

Full simulation samples of CEPC_v4 &3 Tesla

Gang LI

May 10th, 2018

Official Higgs signal

By Yu Dan

- $e^+e^- \rightarrow ZH$, Higgs->inclusive
 - $Z \rightarrow ee$: E240.Pe1e1h_X.e0.p0.whizard195
 - $Z \rightarrow \mu\mu$: E240.Pe2e2h_X.e0.p0.whizard195
 - $Z \rightarrow \tau\tau$: E240.Pe3e3h_X.e0.p0.whizard195
 - $Z \rightarrow \nu\nu$: E240.Pnnh_X.e0.p0.whizard195
 - $Z \rightarrow qq$: E240.Pqqh_X.e0.p0.whizard195
- Each statistics of 5/ab, but at least 100K

An alternative Higgs signal sample

- $e^+e^- \rightarrow ZH$

- $H \rightarrow \gamma\gamma, Z \rightarrow \text{inclusive}$: 400k
- $H \rightarrow \mu^+ \mu^-, Z \rightarrow \text{inclusive}$: 400k
- $H \rightarrow \tau^+ \tau^-, Z \rightarrow \text{inclusive}$: 100k
- $v\bar{v}H, H \rightarrow \text{hadronic final states}$: 100k
- $Z \rightarrow q\bar{q}, H \rightarrow b\bar{b}/c\bar{c}/g\bar{g}, WW/ZZ \rightarrow 4q$: 100k
- $Z \rightarrow ll, H \rightarrow b\bar{b}/c\bar{c}/g\bar{g}, WW/ZZ \rightarrow 4q$: 100k
- $Z \rightarrow \text{inclusive}, H \rightarrow \gamma Z_1, Z_1 \rightarrow \text{inclusive}$: 200k
- $Z \rightarrow \text{inclusive}, H \rightarrow \text{invisible}$: 200k

/besfs/groups/higgs/data/SimReco/wo_BS/CEPC_v4/higgs/smart_final_states
With a readme file

Update flavor tagging at CEPC_v4

- Z pole di-jet events
 - $Z \rightarrow b$ pair
 - $Z \rightarrow c$ pair
 - $Z \rightarrow uds$ pair
- Each has 100 k events, 200k jets

