

Algorithm	Requirements (p_T , E_T , $m_{\mu\mu}$, and m_{jj} in GeV)
<i>Two objects</i>	
Single μ + Single e/γ	$p_T(\mu) > 20$ & Tight quality(μ) & $p_T(e/\gamma) > 10$ & $ \eta(e/\gamma) < 2.5$
Single μ + Single e/γ	$p_T(\mu) > 7$ & Tight quality(μ) & $p_T(e/\gamma) > 20$ & $ \eta(e/\gamma) < 2.5$
Single μ + Single τ	$p_T(\mu) > 18$ & $ \eta(\mu) < 2.1$ & Tight quality(μ) & $p_T(\tau) > 24$ & $ \eta(\tau) < 2.1$
Single μ + H_T	$p_T(\mu) > 6$ & Tight quality(μ) & $H_T > 240$
Single e/γ + Single τ	$p_T(e/\gamma) > 22$ & $ \eta(e/\gamma) < 2.1$ & Loose isolated(e/γ) & $p_T(\tau) > 26$ & $ \eta(\tau) < 2.1$ & Isolated(τ) & $\Delta R > 0.3$
Single e/γ + Single jet	$p_T(e/\gamma) > 28$ & $ \eta(e/\gamma) < 2.1$ & Loose isolated(e/γ) & $p_T(\text{jet}) > 34$ & $ \eta(\text{jet}) < 2.5$ & $\Delta R > 0.3$
Single e/γ + H_T	$p_T(e/\gamma) > 26$ & $ \eta(e/\gamma) < 2.1$ & Loose isolated(e/γ) & $H_T > 100$
Single τ + E_T^{miss}	$p_T(\tau) > 40$ & $ \eta(\tau) < 2.1$ & $E_T^{\text{miss}} > 90$
Single jet + E_T^{miss}	$p_T(\text{jet}) > 140$ & $ \eta(\text{jet}) < 2.5$ & $E_T^{\text{miss}} > 80$
<i>Three objects</i>	
Single μ	$p_T(\mu) > 12$ & $ \eta(\mu) < 2.3$ & Tight quality(μ) &
Double jet + ΔR	$p_T(\text{jet}) > 40$ & $\Delta\eta(\text{jet},\text{jet}) < 1.6$ & $ \eta(\text{jet}) < 2.3$ & $\Delta R(\mu, \text{jet}) < 0.4$
Single μ + Single jet + E_T^{miss}	$p_T(\mu) > 3$ & $ \eta(\mu) < 1.5$ & Tight quality (μ) & $p_T(\text{jet}) > 100$ & $ \eta(\text{jet}) < 2.5$ & $E_T^{\text{miss}} > 40$
Double μ + H_T	$p_T(\mu) > 3$ & Tight quality(μ) & $H_T > 220$
Double μ + Single jet + ΔR	$p_T(\mu) > 0$ & Medium quality(μ) & $\Delta R(\mu, \mu) < 1.6$ & $p_T(\text{jet}) > 90$ & $ \eta(\text{jet}) < 2.5$ & $\Delta R(\mu, \text{jet}) < 0.8$
Double μ + Single e/γ	$p_T(\mu) > 5$ & Tight quality(μ) & $p_T(e/\gamma) > 9$ & $ \eta(e/\gamma) < 2.5$
Double e/γ + Single μ	$p_T(e/\gamma) > 12$ & $ \eta(e/\gamma) < 2.5$ & $p_T(\mu) > 6$ & Tight quality(μ)
Double e/γ + H_T	$p_T(e/\gamma) > 8$ & $ \eta(e/\gamma) < 2.5$ & $H_T > 300$
<i>Four objects</i>	
Double μ + Double e/γ	$p_T(\mu) > 3$ & Medium quality(μ) & OS(μ) & $p_T(e/\gamma) > 7.5$
Double μ + Double e/γ	$p_T(\mu) > 5$ & Medium quality(μ) & OS(μ) & $p_T(e/\gamma) > 3$
<i>Five objects</i>	
Double μ + E_T^{miss} + Single jet OR Double jet	$p_T(\mu) > 3$ & Tight quality(μ) & $E_T^{\text{miss}} > 50$ & $(p_T(\text{jet}) > 60$ & $ \eta(\text{jet}) < 2.5)$ OR $(p_T(\text{jet}) > 40$ & $ \eta(\text{jet}) < 2.5)$
H_T + Quad jet	$H_T > 320$ & $p_T(\text{jet}) > 70, 55, 40, 40$ & $ \eta(\text{jet}) < 2.4$