# Seed Summary: NB/BD Program toward RH

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### 1 Seed Summary

This document compresses the core insights from Versions 1–5 of our exploration toward the Riemann Hypothesis.

#### Core Achievements

- Established negative main-diag (M < 0) consistently across N.
- Achieved off-diag suppression at the  $1/\log N$  scale (V4).
- Demonstrated uniformity up to N=2000, including over–suppression cases.
- Outlined V5 roadmap for rigorous NB/BD alignment, uniform bounds, and residual control.

#### Limitations

- Current basis (Gaussian, phase–modulated,  $\mu(n)/n$ ) not yet proven admissible in NB/BD frame.
- Constants  $\theta$ , C unproven uniform in N.
- Residual terms  $R_T$  remain uncontrolled.
- Full equivalence  $d_N \to 0 \iff \text{RH not yet closed}$ .

## Conclusion

These notes form a seed: evidence that simultaneous satisfaction of NB/BD conditions may be possible with enriched bases and kernels. Proof remains open, but a plausible roadmap (V5) is identified.