Treatment of Observational Uncertainty in ILAMB

Nathan Collier,   Forrest Hoffman (ORNL)
Dave Lawrence (NCAR)

Science Summary

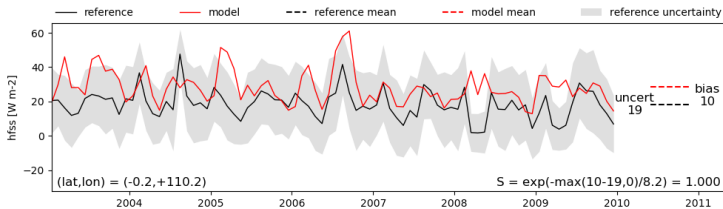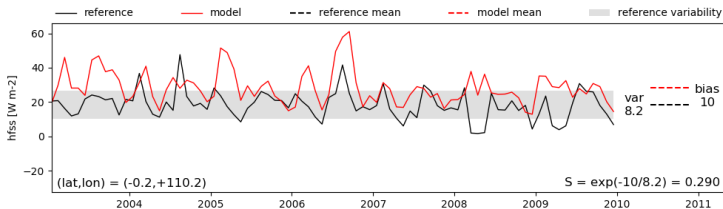As more observational / reanalysis datasets are providing estimates of uncertainty, we have adapted the ILAMB scoring methodology to account for it following a *perfect in the envelope* paradigm.

Future Research

Understand the impact of including uncertainty on a wider selection of observational datasets. The following come from the CLASS dataset:
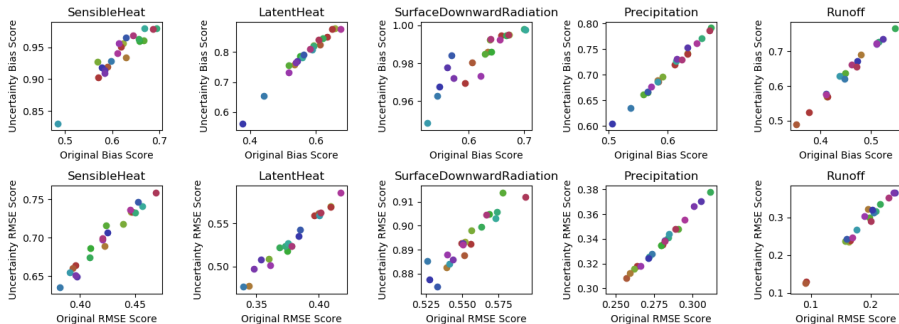

Figure: Bias (top row) and RMSE (bottom row) scores for CMIP6 models (colored dots) for the standard ILAMB methodology (x-axis) and a methodology including uncertainty (y-axis).

Relationship to white paper

Much of the RGMA research depends on comparisions to observational datasets.

- ▶ If we are benchmarking in areas of large observational uncertainty, we might make a mountain of a molehill
- ▶ Allows score maps to better drive model improvements
- ▶ Gives us a feedback mechanism to observational community