Cloud Life Cycle WG Closing Plenary

21 March 2013

ASR
Atmospheric System Research

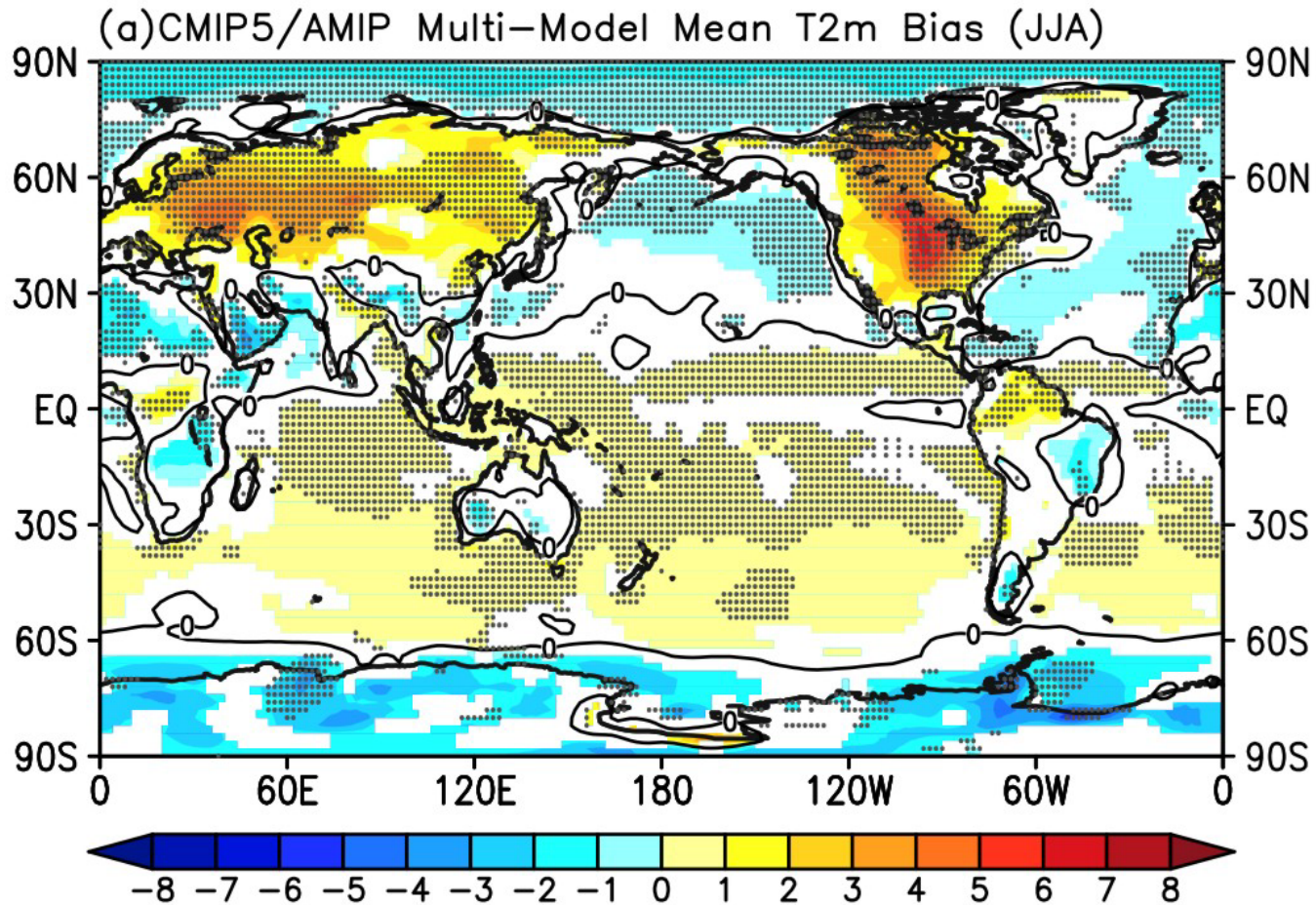U.S. DEPARTMENT OF ENERGY | Office of Science

Agenda

- **Breakout Summaries (status, plans, participation, leadership)**

- **Discussion of evolving themes / cross-cutting themes**

- **Priority activities / data**

- **CLWG future path: Towards fall meeting and beyond.**

Warm Bias in Transpose-AMIP models

(a)CMIP5/AMIP Multi-Model Mean T2m Bias (JJA)

Ma, Xie, et al (2013)

Priorities: Instruments

- Doppler lidar at NSA
- 1625 nm channel on MFRSR (replacing broadband channel) – All sites
- WACR upgrade of computer and receiver
- W-SACR upgrade to improve sensitivity
- SWS (Shortwave Spectrometer) upgrades
- Frost point hygrometer sondes at SGP

- We need to engage in Radar activities!

Priorities: Products/VAPS

Current VAP Development Priorities - 1

Mike

- Ship-corrected moments from MWACR and KAZR
- Horizontal wind contamination correction for MWACR, KAZR (MAGIC)
- Full release of KAZR-ARSCL
- Full release of MicroARSCL (radar spectra properties for microphysics applications)
- SACR products – cloud mask, attenuation correct, velocity unfolding based on work from Kollias et al
- Convective-Stratiform partitioning from C-band
- Integrated Vertical Velocity product

Scott

- Manus Quantitative Precipitation Estimate (QPE)
- Release of Py-ART as an open source development platform
- Quality Controlled moments from the NSA X-SAPR
- Operational implementation of CMAC (corrected moments antenna coordinates), MMCG (mapped moments on cartesian grid), and QPE at SGP

Current VAP Development Priorities - 2

Jennifer (MAGIC Post-Processing)

- Bulk Aerodynamic Fluxes
- Lidar Corrections
- Coordinating MAGIC-wide post-processing efforts (e.g. radar moments, microwave tip curves, meteorology best estimate)

Shaocheng

- Large-scale forcing for AMIE-Gan and AMIE-Manus
- ARM Best Estimate for land-atmosphere interactions

Laura

- MWRRETv2 – Physical retrieval of WV/LW based on 3-channel MWRs
- PBL Height – transition sonde-based product to operations and work on lidar product
- Release of RIPBE/BBHRP for MC3E period and work with QUICR/ACRED
- Extend MFRSR Cloud Optical Depth to NSA
- Sea Surface Temperature from IRTs (MAGIC)
- Run AERI Profile for TCAP and GVAX
- Develop NFOV Cloud Optical Depth VAP

Priorities: Campaigns

- **Routine aircraft observations -> building critical statistics on ice mass-dimensional relationships.**

- **Others….**

CLWG path forward

- **Feedback on general organization and meeting approaches**