

## 2) Fix the sign + “repulsive condition” with one explicit convention

Right now the doc says repulsive curvature depends on  $\tilde{\kappa} < 0$  (good!), but Stage 2.5 needs a single boxed statement:

**Deliverable:** one boxed convention like:

- metric signature  $(-, +, +, +$  or  $+,-,-,-)$
- perfect-fluid form of  $T_{\mu\nu}$
- which sign of  $\tilde{\kappa}$  yields negative effective pressure

This is where reviewers try to poke holes first, so we make it un-pokeable.

### 3) Turn the falsification criterion into a full measurement spec

You *already* have the killer asset: an explicit falsification threshold ( $\Delta p$  sensitivity, qubit count, run count)

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**Deliverable:** a one-page "Experiment Spec Sheet" with:

- primary observable:  $\Delta p$  or equivalent force proxy
- background budget list (EM, thermal gradients, Casimir, vibrations)
- control toggles (coherent  $\leftrightarrow$  decohered)  Gravity from Information\_A Sta...
- required significance + trial count  Gravity from Information\_A Sta...
- how  $\Delta p$  maps to a bound on  $|\tilde{\kappa}|$   Gravity from Information\_A Sta...

This is where Stage 2 becomes *something a lab can implement*.

#### 4) Replace “ $\kappa$ is bounded by X” with a clean “bounds table” appendix

Your doc already does this correctly: “upper bounds, not measurements”

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2.5 is just making it citation-clean and conservative.

**Deliverable:** Appendix A:

- bounds-only language
- clear mapping: experiment → observable → inferred bound on  $\tilde{\kappa}$

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Even if every bound is later revised, the *method* stays solid.

## 5) Quarantine P/E/I/G into a “formal analogy” section

Your Stage 2 doc already formalizes P/E/I/G as constrained flow + Liouvillian steady state + negentropy

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**Deliverable:** one section header:

“P/E/I/G as a cross-domain dynamical template (non-ontological extension)”

This keeps your big vision *and* keeps reviewers from calling it “category error.”

## 6) Convert to a clean LaTeX / arXiv-ready format

You asked earlier about formatting — now is the payoff.

**Deliverables:**

- a LaTeX version with numbered equations, consistent symbols, and a short abstract
- a 1-page “Key Equations” appendix (you already have this structure)



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Once it compiles cleanly, you can share it instantly with serious people.

## 7) (Optional but powerful) Add a “Null Result Value Proposition”

This is a credibility rocket.

**Deliverable:** a paragraph that says:

- “Even if null, this experiment sets the strongest lab bound on information–geometry coupling.”
- “That result constrains a whole class of emergent gravity models.”

This makes the project valuable even if  $\tilde{\kappa} = 0$  at lab scale.