

19.2 fb<sup>-1</sup> (8 TeV)

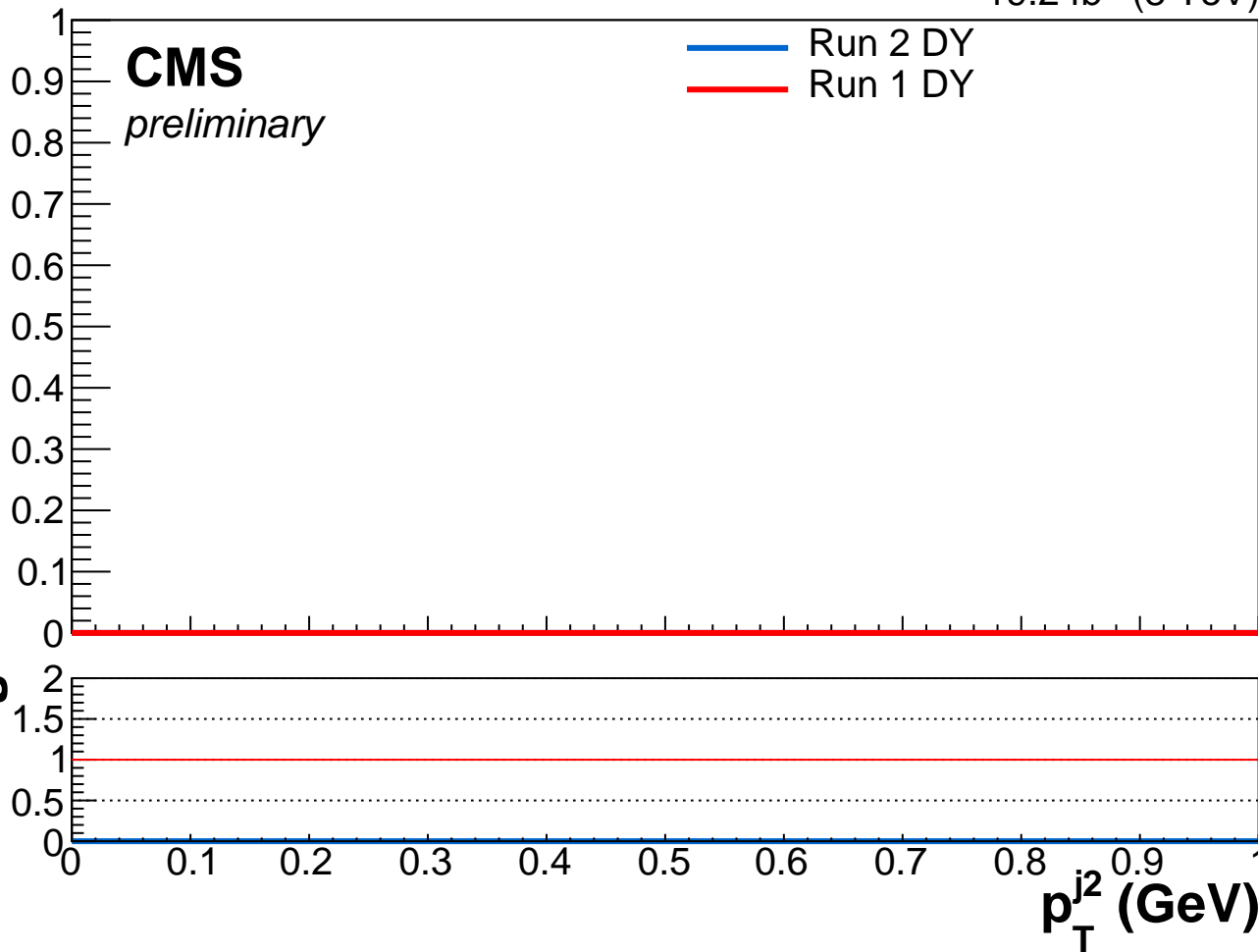
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

$p_T^{j2}$  (GeV)



19.2 fb<sup>-1</sup> (8 TeV)

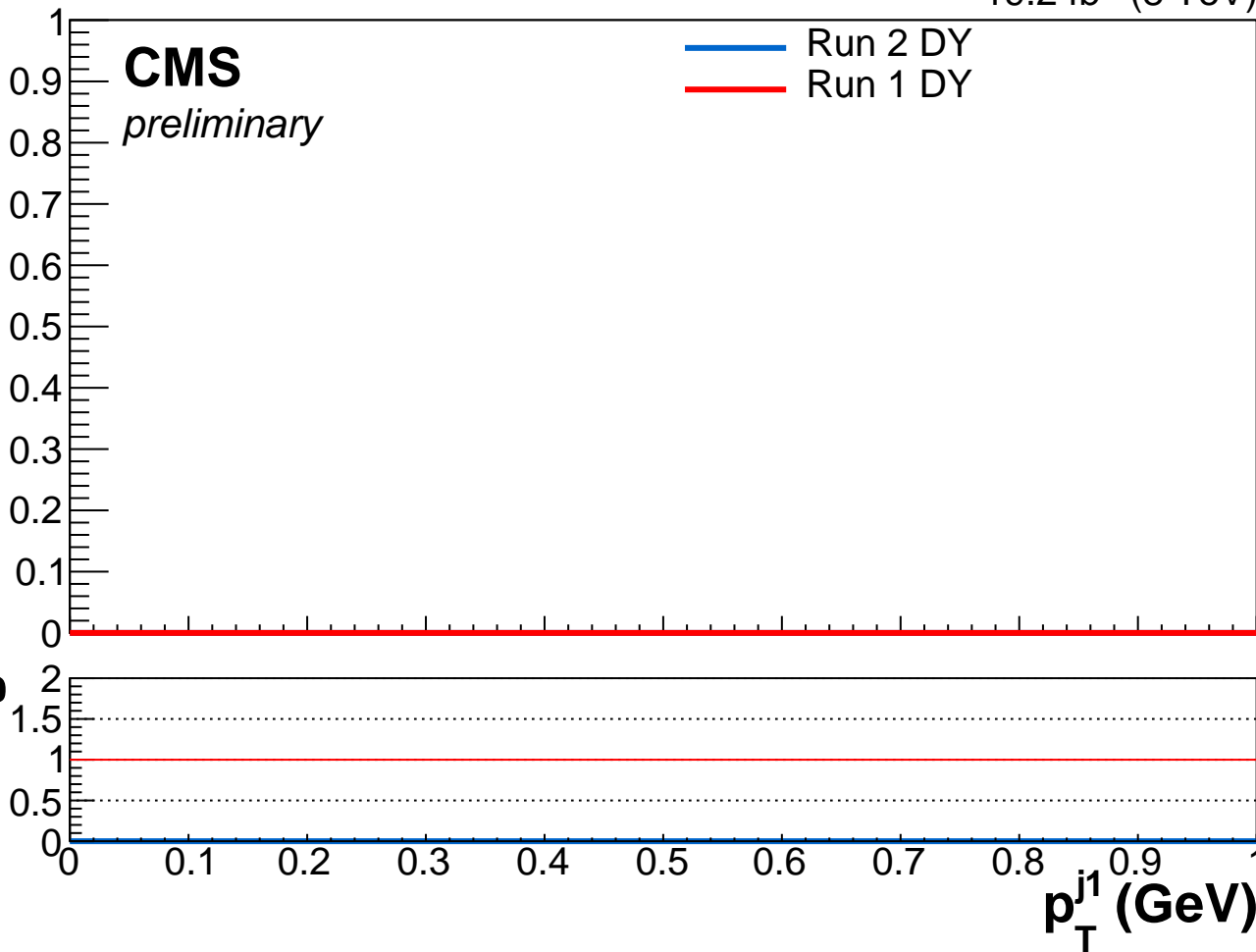
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

p<sub>T</sub><sup>j1</sup> (GeV)



19.2 fb<sup>-1</sup> (8 TeV)

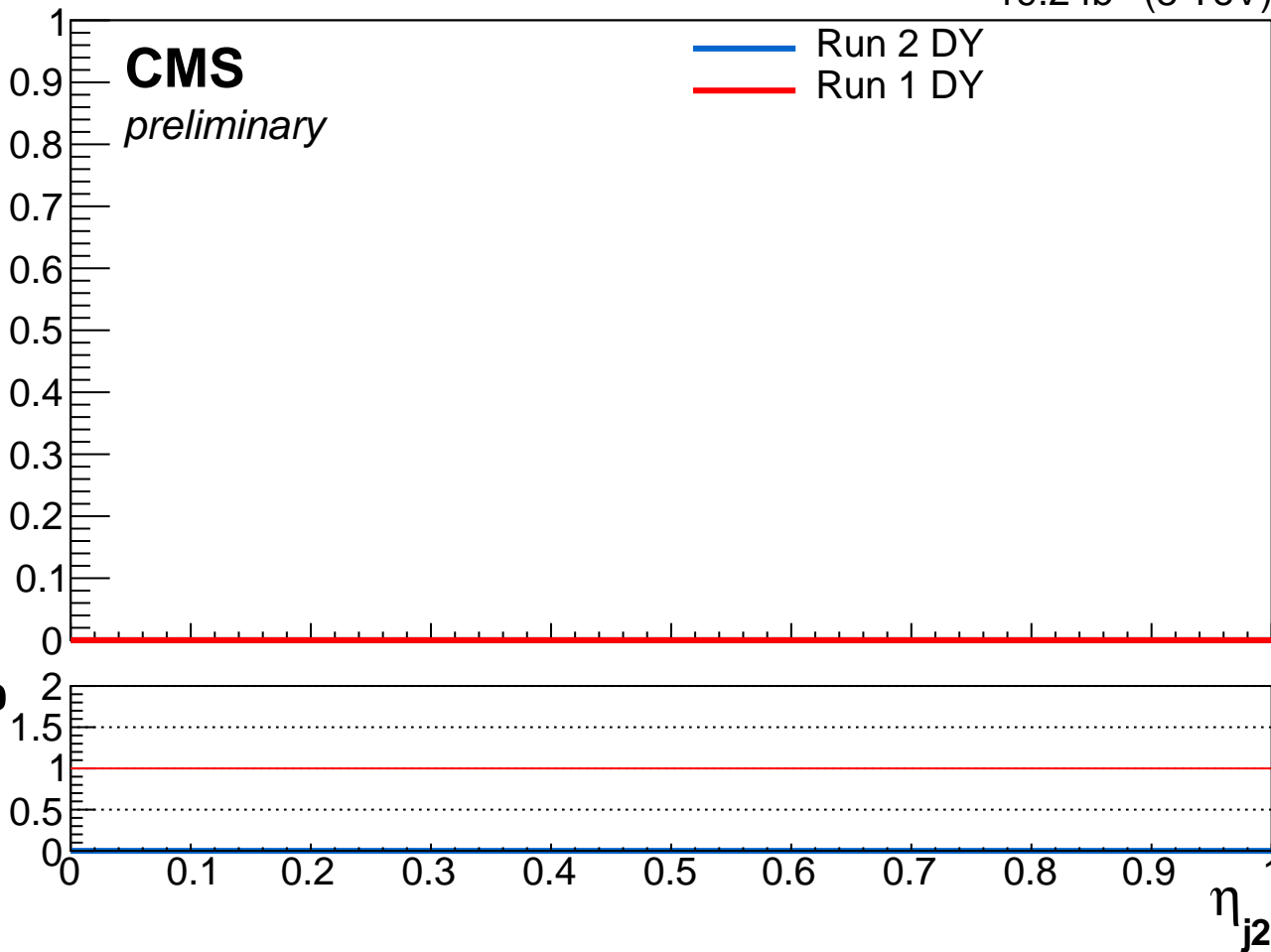
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

$\eta_{j2}$



19.2 fb<sup>-1</sup> (8 TeV)

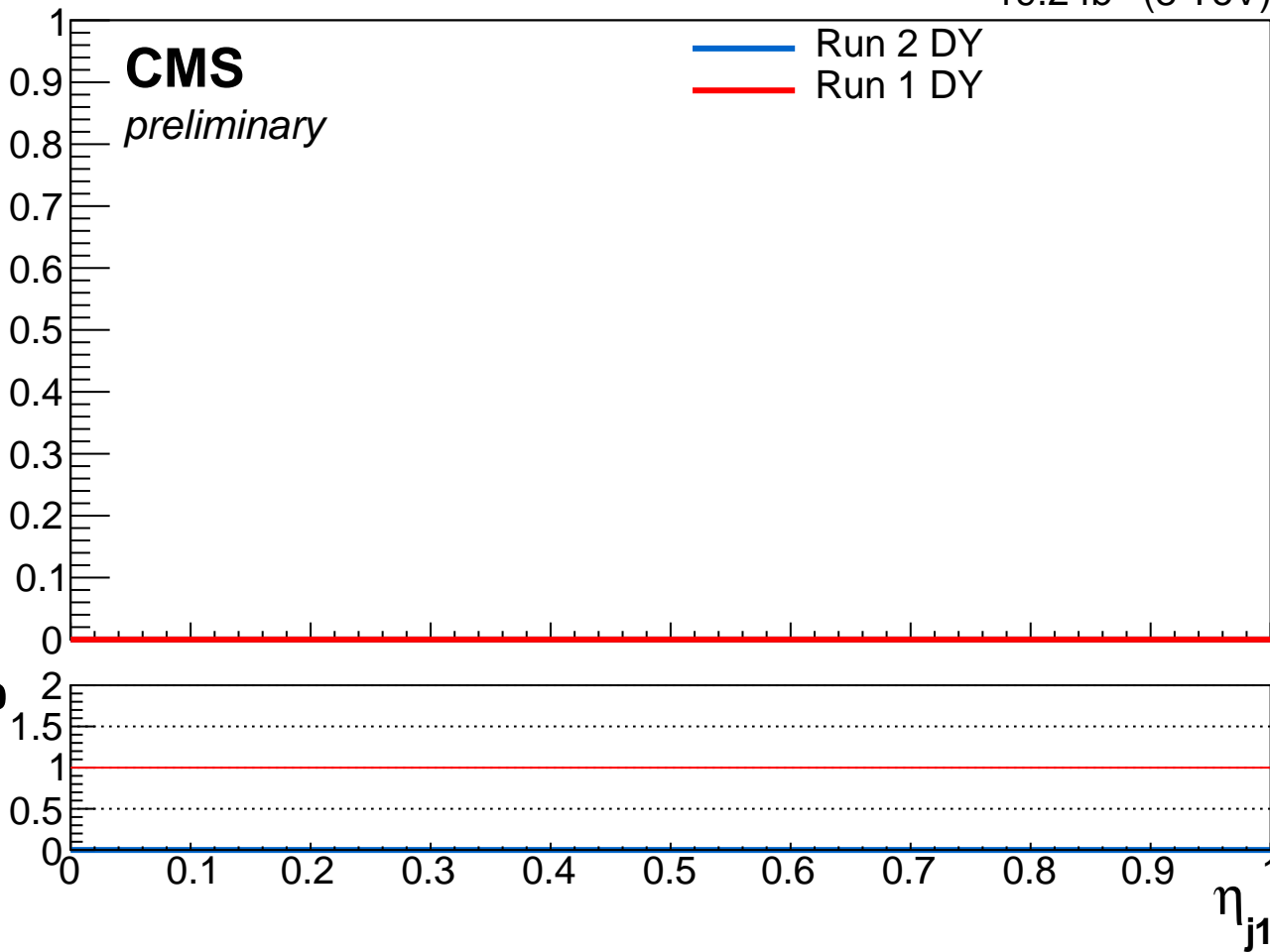
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

$\eta_{j1}$



19.2 fb<sup>-1</sup> (8 TeV)

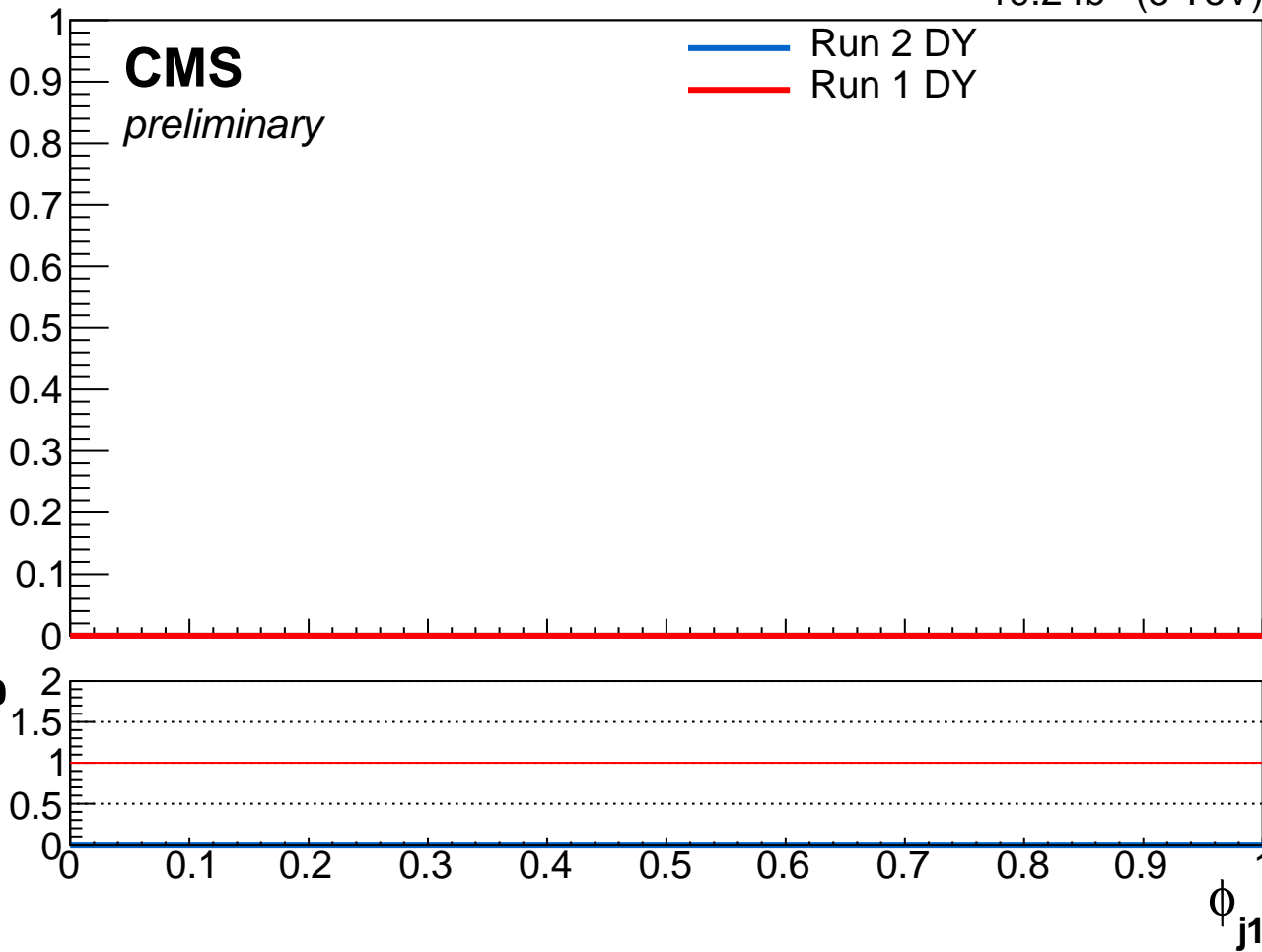
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

$\phi_{j1}$



19.2 fb<sup>-1</sup> (8 TeV)

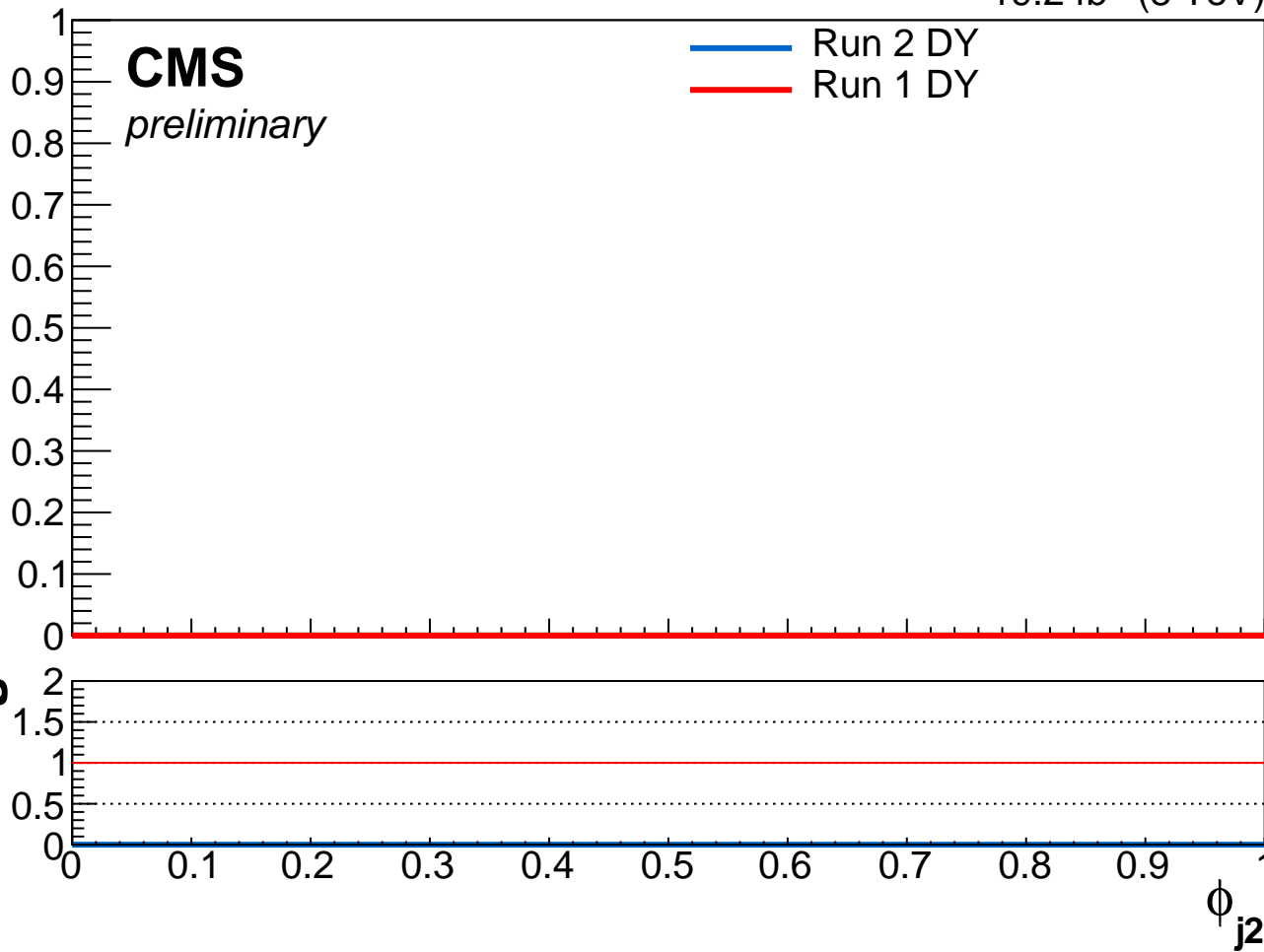
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

$\phi_{j2}$



19.2 fb<sup>-1</sup> (8 TeV)

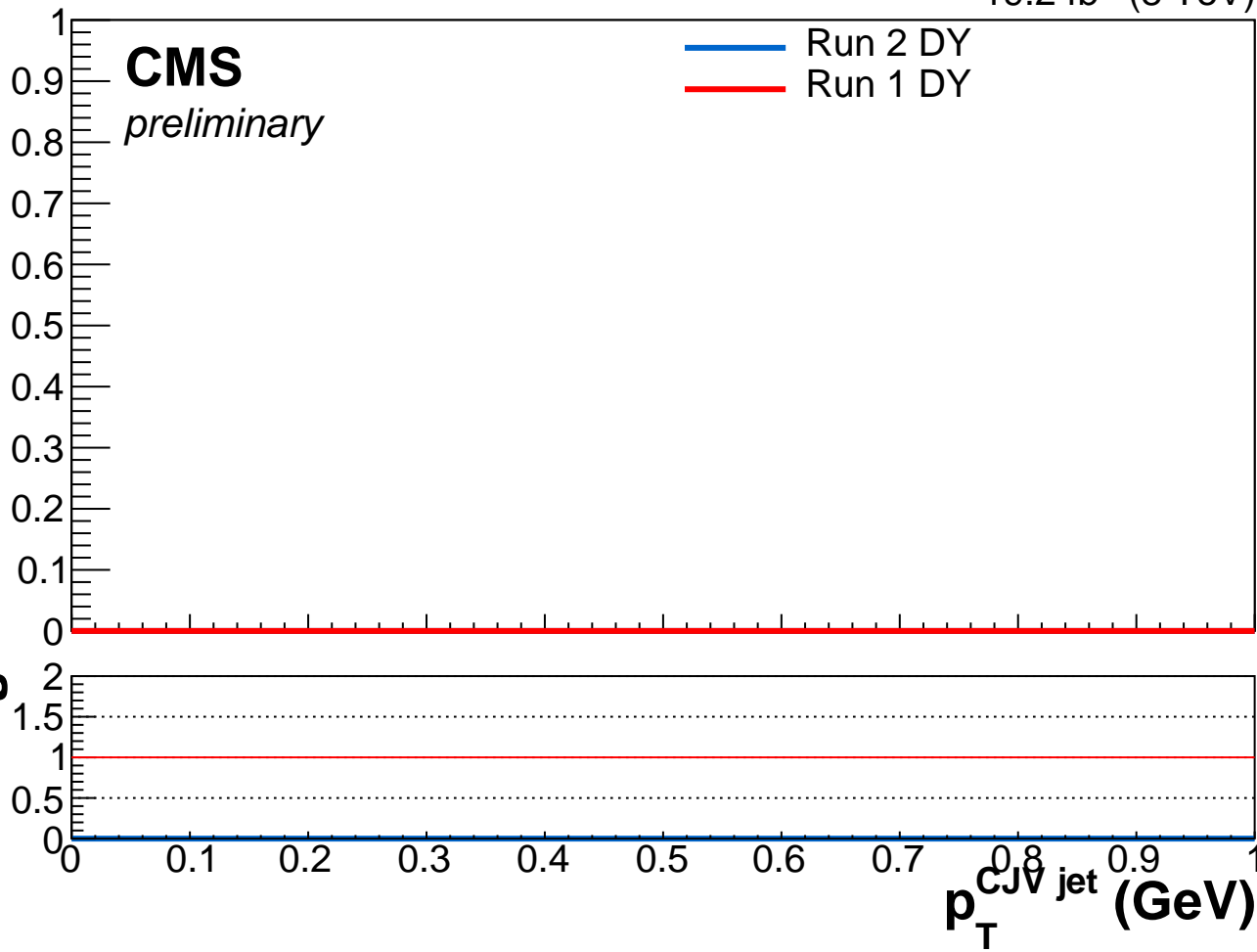
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

$p_{\text{T}}^{\text{CJ, jet}}$  (GeV)



19.2 fb<sup>-1</sup> (8 TeV)

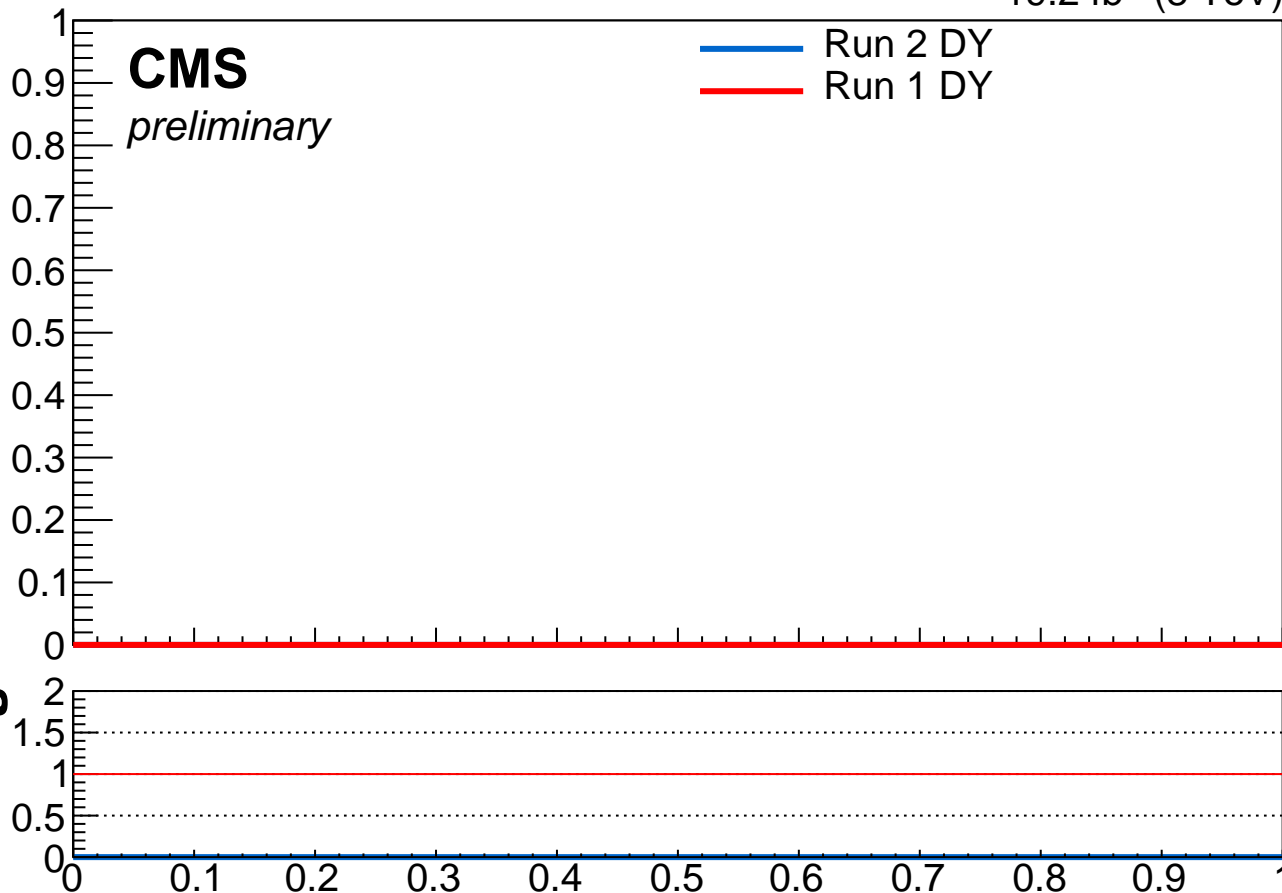
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

Missing transverse energy (GeV)





19.2 fb<sup>-1</sup> (8 TeV)

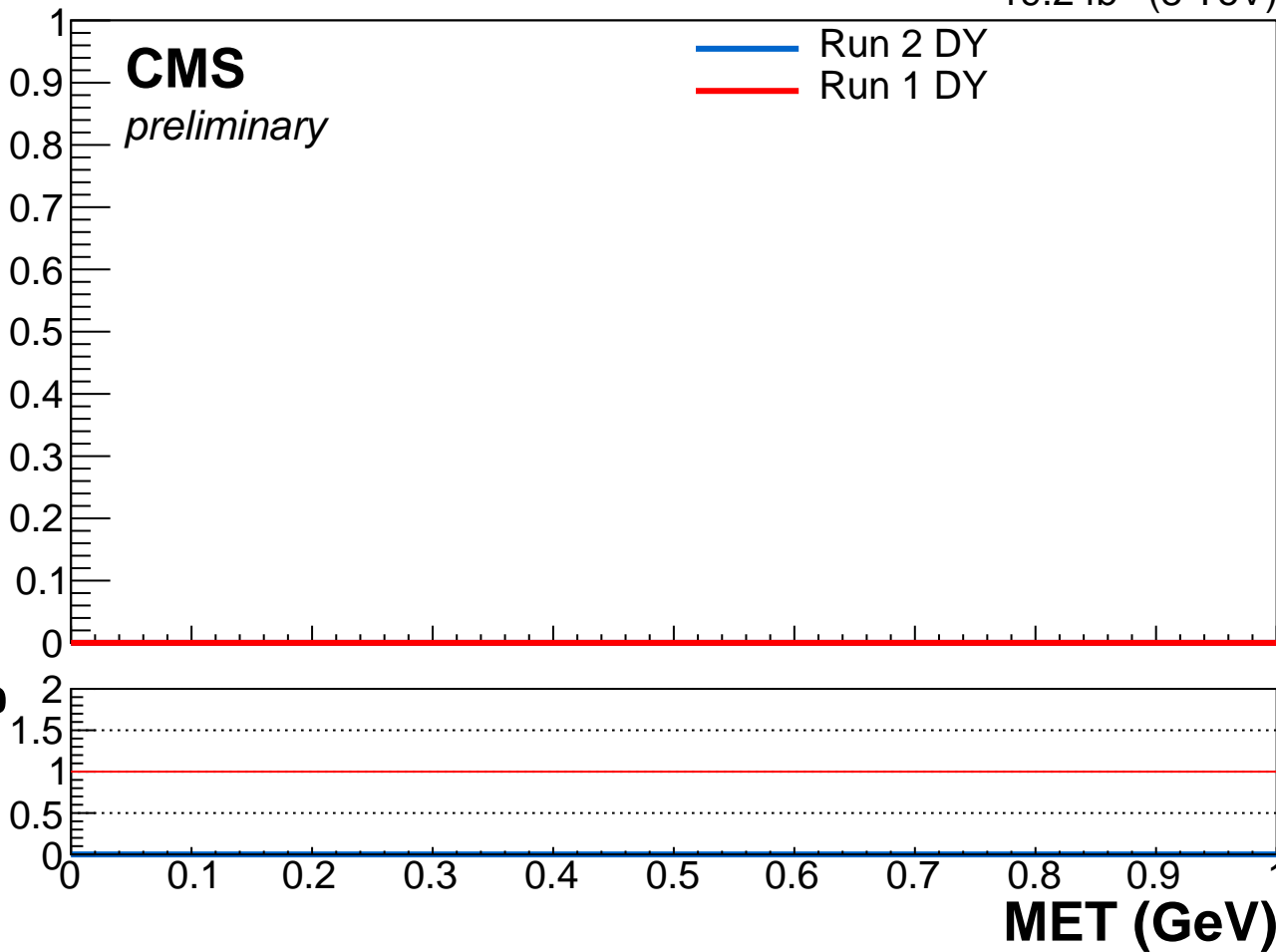
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

MET (GeV)



19.2 fb<sup>-1</sup> (8 TeV)

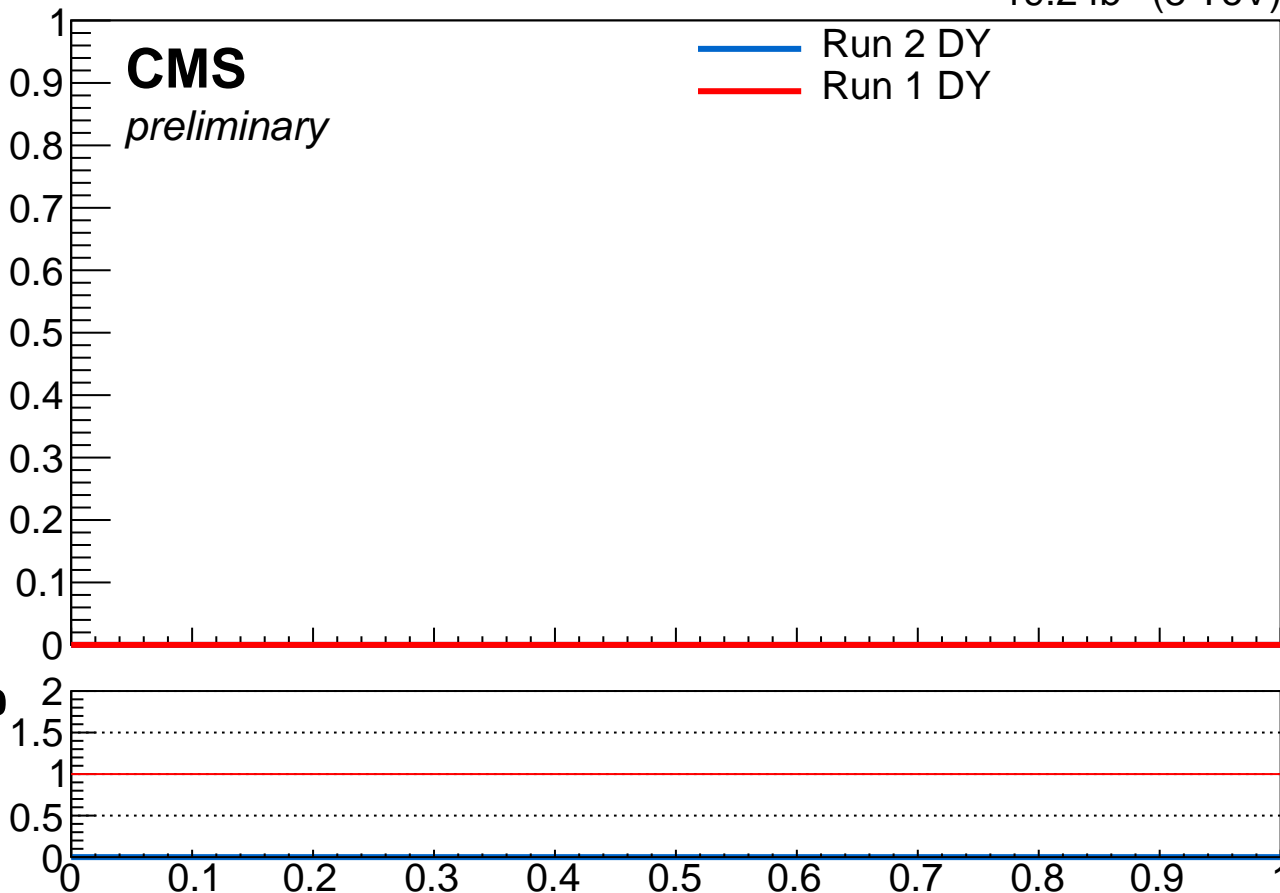
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

L1MET (GeV)



19.2 fb<sup>-1</sup> (8 TeV)

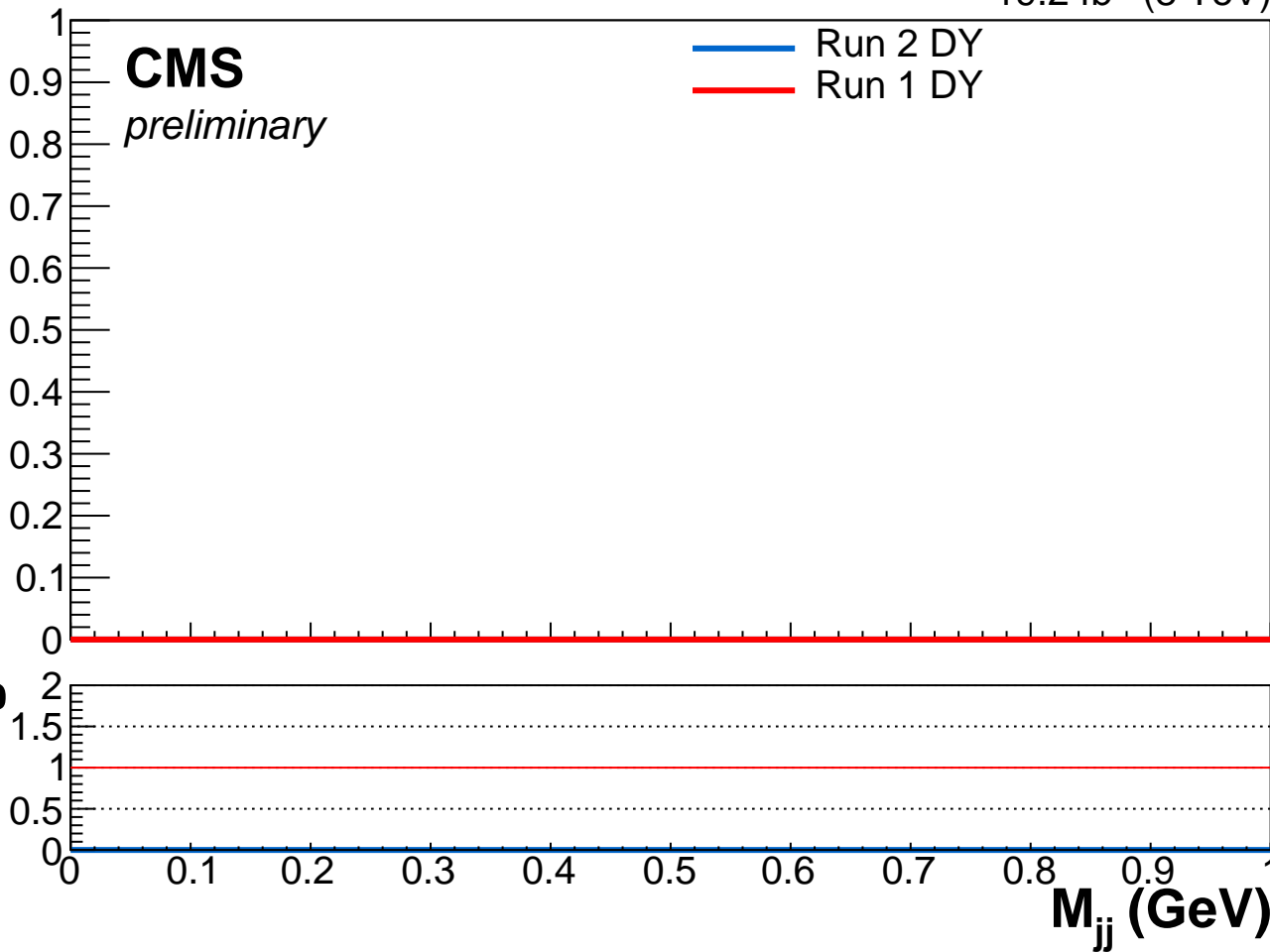
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

M<sub>jj</sub> (GeV)



19.2 fb<sup>-1</sup> (8 TeV)

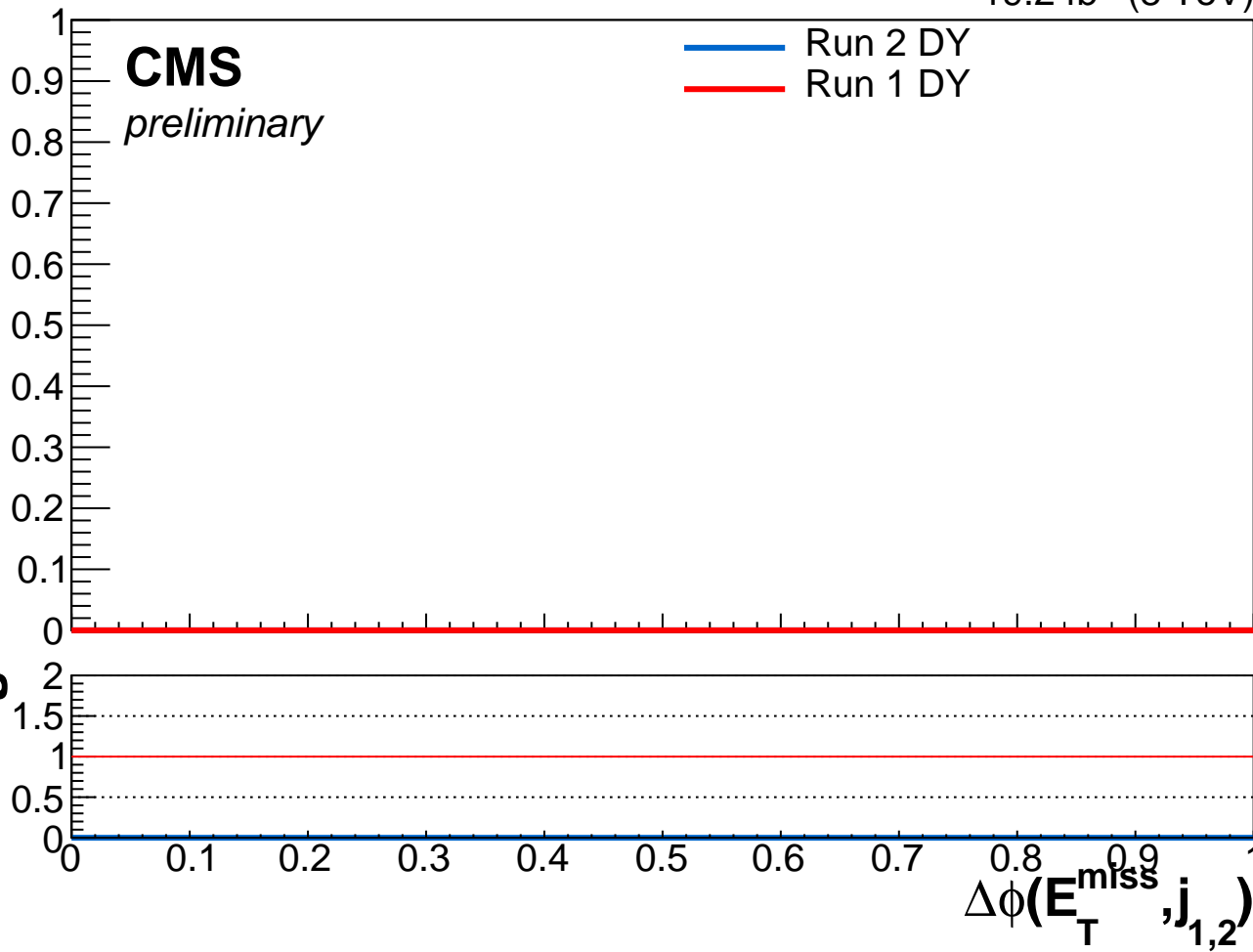
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

$\Delta\phi(E_T^{\text{miss}}, j_{1,2})$



19.2 fb<sup>-1</sup> (8 TeV)

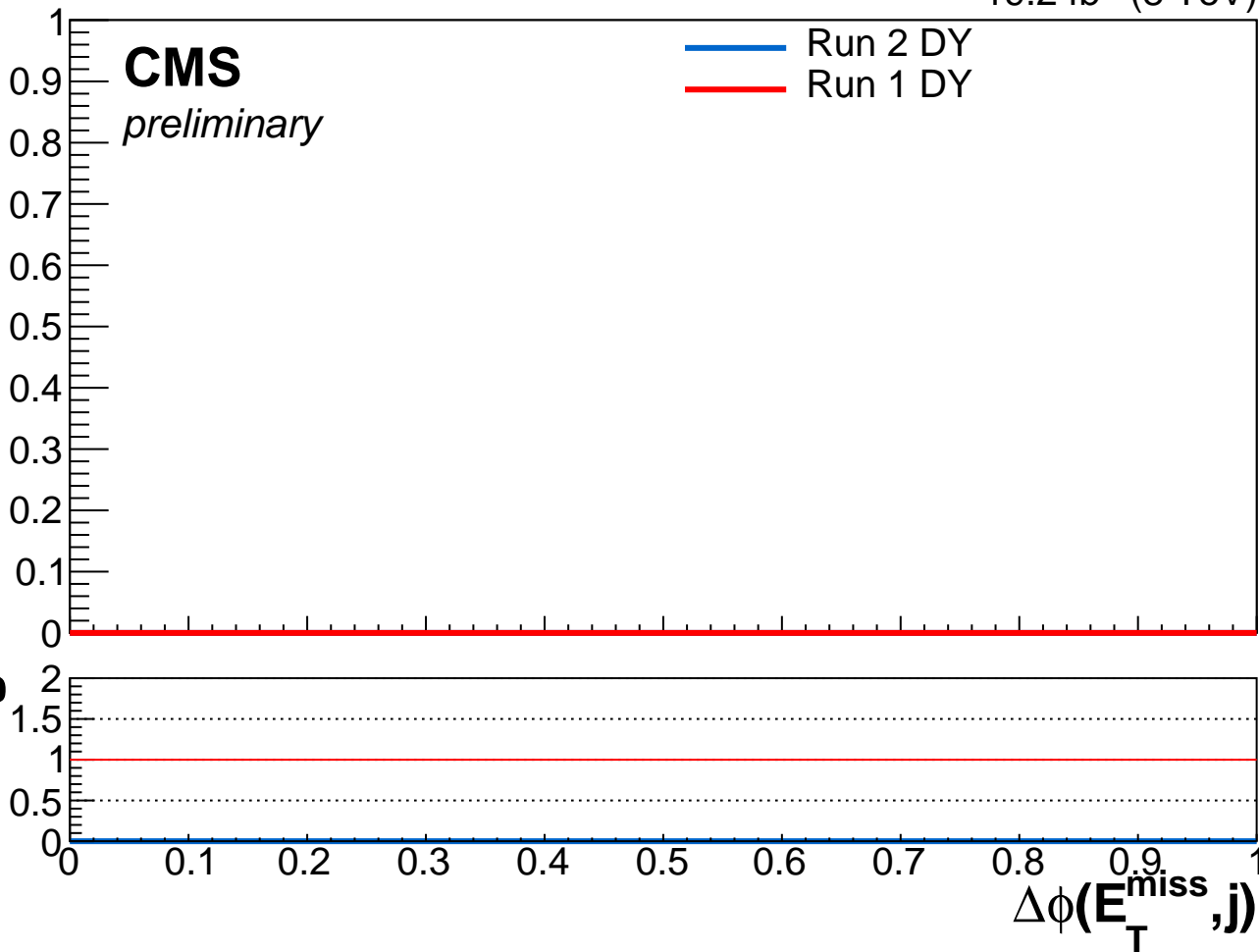
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

$\Delta\phi(\mathbf{E}_T^{\text{miss}}, \mathbf{j})$



19.2 fb<sup>-1</sup> (8 TeV)

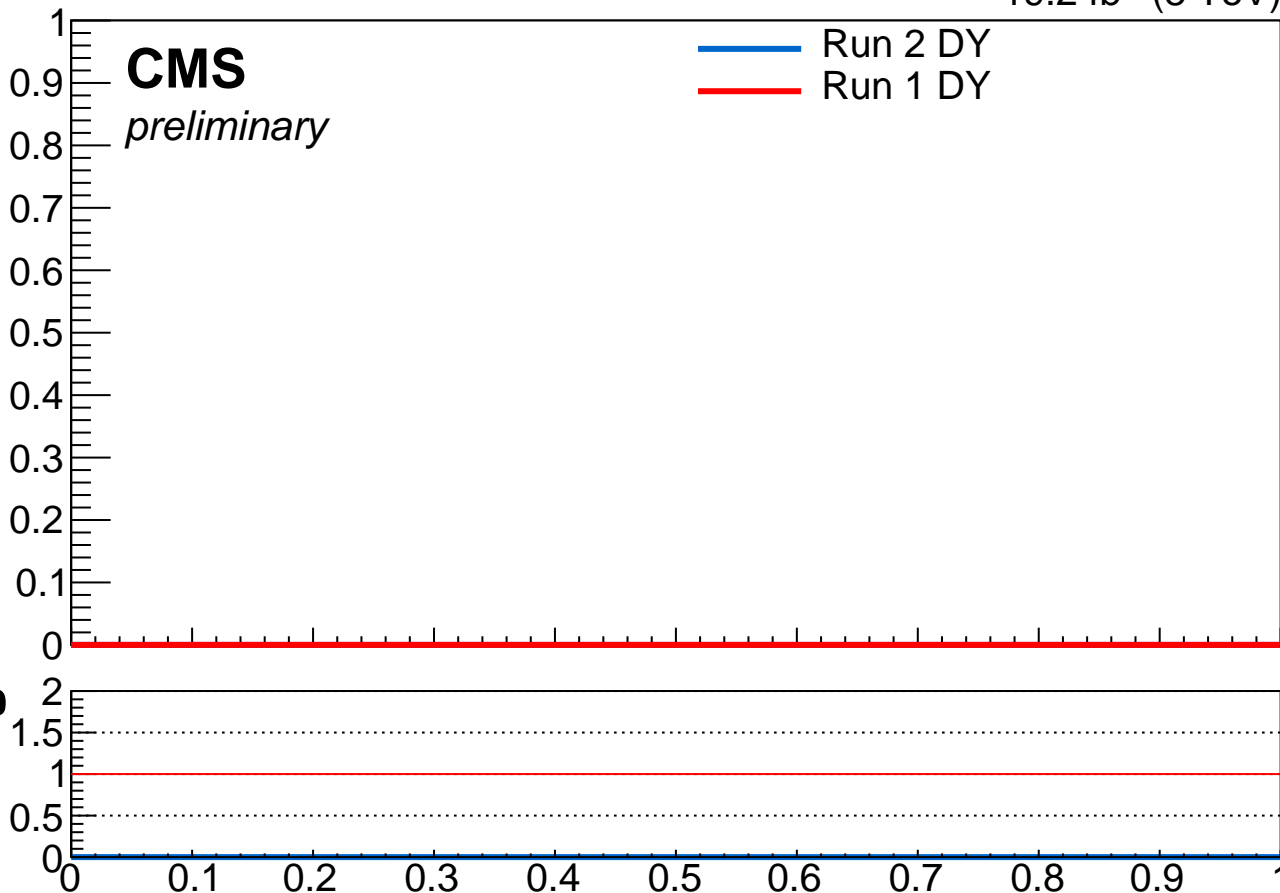
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

**S**



19.2 fb<sup>-1</sup> (8 TeV)

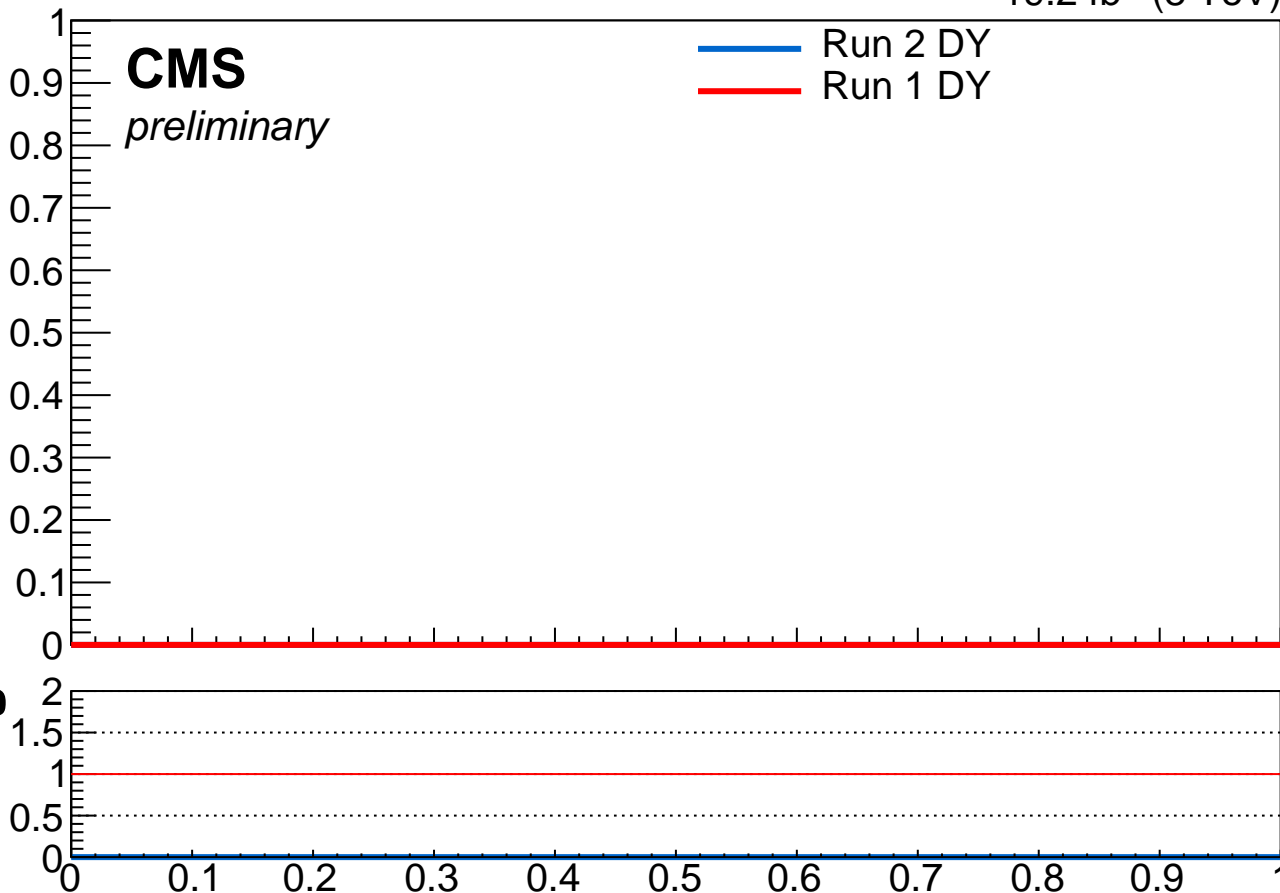
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

Run 1 S



19.2 fb<sup>-1</sup> (8 TeV)

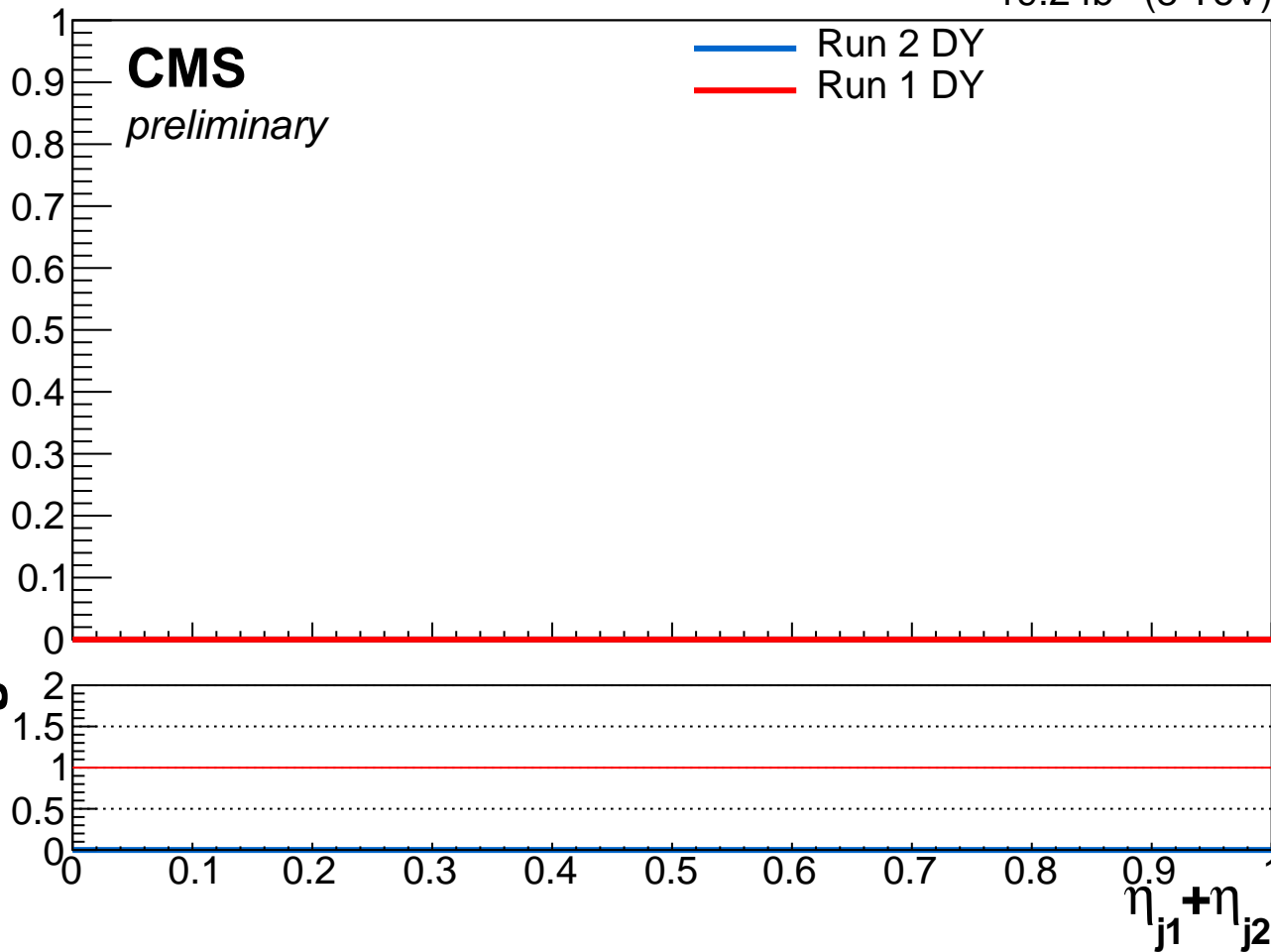
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

$\eta_{j1} + \eta_{j2}$





19.2 fb<sup>-1</sup> (8 TeV)

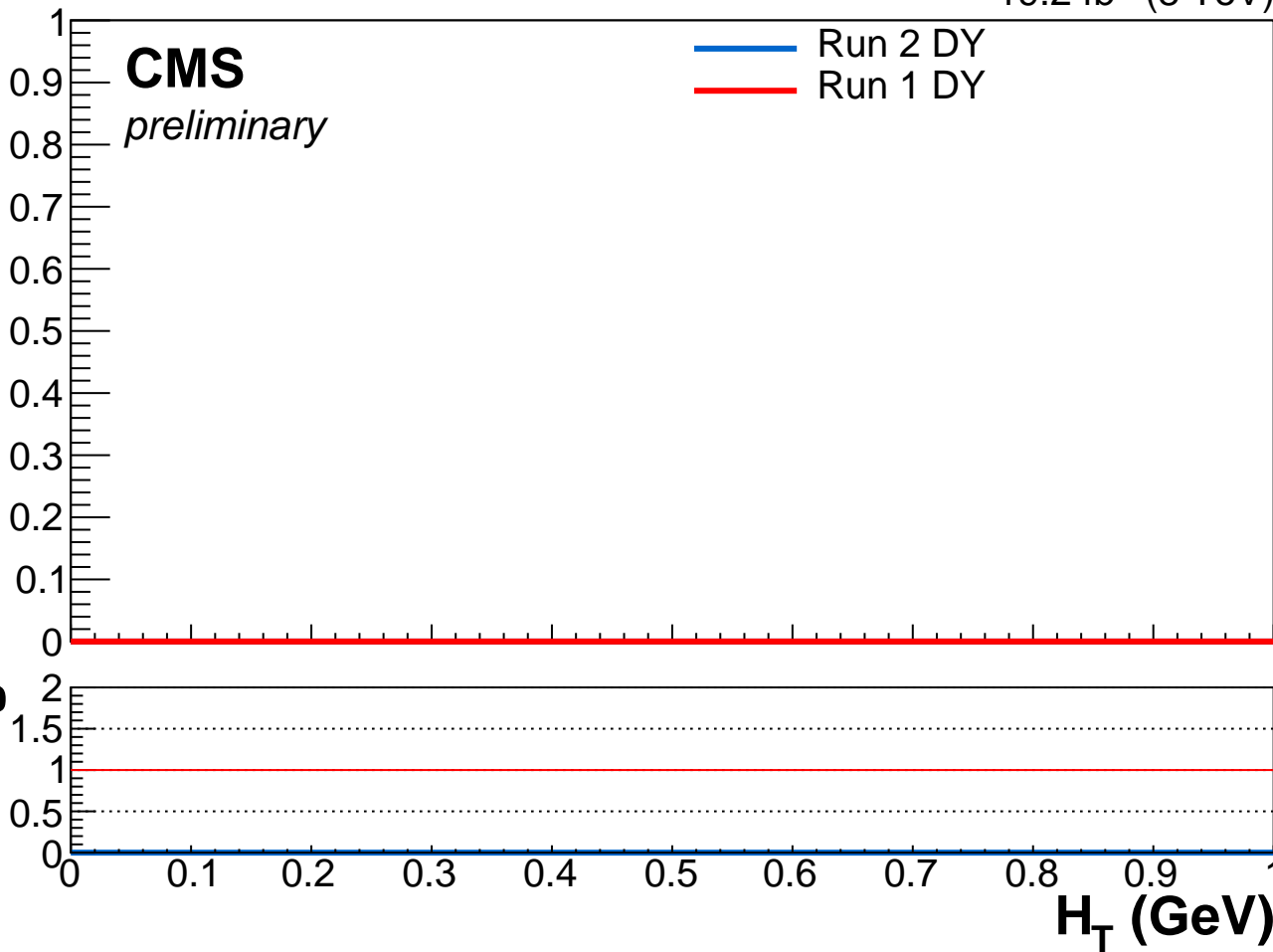
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

H<sub>T</sub> (GeV)



19.2 fb<sup>-1</sup> (8 TeV)

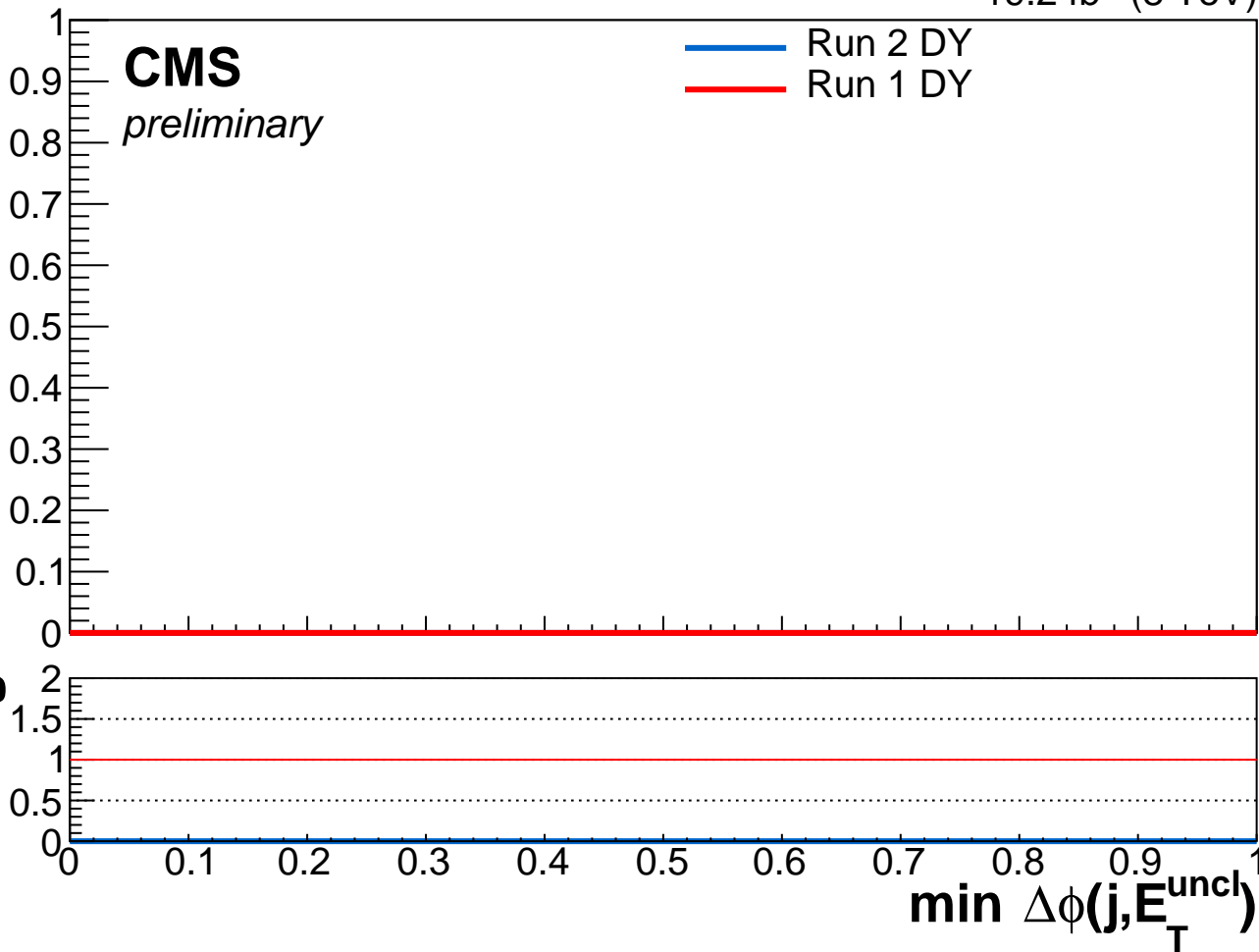
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

min  $\Delta\phi(j, E_T^{\text{uncl}})$



19.2 fb<sup>-1</sup> (8 TeV)

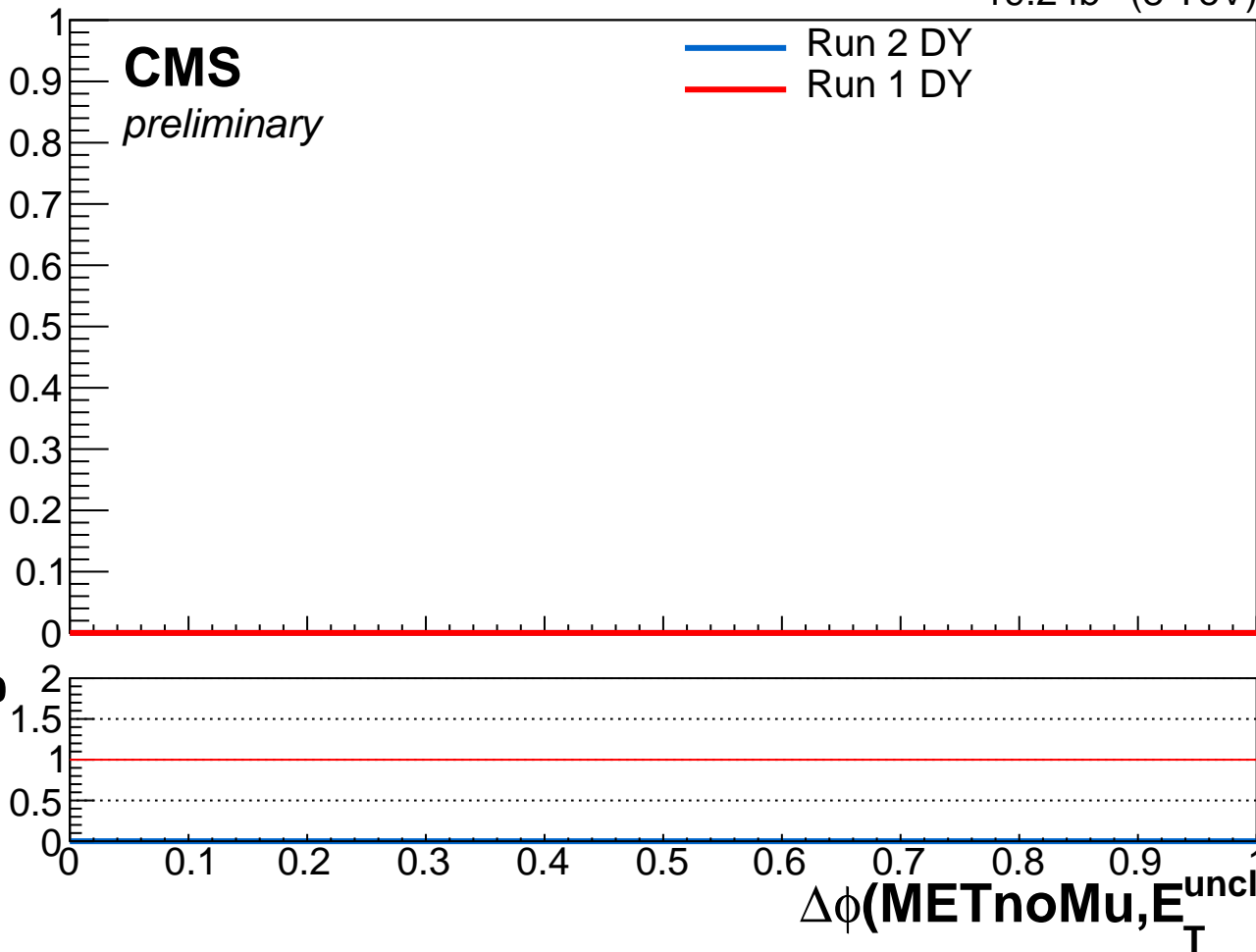
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

$\Delta\phi(\text{METnoMu}, E_T^{\text{unc}})$



19.2 fb<sup>-1</sup> (8 TeV)

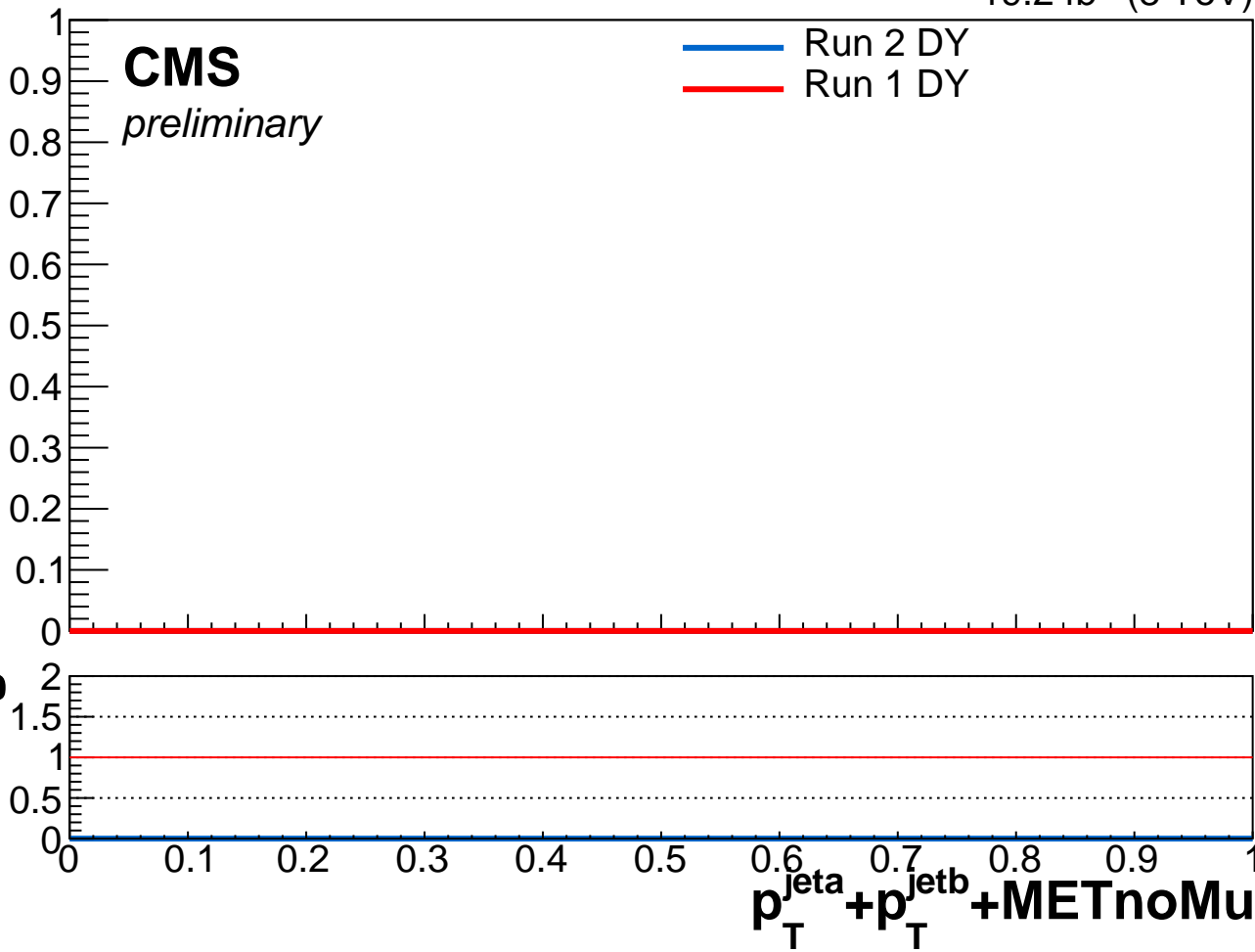
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

$p_T^{\text{jeta}} + p_T^{\text{jetb}} + \text{METnoMu}$



19.2 fb<sup>-1</sup> (8 TeV)

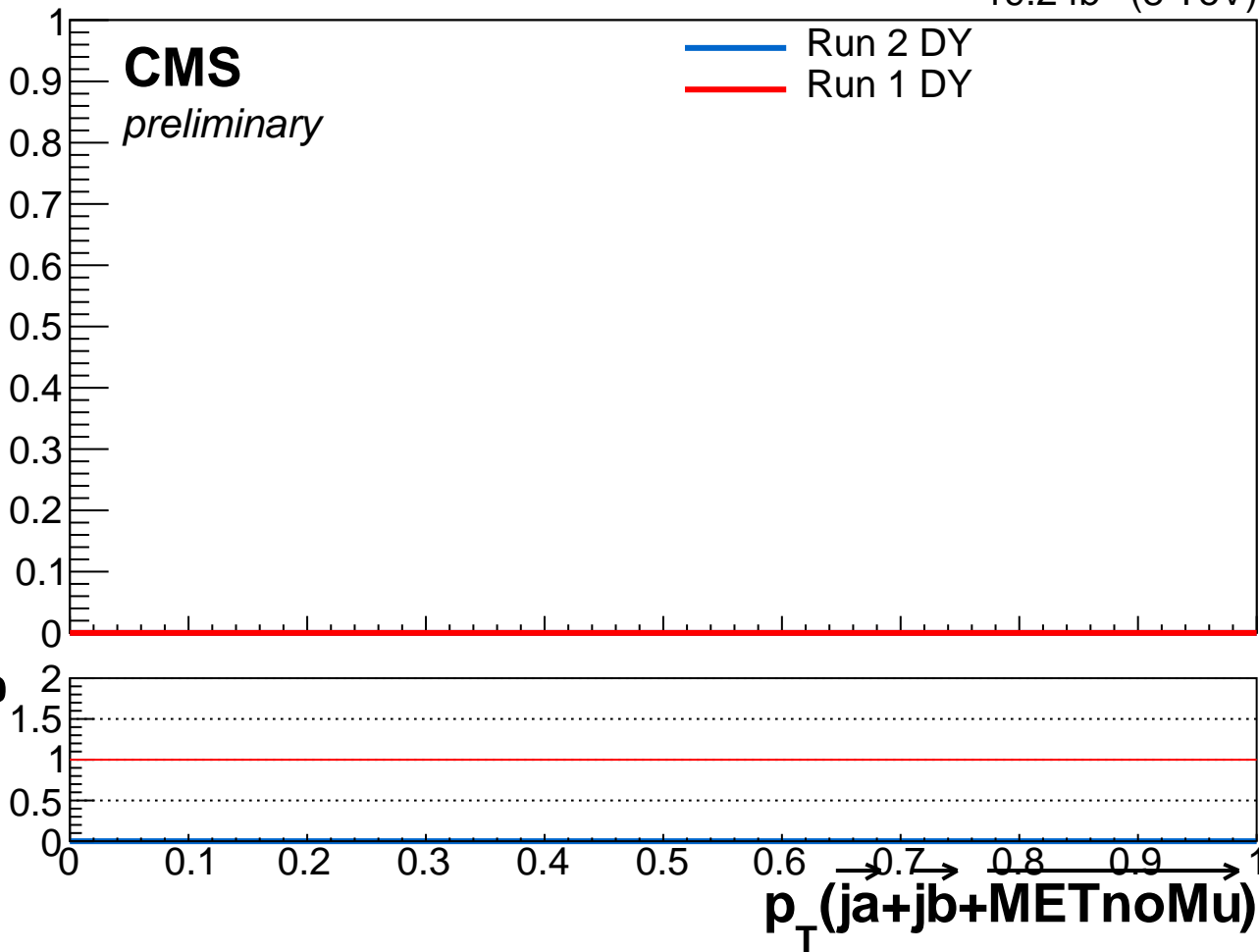
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

$p_T(ja+jb+METnoMu)$



19.2 fb<sup>-1</sup> (8 TeV)

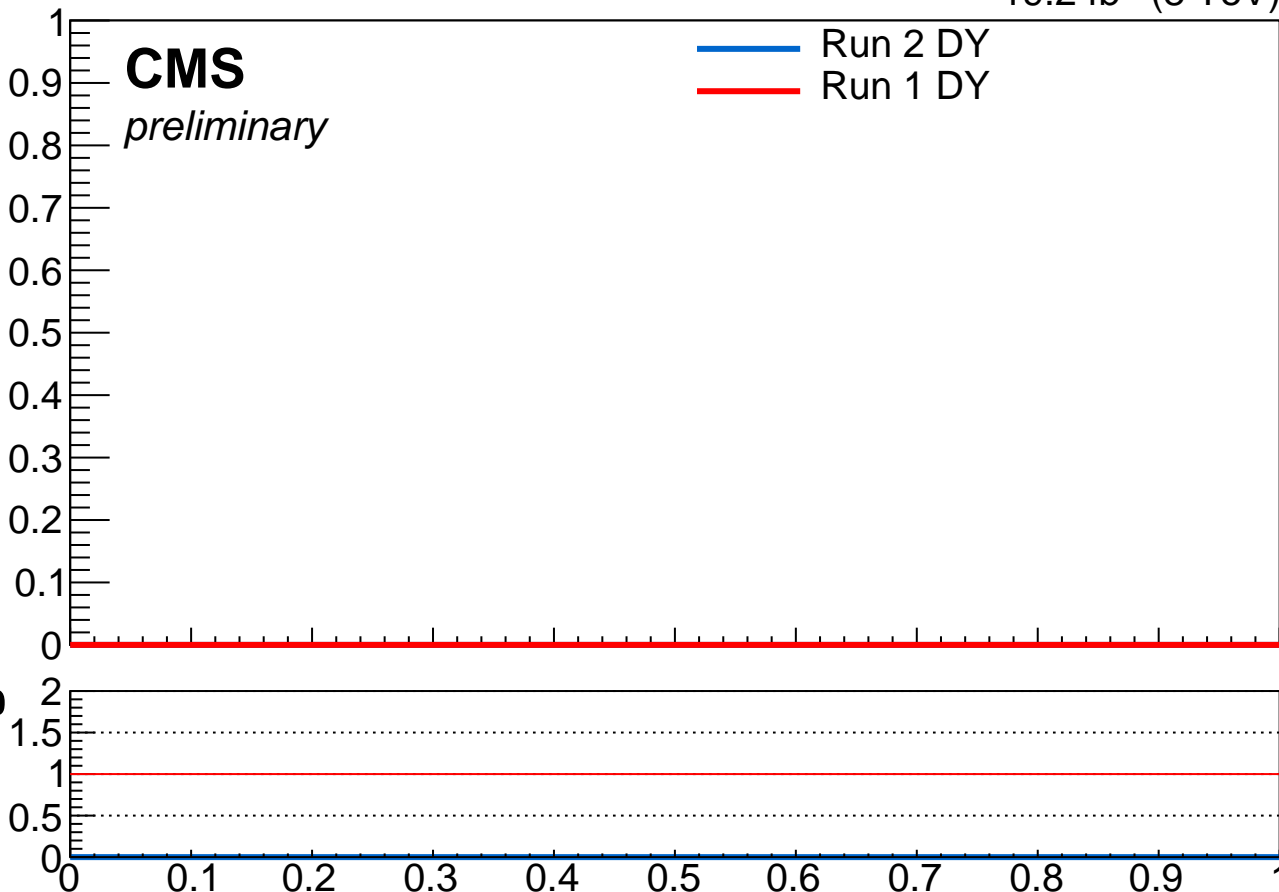
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

CJV jets (30 GeV)



19.2 fb<sup>-1</sup> (8 TeV)

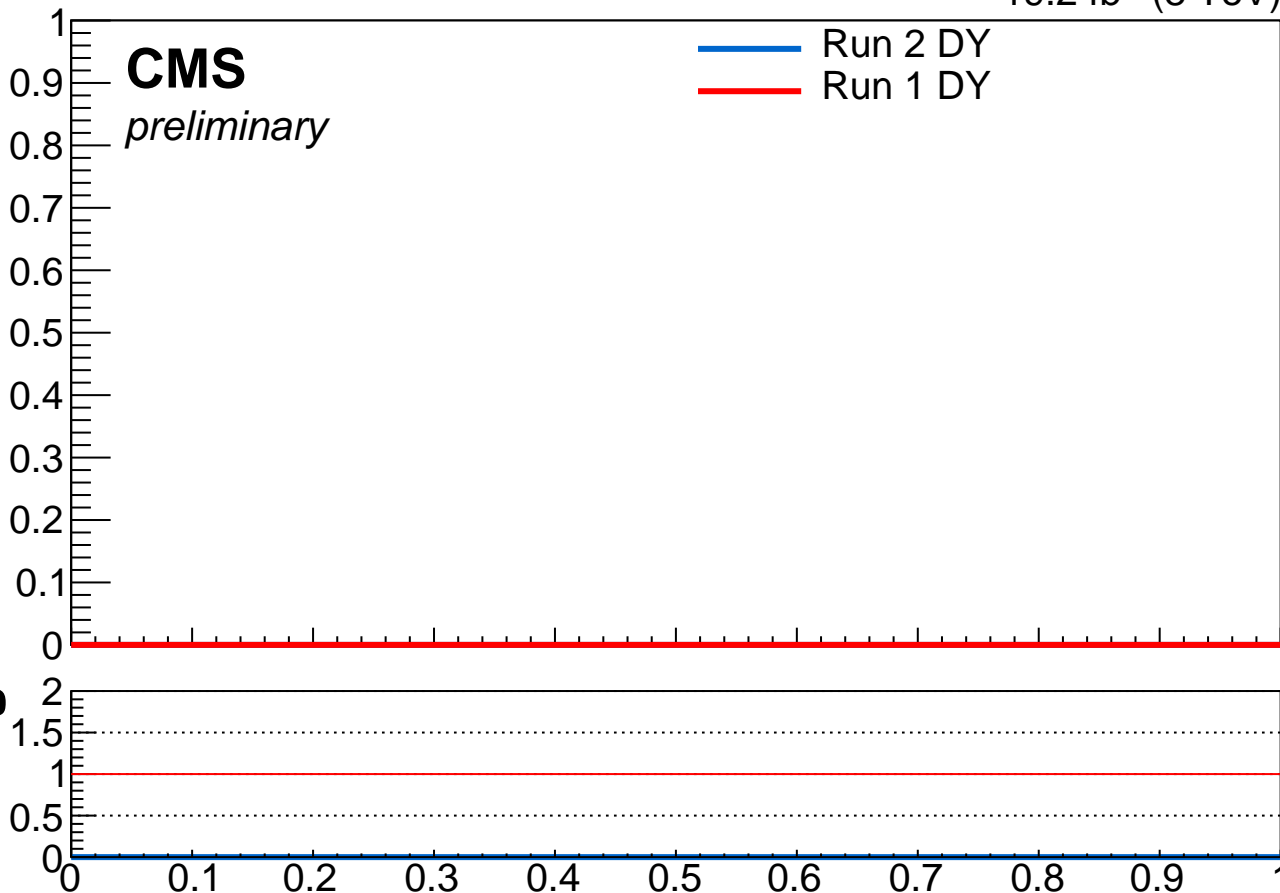
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

CJV jets (20 GeV EB, 30 GeV EE)



19.2 fb<sup>-1</sup> (8 TeV)

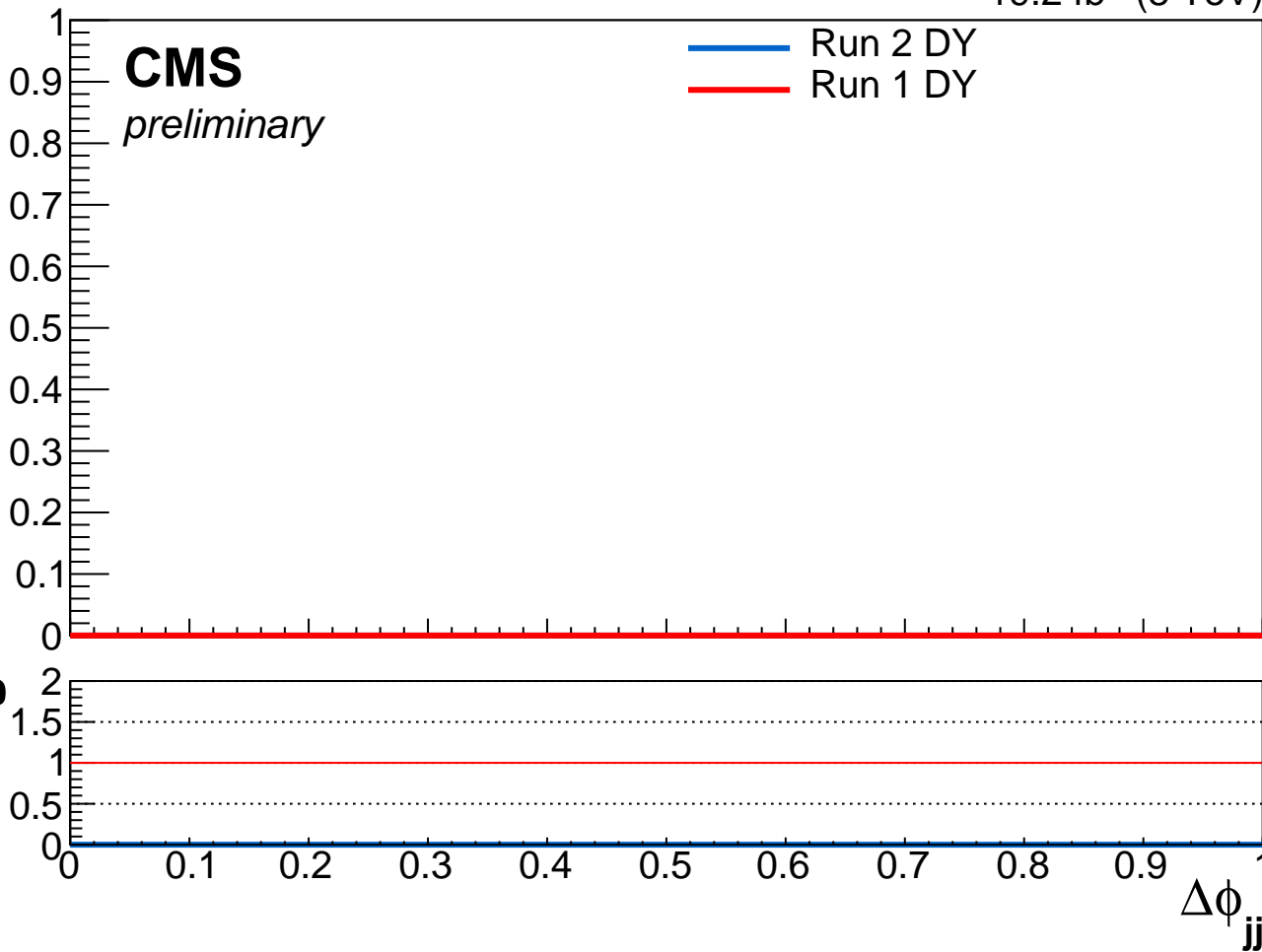
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

$\Delta\phi_{jj}$





19.2 fb<sup>-1</sup> (8 TeV)

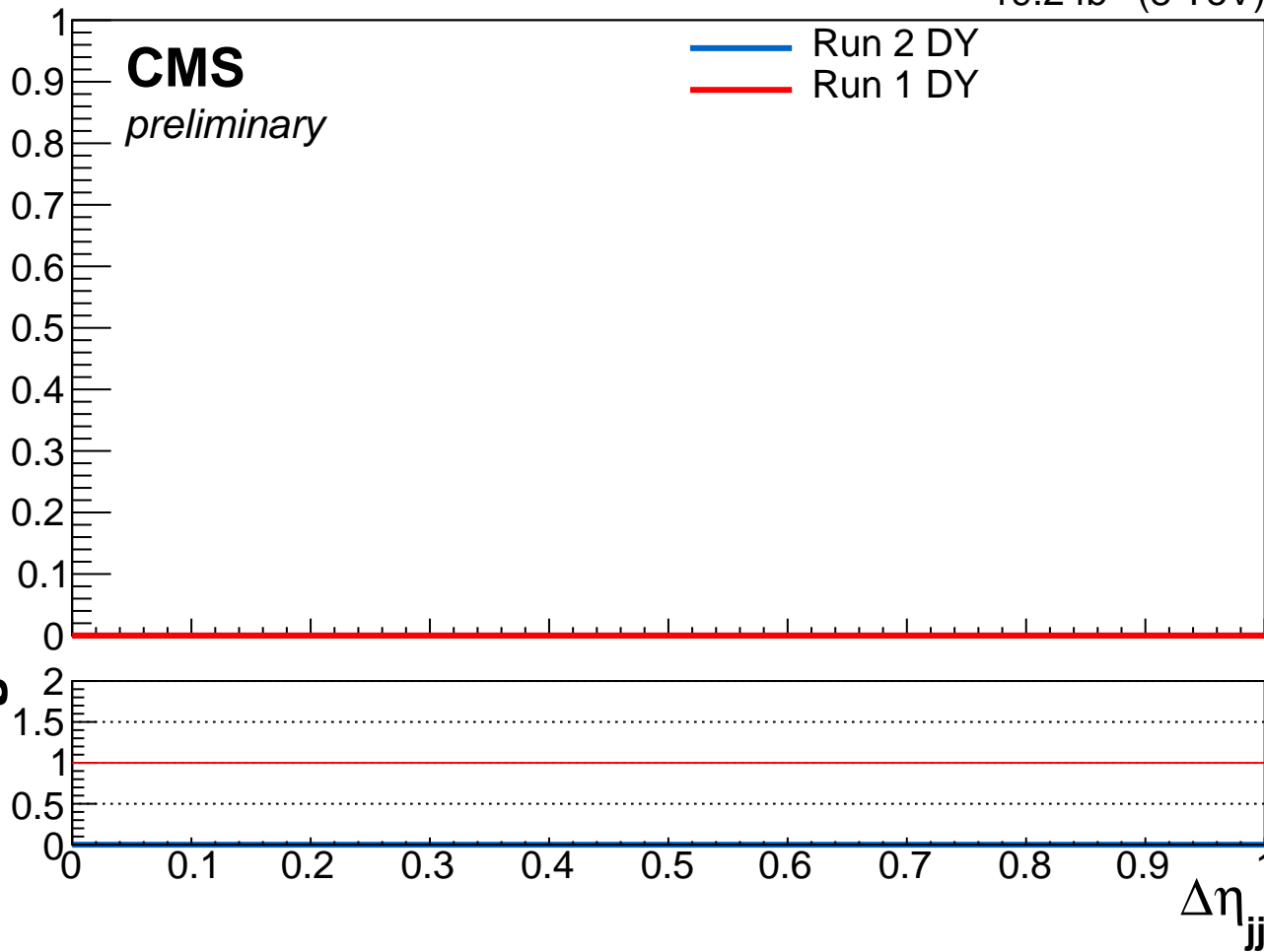
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

$\Delta\eta_{jj}$



19.2 fb<sup>-1</sup> (8 TeV)

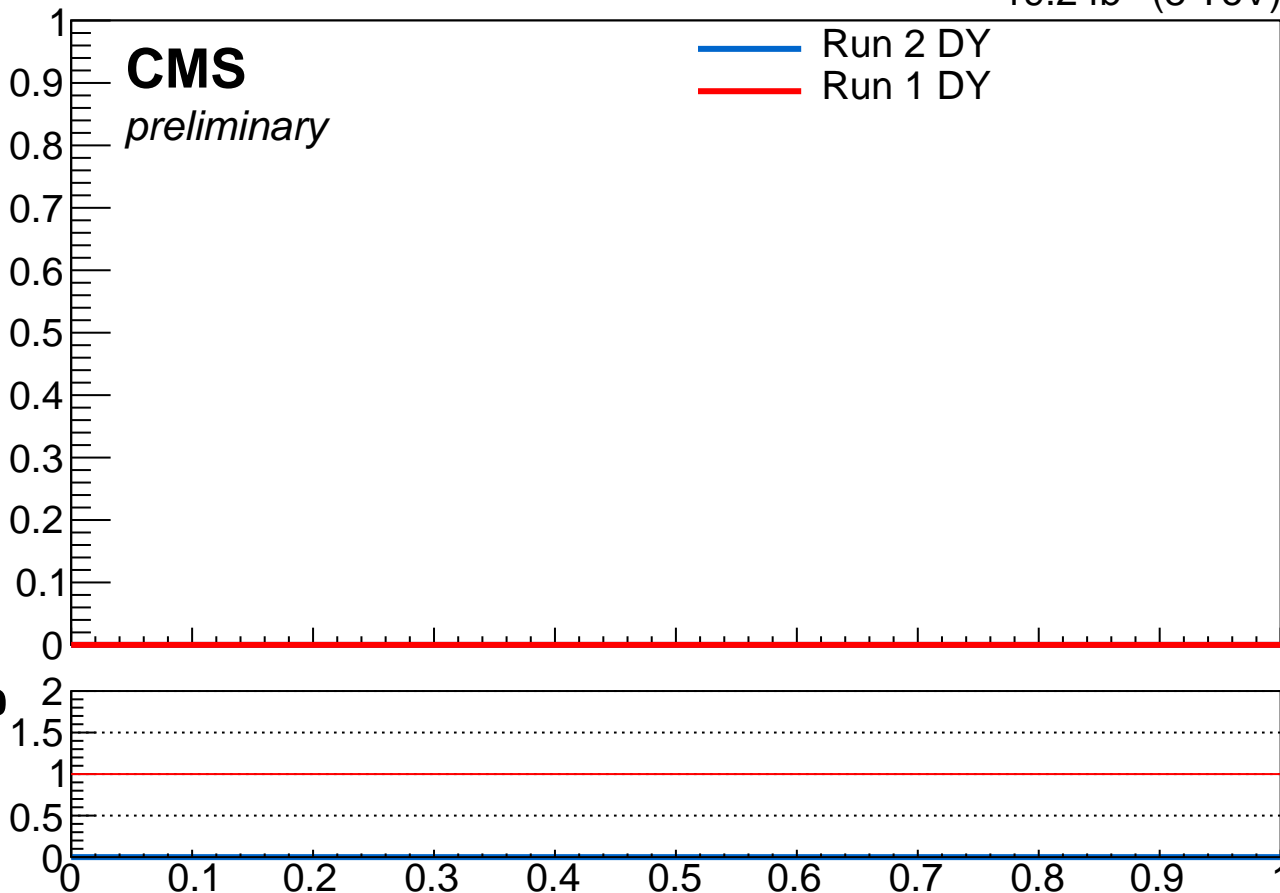
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

$m_T(\text{lepton}+\text{MET})$  (GeV)



19.2 fb<sup>-1</sup> (8 TeV)

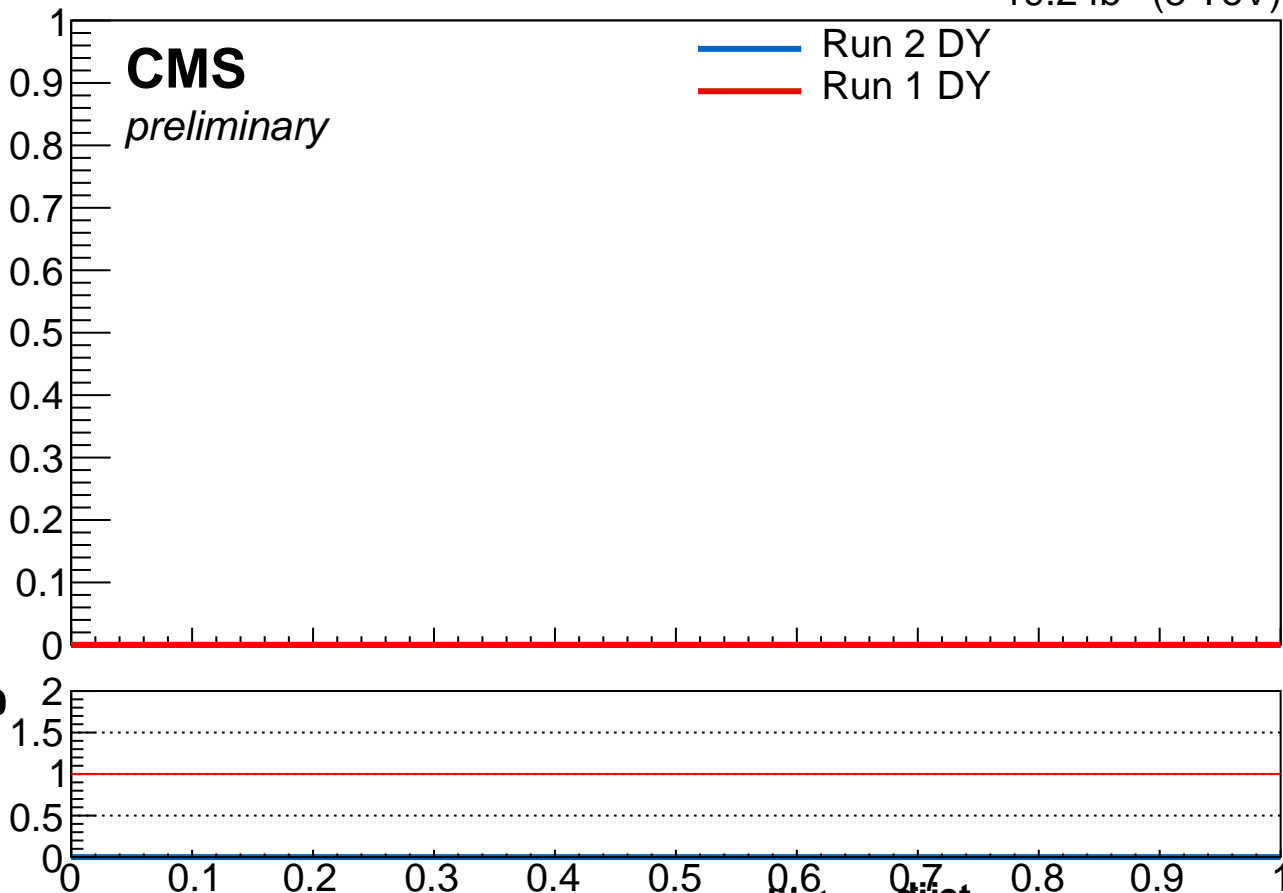
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

$p_T^{\text{dijet}} / (p_T^{\text{dijet}} + \text{MET}_{\text{noMu}})$



19.2 fb<sup>-1</sup> (8 TeV)

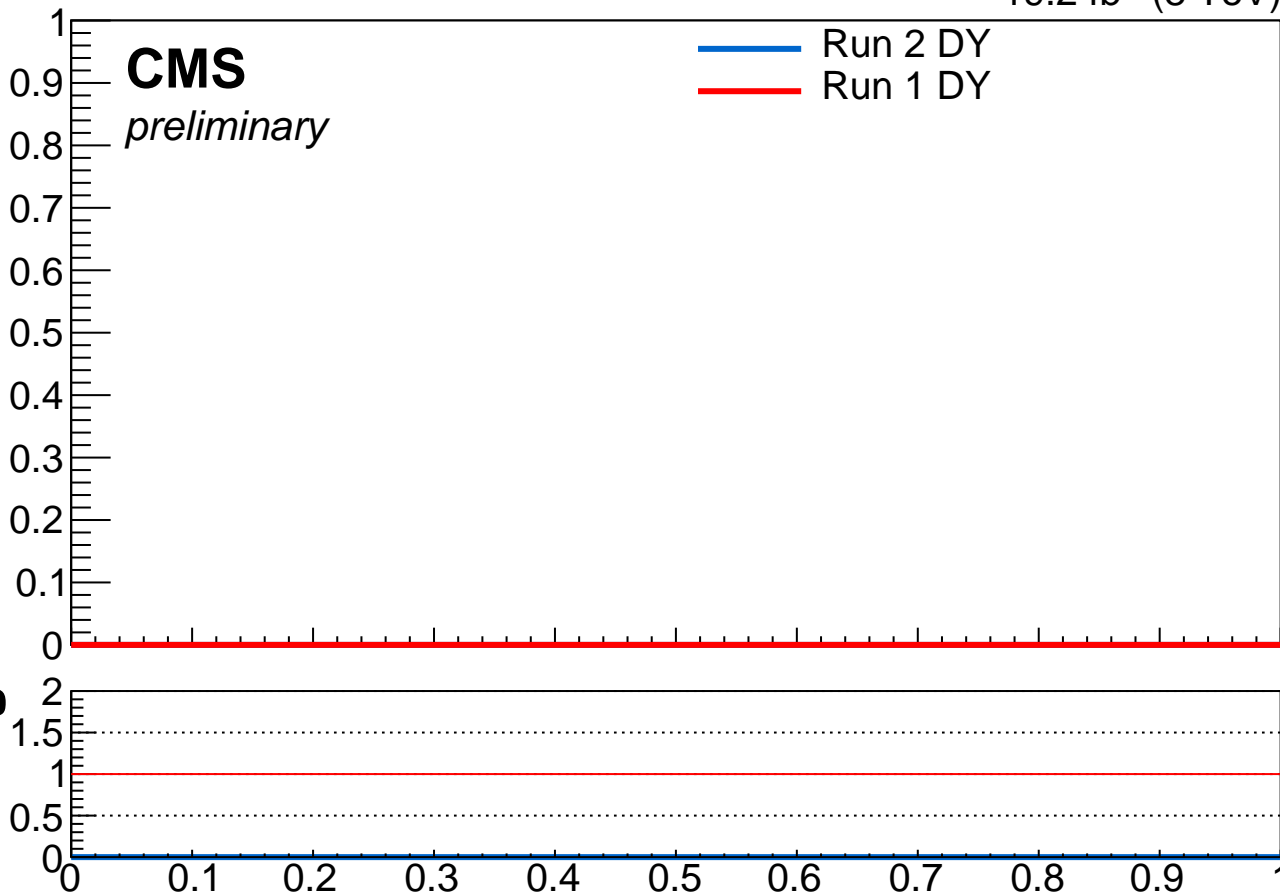
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

Jet 1 CSV



19.2 fb<sup>-1</sup> (8 TeV)

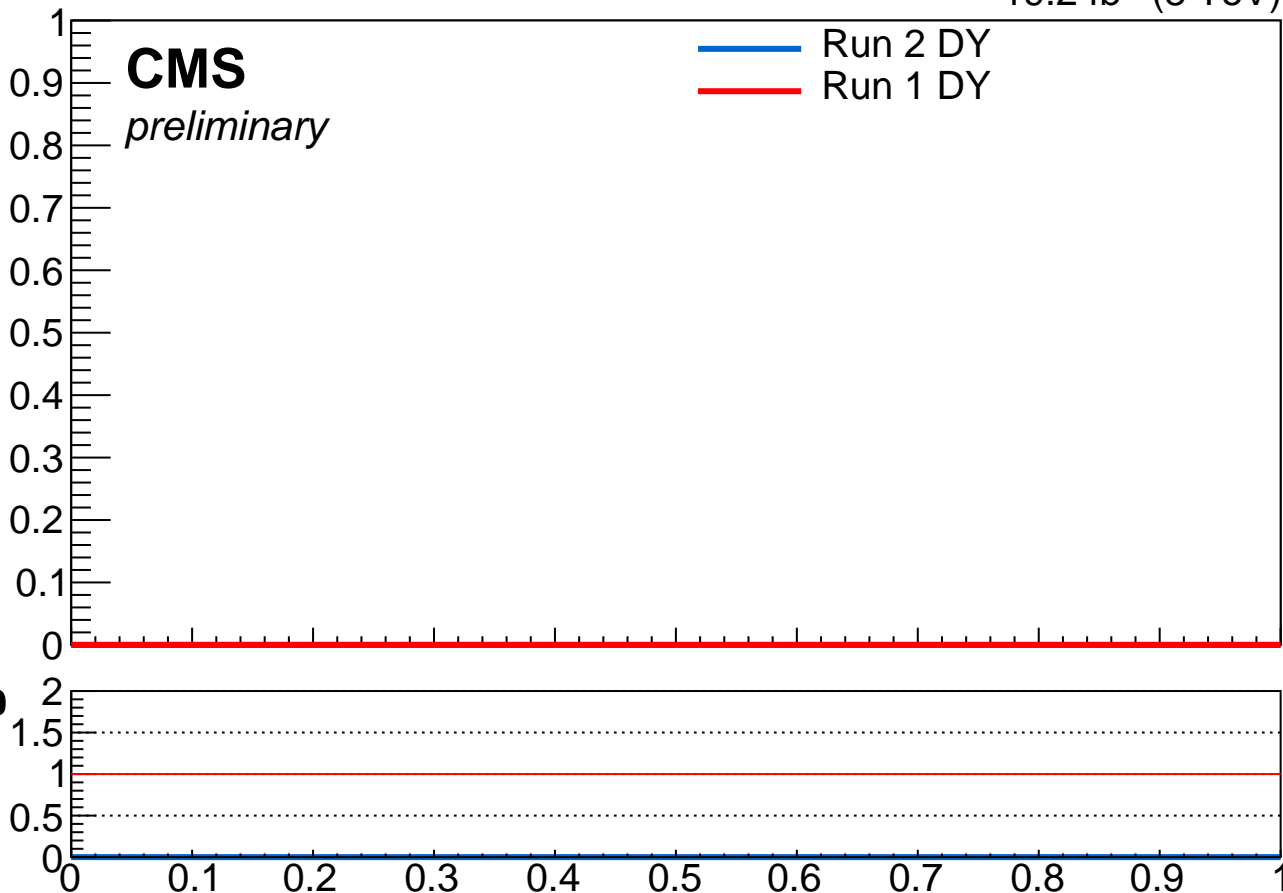
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

**Jet 2 CSV**



19.2 fb<sup>-1</sup> (8 TeV)

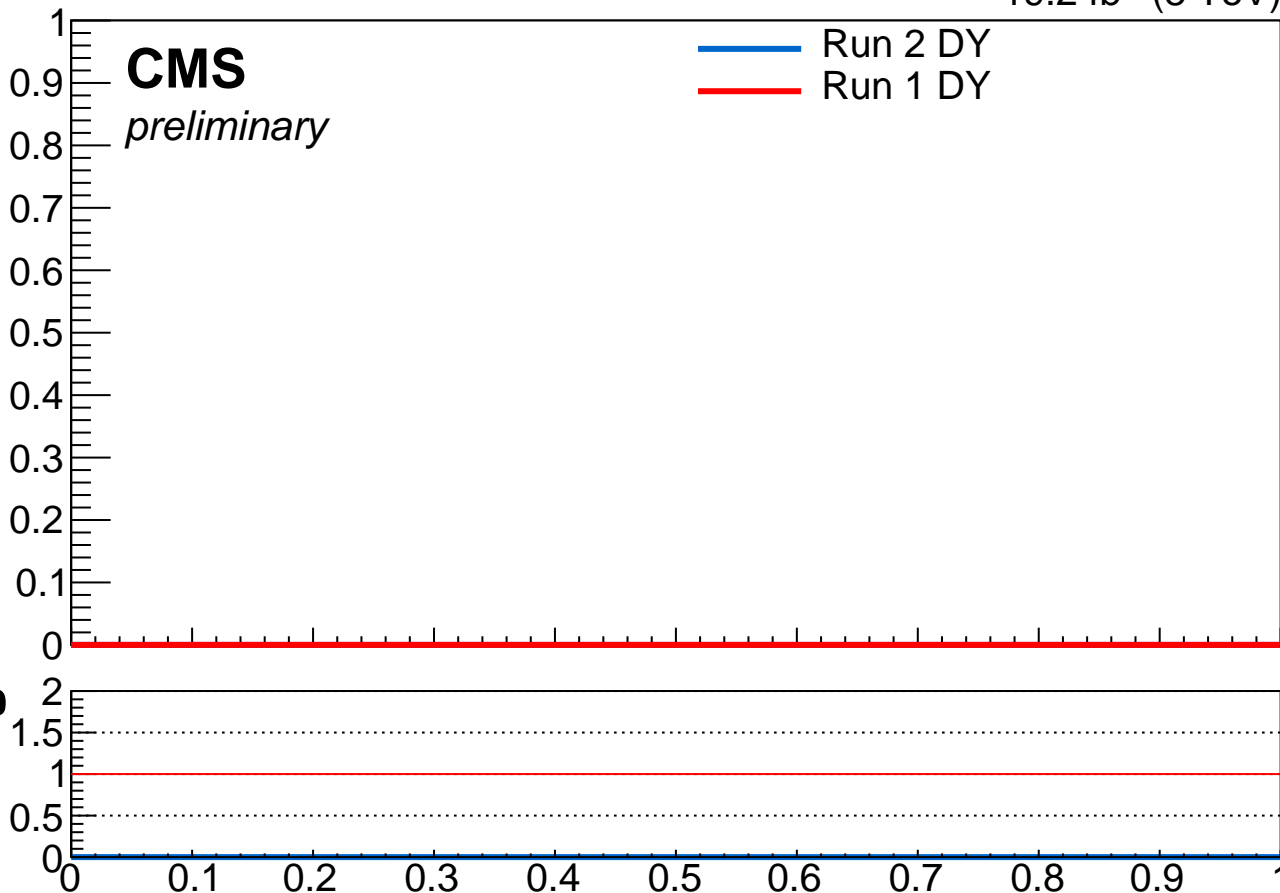
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

**Data/Bkg**

**Jet 3 CSV**



19.2 fb<sup>-1</sup> (8 TeV)

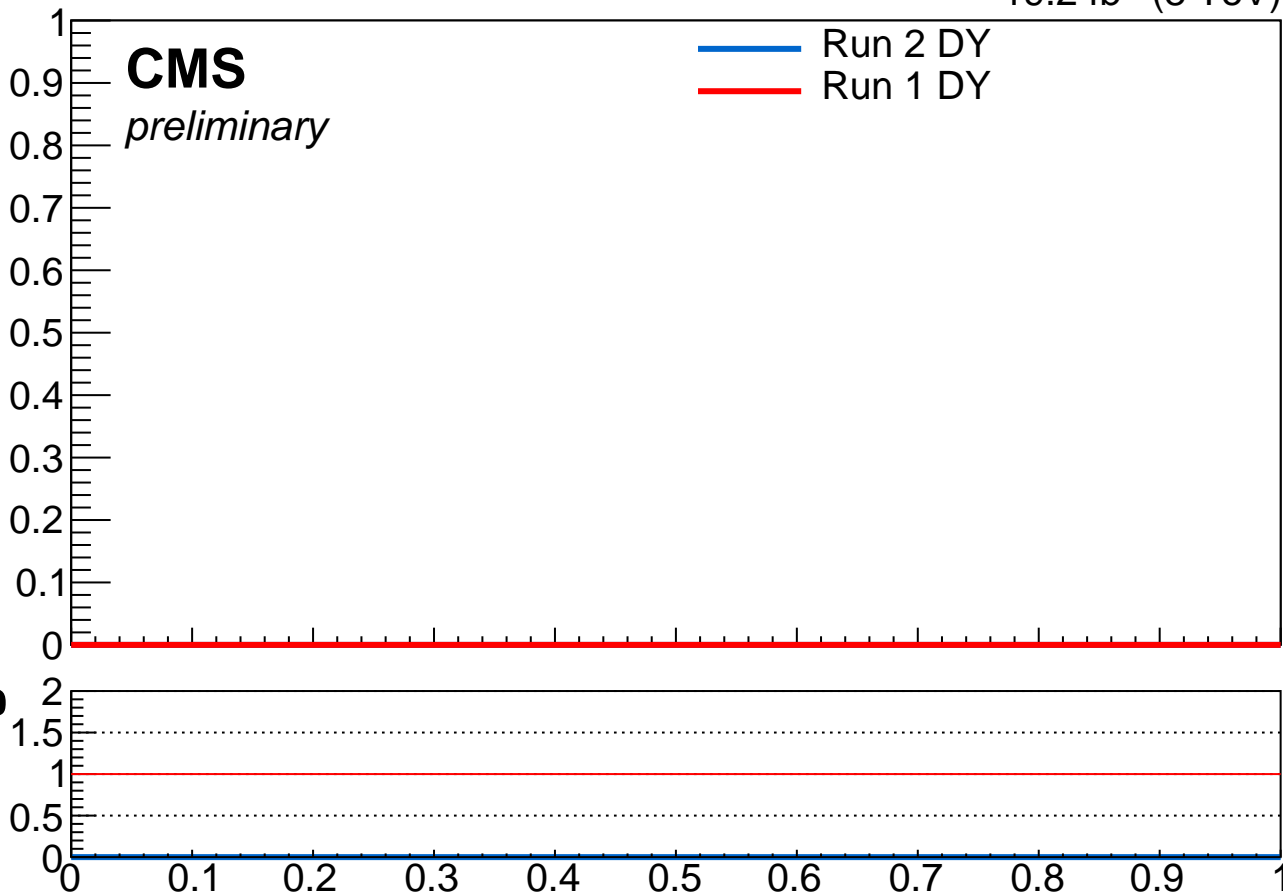
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

N jets pt>30 GeV



19.2 fb<sup>-1</sup> (8 TeV)

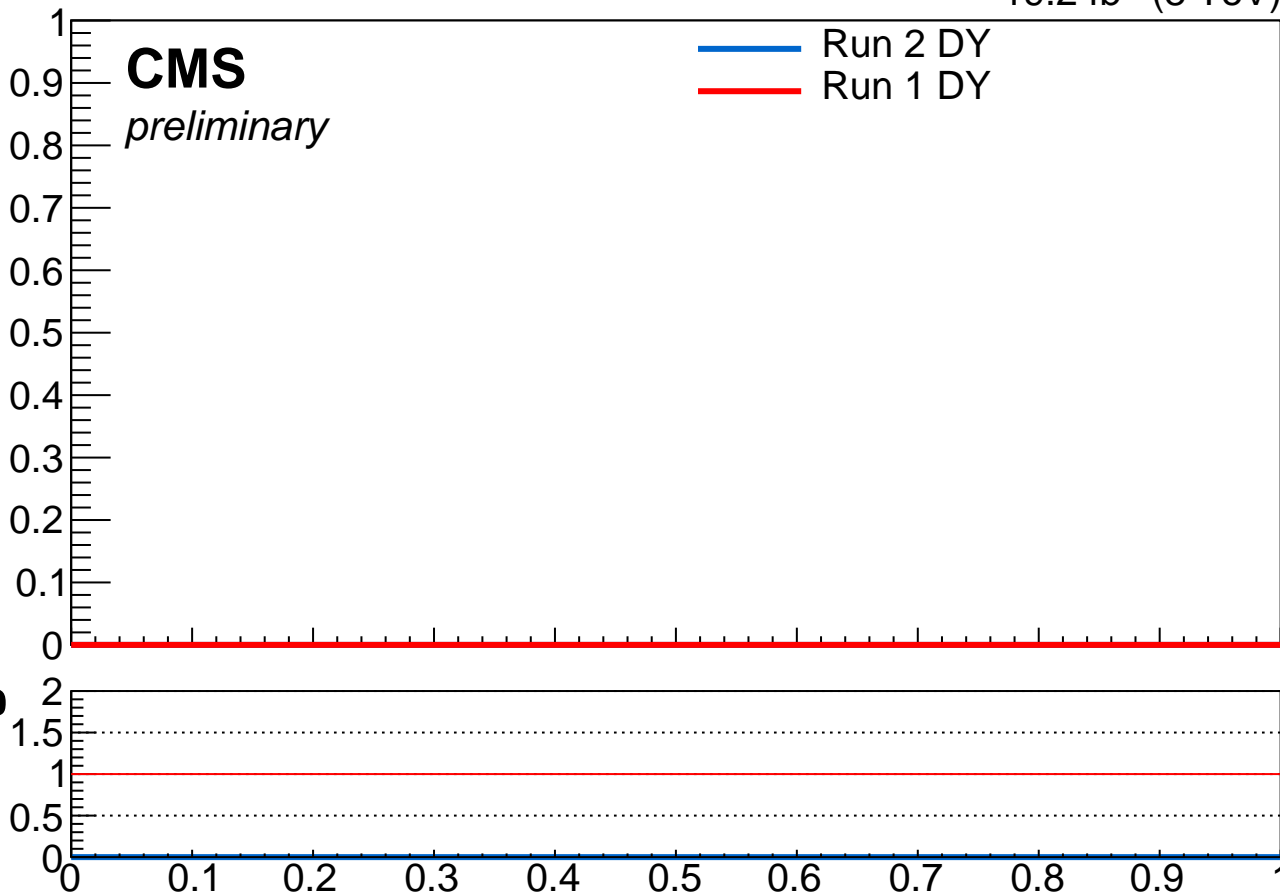
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

N jets pt>15 GeV





19.2 fb<sup>-1</sup> (8 TeV)

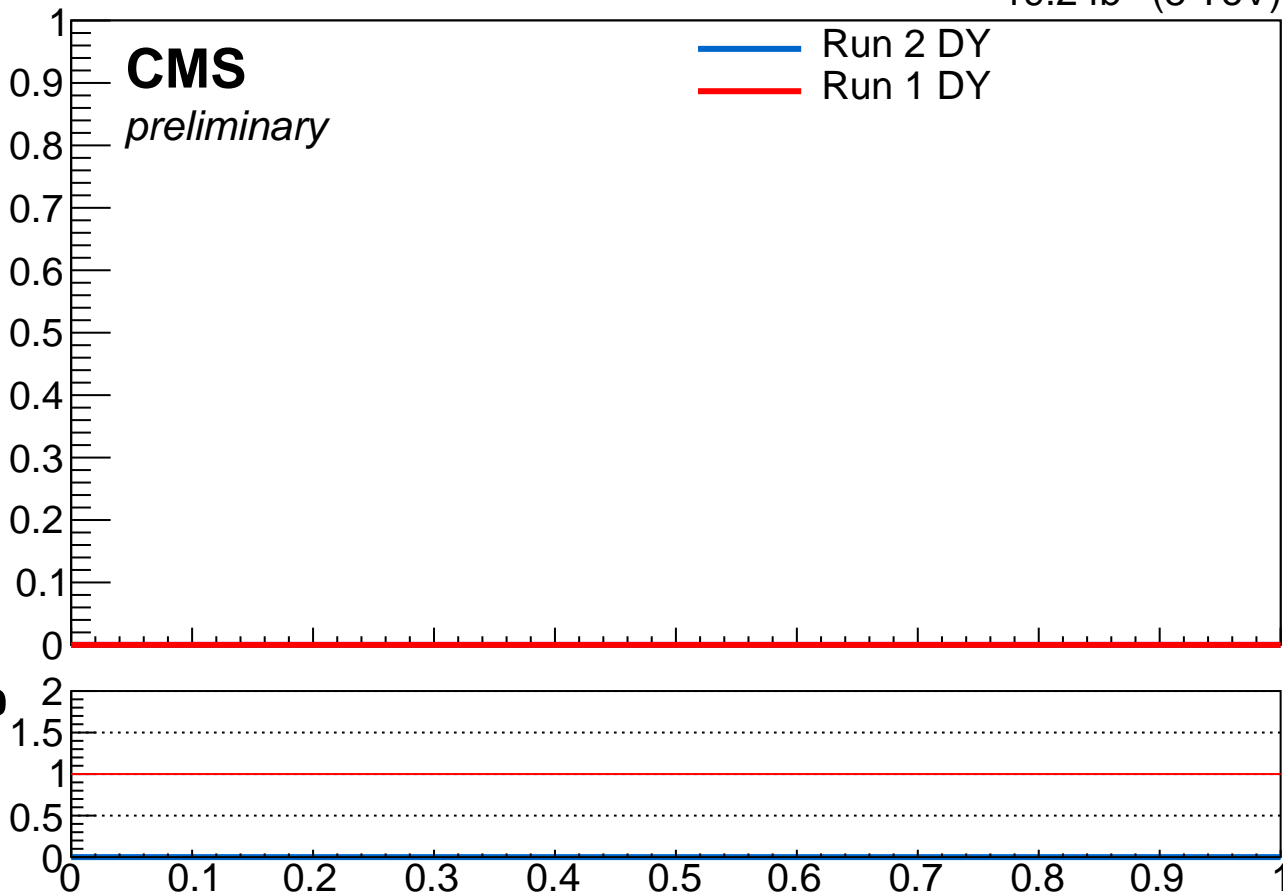
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

**Data/Bkg**

**Central tag jet  $\eta$**



19.2 fb<sup>-1</sup> (8 TeV)

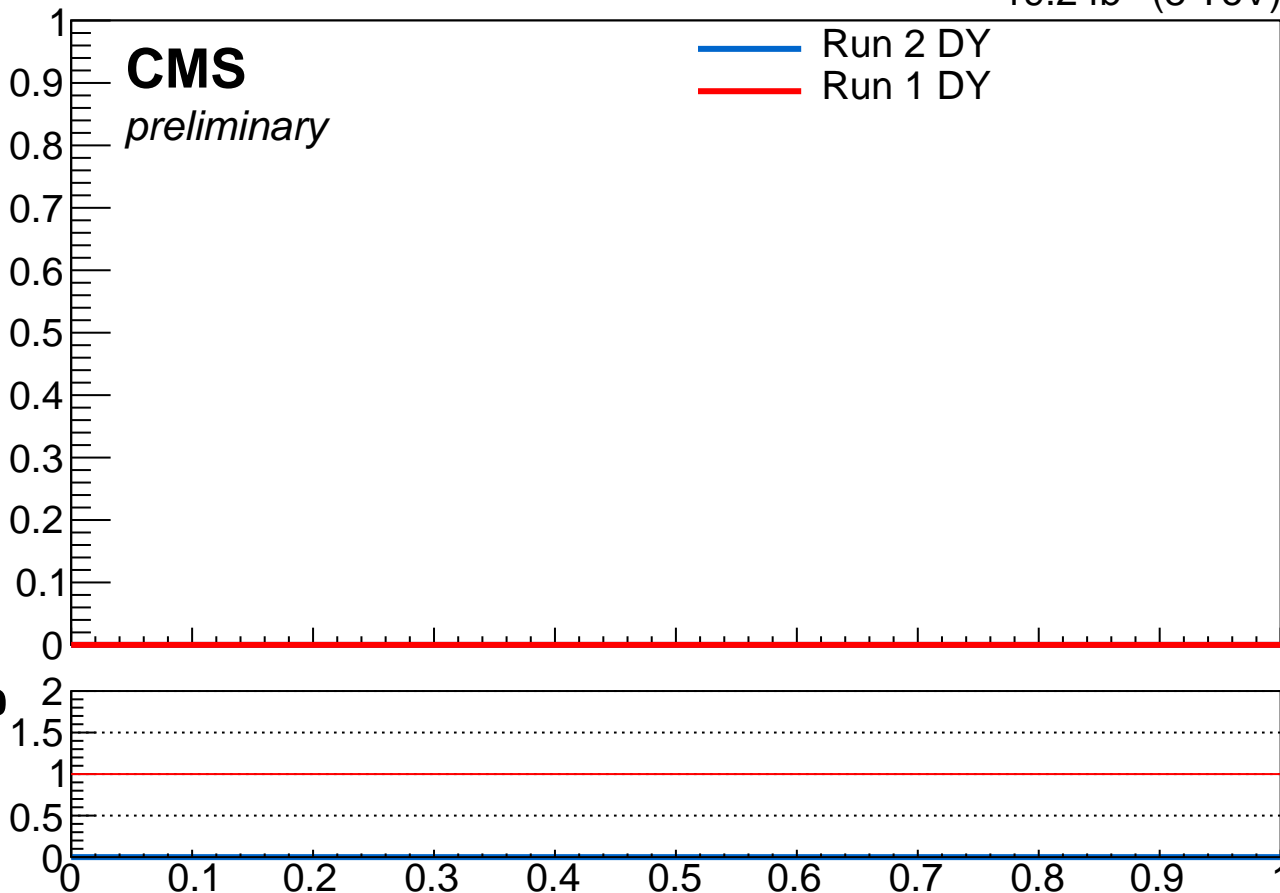
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

Forward tag jet  $\eta$



19.2 fb<sup>-1</sup> (8 TeV)

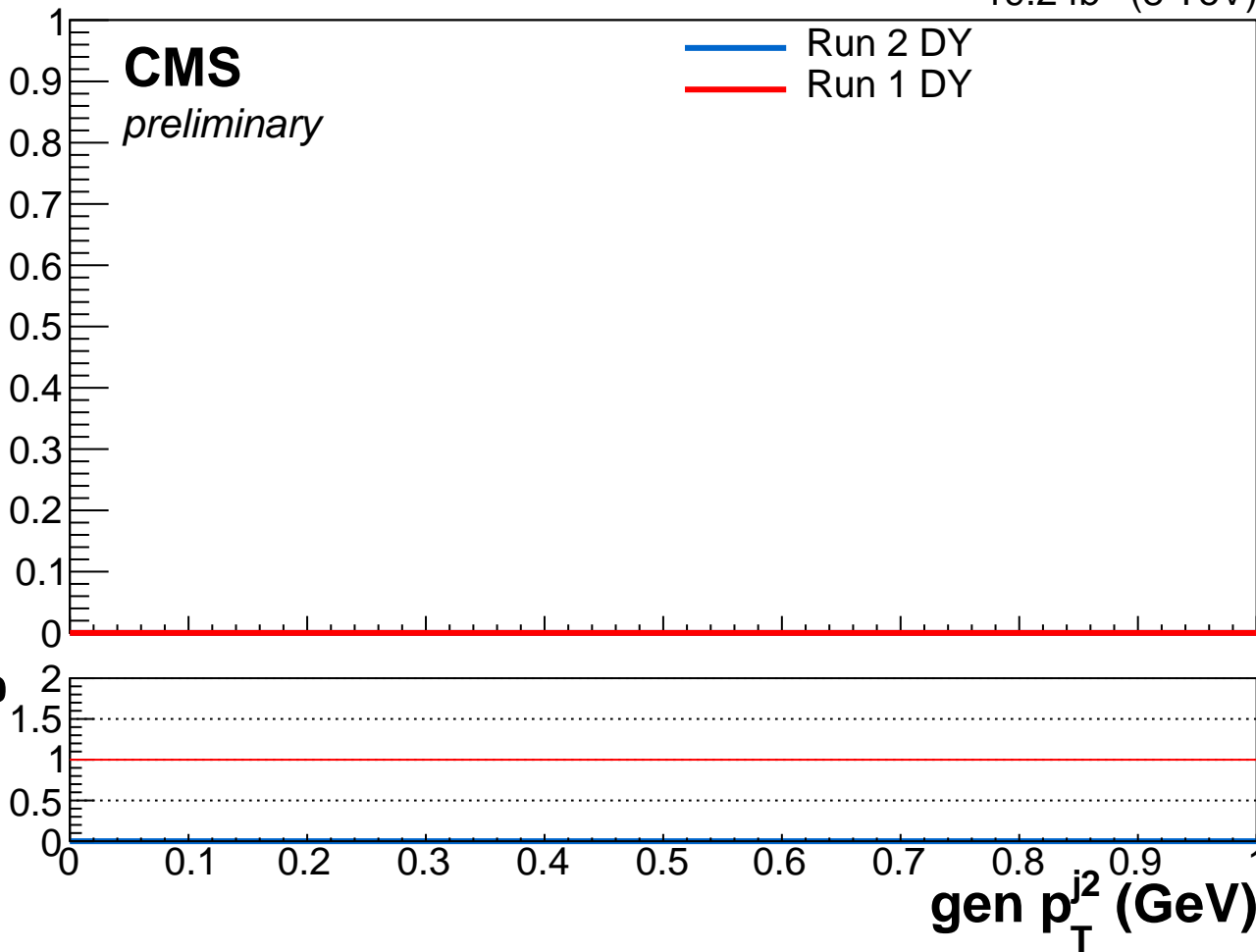
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

gen p<sub>T</sub><sup>j2</sup> (GeV)



19.2 fb<sup>-1</sup> (8 TeV)

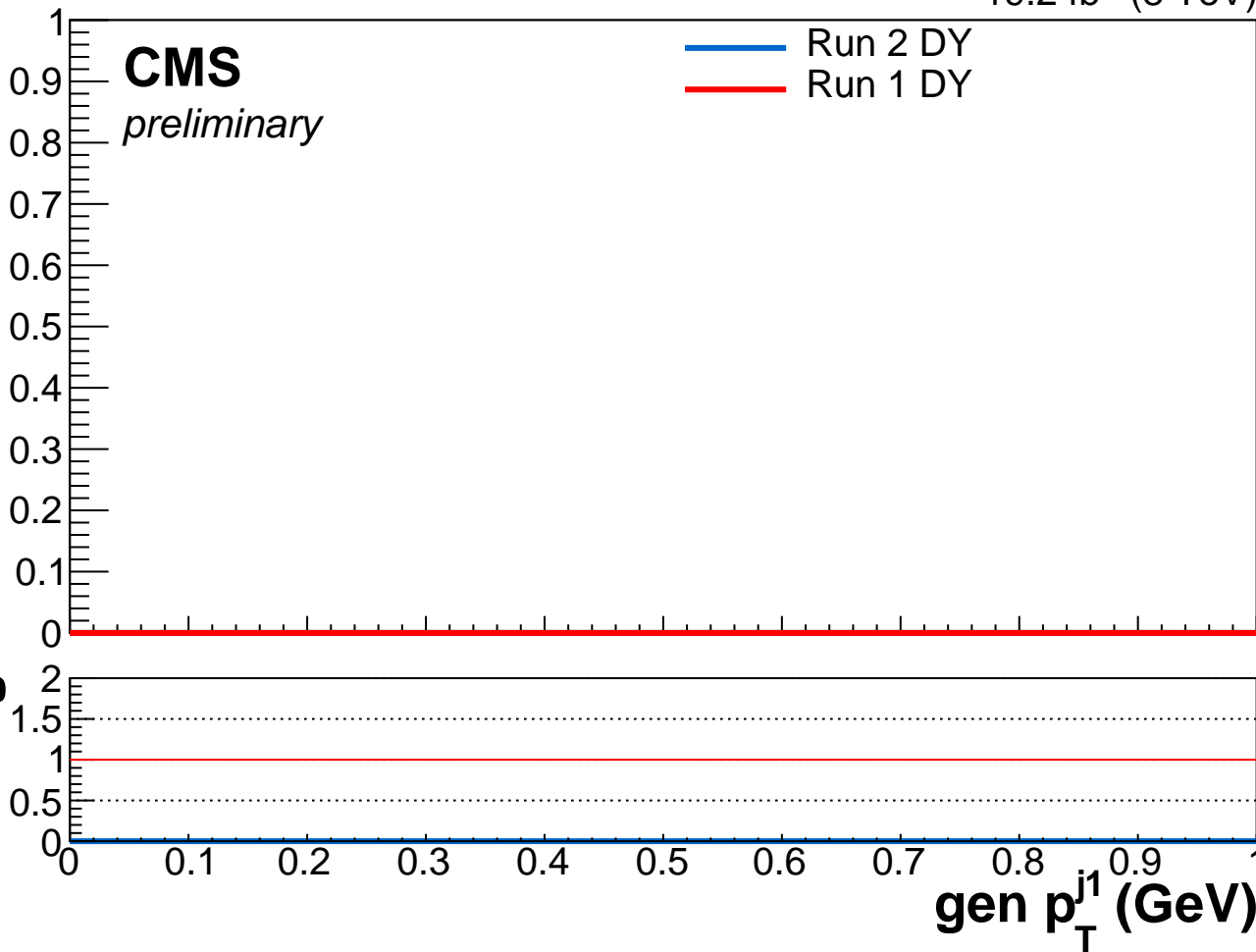
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

gen p<sub>T</sub><sup>j1</sup> (GeV)



19.2 fb<sup>-1</sup> (8 TeV)

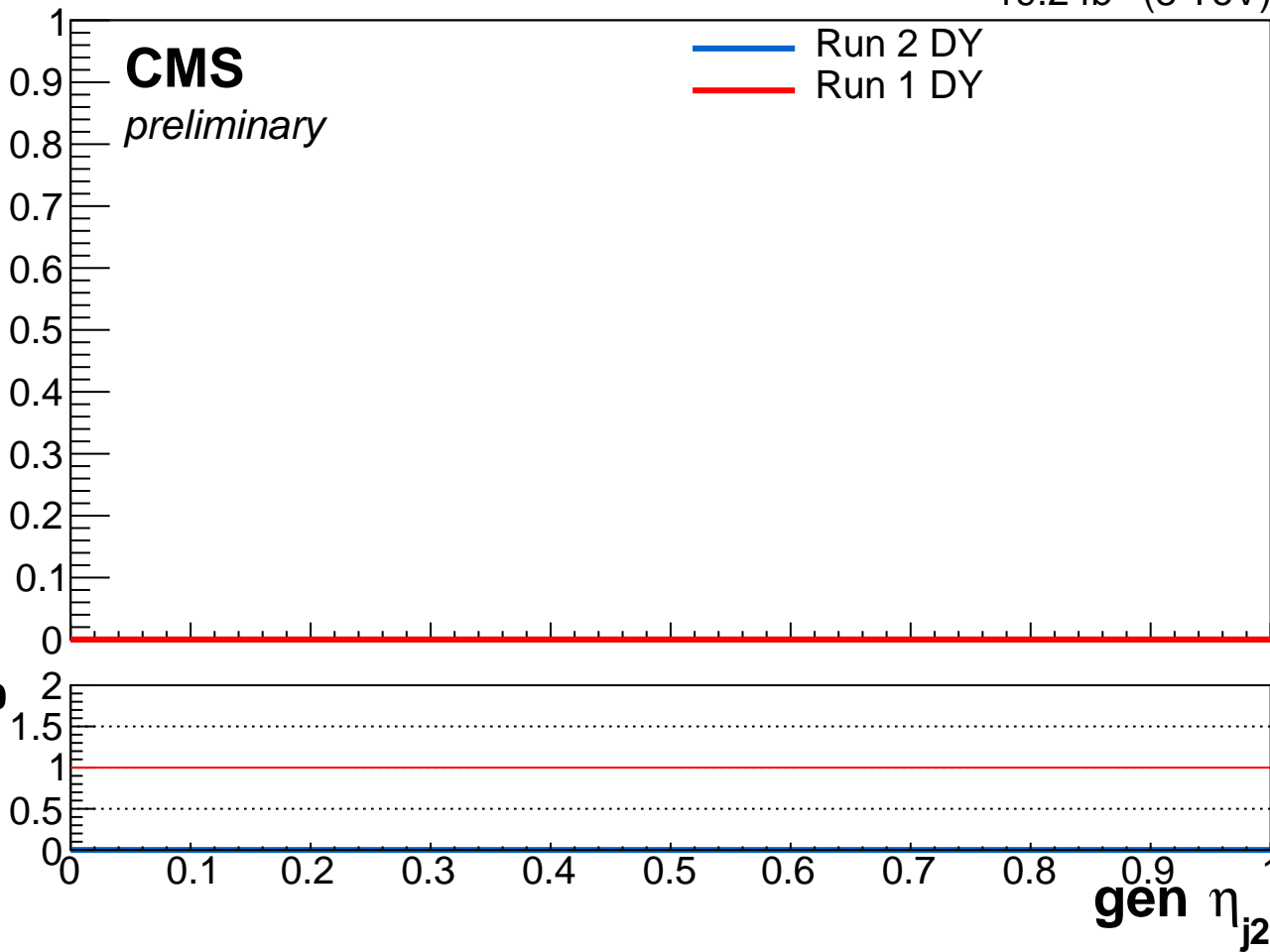
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

gen  $\eta_{j2}$



19.2 fb<sup>-1</sup> (8 TeV)

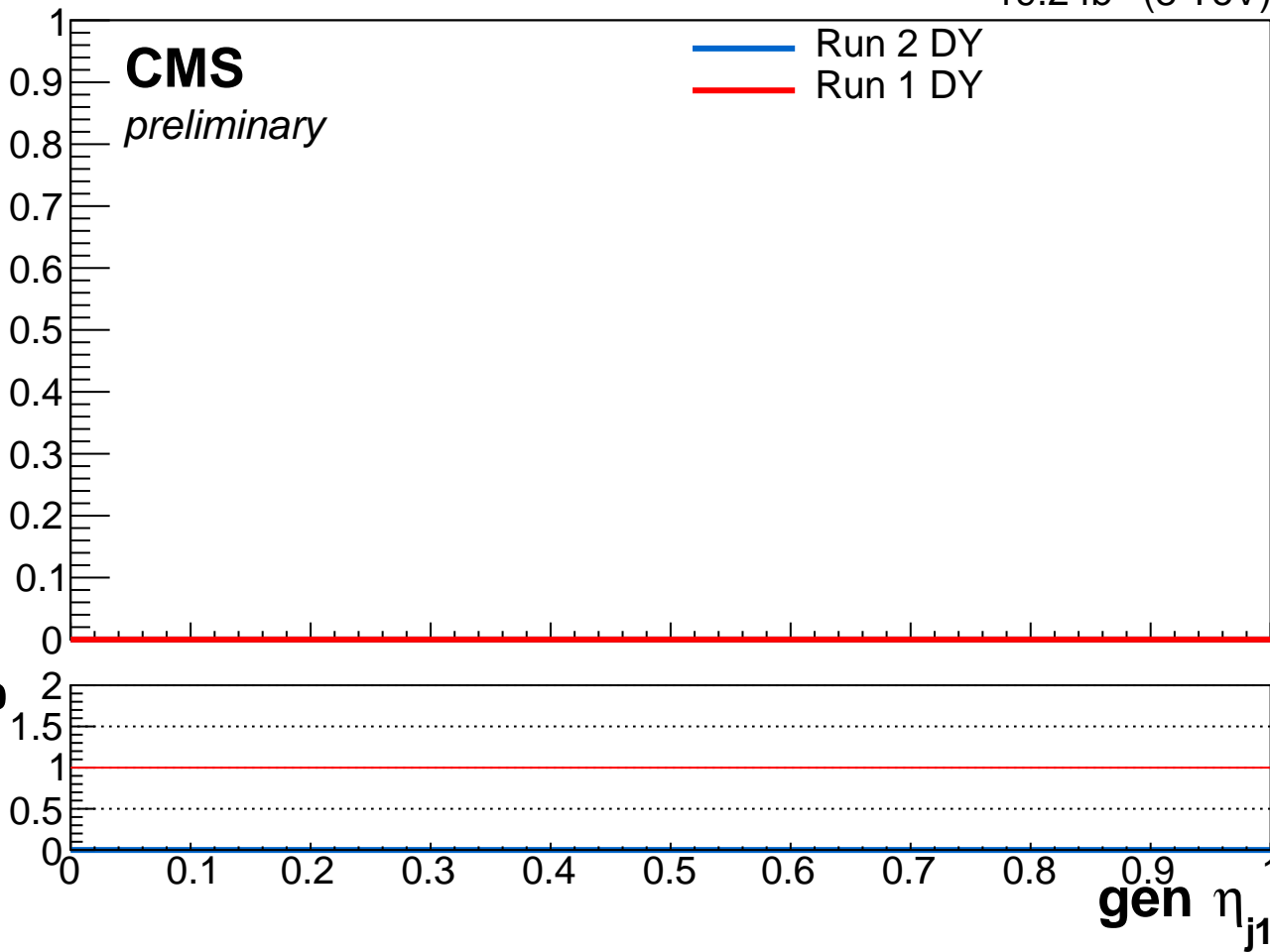
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

gen  $\eta_{j1}$



19.2 fb<sup>-1</sup> (8 TeV)

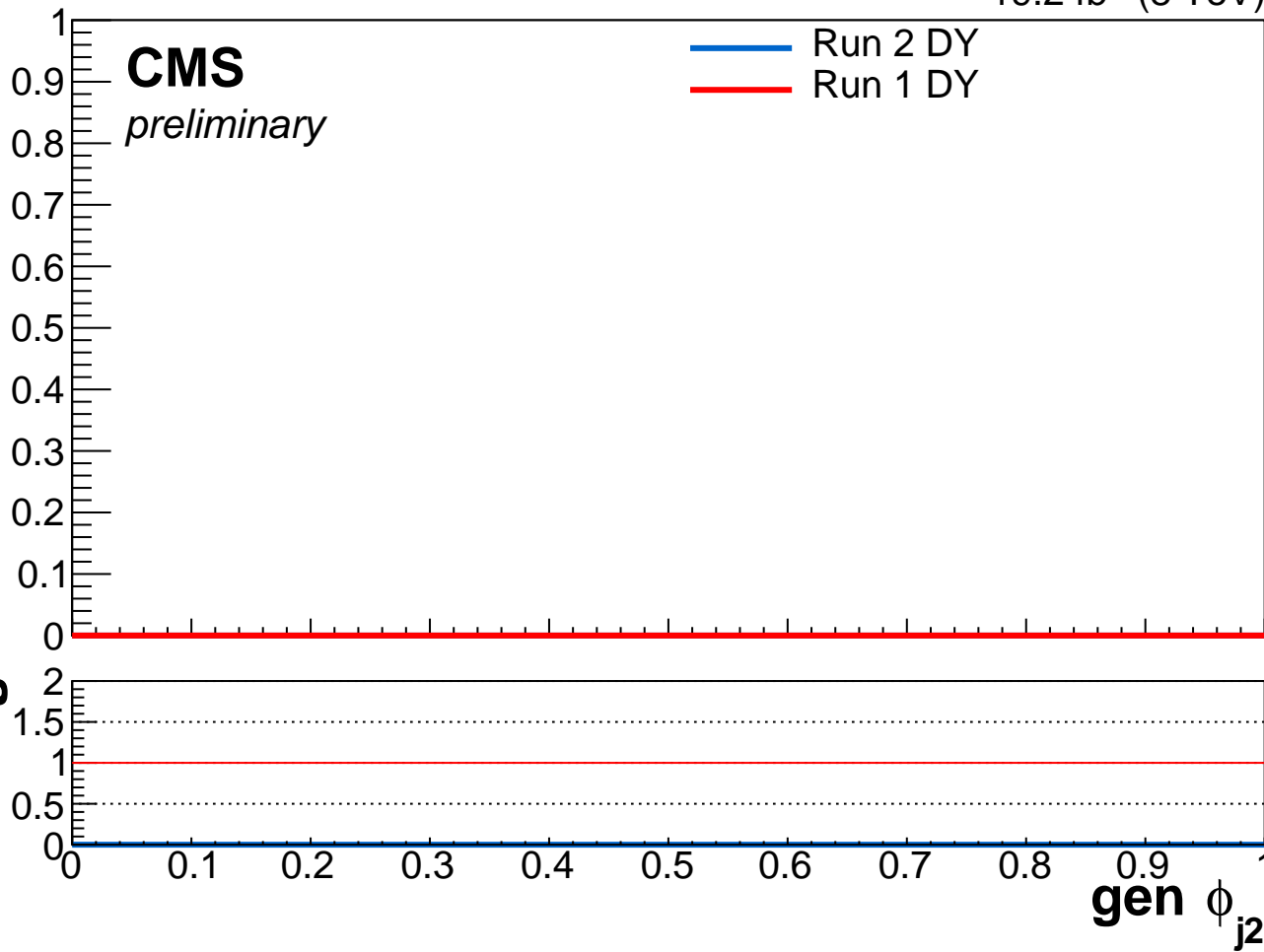
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

gen  $\phi_{j2}$



19.2 fb<sup>-1</sup> (8 TeV)

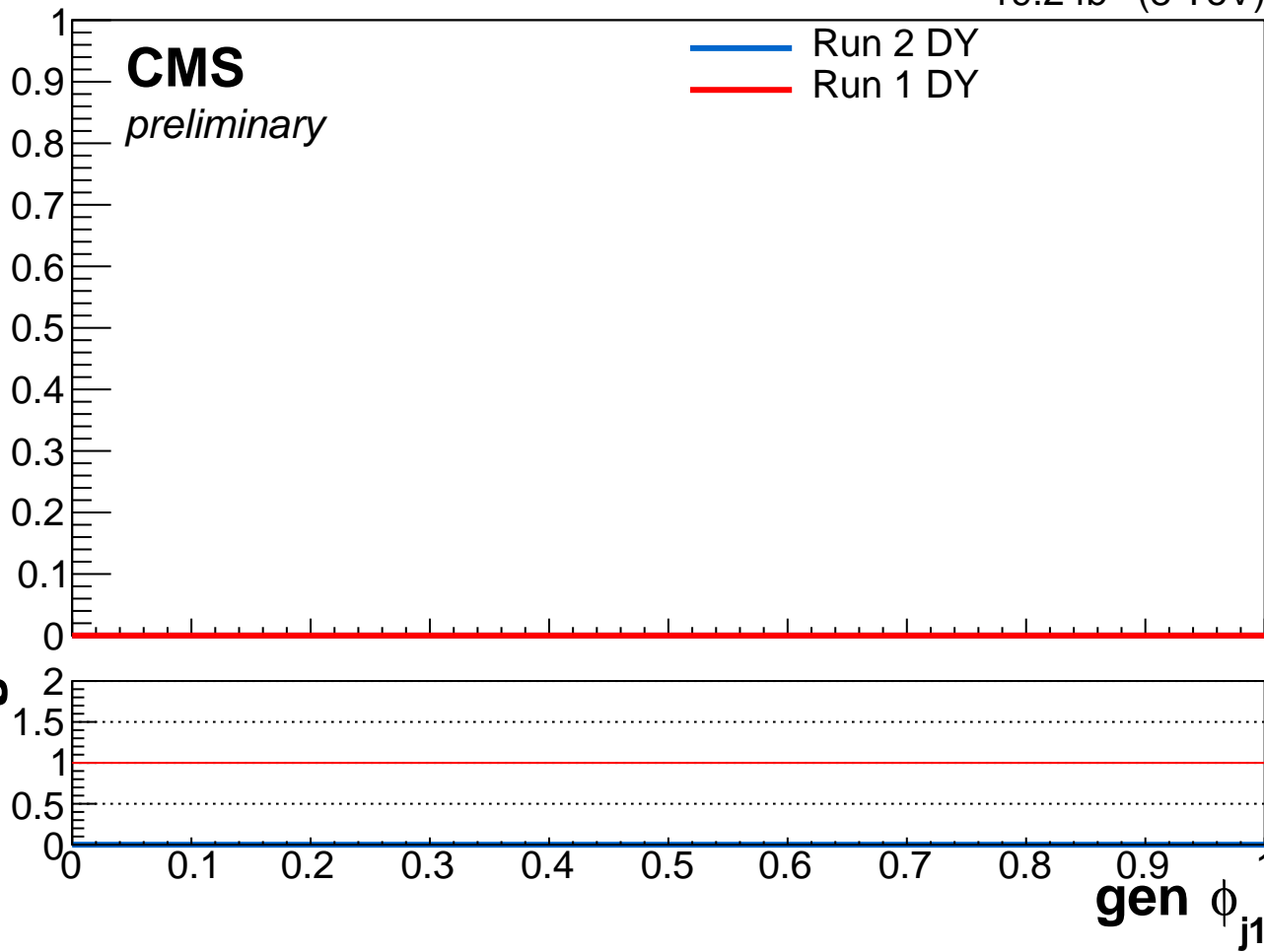
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

gen  $\phi_{j1}$





19.2 fb<sup>-1</sup> (8 TeV)

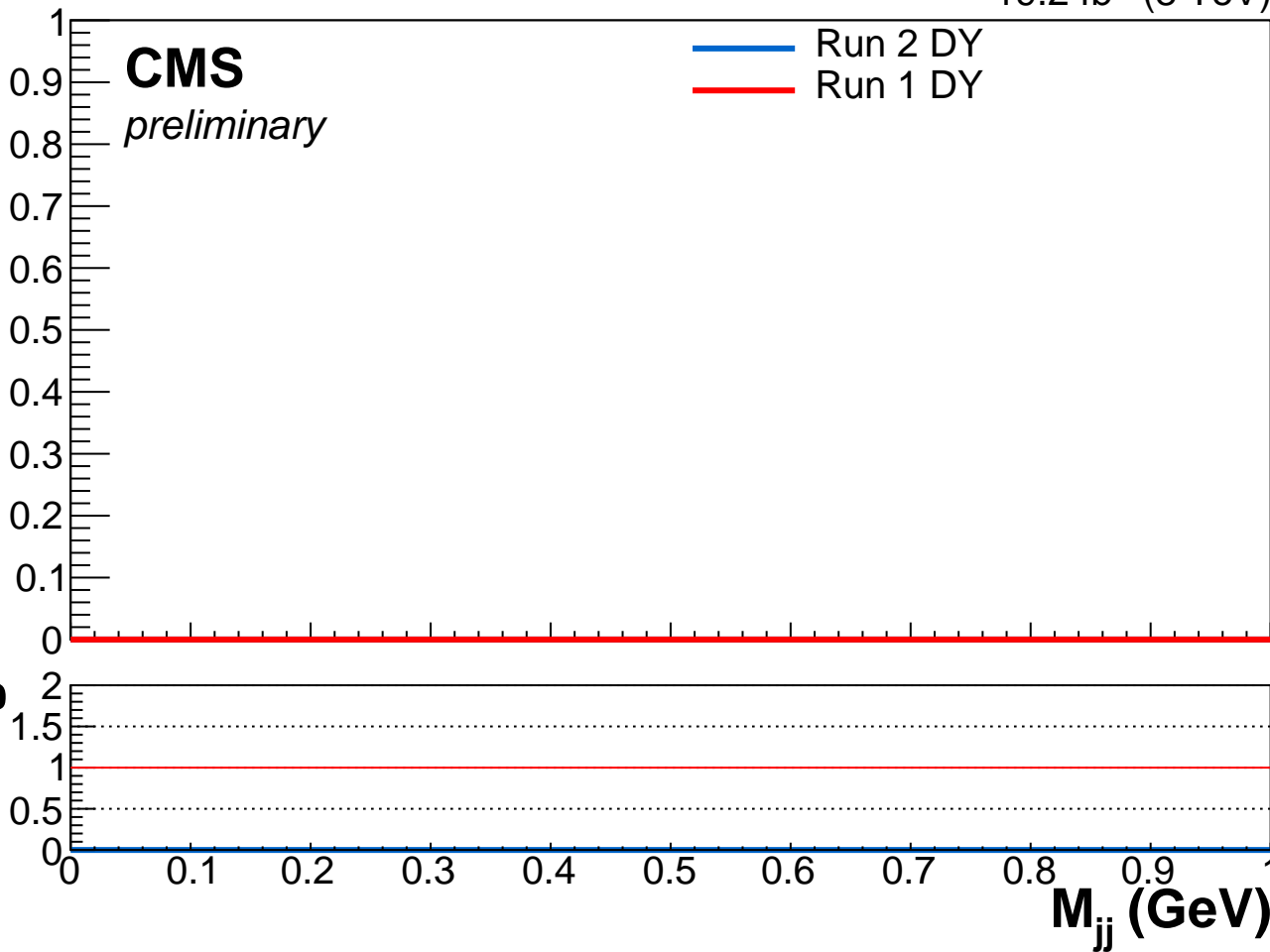
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

M<sub>jj</sub> (GeV)



19.2 fb<sup>-1</sup> (8 TeV)

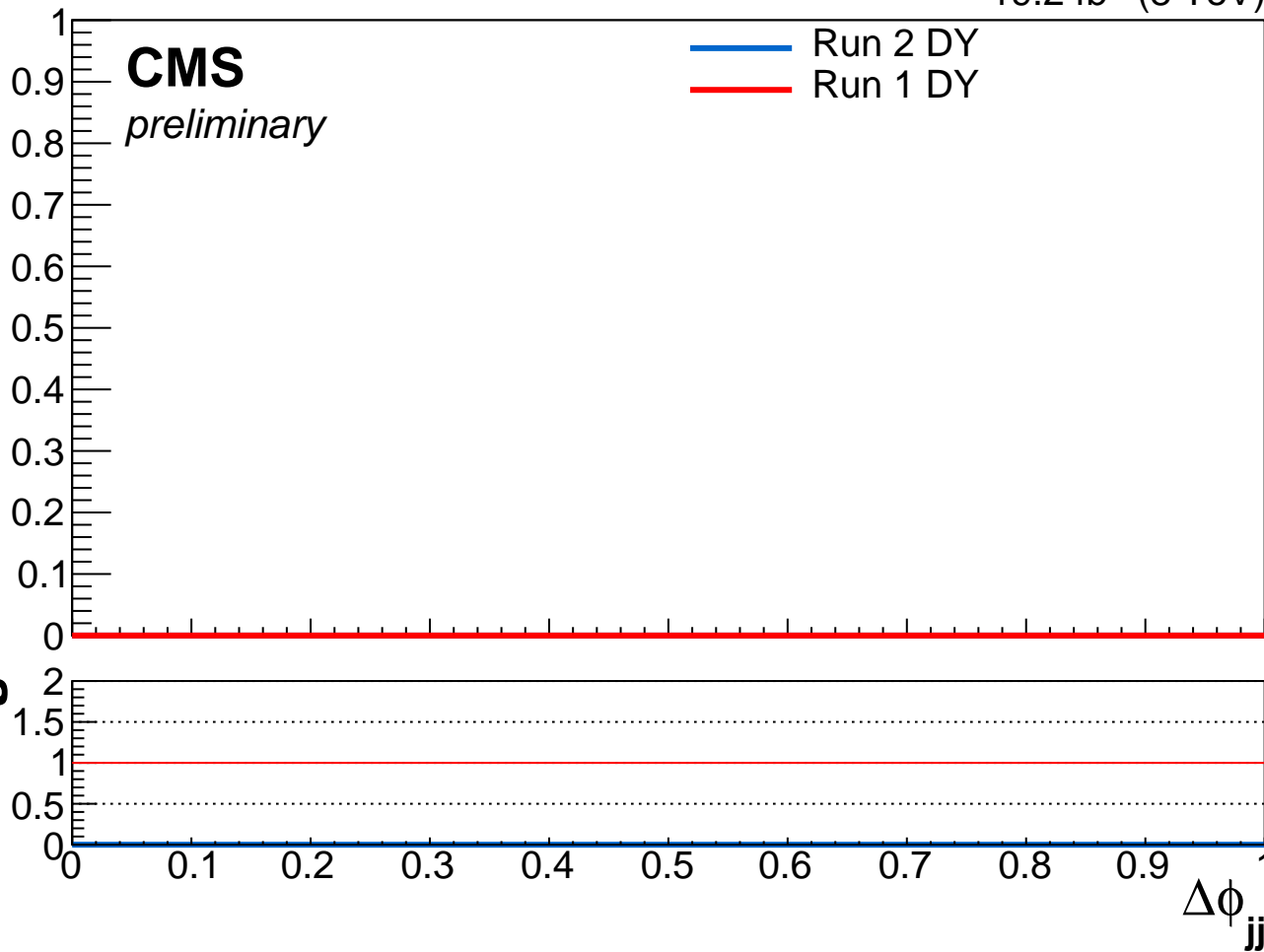
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

$\Delta\phi_{jj}$



19.2 fb<sup>-1</sup> (8 TeV)

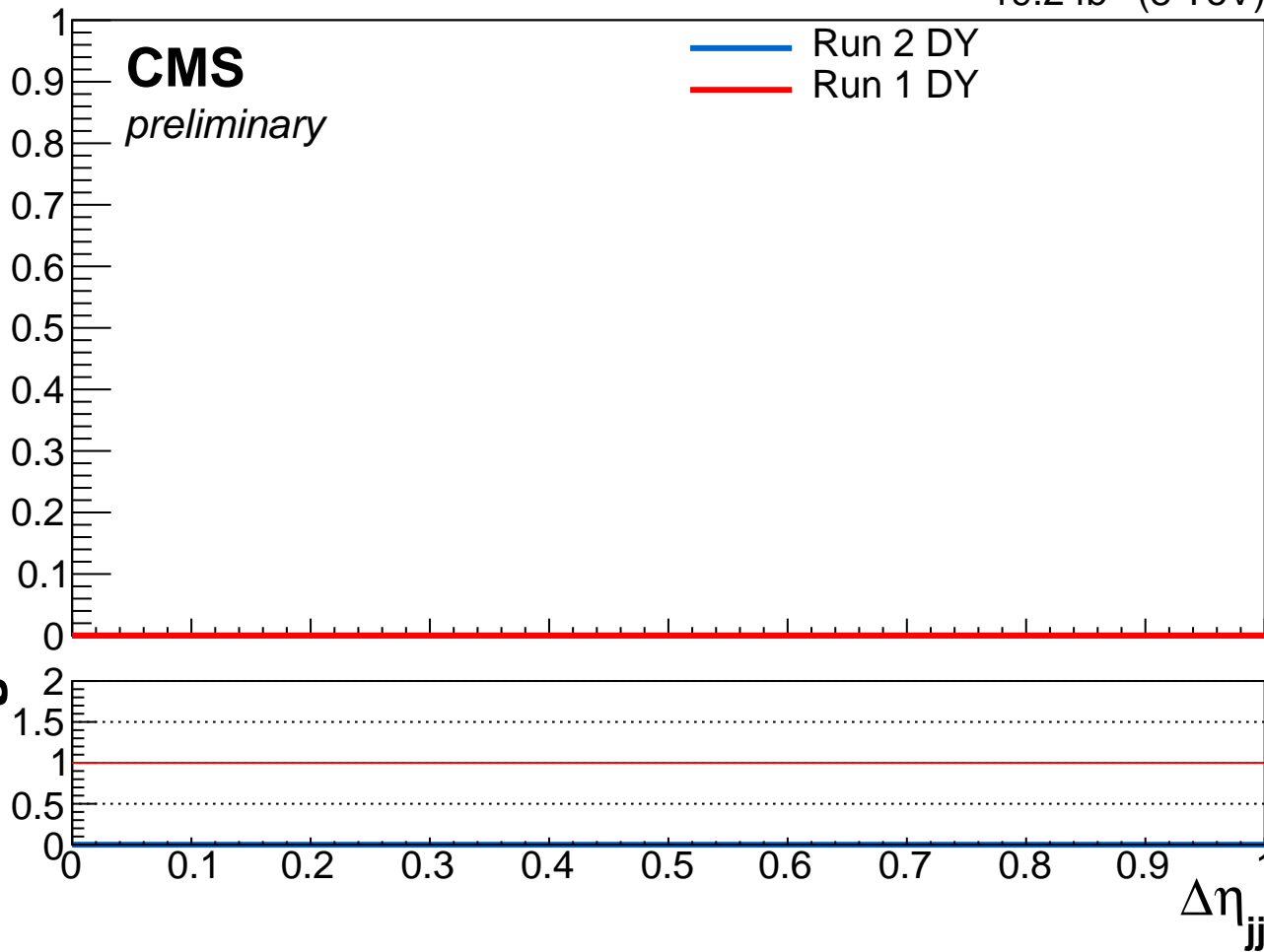
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

$\Delta\eta_{jj}$



19.2 fb<sup>-1</sup> (8 TeV)

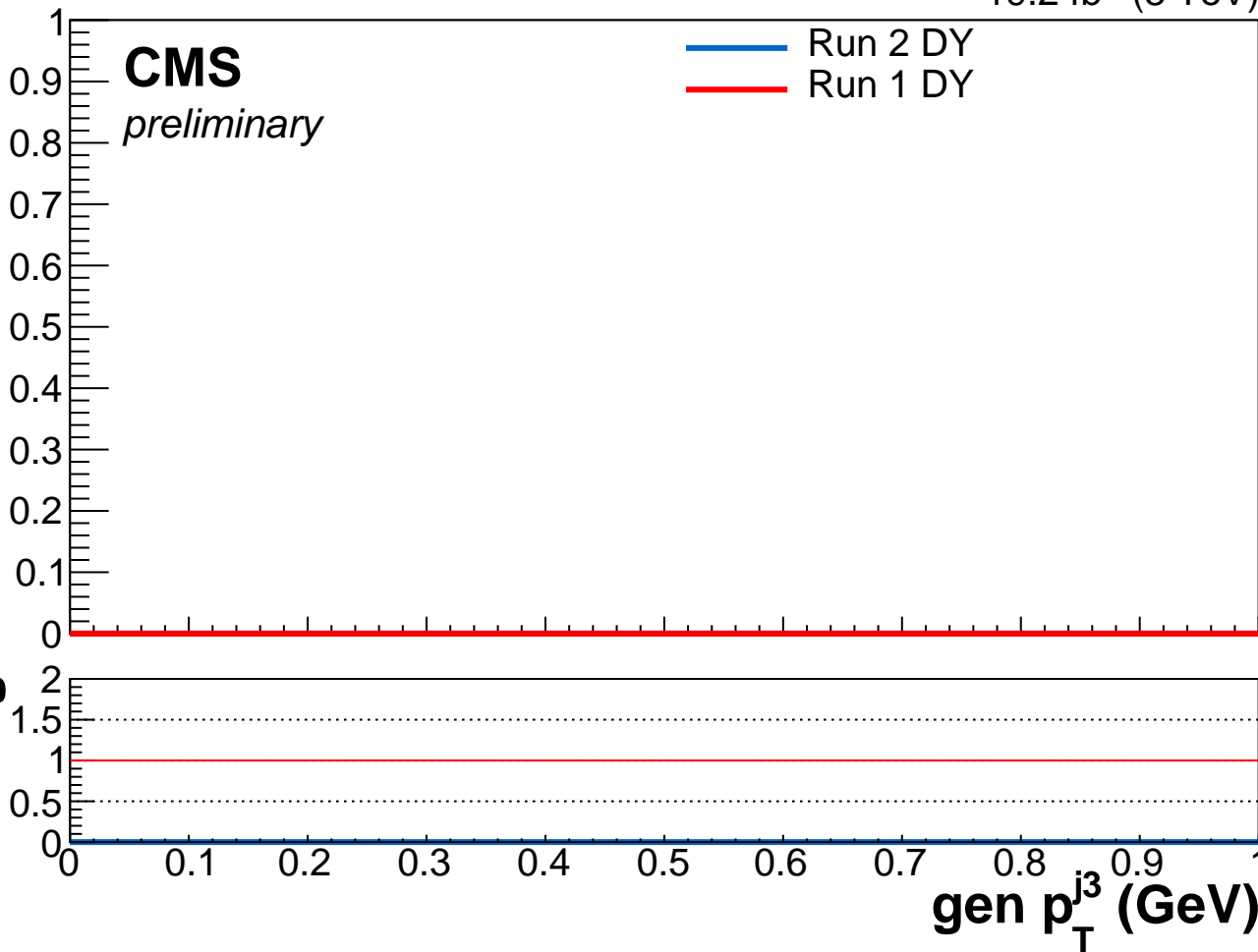
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

gen p<sub>T</sub><sup>j3</sup> (GeV)



19.2 fb<sup>-1</sup> (8 TeV)

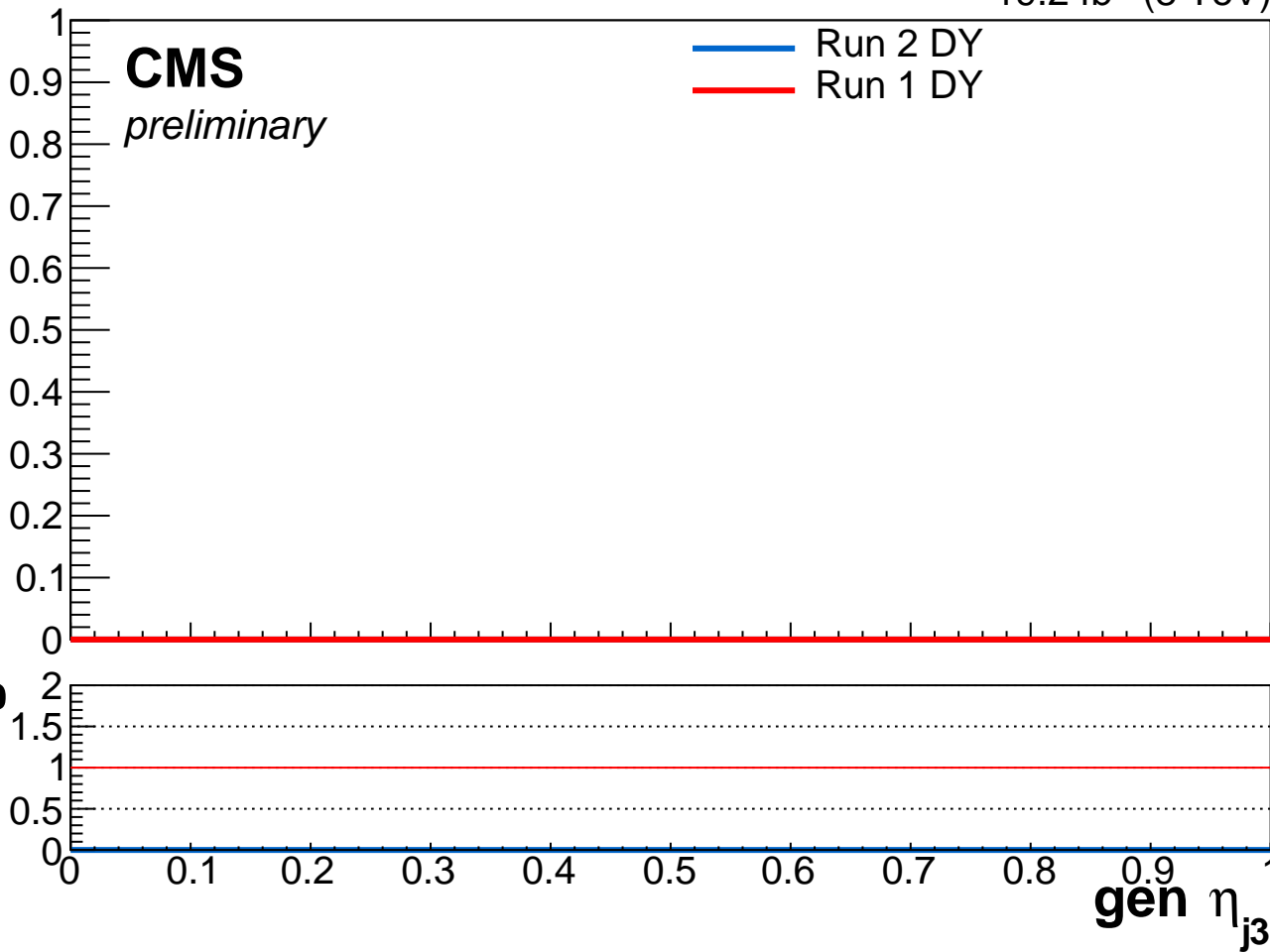
**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

gen  $\eta_{j3}$



19.2 fb<sup>-1</sup> (8 TeV)

**CMS**

*preliminary*

Run 2 DY  
Run 1 DY

Data/Bkg

gen  $\phi_{j3}$

