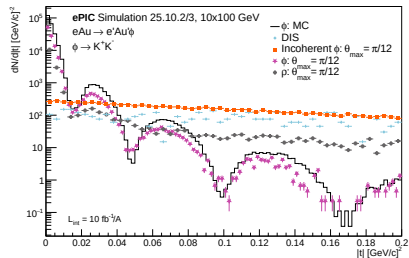


Diffractive ϕ Analysis Update

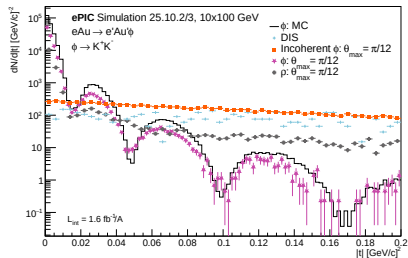
Maci Kesler

December 1, 2025

All Background



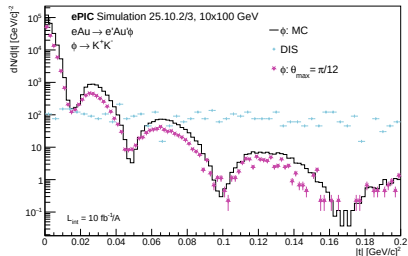
preTDR lumi



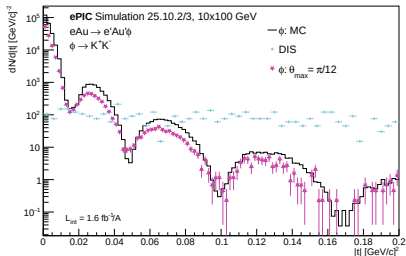
Early Science lumi

DIS Background

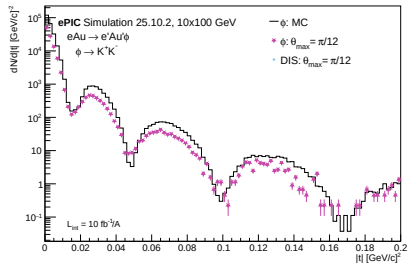
preTDR lumi:



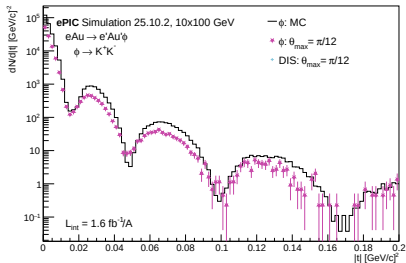
Early Science lumi:



$|t|$ Distribution with DIS All Vetoes

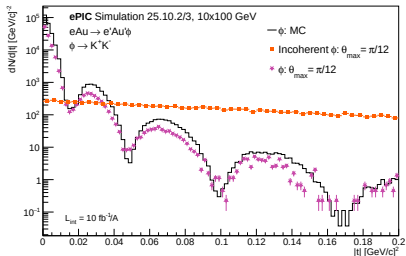


$|t|$ Distribution with DIS All Vetoes

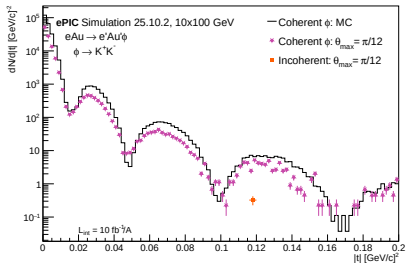


Incoherent Production

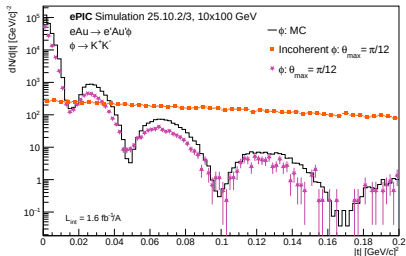
preTDR lumi:



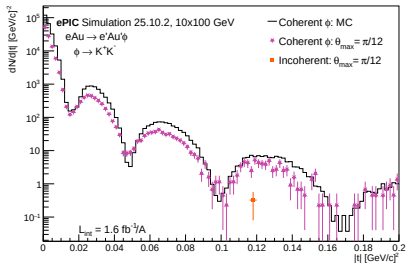
|t| Distribution with Incoherent ϕ All Vetoes



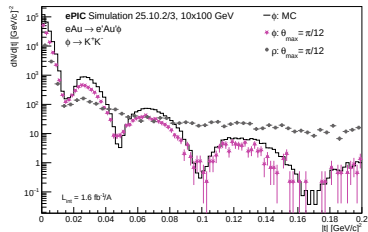
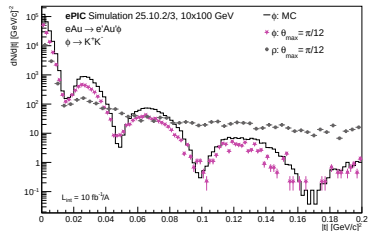
Early Science lumi:



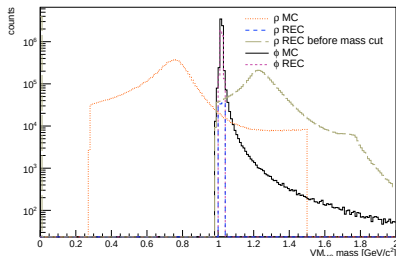
|t| Distribution with Incoherent ϕ All Vetoes



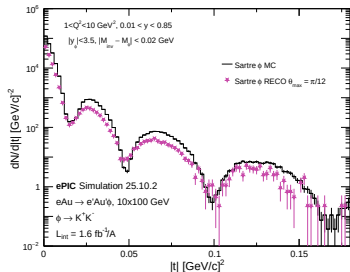
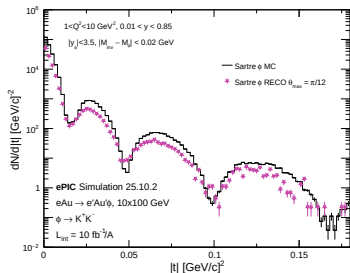
ρ Background Production



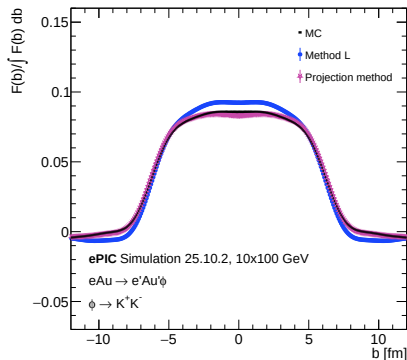
Top: preTDR lumi
Bottom: Early Science lumi



Results: t Distribution



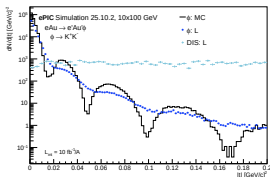
Top: preTDR lumi
Bottom: Early Science lumi



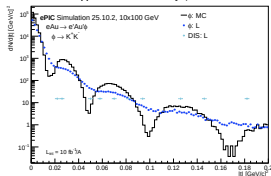
Veto Progression and Comparisons with Method L for preTDR

Top: method L Bottom: projection method

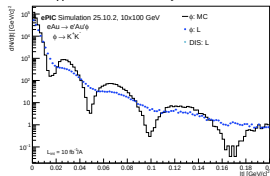
no vetoes



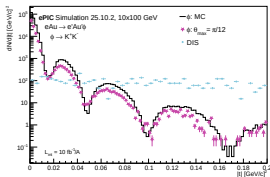
$|\eta|$ Distribution DIS Only η Vetoes



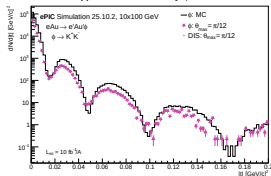
$|\eta|$ Distribution with DIS Only Detector Vetoes



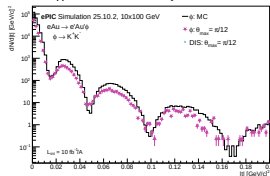
no vetoes



$|\eta|$ Distribution DIS Only η Vetoes



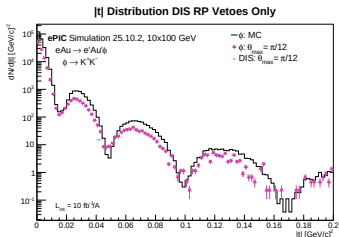
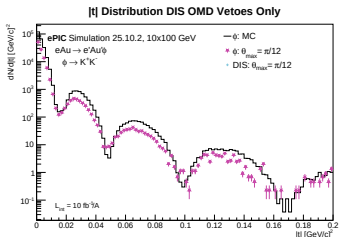
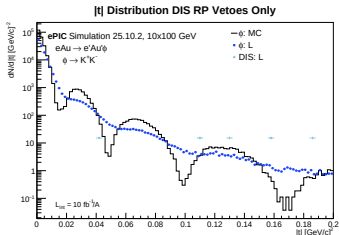
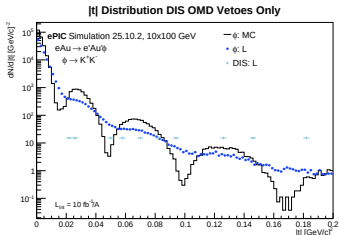
$|\eta|$ Distribution with DIS Only Detector Vetoes



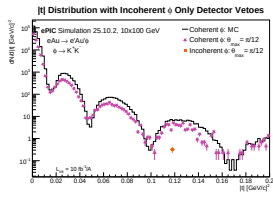
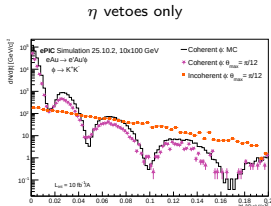
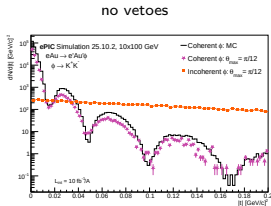
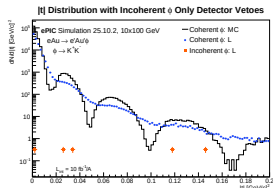
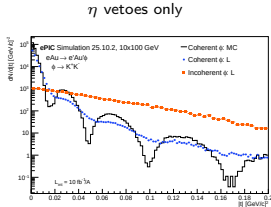
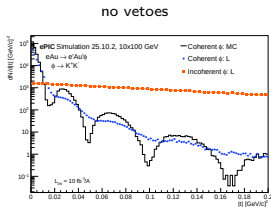
DIS: preTDR Each Detector Veto

Top: method L

Bottom: projection method



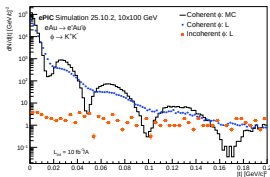
Top: method L
Bottom: projection method



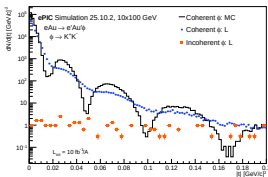
Incoherent: preTDR Each Detector Veto

Top: method L
Bottom: projection method

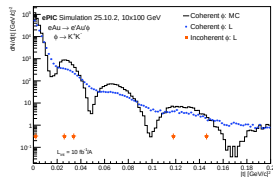
only OMD vetoes



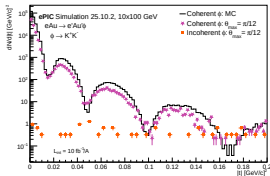
only RP vetoes



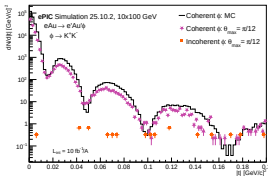
only ZDC vetoes



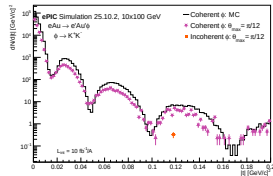
only OMD vetoes



only RP vetoes

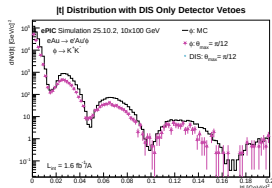
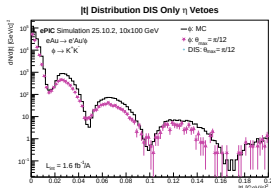
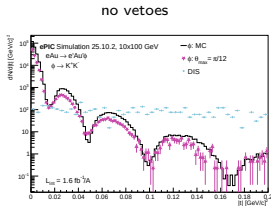
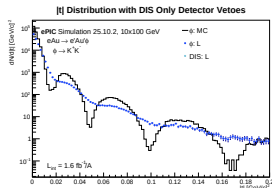
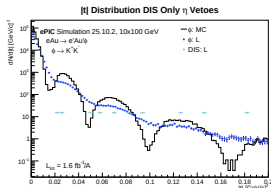
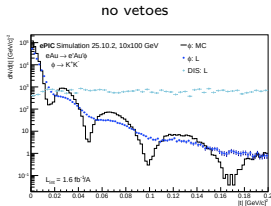


only ZDC vetoes



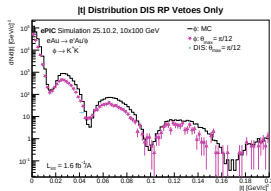
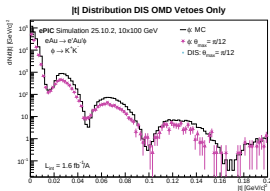
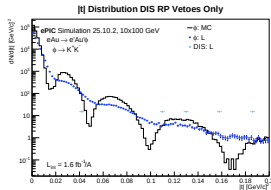
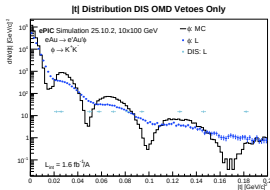
Veto Progression and Comparisons with Method L for Early Science

Top: method L
Bottom: projection method



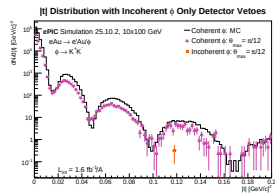
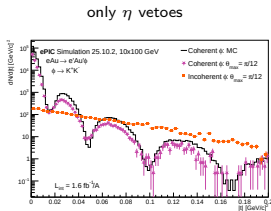
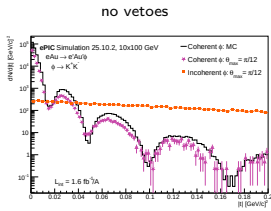
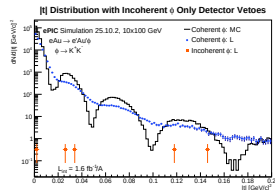
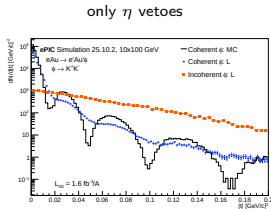
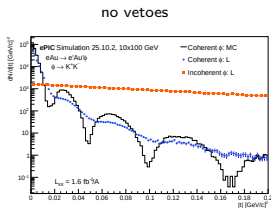
DIS: Early Science Each Detector Veto

Top: method L
Bottom: projection method



Incoherent: Early Science

Top: method L
Bottom: projection method



Incoherent: Early Science Each Detector Veto

Top: method L
Bottom: projection method

