

GF-01 APX Capsule — Press Prefilled (Ticks 1-8)

Schemes considered: ID, ΔR ($\Delta + \text{zero-RLE}$), $GR(p)$ for $p \in \{0..4\}$. MDL = L_{total} (bits).

Computed manifest_check: 487809945

S1_post_u_deltas: len=48 chosen= ΔR $L_{\text{total}}=7$ — Per-tick net change per node (t=1..8, nodes asc)

S2_fluxes: len=64 chosen= ΔR $L_{\text{total}}=8$ — Per-tick edge flux f_e (t=1..8, edges in ID order)

A5 — APX Manifest (Prefilled)

APX name	profile	manifest_check
GF01_APX_v0_full_window	CMP-0	487809945

stream_id	description	scheme	params	L_model	L_residual	L_total
S1_post_u_deltas	Per-tick net change Δu per node (t=1..8, nodes asc)	Per node (t=1..8, nodes asc)	0	0	0	7
S2_fluxes	Per-tick edge flux $f_{\Delta R}$ (t=1..8, edges in ID order)	Per edge (t=1..8, edges in ID order)	0	0	0	8

A6 — APX SimA Model (Prefilled) — S1_post_u_deltas

Chosen scheme: ΔR ; $L_{\text{total}}=7$ bits

candidate	param	$L_{\text{total}}(\text{bits})$
ID		48
GR	$p=0$	48
GR	$p=1$	96
GR	$p=2$	144
GR	$p=3$	192
GR	$p=4$	240
ΔR		7

ID: per value bits = 1(sign) + $\lceil \log_2(|z|+1) \rceil$ for magnitude; $z=0$ uses 1 bit total.

GR(p): zigzag y ; bits = $(\lfloor y/2^p \rfloor + 1) + p$.

ΔR : encode deltas with zero-run marker 0 + $\lceil \log_2(L+1) \rceil$, non-zero as marker 1 + GR($p=0$).

Totals exclude fixed headers in V0 ($L_{\text{model}}=L_{\text{residual}}=0$).

A6 – APX SimA Model (Prefilled) – S2_fluxes

Chosen scheme: ΔR ; $L_{\text{total}}=8$ bits

candidate	param	$L_{\text{total}}(\text{bits})$
ID		64
GR	$p=0$	64
GR	$p=1$	128
GR	$p=2$	192
GR	$p=3$	256
GR	$p=4$	320
ΔR		8

ID: per value bits = 1(sign) + $\lceil \log_2(|z|+1) \rceil$ for magnitude; $z=0$ uses 1 bit total.

GR(p): zigzag y ; bits = $(\lfloor y/2^p \rfloor + 1) + p$.

ΔR : encode deltas with zero-run marker 0 + $\lceil \log_2(L+1) \rceil$, non-zero as marker 1 + GR($p=0$).

Totals exclude fixed headers in V0 ($L_{\text{model}}=L_{\text{residual}}=0$).

A7 – APX Residuals (Prefilled)

Exact schemes selected; residuals not required ($L_residual=0$).

stream_id	residual_entries
S1_post_u_deltas	(none)
S2_fluxes	(none)

A8 — MDL Tally (Prefilled)

stream_id	candidate	param	L_total(bits)	chosen?
S1_post_u_deltas	ID		48	
S1_post_u_deltas	GR	p=0	48	
S1_post_u_deltas	GR	p=1	96	
S1_post_u_deltas	GR	p=2	144	
S1_post_u_deltas	GR	p=3	192	
S1_post_u_deltas	GR	p=4	240	
S1_post_u_deltas	ΔR		7	✓
S2_fluxes	ID		64	
S2_fluxes	GR	p=0	64	
S2_fluxes	GR	p=1	128	
S2_fluxes	GR	p=2	192	
S2_fluxes	GR	p=3	256	
S2_fluxes	GR	p=4	320	
S2_fluxes	ΔR		8	✓