

Category	$2\ell ss$									
b-tag	no req.		Loose				Tight			
Leptons	ee		$e\mu$		$\mu\mu$		$e\mu$		$\mu\mu$	
Charge	-	+	-	+	-	+	-	+	-	+
$t\bar{t}H$	0.8 ± 0.4	0.8 ± 0.4	1.9 ± 1.0	1.9 ± 0.9	1.3 ± 0.6	1.3 ± 0.6	0.8 ± 0.4	0.9 ± 0.5	0.6 ± 0.3	0.5 ± 0.2
$t\bar{t}W + t\bar{t}WW$	6.0 ± 1.2	10.9 ± 2.1	12.7 ± 2.4	23.4 ± 4.5	8.4 ± 1.7	16.8 ± 3.2	6.4 ± 1.2	11.9 ± 2.1	4.2 ± 0.9	7.8 ± 1.5
tH	0.1 ± 0.0	0.1 ± 0.0	0.6 ± 0.1	0.9 ± 0.1	0.1 ± 0.0	0.2 ± 0.0	< 0.05	0.1 ± 0.0	< 0.05	< 0.05
$WZ + ZZ$	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
$t\bar{t}Z$	8.3 ± 1.6	8.2 ± 1.4	10.1 ± 1.9	11.6 ± 2.0	4.0 ± 0.7	3.8 ± 0.7	6.1 ± 1.3	5.3 ± 1.0	2.4 ± 0.8	2.2 ± 0.4
Misidentified	7.8 ± 2.0	9.3 ± 2.1	26.3 ± 4.3	23.9 ± 4.5	20.5 ± 4.6	17.4 ± 4.3	2.9 ± 1.0	4.9 ± 1.5	2.3 ± 1.4	1.9 ± 0.8
Conversions	1.5 ± 0.6	2.5 ± 1.6	1.4 ± 0.4	2.0 ± 0.8	< 0.05	< 0.05	0.5 ± 0.2	0.6 ± 0.2	< 0.05	< 0.05
Signal flip	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Other	1.7 ± 0.8	2.2 ± 0.9	3.7 ± 1.7	5.9 ± 2.4	2.5 ± 1.0	3.9 ± 1.5	0.9 ± 0.4	1.2 ± 0.6	0.1 ± 0.1	0.5 ± 0.2
SM expectation	26.1 ± 3.0	34.0 ± 3.8	56.7 ± 5.6	69.6 ± 7.2	36.8 ± 5.1	43.4 ± 5.6	17.7 ± 2.1	24.7 ± 2.8	9.6 ± 1.9	13.0 ± 1.8
Observed data	33	33	64	105	49	41	27	27	15	8