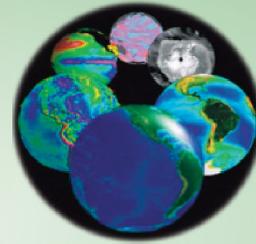


BULLETIN

of the

PORSEC



Association

Volume 5.1 Mars 2011

Dear PORSEC Members,

We have been very distressed to hear about the Earthquake and Tsunami effects in Japan. We have heard from Naoto Ebuchi that most of our PORSEC friends are fine, but we are still concerned and send the whole country our best wishes. The PORSEC emphasis on Natural Hazard detection and evaluation at our conferences certainly is important.

This issue has some follow-up material from PORSEC 2010. This issue has a recapitulation from the Special Session on Space Agencies, with Dr. Igarish's presentation about JAXA's status and plans. We have an article by Abderrahim Bentamy giving some details about the Data Base on Air-Sea Turbulent Fluxes produced at Institut Francais de Recherche et d'Exploitation de la Mer and we announce the appearance of the Proceedings Book from PORSEC 2008.

Please start thinking about attending the PORSEC 2012 meeting in India. An announcement can be found prominently on the PORSEC home page. It is not too early to search for some money to pay for travel to PORSEC 2012 for yourself and perhaps for the opportunity to bring your younger colleagues and students to the tutorial classes. These are valuable maturing experiences for young people.

Wishing you a great year ahead in 2011 with great advances in using remote sensing for research in Oceanography and/or Meteorology!

Yours,

Kristina Katsaros and
Gad Levy

Co-Editors of Bull. PA

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President's message

J Gower

The Ides of March (March 15)

This is traditionally a date in the year on which significant (and often bad) events happen. This year, although the earthquake and tsunami in Japan are now over, tide gauges show that even four days later, the whole north Pacific is still measurably agitated. We are only now learning of the true extent of damage to lives, homes and major infrastructure. We are also learning a lesson about nuclear power, however events may unfold.

We can watch a time-lapse sequence of the Japan earthquake activity as it unfolded, at <http://www.japanquakemap.com/>

It seems that members of our PORSEC family of ocean and satellite scientists in Japan have survived, though many have been affected and some will have interesting stories to tell. The long-term effect on all our lives is something we have yet to learn. After the Sumatra tsunami, we held a session at PORSEC 2006 in Pusan, Korea on tsunami impacts and warnings, largely driven by our altimeter experts who had watched the spreading wave by satellite. In 2012, I think we will be expected to share our experience and thoughts on the disaster with Indian and other colleagues, especially since PORSEC traces much of its origin to Japan. A session at the 2012 PORSEC meeting on "Lessons from the 2011 tsunami" would certainly attract wide interest. I hope we will add this to our program. It will need significant support from our Japanese colleagues. Kristina, Gad and I are all personally interested, since we live in an area with similar tectonics.

PORSEC 2012 will meet in Kochi, India. Please mark the date 5-9 November 2012 in your calendars, and note that there will be a tutorial, probably in the week before, Oct 28 to Nov 2. Satish Sheno, sheno at incois.gov.in our local organizer, is working on local arrangements. Stephanie King and I are planning the traditional one-year-ahead pre-meeting visit, which we will have to fit round her growing pregnancy.

We are collecting ideas for sessions which can be included in the program. I hope you will have other suggestions to add to our 2012 meeting.

Database and Characteristics of Surface Parameters from Satellite Measurements

A. Bentamy, Institute Francais de Recherche et d'Exploitation de la Mer

Surface wind vectors, as well as the associated turbulent fluxes: wind stress, latent and sensible heat fluxes are vital for operational and scientific applications. For instance, they are routinely used as primary forcing function components for ocean circulation, wave, and current models on global and/or local scales. They have great impact on coastal upwelling, primary productivity, cross shelf transport, deep water formation, and ice transport and variability. They are used to investigate climate change as well as storm surge and wave forecasts.

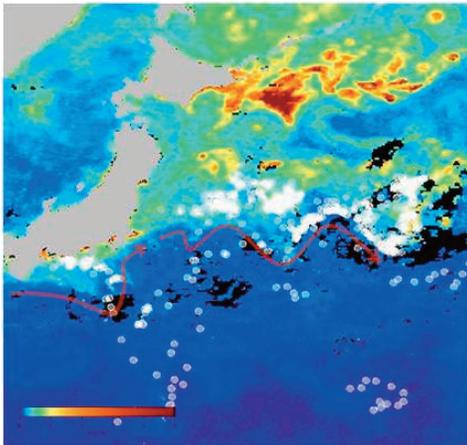
Some surface parameters of various characteristics required for various atmospheric, oceanic, and climatic applications, is known. However, better global spatial and temporal resolution, as well as accuracy, are still needed.

Radars and radiometers onboard polar-orbiting satellites provide valuable information on surface winds, with good spatial resolution, and global coverage. For instance, scatterometers give information on wind speed and direction, whereas passive microwave imagers and altimeters provide information on wind speed. The capability of passive polarimetric radiometers (WindSat) has recently been demonstrated; in addition to wind speed, they offer directional information but of inferior quality to that from scatterometer retrievals. Surface winds are also derived from Synthetic Aperture Radars (SAR). Radars and radiometers provide accurate retrievals, especially in rain free conditions. In general, they are available with a spatial resolution of 25km. The remotely sensed surface winds are used in combination with specific air humidity and sea surface temperature, both mainly derived from radiometer measurements, to enhance the determinations of surface wind stress, latent and sensible heat fluxes at various temporal and spatial scales.

Several studies have indicated the impact of remotely sensed surface parameters on the accuracy of local and global flux estimates, the spatial and temporal patterns of oceanic variability, the forcing of a global ocean circulation model (e.g. Bentamy et al, 2003, Blank et al, 2005, Katsaros et al, 2003, Ayina et al, 2006, Mestas-Nuñez et al, 2006, Grodsky et al, 2009, Bentamy et al, 2009). These studies highlight the need of accurate end coherent long time series of surface parameters available over the global ocean.

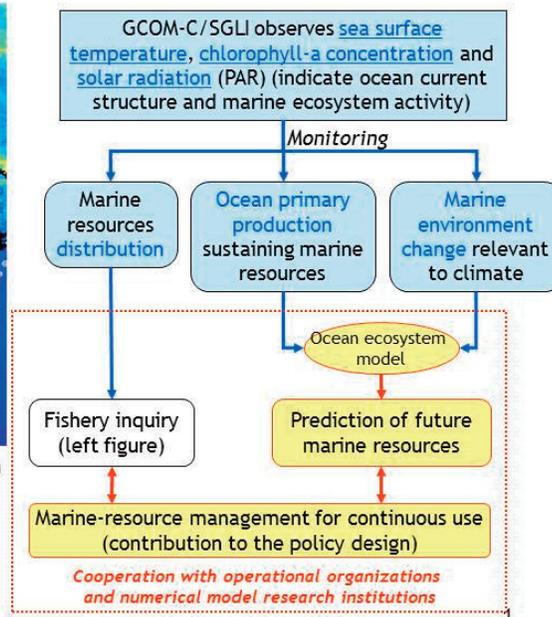
GCOM-C/SGLI product by JAXA

Sustainable Marine Resource Monitoring and Management



Chlorophyll-a concentration in the northwestern Pacific in June 2003 overlaid on fisheries of skipjack and tuna.

The fisheries of skipjack and tuna, warm-water migratory fish, appear to be influenced by the Kuroshio warm current and its extensions offshore Sanriku.



To meet such requirements, the Laboratoire d’Océanographie Spatiale (LOS/IFREMER), in collaboration with various European and international institutes such as the European Space Agency (ESA) and the Jet Propulsion Laboratory (JPL/NASA), runs the web database “Surface winds and air-sea fluxes” - a database involving the air-sea interaction surface parameters (<http://cersat.ifremer.fr/fr/>). The data are made available to users worldwide with appropriate facilities, and cover the period 1992 through present. The purpose of the database is to provide researchers, as well as the international engineering community in general, with a source of surface field data at various spatial and temporal scales (time-series, resource data, spatial and temporal grid data). The raw data are from satellite instruments such as altimeters, scatterometers, and radiometers on board ERS-1 and 2 ADEOS 1 and 2, Topex/Poseidon, Jason, Envisat, QuikSCAT, Metop, NOAA, and DMSP. Data are first calibrated and validated against available ground truth. The results are then used within the inter-comparison procedures between the various retrievals to assess their coherency and to set up physical and empirical retrieval models and algorithms. The results are used to generate regular, in space and time, maps of surface wind speeds and directions, specific surface and air humidity, and of latent and sensible heat fluxes over the global ocean. The former are requested for the enhancement of the oceanic forcing function. The database includes the error associated with each surface parameter estimation. Currently the database contains more than seventeen years of 6-hourly, daily, weekly, and monthly data with three spatial resolutions of 0.25°, 0.50°, and 1.00° in longitude and latitude.

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JAXA's ongoing and future Earth observations

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JAXA has been operating ALOS* (see acronym list defined below) from Jan. 2006 and GOSAT from Jan. 2009, and JAXA's AMSR-E onboard EOS-Aqua from May 2002 and the US-Japan cooperative project TRMM from Nov. 1997. The continuous systematic observations have been providing long-term data sets which are significant for the understanding of variability and long-term trend of weather, climate and environment on global and regional scales. In addition to these, within next 5 years, JAXA is planning to launch GCOM-W1 in 2011, GPM by the US-Japan cooperation project and EarthCARE by the ESA-Japan cooperative project in 2015, and GCOM-C1 in 2014. In the Global Earth Observation System of Systems (GEOSS) 10-year implementation plan, JAXA is focusing on 3 out of 9 Societal Benefit Areas (SBAs); i.e. 1) disaster mitigation, 2) climate change and water cycle, and 3) global warming and carbon cycle. For the disaster mitigation, mainly ALOS is providing data for early responses, GCOM-C1 will be also useful by providing multi-spectral, 2-3 day cyclic observations of flood area delineation, air and water pollution, volcanic plumes and wild fire monitoring with a wide swath width of 250m spatial resolution. For the climate change and water cycle, GCOM-W1, GCOM-C1, GPM, and EarthCARE will be operational to provide complementary data sets. For the global warming and carbon cycle, ALOS, GOSAT and GCOM-C1 will be complementary. During this time frame, JAXA will provide 17 standard products and 12 research products, out of 45 ECVs or almost equivalent climate data sets. For the next phase, JAXA has pre-phase A research for the new missions such as GCOM-W2 with AMSR3 and DFS with NOAA, and the conceptual study on an altimetry mission to develop innovative satellite remote sensing technologies. The presentation in Keelung focused on an update the overview of JAXA's earth observation activities, primarily focusing on the ocean and the coastal zone environmental monitoring. An example of the relationship between satellite observed ocean color to fisheries is seen in the accompanying figure.

**Acronym definitions:*

ALOS – Advanced Land Observing Satellite, also called Daichi

AMSR-E – Advanced Microwave Scanning Radiometer Earth Observing System is a twelve-channel, six-frequency, passive-microwave radiometer system

Aqua – this is not an acronym, just a name of a satellite:

Aqua carries six state-of-the-art instruments in a near-polar low-Earth orbit. The six instruments are the Atmospheric Infrared Sounder (AIRS), the Advanced Microwave Sounding Unit (AMSU-A), the Humidity Sounder for Brazil (HSB), the Advanced Microwave Scanning Radiometer for EOS (AMSR-E), the Moderate Resolution Imaging Spectroradiometer (MODIS), and Clouds and the Earth's Radiant Energy System (CERES). Each has unique characteristics and capabilities, and all six serve together to form a powerful package for Earth observations.

DFS – Dual Frequency Scatterometer

ECV – Essential Climate Variables

EarthCARE – A satellite, the sixth Earth Explorer mission of ESA's Living Planet in cooperation with JAXA with focus on cloud and aerosol EarthCARE stands for Earth Clouds, Aerosols and Radiation Explorer

EOS – Earth Observing System

ESA – European space Agency

GCOM – Global Change Observation Mission,

GCOM-0C1, W1 and W2 – Particular missions of the GCOM series; C stands for Climate, W stands for Water Cycle and three generation 1, 2, 3 are planned for continuous observations.

GPM – Global Precipitation Mission

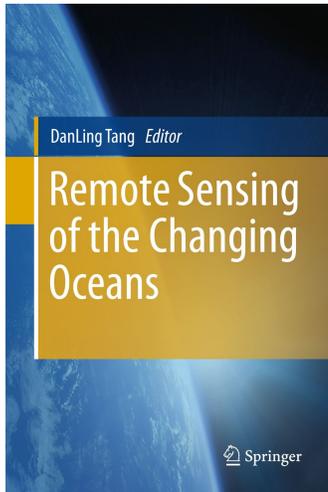
GEOSS – Global Earth Observation System of Systems

GOSAT – Greenhouse Gases Observing Satellite

JAXA – Japan Aerospace Exploration Agency

NOAA – National Oceanic and Atmospheric Administration

TRMM – Tropical Rainfall Measuring Mission



D. Tang, Chinese Academy of Sciences, Guangzhou, China (Ed.)

Remote Sensing of the Changing Oceans

Remote Sensing of the Changing Oceans is a comprehensive account of the basic concepts, theories, methods and applications used in ocean satellite remote sensing. The book provides a synthesis of various new ideas and theories and discusses a series of key research topics in oceanic manifestation of global changes as viewed from space. A variety of research methods used in the analysis and modeling of global changes are introduced in detail along with numerous examples from around the world's oceans. The authors review the changing oceans at different levels, including Global and Regional Observations, Natural Hazards, Coastal Environment and related scientific issues, all from the unique perspective of Satellite Observation Systems. Thus, the book not only introduces the basics of the changing oceans, but also new developments in satellite remote sensing technology and international cooperation in this emerging field. Danling Tang (Lingzis) received her Ph.D from Hong Kong University of Science and Technology. She conducted research and teaching in Hong Kong, USA, Japan, and South Korea for more than 10 years; in 2004, she received "100 Talents Program of Chinese Academy of Sciences" and returned to China. She was a professor of Fudan... *more on* <http://springer.com/978-3-642-16540-5>

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NOTICES

Announcements, News and Opportunities of Interest to the PORSEC Community

ANNOUNCEMENTS & OPPORTUNITIES

Sea level change in the IPCC Working Group I Fifth Assessment Report

The CLIVAR Office is dealing with projections of global-mean sea level change during this century and the further future, and with the geographical distribution of future sea level change. To inform the assessment we need to be aware of relevant publications. In addition to our own searching of the literature, we would be grateful to hear from authors of papers on predictions/projections of global sea level change, of any of its components (thermal expansion due to ocean heat uptake, glaciers, ice caps, ice sheets, terrestrial water storage), of regional sea level change, and of any of the influences upon it (ocean density and circulation changes, surface flux changes, changes in the solid Earth and geoid). If you have published a peer-reviewed paper on such subjects in 2006 or later, we would be grateful if you would email it to Jonathan Gregory (j.m.gregory@reading.ac.uk). If you have submitted a relevant paper, which you are willing to share with us at this point, you are also welcome to email it. (Note that IPCC drafts are always treated as confidential.) Papers to be considered in this assessment must have been submitted by the end of July 2012, but it will be helpful to know about them sooner rather than later. Please feel free to pass on this request to any authors of relevant papers.

Planet Under Pressure 2012 International Conference - Call for sessions

The Planet Under Pressure 2012 Scientific Organizing

Committee invites proposals for parallel sessions.
Deadline for submissions: 18 March 2011.

For details and online submission form see: www.planet-underpressure2012.net

Conference outline

The four-day conference will follow this flow:

Day 1: State of the planet: the latest knowledge about the pressures on the planet

Day 2: Options and opportunities: exchanging knowledge about ways of reducing the pressures on the planet, promoting transformative changes for a sustainable future and adapting to changes in the global system

Day 3: Challenges to progress: clarifying what is preventing or slowing humanity from implementing potential solutions

Day 4: Ways ahead: a vision for 2050 and beyond, and exploring new partnerships and pathways towards global sustainability

Conference themes

- A. Meeting global needs: food, energy, water and other ecosystem services
- B. Transforming our way of living: development pathways under global environmental change
- C. Governing across scales: innovative stewardship of the Earth system

"Given the mounting evidence of the sheer scale of global changes we are witnessing, the scientific community has a responsibility to urge public officials, citizens, and private firms in all countries to focus on the need for major policy changes to avoid major irreparable damage to our planet. I sincerely hope the 2012 conference will make a significant contribution to placing sustainability on everyone's agenda." Elinor Ostrom, 2009 Nobel Laureate Economics, Chief Scientific Advisor to the Planet Under Pressure conference.

Planet Under Pressure is organised by:

- International Geosphere-Biosphere Programme
- DIVERSITAS International Human Dimensions Programme
- World Climate Research Programme and their Earth System Science Partnership

Coupled Model Intercomparison Project Phase 5 (CMIP5) update

As many of you know, about 20 modeling groups from around the world are currently running the CMIP5 experiments. We expect that model data will start to become available for analysis in Northern Hemisphere spring, 2011. Please check the PCMDI web page for current status and updates (<http://cmip-pcmdi.llnl.gov/cmip5/>). The multi-model dataset will mature through the course of this year as more and more model data come online. We advise analysts to be flexible in their analyses, starting with a few models but allowing the capability to include additional model data as more becomes available. Experience with CMIP3 indicates that general conclusions can be reached with a few models, and uncertainties can be better quantified with the addition of more models to reach final publishable results.

With regards to opportunities to present results from CMIP5 model data analyses, the first is a CMIP5 poster session at the upcoming WCRP Open Science Conference (OSC) to be held in Denver, Colorado USA 24-28 October, 2011. For more information on the OSC: <http://www.wcrp-climate.org/conference2011/>

The CMIP5 session at OSC: Session C34: Global Model Evaluation and Projections: CMIP5 and Other Model Intercomparisons (conveners: J. Meehl, D. Waugh, J. Fasullo, K. Williams)

Some important deadlines to keep in mind for the OSC:

Abstract submission deadline for OSC: 30 April 2011
(Abstract submission is available now on the OSC web page noted above.)

Early bird registration deadline for OSC: 30 June 2011

General registration deadline for OSC: 24 October 2011

The second opportunity to present CMIP5 model analysis results will be a CMIP5 Workshop to be hosted by the International Pacific Research Center at the University of Hawaii in March 2012. Some of you recall the CMIP3 Workshop held there in 2005. The CMIP5 Workshop will be a similar “short presentation/poster” format. This workshop is currently being formulated, and further details will be made available on the WCRP, CLIVAR and PCMDI web pages.

NEWS

TerraLook Version 2.0 (Beta) software released

TerraLook provides easy access to new and historical satellite images for users that lack experience with satellite images, or for anyone looking for a convenient way to obtain and work with these images. Formerly known as the Protected Area Archive, TerraLook combines collections of georeferenced JPEG images with simple visualization and analysis tools to help users explore and utilize the data, and all data are free. The US Agency for International Development (USAID) funded this latest TerraLook upgrade through the Regional Visualization and Monitoring System (SERVIR), an initiative representing a partnership between USAID, the US National Aeronautics and Space Administration (NASA), and numerous other organizations. You are invited to test the newest beta version of TerraLook software, Version 2.0 (beta), and to report on your experiences. For further information:

<http://terraLook.cr.usgs.gov/>

Satellite data to improve flood forecasting

As the residents of Queensland, Australia, turn to the mammoth task of cleaning up after the recent devastating floods, data from ESA's Earth observation satellites are showing potential for delivering more timely warnings. The floods in Queensland have been the worst in decades – and with high waters now reaching parts of the southern state of Victoria, this disaster is not over yet. Although the heavy rains in Australia have been triggered by La Niña, it is thought that climate change may result in more frequent flood events. Clearly, it is becoming increasingly important to improve flood warning and monitoring systems. Through a project funded by ESA's Data User Element, observations from the Advanced Synthetic Aperture Radar (ASAR) on Envisat are now used to increase the reliability of information that is fed into models for monitoring and forecasting floods. For further information >> [ESA](#)

Developing disaster management capacity with Earth Observation

The intergovernmental Group on Earth Observations (GEO) has chosen to address the challenge of hurricane and more generally disaster management in the Caribbean through its regional end-to-end pilots. The Caribbean Satellite Disaster Pilot (CSDP) is a regional project under GEO Task DI-09-02b. It was established in 2009 in close cooperation with the Committee on Earth Observation Satellites (CEOS) and regional institutions such as the Caribbean Disaster and Emergency Management Agency (CDEMA), the Caribbean Institute for Meteorology and Hydrology and the University of the West Indies (UWI). The objectives of the pilot are threefold: (i) to demonstrate the effectiveness of satellite imagery to strengthen regional, national and community level capacity for mitigation, management and coordinated response to natural hazards; (ii) to identify specific satellite-based products that can be used for disaster mitigation and response on a regional level; (iii) to identify capacity building activities that will increase the ability of the region to integrate satellite-based information into disaster management initiatives.

For further information >> [earthzine](#)

COURSES WORKSHOPS & CONFERENCES

US CLIVAR/NCAR ASP Research Colloquium (by Invitation/Application) Statistical Assessment of Extreme Weather Phenomena under Climate Change NCAR Foothills Lab, Boulder, Colorado, USA June 13-17, 2011

The US CLIVAR/NCAR Research Colloquium will assemble climate researchers, statisticians, decision and policy makers to discuss the state of the art in science of weather and climate extremes and its application to real world Decision making.

Specific objectives:

- Determine climate and weather extremes that are crucial in resources management and policy making
- Identify the current state of the science of climate and weather extremes including uncertainties and information gaps in real-world applications
 - Obtain insights into the capabilities of climate models in identifying and modeling such extreme events.
 - Assess efficacy of statistical methods and tools to analyze and model extreme events under climate change
 - Develop interdisciplinary research directions in modeling and application of climate extremes.

The Colloquium organizing committee invites the participation of researchers studying extreme events in observations and climate models; statistical modeling and identification of extremes; use of climate extremes in a suite of decision and policy making context.

Participation is limited.

The Researcher Colloquium, as part of a larger NCAR Advanced Study Program Summer Colloquium to train graduate students, will be limited in size in order to enable and encourage active participation of the students, particularly in breakout discussions.

If you are interested in participating, please submit an application with your CV and a brief statement of interest via an online application at

<http://www.regonline.com/Register/Checkin.aspx?EventID=931739>.

Travel support is available.

You will be asked to identify any travel support needs in your application.

The deadline for applications is March 28, 2011.

Applicants will be notified of decisions by April 15, 2011.

The 3rd International Summit on Hurricanes and Climate Change *Rhodes, Greece* *June 27 - July 2, 2011*

The 3rd International Summit on Hurricanes and Climate Change will be held at Sheraton Conference Center on June 27-July 2, 2011 in Rhodes, Greece. The meeting is designed to serve as a forum to discuss the most recent progress in hurricanes and climate change.

Sessions will convene in the mornings and early afternoons and will include lectures by invited speakers, as well as talks and poster presentations selected from submitted abstracts.

The confirmed speakers are:

James Elsner, Florida State University
Kerry Emanuel, Massachusetts Institute of Technology
Isaac Ginis, University of Rhode Island
Robert Hart, Florida State University
Ann Henderson-Sellers, Macquarie University
Greg Holland, NCAR/MMM
Ning Lin, Massachusetts Institute of Technology
Kam-biu Liu, Louisiana State University School of the Coast and Environment
John McBride, The Center for Australian Weather and Climate Research
Jonathon Nott, James Cook University, Australia
Anastasios Tsonis, University of Wisconsin
Kevin Walsh, CSIRO Atmospheric Research, Aspendale, Australia.

The deadline for receipt of abstracts, early registration, and hotel reservations is March 15, 2011. If you plan to attend, please fill out the pre-registration form on-line <http://app.simplycast.com/script/redirect.php?e=11320&outgoing_idno=5815661&gId=5762881&link_idno=5722466> Please note that the cost of the accommodation package is 1320 Euro. The accommodation package includes congress registration fee, 5 nights hotel accommodations at Sheraton Hotel (June 27 – July 2), all meals, meeting social events, and a city tour. Download Registration form: <http://app.simplycast.com/script/redirect.php?e=11320&outgoing_idno=5815661&gId=5762881&link_idno=5732656>

In order to encourage the participation of young scientists, the Aegean Conferences is offering Trainee Travel Awards to offset a portion of the travel expenses to the Conference. The recipients of these awards will be selected based on the scientific merit of abstracts submitted by applicants. Additional information will be sent only to people who respond to this announcement and pre-register on-line. For your convenience and to expedite the communication process, registration materials, including abstract and hotel re-

servation forms, are available on the web site at www.aegeanconferences.org. Information on Rhodes, travel to Greece, hotel accommodations, etc. is also available on the web site. Updated information will be available through this site.

The IUGG 2011 Meeting *Melbourne, Australia,* *27 June - 8 July, 2011*

Further details:

A link to the programs is:

<http://www.iugg2011.com/program-iamas.as>

The First XBT Science Workshop: Building a Multi-Decadal Upper Ocean Temperature Record *Melbourne, Australia* *7-8 July 2011*

<http://www.aoml.noaa.gov/phod/goos/meetings/2011/XSW/>

The goal of the meeting is to bring together scientists working on the upper ocean thermal structure to highlight the uses of XBT data. Topics include upper ocean heat budgets, transport, circulation and variability of near surface temperature and salinity. The use of multiple data types is encouraged that include novel inclusions of different instruments and is not strictly limited to XBT data alone.

The meeting will immediately follow the IUGG XXV General Assembly.

2011 Gordon Research Conference and Seminar, Radiation and Climate *Colby College, Maine* *July 10-14 2011*

Applications are now being accepted for the 2011 Gordon Research Conference (GRC) on Radiation and Climate, to be held July 10-14 2011 at Colby College, Maine. The conference focus for 2011 is Clouds, Aerosols, Precipitation and their Role in Climate and Climate Change. Speakers will present cutting-edge research on outstanding issues in climate change, particularly those in which the interactions between clouds, aerosols, and precipitation play a major role.

The Conference will feature a broad range of topics, including grand challenges in atmospheric radiation and climate, cloud and hydrological cycle feedbacks, aerosol-cloud-precipitation-climate interactions across scales, new approaches for remote sensing and in-situ observations of clouds, aerosols and precipitation, and multi-scale modeling challenges.

The GRC will bring together a collection of leading investigators who are at the forefront of their field, and will provide opportunities for scientists, especially junior scientists and graduate students, to present their work in poster format and exchange ideas with leaders in the field. The collegial atmosphere of this Conference, with programmed discussion sessions as well as opportunities for informal gatherings in the afternoons and evenings, provides an avenue for scientists from different disciplines to brainstorm and promotes cross-disciplinary collaborations in the various research areas represented.

For a list of session topics, speakers and discussion leaders, and to register for the GRC, please visit the website: <http://www.grc.org/programs.aspx?year=2011&program=-radclimate>

Applications for the GRC must be submitted by June 12, 2011. Please apply early, as some meetings become over-subscribed before this deadline.

Graduate students and early-career scientists will also have the opportunity to present their work at the first ever Gordon Research Seminar (GRS) held immediately before the GRC (July 9-10, 2011). The GRS will provide a unique forum for graduate students, post-docs, and early career scientists to present their work and exchange cutting edge ideas with other scientists with comparable levels of experience and education. Most of the attendees of the GRS are expected to attend the Gordon Research Conference that immediately follows it (July 10-15, 2011).

For more information and to submit an application, please visit the Gordon Research Seminar website: http://www.grc.org/programs.aspx?year=2011&program=-grs_radc

To be considered for an oral presentation at the GRS, your application must be received by March 9, 2011. **Final deadline for applications to the Seminar is June 11, 2011.** Those interested in attending both the GRC and GRS must submit an application for both meetings.

WCRP Open Science Conference **Denver, Colorado** **24-28 October 2011**

For more information:

<http://www.wcrp-climate.org/conference2011/>

Past Present and Future Change in the Atlantic Meridional Overturning Circulation **Bristol, UK** **12-15 July 2011**

DEADLINE FOR ABSTRACTS: 21 March 2011.

SCIENCE THEMES:

- What do we know about present and past changes in the AMOC on seasonal to millennial time scales?
- How does the AMOC influence ocean, atmosphere and terrestrial climate and ecosystems?
- How will the AMOC change over the next few decades and over the 21st century? Outlook and Challenges

<http://www.noc.soton.ac.uk/rapid/ic2011/>

Fifth International Conference on Flood Management (ICFM5) **Tsukuba, Japan** **27-29 September 2011**

<http://www.ifi-home.info/icfm-icharm/Call-for-Papers.html>

ICFM is the only recurring international conference focused solely on flood related issues. It is designed to bring together practitioners and researchers alike, including engineers, planners, health specialists, disaster managers, decision makers, and policy makers engaged in various aspects of flood management.

Authors are invited to submit abstracts on the conference topic areas. **The deadline for the abstract submission is 1 April 2011.**

Notifications of acceptance will be sent to authors no later than 30 April 2011.

All accepted abstracts will be published in the conference proceedings and authors of a few selected abstracts will be invited to submit their full manuscripts to be published in a peer-reviewed journal.

**Community Earth System Model (CESM)
2nd Annual CESM Tutorial on climate
modeling
Boulder, Colorado
1 - 5 August 2011**

The focus will be on modeling of the coupled climate system and its major components.

The tutorial is targeted at graduate students who wish to learn how to understand, run, and modify climate models for scientific applications. The focus will be on CESM specifically. Specific content will be tailored to meet students' needs. The tutorial will last 5 days and include: (a) Lectures on climate modeling, focusing on techniques and approaches in CESM (b) Practical sessions on running and modifying the components of CESM.

Because space is limited, we are asking for a brief on-line application to balance attendees across institutions and for distributing funding. Click here to apply: https://www.regonline.com/2011_cesm_tutorial

Please apply in one of three categories: (a) participant requesting full travel support (airfare, per diem, lodging, local ground transportation) (b) participant requesting partial support (per diem, lodging, local ground transportation) (c) participant requesting no support

Application deadline is 25 March 2011.

We expect to notify participants by late April with the status of your request to attend the tutorial and what level of funding we are able to provide to you.

NEW BOOK RELEASES

New book: Remote Sensing of the Changing Oceans (Springer©)

A new book based on PORSEC 2008: Remote Sensing of the Changing Oceans

For further information see poster above the Notices or:

<[Remote Sensing of the Changing Oceans](#)>

New book: Factor Separation in the Atmosphere (Cambridge University Press)

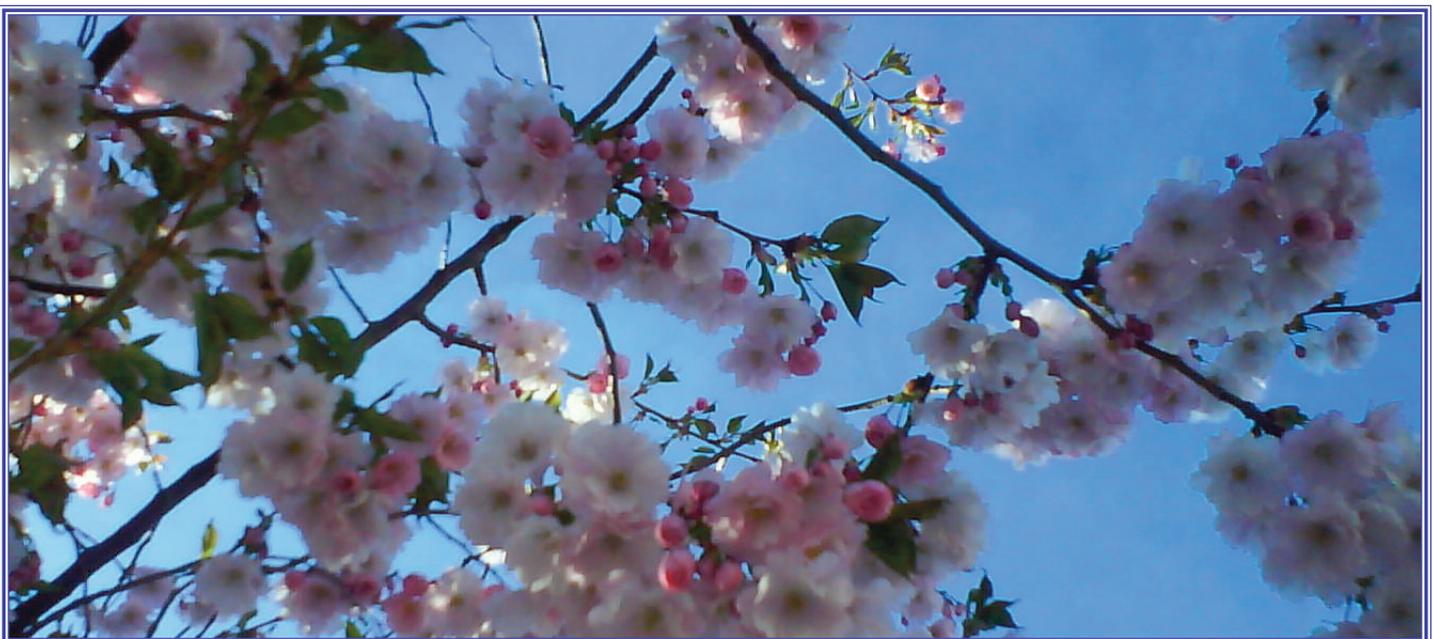
A new book about the Factor Separation (FS) computational method in modeling nonlinear factors in applications in the atmospheric sciences.

For further information:.

<[Factor Separation in the Atmosphere](#)>

To purchase a copy with 20 % discount (available until May),

1. go to: <http://www.tau.ac.il/~pinhas/>
2. click the 20% discount order form for the book on the Factor Separation Method.



PORSEC 2012

will meet in

Kochi, India

5-9 November 2012

Mark your calendars

PORSEC Database

For our database of the PORSEC Association members we would like you to enter your information directly into our web membership form, if you haven't already done so: <http://porsec.nwra.com/membershipform.php>

Please fill this form even if you have already given the information to us in any other format since we may not have all that information down correctly. **Please use this form to update your information whenever you have any changes.** It can also be used to pay your membership fee.

This form is also accessible through our main page (<http://porsec.nwra.com>) by clicking on "Join the PORSEC Association".

Please work on getting us more members; use the PORSEC home page and the above links for information. The prospective member provides us with the same information through the form. We will bill the person for the membership fee, which can now be paid via "Pay Pal" on the Internet.

Information

For information about the association and links to Newsletters from the president and Bulletin issues go to: <http://porsec.nwra.com/>. To join the PORSEC Association go to membership on the web site or contact one of us directly. The Bulletin of the PORSEC Association is edited by Gad Levy and Kristina B. Katsaros. Production Editor Susanne Öhrvik. ***We welcome contributions about your work and about any activities of our PORSEC members that may be of interest to other members for future issues of the Bulletin.*** To submit articles for this Bulletin of the PORSEC Association, please contact gad at porsec.nwra.com or katsaros@porsec.nwra.com.