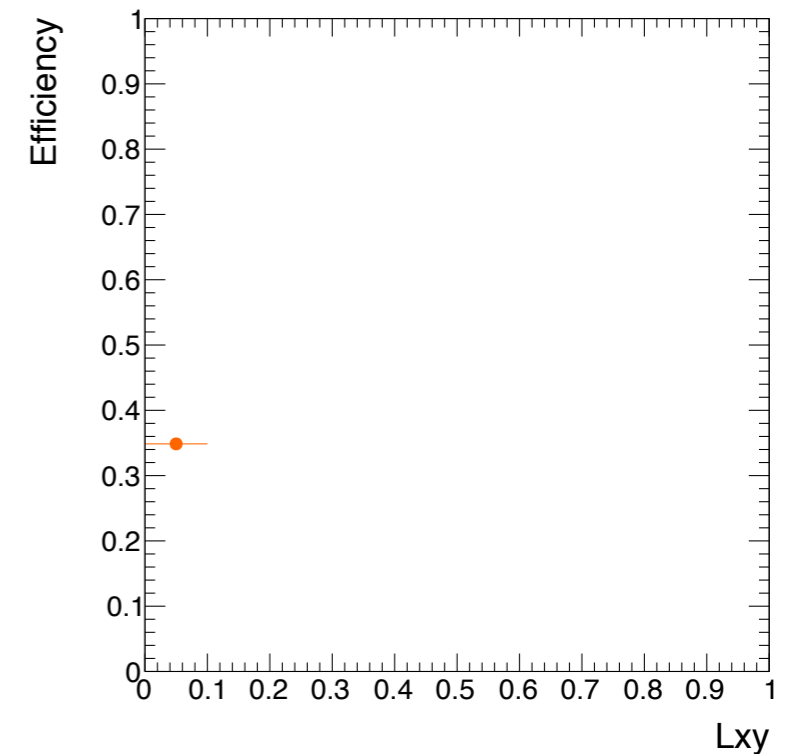
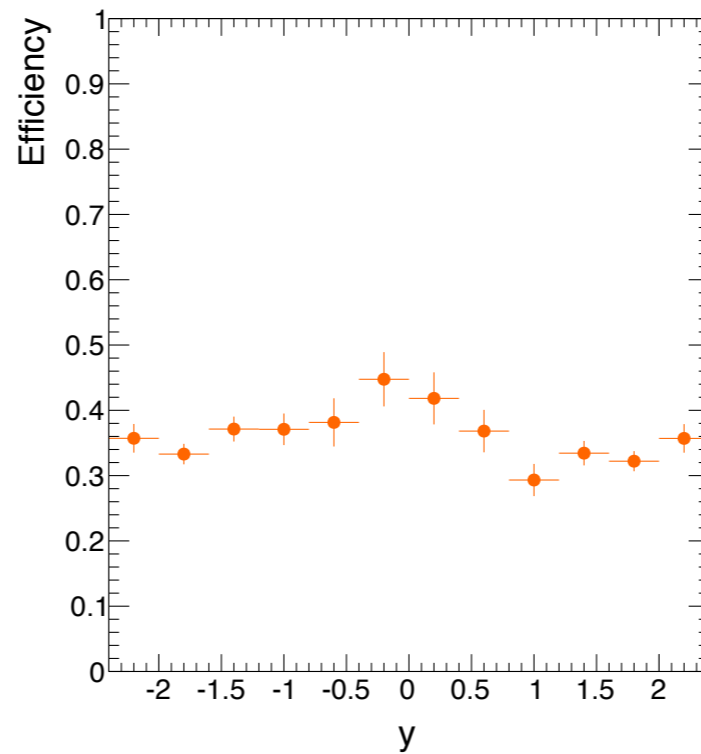
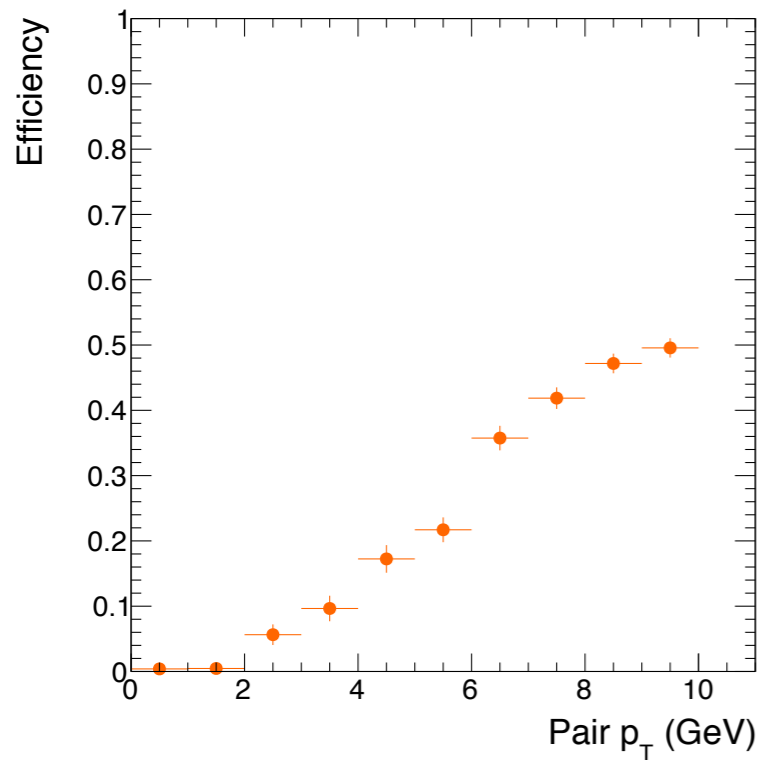


⊕ **Prompt J/psi (dimuon pairs)**

- 2D pT vs y efficiency plots :

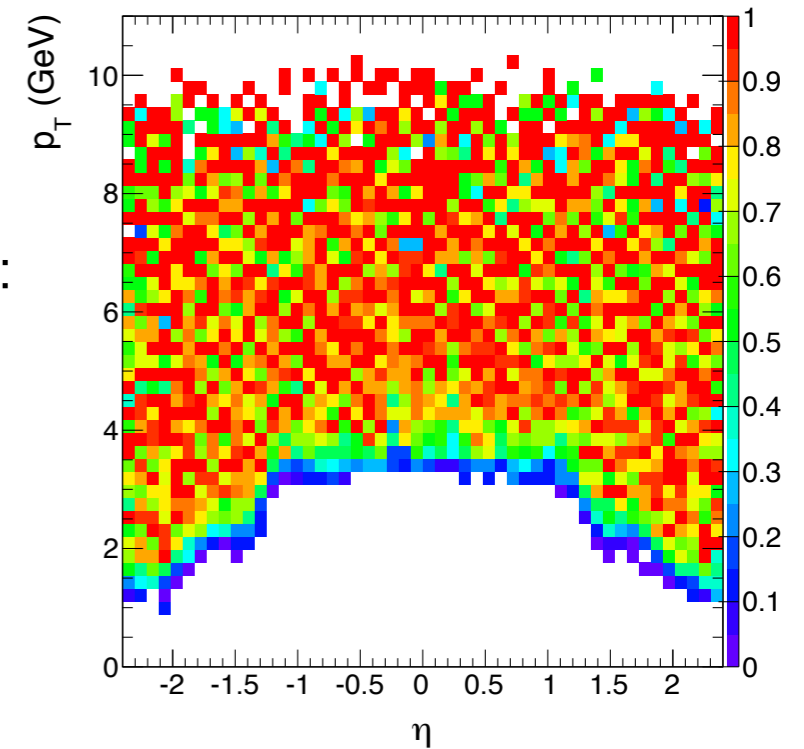


- 1D : Efficiency vs pT, y, and Lxy

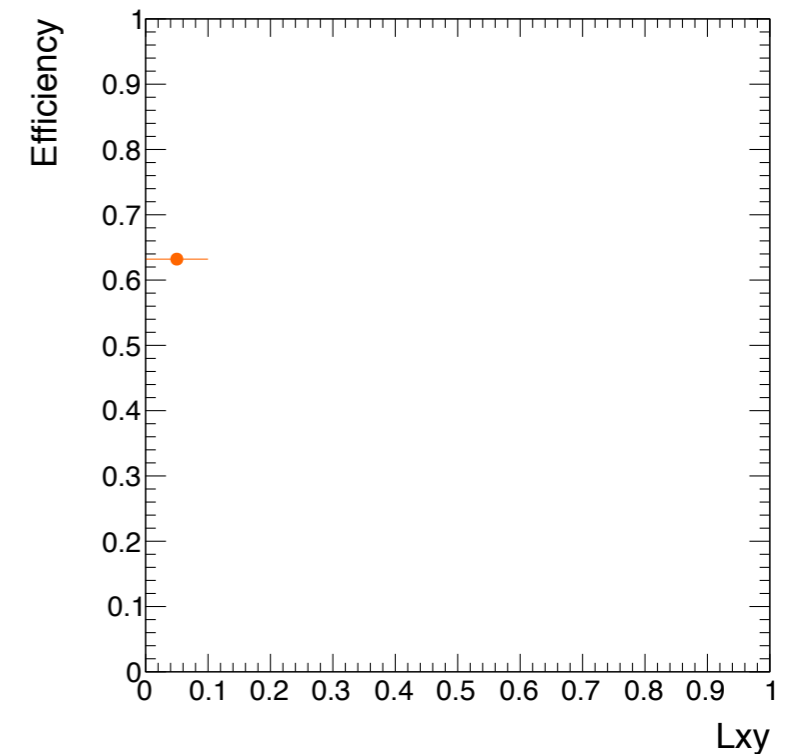
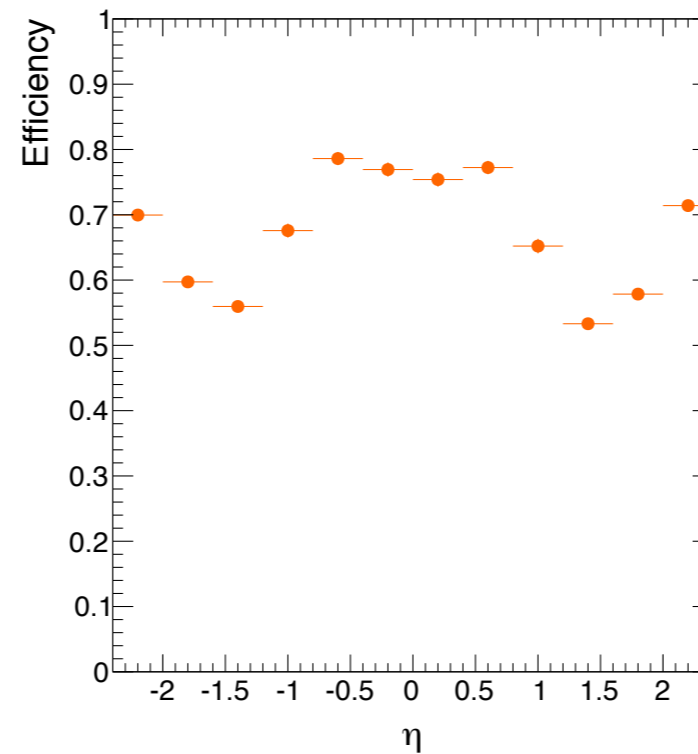
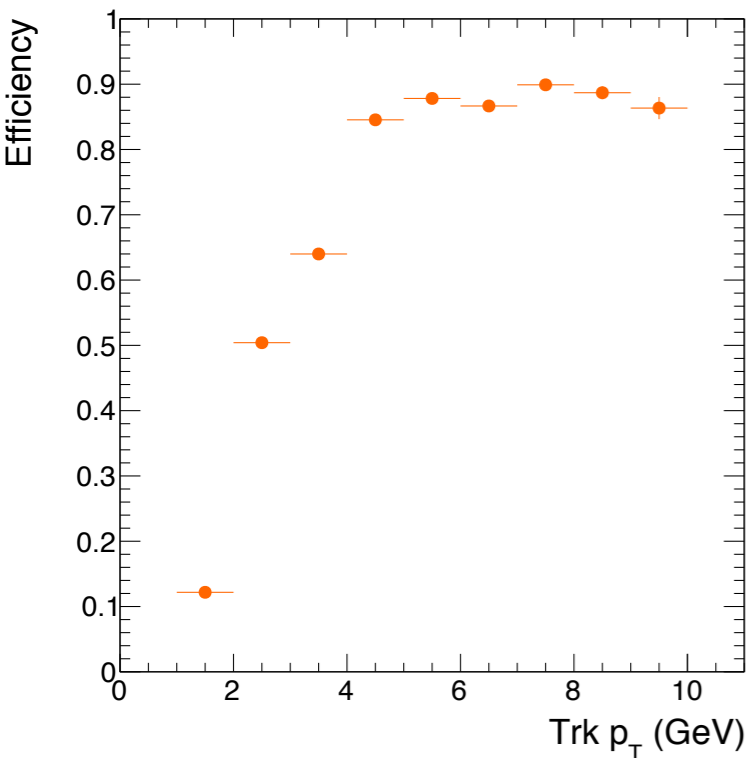


## ⊕ Prompt J/psi (single tracks)

- 2D pT vs eta efficiency plots :

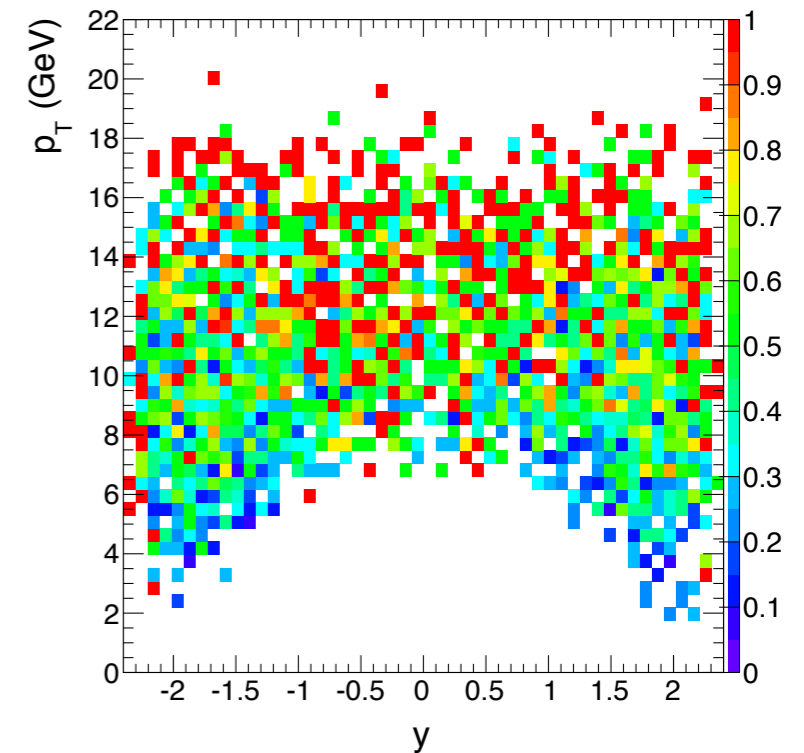


- 1D : Efficiency vs pT, eta, and Lxy

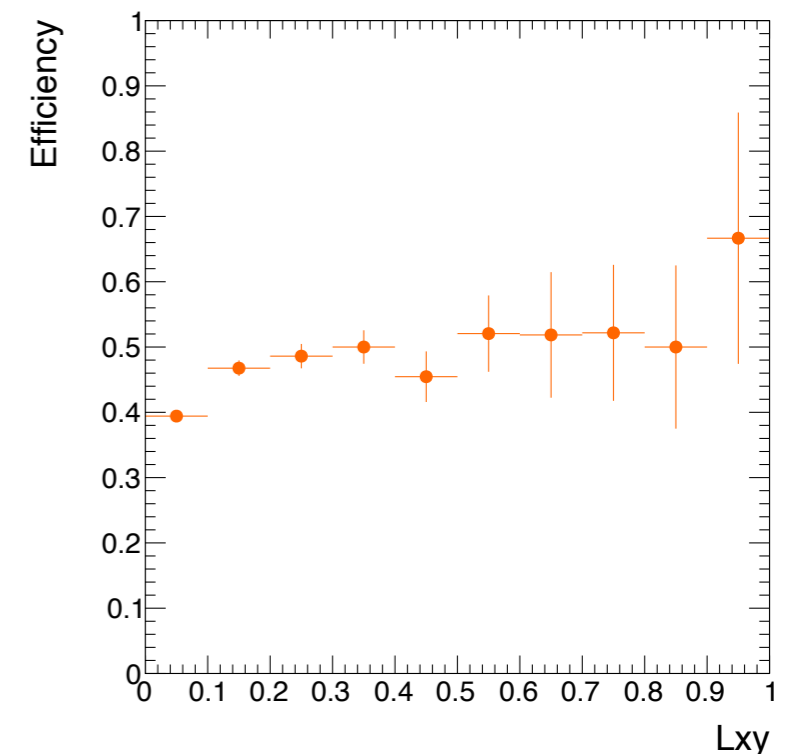
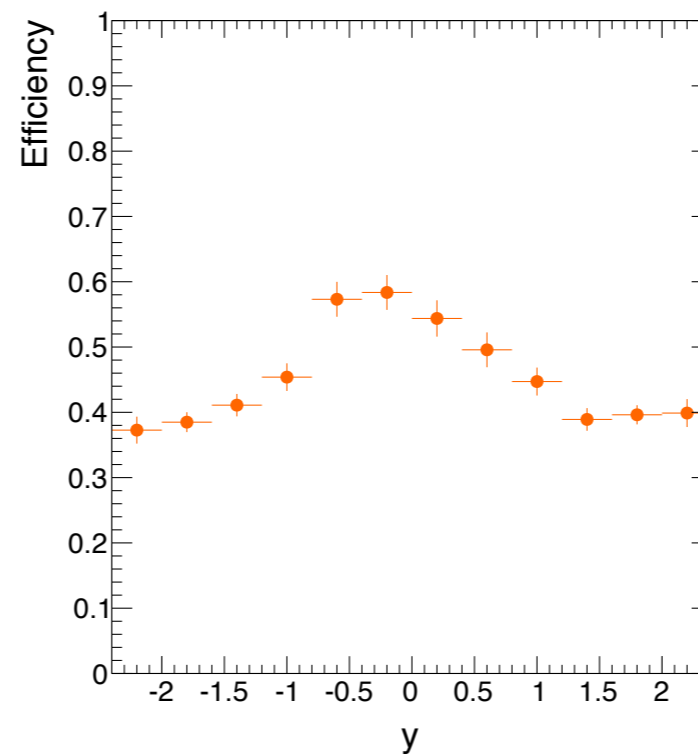
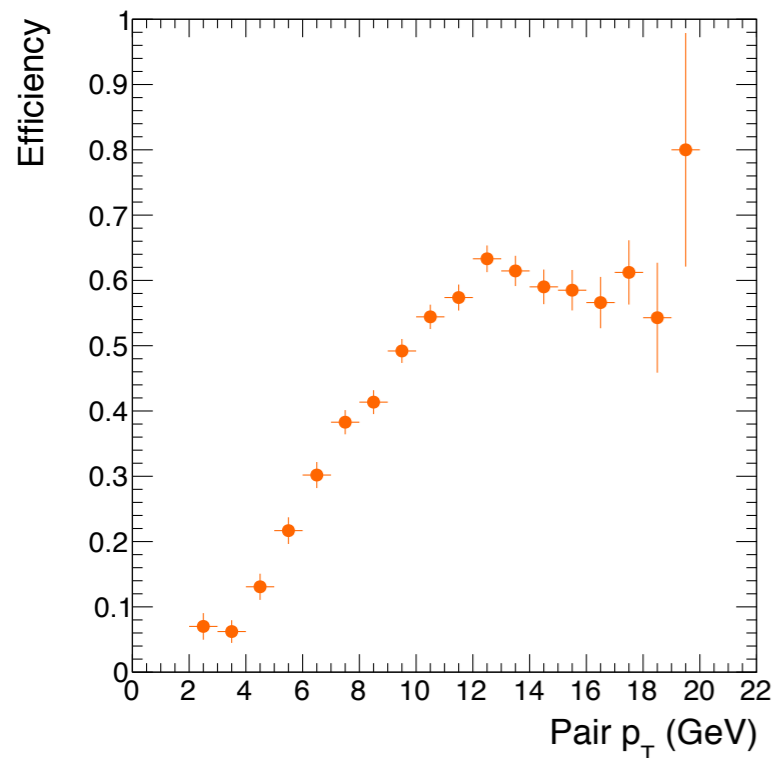


⊕ **B to J/psi (dimuon pairs)**

■ 2D pT vs y efficiency plots :

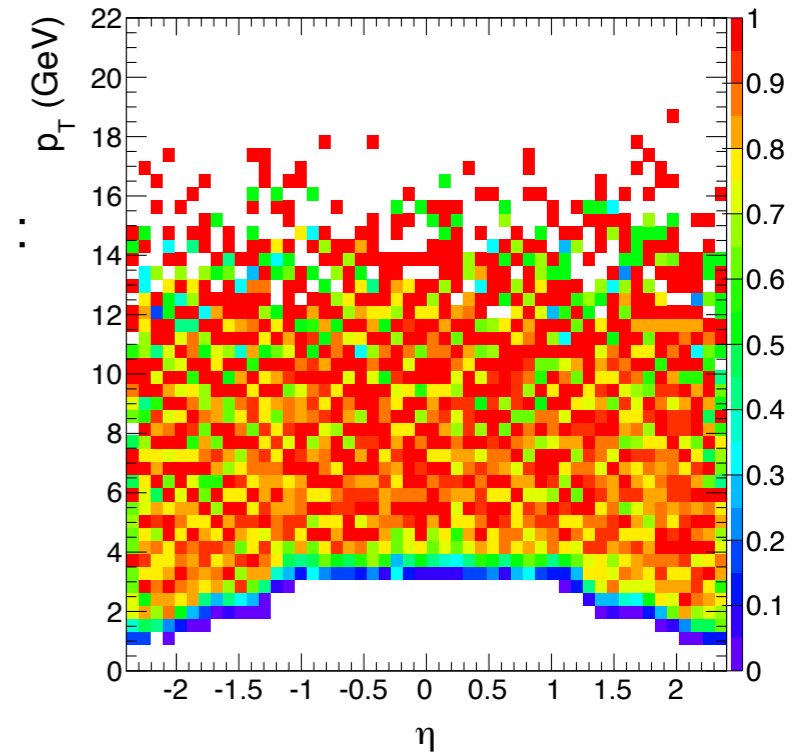


■ 1D : Efficiency vs pT, y, and Lxy



⊕ **B to J/psi (single tracks)**

- 2D pT vs eta efficiency plots :



- 1D : Efficiency vs pT, eta, and Lxy

