



Snowmass EWK

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Results varying $\mathcal{L}_{s,0}$ and $\mathcal{L}_{s,1}$ from $1e-10$ down:

SM_LS0_LS1_UFO

ssWW

x-sec (pb):

	FS0=0 FS1=0	FS0=0 FS1=x	FS0=x FS1=0	FS0=x FS1=x
x=1e-10	0.006543 ± 1.6e-5	0.01553 ± 3.8e-5	0.08463 ± 0.00022	0.146 ± 0.00033
x=5e-11		0.008713 ± 2.3e-5	0.02602 ± 6.6e-5	0.04139 ± 8.6e-5
x=2.5e-11		0.007145 ± 1.4e-5	0.01136 ± 3e-5	0.01518 ± 3.9e-5
x=1.25e-11		0.006703 ± 1.8e-5	0.007702 ± 1.5e-5	0.008666 ± 2.1e-5

scale factor:

	FS0=0 FS1=x	FS0=x FS1=0	FS0=x FS1=x
x=1e-10	2.4	12.9	22.3
x=5e-11	1.3	4.0	6.3
x=2.5e-11	1.1	1.7	2.3
x=1.25e-11	1.0	1.2	1.3

=> Use FS1 (second operator) in limit settings

Background Samples:

SM_LS0_LS1_UFO

x-sec (pb):

	FS0=0 FS1=0	FS0=1e-10 FS1=1e-10
Backgrounds:		
WZ jj	0.06622 ± 0.00021	0.04491 ± 0.00013
WY jj	4.725 ± 0.014	4.725 ± 0.014

=> 32% reduction

Fake/Charge flip → We can scale WZ + WY shapes

ee: 70%

emu: 50%

mumu: 70%

Set aQGC Limits:

- Need the delphes generic detector model
- Use the Duke framework/software to set limits
 - I will need instructions...
 - I have an account, but need a password, thanks Ashutosh!
- I shared my work at the ATLAS ssWW meeting yesterday
 - I should check with expert on WZ background generation
 - Check WZ third lepton veto—apparently many missing leptons at low p_T
 - Is our model (SM_LS0_LS1_UFO) unitarized? If not, it may be an issue
 - One suggestion to use a tighter phase space region, ~ 80 GeV