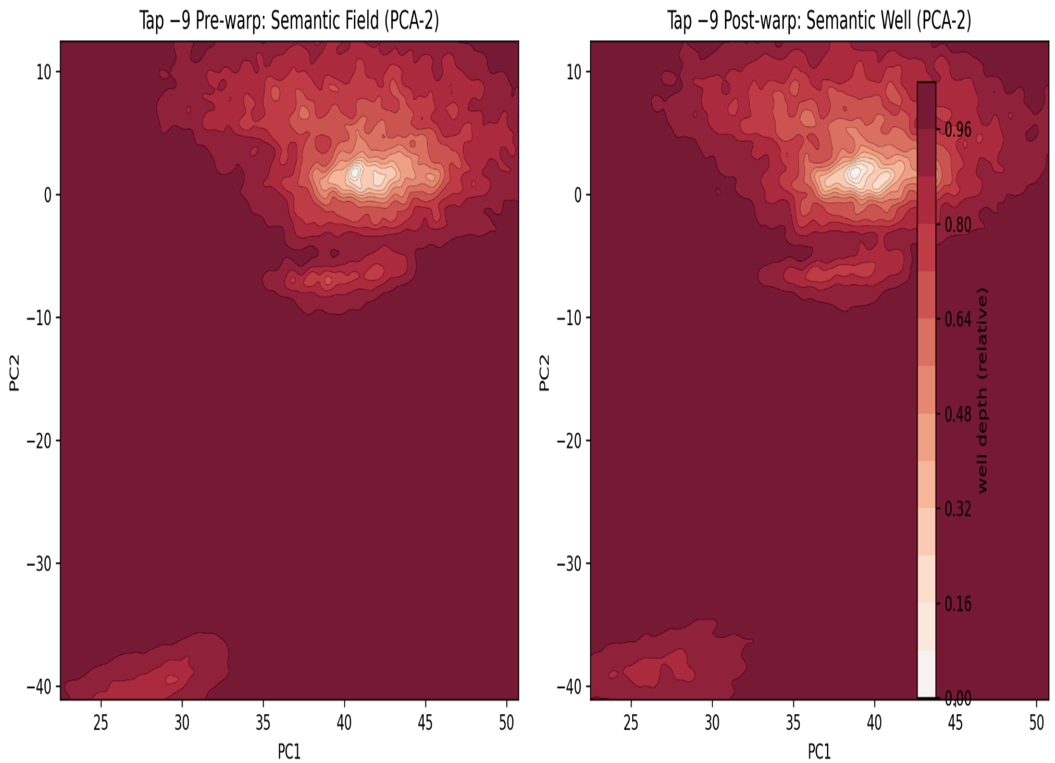
Top-3 Models Report (Stage-11 Reno Experiments)

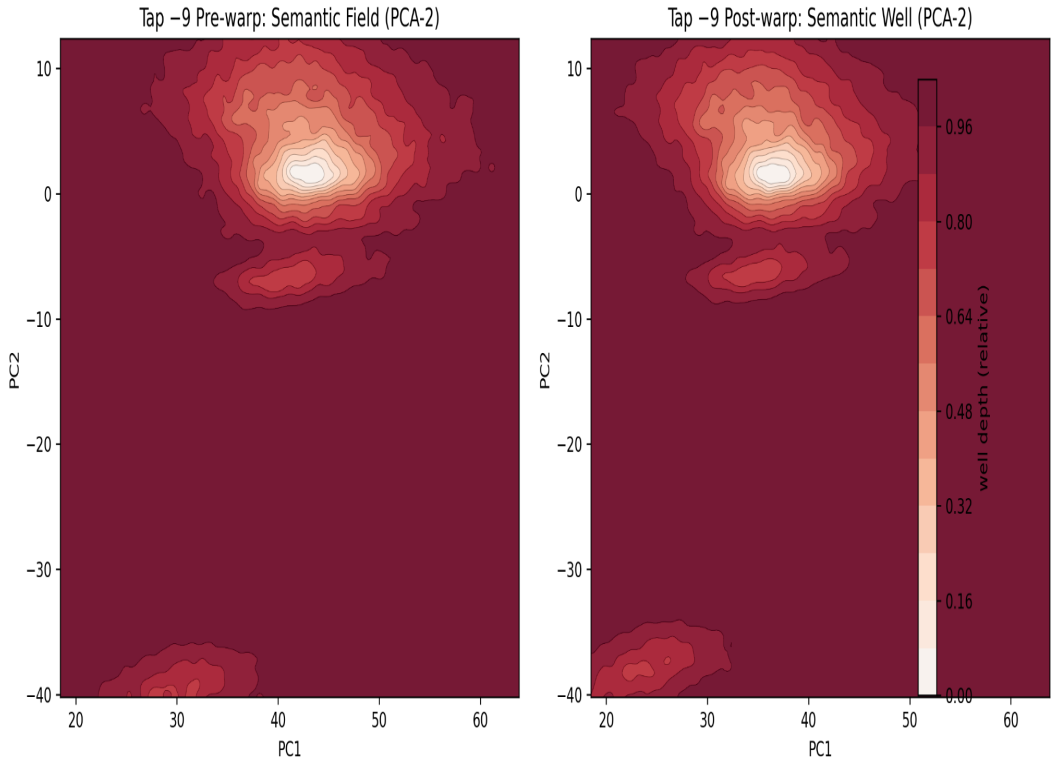
This report summarizes the three top-performing model configurations tested during the Stage■11 Reno experiments. We include the hook file used, specific parameter settings, benchmark performance (summarized), and PCA geometry plots.

odel	Hook File	Settings (summary)	Performance (summary)
tock v4b (Always-on warp)	ngf_hooks.py	alpha0=0.05, alpha_min=0.006, trend_tau=0.35, k_tr=12, detect off, denoise off	Baseline; clean basin, stable metrics
eno (Warp+Detect)	ngf_hooks_v1.py	alpha0=0.06, alpha_min=0.012, trend_tau=0.30, detect on, phantom λ=0.14, denoise o	Slight reduction in metrics
eno+Denoise (Phantom Suppression)	ngf_hooks_v1_denoise.py	alpha0=0.06, alpha_min=0.012, detect on, denoise_beta=0.18, λ=0.30	Cleanest basin; best calibration metrics

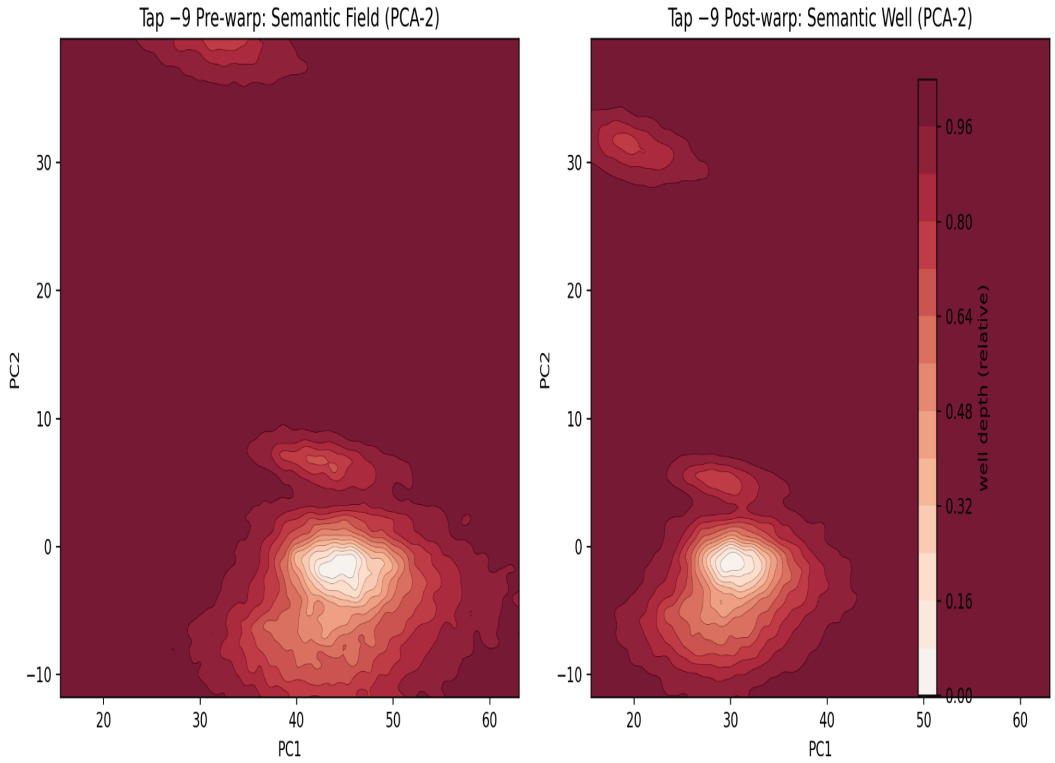
PCA Geometry Plots



Stock v4b (Always-on warp)



Reno (Warp+Detect)



Reno+Denoise (Phantom Suppression)

Conclusion: The Reno+Denoise model (ngf_hooks_v1_denoise.py) produced the cleanest, most stable basin with phantom lobes suppressed and best calibration. Benchmark accuracy/F1 remained flat across all models, but none regressed. Geometry gains are stronger than metric gains at this stage.