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Observations for CMIP5 Simulations

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Objective

To Provide the community of researchers that will access and evaluate the CMIP5 model results access to analogous sets of observational data.

- Analogous sets in terms of periods, variables, temporal/spatial frequency
- This activity will be carried out in close coordination with the corresponding CMIP5 modeling entities and activities
- It will directly engage the observational (e.g. mission and instrument) science teams to facilitate production of the corresponding data sets.

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Background

- Taylor et al (2008) have defined the protocol for the CMIP5 simulations that will be used for the next IPCC Assessment Report, AR5.

- The protocol defines the scope of simulations that will be undertaken by the participating modeling groups.

- For several of the prescribed retrospective simulations (e.g, decadal hindcasts, AMIP and 20th Century coupled simulations) observational data sets can be used to evaluate and diagnose the simulation outputs.

- However, to date, the pertinent observational data sets to perform these particular evaluations have not been optimally identified and coordinated to readily enable their use in the context of CMIP5.

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Main Tasks

Given the complexity of the observational datasets, a simple framework to identify, organize and disseminate them for CMIP5 will be developed.

Use the CMIP5 simulation protocol (Taylor et al. 2008) as the guideline for deciding which observations to stage in parallel to model simulations.

The main tasks will be:

1) Work with modeling/observation communities to identify data sets;

2) Work with observational teams to establish the metadata for datasets while documenting as best as possible the quality of observations;

3) Work with the observational science teams to facilitate production of the identified datasets, with the needed characteristics and formats;

4) Organize these datasets and provide a strategy for accessing them that has close parallels to the model data archive.

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Strategy

The most efficient way to achieve these goals is to directly involve the large variety of groups that are the originators of these observational datasets.

This should be carried out through a request for participation of the different groups in this observational component of CMIP5.

In conjunction with this, is the need to work with the group(s) developing the CMIP5 model data dissemination system to make the analogous system for observations as parallel as possible.