

Selection	Description
Trigger	Single-muon $p_T > 24/27/24$ GeV
	Single-electron $p_T > 27/32/32$ GeV
	Dimuon $p_T > 17$ (8) GeV
	Dielectron $p_T > 23$ (12) GeV
	Electron (muon) $p_T > 23$ (8) GeV
	Muon (electron) $p_T > 23$ (12) GeV
Sign and flavor of leptons	$e^\pm e^\pm, \mu^\pm \mu^\pm, e^\pm \mu^\pm, \mu^\pm \tau^\pm, e^\pm \tau^\pm$
Loose lepton count	= 2
Tight lepton count	= 2
Lepton $p_T$	$p_T > 30$ GeV
AK8 jet threshold	$p_T > 250$ GeV
AK8 jet count	$\geq 1$
H $\rightarrow$ $b\bar{b}$ candidate	max $X \rightarrow b\bar{b}$ score AK8 jet
Medium b tagged jet count	= 0
AK4 jet count for VBS	$\geq 2$
VBS jet candidates	max momentum jets, opposite $\eta$ sign $m_{jj} > 100$ GeV
Signal region	$m_{jj} > 500$ GeV, $ \Delta\eta_{jj}  > 3$ , $X \rightarrow b\bar{b}$ score $> 0.9$ for H $\rightarrow b\bar{b}$ candidate
Control region	$m_{jj} > 100$ GeV, with $m_{jj} < 500$ GeV or $ \Delta\eta_{jj}  < 3$