

Weekly meeting

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Introduction

- All the upper limits at bbyy, wwyy, bbbb sub-channels
- Number of toys is 100k among all the results
- Keep the number of steps unchangeable, decrease the scanning region, which are decided by the plots from previous work.

Workspace-upper limits(median)

wwyy	Mh260	Mh300	Mh350	Mh400	Mh500	Mh800	Mh1000	smhh
Upper limit(median)	9.73328	7.99554	6.86845	5.86464	~5.19387	5.82575	8.26986	6.63326

bbyy	Mh260	Mh300	Mh350	Mh400	Mh500	non-resonant
Upper limit(median)	1.60834	1.45795	1.19524	0.95936	0.697564	1.0602

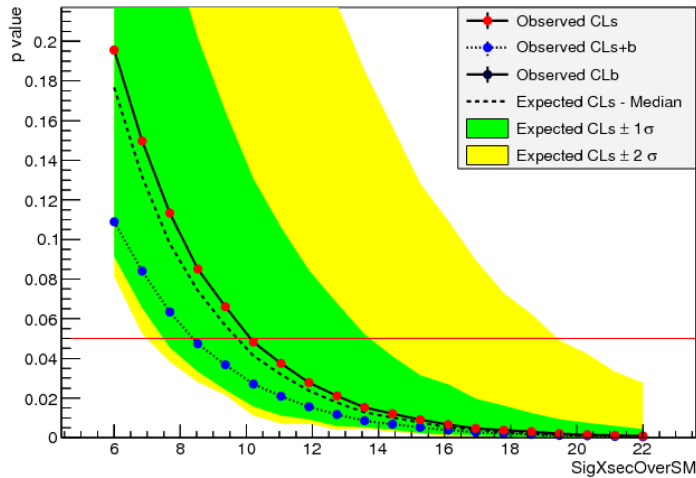
Workspace-wwyy(260,300,350,400)

Mh260

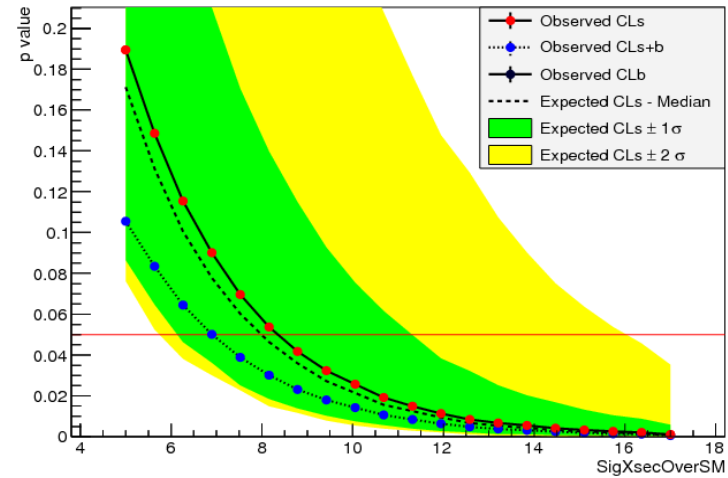
Mh300

Mh400

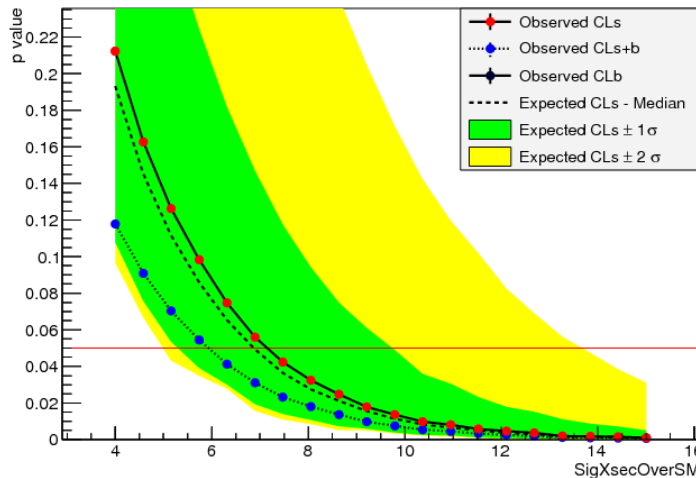
Frequentist CL Scan for workspace result_SigXsecOverSM



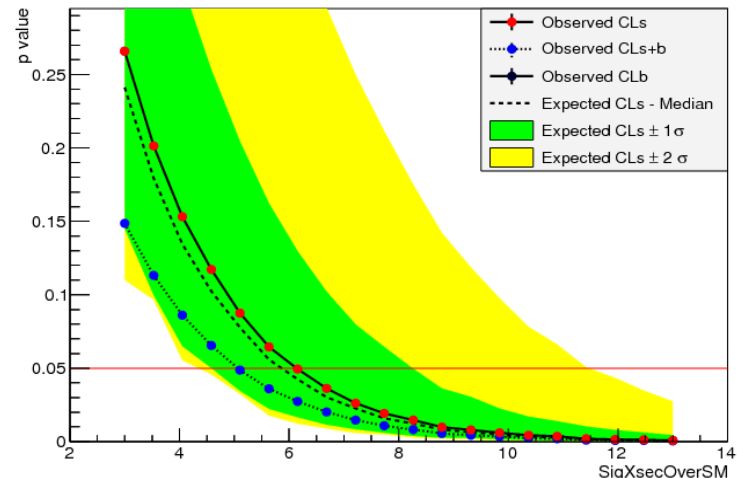
Frequentist CL Scan for workspace result_SigXsecOverSM



Frequentist CL Scan for workspace result_SigXsecOverSM

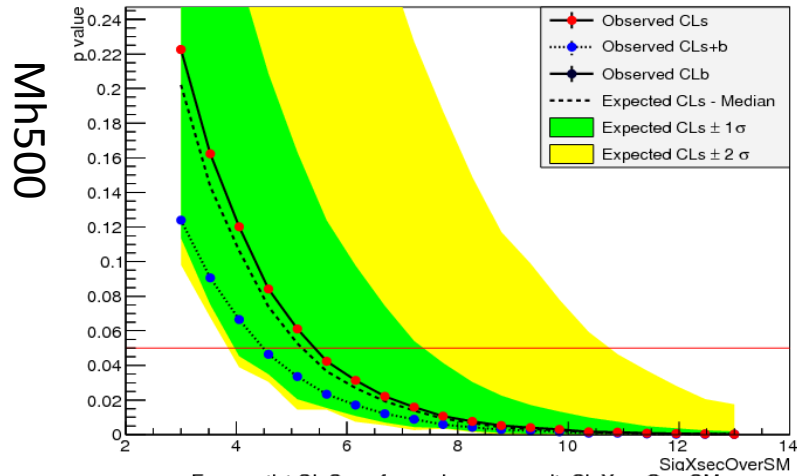


Frequentist CL Scan for workspace result_SigXsecOverSM

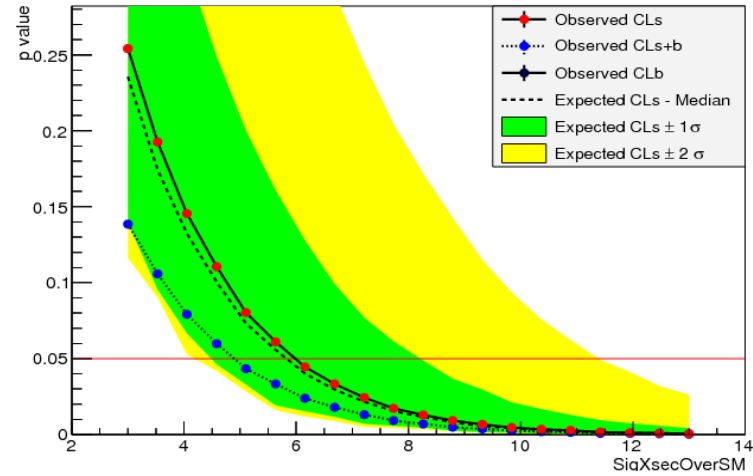


Workspace-wwyy(500,800,1000,smhh)

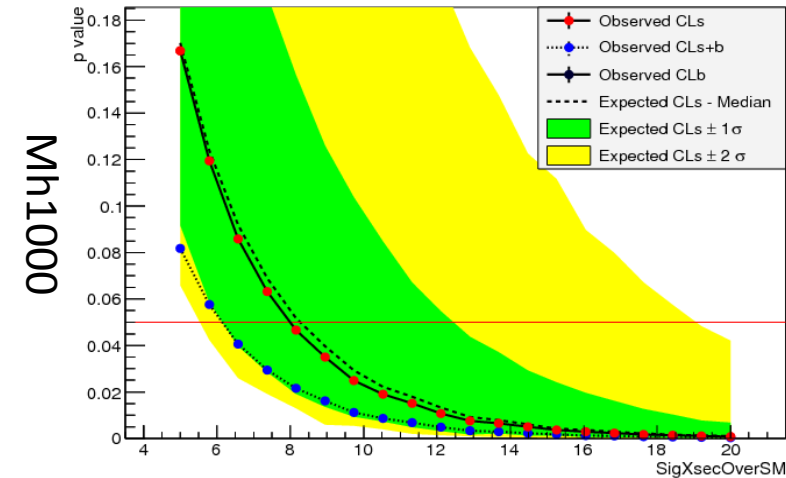
Frequentist CL Scan for workspace result_SigXsecOverSM



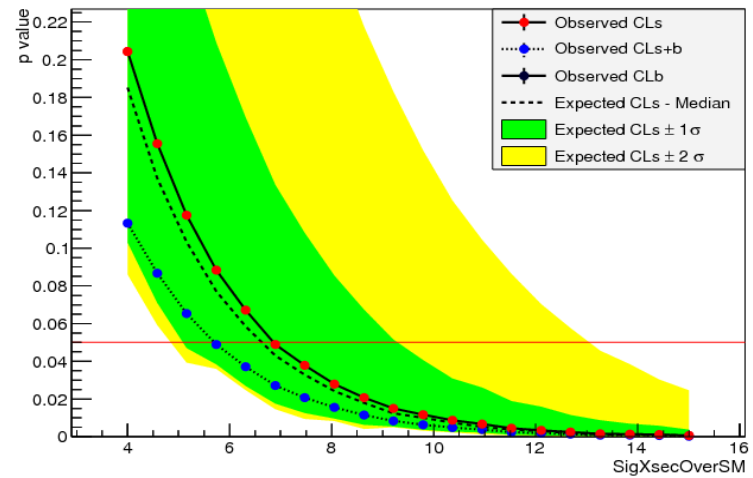
Frequentist CL Scan for workspace result_SigXsecOverSM



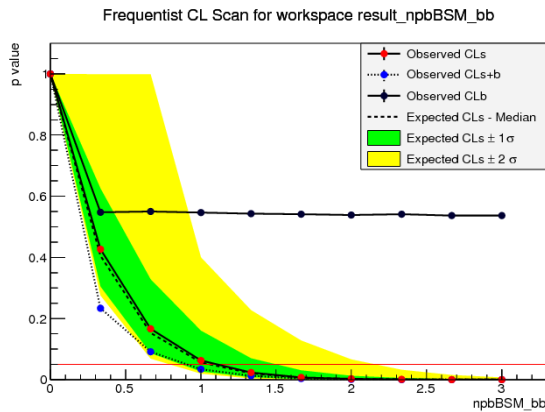
Frequentist CL Scan for workspace result_SigXsecOverSM



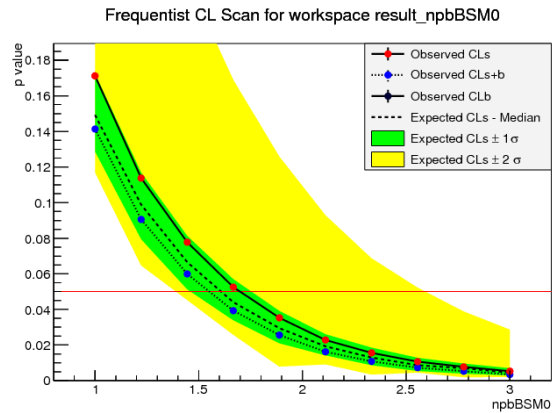
Frequentist CL Scan for workspace result_SigXsecOverSM



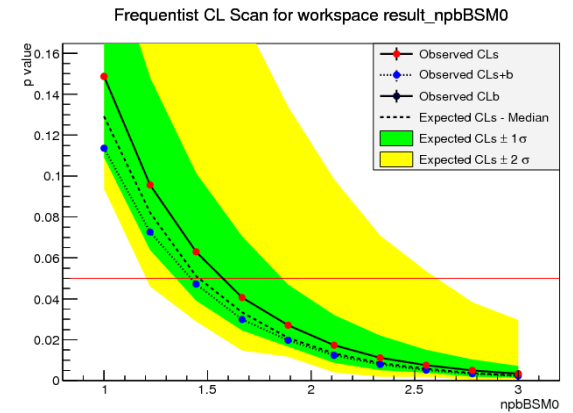
Workspace-bbyy(non-resonant,)



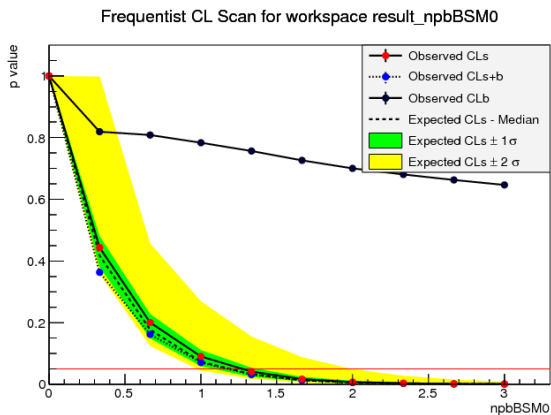
Non-resonant



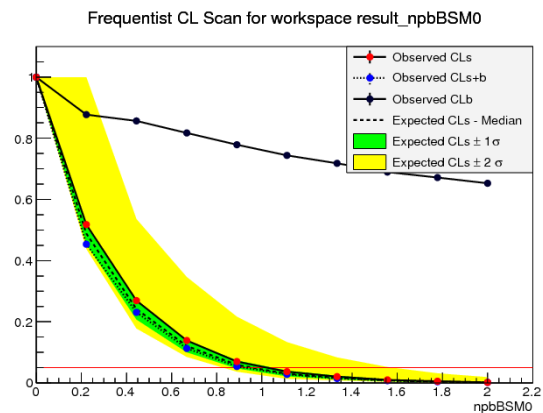
Mh260



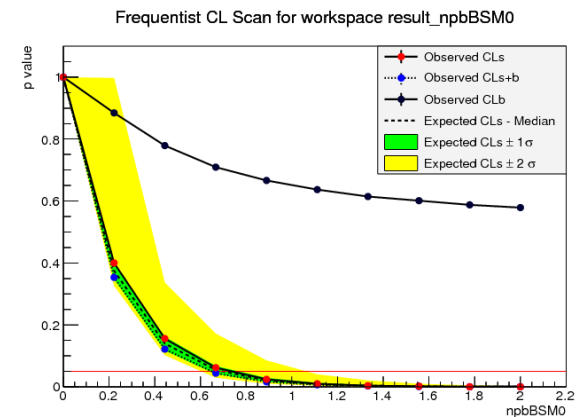
Mh300



Mh350



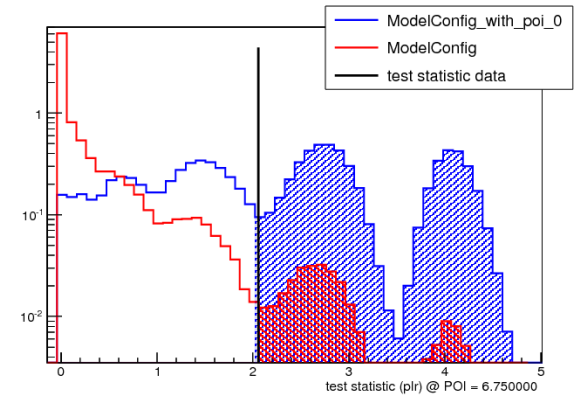
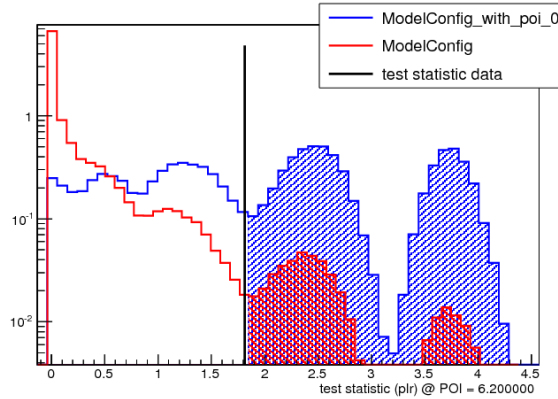
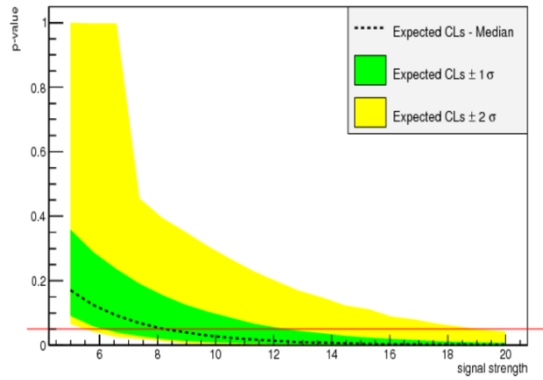
Mh400



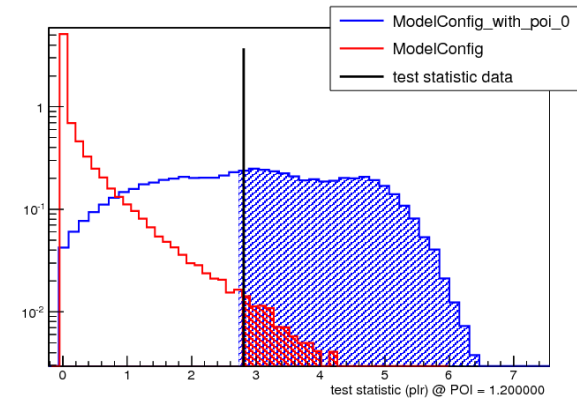
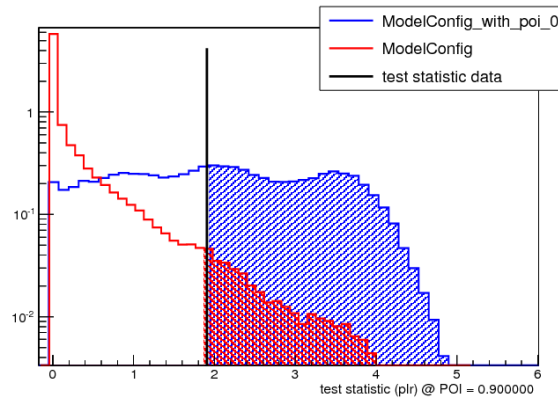
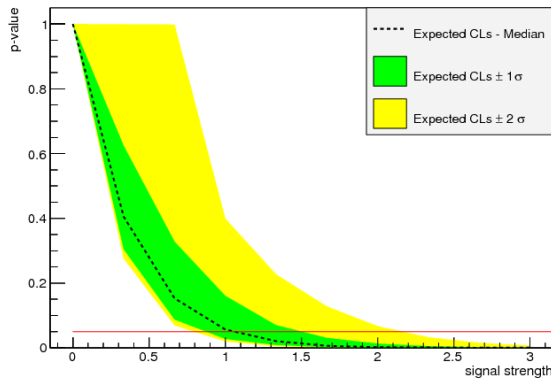
Mh500

Other plots

Wwyy-Non-resonant



bbyy-Non-resonant



Summary

- At the sub-channel of $b\bar{b}y\bar{y}$, the upper limits drop from 260 GeV to 500 GeV on mass.
- At the sub-channel of $w\bar{w}y\bar{y}$, the upper limit drops from 260 to 500, while the upper limit increases from 800 to 1000.
- Although has increased the number of toys, the difference between -2σ and -1σ is still small.
- Getting the upper limits of $b\bar{b}b\bar{b}$ is on process.
- Rerunning to get the files for Mh500 of $w\bar{w}y\bar{y}$.
- Producing some plots for a draft.

Back up

Workspace-wwyy(toys-100k)

Mh260

- expected limit (+2 sig)
19.416
- expected limit (+1 sig)
13.7357
- expected limit (median)
9.73328
- expected limit (-1 sig)
7.50428
- expected limit (-2 sig)
6.9923

Mh300

- expected limit (+2 sig)
16.0326
- expected limit (+1 sig)
11.3028
- expected limit (median)
7.99554
- expected limit (-1 sig)
6.14027
- expected limit (-2 sig)
5.74315

Workspace-wwyy

Mh350

- expected limit (+2 sig)
13.6646
- expected limit (+1 sig)
9.73387
- expected limit (median)
6.86845
- expected limit (-1 sig)
5.29829
- expected limit (-2 sig)
4.98786

Mh400

- expected limit (+2 sig)
11.4738
- expected limit (+1 sig)
8.2529
- expected limit (median)
5.86464
- expected limit (-1 sig)
4.58162
- expected limit (-2 sig)
4.39051

Workspace-wwyy

~Mh500

- expected limit (+2 sig)
10.7502
- expected limit (+1 sig)
7.37822
- expected limit (median)
5.19387
- expected limit (-1 sig)
3.97391
- expected limit (-2 sig)
3.85145

Mh800

- expected limit (+2 sig)
11.3868
- expected limit (+1 sig)
8.20521
- expected limit (median)
5.82575
- expected limit (-1 sig)
4.48498
- expected limit (-2 sig)
4.18965

Workspace-wwyy

Mh1000

- expected limit (+2 sig)
19.0631
- expected limit (+1 sig)
12.4482
- expected limit (median)
8.26986
- expected limit (-1 sig)
6.14718
- expected limit (-2 sig)
5.53552

smhh

- expected limit (+2 sig)
13.0509
- expected limit (+1 sig)
9.29285
- expected limit (median)
6.63326
- expected limit (-1 sig)
5.08696
- expected limit (-2 sig)
4.84646

Workspace-bbyy(toys-100k)

Non-resonant

- expected limit (+2 sig)
2.1601
- expected limit (+1 sig)
1.50375
- expected limit (median)
1.0602
- expected limit (-1 sig)
0.873112
- expected limit (-2 sig)
0.796312

res260

- expected limit (+2 sig)
2.59258
- expected limit (+1 sig)
1.75352
- expected limit (median)
1.60834
- expected limit (-1 sig)
1.46017
- expected limit (-2 sig)
1.39071

Workspace-bbyy

res300

- expected limit (+2 sig)
2.60718
- expected limit (+1 sig)
1.86028
- expected limit (median)
1.45795
- expected limit (-1 sig)
1.34732
- expected limit (-2 sig)
1.20392

res350

- expected limit (+2 sig)
1.99565
- expected limit (+1 sig)
1.37689
- expected limit (median)
1.19524
- expected limit (-1 sig)
1.0866
- expected limit (-2 sig)
0.978991

Workspace-bbyy

res400

- expected limit (+2 sig)
1.57353
- expected limit (+1 sig)
1.04751
- expected limit (median)
0.95936
- expected limit (-1 sig)
0.880212
- expected limit (-2 sig)
0.829597

res500

- expected limit (+2 sig)
1.06324
- expected limit (+1 sig)
0.76561
- expected limit (median)
0.697564
- expected limit (-1 sig)
0.64165
- expected limit (-2 sig)
0.603277