

Closing remarks: Understanding and Prediction

Presented by

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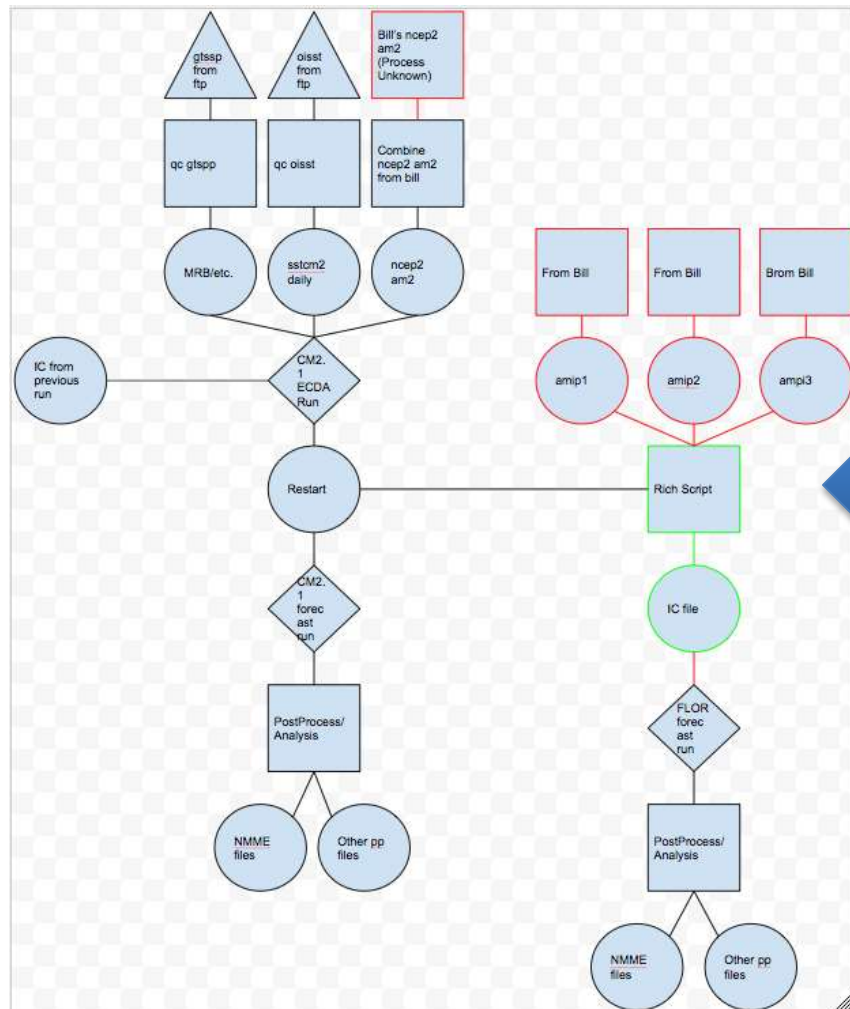


Understanding and prediction

- Unified approaches for variability and change, across time scales and phenomena
- Tools targeted to research objectives, with clearly defined goals
- Judicious & balanced use of complexity, high resolution and large ensembles
- Application and research connected and complementary

Efficient resource use: automation and focus

Prediction process: every month



- Pseudo-operational forecasts a challenge within research environment: resources
- Test fully-automated forecast workflow underway (thanks Seth Underwood!!!!)
- Target tools to problems, consider value of cost.
- Engage community (internal and external).

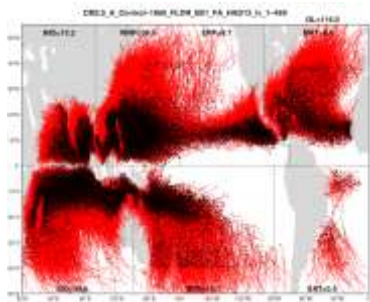
Going forward

- New attribution and prediction targets (e.g., ecosystems and earth system vars.)
- Large ensembles to target nexus of change/variability
- Incorporate new models (i.e., CM4) into predictions as resources permit
- High-resolution coupled data assimilation
- Prediction, attribution and understanding unified across timescales and phenomena

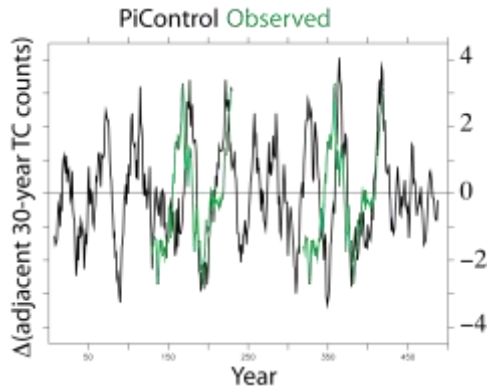
Unified prediction, attribution & understanding

We are here already, moving forward (TC example).

Simulation



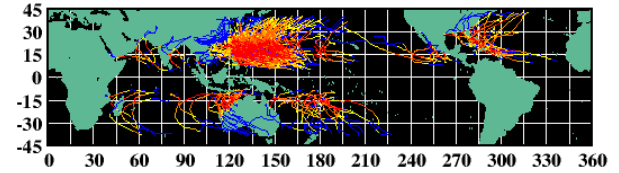
Seasonal FLOR TC Predictions



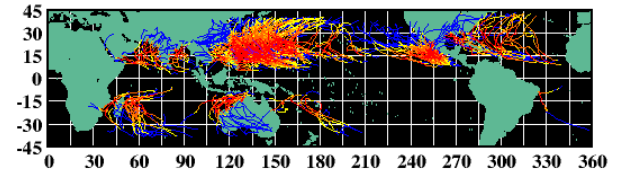
FLOR TC D&A

Dec-Cen Pred.

CONTROL/downscaled - 244 storms



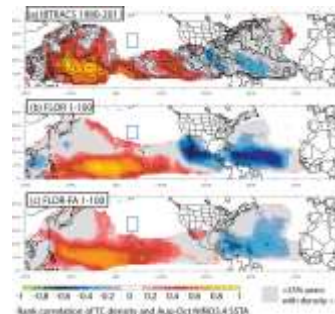
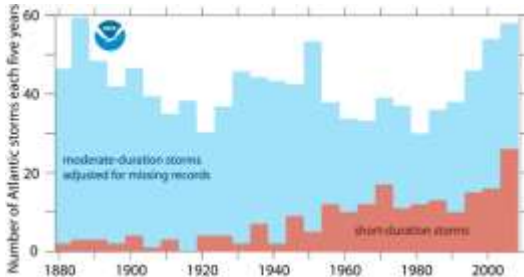
WARMING/downscaled - 313 storms



Downscaling, Impacts
and Decisions



Assessment
of Obs.



Understanding

w/ Princeton U./CEE, U. Iowa,
Willis Research Network,
U.S. Army Corps