

Weekly Report

Shuiting Xin

10/02/2020

SH model(Fit to ATLAS H->yy data)

- 1-d fit for different mass point

mass point	beta_g
250_140	0.376366
250_150	0.357508
250_160	0.34769
250_170	0.322766
260_140	0.40806
260_150	0.390718
260_160	0.380078
260_170	0.365872
270_140	0.309466
270_150	0.428391
270_160	0.418538
270_170	0.404951

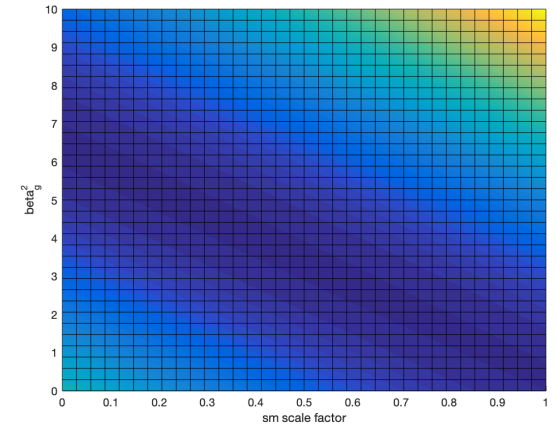
- Different cross section, efficiency have been took into account.

SH model

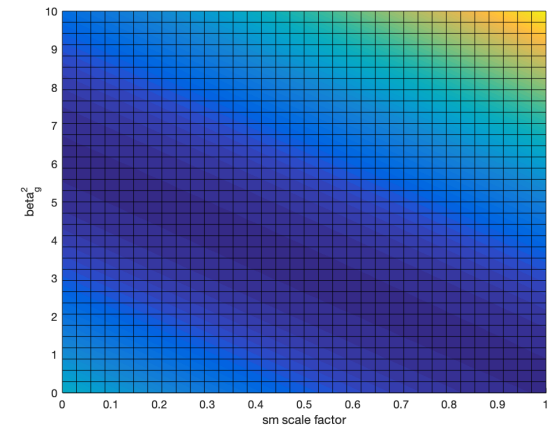
- Finish 2-d fit for different mass point

mass point	sm factor	beta_g	chi^2
250,140	0.1407	5.5736	4.5722
250,150	0.4668	3.4347	4.7707
250,160	0.1064	5.2866	4.4614
250,170	0.3563	3.7043	4.767
260,140	0.267	5.1402	4.5303
260,150	0.3962	4.1803	4.7074
260,160	0.3085	4.5493	4.5768
260,170	0.1568	5.2536	4.4657
270,140	0.468	2.9473	4.7332
270,150	0.2461	5.4867	4.4414
270,160	0.1419	6.037	4.3504
270,170	0.1782	5.5696	4.3136

Make sm contribution float will give factors unreasonable. When sm factors decrease to small, uncertainly from BSM processes can't be excluded. Then chi^2 value would be different.



250,140



250,150