Process Total SM tt W+jets Single top Diboson Multiboson	TRLM 717.69 ± 8.39 571.83 ± 5.95 29.07 ± 2.42 102.05 ± 5.35 4.12 ± 0.57 0.01 ± 0.00	TRMM 474.52 ± 5.92 407.34 ± 4.55 8.39 ± 1.15 46.17 ± 3.58 2.01 ± 0.16 0.00 ± 0.00	TRHM 680.70 ± 11.25 572.69 ± 4.77 36.14 ± 9.35 57.87 ± 4.02 2.81 ± 0.30 0.01 ± 0.01	WR 130.17 ± 4.71 45.82 ± 1.22 67.27 ± 4.14 8.99 ± 1.53 5.60 ± 0.94 0.00 ± 0.00	STCR 178.41 ± 5.62 51.72 ± 1.25 19.04 ± 2.10 92.50 ± 5.03 2.79 ± 0.34 0.00 ± 0.00
$\begin{array}{l} t\bar{t} + V \\ t\bar{t} + h \\ Z + jets \\ V + h \\ C1N2_Wh_hbb_1000p0_0p0_NoSys \\ C1N2_Wh_hbb_1000p0_100p0_NoSys \\ C1N2_Wh_hbb_1000p0_150p0_NoSys \\ C1N2_Wh_hbb_1000p0_200p0_NoSys \\ C1N2_Wh_hbb_1000p0_200p0_NoSys \\ \end{array}$	8.84 ± 0.38 0.64 ± 0.03 1.06 ± 0.21 0.09 ± 0.01 0.02 ± 0.01 0.01 ± 0.01 0.02 ± 0.01 0.02 ± 0.01	$\begin{array}{c} 9.73 \pm 0.41 \\ 0.53 \pm 0.02 \\ 0.34 \pm 0.08 \\ 0.01 \pm 0.00 \\ 0.05 \pm 0.02 \\ 0.01 \pm 0.01 \\ 0.00 \pm 0.00 \\ 0.01 \pm 0.01 \end{array}$	$\begin{array}{c} 9.83 \pm 0.39 \\ 0.67 \pm 0.02 \\ 0.62 \pm 0.16 \\ 0.05 \pm 0.02 \\ 0.22 \pm 0.04 \\ 0.20 \pm 0.04 \\ 0.24 \pm 0.04 \\ 0.16 \pm 0.03 \end{array}$	$\begin{array}{c} 0.20\pm0.07\\ 0.08\pm0.01\\ 0.95\pm0.41\\ 1.26\pm0.40\\ 0.00\pm0.00\\ 0.01\pm0.01\\ 0.01\pm0.01\\ 0.01\pm0.01\\ \end{array}$	$\begin{aligned} 11.00 &\pm 0.43 \\ 0.46 &\pm 0.02 \\ 0.85 &\pm 0.18 \\ 0.05 &\pm 0.02 \\ 0.06 &\pm 0.02 \\ 0.03 &\pm 0.01 \\ 0.06 &\pm 0.02 \\ 0.02 &\pm 0.01 \end{aligned}$
C1N2_Wh_hbb_1000p0_250p0_NoSys C1N2_Wh_hbb_1000p0_300p0_NoSys C1N2_Wh_hbb_1000p0_350p0_NoSys C1N2_Wh_hbb_1000p0_400p0_NoSys C1N2_Wh_hbb_1000p0_50p0_NoSys C1N2_Wh_hbb_152p5_22p5_NoSys C1N2_Wh_hbb_165p0_35p0_NoSys C1N2_Wh_hbb_177p5_47p5_NoSys	$\begin{array}{c} 0.00 \pm 0.00 \\ 0.01 \pm 0.01 \\ 0.01 \pm 0.01 \\ 0.00 \pm 0.00 \\ 0.01 \pm 0.01 \\ 4.33 \pm 1.41 \\ 3.07 \pm 1.27 \\ 1.58 \pm 0.93 \end{array}$	$\begin{array}{c} 0.03 \pm 0.01 \\ 0.02 \pm 0.01 \\ 0.00 \pm 0.00 \\ 0.02 \pm 0.01 \\ 0.01 \pm 0.01 \\ 0.40 \pm 0.40 \\ 0.00 \pm 0.00 \\ 0.00 \pm 0.00 \end{array}$	$\begin{array}{c} 0.17 \pm 0.03 \\ 0.22 \pm 0.04 \\ 0.24 \pm 0.04 \\ 0.21 \pm 0.04 \\ 0.19 \pm 0.03 \\ 0.56 \pm 0.56 \\ 0.00 \pm 0.00 \\ 1.18 \pm 0.84 \end{array}$	$\begin{array}{c} 0.01 \pm 0.01 \\ 0.00 \pm 0.00 \\ 0.01 \pm 0.01 \\ 0.00 \pm 0.00 \\ 0.01 \pm 0.01 \\ 1.81 \pm 0.92 \\ 3.12 \pm 1.21 \\ 1.92 \pm 0.98 \end{array}$	$\begin{array}{c} 0.07 \pm 0.02 \\ 0.09 \pm 0.02 \\ 0.03 \pm 0.01 \\ 0.06 \pm 0.02 \\ 0.11 \pm 0.03 \\ 0.95 \pm 0.71 \\ 1.62 \pm 0.94 \\ 0.00 \pm 0.00 \end{array}$
C1N2_Wh_hbb_187p5_12p5_NoSys C1N2_Wh_hbb_187p5_37p5_NoSys C1N2_Wh_hbb_190p0_60p0_NoSys C1N2_Wh_hbb_200p0_0p0_NoSys C1N2_Wh_hbb_200p0_25p0_NoSys C1N2_Wh_hbb_200p0_50p0_NoSys C1N2_Wh_hbb_200p0_50p0_NoSys C1N2_Wh_hbb_202p5_72p5_NoSys	2.84 ± 1.28 3.20 ± 1.31 1.18 ± 0.84 3.18 ± 1.28 2.09 ± 0.95 2.25 ± 1.01 0.86 ± 0.62	0.00 ± 0.00 2.98 ± 1.37 0.32 ± 0.32 0.00 ± 0.00 1.40 ± 0.70 1.06 ± 0.75 0.92 ± 0.65 0.00 ± 0.00	0.68 ± 0.68 0.60 ± 0.60 0.00 ± 0.00 0.55 ± 0.55 0.00 ± 0.00 1.42 ± 0.82 0.51 ± 0.51	1.92 ± 0.98 3.34 ± 1.41 0.56 ± 0.56 1.77 ± 1.03 1.18 ± 0.71 1.71 ± 0.87 1.10 ± 0.70 1.04 ± 0.73	0.00 ± 0.00 0.55 ± 0.55 0.76 ± 0.76 0.00 ± 0.00 0.00 ± 0.00 0.00 ± 0.00 1.06 ± 0.75 0.00 ± 0.00
C1N2_Wh_hbb_212p5_37p5_NoSys C1N2_Wh_hbb_212p5_62p5_NoSys C1N2_Wh_hbb_225p0_0p0_NoSys C1N2_Wh_hbb_225p0_25p0_NoSys C1N2_Wh_hbb_225p0_50p0_NoSys C1N2_Wh_hbb_225p0_75p0_NoSys C1N2_Wh_hbb_225p0_75p0_NoSys	5.89 ± 1.81 1.65 ± 0.85 2.38 ± 1.07 1.86 ± 0.94 1.80 ± 0.90 2.29 ± 1.01 2.43 ± 1.10	$\begin{aligned} 1.57 &\pm 0.92 \\ 1.87 &\pm 1.10 \\ 1.29 &\pm 0.74 \\ 3.45 &\pm 1.22 \\ 1.77 &\pm 0.89 \\ 1.13 &\pm 0.80 \\ 2.71 &\pm 1.22 \end{aligned}$	1.50 ± 0.87 0.43 ± 0.43 0.85 ± 0.60 0.32 ± 0.32 0.79 ± 0.56 0.43 ± 0.43 2.14 ± 1.12	0.99 ± 0.70 1.23 ± 0.90 0.86 ± 0.62 1.46 ± 0.75 0.73 ± 0.52 0.88 ± 0.63 0.85 ± 0.64	1.81 ± 0.91 0.56 ± 0.56 0.47 ± 0.47 0.48 ± 0.48 0.00 ± 0.00 0.92 ± 0.67 0.61 ± 0.61
C1N2_Wh_hbb_250p0_0p0_NoSys C1N2_Wh_hbb_250p0_100p0_NoSys C1N2_Wh_hbb_250p0_25p0_NoSys C1N2_Wh_hbb_250p0_50p0_NoSys C1N2_Wh_hbb_250p0_75p0_NoSys C1N2_Wh_hbb_275p0_0p0_NoSys C1N2_Wh_hbb_275p0_25p0_NoSys C1N2_Wh_hbb_275p0_50p0_NoSys	2.52 ± 1.21 1.53 ± 0.90 1.66 ± 0.97 1.45 ± 0.89 0.00 ± 0.00 3.19 ± 1.26 1.73 ± 0.83 1.81 ± 0.91	1.98 ± 1.00 0.00 ± 0.00 3.37 ± 1.28 4.22 ± 1.51 2.01 ± 1.01 2.00 ± 0.92 4.60 ± 1.45 2.59 ± 1.02	0.89 ± 0.63 0.00 ± 0.00 1.33 ± 0.78 3.55 ± 1.36 0.54 ± 0.54 2.61 ± 1.01 5.72 ± 1.52 2.63 ± 1.10	1.22 ± 0.88 1.52 ± 1.08 2.27 ± 1.16 0.51 ± 0.51 0.49 ± 0.49 0.72 ± 0.72 0.54 ± 0.54 1.23 ± 0.87	1.40 ± 0.81 1.25 ± 0.83 0.72 ± 0.72 0.00 ± 0.00 0.00 ± 0.00 0.66 ± 0.47 0.27 ± 0.27 0.98 ± 0.70
C1N2_Wh_hbb_275p0_55p0_NoSys C1N2_Wh_hbb_300p0_0p0_NoSys C1N2_Wh_hbb_300p0_100p0_NoSys C1N2_Wh_hbb_300p0_150p0_NoSys C1N2_Wh_hbb_300p0_25p0_NoSys C1N2_Wh_hbb_300p0_50p0_NoSys C1N2_Wh_hbb_300p0_50p0_NoSys C1N2_Wh_hbb_300p0_50p0_NoSys	3.70 ± 1.15 1.72 ± 0.87 2.59 ± 1.17 1.06 ± 0.21 2.07 ± 1.05 2.33 ± 1.24 1.43 ± 0.84	2.39 ± 1.02 4.51 ± 1.38 0.00 ± 0.00 0.00 ± 0.00 0.73 ± 0.19 3.70 ± 1.26 3.34 ± 1.27 2.39 ± 1.09	1.83 ± 0.76 6.38 ± 1.83 2.85 ± 1.17 0.65 ± 0.20 3.31 ± 1.25 6.96 ± 1.77 3.76 ± 1.36	0.33 ± 0.37 0.38 ± 0.38 0.38 ± 0.38 0.28 ± 0.12 2.49 ± 1.12 1.16 ± 0.83 1.23 ± 0.71	0.58 ± 0.76 0.57 ± 0.52 0.56 ± 0.56 0.58 ± 0.58 0.25 ± 0.11 0.59 ± 0.59 0.57 ± 0.57 1.29 ± 0.75
C1N2_Wh_hbb_325p0_0p0_NoSys C1N2_Wh_hbb_325p0_50p0_NoSys C1N2_Wh_hbb_350p0_0p0_NoSys C1N2_Wh_hbb_350p0_100p0_NoSys C1N2_Wh_hbb_350p0_150p0_NoSys C1N2_Wh_hbb_350p0_200p0_NoSys C1N2_Wh_hbb_350p0_25p0_NoSys C1N2_Wh_hbb_350p0_50p0_NoSys	3.29 ± 1.18 0.30 ± 0.30 2.49 ± 1.00 0.91 ± 0.53 2.19 ± 0.93 0.54 ± 0.38 1.71 ± 0.70 1.18 ± 0.59	3.94 ± 1.28 1.40 ± 0.82 2.03 ± 0.79 1.79 ± 0.78 0.47 ± 0.33 1.28 ± 0.60 2.46 ± 1.13 5.33 ± 1.46	5.68 ± 1.47 8.21 ± 1.82 7.80 ± 1.61 4.57 ± 1.12 0.90 ± 0.58 0.58 ± 0.41 7.92 ± 1.74 7.55 ± 1.59	1.19 ± 0.69 0.45 ± 0.45 0.47 ± 0.47 0.51 ± 0.36 0.61 ± 0.44 0.00 ± 0.00 0.40 ± 0.40 1.50 ± 0.70	$\begin{array}{c} 1.33 \pm 0.67 \\ 0.74 \pm 0.44 \\ 1.74 \pm 0.86 \\ 0.25 \pm 0.25 \\ 0.21 \pm 0.21 \\ 0.47 \pm 0.47 \\ 0.00 \pm 0.00 \\ 0.00 \pm 0.00 \end{array}$
C1N2_Wh_hbb_350p0_50p0_NoSys C1N2_Wh_hbb_375p0_0p0_NoSys C1N2_Wh_hbb_375p0_50p0_NoSys C1N2_Wh_hbb_400p0_0p0_NoSys C1N2_Wh_hbb_400p0_100p0_NoSys C1N2_Wh_hbb_400p0_150p0_NoSys C1N2_Wh_hbb_400p0_150p0_NoSys C1N2_Wh_hbb_400p0_200p0_NoSys	2.46 ± 0.99 1.18 ± 0.68 1.17 ± 0.77 1.98 ± 0.73 0.89 ± 0.59 1.46 ± 0.73 0.59 ± 0.59	$\begin{aligned} 1.26 &\pm 0.60 \\ 1.47 &\pm 0.69 \\ 0.64 &\pm 0.64 \\ 3.10 &\pm 1.07 \\ 0.72 &\pm 0.51 \\ 1.08 &\pm 0.53 \\ 1.48 &\pm 0.78 \end{aligned}$	8.76 ± 1.39 8.76 ± 1.76 13.31 ± 2.49 6.30 ± 1.73 8.91 ± 1.53 6.92 ± 1.58 3.74 ± 1.24 2.63 ± 0.99	0.50 ± 0.70 0.50 ± 0.35 0.00 ± 0.00 0.50 ± 0.30 1.10 ± 0.70 0.80 ± 0.51 0.18 ± 0.18 0.87 ± 0.62	0.00 ± 0.00 0.43 ± 0.43 0.39 ± 0.28 1.28 ± 0.78 1.74 ± 0.88 0.17 ± 0.17 0.92 ± 0.63 0.18 ± 0.18
C1N2_Wh_hbb_400p0_250p0_NoSys C1N2_Wh_hbb_400p0_25p0_NoSys C1N2_Wh_hbb_400p0_50p0_NoSys C1N2_Wh_hbb_425p0_0p0_NoSys C1N2_Wh_hbb_450p0_0p0_NoSys C1N2_Wh_hbb_450p0_100p0_NoSys C1N2_Wh_hbb_450p0_150p0_NoSys C1N2_Wh_hbb_450p0_150p0_NoSys C1N2_Wh_hbb_450p0_200p0_NoSys	0.69 ± 0.34 0.37 ± 0.26 1.15 ± 0.59 0.81 ± 0.66 0.70 ± 0.41 1.16 ± 0.54 1.05 ± 0.54 0.48 ± 0.34	0.42 ± 0.30 1.90 ± 0.78 1.33 ± 0.60 0.66 ± 0.44 0.21 ± 0.21 1.16 ± 0.53 0.72 ± 0.41 0.55 ± 0.33	0.66 ± 0.52 9.75 ± 1.89 9.96 ± 1.94 8.02 ± 1.55 8.69 ± 1.57 6.91 ± 1.35 5.74 ± 1.20 4.52 ± 1.04	$\begin{array}{c} 0.00 \pm 0.00 \\ 0.35 \pm 0.25 \\ 0.24 \pm 0.24 \\ 0.14 \pm 0.14 \\ 0.79 \pm 0.47 \\ 0.27 \pm 0.19 \\ 0.00 \pm 0.00 \\ 0.00 \pm 0.00 \end{array}$	0.31 ± 0.31 0.77 ± 0.61 0.98 ± 0.70 1.45 ± 0.69 1.44 ± 0.63 0.00 ± 0.00 0.24 ± 0.24 0.21 ± 0.21
C1N2_Wh_hbb_450p0_250p0_NoSys C1N2_Wh_hbb_450p0_300p0_NoSys C1N2_Wh_hbb_450p0_50p0_NoSys C1N2_Wh_hbb_500p0_0p0_NoSys C1N2_Wh_hbb_500p0_100p0_NoSys C1N2_Wh_hbb_500p0_150p0_NoSys C1N2_Wh_hbb_500p0_150p0_NoSys C1N2_Wh_hbb_500p0_200p0_NoSys	$\begin{array}{c} 0.68 \pm 0.39 \\ 0.76 \pm 0.45 \\ 0.52 \pm 0.37 \\ 0.30 \pm 0.21 \\ 1.10 \pm 0.43 \\ 1.43 \pm 0.48 \\ 0.22 \pm 0.22 \end{array}$	$\begin{array}{c} 0.76 \pm 0.39 \\ 0.46 \pm 0.27 \\ 1.77 \pm 0.68 \\ 0.63 \pm 0.32 \\ 0.50 \pm 0.26 \\ 0.91 \pm 0.37 \\ 1.16 \pm 0.43 \end{array}$	0.92 ± 0.42 0.47 ± 0.27 6.09 ± 1.27 5.44 ± 0.94 5.91 ± 0.98 5.32 ± 0.92 4.22 ± 0.83	$\begin{array}{c} 0.00 \pm 0.00 \\ 0.00 \pm 0.00 \\ 0.99 \pm 0.44 \\ 0.85 \pm 0.39 \\ 0.42 \pm 0.25 \\ 0.00 \pm 0.00 \\ 0.19 \pm 0.19 \end{array}$	$\begin{array}{c} 0.92 \pm 0.42 \\ 0.12 \pm 0.12 \\ 0.95 \pm 0.48 \\ 0.50 \pm 0.30 \\ 0.28 \pm 0.20 \\ 0.14 \pm 0.14 \\ 0.34 \pm 0.20 \end{array}$
C1N2_Wh_hbb_500p0_250p0_NoSys C1N2_Wh_hbb_500p0_300p0_NoSys C1N2_Wh_hbb_500p0_350p0_NoSys C1N2_Wh_hbb_500p0_50p0_NoSys C1N2_Wh_hbb_535p0_400p0_NoSys C1N2_Wh_hbb_550p0_0p0_NoSys C1N2_Wh_hbb_550p0_100p0_NoSys C1N2_Wh_hbb_550p0_100p0_NoSys C1N2_Wh_hbb_550p0_150p0_NoSys	0.50 ± 0.26 0.84 ± 0.34 0.50 ± 0.36 0.38 ± 0.22 0.43 ± 0.25 0.38 ± 0.27 0.18 ± 0.18 0.06 ± 0.06	0.80 ± 0.36 0.45 ± 0.32 0.27 ± 0.19 0.29 ± 0.20 0.22 ± 0.22 0.00 ± 0.00 0.64 ± 0.33 0.43 ± 0.24	2.13 ± 0.58 1.06 ± 0.44 0.31 ± 0.22 7.01 ± 1.09 0.00 ± 0.00 4.73 ± 0.83 4.96 ± 0.82 4.49 ± 0.80	0.19 ± 0.19 0.00 ± 0.00 0.00 ± 0.00 0.33 ± 0.24 0.19 ± 0.19 0.26 ± 0.19 0.00 ± 0.00 0.12 ± 0.12	0.19 ± 0.19 0.00 ± 0.00 0.21 ± 0.21 0.21 ± 0.16 0.00 ± 0.00 1.10 ± 0.43 0.32 ± 0.19 0.12 ± 0.12
C1N2_Wh_hbb_550p0_200p0_NoSys C1N2_Wh_hbb_550p0_250p0_NoSys C1N2_Wh_hbb_550p0_300p0_NoSys C1N2_Wh_hbb_550p0_50p0_NoSys C1N2_Wh_hbb_600p0_0p0_NoSys C1N2_Wh_hbb_600p0_100p0_NoSys C1N2_Wh_hbb_600p0_100p0_NoSys C1N2_Wh_hbb_600p0_150p0_NoSys	$\begin{array}{c} 0.32 \pm 0.24 \\ 0.19 \pm 0.19 \\ 0.42 \pm 0.11 \\ 0.17 \pm 0.17 \\ 0.26 \pm 0.16 \\ 0.44 \pm 0.22 \\ 0.23 \pm 0.16 \end{array}$	0.49 ± 0.24 0.39 ± 0.24 0.43 ± 0.20 0.56 ± 0.12 0.77 ± 0.35 0.29 ± 0.14 0.12 ± 0.12 0.48 ± 0.22	4.40 ± 0.81 2.14 ± 0.55 1.97 ± 0.23 5.08 ± 0.83 3.44 ± 0.56 2.85 ± 0.53 4.85 ± 0.69	$\begin{array}{c} 0.00 \pm 0.00 \\ 0.00 \pm 0.00 \\ 0.04 \pm 0.03 \\ 0.14 \pm 0.14 \\ 0.11 \pm 0.11 \\ 0.00 \pm 0.00 \\ 0.14 \pm 0.14 \end{array}$	0.12 ± 0.12 0.30 ± 0.25 0.18 ± 0.18 0.20 ± 0.08 0.26 ± 0.18 0.40 ± 0.20 0.19 ± 0.14 0.46 ± 0.22
C1N2_Wh_hbb_600p0_200p0_NoSys C1N2_Wh_hbb_600p0_250p0_NoSys C1N2_Wh_hbb_600p0_300p0_NoSys C1N2_Wh_hbb_600p0_350p0_NoSys C1N2_Wh_hbb_600p0_400p0_NoSys C1N2_Wh_hbb_600p0_50p0_NoSys C1N2_Wh_hbb_650p0_0p0_NoSys C1N2_Wh_hbb_650p0_0p0_NoSys	0.06 ± 0.06 0.00 ± 0.00 0.06 ± 0.06 0.30 ± 0.18 0.11 ± 0.11 0.13 ± 0.13 0.18 ± 0.11 0.07 ± 0.07	$\begin{array}{c} 0.45 \pm 0.17 \\ 0.76 \pm 0.29 \\ 0.07 \pm 0.07 \\ 0.40 \pm 0.22 \\ 0.12 \pm 0.12 \\ 0.00 \pm 0.00 \\ 0.05 \pm 0.05 \\ 0.09 \pm 0.07 \end{array}$	3.08 ± 0.54 3.10 ± 0.53 2.97 ± 0.55 1.75 ± 0.41 0.82 ± 0.30 2.69 ± 0.49 2.57 ± 0.43 3.13 ± 0.45	$\begin{array}{c} 0.12 \pm 0.12 \\ 0.04 \pm 0.04 \\ 0.25 \pm 0.14 \\ 0.00 \pm 0.00 \\ 0.00 \pm 0.00 \\ 0.17 \pm 0.12 \\ 0.09 \pm 0.09 \\ 0.05 \pm 0.05 \end{array}$	0.17 ± 0.12 0.18 ± 0.14 0.18 ± 0.11 0.10 ± 0.10 0.10 ± 0.10 0.49 ± 0.21 0.31 ± 0.14 0.56 ± 0.20
C1N2_Wh_hbb_650p0_150p0_NoSys C1N2_Wh_hbb_650p0_200p0_NoSys C1N2_Wh_hbb_650p0_250p0_NoSys C1N2_Wh_hbb_650p0_300p0_NoSys C1N2_Wh_hbb_650p0_50p0_NoSys C1N2_Wh_hbb_700p0_0p0_NoSys C1N2_Wh_hbb_700p0_0p0_NoSys	0.07 ± 0.07 0.10 ± 0.07 0.18 ± 0.10 0.11 ± 0.08 0.11 ± 0.08 0.06 ± 0.06 0.05 ± 0.03 0.06 ± 0.05	0.09 ± 0.07 0.32 ± 0.15 0.43 ± 0.17 0.51 ± 0.19 0.07 ± 0.07 0.19 ± 0.12 0.17 ± 0.09 0.22 ± 0.10	3.13 ± 0.43 2.70 ± 0.43 2.54 ± 0.42 2.51 ± 0.40 1.38 ± 0.29 3.23 ± 0.45 1.83 ± 0.28 1.47 ± 0.26	0.03 ± 0.03 0.00 ± 0.00 0.11 ± 0.08 0.00 ± 0.00	0.30 ± 0.20 0.00 ± 0.00 0.20 ± 0.10 0.00 ± 0.00 0.31 ± 0.15 0.37 ± 0.15 0.17 ± 0.08 0.11 ± 0.07
C1N2_Wh_hbb_700p0_150p0_NoSys C1N2_Wh_hbb_700p0_200p0_NoSys C1N2_Wh_hbb_700p0_250p0_NoSys C1N2_Wh_hbb_700p0_300p0_NoSys C1N2_Wh_hbb_700p0_350p0_NoSys C1N2_Wh_hbb_700p0_400p0_NoSys C1N2_Wh_hbb_700p0_50p0_NoSys C1N2_Wh_hbb_700p0_50p0_NoSys	$\begin{array}{c} 0.10 \pm 0.07 \\ 0.17 \pm 0.08 \\ 0.13 \pm 0.06 \\ 0.12 \pm 0.07 \\ 0.10 \pm 0.07 \\ 0.09 \pm 0.07 \\ 0.06 \pm 0.06 \\ 0.03 \pm 0.03 \end{array}$	$\begin{array}{c} 0.04 \pm 0.04 \\ 0.22 \pm 0.10 \\ 0.11 \pm 0.07 \\ 0.27 \pm 0.10 \\ 0.25 \pm 0.10 \\ 0.29 \pm 0.12 \\ 0.19 \pm 0.09 \\ 0.08 \pm 0.05 \end{array}$	1.72 ± 0.27 1.46 ± 0.26 1.67 ± 0.27 1.77 ± 0.27 1.29 ± 0.23 1.34 ± 0.25 1.62 ± 0.27 1.07 ± 0.18	$\begin{array}{c} 0.10 \pm 0.07 \\ 0.06 \pm 0.04 \\ 0.03 \pm 0.03 \\ 0.09 \pm 0.07 \\ 0.03 \pm 0.03 \\ 0.10 \pm 0.07 \\ 0.11 \pm 0.08 \\ 0.04 \pm 0.04 \end{array}$	$\begin{array}{c} 0.21 \pm 0.10 \\ 0.12 \pm 0.07 \\ 0.28 \pm 0.12 \\ 0.17 \pm 0.09 \\ 0.18 \pm 0.09 \\ 0.08 \pm 0.06 \\ 0.26 \pm 0.11 \\ 0.19 \pm 0.07 \end{array}$
C1N2_Wh_hbb_750p0_150p0_NoSys C1N2_Wh_hbb_750p0_200p0_NoSys C1N2_Wh_hbb_750p0_250p0_NoSys C1N2_Wh_hbb_750p0_300p0_NoSys C1N2_Wh_hbb_750p0_50p0_NoSys C1N2_Wh_hbb_800p0_0p0_NoSys C1N2_Wh_hbb_800p0_100p0_NoSys	$\begin{array}{c} 0.04 \pm 0.04 \\ 0.00 \pm 0.00 \\ 0.07 \pm 0.05 \\ 0.00 \pm 0.00 \\ 0.11 \pm 0.06 \\ 0.04 \pm 0.01 \\ 0.06 \pm 0.03 \end{array}$	$\begin{array}{c} 0.05 \pm 0.04 \\ 0.11 \pm 0.06 \\ 0.04 \pm 0.03 \\ 0.02 \pm 0.02 \\ 0.08 \pm 0.05 \\ 0.07 \pm 0.02 \\ 0.06 \pm 0.04 \end{array}$	$\begin{aligned} 1.30 &\pm 0.20 \\ 1.21 &\pm 0.19 \\ 1.24 &\pm 0.20 \\ 1.32 &\pm 0.21 \\ 0.94 &\pm 0.17 \\ 0.76 &\pm 0.06 \\ 0.90 &\pm 0.14 \end{aligned}$	$\begin{array}{c} 0.05 \pm 0.04 \\ 0.00 \pm 0.00 \\ 0.00 \pm 0.00 \\ 0.00 \pm 0.00 \\ 0.07 \pm 0.04 \\ 0.04 \pm 0.02 \\ 0.06 \pm 0.03 \end{array}$	$\begin{array}{c} 0.16 \pm 0.08 \\ 0.06 \pm 0.04 \\ 0.12 \pm 0.06 \\ 0.21 \pm 0.08 \\ 0.14 \pm 0.07 \\ 0.17 \pm 0.03 \\ 0.14 \pm 0.06 \end{array}$
C1N2_Wh_hbb_800p0_150p0_NoSys C1N2_Wh_hbb_800p0_200p0_NoSys C1N2_Wh_hbb_800p0_250p0_NoSys C1N2_Wh_hbb_800p0_300p0_NoSys C1N2_Wh_hbb_800p0_350p0_NoSys C1N2_Wh_hbb_800p0_400p0_NoSys C1N2_Wh_hbb_800p0_50p0_NoSys C1N2_Wh_hbb_900p0_50p0_NoSys	$\begin{array}{c} 0.03 \pm 0.02 \\ 0.00 \pm 0.00 \\ 0.04 \pm 0.03 \\ 0.05 \pm 0.03 \\ 0.04 \pm 0.03 \\ 0.00 \pm 0.00 \\ 0.00 \pm 0.00 \\ 0.02 \pm 0.01 \end{array}$	$\begin{array}{c} 0.06 \pm 0.04 \\ 0.03 \pm 0.03 \\ 0.07 \pm 0.04 \\ 0.04 \pm 0.03 \\ 0.07 \pm 0.04 \\ 0.07 \pm 0.04 \\ 0.03 \pm 0.02 \\ 0.02 \pm 0.01 \end{array}$	0.82 ± 0.13 1.00 ± 0.15 0.93 ± 0.14 0.79 ± 0.13 0.63 ± 0.12 0.72 ± 0.13 0.90 ± 0.14 0.42 ± 0.03	$\begin{array}{c} 0.00 \pm 0.00 \\ 0.06 \pm 0.04 \\ 0.04 \pm 0.03 \\ 0.03 \pm 0.02 \\ 0.02 \pm 0.02 \\ 0.00 \pm 0.00 \\ 0.06 \pm 0.04 \\ 0.02 \pm 0.01 \end{array}$	$\begin{array}{c} 0.15 \pm 0.06 \\ 0.18 \pm 0.06 \\ 0.17 \pm 0.06 \\ 0.09 \pm 0.04 \\ 0.05 \pm 0.03 \\ 0.08 \pm 0.04 \\ 0.12 \pm 0.05 \\ 0.12 \pm 0.02 \end{array}$
C1N2_Wh_hbb_900p0_100p0_NoSys C1N2_Wh_hbb_900p0_150p0_NoSys C1N2_Wh_hbb_900p0_200p0_NoSys C1N2_Wh_hbb_900p0_250p0_NoSys C1N2_Wh_hbb_900p0_300p0_NoSys C1N2_Wh_hbb_900p0_350p0_NoSys C1N2_Wh_hbb_900p0_350p0_NoSys C1N2_Wh_hbb_900p0_400p0_NoSys C1N2_Wh_hbb_900p0_400p0_NoSys	$\begin{array}{c} 0.00 \pm 0.00 \\ 0.01 \pm 0.01 \\ 0.06 \pm 0.03 \\ 0.03 \pm 0.02 \\ 0.00 \pm 0.00 \\ 0.03 \pm 0.02 \\ 0.06 \pm 0.03 \end{array}$	0.02 ± 0.01 0.03 ± 0.02 0.06 ± 0.03 0.01 ± 0.01 0.02 ± 0.01 0.01 ± 0.01 0.03 ± 0.02 0.03 ± 0.02 0.00 ± 0.00	0.42 ± 0.07 0.55 ± 0.08 0.33 ± 0.06 0.35 ± 0.07 0.49 ± 0.08 0.47 ± 0.08 0.46 ± 0.07	$\begin{array}{c} 0.04 \pm 0.02 \\ 0.00 \pm 0.00 \\ 0.00 \pm 0.00 \\ 0.01 \pm 0.01 \\ 0.02 \pm 0.02 \\ 0.01 \pm 0.01 \\ 0.00 \pm 0.00 \end{array}$	$\begin{array}{c} 0.10 \pm 0.03 \\ 0.10 \pm 0.03 \\ 0.10 \pm 0.04 \\ 0.10 \pm 0.04 \\ 0.04 \pm 0.02 \\ 0.08 \pm 0.03 \\ 0.08 \pm 0.03 \end{array}$
Unweighted Total SM Unweighted $t\bar{t}$ Unweighted W+jets Unweighted Single top Unweighted Diboson Unweighted Multiboson Unweighted $t\bar{t}$ + V	0.02 ± 0.02 35302 30552 573 569 400 4 1817	25950 22063 251 188 280 1	0.38 ± 0.07 44870 39965 446 260 338 5 1939	0.00 ± 0.00 4785 3008 778 41 254 1 43	0.06 ± 0.03 8763 4545 365 385 382 2 2027
Unweighted tt + h Unweighted Z+jets Unweighted V+h Unweighted C1N2_Wh_hbb_1000p0_0p0_NoSys Unweighted C1N2_Wh_hbb_1000p0_100p0_NoSys Unweighted C1N2_Wh_hbb_1000p0_150p0_NoSys Unweighted C1N2_Wh_hbb_1000p0_200p0_NoSys Unweighted C1N2_Wh_hbb_1000p0_250p0_NoSys	1144 73 170 4 2 1 2 1	1180 33 17 8 1 1 2 6	1750 83 84 38 34 42 27 33	85 21 554 1 2 1 1 2	964 51 42 10 6 12 5
Unweighted C1N2_Wh_hbb_1000p0_300p0_NoSys Unweighted C1N2_Wh_hbb_1000p0_350p0_NoSys Unweighted C1N2_Wh_hbb_1000p0_400p0_NoSys Unweighted C1N2_Wh_hbb_1000p0_50p0_NoSys Unweighted C1N2_Wh_hbb_152p5_22p5_NoSys Unweighted C1N2_Wh_hbb_165p0_35p0_NoSys Unweighted C1N2_Wh_hbb_177p5_47p5_NoSys Unweighted C1N2_Wh_hbb_177p5_47p5_NoSys	2 2 1 1 11 6 4 5	3 0 2 2 1 0	40 41 34 35 1 0 2	0 1 0 1 4 7 4	17 4 11 19 2 3 0
Unweighted C1N2_Wh_hbb_187p5_37p5_NoSys Unweighted C1N2_Wh_hbb_190p0_60p0_NoSys Unweighted C1N2_Wh_hbb_200p0_0p0_NoSys Unweighted C1N2_Wh_hbb_200p0_25p0_NoSys Unweighted C1N2_Wh_hbb_200p0_50p0_NoSys Unweighted C1N2_Wh_hbb_202p5_72p5_NoSys Unweighted C1N2_Wh_hbb_212p5_37p5_NoSys	6 2 7 5 5 2 11	1 0 4 2 2 0 3	1 0 1 0 3 1 3	1 3 3 4 3 2 3	1 0 0 0 2 0 4
Unweighted C1N2_Wh_hbb_212p5_62p5_NoSys Unweighted C1N2_Wh_hbb_225p0_0p0_NoSys Unweighted C1N2_Wh_hbb_225p0_25p0_NoSys Unweighted C1N2_Wh_hbb_225p0_50p0_NoSys Unweighted C1N2_Wh_hbb_225p0_75p0_NoSys Unweighted C1N2_Wh_hbb_237p5_62p5_NoSys Unweighted C1N2_Wh_hbb_250p0_0p0_NoSys Unweighted C1N2_Wh_hbb_250p0_100p0_NoSys	$egin{array}{cccccccccccccccccccccccccccccccccccc$	3 8 4 2 5 4 0	$egin{array}{cccccccccccccccccccccccccccccccccccc$	2 2 4 2 2 2 2 2	1 1 0 2 1 3
Unweighted C1N2_Wh_hbb_250p0_25p0_NoSys Unweighted C1N2_Wh_hbb_250p0_50p0_NoSys Unweighted C1N2_Wh_hbb_250p0_75p0_NoSys Unweighted C1N2_Wh_hbb_275p0_0p0_NoSys Unweighted C1N2_Wh_hbb_275p0_25p0_NoSys Unweighted C1N2_Wh_hbb_275p0_50p0_NoSys Unweighted C1N2_Wh_hbb_275p0_75p0_NoSys Unweighted C1N2_Wh_hbb_300p0_0p0_NoSys	3 3 0 7 5 4 11 4	7 8 4 5 12 7 12 0	3 7 1 7 15 7 6 13	4 1 1 1 2 1	1 0 0 2 1 2 2
Unweighted C1N2_Wh_hbb_300p0_100p0_NoSys Unweighted C1N2_Wh_hbb_300p0_150p0_NoSys Unweighted C1N2_Wh_hbb_300p0_25p0_NoSys Unweighted C1N2_Wh_hbb_300p0_50p0_NoSys Unweighted C1N2_Wh_hbb_300p0_75p0_NoSys Unweighted C1N2_Wh_hbb_325p0_0p0_NoSys Unweighted C1N2_Wh_hbb_325p0_50p0_NoSys	5 28 4 4 3 8 1	1 16 9 7 5 11 3	6 16 8 17 8 16 23	1 6 5 2 3 3	2 6 1 1 3 4 3
Unweighted C1N2_Wh_hbb_350p0_0p0_NoSys Unweighted C1N2_Wh_hbb_350p0_100p0_NoSys Unweighted C1N2_Wh_hbb_350p0_150p0_NoSys Unweighted C1N2_Wh_hbb_350p0_200p0_NoSys Unweighted C1N2_Wh_hbb_350p0_25p0_NoSys Unweighted C1N2_Wh_hbb_350p0_50p0_NoSys Unweighted C1N2_Wh_hbb_350p0_75p0_NoSys Unweighted C1N2_Wh_hbb_375p0_0p0_NoSys	8 3 6 2 7 4 8 4	7 6 2 5 5 15 5 6	28 19 3 2 24 26 27 39	1 2 2 0 1 5 2	5 1 1 1 0 0 1 2
Unweighted C1N2_Wh_hbb_375p0_50p0_NoSys Unweighted C1N2_Wh_hbb_400p0_0p0_NoSys Unweighted C1N2_Wh_hbb_400p0_100p0_NoSys Unweighted C1N2_Wh_hbb_400p0_150p0_NoSys Unweighted C1N2_Wh_hbb_400p0_200p0_NoSys Unweighted C1N2_Wh_hbb_400p0_250p0_NoSys Unweighted C1N2_Wh_hbb_400p0_25p0_NoSys Unweighted C1N2_Wh_hbb_400p0_50p0_NoSys	$ \begin{array}{c} 4 \\ 10 \\ 3 \\ 5 \\ 1 \\ 4 \\ 2 \\ 4 \end{array} $	1 12 2 5 4 2 8	20 49 26 13 10 2 34 30	3 4 3 1 2 0 2	4 5 1 3 1 1 2
Unweighted C1N2_Wh_hbb_425p0_0p0_NoSys Unweighted C1N2_Wh_hbb_450p0_0p0_NoSys Unweighted C1N2_Wh_hbb_450p0_100p0_NoSys Unweighted C1N2_Wh_hbb_450p0_150p0_NoSys Unweighted C1N2_Wh_hbb_450p0_200p0_NoSys Unweighted C1N2_Wh_hbb_450p0_250p0_NoSys Unweighted C1N2_Wh_hbb_450p0_300p0_NoSys	2 3 5 4 2 3 3	3 1 5 4 3 4 3	32 36 29 25 21 6 3	1 3 2 0 0 0	5 6 0 1 1 5
Unweighted C1N2_Wh_hbb_450p0_50p0_NoSys Unweighted C1N2_Wh_hbb_500p0_0p0_NoSys Unweighted C1N2_Wh_hbb_500p0_100p0_NoSys Unweighted C1N2_Wh_hbb_500p0_150p0_NoSys Unweighted C1N2_Wh_hbb_500p0_200p0_NoSys Unweighted C1N2_Wh_hbb_500p0_250p0_NoSys Unweighted C1N2_Wh_hbb_500p0_300p0_NoSys Unweighted C1N2_Wh_hbb_500p0_350p0_NoSys	2 2 7 9 1 4 6 2	4 4 6 8 5 2 2	25 36 40 37 28 15 6 2	5 3 0 1 1 0	3 2 1 4 1 0
Unweighted C1N2_Wh_hbb_500p0_50p0_NoSys Unweighted C1N2_Wh_hbb_535p0_400p0_NoSys Unweighted C1N2_Wh_hbb_550p0_0p0_NoSys Unweighted C1N2_Wh_hbb_550p0_100p0_NoSys Unweighted C1N2_Wh_hbb_550p0_150p0_NoSys Unweighted C1N2_Wh_hbb_550p0_200p0_NoSys Unweighted C1N2_Wh_hbb_550p0_250p0_NoSys Unweighted C1N2_Wh_hbb_550p0_300p0_NoSys	3 3 2 1 1 2 1 15	2 1 0 4 5 3 5	45 0 35 40 37 32 16 77	2 1 2 0 1 0 0 2	2 0 7 3 1 2 1 7
Unweighted C1N2_Wh_hbb_550p0_50p0_NoSys Unweighted C1N2_Wh_hbb_600p0_0p0_NoSys Unweighted C1N2_Wh_hbb_600p0_100p0_NoSys Unweighted C1N2_Wh_hbb_600p0_150p0_NoSys Unweighted C1N2_Wh_hbb_600p0_200p0_NoSys Unweighted C1N2_Wh_hbb_600p0_250p0_NoSys Unweighted C1N2_Wh_hbb_600p0_300p0_NoSys	1 3 4 2 1 0	5 5 1 5 7 8	41 40 32 53 37 37 37	1 1 0 1 1 1 3	3 4 2 5 2 2 2 3
Unweighted C1N2_Wh_hbb_600p0_350p0_NoSys Unweighted C1N2_Wh_hbb_600p0_400p0_NoSys Unweighted C1N2_Wh_hbb_600p0_50p0_NoSys Unweighted C1N2_Wh_hbb_650p0_0p0_NoSys Unweighted C1N2_Wh_hbb_650p0_100p0_NoSys Unweighted C1N2_Wh_hbb_650p0_150p0_NoSys Unweighted C1N2_Wh_hbb_650p0_200p0_NoSys	3 1 1 3 1 2 3	4 1 0 1 2 5 7	20 8 32 40 55 47 40	0 0 3 1 1 0 0	1 7 5 9 0 4
Unweighted C1N2_Wh_hbb_650p0_250p0_NoSys Unweighted C1N2_Wh_hbb_650p0_300p0_NoSys Unweighted C1N2_Wh_hbb_650p0_50p0_NoSys Unweighted C1N2_Wh_hbb_700p0_0p0_NoSys Unweighted C1N2_Wh_hbb_700p0_100p0_NoSys Unweighted C1N2_Wh_hbb_700p0_150p0_NoSys Unweighted C1N2_Wh_hbb_700p0_200p0_NoSys Unweighted C1N2_Wh_hbb_700p0_250p0_NoSys	2 2 1 2 2 2 2 5 4	8 1 3 4 6 2 5 3	43 26 56 49 34 46 36 43	0 0 2 0 2 2 2 1	0 5 7 5 3 5 3 6
Unweighted C1N2_Wh_hbb_700p0_300p0_NoSys Unweighted C1N2_Wh_hbb_700p0_350p0_NoSys Unweighted C1N2_Wh_hbb_700p0_400p0_NoSys Unweighted C1N2_Wh_hbb_700p0_50p0_NoSys Unweighted C1N2_Wh_hbb_750p0_100p0_NoSys Unweighted C1N2_Wh_hbb_750p0_150p0_NoSys Unweighted C1N2_Wh_hbb_750p0_200p0_NoSys	3 2 2 1 1 1 0	3 7 6 6 5 2 2 4	47 34 32 40 40 43 43	1 2 1 2 2 1 2 0	4 5 2 6 7 5 2
Unweighted C1N2_Wh_hbb_750p0_250p0_NoSys Unweighted C1N2_Wh_hbb_750p0_300p0_NoSys Unweighted C1N2_Wh_hbb_750p0_50p0_NoSys Unweighted C1N2_Wh_hbb_800p0_0p0_NoSys Unweighted C1N2_Wh_hbb_800p0_100p0_NoSys Unweighted C1N2_Wh_hbb_800p0_150p0_NoSys Unweighted C1N2_Wh_hbb_800p0_200p0_NoSys Unweighted C1N2_Wh_hbb_800p0_250p0_NoSys Unweighted C1N2_Wh_hbb_800p0_250p0_NoSys	2 0 4 14 4 2 0 2	2 1 3 16 3 3 1 3	42 44 36 192 44 42 46 46	0 0 3 8 3 0 2 2	5 7 5 45 7 9 9
Unweighted C1N2_Wh_hbb_800p0_300p0_NoSys Unweighted C1N2_Wh_hbb_800p0_350p0_NoSys Unweighted C1N2_Wh_hbb_800p0_400p0_NoSys Unweighted C1N2_Wh_hbb_800p0_50p0_NoSys Unweighted C1N2_Wh_hbb_900p0_0p0_NoSys Unweighted C1N2_Wh_hbb_900p0_100p0_NoSys Unweighted C1N2_Wh_hbb_900p0_150p0_NoSys	3 2 0 0 8 0 1	3 2 3 3 2 13 2 4	43 35 35 41 198 40 51	2 2 1 0 3 10 4 0	5 3 4 5 55 10
Unweighted C1N2_Wh_hbb_900p0_200p0_NoSys Unweighted C1N2_Wh_hbb_900p0_250p0_NoSys Unweighted C1N2_Wh_hbb_900p0_300p0_NoSys Unweighted C1N2_Wh_hbb_900p0_350p0_NoSys Unweighted C1N2_Wh_hbb_900p0_400p0_NoSys Unweighted C1N2_Wh_hbb_900p0_50p0_NoSys	5 2 0 3 5	1 2 2 3 3 0	33 33 46 44 42 37	0 1 1 1 0	7 8 4 6 9