

Table 1: TOP-22-006 unblind yields, calculated Sep 12, 2022 (version at20v01)

|                 | 2lss m 3b | 2lss p 3b | 2lss m 2b | 2lss p 2b | 3l m 1b | 3l p 1b | 3l m 2b | 3l p 2b | 3l onZ 1b | 3l onZ 2b | 4l 2b |
|-----------------|-----------|-----------|-----------|-----------|---------|---------|---------|---------|-----------|-----------|-------|
| tWZ sm          | 0.45      | 0.47      | 6.59      | 6.63      | 4.76    | 4.74    | 1.68    | 1.68    | 63.03     | 20.2      | 2.72  |
| Diboson sm      | 0.09      | 0.25      | 11.99     | 15.62     | 30.33   | 29.51   | 2.01    | 3.18    | 336.68    | 34.19     | 4.81  |
| Triboson sm     | 0.04      | 0.07      | 2.14      | 3.11      | 0.95    | 1.32    | 0.1     | 0.17    | 15.94     | 2.59      | 0.45  |
| charge flips sm | 1.62      | 1.57      | 17.5      | 17.4      | 0.0     | 0.0     | 0.0     | 0.0     | 0.0       | 0.0       | 0.0   |
| fakes sm        | 6.6       | 8.86      | 112.61    | 120.82    | 56.93   | 56.54   | 11.67   | 10.22   | 55.43     | 9.64      | 0.0   |
| convs sm        | 0.95      | 0.84      | 11.4      | 9.53      | 3.36    | 2.91    | 3.23    | 3.06    | 0.78      | 0.68      | 0.01  |
| Sum bkg         | 9.32      | 11.59     | 155.64    | 166.48    | 91.56   | 90.29   | 17.01   | 16.62   | 408.83    | 47.11     | 5.26  |
| ttlnu sm        | 12.39     | 23.41     | 142.46    | 269.49    | 25.56   | 47.13   | 27.12   | 50.42   | 10.14     | 11.38     | 0.03  |
| ttl sm          | 12.17     | 12.19     | 117.78    | 118.39    | 51.33   | 50.8    | 48.2    | 49.53   | 319.16    | 294.37    | 40.22 |
| ttH sm          | 9.38      | 9.36      | 82.29     | 82.49     | 23.41   | 23.13   | 22.81   | 22.61   | 9.58      | 9.66      | 3.5   |
| tllq sm         | 0.46      | 0.86      | 6.45      | 11.64     | 5.44    | 9.51    | 2.39    | 4.21    | 111.1     | 47.92     | 0.01  |
| tHq sm          | 0.12      | 0.23      | 1.4       | 2.58      | 0.47    | 0.83    | 0.35    | 0.61    | 0.35      | 0.23      | 0.03  |
| tttt sm         | 9.5       | 9.42      | 7.49      | 7.38      | 0.86    | 0.85    | 4.85    | 4.9     | 0.21      | 1.29      | 0.55  |
| Sum sig         | 44.02     | 55.48     | 357.88    | 491.97    | 107.07  | 132.23  | 105.73  | 132.28  | 450.53    | 364.86    | 44.34 |
| Sum expected    | 53.34     | 67.07     | 513.52    | 658.45    | 198.63  | 222.52  | 122.74  | 148.9   | 859.36    | 411.96    | 49.6  |
| Observation     | 71.0      | 68.0      | 608.0     | 781.0     | 233.0   | 270.0   | 148.0   | 158.0   | 1074.0    | 466.0     | 50.0  |
| Pdiff           | -33.1     | -1.39     | -18.4     | -18.61    | -17.3   | -21.34  | -20.58  | -6.11   | -24.98    | -13.12    | -0.8  |