On simulation of the inclusive J/psi production (status)

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Simulation details and reconstruction

Simulation:

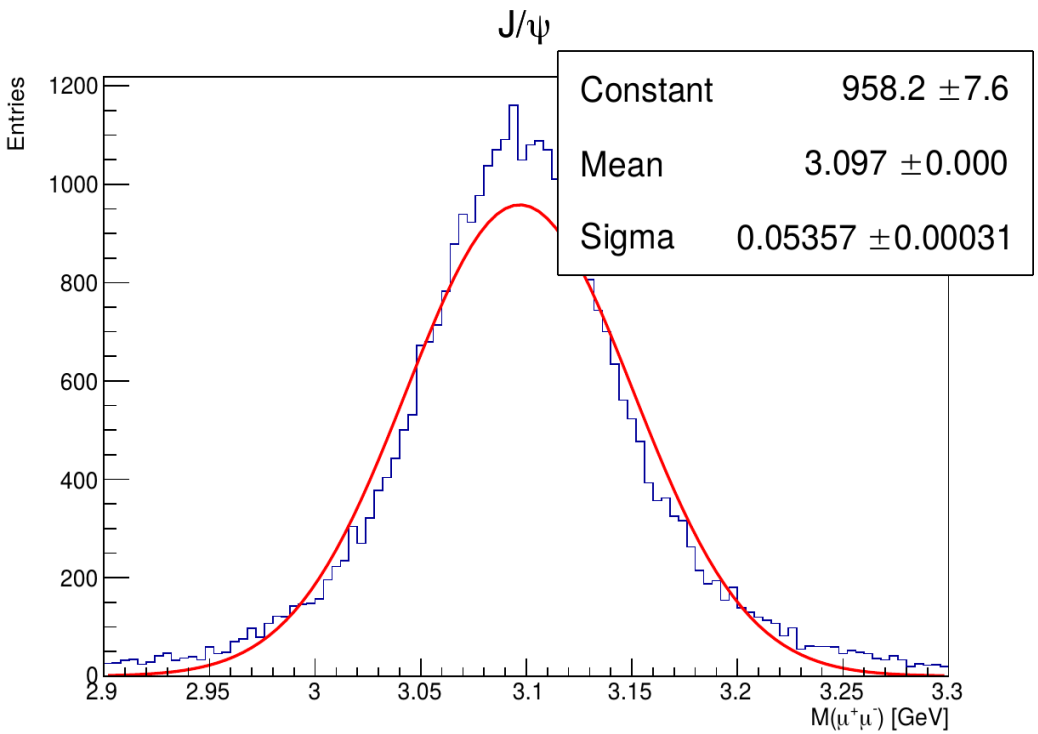
- New geometry (~mid. of July, smaller detector, simulation is based SimuQsl.C)
- 1T field map (map_qsolRZ_6cls2cm.bin) scaled by 0.8
- Detailed description of the RS system is available (thanks to Alexander Verkheev!)
- Fixed Pythia6 minimum bias set-up

Reconstruction:

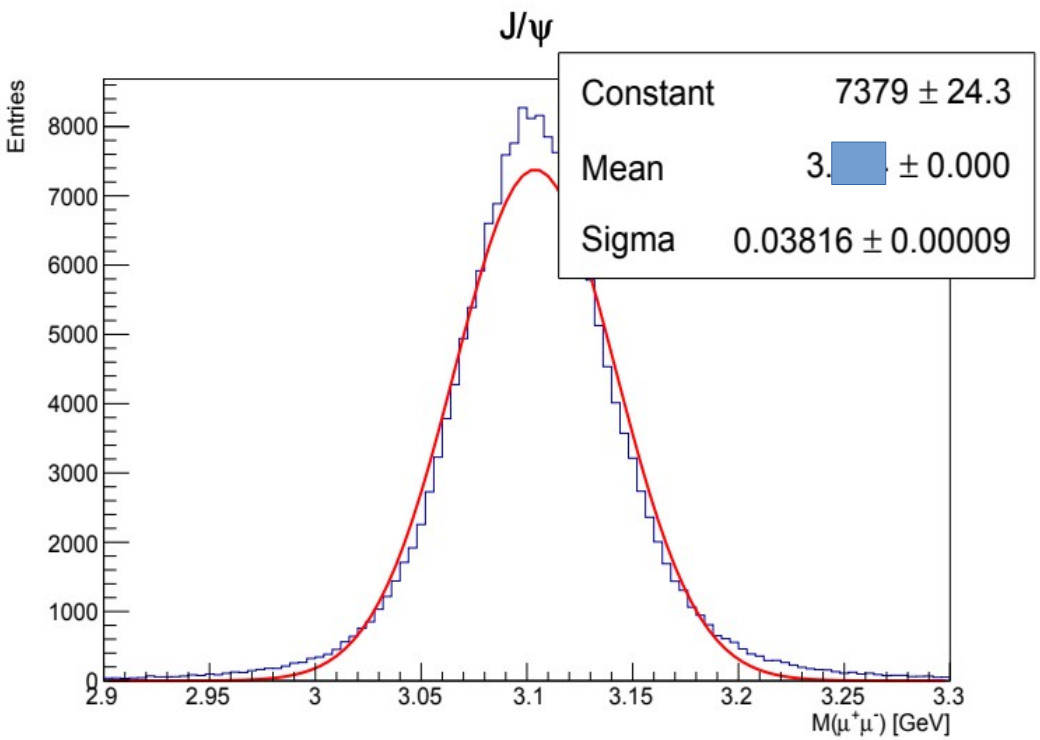
- Tracks must pass more than 3λ in the **active** parts of the RS (sum of segments in the barrel and endcaps)
- $|\cos(\theta)|>0.9$ for muon candidates
- For background estimation only tracks from the primary interaction vertex or muons from decay of such pions.

Resolution I

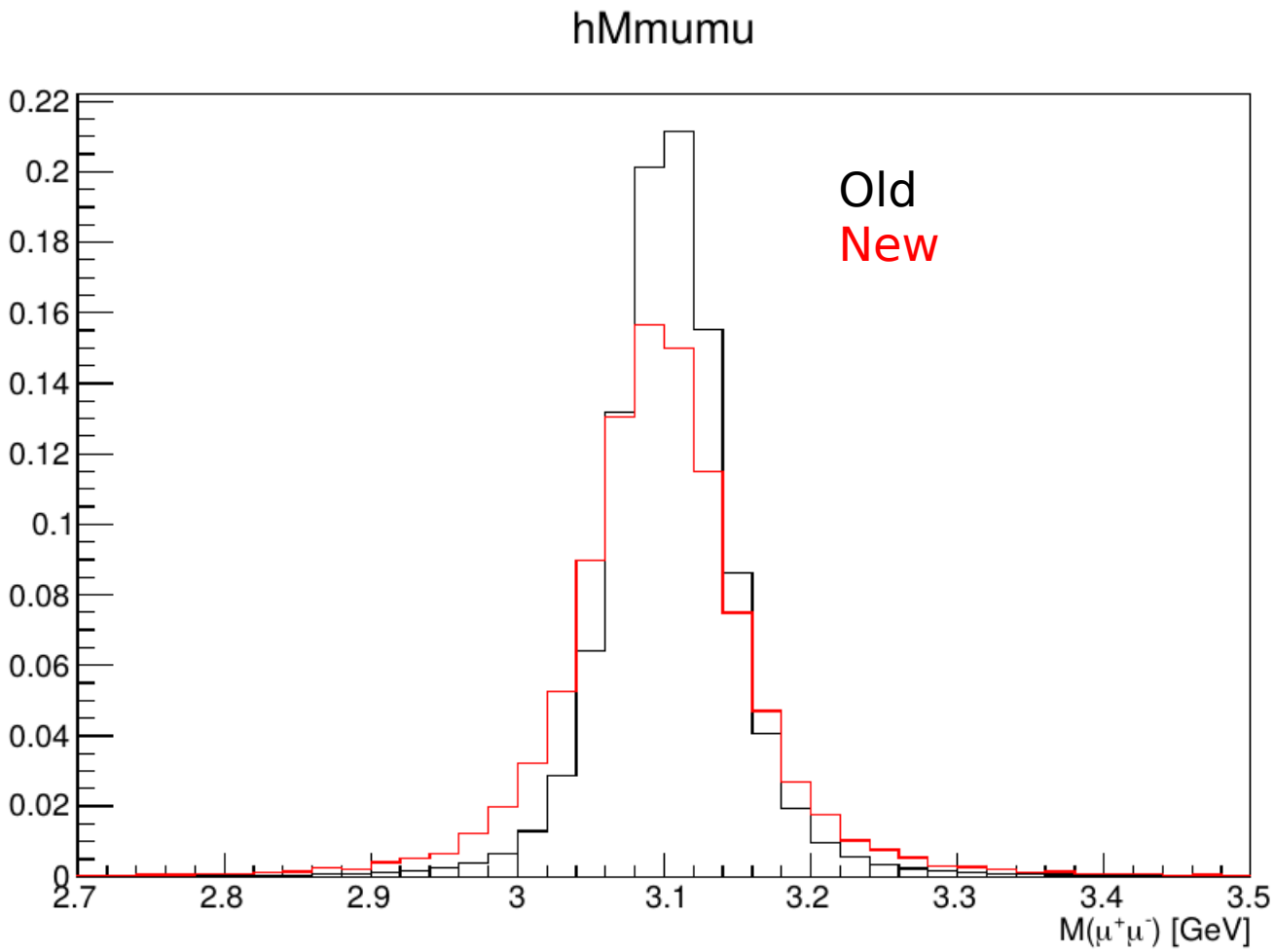
New



Old

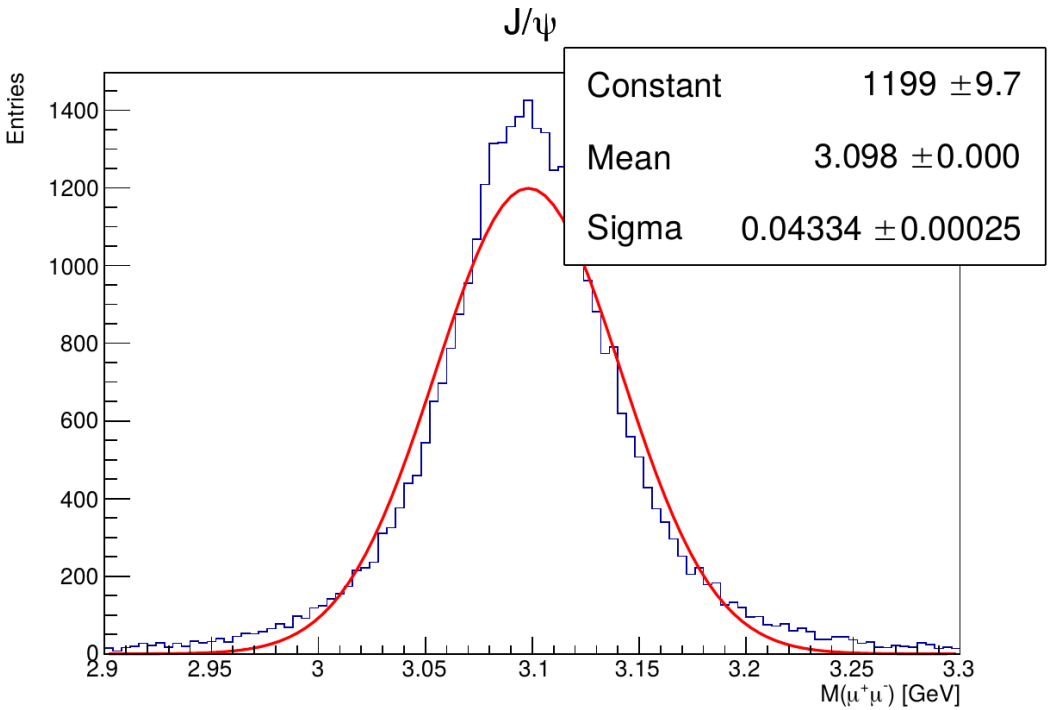


Resolution II

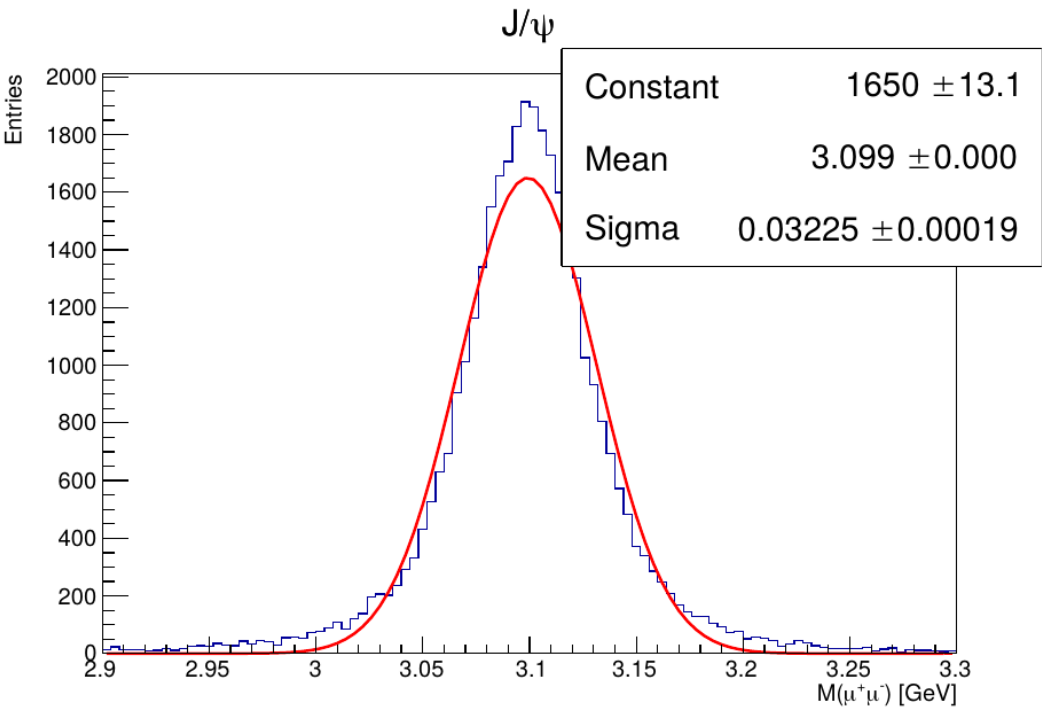


Resolution III

1T



1.4T

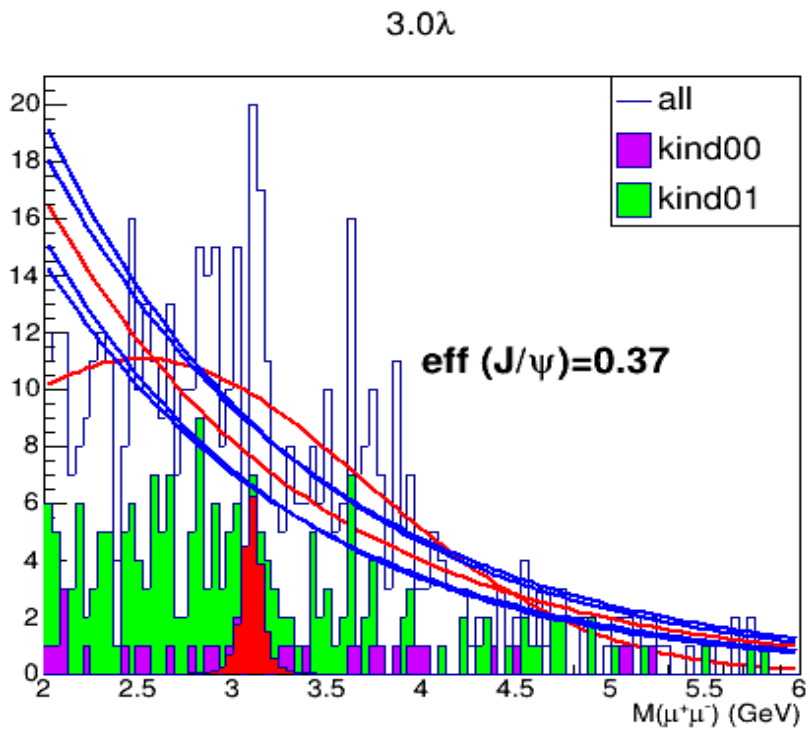


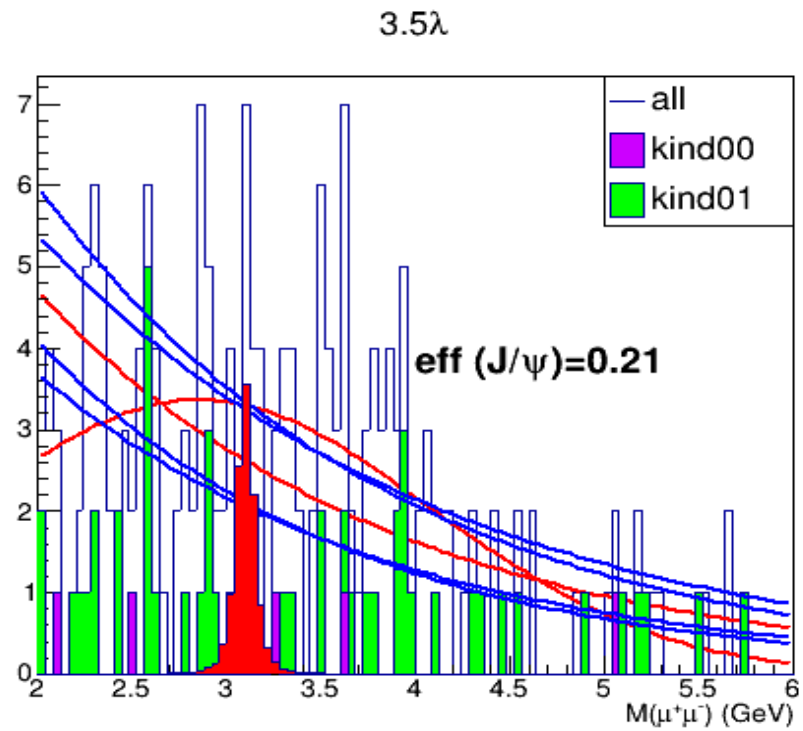
Resolution IV

Resolution of the J/ψ peak as a function of magnetic field.

The resolution for the previous set-up

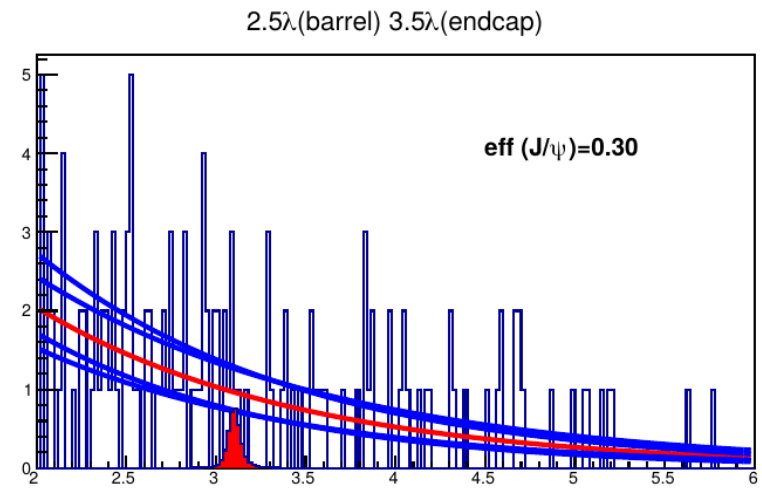
Dimuon mass spectrum

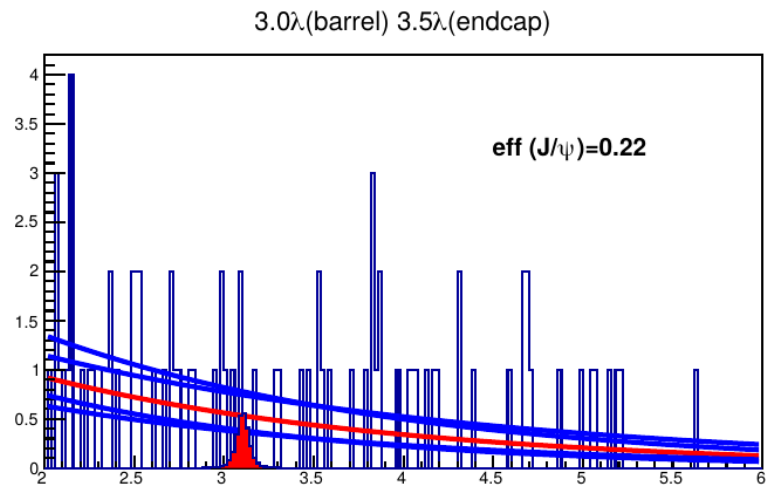


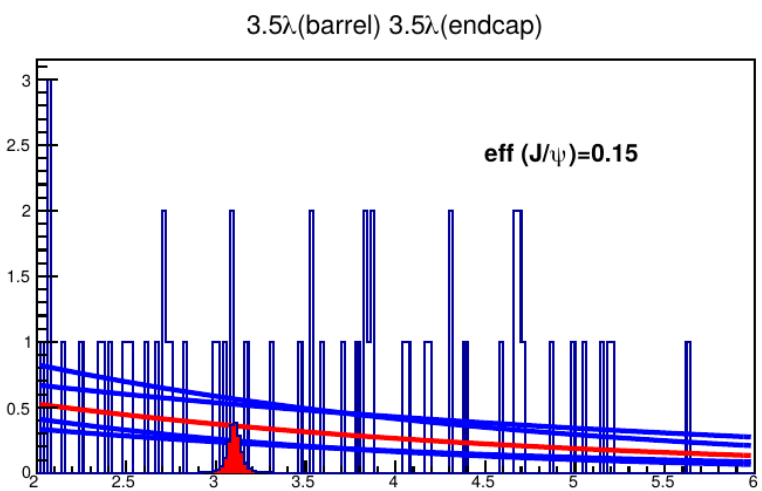


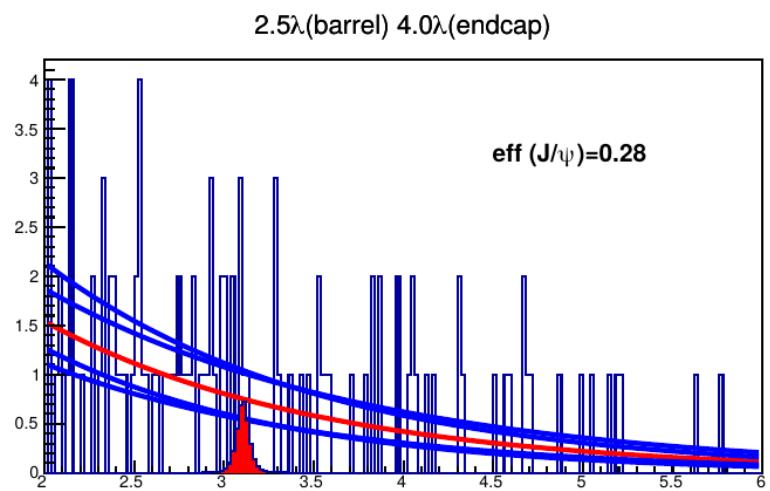
Background estimated from ~180M MB events

Previous detector set-up



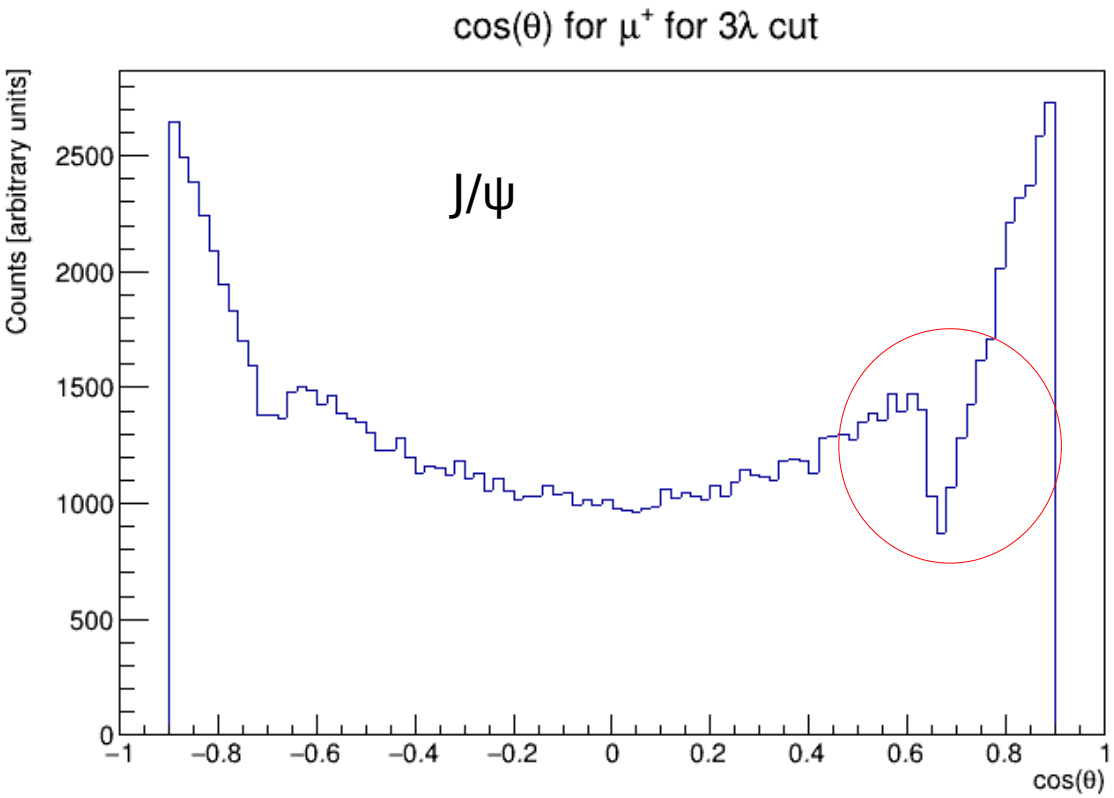






The cut was set on the transverse path!

Bug in reconstruction



*Artur suggested to align (local) Y-axis of all volumes in the outer direction from the collision point. I strongly support it.

Ongoing work

1) Estimation of statistical uncertainties for TSA

2) Isolation cut efficiency