

U-Binning

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University of Regina

KaonLT Experiment, Jefferson Lab Hall C

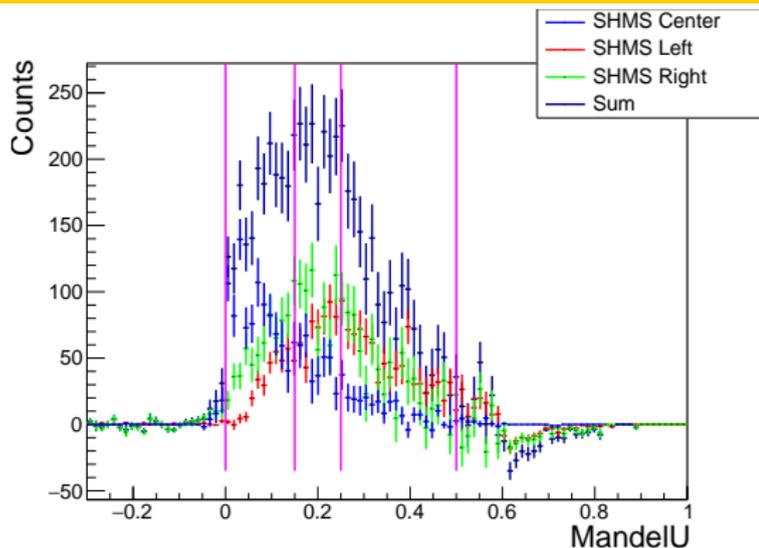


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First Pass at u -Binning

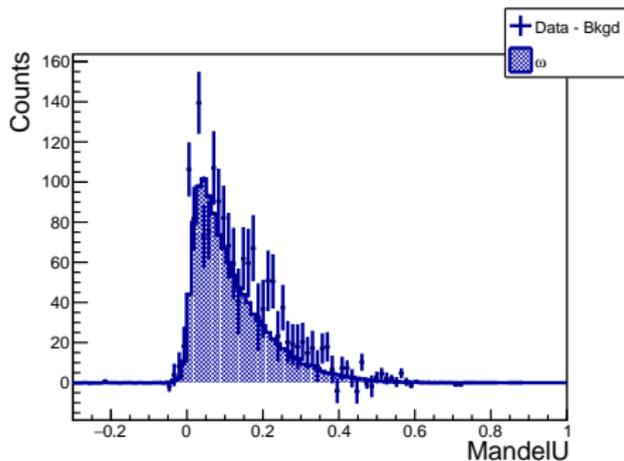
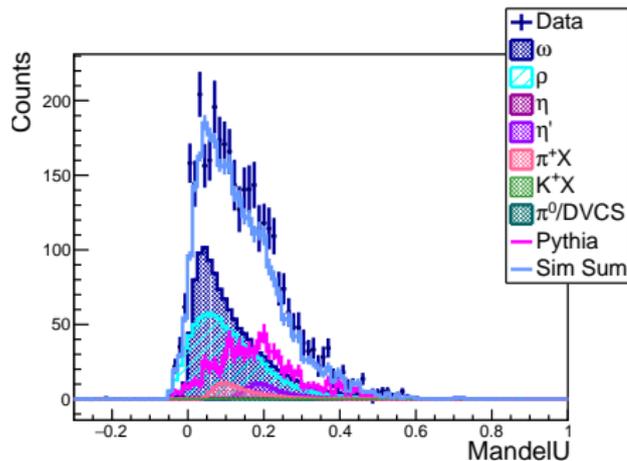


- Do kinematic comparison plots for u
- Use bkgd-sub data to pick bin ranges
- Using high ϵ only but all 3 SHMS angles (for now)

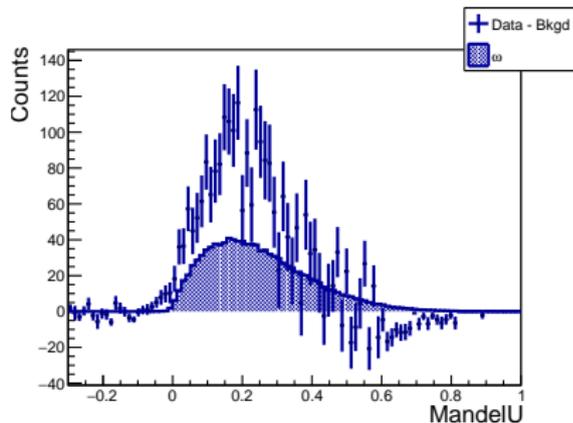
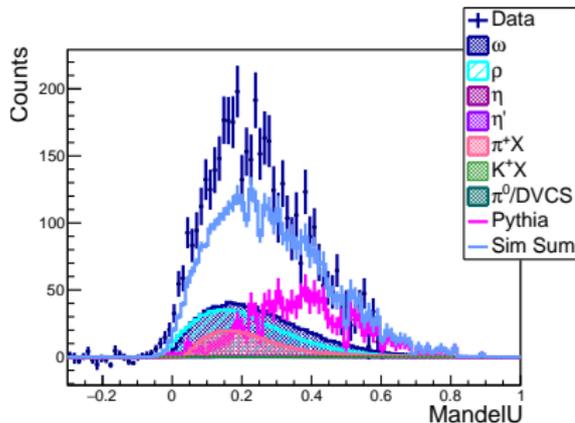
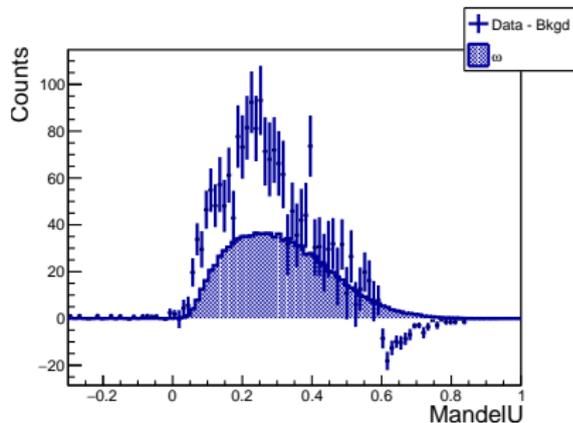
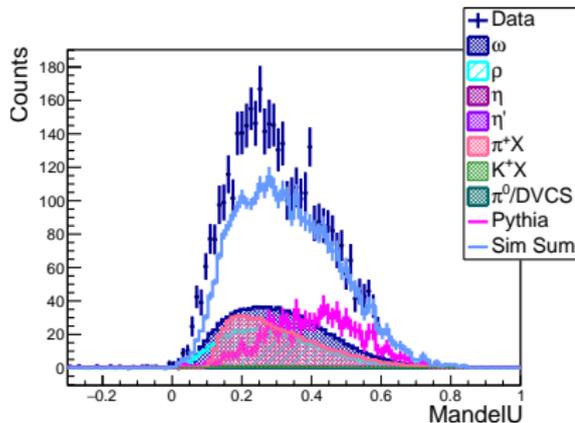


$-u$ low	$-u$ high	Counts	L	C	R
0.0	0.15	2058.78	349.208	985.652	723.923
0.15	0.25	1914.01	651.275	419.605	843.133
0.25	0.50	1855.69	911.377	216.014	728.302

$Q^2=3$, $W=3.14$, high ϵ



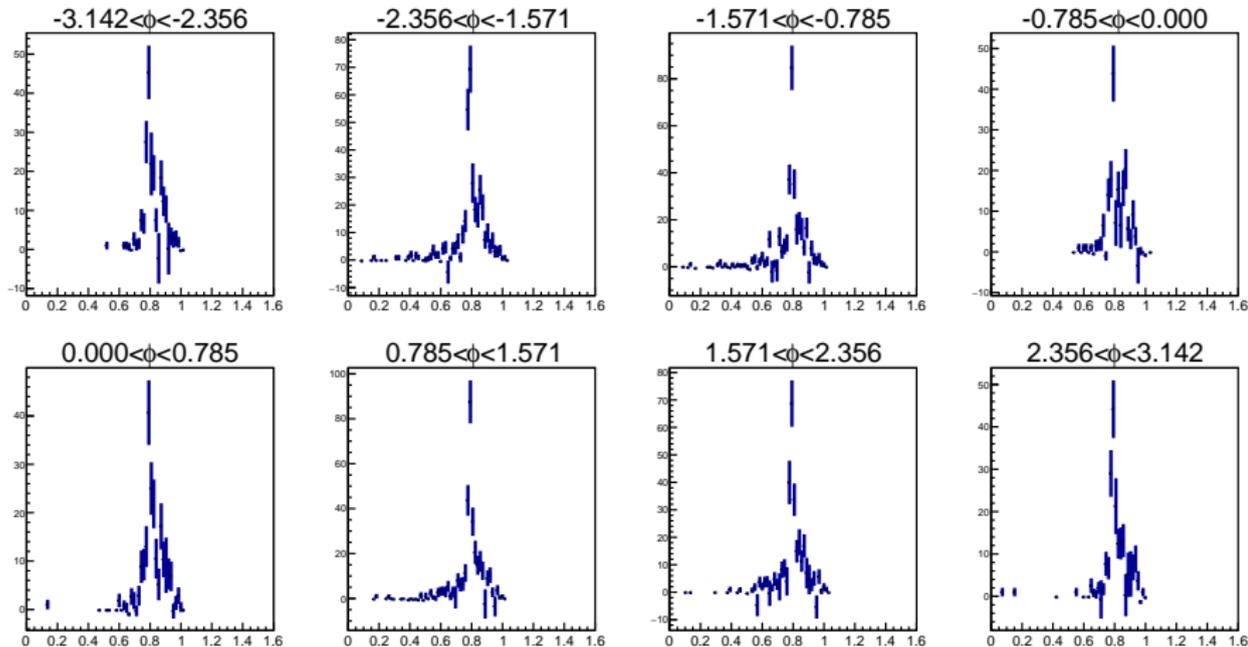
SHMS Left (above) & Right (below)



Binned Mmp Distributions



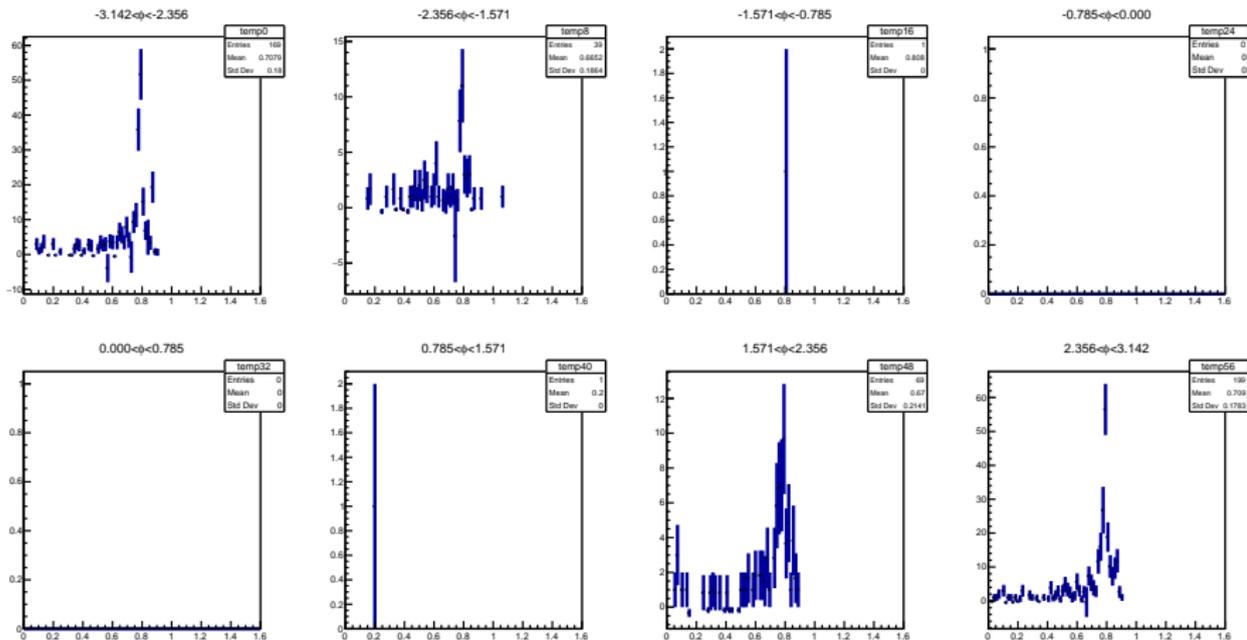
SHMS Center, $0.00 < -u < 0.15$ (bin 1)



Binned Mmp Distributions



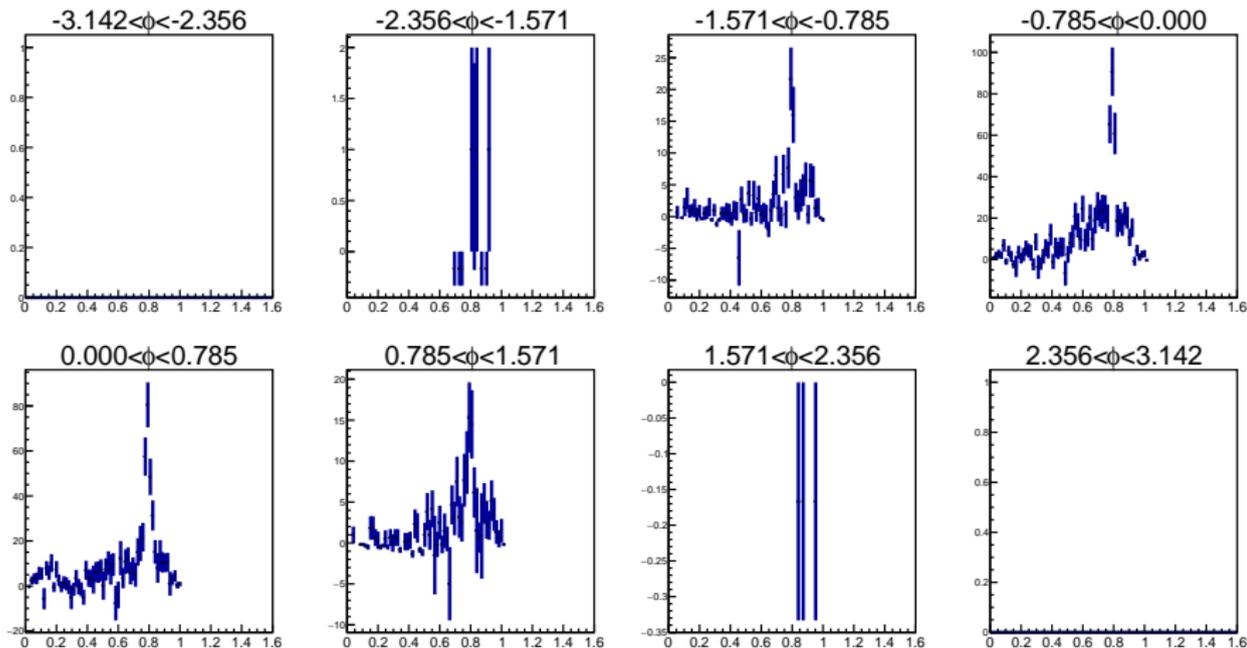
SHMS Left, $0.00 < -u < 0.15$ (bin 1)



Binned M_p Distributions



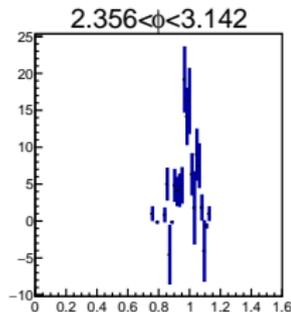
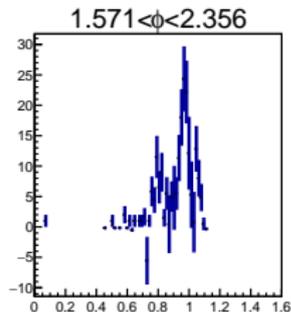
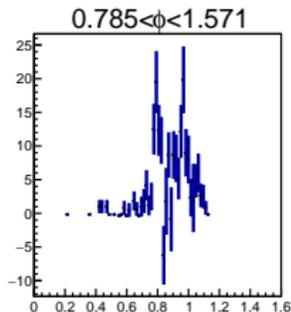
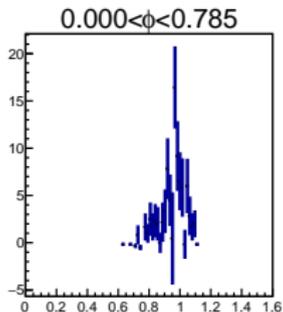
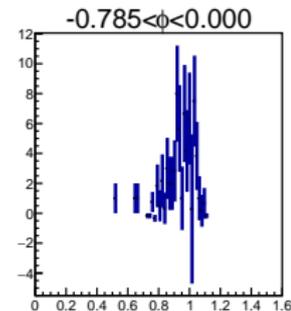
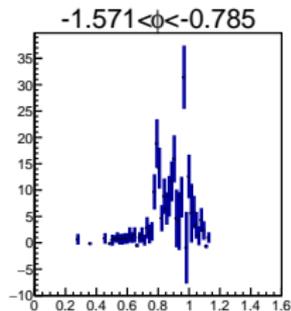
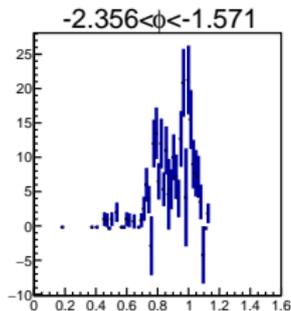
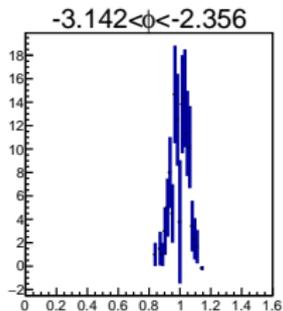
SHMS Right, $0.00 < -u < 0.15$ (bin 1)



Binned Mmp Distributions



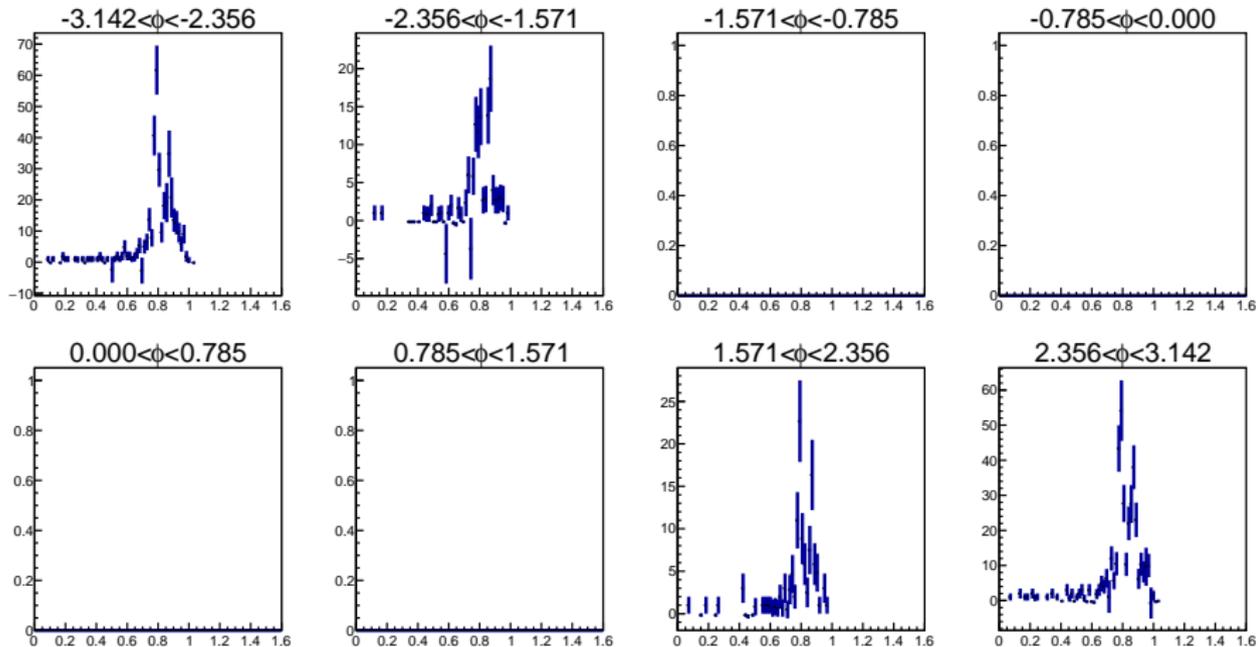
SHMS Center, $0.15 < -u < 0.25$ (bin 2)



Binned Mmp Distributions



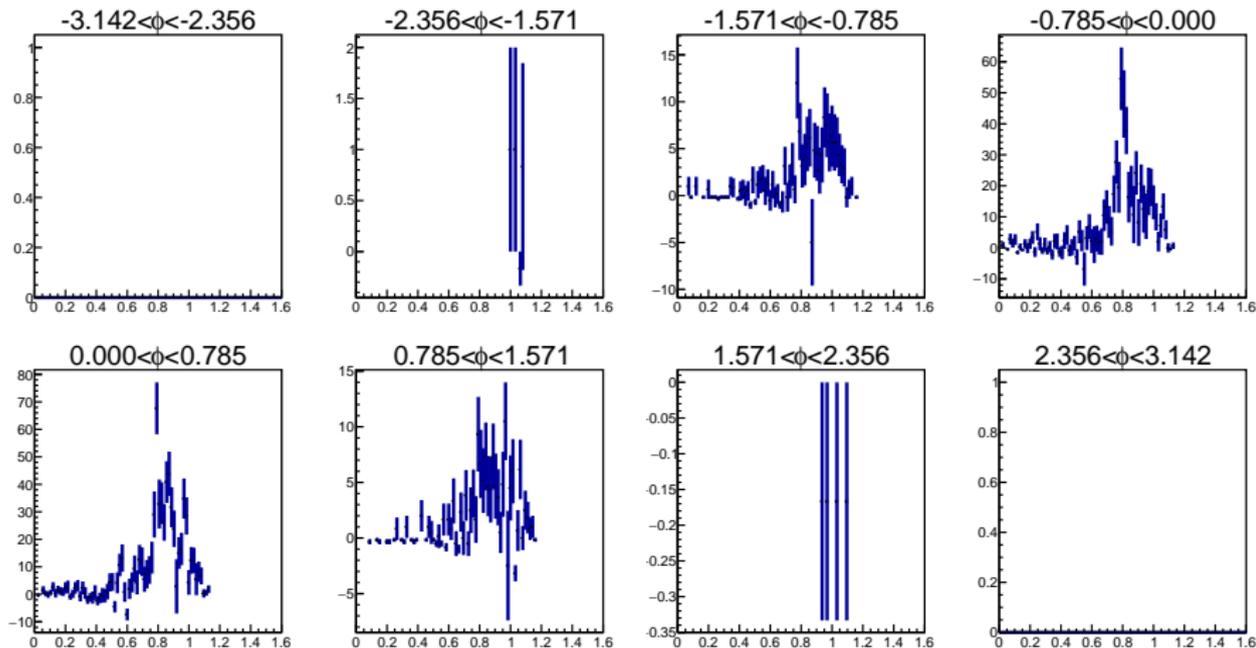
SHMS Left, $0.15 < -u < 0.25$ (bin 2)



Binned M_p Distributions



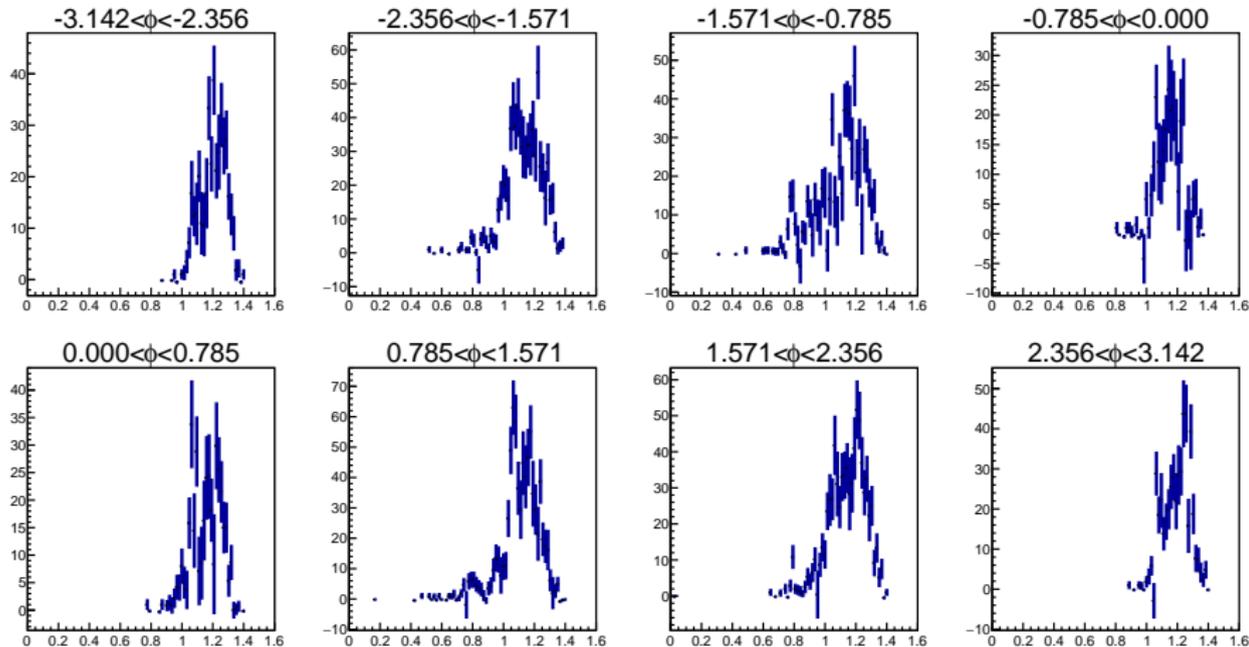
SHMS Right, $0.15 < -u < 0.25$ (bin 2)



Binned M_p Distributions



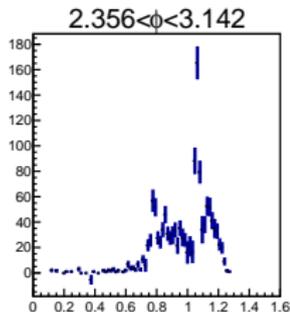
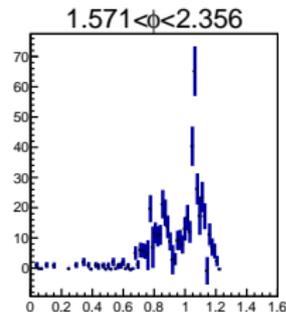
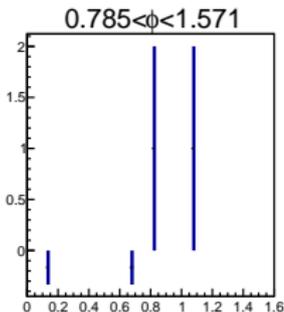
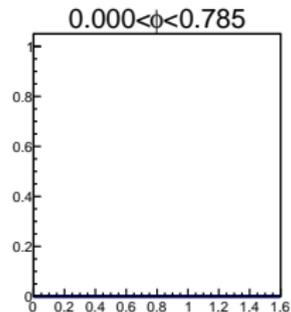
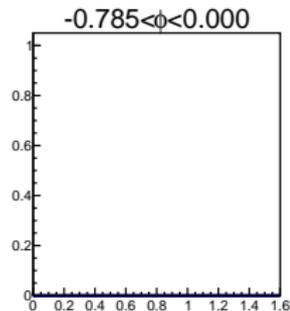
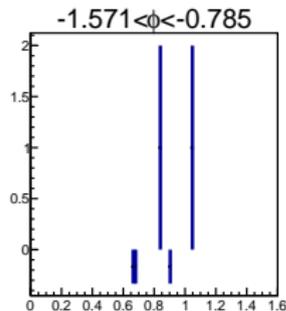
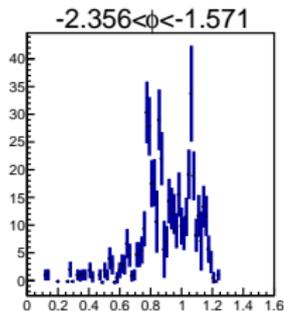
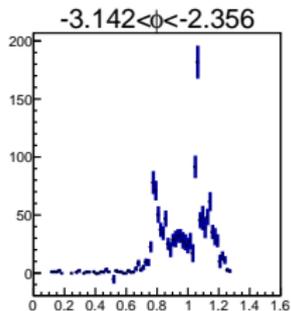
SHMS Center, $0.25 < -u < 0.50$ (bin 3)



Binned Mmp Distributions



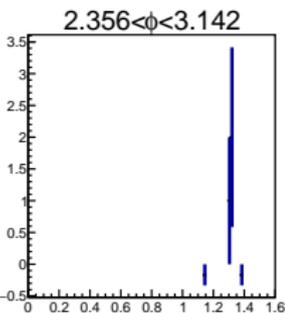
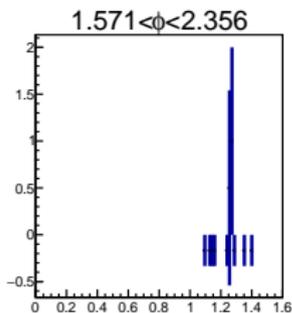
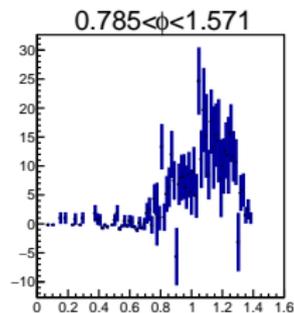
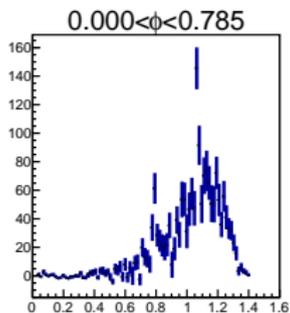
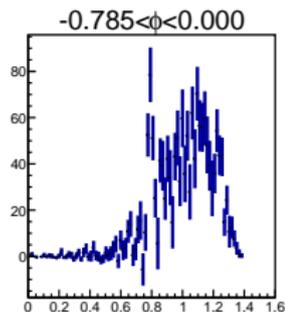
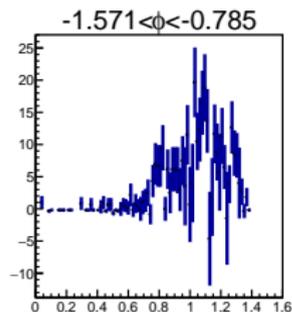
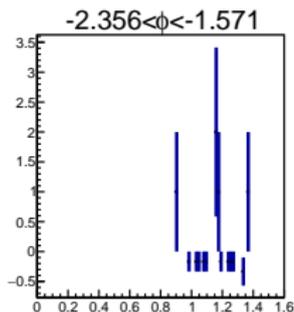
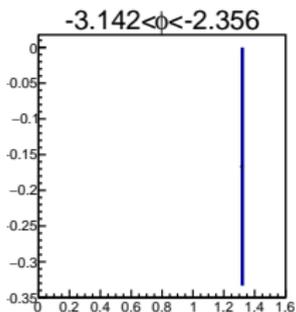
SHMS Left, $0.25 < -u < 0.50$ (bin 3)



Binned Mmp Distributions



SHMS Right, $0.25 < -u < 0.50$ (bin 3)





- Try finer binning at lower u
- Try binning in t instead of u (in progress)
- u -phi & t -phi plot
- Check $u - u_{true}$ and $t - t_{true}$ in SIMC
- Check effect of radiative tail vs t/u in SIMC
- Extend shape study to each (u, ϕ) bin