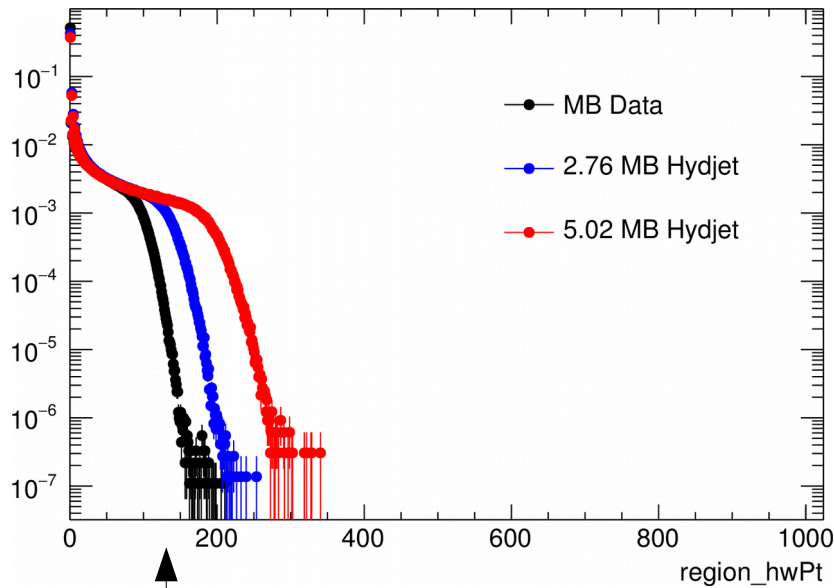


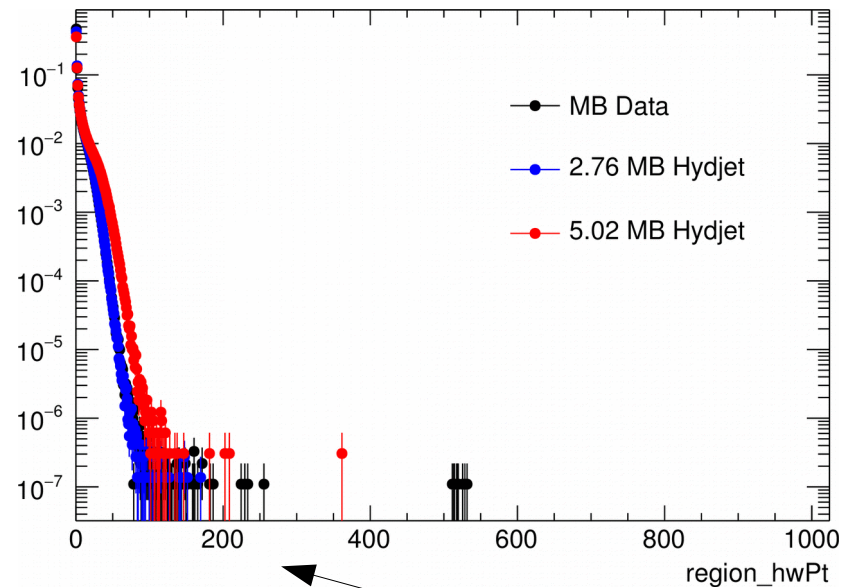
Energy distributions and widths

- Samples used:
 - MB 2011 Data:
/export/d00/scratch/men1/L1Trigger/L1EmulatorDPGData/HIMinBiasUPC_Skim_HLT_HIMinBiasHFOrBSC_v2_CaloRegionEta516_CMSSW740pre7/L1NTupleMBHI.root
 - 2.76 TeV Hydjet:
/export/d00/scratch/luck/Hydjet1p8_2760GeV_L1UpgradeAnalyzer_GT_run1_mc_Hlon_L1UpgradeAnalyzer.root
 - 5.02 TeV Hydjet:
/export/d00/scratch/luck/HydjetMB_740pre8_MCHI2_74_V3_53XBS_L1UpgradeAnalyzer_GT_MCHI2_74_V3.root
 - (See twiki for full sample list)
- Plots:
 - for a fixed eta value, plots of the region_hwPt distribution (hwPt is in units of 0.5GeV, i.e. hwPt = 20 is equivalent to 10GeV)
 - for a fixed eta value, plots of the standard deviation of the region_hwPt per event (calculated by $E(x^2) - (E(x))^2$)
 - Summary plot showing the standard deviation of the region_hwPt distributions (std dev of the region_hwPt histograms)

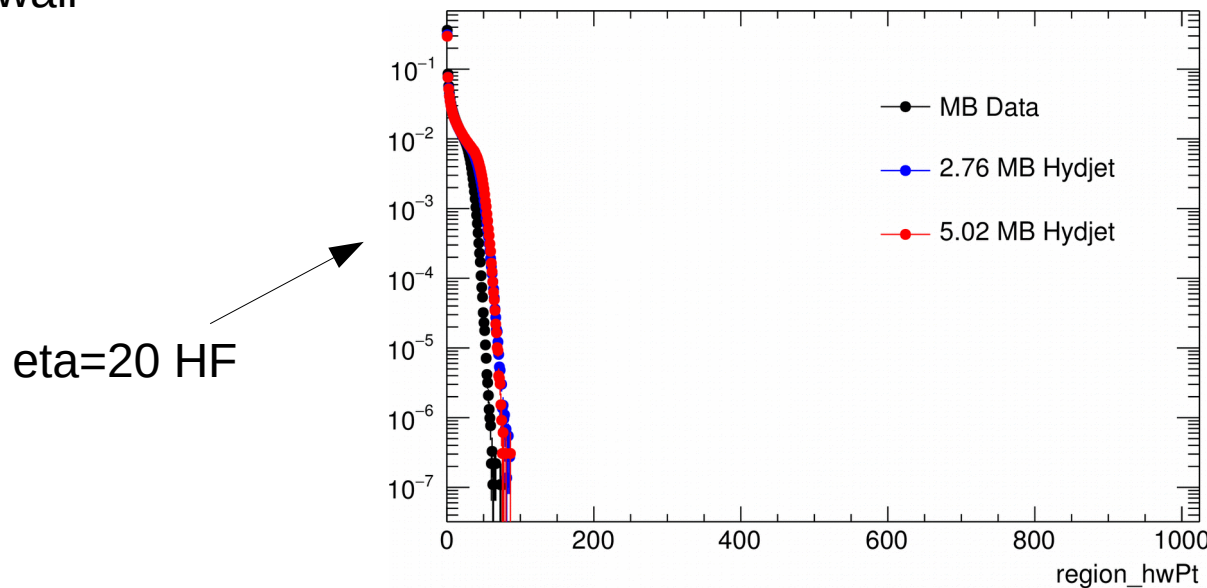
region_hwPt distributions



$\eta=4$ "wall"

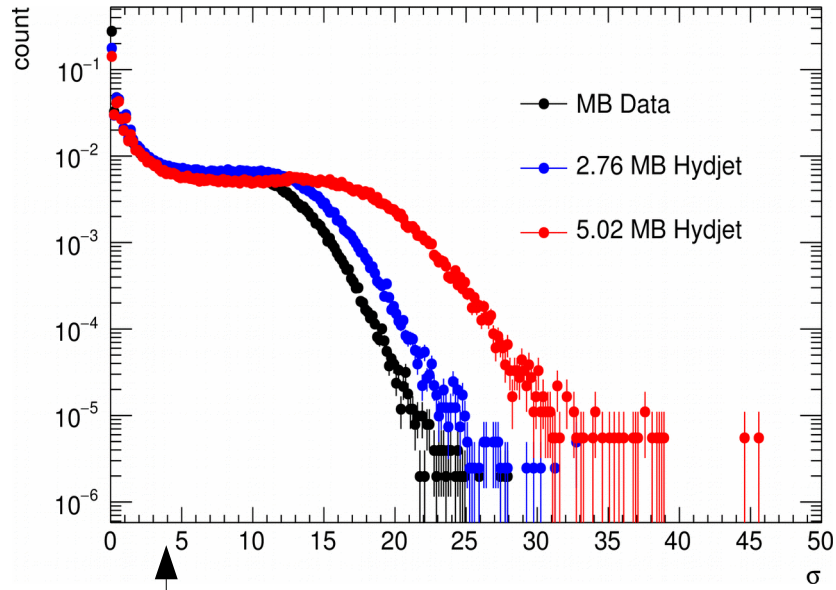


$\eta=10$ Barrel

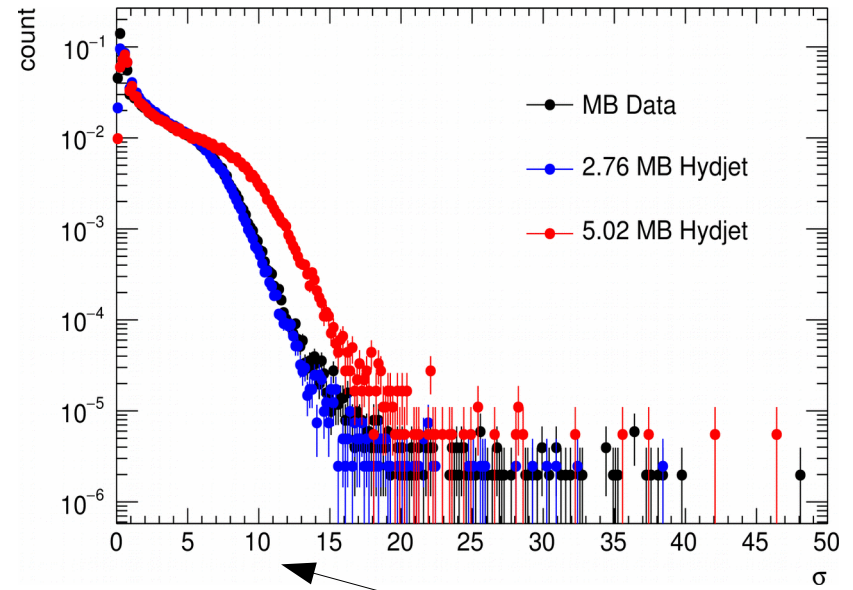


$\eta=20$ HF

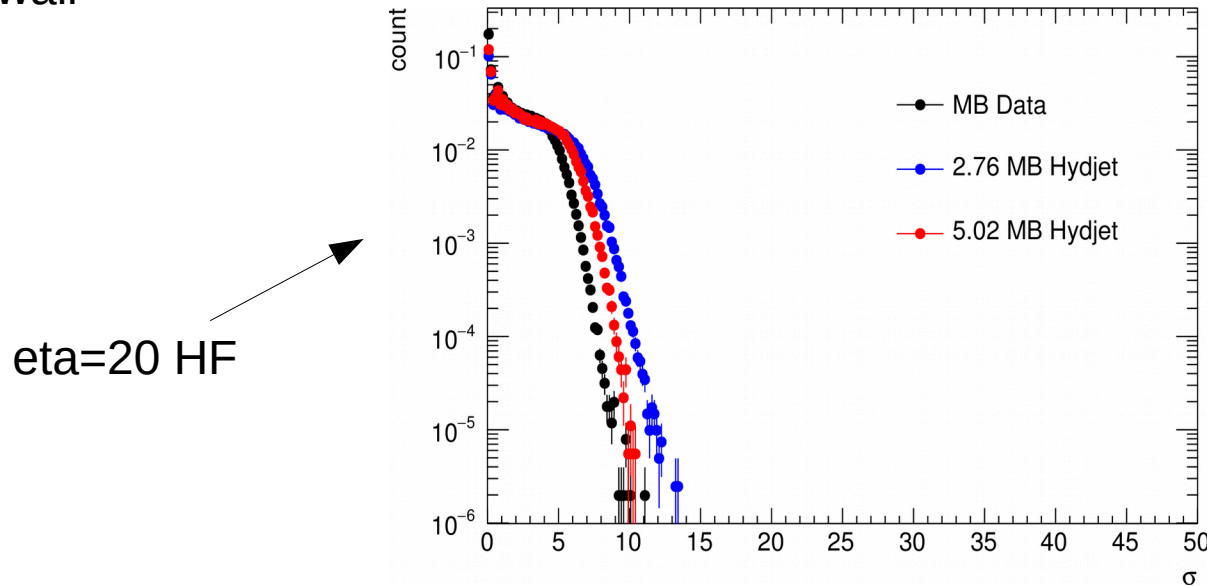
region_hwPt sigmas



$\eta=4$ "wall"

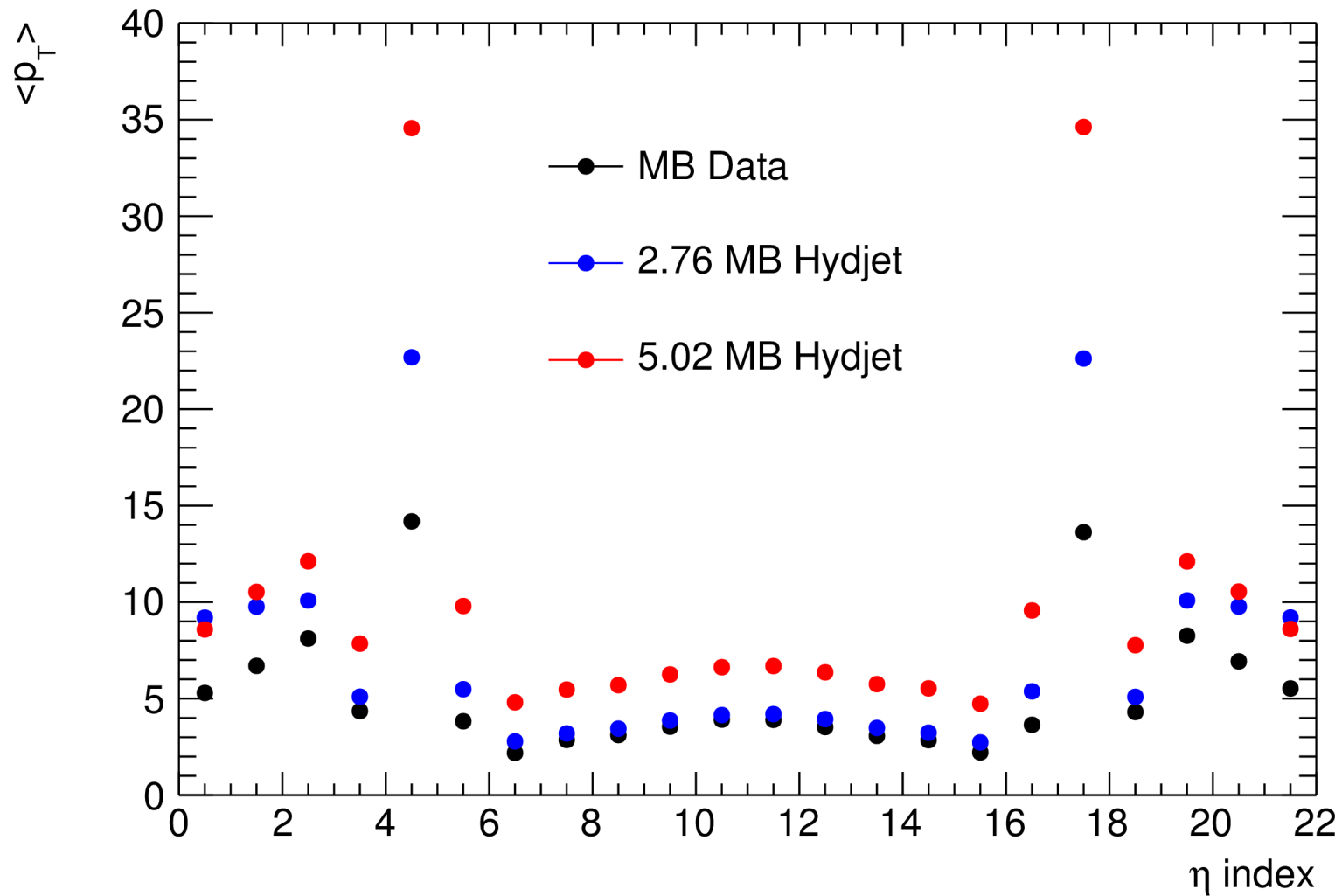


$\eta=10$ Barrel

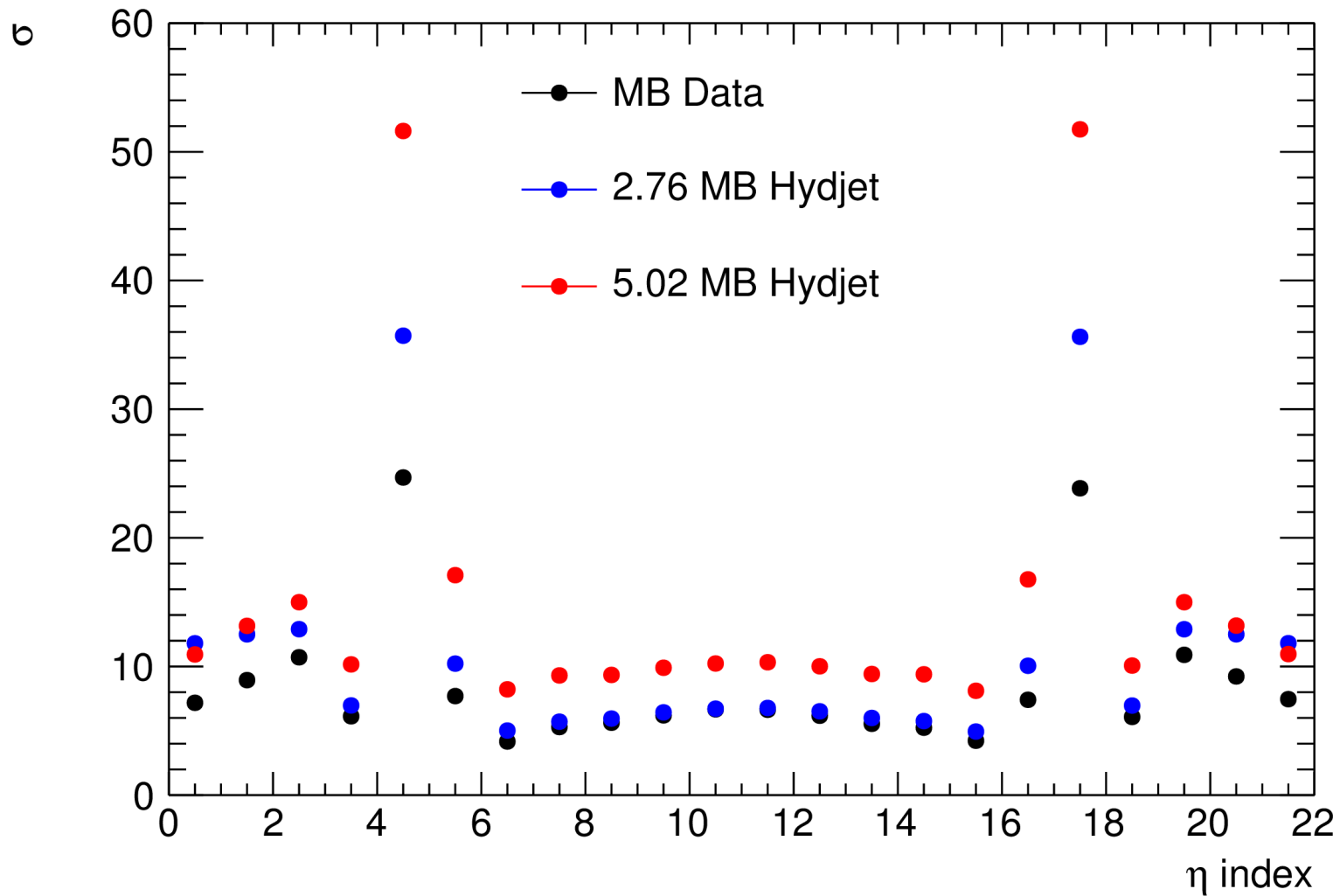


$\eta=20$ HF

avg hwPt per eta



std. dev. of region_hwPt histos



Summary

- Significant differences in Data, 2.76 Hydjet, and 5.02 Hydjet
 - 2011 data and 2.76 hydjet only seem to ~match in barrel
 - 2011 data and 5.02 hydjet actually match better in HF (shape only, normalization differs)
 - Neither hydjet seems to deal with “walls” accurately
- Needed:
 - study as function of centrality