

**Report on CFMIP discussions and decisions that took place at
the WGCM-11th session (Hamburg, Sept 3-5 2007)**

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General issues :

WGCM supports our initiatives aiming at improving the evaluation of clouds in climate models and the understanding of cloud-climate feedbacks. Progress on the collaboration between CFMIP and GCSS is also viewed very positively. The main lines of the CFMIP-2 project have been approved. However the details have not been discussed much, owing to a very busy agenda.

Experimental design :

- John Mitchell insisted that we should also consider slab experiments in our analyses of climate sensitivity and feedbacks, partly for a reason of continuity with the past, and partly to examine better the influence of the atmospheric model component on the spread of climate feedbacks. Note that slab experiments will be part of CMIP4 coordinated experiments.

- The meeting clarified the CMIP4 plans of coordinated experiments. In addition to "long-term AR5 scenarios", carbon-climate experiments and near-term experiments focused on decadal predictability, CMIP4 will coordinate idealized 1%/yr CO₂ experiments (with pre-industrial control), slab experiments, AMIP experiments, plus an AMIP-like (3 yr) experiment with 2xCO₂.

Simulator :

- WGCM recommends to use the CFMIP simulator (CICCS) in some CMIP4 experiments (including : AMIP, pre-industrial control, 1%/yr CO₂ and 20th century simulations), at least for some time slices.

- The recommendation will be refined at the next WGCM meeting once we can give more details about the computational cost of the simulator, and about the amount of associated outputs. At that time, we will also have to be more specific about the amount of work required to implement the simulator in the models (for groups that already use the ISCCP simulator as well as for others). Pilot intercomparison studies using this simulator that will be carried out over the next few months will be very important for this purpose.

- Delivering the simulator to the modelling groups within the second half of 2008 should be fine.

CMIP4 outputs :

- WGCM agrees on the principle of having more cloud diagnostics (including higher-frequency - e.g. 3-hourly - diagnostics for some time periods), and of collecting atmospheric model data on model levels as well as on interpolated level.

- However, it is too early to decide exactly what can enter the list of CMIP4 outputs.

This will be decided at the next WGCM meeting. In the meantime, a list should be proposed (Karl proposed in 6 months or so from now) and circulate amongst the different modeling groups to get some feedback.

- Like in CMIP3, CMIP4 outputs will be prioritized. WGCM agreed that some diagnostics from the simulator should enter in the top-level package of CMIP4. But we will have to prioritize the different outputs that we will request to the modeling groups, and for each set of output we will have to explain the associated purpose or the science question addressed.

- It is too early to decide whether it is reasonable or not to request high-frequency grid-point diagnostics as part of the standard CMIP4 output. It will be discussed at the next WGCM meeting. But we are already sure that some global 3-hourly diagnostics will be included in the CMIP4 output for some time periods.

Storage:

For the moment, it seems unlikely that CFMIP-2 additional experiments (i.e. experiments that are not CMIP4 coordinated experiments) can be stored together with the CMIP4 database. It can be discussed again at the next WGCM meeting.