CMS *Internal*

$\hat{r} = 0.21^{+0.24}_{-0.23}$

Legend:
- Unconstrained
- Poisson
- Gaussian
- AsymmetricGaussian
- Fit (●—)
- Pull (×)
- +1σ Impact
- −1σ Impact

#	Parameter	Value
1	tf_dataResidualZ2017_recoil_par0_fjmass_par1	$1.46^{+0.07}_{-0.07}$
2	tf_dataResidualZ2018_recoil_par0_fjmass_par1	$1.52^{+0.07}_{-0.07}$
3	tf_dataResidualZ2016_recoil_par0_fjmass_par1	$1.04^{+0.07}_{-0.06}$
4	tf_dataResidualZ2016_recoil_par0_fjmass_par0	$1.037^{+0.036}_{-0.035}$
5	tf_dataResidualZ2017_recoil_par0_fjmass_par0	$1.09^{+0.04}_{-0.04}$
6	doublebtag_2018	
7	qcdsig_norm2017pass	
8	sr2016failmass120to300recoil4_zjets_bin0	144^{+7}_{-7}
9	tf_dataResidualZ2018_recoil_par0_fjmass_par0	$1.15^{+0.04}_{-0.04}$
10	sr2017failmass120to300recoil4_zjets_bin0	151^{+7}_{-7}
11	sr2016failmass40to120recoil4_zjets_bin6	112^{+6}_{-6}
12	sr2018failmass120to300recoil4_zjets_bin0	210^{+9}_{-8}
13	sr2017failmass120to300recoil3_zjets_bin0	420^{+12}_{-12}
14	CMS_scale_met2018	
15	sr2016failmass120to300recoil3_zjets_bin0	393^{+12}_{-12}
16	qcdsig_norm2018pass	
17	sr2018failmass120to300recoil0_zjets_bin2	9480^{+110}_{-110}
18	sr2017failmass40to120recoil4_zjets_bin6	109^{+6}_{-6}
19	sr2018failmass40to120recoil0_zjets_bin3	5100^{+80}_{-80}
20	sr2018failmass120to300recoil0_zjets_bin1	9820^{+110}_{-110}
21	sr2018failmass40to120recoil0_zjets_bin4	4890^{+70}_{-70}
22	sr2016passmass120to300recoil3_tt_bin0	$12.0^{+2.2}_{-2.1}$
23	tf_dataResidualW2016_recoil_par0_fjmass_par0	$1.148^{+0.036}_{-0.035}$
24	sr2016failmass40to120recoil3_zjets_bin6	286^{+10}_{-10}
25	sr2018failmass120to300recoil0_zjets_bin3	2270^{+40}_{-40}
26	sr2018failmass40to120recoil0_zjets_bin6	9400^{+100}_{-100}
27	sr2018failmass120to300recoil3_zjets_bin0	592^{+15}_{-14}
28	sr2016failmass120to300recoil2_zjets_bin0	1492^{+24}_{-24}
29	doublebtag_2017	
30	sr2017failmass40to120recoil3_zjets_bin6	286^{+10}_{-10}

$(\hat{\theta}-\theta_I)/\sigma_I$ $(\hat{\theta}-\theta_I)/\sqrt{\sigma_I^2 - \sigma^2}$

$\Delta\hat{r}$