

Uncertainty source	$m_N = 40 \text{ GeV}$			$m_N = 200 \text{ GeV}$		
	e	μ	τ	e	μ	τ
Luminosity, pileup reweighting	5.0%	2.6%	11.3%	5.8%	7.6%	4.4%
Trigger efficiency	2.4%	10.6%	26.4%	2.9%	6.9%	5.1%
Light-lepton selection efficiency & energy calibration	8.7%	15.5%	7.9%	10.4%	18.3%	1.2%
τ_h selection efficiency	—	—	2.7%	—	—	14.2%
Jet energy calibration, p_T^{miss} , b tagging efficiency	10.6%	8.4%	34.4%	8.6%	12.4%	24.0%
WZ background normalization	1.1%	9.6%	7.4%	2.8%	5.4%	4.0%
ZZ background normalization	3.9%	9.9%	8.0%	4.1%	6.1%	6.5%
Z γ background normalization	7.4%	8.3%	5.1%	1.9%	1.5%	12.1%
Other background normalization	1.4%	5.6%	1.6%	13.8%	6.3%	10.5%
Nonprompt light-lepton background	10.8%	16.0%	20.9%	15.6%	26.4%	9.1%
Nonprompt τ_h background	—	—	14.3%	—	—	66.7%
HNL cross section prediction	4.7%	3.5%	3.8%	3.7%	3.0%	2.1%
Total systematic	23.3%	25.5%	55.1%	27.7%	35.8%	75.5%
Statistical	96.8%	96.5%	83.4%	96.1%	93.3%	65.5%