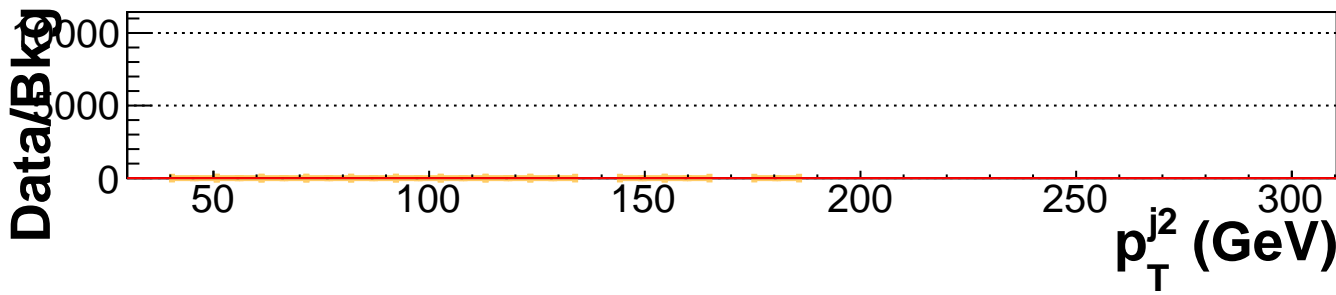
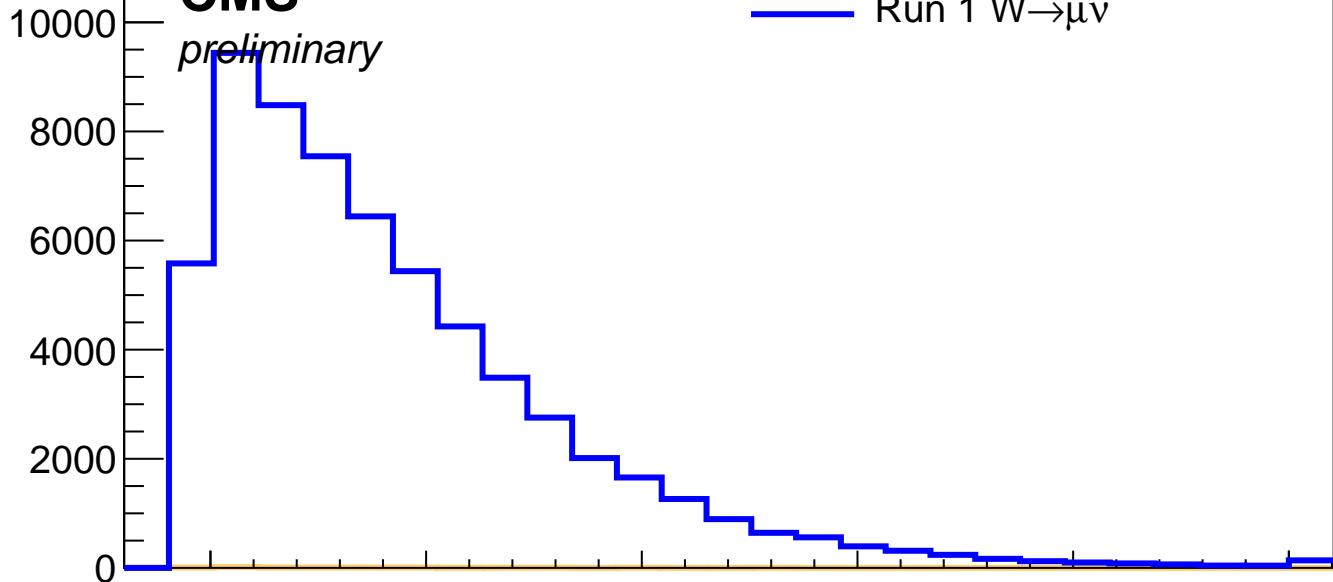


19.2 fb⁻¹ (8 TeV)

CMS

preliminary

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



19.2 fb⁻¹ (8 TeV)

CMS

preliminary

— W→μν

— Run 1 W→μν

Data/Bkg

5000
4000
3000
2000
1000
0

50

100

150

200

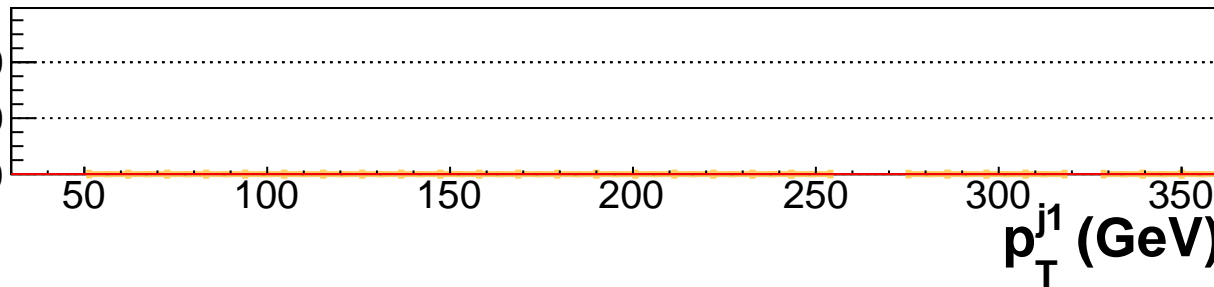
250

300

350

p_T^{j1} (GeV)

4000
3000
2000
1000
0



19.2 fb⁻¹ (8 TeV)

CMS

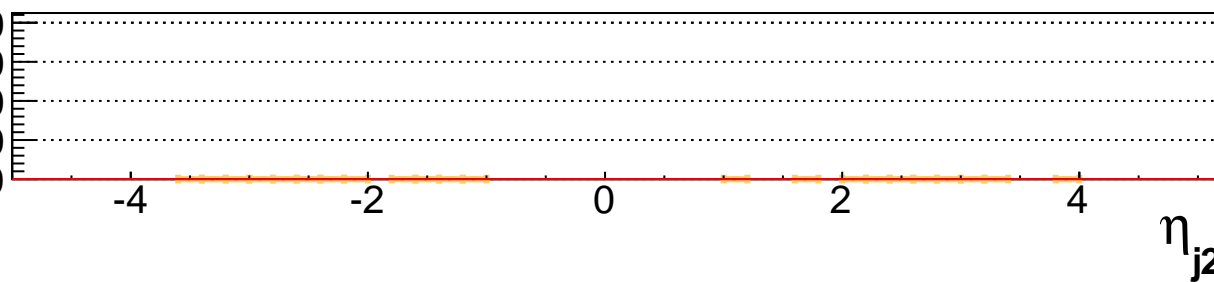
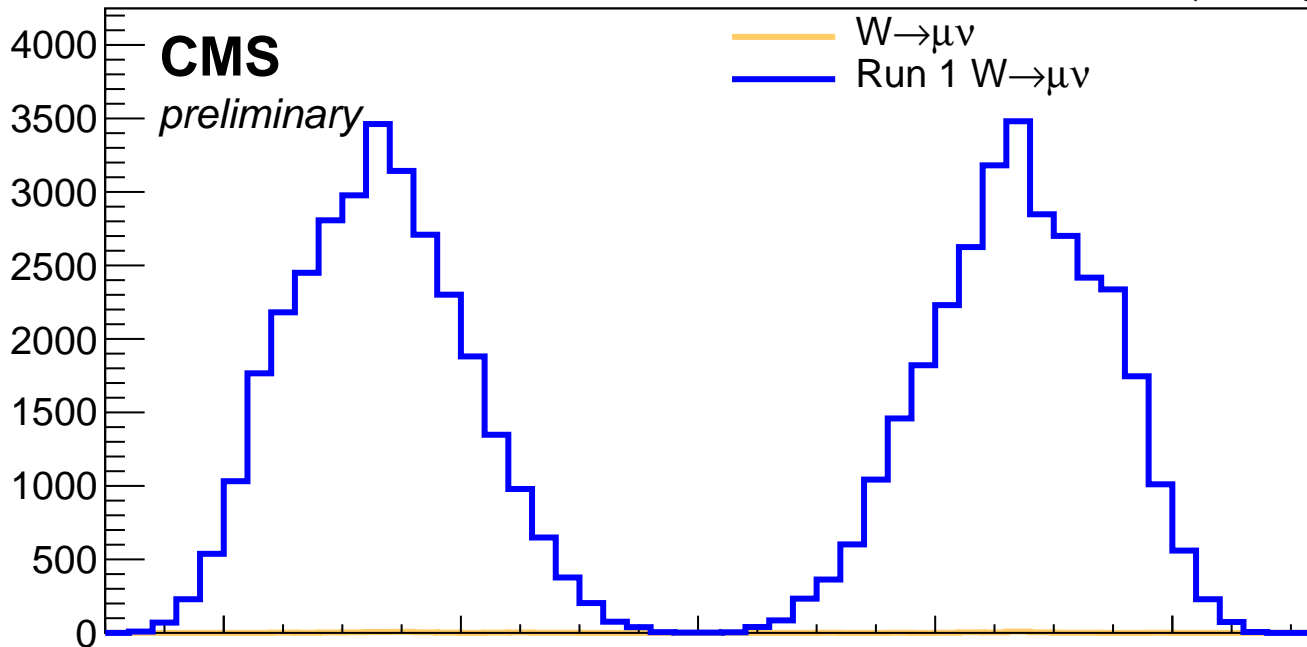
preliminary

W→μν

Run 1 W→μν

Data/Bkg

η_{j2}



19.2 fb⁻¹ (8 TeV)

CMS

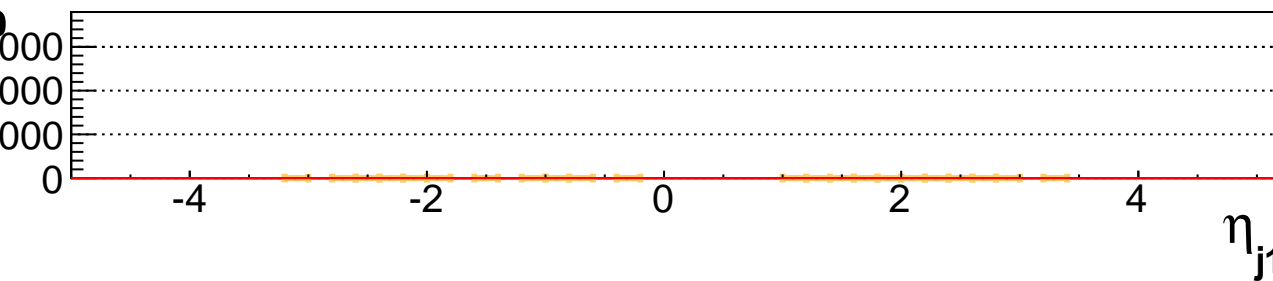
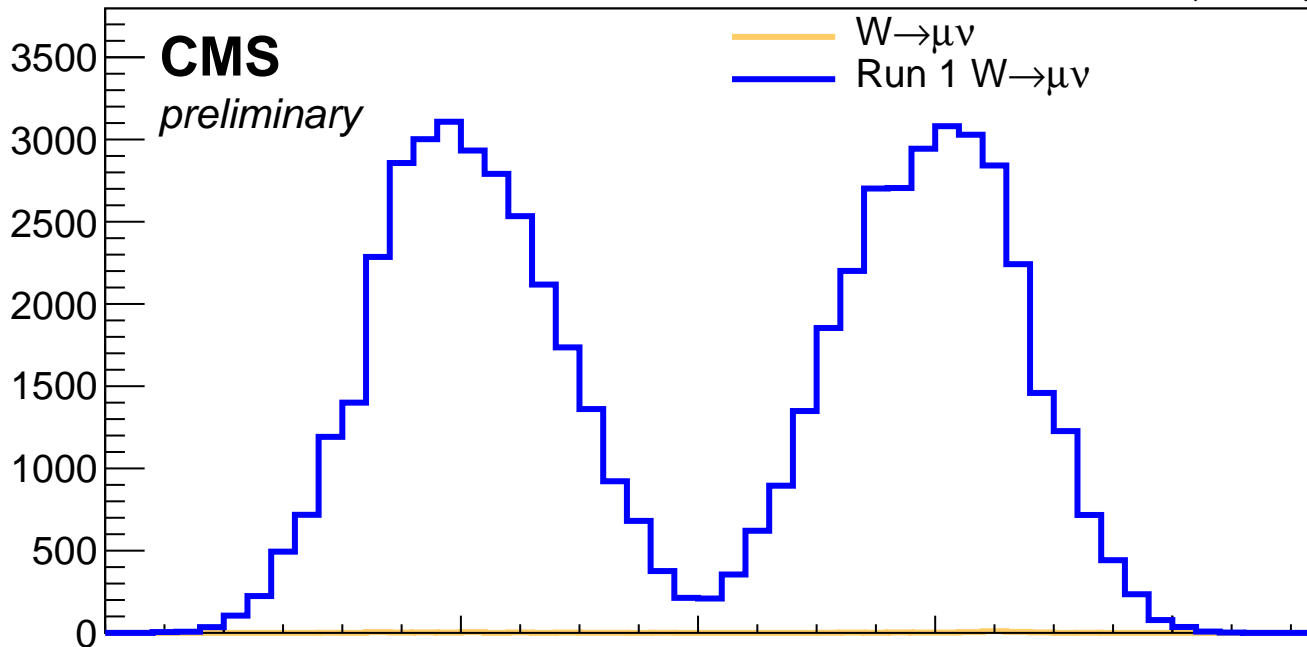
preliminary

— $W \rightarrow \mu \nu$

— Run 1 $W \rightarrow \mu \nu$

Data/Bkg

η_{j1}



19.2 fb⁻¹ (8 TeV)

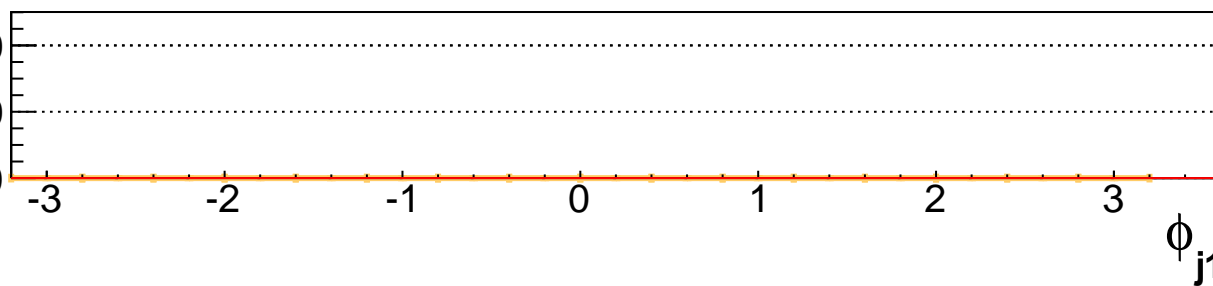
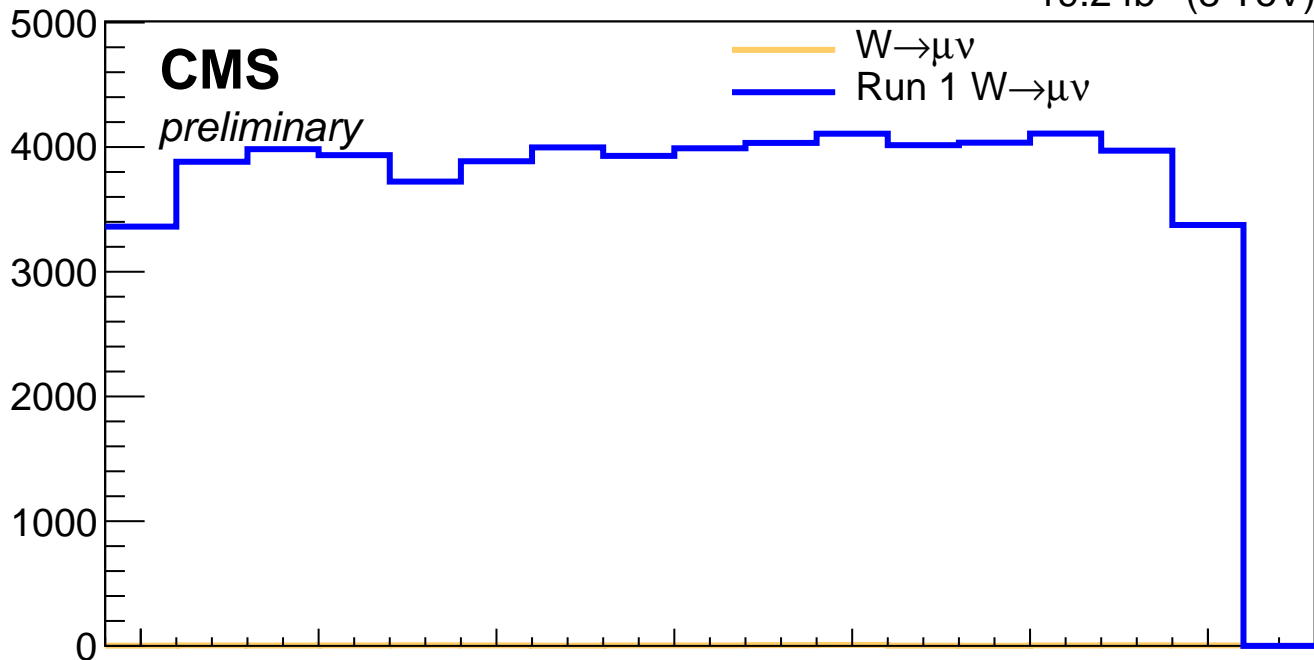
CMS

preliminary

— $W \rightarrow \mu \nu$

— Run 1 $W \rightarrow \mu \nu$

Data/Bkg



19.2 fb⁻¹ (8 TeV)

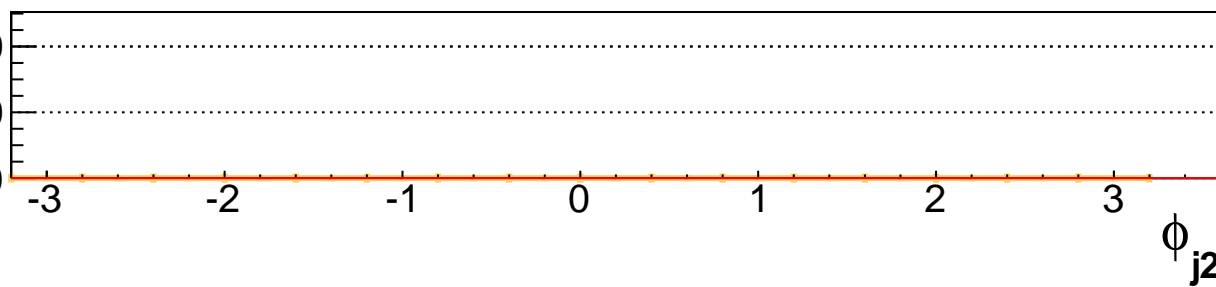
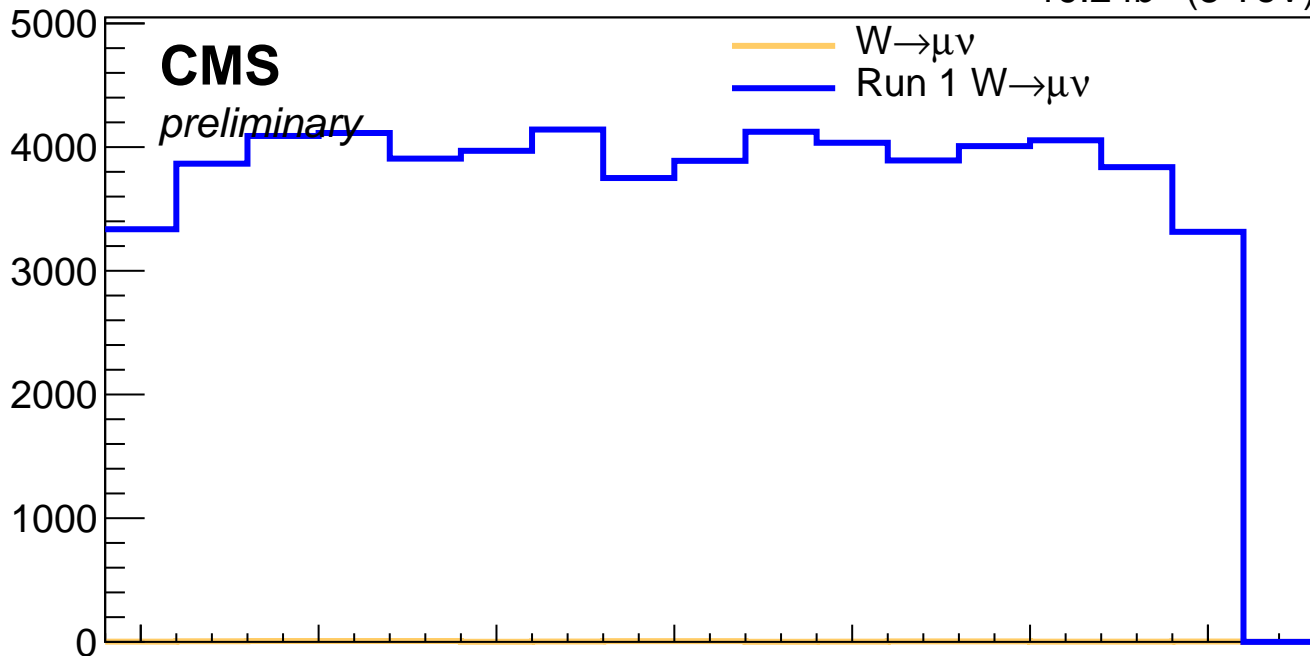
CMS

preliminary

— $W \rightarrow \mu \nu$

— Run 1 $W \rightarrow \mu \nu$

Data/Bkg



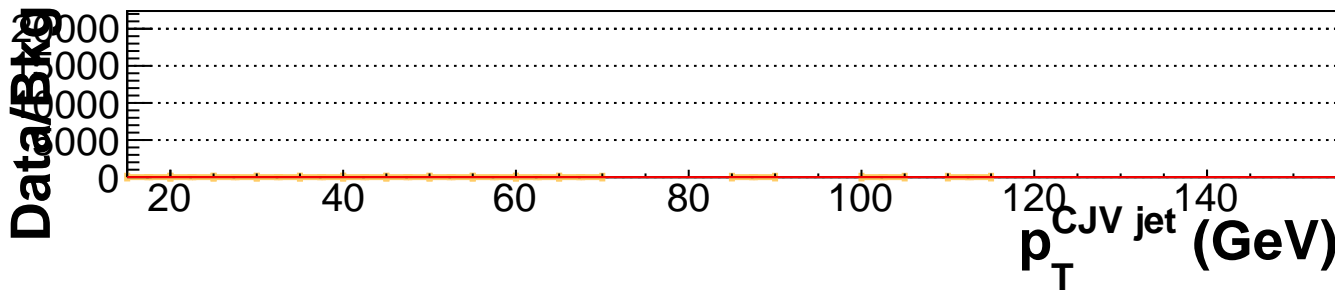
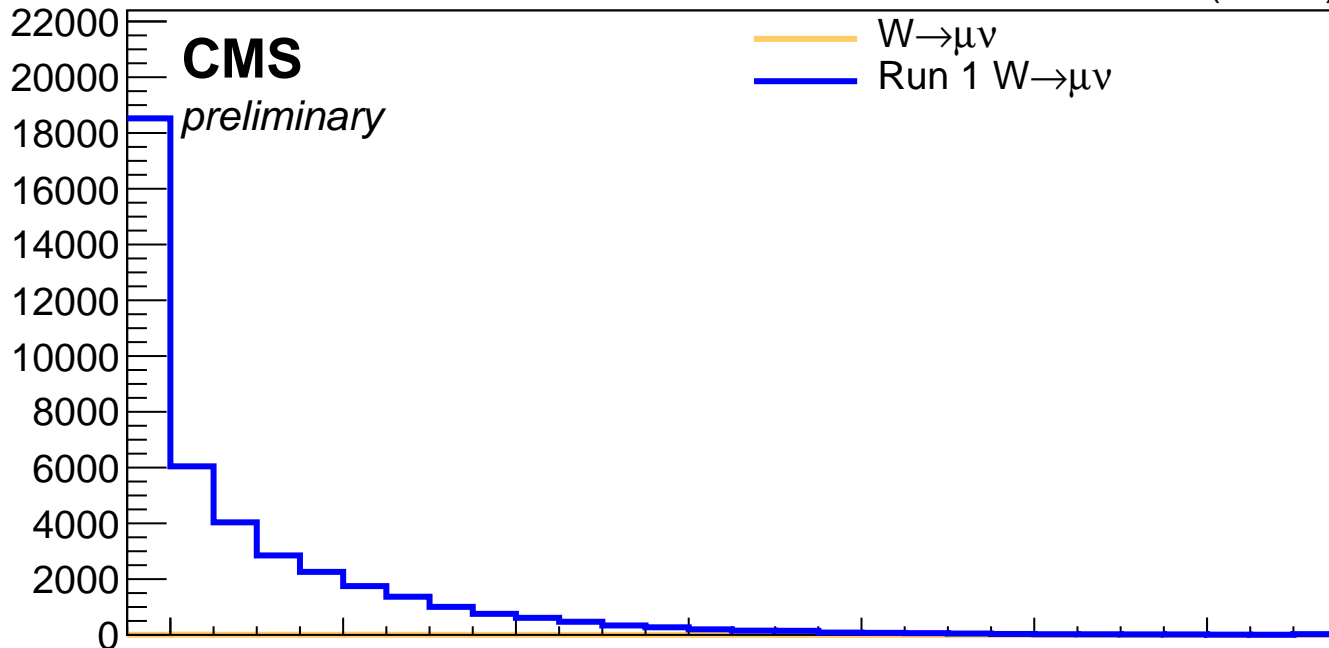
19.2 fb⁻¹ (8 TeV)

CMS

preliminary

W→μν

Run 1 W→μν

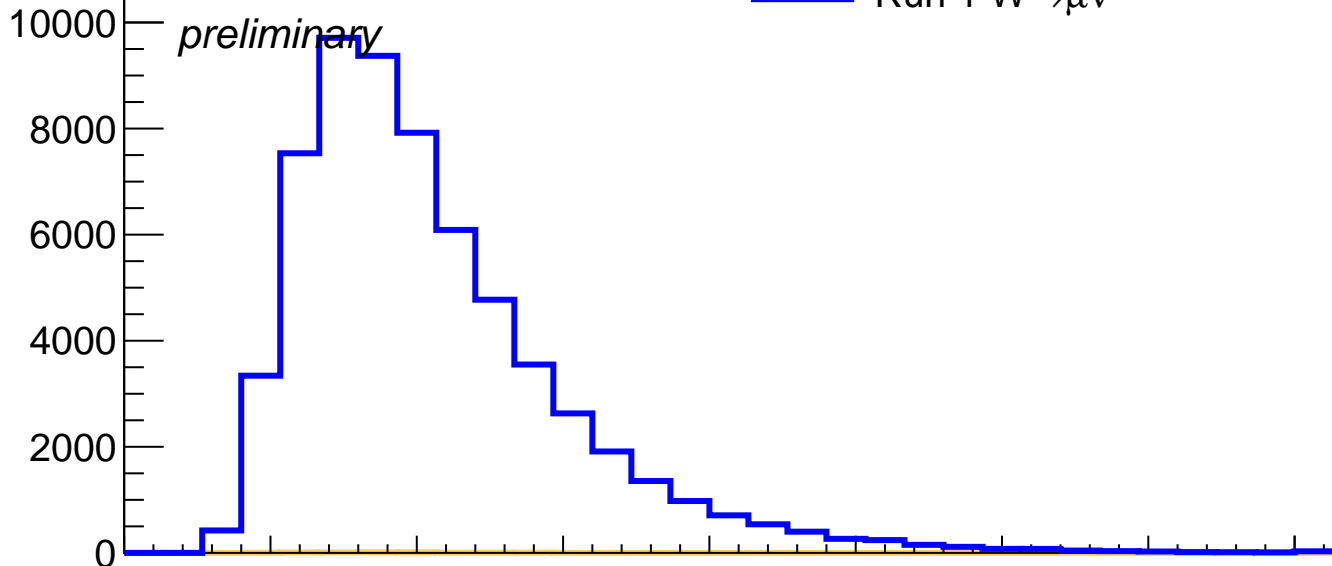


19.2 fb⁻¹ (8 TeV)

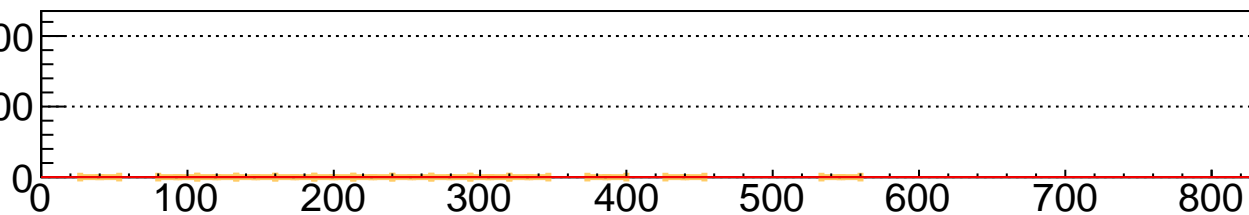
CMS

preliminary

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



Data/Bkg

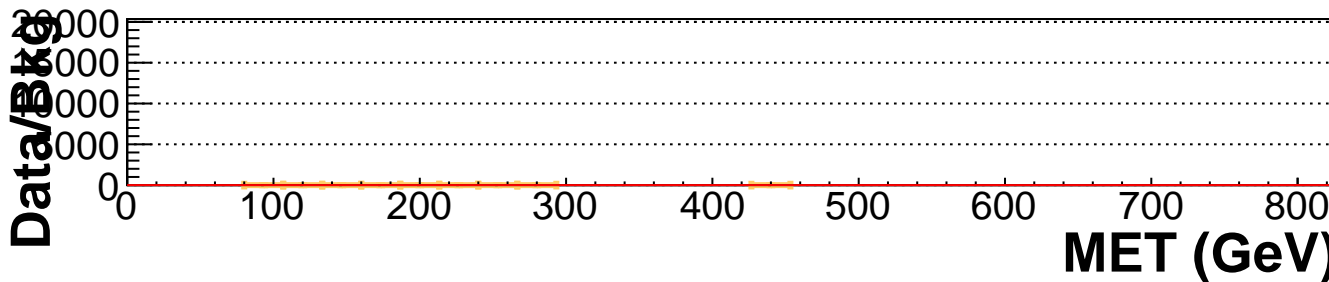
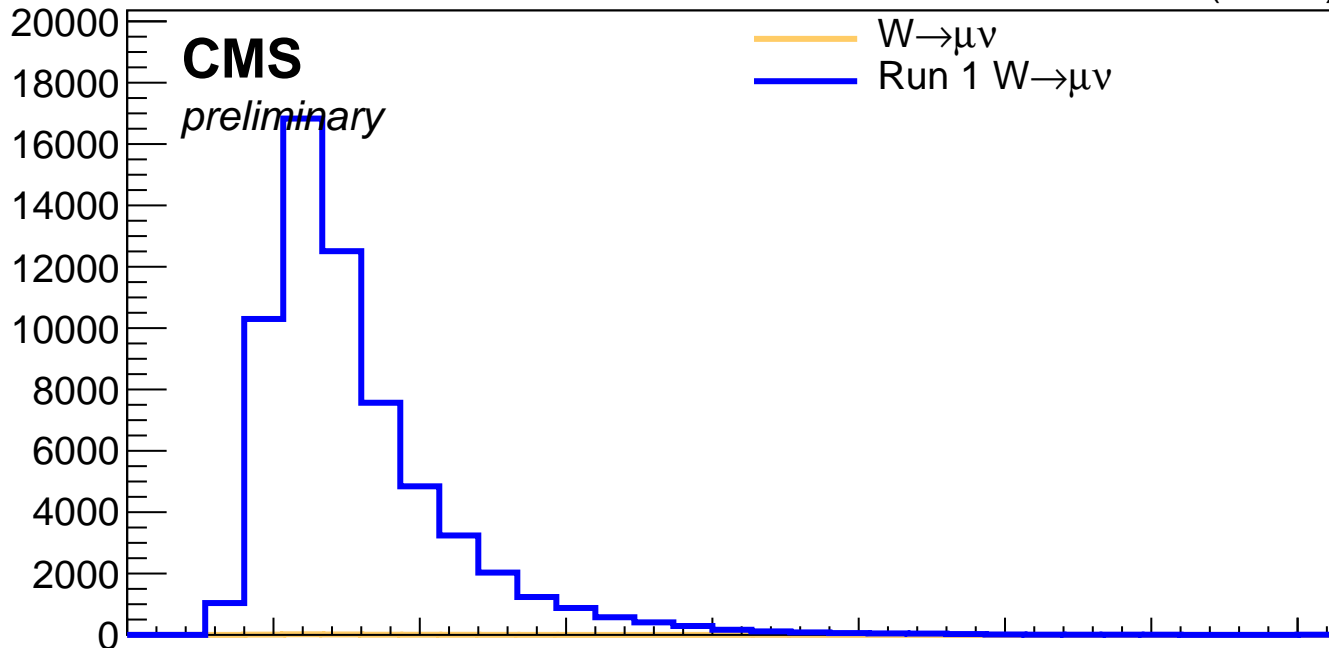


Missing transverse energy (GeV)

19.2 fb⁻¹ (8 TeV)

CMS
preliminary

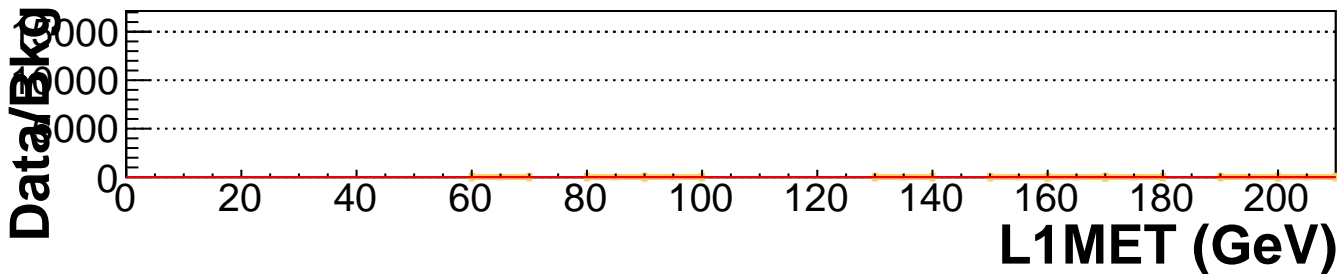
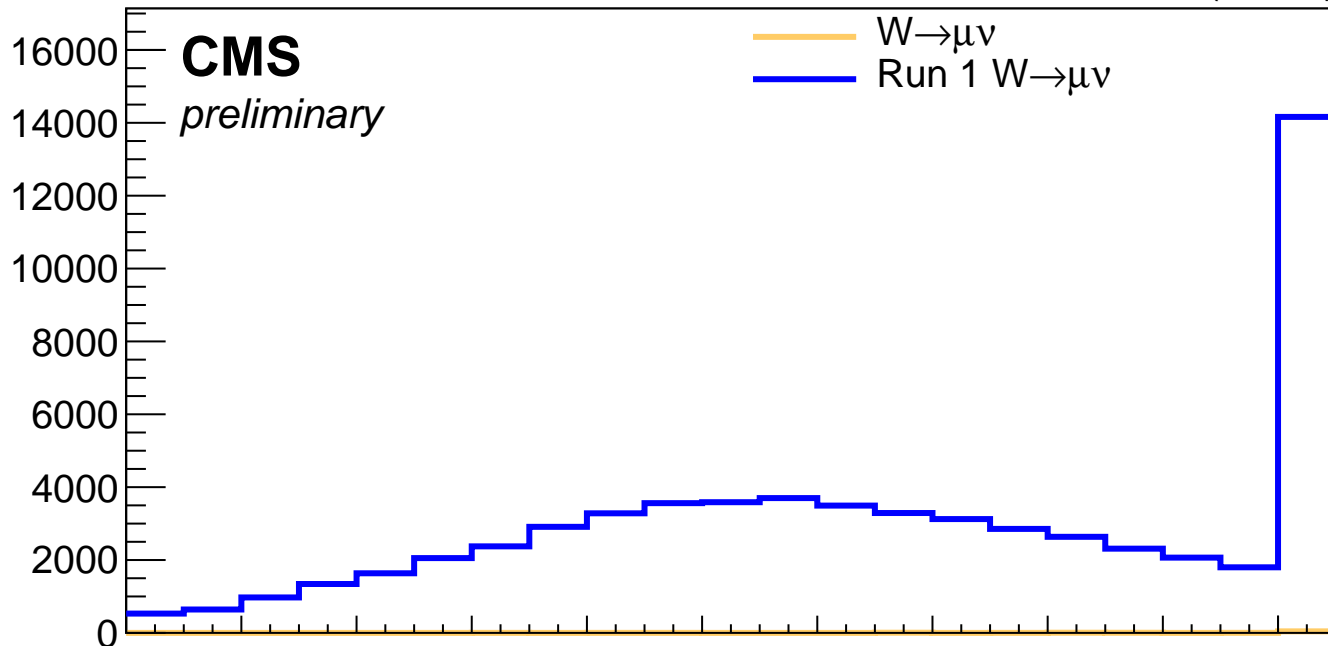
— W→μν
— Run 1 W→μν



19.2 fb⁻¹ (8 TeV)

CMS
preliminary

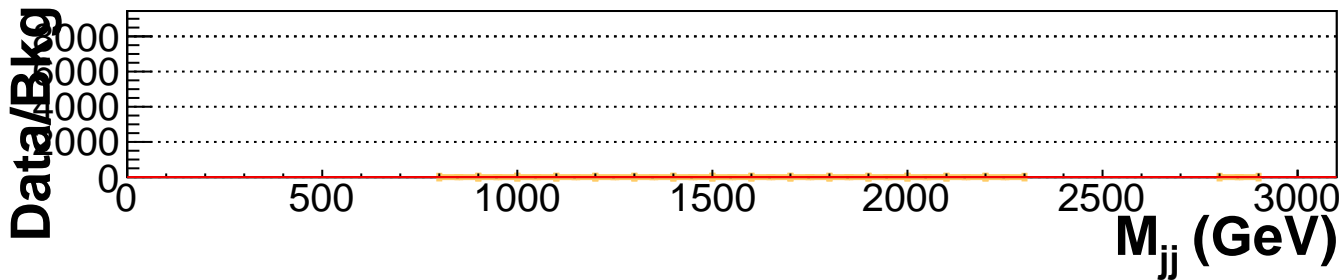
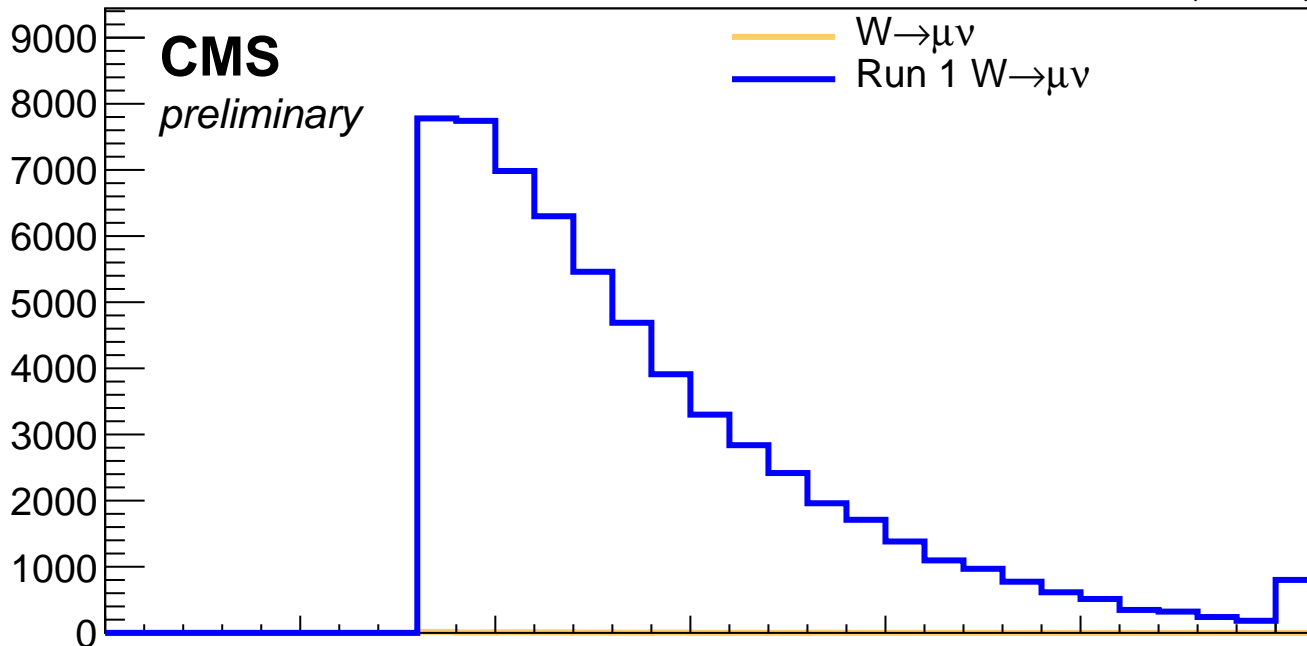
— $W \rightarrow \mu \nu$
— Run 1 $W \rightarrow \mu \nu$



19.2 fb⁻¹ (8 TeV)

CMS
preliminary

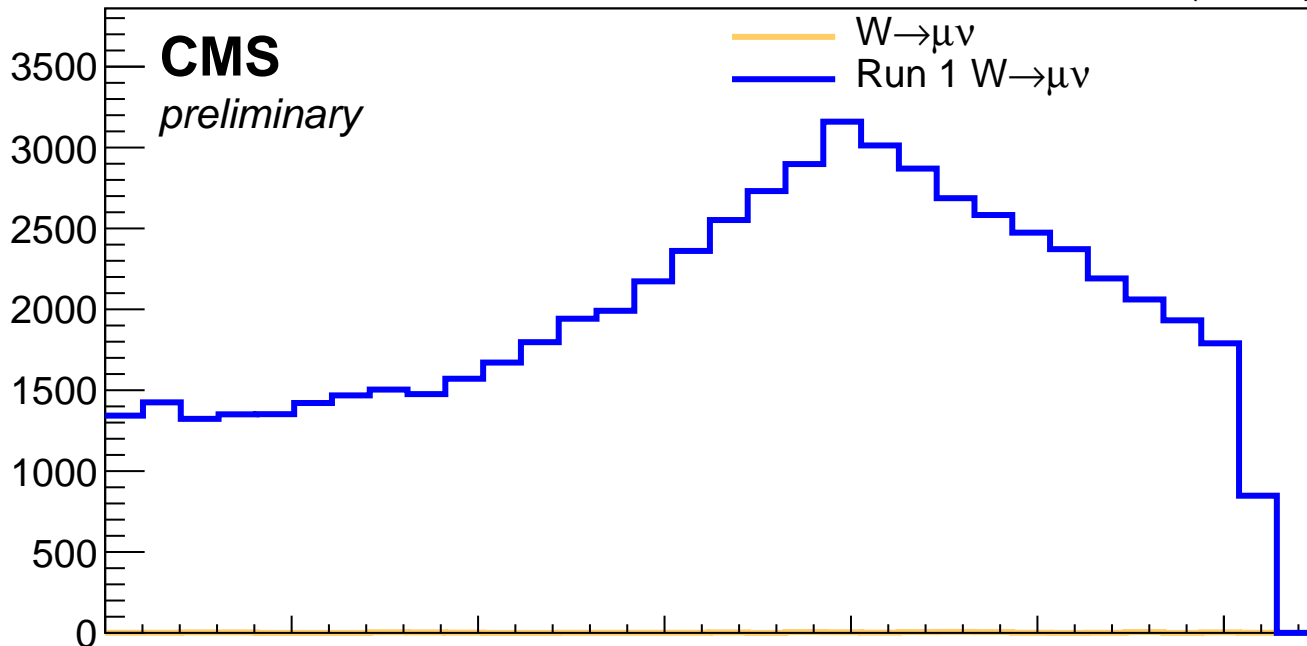
— W→μν
— Run 1 W→μν



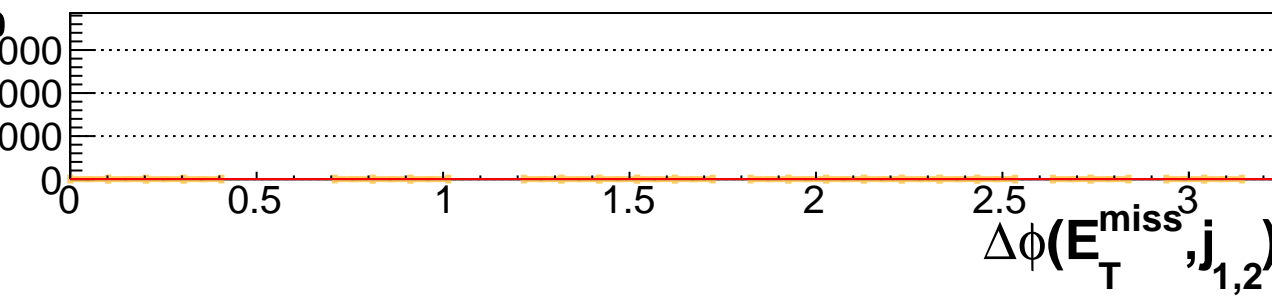
19.2 fb⁻¹ (8 TeV)

CMS
preliminary

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



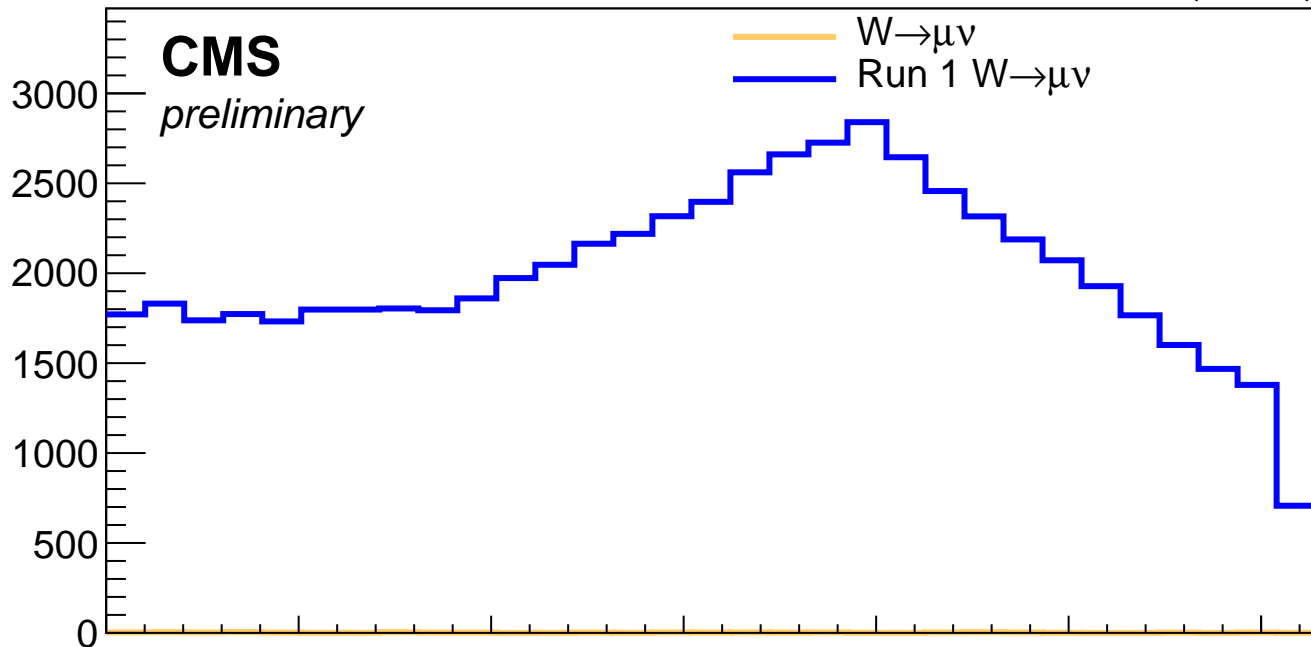
Data/Bkg



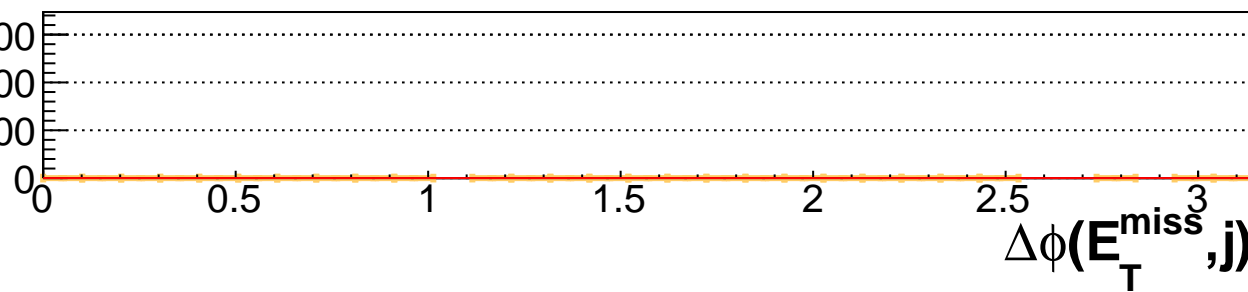
19.2 fb⁻¹ (8 TeV)

CMS
preliminary

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



Data/Bkg

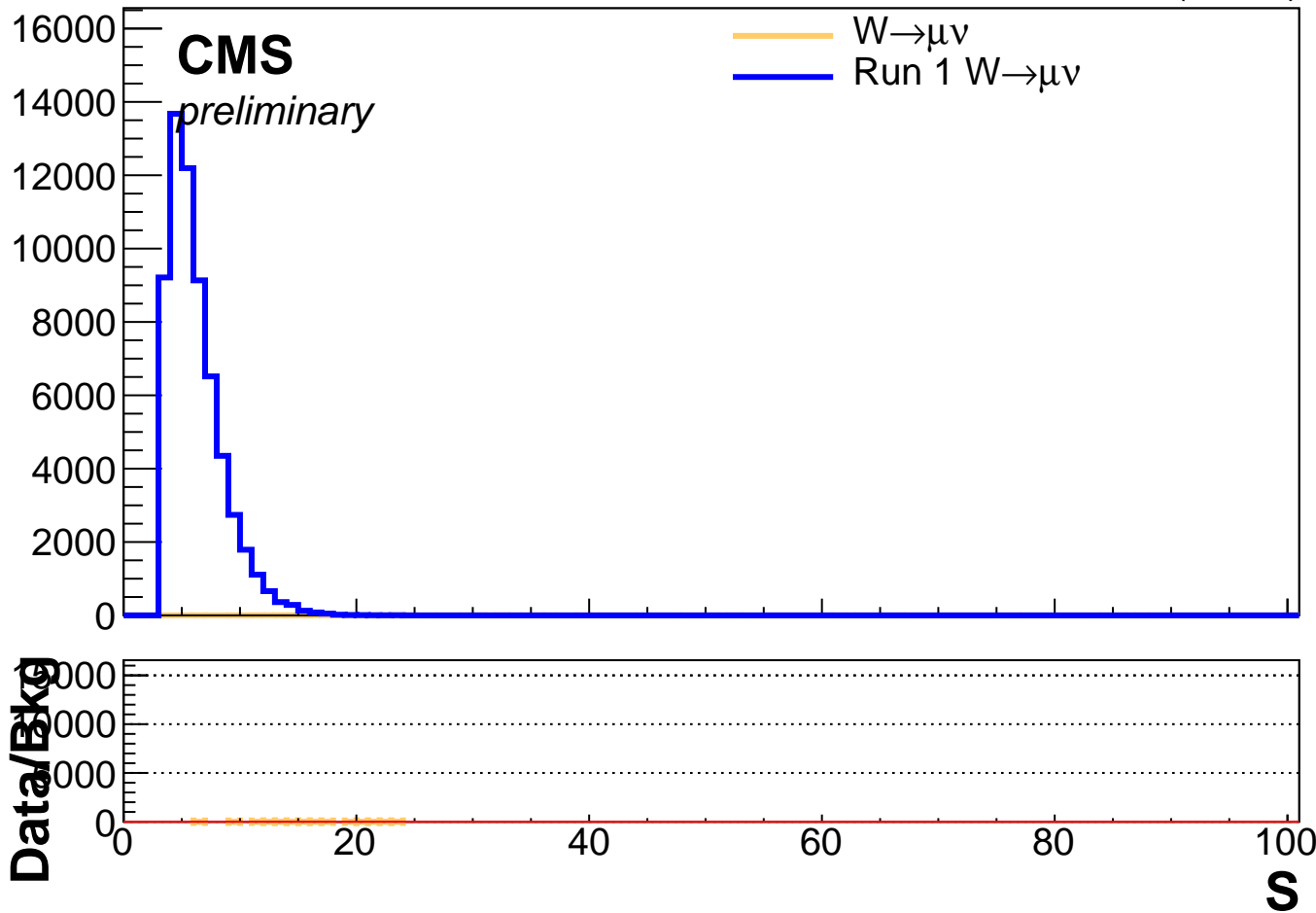


19.2 fb⁻¹ (8 TeV)

CMS

preliminary

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



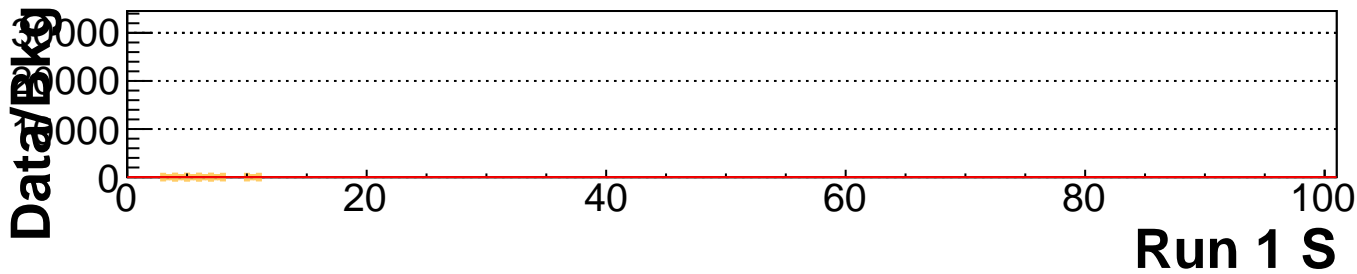
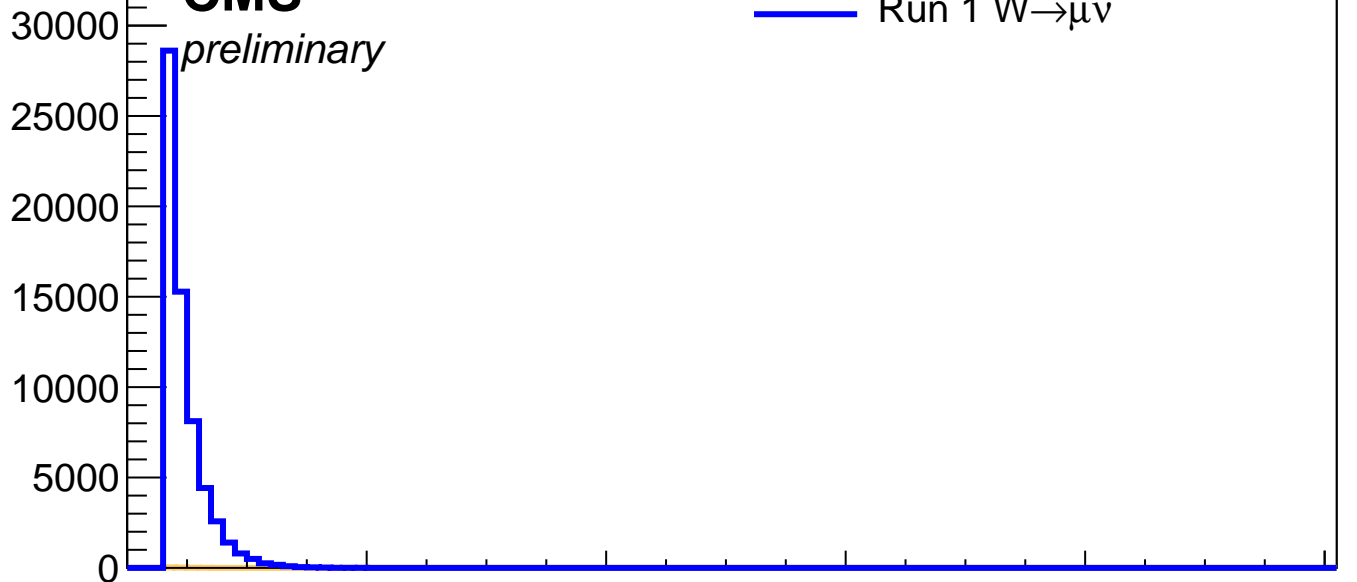
19.2 fb⁻¹ (8 TeV)

CMS

preliminary

W→μν

Run 1 W→μν



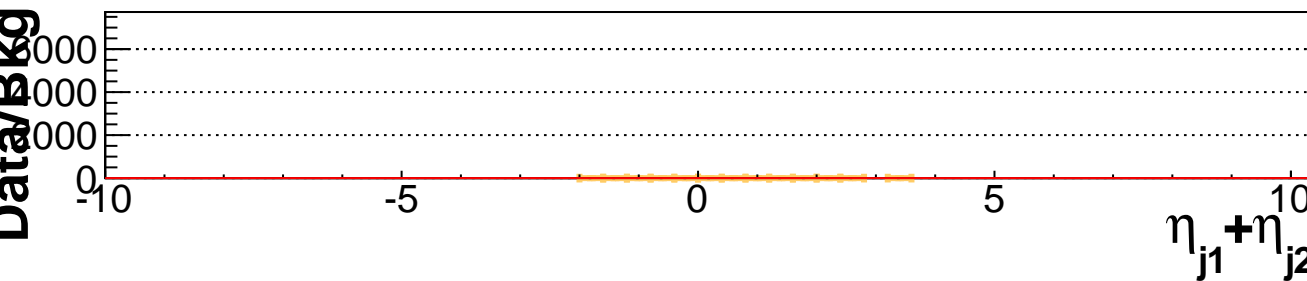
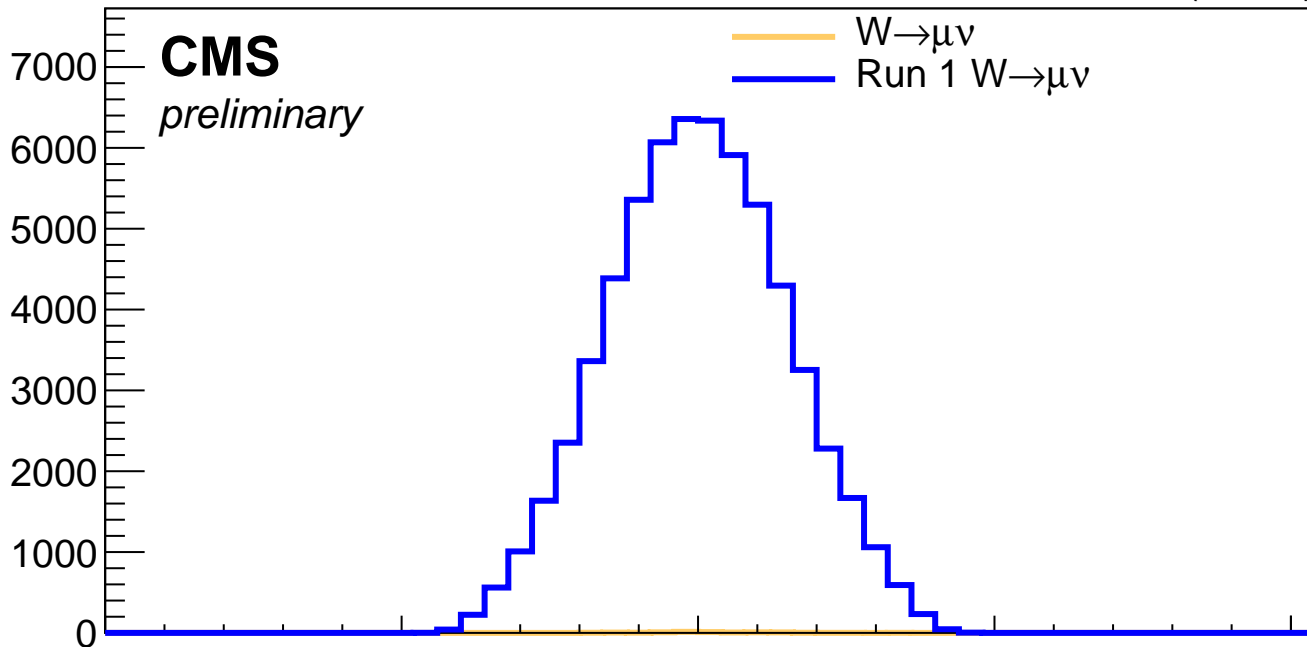
19.2 fb⁻¹ (8 TeV)

CMS
preliminary

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

Data/Bkg

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



19.2 fb⁻¹ (8 TeV)

CMS

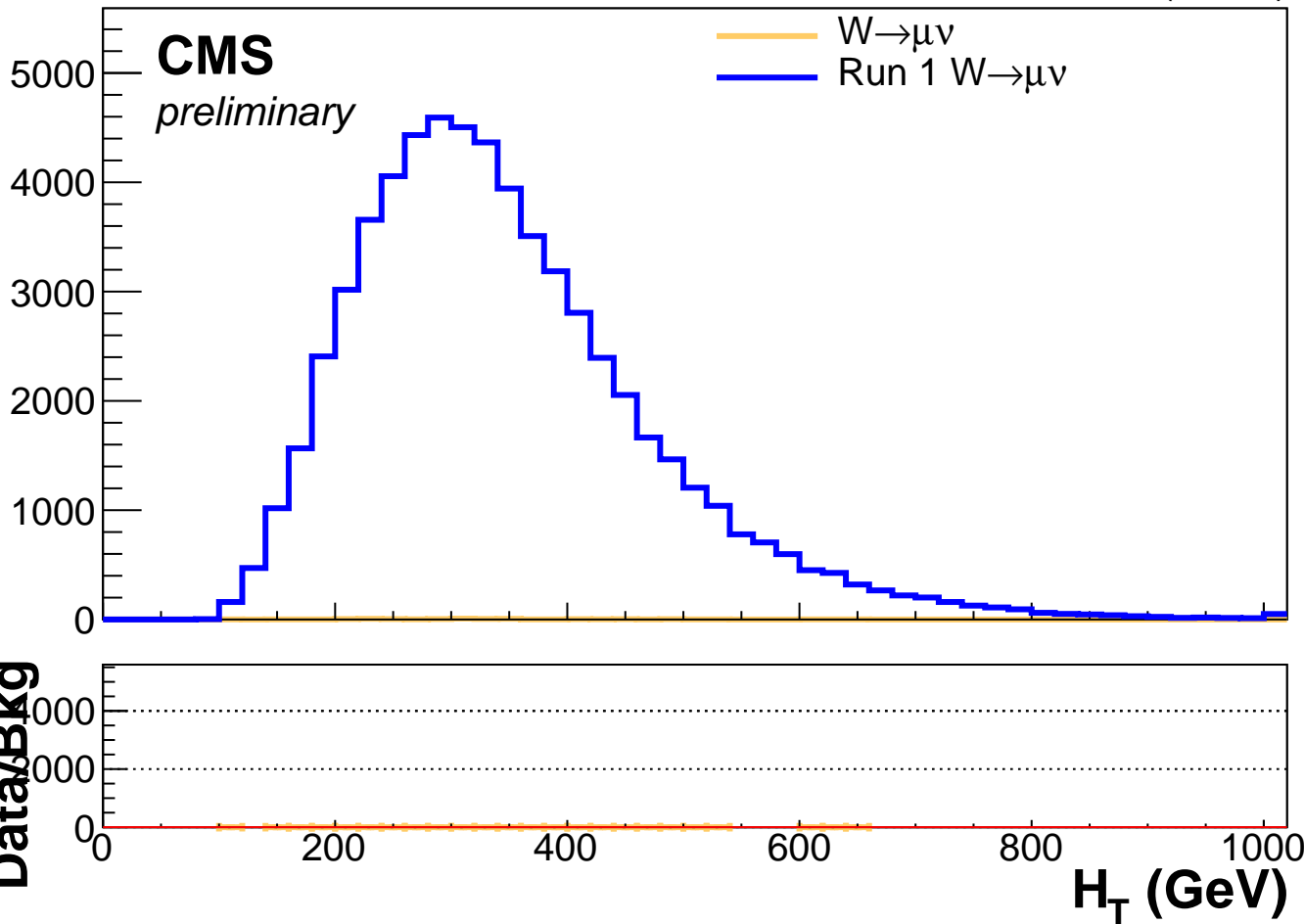
preliminary

— $W \rightarrow \mu \nu$

— Run 1 $W \rightarrow \mu \nu$

Data/Bkg

H_T (GeV)



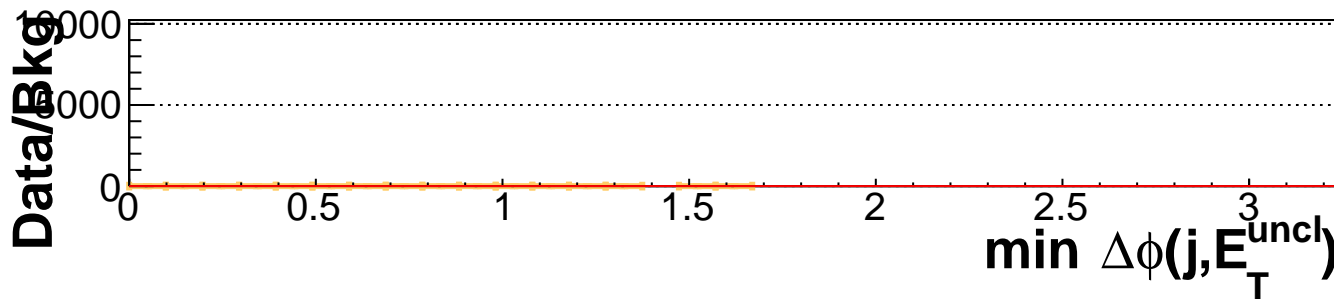
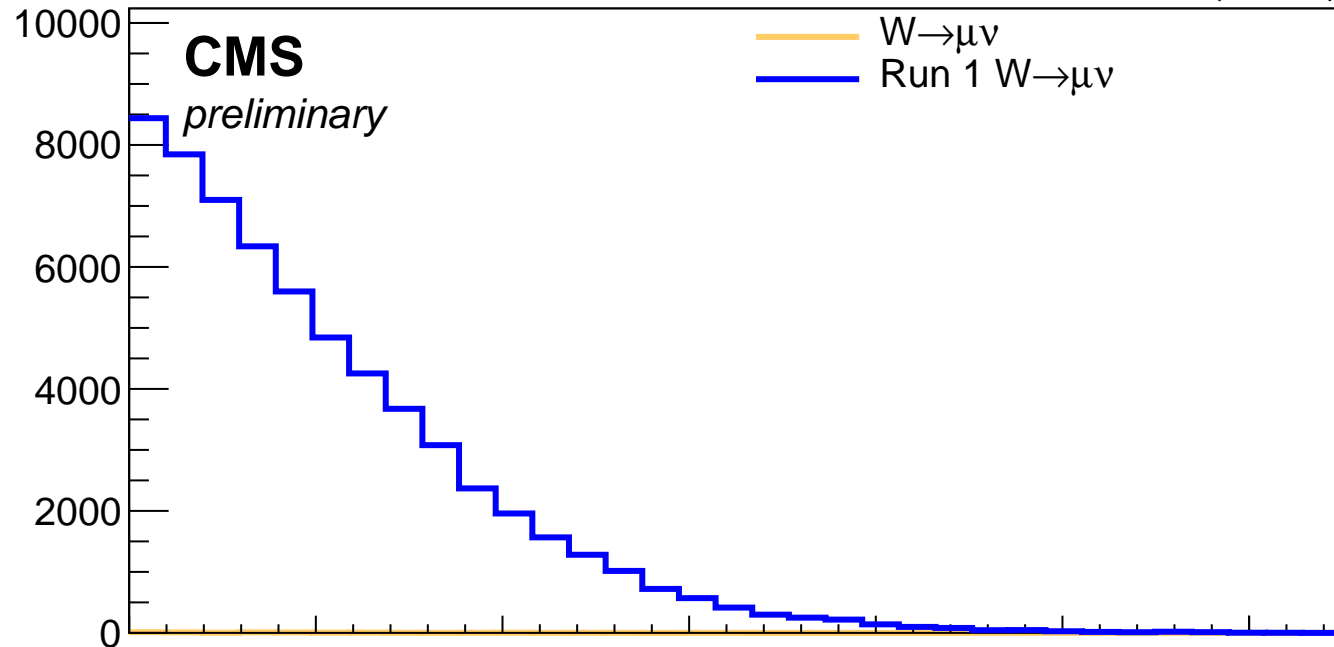
19.2 fb⁻¹ (8 TeV)

CMS

preliminary

W→μν

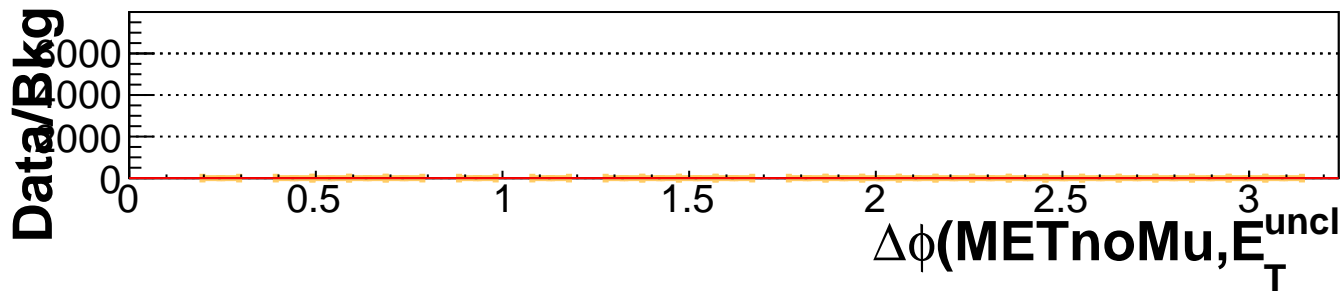
Run 1 W→μν



19.2 fb⁻¹ (8 TeV)

CMS
preliminary

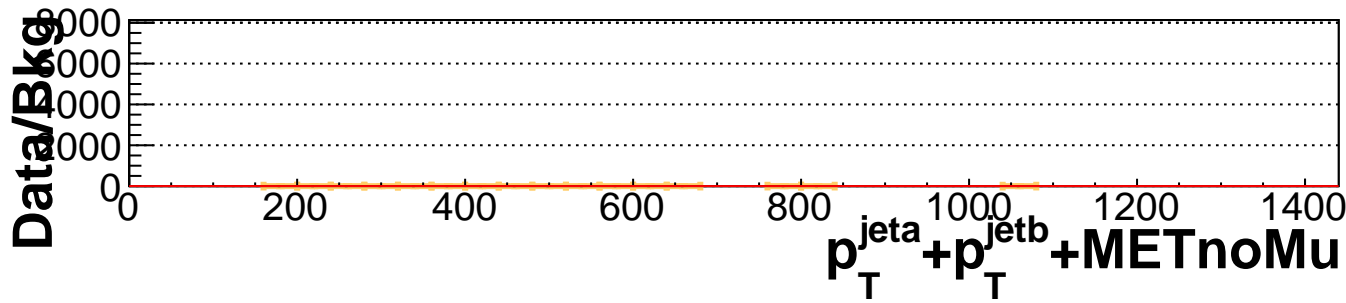
— $W \rightarrow \mu \nu$
— Run 1 $W \rightarrow \mu \nu$



19.2 fb⁻¹ (8 TeV)

CMS
preliminary

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

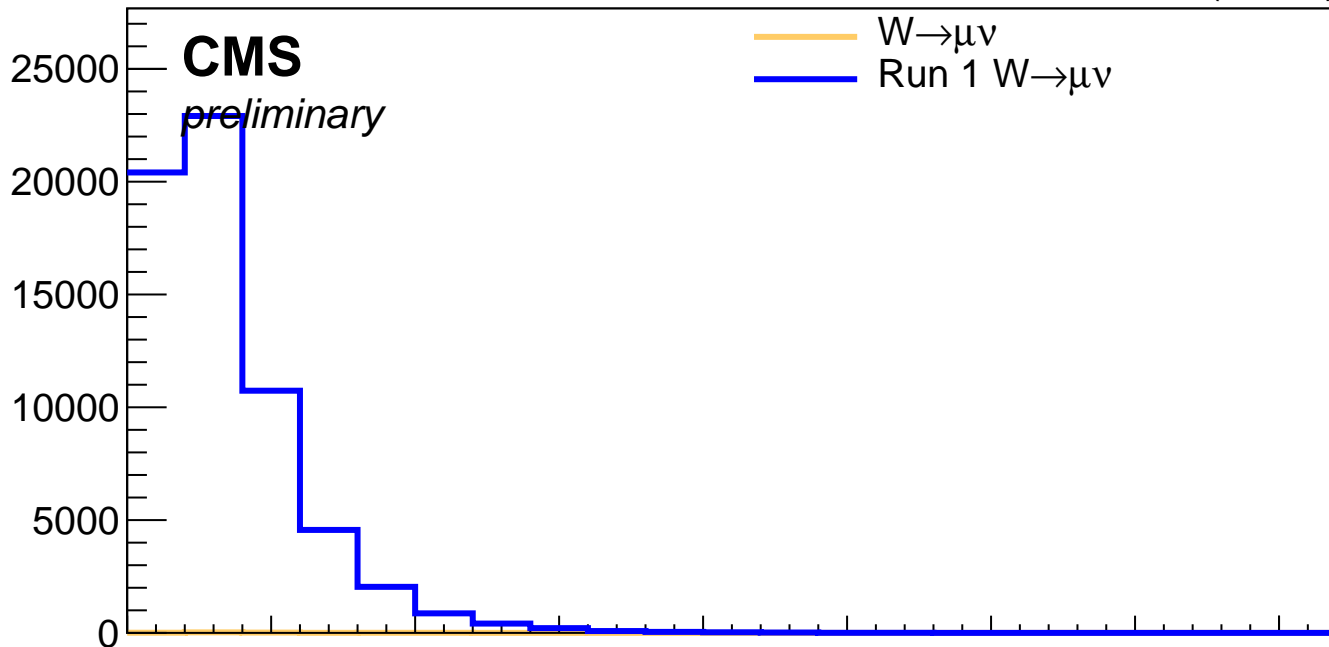


19.2 fb⁻¹ (8 TeV)

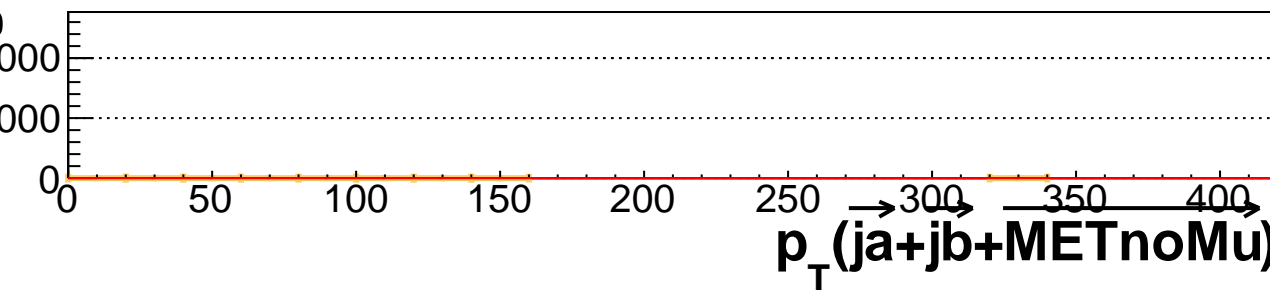
CMS

preliminary

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



Data/Bkg

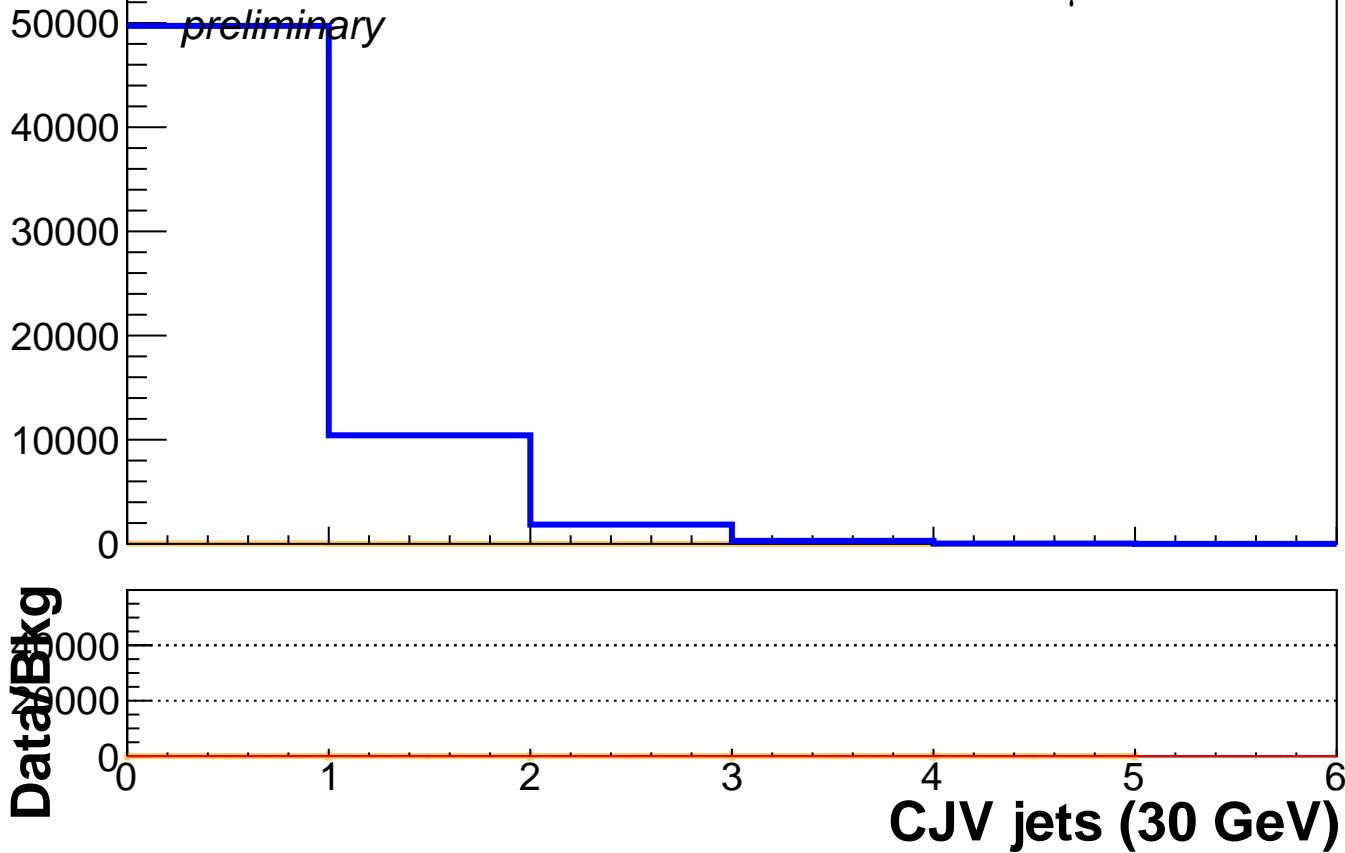


19.2 fb⁻¹ (8 TeV)

CMS

preliminary

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



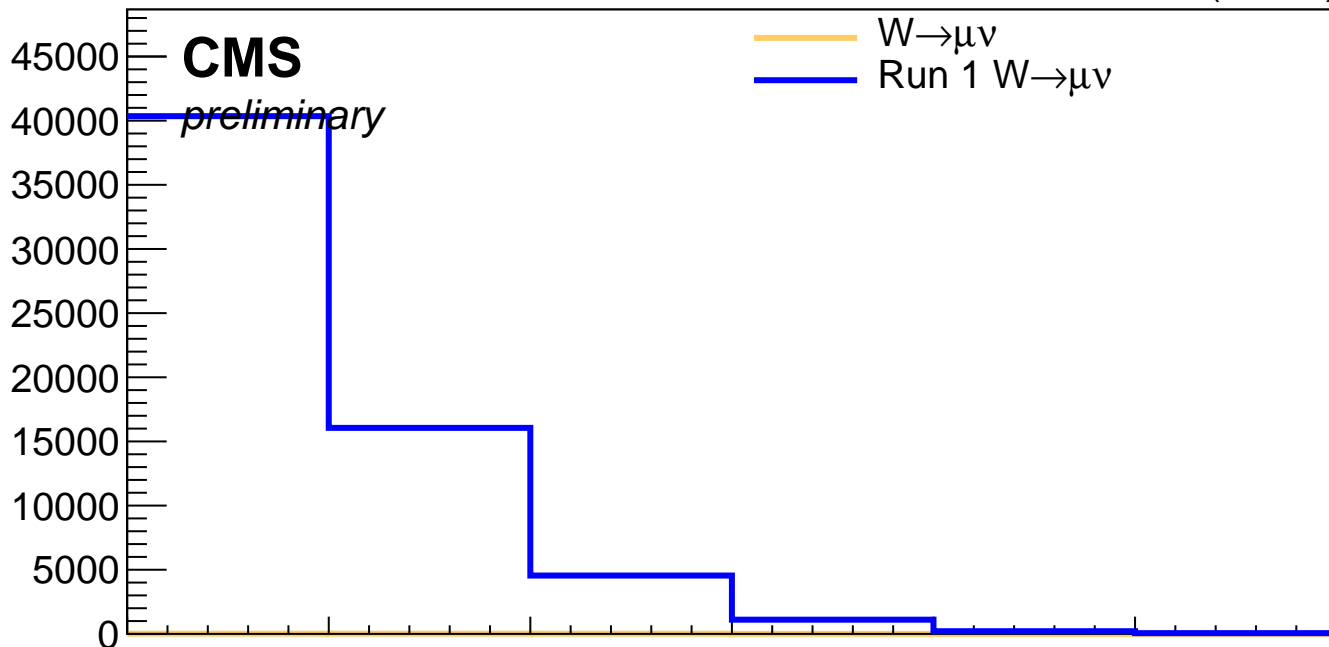
19.2 fb⁻¹ (8 TeV)

CMS

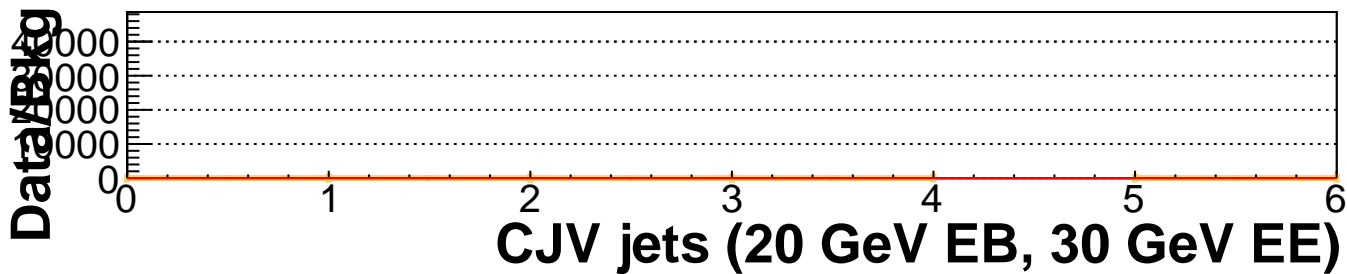
preliminary

W→μν

Run 1 W→μν



Data/Bkg



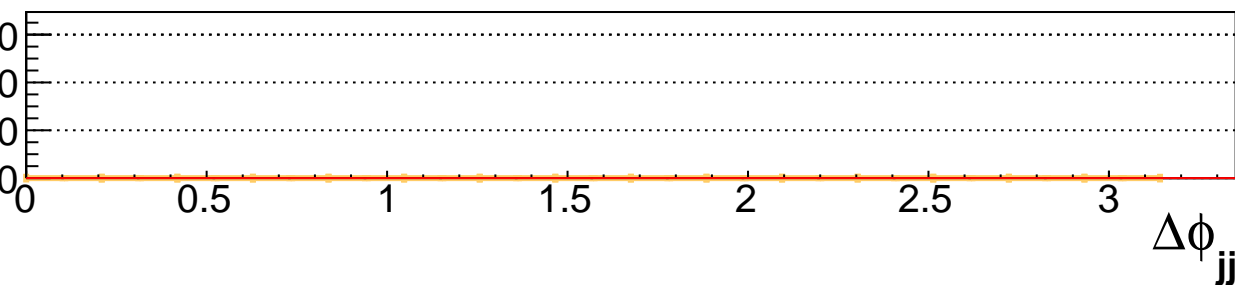
19.2 fb⁻¹ (8 TeV)

CMS
preliminary

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

6000
5000
4000
3000
2000
1000
0

Data/Bkg

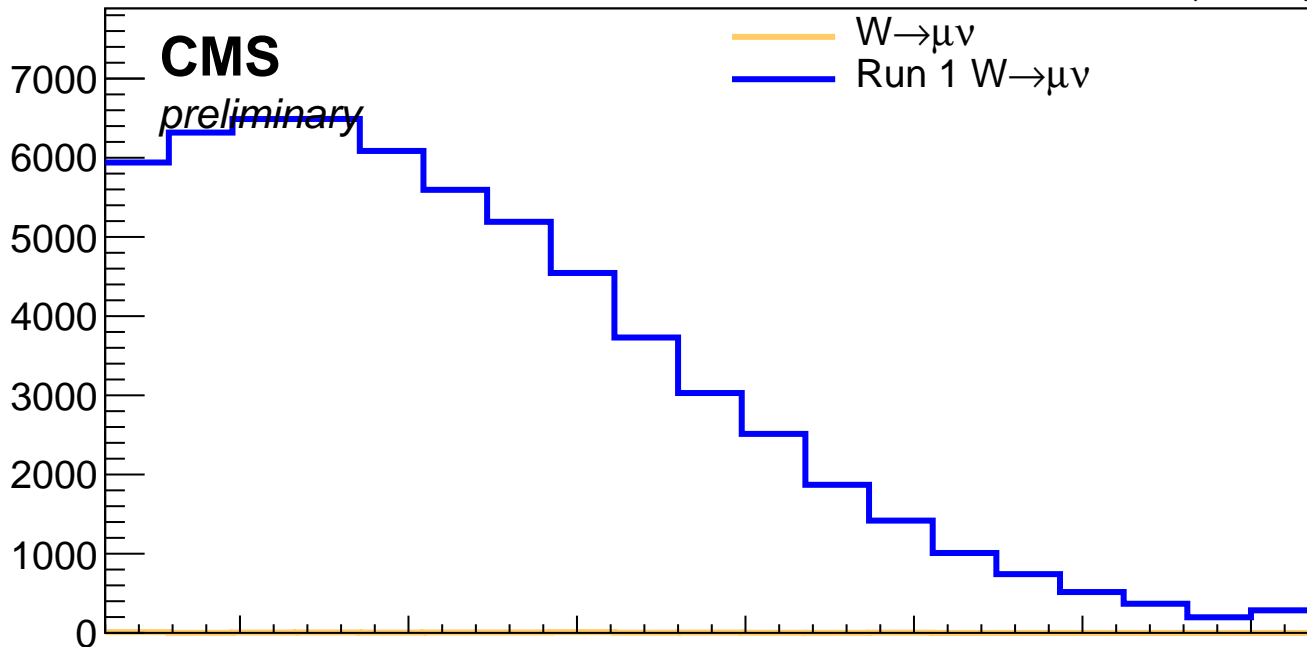


19.2 fb⁻¹ (8 TeV)

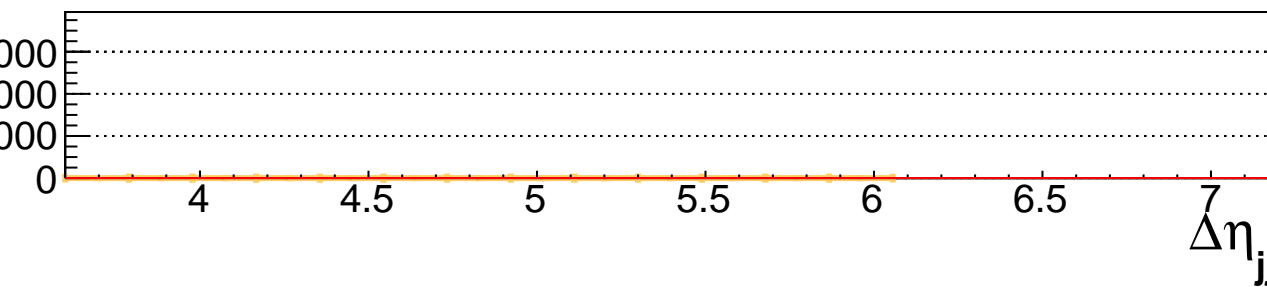
CMS

preliminary

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



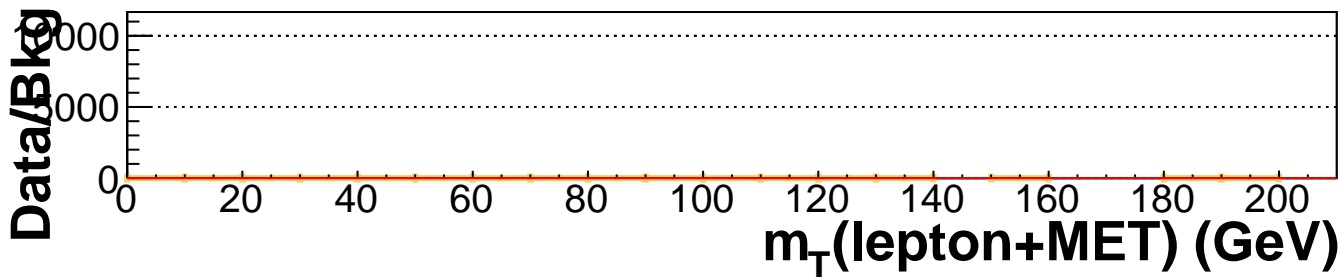
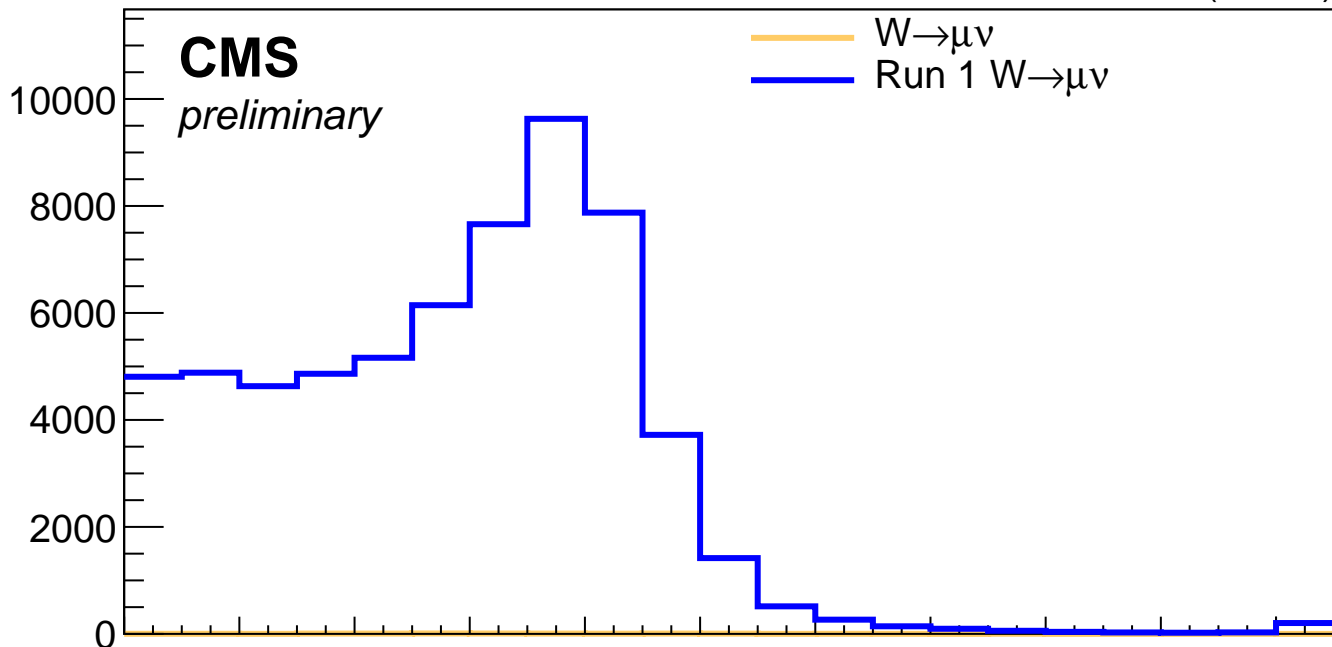
Data/Bkg



19.2 fb⁻¹ (8 TeV)

CMS
preliminary

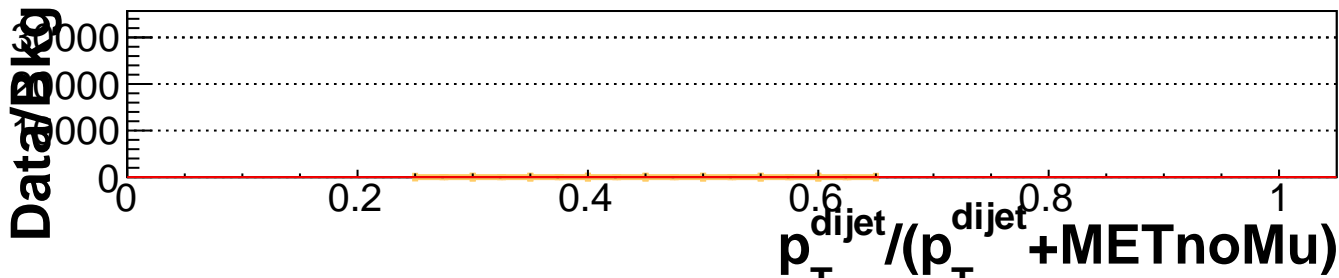
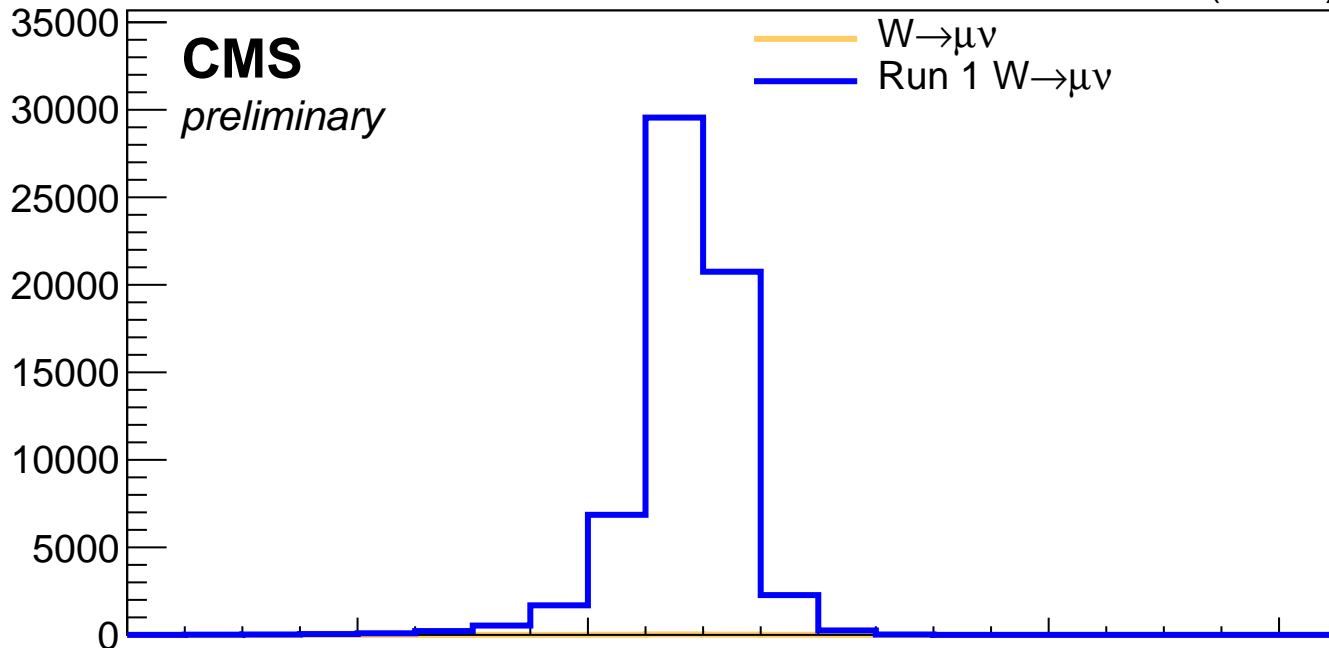
— $W \rightarrow \mu \nu$
— Run 1 $W \rightarrow \mu \nu$



19.2 fb⁻¹ (8 TeV)

CMS
preliminary

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

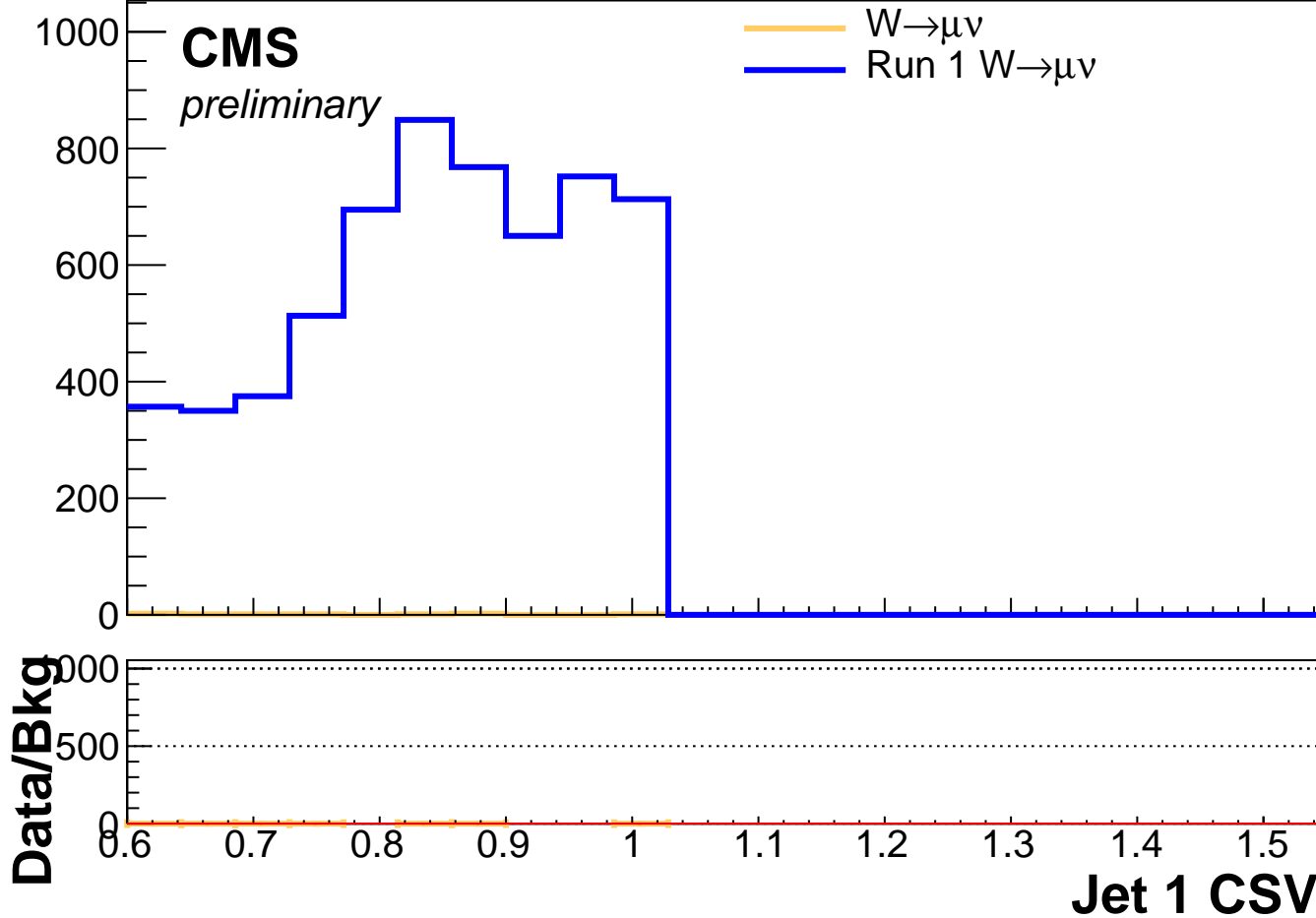


19.2 fb⁻¹ (8 TeV)

CMS

preliminary

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



19.2 fb⁻¹ (8 TeV)

CMS

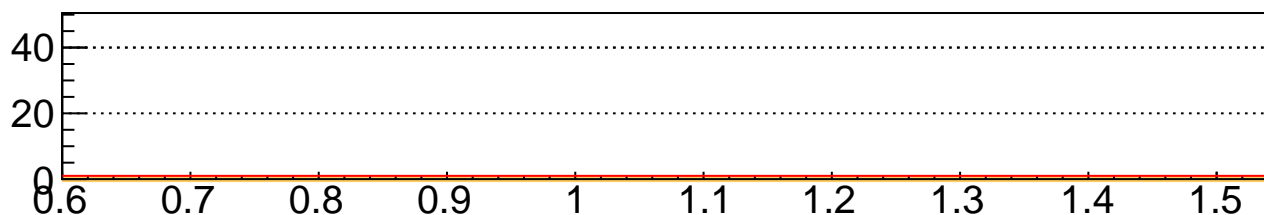
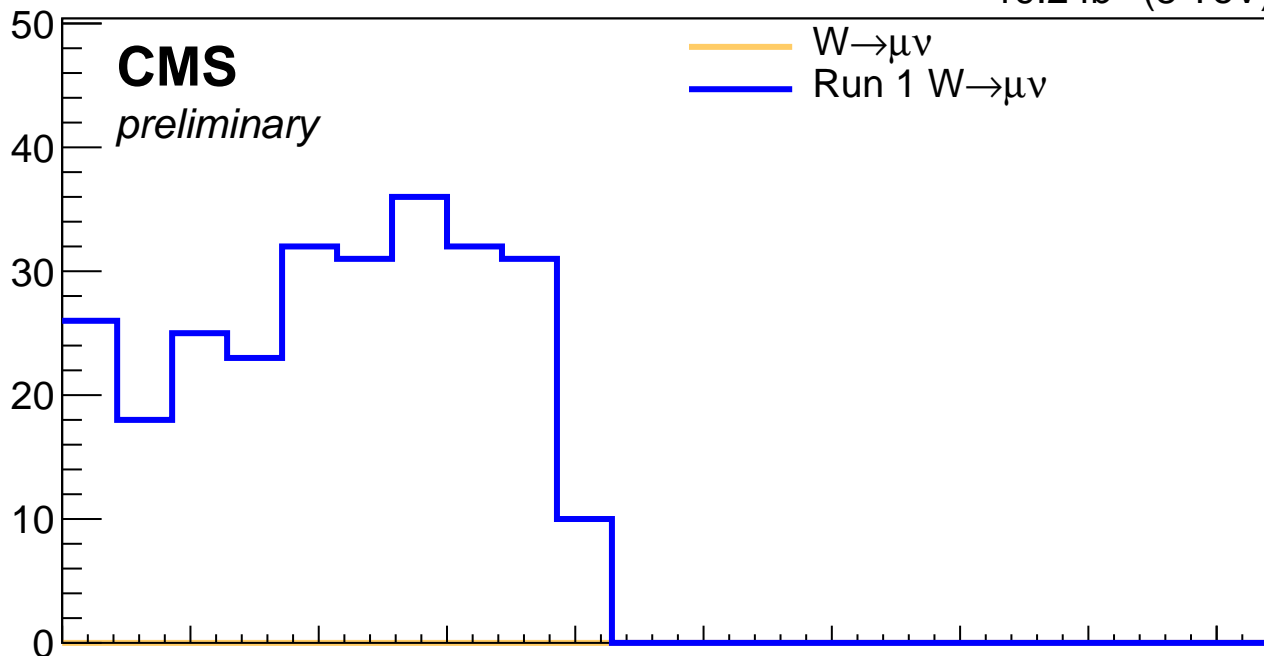
preliminary

W→μν

Run 1 W→μν

Data/Bkg

Jet 2 CSV



19.2 fb⁻¹ (8 TeV)

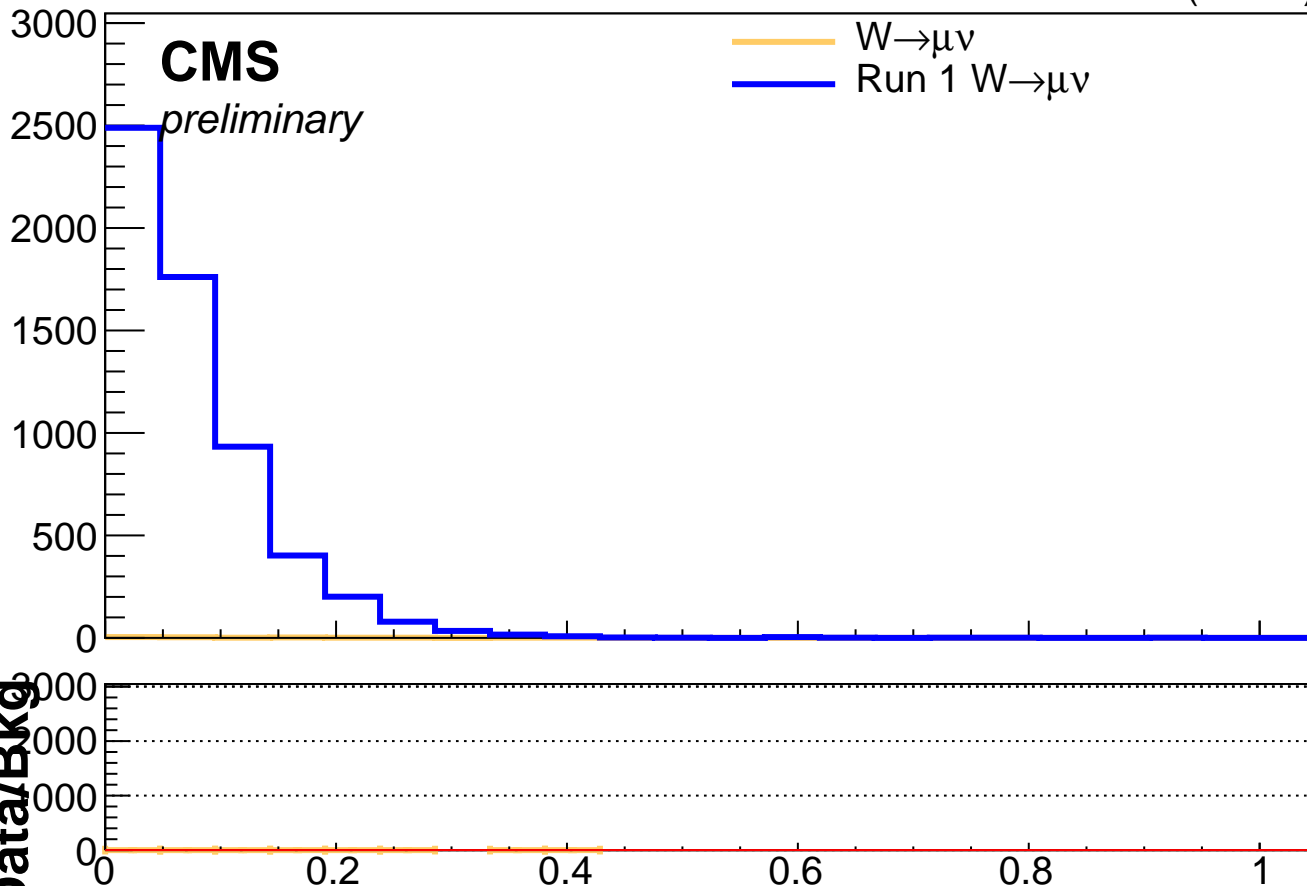
CMS

preliminary

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

Data/Bkg

Jet 3 CSV



19.2 fb⁻¹ (8 TeV)

CMS

preliminary

W→μν

Run 1 W→μν

50000
40000
30000
20000
10000
0

Data/Bkg

1000
500
0

0

2

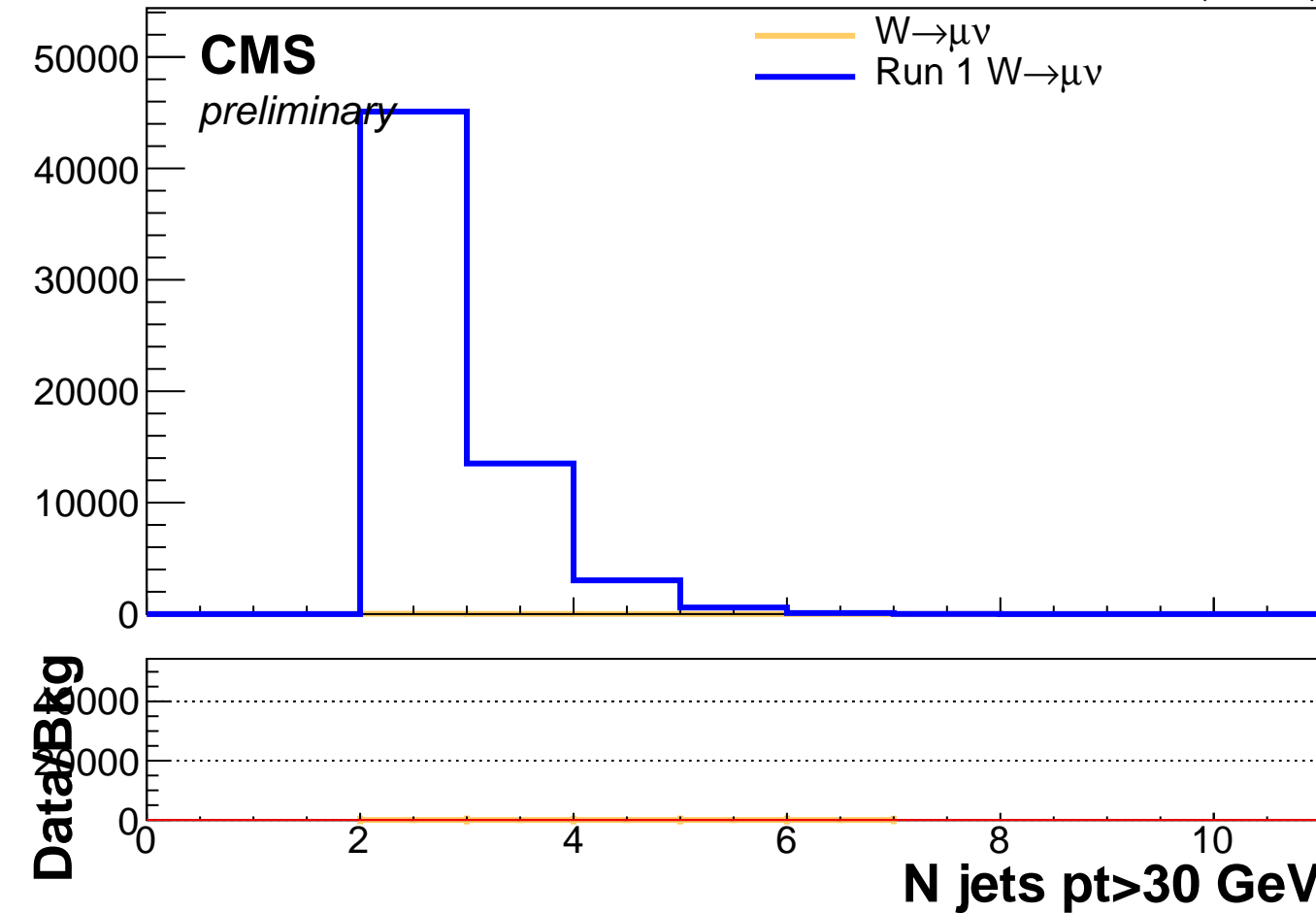
4

6

8

10

N jets pt>30 GeV



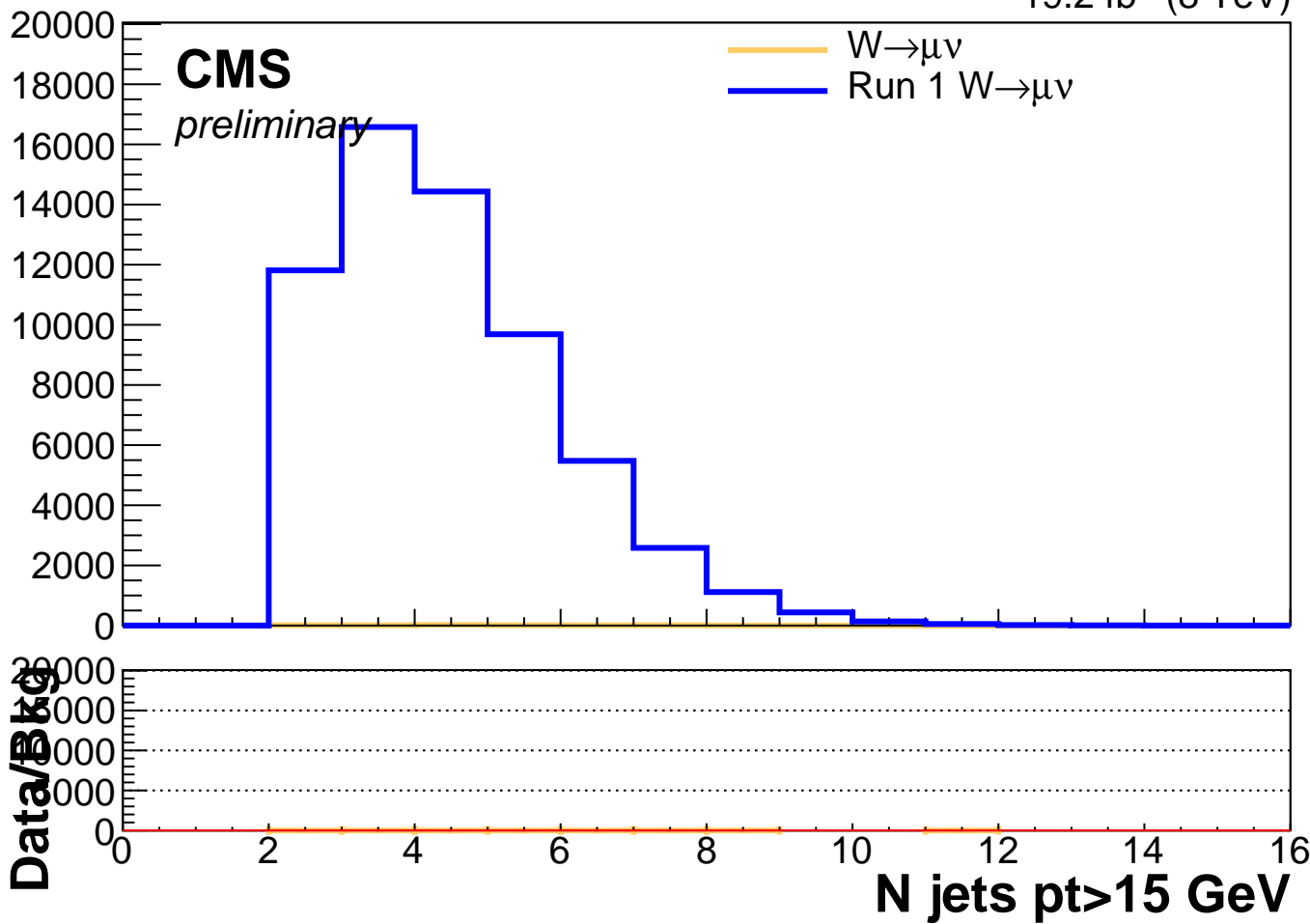
19.2 fb⁻¹ (8 TeV)

CMS

preliminary

W→μν

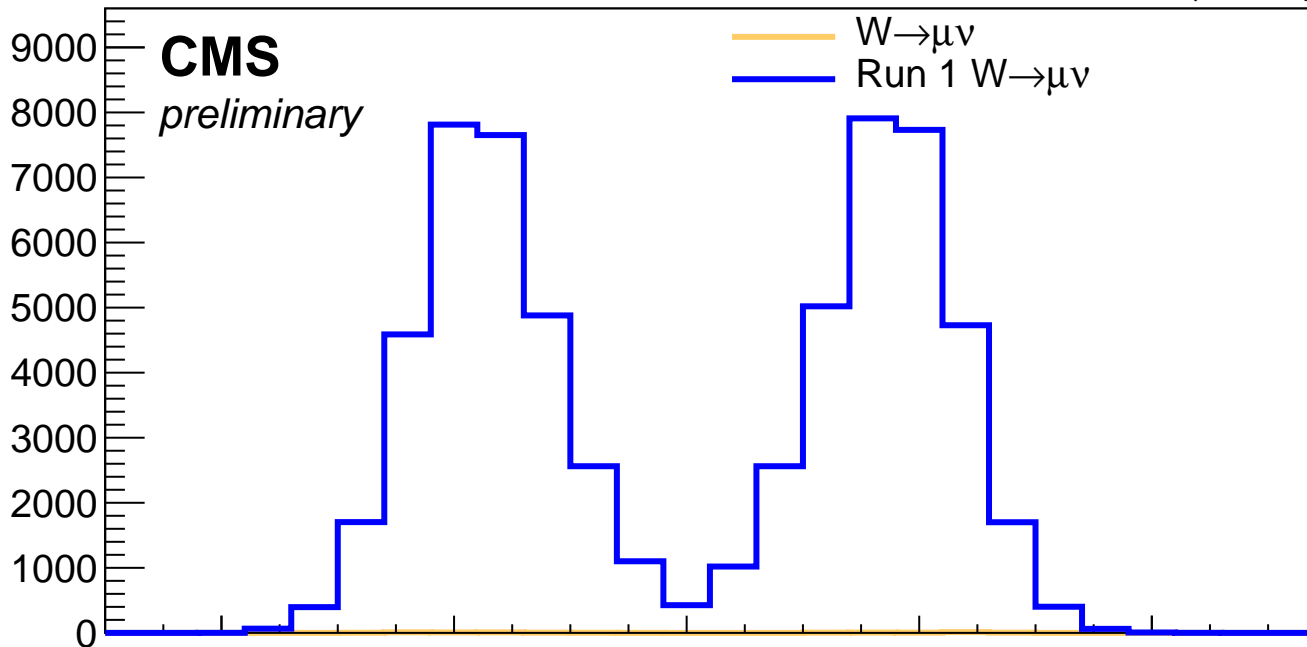
Run 1 W→μν



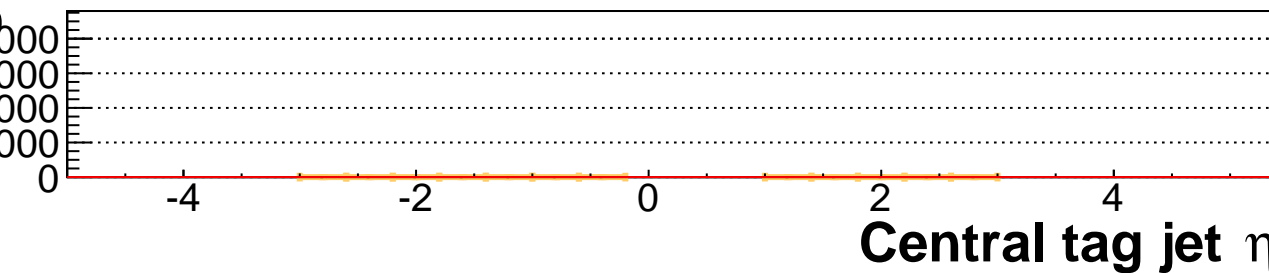
19.2 fb⁻¹ (8 TeV)

CMS
preliminary

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



Data/Bkg



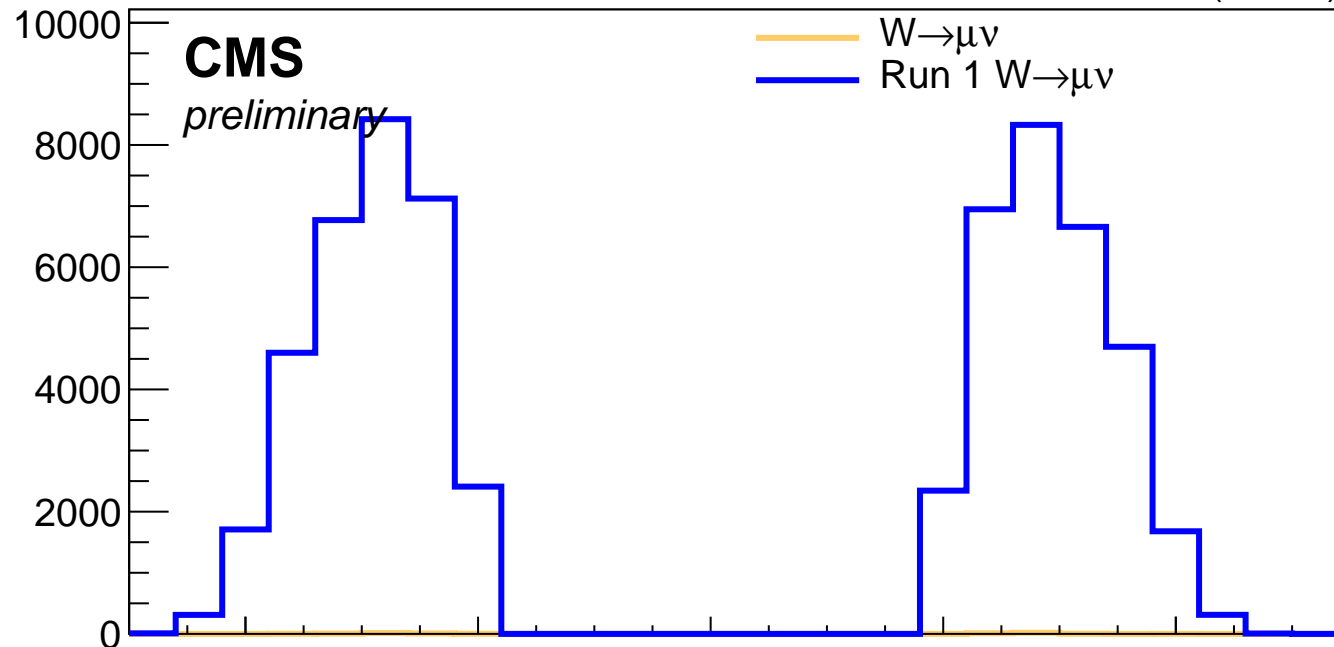
19.2 fb⁻¹ (8 TeV)

CMS

preliminary

— $W \rightarrow \mu \nu$

— Run 1 $W \rightarrow \mu \nu$



Data/Bkg

Forward tag jet η