

December 2007
U.S. CLIVAR News-gram

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CALENDAR of UPCOMING EVENTS (for more information - <http://www.usclivar.org/calendar.html>)

December 2007:

5-6: CLIVAR/GSOP Velocity Workshop (La Jolla, CA)
10-14: AGU Fall Meeting (San Francisco, CA)

January 2008:

20-24: AMS Annual Meeting (New Orleans, LA)
28-31: 3rd WCRP International Reanalysis Conference (Tokyo, Japan)

Scientific Opportunities

1. Research Opportunity – NSF P2C2 (Paleo Perspectives on Climate Change)

Proposals Due Feb 4, 2008

http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf08505

The goal of research funded under the interdisciplinary P2C2 solicitation is to utilize key geological, chemical, and biological records of climate system variability to provide insights into the mechanisms and rate of change that characterized Earth's past climate variability, the sensitivity of Earth's climate system to changes in forcing, and the response of key components of the Earth system to these changes.

Important scientific objectives of P2C2 are to: 1) provide comprehensive paleoclimate data sets that can serve as model test data sets analogous to instrumental observations; and 2) enable transformative syntheses of paleoclimate data and modeling outcomes to understand the response of the longer-term and higher magnitude variability of the climate system that is observed in the geological record.

The Paleo Perspectives on Climate Change (P2C2) competition is a coordinated paleoclimate science initiative that is funded by the National Science Foundation (NSF) Divisions of Atmospheric Sciences (ATM), Earth Sciences (EAR), and Ocean Sciences (OCE) in the Geosciences (GEO) Directorate, and the NSF Office of Polar Programs (OPP). The annual P2C2 competition supports the scientific objectives of the US Climate Change Science Program (CCSP) by fostering interdisciplinary research and synthesis of climate data.

The importance of P2C2 research, as an element of the CCSP, stems from its unique capability, on timescales longer than the instrumental record, to: 1) document the past temporal and spatial variability of Earth's climate system; 2) evaluate the rates of change associated with this variability; 3) determine the sensitivity of the Earth's climate system to variations in climate-forcing factors; and 4) provide a test environment for simulation predictions from numerical models.

Proposals to the P2C2 competition must clearly state how the proposed projects will contribute to achieving these goals and how the research is relevant to the P2C2 areas of Research Interest.

Support for Antarctic field work will not be considered in the P2C2 competition.

Areas of Research Interest

1. What were the regional responses of coupled climate systems like ENSO, the monsoons, NAM, and the MOC during past climate changes? (CCSP Strategic Research Questions 4.2, 4.3, 4.4)
2. How does the geological record inform us about past climate sensitivity and the impact of past abrupt changes in climate under a variety of different boundary conditions, past climate states, or during periods of large and rapid changes in forcing? (CCSP Strategic Research Questions 4.1, 4.2, 4.3, 4.4)
3. How sensitive was ice (i.e., sheets, caps, mountain glaciers) and sea level to rapid changes in climate especially during past warm climates? (CCSP Strategic Research Questions 4.1, 4.3)

2. NASA Announcement of Opportunity in Biogeochemical remote sensing

This amendment establishes a new proposal opportunity in Appendix A.5 entitled "Ocean Biology and Biogeochemistry." NASA's Ocean Biology and Biogeochemistry program focuses on describing, understanding, and predicting the biological and biogeochemical regimes of the upper ocean as determined by remote observation of aquatic optical properties from space, aircraft, and other airborne platforms. NASA's Ocean Biology and Biogeochemistry program utilizes remotely sensed observations from land, ocean, and atmosphere, as well as field studies and campaigns, and interdisciplinary data assimilation and modeling efforts to better understand the oceans' role in the Earth System. This solicitation solicits research in conjunction with the Airborne Science program and focuses on development of a portable airborne platform sensor that can be deployed on an aircraft or Unmanned Aerial System (UAS) to complement space-based data and meet the needs of the Ocean Biology and Biogeochemistry research program.

Notices of Intent to propose are due December 28, 2007, and proposals are due February 29, 2008.

3. NOAA Teacher at Sea Research Opportunity

Application deadline: Monday, 31 December 2007

For further information, please go to: <http://teacheratsea.noaa.gov>

The National Oceanic and Atmospheric Administration (NOAA) is now accepting applications for its Teacher at Sea program. The mission of NOAA's Teacher at Sea program is to give teachers a clearer insight into our ocean planet and a greater understanding of maritime work and studies, and to foster an interdisciplinary educational experience that provides a unique environment for learning and teaching.

Since 1990, NOAA's Teacher at Sea Program has enabled more than 500 teachers to gain first-hand experience of science and life at sea. Teachers have enriched their classroom curricula with a depth of understanding made possible by living and working side-by-side, day and night, with those who contribute to the world's body of scientific knowledge.

Teachers may select a cruise aboard one of NOAA's 19 ships, of which there are three main types. Fisheries research vessels perform biological and physical science studies in support of fisheries research; oceanographic and coastal research vessels perform physical science studies in support of physical oceanography, atmospheric studies, and bathymetric mapping; and hydrographic survey vessels scan the coastal sea floor with side-scan sonar and sophisticated bottom sounding systems to locate submerged obstructions and navigational hazards for the creation or update of the nation's nautical charts.

NOAA's Teacher at Sea Program accepts applications from currently employed K-12 teachers, college teachers, or museum or aquarium educators, both American and International. NOAA regrets that they cannot accept applications from student or pre-service teachers.

Teachers can expect to be at sea anywhere from one week to a month. Most teachers take advantage of cruises offered during the summer, but cruises take place throughout year. All necessary travel costs are paid for by the NOAA Teacher at Sea Program. While airfare is paid for up-front by the government, all other necessary travel costs are reimbursed.

4. AGU Congressional Science Fellowship

AGU is accepting applications for its 2008-2009 Congressional Science Fellowship. The Fellowship provides Earth and space scientists who are interested in science policy with an opportunity to play an active role in the U.S. policy process. Each Fellow spends a year (September through August) on the staff of a Congressional committee or of a House or Senate member, providing advice on a variety of scientific issues.

The program is seeking applicants who are articulate, flexible, and able to work well with people from diverse backgrounds. A broad background in science is a plus because Fellows often have to advise on a wide range of scientific topics. Experience in public policy is not required, but such experience and/or an interest in using science to solve public problems is desirable.

AGU invites all members who are citizens or permanent residents of the United States to apply. While aimed at early to mid-career Earth and space scientists with doctorate degrees, the program places no restrictions on age, on educational or career level, or on specific scientific backgrounds. Applicants undergo a highly competitive selection process, as more than 25 applicants vied for the 2007-2008 fellowship.

Applicants who are currently Ph.D. candidates should plan to complete their degree prior to the start of the program in September 2008. Experience has shown that Fellows do not have time for thesis work during the fellowship year. Each doctoral candidate should submit, among other references, a letter from his or her adviser stating the status of the applicant's thesis and the anticipated completion date. The fellowship carries a stipend of \$55,000, health insurance, moving expenses, and a travel allowance. The deadline for applications is **1 February 2008**.

For further details and application instructions, visit the AGU Web site:

http://www.agu.org/sci_soc/policy/congress_fellows.html

or contact Kate Von Holle at +1 202-777-7509 or via e mail kvonholle@agu.org.

Positions Available

5. Faculty position in Climate Science at Florida State University

The Meteorology Department (<http://www.met.fsu.edu>) at the Florida State University (FSU) invites applications for a tenure earning Assistant Professor in Climate Science. The Department seeks candidates with research interests focusing on understanding climate predictability using numerical models and observations. Specific research issues could include, but are not limited to, seasonal to decadal prediction, downscaling, global climate change and its feedback on regional climates, and climate scale interactions of the atmosphere with terrestrial, oceanic and/or cryospheric processes. The successful candidate will be expected to a) conduct state of the art research, b) assist in developing applications based on the above mentioned climate research activities, and c) interact with a team of interdisciplinary scientists. The candidate will also be expected to teach at both the graduate and undergraduate level in Meteorology and to help focus interdisciplinary earth science training.

The successful candidate will be associated with the FSU Center for Ocean-Atmospheric Prediction Studies (COAPS, <http://www.coaps.fsu.edu>). COAPS is a member of the Southeast Climate Consortium (SECC; <http://secc.coaps.fsu.edu>) which is composed of research scientists from FSU, University of Miami, University of Florida, University of Georgia, Auburn University, and University of Alabama at Huntsville who actively perform research on the impact of climate variability in the southeastern United States.

Inquiries about the position may be addressed to the director of COAPS, Dr. Eric Chassignet, at echassignet@coaps.fsu.edu. Salary and start-up costs are nationally competitive. A Ph.D. is required.

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.

Please send by December 7, 2007, a comprehensive C.V., a statement of research interest, and the names and addresses of at least three scientific references by email to mslaton@coaps.fsu.edu.

6. GS-12/13 vacancy announcement in the Climate Prediction Center/NCEP

<http://www.usajobs.com>

Major Duties:

The incumbent will be responsible for analysis of the coupled ocean-atmosphere system. Specifically, the incumbent will 1) analyze sea surface temperature (SST) predictions in the NCEP's Climate Forecast System (CFS) suite of model integrations, 2) participate in the analysis of the El Niño-Southern Oscillation (ENSO) variability in the next generation CFS experimental simulations, 3) monitor ocean analysis in the NCEP's ongoing reanalysis efforts, 4) participate in the development of products based on the Global Ocean Data Assimilation System (GODAS), and analysis air-sea interaction in observations and coupled model simulations. It is expected that these diagnostic activities will 1) contribute to improved understanding of climate variability, 2) lead to improved real-time ocean monitoring and diagnostics products, and 3) lead to new/improved extended-range forecast tools. The incumbent should have 1) a strong background in climate variability of the coupled ocean-atmosphere system, e.g., ENSO variability and dynamics, 2) a familiarity with the ocean observing system, 3) extensive experience with climate diagnostics techniques, and 4) extensive experience in handling large data sets.

7. SUNY-Oswego tenure track Research Professor in Weather/Climate Modeling

SUNY-Oswego has reopened its search for a tenure track Research Professor in Weather/Climate Modeling who has at least the equivalent of several years post-doc experience in modeling and also has grant writing experience. They are interested in someone with research interests in the great lakes. Contact Alfred Stamm

(stamm@oswego.edu) for more information.

**8. Postdoctoral Position Announcement Polar Climate Change - University of California Los Angeles
Application Deadline: Wednesday, 5 December 2007**

The University of California Los Angeles (UCLA) Department of Atmospheric and Oceanic Sciences seeks a postdoctoral scholar in Polar Climate Change. The postdoctoral scholar will be supervised by Professor Alex Hall and will focus on constraining simulations of climate change in high latitudes with observations. Depending on the scholar's research interests, the project may also involve analyses of simulated and observed climate variability in both the Arctic and Antarctic.

Applicants should have a PhD in Atmospheric and Oceanic Sciences or a related field, and should be able to exhibit strong oral and written communication, analytical, and programming skills.

To apply, please submit a brief statement of research interests and goals, with a complete CV, and contact information for three references to:

Alex Hall

Department of Atmospheric and Oceanic Sciences University of California Los Angeles
405 Hilgard Avenue
Box 951565
Los Angeles, CA 90095

Applications may also be submitted electronically to: Alex Hall
E-mail: alexhall@atmos.ucla.edu

Meetings and Workshops

9. Modeling Sea Ice and Ice-Ocean Interaction European Geophysical Union

Call for Papers

13-18 April 2008 Vienna, Austria

Abstract Submission Deadline: 14 January 2008

Papers are invited for "Modeling sea ice and ice-ocean interaction" (session CR21) to be convened at the European Geophysical Union General Assembly on 13-18 April 2008, in Vienna, Austria.

Session description:

The year 2007 has witnessed yet another record minimum sea ice extent in the Arctic. Some climate models now predict that summer arctic sea ice might altogether disappear in about 30 or 40 years. While the effects of a shrinking sea ice cover on global climate, ocean circulation, and marine biology are expected to be quite significant, they are very difficult to evaluate because of our incomplete understanding of the polar climate components and our limited ability to model them. Coupled sea ice-ocean models are key for organizing our current knowledge of the physical and biogeochemical properties of sea ice and ocean, exploring poorly understood processes, and forecasting future changes and their impact on the natural world and human activities, such as the exploitation of gas, oil, and mineral resources, navigation, tourism, and military operations.

How realistic are current sea ice-ocean models? The representations of which processes and properties need to be introduced or revised in order to improve the performance of these models? How reliable are these models for operational, medium-range, and climate forecast? Session organizers invite contributions regarding all aspects of sea ice and sea ice-ocean modeling. Presentations and posters are welcome on modeling of snow and ice thermodynamics and dynamics, ice-atmosphere and ice-ocean interactions, ice biological and chemical processes, and data assimilation in sea-ice models.

For further information and to submit an abstract, please go to: <http://meetings.copernicus.org/egu2008/>

10. SCAR/IASC IPY Open Science Conference

Funding Available for Early Career Scientists Polar Research: Arctic and Antarctic Perspectives in the International Polar Year SCAR/IASC IPY Open Science Conference

8-11 July 2008

St. Petersburg, Russia

Application Deadline: Tuesday, 15 January 2008

The International Arctic Science Committee (IASC) and Scientific Committee on Antarctic Research (SCAR) are jointly organizing the SCAR/IASC IPY Open Science Conference in St Petersburg, Russia, on 8-11 July 2008. Natural and social scientists are invited to present papers under a series of session headings that address the themes of the International Polar Year (IPY).

IASC will provide travel grants for early career scientists (less than five years after completion of PhD) who present papers with an Arctic component. The maximum travel support will be 2,000 EUR per person.

Applications consisting of the abstract submitted to the conference, a short but informative CV, and an estimate of the travel costs should be sent by Tuesday, 15 January 2008, to:

IASC Secretariat

P.O. Box 50003

104 05 Stockholm, Sweden

Phone: +46-8-6739613

E-mail: iasc@iasc.se

Product and Report Announcements:

- **NSF Awards Focus on Policy Implications of Global Change Throughout the Americas**
Funding for six international research projects to study the interactions of global change, climate variability, land use and human effects has been awarded as part of a new Inter-American Institute for Global Change Research (IAI) program to investigate the policy implications of climate change in the Americas. The IAI is supported by the National Science Foundation (NSF) and its equivalents in other IAI member countries.

The collaborative research network (CRN) awards fund international projects by scientists investigating global change problems across the Americas. In collaboration with the CRN projects, researchers funded through another set of IAI awards--the Small Grants for Human Dimensions program (SGP-HD)--are looking at how human health, welfare and activities depend on the productivity, diversity and functioning of ecosystems.

http://www.nsf.gov/news/news_summ.jsp?cntn_id=110717

- **Now available: Final Report, Synthesis and Assessment Product 2.2**
<http://www.climatescience.gov/Library/sap/sap2-2/final-report/default.htm>

The First State of the Carbon Cycle Report (SOCCR): The North American Carbon Budget and Implications for the Global Carbon Cycle. A Report by the U.S. Climate Change Science Program and the Subcommittee on Global Change Research [King, A.W., L. Dilling, G.P. Zimmerman, D.M. Fairman, R.A. Houghton, G. Marland, A.Z. Rose, and T.J. Wilbanks (eds.)]. National Oceanic and Atmospheric Administration, National Climatic Data Center, Asheville, NC, USA, 242 pp. Printed

copies will be available Winter 2008. Orders currently being accepted via GCRIO Online Catalog at: http://www.gcrio.org/orders/product_info.php?products_id=186

- **International Arctic Science Committee launch new website**

The International Arctic Science Committee (IASC) announces the launch of its new website, which has been developed in cooperation with the Arctic Portal (<http://www.arcticportal.org/>). Users will also be automatically redirected to the IASC website by visiting: <http://www.iasc.se>
IASC is a non-governmental organization whose aim is to encourage and facilitate cooperation in all aspects of arctic research, in all countries engaged in arctic research, and in all areas of the arctic region.

- **First Public Release of Aura OMI Radiance and Irradiance Data Products**

Aura OMI Level-1B Radiance and Irradiance Data Products (version 3) are now released to the scientific community for environmental monitoring and global climate change studies. Four standard radiometric calibrated and geolocated (Level-1B) Radiance data products 'OML1BRUG', 'OML1BRUZ', 'OML1BRVG', 'OML1BRVZ', and the Solar Irradiance data product 'OML1BIRR' are now available from the NASA Goddard Earth Sciences Data and Information Services Center (GES DISC). <http://disc.gsfc.nasa.gov/Aura/OMI/>

The Ozone Monitoring Instrument (OMI) has been providing global measurements of stratospheric and tropospheric ozone, clouds, aerosols and smoke from biomass burning, SO₂ from volcanic eruptions and other sources, and key tropospheric pollutants (HCHO and NO₂) and ozone depleting gases (OCIO and BrO) since its launch aboard the EOS-Aura satellite (1:38 pm equator-crossing time, ascending node on the day side) on July 15, 2004. OMI, with its 2600 km viewing swath width (60 cross track pixels, spatial resolution of 13 x 24 km at nadir), provides almost daily global coverage.

OMI is a contribution of the Netherlands Agency for Aerospace Programs (NIVR) in collaboration with Finnish Meteorological Institute (FMI), to the US EOS-Aura Mission. Aura is part of the A-Train series of satellites, 15 minutes behind the Aqua satellite. The Royal Netherlands Meteorological Institute (KNMI) is the principal institute for the OMI instrument and Dr. Pieternel Levelt is the OMI Principal Investigator.

The Level-1B Radiance and Irradiance data products available from GES DISC, contain calibrated and geolocated earth view spectral radiances and incoming solar spectral irradiances, for 716 UV channels in the spectral region of 264 to 383 nm, and 751 VIS channels in the spectral region of 349-504 nm. OMI also provides spatial zoom-in measurements (nadir ground pixel size 13 x 12 km) one day per month. Version 3 is the first 'public release' of OMI Radiance and Irradiance data products. The lead algorithm scientist for the Level-1B radiance and irradiance products is Dr. Marcel Dobber from the KNMI.

For the full set of Aura products available from the GES DISC, please see the link below.
http://disc.gsfc.nasa.gov/Aura/data_products.shtml

- **NSIDC Sea Ice Index updated**

The National Snow and Ice Data Center (NSIDC) announces the redesign and enhancement of its Sea Ice Index website with new data set updates. The Sea Ice Index website is available at: http://nsidc.org/data/seaice_index

The Sea Ice Index pages have been redesigned so that graphs and images are easier to find. Thumbnails now take users to the Web Image Spreadsheet Tool (WIST) where images from different time periods can be quickly compared.

GIS compatible files (shapefiles) of monthly ice coverage through September 2007 are now available.

NSIDC's sea ice animations are also now available in the dataset catalog of NOAA's Science On a Sphere (<http://sos.noaa.gov/>). Animations of sea ice concentration show the annual cycle and give some insight into its variability, while a series of September monthly means from 1987 to present highlights the change in the annual arctic minimum sea ice extent through time.

Updates to the "National Ice Center Arctic Sea Ice Charts and Climatologies in Gridded Format" data set have also been made. A browse feature is now available which allows for quick visual comparisons of different time periods and products. Prior to this update images could only be viewed individually by downloading them from the FTP site.

To access the new browse feature, please select the "Browse" link at:
<http://nsidc.org/data/g02172.html>