Meeting of the AGU Technical Committee on Precipitation

Monday, May 25, 2009, 06:45PM – 8:45PM

Attendees

Rick Lawford, Eyal Amitai, Mekonnen Gebremichael, Shaun Lovejoy, and Yang Hong

AGU Meeting Session Planning

Approved sessions for AGU Fall 2009, San Francisco, California [see text at end of agenda]

1) Using Precipitation Observations in Atmospheric, Land Surface, and Hydrological Models
2) Precipitation Extremes, Floods, and Droughts in a Changing World
3) Possible new session from Mekonnen Gebremichael: Precipitation Estimation/Validation
4) (http://www.agu.org/meetings/fm09/), and propose submission is open.

Session proposals for AGU 2010 Joint Assembly, in Brazil:

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2010 Meeting of the Americas
08–13 August 2010, Iguassu Falls, Brazil
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1) Eyal Amitai (looking for co-conveners): General Session on Precipitation
2) Welcome more session proposals and we can discuss this at Fall meeting

Report on AGU Fall 2008 Meeting: 2 Journal special issues out of Precipitation Sessions

1) Int. J. Climatology Special Issue on *Hydroclimatology* based on Scott Curtis et al. convened session "Spatial and Temporal Trends in Hydrometeorological Records as Indicators of Climate Variability and Change I & II". Guest Editor Dr. Scott Curtis and Journal Editor Dr. McGrego.
2) Int. J. Remote Sensing Special Issue on *Remote Sensing and Large Scale Land Surface Process* Based on Session "Remote Sensing and Modeling of Land Surface Hydrological Processes convened by Dr. Tang et al. Guest Editor Drs. Qiuhong Tang, Michael Durand, Dennis P. Lettenmaier and Journal Editor Dr. Yang Hong,

Precipitation Committee

1) Welcome our new committee member: Firat Testik from Clemson University
2) Chair and Deputy Chair have 2-year term limit, so we need identify a new deputy chair for next term at AGU Fall this year
3) Member no term limits but encourage they get more involved
4) Li-Chuan Chen (Li-Chuan.Chen@noaa.gov) from the NOAA/NWS will update the precipitation committee website quarterly (http://www.iihr.uiowa.edu/~precip/index.htm)

General Discussion Topics

Precipitation-related conferences, programs or field experiments:

1) HW.6 Precipitation variability and water resources (Convened by Daniel Schertzer, Shaun Lovejoy, Nityanand Singhh, Eric A. Smith) during the Joint IAHS & IAH International Convention, Hyderabad, 6-12 September 2009 http://www.appliedhydrology.org/iahs/iahshome.view

2) From Daniel Schertzer: the 10th International Precipitation Conference (IPC10) will be hold in Coimbra (Portugal) in June 2010 and organized by Jao de Lima and colleagues

3) Rick Lawford: GEWEX **Sixth International Scientific Conference on the Global Energy and Water Cycle** (http://www.gewex.org/): Water in a Changing Climate, Melbourne, Australia, 24-28 August 2009.

Special Issue call

Special Collection Issue of the Journal of Hydrometeorology
State-of-the-Science of Precipitation Research
Dear Colleague:
The purpose of this letter is to invite you to submit a manuscript to Special Collection on Precipitation Research. Topics to be covered are:
precipitation measurement, including satellite-based estimation, retrieval algorithms and data estimation, ground sensors and field campaigns; microphysics; modeling; quantitative precipitation forecasting; and interface topics such as aerosol-cloud rainfall interactions, among others.
Pending review and acceptance, these manuscripts will be published independently in the hard-copy of JHM, but a special digital collection with all the published manuscripts will also be created and distributed.
Although, the Journal of Hydrometeorology accepts papers for review on a rolling basis, in order to facilitate the coordination, the deadline for submission of manuscripts to this special collection is November 20, 2009. When you submit your manuscript, please indicate clearly that it is submitted to the Special Collection on Precipitation Research.
Finally, please confirm your interest by email to the CEA, Terri Scott, at jhydromet-ea@duke.edu <mailto:jhydromet-ea@duke.edu> with a tentative title and co-authorship for your manuscript, which will help us in planning the review process. If you have any questions on this, please contact Terri Scott.
Precipitation research is core to JHM's mission. And in many ways JHM has become a journal of reference in the area of precipitation research.
We are committed to producing a high-quality, high-impact publication with your contribution. Looking forward to hearing from you soon.
Best regards,
Ana P. Barros. Ph.D.
Professor of Engineering

Appendix

2009 AGU Fall Sessions Sponsored by our committee

1) Session Title: Using Precipitation Observations in Atmospheric, Land Surface, and Hydrological Models

Abstract: Precipitation products are beginning to be used more frequently in numerical modeling studies of weather and climate. Precipitation observations are also used for a new generation of atmospheric, land-surface and hydrologic numerical modeling analyses. Precipitation observations include conventional rain gauge observation, radar, and satellite-based estimates. An important component in applying a numerical modeling system is to understand the capabilities and limitations through verification studies. Typical verification is often performed using standard verification measures (mean error, bias, mean absolute error, and root mean squared error, etc.). However, these methods are unable to account for small-scale noise or discriminate types of errors such as displacement in time and/or space (location, intensity, and orientation errors, etc.) in the forecasts. This issue has motivated recent research and development of many new diagnostic verification techniques to evaluate forecasted fields such as precipitation. The purpose of this special session is to exchange recent scientific knowledge on the application of verification methods and the impacts and techniques for using precipitation observations in numerical analyses, simulations, and predictions using coupled or uncoupled atmospheric, land-surface, and hydrologic numerical modeling systems.

Presentations describing assimilation techniques for precipitation observations are encouraged. Presentations describing the impacts of incorporating precipitation observations on simulations and predictions in atmospheric, land surface, and hydrologic models are especially welcome. Finally, all contributions related to the application of verification methods to evaluate numerical models are especially welcome.

Conveners:
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2) Precipitation Extremes, Floods, and Droughts in a Changing World

Precipitation is highly variable in time and space and responds to changing heat sources on the Earth's surface and atmospheric pressure perturbations. Examples of the former include the El Nino/La Nina cycle of sea surface temperature in the Pacific or land cover changes and urbanization. Pressure anomalies such as the Pacific-North American pattern or North Atlantic Oscillation influence storm tracks and thus the frequency of precipitation. Extremes, either intense and/or long-lasting rain events or a lack of rain over many days lead to flood and drought respectively. It is very difficult to distinguish a climate change signal in rainfall, flood, and drought from the natural variability, because trends are often slight in comparison and there is a lack of high quality consistent observations over long time periods for much of the globe. Further, the definition of "extreme rain" is often open for interpretation and many people may have a perception of hydroclimate change that is not consistent with the data record. This session invites observational and modeling studies that help define extreme rainfall in a meteorological and socio-economic context. A discussion on past and future local

to global frequency/magnitude changes in rainfall, floods, and droughts, along with potential human-environmental causes and impacts are also welcome.

Co-sponsors: A, GC, maybe public affairs (PA)

Convener: Scott Curtis, East Carolina University
Yang Hong, University of Oklahoma

3) **Possible session proposal: Precipitation Estimation/Validation**