

**August 2006**  
**U.S. CLIVAR News-gram**

**Table of Contents**

---

---

**i – Calendar of Upcoming Events**

**Research Opportunities and Calls for Papers**

1. Request for Targeted Proposals - Russian-American Long-term Census of the Arctic (RUSALCA) National Oceanic and Atmospheric Administration (NOAA) Cooperative Institute for Arctic Research (CIFAR)
2. NOAA-NESDIS Announcement of Opportunity

**Announcements:**

- Extension of PIRATA Array for AMMA

**Meetings and Workshops:**

3. AGU Special Sessions
4. Gordon Research Conference on Polar Marine Science
5. Climate Prediction Applications Science Workshop
6. Seventh Workshop on Decadal Climate Variability

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

**August 2006:**

- 31 – 4 Aug: CLIVAR WGCM/AIMES Workshop: Next generation Earth System Models and emissions scenario requirements (Aspen, Colorado)
- 14-18: Climate Prediction Program for the Americas PI Meeting (Tucson, Arizona)
- 17-18: NAME Science Working Group Meeting (Tucson, Arizona)
- 28-30: WCRP Observation and Assimilation Panel 2<sup>nd</sup> Meeting (Ispra, Italy)
- 31 – Sep1: CLIVAR/GODAE Meeting on Ocean Synthesis Evaluation (Reading, UK)

**September 2006:**

- 11-12: North Atlantic Climate and Ecosystems: A current threat? (Reykjavik, Iceland)
- 18-20: Managing Drought and Water Security in Vulnerable Environments (Longmont, CO)
- 19-23: ICES 2006 Annual Science Conference (The Netherlands)

**October 2006:**

- 13-22: PICES 15<sup>th</sup> Annual Meeting (Japan)
- 16-18: GODAE Symposium on Data Assimilation and prediction in Asia-Oceania (Beijing, China)
- 18-20: Tropical Atlantic Variability Workshop (Paris, France)
- 23-27: NOAA Climate Diagnostics and Prediction Workshop (Boulder, CO)
- 24-27: RAPID Workshop (Birmingham, UK)

---

---

**Research Opportunities and Calls for Papers**

## **1. Request for Targeted Proposals - Russian-American Long-term Census of the Arctic (RUSALCA) National Oceanic and Atmospheric Administration (NOAA) Cooperative Institute for Arctic Research (CIFAR)**

The announcement of opportunity can be found on the CIFAR website at: <http://www.cifar.uaf.edu/>  
**Proposal Deadline: 5:00 p.m. Alaska time on Thursday, 31 August 2006**

The National Oceanic and Atmospheric Administration (NOAA), through its Cooperative Institute for Arctic Research (CIFAR), requests proposals for participation in the Russian-American Long-term Census of the Arctic (RUSALCA) research program in the Bering and Chukchi Seas that is limited to proposals in two areas: 1) Studies of primary productivity and related hydrographic measurements including dissolved oxygen, pigments, and nutrients; and 2) modeling proposals for the RUSALCA study area utilizing RUSALCA data and providing products that can be used in diagnostic studies and in the design of sampling strategies. Proposals are requested for work to begin in 2007 or 2008 for a period of up to five years.

The RUSALCA program began in summer 2004 with a multidisciplinary cruise examining ocean dynamics, nutrients, and ecosystems in this region and operates under the auspices of two Memoranda of Understanding between NOAA and, respectively, the Russian Academy of Sciences and Roshydromet. The RUSALCA objectives are to support NOAA's Climate Observation and Analysis Program and a Russian interagency Federal Target Program "World Ocean." The RUSALCA program is focused on gathering long-term observations towards understanding the causes and consequences of the reduction in sea ice cover in the northern Bering Sea and the Chukchi Sea in the Arctic Ocean. For 2007 and beyond, NOAA and CIFAR intend to continue the RUSALCA Program with an annual cruise focused on physics in the Bering Strait region. It is anticipated that a multi-disciplinary and geographically more extensive cruise will be sponsored every 2 to 4 years in the northern Bering and Chukchi Seas depending on resources.

This solicitation is limited to proposals in two targeted areas:

### **1. Proposals to Provide Temporal Extension to Measurements of Primary Productivity and Related Hydrographic Indicators of Ecosystem Status**

Measurements of dissolved nutrients, oxygen, and plankton pigments are fundamental to ecosystem assessment and can lend unique insights into physical circulation. Proposals are sought that will provide high quality measurements needed by other funded RUSALCA projects addressing carbon cycling and ecosystem functioning. In addition, primary productivity measurements taken during RUSALCA cruises are sought that when coupled with satellite remote sensing data can provide valuable input to ecosystem modeling efforts.

### **2. Proposals to Develop a Model-based Analysis and Synthesis Capability**

NOAA desires to support an atmosphere-ice-ocean modeling effort focused on the Northern Bering and Chukchi Seas. The model(s) should be of high resolution to capture key processes in this region in ways that will further understanding of the causes and consequences of the reduction of sea ice in the region. In addition, the model must be amenable to uses in the design of optimum sampling strategies for

continued monitoring in the RUSALCA region. The ocean component of the model should allow for inclusion of biological processes.

## **2. NOAA-NESDIS Announcement of Opportunity Research in Satellite Data Assimilation for Numerical Weather, Climate, and Environmental Forecast Systems.**

The National Environmental Satellite, Data, and Information Service (NESDIS), Office of Research and Applications (ORA) and the Joint Center for Satellite Data Assimilation (JCSDA) announces the availability of Federal assistance for research in the area of Satellite Data Assimilation in Numerical Weather, Climate, and Environmental Forecast Systems. The goal of the JCSDA is to accelerate the use of observations from earth-orbiting satellites in operational numerical prediction models for the purpose of improving weather, ocean mesoscale, and other environmental forecasts, improving seasonal to interannual climate forecasts, and increasing the physical accuracy of climate reanalysis. The advanced instruments of current and planned NOAA, NASA, DOD, and international agency satellite missions will provide large volumes of data on atmospheric, oceanic, and land surface conditions with accuracies and spatial resolutions never before achieved. Funded proposals will help accelerate the use of satellite data from both operational and experimental spacecraft in operational weather, ocean mesoscale, climate, and environmental prediction environments, improve community radiative transfer models and surface emissivity models, improve characterization of the error covariances related to forecast models, radiative transfer models and satellite observations, and advance data assimilation science. The program priorities for this opportunity support NOAA's mission support goal of: Weather and Water - Serve Society's Needs for Weather and Water Information.

Program Priorities: Radiative Transfer Models; Advanced Instruments; clouds and precip; ocean data assimilation for prediction on daily to seasonal time scales; land surface; aerosol and trace gas data assimilation

Funding availability: \$600,000

**Letters of Intent (LOI) must be received by NOAA/NESDIS no later than 5:00 p.m. Eastern Daylight Time, August 11, 2006, and full proposals must be received no later than 5:00 p.m. Eastern Daylight Time, October 2, 2006**

Further Info: <http://www.grants.gov/search/search.do?oppId=9947&mode=VIEW>

### **Announcements**

- **Extension of PIRATA Array for AMMA**

THE BCLME PIRATA ATLAS BUOY KIZOMBA was deployed at about 6°S - 8°E at 4100 m depth (05° 58.661 S ; 007° 59.524 E) during the AMMA-EGEE 5 cruise on the 27 of June 2006 at 6 S 8 E by IRD (Gouriou, Bourles and co). Data (except for current velocity) are displayed on the web at

<http://www.pmel.noaa.gov/pirata/display.html>

Current meter velocity and other parameters (i.e. depth of the 20 C isotherm) can be displayed and downloaded interactively at: <http://www.pmel.noaa.gov/tao/disdell/>

Pirata South East Atlantic extension web site: <http://www.egs.uct.ac.za/~rouault/piratase.html>

### **Meetings and Workshops**

#### **3. AGU Fall Meeting Special Sessions**

**San Francisco, CA**

**11-15 December 2006**

**The deadline for abstracts is September 7. The following special sessions at AGU have a specific US CLIVAR Focus:**

##### **A36:**

##### **Increasing Credibility of Climate Predictions**

Convener:

Alex Hall, *UCLA, Dept. of Atmospheric and Oceanic Sciences*

Lisa Goddard, *International Research Institute for Climate and Society, Columbia University*

The purpose of this session is to examine the credibility of state-of-the-art climate predictions from seasonal to centennial time scales, with an eye toward improving them. On seasonal to interannual time scales, prediction skill can be evaluated statistically by comparing ongoing model predictions to the climate record as it evolves. However, to improve predictions on these time scales, it is necessary to identify and understand the physical mechanisms responsible for predictability and ensure they are properly included in models. On the longer time scales of climate change, it is challenging to evaluate prediction credibility, let alone improve it. The variation of the past century is the only example of forced climate change that has been adequately sampled on a global scale, so rigorous evaluation of model performance is limited to this single realization. Moreover, while current models give widely diverging predictions when identical future forcing scenarios are imposed on them, are all able to simulate a "hindcast" of the past century within observational constraints when realistic past forcing is imposed. Unlike the seasonal to interannual case, the observed climate record is of limited utility in determining which future projections are most realistic. On these time scales, the community is therefore forced to rely almost exclusively on the plausibility of the physical mechanisms underlying simulated climate change. Because of the importance of physical mechanisms in establishing prediction credibility and improving it on all time scales, we solicit papers that identify these mechanisms or evaluate their plausibility. We also solicit work on statistical methods demonstrating prediction reliability on seasonal to interannual time scales, and novel techniques for assessing model credibility on longer time scales.

##### **OS06: Climate Variability over the Americas: Links with Oceans and Land**

Variability in the ocean and land surface greatly influences (and is influenced by) the climate variability over the Americas. Our understanding of this influence has been greatly advanced by work performed in many previous and present programs, such as Pan American Climate Studies (PACS), GEWEX Americas Prediction Project (GAPP), CLIVAR Variability of American Monsoon Systems (VAMOS), national CLIVAR programs, and Climate Prediction Program for the Americas (CPPA). This special session offers a forum for discussion of recent progress in our knowledge and understanding of climate variability over the Americas including observational, numerical modeling, and theoretical studies. The

main session focus is on intraseasonal-to-decadal climate variations associated with ocean-atmosphere-land interactions, particularly on the climate impacts of the Pacific ENSO, tropical Atlantic variability, Atlantic warm pool, and North Atlantic Oscillation.

### **OS26: Understanding and Predicting Pacific Decadal-to-Centennial Variability**

This session will address the causes, consequences and prediction of Pacific climate variability on decadal to centennial time scales from theoretical, numerical, and observational (both instrumental and paleoclimate) perspectives. Phenomena of interest include the Pacific Decadal Oscillation (PDO), the related Interdecadal Pacific Oscillation, the decadal modulation of ENSO, the role of the Pacific in global climate variability, as well as the Pacific expression of 'The Little Ice Age' and the 'Medieval Climate Anomaly'. Papers are welcome on climate processes, including air-sea and tropical-extratropical interactions, oceanic Rossby waves and their impact on western boundary currents, the underlying dynamics of the system, e.g. can the PDO be best characterized by red noise, regimes or other nonlinear behavior, oscillations and/or trends, and the extent to which Pacific climate responds to external forcing. In addition, presentations on climate impacts including effects on ocean biogeochemistry and marine ecosystems, and the relationship between dominant modes of natural climate variability and anthropogenic climate change are also encouraged.

### **OS11: Global Heat Content and the Earth's Energy Budget: Tools for understanding climate change**

By altering the composition of the atmosphere and affecting a variety of other climate forcings, human beings have driven the Earth out of radiative balance. In response, the Earth is absorbing excess heat. The World's oceans have by far the largest heat capacity of any component of the Earth's climate system and as it warms, the majority of this heat is absorbed by the oceans. Global ocean heat content may therefore provide a proxy for measuring the Earth's energy balance. Furthermore, it has been suggested that the large thermal inertia of the oceans will result in a lag between the radiative forcing that causes climate change and the response of Earth's surface temperature. As such, any climate change caused by changes in the Earth's radiative balance must depend critically on the uptake, storage and transport of heat by the oceans.

Many recent advances have occurred in the observation of ocean heat content, the simulation of ocean heat uptake in climate models, deep ocean temperature measurements, and the direct observation of the Earth's radiative balance from space. Nevertheless, there remains a great deal of debate regarding the fidelity of the observational record of ocean heat content, the ability of climate models to simulate it, and the implications for modeling and prediction of future climate change. This session aims to provide an interdisciplinary forum for discussion of these and related issues. We seek contributions that clarify the relationship between ocean heat content and the Earth's radiative balance. We encourage submission of observational and modeling results regarding global and regional changes in ocean heat content, heat transport, and the Earth's radiation balance. Theoretical and modeling studies that assess the importance of ocean heat uptake and transport to the modeling and projection of climate change are also encouraged.

### **A13: Data Assimilation.**

co-sponsored by Atmospheric and Ocean Sciences, Biogeosciences, Hydrology, Nonlinear Geophysics, and Earth and Space Science Informatics -

Data assimilation methods are undergoing rapid advances in Atmospheric, Oceanic, Hydrological and

Ecological sciences. This session will be devoted to advanced data assimilation methods including ensemble-based, Kalman filter and variational methods, and their applications to different scientific disciplines. Presentations addressing non-linear processes, parameter estimation, ways to estimate model and data error, uncertainty of the analysis solution, non-Gaussian errors, and information content of data are particularly welcomed

<http://www.agu.org/meetings/fm06/?content=search&show=detail&sessid=134>.

**OS03:** Accelerating Changes in Freshwater and Heat Contents of the Oceans: Footprint, Evolution, and Role in Climate and Human Life

**OS13:** Dynamics and Impacts of Past Changes in the Thermohaline Circulation

**OS16:** Air-Sea Interaction - Fluxes and Effects.

**A06:** Clouds Aerosol and Precipitation From the A-Train and Early Results From CloudSat and Calipso

**A07:** Aerosols, Clouds, and Climate

**A14:** Recent Advances in Climate Modeling

**A20:** Multidisciplinary Analyses of Climate Variability, Change, and Impacts on a Regional Scale

**A26:** Coordinated Observation and Modeling of Global Water Vapor Variability and Its Feedback to Climate Change

**A34:** Vegetation-Atmosphere Feedback in Regional Climate Variability and Change

**GC03:** Earth's Climate: Cyclic or Noncyclic?

**GC06:** North American Drought

#### **4. Gordon Research Conference on Polar Marine Science**

**"An Interdisciplinary Look at Processes Over Multiple Scales of Variability"**

**25-30 March 2007**

For further information, please go to:

<http://www.grc.org/>

Every other year, the Gordon Research Conference (GRC) on Polar Marine Science brings together an outstanding and diverse group of scientists at the forefront of research, as well as younger scientists and students. The format and intimate nature of these meetings (maximum attendance is 125) makes them ideal venues to learn about the latest research and to meet and discuss new and exciting directions with a highly interdisciplinary group of colleagues.

The focus of the 2007 GRC on Polar Marine Science, which will take place 25-30 March at the Four Points Sheraton in Ventura, California, will be "An Interdisciplinary Look at Processes Over Multiple Scales of Variability." The rationale behind this choice of topic is to explore in detail the physical, chemical, and biological processes that dominate temporal and spatial scales ranging from the "micro" to the "paleo".

The guiding principle of a Gordon Conference is the presentation of new, unpublished work and the free, unhampered discussion that follows. This tradition of freely sharing ideas is due in large part to GRC's "off the record" policy which prohibits photography or tape recording of sessions or the publication of conference proceedings. The agenda for this meeting is still being developed

(<http://www.grc.org/programs/2007/polar.htm>), but organizers hope that you will consider attending and presenting a poster of your most exciting new research results.

**5. Climate Prediction Applications Science Workshop**  
**MARCH 27-30, 2007**  
**SEATTLE, WASHINGTON**

The National Weather Service Climate Services Division, in conjunction with the University of Washington Climate Impacts Group (CIG), will host the 5<sup>th</sup> Climate Prediction Applications Science Workshop (CPASW) in Seattle, Washington, on March 27-30, 2007. The workshop will bring together a diverse group of climate science producers and users to share developments in research and applications related to the use of climate predictions in societal decision-making. The meeting goals are:

(1) to identify new climate prediction applications research, (2) to “build community” by promoting interactions between integrated climate-sensitive research and service communities, (3) to assess impacts of climate forecasts on environmental-societal interactions, (4) to provide feedback to producers of climate products on user requirements. The workshop will not address technical challenges of making climate predictions, climate modeling, or other technical topics related to the science of climate predictions.

Information on the workshop will be posted at:

<http://www.cses.washington.edu/cig/outreach/workshopfiles/cpasw07/> For more information, contact either Diana Perfect (email: [iana.perfect@noaa.gov](mailto:iana.perfect@noaa.gov) phone: 301-713-1970 Ext. 132), or Dennis Lettenmaier (email: [dennisl@u.washington.edu](mailto:dennisl@u.washington.edu) phone: (206) 543-2532)

**6. Seventh Workshop on Decadal Climate Variability**  
**Honolulu, Hawaii**  
**30 April – 3 May 2007**

The Seventh Workshop on Decadal Climate Variability will be held in the Hilton Waikoloa Village (the location of the Feb. 2004 Workshop) near Kona in Hawaii. Hotel reservation, registration, and abstract submission information will follow in August 2006. Please contact Vikram Mehta ([vikram@crces.org](mailto:vikram@crces.org)) if you would like to be on the mailing list for this Workshop.