

Selection	Requirements	Note
Preselection	leading two leptons have opposite sign and different flavour, $p_T^{\ell_1} > 25 \text{ GeV}, p_T^{\ell_2} > 13 \text{ GeV},$ $ \eta < 2.5 \text{ (2.4) for } e(\mu),$ $p_T^{\text{miss}} > 20 \text{ GeV}, p_T^{\ell\ell} > 30 \text{ GeV},$ no additional leptons with $p_T > 10 \text{ GeV}$	
Signal region	$m^{\ell\ell} > 12 \text{ GeV}, m_T^{\text{H}} > 60 \text{ GeV}, m_T^{\ell_2} > 30 \text{ GeV},$ no b-tagged jets with $p_T > 20 \text{ GeV}$	Binned by p_T^{H} or N_{jet} and categorized by lepton properties
$t\bar{t}$ control region	$m^{\ell\ell} > 50 \text{ GeV}, m_T^{\ell_2} > 30 \text{ GeV},$ at least one b-tagged jet with $p_T > 20 \text{ GeV}$ if $N_{\text{jet}} = 0,$ else $p_T > 30 \text{ GeV}$	Binned by p_T^{H} or N_{jet}
$\tau^+\tau^-$ control region	$40 < m^{\ell\ell} < 80 \text{ GeV}, m_T^{\text{H}} < 60 \text{ GeV},$ no b-tagged jets with $p_T > 20 \text{ GeV}$	Binned by p_T^{H} or N_{jet}