



Weekly

Maosen Zhou
6 June, 2016

Sample status

- ❖ **Full non-res HIGG8D1 derivations done;**
- ❖ **ntuples done;**

cut flow

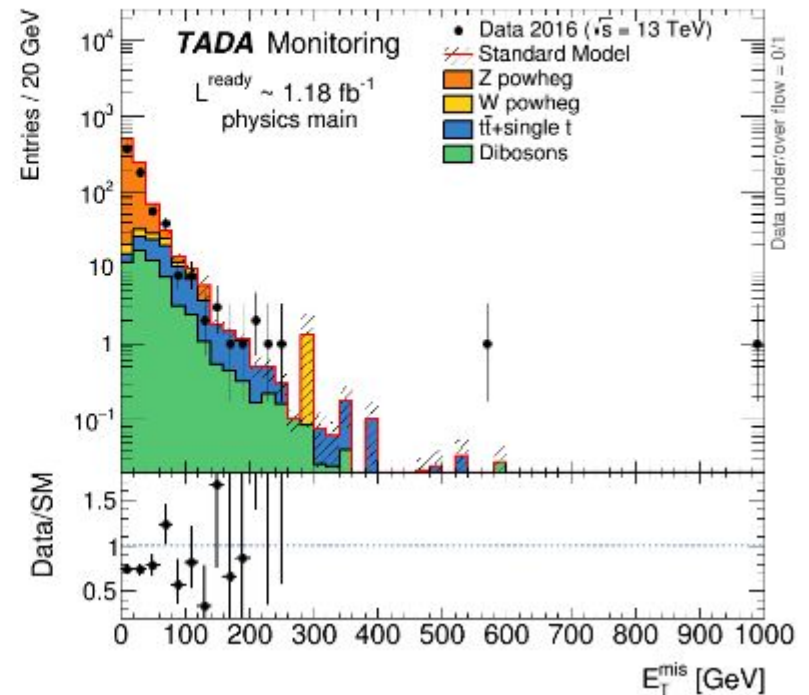
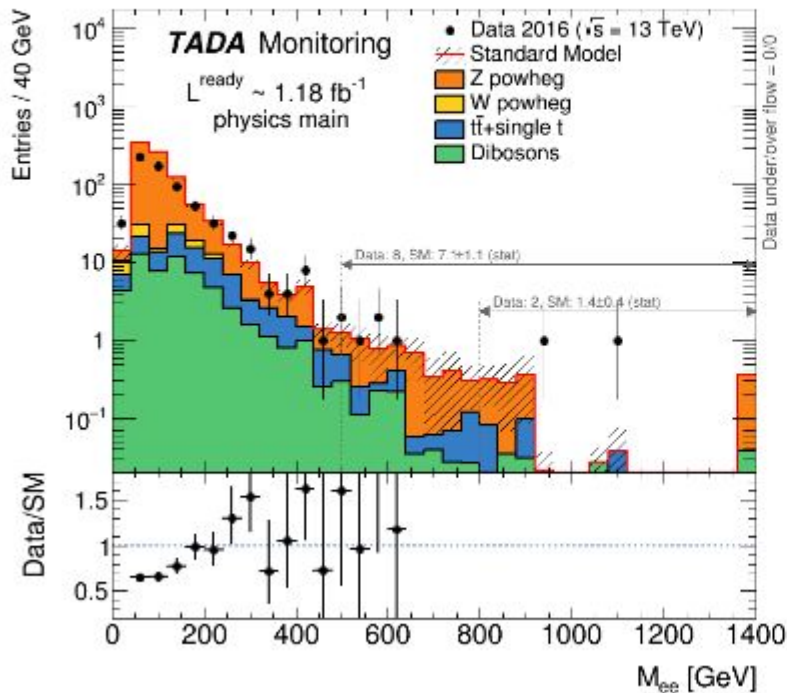
	non-res
initial	100%
HIGG8D1	52%
trigger	43%
Object defition, overlap removal(2 loose leptons)	16%
b veto	8%
2 tight leptons, ≥ 4 jets	4%

❖ Automatic analysis framework:

- Signal optimizations for non-res;
- Fix jet fakes excess in emu channel;
- Validate fake factor of electrons;
- Uncertainties.

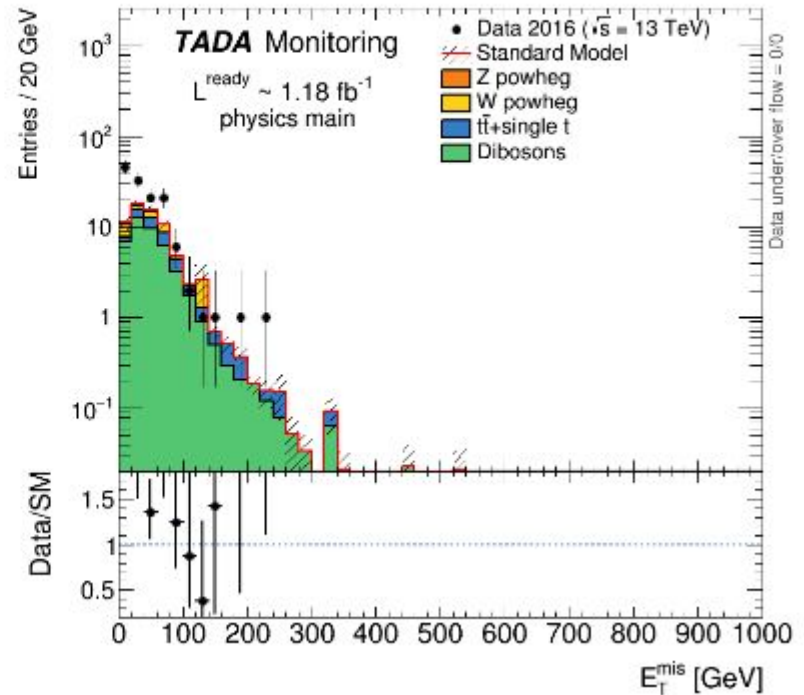
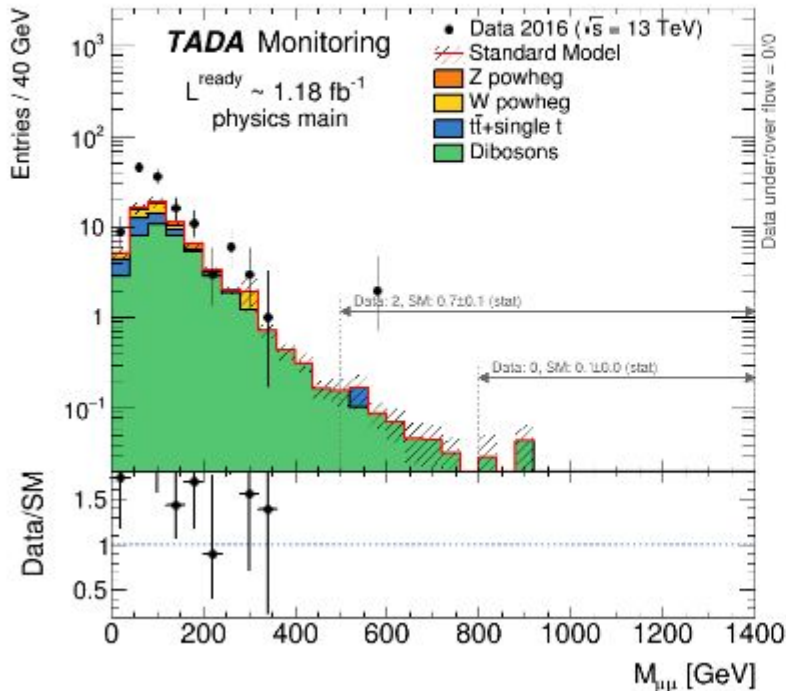
Back up

Signature: same sign electrons



```
( TrigEmuOneEl || TrigEmuDiEl ) &&
( NLooseElectron>=2 && NLooseMuon==0 ) &&
( IsGoodElectron1 && IsGoodElectron2 ) &&
( LooseElectronPt1*LooseElectronPt2 > 0. ) &&
( abs(LooseElectronPt1) > 25000. && abs(LooseElectronPt2) > 25000. ) &&
( abs(Mee - 91188) > 10000. )
```

Signature: same sign muons



(TrigEmuOneMu || TrigEmuDiMu) &&
 (NLooseMuon>=2 && NLooseElectron==0) &&
 (IsGoodMuon1 && PassHighPtMuon1) &&
 (IsGoodMuon2 && PassHighPtMuon2) &&
 (LooseMuonPt1*LooseMuonPt2 > 0.) &&
 (abs(LooseMuonPt1) > 25000. && abs(LooseMuonPt2) > 25000.)