$\chi^2$ table. Blue color text represents a value that is lower than the SM $\chi^2$ by more than one standard deviation of the $\chi^2$ distribution. Similarly, red color text represents values that are higher than the SM $\chi^2$ by more than one standard deviation. In parenthesis is the total SM $\chi^2$ for the dataset included in the fit.

| Process | $N_{\text{data}}$ | SM $\chi^2/N_{\text{data}}$ | smefit2.0, linear correction $\chi^2/N_{data}$ |
|---|---|---|---|
| CMS_ttbb_13TeV | 1 | 4.959 | 2.640 |
| CMS_ttbb_13TeV_2016 | 1 | 1.754 | 0.343 |
| ATLAS_ttbb_13TeV_2016 | 1 | 0.906 | 1.687 |
| CMS_tttt_13TeV | 1 | 0.055 | 0.017 |
| CMS_tttt_13TeV_run2 | 1 | 0.051 | 1.117 |
| ATLAS_tttt_13TeV_run2 | 1 | 2.352 | 0.727 |
| Total | | | 1.088 (1.679) |

Table 1: $\chi^2$ table for 4H data

| Process | $N_{\text{data}}$ | SM $\chi^2/N_{\text{data}}$ | smefit2.0, linear correction $\chi^2/N_{data}$ |
|---|---|---|---|
| ATLAS_CMS_tt_AC_8TeV | 6 | 0.861 | 0.790 |
| ATLAS_tt_AC_13TeV | 5 | 0.275 | 0.273 |
| Total | | | 0.555 (0.595) |

Table 2: $\chi^2$ table for AC data

| Process | $N_{\text{data}}$ | SM $\chi^2/N_{\text{data}}$ | smefit2.0, linear correction $\chi^2/N_{data}$ |
|---|---|---|---|
| ATLAS_ggF_ZZ_13TeV | 6 | 0.958 | 0.841 |
| CMS_ggF_aa_13TeV | 6 | 1.049 | 1.050 |
| ATLAS_H_13TeV_2015_pTH | 9 | 1.11 | 1.096 |
| CMS_H_13TeV_2015_pTH | 9 | 0.8 | 0.789 |
| ATLAS_WH_Hbb_13TeV | 2 | 0.1 | 0.044 |
| ATLAS_ZH_Hbb_13TeV | 3 | 0.496 | 0.390 |
| Total | | | 0.845 (0.883) |

Table 3: $\chi^2$ table for Hdiff data

| Process | $N_{\text{data}}$ | SM $\chi^2/N_{\text{data}}$ | smefit2.0, linear correction $\chi^2/N_{data}$ |
|---|---|---|---|
| ATLAS_CMS_SSinc_RunI | 22 | 0.859 | 0.854 |
| Total | | | 0.854 (0.859) |

Table 4: $\chi^2$ table for HrunI data

| Process | $N_{\text{data}}$ | SM $\chi^2/N_{\text{data}}$ | smefit2.0, linear correction $\chi^2/N_{data}$ |
|---|---|---|---|
| ATLAS_SSinc_RunII | 16 | 0.542 | 0.542 |
| CMS_SSinc_RunII | 24 | 0.771 | 0.707 |
| Total | | | 0.641 (0.679) |

Table 5: $\chi^2$ table for HrunII data

| | | SM | smefit2.0, linear correction |
|---|---|---|---|
| Process | $N_{\text{data}}$ | $\chi^2/N_{\text{data}}$ | $\chi^2/N_{data}$ |
| LEP_eeWW_182GeV | 10 | 1.38 | 1.378 |
| LEP_eeWW_189GeV | 10 | 0.885 | 0.884 |
| LEP_eeWW_198GeV | 10 | 1.609 | 1.612 |
| LEP_eeWW_206GeV | 10 | 1.085 | 1.083 |
| Total | | | 1.239 (1.240) |

Table 6: $\chi^2$ table for LEP data

| | | SM | smefit2.0, linear correction |
|---|---|---|---|
| Process | $N_{\text{data}}$ | $\chi^2/N_{\text{data}}$ | $\chi^2/N_{data}$ |
| ATLAS_WW_13TeV_2016_memu | 13 | 1.651 | 1.650 |
| ATLAS_WZ_13TeV_2016_mTWZ | 6 | 0.861 | 0.833 |
| CMS_WZ_13TeV_2016_pTZ | 11 | 1.423 | 1.465 |
| Total | | | 1.419 (1.410) |

Table 7: $\chi^2$ table for VV data

| | | SM | smefit2.0, linear correction |
|---|---|---|---|
| Process | $N_{\text{data}}$ | $\chi^2/N_{\text{data}}$ | $\chi^2/N_{data}$ |
| ATLAS_WhelF_8TeV | 3 | 1.967 | 1.338 |
| CMS_WhelF_8TeV | 3 | 0.296 | 0.613 |
| Total | | | 0.976 (1.131) |

Table 8: $\chi^2$ table for WhelF data

| | | SM | smefit2.0, linear correction |
|---|---|---|---|
| Process | $N_{\text{data}}$ | $\chi^2/N_{\text{data}}$ | $\chi^2/N_{data}$ |
| CMS_t_tch_13TeV_inc | 2 | 0.345 | 0.264 |
| CMS_t_tch_13TeV_diff_Yt | 4 | 0.476 | 0.526 |
| CMS_t_tch_13TeV_2016_diff_Yt | 5 | 0.58 | 0.599 |
| ATLAS_t_tch_13TeV | 2 | 0.011 | 0.046 |
| Total | | | 0.440 (0.424) |

Table 9: $\chi^2$ table for t13 data

| | | SM | smefit2.0, linear correction |
|---|---|---|---|
| Process | $N_{\text{data}}$ | $\chi^2/N_{\text{data}}$ | $\chi^2/N_{data}$ |
| CMS_t_tch_8TeV_inc | 2 | 0.293 | 0.120 |
| CMS_t_tch_8TeV_diff_Yt | 6 | 0.11 | 0.196 |
| CMS_t_sch_8TeV | 1 | 1.265 | 0.984 |
| ATLAS_t_tch_8TeV | 4 | 0.89 | 0.699 |
| ATLAS_t_sch_8TeV | 1 | 0.085 | 0.736 |
| Total | | | 0.423 (0.440) |

Table 10: $\chi^2$ table for t8 data

|  |  | SM | smefit2.0, linear correction |
|---|---|---|---|
| Process | $N_{\text{data}}$ | $\chi^2/N_{\text{data}}$ | $\chi^2/N_{data}$ |
| ATLAS_tW_8TeV_inc | 1 | 0.026 | 0.012 |
| ATLAS_tW_slep_8TeV_inc | 1 | 0.134 | 0.137 |
| CMS_tW_8TeV_inc | 1 | 0.0 | 0.000 |
| ATLAS_tW_13TeV_inc | 1 | 0.549 | 0.553 |
| CMS_tW_13TeV_inc | 1 | 3.855 | 3.859 |
| Total |  |  | 0.912 (0.913) |

Table 11: $\chi^2$ table for tW data

|  |  | SM | smefit2.0, linear correction |
|---|---|---|---|
| Process | $N_{\text{data}}$ | $\chi^2/N_{\text{data}}$ | $\chi^2/N_{data}$ |
| ATLAS_tZ_13TeV_inc | 1 | 0.0 | 0.035 |
| ATLAS_tZ_13TeV_run2_inc | 1 | 0.048 | 0.050 |
| CMS_tZ_13TeV_inc | 1 | 0.678 | 0.406 |
| CMS_tZ_13TeV_2016_inc | 1 | 1.23 | 0.414 |
| Total |  |  | 0.226 (0.489) |

Table 12: $\chi^2$ table for tZ data

|  |  | SM | smefit2.0, linear correction |
|---|---|---|---|
| Process | $N_{\text{data}}$ | $\chi^2/N_{\text{data}}$ | $\chi^2/N_{data}$ |
| CMS_tt_13TeV_ljets_2015_Mtt | 8 | 0.939 | 0.689 |
| CMS_tt_13TeV_dilep_2015_Mtt | 6 | 1.299 | 1.350 |
| CMS_tt_13TeV_ljets_2016_Mtt | 10 | 1.992 | 1.677 |
| CMS_tt_13TeV_dilep_2016_Mtt | 7 | 2.282 | 1.915 |
| ATLAS_tt_13TeV_ljets_2016_Mtt | 7 | 0.986 | 1.667 |
| Total |  |  | 1.459 (1.529) |

Table 13: $\chi^2$ table for tt13 data

|  |  | SM | smefit2.0, linear correction |
|---|---|---|---|
| Process | $N_{\text{data}}$ | $\chi^2/N_{\text{data}}$ | $\chi^2/N_{data}$ |
| ATLAS_tt_8TeV_ljets_Mtt | 7 | 2.953 | 2.679 |
| ATLAS_tt_8TeV_dilep_Mtt | 6 | 0.086 | 0.067 |
| CMS_tt_8TeV_ljets_Ytt | 10 | 0.906 | 1.018 |
| CMS_tt2D_8TeV_dilep_MttYtt | 16 | 1.628 | 1.227 |
| Total |  |  | 1.256 (1.443) |

Table 14: $\chi^2$ table for tt8 data

|  |  | SM | smefit2.0, linear correction |
|---|---|---|---|
| Process | $N_{\text{data}}$ | $\chi^2/N_{\text{data}}$ | $\chi^2/N_{data}$ |
| ATLAS_ttW_8TeV | 1 | 1.334 | 0.416 |
| ATLAS_ttW_13TeV | 1 | 0.828 | 0.539 |
| ATLAS_ttW_13TeV_2016 | 1 | 0.225 | 0.223 |
| CMS_ttW_8TeV | 1 | 1.781 | 0.708 |
| CMS_ttW_13TeV | 1 | 0.028 | 0.766 |
| Total |  |  | 0.531 (0.839) |

Table 15: $\chi^2$ table for ttW data

| | | SM | smefit2.0, linear correction |
|---|---|---|---|
| Process | $N_{\text{data}}$ | $\chi^2/N_{\text{data}}$ | $\chi^2/N_{data}$ |
| ATLAS_ttZ_8TeV | 1 | 1.314 | 0.838 |
| ATLAS_ttZ_13TeV | 1 | 0.007 | 0.088 |
| ATLAS_ttZ_13TeV_2016 | 1 | 0.001 | 0.226 |
| CMS_ttZ_8TeV | 1 | 0.042 | 0.175 |
| CMS_ttZ_13TeV | 1 | 1.011 | 0.299 |
| CMS_ttZ_13TeV_pTZ | 4 | 0.732 | 0.615 |
| Total | | | 0.454 (0.589) |

Table 16: $\chi^2$ table for ttZ data

| | smefit2.0, linear correction | |
|---|---|---|
| Process | $N_{\text{data}}$ | $\chi^2/N_{\text{data}}$ |
| tt8 | 39 | 1.256 (1.443) |
| tt13 | 38 | 1.459 (1.529) |
| WhelF | 6 | 0.976 (1.131) |
| AC | 11 | 0.555 (0.595) |
| 4H | 6 | 1.088 (1.679) |
| ttZ | 9 | 0.454 (0.589) |
| ttW | 5 | 0.531 (0.839) |
| t8 | 14 | 0.423 (0.440) |
| t13 | 13 | 0.440 (0.424) |
| tW | 5 | 0.912 (0.913) |
| tZ | 4 | 0.226 (0.489) |
| HrunI | 22 | 0.854 (0.859) |
| HrunII | 40 | 0.641 (0.679) |
| Hdiff | 35 | 0.845 (0.883) |
| VV | 30 | 1.419 (1.410) |
| LEP | 40 | 1.239 (1.240) |
| Total | 317 | 0.987 (1.055) |

Table 17: $\chi^2$ table for grouped data. In parenthesis is the total SM $\chi^2$ for the dataset included in the fit. The SM column refers to all the datasets available in the group