

Exclusive, Diffractive, Tagging WG

Regular WG Meetings (May 13, May 20)

- J/Psi production
 - **S. Fegan**
- U-channel ρ^0
 - **Z. Sweger**
- VM in eA
 - **M. Pitt**
- Afterburner
 - **A. Jentsch**
- DVMP π^0
 - **H. Jiang**





The ePIC Study

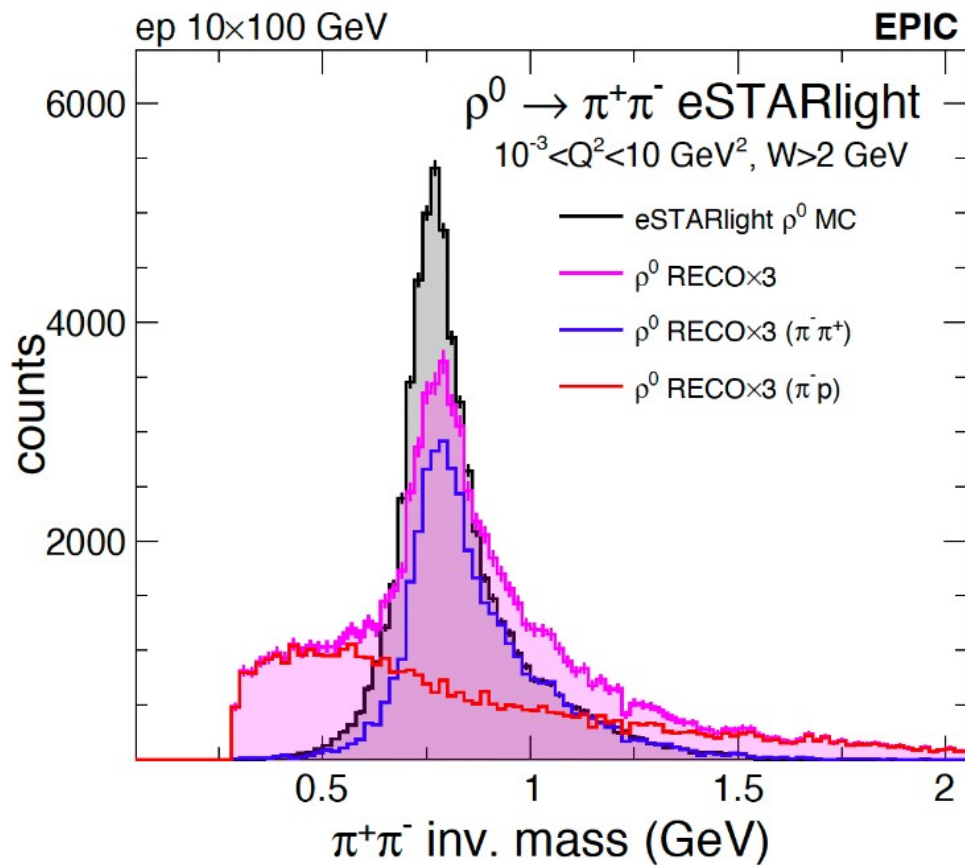
Same idea here, but on $J/\Psi \rightarrow \mu^+ \mu^-$

- $\mu^+ \mu^-$ offers a complimentary approach to $e^+ e^-$
- Similar branching fraction
- $\mu^+ \mu^-$ decay avoids potential ambiguity in separating decay lepton from scattered electron

The approach:

- Use IAger to generate $J/\Psi \rightarrow \mu^+ \mu^-$ samples and evaluate feasibility of measurement
- Starting with $10 fb^{-1}$ samples at 10 on 100 GeV and 18 on 275 GeV settings

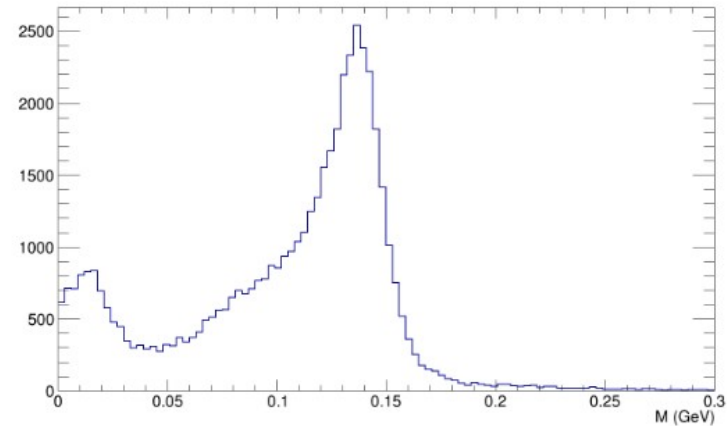
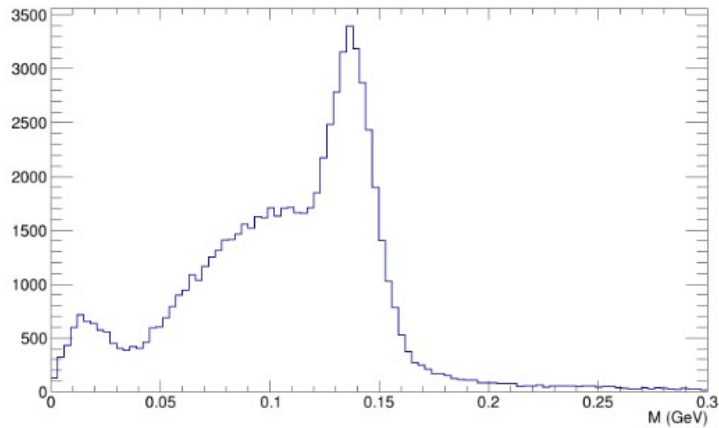
Benchmark plot: ρ^0 mass reconstruction



Summary and discussion

- Simulation:
 - Development of detector geometry is frozen unless an unexpected developments we will proceed with the current setup
 - Some issues with RP response (investigating)
- Coherent VM selection and background veto – plots for future TDR
- Semi-coherent events (work in progress) - estimation of beam backgrounds
<https://github.com/eic/ProtonBeamGas>, is ongoing, Clustering of B0 / ZDC has issues, once fixed we proceed to show the resolution plots
- The lowQ2 taggers are not in the EICRecon <https://github.com/eic/EICrecon/pull/675>, inclusion of low-Q2 region is considered
- t reconstruction – Afterburner bias is investigated, once done, we aim to apply ML to reconstruct t

Pions invariant compared with the previous



Left: Current Right: Previous

