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## September 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))

#### September 2009

21-25: Ocean Obs '09 (Venice, Italy)

21-25: ICES Annual Conference (Berlin, Germany)

28-30: CLIVAR Working Group on Coupled Models (San Francisco, USA)

#### October 2009

5-9: 5<sup>th</sup> WMO Symposium on Data Assimilation (Melbourne, Australia)

12-15: Decadal Climate Predictability and Prediction: Are we ready? (St. Michaels, MD)

26-30: NOAA Climate Diagnostics and Prediction Workshop (Monterey, CA)

#### November 2009

4-6: Earth System Initialization for Decadal Prediction (Utrecht, Netherlands)

11-13: CLIVAR Global Synthesis and Observations Panel Meeting (Tokyo, Japan)

16-19: SOLAS Open Science Conference (Barcelona, Spain)

#### Research Opportunities

#### **1. Announcement of Opportunity NASA Earth Science for Decision Making: Gulf of Mexico Region**

This amendment establishes a new program element in Appendix A.40 entitled "Earth Science for Decision Making: Gulf of Mexico Region." This new program element solicits proposals that

develop and demonstrate innovative and practicable applications of NASA Earth science observations, models, and research to support resource management, planning, and decision making activities in the broad Gulf of Mexico region. The overall objective of this solicitation is to create a suite of projects that will enhance the Gulf of Mexico region's ability to use NASA Earth science observations and research in decision making activities. This solicitation has a special emphasis on climate adaptation and climate change impacts in the Gulf region and southeast United States.

Notices of Intent to propose are not requested. Proposals are due November 19, 2009.

On or about August 26, 2009, this Amendment to the NASA Research Announcement "Research Opportunities in Space and Earth Sciences (ROSES) 2009" (NNH09ZDA001N) will be posted on the NASA research opportunity homepage at <http://nspires.nasaprs.com/> (select "Solicitations" then "Open Solicitations" then "NNH09ZDA001N").

<http://nspires.nasaprs.com/external/solicitations/summary.do?method=init&solId=%7bF1414528-D0D6-A730-85BE-2B1C16903D55%7d&path=open>

Further information about the Earth Science for Decision Making: Gulf of Mexico Region program element is available from Mr. John Haynes, Earth Science Division, Science Mission Directorate, NASA Headquarters, Washington, DC 20546; Telephone: (202) 358-4665; E-mail: [JHaynes@nasa.gov](mailto:JHaynes@nasa.gov).

### **Position Announcements**

#### **2. NOAA Atlantic Oceanographic and Meteorological Laboratory Physical Oceanographer Position**

NOAA/AOML is part of the US Department of Commerce and is located in Miami, Florida. AOML mission is to conduct basic and applied research in oceanography, tropical meteorology and atmospheric and oceanic chemistry. The Physical Oceanography Division (PHOD) at AOML does state-of-the-art climate and ecosystem research and supports a broad range of oceanographic observations. PHOD is inviting applications for ZP IV-V (equivalent to GS 13-15) observational physical oceanographer to join its scientific team. A strong post-graduate background in physical oceanography or related fields, a robust publication record, a history of success in obtaining funding and conducting research projects are required. Potential applicants are encouraged to find more information about PHOD at: [www.aoml.noaa.gov/phod](http://www.aoml.noaa.gov/phod). All applicants must apply on line at: [www.usajobs.gov](http://www.usajobs.gov) announcement numbers: OAR-AOLM-2009-0035 and OAR-AOML-2009-0036. Applications are accepted until October 15, 2009.

#### **3. Postdoc Position at the University California, Irvine**

PostArctic and Sub-Arctic Climate Variability University of California, Irvine  
Irvine, California. Review of applications will begin: **Monday, 7 September 2009**. Position will be open until filled.

The University of California, Irvine (UC Irvine) seeks a postdoctoral research associate to work on arctic and sub-arctic climate variability. The successful applicant will be involved in a project focused on forcing and dynamical feedback between the atmospheric circulation as expressed in terms of climate modes--especially the North Atlantic Oscillation/Northern Annular Mode (NAO/NAM)--and other components of the climate system, such as modes of ocean, sea ice, and stratospheric variability. Observations and a hierarchy of models, both dynamical and statistical, will be used. The models will range from simple linear stochastic equations that represent interactions between the different components of the climate system, to simplified, coupled global

climate models. The project includes collaboration with a group in statistics, and collaborations are encouraged with other groups in the growing climate focus at UC Irvine.

Scientists with a strong background in large-scale atmospheric/climate dynamics and possessing excellent modeling, computational, and statistical skills are encouraged to apply. Candidates must have modeling experience and a strong programming background (e.g., Matlab). A PhD in atmospheric or related sciences is required. The initial appointment is for one year.

Applicants must submit a CV and the names of three references to:

Gudrun Magnusdottir  
Dept. of Earth System Science  
University of California, Irvine  
Irvine, CA 92697-3100  
Email: gudrun@uci.edu

#### **Meetings and Workshops**

#### **4. NOAA's 34th Climate Diagnostics and Prediction Workshop Monterey, California, 26-30 October 2009**

The workshop will concentrate on the status and prospects for advancing climate monitoring, assessment and prediction, with emphasis on societal impact of climate over the western US. This includes three major themes: (i) improving climate predictions / predictability, (ii) understanding and attribution of climate variability and its impacts, and (iii) application of climate predictions / projections in the development and delivery of products relevant to user communities in the Western US. The Workshop will feature oral sessions with a mix of invited and submitted presentations and thematic poster sessions.

The primary focus areas for the workshop will include: 1) Recent Climate Events. 2) Coupled atmosphere-ocean modeling of the climate system. 3) Impact of global scale climate variations on western US weather and climate. 4) Shift in climate means and interdecadal variations. 5) Application of climate science in decision making.

The outcome of this year's workshop will be an assessment of our current understanding and ability to predict climate in time scales ranging from week-2 through interdecadal, including identifying opportunities for advances, and exploring new products to support regional decision making.

A web site for the workshop information and abstract submission is linked through:  
<http://www.cpc.ncep.noaa.gov/products/CDPW34.shtml>  
The abstract deadline is **AUGUST 31, 2009**.  
Registration is now open.

#### **5. Ocean Sciences Meeting**

**Portland, Oregon, 22-26 February 2010**

**The deadline to submit an abstract is 15 October 2009 – 2359 Eastern Daylight Time.** For more information on abstract submission please see: <http://www.agu.org/meetings/os10/>  
Several CLIVAR related sessions are listed below:

#### **IT17: Basin Scale Interpolation and Mapping of Ocean Properties**

*Interpolation of data is a generic oceanographic problem that arises whenever estimating basin-wide or global tracer distributions, or when preparing gridded input data for models. Given the relatively limited amount and uneven distribution of oceanographic observations, the often large temporal and spatial variability and the largely unknown covariance field, interpolation of large-scale tracer fields and calculation of interpolation errors remain challenging tasks. Interpolation errors can be significant, and, for instance, the uncertainty in the global estimate of the oceanic anthropogenic carbon content is possibly dominated by these mapping errors. Techniques for the mapping of ocean surface properties are possibly different from ocean interior applications, because of the availability of additional satellite data. In this session we invite speakers to present results evaluating and/or comparing oceanographic interpolation techniques considering various time and space scales and from all disciplines of oceanography.*

**IT61: Towards Comprehensive Observing Systems in Polar Regions 2: Southern Ocean**

*The Southern Ocean plays a critical role in the global ocean circulation, biogeochemical cycles and climate. Feedbacks involving ocean circulation, sea ice, ice shelves and the carbon cycle have the potential to significantly affect the extent and rate of future climate change and sea-level rise, but remain poorly understood. Limited observations suggest the Southern Ocean is changing: the region is warming more rapidly than the global ocean average; the uptake of carbon by the Southern Ocean has slowed the rate of climate change but increased the acidity of the Southern Ocean, while the ability of the region to continue to absorb CO<sub>2</sub> is a topic of active debate; and there are indications of ecosystem changes. Yet our understanding of these regions is hampered by a lack of sustained observations. Advances in technology and understanding mean that it is now feasible to plan and implement a Southern Ocean Observing System. This session aims to bring together all those involved with the planning, design, implementation and use of observations in the Southern Ocean as well as those involved in the technological developments that make these observations possible. Science contributions that make use of such sustained observations are particularly encouraged.*

**MT07: Ocean Data Stewardship to Link Observations to Research and Applications**

*The last decade has seen a dramatic increase in the diversity, complexity and volume of oceanographic observations. These changes have stressed traditional data management techniques and tools, making it difficult to fully exploit the value of these observations. To meet these challenges and support an ever-widening range of applications, today's data management systems need to evolve into robust data stewardship systems, capable of working "smarter" and incorporating recent advances in technology and scientific understanding. This session solicits contributions from ocean data producers, users, and stewards to explore the challenges, discuss possible solutions, and generate ideas on how modern ocean data stewardship can allow the ocean research and application communities to fully realize the value of the observations being collected.*

**PO42: Scientific and Practical Lessons Learned From Ocean Data Assimilation**

*Significant advances have been made in the past 10 years in ocean state estimation and data assimilation. Estimation and assimilation techniques are now routinely used by coastal, regional, and global ocean analysis and prediction systems that improve model estimates by constraining them with ocean observations. Much of the emphasis until recently has been on either the estimation and assimilation methodologies or the testing and validation of the ocean analyses and predictions. As the subject matter evolves, focus is shifting towards scientific and practical applications of these products and modeling tools. This session therefore invites contributions that illustrate the increased scientific understanding of the ocean and practical applications gained from ocean state estimation and data assimilation. Contributions are sought from studies of the ocean's physics and biology as well as practical applications of these tools and products.*

**PO: The South Atlantic, interocean exchanges and the Meridional Overturning Circulation**

*While the North Atlantic is the sole provider of North Atlantic Deep Water (NADW) to the global ocean, the South Atlantic is the sole recipient for upper and bottom waters flowing into the North*

*Atlantic to balance the NADW export. Modifications of water masses participating in the return flow within the South Atlantic can potentially lead to alterations of the Atlantic meridional overturning circulation (AMOC). Observations and models suggest that the South Atlantic is not a passive conduit for remotely formed water masses but actively creates and transforms them within the basin. However, little is known about the dynamical processes that control these water mass transformations or that modulate the spatial and temporal variability of the South Atlantic circulation. To address these matters we invite contributions that focus on the South Atlantic circulation and variability, including its exchanges with the contiguous basins and its contribution to the AMOC.*

**PO15: Theory, Modelling, and Observations of Westward Propagating Rossby Waves and Eddies**

*Westward propagating Rossby waves and eddies are a dominant feature of the sea surface height variability on seasonal to decadal time scales, which are of fundamental importance for the large-scale circulation owing to their role: 1) in the adjustment of the oceans to changes in the buoyancy and wind forcing, 2) in significantly contributing to the meridional transport of heat, salt, and nutrients. As a result, it is essential to represent such signals in numerical ocean general circulation models used for climate change studies. For this to be successful, however, much remain to be understood about the formation, propagation, decay, dynamics, and vertical structure of such signals.*

*This session encourages contributions using Remote Sensing observations (altimetry, SST, and ocean color) and in-situ data (e.g., ARGO floats), as well as theoretical and modelling work, that can help refine the description and understanding of Rossby waves and eddies.*

**6. 5th WMO Data Assimilation Symposium  
Melbourne 5-9 October 2009**

The draft program for the 5th WMO Data Assimilation Symposium is now available at :  
[http://wmoda5.amos.org.au/program\\_1.shtml](http://wmoda5.amos.org.au/program_1.shtml)

Registrations are still open via: <http://www.amos.org.au/conference08>

**7. State of the Arctic Conference  
16-19 March 2010, Miami, Florida**

The organizers of the State of the Arctic Conference announce the launch of the conference website, which features an online community suggestions form. The State of the Arctic Conference will be held 16-19 March 2010 at the Hyatt Regency Miami in Miami, Florida. The main goal of the conference is to review our understanding of the arctic system in a time of human-induced, rapid environmental change. It will provide an open international forum for discussion of future research directions aimed toward a better understanding of the arctic system and its trajectory.

The Organizing Committee would like your ideas on conference themes, topics, structure, or other suggestions relevant to the conference program. This is not a formal call for sessions, but rather an opportunity for the broader arctic community to provide initial input to the conference planning. A formal call for abstracts will be forthcoming.

To submit a suggestion, go to the website (<http://soa.arcus.org>) and click on "submit a suggestion." The deadline for this initial community input is Monday, 14 September 2009. The tentative conference program, registration, and call for abstracts will be available soon.

For further information, please contact: Helen Wiggins, Arctic Research Consortium of the U.S. (ARCUS) Email: [helen@arcus.org](mailto:helen@arcus.org)

**ANNOUNCEMENTS:**

- **New START Website**  
<http://start.org>

START is the global change **SysTem** for **A**nalysis, **R**esearch and **T**raining, a non-governmental research organization. We assist developing countries in building the expertise and knowledge needed to explore the drivers of and solutions to global and regional environmental change. Our goal is to reduce vulnerability through informed decision-making.

START is pleased to announce the launch of the redesigned START website. Our site has been spruced up with updated information on our organization and programs, a rejuvenated look and layout and several new features to enable readers to better interact with our site. One new feature is the START Blog, which invites staff and colleagues of START to post blogs on updates in global environmental change research or on START programs. The START Blog strives to open discussions within the international global environmental change community by allowing readers a comment section to respond to posts. I encourage the START family to aid this effort, by responding to Blog posts and/or posting your own topic. To contribute to the Blog, please email [lgibbons@agu.org](mailto:lgibbons@agu.org).

Another feature is the START Alumni Network, a database highlighting over 500 scientists who have been directly involved in START through training, education, fellowships, grants, and research activities. We are working to expand upon the START Alumni Network to allow the scientists in the database to communicate with one another to share expertise and experiences.