Run 1 combination report

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2016-04-18

Tasks

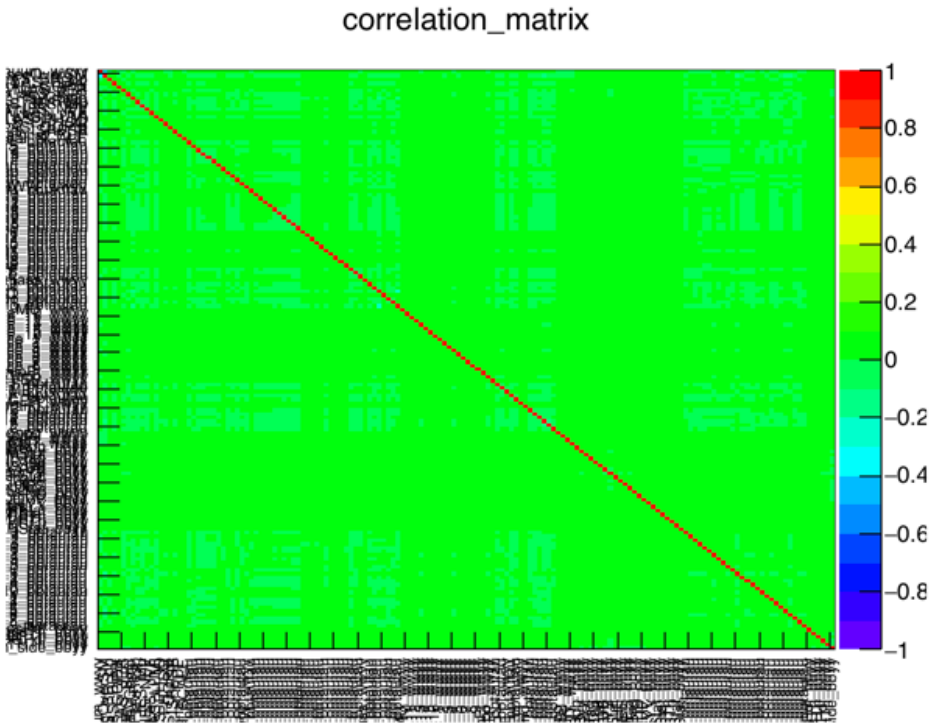
- Use Combinationtools to merge subchannel workspaces
- Use NuisanceCheck to show the correlation map, fit value
- Use Asymptotics to get limits
- Use lowmassSignificance to get local p0
- Use StandardHypoTestInv to get limits Still running; Unfinished

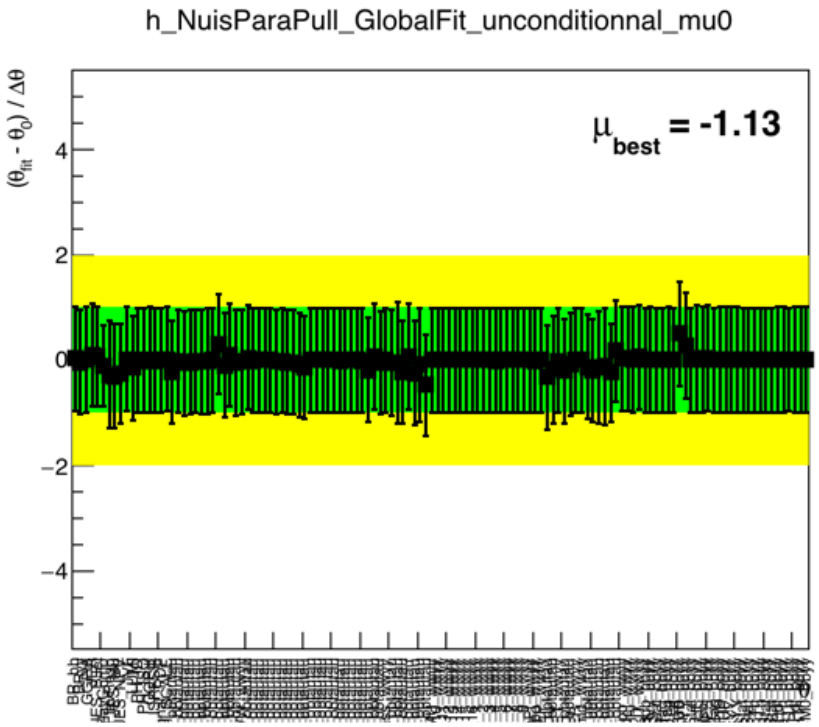
- Some bug about PLR curve, debugging;

Combiantiontools

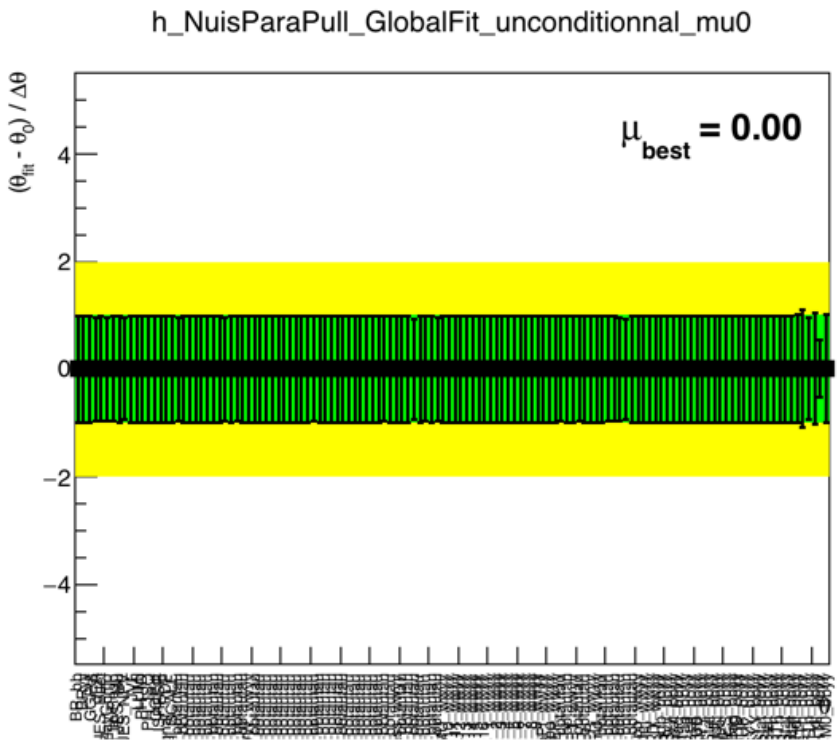
- Take 300GeV samples
  - bbyy, wwyy, bbtautau channel;
  - Separately use AsimovData and obsData

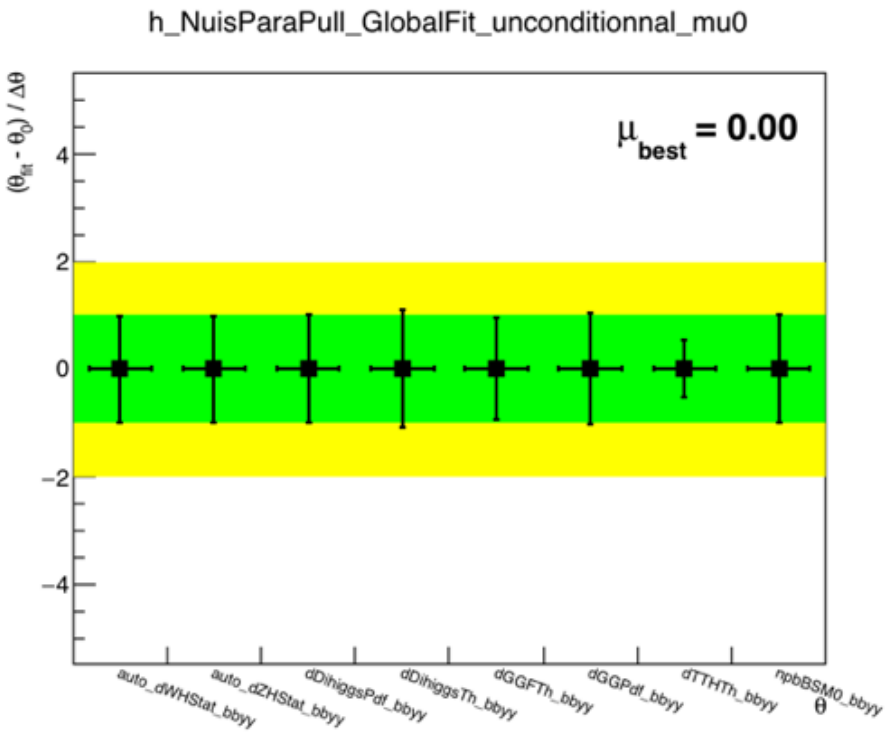
NuisanceCheck_obsData





NuisanceCheck_asimovData



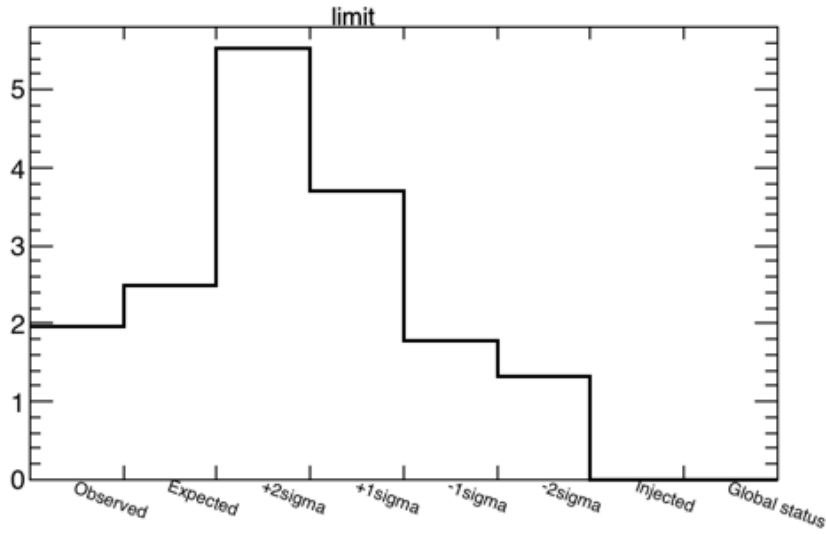


dTTHTh_bbyy: $0^{+0.535}_{-0.535}$

Asymptotics

Using ObsData

Correct bands	
Observed:	1.95858
Median:	2.48336
+2sigma:	5.53457
+1sigma:	3.70805
-1sigma:	1.7894
-2sigma:	1.33288
Injected:	0



lowmassSignificance

	Asimov	ObsData
Null p-value	0.994 +/- 0.00244213	0.997 +/- 0.00172945
Significance	-2.51214 +/- 0.14363 sigma	-2.74778 +/- 0.189028 sigma
Number of Alt toys	1000	1000
Number of Null toys	1000	1000
Test statistic evaluated on data	0	0
CL_b:	0.994 +/- 0.00244213	0.997 +/- 0.00172945
CL_s+b	0.999 +/- 0.0009995	0.993 +/- 0.00263647
CL_s	1.00503 +/- 0.00266612	0.995988 +/- 0.00315877
p value from frequentists calculator	0.994	0.997

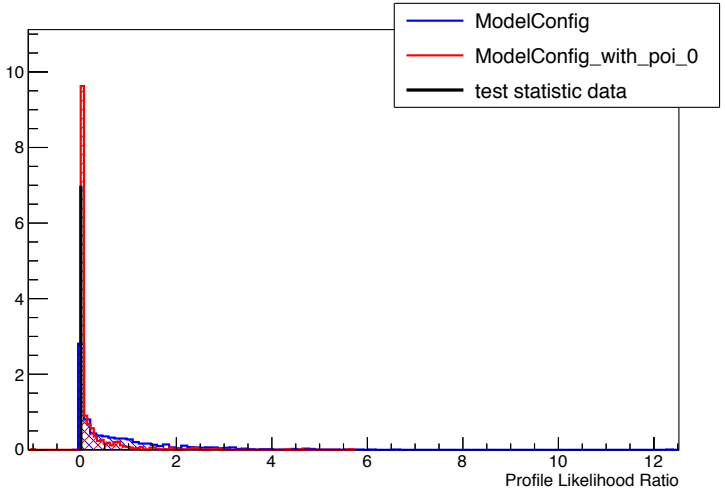
To do:

- Learn to convert the unbinned fit workspace to binned fit;
  - see the impacts
  - change the dataset to histogram-based data.

backups

lowmassSignificance

ObsData



AsimovData