



Current and future plans for S2S2D in CGD

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S2S2D

- Fundamentally a coupled problem
- Different scales of predictability operate on different modes of coupling
 - Ocean

Decadal Prediction Large Ensemble with CESM1

The CESM Decadal Prediction Large Ensemble:
Forecasting decadal trends in the
North Atlantic and Arctic

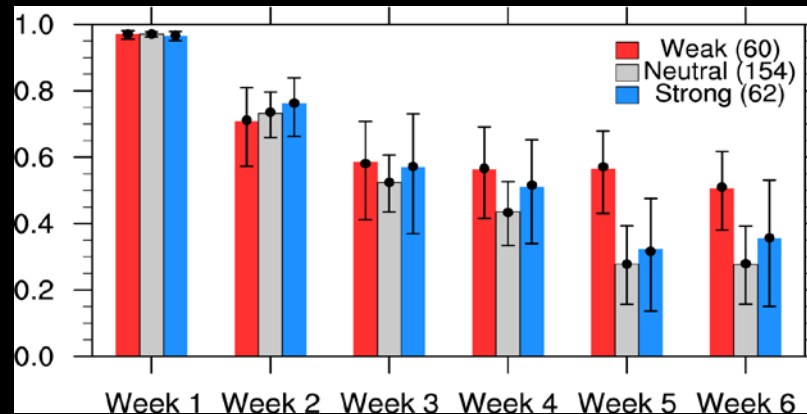
S2S2D

- Fundamentally a coupled problem
- Different scales of predictability operate on different modes of coupling
 - Ocean (S. Yeager et al.)
 - Stratosphere (Y. Richter et al.)

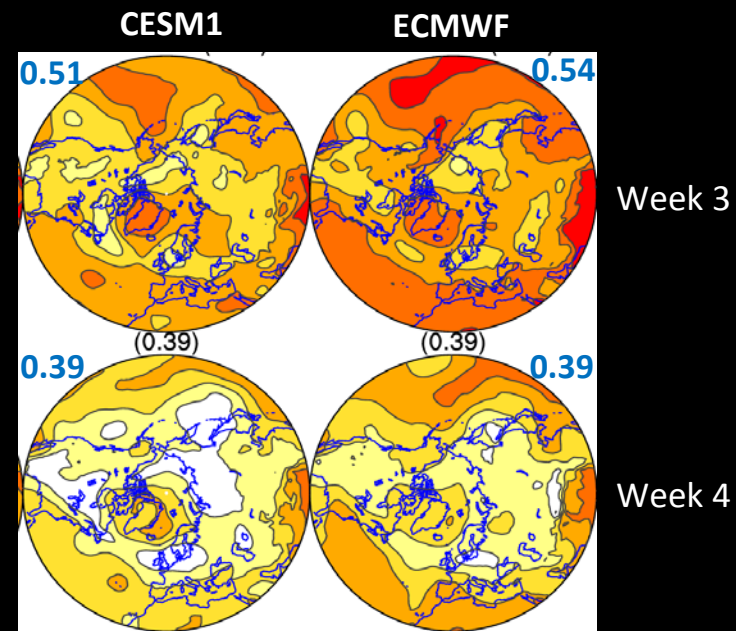
NAO Predictability: Influence of the Stratosphere

- Research with CESM1 S2S hindcasts
- Following extreme stratospheric polar vortex conditions, the **NAO predictive skill up to week 6 is generally higher compared to stratospheric neutral vortex states.**
- The enhanced NAO predictive skill **for weak vortex events is related to stratospheric downward coupling**, while in the case of strong vortex events the skill is partly related to persistence and lower boundary forcing.

ACC of weekly NAO in dependence of initialized 10hPa polar vortex strength



*Sun et al. (2018)
in preparation
Poster: Monday
PM*



NOAA funded project: J. Richter (NCAR) & J. Perlwitz & L. Sun (NOAA/ESRL/PSD)

S2S2D

- Fundamentally a coupled problem
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 - Ocean
 - Stratosphere
- Bridging the weather-climate interface
 - Singletrack project and associated SIMA system