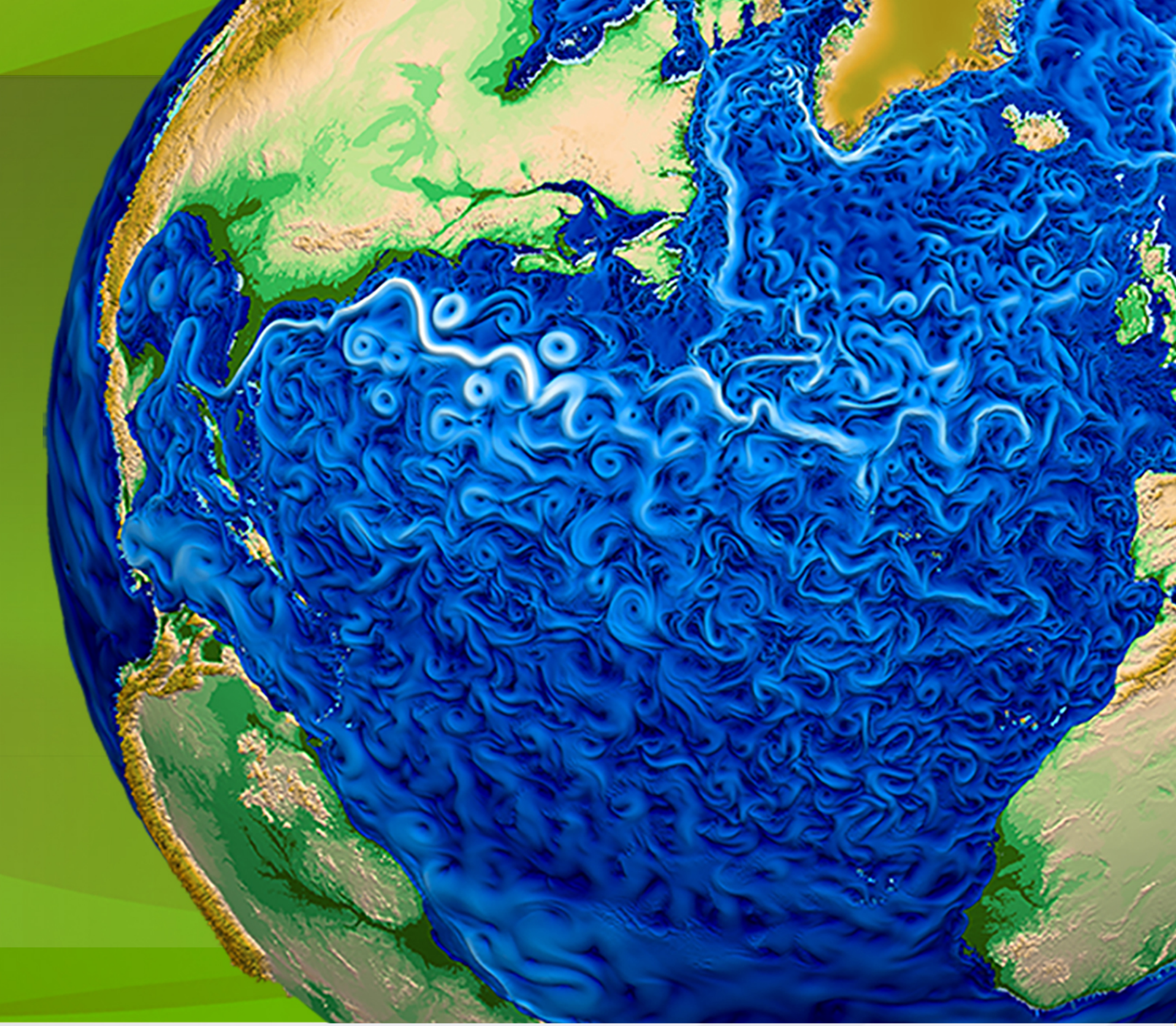


R:

Evaluation of the ACME coupled system: first application to v0 simulation

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Objectives

1. Identify priority metrics for the coupled system

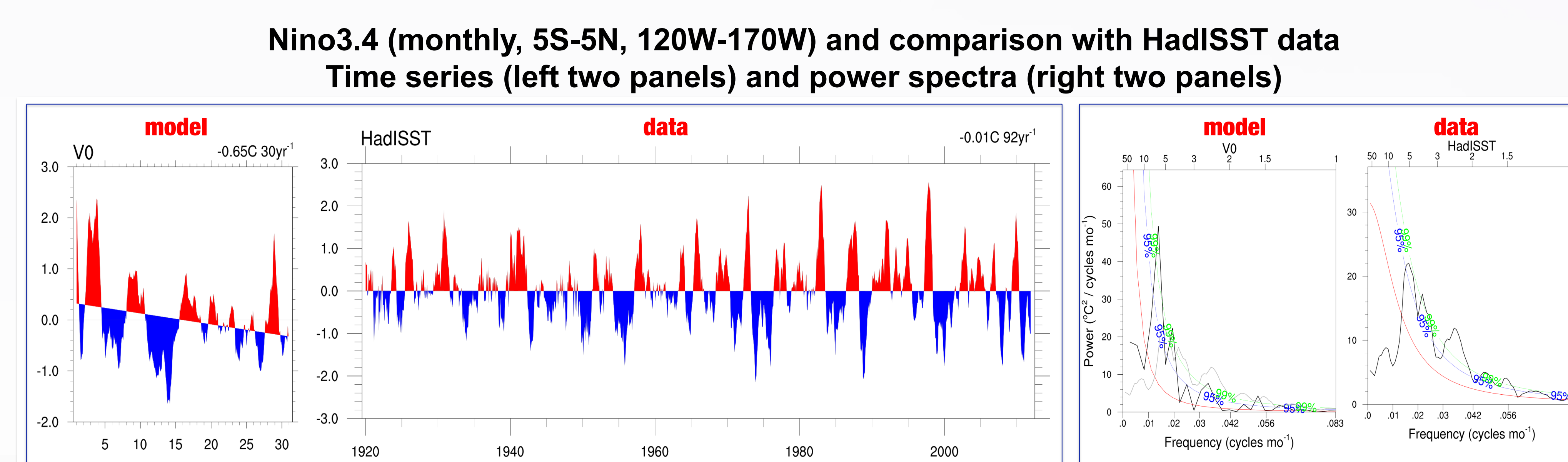
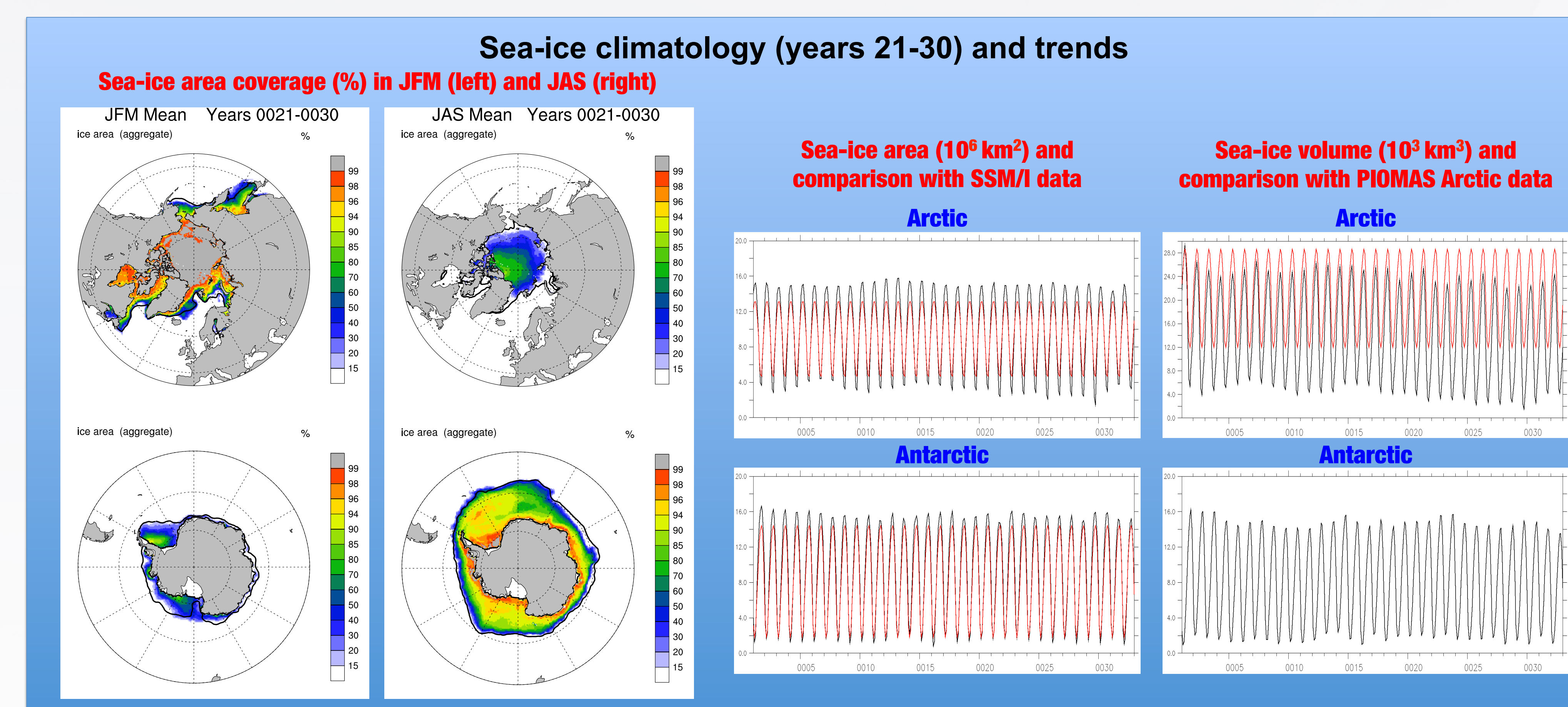
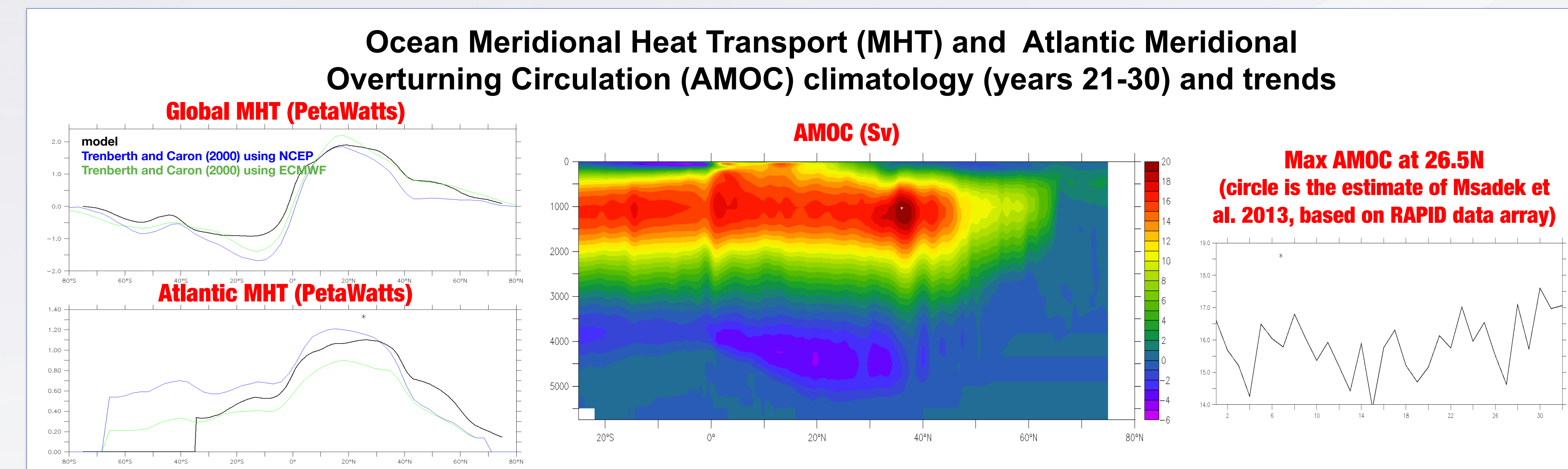
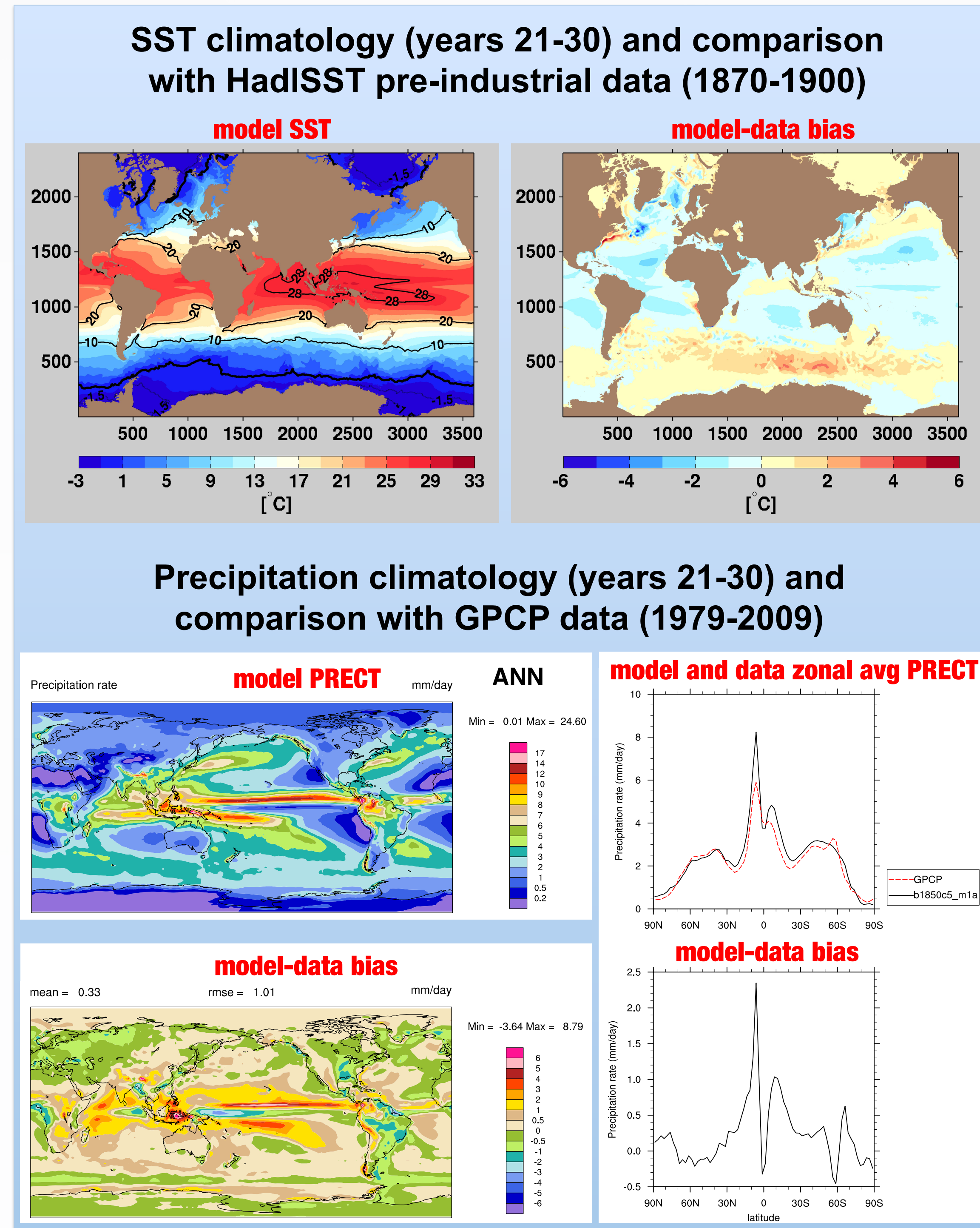
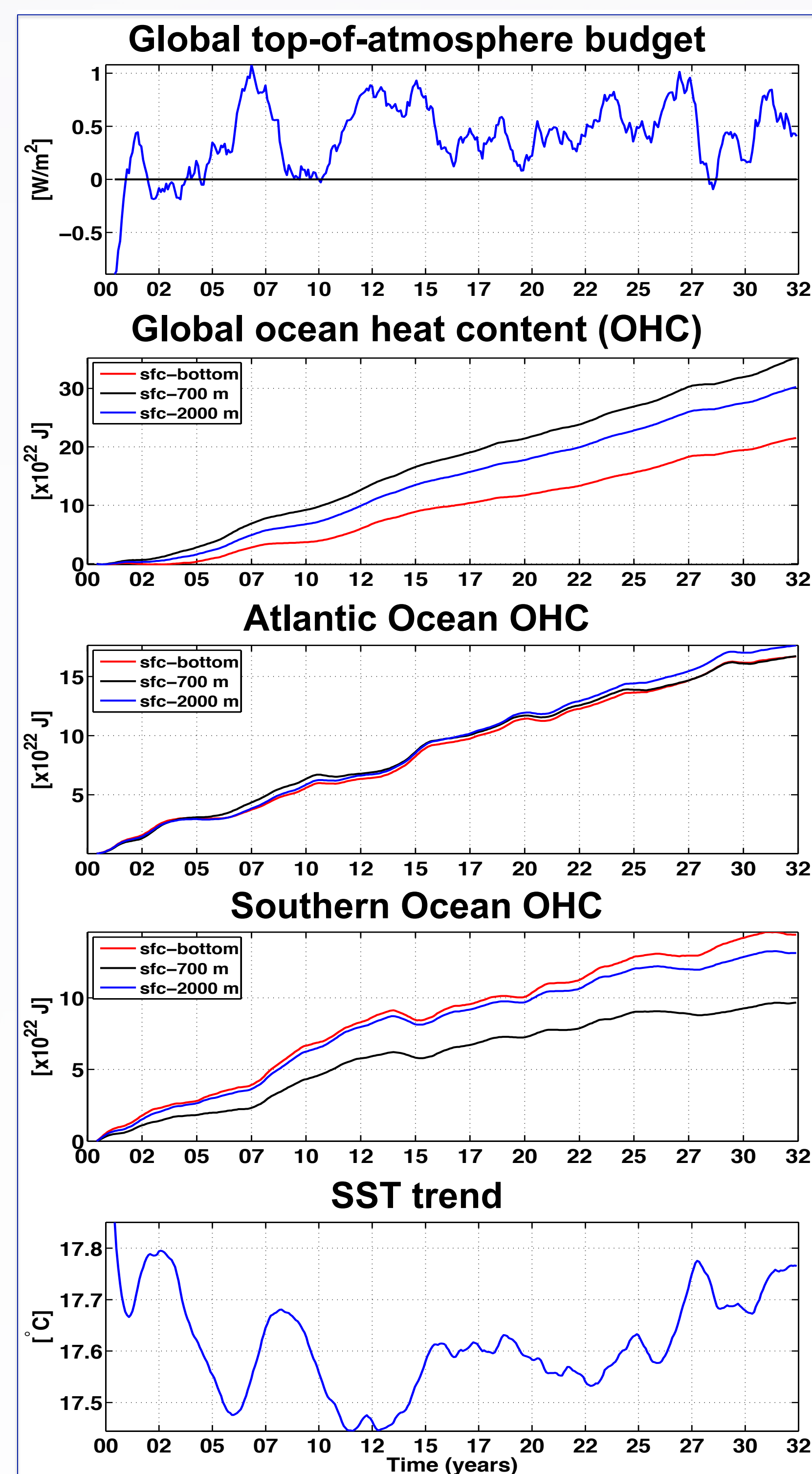
We have put together a team with expertise in single-component and coupled model simulations to identify a suite of seven priority metrics to evaluate the ACME coupled system. These metrics are: i) climatology and trends of zonal top-of-atmosphere budget; ii) trends of ocean heat content; iii) climatology and trends of SST; iv) climatology and trends of precipitation; v) climatology and trends of sea-ice extent and thickness; vi) annual meridional ocean heat transport and meridional overturning circulation pattern; and vii) Nino3.4 index.

2. Document process to inform Workflow

The same team is also providing complete documentation of the metric computation process to inform the Workflow team. The documentation includes a full description of the computational algorithm, the necessary model fields, and the observational data set used for direct model-data comparison.

Approach

First application of priority metrics to ACME v0 first 33 years of simulation



Impact

Evaluation of all future ACME coupled simulation. We now have an exciting team that can contribute with expertise in atmosphere, ocean and sea-ice modeling to the evaluation and better understanding of the simulated coupled system in future ACME coupled experiments.

Important link to Workflow team work on development of UV-CDAT diagnostic package for ACME.