

Common preselection	
E_T^{miss} quality	Filters related to beam and instrumental effects, and reconstruction failures
Lepton/photon vetoes	$p_T > 10, 10, 25$ GeV for isolated tracks, leptons, photons (respectively) and $ \eta < 2.5$
Jet j_i acceptance	Consider each jet j_i that satisfies $p_T^{j_i} > 40$ GeV and $ \eta^{j_i} < 3$
Jet j_1 acceptance	$p_T^{j_1} > 100$ GeV and $ \eta^{j_1} < 2.5$
Jet j_2 acceptance	$p_T^{j_2} < 40$ GeV (monojet), $40 < p_T^{j_2} < 100$ GeV (asymmetric), $p_T^{j_2} > 100$ GeV (symmetric)
Forward jet veto	Veto events containing a jet satisfying $p_T > 40$ GeV and $ \eta > 3$
Jets below threshold	$H_T^{\text{miss}} / E_T^{\text{miss}} < 1.25$
Energy sums	$H_T > 200$ GeV and $H_T^{\text{miss}} > 130$ GeV
Event categorisation	
n_{jet}	1 (monojet), 2, 3, 4, ≥ 5 (asymmetric), 2, 3, 4, ≥ 5 (symmetric)
n_b	0, 1, 2, ≥ 3 ($n_b \leq n_{\text{jet}}$)
H_T (GeV)	200, 250, 300, 350, 400, 500, 600, > 800 GeV (bins can be dropped/merged vs. n_{jet} , Table ??)
Signal region (SR)	
QCD multijet rejection	$\alpha_T > 0.65, 0.60, 0.55, 0.53, 0.52, 0.52, 0.52$ (mapped to H_T bins in range $200 < H_T < 800$ GeV)
QCD multijet rejection	$\Delta\phi_{\text{min}}^* > 0.5$ ($n_{\text{jet}} \geq 2$) or $\Delta\phi_{\text{min}}^{*25} > 0.5$ ($n_{\text{jet}} = 1$)
Control regions (CR)	
Multijet-enriched	SR + $H_T^{\text{miss}} / E_T^{\text{miss}} > 1.25$ (inverted)
γ + jets	1 γ with $p_T > 200$ GeV, $ \eta < 1.45$, $\Delta R(\gamma, j_i) > 1.0$, $H_T > 400$ GeV, same α_T req. as SR
μ + jets	1 μ with $p_T > 30$ GeV, $ \eta < 2.1$, $I_{\text{rel}}^\mu < 0.1$, $\Delta R(\mu, j_i) > 0.5$, $30 < m_T(\vec{p}_T^\mu, \vec{p}_T^{\text{miss}}) < 125$ GeV
$\mu^\pm \mu^\mp$ + jets	2 μ with $p_T > 30$ GeV, $ \eta < 2.1$, $I_{\text{rel}}^\mu < 0.1$, $\Delta R(\mu_{1,2}, j_i) > 0.5$, $ m_{\mu\mu} - m_Z < 25$ GeV