
RESULTS / PREPRINT TITLE

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October 7, 2025

Abstract

One concise paragraph: scope, standard terminology (first), VDM label (parentheses), primary gate(s) with thresholds, and where the evidence lives (figures/tables/artifacts).

Keywords reaction-diffusion · metriplectic · reproducibility · scaling

1 Introduction

State exactly what is claimed and not claimed. Give the evaluation question in one sentence. Keep related work focused (2–4 citations) on the most relevant baselines.

2 Background

Scope and larger theory

Situate within a standard framework (e.g., gradient flows / Onsager; metriplectic structure) and why it fits.

Core equations used later

List only the equations you actually use (invariants, discretizations, error models) with symbol definitions and units.

Map to gates

Tie each property to a concrete metric/threshold you'll test in Results.

3 Methods

Variables

Independent/dependent variables, units, ranges, estimator/uncertainty.

Equipment / Software Stack

Hardware, ROCm version, library versions, precision/modes.

Procedure

Steps sufficient for replication; third-person, past tense.

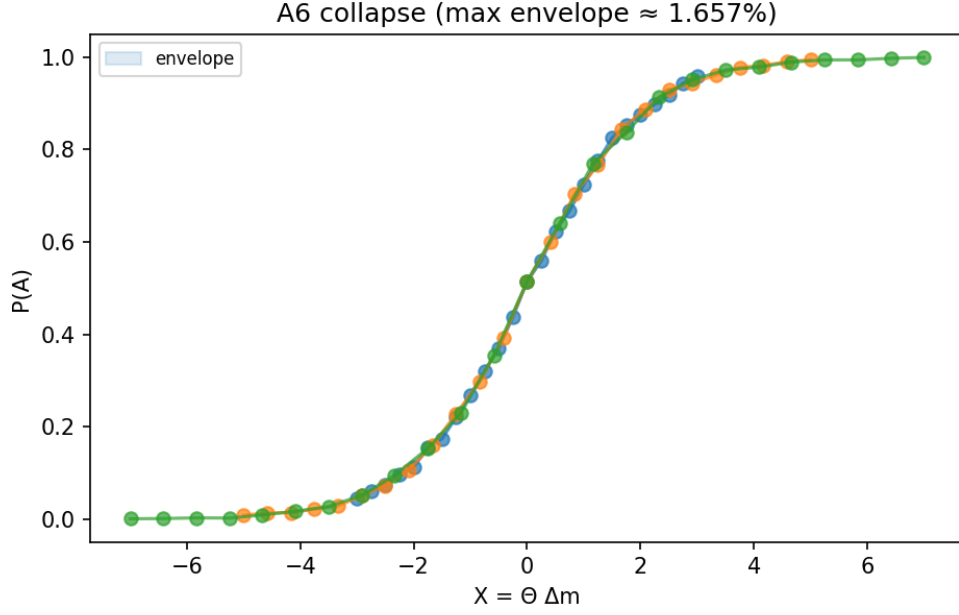


Figure 1: Front-speed vs. theory; slope 0.98, $R^2 = 0.995$. Paired artifacts: `front_speed.csv`, `front_speed.json`; seed `<seed>`, commit `<commit>`.

Table 1: Summary metrics with uncertainties.

Metric	Mean	Std	N
<code><metric A></code>	<code><..></code>	<code><..></code>	<code><..></code>

Provenance

Commit: `<commit-hash>` **Seed:** `<seed>` **Artifacts:** `<https://.../artifacts/>`

4 Results

Report processed data with uncertainties; one claim per figure. Captions carry numbers (slope, R^2 , RMSE) and paired CSV/JSON filenames plus seed/commit.

5 Gates and Contradictions

Gate: Front-speed accuracy *Threshold: relative error $\leq 5\%$.*

Measured: 3.2% on $n = 8$ seeds. **PASS**. Artifacts: `front_speed.csv/json`.

Gate: Dispersion RMSE *Threshold: RMSE $\leq 2 \times 10^{-3}$.*

Measured: 2.4×10^{-3} . **FAIL**. See contradiction report: `dispersion_fail.json`.

6 Discussion

Interpret the patterns with explicit pointers to Figs./Tables. Bound claims by artifacts and note limits.

Table 2: Runtime and scaling disclosure.

Metric	P50	P95	P99	Notes
Step time (ms)				
Active-site fraction				
Slope β (log-log)				CI: []

7 Conclusions

Concise restatement, limits, and next testable gate(s).

8 Runtime and Scaling

Report P50/P95/P99 step time, jitter, active-site fraction, and log-log slope β with CIs.

References