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## January 2011 U.S. CLIVAR News-gram

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#### ANNOUNCEMENTS

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#### CALENDAR of UPCOMING EVENTS

(for more information-[www.usclivar.org/calendar.html](http://www.usclivar.org/calendar.html))

January

23-27: AMS Annual Meeting (Seattle, WA)

February

13-18: AGU ASLO Meeting (San Juan, Puerto Rico)

March

2-4: Workshop on Drought Predictability and Prediction in a Changing Climate (Barcelona, Spain)

#### Research Opportunities

##### 1. NASA Research Opportunity: NASA Energy and Water Cycle Study (NEWS)

<http://nspires.nasaprs.com/external/viewrepositorydocument?cmdocumentid=221178&solicitationId={9A2A4973-2086-5305-3609-F3627359D994}&viewSolicitationDocument=1>

The overarching long-term NASA Energy and Water Cycle Study (NEWS) grand challenge can be summarized as documenting and enabling improved, observationally based, predictions of water and energy cycle consequences of Earth system variability and change. This challenge

requires documenting and predicting trends in the rate of the Earth's water and energy cycling that corresponds to climate change and changes in the frequency and intensity of naturally occurring related meteorological and hydrologic events, which may vary as climate may vary in the future. The cycling of water and energy has obvious and significant implications for the health and prosperity of our society. The importance of documenting and predicting water and energy cycle variations and extremes is necessary to accomplish this benefit to society.

NASA's Energy and Water Cycle Study solicits projects to mine the vast data and model resources through innovative analyses to make progress against the NEWS goals. These projects should eschew focusing their efforts on product generation, model capability revision, or extensive model simulations. Instead, they should exploit existing resources that can be gained from previous or ongoing NASA sponsored research. Potential NEWS PIs are encouraged to leverage previous and existing NEWS funded activities, see <http://nasa-news.org/> (see tabs for "Resources" and "Projects").

Amendment 29 releases the final version of the text of Appendix A.17: NASA Energy and Water Cycle Study, which replaces the draft text in its entirety. **Notices of Intent to propose are due on February 16, 2011. The due date for proposals is March 22, 2011.** Questions concerning this program may be addressed to Dr. Jared K. Entin.

## **2. NSF Student Travel Fellowship for the DYNAMO Field Campaign**

The field campaign of DYNAMO (Dynamics of the MJO) is designed to improve our understanding of key initiation processes for the Madden-Julian Oscillation (MJO) and our ability to predict MJO initiation. It is supported by NSF, NOAA, ONR, DOE, and NASA. DYNAMO is the US contribution to the international field program CINDY2011 (Cooperative Indian Ocean Experiment on Intraseasonal Variability in Year 2011), which will take place in the equatorial central Indian Ocean region October 1, 2011 – March 31, 2012. During the DYNAMO field campaign observations will be collected from the atmosphere, ocean and their interface by a multiplatform observational network consisting of islands, research vessels, moorings, and aircraft. More information of DYNAMO is available at <http://www.eol.ucar.edu/projects/dynamo/>

The field campaign will provide an excellent opportunity for young scientists to gain first hand experience in a modern, international field experiment, broaden their scientific background, and interact with scientists outside their home institutes. We anticipate several DYNAMO NSF Student Travel Fellowships available to support participation in the DYNAMO field campaign by advanced graduate students and recently graduated postdoctoral associates, especially those from underrepresented groups. The fellowship will cover expenses of airfare, lodging (shared rooms), and food for 30 days for each recipient, who should receive regular stipend/salary support from their home institutes. Qualified candidates must have made excellent progress toward their graduate degrees, be in good health to travel to and work in remote locations during the field campaign, and be able to perform well at both day and night shifts on land and onboard ships. Their participation in the DYNAMO field campaign must not negatively affect their academic progress toward earning their degree and will need approval from their advisors. Fellowship recipients will provide needed assistance to the field operation, including, but not limited to, sounding launches, radar operation and data retrieval, and in-field data analysis. Each fellowship recipient will work closely with a senior mentor during the field campaign.

To apply for the fellowship, please send the application form and required materials [toczhang@rsmas.miami.edu](mailto:toczhang@rsmas.miami.edu) and [jmoore@ucar.edu](mailto:jmoore@ucar.edu) **by January 30, 2011**. Selection decisions will be made in late February. The DYNAMO Project Office will make travel arrangement to the field.

### **3. IIASA Young Scientists Summer Program 2011**

#### **Application deadline is January 17**

Each summer, the International Institute for Applied Systems Analysis (IIASA), located in Schloss Laxenburg near Vienna, Austria, hosts a selected group of graduate students, primarily doctoral, from around the world in its Young Scientists Summer Program (YSSP). These students work closely with an IIASA senior scientist mentor on a project proposed by the student, related to his or her graduate research.

IIASA is an international institution, supported by the U.S. and 15 other member nations, engaged in scientific research aimed at providing policy insight on issues of regional and global importance in the following fields:

#### **PROGRAM AREAS**

- Energy
- Transitions to New Technologies
- Advanced Systems Analysis
- Ecosystem Services and Management
- Mitigation of Air Pollution and Greenhouse Gases
- Evolution and Ecology
- World Population
- Risk Policy and Vulnerability

#### **GLOBAL PROBLEM AREAS**

- Energy and Climate Change
- Food and Water
- Poverty and Equity

Detailed information about each program is on the IIASA Website: <http://www.iiasa.ac.at/>

#### **HOW DO YOU APPLY?**

An on-line application form, along with more information, is at <http://www.iiasa.ac.at/yssp/register/>

#### **Position Announcements**

### **4. NCAR EARTH SYSTEMS LABORATORY (NESL) Lab Director (Boulder, CO)**

The NCAR Earth Systems Laboratory (NESL) at the **National Center for Atmospheric Research (NCAR)** in Boulder seeks a Director to lead the laboratory in the following scientific research areas: atmospheric chemistry, climate and global dynamics, microscale and mesoscale meteorology, and multidisciplinary activities related to these activities. In addition, the LD serves as an NCAR Associate Director and is a member of the NCAR Executive Committee. As a member of the NCAR Executive Committee, the LD shares in NCAR management deliberations, offering on the behalf of NESL and NCAR advice on matters such as scientific goals, priorities, budgets, policies programs, initiatives, and standards. The LD has shared responsibility for NCAR's future direction as a national center. The LD interacts extensively with the National Science Foundation (NSF) and the broad community. This position reports to the NCAR Director. The NESL LD plays a crucial and dynamic role in developing and incorporating significant strategic and tactical decisions and plans to merge NESL science, facilities, and program plans with the broader NCAR Strategic Plan.

- The NESL LD supervises NESL senior management and directs the scientific, technical, and administrative divisions/sections/teams of the laboratory. Continues to foster the trend of the scientific divisions acting as one laboratory while maintaining their

disciplinary expertise. This includes creating collaborative division relations and management/administrative transparency and accountability. Fosters an environment of teamwork and excellence. Cultivates and promotes interdisciplinary partnerships and programs within NCAR and the community. Directly supervises 6 senior managers and oversees the staff of approximately 293 employees.

- Responsible for the overall scientific and technological productivity, creativity, and excellence of the laboratory, including the formulation and execution of both long and short-range strategic plans.
- Develops long-term community modeling plans, based on insightful assessments of need that include appropriate participation by the community. Responsible for the promotion, development and management of NESL programs and optimized development and acquisition of resources.
- Leads NESL budget and program planning, including establishing budget priorities. Presents budget proposals to the NCAR Director and Executive Committee and allocates laboratory budgets and resources. Develops new funding sources to support the technological, scientific and service goals of the laboratory.
- As an NCAR Associate Director and member of the NCAR Executive Committee, facilitates inter-program and cross-NCAR science. Optimizes development, acquisition, and allocation of shared resources. Promotes science opportunities by fostering interdisciplinary programs and stimulating and facilitating coordinated science among programs at NCAR and the scientific community.
- Oversees and ensures the equity of the appointments, promotions, performance reviews, and salary determination of staff. Makes decisions and provides input for the appointment and promotion of ladder track staff. Ensures workforce diversity and excellence. Provides leadership for mentoring and development plans for staff.
- Serves as program advocate and liaison in a number of forums, including NSF and other government agencies, UCAR member institutions, and the national and international scientific community. Stimulates and facilitates coordinated science through interactions and collaborations among other NCAR laboratories, the NCAR Integrated Science Program (ISP) and UCAR Community Programs (UCP) programs.

Typically requires a Ph.D. in a science discipline relevant to the NESL mission of the laboratory; and at least 10 years of experience conducting or managing complex science programs; or an equivalent combination of education and experience.

Requires skill in scientific advocacy to effectively and persuasively promote goals and strategies for the advancement of NESL programs within NCAR, UCAR, funding agencies and the general scientific community. Must have acumen and leadership skills associated with the development of technological and scientific programs and leadership skills in directing and developing a staff of widely-varying backgrounds and experiences.

Requires skills in budget and resource development and related management and administrative functions plus skill in identifying problems or potential problems, and in recommending, promoting and implementing effective and creative solutions. Must have expert skill in planning and managing multiple goals and objectives within fiscal constraints, involving interdisciplinary groups of people using current management principles. It is essential that this leader has international recognition as a scientific and/or technological leader in atmospheric science, preferably in areas of relevance to NESL activities and a solid ability to promote diversity within the laboratory.

View detailed job description at [www.ucar.edu](http://www.ucar.edu) (jobs and opportunities/careers at UCAR). Initial consideration will be given to applications received prior to **January 31, 2011**. Thereafter, applications will be reviewed on an as-needed basis. Apply online (reference tracking code #11011).

### **5. Tenure Track Position at the University of Michigan**

The Atmospheric, Oceanic and Space Sciences (AOSS) Department at the University of Michigan (UM) is seeking tenured or tenure-track applicants at the assistant professor or higher level for a climate/climate change or hydrosphere-atmosphere-interactions modeler.

Applicants are sought who are interested in the prediction of high-impact local weather events, the statistics of these events in a future climate, and/or regional-local climate predictions. The applicant would work with a team interested in the software challenges facing petascale computing efforts to enable region-local predictions. This requires a significant redesign of climate science applications, libraries, numerical methods and algorithms to reach the level of parallelism needed to fully utilize the newest generation of computer architectures. Applicants that have the potential to bridge the gap between these libraries, numerical methods and algorithms for regional-local prediction would be favored, but interest in the science of predicting regional scale extrema and events is also of interest. Applicants may be eligible for a courtesy appointment in the Computer Science division in the Department of Electrical Engineering & Computer Science. This position was awarded to AOSS under UM's Interdisciplinary Junior Faculty Cluster Hire initiative. The Cluster Hire includes four proposed hires in the Departments of Materials Science & Engineering, Atmospheric, Oceanic & Space Sciences in collaboration with Civil & Environmental Engineering, Mathematics, and Electrical Engineering & Computer Science. Successful candidates will work in their primary disciplinary area but could also contribute to the development of high-performance computing.

The successful candidate will be expected to (1) develop a widely recognized research program, (2) attract external funding, (3) mentor graduate students and (4) participate in the teaching mission of the AOSS department at both the graduate and undergraduate level. Candidates capable of developing collaborative relationships in research and teaching are of particular interest. A PhD in atmospheric science, scientific computing or another relevant discipline is required. Applications should include a cover letter, CV, a concise personal statement describing the candidate's vision for research and education, and a list of at least four references.

For full consideration applications should be received before **January 5, 2011**. Questions concerning these positions and applications (in a single pdf file) should be directed to [penner@umich.edu](mailto:penner@umich.edu).

The University of Michigan, as an equal opportunity/affirmative action employer, complies with all applicable federal and state laws regarding nondiscrimination and affirmative action. The University of Michigan is committed to a policy of equal opportunity for all persons and does not discriminate on the basis of race, color, national origin, age, marital status, sex, sexual orientation, gender identity, gender expression, disability, religion, height, weight, or veteran status in employment, educational programs and activities, and admissions. Inquiries or complaints may be addressed to the Senior Director for Institutional Equity, and Title IX/Section 504/ADA Coordinator, Office of Institutional Equity, 2072 Administrative Services Building, Ann Arbor, Michigan 48109-1432, 734-763-0235, TTY 734-647-1388. For other University of Michigan information call 734-764-1817.

## **6. Princeton Postdoctoral Position Announcement: Hurricanes and Climate**

The Atmospheric and Oceanic Sciences Program at Princeton University seeks an outstanding postdoctoral research associate to engage in projects on hurricanes and climate change, working with scientists at Princeton University and the Geophysical Fluid Dynamics Laboratory/NOAA in Princeton, New Jersey. The position is funded by the Willis Research Network (WRN) through an agreement with Princeton University and GFDL. WRN sponsors several such research associates at selected institutions internationally. The research associate at AOS will work on problems of mutual interest to Princeton University, GFDL/NOAA and to the insurance/reinsurance industry. This position may be renewed for up to three years pending satisfactory performance.

Proposed activities include one or more of the following: 1) 21st century projections of intense hurricane activity in various tropical cyclone basins; 2) Improved seasonal to interannual prediction models of hurricane activity in the Atlantic or other basins 3) Detection and attribution of change in the climate of hurricanes, including refinement and analysis of relevant observational data sets and models.

The overall goal is to improve scientific understanding in these areas, leading to more confident assessment of uncertainties in projections, including an understanding of the mechanisms producing observed or simulated changes, and/ or more skillful seasonal to interannual outlooks. The methods and tools used may include use of simulations from multiple global climate models, which are used as input to time-slice experiments with high resolution atmospheric models, dynamical downscaling using regional models, or statistical downscaling. Our use of multiple climate models attempts to assess the consistency of projections and dependence on the particular climate model chosen. Hurricane or hurricane-related observational data sets are also being assessed. The research associate will have opportunities for periodic interaction with potential users of the research results (e.g., insurers and reinsurers).

Candidates must possess a Ph.D. in the earth sciences, applied math, statistics, or the physical sciences. The selected candidate will work on one or more of the research areas identified above, and will have one or more of the following qualifications: strong research background on hurricane dynamics and modeling and/or climate change science related to hurricane activity; experience conducting and analyzing model experiments related to storm activity; strong diagnostic and/or statistical analysis skills for analyzing model output and/or observations relevant to the project goals.

Complete applications, including a CV, statement of research experience and interests, as well as names and contact information for references should be submitted at <<http://jobs.princeton.edu>>, Req.# 1000900. Applications received before **Feb. 1, 2011** will receive first consideration; others will be considered until the position is filled. For further information, contact: Tom Knutson (<[Tom.Knutson@noaa.gov](mailto:Tom.Knutson@noaa.gov)>) or Isaac Held (<[Isaac.Held@noaa.gov](mailto:Isaac.Held@noaa.gov)>). Princeton University is an equal opportunity employer and complies with applicable EEO and affirmative action regulations.

## **Meetings and Workshops**

### **7. NCAR ASP Summer Colloquium on "African Weather and Climate: Unique Challenges and Application of New Knowledge."**

The colloquium aims to educate and attract graduate students to research with far-reaching consequences and promote their collaboration. The focus will be on (i) developing synthesized knowledge on African weather and climate, and (ii) applying modern tools of remote sensing, numerical simulation and prediction, statistical data analysis, and visualization to understand variability on synoptic, intraseasonal, interannual, and climate timescales, making and

interpreting their prediction, and optimizing its societal benefit in Africa. Lectures will be presented by a core group of instructors, including experts from Africa. Students will work in small groups on tutorials and simulations based on case studies. Students will also have opportunities to present their research and identify areas of priority for future collaboration.

The primary audience for the colloquium is advance graduate students who have completed at least one year of graduate coursework in meteorology, climatology, or related environmental sciences. The ISP will fund travel and living expenses for approximately 25 students, including students from Africa. For more information, please see <http://www.isp.ucar.edu/>. Applications for the colloquium are currently open at [http://regonline.activeglobal.com/near\\_africa\\_colloquium](http://regonline.activeglobal.com/near_africa_colloquium)

### **8. YOTC International Science Symposium and 8th AMY International Workshop Beijing China 16-19 May 2011**

Call for Papers: <http://yotc-amy-2011.csp.escience.cn>

The sessions will be based on keynote oral presentations coordinated with poster presentations, with emphasis on the following areas.

Monday May 16

Session 1: Overview, Challenges & Highlights of the WWRP/THORPEX- WCRP YOTC Project

Session 2: Madden-Julian Oscillation & Convectively-coupled Tropical Waves

Tuesday May 17

Session 3: Easterly Waves & Tropical Cyclones

Session 4: Hierarchical Modeling & Seamless Prediction

Wednesday May 18

Session 5: Tropical-Extratropical Interaction

Session 6: Monsoon Intraseasonal Variability

Thursday May 19

8th Asian Monsoon Years (AMY) Workshop

### **Abstracts should be submitted by 1 February 2011**

Information on the YOTC project can be found at [www.ucar.edu/yotc](http://www.ucar.edu/yotc)

### **9. 11th Conference on Polar Meteorology and Oceanography**

**Boston, Massachusetts Abstract Deadline: 10 January 2011**

**Preregistration Deadline: 28 March 2011**

**Manuscript Deadline 15 April 2011**

**Initial Announcement Published: July 2010**

See: <http://usscar.tamu.edu/latest-news/92-latest-news/664-11th-conference-on-polar-meteorology-and-oceanography>

The 11th Conference on Polar Meteorology and Oceanography, sponsored by the American Meteorological Society and organized by the AMS Polar Meteorology and Oceanography Committee, will be held 2-4 May 2011, at the Omni Parker House, 60 School Street, Boston, MA 02108 (<http://www.omnihotels.com/FindAHotel/BostonParkerHouse.aspx>). Papers are solicited on all aspects of polar meteorology and oceanography, including atmospheric, oceanic, terrestrial, and cryospheric processes, climate (past, present, and future), rapid environmental change, interactions among polar atmosphere-ocean-land-ice components, high latitude atmospheric and oceanic dynamics, boundary layer processes, weather forecasting, human dimensions, and extreme events.

**Please submit your abstract electronically via the AMS conference website by 10 January 2011** (see the website for instructions). An abstract fee of \$95, payable by credit card or purchase order, is charged at the time of submission (refundable only if abstract is not accepted).

Authors of accepted presentations will be notified via e-mail by early February 2011. Instructions for formatting extended abstracts will be posted on the AMS conference website. Extended manuscripts (file size up to 3 MB) must be submitted electronically by 15 April 2011. All abstracts, extended abstracts, and presentations will be made available on the AMS website.

### **10. Workshop on Drought Predictability and Prediction in a Changing Climate: Assessing Current Knowledge and Capabilities, User Requirements and Research Priorities**

**Registration has been extended until 15 January**

<http://drought.wcrp-climate.org/workshop/>

A draft of the community white paper that will form the basis of discussion at the workshop is posted on the website. The workshop will bring together scientists involved in all aspects of drought research and applications, as well as key users of drought information. The workshop welcomes contributions addressing the following topics:

1. User requirements for drought prediction information on sub-seasonal to centennial time scales
2. Current understanding of the mechanisms and predictability of drought on sub-seasonal to centennial time scales
3. Current drought prediction/projection capabilities on sub-seasonal to centennial time scales
4. Advancing regional drought prediction capabilities for variables and scales most relevant to user needs on sub-seasonal to centennial time scales.

### **11. 43rd Liege Colloquium: "Tracers of physical and biogeochemical processes, past changes and ongoing anthropogenic impacts"**

**2 - 6 May 2011, Liege, Belgium**

Additional information about the Colloquium, including a web interface for registration and for abstract submission, can be found at <http://modb.oce.ulg.ac.be/colloquium/>. Note that the deadline for abstract **submission is 16 January 2011**. To help manage a limited budget, travel subsidies will be fixed at a maximum amount according to the location of the traveler's home institution:

Locations east of the Continental Divide:	\$1800.
Locations west of the Continental Divide	\$2000.
Hawaii and Alaska	\$2200.

Subsidies will be provided as reimbursements of actual travel expenses, to be processed by the U.S. GEOTRACES Project Office <geotraces@ldeo.columbia.edu>. In anticipation of requests for more subsidies than can be covered, interested persons are asked to submit a brief statement (<200 words) describing their expected contribution to the colloquium and the benefits they expect to obtain by participating. The request for travel support, including the brief statement, should be submitted to the US GEOTRACES Project Office <geotraces@ldeo.columbia.edu> by 5:00 PM Eastern Time on 10 January. Those selected will be notified by 13 January so that they can submit their abstracts by the 16 January deadline.

#### **ANNOUNCEMENTS:**

- **Open solicitation for references relevant to IPCC AR5 WG1 Chapter 11**  
Chapter 11 covers near-term (up to mid-century) climate change projections, emerging

decadal predictions and decadal predictability, mechanisms underpinning predictability, near-term atmospheric composition, and air quality-climate connections.

A brief overview of the topics to be covered in WG1 Chapter 11 is given below. Do you have any relevant papers or reports published in 2005 or later that were not included in the 2007 IPCC AR4? If you do please send citation details and pdf copies to the contacts provided below. Please note that not all papers received will be referenced in the IPCC report.

Papers submitted to a peer-reviewed journal before July 31, 2012 can also be provided. We will respect the confidentiality of your pre-publication paper, but authors must have a copy of the submitted version to consider it for the chapter.

If you have a question as to which contact person you should send results to, please contact Ben Kirtman [bkirtman@rsmas.miami.edu](mailto:bkirtman@rsmas.miami.edu)) or Scott Power ([s.power@bom.gov.au](mailto:s.power@bom.gov.au)).

### **Preliminary overview of Chapter 11 with contacts for each section**

#### *Mechanisms, Sources and Limits to Decadal Predictability*

Rowan Sutton, Jerry Meehl, Gabe Vecchi, John Adedoyin, Roxana Bojariu, Paco Doblas-Reyes cc Scott Power

#### *Atmospheric composition and related radiative forcing: Near-term projections (up to mid-century) including predictability; air quality/air quality and climate connections, and related extreme events (up to end of 21st century)*

Arlene Fiore and Michael Prather

#### *Predictability of decadal climate variability*

George Boer, Roxana Bojariu, Abdoulaye Sarr cc Scott Power

#### *Near-term initialised hindcasts and predictions including verification*

Francisco J. Doblas-Reyes, George Boer, John Adedoyin, Abdoulaye Sarr, Masahide Kimoto, Geert Jan van Oldenborgh, Roxana Bojariu, cc Ben Kirtman

#### *Regional Predictability/prediction of extremes (e.g. tropical cyclones)*

Huijun Wang, Masahide Kimoto, Christoph Schaer, Gabe Vecchi cc Ben Kirtman and Scott Power

#### *Predictability and prediction of abrupt climate change*

Rowan Sutton, Huijun Wang, George Boer cc Ben Kirtman and Scott Power

#### *Near-term Projections*

Ines Camilloni, Jerry Meehl, Abdoulaye Sarr, Christoph Schaer, Rowan Sutton, Gabe Vecchi, Huijun Wang, Roxana Bojariu cc Scott Power