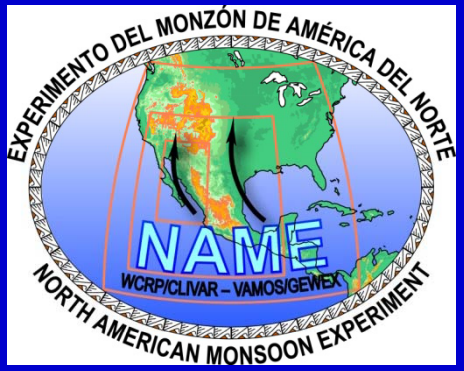
Variability of the American Monsoon Systems 2002

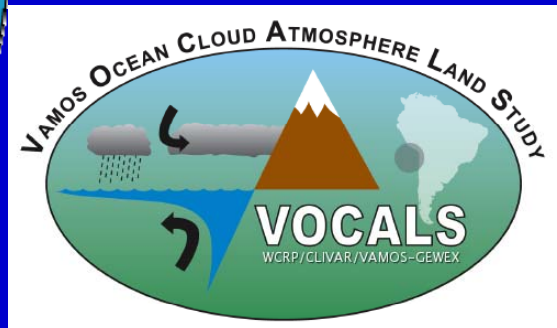
One of the central themes of VAMOS is the evolution of **the South American Monsoon system (SAMS).** A Working Group identified inadequate observations (both in quality and coverage) as well as the limited availability of historical data over South America as the current most limiting factors to adequately address the impact of climate variations (particularly in precipitation) on water resource management, energy production, agriculture and health.

Another central theme of VAMOS is the **study of marine stratus/ stratocumulus in the eastern Pacific**. VAMOS had appointed a Working Group to develop and promote scientific activities leading to an improved understanding and model simulation of the effects of eastern Pacific stratus/stratocumulus decks on the variability of American Monsoon systems.

Consistent with CLIVAR policies, the Working Group on the VAMOS database re-emphasized that **VAMOS data management** will be based, as far as possible, on the principle of free and open access to data.

VAMOS Program Structure (2007)





VAMOS MODELING GROUP

VAMOS PROJECT OFFICE

Variability of the American Monsoon Systems 2012

Cross-cuts

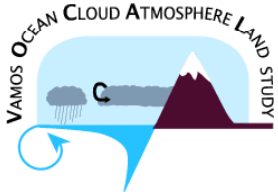
- Modeling Plan
- Extremes Atlas
- VAMOS/CORDEX

CLIVAR and GEWEX endorsed activity

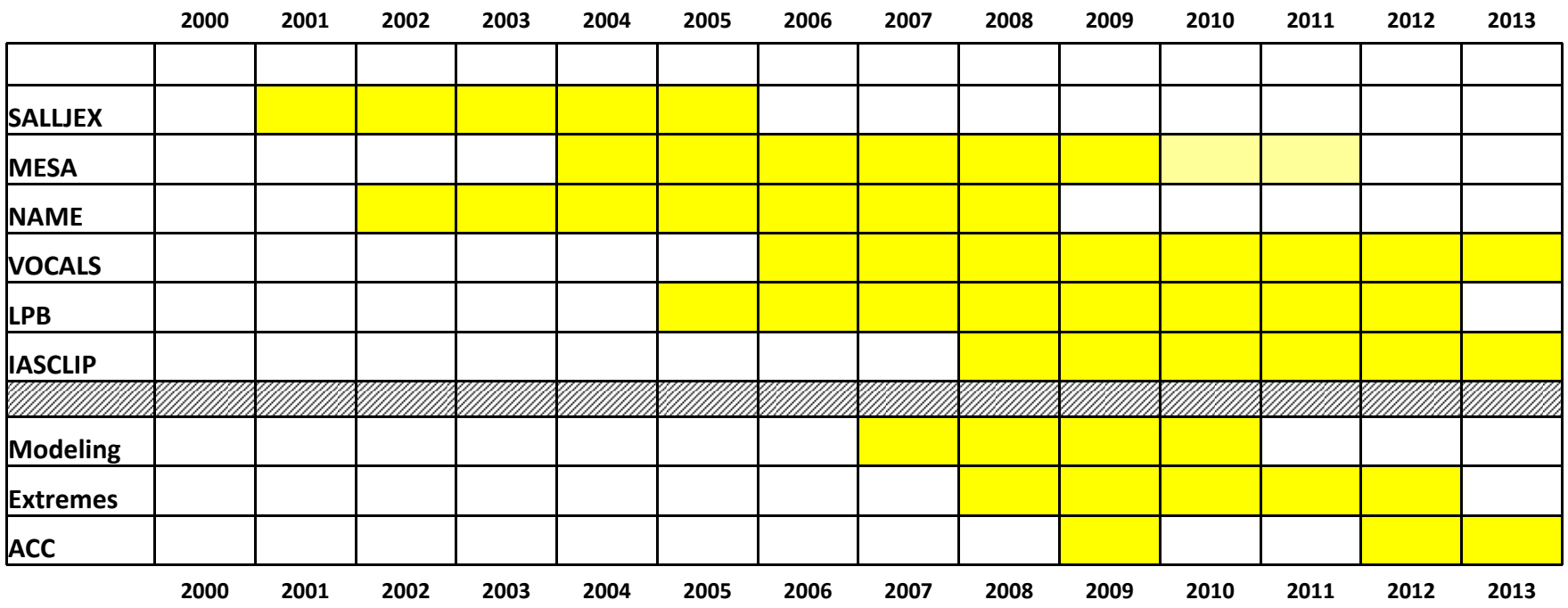
- La Plata Basin Regional Hydroclimate Project (LPB)
  (CLARIS-LPB and IAI-LPB)

Science Programs

- VAMOS Ocean Cloud Atmosphere Land Study (**VOCALS**)
- Intra-Americas Study of Climate Processes (**IASCLIP**)
- ~~New American Core Monsoons initiative~~



VAMOS Timeline



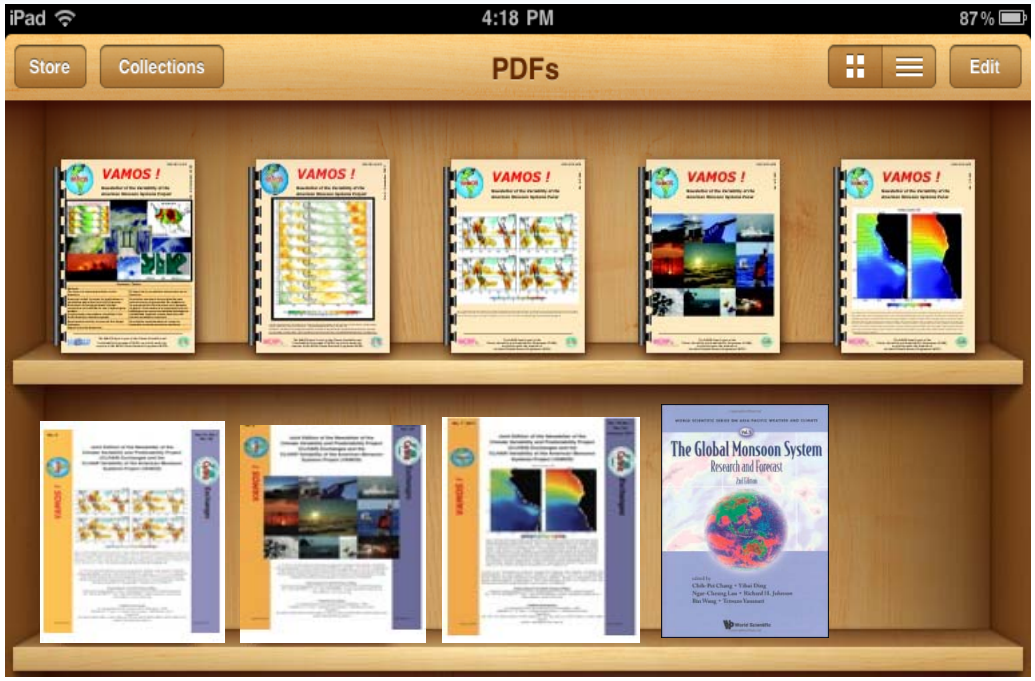
VAMOS strong points:

- Sound basic science leading to improvements in knowledge of physical mechanisms
- Good combination of theory and observations/field campaigns
- Field Campaigns highly motivating to young scientists and students
- Dissemination to the community-at-large.

VAMOS was not designed to deal with current needs:

- Concept of Climate Services
- Interaction with stakeholders (e.g. agriculture)
- Societal needs

Dissemination activities

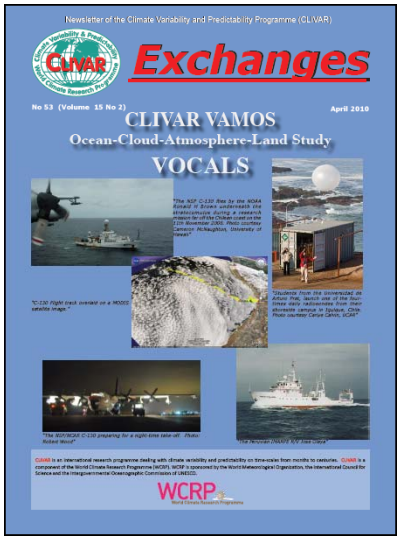


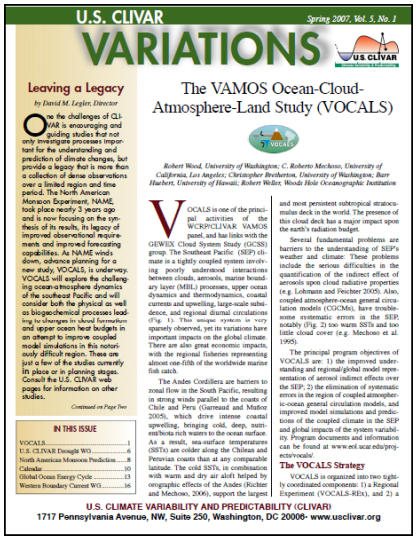
VAMOS Newsletter
(bilingual)

VAMOS contributes regularly to *CLIVAR Exchanges:*

Recent issues of the VAMOS Newsletter are published jointly with CLIVAR Exchanges

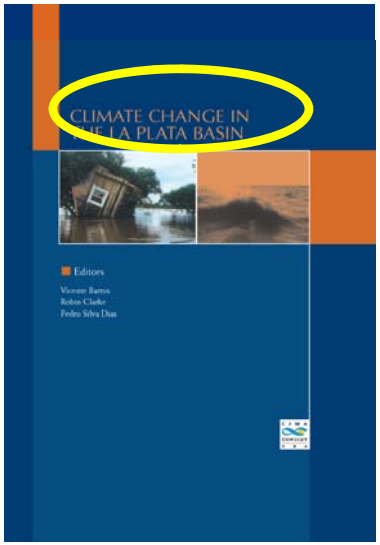
Dissemination activities





VAMOS Ocean Cloud Atmosphere Land Study
VOCALS
WCRP/CLIVAR/VAMOS-GEWEX

PUBLICATIONS: VOCALS Special Issue in Atmospheric Chemistry and Physics (EGU Journal)
~30 papers; 60-70 total.



LPB
La Plata Basin

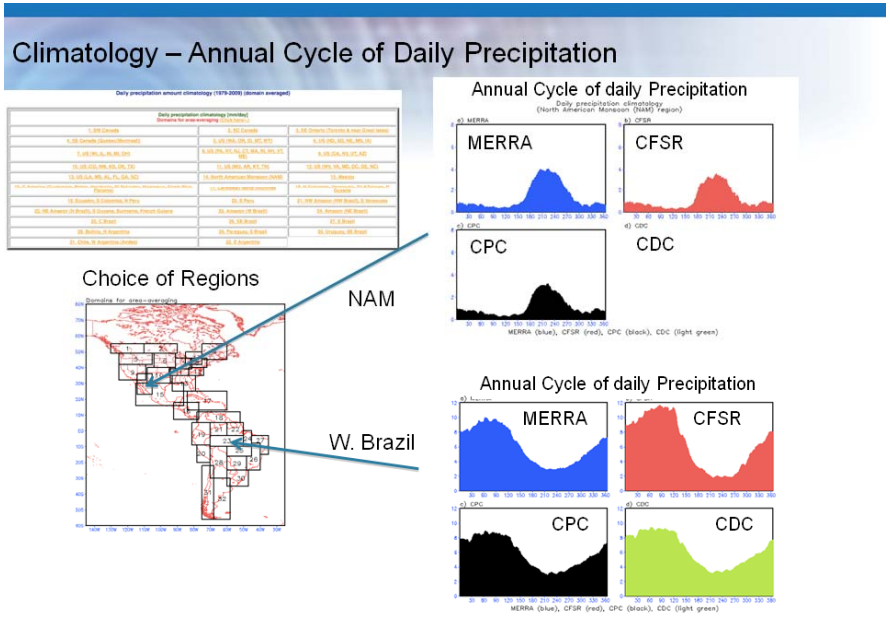
LPB
Book and special issue of Exchanges
Planned special issues in EU journals

VAMOS Extremes Working Group

Siegfried Schubert and Iracema Cavalcanti
(cochairs)

http://gmao.gsfc.nasa.gov/research/subseasonal/atlas/Extremes.html

The overall focus is on improving our understanding of the mechanisms and predictability of warm season extremes over the Americas



- *Develop atlas of warm-season extremes over the Americas*
- *Evaluate existing and planned simulations*
- *New model runs to address mechanisms and predictability of extremes*

- Basic climatologies
- Precipitation extremes
- SPI time series and maps
- Precipitation return values based on GEV fits, including impact of ENSO
- Various temperature extremes – latest