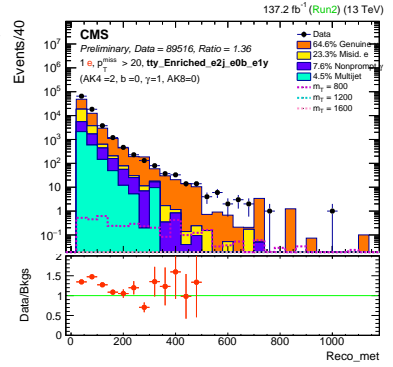
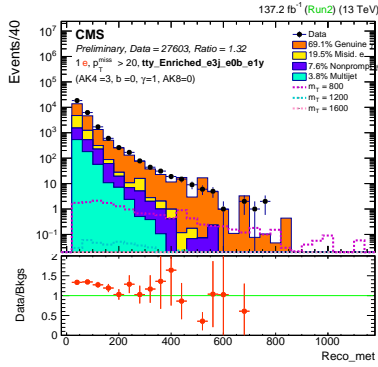
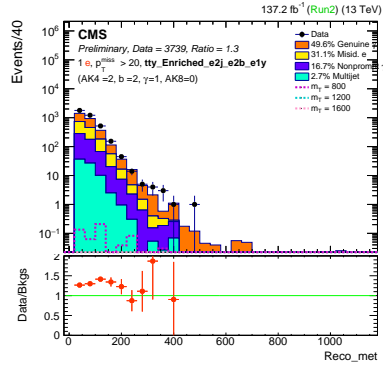
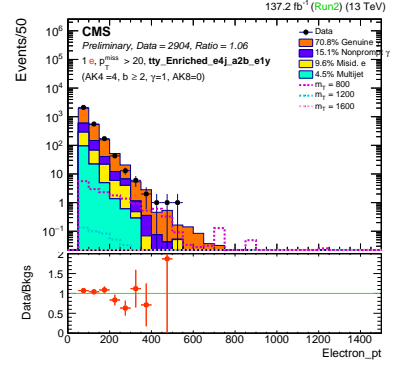
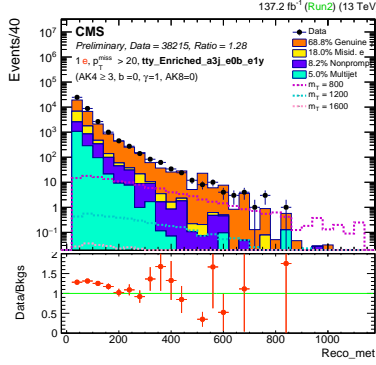
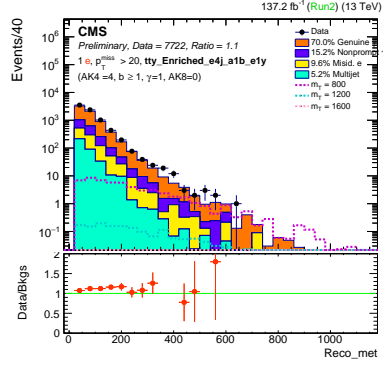


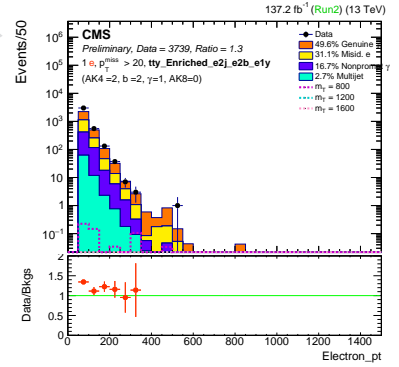
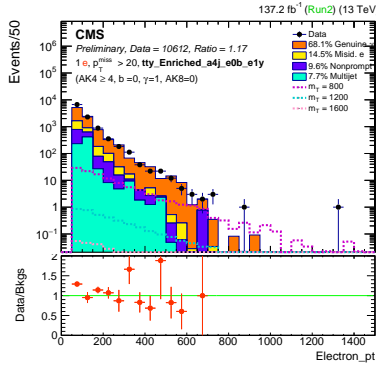
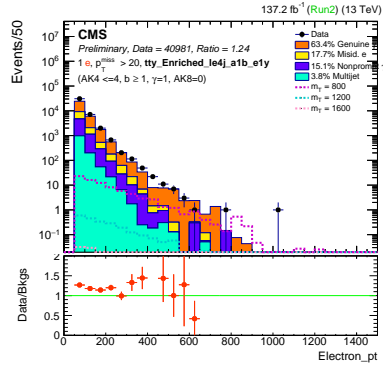
Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)	Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)	Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)
Data	2904.0	—	—	—	—	Data	40981.0	—	—	—	—	Data	10612.0	—	—	—	—
$t\bar{t}\gamma$	1723.2	99.3	0.3	0.2	0.1	$t\bar{t}\gamma$	13001.5	99.2	0.4	0.3	0.1	$W + \gamma$	2854.3	99.7	0.2	0.0	0.1
t/\bar{t}	907.7	19.8	44.5	23.8	12.0	t/\bar{t}	11445.1	23.6	38.8	29.8	7.8	QCD	1691.8	65.4	12.7	0.2	21.7
$DY + jets$	49.0	0.0	0.0	77.4	22.6	$W + \gamma$	2785.8	99.7	0.1	0.1	0.0	$DY + jets$	1325.8	1.3	6.5	85.8	6.4
Others	23.0	64.2	11.2	21.6	2.9	$DY + jets$	2500.9	1.3	3.2	90.5	5.0	$t\bar{t}\gamma$	1082.5	99.4	0.3	0.1	0.1
$Z + \gamma$	22.6	96.8	0.0	1.5	1.7	$Z + \gamma$	1528.4	98.0	0.1	1.8	0.2	$Z + \gamma$	755.6	97.2	0.1	2.4	0.3
QCD	7.7	85.4	14.6	0.0	0.0	QCD	994.6	79.3	11.0	0.0	9.8	t/\bar{t}	651.5	24.3	47.5	17.4	10.8
$W + \gamma$	7.6	100.0	0.0	0.0	0.0	$W + jets$	404.1	0.0	69.1	0.7	30.1	$W + jets$	393.2	0.0	58.3	0.0	41.7
$W + jets$	2.6	0.0	24.6	0.0	75.4	Others	331.1	64.6	9.4	22.6	3.4	Others	325.9	75.5	7.6	14.5	2.3
Bkgs	2743.4	70.8	15.1	9.6	4.5	Bkgs	32991.5	63.4	15.1	17.7	3.8	Bkgs	9080.7	68.1	9.6	14.6	7.7
$m_T = 800$	16.8	0.0	99.9	0.1	0.0	$m_T = 800$	81.0	0.0	99.8	0.2	0.0	$m_T = 800$	108.6	0.2	99.8	0.0	0.0
$m_T = 1200$	0.5	0.1	99.6	0.0	0.2	$m_T = 1200$	2.3	0.0	99.5	0.4	0.1	$m_T = 1200$	3.8	0.3	99.6	0.1	0.1
$m_T = 1600$	0.0	-0.0	100.0	0.0	0.0	$m_T = 1600$	0.2	0.1	99.8	0.0	0.0	$m_T = 1600$	0.3	0.2	99.7	0.1	0.0
Data/Bkgs	1.06	—	—	—	—	Data/Bkgs	1.24	—	—	—	—	Data/Bkgs	1.17	—	—	—	—



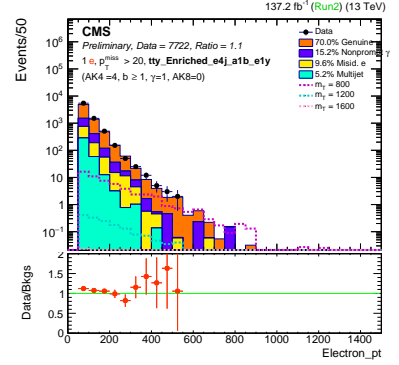
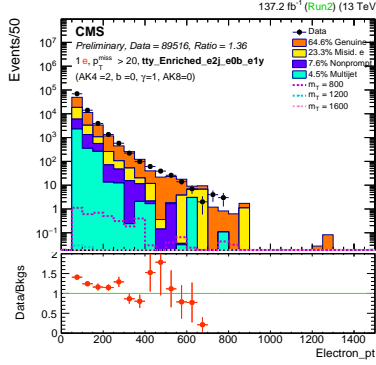
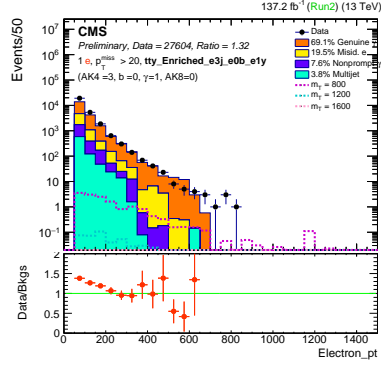
Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)	Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)	Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)
Data	3739.0	—	—	—	—	Data	27603.0	—	—	—	—	Data	89516.0	—	—	—	—
t/\bar{t}	1516.2	19.9	28.4	47.1	4.6	$W + \gamma$	7999.1	99.8	0.1	0.1	0.0	$W + \gamma$	24627.0	99.8	0.1	0.0	0.1
$t\bar{t}\gamma$	1013.0	98.7	0.4	0.8	0.1	$DY + jets$	4158.8	1.3	5.5	89.0	4.3	$DY + jets$	16237.1	1.3	5.2	89.3	4.3
$DY + jets$	174.7	0.0	2.9	96.1	1.0	$Z + \gamma$	2859.0	98.4	0.2	1.2	0.2	$Z + \gamma$	11621.5	98.5	0.1	1.2	0.2
$Z + \gamma$	68.7	99.2	0.0	0.8	0.0	QCD	1898.6	81.8	10.2	0.0	8.0	QCD	4902.7	73.7	15.2	0.1	11.0
QCD	49.9	28.4	71.6	0.0	0.0	$t\bar{t}\gamma$	1327.4	99.2	0.4	0.3	0.1	$W + jets$	4079.1	0.3	63.1	0.1	36.5
$W + \gamma$	36.4	100.0	0.0	0.0	0.0	$W + jets$	1012.8	0.3	63.9	0.5	35.2	t/\bar{t}	1751.5	28.9	39.3	24.4	7.4
Others	17.1	50.6	6.8	38.2	4.3	t/\bar{t}	1010.3	27.0	43.9	20.6	8.6	$t\bar{t}\gamma$	1562.8	99.1	0.4	0.3	0.1
$W + jets$	8.5	0.0	45.0	0.0	55.0	Others	600.5	70.3	8.9	18.1	2.7	Others	1122.1	60.7	13.3	22.7	3.4
Bkgs	2884.5	49.6	16.7	31.1	2.7	Bkgs	20866.5	69.1	7.6	19.5	3.8	Bkgs	65903.9	64.6	7.6	23.3	4.5
$m_T = 800$	0.6	0.0	100.0	0.0	0.0	$m_T = 800$	15.0	0.0	100.0	0.0	0.0	$m_T = 800$	4.0	0.6	99.4	0.0	0.0
$m_T = 1200$	0.0	0.0	100.0	0.0	0.0	$m_T = 1200$	0.5	0.0	99.3	0.7	0.0	$m_T = 1200$	0.1	0.9	98.4	0.6	0.0
$m_T = 1600$	0.0	0.0	100.0	0.0	0.0	$m_T = 1600$	0.0	-0.3	100.3	0.0	0.0	$m_T = 1600$	0.0	0.0	100.0	0.0	0.0
Data/Bkgs	1.3	—	—	—	—	Data/Bkgs	1.32	—	—	—	—	Data/Bkgs	1.36	—	—	—	—



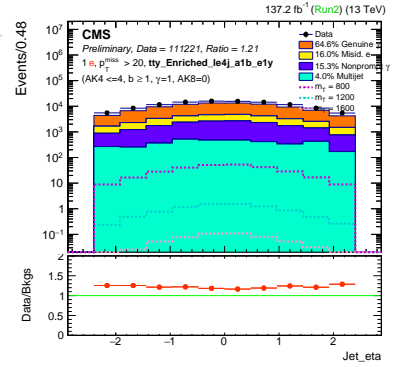
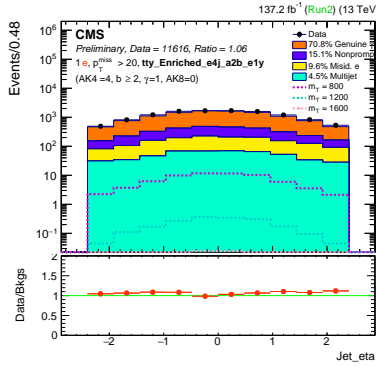
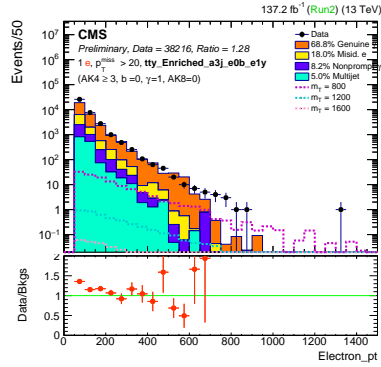
Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)	Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)	Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)
Data	7722.0	—	—	—	—	Data	38215.0	—	—	—	—	Data	2904.0	—	—	—	—
$t\bar{t}\gamma$	3874.6	99.4	0.3	0.2	0.1	$W + \gamma$	10853.5	99.7	0.2	0.1	0.0	$t\bar{t}\gamma$	1723.2	99.3	0.3	0.2	0.1
$t/t\bar{t}$	2176.5	22.1	45.3	21.4	11.2	$DY + jets$	5484.6	1.3	5.7	88.2	4.8	$t/t\bar{t}$	907.7	19.8	44.5	23.8	12.0
$W + \gamma$	311.5	98.9	1.1	0.0	0.0	$Z + \gamma$	3614.6	98.2	0.2	1.5	0.2	$DY + jets$	49.0	0.0	0.0	77.4	22.6
$DY + jets$	204.5	0.8	0.0	90.3	8.9	QCD	3590.4	74.1	11.4	0.1	14.5	Others	23.0	64.2	11.2	21.6	2.9
QCD	192.6	40.5	14.4	0.0	45.1	$t\bar{t}\gamma$	2409.9	99.3	0.4	0.2	0.1	$Z + \gamma$	22.6	96.8	0.0	1.5	1.7
$Z + \gamma$	126.0	97.2	0.6	1.9	0.3	$t/t\bar{t}$	1661.8	25.9	45.3	19.3	9.4	QCD	7.7	85.4	14.6	0.0	0.0
Others	82.4	70.4	9.8	17.3	2.5	$W + jets$	1406.0	0.2	62.4	0.4	37.0	$W + \gamma$	7.6	100.0	0.0	0.0	0.0
$W + jets$	33.7	0.0	76.8	0.2	23.0	Others	926.3	72.1	8.5	16.8	2.6	$W + jets$	2.6	0.0	24.6	0.0	75.4
Bkgs	7001.8	70.0	15.2	9.6	5.2	Bkgs	29947.2	68.8	8.2	18.0	5.0	Bkgs	2743.4	70.8	15.1	9.6	4.5
$m_T = 800$	54.7	0.0	99.8	0.2	0.0	$m_T = 800$	123.6	0.2	99.8	0.0	0.0	$m_T = 800$	16.8	0.0	99.9	0.1	0.0
$m_T = 1200$	1.6	0.0	99.6	0.3	0.1	$m_T = 1200$	4.3	0.2	99.5	0.2	0.1	$m_T = 1200$	0.5	0.1	99.6	0.0	0.2
$m_T = 1600$	0.1	0.2	99.7	0.1	0.0	$m_T = 1600$	0.3	0.2	99.7	0.1	0.0	$m_T = 1600$	0.0	-0.0	100.0	0.0	0.0
Data/Bkgs	1.1	—	—	—	—	Data/Bkgs	1.28	—	—	—	—	Data/Bkgs	1.06	—	—	—	—



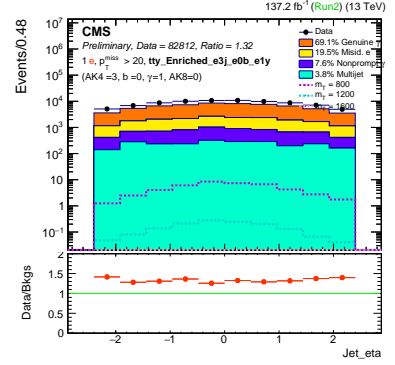
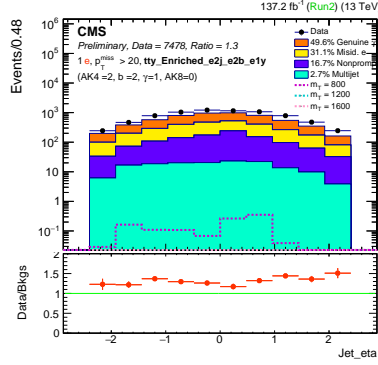
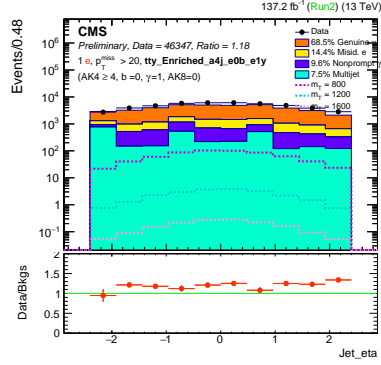
Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)	Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)	Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)
Data	40981.0	—	—	—	—	Data	10612.0	—	—	—	—	Data	3739.0	—	—	—	—
$t\bar{t}\gamma$	13012.3	99.2	0.4	0.3	0.1	$W + \gamma$	2854.3	99.7	0.2	0.0	0.1	$t/t\bar{t}$	1516.2	19.9	28.4	47.1	4.6
$t/t\bar{t}$	11445.1	23.6	38.8	29.8	7.8	QCD	1691.8	65.4	12.7	0.2	21.7	$t\bar{t}\gamma$	1013.0	98.7	0.4	0.8	0.1
$W + \gamma$	2785.8	99.7	0.1	0.1	0.0	$DY + jets$	1325.8	1.3	6.5	85.8	6.4	$DY + jets$	174.7	0.0	2.9	96.1	1.0
$DY + jets$	2500.9	1.3	3.2	90.5	5.0	$t\bar{t}\gamma$	1082.5	99.4	0.3	0.1	0.1	$Z + \gamma$	68.7	99.2	0.0	0.8	0.0
$Z + \gamma$	1528.4	98.0	0.1	1.8	0.2	$Z + \gamma$	755.6	97.2	0.1	2.4	0.3	QCD	49.9	28.4	71.6	0.0	0.0
QCD	994.6	79.3	11.0	0.0	9.8	$t/t\bar{t}$	651.5	24.3	47.5	17.4	10.8	$W + \gamma$	36.4	100.0	0.0	0.0	0.0
$W + jets$	404.1	0.0	69.1	0.7	30.1	$W + jets$	393.2	0.0	58.3	0.0	41.7	Others	17.1	50.6	6.8	38.2	4.3
Others	331.1	64.6	9.4	22.6	3.4	Others	326.0	75.6	7.6	14.5	2.3	$W + jets$	8.5	0.0	45.0	0.0	55.0
Bkgs	33002.1	63.4	15.1	17.7	3.8	Bkgs	9080.8	68.1	9.6	14.5	7.7	Bkgs	2884.5	49.6	16.7	31.1	2.7
$m_T = 800$	81.0	0.0	99.8	0.2	0.0	$m_T = 800$	108.9	0.2	99.7	0.0	0.0	$m_T = 800$	0.6	0.0	100.0	0.0	0.0
$m_T = 1200$	2.3	0.0	99.5	0.4	0.1	$m_T = 1200$	3.8	0.3	99.6	0.1	0.1	$m_T = 1200$	0.0	0.0	100.0	0.0	0.0
$m_T = 1600$	0.2	0.1	99.8	0.0	0.0	$m_T = 1600$	0.3	0.2	99.7	0.1	0.0	$m_T = 1600$	0.0	0.0	100.0	0.0	0.0
Data/Bkgs	1.24	—	—	—	—	Data/Bkgs	1.17	—	—	—	—	Data/Bkgs	1.3	—	—	—	—



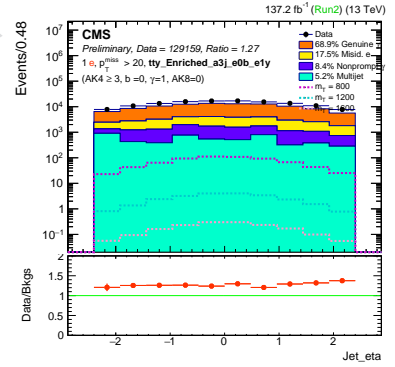
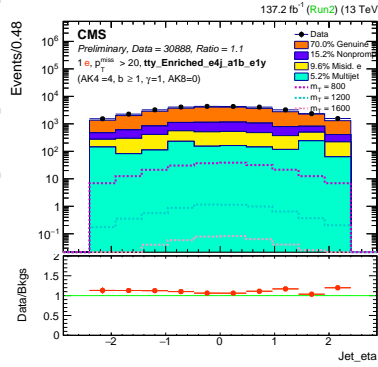
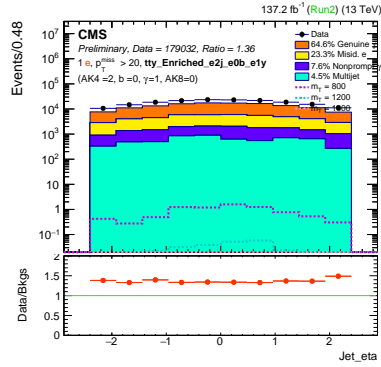
Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)	Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)	Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)
Data	27604.0	—	—	—	—	Data	89516.0	—	—	—	—	Data	7722.0	—	—	—	—
$W + \gamma$	7999.1	99.8	0.1	0.1	0.0	$W + \gamma$	24627.0	99.8	0.1	0.0	0.1	$t\bar{t}\gamma$	3874.5	99.4	0.3	0.2	0.1
$DY + jets$	4158.8	1.3	5.5	89.0	4.3	$DY + jets$	16237.1	1.3	5.2	89.3	4.3	$t/\bar{t}\bar{t}$	2176.5	22.1	45.3	21.4	11.2
$Z + \gamma$	2859.0	98.4	0.2	1.2	0.2	$Z + \gamma$	11621.5	98.5	0.1	1.2	0.2	$W + \gamma$	311.5	98.9	1.1	0.0	0.0
QCD	1898.6	81.8	10.2	0.0	8.0	QCD	4902.7	73.7	15.2	0.1	11.0	$DY + jets$	204.5	0.8	0.0	90.3	8.9
$t\bar{t}\gamma$	1327.4	99.2	0.4	0.3	0.1	$W + jets$	4079.1	0.3	63.1	0.1	36.5	QCD	192.6	40.5	14.4	0.0	45.1
$W + jets$	1012.8	0.3	63.9	0.5	35.2	$t/\bar{t}\bar{t}$	1751.5	28.9	39.3	24.4	7.4	$Z + \gamma$	126.0	97.2	0.6	1.9	0.3
$t/\bar{t}\bar{t}$	1010.3	27.0	43.9	20.6	8.6	$t\bar{t}\gamma$	1562.8	99.1	0.4	0.3	0.1	Others	82.4	70.4	9.8	17.3	2.5
Others	600.5	70.3	8.9	18.1	2.7	Others	1122.1	60.7	13.3	22.7	3.4	$W + jets$	33.7	0.0	76.8	0.2	23.0
Bkgs	20866.5	69.1	7.6	19.5	3.8	Bkgs	65903.9	64.6	7.6	23.3	4.5	Bkgs	7001.7	70.0	15.2	9.6	5.2
$m_T = 800$	15.1	0.0	100.0	0.0	0.0	$m_T = 800$	4.1	0.6	99.4	0.0	0.0	$m_T = 800$	54.8	0.0	99.8	0.2	0.0
$m_T = 1200$	0.5	0.0	99.3	0.7	0.0	$m_T = 1200$	0.1	0.9	98.4	0.6	0.0	$m_T = 1200$	1.6	0.0	99.6	0.3	0.1
$m_T = 1600$	0.0	-0.3	100.3	0.0	0.0	$m_T = 1600$	0.0	0.0	100.0	0.0	0.0	$m_T = 1600$	0.1	0.2	99.7	0.1	0.0
Data/Bkgs	1.32	—	—	—	—	Data/Bkgs	1.36	—	—	—	—	Data/Bkgs	1.1	—	—	—	—



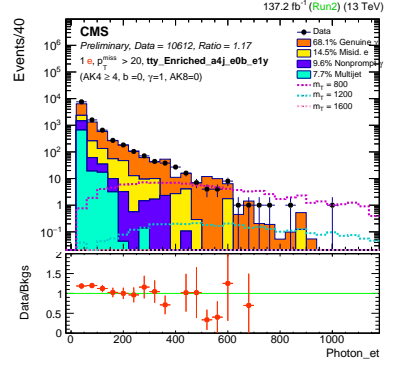
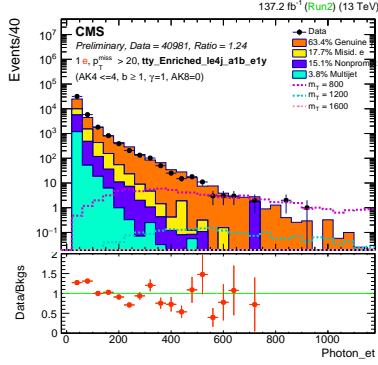
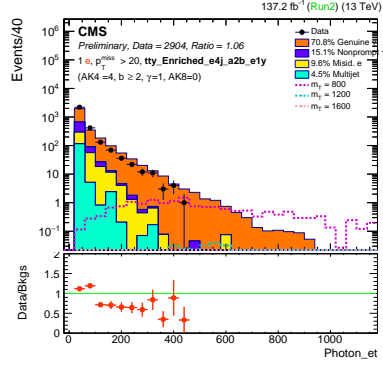
Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)	Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)	Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)
Data	38216.0	—	—	—	—	Data	11616.0	—	—	—	—	Data	111221.0	—	—	—	—
$W + \gamma$	10853.5	99.7	0.2	0.1	0.0	$t\bar{t}\gamma$	6892.8	99.3	0.3	0.2	0.1	$t\bar{t}\gamma$	39003.8	99.2	0.4	0.3	0.1
$DY + jets$	5484.6	1.3	5.7	88.2	4.8	$t/\bar{t}\bar{t}$	3630.9	19.8	44.5	23.8	12.0	$t/\bar{t}\bar{t}$	31378.5	23.2	40.2	28.3	8.3
$Z + \gamma$	3614.6	98.2	0.2	1.5	0.2	$DY + jets$	196.1	0.0	0.0	77.4	22.6	$W + \gamma$	7044.5	99.7	0.2	0.1	0.0
QCD	3590.4	74.1	11.4	0.1	14.5	Others	92.2	64.2	11.2	21.6	2.9	$DY + jets$	6039.8	1.3	3.1	90.1	5.5
$t\bar{t}\gamma$	2409.9	99.3	0.4	0.2	0.1	$Z + \gamma$	90.3	96.8	0.0	1.5	1.7	$Z + \gamma$	3676.8	97.9	0.1	1.7	0.2
$t/\bar{t}\bar{t}$	1661.8	25.9	45.3	19.3	9.4	QCD	30.6	85.4	14.6	0.0	0.0	QCD	2739.4	75.6	11.0	0.0	13.4
$W + jets$	1406.0	0.2	62.4	0.4	37.0	$W + \gamma$	30.4	100.0	0.0	0.0	0.0	$W + jets$	1010.3	0.0	69.3	0.6	30.1
Others	926.4	72.1	8.5	16.8	2.6	$W + jets$	10.5	0.0	24.6	0.0	75.4	Others	947.4	65.8	9.5	21.5	3.2
Bkgs	29947.2	68.8	8.2	18.0	5.0	Bkgs	10973.7	70.8	15.1	9.6	4.5	Bkgs	91840.9	64.6	15.3	16.0	4.0
$m_T = 800$	124.0	0.2	99.8	0.0	0.0	$m_T = 800$	67.3	0.0	99.9	0.1	0.0	$m_T = 800$	293.9	0.0	99.8	0.2	0.0
$m_T = 1200$	4.3	0.2	99.5	0.2	0.1	$m_T = 1200$	1.9	0.1	99.6	0.0	0.2	$m_T = 1200$	8.5	0.0	99.5	0.4	0.1
$m_T = 1600$	0.3	0.2	99.7	0.1	0.0	$m_T = 1600$	0.1	-0.0	100.0	0.0	0.0	$m_T = 1600$	0.6	0.1	99.8	0.0	0.0
Data/Bkgs	1.28	—	—	—	—	Data/Bkgs	1.06	—	—	—	—	Data/Bkgs	1.21	—	—	—	—



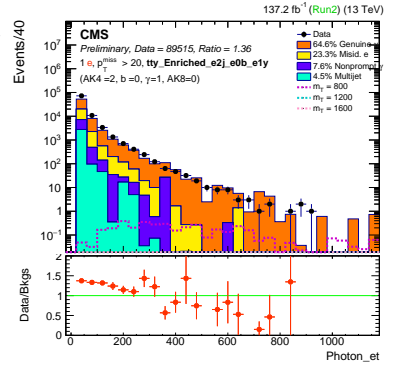
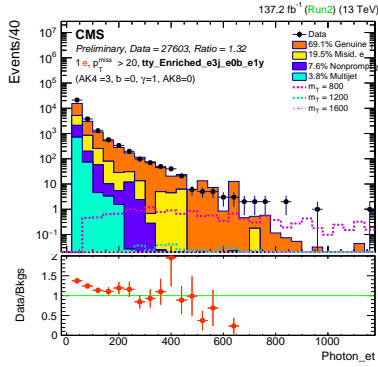
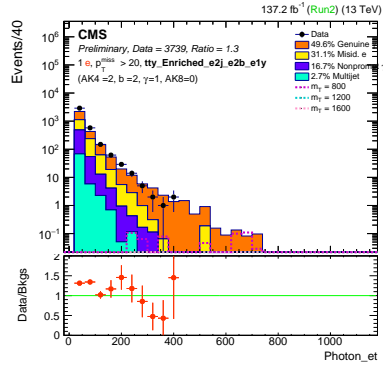
Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)	Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)	Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)
Data	46347.0	—	—	—	—	Data	7478.0	—	—	—	—	Data	82812.0	—	—	—	—
$W + \gamma$	12410.2	99.7	0.2	0.0	0.1	$t/\bar{t}\gamma$	3032.3	19.9	28.4	47.1	4.6	$W + \gamma$	23997.4	99.8	0.1	0.1	0.0
QCD	7193.5	66.9	12.4	0.2	20.5	$t\bar{t}\gamma$	2026.0	98.7	0.4	0.8	0.1	$DY + jets$	12476.4	1.3	5.5	89.0	4.3
$DY + jets$	5681.1	1.2	6.5	85.9	6.4	$Z + \gamma$	349.5	0.0	2.9	96.1	1.0	$Z + \gamma$	8577.1	98.4	0.2	1.2	0.2
$t\bar{t}\gamma$	4843.5	99.4	0.3	0.1	0.1	QCD	99.9	28.4	71.6	0.0	0.0	QCD	5695.9	81.8	10.2	0.0	8.0
$Z + \gamma$	3188.9	97.2	0.1	2.3	0.3	$W + \gamma$	72.9	100.0	0.0	0.0	0.0	$t\bar{t}\gamma$	3982.3	99.2	0.4	0.3	0.1
t/\bar{t}	2905.9	24.1	47.8	17.2	11.0	Others	34.1	50.6	6.8	38.2	4.3	$W + jets$	3038.3	0.3	63.9	0.5	35.2
$W + jets$	1715.5	0.0	57.7	0.0	42.3	$W + jets$	17.0	0.0	45.0	0.0	55.0	t/\bar{t}	3030.8	27.0	43.9	20.6	8.6
Others	1434.6	75.6	7.5	14.5	2.4	Bkgs	5769.1	49.6	16.7	31.1	2.7	Others	1801.4	70.3	8.9	18.1	2.7
Bkgs	39373.3	68.5	9.6	14.4	7.5	$m_T = 800$	1.1	0.0	100.0	0.0	0.0	Bkgs	62599.5	69.1	7.6	19.5	3.8
$m_T = 800$	627.2	0.2	99.7	0.0	0.0	$m_T = 1200$	0.0	0.0	100.0	0.0	0.0	$m_T = 800$	45.2	0.0	100.0	0.0	0.0
$m_T = 1200$	22.5	0.2	99.6	0.1	0.1	$m_T = 1600$	0.0	0.0	100.0	0.0	0.0	$m_T = 1200$	1.4	0.0	99.3	0.7	0.0
$m_T = 1600$	1.6	0.2	99.7	0.0	0.0	Data/Bkgs	1.3	—	—	—	—	$m_T = 1600$	0.1	-0.3	100.3	0.0	0.0
Data/Bkgs	1.18	—	—	—	—							Data/Bkgs	1.32	—	—	—	—



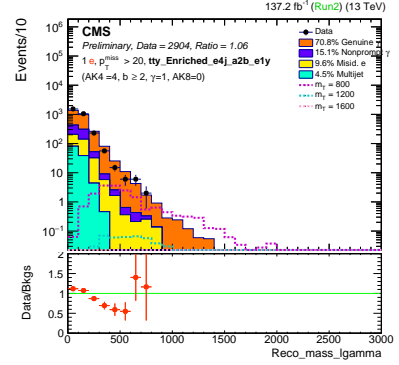
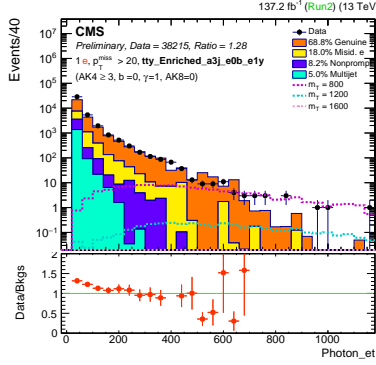
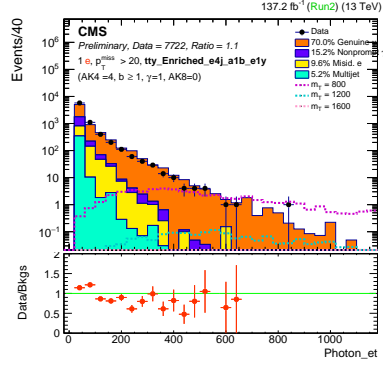
Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)	Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)	Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)
Data	179032.0	—	—	—	—	Data	30888.0	—	—	—	—	Data	129159.0	—	—	—	—
$W + \gamma$	49253.9	99.8	0.1	0.0	0.1	$t\bar{t}\gamma$	15497.7	99.4	0.3	0.2	0.1	$W + \gamma$	36407.6	99.7	0.2	0.1	0.0
$DY + jets$	32474.2	1.3	5.2	89.3	4.3	$t/\bar{t}\gamma$	8706.0	22.1	45.3	21.4	11.2	$DY + jets$	18157.5	1.3	5.8	88.0	4.9
$Z + \gamma$	23243.1	98.5	0.1	1.2	0.2	$W + \gamma$	1245.9	98.9	1.1	0.0	0.0	QCD	12889.4	73.5	11.4	0.1	15.0
QCD	9805.4	73.7	15.2	0.1	11.0	$DY + jets$	818.2	0.8	0.0	90.3	8.9	$Z + \gamma$	11766.0	98.1	0.2	1.5	0.2
$W + jets$	8158.3	0.3	63.1	0.1	36.5	QCD	770.3	40.5	14.4	0.0	45.1	$t\bar{t}\gamma$	8825.8	99.3	0.4	0.2	0.1
t/\bar{t}	3503.1	28.9	39.3	24.4	7.4	$Z + \gamma$	504.0	97.2	0.6	1.9	0.3	t/\bar{t}	5936.8	25.6	45.8	18.9	9.8
$t\bar{t}\gamma$	3125.7	99.1	0.4	0.3	0.1	Others	329.8	70.4	9.8	17.3	2.5	$W + jets$	4753.7	0.2	61.7	0.3	37.8
Others	2244.2	60.7	13.3	22.7	3.4	$W + jets$	134.8	0.0	76.8	0.2	23.0	Others	3236.0	72.6	8.3	16.5	2.6
Bkgs	131807.8	64.6	7.6	23.3	4.5	Bkgs	28006.5	70.0	15.2	9.6	5.2	Bkgs	101972.8	68.9	8.4	17.5	5.2
$m_T = 800$	8.1	0.6	99.4	0.0	0.0	$m_T = 800$	219.0	0.0	99.8	0.2	0.0	$m_T = 800$	672.3	0.2	99.7	0.0	0.0
$m_T = 1200$	0.3	0.9	98.4	0.6	0.0	$m_T = 1200$	6.5	0.0	99.6	0.3	0.1	$m_T = 1200$	23.9	0.2	99.6	0.1	0.1
$m_T = 1600$	0.0	0.0	100.0	0.0	0.0	$m_T = 1600$	0.4	0.2	99.7	0.1	0.0	$m_T = 1600$	1.7	0.2	99.8	0.0	0.0
Data/Bkgs	1.36	—	—	—	—	Data/Bkgs	1.1	—	—	—	—	Data/Bkgs	1.27	—	—	—	—



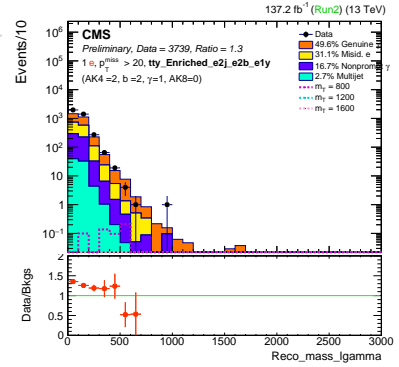
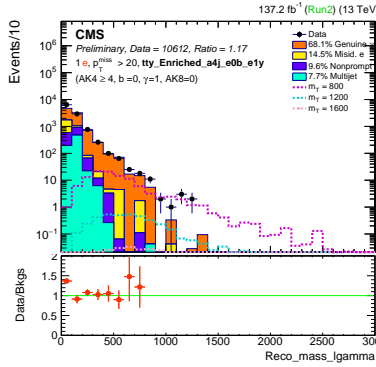
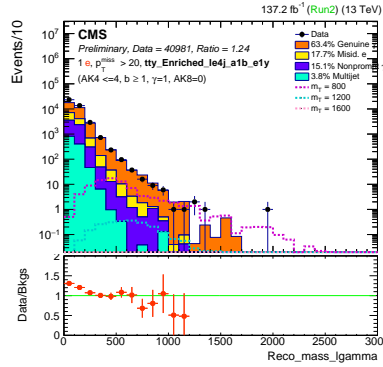
Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)	Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)	Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)
Data	2904.0	—	—	—	—	Data	40981.0	—	—	—	—	Data	10612.0	—	—	—	—
$t\bar{t}\gamma$	1723.2	99.3	0.3	0.2	0.1	$t\bar{t}\gamma$	13002.1	99.2	0.4	0.3	0.1	$W + \gamma$	2854.3	99.7	0.2	0.0	0.1
t/\bar{t}	907.7	19.8	44.5	23.8	12.0	t/\bar{t}	11445.1	23.6	38.8	29.8	7.8	QCD	1691.8	65.4	12.7	0.2	21.7
$DY + jets$	49.0	0.0	0.0	77.4	22.6	$W + \gamma$	2785.8	99.7	0.1	0.1	0.0	$DY + jets$	1325.8	1.3	6.5	85.8	6.4
Others	23.0	64.2	11.2	21.6	2.9	$DY + jets$	2500.9	1.3	3.2	90.5	5.0	$t\bar{t}\gamma$	1082.4	99.4	0.3	0.1	0.1
$Z + \gamma$	22.6	96.8	0.0	1.5	1.7	$Z + \gamma$	1528.4	98.0	0.1	1.8	0.2	$Z + \gamma$	755.6	97.2	0.1	2.4	0.3
QCD	7.7	85.4	14.6	0.0	0.0	QCD	994.6	79.3	11.0	0.0	9.8	t/\bar{t}	651.5	24.3	47.5	17.4	10.8
$W + \gamma$	7.6	100.0	0.0	0.0	0.0	$W + jets$	404.1	0.0	69.1	0.7	30.1	$W + jets$	393.2	0.0	58.3	0.0	41.7
$W + jets$	2.6	0.0	24.6	0.0	75.4	Others	331.1	64.6	9.4	22.6	3.4	Others	326.0	75.6	7.6	14.5	2.3
Bkgs	2743.4	70.8	15.1	9.6	4.5	Bkgs	32992.0	63.4	15.1	17.7	3.8	Bkgs	9080.7	68.1	9.6	14.5	7.7
$m_T = 800$	16.1	0.0	99.9	0.1	0.0	$m_T = 800$	76.8	0.0	99.8	0.2	0.0	$m_T = 800$	103.8	0.2	99.8	0.0	0.0
$m_T = 1200$	0.4	0.1	99.6	0.0	0.3	$m_T = 1200$	2.1	0.0	99.5	0.4	0.1	$m_T = 1200$	3.5	0.3	99.5	0.1	0.1
$m_T = 1600$	0.0	-0.1	100.1	0.0	0.0	$m_T = 1600$	0.1	0.2	99.8	0.0	0.0	$m_T = 1600$	0.2	0.3	99.6	0.1	0.0
Data/Bkgs	1.06	—	—	—	—	Data/Bkgs	1.24	—	—	—	—	Data/Bkgs	1.17	—	—	—	—



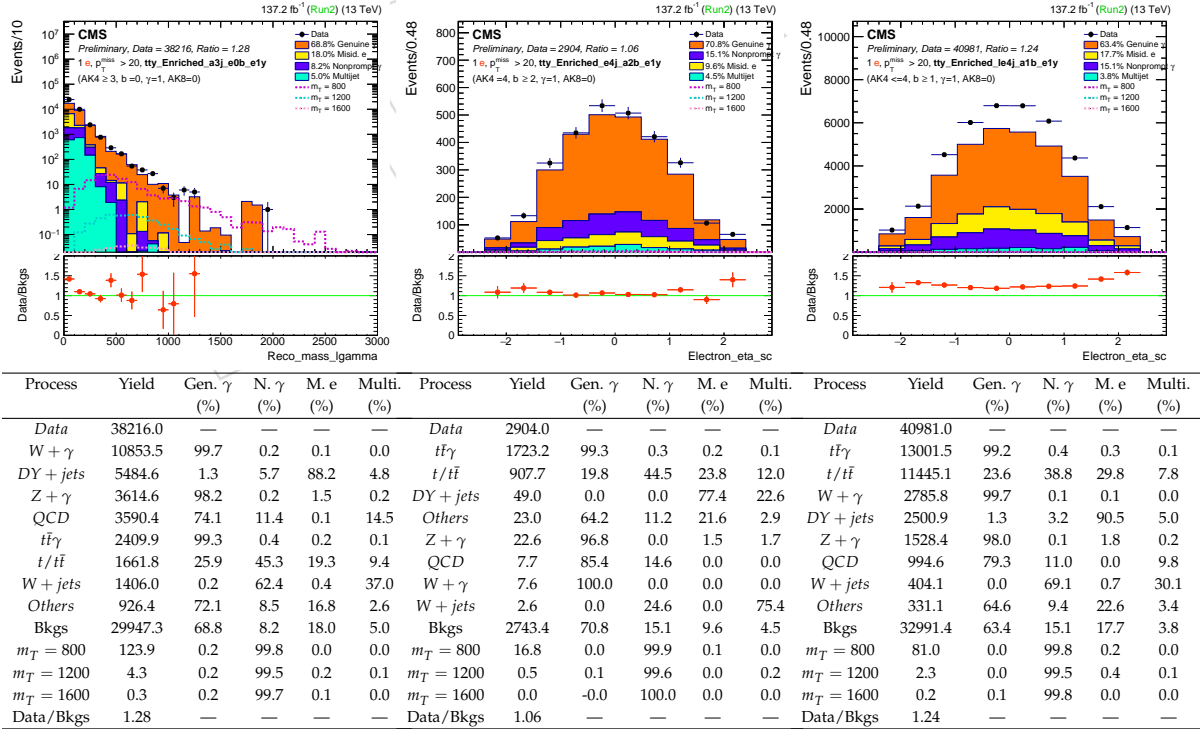
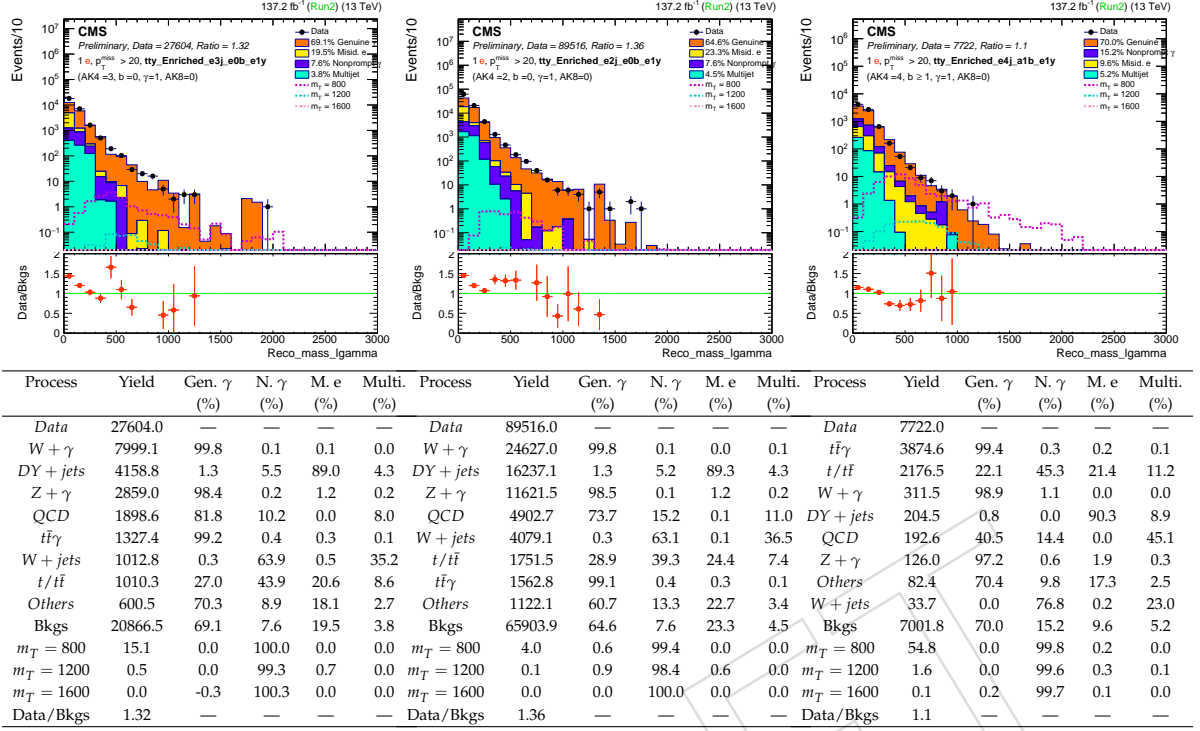
Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)	Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)	Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)
Data	3739.0	—	—	—	—	Data	27603.0	—	—	—	—	Data	89515.0	—	—	—	—
t/\bar{t}	1516.2	19.9	28.4	47.1	4.6	$W + \gamma$	7999.1	99.8	0.1	0.1	0.0	$W + \gamma$	24627.0	99.8	0.1	0.0	0.1
$t\bar{t}\gamma$	1013.0	98.7	0.4	0.8	0.1	$DY + jets$	4158.8	1.3	5.5	89.0	4.3	$DY + jets$	16237.1	1.3	5.2	89.3	4.3
$DY + jets$	174.7	0.0	2.9	96.1	1.0	$Z + \gamma$	2859.0	98.4	0.2	1.2	0.2	$Z + \gamma$	11621.5	98.5	0.1	1.2	0.2
$Z + \gamma$	68.7	99.2	0.0	0.8	0.0	QCD	1898.6	81.8	10.2	0.0	8.0	QCD	4902.7	73.7	15.2	0.1	11.0
QCD	49.9	28.4	71.6	0.0	0.0	$t\bar{t}\gamma$	1327.4	99.2	0.4	0.3	0.1	$W + jets$	4079.1	0.3	63.1	0.1	36.5
$W + \gamma$	36.4	100.0	0.0	0.0	0.0	$W + jets$	1012.8	0.3	63.9	0.5	35.2	t/\bar{t}	1751.5	28.9	39.3	24.4	7.4
Others	17.1	50.6	6.8	38.2	4.3	t/\bar{t}	1010.3	27.0	43.9	20.6	8.6	$t\bar{t}\gamma$	1562.8	99.1	0.4	0.3	0.1
$W + jets$	8.5	0.0	45.0	0.0	55.0	Others	600.5	70.3	8.9	18.1	2.7	Others	1122.1	60.7	13.3	22.7	3.4
Bkgs	2884.5	49.6	16.7	31.1	2.7	Bkgs	20866.5	69.1	7.6	19.5	3.8	Bkgs	65903.9	64.6	7.6	23.3	4.5
$m_T = 800$	0.6	0.0	100.0	0.0	0.0	$m_T = 800$	14.3	0.0	100.0	0.0	0.0	$m_T = 800$	3.9	0.6	99.4	0.0	0.0
$m_T = 1200$	0.0	0.0	100.0	0.0	0.0	$m_T = 1200$	0.5	0.0	99.3	0.7	0.0	$m_T = 1200$	0.1	1.1	98.2	0.7	0.0
$m_T = 1600$	0.0	0.0	100.0	0.0	0.0	$m_T = 1600$	0.0	-0.3	100.3	0.0	0.0	$m_T = 1600$	0.0	0.0	100.0	0.0	0.0
Data/Bkgs	1.3	—	—	—	—	Data/Bkgs	1.32	—	—	—	—	Data/Bkgs	1.36	—	—	—	—

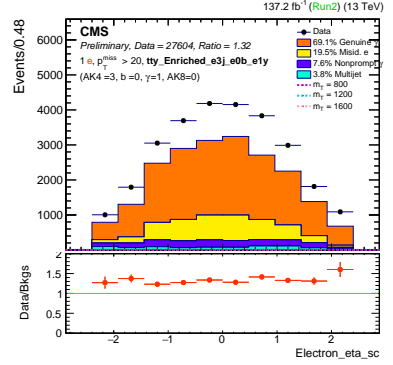
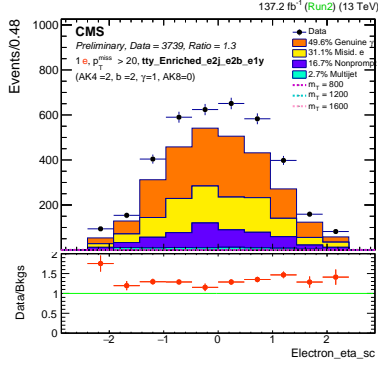
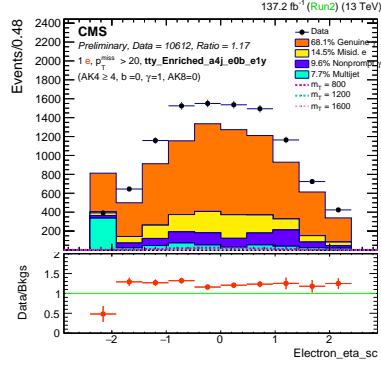


Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)	Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)	Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)
Data	7722.0	—	—	—	—	Data	38215.0	—	—	—	—	Data	2904.0	—	—	—	—
$t\bar{t}\gamma$	3874.5	99.4	0.3	0.2	0.1	$W + \gamma$	10853.5	99.7	0.2	0.1	0.0	$t\bar{t}\gamma$	1723.2	99.3	0.3	0.2	0.1
$t/t\bar{t}$	2176.5	22.1	45.3	21.4	11.2	$DY + jets$	5484.6	1.3	5.7	88.2	4.8	$t/t\bar{t}$	907.7	19.8	44.5	23.8	12.0
$W + \gamma$	311.5	98.9	1.1	0.0	0.0	$Z + \gamma$	3614.6	98.2	0.2	1.5	0.2	$DY + jets$	49.0	0.0	0.0	77.4	22.6
$DY + jets$	204.5	0.8	0.0	90.3	8.9	QCD	3590.4	74.1	11.4	0.1	14.5	Others	23.0	64.2	11.2	21.6	2.9
QCD	192.6	40.5	14.4	0.0	45.1	$t\bar{t}\gamma$	2409.8	99.3	0.4	0.2	0.1	$Z + \gamma$	22.6	96.8	0.0	1.5	1.7
$Z + \gamma$	126.0	97.2	0.6	1.9	0.3	$t/t\bar{t}$	1661.8	25.9	45.3	19.3	9.4	QCD	7.7	85.4	14.6	0.0	0.0
Others	82.4	70.4	9.8	17.3	2.5	$W + jets$	1406.0	0.2	62.4	0.4	37.0	$W + \gamma$	7.6	100.0	0.0	0.0	0.0
$W + jets$	33.7	0.0	76.8	0.2	23.0	Others	926.4	72.1	8.5	16.8	2.6	$W + jets$	2.6	0.0	24.6	0.0	75.4
Bkgs	7001.7	70.0	15.2	9.6	5.2	Bkgs	29947.2	68.8	8.2	18.0	5.0	Bkgs	2743.4	70.8	15.1	9.6	4.5
$m_T = 800$	51.8	0.0	99.8	0.2	0.0	$m_T = 800$	118.1	0.2	99.8	0.0	0.0	$m_T = 800$	16.8	0.0	99.9	0.1	0.0
$m_T = 1200$	1.5	0.0	99.5	0.4	0.1	$m_T = 1200$	4.0	0.2	99.5	0.2	0.1	$m_T = 1200$	0.5	0.1	99.6	0.0	0.2
$m_T = 1600$	0.1	0.2	99.6	0.1	0.1	$m_T = 1600$	0.3	0.2	99.7	0.1	0.0	$m_T = 1600$	0.0	-0.0	100.0	0.0	0.0
Data/Bkgs	1.1	—	—	—	—	Data/Bkgs	1.28	—	—	—	—	Data/Bkgs	1.06	—	—	—	—

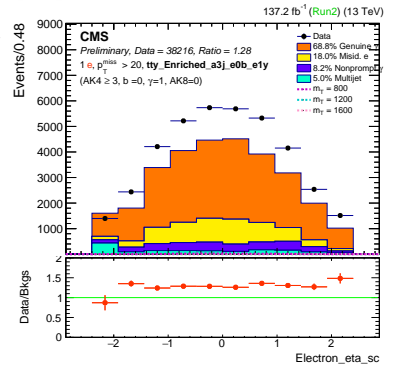
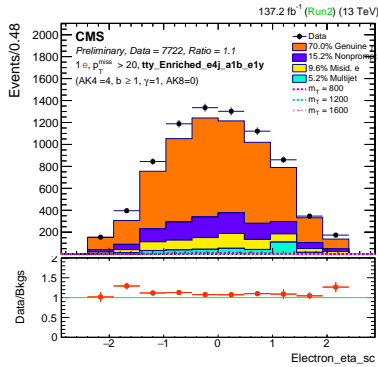
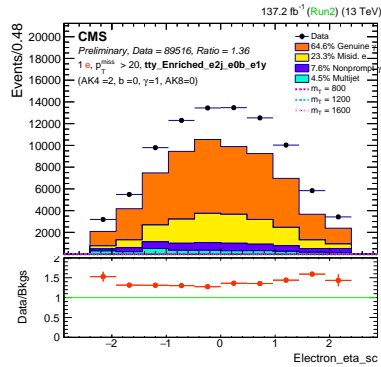


Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)	Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)	Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)
Data	40981.0	—	—	—	—	Data	10612.0	—	—	—	—	Data	3739.0	—	—	—	—
$t\bar{t}\gamma$	13001.8	99.2	0.4	0.3	0.1	$W + \gamma$	2854.3	99.7	0.2	0.0	0.1	$t/t\bar{t}$	1516.2	19.9	28.4	47.1	4.6
$t/t\bar{t}$	11445.1	23.6	38.8	29.8	7.8	QCD	1691.8	65.4	12.7	0.2	21.7	$t\bar{t}\gamma$	1013.0	98.7	0.4	0.8	0.1
$W + \gamma$	2785.8	99.7	0.1	0.1	0.0	$DY + jets$	1325.8	1.3	6.5	85.8	6.4	$DY + jets$	174.7	0.0	2.9	96.1	1.0
$DY + jets$	2500.9	1.3	3.2	90.5	5.0	$t\bar{t}\gamma$	1082.5	99.4	0.3	0.1	0.1	$Z + \gamma$	68.7	99.2	0.0	0.8	0.0
$Z + \gamma$	1528.4	98.0	0.1	1.8	0.2	$Z + \gamma$	755.6	97.2	0.1	2.4	0.3	QCD	49.9	28.4	71.6	0.0	0.0
QCD	994.6	79.3	11.0	0.0	9.8	$t/t\bar{t}$	651.5	24.3	47.5	17.4	10.8	$W + \gamma$	36.4	100.0	0.0	0.0	0.0
$W + jets$	404.1	0.0	69.1	0.7	30.1	$W + jets$	393.2	0.0	58.3	0.0	41.7	Others	17.1	50.6	6.8	38.2	4.3
Others	331.1	64.6	9.4	22.6	3.4	Others	326.0	75.6	7.6	14.5	2.3	$W + jets$	8.5	0.0	45.0	0.0	55.0
Bkgs	32991.8	63.4	15.1	17.7	3.8	Bkgs	9080.8	68.1	9.6	14.5	7.7	Bkgs	2884.5	49.6	16.7	31.1	2.7
$m_T = 800$	81.0	0.0	99.8	0.2	0.0	$m_T = 800$	108.9	0.2	99.8	0.0	0.0	$m_T = 800$	0.6	0.0	100.0	0.0	0.0
$m_T = 1200$	2.3	0.0	99.5	0.4	0.1	$m_T = 1200$	3.8	0.3	99.6	0.1	0.1	$m_T = 1200$	0.0	0.0	100.0	0.0	0.0
$m_T = 1600$	0.2	0.1	99.8	0.0	0.0	$m_T = 1600$	0.3	0.2	99.7	0.1	0.0	$m_T = 1600$	0.0	0.0	100.0	0.0	0.0
Data/Bkgs	1.24	—	—	—	—	Data/Bkgs	1.17	—	—	—	—	Data/Bkgs	1.3	—	—	—	—





Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)	Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)	Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)
Data	10612.0	—	—	—	—	Data	3739.0	—	—	—	—	Data	27604.0	—	—	—	—
$W + \gamma$	2854.3	99.7	0.2	0.0	0.1	t/\bar{t}	1516.2	19.9	28.4	47.1	4.6	$W + \gamma$	7999.1	99.8	0.1	0.1	0.0
QCD	1691.8	65.4	12.7	0.2	21.7	$t\bar{t}\gamma$	1013.0	98.7	0.4	0.8	0.1	$DY + jets$	4158.8	1.3	5.5	89.0	4.3
$DY + jets$	1325.8	1.3	6.5	85.8	6.4	$t\bar{t}\gamma$	174.7	0.0	2.9	96.1	1.0	$Z + \gamma$	2859.0	98.4	0.2	1.2	0.2
$t\bar{t}\gamma$	1082.5	99.4	0.3	0.1	0.1	$Z + \gamma$	68.7	99.2	0.0	0.8	0.0	QCD	1898.6	81.8	10.2	0.0	8.0
$Z + \gamma$	755.6	97.2	0.1	2.4	0.3	QCD	49.9	28.4	71.6	0.0	0.0	$t\bar{t}\gamma$	1327.4	99.2	0.4	0.3	0.1
t/\bar{t}	651.5	24.3	47.5	17.4	10.8	$W + \gamma$	36.4	100.0	0.0	0.0	0.0	$W + jets$	1012.8	0.3	63.9	0.5	35.2
$W + jets$	393.2	0.0	58.3	0.0	41.7	Others	17.1	50.6	6.8	38.2	4.3	t/\bar{t}	1010.3	27.0	43.9	20.6	8.6
Others	326.0	75.6	7.6	14.5	2.3	$W + jets$	8.5	0.0	45.0	0.0	55.0	Others	600.5	70.3	8.9	18.1	2.7
Bkgs	9080.8	68.1	9.6	14.5	7.7	Bkgs	2884.5	49.6	16.7	31.1	2.7	Bkgs	20866.5	69.1	7.6	19.5	3.8
$m_T = 800$	108.9	0.2	99.8	0.0	0.0	$m_T = 800$	0.6	0.0	100.0	0.0	0.0	$m_T = 800$	15.1	0.0	100.0	0.0	0.0
$m_T = 1200$	3.8	0.3	99.6	0.1	0.1	$m_T = 1200$	0.0	0.0	100.0	0.0	0.0	$m_T = 1200$	0.5	0.0	99.3	0.7	0.0
$m_T = 1600$	0.3	0.2	99.7	0.1	0.0	$m_T = 1600$	0.0	0.0	100.0	0.0	0.0	$m_T = 1600$	0.0	-0.3	100.3	0.0	0.0
Data/Bkgs	1.17	—	—	—	—	Data/Bkgs	1.3	—	—	—	—	Data/Bkgs	1.32	—	—	—	—



Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)	Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)	Process	Yield	Gen. γ (%)	N. γ (%)	M. e (%)	Multi. (%)
Data	89516.0	—	—	—	—	Data	7722.0	—	—	—	—	Data	38216.0	—	—	—	—
$W + \gamma$	24627.0	99.8	0.1	0.0	0.1	$t\bar{t}\gamma$	3874.6	99.4	0.3	0.2	0.1	$W + \gamma$	10853.5	99.7	0.2	0.1	0.0
$DY + jets$	16237.1	1.3	5.2	89.3	4.3	t/\bar{t}	2176.5	22.1	45.3	21.4	11.2	$DY + jets$	5484.6	1.3	5.7	88.2	4.8
$Z + \gamma$	11621.5	98.5	0.1	1.2	0.2	$W + \gamma$	311.5	98.9	1.1	0.0	0.0	$Z + \gamma$	3614.6	98.2	0.2	1.5	0.2
QCD	4902.7	73.7	15.2	0.1	11.0	$DY + jets$	204.5	0.8	0.0	90.3	8.9	QCD	3590.4	74.1	11.4	0.1	14.5
$W + jets$	4079.1	0.3	63.1	0.1	36.5	QCD	192.6	40.5	14.4	0.0	45.1	$t\bar{t}\gamma$	2409.9	99.3	0.4	0.2	0.1
t/\bar{t}	1751.5	28.9	39.3	24.4	7.4	$Z + \gamma$	126.0	97.2	0.6	1.9	0.3	t/\bar{t}	1661.8	25.9	45.3	19.3	9.4
$t\bar{t}\gamma$	1562.8	99.1	0.4	0.3	0.1	Others	82.4	70.4	9.8	17.3	2.5	$W + jets$	1406.0	0.2	62.4	0.4	37.0
Others	1122.1	60.7	13.3	22.7	3.4	$W + jets$	33.7	0.0	76.8	0.2	23.0	Others	926.4	72.1	8.5	16.8	2.6
Bkgs	65903.9	64.6	7.6	23.3	4.5	Bkgs	7001.8	70.0	15.2	9.6	5.2	Bkgs	29947.3	68.8	8.2	18.0	5.0
$m_T = 800$	4.0	0.6	99.4	0.0	0.0	$m_T = 800$	54.8	0.0	99.8	0.2	0.0	$m_T = 800$	123.9	0.2	99.8	0.0	0.0
$m_T = 1200$	0.1	0.9	98.4	0.6	0.0	$m_T = 1200$	1.6	0.0	99.6	0.3	0.1	$m_T = 1200$	4.3	0.2	99.5	0.2	0.1
$m_T = 1600$	0.0	0.0	100.0	0.0	0.0	$m_T = 1600$	0.1	0.2	99.7	0.1	0.0	$m_T = 1600$	0.3	0.2	99.7	0.1	0.0
Data/Bkgs	1.36	—	—	—	—	Data/Bkgs	1.1	—	—	—	—	Data/Bkgs	1.28	—	—	—	—