

Heavy Higgs limits

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EXO Meeting
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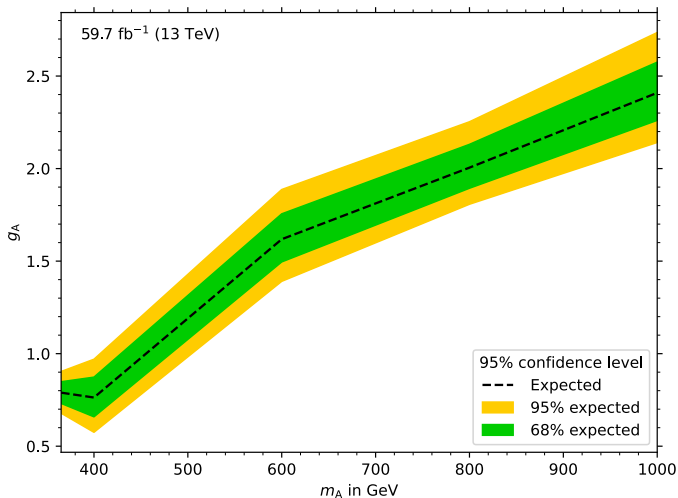
Status of the limits

Difference to the 2016 analysis

- With color reconnection uncertainties
- Using only total jet energy correction uncertainty
- No PDF uncertainties
- No trigger efficiencies
- No DY or top p_T reweighting

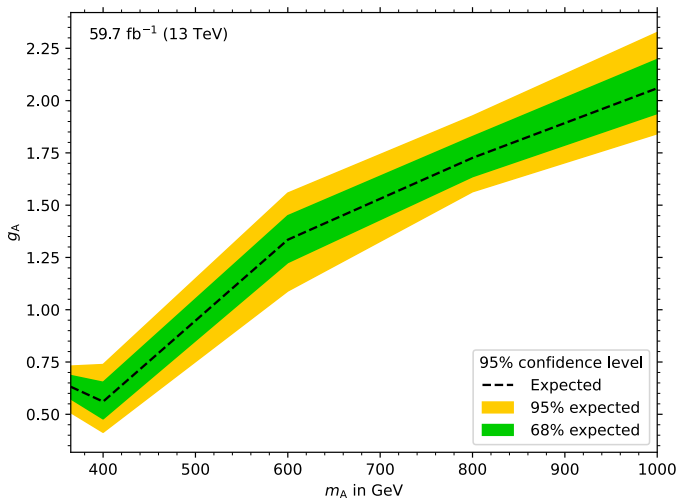
Taking a look at 2018 limits

Pseudoscalar



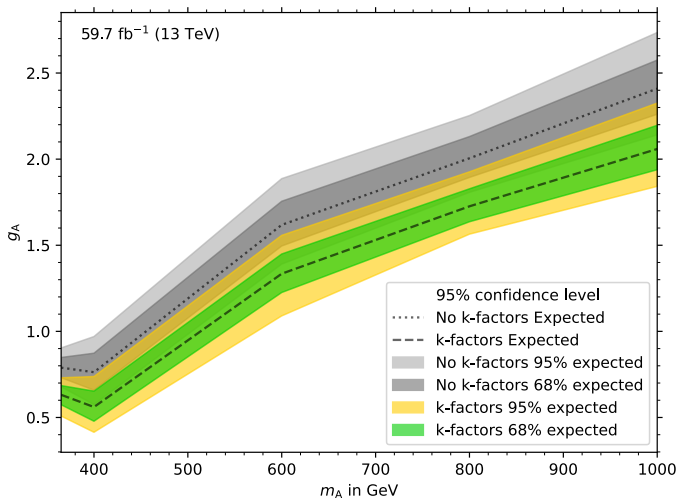
Taking a look at 2018 limits

Pseudoscalar, with k-factor taken from Sam



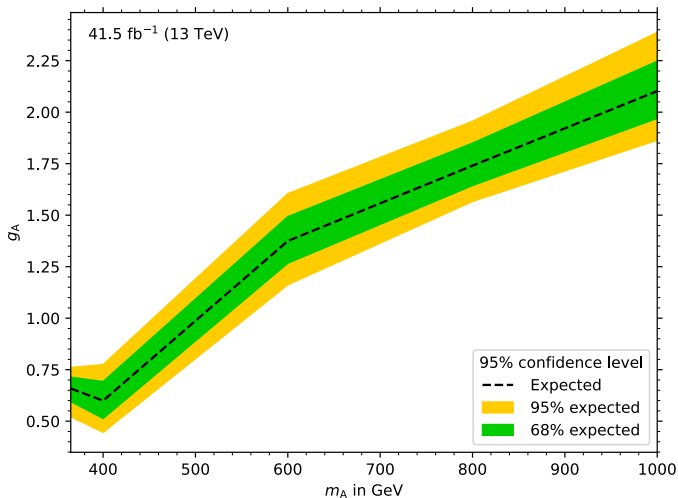
Taking a look at 2018 limits

Comparing the previous two plots



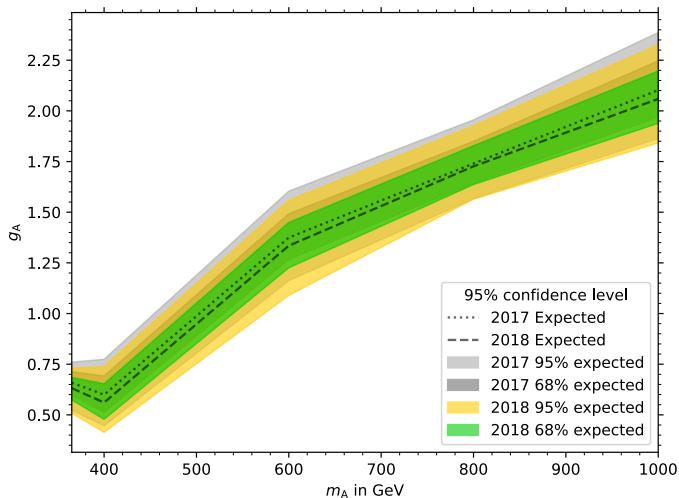
First look at 2017 limits

Created templates for 2017, fairly complete



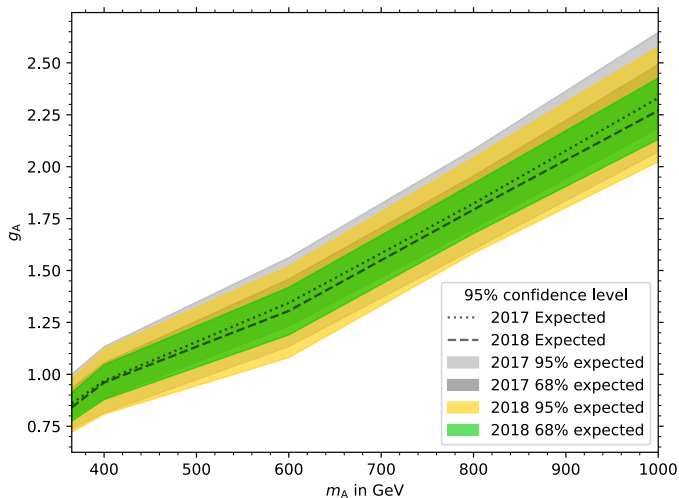
2017 vs 2018

2018 shows slightly better limits



2017 vs 2018

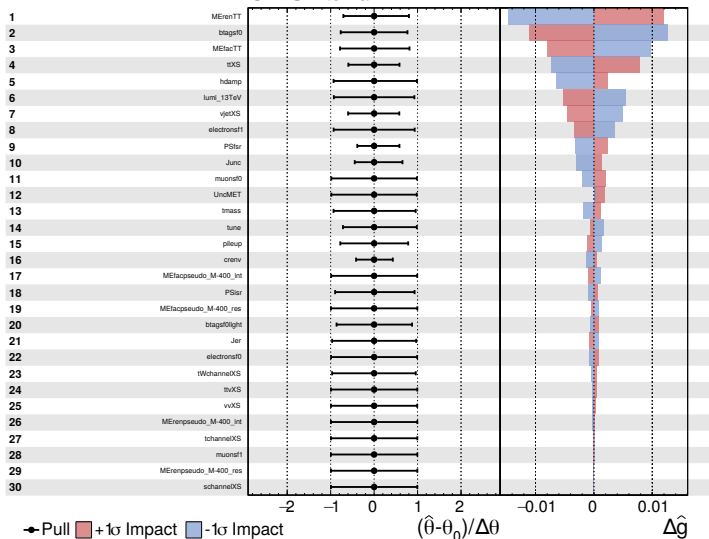
This is for the scalar case



Impacts for 2018 Pseudoscalar 400 GeV

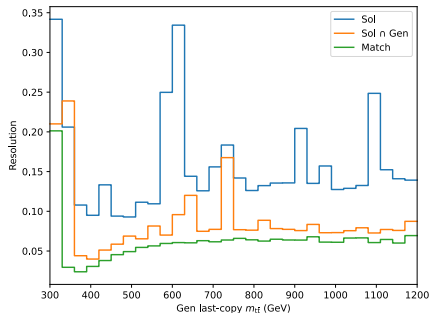
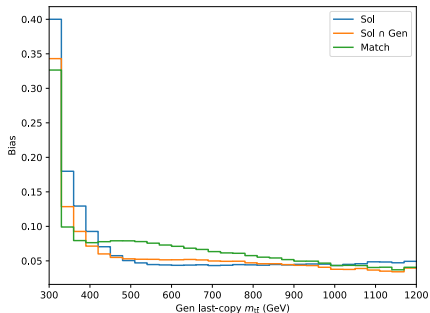
Ignoring statistical uncertainties

CMS Internal



Validation of Sonnenschein

Definitions as in Afiq's thesis



- Bias is always positive
- Spiky and overall low resolution

Thank you