

Selection - Background Estimation for Wjets and Zjets (2017)

Central	Trigger	HLT_IsoMu27	
	Muon Selection	$pT(\mu) > 30 \text{ GeV}$ $ \eta(\mu) < 2.1$ Tight ID Isolation: $I < 0.15$	
		W+jets	$N(\mu) = 1$ $50 \text{ GeV} < mT(\mu, \text{MET}) < 100 \text{ GeV}$
		Z+jets	$N(\mu) \geq 2$ $60 \text{ GeV} < M(\mu, \mu) < 120 \text{ GeV}$ Opposite Charge
	*MET Criterion	*MET > 250 GeV	

Recalculated *MET = vector sum of the default MET and muon(s)

Dijet pair should be the one with the largest invariant mass

CR1) CENTRAL: Central Selections + Vetoes

CR2) CENTRAL + VBF: Central Selections + VBF + Vetoes

VBF	Jets Definition	$pT(j) > 60 \text{ GeV}$ $ \eta(j) < 2.5$ Tight ID $N(j) \geq 2$ $\Delta R(j, \mu) > 0.4$
	VBF Criteria (DiJet Selection)	$\eta(j_1)\eta(j_2) < 0$ $ \Delta\eta(j_1, j_2) > 3.8$ $M(j_1, j_2) > 1 \text{ TeV}$

Veto	Electron Veto	$pT(e) > 10 \text{ GeV}$ $ \eta(e) < 2.5$ Medium ID
	Tau Veto	$pT(\tau_h) > 20 \text{ GeV}$ $ \eta(\tau_h) < 2.5$ 1 prong $\Delta R(\tau_h, \mu, \text{or } e) > 0.3$ Tau_idDeepTau2017v2p1
	B-tagged Jets Veto	$pT(b) > 30 \text{ GeV}$ $ \eta(b) < 2.4$ Deep CSV Medium WP

Btag SF applied, No BJet overlap removal