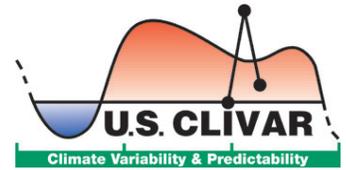


January 2013 U.S. CLIVAR Newsgram



Please forward to interested colleagues. To manage your subscription to this newsgram, visit: www.usclivar.org/contact/get-involved. To include an announcement in our next issue, email Jennifer Mays: jmays@usclivar.org.

Calendar of Upcoming Events

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2. National Academies Press New Releases: A National Strategy for Advancing Climate Modeling, and Review of the Federal Ocean Acidification Research and Monitoring Plan

Meetings and Workshops

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2. U.S. CLIVAR International Workshop - Understanding the Response of Greenland's Marine Terminating Glaciers to Oceanic and Atmospheric Forcing
3. U.S. CLIVAR Hurricane Workshop
4. U.S. AMOC/U.K. RAPID International Science Meeting: 'AMOC Variability: Dynamics and Impacts'
5. U.S. CLIVAR Extremes Workshop
6. Open-Door Workshop on Chukchi-Beaufort Seas High Resolution Meteorological Modeling Study and Atmospheric Reanalysis
7. Second China-U.S. Symposium on Meteorology: Severe Weather and Regional Climate Variability and Predictability
8. NCAR ASP Summer Colloquium: Carbon-Climate Connections in the Earth System
9. 2013 Community Earth System Modeling Tutorial
10. GODAE OceanView Symposium 2013 "International Operational Oceanography: 5 years on from GODAE - where are we now?"

Position Announcements

1. Director, National Center for Atmospheric Research (NCAR), Boulder, CO
2. Postdoctoral Position in Current and Future Extreme Temperature Events, UC, Davis
3. Postdoctoral Positions in Indian Monsoon Prediction, COLA
4. Postdoctoral Research Scientist in Climate Model Analysis, COLA
5. Postdoctoral Scientist in Earth System Modeling, COLA
6. Postdoctoral Researchers, Program in Atmospheric and Oceanic Sciences at Princeton University
7. Postdoctoral Scholar, Department of Earth and Planetary Sciences, Johns Hopkins University, Baltimore, MD
8. Postdoctoral Fellowship in Global Change, Johns Hopkins University, Baltimore, MD
9. Postdoctoral Position on Air-Sea Interactions at Mesoscales, Laboratoire de Meteorologie Dynamique, Paris, France
10. Two Postdoctoral Positions in working group 'Paleoclimate Modeling', Institute of Geosciences, University of Kiel (CAU), Germany

Calendar of Upcoming Events

[U.S. CLIVAR ENSO Diversity Workshop](#)

February 6-8, 2013

UCAR Center Green, Boulder, CO

[4th PAGES Open Science Meeting](#)

February 13-16, 2013

Goa, India

[AAAS Annual Meeting](#)

February 14-18, 2013

Boston, MA

[ASLO 2013 Aquatic Sciences Meeting](#)

February 17-22, 2013

New Orleans, LA

[WGOMD/SOP Workshop on Sea Level Rise, Ocean/ Ice Shelf Interactions and Ice Sheets](#)

February, 18-20, 2013

Hobart, Australia

[8th Session of the CLIVAR/CliC/SCAR Southern Ocean Panel](#)

February 21-22, 2013

Hobart, Australia

By invitation

11th Session of CLIVAR Working Group on Ocean Model Development

February 21- 23, 2013

Hobart, Australia

By invitation

[WCRP Special Workshop on Climatic Effects of Ozone Depletion in the Southern Hemisphere: Assessing the Evidence and Identifying Gaps in the Current Knowledge](#)

February 25 -March 1, 2013

Buenos Aires, Argentina

[GODAE OceanView & WGNE Joint Workshop on Short- to Medium-range Coupled Prediction for the Atmosphere-Wave-Sea-Ice-Ocean](#)

March 19-22, 2013

Washington, DC

[NOAA 2013 Satellite Conference for Direct Readout, GOES/POES, AND GOES-R/JPSS Users](#)

April 8-12, 2013

NOAA/NCWCP, College Park, MD

[GODAE OceanView-GSOP-CLIVAR Workshop on Observing System Evaluation and Coupled Data Assimilation](#)

Planned for April 2013

POSTPONED TO 2014

[4th WGNE Workshop on Systematic Errors in Weather and Climate Models](#)

April 15-19, 2013

Exeter, UK

[WCRP GEWEX International Satellite Cloud Clima- tology Project at 30](#)

April 22-25, 2013

New York, NY

[AMS 12th Conference on Polar Meteorology and Oceanography](#)

April 29 - May 2, 2013

Seattle, WA

[Ocean Gateways Past and Present: Significance for Ocean Circulation and Terrestrial Climate](#)

May 5-7, 2013

Jerusalem, Israel

Announcements

1. [Draft National Climate Assessment Report Released for Public Review](#)

The National Climate Assessment Development and Advisory Committee (NCADAC) has engaged more than 240 authors in the creation of the report. Following extensive review by the National Academies of Sciences and by the public, this report will be revised by the NCADAC and, after additional review, will

then be submitted to the Federal Government for consideration in the Third National Climate Assessment (NCA) Report.

The NCA is envisioned as an inclusive, nationwide process with many key objectives, including:

- Evaluating, integrating, and assessing relevant climate science and information from multiple sources
- Summarizing and synthesizing the findings of the U.S. Global Change Research Program
- Increasing understanding of what is known and not known about climate change
- Informing climate science research priorities
- Building climate assessment capacity, including vulnerability assessment and documentation of impacts in regions and sectors
- Supporting climate-literacy and skilled use of NCA findings

The NCA process and third report set the stage for more comprehensive assessments in the future. It differs from previous U.S. climate assessments in a variety of ways:

- It is an ongoing process, rather than a periodic report-writing activity
- The NCA includes climate impacts and projections, but also assesses progress in response activities such as adaptation and mitigation
- Partnerships inside and outside of the government support this effort, including entities in both the public and the private sectors
- National indicators of change within regions and sectors are being developed, along with consistent and ongoing methods for evaluation
- This NCA report will be entirely web-based and the final report will be submitted as an e-book; this allows easier access to data for citizens and scientists and transparent “line of sight” between data and conclusions
- This NCA is designed to support decision making processes within and across regions and sectors of the U.S. while also considering the international context of U.S. activities and impacts

U.S. CLIVAR encourages the climate research community to download the NCADAC Draft Climate Assessment Report and provide comments. All comments must be submitted through the [online review and comment system](#) open **January 14 - April 12, 2013**.

2. National Academies Press New Releases:

[A National Strategy for Advancing Climate Modeling](#)

A National Strategy for Advancing Climate Modeling emphasizes the needs for climate models to evolve substantially in order to deliver climate projections at the scale and level of detail desired by decision makers, this report finds. Despite much recent progress in developing reliable climate models, there are still efficiencies to be gained across the large and diverse U.S. climate modeling community. Evolving to a more unified climate modeling enterprise-in particular by developing a common software infrastructure shared by all climate researchers and holding an annual climate modeling forum-could help speed progress.

Throughout this report, several recommendations and guidelines are outlined to accelerate progress in climate modeling. The U.S. supports several climate models, each conceptually similar but with components assembled with slightly different software and data output standards. If all U.S. climate models employed a single software system, it could simplify testing and migration to new computing hardware, and allow scientists to compare and interchange climate model components, such as land surface or ocean models. A National Strategy for Advancing Climate Modeling recommends an annual U.S. climate

modeling forum be held to help bring the nation's diverse modeling communities together with the users of climate data. This would provide climate model data users with an opportunity to learn more about the strengths and limitations of models and provide input to modelers on their needs and provide a venue for discussions of priorities for the national modeling enterprise, and bring disparate climate science communities together to design common modeling experiments.

In addition, A National Strategy for Advancing Climate Modeling explains that U.S. climate modelers will need to address an expanding breadth of scientific problems while striving to make predictions and projections more accurate. Progress toward this goal can be made through a combination of increasing model resolution, advances in observations, improved model physics, and more complete representations of the Earth system. To address the computing needs of the climate modeling community, the report suggests a two-pronged approach that involves the continued use and upgrading of existing climate-dedicated computing resources at modeling centers, together with research on how to effectively exploit the more complex computer hardware systems expected over the next 10 to 20 years.

[Review of the Federal Ocean Acidification Research and Monitoring Plan](#)

Review of the Federal Ocean Acidification Research and Monitoring Plan reviews the strategic plan on the basis of how well it fulfills program elements laid out in the FOARAM Act and follows the advice provided to the working group in the NRC's 2010 report, Ocean Acidification: A National Strategy to Meet the Challenges of a Changing Ocean. This report concludes that, overall, the plan is strong and provides a comprehensive framework for improving our understanding of ocean acidification. Potential improvements include a better defined strategy for implementing program goals, stronger integration of the seven broad scientific themes laid out in the FOARAM Act, and better mechanisms for coordination among federal agencies and with other U.S. and international efforts to address ocean acidification.

Meetings and Workshops

[1. U.S. CLIVAR ENSO Diversity Workshop](#)

UCAR Center Green Conference Center

Boulder, CO

February 6-8, 2013

It is well known that no two ENSO events look alike. Over the last decade, the longitudinal location of warming during El Niño events has received a large attention due to its influence upon atmospheric teleconnections and remote impacts. Several different approaches, indices, and definitions have been introduced to categorize the various El Niño flavors. While the literature on this topic is extensive, there are still many open questions about the existence of a continuum versus preferred longitudes of maximum warming, dynamical processes, impacts, possible precursors, and the ability to predict the different flavors. It is also unclear whether observational and ocean analysis datasets are consistent in reproducing the various aspects of ENSO diversity, and of adequate duration to provide a statistically significant characterization of the different flavors. Proxy data are a promising approach, and the information they provide needs to be explored and compared with other observations and models.

The workshop is intended to provide a venue for discussion and synthesis of all the above aspects of ENSO diversity. It will include oral and poster presentations, with ample time for discussion to identify key directions for future research. Although abstract submission is now closed, registration is still open. Registration and the workshop agenda are available on [the event webpage](#).

2. U.S. CLIVAR International Workshop - Understanding the Response of Greenland's Marine Terminating Glaciers to Oceanic and Atmospheric Forcing

Beverly, MA

June 4-7, 2013

The widespread retreat and speedup of marine-terminating outlet glaciers in Greenland over the past two decades has led to a doubling of the ice sheet's contribution to sea level rise and increased the freshwater input to the North Atlantic. Its coincidence with a period of oceanic and atmospheric warming suggests a common climate driver. Yet the forcings and mechanisms behind these dynamic responses are poorly understood and either missing or crudely parameterized in climate and ice sheet models. Progress on this complex topic requires a collaborative, international, cross-disciplinary and multi-faceted approach.

With this workshop, we seek to bring together oceanographers, glaciologists, atmospheric and climate scientists, including observationalists, modelers, and theoreticians, working on all aspects of this problem. A whitepaper initiated by the U.S. CLIVAR Working Group on Greenland Ice Sheet Ocean interactions (GRISO) serves as background to this workshop. [It can be downloaded here.](#) Abstract submission and registration will open in February.

3. U.S. CLIVAR Hurricane Workshop **Geophysical Fluid Dynamics Laboratory, Princeton, NJ** **June 5-7, 2013**

In recent years, global climate models have become an increasingly important tool for simulating the effects of climate change on tropical storms and hurricanes. The increasing horizontal resolution of these models has enabled them to provide an improved representation of tropical cyclone formation rates and their regional variation. This is particularly important when these models are used to estimate the possible effects of climate change on tropical cyclone behavior. Several research questions remain to be resolved in this work:

- Many models predict a decrease in global tropical cyclone numbers, particularly in the Southern Hemisphere. What is the fundamental reason for this change?
- Prediction of future tropical cyclone behavior in the Atlantic Ocean is of crucial importance, yet tropical cyclones in this basin have typically been less well simulated. Do the new generation of higher-resolution climate models simulate the Atlantic better? Do they simulate a similar tropical cyclone response to climate change, thus giving more confidence in our prediction?
- Many studies have shown that tropical cyclone behavior responds strongly to changes in sea surface temperature. What is the tropical cyclone response of climate models to an imposed, common increase in sea surface temperature? How sensitive is the simulation of tropical cyclone variability to differences in SST analysis?
- What is the relationship between local versus remote forcing and hurricane formation in the North Atlantic? How does tropical cyclone frequency respond to an increase in tropical mean sea surface temperature versus an increase in the Atlantic alone? What about the response of tropical cyclones to local and remote forcing in other regions of tropical cyclone formation, is it similar to or different from that in the Atlantic?
- How does the role of changes in atmospheric carbon dioxide differ from the role played by sea surface temperatures in changing tropical cyclone characteristics in a warmer world?
- How does air-sea interaction modify the climate response of tropical cyclones?

This workshop will review current progress in these issues, through presentations based on results of common climate model experiments already produced by group members. In addition, discussion will focus on novel syntheses of these results, as well as applicable analytical techniques, and how they might be applied to address some of the fundamental issues mentioned above. Registration and abstract submission will open soon through the U.S. CLIVAR website.

**4. [U.S. AMOC/U.K. RAPID International Science Meeting: 'AMOC Variability: Dynamics and Impacts'](#)
Hilton Baltimore
Baltimore, MD
July 16-19, 2013**

- Registration/Abstract Submission **now open**.
- Abstract submission closes **March 4, 2013**.

Observations and numerical modelling experiments suggest that changes in the Atlantic Meridional Overturning Circulation (AMOC) play a key role in global climate variability and change. This second joint meeting of the UK RAPID and US AMOC science programs provides an opportunity to explore new results from the purposefully designed AMOC observing systems, as well as a wide variety of observational, global coupled and regional model studies and theory in this rapidly changing field of research. The meeting is intended to span the full breadth of AMOC research: paleo- and modern observational studies, theory, modelling, predictability/prediction, and impacts on climate, carbon, and biogeochemistry. An outcome of the meeting will be an online collection of abstracts and presentations.

To encourage integration of observations and theory, and merger of results across geographic areas the meeting will address three themes:

- Observations and dynamics of seasonal-to-interannual timescales. This session includes results from recent instrument deployments and related observational studies, and results from regional high resolution modeling.
- Observations and dynamics of decadal to multi-centennial timescales. This session includes results from proxy studies, and coupled climate model simulations.
- Climate impacts, and what the future may hold. This session emphasizes studies focused on forecasts of societal impacts, including changes in key variables: SST, sea level, carbon/biogeochemistry, and ecosystems.

Scientific Organizing Committee: Jim Carton (University of Maryland), Stuart Cunningham (Scottish Association for Marine Science), Eleanor Frajka-Williams (U.K. National Oceanographic Centre), Young-Oh Kwon (Woods Hole Oceanographic Institution), David Marshall (University of Oxford), Rym Msadek (NOAA Geophysical Fluid Dynamics Laboratory).

5. U. S. CLIVAR Extremes Workshop
Lawrence Berkeley National Laboratory, Berkeley, CA
August 20-22, 2013

This workshop focuses on short-term, extreme, temperature and precipitation events that occur in North America with an emphasis on the large-scale meteorological patterns (LSMPs) associated with such events. To improve our understanding of such events this workshop will bring together synoptic, dynamics, modeling, and statistical experts to review our understanding and capabilities to model and predict

those events and identify gaps and establish research protocols. Extreme events with a time scale of 5 days or less are the primary focus. Observational studies often emphasize statistical analyses of surface data. Modeling studies often emphasize model skill in simulating the surface data. However, improved understanding and simulation flows from applying synoptic and dynamic analyses, and that is done through the common interface of understanding and simulating the LSMPs associated with extreme events. Conversely, model assessment and statistical tools can be applied to the LSMPs. Hence, the LSMPs provide a unifying locus for this workshop to bring together modelers, statisticians, synopticians, and dynamicists.

The specific objectives are:

- Establish methodology and research protocols for incorporating LSMPs in statistical, dynamical, and synoptic analyses
- Provide preliminary assessment of where current climate models stand in their simulation of LSMPs and connection with the extreme events
- Identify and prioritize research needs to advance understanding and modeling of LSMPs and extreme events

The workshop will explore these topics:

- Data quality (such as station versus reanalyses in the extremes context) and requirements
- Protocols for defining and identifying events as well as LSMPs (such as: common and LSMP indices, extreme statistics procedures, multivariate statistics, and compositing strategies)
- Synoptic-dynamics linking the LSMP to the extreme event and the LSMP to both local forcing and remote low frequency phenomena (such as: dynamical tools, soil moisture, influence by ENSO, NAO, etc., including under trending climate)
- Evaluation and diagnosis of model simulation of extremes in the LSMP context (such as: assessing LSMPs in models versus analyses including formation dynamics, developing LSMP-based metrics)

The workshop welcomes abstracts related to any temperature and/or precipitation extremes on a 5 days or less time scale. Application of multiple analysis approaches to the following provided datasets are especially welcome: California Central Valley max/min temperatures, Iowa precipitation, and climate model output. The invited speakers are encouraged to highlight their approaches and findings with one or more of the provided datasets as part of their talks. Poster sessions and breakout sessions are planned. Registration and abstract submission will open soon through the U.S. CLIVAR website.

6. Open-Door Workshop on Chukchi-Beaufort Seas High Resolution Meteorological Modeling Study and Atmospheric Reanalysis

Anchorage, AK

January 25, 2013

The major objective of this workshop is to introduce a recently developed Chukchi-Beaufort Seas High-resolution Atmospheric Reanalysis (CBHAR) data from 1979-2009, and disseminate scientific findings through model simulations and CBHAR data analysis. The Chukchi-Beaufort Seas have experienced drastic climate changes during past decades, including increased surface wind and decreased sea ice cover. The changed climate may also increase the threat to both national energy security and the environment, due to potential infrastructure destruction and resultant oil spills.

This workshop will bring together colleagues from the project team, broader scientific and societal communities, government, and industry to better understand weather and climate changes in the Beaufort and Chukchi Seas. Usage and application of this high-resolution data product for various purposes (such as ocean modeling, oil spill dispersion, air pollution dispersion) and policy-making processes will be in-

produced and discussed. The workshop is open to public and all interested colleagues. It is scheduled from 8:00 AM – noon, Friday, Jan. 25, 2013, at the Alaska Marine Science Symposium 2013 (Hotel Captain Cook, room WHITBY) in Anchorage. Contact: Xiangdong Zhang, International Arctic Research Center, University of Alaska Fairbanks; email: xdz@iarc.uaf.edu.

7. Second China - U.S. Symposium on Meteorology: Severe Weather and Regional Climate Variability and Predictability

Qingdao, Shandong Province, China

June 15-27, 2013

Goals of the symposium are to:

- Define the State of Knowledge in the Two Countries for Severe Weather and Regional Climate Variability and Predictability
- Identify the Most Important Challenges for the Next Decade

Themes covered in the symposium include:

- Extreme Weather and Climate -- with emphasis on linkages across the weather-climate interface.
- Simulation of Mesoscale Phenomena -- with emphasis on contemporary models (e.g., leading Chinese model and WRF) and data assimilation and ensemble forecasting systems.
- Severe Weather Processes and Predictability -- with emphasis on high impact convective and meso-scale systems
- Climate Predictability at Seasonal-to-Interannual Timescales -- with emphasis on dynamical and statistical downscaling.
- Long-Term (Decadal and Beyond) Climate Simulation and Projection -- with emphasis on regional and continental scales.

Scientific Steering Committees: China - Chair Academician Qing-Cun Zeng (Chinese Academy of Sciences), Yihui Ding, Shouting Gao, Xiuqun Yang, Chaolin Zhang, Jiang Zhu; United States - Co-Chairs Berrien Moore and Peter Lamb (The University of Oklahoma), Lance Leslie, Robin O'Malley, David Turner, Louis Uccellini, Xuguang Wang.

For further information, please [visit the website](#) or contact: Dr. Jianqi Sun (86-10-82995107, sunjq@mail.iap.ac.cn) or the Symposium Co-Chair Dr. Peter Lamb (1-405-325-3041, plamb@ou.edu). Abstracts should be submitted by **April 15, 2013**. China and other Asia-based scientists should send abstracts to Hongmei Tang (tanghongmei@mail.iap.ac.cn); U.S.-based and other scientists should send abstracts to Tracy Reinke (treinke@ou.edu).

8. NCAR ASP Summer Colloquium: Carbon-Climate Connections in the Earth System

NCAR, Boulder, CO

July 29-August 16, 2013

This colloquium is designed for graduate students who have completed at least one-year in a field related to biogeochemistry or Earth System modeling. The colloquium will focus on the physical, biological, and chemical mechanisms that regulate the global carbon cycle. It will feature lectures from international experts on key aspects of the carbon cycle and its representation in Earth System models.

Lectures will address both terrestrial and ocean biogeochemical systems, and include observational and modeling perspectives. Furthermore, lectures will be given on coupled climate modeling and analytical

techniques relevant to carbon cycle science. Tutorials and computer-based exercises will provide experience working with models spanning a range of complexity. Student projects will examine the behavior of cutting-edge Earth System models in simulations submitted to phase 5 of the Coupled Model Intercomparison Project (CMIP5). Application deadline is **February 15, 2013**.

9. 2013 Community Earth System Modeling (CESM) Tutorial

NCAR, Boulder, CO

August 12-16, 2013

The CESM Tutorial will include lectures on simulating the climate system, practical sessions on running CESM, modifying components, and analyzing data. The tutorial is targeted at graduate student level individuals. A maximum of 80 students will be accepted with financial support for up to 40 students .

Acceptance criteria:

- Preference given to early career graduate students, though we will aim for a mix of graduate students, postdocs, and early career research scientists and faculty
- Project descriptions and their fit with broader CESM goals and activities
- Balance attendees across institutions

How to Apply:

- Application website coming soon.
- Application deadline: March 1, 2013.
- Accepted students informed by late April.
- Questions should be directed to Susan Bates, bates@ucar.edu.

10. GODAE OceanView Symposium 2013 “International Operational Oceanography: 5 years on from GODAE - where are we now?”

NCWCP/Riverdale, MD

November 4-6, 2013

Operational Oceanography aims to address many challenges with timescales from days to decades, regions ranging from coastal areas to the global ocean and applications from off-shore industries to ocean ecosystems. This is inherently an international issue which requires broad collaboration. GODAE OceanView (GOV), following on from GODAE, is an international programme which provides coordination and leadership in consolidating and improving global and regional ocean analysis and forecasting systems and the development of new capabilities. The GODAE OceanView Science Team (GOVST) is a forum for the main operational and research institutions to accelerate the improvement and exploitation of the systems through exchange of information and expertise and the coordination of joint assessments. The GODAE OceanView Symposium will provide an opportunity to review the key scientific achievements of GOV in the last years, to critically examine the outcomes, and to discuss the next steps towards the future of operational ocean analysis and forecasting and its international coordination.

The symposium will be held at NOAA Center for Weather and Climate Prediction (NOAA/NCWCP), 5830 University Research Court, Prince George’s County, Riverdale, MD near Washington, DC. It is being designed to appeal to a wide audience. Those developing or supporting the observing systems, ocean analysis and prediction systems, forecasters, service providers, the user community, decision and policy makers, researchers and programme managers from both the public and private sectors are all warmly encouraged to attend.

The symposium will be organized around four core sessions representing multi-author plenary review papers and posters over a 3-day period. The symposium is organized by NOAA/UCAR with support from the GODAE OceanView Project Office. Presentations will show the progress of operational oceanography infrastructure, will address key scientific & technological advances and also focus on future challenges and opportunities. Key speakers will be invited to represent the achievement in the core areas and poster sessions will provide an overview of current R&D efforts, user applications and stakeholder involvement. The symposium will be followed by 1.5 day internal review to examine the GODAE OceanView objectives and to advise on future areas of development and activities.

Position Announcements

1. [Director, National Center for Atmospheric Research \(NCAR\)](#)

Boulder, CO

The University Corporation for Atmospheric Research (UCAR) invites applications and nominations for the position of Director of the National Center for Atmospheric Research (NCAR). UCAR intends to fill the position promptly, and seeks to have the new Director in place by mid-2013.

The Director of NCAR is the national center's executive and scientific leader. The director is responsible for the scientific direction, productivity, innovation capacity, and overall success of NCAR research, facilities, and programs, including the formulation and execution of plans, budgets, and priorities, as well as directing all phases of the operation of the national center. A major responsibility of the director of NCAR is to build and maintain strategic partnerships with the National Science Foundation (NSF) and the 104 university members of UCAR.

The successful candidate will have demonstrated the ability to lead and inspire on a broad intellectual front and will possess a significant record of scientific or technical achievement in the atmospheric or related sciences. He or she will have demonstrated successful planning, management, execution, and administration of complex research and facility activities and will possess a breadth of interest, vision, and judgment. The candidate will be adept at advocating for NCAR's science and facilities to various constituencies and will have experience in applying research to pressing societal needs. She or he will have shown a strong commitment to increasing diversity in the atmospheric and related sciences community and to supporting educational engagement initiatives.

The search committee hopes to identify and interview top candidates in the spring of 2013. The successful candidate will be named shortly thereafter. Applications will be kept strictly confidential. Please submit an application letter accompanied by a complete curriculum vitae to the address below. Do not submit applications via UCAR's employment website. Initial consideration will be given to applications received by **March 27, 2013**. [See the full announcement here](#).

Please address all correspondence to:
NCAR Director Search Committee
University Corporation for Atmospheric Research
c/o Kathryn Strand
P. O. Box 3000
Boulder, CO 80307
strand@ucar.edu

2. Postdoctoral Position in Current and Future Extreme Temperature Events University of California, Davis

A postdoctoral scholar position is available in simulation of climate extremes in temperature that affect California. The position resides in the research program of Prof. Richard Grotjahn at the University of California, Davis, Department of Land, Air and Water Resources. The successful applicant will work closely with Prof. Grotjahn and his graduate students on projects related to the simulation, synoptics, and dynamics of the large scale flow associated with extreme events in temperature that affect California. This project combines expertise in atmospheric dynamics and synoptics, extreme value statistics, and climate modeling.

Tasks include modifying and creating computer codes to perform various statistical and dynamical analyses of reanalysis and climate model data. These tasks are performed on reanalyses and on global climate model data archived as part of the CMIP-5 project. Consequently, a PhD in an atmospheric or closely related science is required. Experience in FORTRAN programming is strongly preferred, though excellent knowledge of C++ should allow you to transition easily to FORTRAN programming. Knowledge of atmospheric dynamics and atmospheric modeling are strongly preferred. Good written and verbal communication skills are preferred. Also desired, but not required is experience with NCL, working with large datasets, and/or expertise in extreme value statistics.

Learning opportunities include developing your expertise in fields outside your current specialization(s). For example, an applicant highly knowledgeable in atmospheric dynamics will develop working knowledge of extreme value statistical procedures and climate modeling. The successful applicant will participate in writing reports, articles, and conference presentations. The successful candidate may participate in meetings such as the annual CESM workshop and/or AMS meeting. Also, Prof. Grotjahn is organizing an international workshop on these topics and is ICDM Secretary and a co-convenor of biennial IAMAS sessions on extreme weather and climate. The successful applicant will be encouraged to explore grant writing. The successful applicant will have opportunities to participate in various instructional activities, including the new NSF IGERT on Climate Change, Water and Society.

The position is available now and it is open until filled. The initial appointment is for one year, with funding available for up to three years. Salary depends upon your level of experience and is competitive with a range of \$44,340 to \$49,884. The position includes vacation with supervisory approval and health care benefits (which includes family coverage). The position is covered by a collective bargaining unit. To ensure consideration, please submit a complete application packet no later than **February 15, 2013**. This application should be submitted electronically to Prof. Grotjahn (grotjahn@ucdavis.edu).

The application should include the following:

1. A cover letter that outlines your interests and how they relate to this project. Include paragraphs that highlight your experience and your expertise in dynamics, synoptics, global modeling, statistics, and computer programming.
2. Your CV. Ensure that it includes your contact information, your educational experience and degrees, lists of your publications and presentations, and any other academic information (e.g. TA experience) you feel is relevant. Please note that publication lists with active links to online papers are strongly preferred.
3. Names and contact information for 3 references. The contact information should include postal mail address, telephone number(s), and email address for each reference.
4. Transcripts of your graduate education. Preferred, but not required are transcripts of undergraduate education (such transcripts are especially useful if your computer programming or meteorology coursework was mainly as an undergraduate).

3. Postdoctoral Positions in Indian Monsoon Prediction Center for Ocean-Land-Atmosphere Studies (COLA)

The Center for Ocean-Land-Atmosphere Studies is looking for up to three self-motivated postdoctoral research scientists in the area of Indian monsoon prediction and predictability. The incumbents will join a multi-national project in collaboration with the National Monsoon Mission of the Government of India. The selected candidates will investigate ocean-land-atmosphere coupling and initialization strategies to improve CFSv2 and monsoon prediction. Particular attention will be paid to three aspects of the problem: land-atmosphere feedbacks, multiple analysis ocean initialization, and ocean-atmosphere feedbacks. The successful candidates are also expected to take leadership roles in preparation of manuscripts for publication and conference participation.

Applicants must have a Ph.D. in atmospheric sciences or a related field, with experience in climate variability or climate modeling and prediction. The appointment will be for one year, with potential for renewal for the second and third years, given satisfactory performance. For consideration, interested and qualified applicants should submit a cover letter including a statement of research interests, a curriculum vita, and contact information of two professional references to the NMM PostDoc Search Committee (Dr. James Kinter, chairperson; jkinter@gmu.edu). Applications received before **February 28, 2013** will receive highest priority.

4. Climate Model Analysis Post-Doctoral Research Scientist The Center for Ocean-Land-Atmosphere Studies (COLA)

The Center for Ocean-Land-Atmosphere Studies (COLA) seeks a recent Ph.D. recipient to serve as a post-doctoral research scientist. The successful candidate will conduct statistical analyses of climate models and observations with the aim of improving understanding and quantifying the extent to which the climate system can be predicted on time scales from seasons to decades.

Scientists with backgrounds in applying statistical methods to understand climate dynamics and/or predictability are especially encouraged to apply. Applications, consisting of curriculum vitae, at least two references for letters of recommendation, and statement of research interest, should be sent to COLA Model Analysis PostDoc Search (delsole@cola.iges.org) by **March 31, 2013**.

5. Earth System Modeling Post-Doctoral Scientist The Center for Ocean-Land-Atmosphere Studies (COLA)

The Center for Ocean-Land-Atmosphere Studies (COLA), in collaboration with the National Center for Atmospheric Research and Lawrence-Livermore National Laboratory, seeks recent Ph.D. recipients to serve as postdoctoral research fellows. Successful applicants will conduct original research in Earth system modeling and data analysis, supported by collaborative funding from the National Science Foundation, working with mentors at both COLA and one or more of the collaborating centers. Research with large ensemble simulations and/or high-resolution Earth system models to assess the predictability of regional climate on intra-seasonal to decadal time scales is particularly targeted. Fellows will receive training and experience in assembling system models from the system components, running the models in controlled experiments, and/or evaluating model output to test hypotheses and make inferences about climate variability and change.

Scientists with backgrounds in developing or analyzing coupled ocean-atmosphere-land surface models, general circulation models of the atmosphere or ocean, or models of land-surface or cryospheric processes are strongly encouraged to apply. Applications, consisting of curriculum vitae, at least two references for letters of recommendation, and statement of research interest, should be sent to COLA ESM PostDoc Search (delsole@cola.iges.org) by **March 15, 2013**.

6. Postdoctoral Researchers

Program in Atmospheric and Oceanic Sciences (AOS) at Princeton University

Research on the impacts of climate change on ocean circulation, biogeochemistry, and ecology in the Program in Atmospheric and Oceanic Sciences (AOS) at Princeton University. The AOS ocean biogeochemistry group seeks energetic and enthusiastic postdoctoral researchers to participate in modeling and observational studies of climate impacts on ocean circulation and how these affect ocean biogeochemical cycles and ecology. This effort is part of a broad modeling and observational study of ocean circulation, the global carbon cycle, ocean ecology, and the impact of climate change on all of these. Areas of particular current interest include the Southern Ocean, and the detection and attribution of biogeochemical and ecological change in the ocean. Individuals will join a vigorous interdisciplinary research group under the direction of Prof. Jorge Sarmiento and will be able to take advantage of a wide range of related research at Princeton University and NOAA/GFDL.

Candidates must have received a Ph.D. in the earth sciences, applied math, or the physical, biological, or chemical sciences within three years of the starting date for the appointment. Training in oceanic sciences is strongly preferred, and strong modeling, quantitative, and/or statistical skills are a must. Postdoctoral appointments are initially for one year with the renewal for subsequent years based on satisfactory performance and continued funding. A competitive salary is offered commensurate with experience and qualifications.

Applicants [must apply online](#), Req # 1300023, and submit vitae, a statement of research experience and interests, and names of at least 3 references. Review of applications will begin immediately and continue until the position(s) are filled. Princeton University is an equal opportunity employer and complies with applicable EEO and affirmative action regulations.

7. Postdoctoral Scholar

Department of Earth and Planetary Sciences (EPS), Johns Hopkins University, Baltimore, MD

The Johns Hopkins University invites applications for the Morton K. Blaustein Postdoctoral Scholar in the [Department of Earth and Planetary Sciences](#) (EPS). We seek an outstanding individual with a recent Ph.D. in any area of Earth and Planetary sciences. The successful candidate will be free to pursue his/her independent research interests. Projects that complement our existing research programs and that involve two or more of the faculty from EPS and other Hopkins departments will be given preference. Information on our department and its research activities can be found at [www.epp.hopkins.edu](#). Applicants should contact faculty with whom they are interested in working. The duration of the fellowship is one year with an anticipated extension for a second year. The position carries a competitive salary and fringe benefits, includes an annual stipend for travel and research expenses, and provides eligibility to participate in the Johns Hopkins University health plans.

Consideration of applications will begin **February 15, 2013**. Applications can only be submitted electronically through [Interfolio](#). To apply, please submit your curriculum vitae (with your email address), names and emails of three or more references, and a brief research plan.

8. Postdoctoral Fellowship in Global Change Johns Hopkins University, Baltimore, MD

The Johns Hopkins University invites applications for the Glenadore and Howard L. Pim Postdoctoral Fellowship in Global Change. This fellowship is part of a Global Change Science initiative within the [Department of Earth and Planetary Sciences](#). We seek an outstanding individual with a recent Ph.D. who is pursuing interdisciplinary research in Global Change.

Candidates whose research spans the physical sciences, social sciences, health sciences and/or public policy aspects of global change are preferred. Areas of interest include but are not limited to (1) fundamental processes driving global change; (2) the impact of global change on air quality, water resources, ecosystems, and/or human health; (3) remediation of the effects of global change; (4) energy resources; and (5) analysis of economic, sociological, public health, and policy implications of global change. Special consideration will be given to candidates who will collaborate with faculty from other Hopkins departments. The [Environment, Energy, Sustainability and Health Institute](#) and the [Global Water Program](#) are examples of relevant initiatives at Hopkins. Applicants should contact faculty with whom they are interested in working. The duration of the fellowship is one year with an anticipated extension for a second year. The position carries a competitive salary and fringe benefits, includes an annual stipend for travel and research expenses, and provides eligibility to participate in Johns Hopkins University health plans.

Consideration of applications will begin **February 15, 2013**. Applications can only be submitted electronically through [Interfolio](#). To apply, please forward your curriculum vitae (with your email address), names and emails of three or more references, and a brief research plan.

9. Postdoctoral Position on Air-Sea Interactions at Mesoscales Laboratoire de Meteorologie Dynamique, Paris, France

In the framework of a contract (ASIV) with the French funding agency (ANR), "Air Sea Interactions and Variability: the effect of SST gradients and high resolution", we seek a postdoctoral researcher for a 2-year contract at Laboratoire de Meteorologie Dynamique in Paris (France). The project concerns the role of air-sea interactions on the atmospheric storm-track. It will involve both numerical modelling with the WRF model and theoretical aspects (based on Geophysical Fluid Dynamics). The contract length is 2 years with a salary of 2700 Euros per month before taxes and insurances. The position will remain **open until filled**. The recruited postdoctoral fellow should start before September 2013. Candidates should have a PhD in dynamical meteorology, physical oceanography or in fluid mechanics. Experience on dynamical understanding of nonlinear processes is desirable. Interested candidates should send a CV and the names of two references to Guillaume Lapeyre, glapeyre@lmd.ens.fr.

10. Two Postdoc Positions in the working group 'Paleoclimate Modeling' Institute of Geosciences, University of Kiel (CAU), Germany

Job 1 - Postdoc (3 yrs): [Glacial/interglacial hydrographic structures and nutrient utilization in the Pacific Southern Ocean - a data and modeling approach](#)

The position is in the framework of the Priority Program 'Antarctic research with comparative investigations in Arctic ice areas' (ANTARCTIC; SPP 1158) funded by the German Science Foundation (DFG).

Job 2 - Postdoc (3 yrs): [Paleoclimate and ocean biogeochemical modeling](#)

The successful candidate will use AOGCMs in combination with marine biogeochemical models to per-

form and analyze paleo climate simulations with relevance to the global carbon cycle. This position includes teaching obligations.

Requirements:

- PhD degree in oceanography, physics, geosciences or a related field
- experience in marine biogeochemistry and numerical modeling is required
- excellent oral and written communication skills in English are expected
- interest and ability to work independently but team-oriented in a young, international research group

The positions will be awarded for three years, and the starting dates are as soon as possible. Salary corresponds to the level of TV-L E13 of the German public service salary scale. CAU is an equal opportunity employer, aiming to increase the proportion of women in science. Applications by females are particularly welcome. Applicants with severe disabilities will be given priority consideration, given equal qualifications. Interested candidates should send an application letter including a curriculum vitae, short statement of research interest, copies of transcripts, and names and contact information of at least two references via e-mail to Prof. Dr. Birgit Schneider: bschneider@gpi.uni-kiel.de. Application review will start on **February 28, 2013** and continue until the positions are filled.