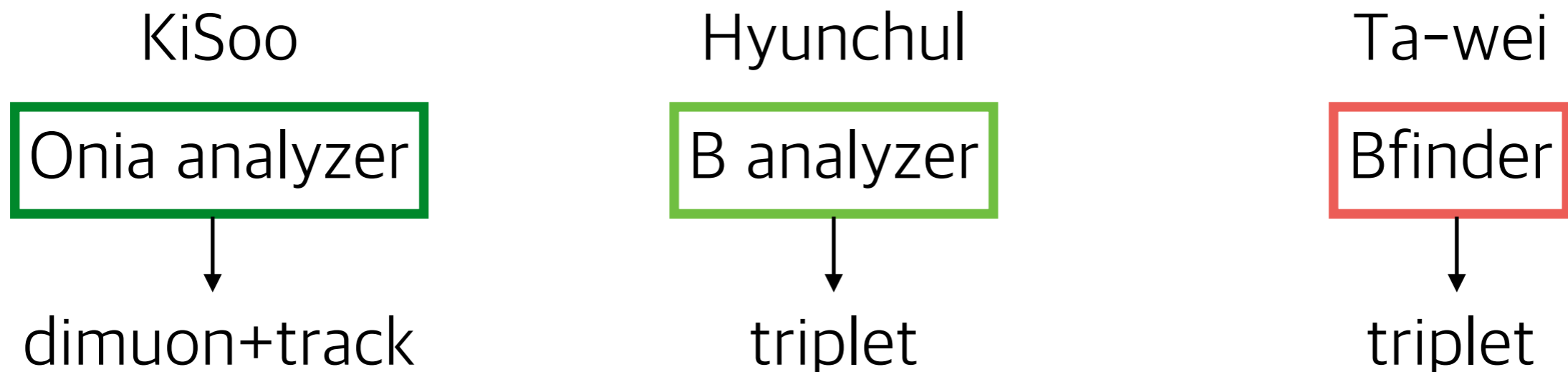# J/ψ track triplet status

KiSoo Lee

Data Sample

- dataset: /HIDiMuon/tdahms-Onia2MuMu_RegIT-Skim_v3-16e111b93439e581c6bdad4acd2262ef/USER

- Using Onia analyzer dimuon and track tree is made

- Centrality information is hard to approach
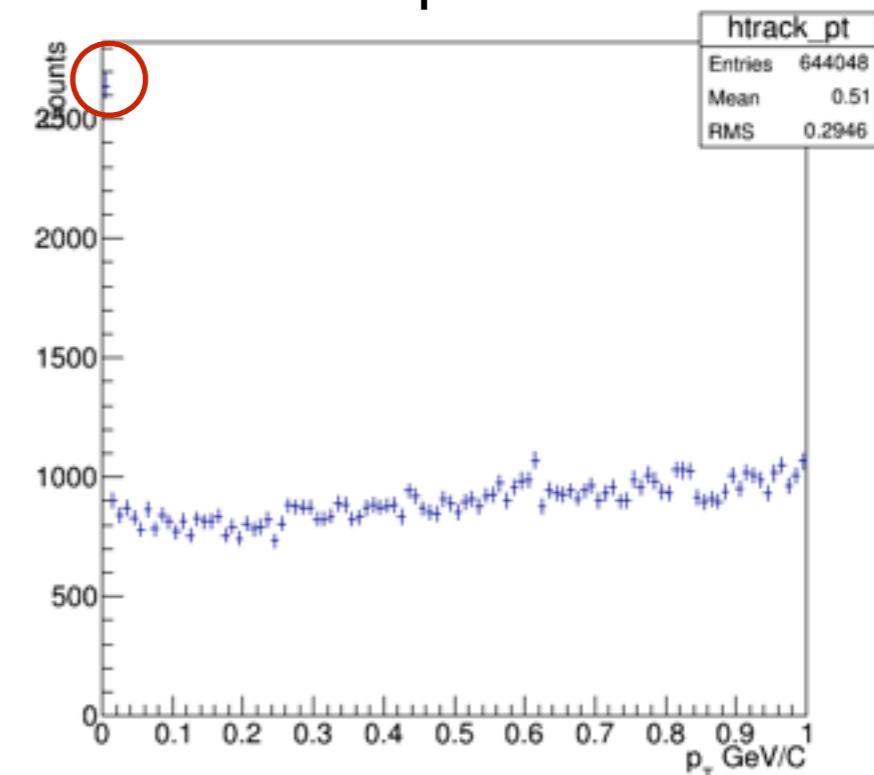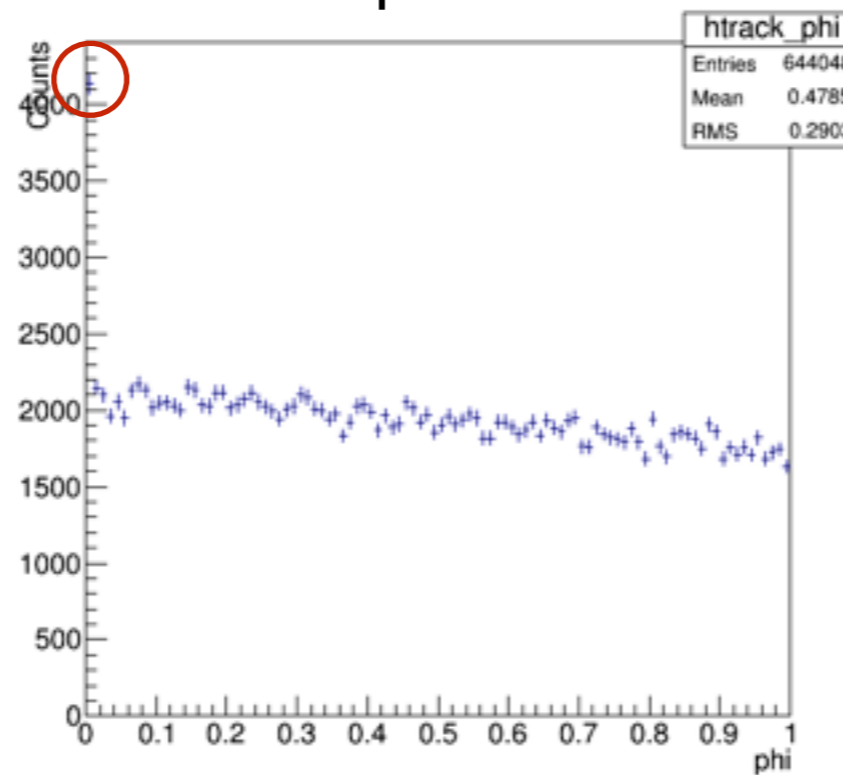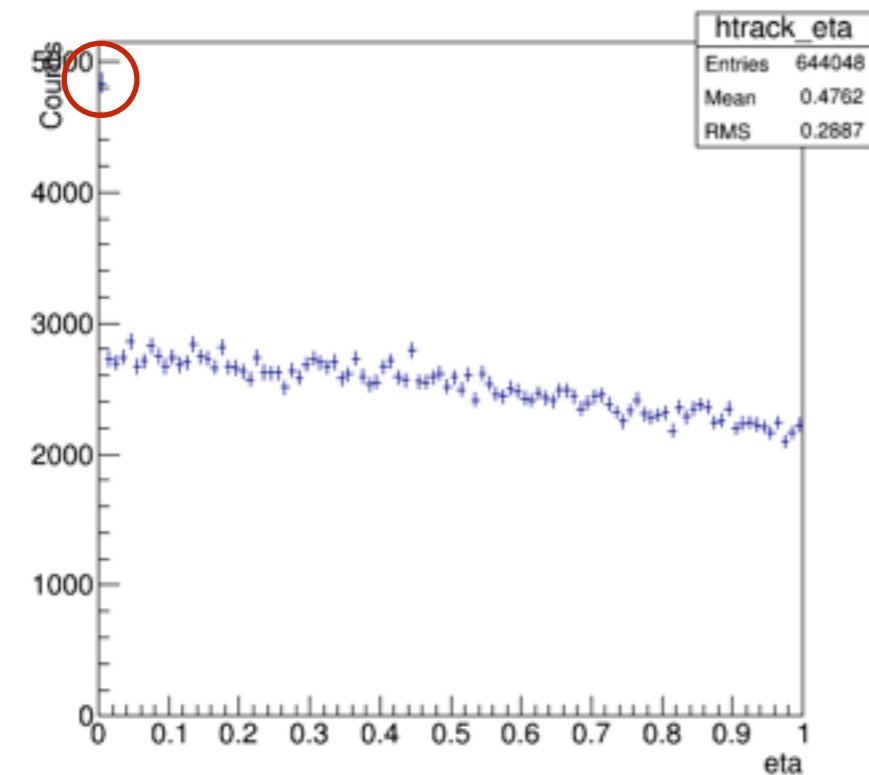
  - Obtained from Mihee's dimuon tree

KiSoo	Hyunchul	Ta-wei
Onia analyzer	B analyzer	Bfinder
↓	↓	↓
dimuon+track	triplet	triplet

condition

- J/ψ mass: 2.6 ~ 3.5

- muon acceptance

  - $|η| <= 1.0$: pT > 3.4

  - $1.0 <= |η| < 1.5$: pT >= 5.8−2.4*|η|

  - $1.5 <= |η| <= 2.4$: pT >= 3.3667−7.0/9.0*|η|

- muon valid hit + pixel > 6

- J/ψ vertex probability > 0.01

- cτ/cτ error > 3.4

- |z vertex| < 15

- TMOneStaTight

- global muon

exclude muon from track

eta — phi — pt
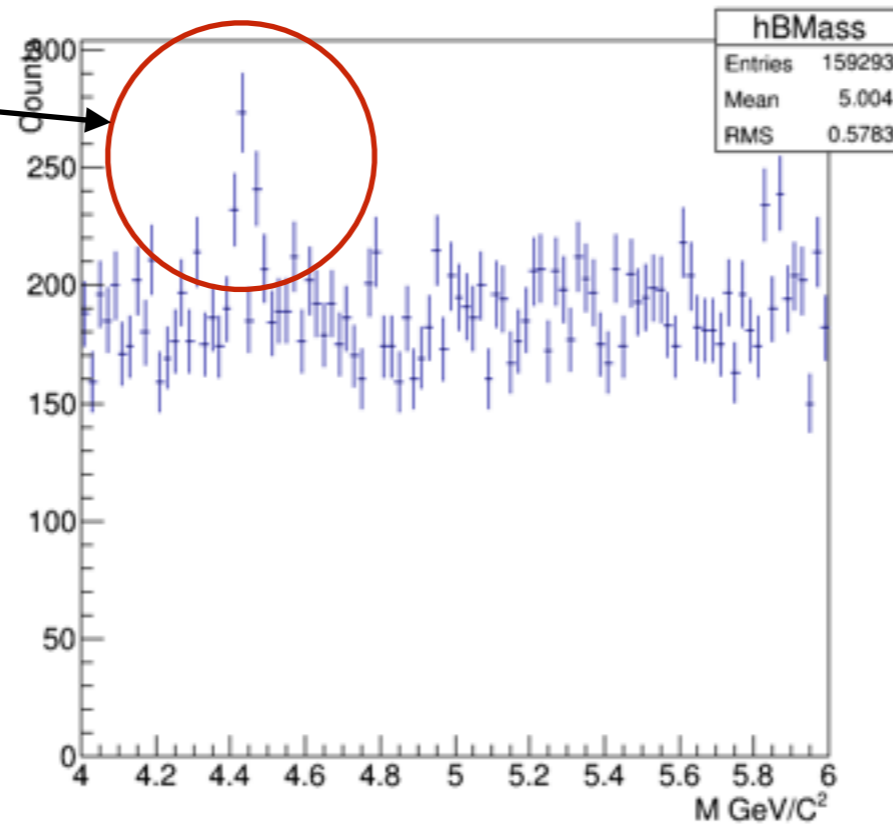
- |track pt-muon pt| < 0.01

- |track eta-muon eta| < 0.01

- |track phi-muon phi| < 0.01

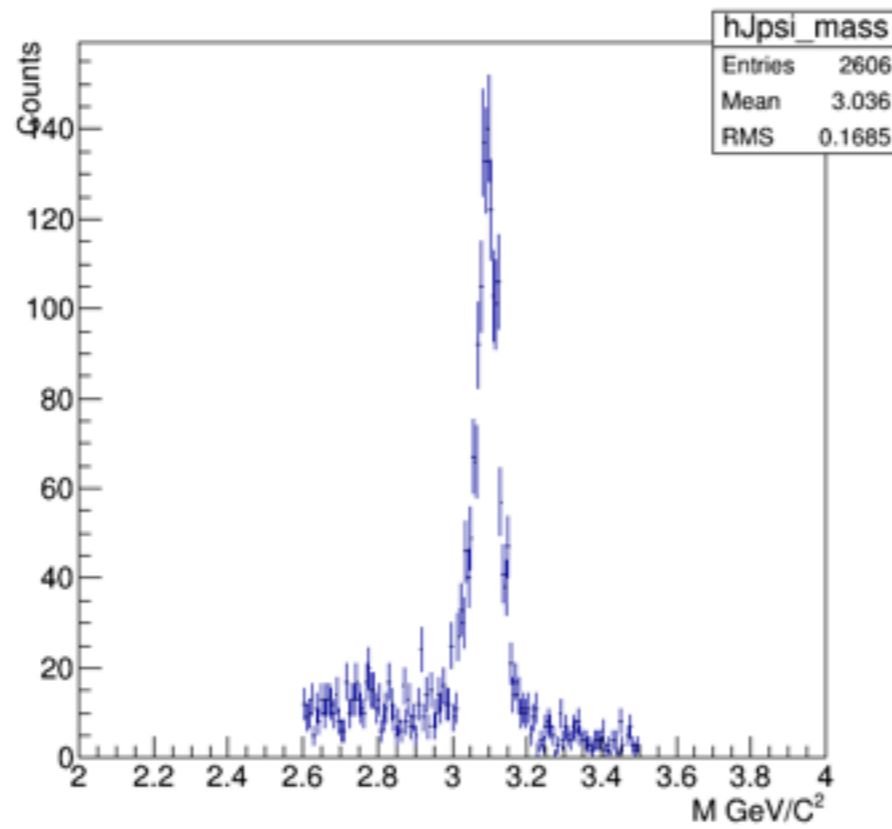- If satisfy three condition, the track is regard as muon

triplet mass

really peak?
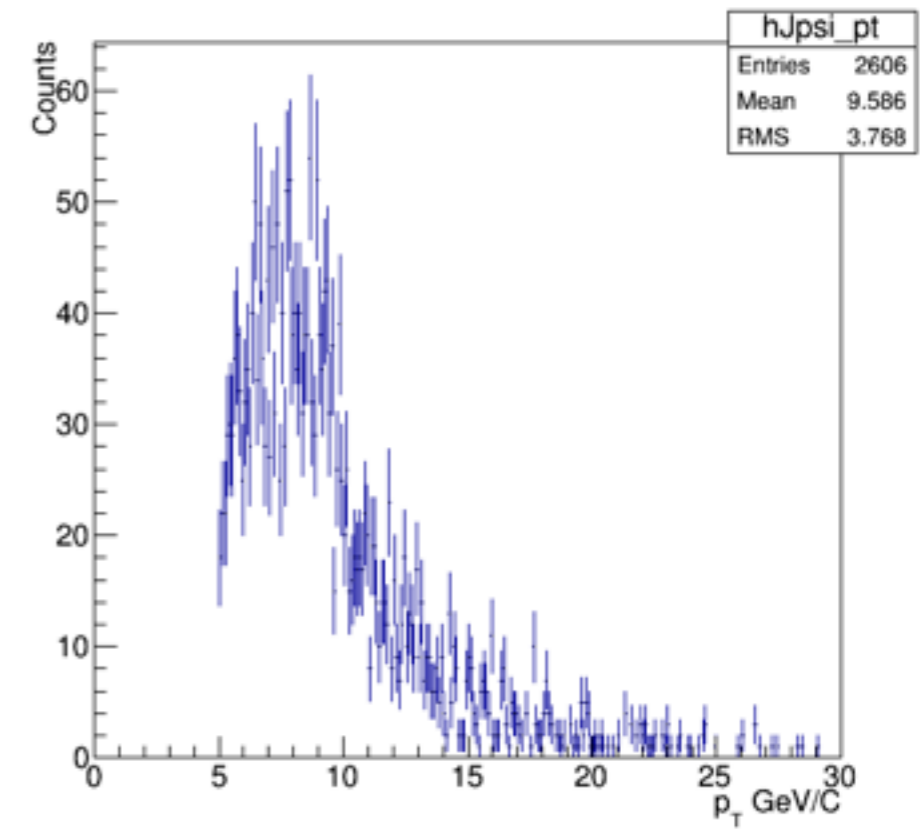

- track pt > 2 GeV, J/ψ pt > 5 GeV, triplet pt > 9 GeV
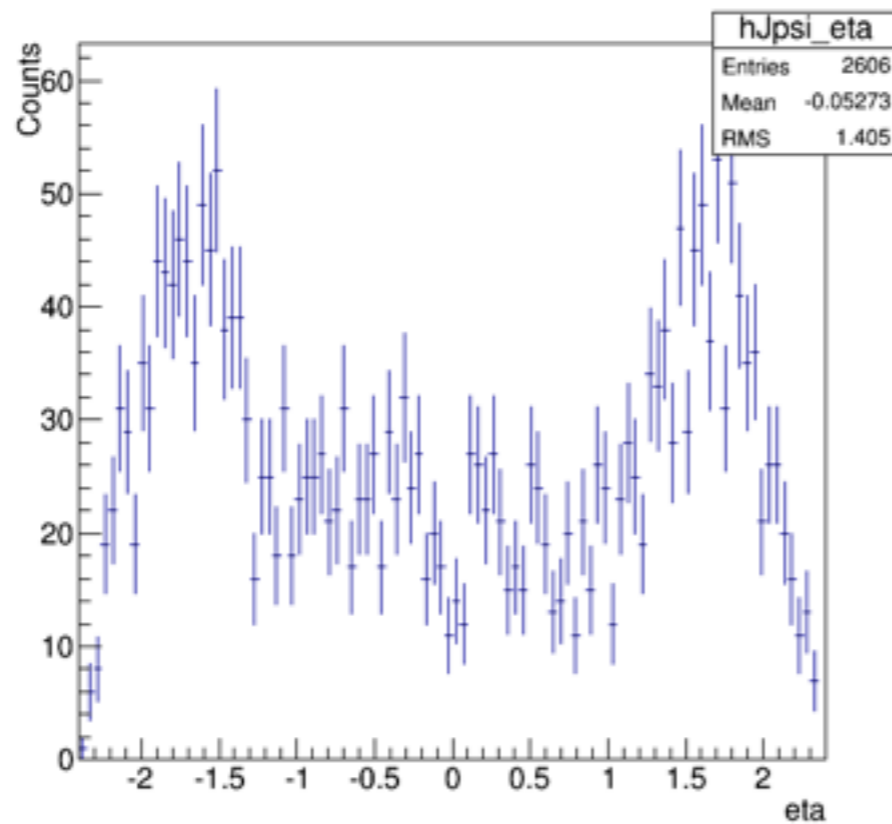- peak is exist around 4.5 GeV
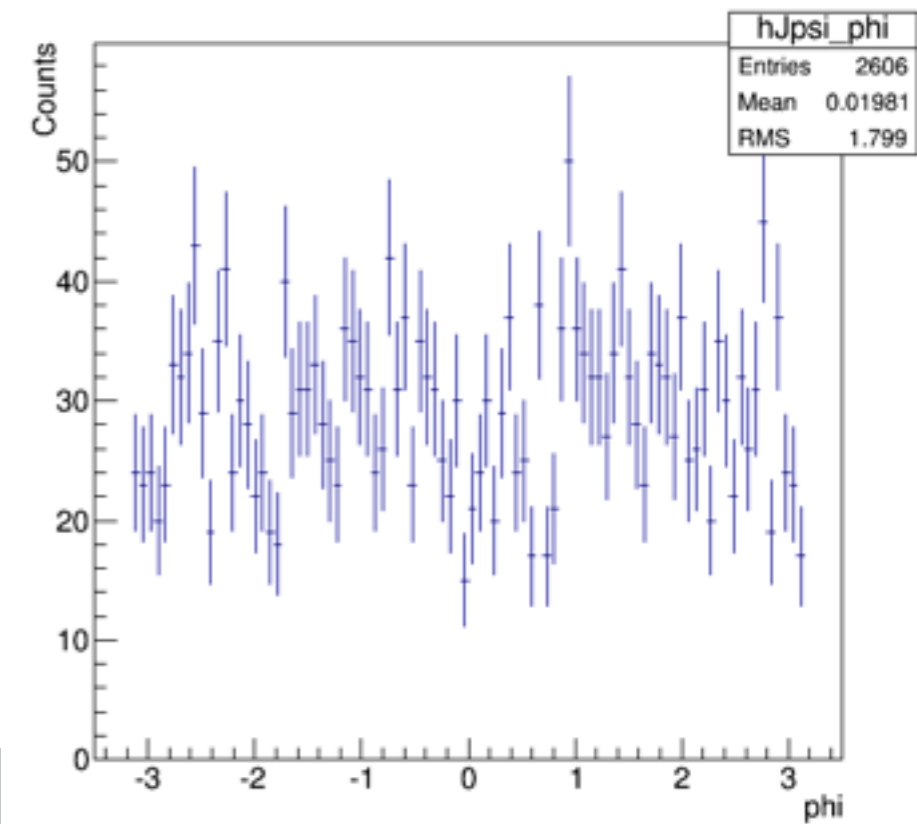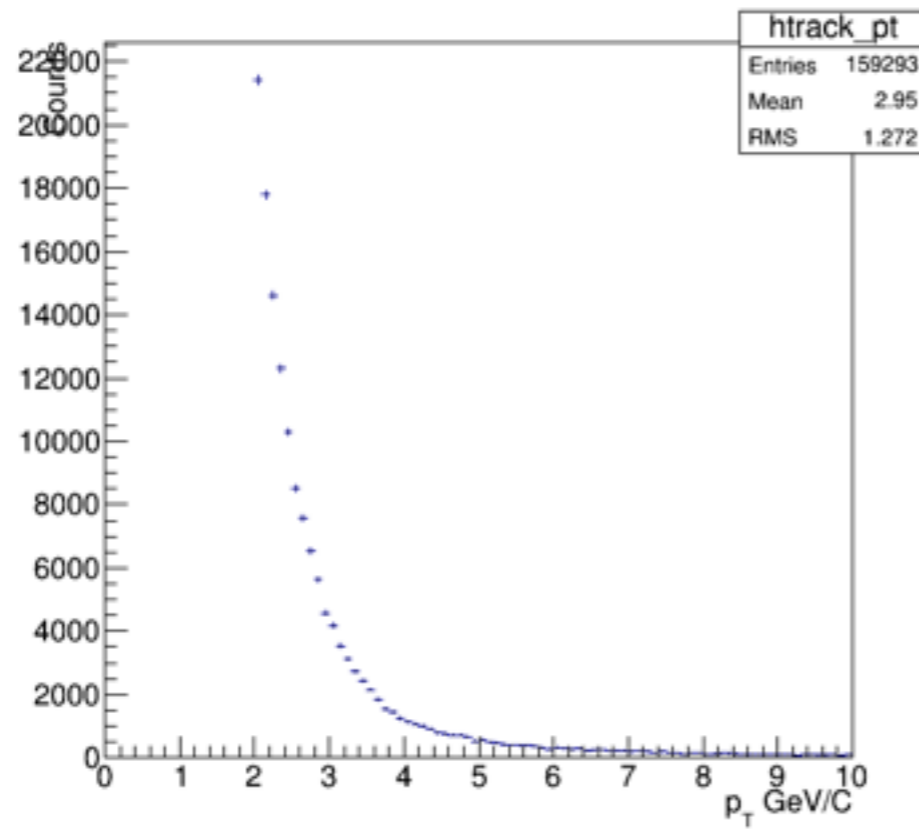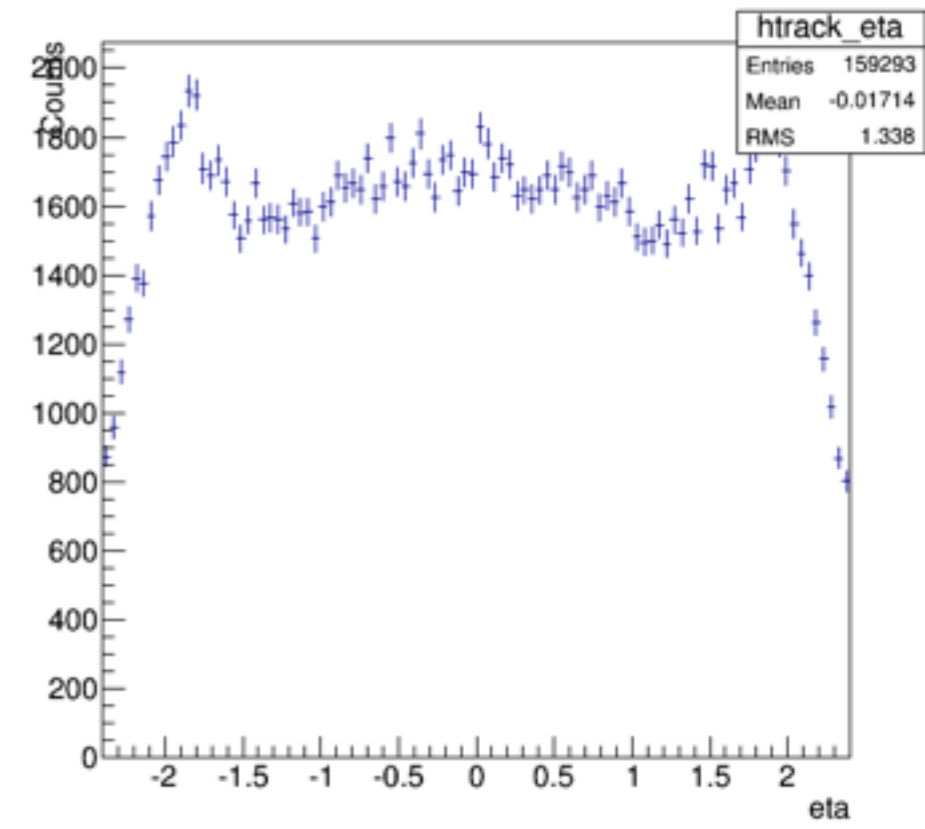- cos cut is not applied yet
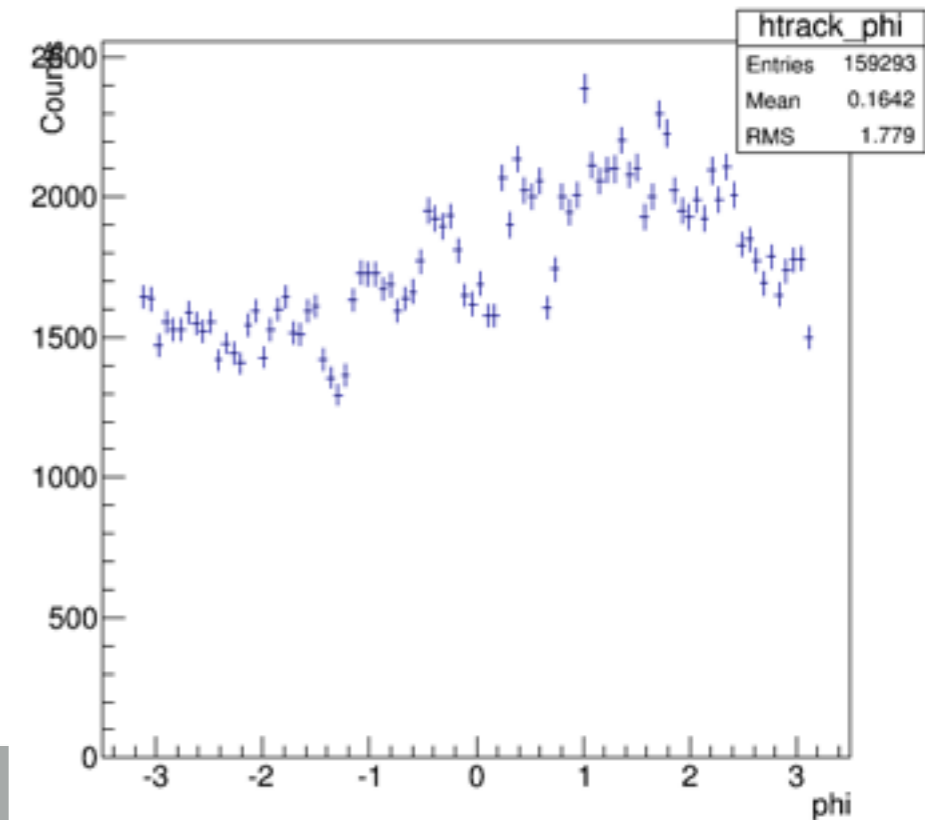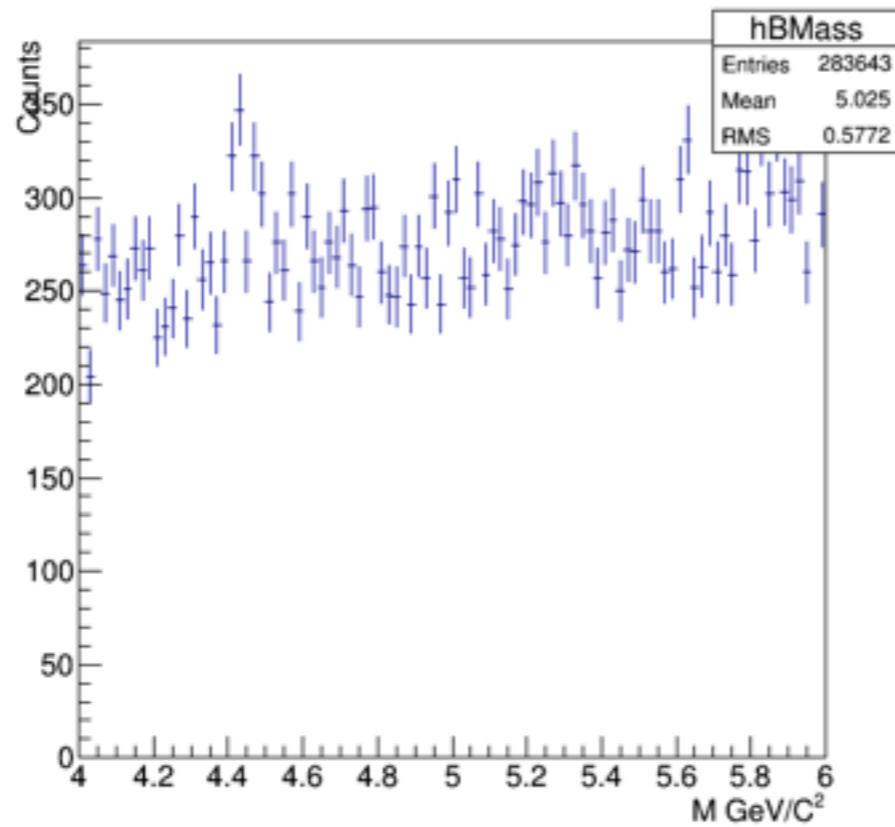
J/ψ in cut

mass

pt

eta

phi

track in cut

pt

eta

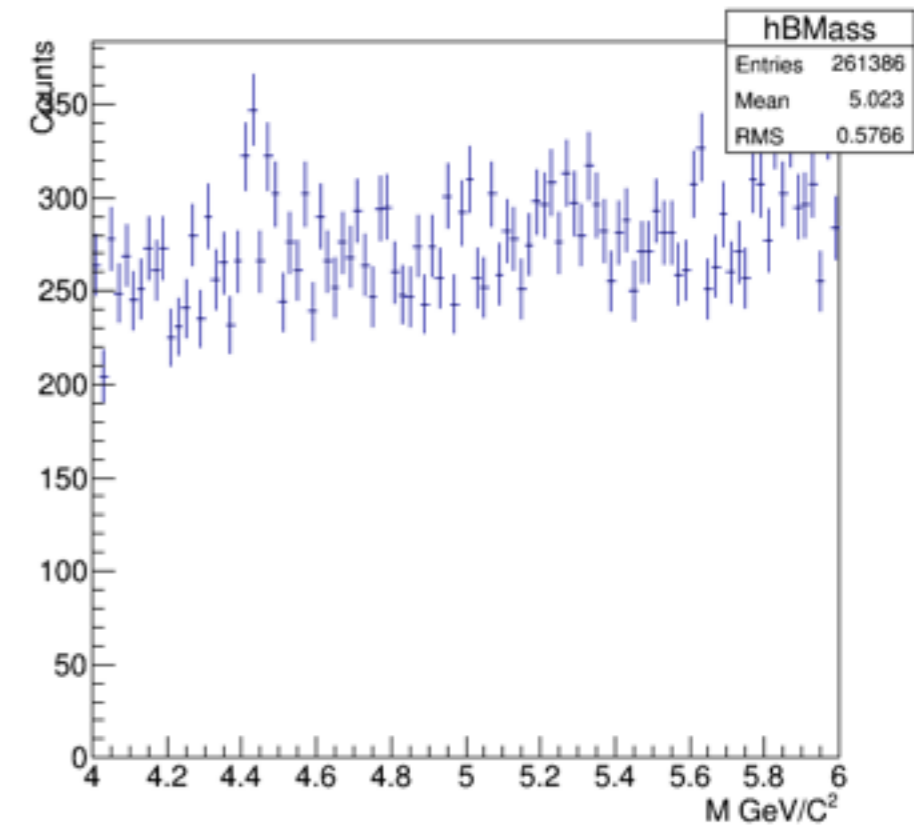
phi

- apply cosine

- apply pdg mass to J/ψ
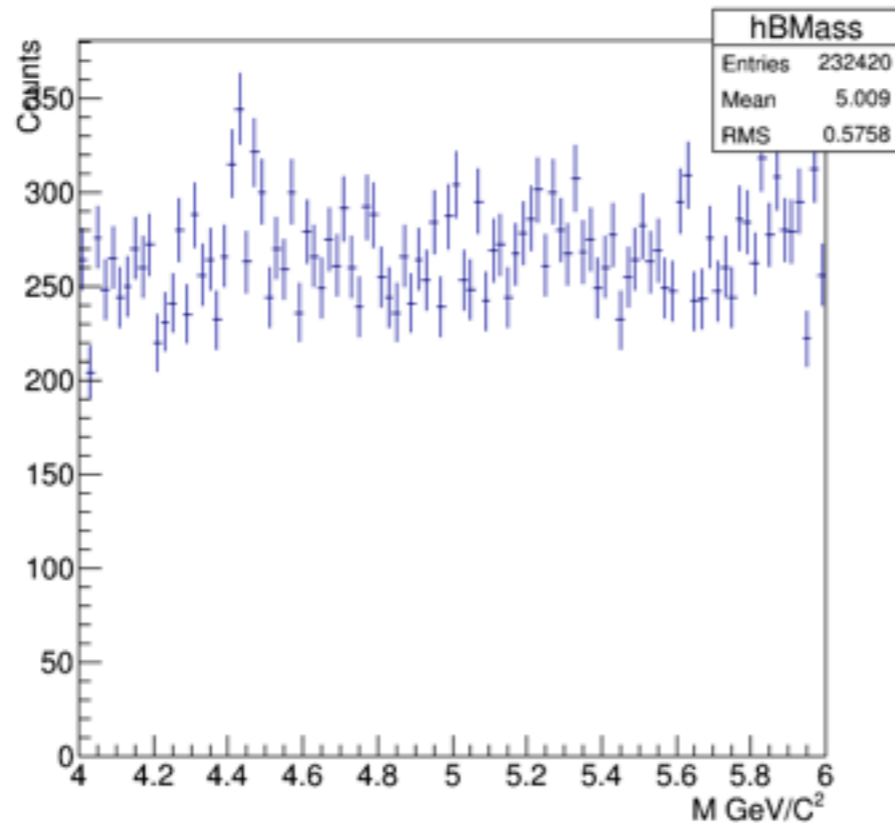
back up

track pt > 2 GeV, J/ψ pt > 5 GeV

Tri pt > 5
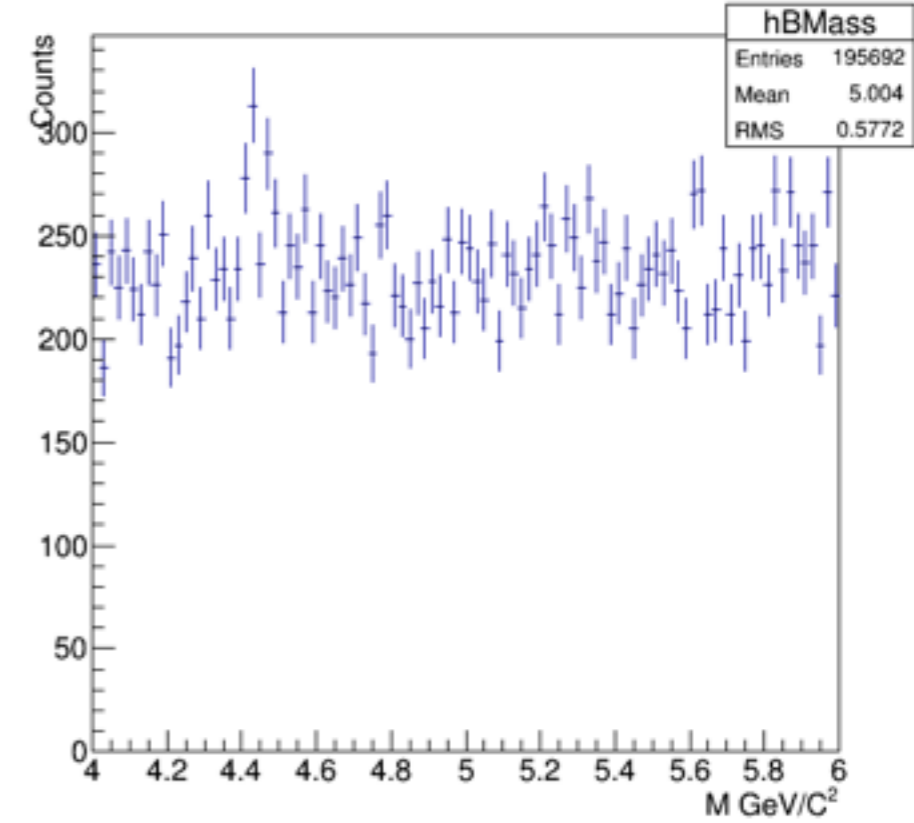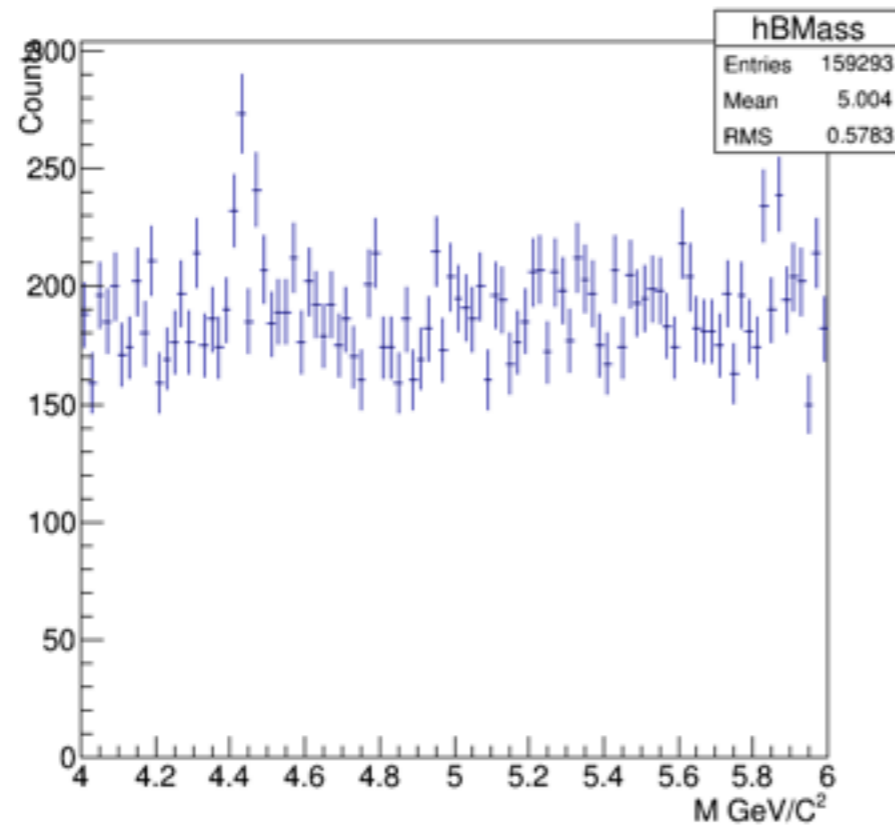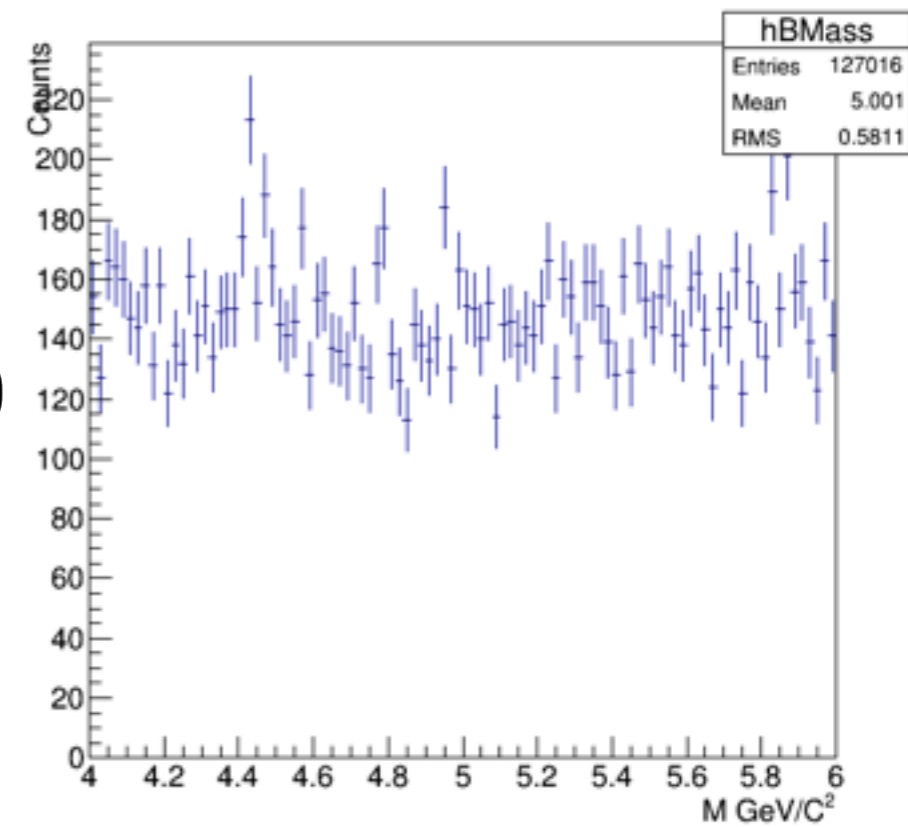
Tri pt > 6

Tri pt > 7

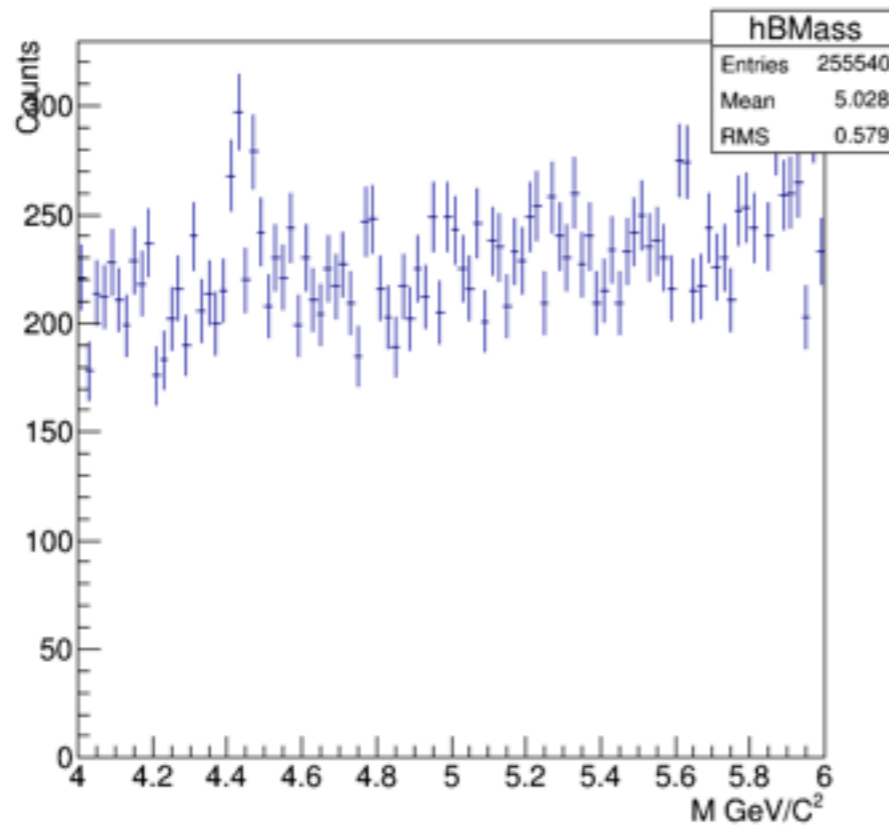Tri pt > 8

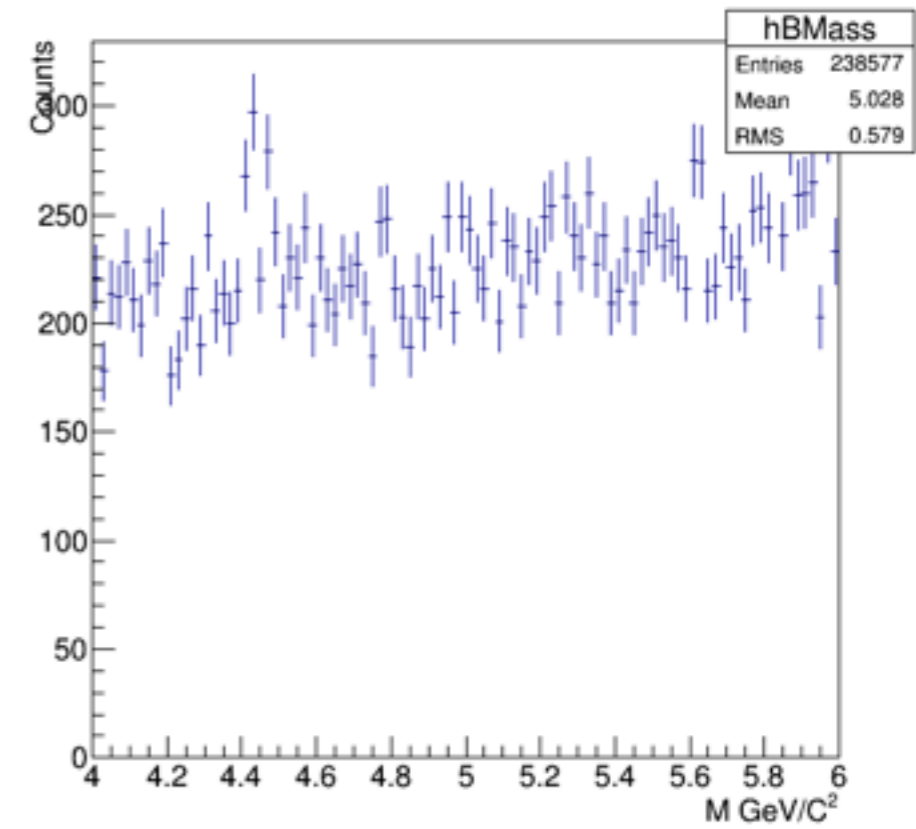# track pt > 2 GeV, J/ψ pt > 5 GeV

Tri pt > 9

Tri pt > 10

- 4.5 GeV peak is more clear as triplet pt cut is higher
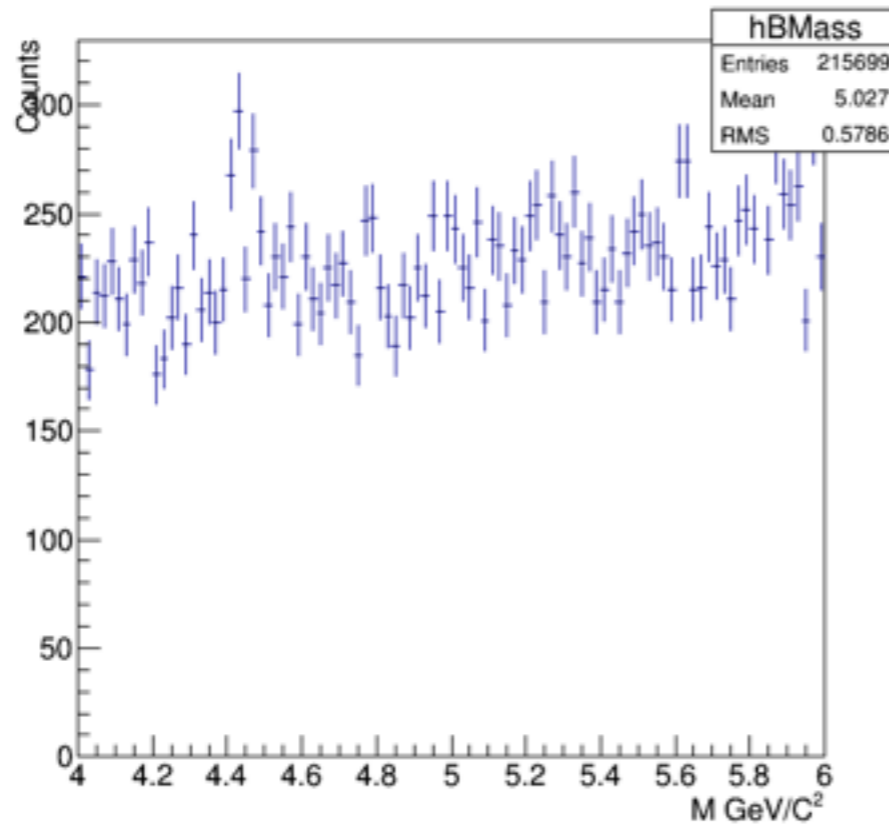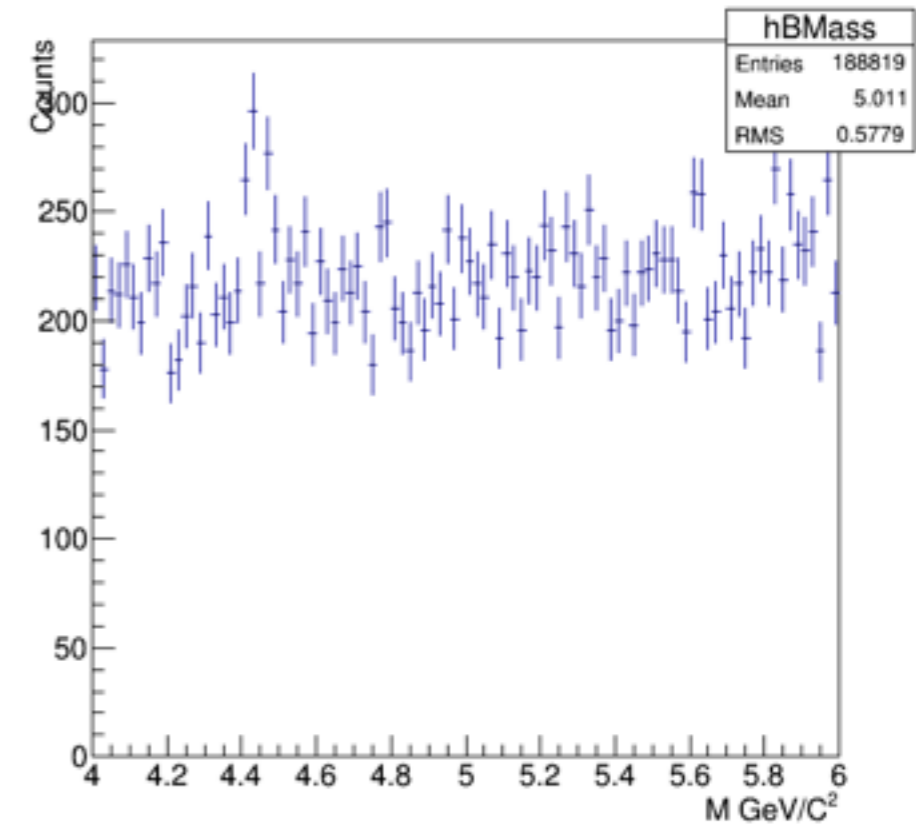
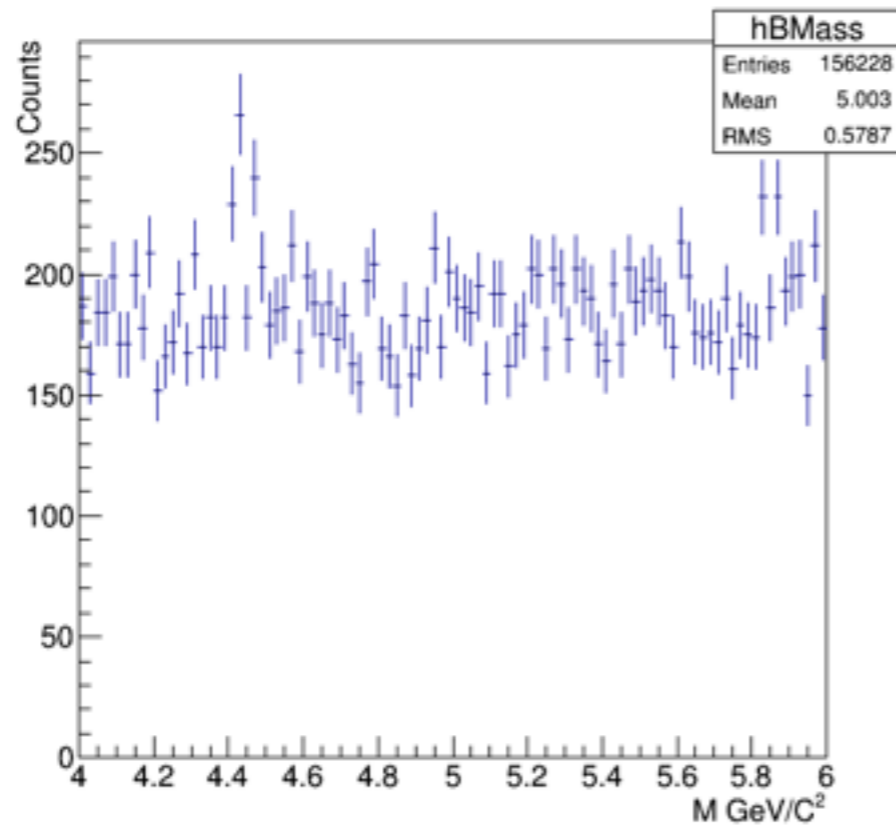# track pt > 2 GeV, J/ψ pt > 6 GeV

B pt > 5

B pt > 6

B pt > 7

B pt > 8

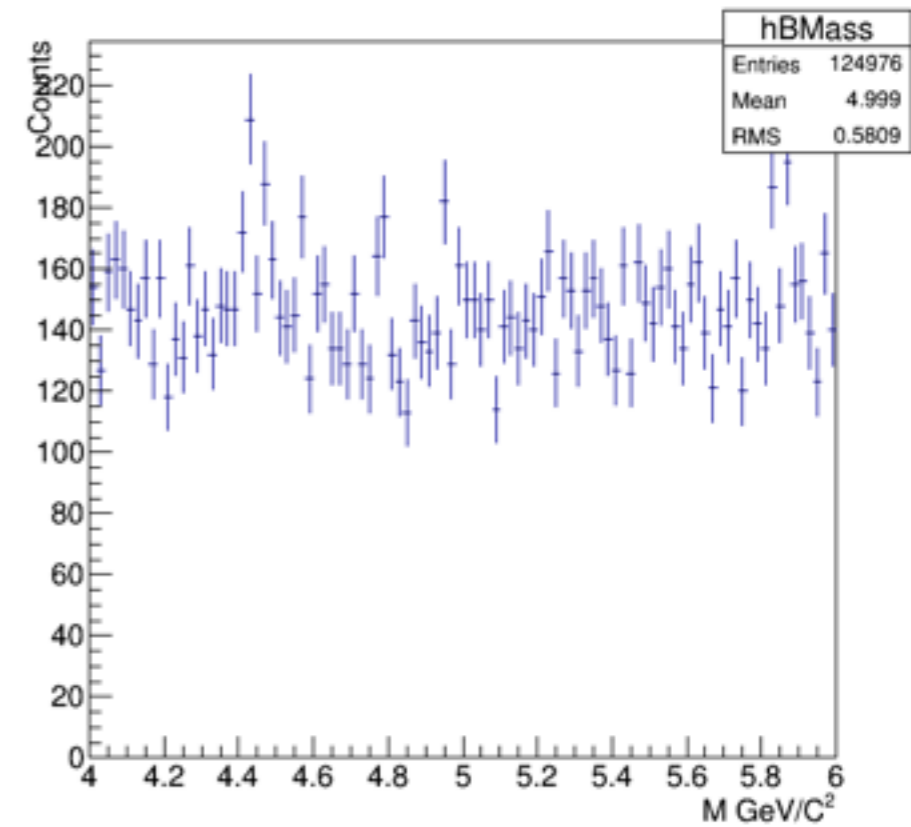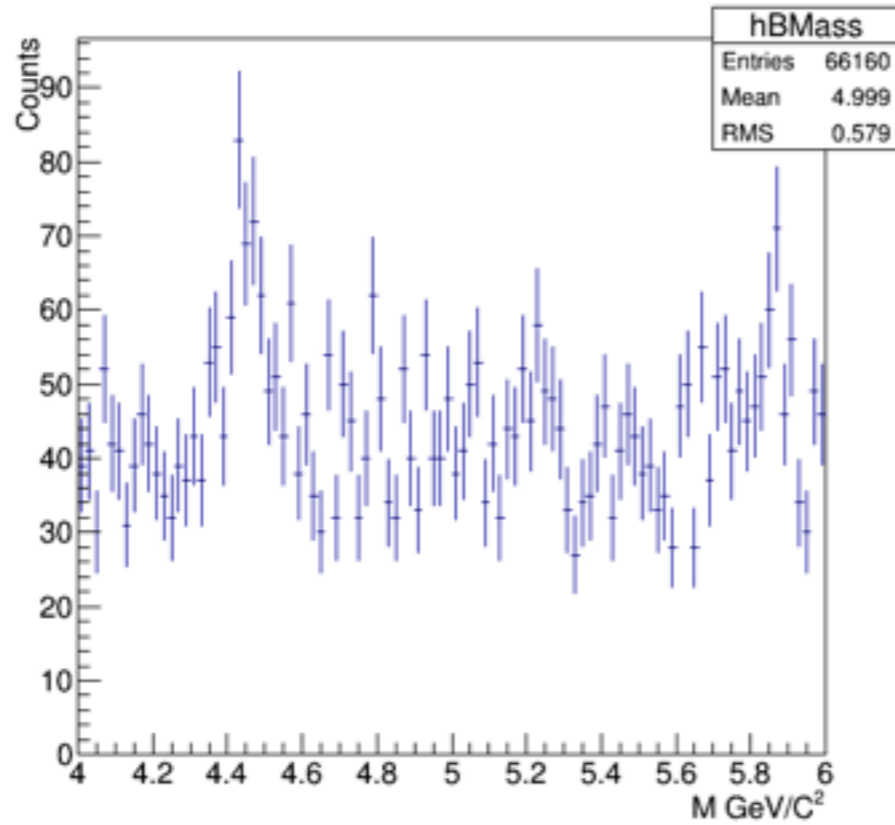# track pt > 2 GeV, J/ψ pt > 6 GeV
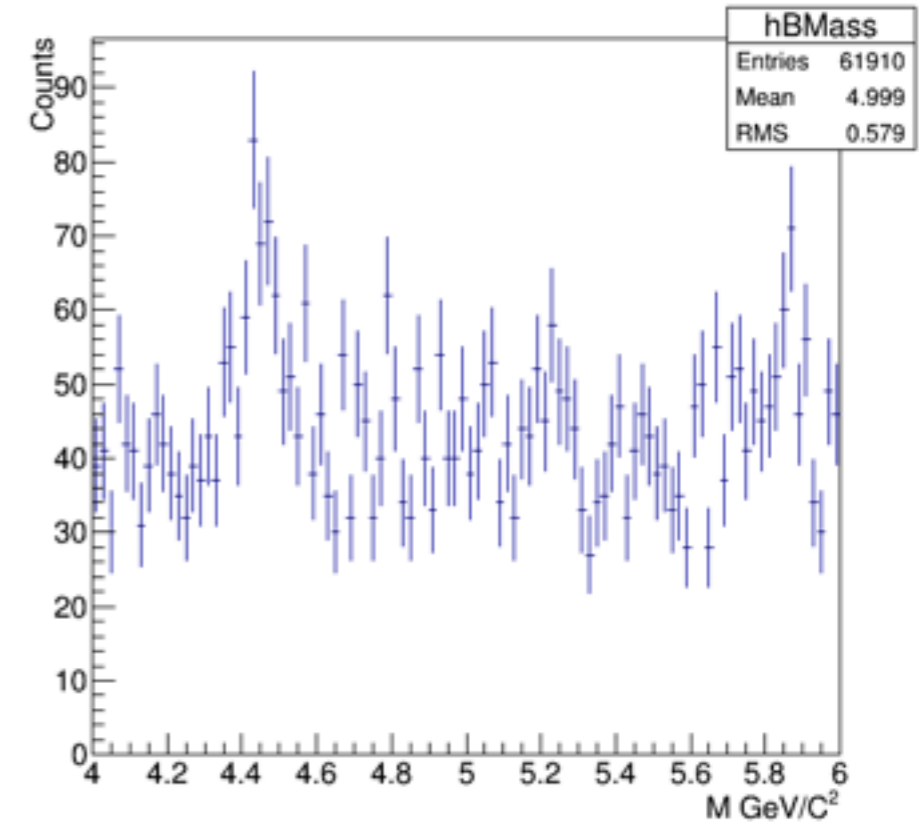
B pt > 9

B pt > 10

- 4.5 GeV peak is more clear as triplet pt cut is higher
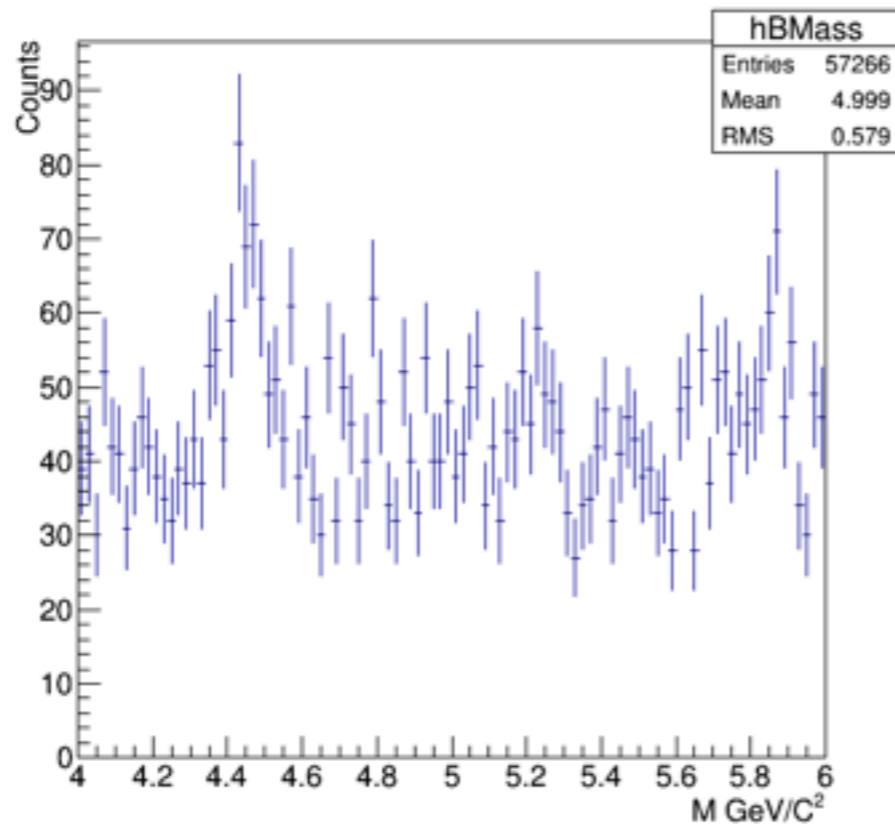
track pt > 3 GeV, J/ψ pt > 6 GeV
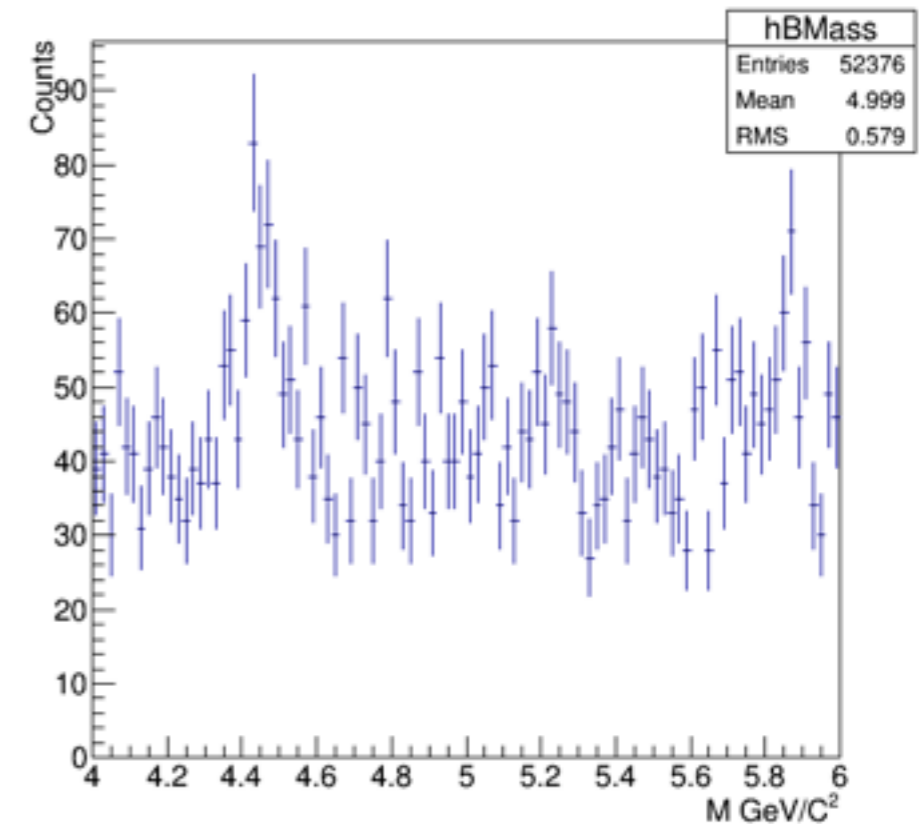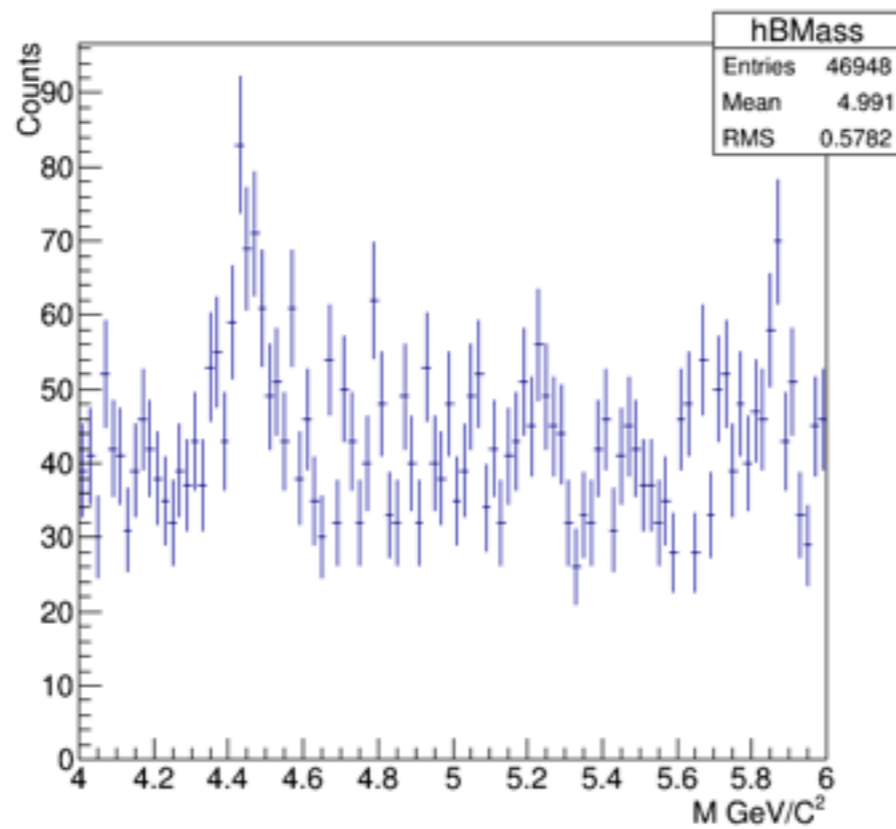

Tri pt > 5

Tri pt > 6

Tri pt > 7

Tri pt > 8

track pt > 3 GeV, J/ψ pt > 6 GeV

B pt > 9

B pt > 10