

**First West African Monsoon Modeling and Evaluation  
(WAMME) Workshop  
in 2008 American Meteorological Society Annual Meeting,  
New Orleans, January 20, 2008**

**Organizers: Yongkang Xue, William K.-M. Lau, and Kerry H. Cook**

The West African Monsoon Modeling and Evaluation project (WAMME) uses general circulation models (GCMs) and regional climate models (RCMs) to address issues regarding the role of land-ocean-atmosphere interaction, land-use and water-use change, vegetation dynamics, as well as dust, on West African monsoon (WAM) development. Seven GCM groups and three RCM groups have participated in this project. This workshop will discuss results from the WAMME first stage of experiment, WAM modeling issues, future strategies, and coordination with other collaborative projects, such as AMMA, CEOP, International Monsoon Year, etc.

**1). WAMME Results and Related Science.**

**Chairs:** William K.-M. Lau and Kerry H. Cook

8:15-8:25 Brief introduction to the WAMME initiative

Yongkang Xue, University of California, Los Angeles, USA., William K-M Lau, Kerry H. Cook

8:25-8:45 Analyses of the first West African Monsoon Modeling and Evaluation (WAMME) Experiments

Yongkang Xue, University of California, Los Angeles, USA., William K-M Lau, Kerry H. Cook, David Rowell, Aaron Boone, Fernando De Sales, Paul Dirmeyer, Leonard M. Druryan, Jinming Feng, Matthew Fulakeza, Zhichang Guo, S. M. Hagos, Kyu-Myong Kim, Akio Kitoh, Vadlamani Kumar, Benjamin Lamptey, Patrick Lonergan, Wilfran Moufouma-Okia, Phil Pegion, Jae Schemm, Siegfried D. Schubert, Wassila Thiaw, Augustin Vintzileos, Ratko Vasic, Edward K. Vizy, Steve Williams, Man-Li C. Wu

8:45-9:00 Modeling interannual variability of the WAM jump using WAMME regional model simulations

Kerry H. Cook, Cornell University, USA, J. F. Newman, E. K. Vizy, and S. M. Hagos

9:00-9:15 West African summer monsoon climate: A comparison of RM3 downscaled analyses to downscaled GCM forecasts

Leonard M. Druryan, NASA/Goddard Institute for Space Studies, USA. Matthew Fulakeza and Patrick Lonergan

9:15-9:30 Influence of soil moisture initialization methodology on simulating the West African Monsoon system in a Regional Climate Model

Wilfran Moufouma-Okia, Met Office, Hadley Centre for Climate Prediction and Research, U.K. Dave Rowell and Richard Jones.

9:30-9:45 West African Monsoon in a 20km-mesh Atmospheric GCM  
Akio Kitoh, Meteorological Research Institute, Japan, Masahiro Hosaka and Osamu Arakawa, Meteorological Research Institute, Tsukuba, Japan

9:45-10:00 Predictions of the West African monsoon in the NCEP GFS  
Vadlamani B. Kumar, Climate Prediction Center/NCEP, Wassila M. Thiaw, and Jae K. Schemm

10:00-10:30 **Coffee break**

**2). Relationship of WAMME to Other Programs: Developing Interactions and Synergy.** Chairs: Kerry H. Cook and David Rowell

10:30- 10:45 An overview of UCAR Activities in Africa  
A. Laing, UCAR, R. Pandya, R. Brientjes, B. Lamptey, P. Kucera, F. Semazzi, T. Yoksas, M. Ramamurthy, M. Weingroff, T. Spangler, A. Traore, M. Konate, N. Fall, R. Boger, T. Warner, S. Herrmann, M. Moncrieff and R. Low

10:45-11:05 The International CLIVAR Climate of the Twentieth Century Project (C20C)  
Chris Folland, Met Office Hadley Centre, UK and Jim Kinter, Center for Ocean-Land-Atmosphere Studies, USA

11:05-11:25 AMMA-MIP and AMMA-LMIP modeling activities  
Paolo Ruti, ENEA, Italy and Aaron Boone, CNRM, France

11:25-11:40 The AMMA radiosonde programme and its implications for the future of atmospheric monitoring over Africa  
Andreas H. Fink, University of Cologne, Köln, Germany; and C. Thorncroft, S. Janicot, M. W. Douglas, A. Beljaars, D. J. Parker, E. Afiesimama, J. B. Ngamini, A. Augusti-Panareda, F. Dide, A. Diedhiou, T. Lebel, J. Polcher, J. L. Redelsperger, and G. Wilson

**11:40 – 1:40 Lunch Break**

**3). What next? Thoughts and issues in designing future African climate studies.**  
Chairs: Yongkang Xue and William K-M Lau

1:40-1:55 Some thoughts on SST forcing of Sahel rainfall  
David Rowell, Met Office, Hadley Centre for Climate Prediction and Research, UK

1:55-2:10 Scale interactions in the West African Monsoon  
Chris Thorncroft, University at Albany, SUNY, USA

2:10-2:25 Land-atmosphere coupling strength in AGCMs – with a focus on cases in the updated COLA AGCM

Zhichang Guo, Center for Ocean-Land-Atmosphere Interactions, USA. and Paul Dirmeyer.

2:25-2:40 Effects of Saharan dust on the diurnal and seasonal variability of the West African Monsoon

William K-M Lau, NASA/Goddard Space Flight Center, USA, Kyu-Myong Kim, Yogesh Y. Sud, Gregory K. Walker

2:40-2:55 Regional modeling study of the effect of Saharan dust on the West African monsoon

Abdourahamane Konare, University of Cocody, Ivory Coast, A.S. Zakey, F. Solmon, F. Giorgi, S. Raucher, S. Ibrah, X. Bi

2:55-3:05 Dust and African precipitation

Natalie Mahowald, Cornell University, USA.

3:05-3:15 Designing regional model simulations of the WAM: Lessons learned

Edward K. Vizy, Cornell University, USA., E. E. Riddle, S. M. Hagos, C. M. Patricola, and K.H. Cook

3:15-3:25 On the evolution of African Easterly Waves and precipitation systems over the Sahel as a function of horizontal model resolution

Augustin Vintzileos, National Center for Environmental Prediction and UCAR, USA.

3:25-3:30 Coupled ocean/atmosphere regional modeling of the WAM system

E. E. Riddle, Cornell University, USA, S. M. Hagos, C. M. Patricola, E. K. Vizy, and K.H. Cook

3:30-3:35 Simulating 2005 summer over West Africa.

Benjamin Lamptey, NCAR and Ghana Meteorological Agency, Ghana

**3:35 – 4:00 Coffee break**

**4). Discussion** Chairs: Yongkang Xue, William K-M Lau, and Kerry H. Cook

4:00 – 6:00

**7:00 Dinner (Optional)**

The workshop is sponsored by Coordinated Energy and Water Cycle Observation Project (CEOP), U.S. National Science Foundation, U.S. National Aeronautics and Space Administration, and American Meteorological Society Climate Variability and Change Committee.