

Evaluation and improvement of climate models

Strategy of model evaluation and improvement in AMMA

I. Intercomparison program AIMMAMIP

- 2 parts : cross section and maps
- make model output available on a data
- define a series of important diagnostics focussed
- on the **intra-seasonal and seasonal time-scales**
- focused but **muti-model** (global, regional, chemistry ...)

<http://amma-mip.lmd.jussieu.fr>

II. Use those integrated models to study the processes which are governing the interannual variability of the African Monsoon ... Identify important mechanisms that should be improved.

III. Improve the representation of small scale and meso-scale processes in integrated models

- “Single column models” vs “cloud resolving” our “large eddy” simulations.
- Idealized frameworks, etc ...

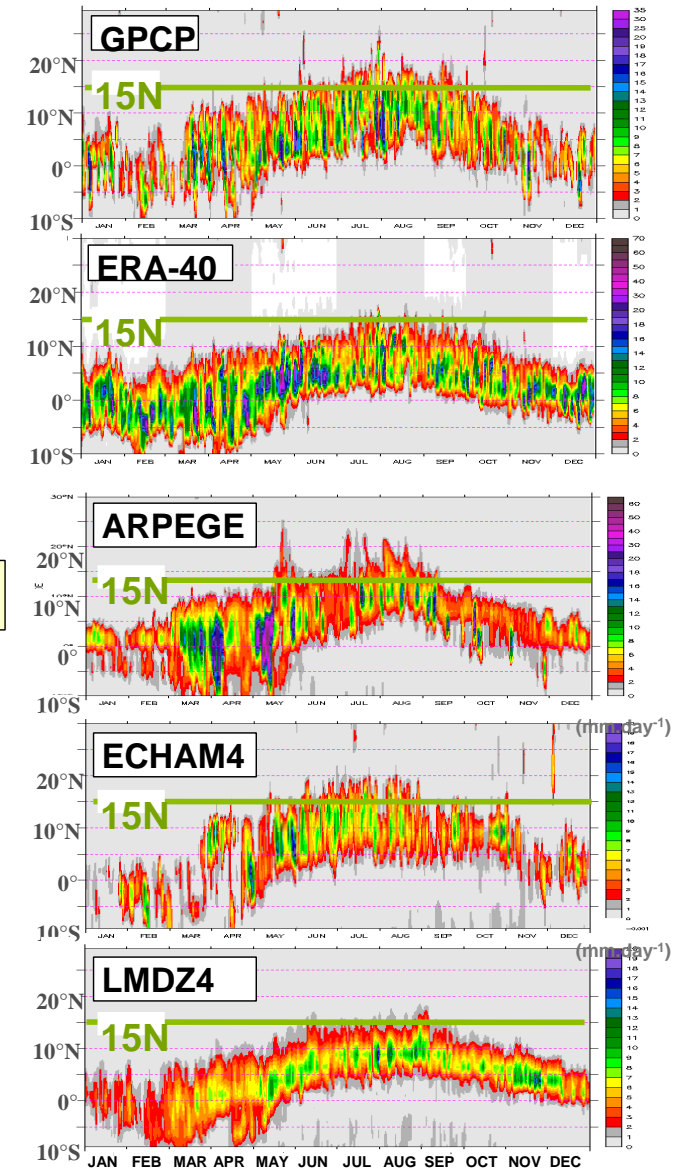
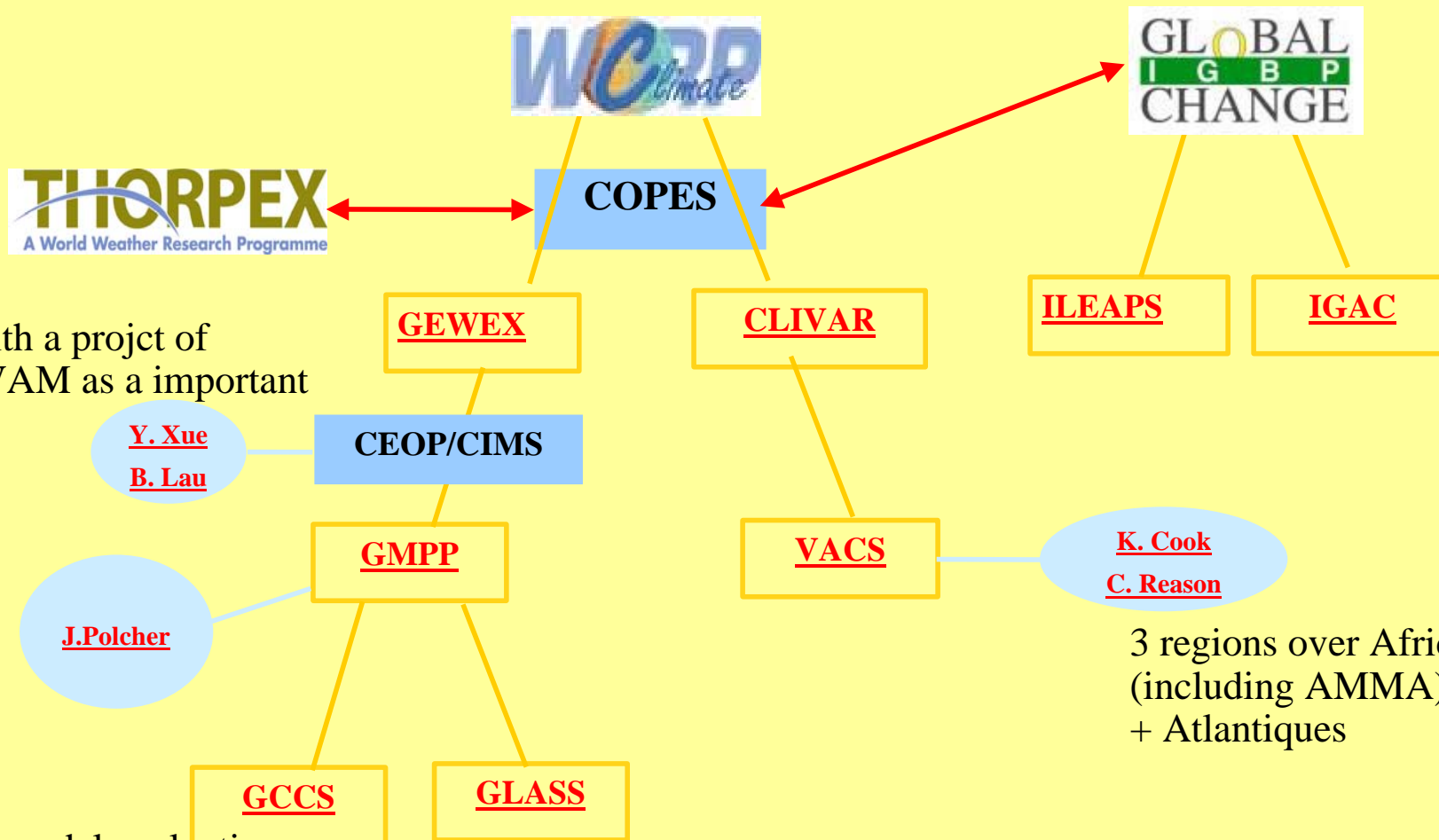


Figure 4: [10W,10E] average daily mean rainfall for 2000, from GPCP, reanalysis products and GCM runs.

Soon

UCLA (Madrid)



CEOP with a project of having WAM as a important focus.

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3 regions over Africa (including AMMA) + Atlantiques

Link with the model evaluation Strategy.3 -> contribution to GCSS when mature ?

We need to minimize 1) the spread of efforts in AMMA
2) the number of programmes to be linked/to report

Activity 1: Evaluation of models (MIP)

To merge & coordinate:

- AMMA-France , AMMA-EU
- CEOP-CIMS initiative
- Remote forcing (SST) detection

To link with COPEX; CLIVAR, CEOP, THORPEX, IGBP ??

Activity 2: Improvement of processes & feedbacks

To merge & coordinate:

- AMMA-France & AMMA-EU (Water cycle, surface-atmosphere feedbacks, aerosols)
- CEOP-CIMS initiative

To link with GEWEX, CEOP, THORPEX, IGBP ??

Relavant issues to be diagnosed

- seasonal cycle
 - intra-seasonal variability
 - diurnal cycle
 - aerosols impact on dynamics
 - veg/soil-atmosphere interactions
 - Interannual variability : remote control versus local processes
- } AMMA-Model Intercomparison Programm

Coordinating group:

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