

| Region                           | Modified selection criteria  |
|----------------------------------|--|
| DY(2 $\ell$ ) CR                 | $0 < M_{\tau\tau} < 160 \text{ GeV}$<br>No upper requirement on the lepton $p_T$   |
| $t\bar{t}$ (2 $\ell$ ) CR        | At least one b-tagged jet with $p_T > 25 \text{ GeV}$<br>No requirement on $m_T(\ell_i, p_T^{\text{miss}})$ (instead of $< 70 \text{ GeV}$ )<br>No upper requirement on the lepton $p_T$   |
| VV(2 $\ell$ ) VR                 | $m_T(\ell_i, p_T^{\text{miss}}) > 90 \text{ GeV}$ (instead of $< 70 \text{ GeV}$ )<br>No upper requirement on the lepton $p_T$   |
| WZ(3 $\ell$ )<br>enriched region | No $M_{\text{SFOS}}^{\text{min}}(\ell\ell)$ upper requirement at $50 \text{ GeV}$<br>No $M_{\text{SFAS}}^{\text{max}}(\ell\ell)$ requirement<br>$p_T(\ell_1) > 30 \text{ GeV}$<br>$p_T(\ell_2) > 10 \text{ GeV}$ ( $> 15 \text{ GeV}$ if $\ell$ is electron in high-MET bin)<br>$p_T(\ell_3) > 10 \text{ GeV}$ ( $> 15 \text{ GeV}$ if $\ell$ is electron in high-MET bin)<br>At least one $\mu$ with $p_T > 20 \text{ GeV}$ |
| SS(2 $\ell$ ) CR                 | Same-sign requirement on lepton electric charge<br>No requirement on $m_T(\ell_i, p_T^{\text{miss}})$  |