

| Background | Channel | Normalization factors | |
|---|--|------------------------|------------------------|
| | | VBF | Boosted |
| $Z \rightarrow ll$ (CR) | $\tau_{\text{lep}}\tau_{\text{lep}}$ | $0.88^{+0.34}_{-0.30}$ | $1.27^{+0.30}_{-0.25}$ |
| Top (CR) | $\tau_{\text{lep}}\tau_{\text{lep}}$ | 1.19 ± 0.09 | 1.07 ± 0.05 |
| Top (CR) | $\tau_{\text{lep}}\tau_{\text{had}}$ | $1.53^{+0.30}_{-0.27}$ | 1.13 ± 0.07 |
| Fake- $\tau_{\text{had-vis}}$ (data-driven) | $\tau_{\text{had}}\tau_{\text{had}}$ | | 1.12 ± 0.12 |
| $Z \rightarrow \tau\tau$ (fit in each SR) | $\tau_{\text{lep}}\tau_{\text{lep}}, \tau_{\text{lep}}\tau_{\text{had}}, \tau_{\text{had}}\tau_{\text{had}}$ | $1.04^{+0.10}_{-0.09}$ | 1.11 ± 0.05 |