weekly

Huijun

The STAT challenge

- I just finished the stat challenge with h011 of fitting signal strength
- Building the workspace for fitting xsec

NO.	NAME	VALUE	ERROR	STEP SIZE	VALUE
1	mu_xs_VBF	6.03070e-01	5.28946e-01	3.73559e-02	-1.16704e+00
2	mu_xs_WH	2.90128e+00	2.34121e+00	8.42114e-02	-6.60058e-01
3	mu_xs_ZH	5.96037e-02	1.43702e+01	4.54487e-01	-1.44464e+00
4	mu_xs_ggH	1.10995e+00	2.88367e-01	1.52156e-02	-1.01981e+00
5	mu_xs_ttH	-1.76960e-01	7.40865e-01	4.36947e-02	-1.11321e+00
6	nbkg_VBF_high	2.80829e+01	5.54744e+00	6.00481e-04	-1.54140e+00
7	nbkg_VBF_low	5.51650e+02	2.36806e+01	5.79526e-04	-1.44042e+00
8	nbkg_VH_MET	5.30636e+00	2.36549e+00	5.89032e-04	-1.55802e+00
9	nbkg_VH_dileptons	-9.63062e+00	8.79767e-01	8.11205e-02	-1.57417e+00
10	nbkg_VH_hadronic_high	1.66305e+02	1.30484e+01	5.80716e-04	-1.49925e+00
11	nbkg_VH_hadronic_low	1.39159e+03	3.74503e+01	5.78930e-04	-1.36350e+00
12	nbkg_VH_leptonic	7.92857e+00	2.90840e+00	5.92544e-04	-1.55518e+00
13	nbkg_ggH	8.92246e+04	2.99441e+02	1.02668e-03	3.81902e-01
14	nbkg_ttH_hadronic	6.80309e+01	8.24517e+00	5.73506e-04	-1.52504e+00
15	nbkg_ttH_leptonic	6.06450e+00	2.44632e+00	5.69416e-04	-1.55714e+00
16	nui_PER_ATLAS_Hgg_mass	4.95634e-01	6.27735e-01	2.61951e-02	9.92898e-02
17	nui_PES_ATLAS_Hgg_mass	1.72080e-01	9.59857e-01	3.99722e-02	3.44227e-02
18	p0_VBF_high	-2.82275e+00	1.24944e+00	2.58606e-03	-2.82312e-02
19	p0_VBF_low	-2.93842e+00	2.83695e-01	5.86855e-04	-2.93885e-02
20	p0_VH_hadronic_high	-4.43926e+00	5.40153e-01	1.11818e-03	-4.44072e-02
21	p0_VH_hadronic_low	-3.32934e+00	1.83513e-01	3.79742e-04	-3.32996e-02
22	p0_ggH	-3.77323e+00	2.26111e-02	4.67948e-05	-3.77412e-02
23	p1_VBF_high	2.98728e-01	2.04364e+00	4.22996e-03	2.98729e-03
24	p1_VBF_low	1.98422e-01	4.65228e-01	9.61880e-04	1.98422e-03
25	p1_VH_hadronic_high	8.90316e-01	9.16257e-01	1.89505e-03	8.90328e-03
26	p1_VH_hadronic_low	-8.93100e-02	3.06614e-01	6.34154e-04	-8.93100e-04
27	p1_ggH	8.23019e-01	3.75768e-02	7.77145e-05	8.23028e-03
28	slope_VH_MET	-1.29617e-07	6.68202e-03	1.06934e-02	1.57057e+00
			WARNING -	- ABOVE PARAMETER IS AT LIMIT.	
29	slope_VH_dileptons	-9.00613e-01	5.36261e+00	-0.00000e+00	1.46120e+00
30	slope_VH_leptonic	-8.59627e-03	2.27293e-02	0.00000e+00	1.51215e+00
31	slope_ttH_hadronic	-1.25355e-04	2.29843e+00	0.00000e+00	1.57788e+00
32	slope_ttH_leptonic	-4.18436e-02	2.89248e-02	-0.00000e+00	1.44133e+00

Spurious signal for h011

- We have some issue with lepton fake as photon in the background sample, thinking of how to deal with them

Category	Model	$\sqrt{s}$ = 13 TeV	
		N_{spur}	μ_{spur}
ggH	Ber3	-9.20	-6.6 %
VBF low	Exp1	0.25	5.7 %
VBF high	Exp1	0.07	3.2 %
VH hadronic low	Exp1	0.77	24.6 %
VH hadronic high	Exp1	0.10	10.1 %
VH MET	Exp2	-0.09	-37.8%
VH leptonic	-	-	-
VH dilepton	-	-	-
$t\bar{t}H$ hadronic	Exp1	0.26	46.3 %
$t\bar{t}H$ leptonic	Exp1	-0.05	-15.4 %