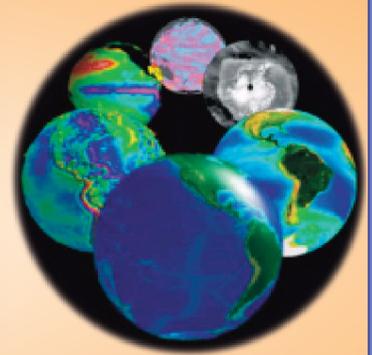


BULLETIN

of the

PORSEC

Association



Volume 8.2 Aug 2014

Dear Fellow Members of the PORSEC Association,

This issue of our Bulletin of the Association brings you the latest updates on the PORSEC 2014 conference. Be sure to read the details from the Local Organizing Committee in this issue including: conference highlights, tutorial and tourist opportunities.

As you know by now, the PORSEC in 2014 has the theme Ocean Remote Sensing for Sustainable Resources. It will be held in Bali, Indonesia, November 4-7, 2014 with registration and an icebreaker on November 3. There are many great-sounding sessions planned that would cover most oceanographic topics.

We hope that you have registered, made sure your passport is up-to-date and you have obtained a visa – if your nationality requires one. Do check the web-site for details about formalities (<http://porsec2014.unud.ac.id/announcements/schedule>).

The next item in this issue is a fanciful, Geo-Engineering idea, proposed by past-PORSEC President James Gower. It concerns the possibility of developing a dike across Gibraltar Strait to prevent sea level rise in the Mediterranean. It reads almost like “Sci-Fi” or something the popular 19th century French writer, Jules Verne, could have envisioned. As argued by Gower, bold thinking and early thorough discussion of such steps and their potential consequences are required, if Humanity keeps on spewing out carbon dioxide and changing the climate, melting glaciers and changing the sea-level. This topic could be good for discussions about anthropogenic climate change and what to do about it!!

Perhaps you can find funds to bring a student or younger colleague for the tutorial, which takes place just before the conference and allow those young persons to participate in some of the PORSEC 2014 sessions. The world will need well-informed and well-connected scientists for the future.

The Special Issue of the International Journal of Remote Sensing solicited in conjunction with our conference in Kochi, India is in print as reported in our last issue.

Best regards,
Kristina B. Katsaros and Gad Levy,
Co-Editors of the Bulletin

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Preparation Report for PORSEC 2014

The 12th Biennial Conference of PORSEC-2014

1. Main Theme

Ocean Remote Sensing for Sustainable Resources

2. Venue

- PORSEC-2014 conference will be organized at Hotel Prama Sanur Beach Bali, Jl. Danau Tamblingan, Sanur, 80032, Bali, Indonesia
- Training will be organized at Postgraduate Building of Udayana University, Denpasar-Bali.

3. Participants

We expect about 300 persons for the conference.

4. Dates

- Conference on Tuesday (November 4, 2014) to Friday (November 7, 2014).
- Training on Wednesday (October 29, 2014) to Saturday (November 2, 2014)

5. Preparation Schedule

Event	Date
Submission of Proposal for Sessions	30 December 2013
Second Circular-Call for papers	31 January 2014
Submission of Abstract	1 August 2014
Acceptance of Abstract	15 August 2014
Early bird registration	31 August 2014
Late registration	30 September 2014
Submission of full papers	31 August 2014
Conferences	4 November 2014 – 7 November 2014

SESSIONS

6. Technical Sessions

Special Sessions

- Satellite Program, Space Agencies
- Remote Sensing and Global Environmental Change
- Remote sensing Dev. And Appl. In South East Asia
- Blue Economy
- Marine Geospatial Technology

Topics of General Sessions

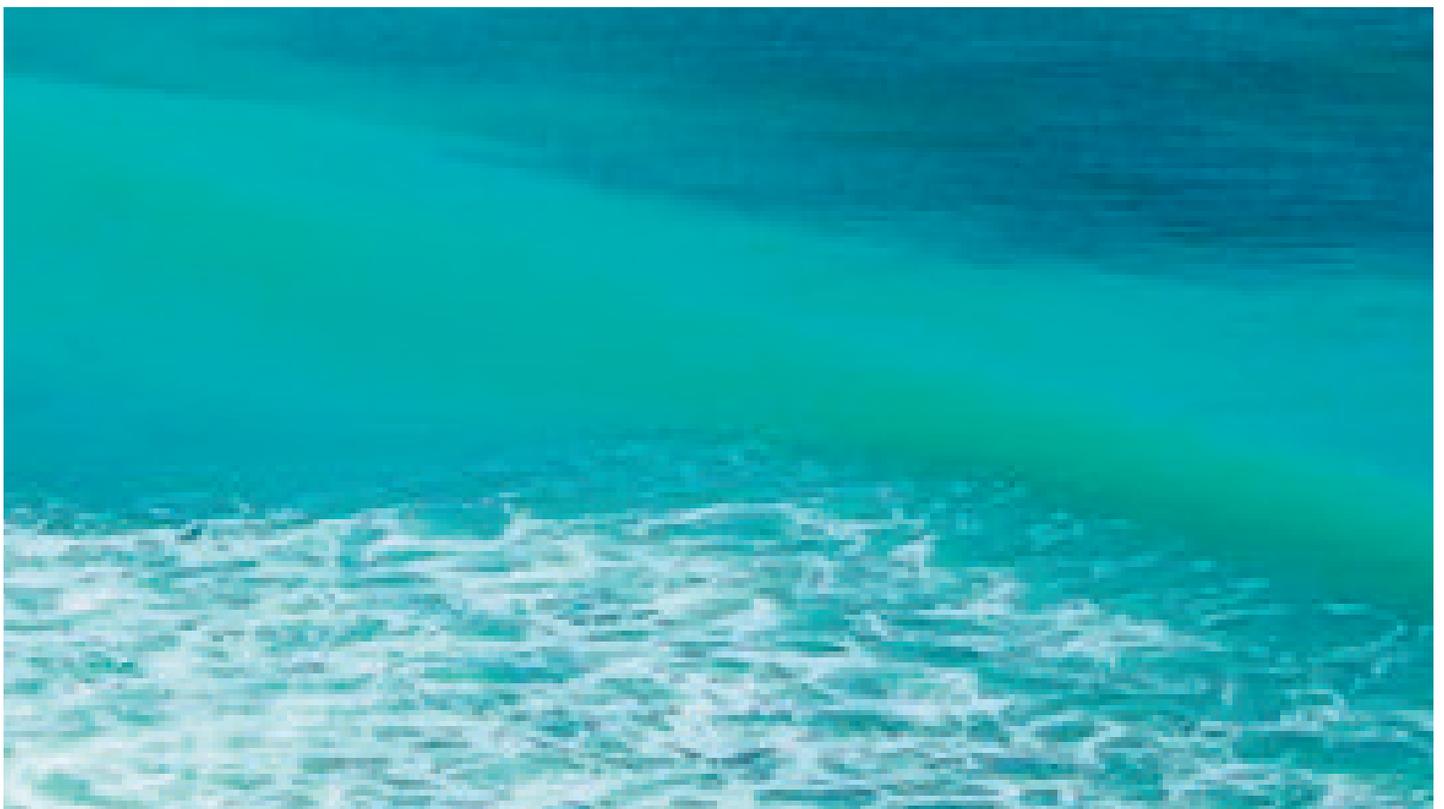
- Synthetic Aperture Radar (SAR)
- Fluxes through the Air-Sea Interface
- Ocean Color & bio-optical Properties
- Thermal Infrared Remote Sensing
- Microwave Remote Sensing (Passive & Active)
- Observation and Modeling
- Mesoscale Ocean Features (Eddies, Fronts, Upwelling)
- Large Scale Ocean Dynamics
- Coastal Watch Management
- High Resolution Satellite Remote Sensing
- Marine Acoustics
- Fishery Remote Sensing and Ocean GIS
- Climate Change
- Asia Monsoon
- Carbon and Water Cycle
- Internal Waves
- GPS for Climatology
- Disaster Mitigation

7. PORSEC Participants

- Total **PORSEC participants** registered until 22 July 2014 were 254 people (including ordinary and training participants) from 27 countries.
- **Training Participants** (until 22 July 2014) are 19.
Countries represented:
Indonesia: 10
China: 2
Pakistan: 3
Vietnam: 2
India: 1
US: 1

8. Total Number of Abstracts and details

No	Sessions	Oral	Poster	Total
1	Coastal Watch Management	24	18	42
2	Altimetry and Its Application	10	1	11
3	GPS for Climatology	3		3
4	Fishery Remote Sensing and Ocean GIS	22	5	27
5	Observation and Modeling	23	5	28
6	Ocean Color & Bio-optical Properties	24	8	32
7	Synthetic Aperture Radar (SAR)	12	2	14
8	High Resolution Satellite Remote Sensing	10	8	18
9	Mesoscale Ocean Features (Eddies; Fronts; Upwelling)	8	2	10
10	Large Scale Ocean Dynamics	1	2	3
11	Thermal Infrared remote sensing	6	3	9
12	The Estimation Validation and Uncertainties of Air-Sea Fluxes	3	2	5
13	Carbon and Water Cycles	1		1
14	Marine Acoustics	4		4
15	Climate Change	10	3	13
16	Asia Monsoon	5	1	6
17	Internal Waves		2	2
18	Disaster Mitigation	6		6
19	Microwave Remote Sensing (Passive & Active)	2	1	3
	Note: registrants until 22 July 2014	174	63	237



Global sea level rise: the case for a dam on the Strait of Gibraltar

Jim Gower

Institute of Ocean Sciences, Sidney, BC, Canada V8L 4B2

Global sea-level rise is now seen as one of the most significant impacts of human-induced climate change, and is expected to seriously affect most coastal areas in the next 10 to 100 years. Possible defences need to be considered for all areas. The coasts of the Mediterranean and Black Seas have an almost unique opportunity, in that a dam on the Strait of Gibraltar would provide long-term protection at an affordable cost, and no active pumping would be required to stabilize Mediterranean sea level, since evaporation dominates the water balance.

The dam would be built of loose rock, and designed to initially cause a sea level height difference between its two sides of about a metre, with sluices to allow inflow of Atlantic water to balance net evaporation. Probable location of the dam is shown in Figure 1. This is over a sill where water depths are a maximum of 280 m, much less than in the narrowest part of the Strait where depths are over 600 m. Volume of rock in the dam is about 1.5 cubic km for the site shown and for an angle of repose (slope of the dam

surfaces) of 30 degrees. This is a large volume, but less than has been excavated from some existing open pit mines.

In addition to coastal protection, the dam would allow power generation and a land link between Europe and Africa. Negative effects include the need for shipping to pass through locks both here and at Suez, and a long term rise in Mediterranean salinity with eventual impacts on fisheries. The salinity rise would be slow, causing serious effects only after several centuries. Mitigation, when needed, would require pumping out large volumes of Mediterranean deep water, over or through the dam. The dam would be a major project, requiring international agreements and resources. Its cost is high (estimated on the order of \$50 billion), but much less than the expected damage from rising sea levels. It will probably not be built soon, but discussions need to start to quantify costs, benefits and impacts. Similar large-scale projects may be needed to address long-term effects of climate change in Indonesia.

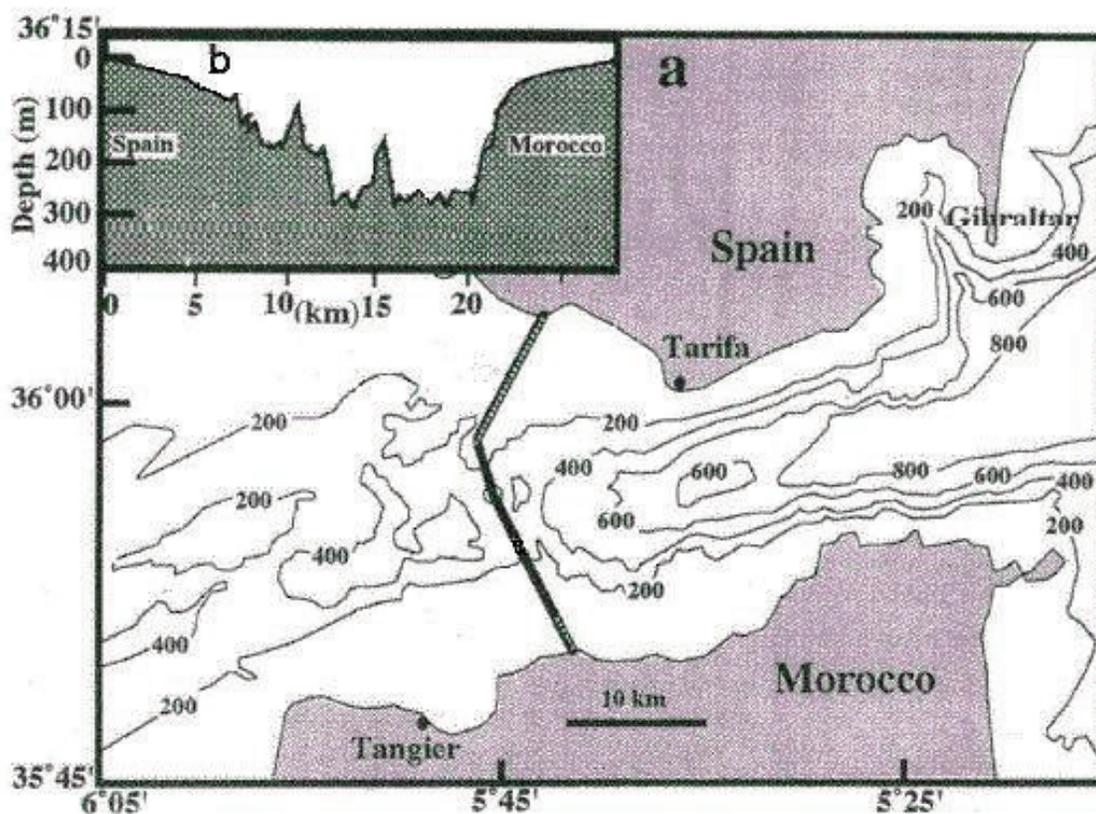


Figure 1 (a) Map showing water depths in the Strait of Gibraltar with the black line showing probable dam location. (b) Cross-section showing water depths along the route of the dam.

Chlorophyll fluorescence images of waters around Bali

Jim Gower

Institute of Ocean Sciences, Sidney, BC, Canada V8L 4B2

The signal due to solar-stimulated chlorophyll fluorescence is available from satellite sensors such as MERIS and MODIS, and could be much more widely used for monitoring coastal productivity and plankton blooms. The MODIS fluorescence product is available through the NASA Oceancolor and Giovanni web systems. Here we

show a single example of a recent fluorescence image of the waters around Bali (Figure 1), and compare it to the standard chlorophyll product from the same sensor (Figure 2). Images are the 1 km processed data products made available in near real time by NASA Oceancolor.

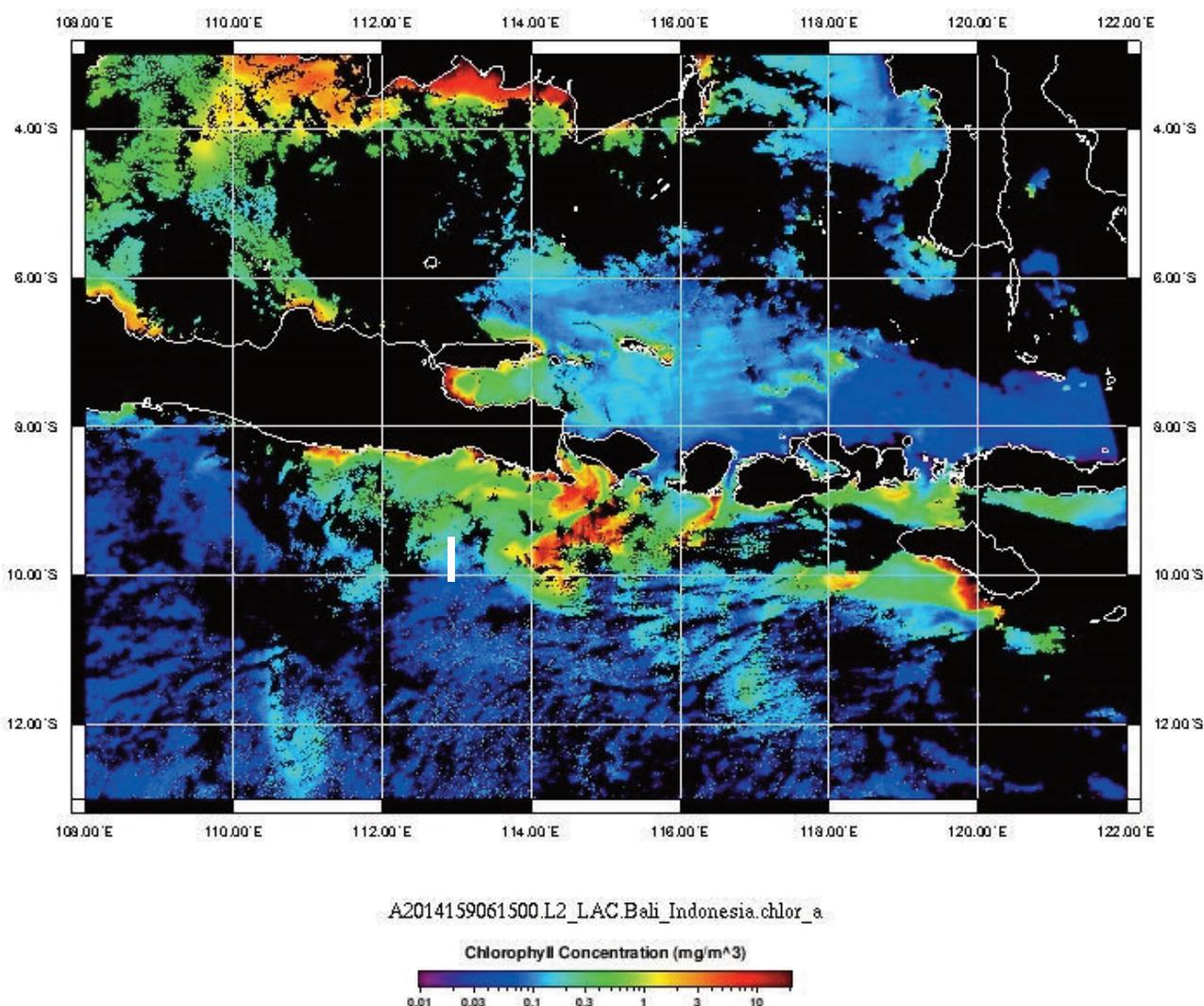


Figure 1. MODIS fluorescence image of the Indonesian Island chain on 10 July 2014, showing Java (left), Bali (centre) and islands out to Sumba and Flores in the east. The two southern arms of Sulawesi Island are visible at top right, with the south shore of Borneo at top centre. The image shows high fluorescence from blooms south of Bali and around Sumba Island.

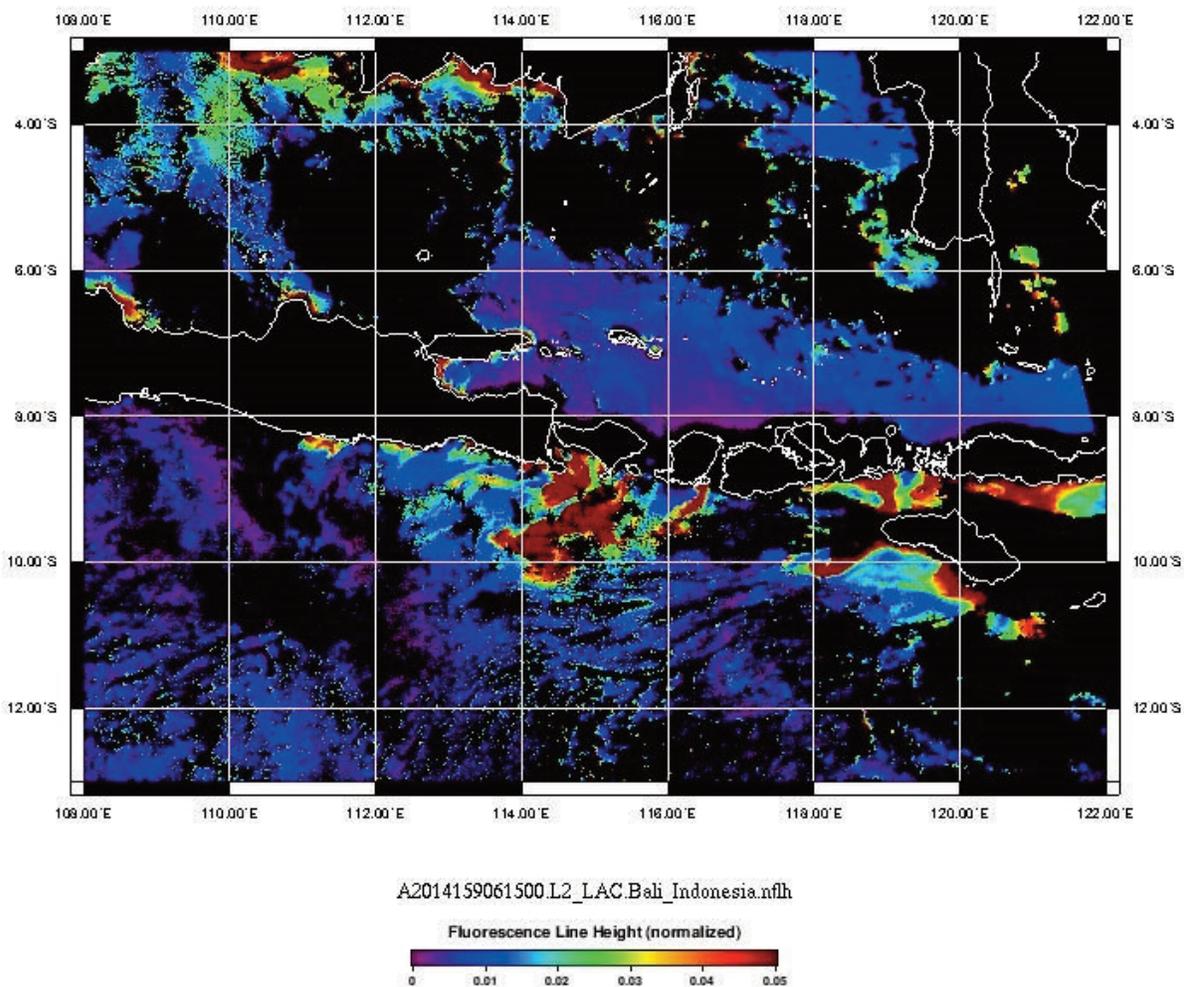


Figure 2. MODIS chlorophyll image from the same satellite pass and area as Figure 1 showing the same blooms, but with some differences in relative signal levels compared to Figure 1, suggesting differences in fluorescence properties. Figure 2 also shows larger areas of high signal on the south coast of Borneo.

In most areas, Figures 1 and 2 clearly show the same blooms. Colours are different, due to the signal scalings used in the two products (see colour bars). Differences between the two images near Flores, Sumba and eastern Sumbawa Islands (east side of the images) suggest differences in fluorescence properties of the blooms.

High chlorophyll signals near the south coast of Borneo could be due to suspended sediment in river runoff. Other small areas of high chlorophyll could be due to shallow water in coral reefs. In general, areas showing high chlorophyll, but with no corresponding fluorescence indicate possible problems in the standard chlorophyll product. The blooms south of Bali are confirmed by both methods.

NOTICES

Announcements, News, and Opportunities of Interest to the PORSEC Community

ANNOUNCEMENTS

Arctic Assessment, Phase II, from the U.S. Clivar Project Office.

Thank you to all that contributed to the first phase of the Arctic Observing Assessment. In recent weeks, a first round of anonymous input about societal priorities in the Arctic was received by phone, e-mail, and the web. These responses were wide-ranging. A draft attempt has been made to group these responses into categories that would serve as the basis for the next steps of the Assessment. At this time, 11 categories have been identified and made public in an online survey. Your input is again welcomed for the next step of the Arctic Observing Assessment for

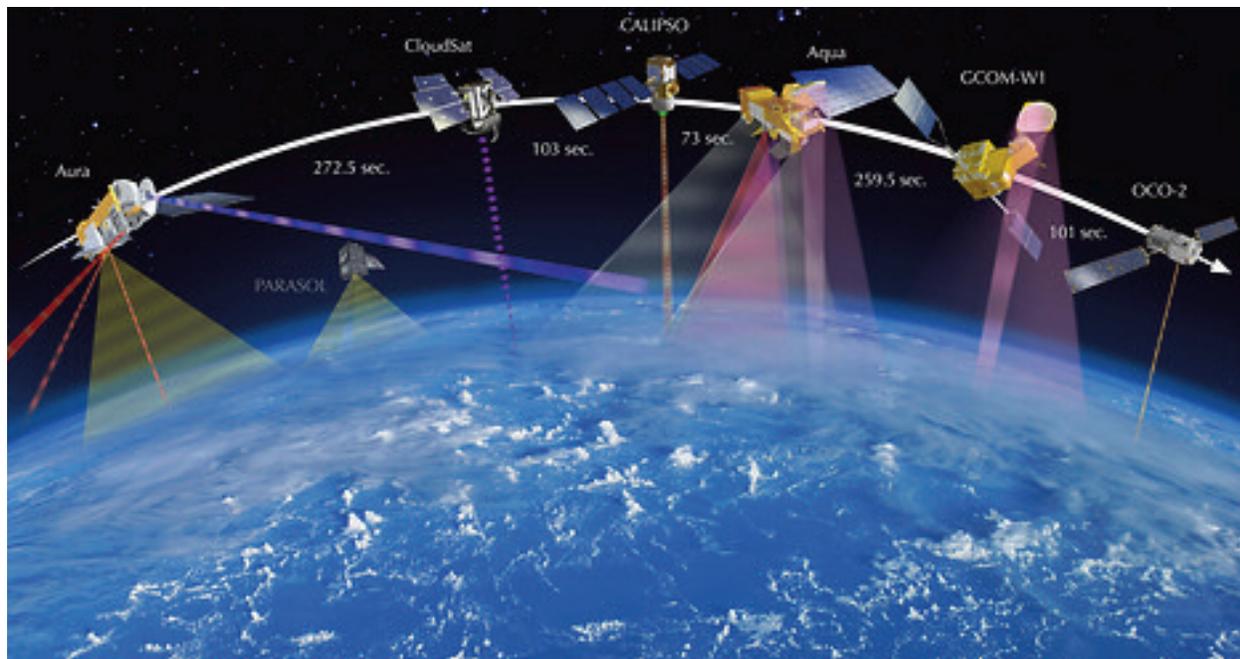
the Interagency Arctic Research Policy Committee (IARPC) and the Sustaining Arctic Observing Networks (SAON). Please visit <http://bit.ly/ssipcomment> to review these categories and their descriptions and provide feedback about missing categories or edits to category descriptions. Input is requested by August 8, 2014.

The categories identified by this process will be mapped into an open access relational database that includes products, information sources, and tools identified as necessary for informed decisions. The build out of the database will be featured on the ArcticHub (<http://www.arctichub.net>) and will allow for the community to crowd source information and products into the database. Frequently Asked Questions about the Assessment, including more information about IARPC and SAON, are also available on the Hub.

NEWS

NASA successfully launches OCO-2 to study global carbon cycle

In early July, NASA lit up the sky with the successful launch of the Orbiting Carbon Observatory-2 (OCO-2) that will measure Earth's sources and sinks for atmospheric carbon dioxide over the next two years. The satellite will also quantify variability over the seasonal cycle.



NASA's OCO-2 studies global carbon cycle

CONFERENCES

11th International Conference on Southern Hemisphere Meteorology and Oceanography

5-9 October 2015, Santiago, CHILE

We are very pleased to announce that the 11th meeting of the International Conference on Southern Hemisphere Meteorology and Oceanography will be held in Santiago, Chile, from Monday 5 to Friday 9 of October 2015. The conference is organized by the American Meteorological Society (AMS) and the Department of Geophysics, Universidad de Chile. The Department of Geophysics (DGF) is within the Facultad de Ciencias Físicas y Matemáticas located near downtown in Santiago. We gratefully acknowledge the generous support of the FONDAP Center of Climate and Resilience Research (CR2), the ICM Nucleus on SH Paleoclimate and MeteoData.

Since its advent, the ICSHMO has provided a unique contribution to ocean and atmosphere sciences that are specific to the Southern Hemisphere. The objective of the 2015 conference is to provide an interdisciplinary forum for presentations of our current knowledge, as well as encouraging new research and applications within the variety of disciplines related to weather and climate of the ocean and atmosphere. The overarching theme of this conference will be the Challenges of the Next Decade. Participation of early career scholars and postgraduate researchers is positively encouraged.

More information on booking accommodations will be forthcoming in the 2nd Circular along with a call for abstracts. Below is a summary of key dates regarding this conference.

2nd Circular (call for abstracts) September 2014
Abstract opening November 2014
Abstract Closing March 2015
Notification of abstract acceptance May 2015
Registration opening May 2015
Draft Program June 2015
Final Program July 2015
11th ICSHMO October 5-9, 2015

We look forward to seeing you in Santiago, Chile, in this new gathering of the ICSHMO, so place these dates on your calendar and make arrangements to attend. We kindly ask you to circulate the information among those interested in Southern Hemisphere Meteorology and Oceanography.

The official website will be available in early August at <http://www.dgf.uchile.cl/ICSHMO>.

Prof. James Renwick

Victoria University of Wellington
New Zealand

Chair of the Programme Committee

Prof. René Garreaud

Universidad de Chile

Chile

Chair of the Local Organizing Committee

POSITIONS

Full-time position in Atmospheric Sciences

Universidad de Concepción

Facultad de Ciencias Físicas y Matemáticas

Departamento de Geofísica

Avda. Esteban Iturra s/n - Casilla 160-C –

Teléfono 2204136 – FAX 2220104

Concepcion, June 2014.

The Geophysics Department in the Faculty of Physical and Mathematical Sciences at the University of Concepcion, Chile invites applications for a full-time, tenure-track Assistant/Associate Professor position in Atmospheric Sciences to be filled from 1st of December, 2014.

The focus of the position is on a field that will complement or extend the areas of interest of the Geophysics Department in atmospheric Science, with emphasis in any of the following disciplines: dynamic meteorology, synoptic and dynamic climatology, numerical modeling of the atmosphere, air-sea interaction, climate variability and change, mountain meteorology, among others.

The tasks of the Professor in Atmospheric Sciences include: designing and teaching courses at the undergraduate level; supervising undergraduate and graduate students in their area of expertise (aimed at students who already have mathematical and geophysical training); contributing to research in the field; contributing to strengthen national and international collaborative research/networks, mainly in Atmospheric Sciences. This position includes occasional administrative/service work within the Department.

Candidates should hold a Ph.D. or equivalent in atmospheric sciences, geophysics, physics or a related field and have

a strong and proven track record of publications in international refereed journals. Applicants should have excellent communication skills with the experience and motivation required to teach undergraduate and graduate geophysics students. We would like the candidate to speak/learn Spanish. However, it is possible to teach courses in either English or Spanish, depending on the language proficiency.

On the basis of experience and competence, candidates will be positioned within one of the levels Assistant Professor or Associate Professor. The position is full-time and wages at the University of Concepcion follow a categorical salary system. However applicants may provide salary requirements.

Applicants should send an application letter, curriculum vitae, a statement of teaching and research interests, two letters of reference and copies of their most significant research to Department of Geophysics ([concurso at dgeo.udec.cl](http://concurso.at.dgeo.udec.cl)). Hardcopies of the documents may also be sent to the following postal address: "Concurso Académico GF-01, Casilla 160-C, Correo 3, Concepción, Chile."

The application review process will begin on 1st of July, 2014, and continue until 31st of August of 2014. Applications will be accepted until 31st of August, 2014. The selection process will involve a preliminary selection of candidates. Selected applications will go to a second phase that will involve an interview in person (national) or a

video conference (international) during September for the prospective candidate.

For more information, please send email to [concurso at dgeo.udec.cl](mailto:concurso@dgeo.udec.cl).

PostDoc Scientist - Geospatial Sciences - Remote Sensing Researcher

South Dakota State University • Geospatial Sciences Center of Excellence

The Geospatial Sciences Center of Excellence (GSCE) is a dynamic, internationally recognized research center located in a small university town in South Dakota which was recently ranked the state with the 5th highest quality of life in the US.

The GSCE is a friendly research environment that has excellent research infrastructure and computing support: (http://globalmonitoring.sdstate.edu/files/GIScCE_Triennial_Report.pdf).

South Dakota State University is committed to affirmative action, equal opportunity and the diversity of its faculty, staff and students. Women and minorities are encouraged to apply. Non-US citizens may apply.

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 at porsec.nwra.com](mailto:katsaros@porsec.nwra.com).