

Table 1: TOP-22-006 unblind yields, calculated Dec 21, 2022 (version at24v01)

|                 | 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          | 0.46      | 0.47      | 6.66      | 6.7       | 4.78    | 4.77    | 1.69    | 1.69    | 63.34     | 20.3      | 2.72  |
| Diboson sm      | 0.1       | 0.25      | 12.13     | 15.37     | 30.17   | 30.51   | 2.02    | 3.19    | 339.31    | 33.79     | 4.81  |
| Triboson sm     | 0.04      | 0.07      | 2.16      | 3.14      | 0.95    | 1.33    | 0.1     | 0.17    | 16.02     | 2.6       | 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        | 6.72      | 8.94      | 112.63    | 120.55    | 57.0    | 56.52   | 11.86   | 10.47   | 55.38     | 10.05     | 0.0   |
| convs sm        | 0.96      | 0.86      | 11.47     | 9.55      | 3.37    | 2.94    | 3.24    | 3.07    | 0.78      | 0.68      | 0.01  |
| Sum bkg         | 9.9       | 12.16     | 162.55    | 172.72    | 96.28   | 96.06   | 18.91   | 18.6    | 474.83    | 67.42     | 7.99  |
| ttlnu sm        | 12.53     | 23.69     | 144.17    | 272.75    | 25.7    | 47.37   | 27.25   | 50.67   | 10.18     | 11.42     | 0.03  |
| ttl sm          | 12.28     | 12.28     | 119.13    | 119.66    | 51.58   | 51.08   | 48.44   | 49.77   | 320.7     | 295.8     | 40.22 |
| ttH sm          | 9.51      | 9.47      | 83.29     | 83.48     | 23.51   | 23.24   | 22.92   | 22.71   | 9.61      | 9.7       | 3.5   |
| tllq sm         | 0.47      | 0.87      | 6.51      | 11.75     | 5.46    | 9.53    | 2.4     | 4.23    | 111.51    | 48.11     | 0.01  |
| tHq sm          | 0.12      | 0.23      | 1.42      | 2.6       | 0.47    | 0.84    | 0.35    | 0.61    | 0.35      | 0.23      | 0.03  |
| tttt sm         | 9.61      | 9.53      | 7.58      | 7.46      | 0.87    | 0.85    | 4.88    | 4.92    | 0.21      | 1.3       | 0.55  |
| Sum sig         | 44.52     | 56.08     | 362.11    | 497.72    | 107.59  | 132.9   | 106.24  | 132.91  | 452.56    | 366.56    | 44.34 |
| Sum expected    | 54.42     | 68.24     | 524.66    | 670.43    | 203.88  | 228.97  | 125.15  | 151.51  | 927.38    | 433.98    | 52.33 |
| Observation     | 71.0      | 68.0      | 608.0     | 781.0     | 233.0   | 270.0   | 148.0   | 158.0   | 1074.0    | 466.0     | 50.0  |
| Pdiff           | -30.47    | 0.35      | -15.88    | -16.49    | -14.29  | -17.92  | -18.26  | -4.28   | -15.81    | -7.38     | 4.45  |