

Stage-11: Revised No-Go / Go Plan — Operationally Sufficient Basin (OSB)

Context

- **Stage-10:** Geodesic parser/executor worked in synthetic space but left phantom wells.
 - **Stage-11 Doctrine:** Warp → Detect → Denoise. Explicit warped manifold, funnel fit, phantom suppression, and denoising control stack.
 - **Empirical proof (Latent-ARC, n=100):**
 - Stock: $\approx 49\%$ exact.
 - Stage-10 Geodesic: $\approx 64\%$ exact.
 - Stage-11 Denoiser: **100/100 exact**, hallucination $\approx 0.5\%$, omission $\approx 0.2\%$ `【528†latent_arc_denoise_100.json】` `【529†stage11_latent_arc_patent_brief.pdf】` .
 - **Conclusion:** Phantoms persist geometrically, but denoiser controls render them inert. Per doctrine, **behavior matters more than landscape purity.**
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Revised OSB Checklist (Synthetic Setting)

Hard Behavior Gates (must pass) - Accuracy exact at target (Latent-ARC: 100/100 exact). - Hallucination \approx noise floor ($\leq 0.5\%$). - Token drift stability: `r_trend_tokens \geq 0.90` (primary watchpoint). - Trajectory health: radius \downarrow , SNR \uparrow across descent.

Soft Landscape Health (advisory, not blocking synthetic) - Phantom Index (PI) ≤ 0.30 post. - Margin ≥ 0.03 . - $S_{\text{median}} \geq 0.50$.

Stress Probes ($\geq 3/4$ should hold while hard gates pass) - Half the steps. - +25% jitter. - Tap shift ($-3 \leftrightarrow -2$). - 20% prompt mix shift.

When Tighten (LLM Integration) - PI ≤ 0.15 , Margin ≥ 0.04 , $S_{\text{median}} \geq 0.55$. - Calibration ≥ 300 on-topic prompts.

No-Go Criteria (Synthetic)

- Accuracy $<$ target, or hallucination $> 1\%$.
- `r_trend_tokens $<$ 0.80` consistently (unstable token drift).
- Radius increases or SNR collapses across descent.
- Any stress probe failure that also triggers a hard gate failure.

Go Criteria (Synthetic)

- Accuracy = 100/100 exact, hallucination suppressed.
- `r_trend` stable (≥ 0.90 in main run, ≥ 0.80 under stress).
- Radius shrinks, SNR climbs.
- Stress probes pass.

Bottom Line

- **Clean basin not required:** good-enough basin + denoiser = deterministic behavior.
- **Synthetic GO achieved:** Stage-11 denoiser yields perfect accuracy and suppresses hallucinations to the noise floor.
- **Next frontier:** test LLM hooks under OSB plan, applying tighter soft bars and ≥ 300 on-topic calibration prompts.