

Please forward to interested colleagues. If you do not wish to receive further newsgrams, please send a message to Cathy Stephens in the US CLIVAR Office (cstephens@usclivar.org)

March 2009 U.S. CLIVAR News-gram

Table of Contents

i – Calendar of Upcoming Events

Research Opportunities

1. NSF Encourages Proposals related to Multi-Scale Modeling
2. NSF Encourages Proposals related to Environment, Society, and the Economy
3. CryoSat-2 Data Announcement of Opportunity European Space Agency
4. 2010 Bower Award and Prize for Achievement in Science Theme: Earth Systems
Franklin Institute

Science News: Google Earth Fill Its Watery Gaps

Position Announcements

5. Research Specialist for the University of Arizona Biosphere 2 Earth Science team
6. Senior Research Fellow - Ocean Observations and Climate Research Group, National Oceanography Centre, Southampton
7. Union of Concerned Scientists

Meetings and Workshops

8. GEWEX 6th International Scientific Conference on the Global Energy and Water Cycle
9. The National Center for Atmospheric Research (NCAR) presents: Marine Ecosystems and Climate: Modeling and Analysis of Observed Variability Motivation and Overview
10. Fifth WMO International Symposium on Data Assimilation
11. Climate, Statistics, and Satellites: A symposium in honor of Professor Gerald R. North
12. NOAA's 34th Climate Diagnostics and Prediction Workshop
13. Summer School on "Monsoon Systems"
14. AGU Spring Meeting

ANNOUNCEMENTS

- **Announcing new ICSU Executive Director**
- **Report of 12th Session of the JSC/CLIVAR Working Group on Coupled Modelling**
- **IPRC Annual Report Announcement**
- **CERES Science Team announces the release of data sets**

CALENDAR of UPCOMING EVENTS

(for more information-www.usclivar.org/calendar.html)

April 2009

6-9: JSC Meeting (University of Maryland – College Park)
27-29: Workshop on Ocean Mesoscale Eddies (Exeter, UK)

May 2009

4-6: AMOC Open Science Meeting (Annapolis, MD)
19-22: CLIVAR SSG Meeting (Madrid, Spain)

June 2009

2-5: CLIVAR VAMOS Meeting (Puerto Rico)

Research Opportunities

1. NSF Encourages Proposals related to Multi-Scale Modeling

The Directorate for Geosciences (GEO) and the Directorate for Biological Sciences (BIO) are enhancing support for interdisciplinary research which bridges from the biological to the earth system sciences in the area of multi-scale modeling. We seek to support projects that focus on the development and/or integration of environmental models that link local, regional and global scales. Competitive projects should address key problems linking biological and Earth system processes over a variety of spatial and temporal scales.

Proposals must bridge the biological and the geosciences disciplines and be relevant to at least one program in the BIO Directorate and at least one program in the GEO Directorate. Proposals involving programs in two different divisions in GEO are also permitted, but they must address the goals of the Dear Colleague Letter (<http://www.nsf.gov/pubs/2009/nsf09032/nsf09032.jsp>).

This is not a special competition or new program. MSM proposals should be submitted to an existing GEO or BIO program according to the program's regular target or deadline dates.

2. NSF Encourages Proposals related to Environment, Society, and the Economy

The Directorate for Social, Behavioral, and Economic Sciences (SBE) and the Directorate for Geosciences (GEO) seek to increase collaboration between the geosciences and the social and behavioral sciences by augmenting funding for interdisciplinary research related to Environment, Society, and the Economy. For more information, see the "Dear Colleague Letter" [<http://www.nsf.gov/pubs/2009/nsf09031/nsf09031.jsp>]

GEO and SBE will consider proposals that describe new research efforts relating to the integrated study of environment, society, and economics. Interdisciplinary teams of researchers are strongly encouraged. Projects are expected to involve researchers in the geosciences and social and behavioral sciences, but they may also include other disciplines.

Prospective topics of interest in the general area of Environment, Society, and the Economy include, but are not limited to, the following:

- * Decision-making strategies related to ongoing or predicted global, regional, and local environmental changes;
- * Economic and geosciences evaluation of technology and practices linked to climate change;
- * Impacts and adaptation of economic systems;
- * Pathways to successful application of geoscience research findings;
- * Development and implementation of mitigation strategies within political and economic constraints;
- * Interplay of environmental change and inequality of income, access to resources, etc.;
- * Role of incentives in human behavior;
- * Politics and economics of resource agreements;
- * Environmental change and its impact on the evolution of human behavior; and
- * Capacity building.

Relevant proposals must be submitted to an existing SBE or GEO program according to the program's regular target or deadline dates. This is not a special competition or new program. Investigators are encouraged to indicate that their proposal was submitted in response to this DCL by including ESE in the title of the proposal.

3. CryoSat-2 Data Announcement of Opportunity European Space Agency

Extended Deadline: Tuesday, 31 March 2009

For further information, please go to: <http://eopi.esa.int>

The European Space Agency (ESA) announces an extended deadline for the CryoSat-2 Data Announcement of Opportunity (AO). The new deadline for submission of proposals is Tuesday, **31 March 2009**.

The opportunity aims at promoting the use of CryoSat-2 data, in combination with ESA Earth Observation and TPM data. In particular, the objectives of this AO are:
Exploration of CryoSat-2 in support of mission objectives; Wider uses of the CryoSat-2 echo and elevation data; Innovative uses of the CryoSat-2 SIRAL SAR and SARIn modes; and Addressing ESA's Living Planet key scientific challenges.

Within the framework of this AO, and as stated in the standard Terms and Conditions for the use of Category-1 data: ESA will provide a limited and agreed amount of data free of charge to accepted AO Principal Investigators (PIs); The data provided can be used only for the purpose defined in the accepted proposal; and The PI will provide regular progress reports and widely publish his / her results.

4. 2010 Bower Award and Prize for Achievement in Science Theme: Earth Systems Franklin Institute

For further information, please go to: <http://www.fi.edu/franklinawards/call.html>

The Franklin Institute invites nominations for the 2010 Bower Award and Prize for Achievement in Science. The theme for the 2010 award is Earth Systems. Nominations of individuals who have made significant scientific contributions to our understanding of the interrelationships among earth systems leading to increased predictability of natural or human-induced changes on the planet are sought. Nominations should recognize efforts that encompass various earth systems and processes, including: the Earth's interior, lithosphere, hydrosphere, biosphere, and atmosphere, biogeochemical cycles, and Earth history.

This award is presented annually to an individual of any nationality for outstanding work in the basic, applied, or engineering sciences. Each year, a predetermined field of study is chosen as a theme. A gold medal and a cash prize of \$250,000 are awarded to the individual selected to receive the award.

The Franklin Institute Awards Program is among the oldest and most comprehensive international science and technology awards programs in the world. The list of Franklin Institute laureates reads like a "Who's Who" in the history of 19th, 20th, and 21st century science. The Franklin Institute urges you to nominate a candidate whose name should be added to this distinguished list.

Science News: Google Earth Fill Its Watery Gaps

By ANDREW C. REVKIN

<http://topics.nytimes.com/top/reference/timestopics/people/r/andrew_c_revkin/index.html?inline=nyt-per> **Published: February 2, 2009**

Two and a half years ago, the software engineers behind Google Earth

<http://topics.nytimes.com/top/news/business/companies/google_inc/index.html?inline=nyt-org>, the searchable online replica of the planet, were poised to fill an enormous data gap, adding the two-thirds of the globe that is covered by water in reality and was blue, and blank, online.

Position Announcements

5. Research Specialist for the University of Arizona Biosphere 2 Earth Science team

The University of Arizona Biosphere 2 Earth Science team (<http://www.b2science.org>) seeks an outstanding individual for the position of Research Specialist in Earth Surface System Model Development. Biosphere 2 will be conducting long-term experiments on the coupled hydrological, ecological, biogeochemical, and geomorphic evolution of hillslope systems in response to climate forcing. The individual in this position will support that effort by leading the development of a coupled earth surface system model comprised of existing and newly-developed component submodels. This system model will serve three purposes: guide the design of experiments in the Biosphere 2; accelerate the use of these experimental data to improve understanding; and act as a bridge to transfer the new understanding from the Biosphere 2 to the real world.

The new hire will work with a dynamic and interdisciplinary group of faculty members (<http://www.b2science.org/earth-steer-comm.html>) and will have the opportunity to take part in cutting-edge science aimed at a better understanding of our physical and biological environment. The position will be appointed on a 3-year contract, with the expectation of renewal in subsequent years depending on performance and funding. Very well-qualified candidates may be considered at the research faculty level if the candidate has a strong publication record and if the funds required are available at time of hire. This position is anticipated to start as soon as possible.

The successful candidate must have prior technical experience in the development and coupling (including coding, model evaluation and improvement) of component submodels (e.g., land surface biophysics on energy and water cycles, dynamic vegetation/ecosystem, hillslope hydrology, biogeochemistry, geomorphology). Ph.D. preferred but exceptional candidates will be considered at the M.S. level.

Outstanding UA benefits include health, dental, and life insurance; sick leave and holidays; UA/ASU/NAU tuition reduction for employee and qualified family members; access to campus cultural and recreational activities; retirement, and more!

Inquiries on the position should be sent to Ms. Candace Crossey (crossey@email.arizona.edu) or 520-626-4092

6. Senior Research Fellow - Ocean Observations and Climate Research Group, National Oceanography Centre, Southampton

Seeking a dynamic and practical Ph.D. Research Scientist with a strong numerical background (Physics, Maths or Environmental Science) to work as an observational Physical Oceanographer. You will join the project RAPID-MOC and its continuation under the NERC directed programme RAPID-WATCH funded until 2014.

This post has a focus on scientific research, but also requires an independent and practical scientist to help lead the execution of the field programme. The appointment is for three years initially and the salary will be in the range of £34,435 to £43,622 per annum.

General enquiries should be directed to Dr Stuart Cunningham, e-mail scu@noc.soton.ac.uk tel: 00 44 (0) 2380 59 6436. To see the full advert, job description, person specification and to apply for this position go to <http://www.noc.soton.ac.uk/vacancies/>

7. Union of Concerned Scientists

UCS is seeking a scientist to work on agriculture and climate issues in our Food and Environment Program. We would appreciate your forwarding this message, if you know of someone who might be interested. The candidate must have a Ph.D. degree in an agricultural or biological science or biogeochemistry, including expertise in agriculture, soils, climate gases, modeling, and a strong background in chemistry.

The job description is available at
www.ucsusa.org/about/jobs-at-ucs.html#CLIMATEAGRICULTURE_SCIENTIST.

The deadline for applications is April 1.

Meetings and Workshops

8. GEWEX 6th International Scientific Conference on the Global Energy and Water Cycle Melbourne, Australia on 24-28 August 2009

Abstracts are requested for sessions on:

Deadline for Abstract Submission 15 March 2009 for the:

- Sixth International Scientific Conference on the Global Energy and Water Cycle
- Second iLEAPS Science Conference

The overall theme of both conferences is: Water in a Changing Climate--Progress in Land-Atmosphere Interactions and Energy/Water Cycle Research. The conferences will hold joint sessions on three common themes with keynote talks, oral and poster presentations. The parallel conferences will have three joint sessions that broadly cover the following themes: (1) Land in the climate system; (2) Aerosol, cloud, precipitation, climate interactions; and (3) Future generation of integrated observation and modelling systems. Complete information about the conferences and sessions can be found at: http://gewex.org/2009gewex_ileaps_conf.html
To submit an abstract: http://gewex.org/2009gewex_ileaps_conf.html

It is expected that registration will open in February 2009.

9. The National Center for Atmospheric Research (NCAR) presents: Marine Ecosystems and Climate: Modeling and Analysis of Observed Variability Motivation and Overview August 2-14, 2009, Boulder, Colorado

Global climate change is altering the structure and functioning of ecosystems, which in turn affects availability of ecological resources and benefits, interactions between ecosystems and the climate system, and could affect economic systems that depend on ecosystems. A grand challenge is to understand and project the effects of global climate variability and change on ecosystems, the goods and services they provide, the drivers and consequences of human responses to ecosystem variability and change, and ecosystem links to the climate system. The colloquium will focus on interactions between climate and marine ecosystems. It will include graduate student participants in approximately equal numbers from both the marine ecosystem and climate communities. It will feature lectures from more than one dozen international experts on observed variability and change in both climate and marine ecosystems, including the influence of climate on benthic, coastal and open-ocean ecosystems. Lectures will also be given on modes of tropical and extratropical climate variability, statistical analysis techniques, earth system modeling, regional ocean models, fisheries, marine protected areas and other socio-economic issues. Tutorials and computer based exercises will also enable students to gain an in-depth

understanding of the models and analysis tools available to tackle cross-disciplinary research problems. Expected Outcome This colloquium will provide climate and marine ecosystem graduate students with a comprehensive introduction to issues surrounding the development of and hands-on experience with observational datasets and state-of-the-art marine ecosystem modeling approaches in the context of climate models, and the techniques of testing models versus existing datasets. An integrated approach to studying climate-ecosystem interactions is typically not offered in standard university courses; accordingly, the colloquium will provide unique and unprecedented opportunity to study and apply these research tools. As importantly, this colloquium will provide an opportunity for graduate students in the marine ecosystem, climate and climate impact sciences to collaborate.

Logistics

The Advanced Study Program will fund travel and living expenses for about 25 graduate student participants during the summer colloquium. For more information and how to apply, go to: www.asp.ucar.edu/colloquium/2009/cgd/index.php **Applications are due to the ASP by March 31, 2009**

10. Fifth WMO International Symposium on Data Assimilation 5-9 October, 2009 Melbourne, Australia

The 5th WMO International Symposium on Data Assimilation will be convened in the Southern Hemisphere springtime, 5-9 October, 2009 in Melbourne, Australia. The goals of the Symposium are: (1) To assess recent progress in all aspects of atmospheric, oceanographic and hydrologic data assimilation, in both research and operational environments; and (2) To reach a common understanding of the main challenges and opportunities that lie ahead in atmospheric, oceanographic and hydrologic data assimilation.

Contributions are sought for presentations relating to state-of-the-art research and operational developments in data assimilation. While there is a continued interest in the global- to meso-scale analysis of the ocean and atmosphere, all aspects of the Earth system, such as the continental biosphere, stratospheric and tropospheric chemistry and ocean biogeochemistry will be discussed at this symposium. In particular, hydrological processes and precipitation will now also be a major theme. Invited papers will give overviews of problems, progress and prospects in key areas. A list of invited speakers and key dates is on the next page. Poster presentations were the main form of presentation in Prague and the Melbourne Symposium will follow this successful style. The offer of some additional oral presentations may be made at the discretion of the Scientific Committee. The Symposium will be held at the Melbourne Convention & Exhibition Centre in central Melbourne. Dr Peter Steinle chairs the Local Organising Committee. Details on the Symposium, including instructions for submitting an abstract, key dates, are available from the symposium web site: <http://wmoda5.amos.org.au>

To receive further information, E-mail: p.steinle@bom.gov.au. **Deadline for short abstracts, including poster abstracts is May 15, 2009**

11. Climate, Statistics, and Satellites: A symposium in honor of Professor Gerald R. North June 8-10, 2009 Annenberg Presidential Conference Center, College Station, Texas

The Department of Atmospheric Sciences at Texas A&M University is organizing a scientific symposium on Climate, Statistics, and Satellites. This symposium will also serve to honor Dr.

Gerald R. North, a Distinguished Professor at the University who has made important contributions to these research topics, in celebration of his 70th birthday.

The objective of the symposium is to provide an opportunity for researchers in the areas of climate, statistics, and satellites to present lectures that provide historical perspectives and/or describe recent advances in these areas. The scientific program will feature invited oral presentations, as well as a contributed poster session. Confirmed speakers include Tom Bell, Bob Cahalan, Jim Coakley, Tom Crowley, Bob Dickinson, Bob Houze, Ben Kedem, Michael King, Doug Nychka, Bette Otto-Bliesner, Cecile Penland, J. Shukla, Mike Wallace, Tom Wilhelm, Ed Zipser, and Francis Zwiers.

The meeting is open to the public. Abstracts are invited for contributed poster sessions. A limited number of travel grants, sponsored by NSF and NASA, are available to support early career scientists (graduate students, post-docs, junior faculty etc.) for AGU-style oral presentations. Please submit abstracts by 1 March 2009, and indicate if you need travel support.

For complete details on abstract submission, registration, schedules, accommodations, and speakers, please visit <http://atmo.tamu.edu/climate> or send e-mail to: north-symposium@tamu.edu.

**12. NOAA's 34th Climate Diagnostics and Prediction Workshop
Monterey, California, on 26-30 October 2009
Abstract Deadline: August 7, 2009**

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

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

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

13. Summer School on "Monsoon Systems"

Announcing the 2009 course of the Alpine Summer School: "Monsoon Systems", which will be held in Valsavarenche, Val d'Aosta (Italy), from June 8th to June 13th, 2009. Invited lecturers and speakers include Annalisa Bracco, Erika Coppola, Judith Curry, Hervé Douville, Carlos Hoyos, Ben Kirtman, Julian McCreary, Jan Polcher, Fabian Solmon, Benjamin Sultan, Pascal Terray and Peter Webster.

Please visit the school's homepage at: <http://www.to.isac.cnr.it/aosta> for further information and details. **The deadline for applications to the school is April 6th, 2009.**

**14. AGU Spring Meeting
May 24-27 2009, Toronto**

http://www.agu.org/meetings/ja09/program/session_proposals.php

Tropical convection: observations, theory, high-resolution modeling, and parameterization
The representation of tropical convection in climate and weather models remains a serious challenge to the accuracy of simulation. Enormous opportunities are afforded by the unprecedented wealth of observational data from satellite retrievals and field programs, new capabilities for high-resolution modeling, and advances in theory and analysis methods for deep convection and its organization. This session is aimed at encouraging the dialogue among these different aspects of the problem. Submissions are particularly encouraged under two closely connected themes, one associated with a year of focused observations and modeling, and one aiming at the gaps between observations, high-resolution modeling, and convective representations.

1) The Year of Tropical Convection (YOTC) has organized tropical convection as the scientific focus, with emphasis on time scales up to seasonal, and in particular the intersection of weather and climate. The YOTC addresses critical issues faced by prediction models involving the representation of tropical convection, convective organization, and accompanying scale interactions. The approach involves advanced high-resolution models, integrated observational data sets, and theoretical insights. The period of May 2008 to October 2009 has been designated the initial period for coordinated investigations by the World Climate Research Program and World Weather Research Program for scientific focus on tropical convection and its scale-interactions interactions. Contributions are sought that highlight observational and modeling advances associated with this ongoing effort. A detailed description of YOTC can be found at <http://www.wmo.int/pages/about/sec/documents/YOTC-Science-Plan.pdf>

2) Non-equilibrium approaches to understanding convective cloud systems. For 40 years convection has been represented in climate models under equilibrium assumptions. This has left a worrisome disconnect between model convective parameterizations and the observations and high-resolution modeling that should inform their improvement. We seek contributions that address model validation associated with convective processes at all time scales, including those at which nonequilibrium effects of convection are most likely to impact the model representation; and contributions analyzing observations and cloud-resolving model results in ways that may help to construct or validate next-generation convective representations, including stochastic parameterizations and multiscale representations.

ANNOUNCEMENTS:

- **Announcing new ICSU Executive Director**
Prof Deliang CHEN has taken up his post of ICSU Executive Director. His contact info is below and a link to his bio:
http://www.icsu.org/5_abouticsu/STRUCT_Secr_bios.html#DC. Please update your databases, as well as governing body membership lists for which ICSU has an ex-officio position.
- **Report of 12th Session of the JSC/CLIVAR Working Group on Coupled Modelling**
The report is available to download from: <http://eprints.soton.ac.uk/65383>
- **IPRC Annual Report Announcement**

2007-2008 Annual Report can be downloaded at:
<http://iprc.soest.hawaii.edu/publications/annualrpts/Annualreport08.pdf>

- **CERES Science Team announces the release of the following data sets**

Synoptic Radiative Fluxes and Clouds (SYN)

CER_SYN_Terra-FM1-MODIS_Edition2C

CER_SYN_Terra-FM2-MODIS_Edition2C

CER_SYN_Aqua-FM3-MODIS_Edition2B

CER_SYN_Aqua-FM4-MODIS_Edition2B

Monthly Regional Radiative Fluxes and Clouds (AVG)

CER_AVG_Terra-FM1-MODIS_Edition2C

CER_AVG_Terra-FM2-MODIS_Edition2C

CER_AVG_Aqua-FM3-MODIS_Edition2B

CER_AVG_Aqua-FM4-MODIS_Edition2B

Monthly Zonal and Global Radiative Fluxes and Clouds (ZAVG)

CER_ZAVG_Terra-FM1-MODIS_Edition2C

CER_ZAVG_Terra-FM2-MODIS_Edition2C

CER_ZAVG_Aqua-FM3-MODIS_Edition2B

CER_ZAVG_Aqua-FM4-MODIS_Edition2B

The SYN/AVG/ZAVG products provide 1 degree gridded surface and atmospheric Fu-Liou radiative transfer fluxes consistent with observed CERES TOA fluxes.

These are a level 3 version of the CRS and FSW level 2 CERES data products and they add diurnal cycle improvements based on 3-hourly geostationary satellite data.

These are the only CERES products with a package of surface UV fluxes. Like the ungridded CERES CRS data product, constrained fluxes are available for clear-sky and all-sky conditions at 70 hPa, 200 hPa, and 500 hPa. Likewise, constrained and untuned fluxes at surface and TOA for clear-sky, all-sky, pristine (no aerosols or clouds), and all-sky-no-aerosol conditions are also available. These fluxes allow the user to infer various cloud and aerosol forcings. Unlike the CERES SRBAVG data product (1 degree monthly averages), these new products add:

- a) 2-stream SW (2/4 stream LW) radiative transfer for surface fluxes and constraints to TOA CERES fluxes, as well as aerosols and clouds derived from MODIS, and 3-hourly clouds derived from geostationary satellite data intercalibrated with MODIS.
- b) 3-hourly synoptic fluxes (SYN), with fluxes averaged over 3 hour periods (not instantaneous fluxes as in FSW) 3-hourly averaged fluxes were requested by climate and weather modeling groups for model validation studies.
- c) The 3-hourly average fluxes (SYN) can be easily composited to daily, or any other time period by simple averaging
- d) Monthly (AVG) and zonal monthly (ZAVG) products are also provided for smaller data volumes.

Temporal coverage for the Terra Edition2 products will run from March 2000 through October 2005. Temporal coverage for the Aqua Edition2 products will run from July 2002 through October 2005.

Information about the CERES products including products available, documentation, relevant links, sample software, tools for working with the data, etc. can be found at the CERES data table: http://eosweb.larc.nasa.gov/PRODOCS/ceres/table_ceres.html