

Selection	Requirements	Additional information
Muons	$N_\mu \geq 2, p_T^{\mu_1} > 26 \text{ GeV},$ $p_T^\mu > 5 \text{ GeV}, \eta_\mu < 2.4$	$p_T^{\mu_1} > 29 \text{ GeV}$ (2017), $p_T^\mu > 26 \text{ GeV}$ (2018 dimuon trigger)
Hadrons	$N_h \geq 2, p_T^h > 5 \text{ GeV}, \eta_h < 2.4,$ $h = \pi^\pm$ ($h = K^\pm$ for $m_S \geq 1.1 \text{ GeV}$)	
Dimuon	$\Delta R_{\mu\mu} < 0.4$, valid vertex	
Dihadron	$\Delta R_{hh} < 0.4$, valid vertex, $p_T^{hh} > 20 \text{ GeV}$	
Loose invariant mass	$m_{\mu\mu} < 5 \text{ GeV}, m_{hh} < 5 \text{ GeV},$ $m_{\mu\mu hh} \in [110, 140] \text{ GeV}$	SR: $m_{\mu\mu hh} \in [122.5, 127.5] \text{ GeV}$ CR: $m_{\mu\mu hh} \in [110, 122.5) \cup (127.5, 140] \text{ GeV}$
Di-object invariant mass	$m_{\mu\mu} \approx m_{hh}$	2D diagonal mass requirement
Categories	<i>prompt</i> ($L_{xy}^{\mu\mu} / \sigma_{xy}^{\mu\mu} < 40, L_{xy}^{hh} / \sigma_{xy}^{hh} < 30$), <i>displaced</i> $\mu\mu$, <i>displaced</i> hh , <i>displaced</i>	Non- <i>prompt</i> categories made by inverting L_{xy} / σ_{xy} alternatively
Relative isolation	<i>prompt</i> $I_{\text{rel}}^{\mu_1} < 0.3, I_{\text{rel}}^{\mu_2} < 0.6,$ $I_{\text{rel}}^{h_1} < 0.6, I_{\text{rel}}^{h_2} < 0.8$	<i>non-prompt</i> $I_{\text{rel}}^{\mu_1} < 0.5, I_{\text{rel}}^{\mu_2} < 0.8,$ $I_{\text{rel}}^{h_1} < 1, I_{\text{rel}}^{h_2} < 1.6$
		category-wise selections $\mu_1, \mu_2 =$ leading, subleading μ $h_1, h_2 =$ leading, subleading h