



MPD Polarization Meeting

Progress on the study of Global Polarization AuAu at $\sqrt{s_{NN}} = 7.7$ GeV

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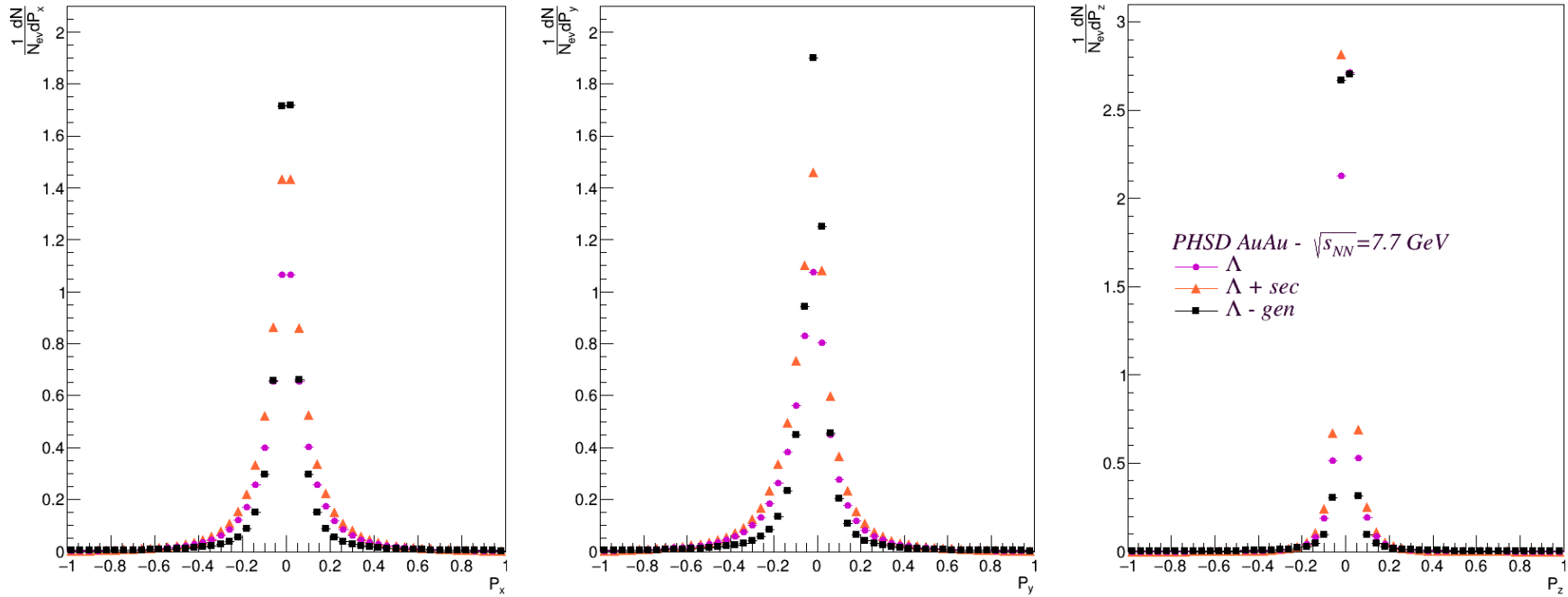
March 30th, 2021



Content

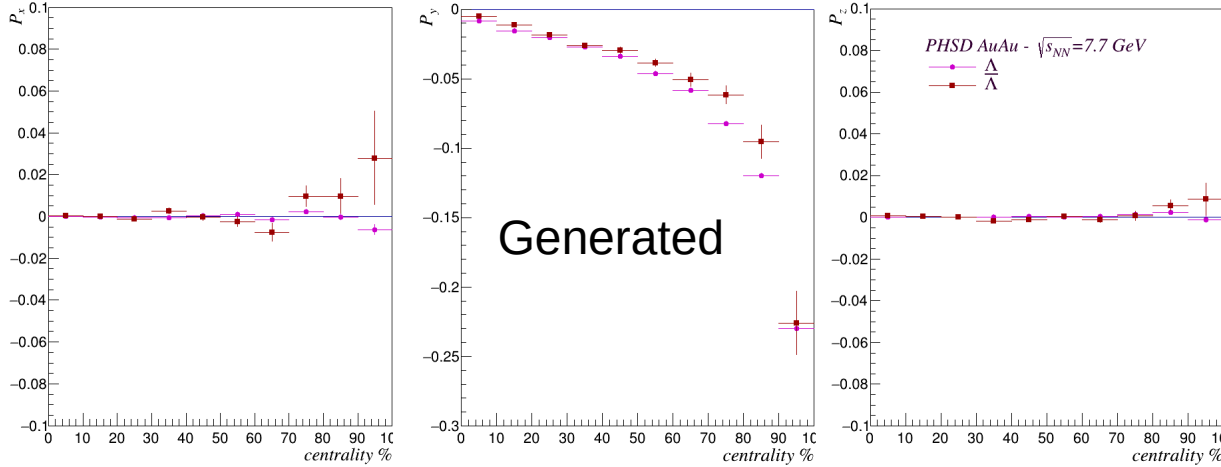
- Comparison MC vs Transported data (MCTracks)
- Angular distributions of protons from decay PHSD (polarized) – UrQMD (without polarization)

Comparison MC vs Transported

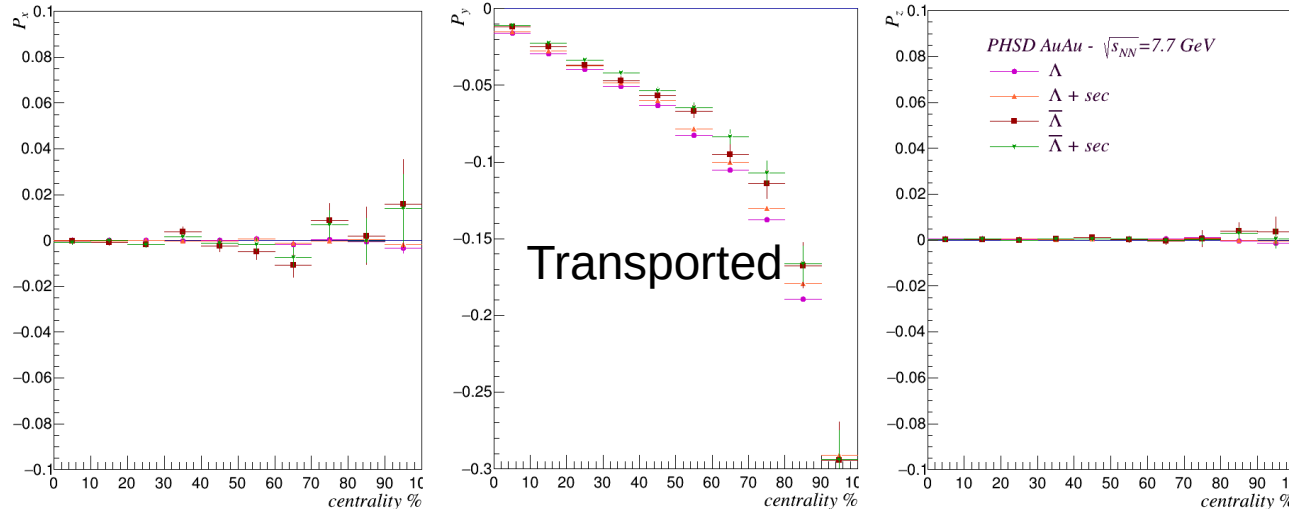


The generated distribution is narrower than transported.
 Transported data consider magnitude of polarization vector.

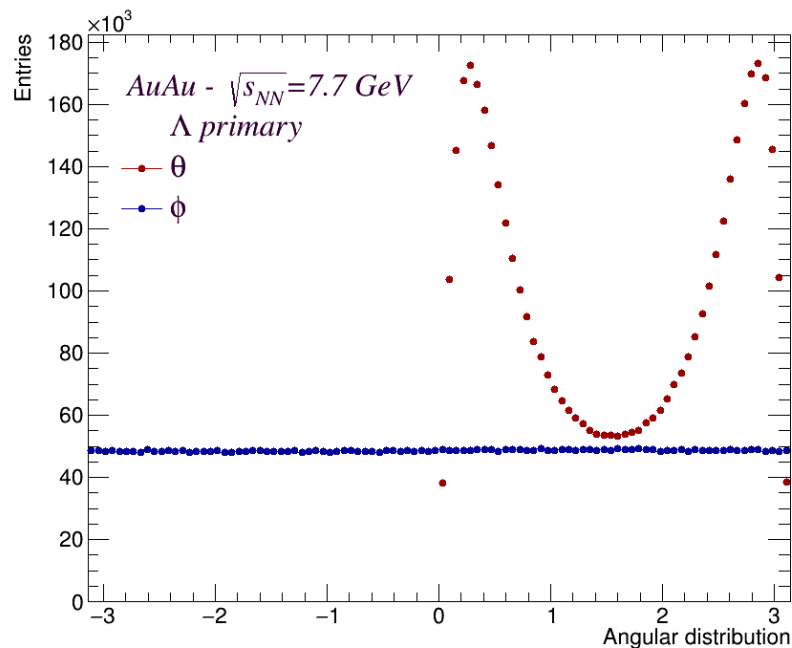
Polarization vs centrality



Polarization in transported data is higher than generated

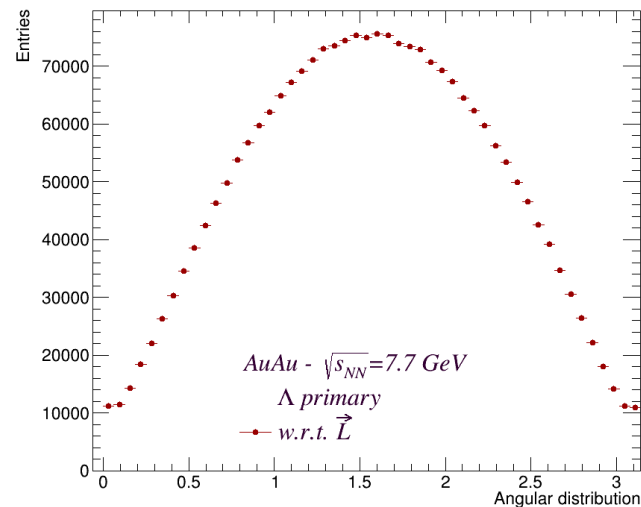


Angular distributions



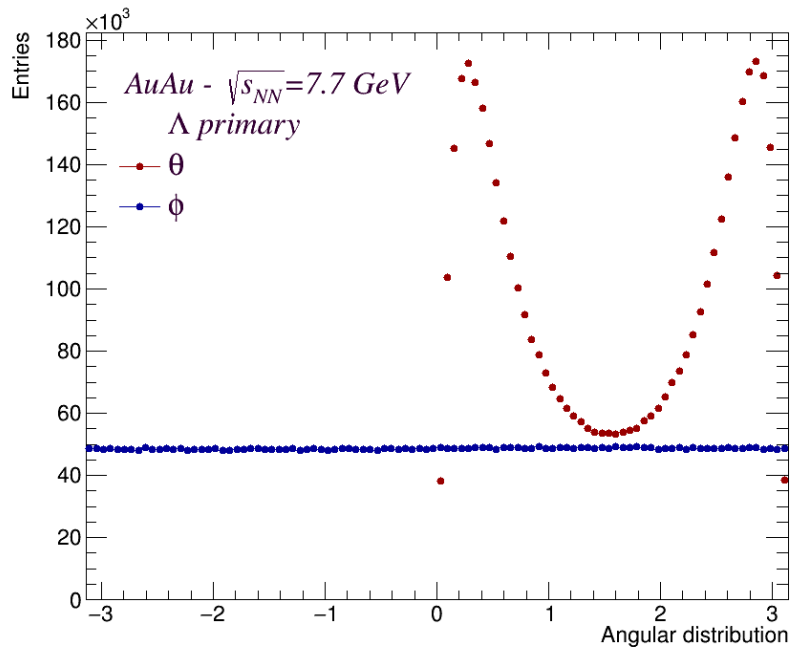
Angles w.r.t. Lab

Particles goes out isotropically around z axis, but preferentially parallel to the z axis



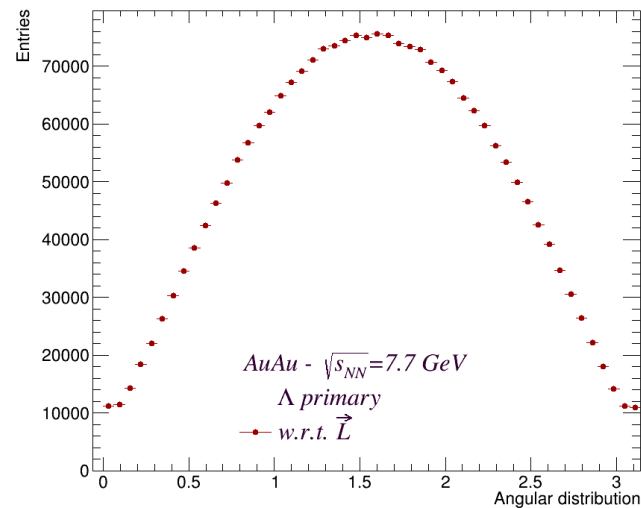
Angle w.r.t. Angular Momentum

Angular distributions - phsd



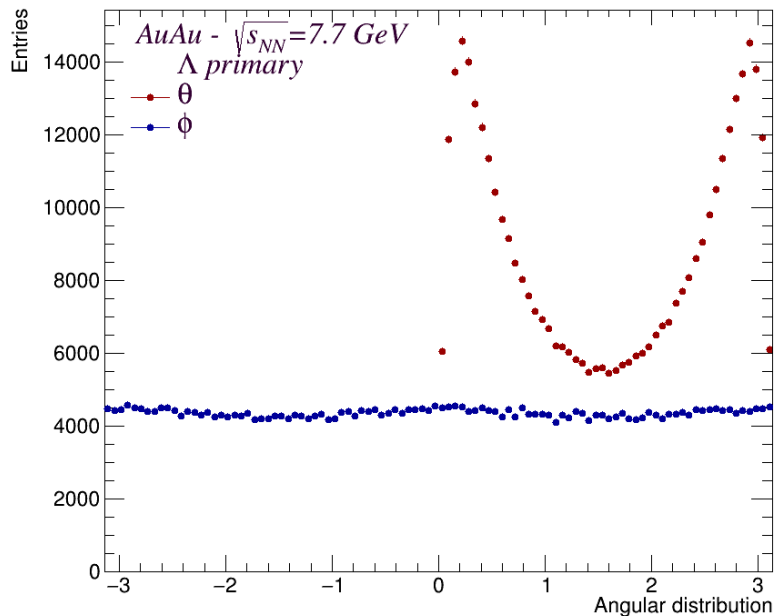
Angles w.r.t. Lab

Particles goes out isotropically around z axis, but preferentially parallel to the z axis



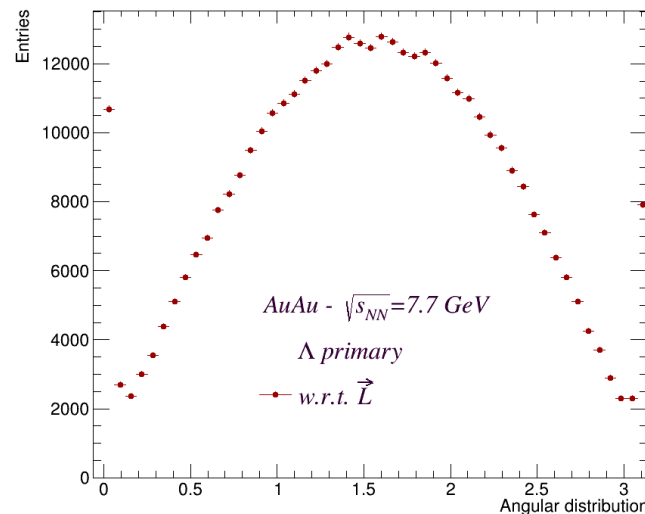
Angle w.r.t. Angular Momentum

Angular distributions - urqmd



Angles w.r.t. Lab

Particles goes out isotropically around z axis, but preferentially parallel to the z axis



Angle w.r.t. Angular Momentum

Summary

- We found small differences between MC and Transported Polarization
- Proton Angular distributions from PHSD and UrQMD looks the same.
- We need to verify that protons keep polarization.