

Signal region

One muon (electron) with $p_T > 27(35)$ GeV

No additional loose leptons

Three or four medium b-tagged jets

$p_T > 30$ GeV and $|\eta| < 2.4$

One or more untagged jets

$p_T > 30$ GeV for $|\eta| < 2.4$ or

$p_T > 40$ GeV for $|\eta| \geq 2.4$

$p_T^{\text{miss}} > 35(45)$ GeV for muons (electrons)

Control region

Two leptons: $p_T > 20/20$ GeV ($\mu^\pm \mu^\mp$)

or $p_T > 20/15$ GeV ($e^\pm e^\mp / \mu^\pm e^\mp$)

No additional loose leptons

Two medium b-tagged jets

$p_T > 30$ GeV and $|\eta| < 2.4$

One or more additional loose b-tagged jets

$p_T > 30$ GeV and $|\eta| < 2.4$

$p_T^{\text{miss}} > 40$ GeV