Cut	700 GeV, 10 cm, region 2017		
	$\epsilon_i^{\mathrm{CMS}}$	$\epsilon_i^{\mathrm{sim}}$, MLM	$\epsilon_i^{\mathrm{sim}}$, MLM, no pileup
total	$1.0^{+0.00}_{-0.00}$	$1.0^{+0.00}_{-0.00}$	$1.0^{+0.00}_{-0.00}$
trigger	$1.8^{+0.02}_{-0.02} \times 10^{-1}$	$1.4^{+0.01}_{-0.01} \times 10^{-1}$	$1.4^{+0.01}_{-0.01} \times 10^{-1}$
passes $p_{\mathrm{T}}^{\mathrm{miss}}$ filters	$1.8^{+0.02}_{-0.02} \times 10^{-1}$	$1.4^{+0.01}_{-0.01} \times 10^{-1}$	$1.4^{+0.01}_{-0.01} \times 10^{-1}$
$p_{\mathrm{T}}^{\mathrm{miss}} > 120\,\mathrm{GeV}$	$1.7^{+0.02}_{-0.02} \times 10^{-1}$	$1.4^{+0.01}_{-0.01} \times 10^{-1}$	$1.4^{+0.01}_{-0.01} \times 10^{-1}$
≥ 1 jet with $p_{\mathrm{T}} > 110\,\mathrm{GeV}$ and $|\eta| < 2.4$	$1.3^{+0.02}_{-0.02} \times 10^{-1}$	$10.0^{+0.09}_{-0.09} \times 10^{-2}$	$9.9^{+0.09}_{-0.09} \times 10^{-2}$
$==0$ pairs of jets with $\Delta\phi_{\mathrm{jet,\ jet}} > 2.5$	$1.1^{+0.02}_{-0.02} \times 10^{-1}$	$8.9^{+0.08}_{-0.08} \times 10^{-2}$	$8.8^{+0.08}_{-0.08} \times 10^{-2}$
$|\Delta\phi(\text{leading jet}, \vec{p}_{\mathrm{T}}^{\mathrm{miss}})| > 0.5$	$1.1^{+0.02}_{-0.02} \times 10^{-1}$	$8.9^{+0.08}_{-0.08} \times 10^{-2}$	$8.8^{+0.08}_{-0.08} \times 10^{-2}$
≥ 1 track with $|\eta| < 2.1$	$1.1^{+0.02}_{-0.02} \times 10^{-1}$	$8.9^{+0.08}_{-0.08} \times 10^{-2}$	$8.8^{+0.08}_{-0.08} \times 10^{-2}$
≥ 1 track with $p_{\mathrm{T}} > 55\,\mathrm{GeV}$	$4.8^{+0.10}_{-0.10} \times 10^{-2}$	$8.4^{+0.08}_{-0.08} \times 10^{-2}$	$8.3^{+0.08}_{-0.08} \times 10^{-2}$
≥ 1 track passing fiducial selections	$3.2^{+0.09}_{-0.09} \times 10^{-2}$	$7.1^{+0.07}_{-0.07} \times 10^{-2}$	$7.1^{+0.08}_{-0.08} \times 10^{-2}$
≥ 1 track with ≥ 4 pixel hits	$1.7^{+0.05}_{-0.05} \times 10^{-2}$	$2.5^{+0.05}_{-0.05} \times 10^{-2}$	$2.4^{+0.05}_{-0.05} \times 10^{-2}$
≥ 1 track with no missing inner hits	$1.7^{+0.06}_{-0.06} \times 10^{-2}$	$1.9^{+0.04}_{-0.04} \times 10^{-2}$	$1.8^{+0.04}_{-0.04} \times 10^{-2}$
≥ 1 track with no missing middle hits	$1.6^{+0.06}_{-0.06} \times 10^{-2}$	$1.9^{+0.04}_{-0.04} \times 10^{-2}$	$1.8^{+0.04}_{-0.04} \times 10^{-2}$
≥ 1 track with relative track isolation $< 5\%$	$5.3^{+0.33}_{-0.33} \times 10^{-3}$	$5.4^{+0.21}_{-0.21} \times 10^{-3}$	$5.0^{+0.21}_{-0.21} \times 10^{-3}$
≥ 1 track with $|d_{\mathrm{xy}}| < 0.02\,\mathrm{cm}$	$5.3^{+0.33}_{-0.33} \times 10^{-3}$	$5.4^{+0.21}_{-0.21} \times 10^{-3}$	$5.0^{+0.21}_{-0.21} \times 10^{-3}$
≥ 1 track with $|d_z| < 0.5\,\mathrm{cm}$	$5.3^{+0.33}_{-0.33} \times 10^{-3}$	$5.4^{+0.21}_{-0.21} \times 10^{-3}$	$5.0^{+0.21}_{-0.21} \times 10^{-3}$
≥ 1 track with $\Delta R(\text{track}, \text{jet}) > 0.5$	$5.1^{+0.33}_{-0.33} \times 10^{-3}$	$5.3^{+0.21}_{-0.21} \times 10^{-3}$	$5.0^{+0.21}_{-0.21} \times 10^{-3}$
≥ 1 track with $\Delta R(\text{track}, \text{electron}) > 0.15$	$5.0^{+0.31}_{-0.31} \times 10^{-3}$	$5.3^{+0.21}_{-0.21} \times 10^{-3}$	$5.0^{+0.21}_{-0.21} \times 10^{-3}$
≥ 1 track with $\Delta R(\text{track}, \text{muon}) > 0.15$	$5.0^{+0.31}_{-0.31} \times 10^{-3}$	$5.3^{+0.21}_{-0.21} \times 10^{-3}$	$5.0^{+0.21}_{-0.21} \times 10^{-3}$
≥ 1 track with $\Delta R(\text{track}, \tau_{\mathrm{h}}) > 0.15$	$5.0^{+0.31}_{-0.31} \times 10^{-3}$	$5.3^{+0.21}_{-0.21} \times 10^{-3}$	$5.0^{+0.21}_{-0.21} \times 10^{-3}$
≥ 1 track with $E_{\mathrm{calo}} < 10\,\mathrm{GeV}$	$4.9^{+0.31}_{-0.31} \times 10^{-3}$	$5.3^{+0.21}_{-0.21} \times 10^{-3}$	$5.0^{+0.21}_{-0.21} \times 10^{-3}$
≥ 1 track with ≥ 3 missing outer hits	$4.9^{+0.31}_{-0.31} \times 10^{-3}$	$5.2^{+0.21}_{-0.21} \times 10^{-3}$	$4.9^{+0.21}_{-0.21} \times 10^{-3}$
≥ 1 track 4 layers	$3.0^{+0.24}_{-0.24} \times 10^{-3}$	$2.8^{+0.16}_{-0.16} \times 10^{-3}$	$2.6^{+0.15}_{-0.15} \times 10^{-3}$
≥ 1 track 5 layers	$1.1^{+0.16}_{-0.16} \times 10^{-3}$	$1.2^{+0.10}_{-0.10} \times 10^{-3}$	$1.2^{+0.10}_{-0.10} \times 10^{-3}$
≥ 1 track ≥ 6 layers	$8.1^{+1.21}_{-1.21} \times 10^{-4}$	$1.1^{+0.10}_{-0.10} \times 10^{-3}$	$1.0^{+0.09}_{-0.09} \times 10^{-3}$

Table 1: Cutflow comparison for 700 GeV, 10 cm, region 2017

Cut	700 GeV, 10 cm, region 2018A		
	$\epsilon_i^{\mathrm{CMS}}$	$\epsilon_i^{\mathrm{sim}}$, MLM	$\epsilon_i^{\mathrm{sim}}$, MLM, no pileup
total	$1.0^{+0.00}_{-0.00}$	$1.0^{+0.00}_{-0.00}$	$1.0^{+0.00}_{-0.00}$
trigger	$1.5^{+0.02}_{-0.02} \times 10^{-1}$	$1.4^{+0.01}_{-0.01} \times 10^{-1}$	$1.4^{+0.01}_{-0.01} \times 10^{-1}$
passes $p_{\mathrm{T}}^{\mathrm{miss}}$ filters	$1.4^{+0.02}_{-0.02} \times 10^{-1}$	$1.4^{+0.01}_{-0.01} \times 10^{-1}$	$1.4^{+0.01}_{-0.01} \times 10^{-1}$
$p_{\mathrm{T}}^{\mathrm{miss}} > 120\,\mathrm{GeV}$	$1.4^{+0.02}_{-0.02} \times 10^{-1}$	$1.4^{+0.01}_{-0.01} \times 10^{-1}$	$1.4^{+0.01}_{-0.01} \times 10^{-1}$
≥ 1 jet with $p_{\mathrm{T}} > 110\,\mathrm{GeV}$ and $|\eta| < 2.4$	$1.3^{+0.02}_{-0.02} \times 10^{-1}$	$10.0^{+0.09}_{-0.09} \times 10^{-2}$	$9.9^{+0.09}_{-0.09} \times 10^{-2}$
$==0$ pairs of jets with $\Delta\phi_{\mathrm{jet, jet}} > 2.5$	$1.1^{+0.01}_{-0.01} \times 10^{-1}$	$8.9^{+0.08}_{-0.08} \times 10^{-2}$	$8.8^{+0.08}_{-0.08} \times 10^{-2}$
$|\Delta\phi(\text{leading jet}, \vec{p}_{\mathrm{T}}^{\mathrm{miss}})| > 0.5$	$1.1^{+0.01}_{-0.01} \times 10^{-1}$	$8.9^{+0.08}_{-0.08} \times 10^{-2}$	$8.8^{+0.08}_{-0.08} \times 10^{-2}$
≥ 1 track with $|\eta| < 2.1$	$1.1^{+0.01}_{-0.01} \times 10^{-1}$	$8.9^{+0.08}_{-0.08} \times 10^{-2}$	$8.8^{+0.08}_{-0.08} \times 10^{-2}$
≥ 1 track with $p_{\mathrm{T}} > 55\,\mathrm{GeV}$	$4.7^{+0.10}_{-0.10} \times 10^{-2}$	$8.4^{+0.08}_{-0.08} \times 10^{-2}$	$8.3^{+0.08}_{-0.08} \times 10^{-2}$
≥ 1 track passing fiducial selections	$3.1^{+0.08}_{-0.08} \times 10^{-2}$	$7.1^{+0.07}_{-0.07} \times 10^{-2}$	$7.1^{+0.08}_{-0.08} \times 10^{-2}$
≥ 1 track with ≥ 4 pixel hits	$1.7^{+0.06}_{-0.06} \times 10^{-2}$	$2.5^{+0.05}_{-0.05} \times 10^{-2}$	$2.4^{+0.05}_{-0.05} \times 10^{-2}$
≥ 1 track with no missing inner hits	$1.7^{+0.06}_{-0.06} \times 10^{-2}$	$1.9^{+0.04}_{-0.04} \times 10^{-2}$	$1.8^{+0.04}_{-0.04} \times 10^{-2}$
≥ 1 track with no missing middle hits	$1.5^{+0.05}_{-0.05} \times 10^{-2}$	$1.9^{+0.04}_{-0.04} \times 10^{-2}$	$1.8^{+0.04}_{-0.04} \times 10^{-2}$
≥ 1 track with relative track isolation $< 5\%$	$5.3^{+0.34}_{-0.34} \times 10^{-3}$	$5.4^{+0.21}_{-0.21} \times 10^{-3}$	$5.0^{+0.21}_{-0.21} \times 10^{-3}$
≥ 1 track with $|d_{\mathrm{xy}}| < 0.02\,\mathrm{cm}$	$5.1^{+0.34}_{-0.34} \times 10^{-3}$	$5.4^{+0.21}_{-0.21} \times 10^{-3}$	$5.0^{+0.21}_{-0.21} \times 10^{-3}$
≥ 1 track with $|d_z| < 0.5\,\mathrm{cm}$	$5.1^{+0.31}_{-0.31} \times 10^{-3}$	$5.4^{+0.21}_{-0.21} \times 10^{-3}$	$5.0^{+0.21}_{-0.21} \times 10^{-3}$
≥ 1 track with $\Delta R(\text{track, jet}) > 0.5$	$4.9^{+0.31}_{-0.31} \times 10^{-3}$	$5.3^{+0.21}_{-0.21} \times 10^{-3}$	$5.0^{+0.21}_{-0.21} \times 10^{-3}$
≥ 1 track with $\Delta R(\text{track, electron}) > 0.15$	$4.7^{+0.31}_{-0.31} \times 10^{-3}$	$5.3^{+0.21}_{-0.21} \times 10^{-3}$	$5.0^{+0.21}_{-0.21} \times 10^{-3}$
≥ 1 track with $\Delta R(\text{track, muon}) > 0.15$	$4.7^{+0.31}_{-0.31} \times 10^{-3}$	$5.3^{+0.21}_{-0.21} \times 10^{-3}$	$5.0^{+0.21}_{-0.21} \times 10^{-3}$
≥ 1 track with $\Delta R(\text{track}, \tau_{\mathrm{h}}) > 0.15$	$4.7^{+0.31}_{-0.31} \times 10^{-3}$	$5.3^{+0.21}_{-0.21} \times 10^{-3}$	$5.0^{+0.21}_{-0.21} \times 10^{-3}$
≥ 1 track with $E_{\mathrm{calo}} < 10\,\mathrm{GeV}$	$4.7^{+0.31}_{-0.31} \times 10^{-3}$	$5.3^{+0.21}_{-0.21} \times 10^{-3}$	$5.0^{+0.21}_{-0.21} \times 10^{-3}$
≥ 1 track with ≥ 3 missing outer hits	$4.6^{+0.31}_{-0.31} \times 10^{-3}$	$5.2^{+0.21}_{-0.21} \times 10^{-3}$	$4.9^{+0.21}_{-0.21} \times 10^{-3}$
≥ 1 track 4 layers	$2.8^{+0.24}_{-0.24} \times 10^{-3}$	$2.9^{+0.16}_{-0.16} \times 10^{-3}$	$2.6^{+0.15}_{-0.15} \times 10^{-3}$
≥ 1 track 5 layers	$9.2^{+1.36}_{-1.36} \times 10^{-4}$	$1.2^{+0.10}_{-0.10} \times 10^{-3}$	$1.2^{+0.10}_{-0.10} \times 10^{-3}$
≥ 1 track ≥ 6 layers	$9.5^{+1.36}_{-1.36} \times 10^{-4}$	$1.1^{+0.10}_{-0.10} \times 10^{-3}$	$1.0^{+0.09}_{-0.09} \times 10^{-3}$

Table 2: Cutflow comparison for 700 GeV, 10 cm, region 2018A

Cut	700 GeV, 10 cm, region 2018B		
	ϵ_i^{CMS}	ϵ_i^{sim}, MLM	ϵ_i^{sim}, MLM, no pileup
total	$1.0^{+0.00}_{-0.00}$	$1.0^{+0.00}_{-0.00}$	$1.0^{+0.00}_{-0.00}$
trigger	$1.5^{+0.02}_{-0.02} \times 10^{-1}$	$1.4^{+0.01}_{-0.01} \times 10^{-1}$	$1.4^{+0.01}_{-0.01} \times 10^{-1}$
passes $p_{\text{T}}^{\text{miss}}$ filters	$1.4^{+0.02}_{-0.02} \times 10^{-1}$	$1.4^{+0.01}_{-0.01} \times 10^{-1}$	$1.4^{+0.01}_{-0.01} \times 10^{-1}$
$p_{\text{T}}^{\text{miss}} > 120\,\text{GeV}$	$1.4^{+0.02}_{-0.02} \times 10^{-1}$	$1.4^{+0.01}_{-0.01} \times 10^{-1}$	$1.4^{+0.01}_{-0.01} \times 10^{-1}$
≥ 1 jet with $p_{\text{T}} > 110\,\text{GeV}$ and $|\eta| < 2.4$	$1.3^{+0.02}_{-0.02} \times 10^{-1}$	$10.0^{+0.09}_{-0.09} \times 10^{-2}$	$9.9^{+0.09}_{-0.09} \times 10^{-2}$
$==0$ pairs of jets with $\Delta\phi_{\text{jet, jet}} > 2.5$	$1.1^{+0.01}_{-0.01} \times 10^{-1}$	$8.9^{+0.08}_{-0.08} \times 10^{-2}$	$8.8^{+0.08}_{-0.08} \times 10^{-2}$
$|\Delta\phi(\text{leading jet}, \vec{p}_{\text{T}}^{\text{miss}})| > 0.5$	$1.1^{+0.01}_{-0.01} \times 10^{-1}$	$8.9^{+0.08}_{-0.08} \times 10^{-2}$	$8.8^{+0.08}_{-0.08} \times 10^{-2}$
≥ 1 track with $|\eta| < 2.1$	$1.1^{+0.01}_{-0.01} \times 10^{-1}$	$8.9^{+0.08}_{-0.08} \times 10^{-2}$	$8.8^{+0.08}_{-0.08} \times 10^{-2}$
≥ 1 track with $p_{\text{T}} > 55\,\text{GeV}$	$4.7^{+0.09}_{-0.09} \times 10^{-2}$	$8.4^{+0.08}_{-0.08} \times 10^{-2}$	$8.3^{+0.08}_{-0.08} \times 10^{-2}$
≥ 1 track passing fiducial selections	$3.1^{+0.07}_{-0.07} \times 10^{-2}$	$7.1^{+0.07}_{-0.07} \times 10^{-2}$	$7.1^{+0.08}_{-0.08} \times 10^{-2}$
≥ 1 track with ≥ 4 pixel hits	$1.7^{+0.06}_{-0.06} \times 10^{-2}$	$2.5^{+0.05}_{-0.05} \times 10^{-2}$	$2.4^{+0.05}_{-0.05} \times 10^{-2}$
≥ 1 track with no missing inner hits	$1.7^{+0.06}_{-0.06} \times 10^{-2}$	$1.9^{+0.04}_{-0.04} \times 10^{-2}$	$1.8^{+0.04}_{-0.04} \times 10^{-2}$
≥ 1 track with no missing middle hits	$1.5^{+0.06}_{-0.06} \times 10^{-2}$	$1.9^{+0.04}_{-0.04} \times 10^{-2}$	$1.8^{+0.04}_{-0.04} \times 10^{-2}$
≥ 1 track with relative track isolation $< 5\%$	$5.3^{+0.33}_{-0.33} \times 10^{-3}$	$5.4^{+0.21}_{-0.21} \times 10^{-3}$	$5.0^{+0.21}_{-0.21} \times 10^{-3}$
≥ 1 track with $|d_{\text{xy}}| < 0.02\,\text{cm}$	$5.2^{+0.33}_{-0.33} \times 10^{-3}$	$5.4^{+0.21}_{-0.21} \times 10^{-3}$	$5.0^{+0.21}_{-0.21} \times 10^{-3}$
≥ 1 track with $|d_z| < 0.5\,\text{cm}$	$5.2^{+0.32}_{-0.32} \times 10^{-3}$	$5.4^{+0.21}_{-0.21} \times 10^{-3}$	$5.0^{+0.21}_{-0.21} \times 10^{-3}$
≥ 1 track with $\Delta R(\text{track}, \text{jet}) > 0.5$	$5.0^{+0.32}_{-0.32} \times 10^{-3}$	$5.3^{+0.21}_{-0.21} \times 10^{-3}$	$5.0^{+0.21}_{-0.21} \times 10^{-3}$
≥ 1 track with $\Delta R(\text{track}, \text{electron}) > 0.15$	$4.8^{+0.32}_{-0.32} \times 10^{-3}$	$5.3^{+0.21}_{-0.21} \times 10^{-3}$	$5.0^{+0.21}_{-0.21} \times 10^{-3}$
≥ 1 track with $\Delta R(\text{track}, \text{muon}) > 0.15$	$4.8^{+0.32}_{-0.32} \times 10^{-3}$	$5.3^{+0.21}_{-0.21} \times 10^{-3}$	$5.0^{+0.21}_{-0.21} \times 10^{-3}$
≥ 1 track with $\Delta R(\text{track}, \tau_{\text{h}}) > 0.15$	$4.8^{+0.32}_{-0.32} \times 10^{-3}$	$5.3^{+0.21}_{-0.21} \times 10^{-3}$	$5.0^{+0.21}_{-0.21} \times 10^{-3}$
≥ 1 track with $E_{\text{calo}} < 10\,\text{GeV}$	$4.7^{+0.32}_{-0.32} \times 10^{-3}$	$5.3^{+0.21}_{-0.21} \times 10^{-3}$	$5.0^{+0.21}_{-0.21} \times 10^{-3}$
≥ 1 track with ≥ 3 missing outer hits	$4.7^{+0.32}_{-0.32} \times 10^{-3}$	$5.2^{+0.21}_{-0.21} \times 10^{-3}$	$4.9^{+0.21}_{-0.21} \times 10^{-3}$
$\phi(p_{\text{T}}^{\text{miss}}) < -1.6$ or $\phi(p_{\text{T}}^{\text{miss}}) > -0.6$	$3.8^{+0.28}_{-0.28} \times 10^{-3}$	$4.3^{+0.19}_{-0.19} \times 10^{-3}$	$4.2^{+0.19}_{-0.19} \times 10^{-3}$
≥ 1 track 4 layers	$2.3^{+0.22}_{-0.22} \times 10^{-3}$	$2.3^{+0.14}_{-0.14} \times 10^{-3}$	$2.2^{+0.14}_{-0.14} \times 10^{-3}$
≥ 1 track 5 layers	$7.2^{+1.30}_{-1.30} \times 10^{-4}$	$1.0^{+0.09}_{-0.09} \times 10^{-3}$	$9.9^{+0.92}_{-0.92} \times 10^{-4}$
≥ 1 track ≥ 6 layers	$8.0^{+1.30}_{-1.30} \times 10^{-4}$	$8.8^{+0.87}_{-0.87} \times 10^{-4}$	$8.7^{+0.86}_{-0.86} \times 10^{-4}$

Table 3: Cutflow comparison for 700 GeV, 10 cm, region 2018B