

19.2 fb⁻¹ (8 TeV)

CMS

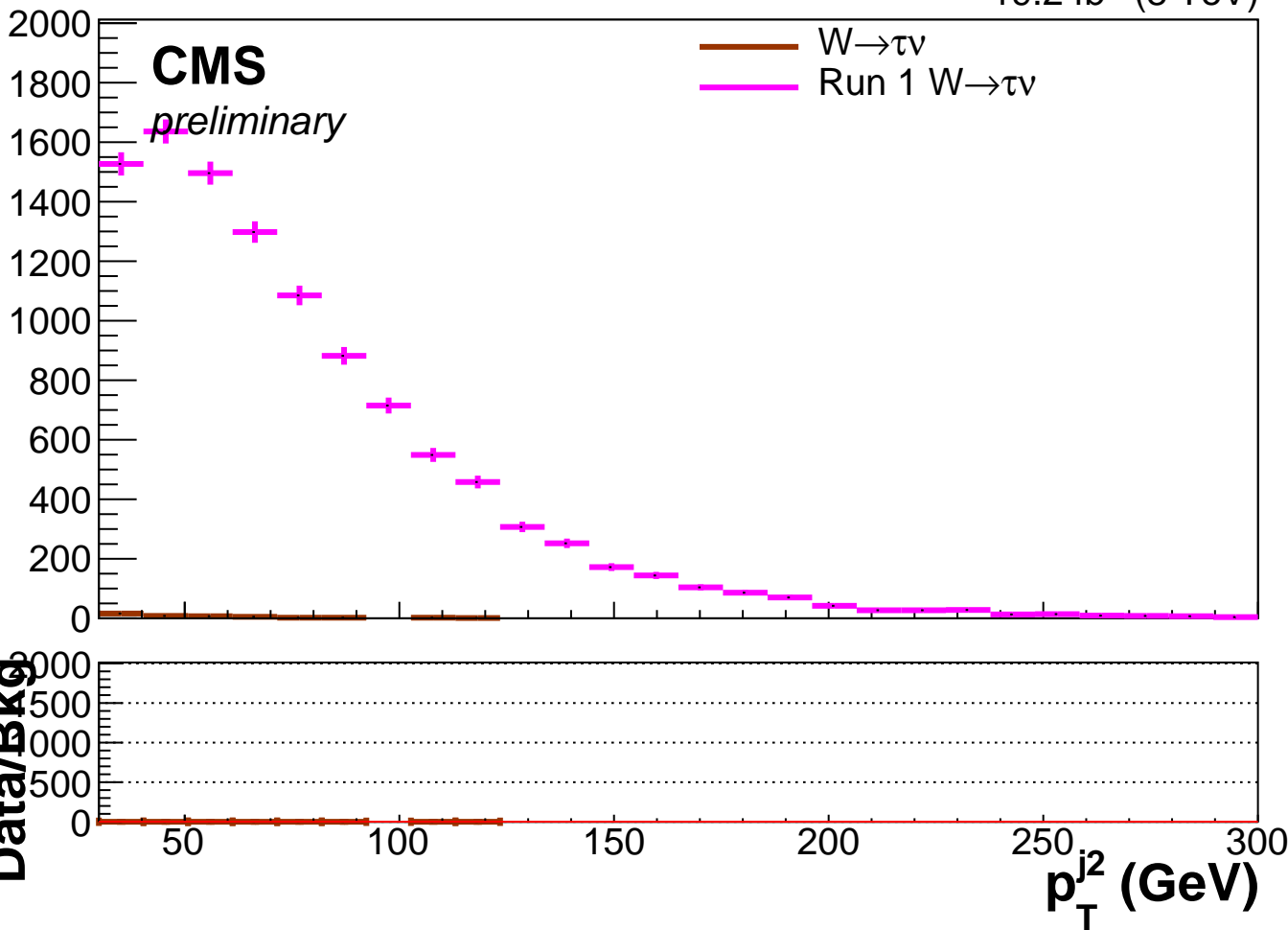
preliminary

— $W \rightarrow \tau \nu$

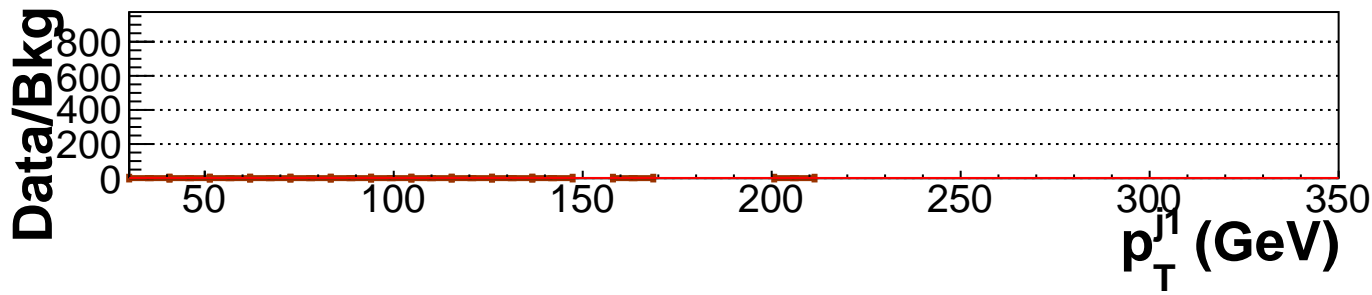
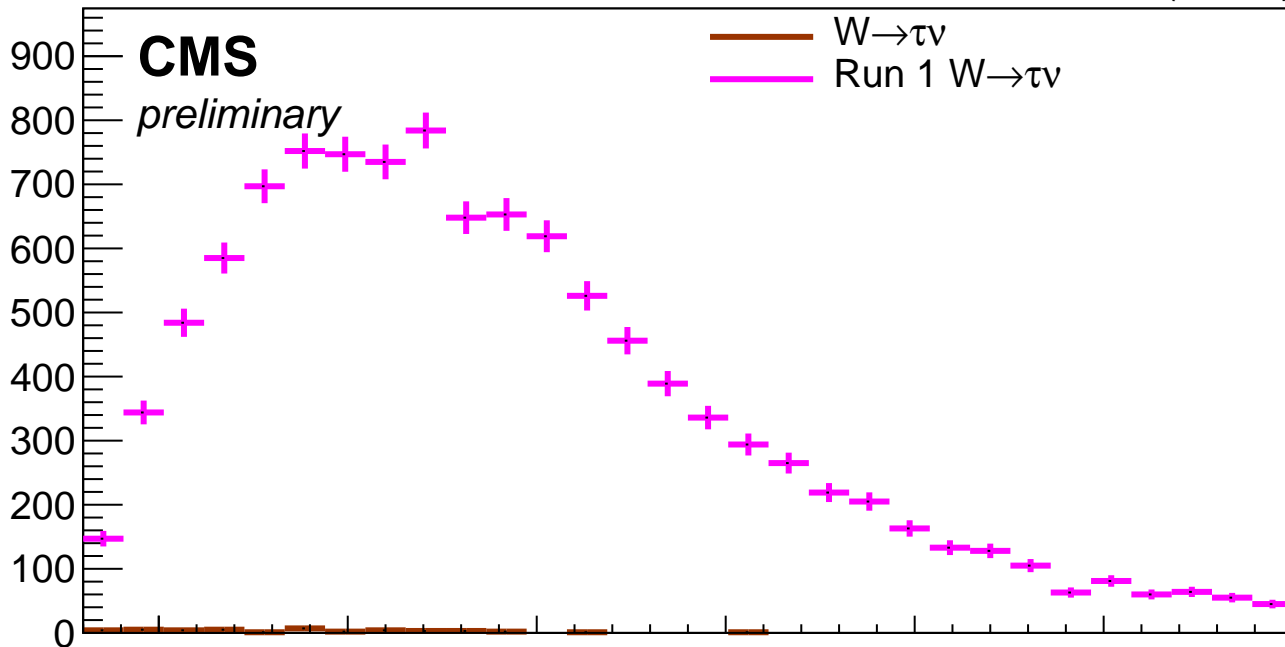
— Run 1 $W \rightarrow \tau \nu$

Data/Bkg

p_T^{j2} (GeV)



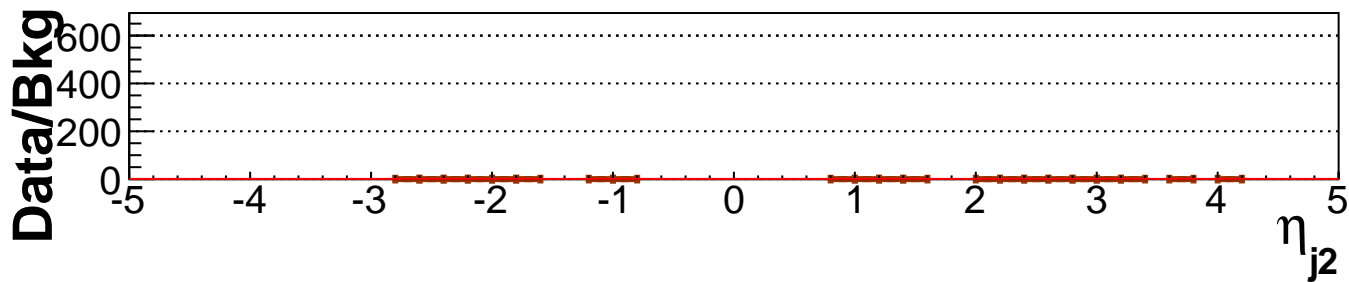
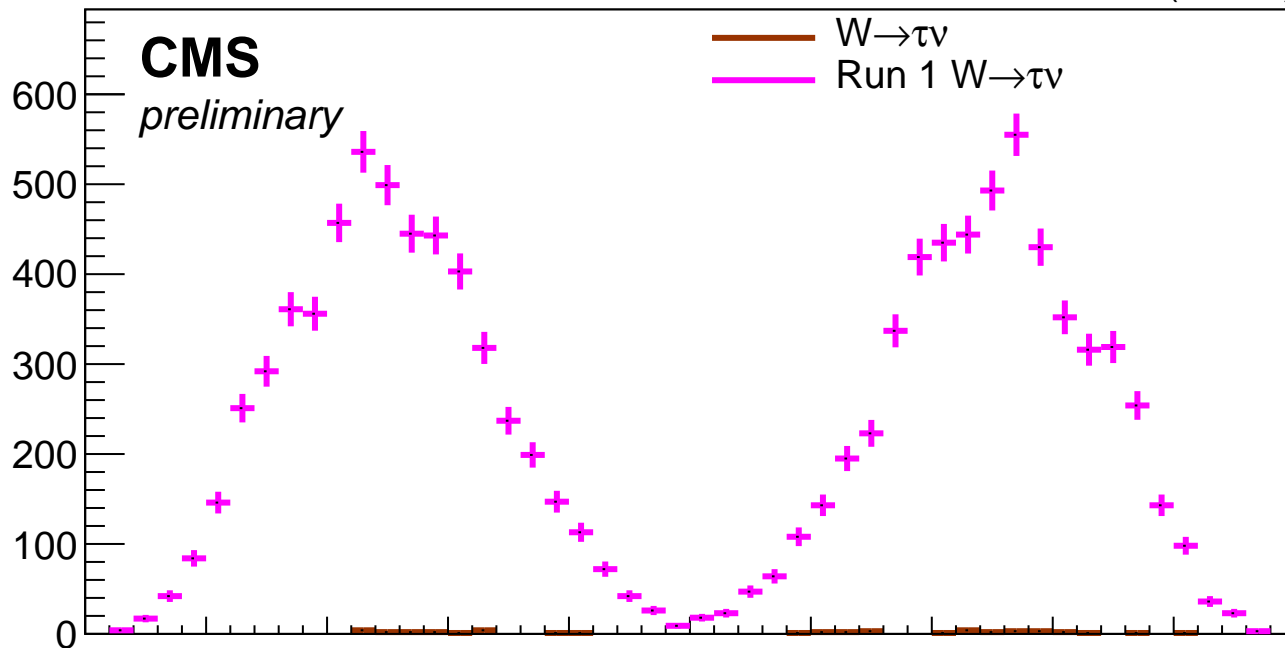
19.2 fb⁻¹ (8 TeV)



19.2 fb⁻¹ (8 TeV)

CMS

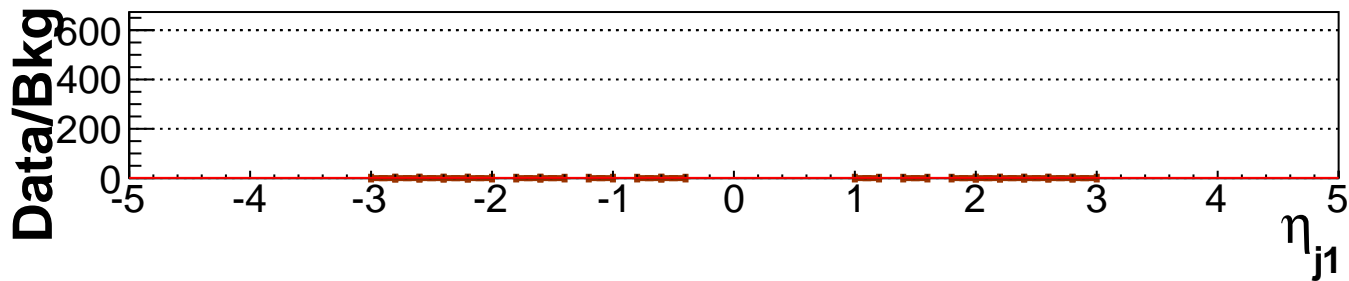
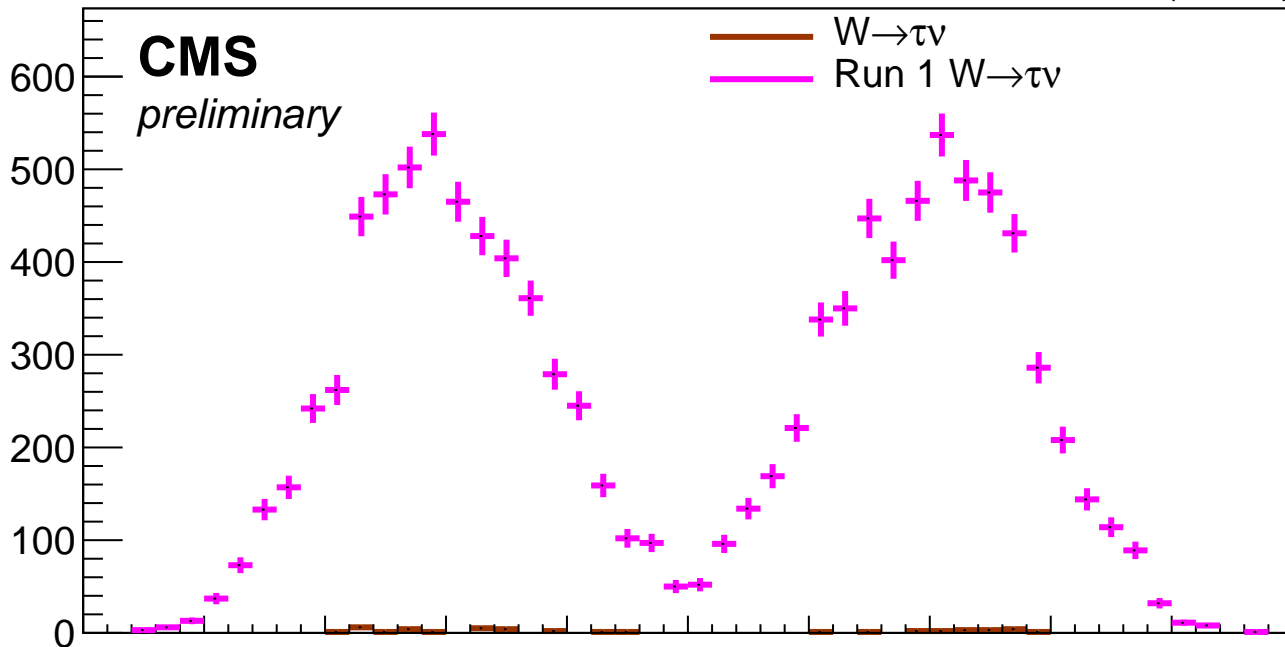
preliminary



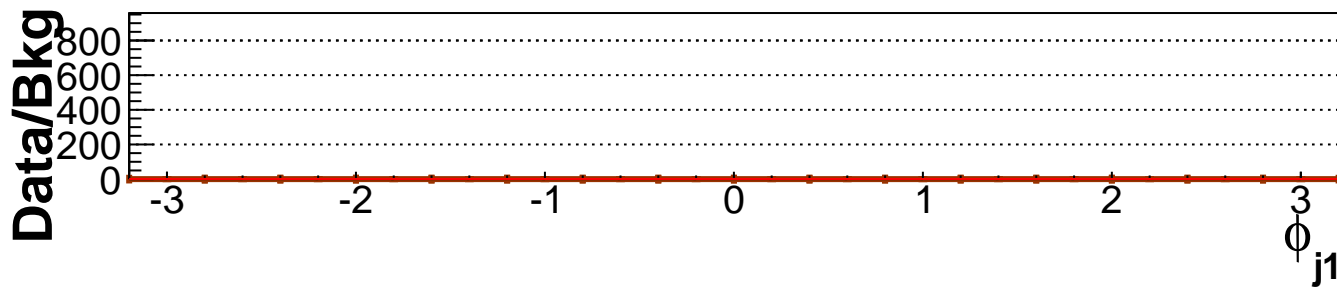
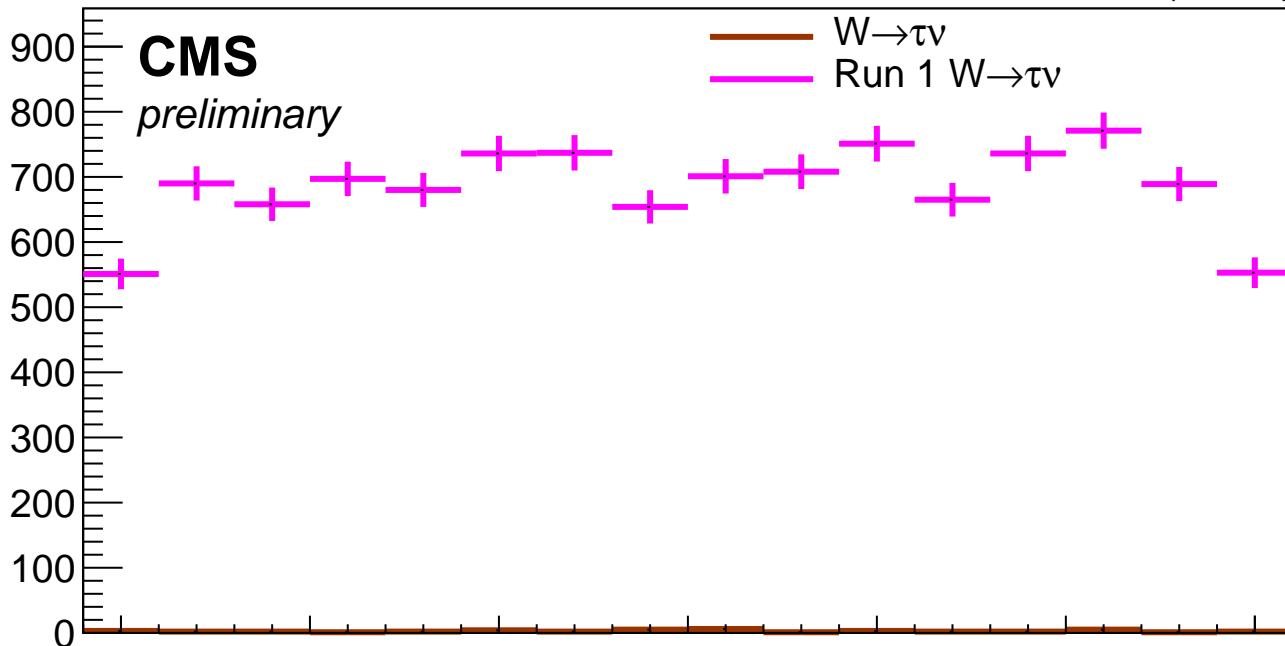
19.2 fb⁻¹ (8 TeV)

CMS
preliminary

— $W \rightarrow \tau \nu$
— Run 1 $W \rightarrow \tau \nu$



19.2 fb⁻¹ (8 TeV)



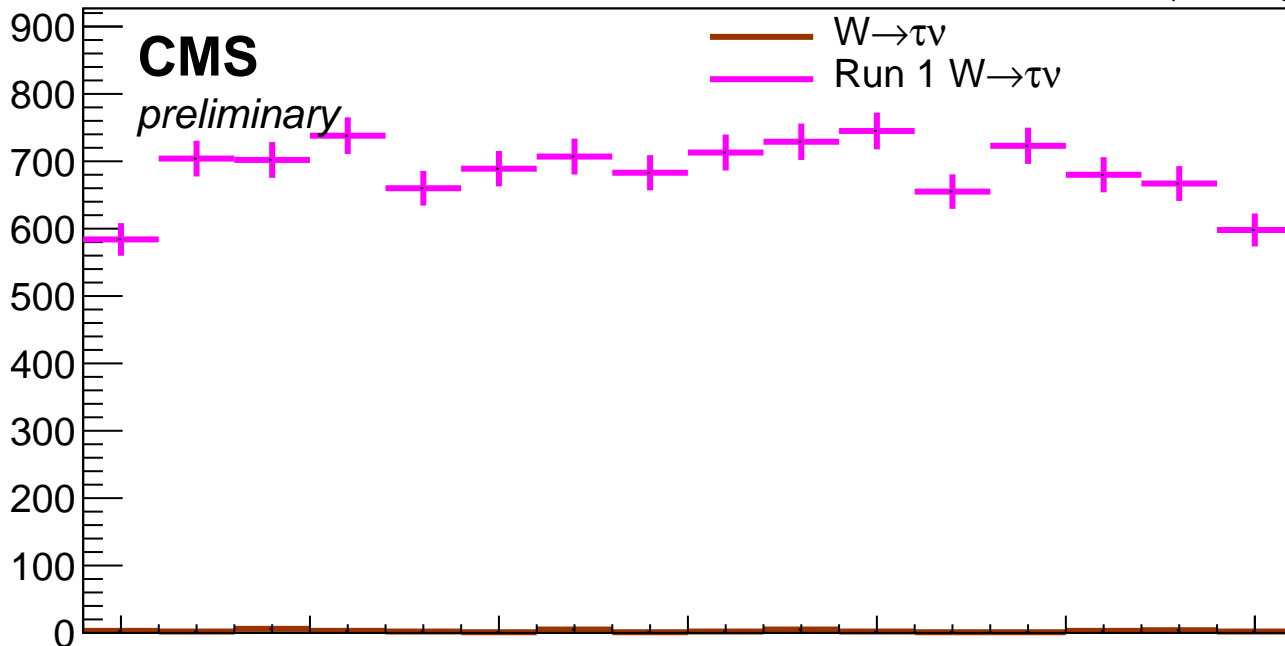
19.2 fb⁻¹ (8 TeV)

CMS

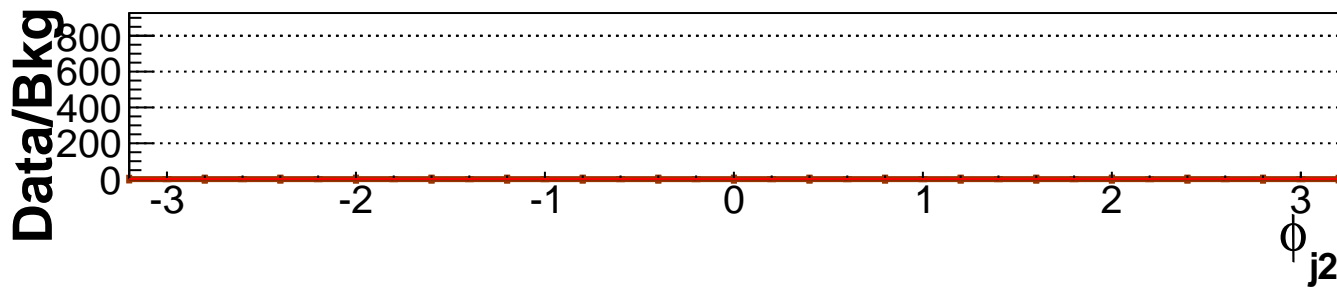
preliminary

— $W \rightarrow \tau \nu$

— Run 1 $W \rightarrow \tau \nu$



Data/Bkg



19.2 fb⁻¹ (8 TeV)

CMS

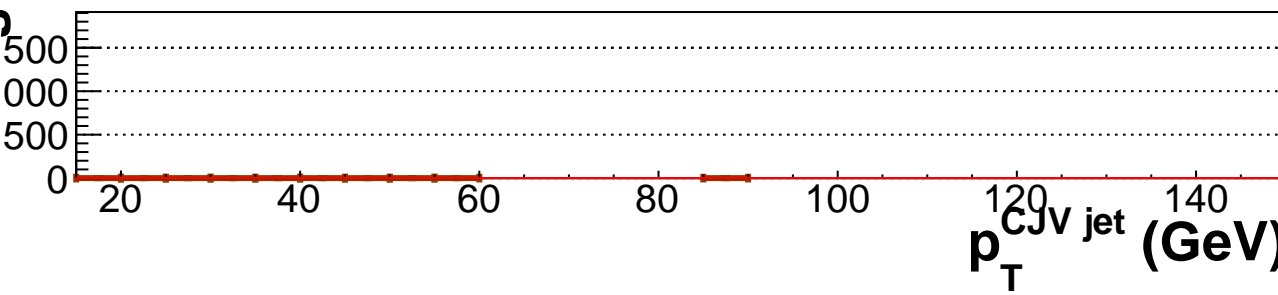
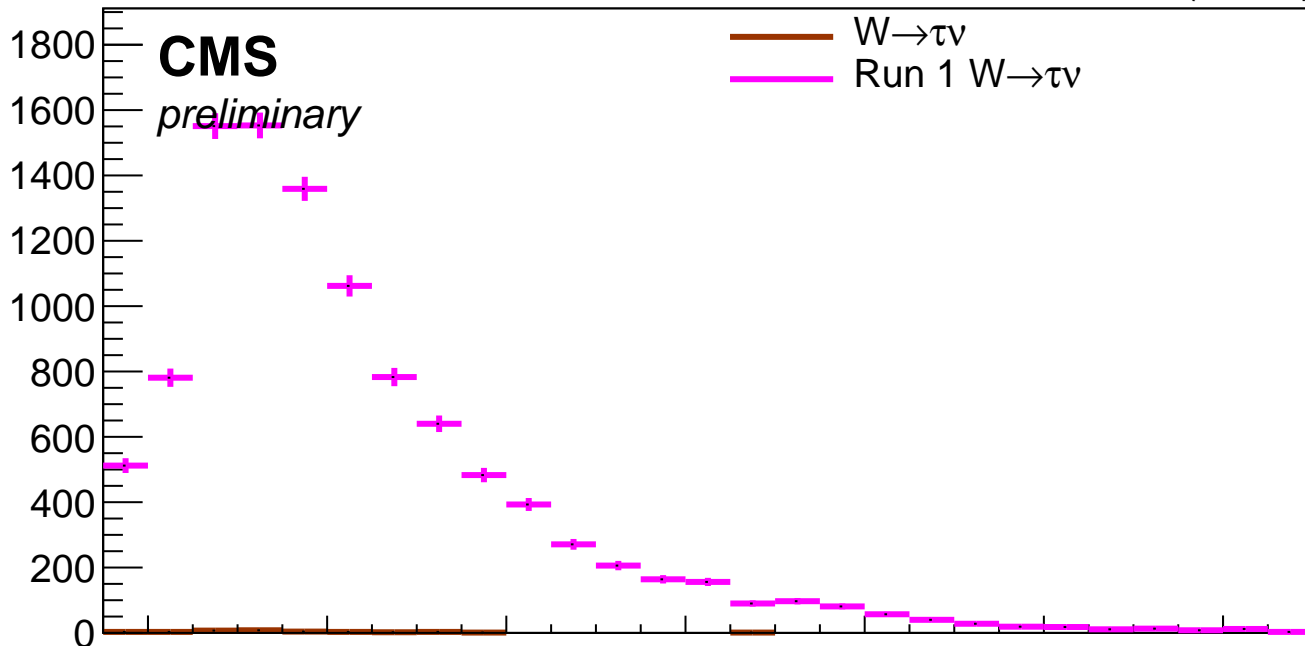
preliminary

W→τν

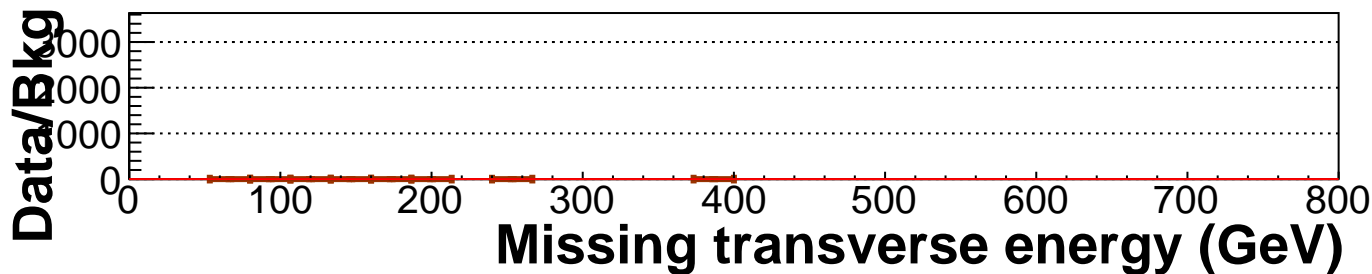
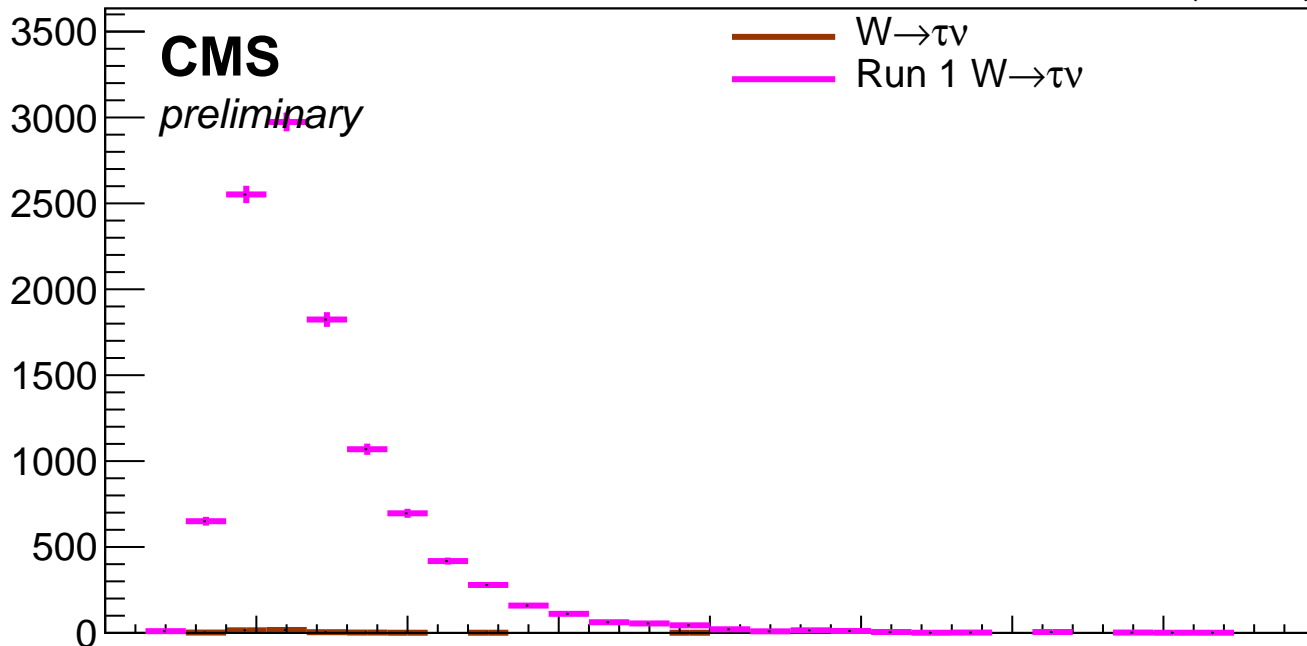
Run 1 W→τν

Data/Bkg

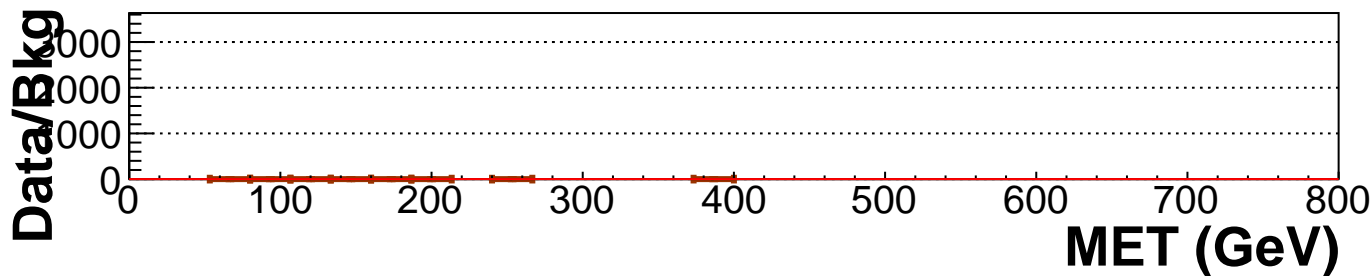
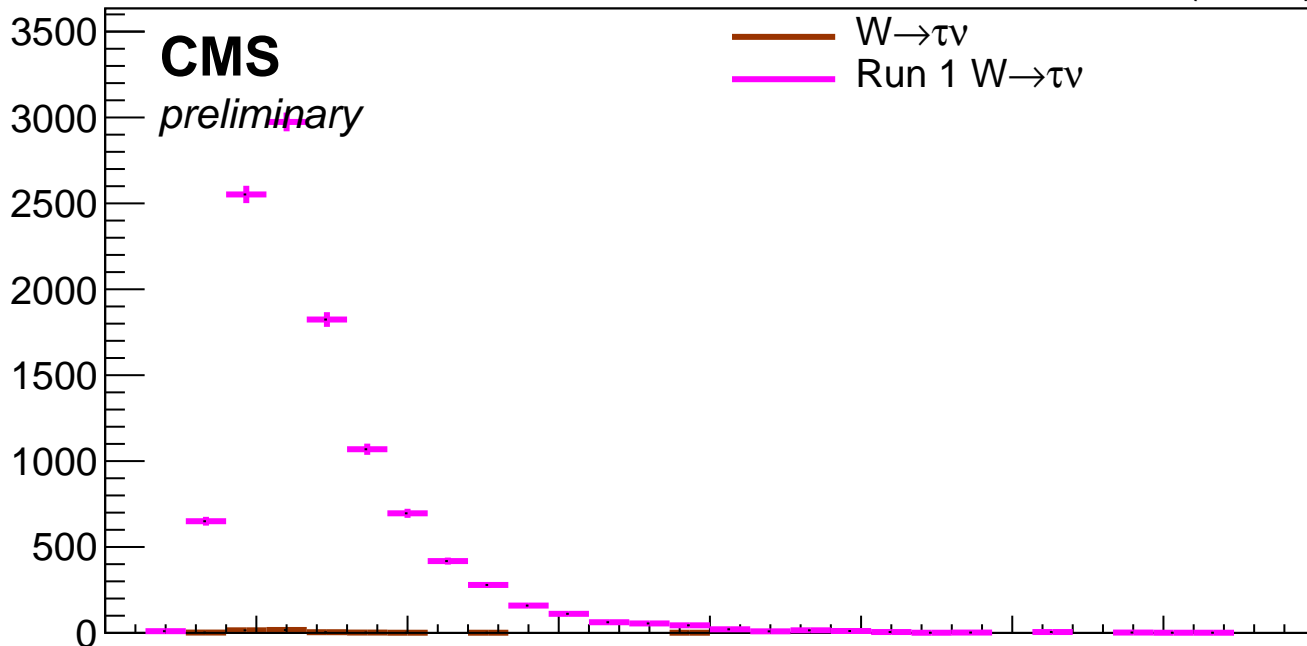
p_T^{CJν jet} (GeV)



19.2 fb⁻¹ (8 TeV)



19.2 fb⁻¹ (8 TeV)



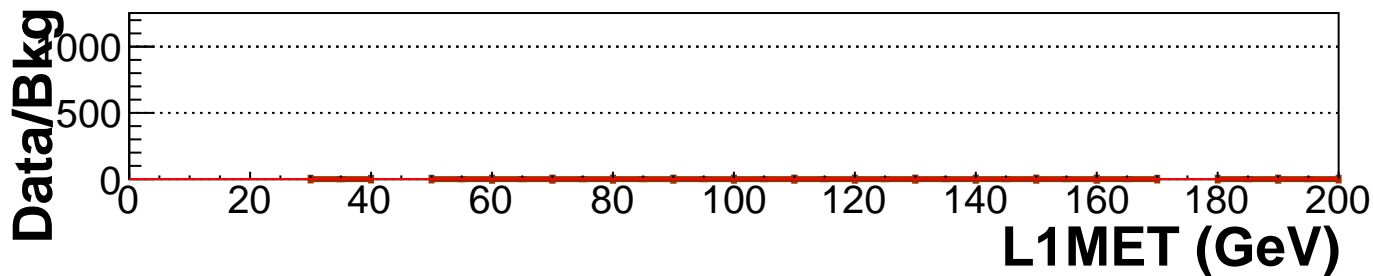
19.2 fb⁻¹ (8 TeV)

CMS

preliminary

— $W \rightarrow \tau \nu$

— Run 1 $W \rightarrow \tau \nu$

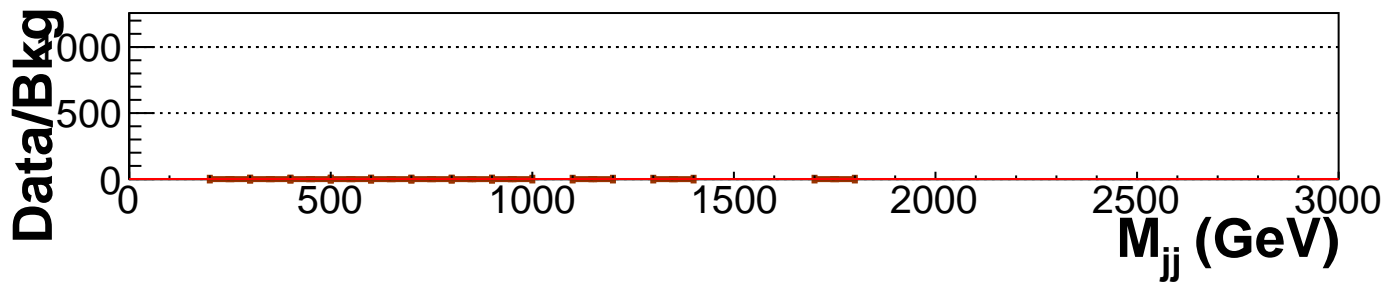


19.2 fb⁻¹ (8 TeV)

CMS

preliminary

— $W \rightarrow \tau \nu$
— Run 1 $W \rightarrow \tau \nu$



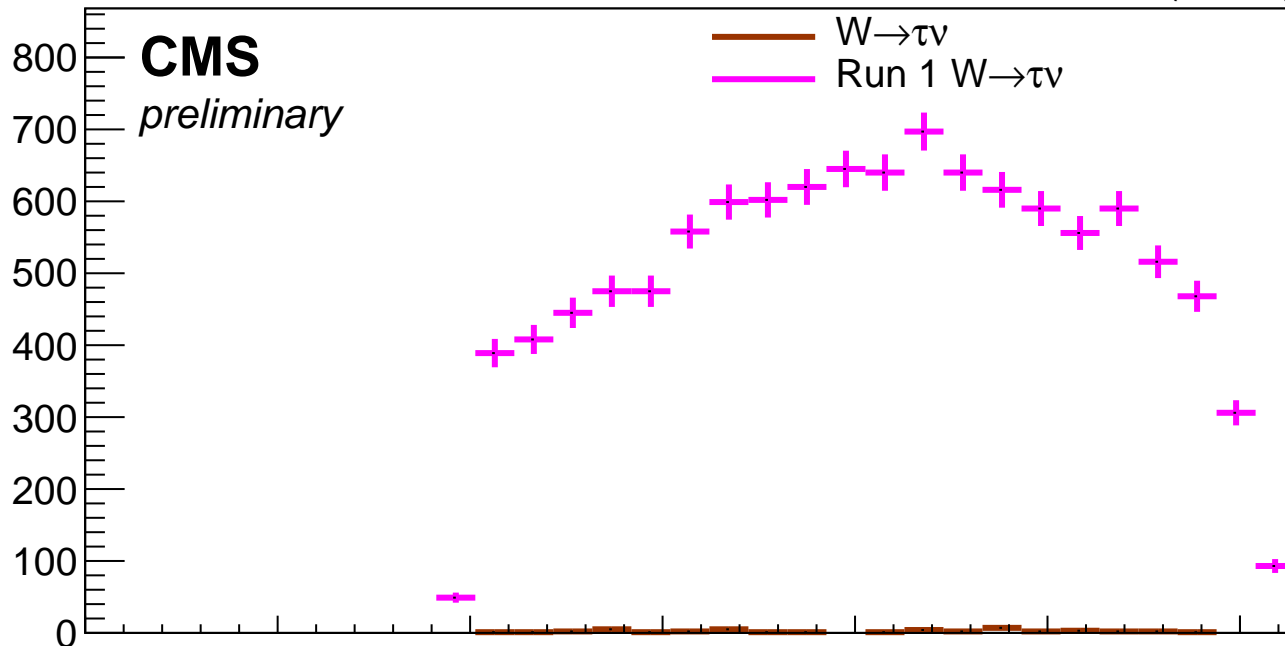
19.2 fb⁻¹ (8 TeV)

CMS

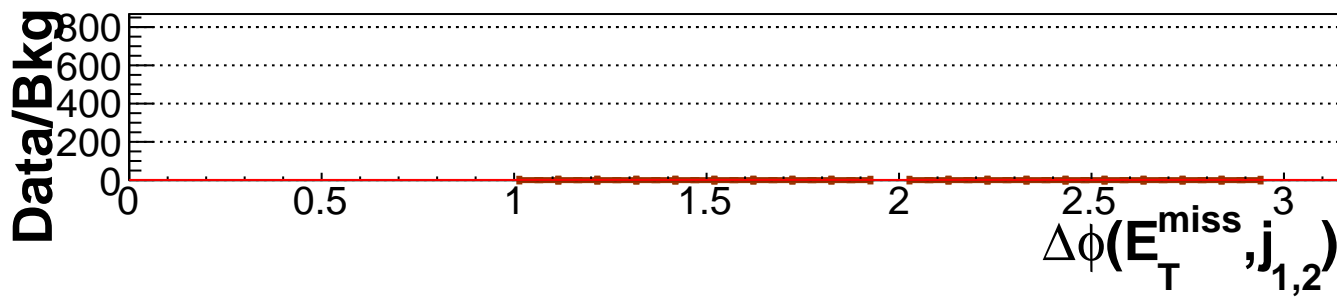
preliminary

— $W \rightarrow \tau \nu$

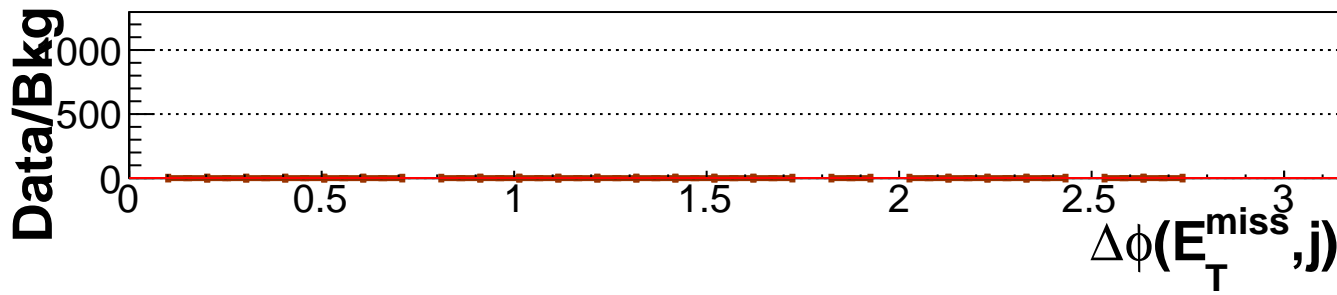
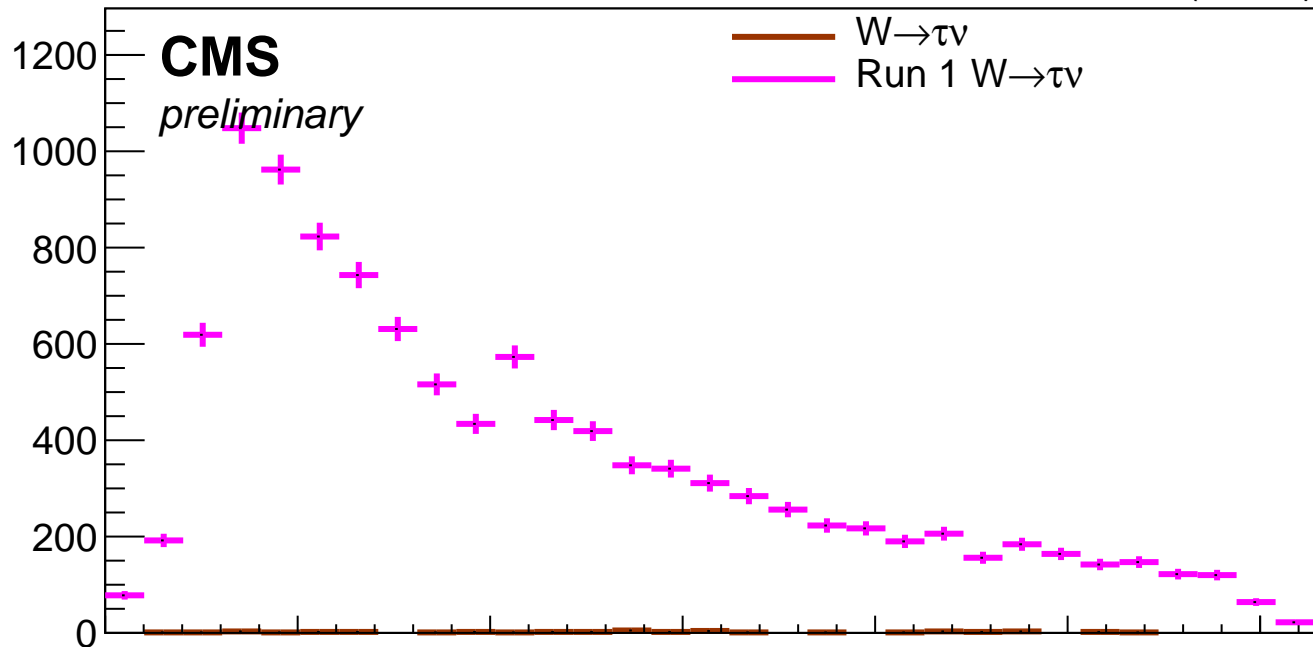
— Run 1 $W \rightarrow \tau \nu$



Data/Bkg



19.2 fb⁻¹ (8 TeV)

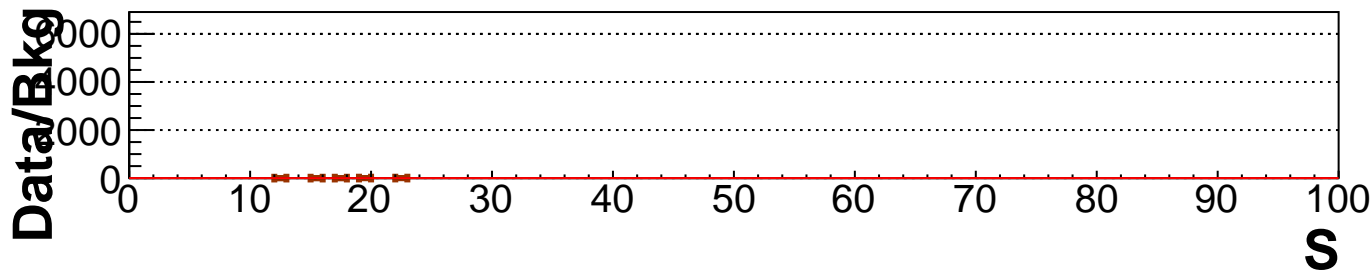
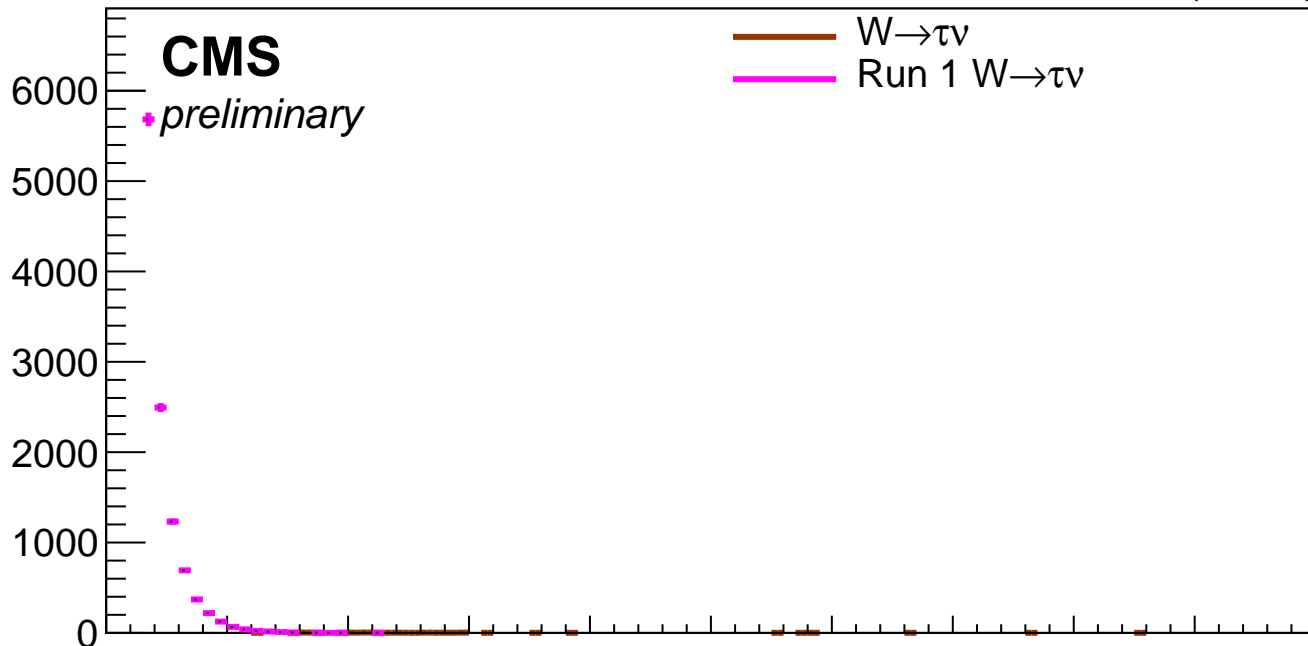


19.2 fb⁻¹ (8 TeV)

CMS

— $W \rightarrow \tau \nu$
— Run 1 $W \rightarrow \tau \nu$

* *preliminary*



19.2 fb⁻¹ (8 TeV)

CMS

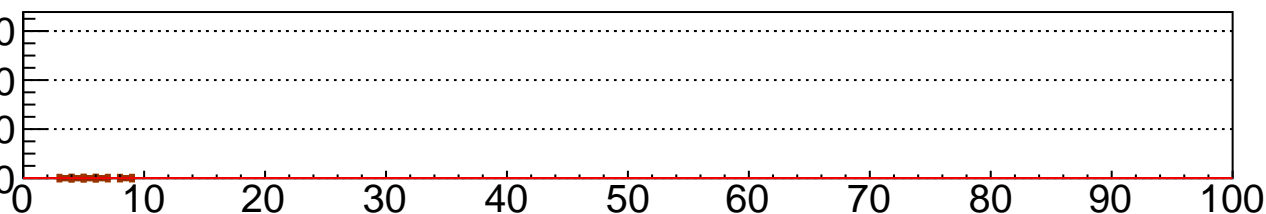
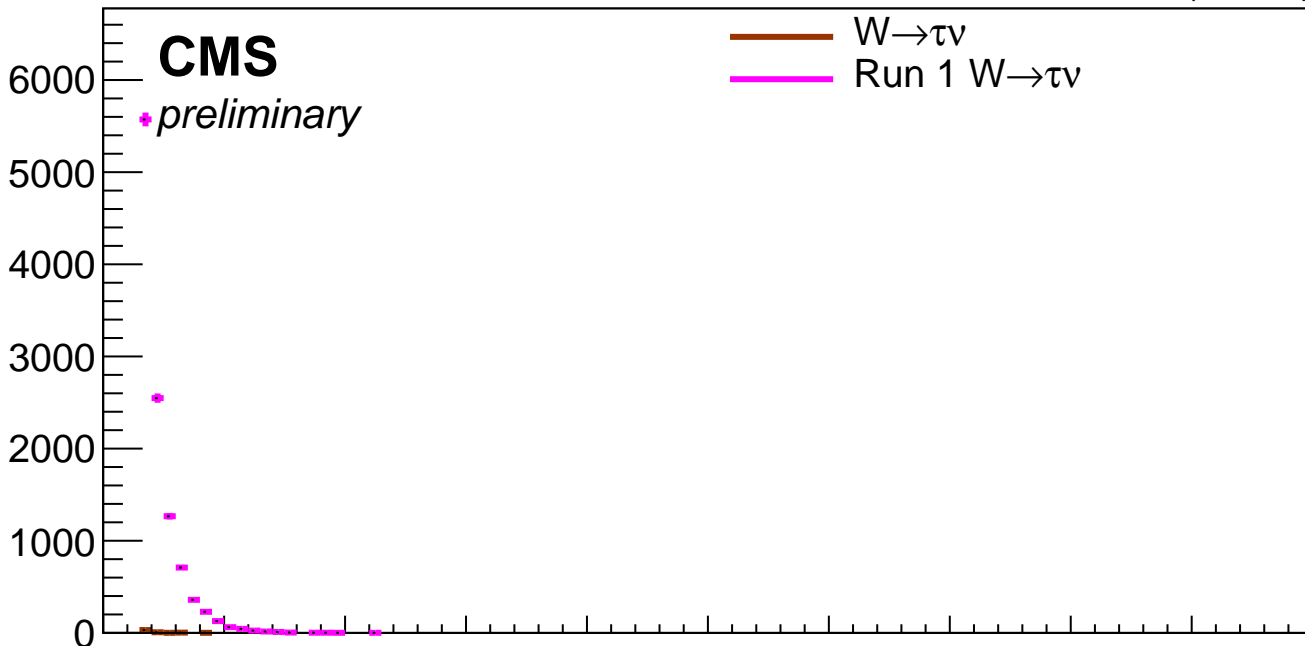
preliminary

W→τν

Run 1 W→τν

Data/Bkg

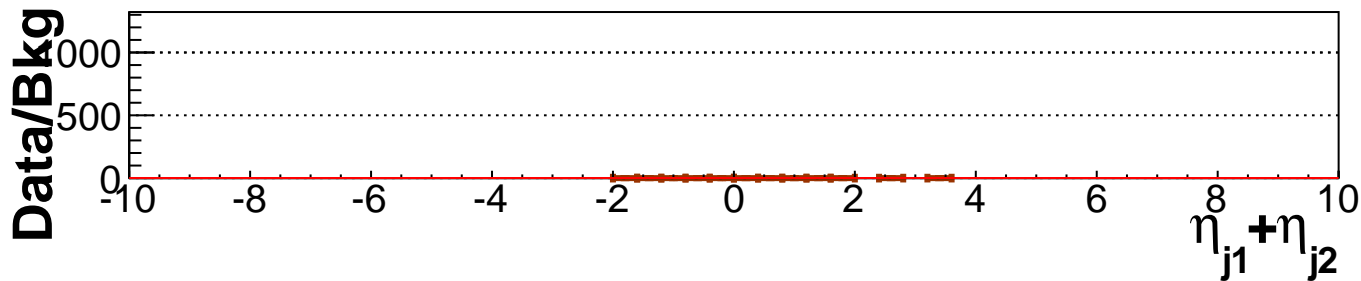
Run 1 S



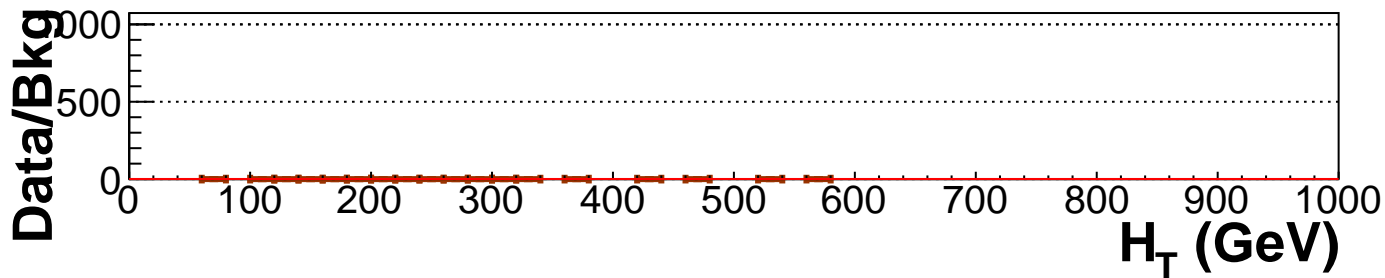
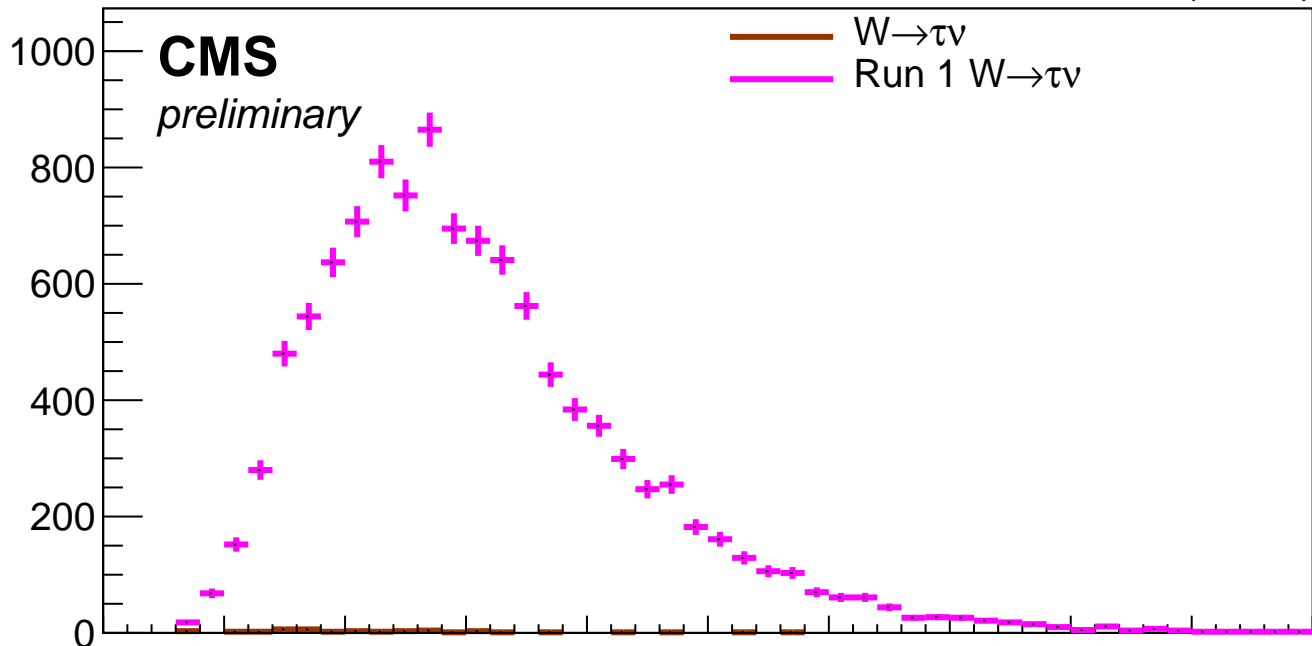
19.2 fb⁻¹ (8 TeV)

CMS
preliminary

— $W \rightarrow \tau \nu$
— Run 1 $W \rightarrow \tau \nu$



19.2 fb⁻¹ (8 TeV)



19.2 fb⁻¹ (8 TeV)

CMS

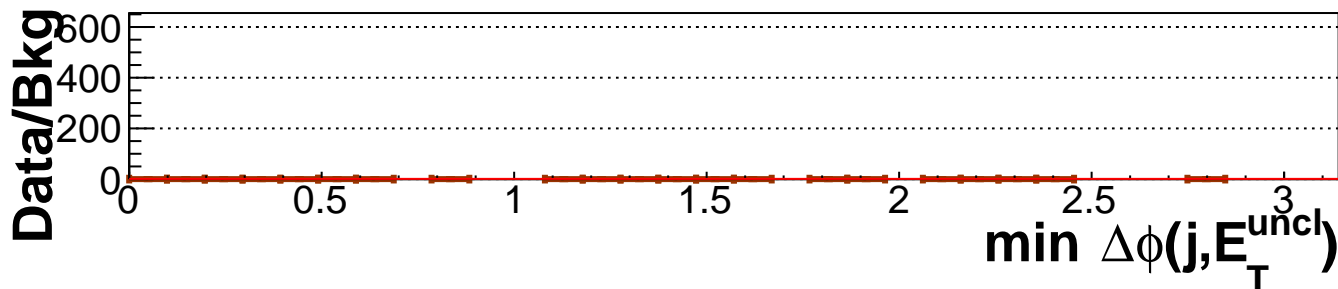
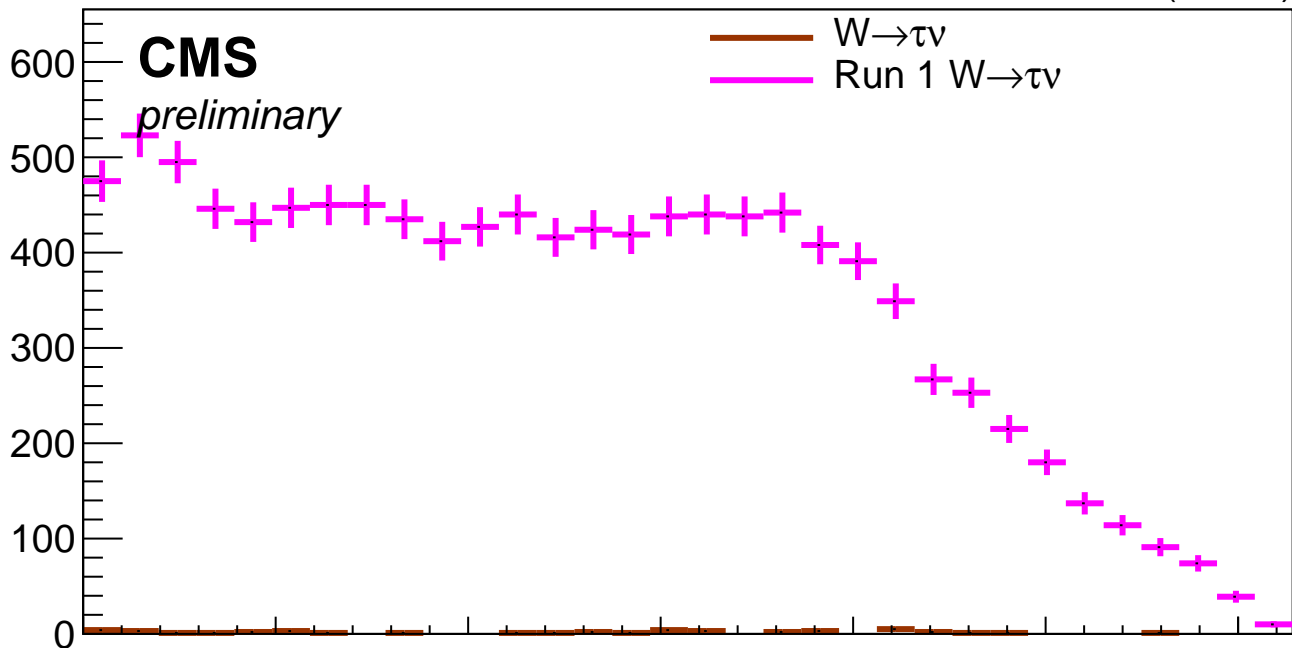
preliminary

— $W \rightarrow \tau \nu$

— Run 1 $W \rightarrow \tau \nu$

Data/Bkg

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



19.2 fb⁻¹ (8 TeV)

CMS

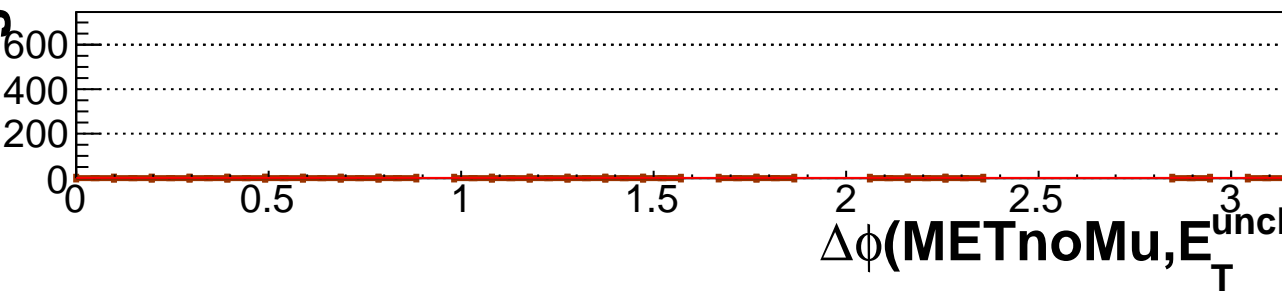
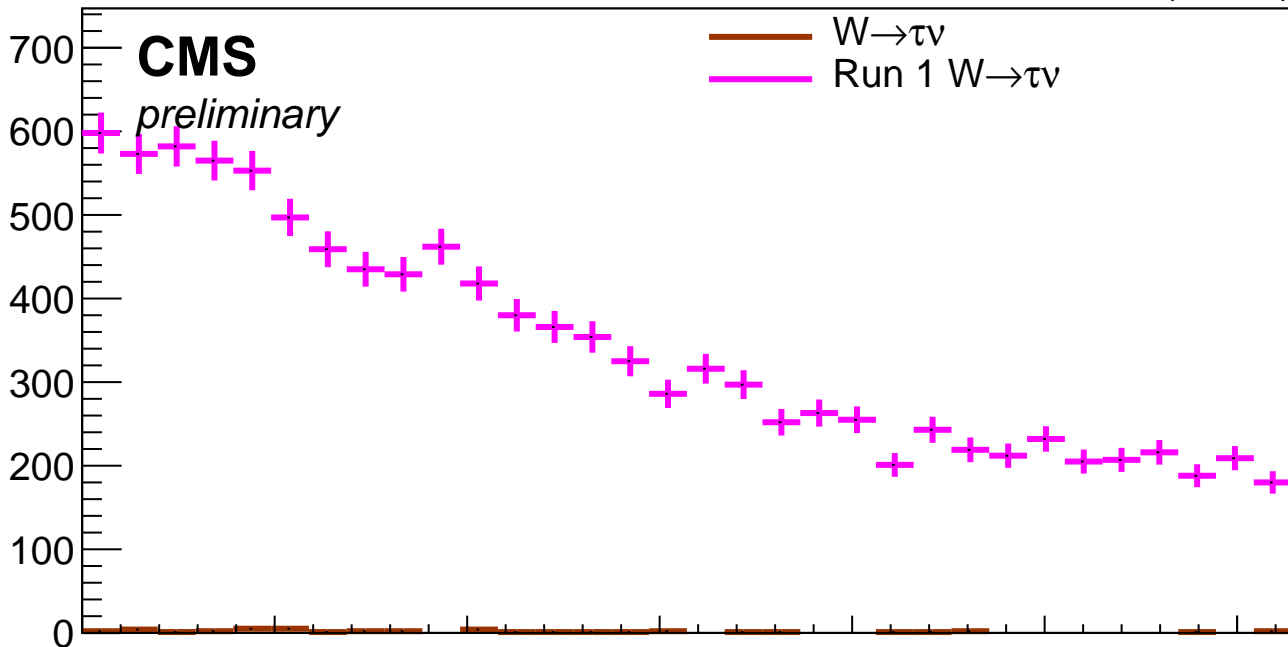
preliminary

— $W \rightarrow \tau \nu$

— Run 1 $W \rightarrow \tau \nu$

Data/Bkg

$\Delta\phi(\text{METnoMu}, E_{\text{T}}^{\text{uncl}})$

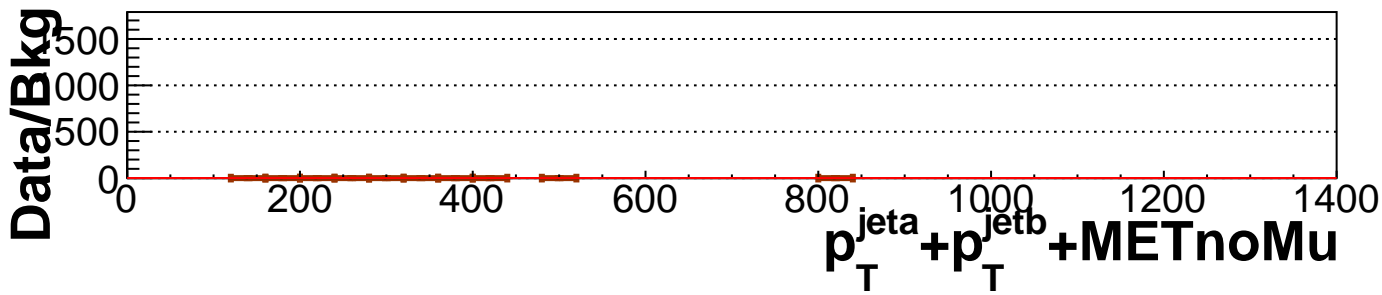
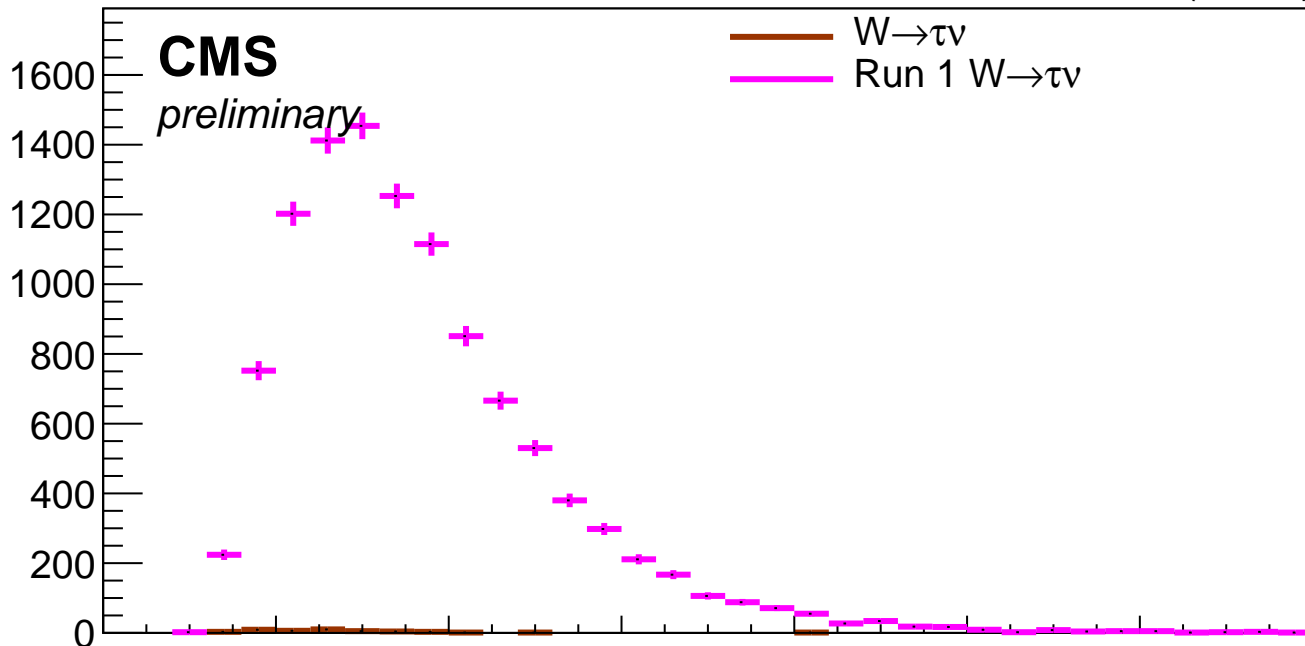


19.2 fb⁻¹ (8 TeV)

CMS

preliminary

— $W \rightarrow \tau \nu$
— Run 1 $W \rightarrow \tau \nu$

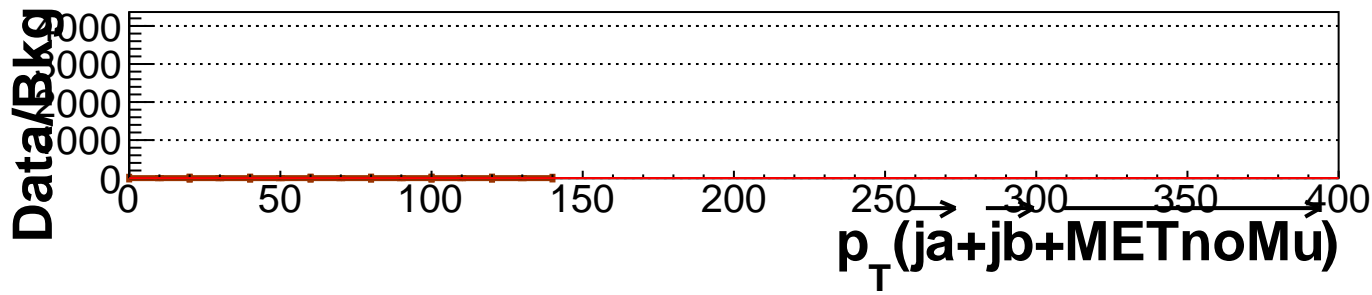


19.2 fb⁻¹ (8 TeV)

CMS

preliminary

— $W \rightarrow \tau \nu$
— Run 1 $W \rightarrow \tau \nu$



19.2 fb⁻¹ (8 TeV)

CMS

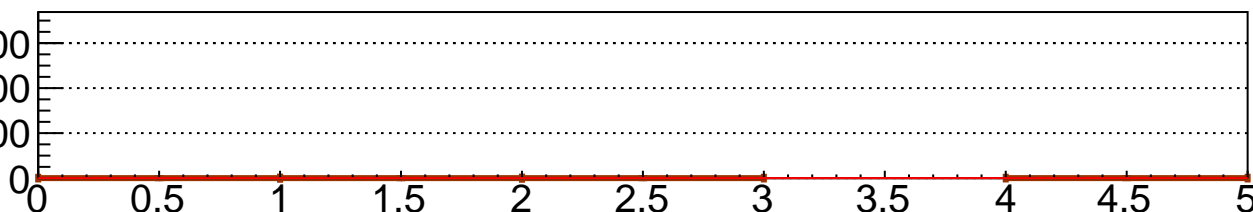
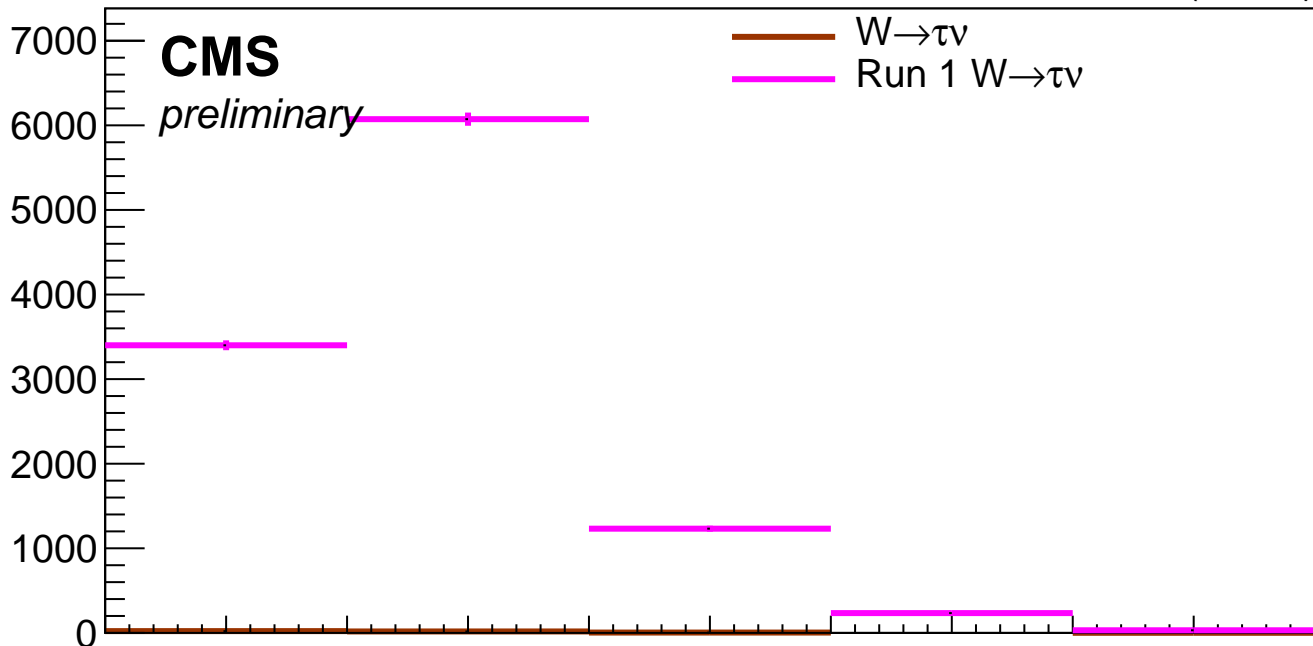
preliminary

W→τν

Run 1 W→τν

Data/Bkg

CJV jets (30 GeV)



19.2 fb⁻¹ (8 TeV)

CMS

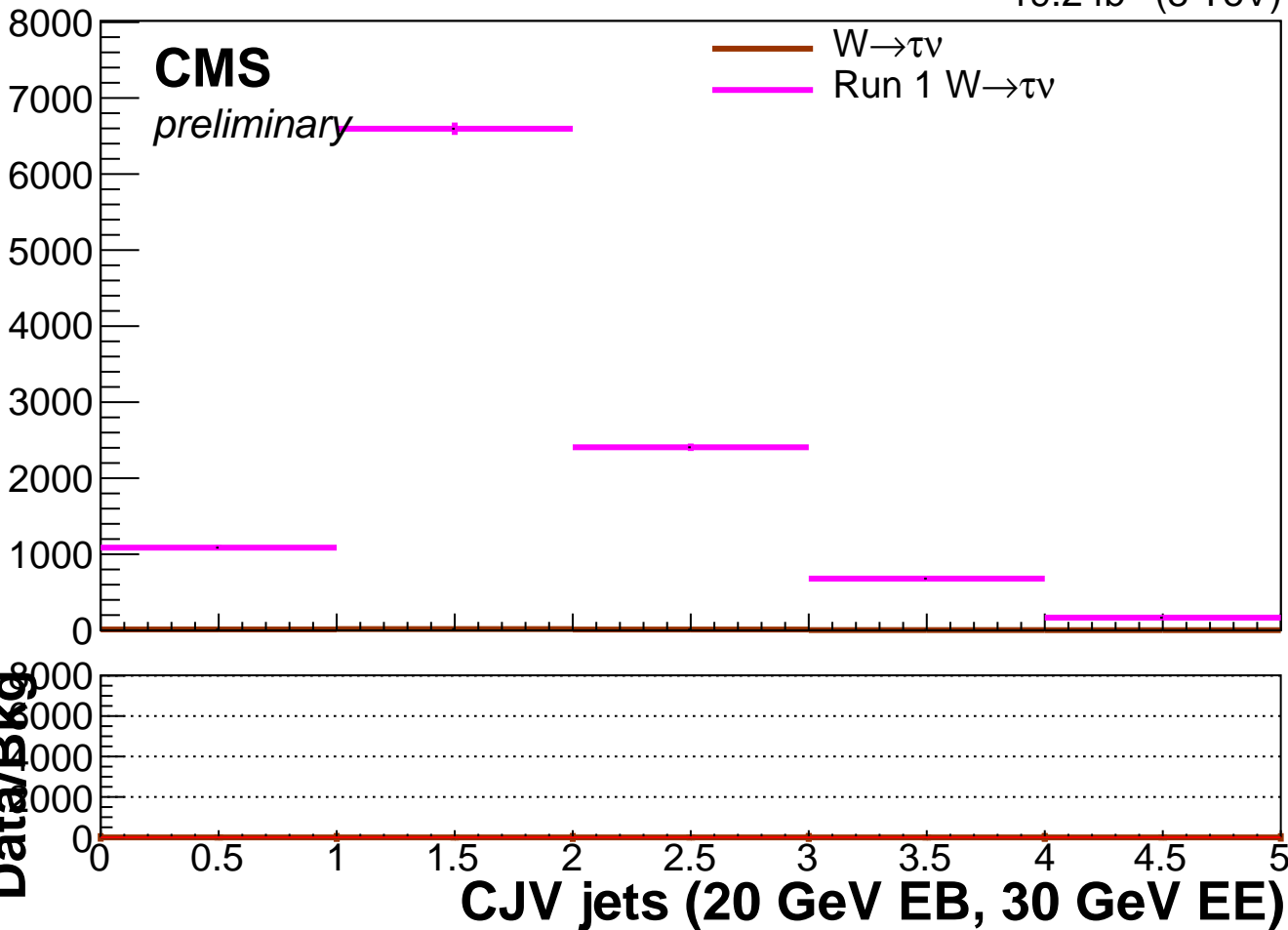
preliminary

W→τν

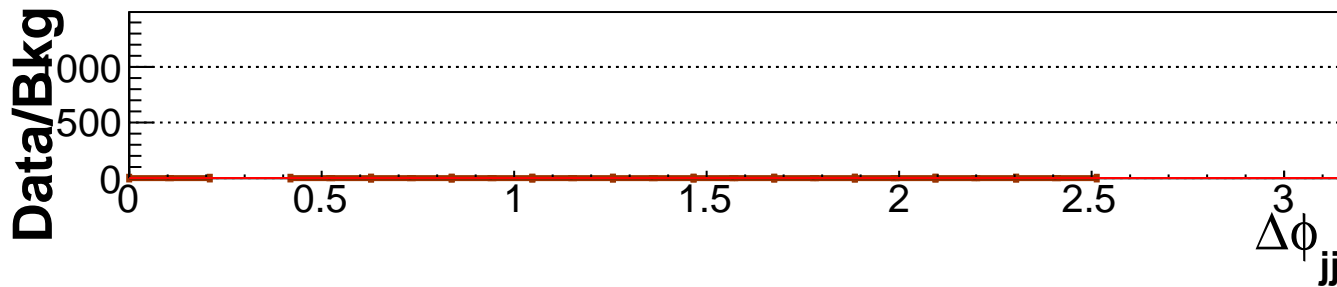
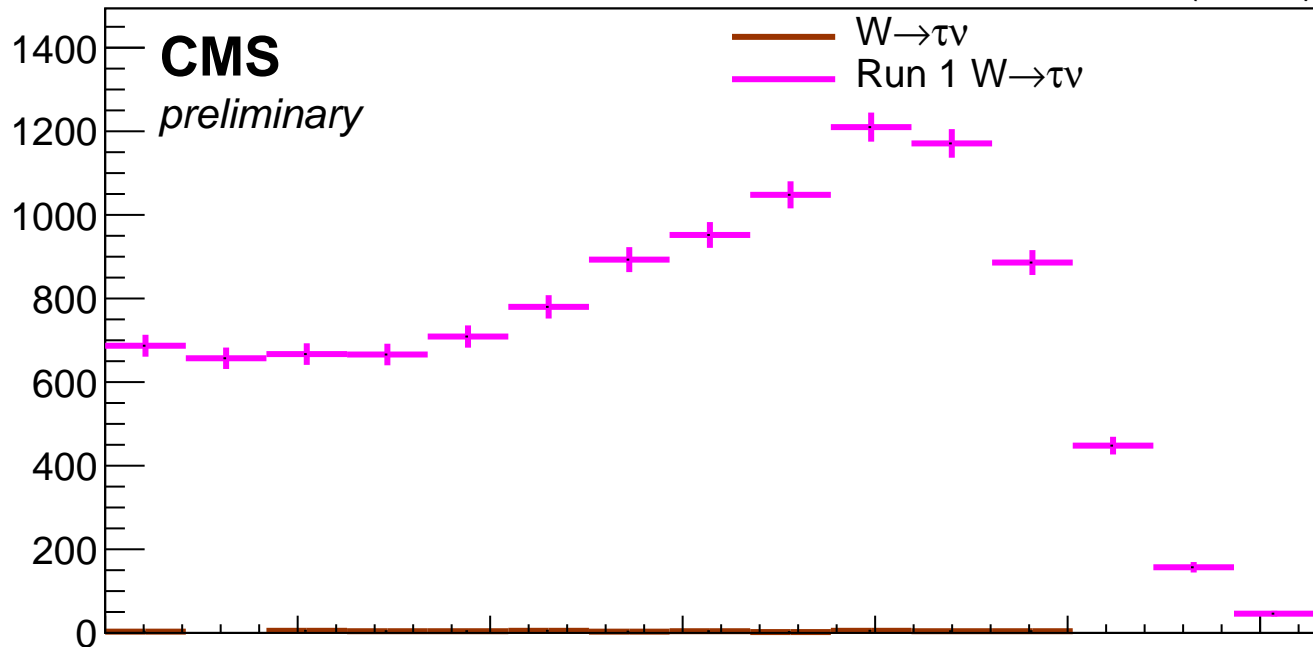
Run 1 W→τν

Data/Bkg

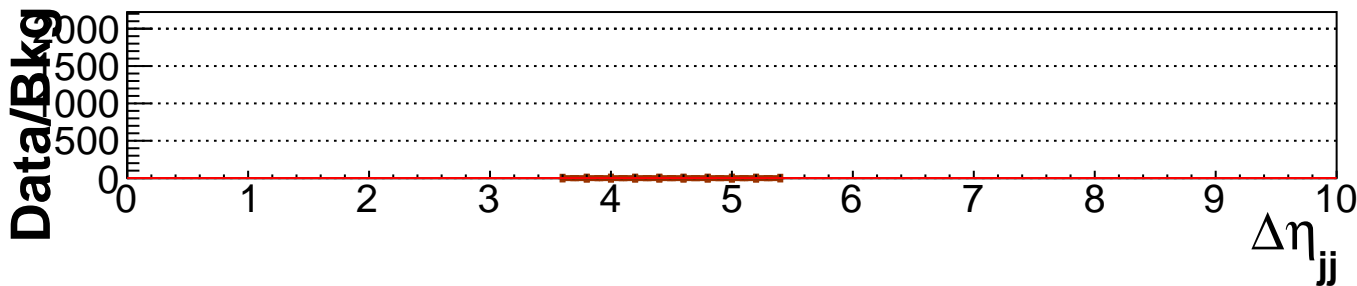
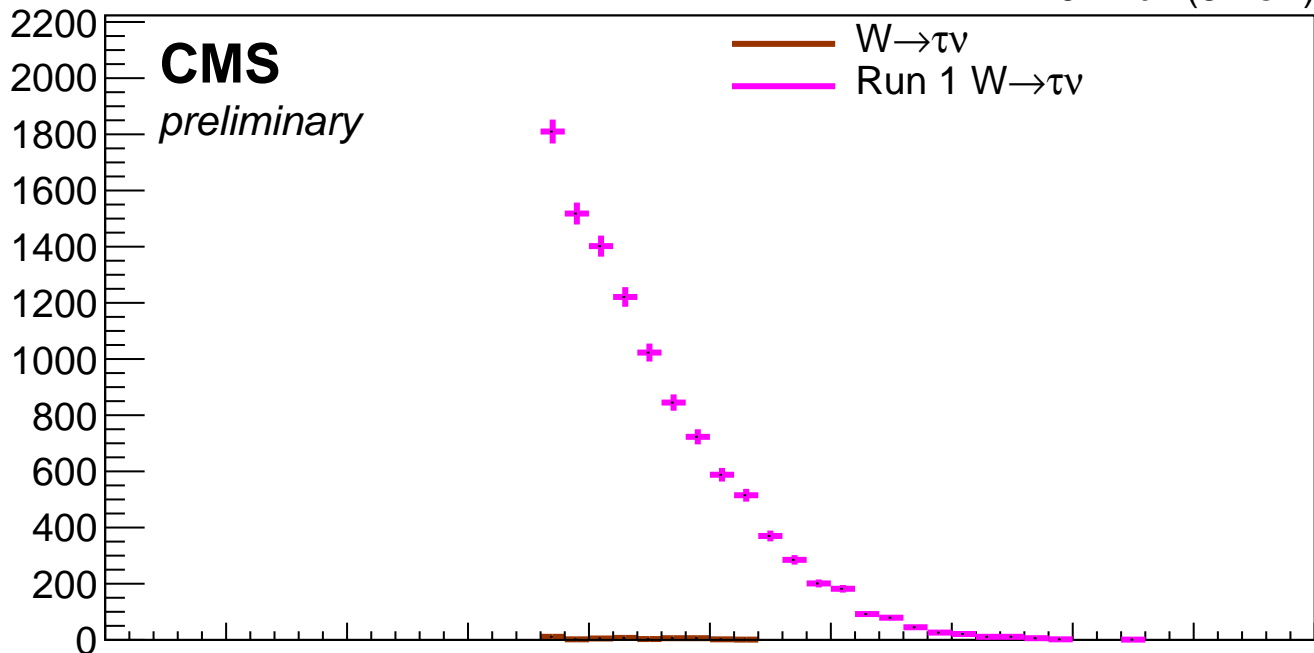
CJV jets (20 GeV EB, 30 GeV EE)



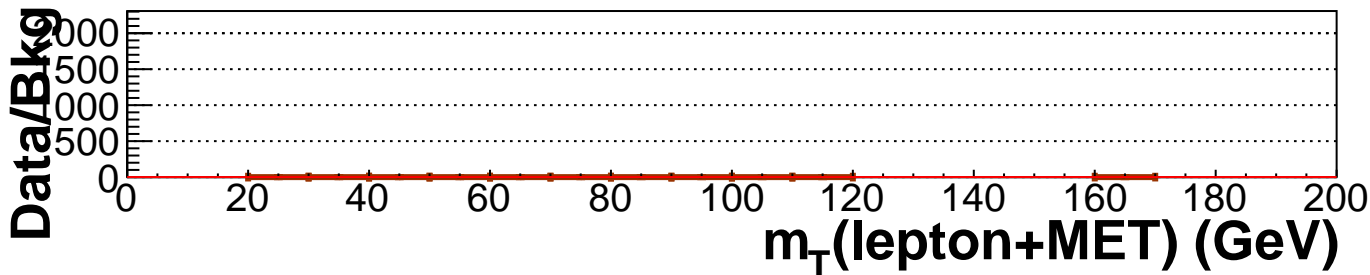
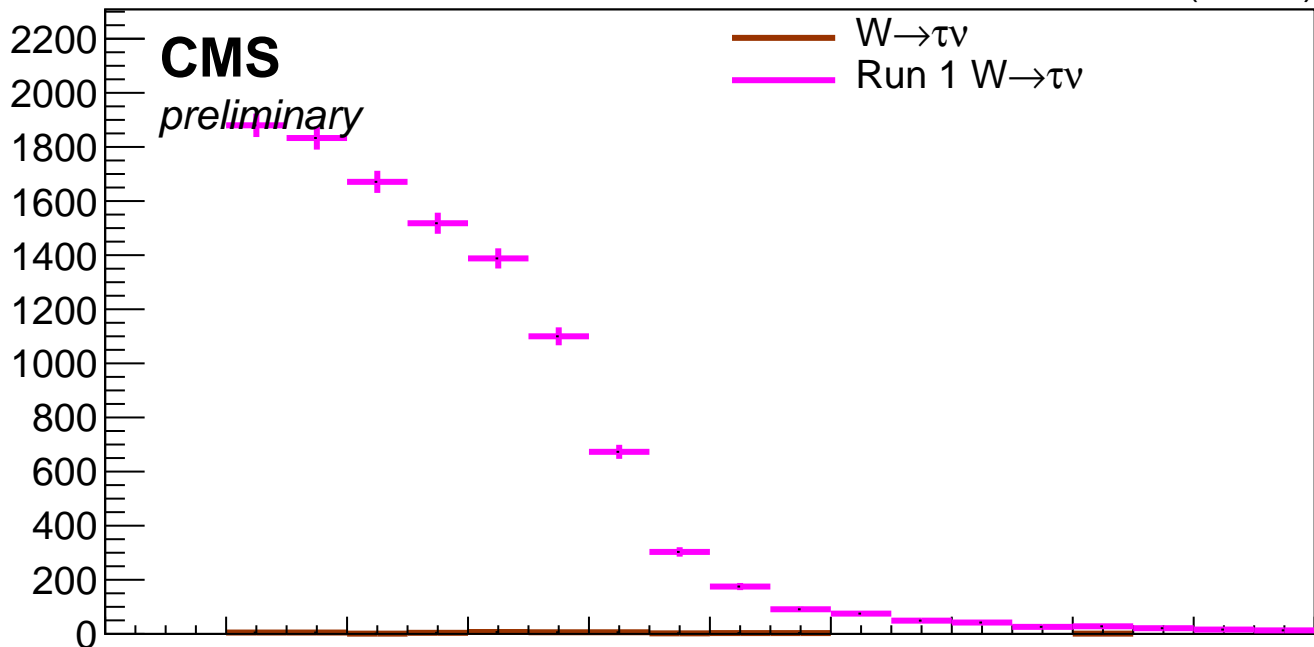
19.2 fb⁻¹ (8 TeV)



19.2 fb⁻¹ (8 TeV)



19.2 fb⁻¹ (8 TeV)



19.2 fb⁻¹ (8 TeV)

CMS

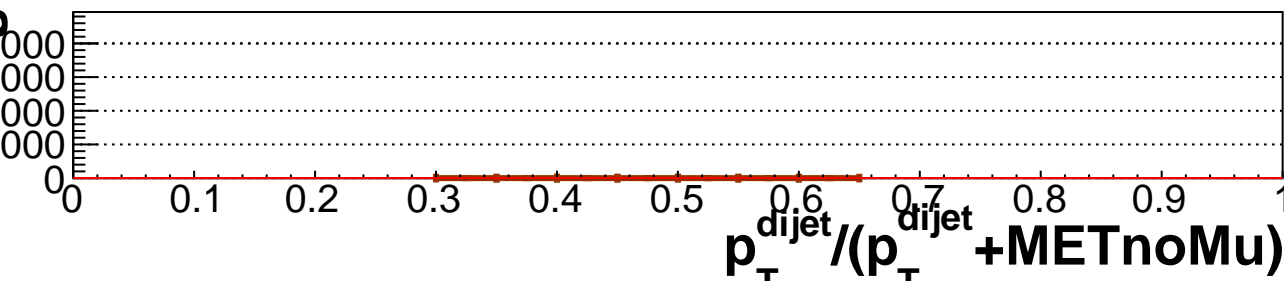
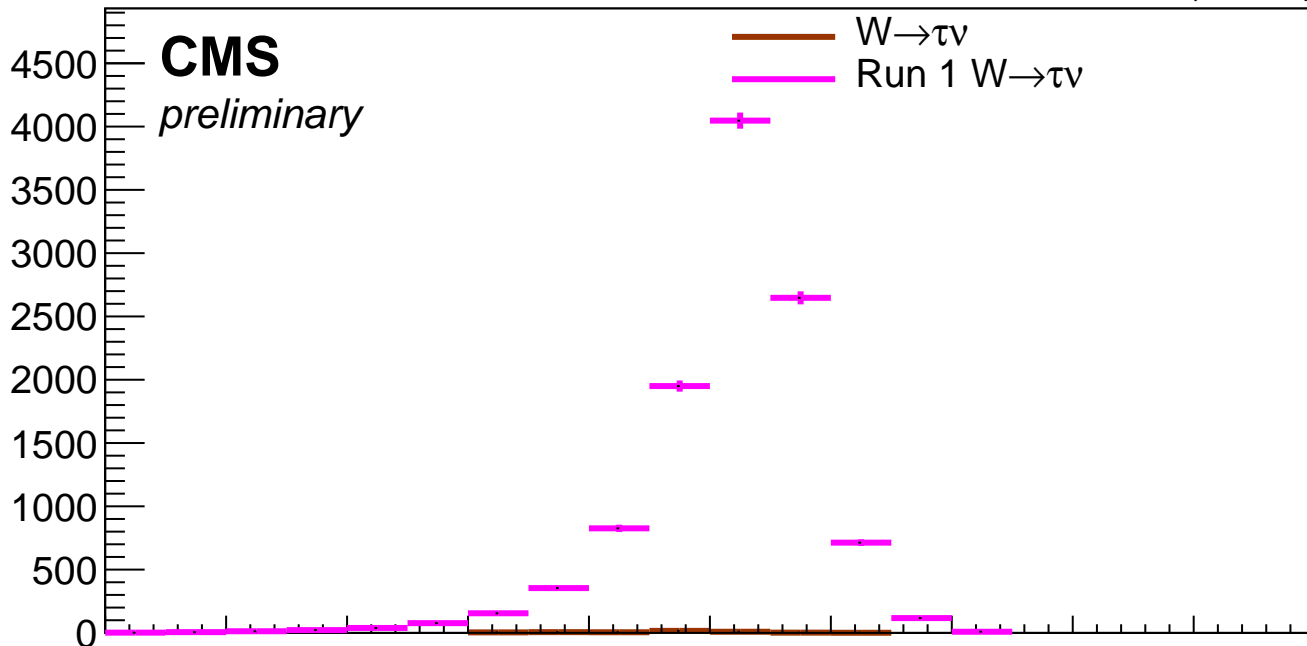
preliminary

W→τν

Run 1 W→τν

Data/Bkg

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



19.2 fb⁻¹ (8 TeV)

CMS

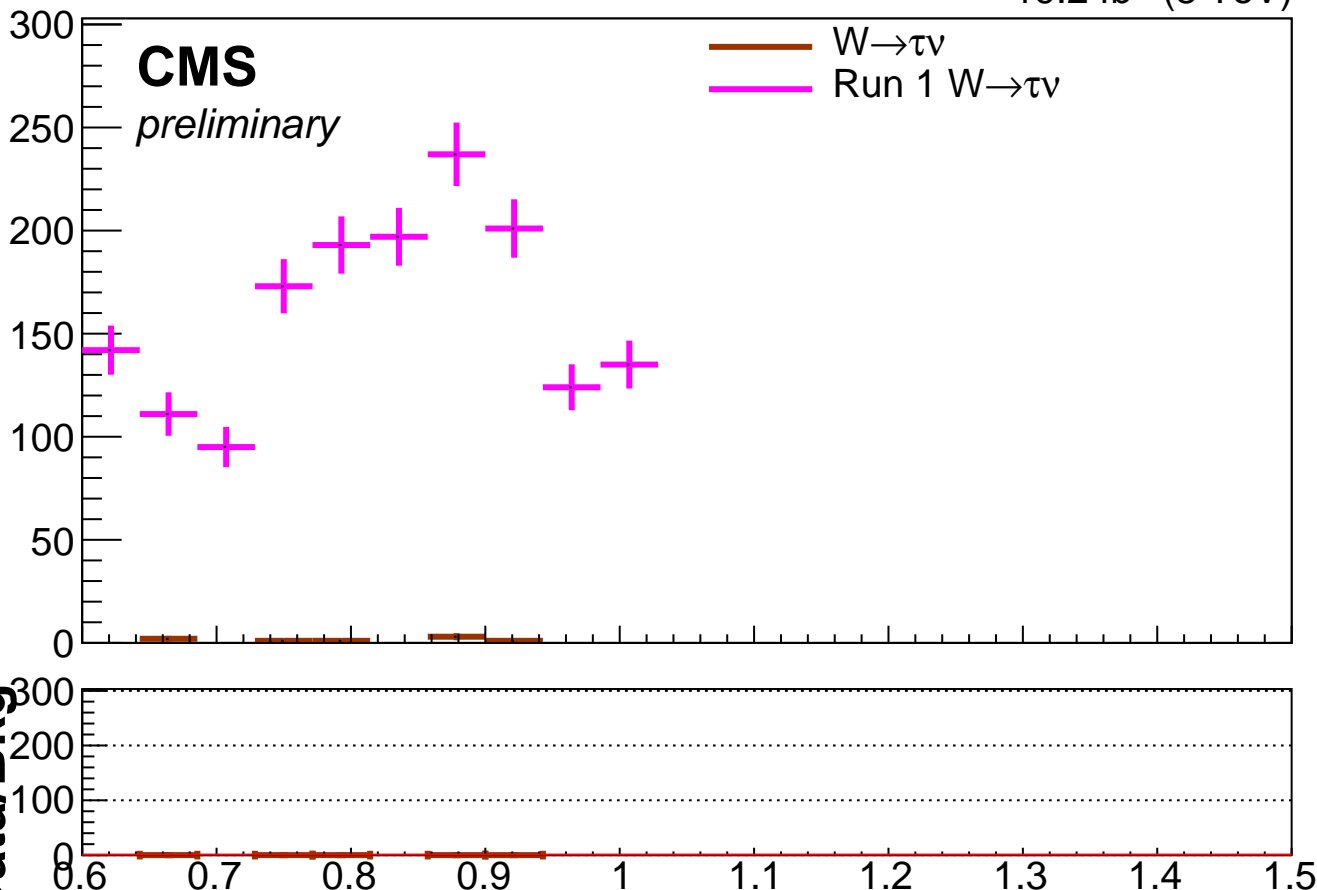
preliminary

— $W \rightarrow \tau \nu$

— Run 1 $W \rightarrow \tau \nu$

Data/Bkg

Jet 1 CSV



19.2 fb⁻¹ (8 TeV)

CMS

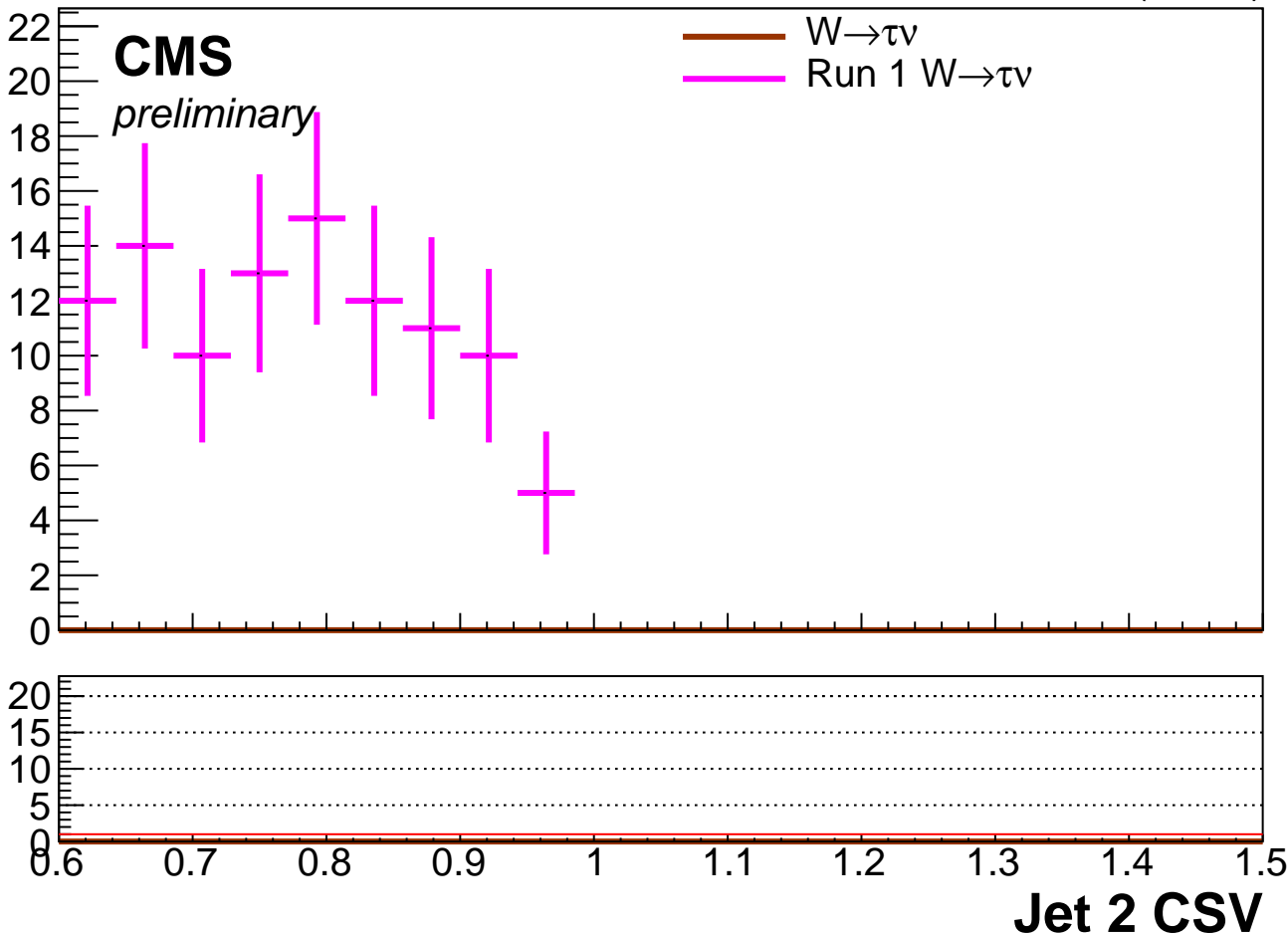
preliminary

W→τν

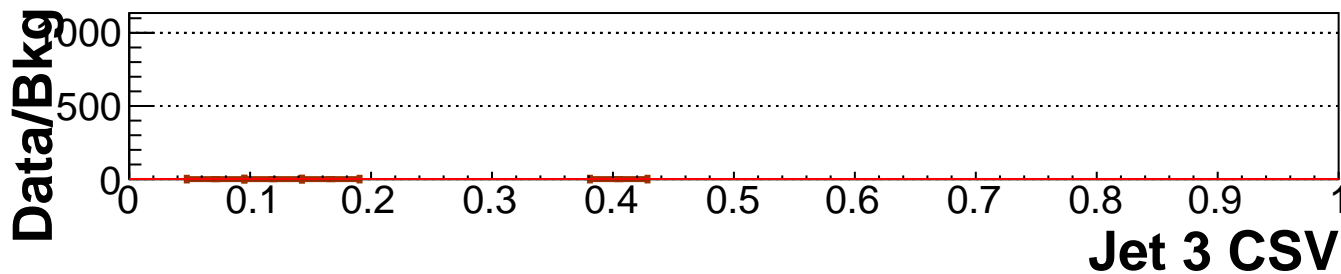
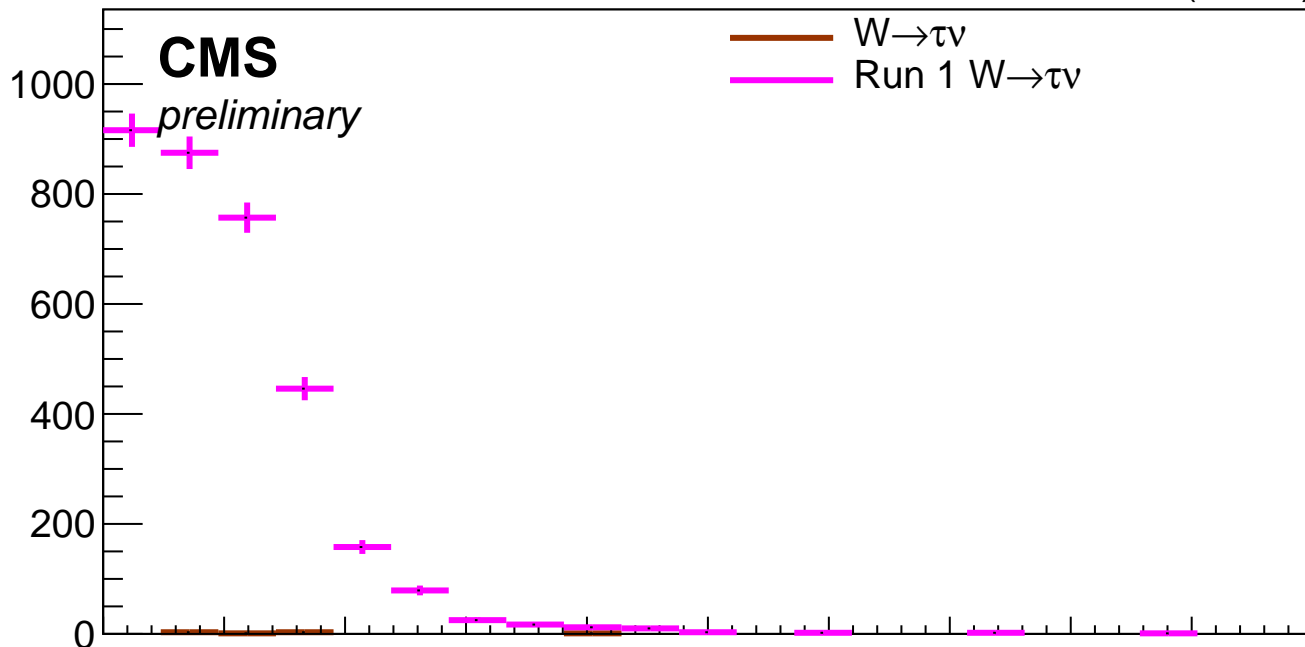
Run 1 W→τν

Data/Bkg

Jet 2 CSV



19.2 fb⁻¹ (8 TeV)



19.2 fb⁻¹ (8 TeV)

CMS

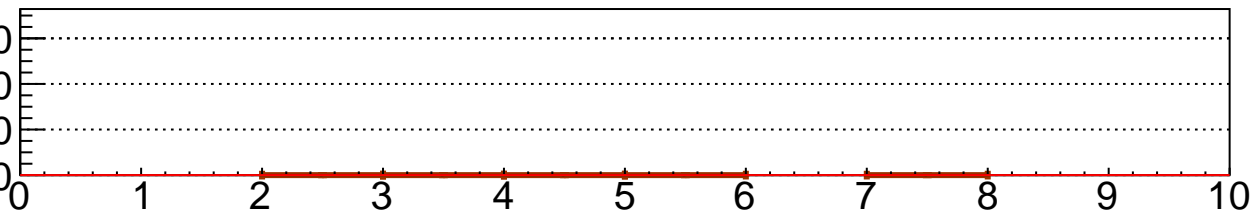
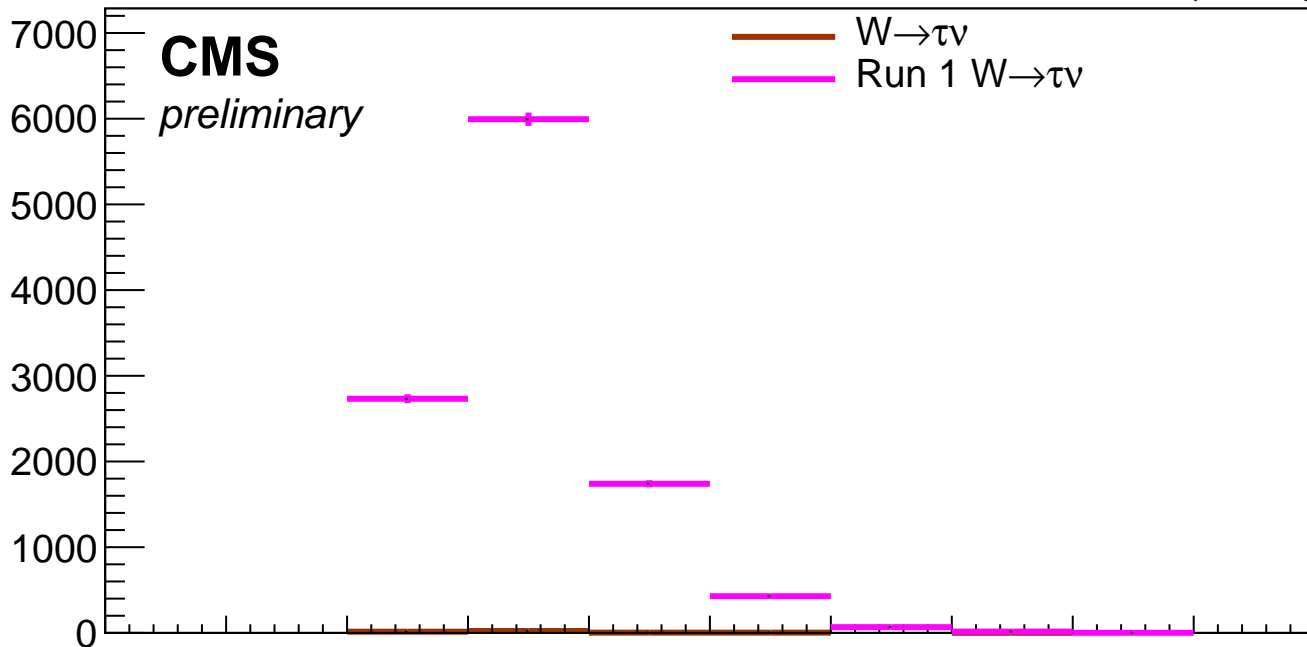
preliminary

W→τν

Run 1 W→τν

Data/Bkg

N jets pt>30 GeV



19.2 fb⁻¹ (8 TeV)

CMS

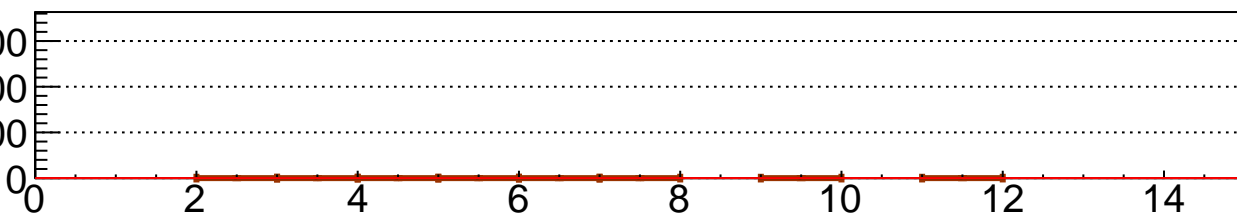
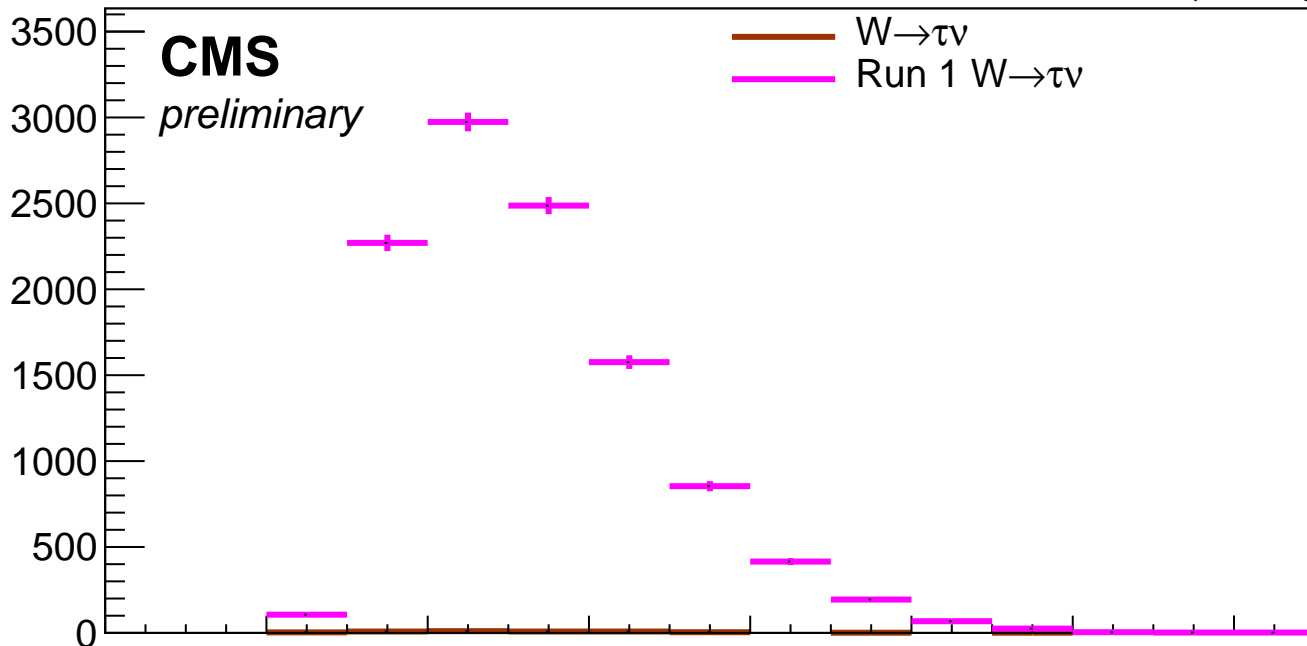
preliminary

W→τν

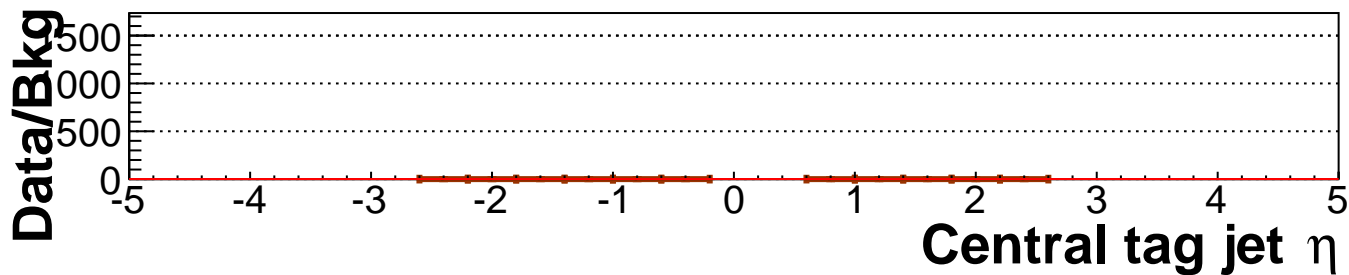
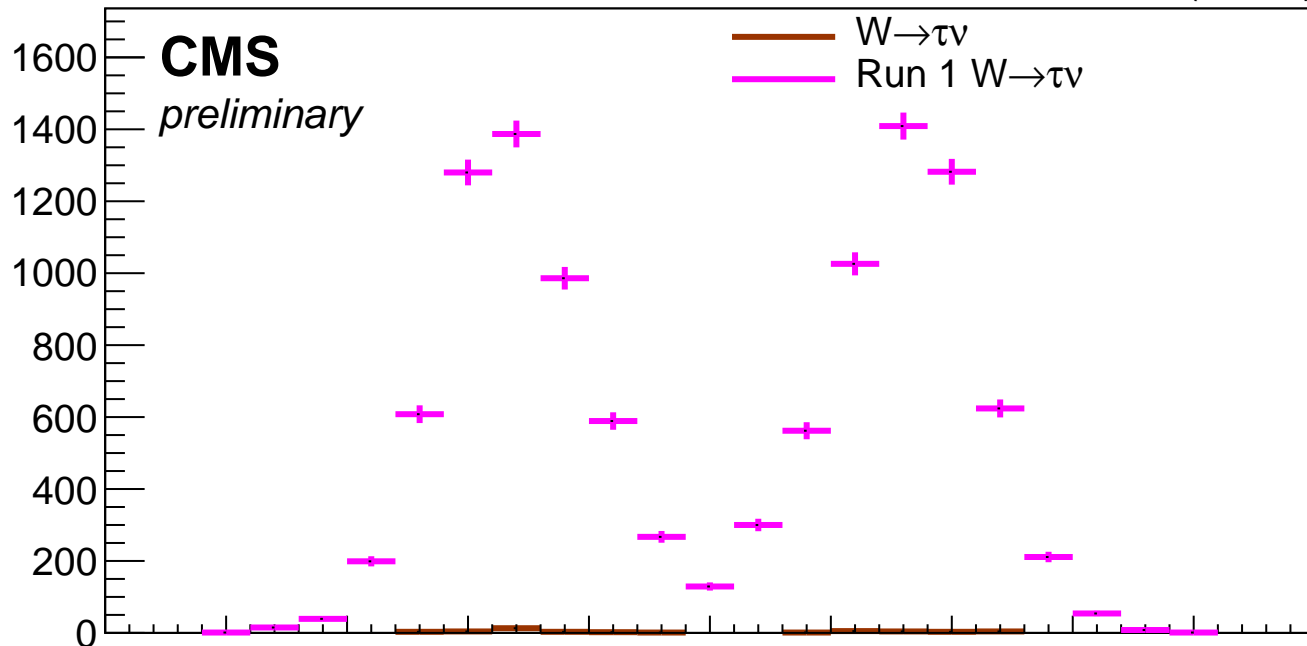
Run 1 W→τν

Data/Bkg

N jets pt>15 GeV



19.2 fb⁻¹ (8 TeV)



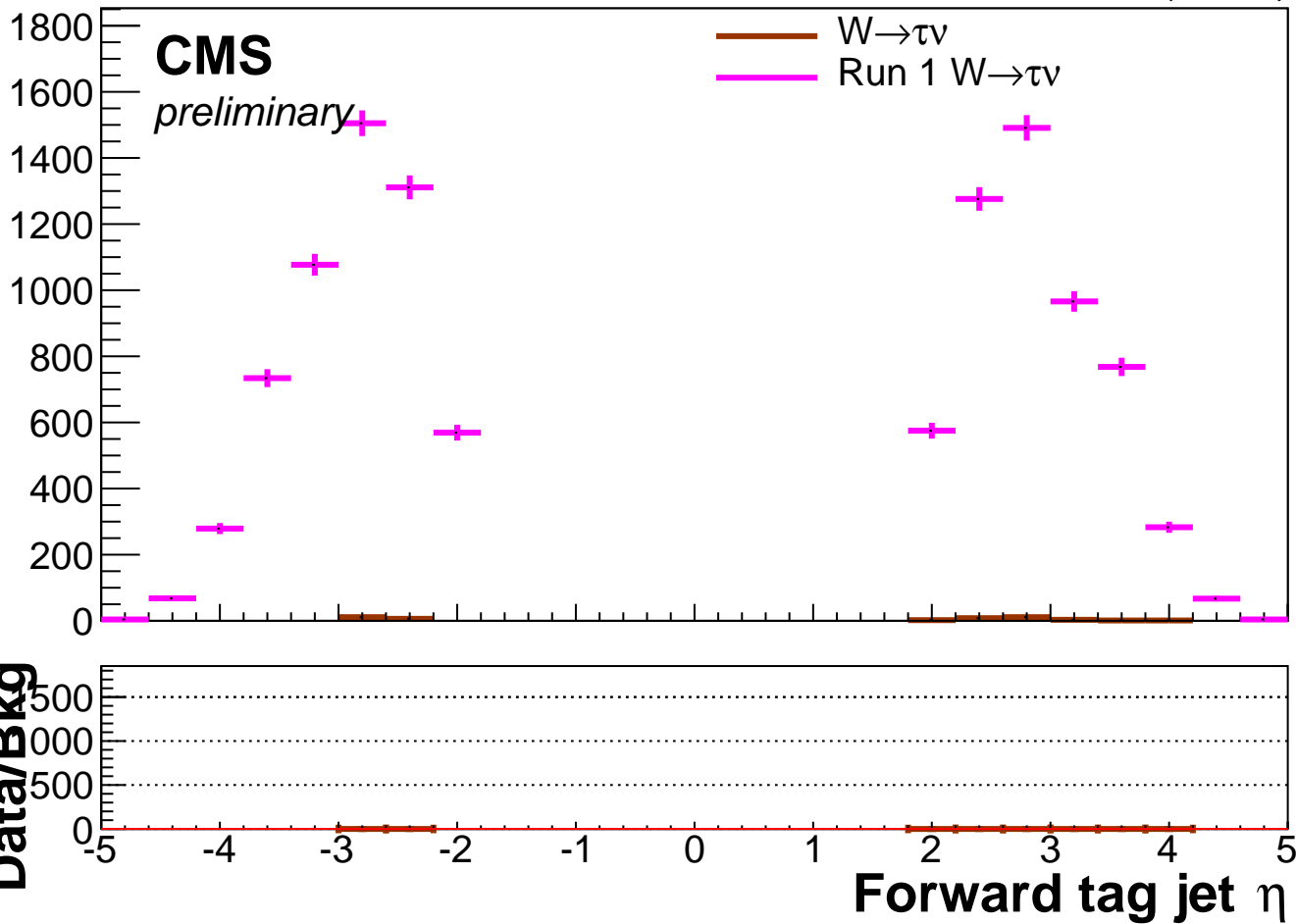
19.2 fb⁻¹ (8 TeV)

CMS

preliminary

— $W \rightarrow \tau \nu$
— Run 1 $W \rightarrow \tau \nu$

Data/Bkg

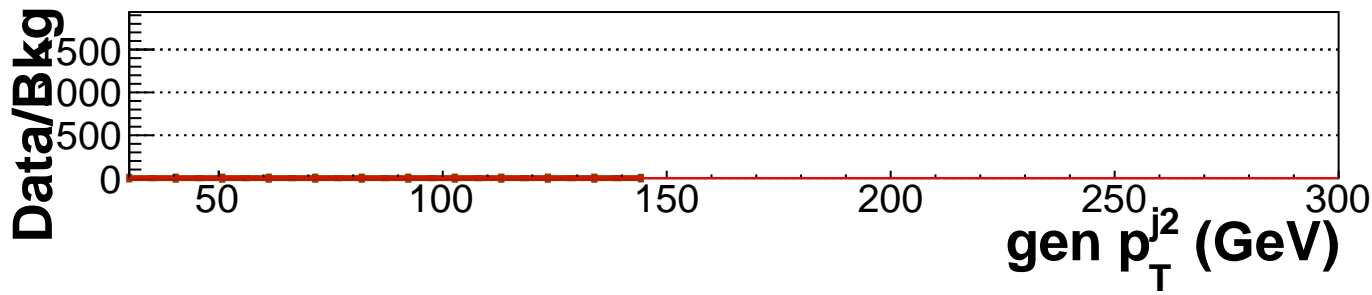


19.2 fb⁻¹ (8 TeV)

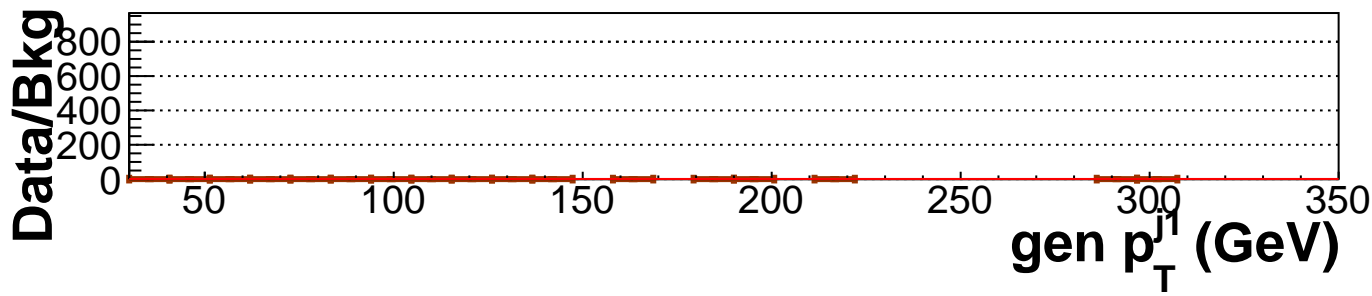
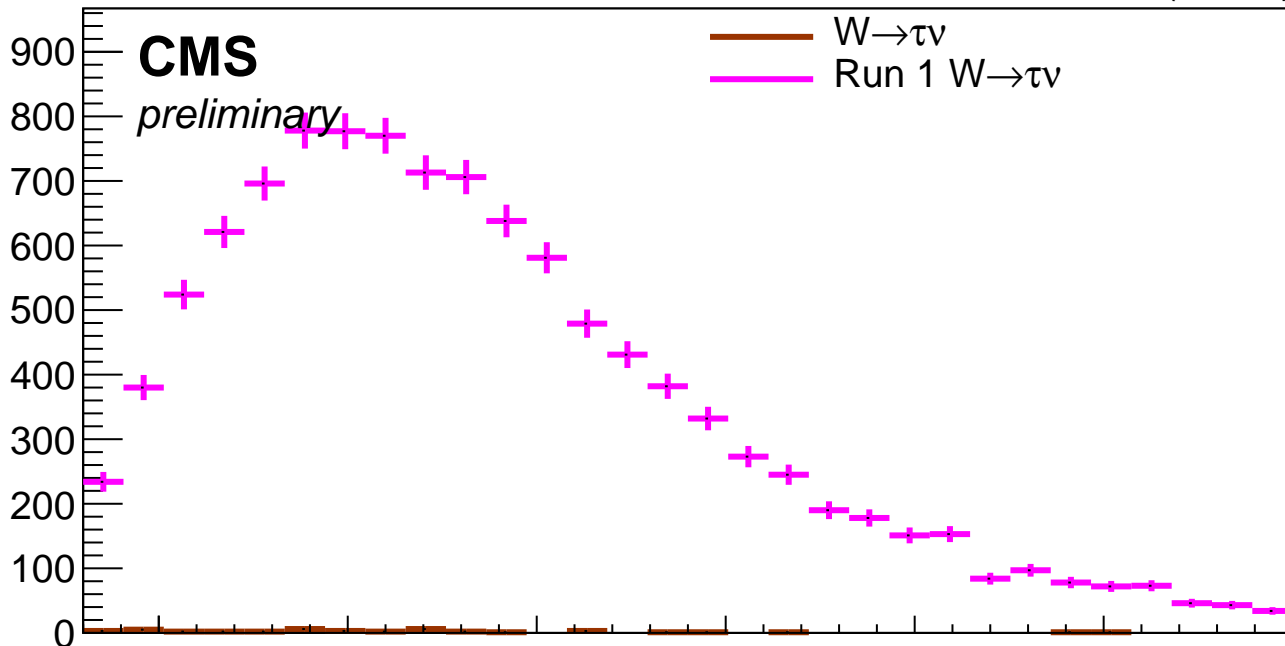
CMS

preliminary

— $W \rightarrow \tau \nu$
— Run 1 $W \rightarrow \tau \nu$



19.2 fb⁻¹ (8 TeV)



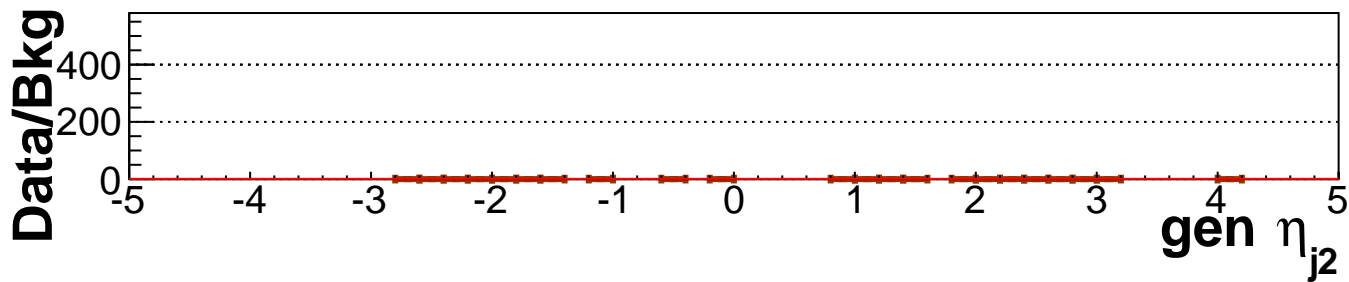
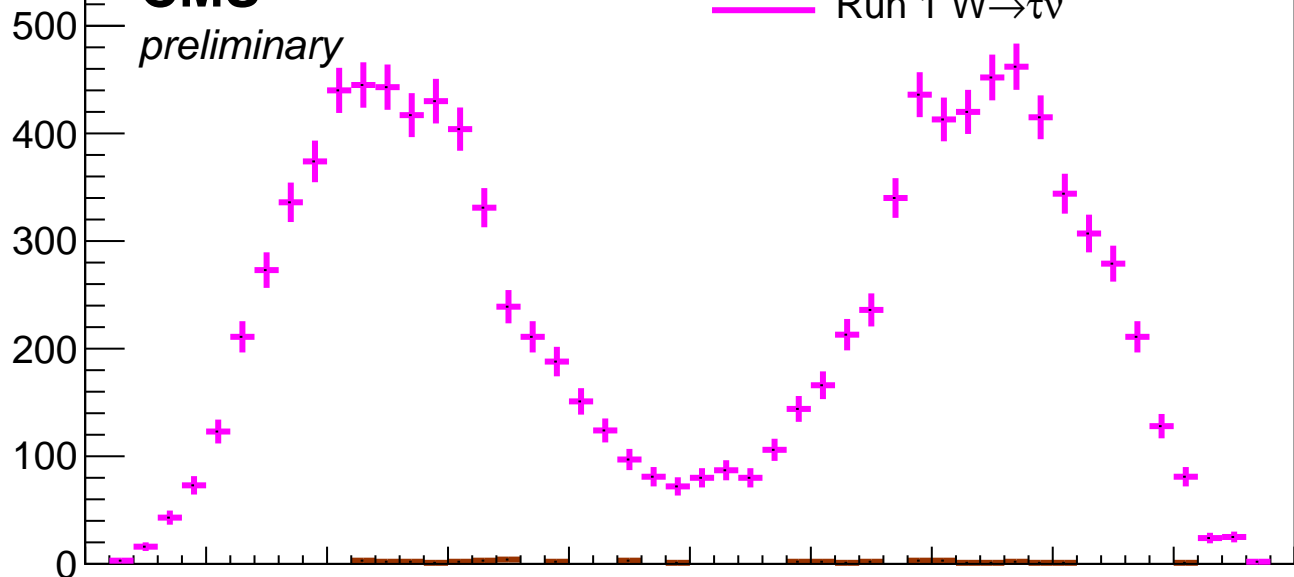
19.2 fb⁻¹ (8 TeV)

CMS

preliminary

— $W \rightarrow \tau \nu$

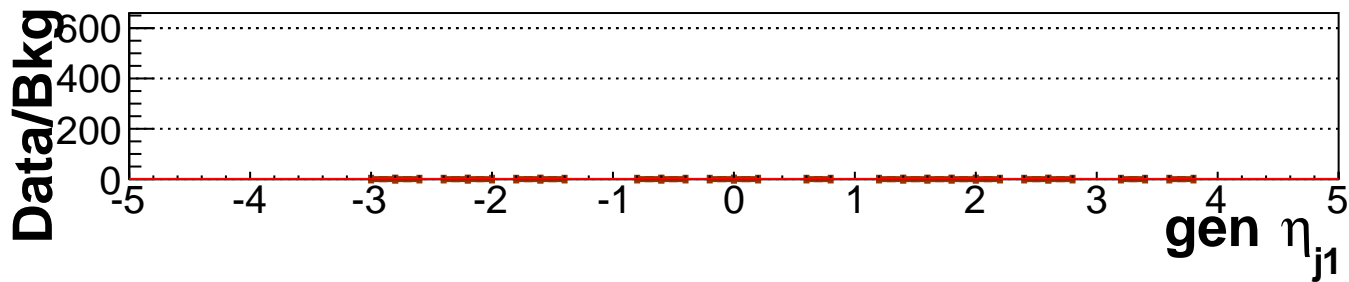
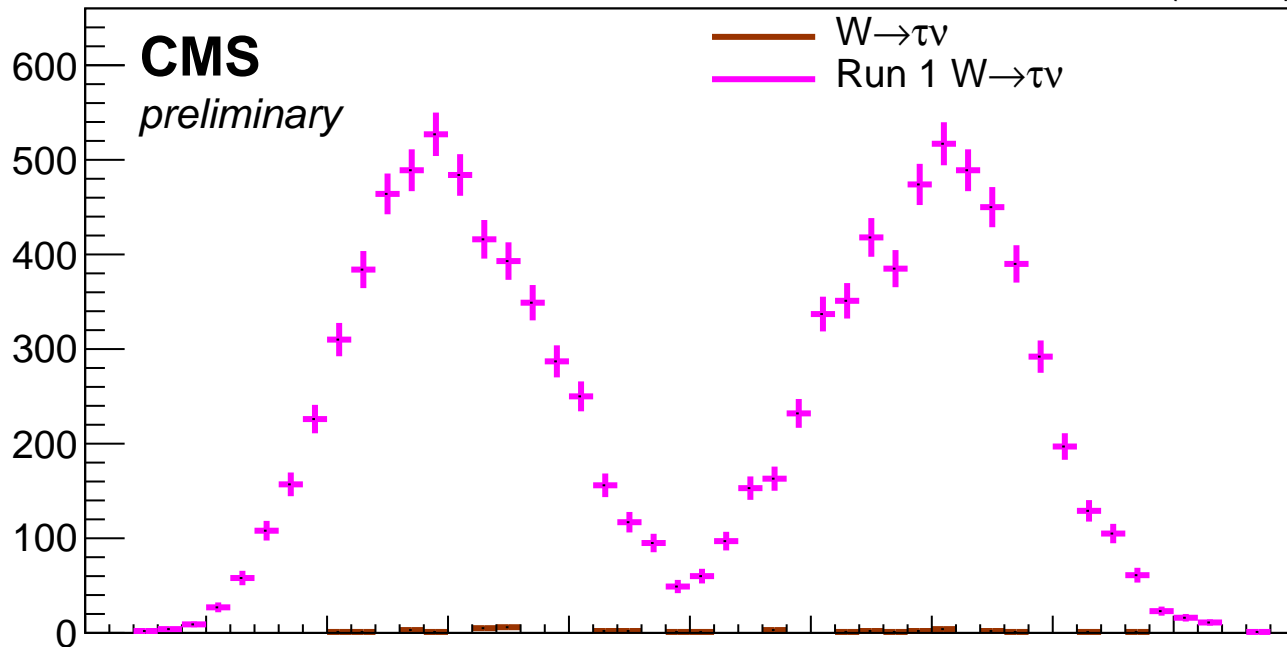
— Run 1 $W \rightarrow \tau \nu$



19.2 fb⁻¹ (8 TeV)

CMS
preliminary

— $W \rightarrow \tau \nu$
— Run 1 $W \rightarrow \tau \nu$



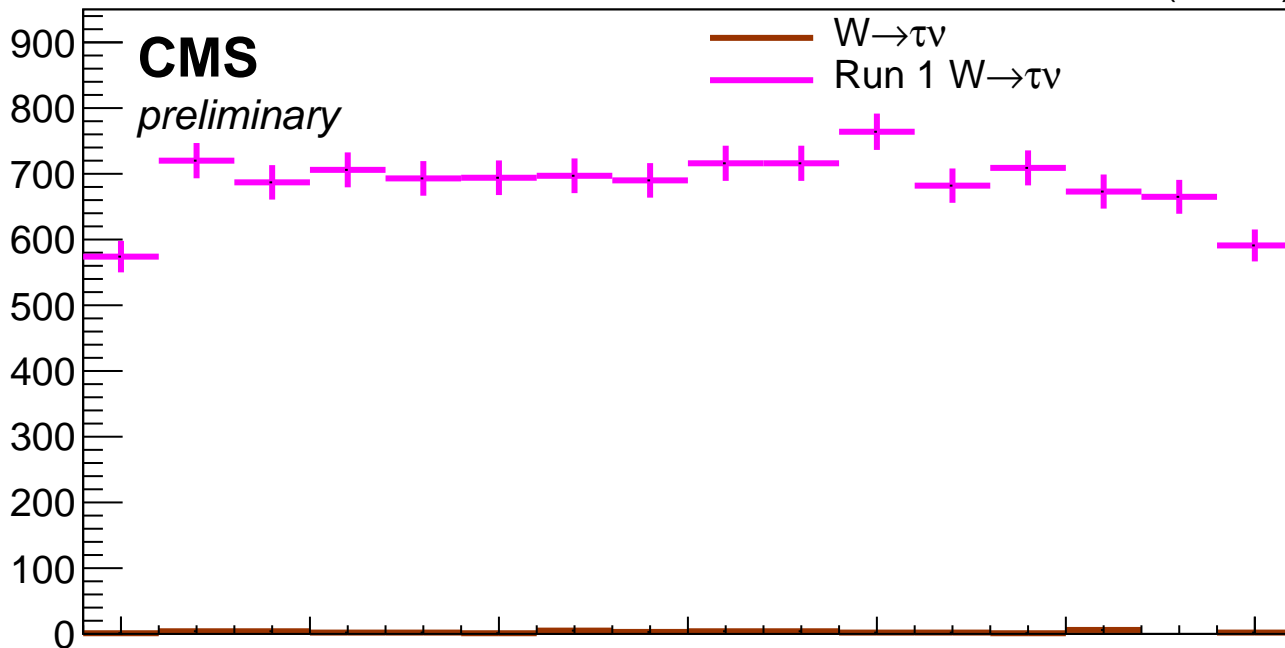
19.2 fb⁻¹ (8 TeV)

CMS

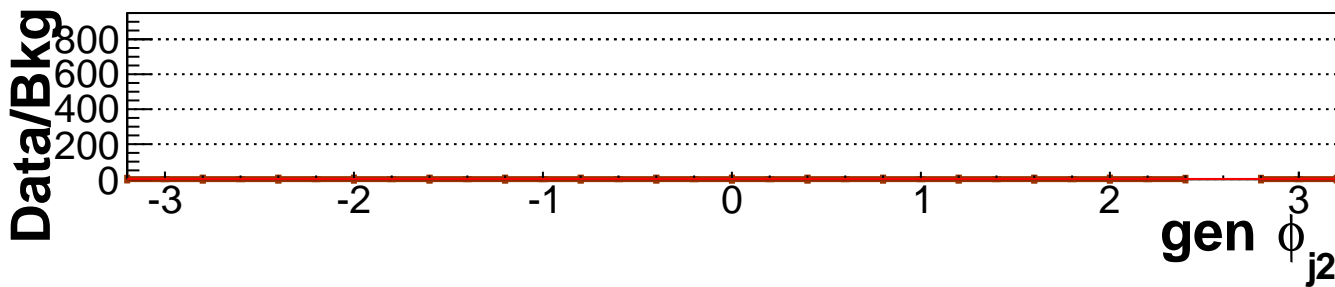
preliminary

— $W \rightarrow \tau \nu$

— Run 1 $W \rightarrow \tau \nu$



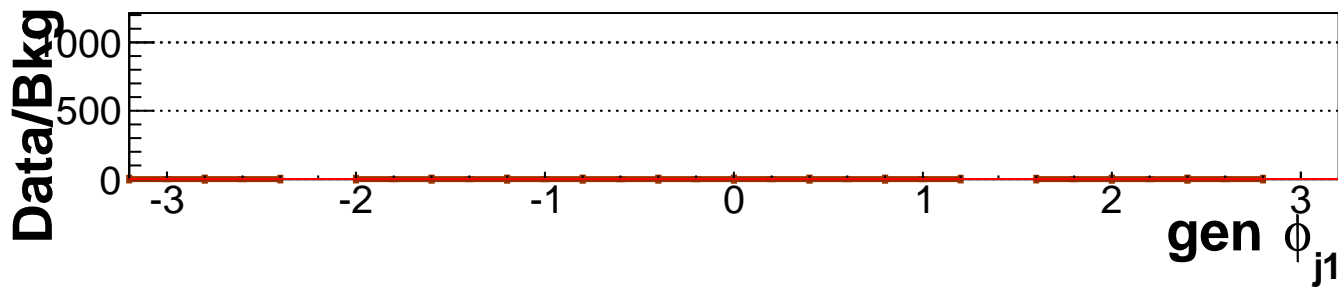
Data/Bkg



19.2 fb⁻¹ (8 TeV)

CMS
preliminary

— $W \rightarrow \tau \nu$
— Run 1 $W \rightarrow \tau \nu$



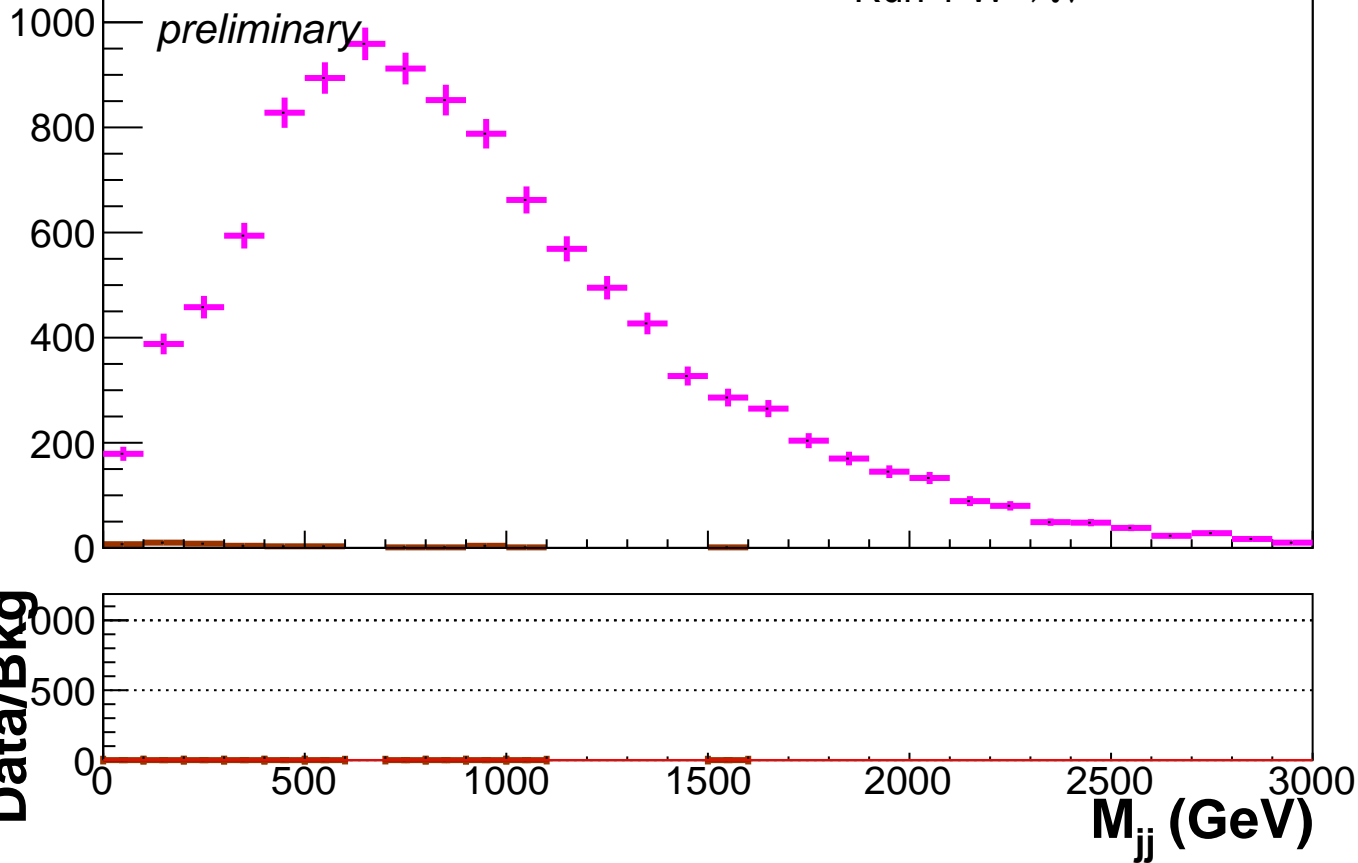
19.2 fb⁻¹ (8 TeV)

CMS

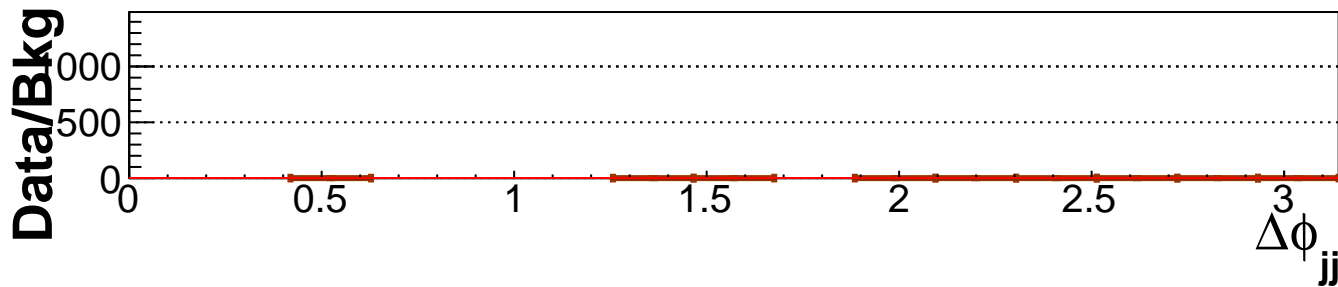
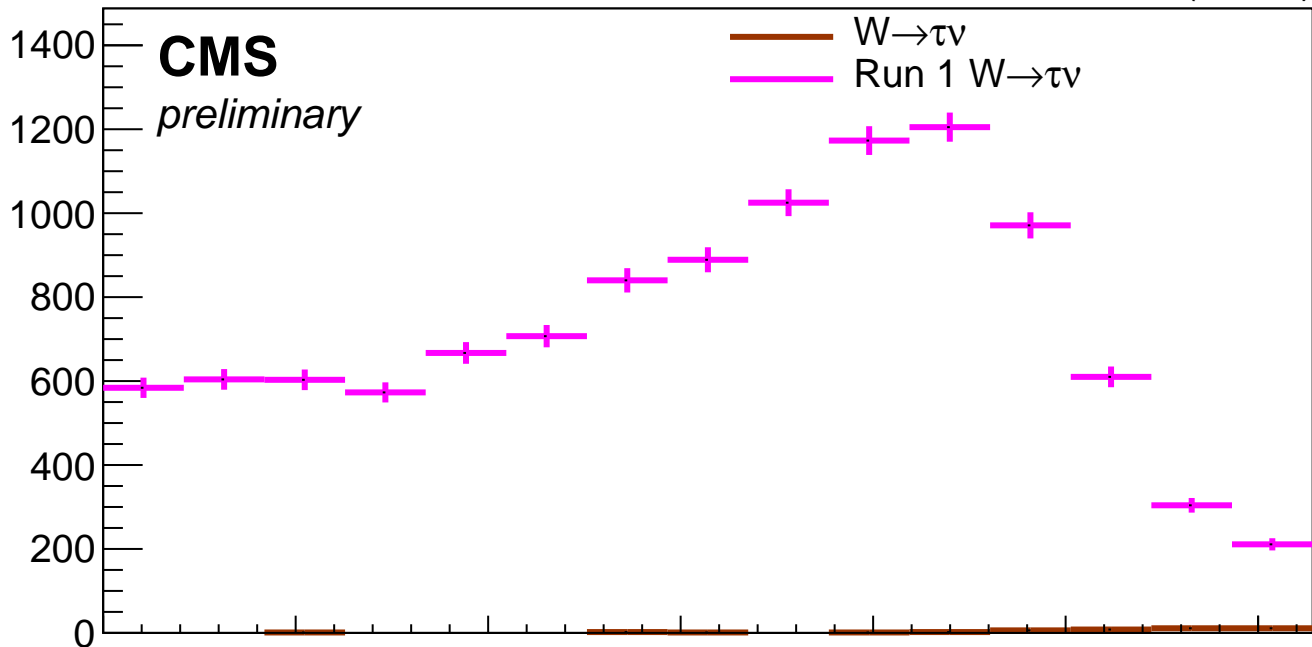
preliminary

— $W \rightarrow \tau \nu$

— Run 1 $W \rightarrow \tau \nu$



19.2 fb⁻¹ (8 TeV)



19.2 fb⁻¹ (8 TeV)

