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## **December 2009 U.S. CLIVAR News-gram**

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### **CALENDAR of UPCOMING EVENTS**

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

#### **January 2010**

11-15 Predicting the Climate of the coming decades (Miami, FL)

17-21: AMS Annual Meeting (Atlanta, GA)

25-29: GEWEX SSG Meeting (India)

#### **February 2010**

22-26: AGU Ocean Sciences Meeting (Portland, OR)

#### **March 2010**

17-19: US CLIVAR High Latitude Surface Fluxes Workshop (Boulder, CO)

## **Research Opportunities**

### **1. Announcement of Opportunity Update Arctic Research Opportunities National Science Foundation**

**Program Solicitation: NSF 10-503**

**Full Proposal Target Date: Thursday, 14 January 2010**

The National Science Foundation (NSF) invites investigators at U.S. organizations to submit proposals to conduct research about the Arctic. Arctic research includes field and modeling studies and data analysis in and about the arctic region. The goal of the NSF Division of Arctic Sciences is to gain a better understanding of the Arctic's physical, biological, geological, chemical, social, and cultural processes and the interactions of ocean, land, atmosphere, biological, and human systems in the Arctic, and to support projects that contribute to the development of the next generation of researchers and scientific literacy for all ages through education, outreach, and broadening participation in science, technology, engineering, and mathematics.

The Arctic Research Opportunities solicitation (NSF 10-503) provides investigators with information about available programs and priorities to determine the program best suited to their proposed work. The Proposal Preparation section (Section V.A.) has specific instructions for proposers conducting field work, including information about requesting logistics support or ship time, working with arctic communities, and complying with environmental policies that should be adhered to by all proposers.

Proposals should be written and planned in accordance with:

- NSF's Grant Proposal Guide

([http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=gpg](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg)) and;

- the Principles for Conduct of Research in the Arctic

(<http://www.nsf.gov/od/opp/arctic/conduct.jsp>).

The information about this solicitation is available on the NSF web site by clicking the 'Arctic Research Opportunities' link at: <http://www.nsf.gov/div/index.jsp?org=ARC>

The complete solicitation is available by searching for document number 'NSF10503' at:

<http://www.nsf.gov/publications/ods/>

### **2. Call for Applications - 2010 East Asia and Pacific Summer Institutes National Science Foundation**

**Application Deadline: Tuesday, 8 December 2009**

**For further information, please go to: <http://nsfsi.org/>**

The National Science Foundation (NSF) is currently accepting applications to the East Asia and Pacific Summer Institutes (EAPSI) program for the summer of 2010. The goals of EAPSI are to introduce U.S. graduate students to East Asia and Pacific science and engineering in the context of a research setting, and to help students initiate scientific relationships that will better enable future collaboration with foreign counterparts. Selected students participate in research experiences at host laboratories in Australia, China, Japan, Korea, New Zealand, Singapore, or Taiwan. All institutes, except Japan, last approximately 8 weeks from June to August. Japan lasts approximately 10 weeks from June to August. Further information on the program may be obtained online at: <http://www.nsf.org/>.

EAPSI will support the following fields of study:

- Biological Sciences
- Computer and Information Science and Engineering
- Education (Science, Technology, Engineering, and Mathematics)
- Engineering
- Geosciences
- Mathematical and Physical Sciences
- Social, Behavioral, and Economic Sciences
- Environmental Research
- Multidisciplinary Research

Applicants must meet all of the following criteria:

- U.S. citizen or permanent resident;
- Enrolled in a research-oriented Master's or PhD degree program (including joint degree programs);
- Students enrolled in joint Bachelor/Master's programs must have graduated from the undergraduate degree (if the student's institution considers them in graduate status, that student is eligible);
- Enrolled at a U.S. institution in the United States; and
- Pursuing studies in fields of science and engineering research and education supported by NSF.

To apply for this opportunity, the applicant must first register as an individual researcher on the NSF FastLane system, available at: [https://www.fastlane.nsf.gov/jsp/homepage/postdoc\\_fel.jsp](https://www.fastlane.nsf.gov/jsp/homepage/postdoc_fel.jsp) . Detailed instructions regarding the application process can be found at: [http://www.nsf.gov/how\\_to\\_apply](http://www.nsf.gov/how_to_apply).

### **3. NASA Earth and Space Science Fellowship (NESSF) Program**

NASA announces a call for graduate fellowship proposals to the NASA Earth and Space Science Fellowship (NESSF) program for the 2010-2011 academic year. This call for fellowship proposals solicits applications from accredited U.S. universities on behalf of individuals pursuing Master of Science (M.Sc.) or Doctoral (Ph.D.) degrees in Earth and space sciences, or related disciplines. The purpose of NESSF is to ensure continued training of a highly qualified workforce in disciplines needed to achieve NASA's scientific goals. Awards resulting from the competitive selection will be made in the form of training grants to the respective universities.

**The deadline for NEW applications is February 1, 2010, and the deadline for RENEWAL applications is March 15, 2010.**

The NESSF call for proposals and submission instructions are located at the NESSF 09 solicitation index page at <http://nspires.nasaprs.com/> - click on "Solicitations" then click on "Open Solicitations" then select the "NESSF 10" announcement. Also refer to "Proposal Submission Instructions" listed under "Other Documents" on the NESSF 10 solicitation index page.

All proposals must be submitted in electronic format only through the NASA NSPIRES system. The advisor has an active role in the submission of the fellowship proposal. To use the NSPIRES system, the advisor, the student, and the university must all register. Extended instructions on how to submit an electronic proposal package are posted on the NESSF 10 solicitation index page listed above. You can register in NSPIRES at <http://nspires.nasaprs.com/> .

For further information contact Russell Deyoung, Program Administrator for NESSF Earth Science Research, Telephone: (757) 864-1472, E-mail: [larc-nessf-Earth@lists.nasa.gov](mailto:larc-nessf-Earth@lists.nasa.gov) or Dolores Holland, Program Administrator for NESSF Heliophysics Research, Planetary Science Research, and Astrophysics Research, Telephone: (202) 358-0734, E-mail: [hq-nessf-Space@nasa.gov](mailto:hq-nessf-Space@nasa.gov) .

#### **Position Announcements**

##### **4. NCAR Postdoctoral Fellow in Arctic System Science**

Applications for a 3-year postdoctoral position are invited from candidates with a recent Ph.D. in atmospheric sciences, physical oceanography, terrestrial ecology or related fields to carry out a research project on the seasonal response of the global climate system (atmosphere, ocean and land) to Arctic sea ice loss within the context of anthropogenic climate change. The project will make use of the Community Climate System Model and a variety of observational datasets. The position is funded by a grant from the National Science Foundation Arctic Sciences Program and will be supervised by NCAR scientists Clara Deser, Marika Holland, and David Lawrence. A full project description may be found at:

[http://www.cgd.ucar.edu/cas/cdeser/Docs/CSAS\\_proposal\\_Oct8.final.pdf](http://www.cgd.ucar.edu/cas/cdeser/Docs/CSAS_proposal_Oct8.final.pdf)

To apply, please send a resume, letter of research interests and accomplishments, and contact

**information for three potential referees by December 23, 2009** to

<http://tinyurl.com/NCARPostdoc10022> .

Initial consideration will be given to applications received prior to 12/23/2009. Thereafter, applications will be reviewed on an as-needed basis. NCAR is an affirmative action/equal opportunity employer and applications from women and minorities are encouraged.

##### **5. Postdoctoral Research Fellowships at the Center for Ocean-Atmospheric Prediction Studies, Florida State University**

The Center for Ocean-Atmospheric Prediction Studies (COAPS) at the Florida State University (FSU) invites applications for three (3) postdoctoral positions in the area of

a) global ocean model evaluation. The successful candidate will set up a series of HYCOM global experiments of varying horizontal and vertical resolution that will allow for a detailed comparison with the experiments performed by the French Drakkar project (<http://www-neom.hmg.inpg.fr/Web/Projets/Drakkar> ). The candidate will work closely with collaborators from the French laboratory LEGI to evaluate the performance of the two global models and to interpret differences due to numerical choices. Experience with ocean models and familiarity with Fortran, UNIX, shell scripting, etc. is essential.

b) ocean process modeling and theory. The successful candidate will work on idealized configuration of the South Atlantic to identify the controlling mechanisms of Agulhas rings formation, their subsequent pathways and influence on the Brazil current. A strong background in Geophysical Fluid Dynamics and familiarity with numerical models are essential.

c) scientific analysis of phenomena in coupled ocean-atmospheric models and satellite data. The duties will include but not be limited to working with senior scientists to design studies of coupled ocean-atmosphere processes, including but not limited to tropical instability waves and assist training graduate and undergraduate students in analysis. Experience with atmospheric boundary-layer processes, model or satellite data processing and familiarity with Fortran, UNIX, shell scripting, etc. is essential.

Applications will be reviewed until the positions are filled. A Ph. D. in Physical Oceanography, Meteorology, or related field is required. Curriculum vitae, a statement of research interests, and three letters of recommendation should be sent electronically to: [mslaton@coaps.fsu.edu](mailto:mslaton@coaps.fsu.edu)

The Florida State University is committed to a policy of non-discrimination for the university community on the basis of race, creed, color, sex, religion, national origin, age, disability, veteran's or marital status, or any other protected group status.

#### **6. Arizona State University, Atmospheric and Climate Sciences**

Applicants are sought with research interests such as regional-scale weather and climate processes; land-atmosphere interactions in natural and human-modified landscapes; long-term coupling and feedbacks between climate and landscape evolution; and/or hydroclimatology of arid and semiarid regions.

While a range of techniques and methods are appropriate to address these topics, candidates with a strong quantitative/modeling background and experience in data analysis from ground and/or remote sensing platforms are needed. A demonstrated track record in research, teaching and grantsmanship is preferred. Applicants with an interest in or on-going activities in the western U.S. or the US/Mexico border area are particularly encouraged. The ability to collaborate with a broad range of other faculty members across ASU is highly desirable, including SESE, School of Geographical Sciences and Urban Planning, School of Sustainability, School of Human Evolution and Social Change, and the Ira A. Fulton Schools of Engineering.

Applications should include: 1) a cover letter that includes a description of the applicant's research and teaching interests, 2) a current CV, and 3) the names, addresses and telephone numbers of three references. Inquiries and applications must be addressed to Kip Hodges, Director, School of Earth and Space Exploration, and submitted electronically to [sesenewfac@asu.edu](mailto:sesenewfac@asu.edu). Submissions in pdf format are preferred.

#### **7. Oak Ridge Climate Change Science Institute**

The Oak Ridge Climate Change Science Institute (ORCCSI) is seeking qualified candidates to be a part of a new multi-agency, multi-disciplinary crosscutting program. ORNL efforts in climate change research currently involve numerous staff members engaged in basic research across a wide range of disciplinary areas including Earth system modeling, atmospheric and climate dynamics, algorithm and numerical methods research, carbon cycle and ecosystem modeling, data analytics and visualization, climate change data science, ecosystem processes, and the analysis of climate change impacts as well as options for adapting to and mitigating future climate change. At the core of the initiative is Earth system modeling, which will utilize the scientific capabilities of ORNL staff as well as the leadership-class computational facilities to project future climates and provide the basis for assessing impacts, develop adaptation options for society, and help assess the effectiveness of options to mitigate increases in atmospheric greenhouse gas concentrations. ORNL data capabilities are a key enabling technology to enhance this broad scientific effort. ORNL's carbon cycle and ecosystem science will combine the development and improvement of terrestrial land surface models with the deployment of new measurements and experiments to focus on the critical scientific improvements needed in global climate and coupled climate-carbon model development and simulation.

More information about ORCCSI can be found at <http://climatechangescience.ornl.gov>

#### **Current Open Positions:**

Group Leader, Computational Earth Sciences--Climate and Earth Modeling  
Carbon - Climate Modeler

Ecosystem Dynamics, Environmental Sciences  
Ecosystems Ecologist  
Ecosystem / Climate Change Simulation Scientist  
Project Manager - Oak Ridge Climate Change Science Institute  
Climate Computational Scientists  
Postdoctoral Research Associates, Climate Change Science - JICS

For more information and to apply online visit <http://jobs.ornl.gov>

UT-Battelle is committed to achieving its strategic business objectives by attracting, retaining, and developing a diverse workforce and is an equal opportunity employer.

### **8. Science Officer, Earth System Science Partnership (ESSP) Office**

The Earth System Science Partnership (ESSP, [www.essp.org](http://www.essp.org)) was established in 2001 by four global environmental change (GEC) research programmes: (DIVERSITAS; [www.diversitas-international.org](http://www.diversitas-international.org)), the International Geosphere-Biosphere Programme (IGBP; <http://igbp.net>), the International Human Dimensions Programme on Global Environmental Change (IHDP; [www.ihdp.org](http://www.ihdp.org)), and the World Climate Research Programme (WCRP; <http://wcrp.wmo.int>). The ESSP facilitates the study of the Earth's environment as an integrated system in order to understand how and why it is changing, and to explore the implications of these changes for global and regional sustainability. More information about the ESSP can be obtained from [www.essp.org](http://www.essp.org).

The ESSP Science Officer will facilitate the advancement of the Partnership and the implementation of its activities under the guidance of the ESSP Scientific Committee (SC) and the ESSP Executive Officer; organise annual ESSP SC meetings and scientific workshops; manage the Coordination Office, located in Paris, France; interact with donor, policy and GEC-research communities; be responsible for communications and outreach; and undertake extensive international travel as a formal representative of the ESSP.

The successful candidate must have a graduate degree (PhD preferable) in the natural or the social sciences, with relevant international and interdisciplinary experience, excellent oral and written communication skills in English (a good working knowledge of French would be advantageous), and enthusiasm for coordinating international science partnerships. The post will be available in April 2010 for an initial period of two-years, with the possibility of an extension subject to funding. **Applications should be submitted (in English) before 7 December 2009** to Martin Rice, ESSP Executive Officer, with a CV (resume) and contact information of three referees. Please note that we only accept electronic applications. We regret that it will not be possible to acknowledge applications and only the short-listed candidates will be contacted for an interview in mid-January.

Send Electronic Applications to: Martin Rice, Executive Officer, Email: [mrice@essp.org](mailto:mrice@essp.org)

### **Meetings and Workshops**

#### **9. Special session entitled "Statistical downscaling of climate and environment: Methods and Applications at Water 2010 Conference**

<http://www.water2010.org>

**Quebec City, 5-7 July 2010**

Statistical downscaling (SD) models have become quite popular over the last decade. Their computational properties and flexibility make them serious competitors over dynamical approaches to provide local-scale generated data needed for many impacts studies of climate

change and evolution. The goal of this session is twofold: to present and/or propose new state-of-the-art algorithms and recent applications of statistical downscaling. We thus wish to bring together developers and practitioners of SD methods for climate, hydrology, and, more generally, environment. Hence, contributions can include presentations of theoretical/methodological approaches (e.g., stochastic, extreme values, Bayesian, probabilistic, non-linear models, uncertainty modelling), as well as applied SD studies in environmental fields (e.g., hydro, precipitation, agronomy, water resources) at any temporal resolution and scale (past, present, future).

February 1st, 2010 - Deadline for receiving one-page abstracts  
March 1st, 2010 - Authors notified of acceptance/rejection and reviewers' comments  
April 1st, 2010 - Deadline for receiving full papers (if desired)  
April 15th, 2010 - Authors notified of paper reviewers' comments  
May 10th, 2010 - Deadline for receiving final full camera-ready papers (if desired)  
May 15th, 2010 - Deadline for early bird registration

#### **ANNOUNCEMENTS:**

- **New National Academy Publication - Science at Sea: Meeting Future Oceanographic Goals with a Robust Academic Research Fleet**

The U.S. academic research fleet is an essential national resource, and it is likely that scientific demands on the fleet will increase. Oceanographers are embracing a host of remote technologies that can facilitate the collection of data, but will continue to require capable, adaptable research vessels for access to the sea for the foreseeable future. Maintaining U.S. leadership in ocean research will require investing in larger and more capable general purpose Global and Regional class ships; involving the scientific community in all phases of ship design and acquisition; and improving coordination between agencies that operate research fleets.

Free Publication: <http://books.nap.edu/catalog/12775.html>

- **Latest GEWEX Newsletter Available**  
[http://www.gewex.org/gewex\\_nwsltr.html](http://www.gewex.org/gewex_nwsltr.html).

Highlights of the issue include the following:

- Completion of 30 Years of Global Precipitation Estimates A Major Milestone in Creating Long-Term Observational Data Sets for the Water and Energy Cycle
- Results presented at the 6th International Scientific Conference on the Global Energy and Water Cycle
- New WCRP Implementation Plan (2010-2015) addresses regional climate assessments and climate information for decision-makers while continuing to support climate observations and research.
- New CLIVAR/GEWEX activity will assess missing links in drought research.
- 10 Years of the Radiative transfer Model Intercomparison (RAMI): Overview, Achievements, and Outlook
- Plans for Phase 2 of the AMMA Land-Surface Model Intercomparison (ALMIP-2) and request for participation.
- Results from AMMA field campaigns show advance knowledge of monsoon mechanisms.
- GEWEX LandFlux Initiative to provide a global data set of products of land-surface turbulent fluxes of heat and water needed for a better understanding of climate scale interactions within the Earth system.

- **North America Land Data Assimilation System Phase 2 (NLDAS-2) hourly products released to the public**

The NASA GSFC Hydrological Sciences Branch and Goddard Earth Sciences Data and Information Service Center (GES DISC) are pleased to announce the release of North America Land Data Assimilation System Phase 2 (NLDAS-2) data products in the Hydrology DISC.

NLDAS-2 products are a 30-year data set (1979-present, in near real-time) of hourly 1/8th-degree surface meteorology and hydrology data over the continuous United States and parts of Canada and Mexico. NLDAS combines observations from many different sources (rain gauges, radar, satellite, model reanalysis) to generate a surface forcing dataset, which is used to drive several different land-surface models. The current data hosted at the GES DISC include both primary and secondary forcing data and Mosaic model outputs.

Users can access the data by searching and downloading via anonymous ftp or through the GES DISC search interface Mirador (<http://mirador.gsfc.nasa.gov>). Mirador, is an innovative data search engine that makes use of keywords to find data quickly in a Google-like interface. NLDAS data are also provided through a GrADS Data Server (GDS) at <http://hydro1.gsfc.nasa.gov/dods/>. GDS users can access the data and perform subsetting and analysis operations online. More advanced tools will be provided in later releases, such as spatial and parameter subsetting, data format transformation, and access through the GES DISC online visualization and analysis system \*Giovanni\*.

Data access link: <http://disc.sci.gsfc.nasa.gov/hydrology/data-holdings>

- **New GO-SHIP web site**

[www.go-ship.org](http://www.go-ship.org). On this site, you will find information about the development of the GO-SHIP program, cruise news, a community bulletin board and resources for the hydrography community. As with any web-site, its usefulness depends on information contributed by the community. Please send an email to Maria Hood (IOCCP) or Kate Stansfield (CLIVAR) if you have news or announcements to post, or if you have additions or corrections for the maps and tables of upcoming hydrography cruises.

GO-SHIP will be holding an open 1 day international planning meeting on Sunday, 21 February 2010 in conjunction with the 2010 Ocean Sciences meeting in Portland, Oregon. Please see the news section of the web for details, and send an email to Maria Hood if you would like to attend.