Table 1: A summary of the cumulative signal acceptance times efficiency, $\mathcal{A}\,\varepsilon$ [%], for various benchmark models with both compressed and uncompressed mass spectra, following the application of the event selection criteria used to define the signal region. Values for $\mathcal{A}\,\varepsilon$ are also shown following the application of additional requirements that define the four most sensitive n_{jet} event categories, as defined in Table 5. Scale factor corrections to simulated signal events that account for the mismodelling of theoretical and experimental parameters are not applied, and so the values for $\mathcal{A}\,\varepsilon$ differ with respect to those in Table 5 by up to 15%.

Event selection	Benchmark model (m_{SUSY}, m_{LSP})					
	T1qqqq (1300, 100)	T1qqqq (900, 700)	T2qq_8fold (1050, 100)	T2qq_8fold (650, 550)	T2qq_1fold (600, 50)	T2qq_1fold (400, 250)
Before selection	100	100	100	100	100	100
Event veto for muons and electrons	99	100	100	100	100	100
Event veto for single isolated tracks	94	91	96	95	96	95
Event veto for photons	92	90	95	94	95	95
Event veto for forward jets ($\lvert\eta\rvert > 3.0$)	81	78	82	81	80	80
$n_{\text{jet}} \geq 2$	81	78	81	72	80	75
$p_{\text{T}}^{\text{j}_1} > 100\,\text{GeV}$	81	71	81	57	79	66
$\lvert\eta^{\text{j}_1}\rvert < 2.5$	81	70	81	55	79	65
$H_{\text{T}} > 200\,\text{GeV}$	81	69	81	50	79	60
$H_{\text{T}}^{\text{miss}} > 130\,\text{GeV}$	77	50	78	33	71	40
$H_{\text{T}}^{\text{miss}}/E_{\text{T}}^{\text{miss}} < 1.25$	74	44	75	28	65	33
H_{T}-dependent α_{T} requirements ($H_{\text{T}} < 800\,\text{GeV}$)	74	30	71	15	50	17
$\Delta\phi_{\text{min}}^{*} > 0.5$	22	18	44	10	33	13
Four most sensitive n_{jet} event categories	22	13	43	5.5	31	6.1

Table 2: A summary of the cumulative signal acceptance times efficiency, $\mathcal{A}\,\varepsilon$ [%], for various benchmark models with both compressed and uncompressed mass spectra, following the application of the event selection criteria used to define the signal region. Values for $\mathcal{A}\,\varepsilon$ are also shown following the application of additional requirements that define the four most sensitive n_{jet} event categories, as defined in Table 5. Scale factor corrections to simulated signal events that account for the mismodelling of theoretical and experimental parameters are not applied, and so the values for $\mathcal{A}\,\varepsilon$ differ with respect to those in Table 5 by up to 15%.

Event selection	Benchmark model (m_{SUSY}, m_{LSP})					
	T1bbbb (1500, 100)	T1bbbb (1000, 800)	T1tttt (1300, 100)	T1tttt (800, 400)	T1ttbb (1300, 100)	T1ttbb (1000, 700)
Before selection	100	100	100	100	100	100
Event veto for muons and electrons	99	98	41	42	61	64
Event veto for single isolated tracks	94	91	31	32	51	54
Event veto for photons	93	91	30	32	50	54
Event veto for forward jets ($\lvert\eta\rvert > 3.0$)	82	79	27	27	44	47
$n_{\text{jet}} \geq 2$	82	78	27	27	44	47
$p_{\text{T}}^{\text{j}_1} > 100\,\text{GeV}$	82	69	27	25	44	43
$\lvert\eta^{\text{j}_1}\rvert < 2.5$	82	68	27	25	44	42
$H_{\text{T}} > 200\,\text{GeV}$	82	66	27	25	44	42
$H_{\text{T}}^{\text{miss}} > 130\,\text{GeV}$	79	48	25	15	41	32
$H_{\text{T}}^{\text{miss}}/E_{\text{T}}^{\text{miss}} < 1.25$	77	43	24	11	38	26
H_{T}-dependent α_{T} requirements ($H_{\text{T}} < 800\,\text{GeV}$)	77	29	24	8.3	38	19
$\Delta\phi_{\text{min}}^{*} > 0.5$	23	17	5.6	1.3	9.5	8.8
Four most sensitive n_{jet} event categories	23	12	5.6	1.3	9.5	7.4

Table 3: A summary of the cumulative signal acceptance times efficiency, $\mathcal{A}\,\varepsilon$ [%], for various benchmark models with both compressed and uncompressed mass spectra, following the application of the event selection criteria used to define the signal region. Values for $\mathcal{A}\,\varepsilon$ are also shown following the application of additional requirements that define the four most sensitive n_{jet} event categories, as defined in Table 5. Scale factor corrections to simulated signal events that account for the mismodelling of theoretical and experimental parameters are not applied, and so the values for $\mathcal{A}\,\varepsilon$ differ with respect to those in Table 5 by up to 15%.

Event selection	Benchmark model (m_{SUSY}, m_{LSP})			
	T5tttt_DM175 (800, 100)	T5tttt_DM175 (700, 400)	T5ttcc (1200, 200)	T5ttcc (750, 600)
Before selection	100	100	100	100
Event veto for muons and electrons	41	42	63	63
Event veto for single isolated tracks	30	32	53	53
Event veto for photons	30	31	53	52
Event veto for forward jets ($\lvert\eta\rvert > 3.0$)	25	27	46	45
$n_{\text{jet}} \geq 2$	25	27	46	41
$p_{\text{T}}^{\text{j}_1} > 100\,\text{GeV}$	25	21	46	25
$\lvert\eta^{\text{j}_1}\rvert < 2.5$	25	21	46	24
$H_{\text{T}} > 200\,\text{GeV}$	25	21	46	23
$H_{\text{T}}^{\text{miss}} > 130\,\text{GeV}$	17	9.4	44	15
$H_{\text{T}}^{\text{miss}}/E_{\text{T}}^{\text{miss}} < 1.25$	11	5.6	42	12
H_{T}-dependent α_{T} requirements ($H_{\text{T}} < 800\,\text{GeV}$)	11	3.9	41	7.5
$\Delta\phi_{\text{min}}^{*} > 0.5$	0.4	0.5	13	3.2
Four most sensitive n_{jet} event categories	0.4	0.4	13	2.3

Table 4: A summary of the cumulative signal acceptance times efficiency, $\mathcal{A}\,\varepsilon$ [%], for various benchmark models with both compressed and uncompressed mass spectra, following the application of the event selection criteria used to define the signal region. Values for $\mathcal{A}\,\varepsilon$ are also shown following the application of additional requirements that define the four most sensitive n_{jet} event categories, as defined in Table 5. Scale factor corrections to simulated signal events that account for the mismodelling of theoretical and experimental parameters are not applied, and so the values for $\mathcal{A}\,\varepsilon$ differ with respect to those in Table 5 by up to 15%.

Event selection	Benchmark model (m_{SUSY}, m_{LSP})					
	T2bb (800, 50)	T2bb (375, 300)	T2tb (600, 50)	T2tb (350, 225)	T2tt (700, 50)	T2tt (350, 100)
Before selection	100	100	100	100	100	100
Event veto for muons and electrons	99	99	72	80	63	63
Event veto for single isolated tracks	96	94	61	72	53	53
Event veto for photons	95	94	60	72	52	52
Event veto for forward jets ($\lvert\eta\rvert > 3.0$)	81	81	51	62	45	45
$n_{\text{jet}} \geq 2$	80	61	51	53	45	44
$p_{\text{T}}^{\text{j}_1} > 100\,\text{GeV}$	80	36	50	36	44	35
$\lvert\eta^{\text{j}_1}\rvert < 2.5$	80	34	50	34	44	34
$H_{\text{T}} > 200\,\text{GeV}$	80	30	50	30	44	33
$H_{\text{T}}^{\text{miss}} > 130\,\text{GeV}$	75	18	44	17	40	20
$H_{\text{T}}^{\text{miss}}/E_{\text{T}}^{\text{miss}} < 1.25$	72	15	38	12	38	15
H_{T}-dependent α_{T} requirements ($H_{\text{T}} < 800\,\text{GeV}$)	62	7.2	30	5.5	34	8.8
$\Delta\phi_{\text{min}}^{*} > 0.5$	39	4.5	17	3.2	21	4.0
Four most sensitive n_{jet} event categories	37	2.9	14	2.1	19	3.0

Table 5: A summary of the cumulative signal acceptance times efficiency, $\mathcal{A}\,\varepsilon$ [%], for various benchmark models with both compressed and uncompressed mass spectra, following the application of the event selection criteria used to define the signal region. Values for $\mathcal{A}\,\varepsilon$ are also shown following the application of additional requirements that define the four most sensitive n_{jet} event categories, as defined in Table 5. Scale factor corrections to simulated signal events that account for the mismodelling of theoretical and experimental parameters are not applied, and so the values for $\mathcal{A}\,\varepsilon$ differ with respect to those in Table 5 by up to 15%.

Event selection	Benchmark model (m_{SUSY}, m_{LSP})		
	T2cc $(325, 305)$	T2tt_degen $(300, 290)$	T2tt_mixed $(300, 250)$
Before selection	100	100	100
Event veto for muons and electrons	100	100	89
Event veto for single isolated tracks	97	98	83
Event veto for photons	97	97	83
Event veto for forward jets ($\lvert\eta\rvert > 3.0$)	83	84	72
$n_{\text{jet}} \geq 2$	26	21	36
$p_{\text{T}}^{\text{j}_1} > 100\,\text{GeV}$	16	14	19
$\lvert\eta^{\text{j}_1}\rvert < 2.5$	15	13	18
$H_{\text{T}} > 200\,\text{GeV}$	13	11	15
$H_{\text{T}}^{\text{miss}} > 130\,\text{GeV}$	11	9.2	10
$H_{\text{T}}^{\text{miss}}/E_{\text{T}}^{\text{miss}} < 1.25$	9.2	7.5	8.4
H_{T}-dependent α_{T} requirements ($H_{\text{T}} < 800\,\text{GeV}$)	4.8	4.3	3.7
$\Delta\phi_{\text{min}}^{*} > 0.5$	3.7	3.7	2.3
Four most sensitive n_{jet} event categories	1.9	1.9	0.9