

Table 1: Yields (from run on Aug 19, 2023)

|                      | 4l wwz sf A     | 4l wwz sf B     | 4l wwz sf C     | 4l wwz of 1     | 4l wwz of 2     | 4l wwz of 3      | 4l wwz of 4     |
|----------------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|-----------------|
| WWZ                  | $2.48 \pm 0.01$ | $1.82 \pm 0.01$ | $0.55 \pm 0.0$  | $0.67 \pm 0.0$  | $0.77 \pm 0.0$  | $1.55 \pm 0.01$  | $5.35 \pm 0.01$ |
| ZH                   | $1.02 \pm 0.01$ | $1.34 \pm 0.01$ | $0.65 \pm 0.01$ | $3.08 \pm 0.01$ | $1.38 \pm 0.01$ | $0.36 \pm 0.0$   | $0.15 \pm 0.0$  |
| qqZZ                 | $1.22 \pm 0.03$ | $3.92 \pm 0.05$ | $2.69 \pm 0.04$ | $0.63 \pm 0.02$ | $0.79 \pm 0.02$ | $0.52 \pm 0.02$  | $0.46 \pm 0.02$ |
| ggZZ                 | $0.23 \pm 0.01$ | $0.76 \pm 0.02$ | $0.7 \pm 0.02$  | $0.11 \pm 0.01$ | $0.16 \pm 0.01$ | $0.1 \pm 0.01$   | $0.04 \pm 0.0$  |
| ttZ                  | $1.55 \pm 0.07$ | $1.09 \pm 0.06$ | $0.25 \pm 0.03$ | $0.36 \pm 0.03$ | $0.44 \pm 0.04$ | $0.9 \pm 0.06$   | $2.78 \pm 0.1$  |
| other                | $1.14 \pm 0.46$ | $2.02 \pm 0.54$ | $0.59 \pm 0.26$ | $3.38 \pm 0.71$ | $1.73 \pm 0.47$ | $0.12 \pm 0.27$  | $1.34 \pm 0.3$  |
| WWZJetsTo4L2Nu       | $2.48 \pm 0.01$ | $1.82 \pm 0.01$ | $0.55 \pm 0.0$  | $0.67 \pm 0.0$  | $0.77 \pm 0.0$  | $1.55 \pm 0.01$  | $5.35 \pm 0.01$ |
| GluGluZH             | $0.3 \pm 0.01$  | $0.33 \pm 0.01$ | $0.09 \pm 0.0$  | $0.52 \pm 0.01$ | $0.23 \pm 0.01$ | $0.07 \pm 0.0$   | $0.05 \pm 0.0$  |
| ggToZHToZTo2L        | $0.72 \pm 0.0$  | $1.0 \pm 0.0$   | $0.56 \pm 0.0$  | $2.56 \pm 0.01$ | $1.14 \pm 0.0$  | $0.3 \pm 0.0$    | $0.11 \pm 0.0$  |
| ZZTo4l               | $1.22 \pm 0.03$ | $3.92 \pm 0.05$ | $2.69 \pm 0.04$ | $0.63 \pm 0.02$ | $0.79 \pm 0.02$ | $0.52 \pm 0.02$  | $0.46 \pm 0.02$ |
| ggToZZTo2e2mu        | $0.02 \pm 0.0$  | $0.23 \pm 0.01$ | $0.23 \pm 0.01$ | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$    | $0.0 \pm 0.0$   |
| ggToZZTo2e2tau       | $0.08 \pm 0.01$ | $0.1 \pm 0.01$  | $0.08 \pm 0.01$ | $0.04 \pm 0.0$  | $0.06 \pm 0.01$ | $0.04 \pm 0.0$   | $0.01 \pm 0.0$  |
| ggToZZTo2mu2tau      | $0.11 \pm 0.01$ | $0.14 \pm 0.01$ | $0.1 \pm 0.01$  | $0.07 \pm 0.01$ | $0.1 \pm 0.01$  | $0.05 \pm 0.0$   | $0.02 \pm 0.0$  |
| ggToZZTo4e           | $0.01 \pm 0.0$  | $0.12 \pm 0.0$  | $0.11 \pm 0.0$  | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$    | $0.0 \pm 0.0$   |
| ggToZZTo4mu          | $0.01 \pm 0.0$  | $0.18 \pm 0.01$ | $0.18 \pm 0.01$ | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$    | $0.0 \pm 0.0$   |
| ggToZZTo4tau         | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$    | $0.0 \pm 0.0$   |
| TTZToLL M 1to10      | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$    | $0.0 \pm 0.0$   |
| TTZToLLNuNu M 10     | $1.55 \pm 0.07$ | $1.09 \pm 0.06$ | $0.25 \pm 0.03$ | $0.36 \pm 0.03$ | $0.44 \pm 0.04$ | $0.9 \pm 0.06$   | $2.78 \pm 0.1$  |
| TTZToQQ              | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$    | $0.0 \pm 0.0$   |
| DYJetsToLL M 50 MLM  | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$    | $0.0 \pm 0.0$   |
| SSWW                 | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$    | $0.0 \pm 0.0$   |
| ST antitop t-channel | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$    | $0.0 \pm 0.0$   |
| ST top s-channel     | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$    | $0.0 \pm 0.0$   |
| ST top t-channel     | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$    | $0.0 \pm 0.0$   |
| tbarW noFullHad      | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$    | $0.0 \pm 0.0$   |
| ttHnobb              | $0.05 \pm 0.02$ | $0.05 \pm 0.02$ | $0.01 \pm 0.01$ | $0.03 \pm 0.01$ | $0.02 \pm 0.01$ | $0.02 \pm 0.01$  | $0.07 \pm 0.02$ |
| TTTo2L2Nu            | $0.04 \pm 0.04$ | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.04 \pm 0.04$  | $0.0 \pm 0.0$   |
| TTWJetsToLNU         | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$    | $0.01 \pm 0.0$  |
| TTWJetsToQQ          | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$    | $0.0 \pm 0.0$   |
| tW noFullHad         | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$    | $0.0 \pm 0.0$   |
| tZq                  | $0.01 \pm 0.01$ | $0.01 \pm 0.01$ | $0.01 \pm 0.01$ | $0.0 \pm 0.01$  | $0.01 \pm 0.01$ | $0.01 \pm 0.01$  | $0.02 \pm 0.01$ |
| VHnobb               | $1.03 \pm 0.44$ | $1.59 \pm 0.52$ | $0.48 \pm 0.25$ | $2.93 \pm 0.69$ | $1.52 \pm 0.47$ | $-0.03 \pm 0.22$ | $0.46 \pm 0.21$ |
| WWTo2L2Nu            | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$   | $0.0 \pm 0.0$    | $0.0 \pm 0.0$   |
| WZTo3LNU             | $0.02 \pm 0.1$  | $0.37 \pm 0.14$ | $0.09 \pm 0.04$ | $0.42 \pm 0.16$ | $0.18 \pm 0.08$ | $0.09 \pm 0.14$  | $0.78 \pm 0.21$ |