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Build robust testing frameworks to evaluate statistical reproducibility
of accelerated/AI-enhanced numerical simulations to build trust
among domain scientists

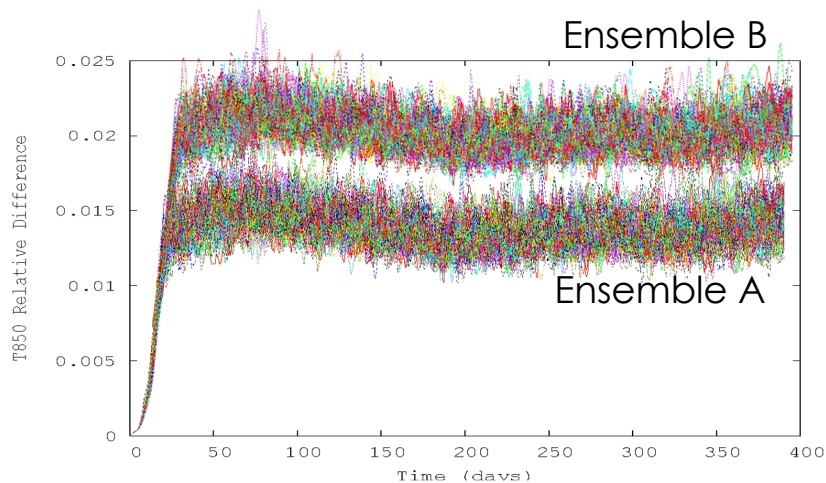
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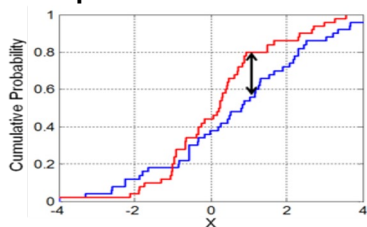
- What does reproducibility mean?

- Numerical vs. Statistical



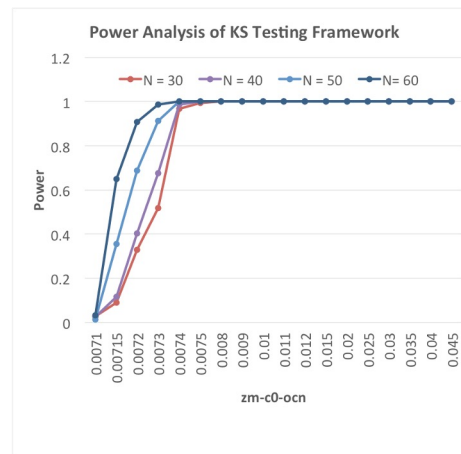
- How do we evaluate reproducibility?

- **Multivariate two sample equality of distribution testing:** high dimensions, low sample sizes



- How do we build trust?

- Quantify false positive/negative error rates



- How can NERSC help?

- Reward low-precision computations
- Allocate hours specifically for evaluating reproducibility
- Leverage expertise in statistics