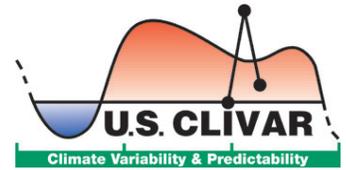


October 2012 U.S. CLIVAR Newsgram



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

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1. Associate Research Scientist/Research Scientist, IRI/Columbia University
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3. Postdoctoral Position (Ice-Sheet/Sea-Level Interactions), Tulane University
4. Postdoctoral Researcher (Tropical Meteorology/Climate Dynamics & Physics), JIFRESSE/UCLA
5. Postdoctoral Scholars (Climate Diagnostics & Modeling), UC, Irvine
6. Postdoctoral Position (Paleoclimate Data Analysis and Modelling), Cardiff University

Calendar of Upcoming Events

[NOAA's 37th Climate Diagnostics and Prediction Workshop](#)

October 22-25, 2012
Hilton, Fort Collins, CO

[IASCLiP Meeting @ NOAA Workshop](#)

October 23, 2012 (7:00-8:30pm)
Hilton, Fort Collins, CO

[Workshop on Variability in the Western Tropical Pacific: Mechanisms, Teleconnections and Impacts on Sub-Seasonal, Inter-Annual and Inter-Decadal Time Scales](#)

November 12-16, 2012
Trieste, Italy

[WCRP/CLiC EGU ESA ESRIN Earth Observation and Cryosphere Science Conference](#)

November 13-16, 2012
Frascati, Italy

[Integrated Ocean Observing System \(IOOS\) Summit 2012](#)

November 13-16, 2012
Herndon, VA

[CLIVAR/GSOP Ocean Synthesis and Air-Sea Flux Evaluation Workshop](#)

November 27-December 1, 2012
Woods Hole, MA
By invitation

[6th Meeting of the Global Synthesis and Observations Panel](#)

November 30-December 1, 2012
Woods Hole, MA
By invitation

[AGU Fall Meeting](#)

December 3-7, 2012
San Francisco, CA

[U.S. CLIVAR Town Hall at AGU Fall 2012 Meeting](#)

December 4, 2012 (12:30-1:30pm)
San Francisco, CA
Room 2016, Moscone West

[93rd AMS Annual Meeting: "Taking Predictions to the Next Level: Expanding Beyond Today's Weather, Water, and Climate Forecasting and Projections."](#)

January 6-10, 2013
Austin, TX

[Third Workshop on the Evaluation of ENSO Processes in Climate Models](#)

January 21-23, 2013
Hobart, Australia

[Dialogue Between Contourite & Oceanography Processes, International Workshop](#)

January 28-29, 2013
Hull, UK

Announcements

1. Expert Reviewer Pre-Registration Opens for the Working Group I Second Order Draft Contribution to IPCC Fifth Assessment Report

Review open: October 5 – November 30, 2012

Working Group I (WGI) of the Intergovernmental Panel on Climate Change (IPCC) is pleased to announce that the Second Order Draft of the WGI contribution to the IPCC Fifth Assessment Report (AR5), Climate Change 2013: The Physical Science Basis, will be available for Expert and Government Review from October 5 – November 30, 2012: <https://sod.ipcc.unibe.ch/registration/>. For additional information, please see the Introduction to the Expert Review of IPCC Working Group I AR5 Draft Reports: https://sod.ipcc.unibe.ch/registration/WGIAR5_ExpertReview_Intro.pdf.

2. Extreme Events and the Carbon Cycle Initial Papers Published in Special Online Issue of Environmental Research Letters

Manuscript submission deadline: December 31, 2012

[Environmental Research Letters: Focus on Extreme Events and the Carbon Cycle](#)

Guest Editors:

Philippe Ciais, Commissariat a L'Energie Atomique CEA, France

Elise Pendall, University of Wyoming, US

Chuxiang Yi, City University of New York - Queens College, US

Feedback between climate dynamics and the carbon cycle is extremely important in understanding 21st century climate change. Extreme events, such as El Niño, La Niña, drought, hurricane, heat and cold waves, forest fires, freezing and insect outbreaks, have the potential to strongly alter carbon exchanges between vegetation and the atmosphere. The focus issue will concentrate on the links between extreme events - such as those listed above - and the carbon cycle. The results covered by this issue are based on field observations, forest inventories, remote sensing time series, numerical modelling, theoretical and experimental approaches. The purpose of this focus issue is to address the impacts of extreme events on terrestrial carbon dynamics.

If you believe you have a suitable article in preparation please submit by e-mailing it to erl@iop.org or send any pre-submission questions to guillaume.wright@iop.org.

3. The National Academies Earth & Life Studies Releases Report: A National Strategy for Advancing Climate Modeling (2012)

Climate models will need to evolve substantially to deliver climate projections at the scale and level of detail desired by decision makers, this report finds. As climate change has pushed climate patterns outside of historic norms, the need for detailed projections is growing across all sectors, including agriculture, insurance, and emergency preparedness planning.

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.

Learn more about A National Strategy for Advancing Climate Modeling by watching a free webinar, featuring presentations by the report's authoring committee and a question and answer session on the report's findings (<http://dels.nas.edu/Report/Report/13430>).

4. New Open Access Data Journal from Wiley-Blackwell Publishers: [Geoscience Data Journal](#)

This new journal provides an open access platform where scientific data can be formally published, in a way that includes scientific peer-review. An online-only journal, Geoscience Data Journal publishes short data papers cross-linked to, and citing, datasets that have been deposited in approved data centers and awarded DOIs. The journal will also accept articles on data services and articles which support and inform data publishing best practices.

The Geoscience Data Journal will accept contributions in the areas of Weather and Climate; Oceanography; Atmospheric and Ocean Chemistry; Cryosphere; Biosphere and Land Surface and Geology.

5. NCEP's Climate Prediction Center Distributing Experimental Seasonal Forecasts from their National Multi-Model Ensemble (NMME)

The forecasts for November 2012 through May 2013 are now available (www.cpc.ncep.noaa.gov/products/NMME/). Both NMME and International MME (IMME) forecasts can be accessed from this page. Forecasts are presented for the following fields:

- 2-meter surface temperature (global and North America)
- Precipitation rate (global and North America)
- Sea-surface temperature (global and Nino3.4-region)

This month, NCEP is debuting NMME probability forecasts. The forecasts, as well as some description, are linked from the homepage ("Experimental: Probability forecasts.") This product is new, so please take a look and let them know if you have any questions or comments.

Announcements of Opportunity

1. [NOAA Climate & Global Change Postdoctoral Fellowship Program](#)

Deadline: January 18, 2013

The UCAR Visiting Scientist Programs (VSP) announces the annual call for applications for the NOAA Climate and Global Change Postdoctoral Fellowship Program, sponsored by the NOAA Climate Programs Office. The purpose of the program is to help create and train the next generation of leading researchers needed for observing, understanding, modeling and predicting the climate variability and change on seasonal and longer time scales (see www.climate.noaa.gov for relevant program foci).

Ten new two-year postdoctoral fellowship appointments are anticipated in 2013. Duties include:

- Conducting independent or collaborative research under a proposed plan related to the goals of the program.
- Documenting the results of the research in scientific publications, and presenting those results at seminars and conferences.
- Pursuing outside activities that advance professional growth, which may include contributing to educational programs, serving on committees, and attending workshops.

Candidates should have a Ph.D. related to climate change research. Preference is given to those who have held a Ph.D. for more than three years. Awardees must change institutions in the absence of a compelling circumstances.

Host institutions are also sought under this announcement. Hosts are expected to mentor the fellow as well as provide office space, a computer workstation, and any other unique research costs associated with this fellowship. Individuals interested in hosting should submit a one or two-page letter of intent to host a specific fellow or describing the type of background preferred. Visit the [UCAR VSP](#) site for additional instructions.

Appointments will be announced in early spring 2013.

2. Postdocs Applying Climate Expertise Postdoctoral Fellowship Program

Deadline: January 4, 2013

The UCAR Visiting Scientist Programs (VSP) announces the annual call for applications for the Postdocs Applying Climate Expertise (PACE) Fellowship Program, sponsored by the NOAA Climate Programs Office. The PACE program has been developed to grow the pool of scientists qualified to work at the interface between climate science and its applications, transition advances in climate science and climate prediction into climate-related decision-making tools and frameworks, and strengthen collaboration between climate research institutions and decision-making institutions across all sectors.

Several new postdoctoral fellowship appointments are anticipated in 2013. The program seeks recent or anticipated PhDs who have strong expertise in climate science and who are interested in applying their knowledge of the climate system to increase decision-making capacity in climate-sensitive sectors. Appointments are nominally for 2 years, with the second year contingent upon satisfactory progress during the first year.

Postdoc duties include:

- Conducting independent or collaborative research under a proposed plan related to the goals of the program.
- Documenting the results of the research in scientific publications, and presenting those results at seminars and conferences.
- Pursuing outside activities that advance professional growth, which may include contributing to educational programs, serving on committees, and attending workshops.

The postdoc will be jointly affiliated with two partner institutions: an institution that contributes expertise on climate research (CR) and an institution responsible for, or strongly linked to, decision making or risk management influenced by climate variability and/or change (DM). The postdoctoral scientist will require mentorship from both the CR partner and the DM partner to most effectively bring advances in climate science to bear in a DM environment.

Postdoc applications will be evaluated, selected, and candidates notified in mid-January to submit a project description to a specific participating CR/DM Partner, using contact information provided by the UCAR/VSP. The project descriptions will be due in mid-March. Candidates are encouraged to contact the CR/DM partners during the process of writing their project descriptions. All candidates will be notified of their status by early April. The postdoctoral appointments may begin any time between April and October.

Host CR and DM partnering institutions are also sought by the PACE program. Institutional CR/DM Partners should develop a joint 3-page statement of intent and submit these to the PACE Steering Committee for review. Those CR/DM Partners chosen to participate prior to mid-January 2013, when the short-list of postdoctoral candidates is produced, are eligible recipients for one of the candidates selected. Interested parties should visit the [PACE Host Institution Page](#) for applications instructions

3. The National Research Council of the National Academies Fellowship Opportunity

The National Research Council of the National Academies sponsors a number of awards for graduate, postdoctoral and senior researchers at participating federal laboratories and affiliated institutions. These awards include generous stipends ranging from \$42,000 - \$80,000 per year for recent Ph.D. recipients, and higher for additional experience. Graduate entry level stipends begin at \$30,000. These awards pro-

vide the opportunity for recipients to do independent research in some of the best-equipped and staffed laboratories in the U.S. Research opportunities are open to U.S. citizens, permanent residents, and for some of the laboratories, foreign nationals.

There are four annual review cycles.

- Review Cycle: November; Opens September 1; Closes November 1
- Review Cycle: February; Opens December 1; Closes February 1
- Review Cycle: May; Opens March 1; Closes May 1
- Review Cycle: August; Opens June 1; Closes August 1

Applicants should contact prospective Adviser(s) at the lab(s) prior to the application deadline to discuss their research interests and funding opportunities. Detailed program information, including online applications, instructions on how to apply and a list of participating laboratories, is available on the [NRC Research Associateship Programs Website](#). Questions should be directed to the NRC at 202-334-2760 or rap@nas.edu.

Meetings and Workshops

1. U.S. CLIVAR Town Hall – Science Plan for the Post-2013 Era AGU Fall 2012 Meeting, Moscone Center, San Francisco, CA December 4, 12:30-1:30pm, Room 2016 (Moscone West)

U.S. CLIVAR convenes a Town Hall for climate scientists to preview the draft U.S. CLIVAR Science Plan being developed by the U.S. CLIVAR Scientific Steering Committee (SSC) and Panels for the 15-year period starting in 2014. During the Town Hall, the community is invited to provide reaction to the draft Plan for consideration by the SSC prior to finalizing the draft for formal public review in 2013. Lunch will be provided.

2. U.S. CLIVAR ENSO Diversity Workshop UCAR,NCAR Center Green Conference Center Boulder, CO February 6-8, 2013

Poster abstract submission deadline: November 20, 2012

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.

3. International Workshop on Ice sheet/ocean/atmosphere interactions in Greenland – Challenges to improving observations, process understanding and modeling

Boston, MA vicinity

Week of June 3-7, 2013

Save the date for a workshop being organized by the U.S. CLIVAR Working Group on Greenland Ice Sheet/Ocean Interactions. The workshop aims at bringing together oceanographers, glaciologists, atmospheric and climate scientists, working as observationalists, modelers and theoreticians on aspects of the problem of ice sheet/ocean/atmosphere interactions around Greenland. Further details on specific dates, venue and agenda will be announced soon.

Organizing and Scientific Steering Committees:

- Cecilia Bitz, U. Washington
- Ginny Catania, U. Texas
- Gordon Hamilton, U. Maine
- Patrick Heimbach, MIT
- Adrian Jenkins, British Antarctic Survey, UK
- Helen Johnson, Oxford University, UK
- Ian Joughin, APL, U. Washington
- Dimitris Menemenlis, JPL/Caltech
- John Mortensen, Greenland Institute of Natural Resources
- Roman Motyka, U. Alaska
- Stephen Price, Los Alamos National Lab
- David Roberts, U. Durham, UK
- Olga Sergienko, Princeton University
- Fiamma Straneo, WHOI
- Dirk van As, Geological Survey of Denmark and Greenland
- Bob Bindshadler, NASA
- Andreas Vieli, U. Durham, UK
- David Bromwich, Ohio State

4. Dialogue Between Contourite & Oceanography Processes International Workshop

University of Hull, UK

January 28-29, 2013

Abstract and registration deadline: December 7, 2012

Understanding deep water-mass circulation is essential to understanding the behavior of the ocean today and to understanding past changes in its operation. In the contemporary Earth System, these currents represent a major component in regulating both the climate system and biogeochemical cycles. However, despite their fundamental importance to the Earth-System, our understanding of the fundamental features of deep water-mass circulation, including the local flow bottom currents, internal waves, their mixing, behavior, variability and role in the sedimentary evolution of continental margin remain poorly understood. Our rising to the challenge of understanding these systems is impeded by the strict division of those researchers studying them from the perspective of the water itself and the geological deposits derived from them.

This international workshop aims to break down barriers between physical and geological communities studying deep water flows and resultant sedimentary deposits, challenging each with the evidence and understanding presented by the other. They aim to create a new phase of holistic and collaborative research, to the benefit of both those studying modern and ancient circulation systems.

5. 12th International NCCR Climate Summer School: “From Climate Reconstructions to Climate Predictions”

Grindelwald, Switzerland

September 1-6, 2013

Application deadline: December 20, 2012

The NCCR Climate, Switzerland’s Centre of Excellence in Climate and Climate Impact Research, invites young scientists to join leading climate researchers in the scenic Swiss Alpine village of Grindelwald for keynote lectures, workshops and poster sessions on the occasion of the 12th NCCR Climate Summer School 2013.

Scope: The 12th International NCCR Climate Summer School is focusing on the theme “From climate reconstructions to climate predictions”. This theme has been chosen due to its paramount importance in terms of both scientific challenges and pressing societal concerns. The specific topics to be addressed include:

- Climate variability of the past two millennia and the next century
- Calibrating proxies, modeling past climate, data - model comparison, detection and attribution
- Rapid climate change and feedbacks, tipping points
- Decadal predictability: theory and processes

The Summer School invites young researchers from all fields of climate research. The courses cover a broad spectrum of climate and climate impact research issues and foster cross-disciplinary links. Each topic includes keynote plenary lectures and workshops with in-depth discussion in smaller groups. All Summer School participants are expected to present a poster of their research and there will be ample opportunity for discussion.

The summer school is open to young researchers (PhD students and Post-Docs) worldwide. Participation is highly competitive and will be limited to a maximum of 70. The registration fee (1400 CHF) includes full board accommodation, excursion and teaching material. A small number of grants will be available for students from developing countries. Successful applicants will be notified in February 2013.

Position Announcements

1. Associate Research Scientist/Research Scientist

The International Research Institute for Climate & Society (IRI)/Columbia University

Position open until filled.

The International Research Institute for Climate & Society (IRI, <http://iri.columbia.edu>) at Columbia University seeks an associate research scientist or a research scientist (open rank depending on education and experience) who is adept at the use of models for hypothesis-driven climate research. We are looking for an individual who can support IRI’s mission through the use of dynamical models both global and regional - to better understand and predict climate variations and change across spatiotemporal scales, in order to help societies better manage climate related risks and better adapt to climate change and variability. The scales of interest range from local and daily, including extremes, to multidecadal and regional; the successful applicant will be able to address a range of complexity in using models, and create probabilistic climate information of relevance in diverse sectors including disaster risk reduction, food security, water resource management and public health.

Minimum Qualifications: All applicants MUST meet these minimum qualifications to be considered for the position. For an Associate Research Scientist, requirements include a PhD in a Physical or Mathematical science, and at least 2 years of post-doctoral experience. For a Research Scientist, requirements include a PhD in a Physical or Mathematical Science, and at least 6 years of post-doctoral experience. Preferred Qualifications: Strong written and verbal communication skills, and a desire to work in the multidisciplinary environment of the IRI. This call will remain open until the position is filled. For more information or to apply see: (academicjobs.columbia.edu/applicants/Central?quickFind=56720).

2. Postdoctoral Research Position (Dynamical Processes in the Southern Ocean) University of California, San Diego/Scripps Institution of Oceanography

Applications deadline: November 5, 2012

Applications for a postdoctoral research position to investigate dynamical processes in the Southern Ocean are now being accepted. The Diapycnal and Isopycnal Mixing Experiment (DIMES, <http://dimes.ucsd.edu>) is a UK/US effort to measure mixing processes in the Southern Ocean and assess their impact on the climate system. The postdoctoral researcher will contribute to the Scripps Institution of Oceanography component of DIMES by helping to produce and analyze a Southern Ocean State Estimate (SOSE, sose.ucsd.edu).

The candidate will join a group with goals aimed both at using DIMES observations to improve SOSE and using SOSE fields to explore mixing, overturning circulation, and transport across the Antarctic Circumpolar Current (ACC). The project offers the opportunity to interact with the broad international community of DIMES investigators.

Research will involve incorporating the DIMES in situ observations as constraints in SOSE. The observations include fields not commonly used in ocean assimilation such as float trajectories and tracer concentrations. In addition, the DIMES region will serve as a testbed to evaluate SOSE performance in comparison to DIMES observations and other independent data fields. This will allow improved understanding of SOSE uncertainties and of the reliability of mixing and stirring estimates derived from simulated float and tracer releases.

The project also aims to quantify along-isopycnal transport by diagnosing the buoyancy and momentum budgets in SOSE. The emphasis will be on evaluating the spatial variations in mixing and overturning, with a particular focus on exchanges of heat and other properties across the ACC. The uncertainty analysis carried out in the DIMES region will allow estimation of an error budget, making the results robust. Meanwhile, the SOSE framework will allow extrapolation of the DIMES results throughout the Southern Ocean, thus allowing the DIMES results to inform large-scale ocean budgets.

Initial appointments are for 1 year with possibility of extension for up to 3 years in total. Position will be open until filled. Applications received by November 5, 2012 will receive full consideration. Complete applications should include a CV and statement of research interests. For further information or to apply contact: Sarah Gille (sgille@ucsd.edu) or Matt Mazloff (mmazloff@ucsd.edu).

3. Postdoctoral Position (Ice-Sheet/Sea-Level Interactions)

Tulane University, New Orleans

Applications deadline: November 12, 2012

Applications are invited for a postdoctoral position in Ice-Sheet/Sea-Level Interactions at the Department of Earth and Environmental Sciences at Tulane University, New Orleans, Louisiana, USA. This is a two-year position with the possibility for an extension depending on progress. The appointment will ideally commence early in 2013, but the exact start date is negotiable.

The successful candidate will join the Quaternary Research Group (<http://www.tulane.edu/~tor>) and is expected to conduct research on ice-sheet/sea-level interactions during the early Holocene; however, specifics can be tailored to the candidates' interests and background. We are looking for a new team member who can offer expertise in glacial isostatic adjustment modeling, micropaleontology, geochronology, or any other specialty relevant to our mission. Additional responsibilities include the supervision of undergraduate students and assisting with mentoring graduate students within the department. We also encourage and support efforts to seek external research funding.

Applications should be sent by e-mail to Professor Torbjörn Törnqvist (tor@tulane.edu, 504.314.2221) and should include a cover letter, CV, statement of research interests, and names and contact information of three referees. Review of applications will start on November 12, 2012; later applicants will receive consideration as long as the position remains unfilled.

4. Postdoctoral Researcher (Tropical Meteorology/Climate Dynamics and Physics) Joint Institute for Regional Earth System Science and Engineering (JIFRESSE)/UCLA

Position open until filled.

Applications are invited for a postdoctoral position in tropical meteorology, climate dynamics and physics at the Joint Institute for Regional Earth System Science and Engineering at the University of California, Los Angeles (JIFRESSE/UCLA). The successful candidate will join a research team from JIFRESSE/UCLA, Jet Propulsion Laboratory (JPL), Colorado State University (CSU), National Center for Atmospheric Research (NCAR), and NOAA/Geophysical Fluid Dynamics Laboratory (GFDL) on an NSF project to investigate key processes associated with the Madden-Julian Oscillation (MJO) with specific emphases on cumulus impacts on momentum transport from multi-scale convective systems by utilizing reanalyses, satellite/in-situ observations, and GCM simulations.

Applicants should have a recent Ph.D. in atmospheric or ocean sciences, or a closely related field. They should be highly self-motivated, and have a strong background in tropical climate dynamics, physics of tropical convection, and extensive experience in processing large datasets. Appointment is awarded initially for a one-year period, and renewable in one-year increments for a maximum of two additional years. Applications will be reviewed until the position is filled. Interested applicants should send a statement of interest, curriculum vitae, and the names and contact information of three references to Dr. Xianan Jiang (xianan@jifresse.ucla.edu) and Dr. Duane Waliser (waliser@ucla.edu).

5. Postdoctoral Scholars (Climate Diagnostics and Modeling) **Department of Earth System Science at the University of California, Irvine**

The Department of Earth System Science at the University of California, Irvine has immediate openings for two postdoctoral scholars. The project seeks to better understand the Central-Pacific El Nino and its global impacts. The work involves analyzing reanalysis data, assimilation products, and coupled model simulations, as well as performing numerical experiments with coupled atmosphere-ocean general circulation models (CGCMs).

Applicants should have a Ph.D. in atmospheric science, physical oceanography, or related discipline. Preference will be given to individuals with prior experience working with CGCMs and with strong Matlab programming skills. Salary is commensurate with experience. The initial appointment for this position is one year, with renewal contingent on the availability of funds. Send a resume and the names of three references to: Professor Jin-Yi Yu (jyyu@uci.edu).

6. Postdoctoral Position (Paleoclimate Data Analysis and Modelling) **School of Earth and Ocean Sciences, Cardiff University**

Application deadline: November 14, 2012

Applications are invited for a 3 year Postdoctoral position within the Paleoclimate and Climate Systems research group of the School of Earth and Ocean Sciences at Cardiff University, UK and in association with the Alfred Wegener Institute, Germany 'Assessing the role of millennial-scale variability in glacial-interglacial climate change'.

This project aims to provide quantitative information about this link in order to learn more about the mechanism of glacial termination. Specifically, we aim to quantitatively differentiate between those millennial-scale oscillations that coincide with glacial terminations and those that do not and to determine the precise temporal relationship between seesaw oscillations, glacial terminations and changes in orbital configuration. In so doing we aim to make progress on the following outstanding questions: Are bipolar seesaw oscillations a necessary feature of glacial terminations or merely a complicating factor? Are seesaw oscillations themselves sufficient to drive glacial termination or are there particular characteristics of terminal oscillations that promote deglaciation? What are the connections between varying boundary conditions (insolation, ice volume, atmospheric CO₂ concentration) and the nature of seesaw oscillations? Is there an underlying orbital parameter that ultimately controls the occurrence of glacial terminations? The project will involve a combination of quantitative data analysis and the application of state-of-the-art computer models of the climate system.

Candidates for the post should have a PhD in natural sciences, experience in numerical Earth system modelling and quantitative data analysis and a strong interest in climate science. The project is led by Dr. Stephen Barker (Cardiff University, UK) in close association with Dr. Gregor Knorr (Alfred Wegener Institute, Germany) and Prof Andy Ridgwell (University of Bristol, UK). The post will involve extended visits to Germany for training and interaction with Co-I Knorr.

Informal enquires may be made to Dr Stephen Barker (barkers3@cf.ac.uk). This is a full-time post and is fixed term for a period of 3 years. Salary: £30,122 - £35,938 per annum. Please visit: <http://tinyurl.com/CardiffPDRA> For more info and to apply please visit: www.cardiff.ac.uk/jobs/ and search for posting: 503BR.