

WMAC-2 report

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Introductory remarks

- Second meeting -> Started action after last year's existential discussions
- Still struggling to get everyone to come -> partly caused by meeting format (see later)
- Great discussions with those who did come

Grand Challenges

- Many of the GC goals require major improvements to models -> There appears to be no strategy how to achieve this.
- Concern that an already stretched modeling community will be even more fragmented.
- More thought on coordination of activities is required. -> Topic for WMAC-3?

CMIP6

- CMIP6 planning has begun.
- The community has barely recovered from CMIP5, with results indicating little progress from CMIP3!
- Just as for the GCs, to remain credible we need more time and a strategy to significantly improve models.
- What is our strategy to achieve this?

Promote model development

- Promote the establishment of several prizes for significant contributions to model development
- Focus on early career scientists
- Options: National Services, WMO, AMS, RMS, AGU, EGU, EMS, etc.
- Small WMAC task team has been formed

Promote model development

- Summer Schools on model development
 - Most summer schools on modeling are either focussed on running models or on numerical methods.
 - Little to no training in details of model physics - true for all spheres
 - Proposal: Organize summer school(s) on model development that focus on parametrization (e.g., like ECMWF training course).
 - Have them every 2 years at a modelling centre - volunteers wanted!

Atmospheric Physics Summer School

- June 2015 at MPI in Hamburg
- General lectures on parametrisation
- Specific lectures on the host organisation model
- SCM-based tutorials and exercises
- Then every 2 years

ESGF

- WMAC sees ESGF as the main mechanism for exchanging data (mod+obs+ana) in the WCRP in the next decade.
- This will have important implications not all of which are fully understood.
- Buy-in from some WCRP activities exists (e.g., CMIP, CHFP, CORDEX, OBS4MIPS, ANA4MIPS).
- Core project involvement requires some more thought

ESGF

- Recommendations:
 - JSC to endorse ESGF as data exchange mechanism and discuss core project involvement
 - Consultation with ESGF to determine details
 - Leave determination of internal structure to ESGF
 - Replace Review Board by an Advisory Board with membership drawn from relevant partners, including WCRP

Workshops

- Proposal: Workshop on model “tuning”
 - WMAC supportive of general idea
 - WGCM to lead
 - Cover all aspects of tuning - from process level to coupled system
 - discuss making documentation of tuning process a requirement for participation in CMIP6

Workshops

- Workshop on Dynamics-Physics coupling
 - How do dynamical and physical process couple in the general circulation and how well is this coupling represented in models? -> Key to regional climate prediction
 - Currently dealt with in separate communities -> Danger of fragmentation
 - Potential partners: GC4, GASS and SPARC
 - Recommendation: Form a small group to define workshop goals and outline led by GASS

Other things

- WMAC endorses proposal that CMIP6 Decadal Prediction activities are coordinated through WGSIP+WGCM +CLIVAR
- Recommendation:WDAC to lead new effort on coordinating activities on surface fluxes -> GEWEX products, SURFA, Reanalyses