

Weekly Report

Shuiting Xin

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Looking into new productions

- HLT triggers seem to have another name:
 - HLT* -> GlobalTrigDecision*
- Trigger match fixed
- It said that lepton SF is included now

Systematics

- QMisID and FF systematics

- Details :[link](#)

- Write Up/Down branches into samples

- For QmisID :

- In ee : $DD_{weight} = \frac{\varepsilon_1 + \varepsilon_2 - \varepsilon_1 * \varepsilon_2}{1 - \varepsilon_1 - \varepsilon_2 + \varepsilon_1 * \varepsilon_2}$; In eu: $DD_{weight} = \frac{\varepsilon_1}{1 - \varepsilon_1}$, assign to event weight(only data)

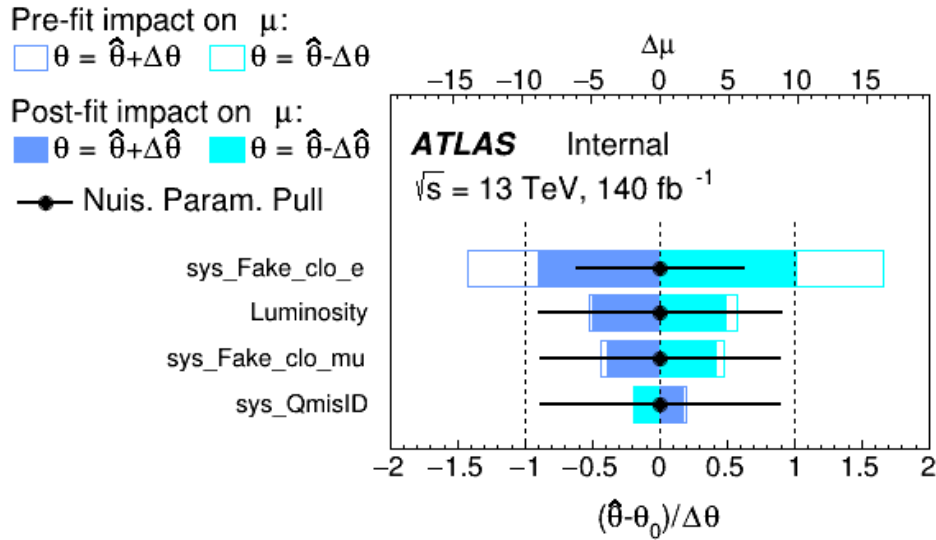
- For FF:

- $ff_weight = N_{data} * ff - N_{MC} * MC_{weight} * ff$ (with uncertainties)
- Only apply to tight-antight events.

- Finally

- $WeiUp = DDU p_{weight} / DD_{weight} \dots$
- $WeiDown = DDD n_{weight} / DD_{weight}$

Limits setting



-2sigma	-1sigma	Median	1 sigma	2sigma	Significance
25.01	33.57	46.59	58.56	65.43	0.042
32.25	43.38	60.21	84.81	116.25	0.036

SigXsecOverSM : 1 +30.7038 -28.8629

backup

- SLT match:(RunYear==2015 &&
(HLT_mu20_loose_L1MU15||HLT_mu50||HLT_e24_lhmedium_L1EM20VH||HLT_e60_lhmediu
m||HLT_e120_lhloose))||((RunYear==2016 || RunYear==2017 ||
RunYear==2018)&&(HLT_mu26_ivarmedium||HLT_mu50||HLT_e26_lhtight_nod0_ivarloose||H
LT_e60_lhmedium_nod0||HLT_e140_lhloose_nod0))
- DLT match: (RunYear==2015 &&
(HLT_mu18_mu8noL1||HLT_e17_lhloose_mu14||HLT_2e12_lhloose_L12EM10VH||HLT_e17_lh
oose_mu14))||((RunYear==2016 &&
(HLT_2e17_lhvloose_nod0||HLT_e17_lhloose_nod0_mu14))||((RunYear==2016 ||
RunYear==2017 || RunYear==2018)&&(HLT_mu22_mu8noL
1||HLT_e17_lhloose_nod0_mu14||HLT_2e24_lhvloose_nod0||HLT_e17_lhloose_nod0_mu14));