Weekly Report

Zhan Li

Cuts

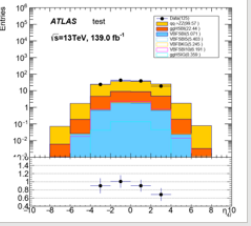
- In this slide all figures are under the cut of loose region.

$m_{4l} \in [130, 220]$ GeV,
$m_{jj} > 120$ GeV,
$n_{jets} >= 2$

- Here m_{4l} is m4l_fsr

1

H eta



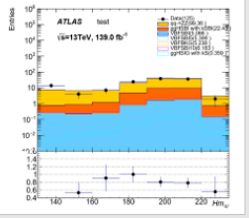
2

H eta

- variable used:
- eta4l_fsr
- [-10,10], 10 bins

3

H m4l



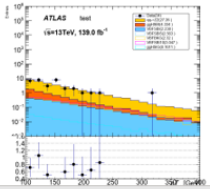
4

H m4l

- variable used:
- m4l_constrained_HM
- [130,235], 7 bins

5

HpT_4l



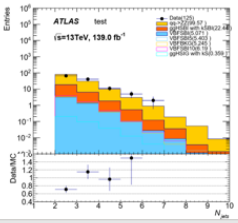
6

HpT_4l

- variable used:
- pt4l_fsr
- [100,400], 20 bins

7

Njets



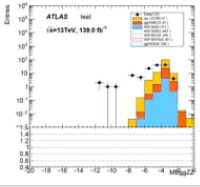
8

Njets

- variable used:
- n_jets
- [1,10], 9 bins

9

MCFM_MELA_ggZZ



10

Cuts

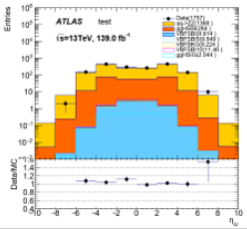
- In this slide all figures are under the cut of

$m_{4l} \in [130, 220]$ GeV,
no others.

- Here m_{4l} is m4l_fsr

1

H eta



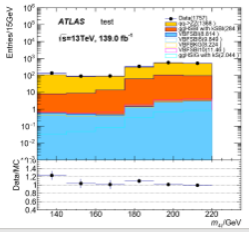
2

H eta

- variable used:
- eta4l_fsr
- [-10,10], 10 bins

3

H m4l



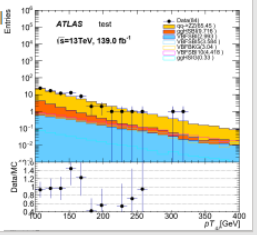
4

H m4l

- variable used:
- m4l_constrained_HM
- [130,235], 7 bins

5

HpT_4l



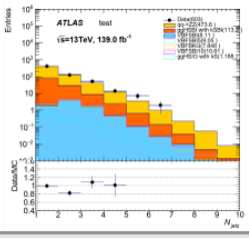
6

HpT_4l

- variable used:
- pt4l_fsr
- [100,400], 20 bins

7

Njets



8

Njets

- variable used:
- n_jets
- [1,10], 9 bins

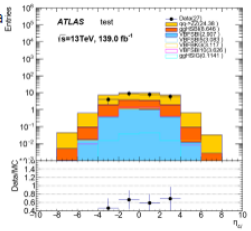
9

Cuts

- In this slide all figures are under the cut of
$m_{4l} \in [130, 220]$ GeV,
$m_{jj} > 300$GeV,
$n_{jets} >= 2$
$|\Delta\eta_{jj}| > 3$
- Here m_{4l} is m4l_fsr

1

H eta



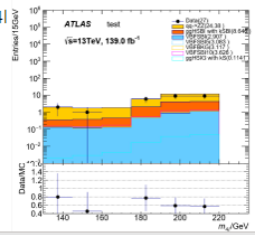
2

H eta

- variable used:
- eta4l_fsr
- [-10,10], 10 bins

3

H m4l



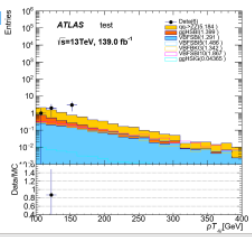
4

H m4l

- variable used:
- m4l_constrained_HM
- [130,235], 7 bins

5

HpT_4l



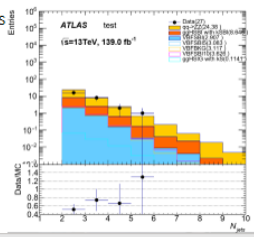
6

HpT_4l

- variable used:
- pt4l_fsr
- [100,400], 20 bins

7

Njets



8

Njets

- variable used:
- n_jets
- [1,10], 9 bins

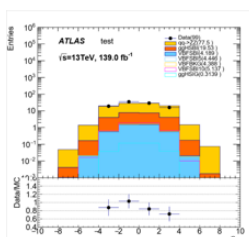
9

Cuts

- In this slide all figures are under the cut of
$m_{4l} \in [180, 220]$ GeV,
$m_{jj} > 120$GeV,
$n_{jets} >= 2$
- Here m_{4l} is m4l_fsr

1

H eta



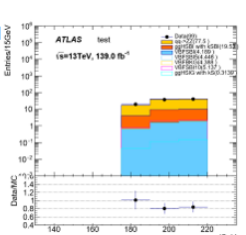
2

H eta

- variable used:
- eta4l_fsr
- [-10,10], 10 bins

3

H m4l



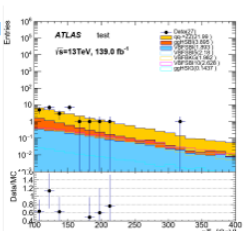
4

H m4l

- variable used:
- m4l_constrained_HM
- [130,235], 7 bins
- I made a mistake. I should use [174,222], 8 bins

5

HpT_4l



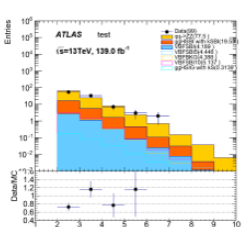
6

HpT_4l

- variable used:
- pt4l_fsr
- [100,400], 20 bins

7

Njets



8

Njets

- variable used:
- n_jets
- [1,10], 9 bins

9

Cuts

- In the next page, the figure is under the cut of
$m_{4l} \in [130, 220]$ GeV,
$m_{jj} > 120$GeV,
$n_{jets} >= 2$
- Here m_{4l} is m4l_fsr

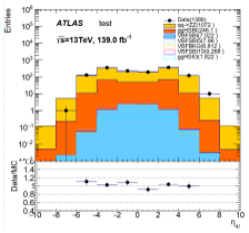
10

Cuts

- In this slide all figures are under the cut of
$m_{4l} \in [180, 220]$ GeV,
no others.
- Here m_{4l} is m4l_fsr

1

H eta



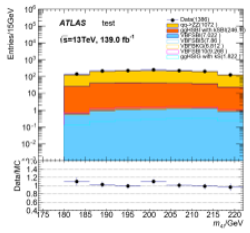
2

H eta

- variable used:
- eta4l_fsr
- [-10,10], 10 bins

3

H m4l



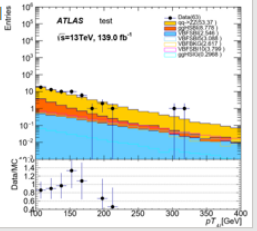
4

H m4l

- variable used:
- m4l_constrained_HM
- [174,222], 8 bins
- But the cut is up to 220, so the last bin is inconvincible.

5

HpT_4l



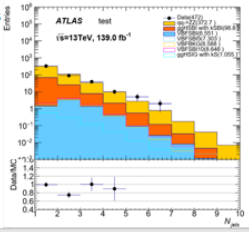
6

HpT_4l

- variable used:
- pt4l_fsr
- [100,400], 20 bins

7

Njets



8

Njets

- variable used:
- n_jets
- [1,10], 9 bins

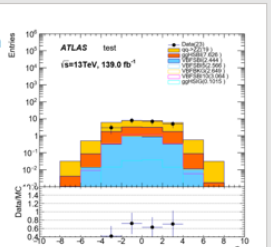
9

Cuts

- In this slide all figures are under the cut of
$m_{4l} \in [180, 220]$ GeV,
$m_{jj} > 300$GeV,
$n_{jets} >= 2$
$|\Delta\eta_{jj}| > 3$
- Here m_{4l} is m4l_fsr

1

H eta



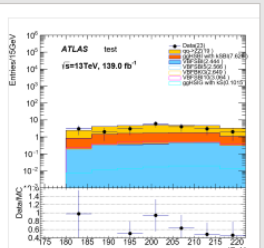
2

H eta

- variable used:
- eta4l_fsr
- [-10,10], 10 bins

3

H m4l



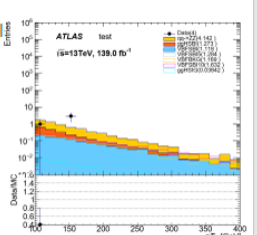
4

H m4l

- variable used:
- m4l_constrained_HM
- [174,222], 7 bins
- But the cut is up to 220, so the last bin is inconvincible.

5

HpT_4l



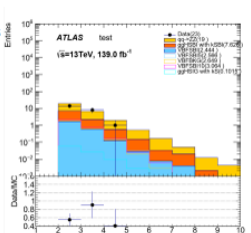
6

HpT_4l

- variable used:
- pt4l_fsr
- [100,400], 20 bins

7

Njets

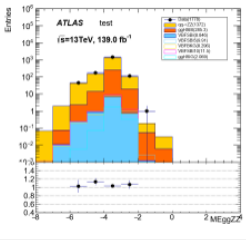


8

Njets

- variable used:
- n_jets
- [1,10], 9 bins

9

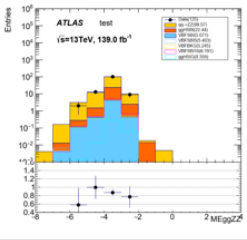


1

Cuts

$m_{4l} \in [130,220]$GeV

2

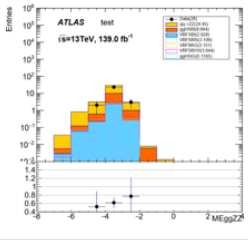


3

Cuts

$m_{4l} \in [130,220]$GeV,
m_{jj}>120GeV,
n_{jets}>=2

4

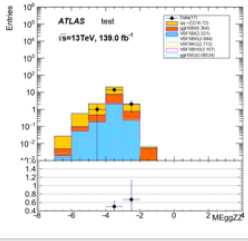


5

Cuts

$m_{4l} \in [130,220]$GeV,
m_{jj}>300GeV,
n_{jets}>=2
$|\Delta\eta_{jj}|$>3

6

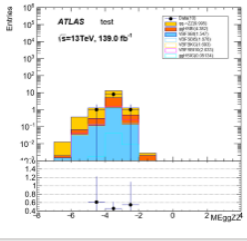


7

Cuts

$m_{4l} \in [130,220]$GeV,
m_{jj}>400GeV,
$|\Delta\eta_{jj}|$>3.3

8

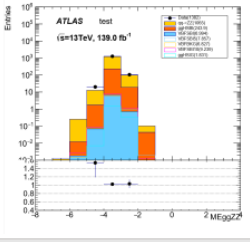


9

Cuts

$m_{4l} \in [130,220]$GeV,
m_{jj}>500GeV,
$|\Delta\eta_{jj}|$>4.25

10

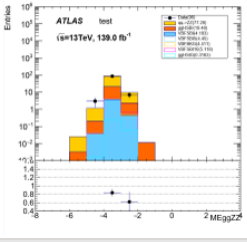


11

Cuts

$m_{4l} \in [180,220]$GeV

12

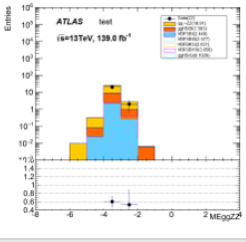


13

Cuts

$m_{4l} \in [180,220]$GeV,
m_{jj}>120GeV,
n_{jets}>=2

14

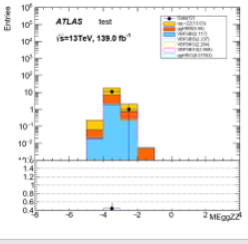


15

Cuts

$m_{4l} \in [180,220]$GeV,
m_{jj}>300GeV,
n_{jets}>=2
$|\Delta\eta_{jj}|$>3

16

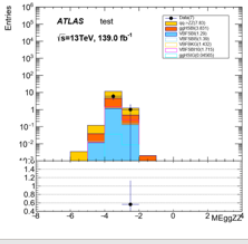


17

Cuts

$m_{4l} \in [180,220]$GeV,
m_{jj}>400GeV,
$|\Delta\eta_{jj}|$>3.3

18



19

Cuts

$m_{4l} \in [180,220]$GeV,
m_{jj}>500GeV,
$|\Delta\eta_{jj}|$>4.25

20