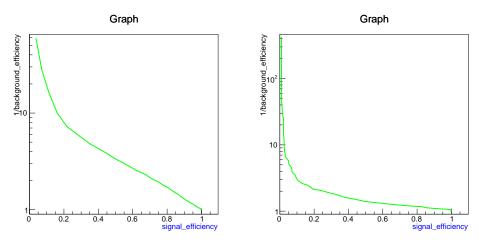
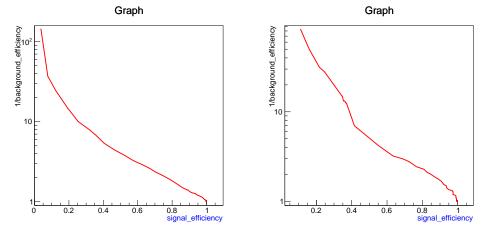


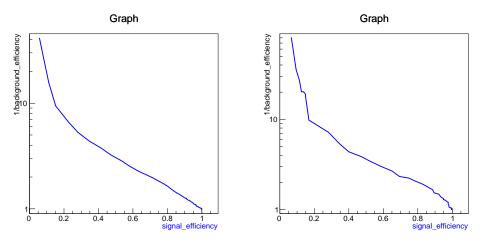
Figure 1: Distributions of Mann-Whitney value U in 5, 10, 20, 40 TeV energy collision for τ_{32} in different detector sizes. Cell Size in 20×20 , 5×5 , and 1×1 (cm×cm) are shown here, and all use 100 bins here.



(a) 40TeV at $20\times20(\text{cm}\times\text{cm})$ in cluster (no (b) 40TeV at $20\times20(\text{cm}\times\text{cm})$ in cluster (after cut)



(c) 40 TeV at $5\times5(cm\times cm)$ in cluster (no cut (d) 40 TeV at $5\times5(cm\times cm)$ in cluster (after)



(e) 40TeV at $1\times1(\text{cm}\times\text{cm})$ in cluster (no cut (f) 40TeV at $1\times1(\text{cm}\times\text{cm})$ in cluster (after cut)

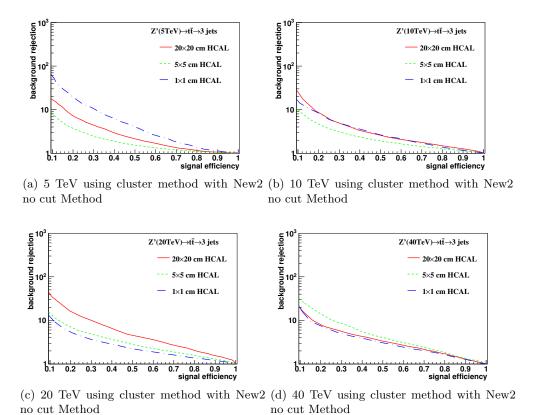


Figure 3: Signal efficiency versus background rejection rate using τ_{32} . The energies of collision at (a)5, (b)10, (c)20, (d)40TeV are shown here. In each picture, the three ROC curves correspond to different detector sizes.

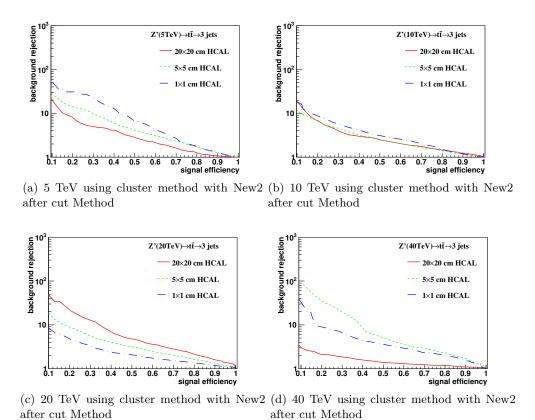


Figure 4: Signal efficiency versus background rejection rate using τ_{32} . The energies of collision at (a)5, (b)10, (c)20, (d)40TeV are shown here. In each picture, the three ROC curves correspond to different detector sizes.