

Weekly meeting

Xiaohu Sun

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25-01-2016

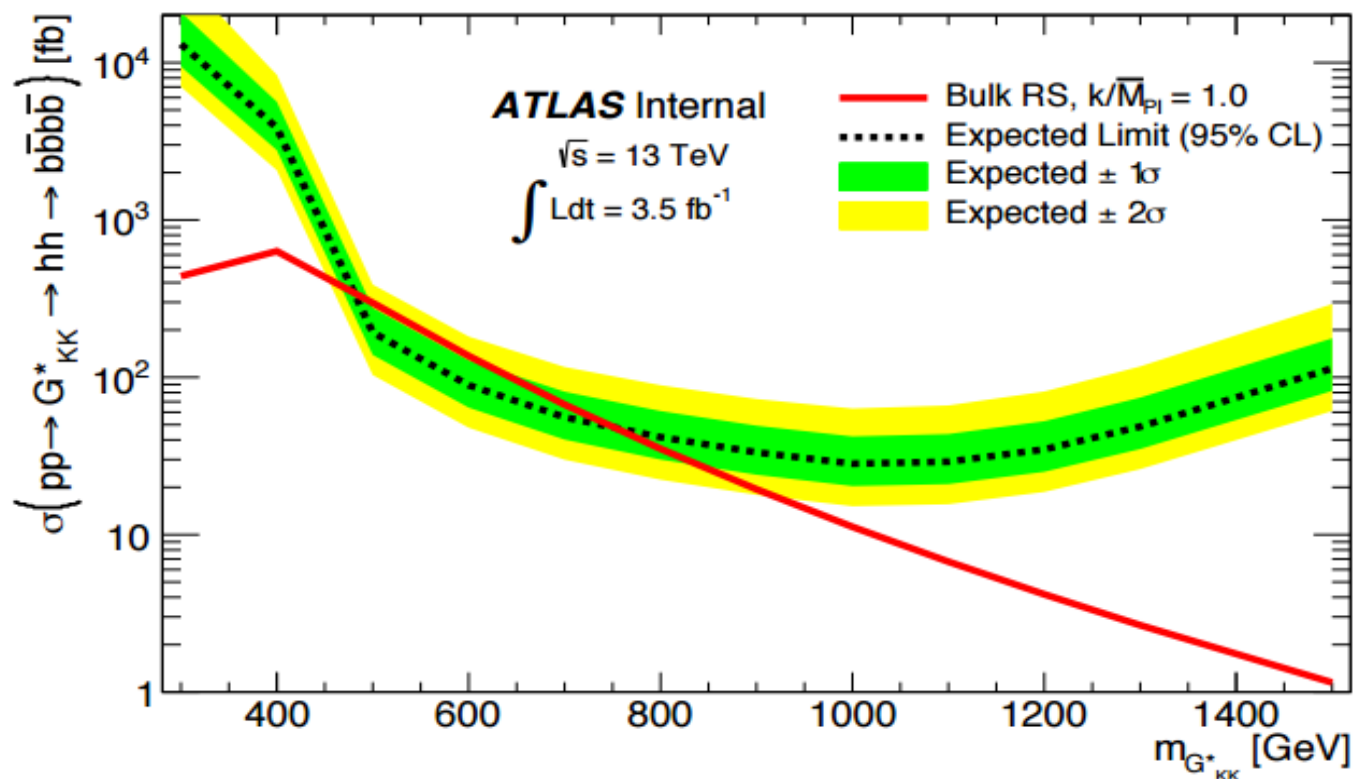
IHEP

- WWW pheno paper
 - Update latest results from Maosen
 - Sent around internally
- [URGENT] 基金结题 2015
 - Finalizing relevant paper
- HH workshop
 - Delivered a dedicated combination talk
 - Mainly about what need doing etc.
 - bbyy and bbbb workspaces can come this week with full systematics
- $Z\gamma \rightarrow \text{jets} + \gamma$
 - Continued with HGam1D dumper, slow, some btagging parts are missing in EXOT6 DAOD
 - Maybe better to contact Yanping or Giovanni M

Bbbb (resolved analysis)

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- Have bbbb workspace without syst in hands
- First of first, double check the workspaces with PLR

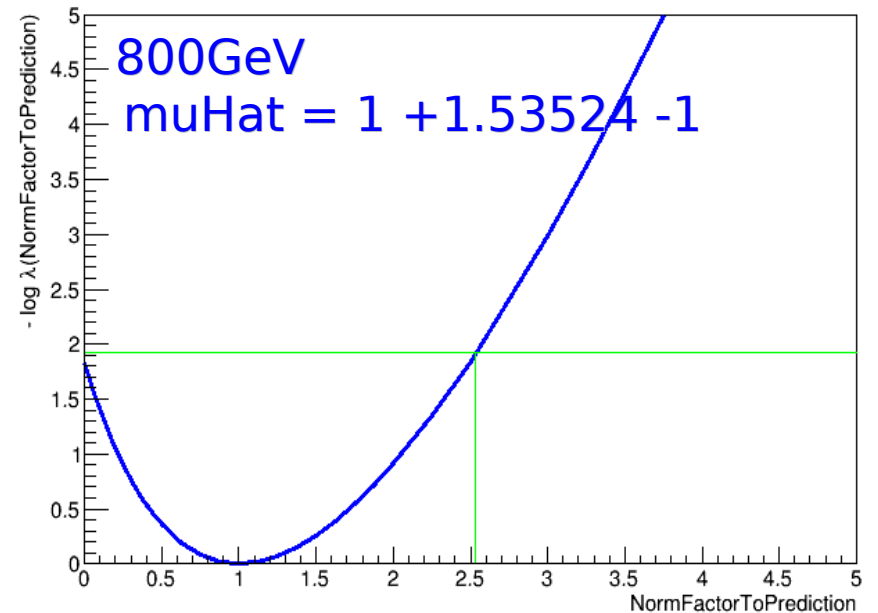
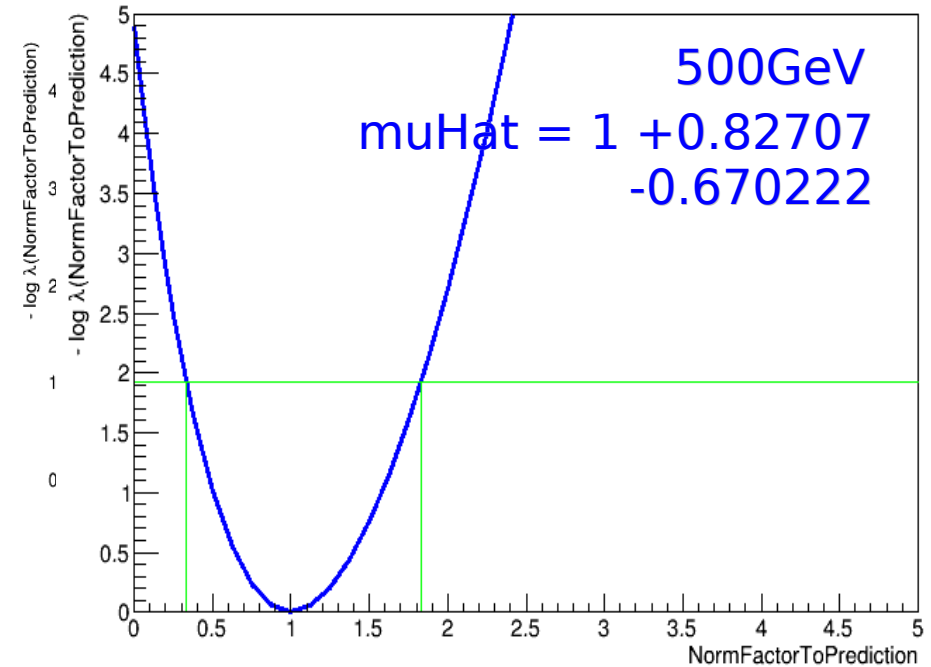


Q Zeng
Expected limits with only stats
Using graviton models $c=1.0$

PLR scan (original bbbb)

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- Fit to asimovData:
 - signal is modeled with graviton model (c=1.0);
 - POI is the signal strength (μ) on $XS \cdot BR(Xhh) \cdot BR(hbb)^2$
- Scan PLR, get expected curve against μ (central at exactly 1)



Scale bbbb workspace – Step 1

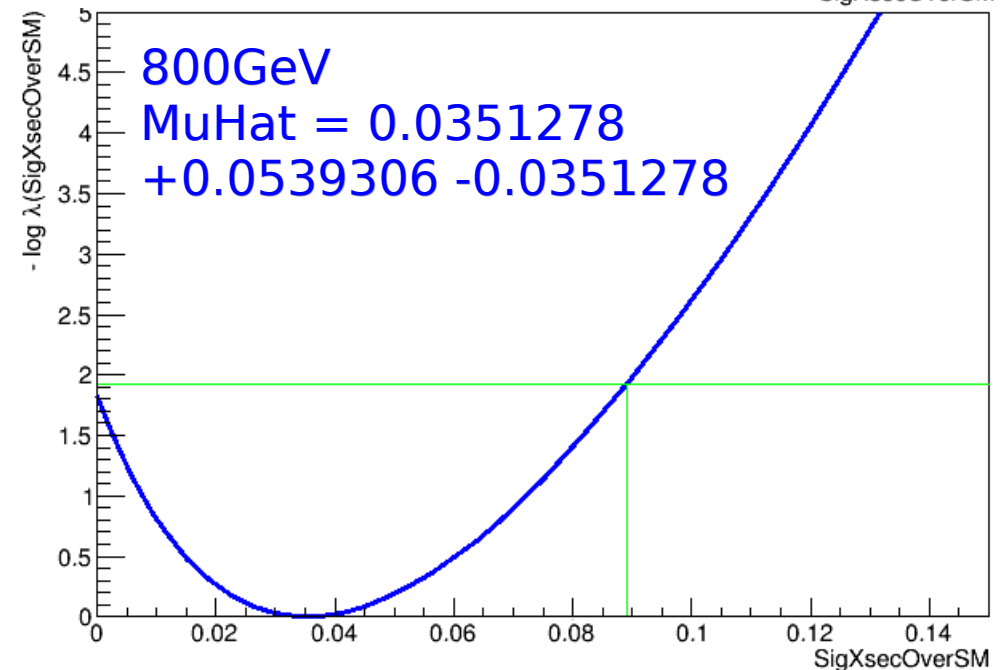
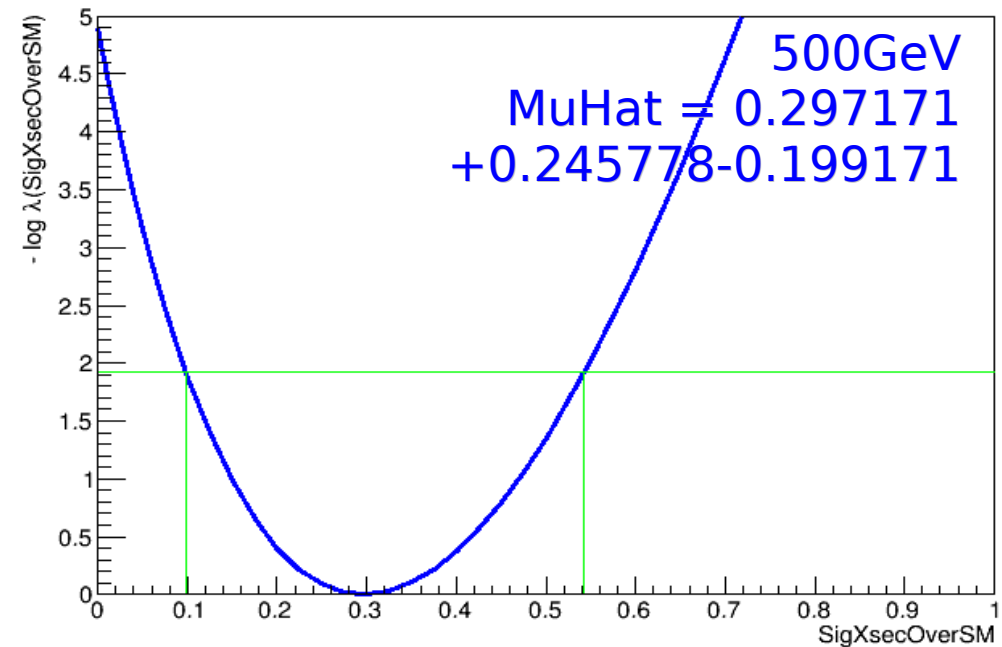
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- Scale POI in workspace
 - From mu on top of $XS*BR(Xhh)*BR(Hbb)$
 - To absolute value of $XS*BR(Xhh)*BR(Hbb)$

Scale bbbb workspace – Step 1

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mass	$\text{XS} \cdot \text{BR}(\text{Xhh}) \cdot \text{BR}(\text{hbb})^2$
300	0.4395267
400	0.633033
500	0.2971692
600	0.1366632
700	0.06709284
800	0.03512817
900	0.01943055
1000	0.01121544
1100	0.00673659
1200	0.00417582
1300	0.002657007
1400	0.001731933
1500	0.00114885
1600	0.000777888
1800	0.000371628
2000	0.000185115
2250	8.27838E-05
2500	3.85614E-05
2750	1.85981E-05
3000	9.23076E-06



Scale bbbb workspace – Step 2

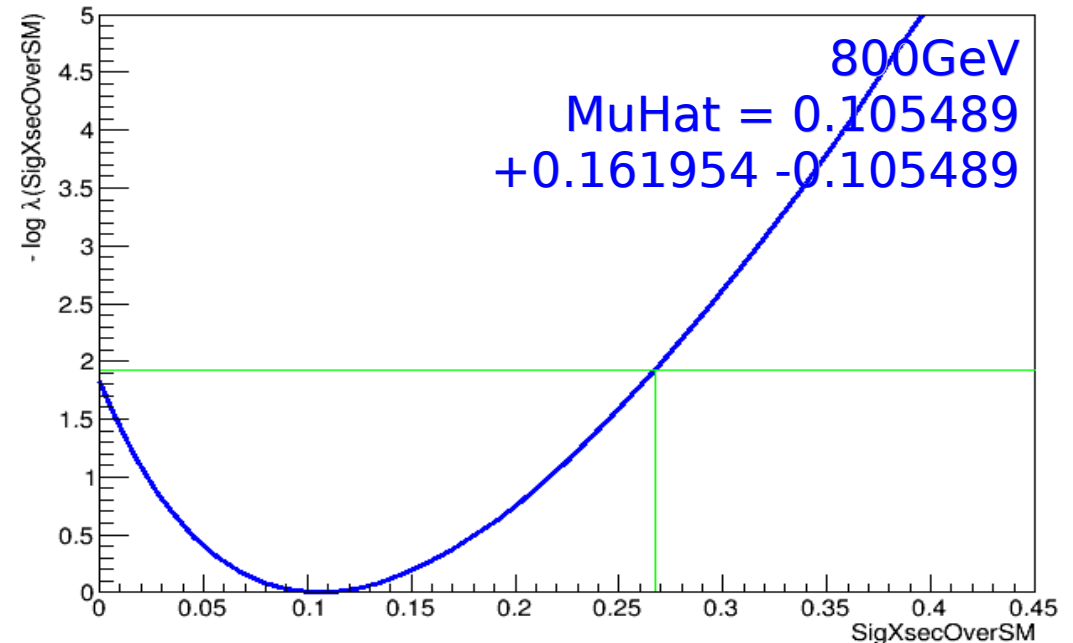
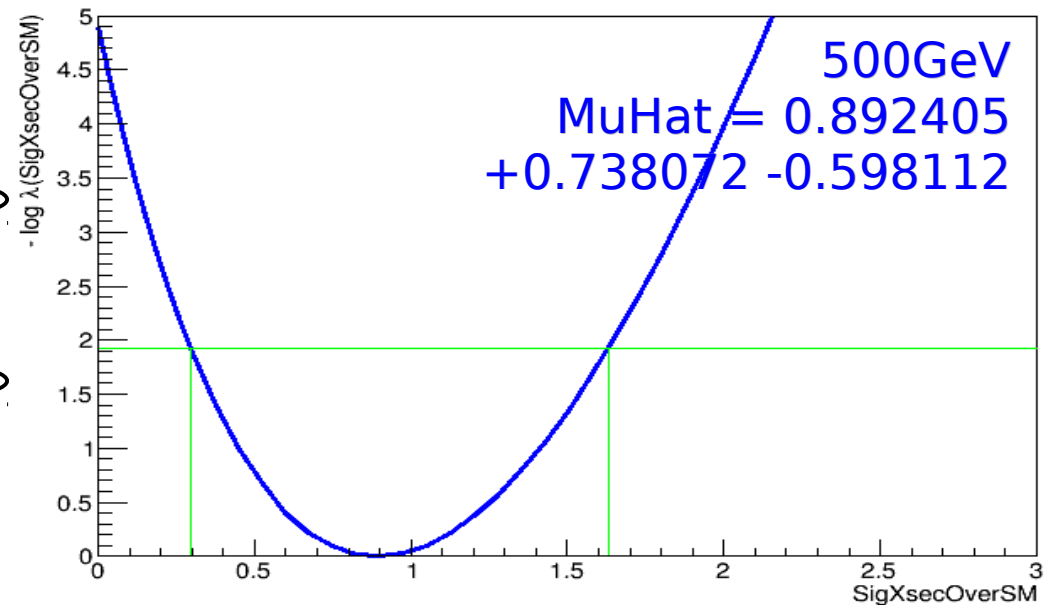
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- Scale POI in workspace
 - **From** absolute value of $XS*BR(Xhh)*BR(Hbb)$
 - **To** absolute value of $XS*BR(Xhh)$

Scale bbbb workspace – Step 2

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mass	theory XS*BR(Xhh)
300	1.3199
400	1.901
500	0.8924
600	0.4104
700	0.20148
800	0.10549
900	0.05835
1000	0.03368
1100	0.02023
1200	0.01254
1300	0.007979
1400	0.005201
1500	0.00345
1600	0.002336
1800	0.001116
2000	5.56E-04
2250	2.49E-04
2500	1.16E-04
2750	5.59E-05
3000	2.77E-05



Current workspace

- Scale POI in bbbb, ready with 300-1500, but only with graviton model and without systematic uncertainties; They promised to pass workspaces with uncertainties this week; Their goal is Moriond
- bbyy promised to pass workspaces this week; also aiming at Moriond
- GRAND heavy Higgs searching combination will go for post-summer time scale; kick-off meeting in Jan

Backup

- P