Update on IOCCG activities, IOCS Meeting rationale & overview

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The International Ocean Colour Coordinating Group

IOCCG
Established in 1996 to promote the application of ocean-colour data at the world scale through coordination, liaison between providers and users, training, advocacy and provision of expert advice.

- Project Office at the Bedford Institute of Oceanography, NS, Canada

- Committee consists of:
  - **Space Agency Representatives** who contribute financially and carry out the decisions endorsed by the group
  - **Research Scientists** who address current research issues and make recommendations

*ESA MERIS Chlorophyll, 3-9 Sept 2010 (image courtesy Cesar Fuentes-Yaco, DFO, Canada)*

1st IOCS meeting, Darmstadt, 6-8 May 2013
IOCCG Mandate

- To provide a common voice for the user community
- Liaise with space agencies
- Advanced training courses to foster expertise in using ocean-colour data
- Facilitate free and open access to ocean-colour data from all agencies
- Ensure continuity and quality of the ocean-colour data stream
- Advocate the importance of ocean-colour data to the global community (informative website, newsletters, brochures, IOCCG reports...)

International Ocean Colour Science Meeting 2013
Advancing Global Ocean Colour Observations
IOCCG Sponsors

- NASA (National Aeronautics and Space Administration)
- ESA (European Space Agency)
- JAXA (Japan Aerospace Exploration Agency)
- EUMETSAT (European Organisation for the Exploitation of Meteorological Satellites)
- CNES (Centre National d'Etudes Spatiales, France)
- CSA (Canadian Space Agency)
- NOAA (National Oceanic and Atmospheric Administration)
- JRC (Joint Research Centre, EC)
- INPE (National Institute for Space Research, Brazil)
- ISRO (Indian Space Research Organisation)
- KIOST (Korea Institute of Ocean Science and Technology)
- NCEO (National Centre for Earth Observation, UK)
- DFO (Bedford Institute of Oceanography)
- Helmholtz-Zentrum Geesthacht (Germany)
IOCCG Scientific Working Groups

- Investigate various aspects of ocean-colour technology and its applications
- End product - publication of an IOCCG Report (13 published to date, plus a handbook).

Widely cited, definitive works. Available at: www.ioccg.org

Report 8: Remote Sensing in Fisheries and Aquaculture (2009)

Current IOCCG Working Groups

1) Phytoplankton Functional Types (Shubha Sathyendranath, UK)
2) Harmful Algal Blooms (IOCCG/GEOHAB – Stewart Bernard, South Africa)
3) Calibration of Ocean-Colour Sensors (Robert Frouin, USA)
4) Ocean Colour Remote Sensing in Polar Seas (Marcel Babin, Canada)
5) Uncertainties in Ocean Colour Radiometry (Roland Doerffer, Germany)
6) Retrieval algorithms for coastal waters (Kevin Ruddick, Belgium)
Established by IOCCG through CEOS to provide a long time series of calibrated ocean colour radiances from measurements obtained from multiple satellites.

**Goals of the OCR-VC**

1) To ensure the continuity of the ocean colour time series – Climate Data Record
2) To provide high quality data sets through a concerted inter-agency effort on activities relating to sensor inter-comparison (INSITU-OCR)
3) Data harmonization, support implementation of ECVs (IOCCG Task Force on ECV Assessment)
4) Facilitate timely and easy access to data (user interface)
5) Capacity building and outreach

- All space agencies on the IOCCG Committee contribute to the OCR-VC

Committee on Earth Observation Satellites
IOCCG Training Initiatives

Introductory courses (applications)

- Theoretical basis of optical radiometry, introduction to processing and using ocean colour data.
- Over 20 courses conducted/co-sponsored around the world.
- Focus on key applications for monitoring and managing the coastal zone, and for protecting marine ecosystems and resources.

High-level training courses (scientific research)

To maintain a highly skilled and trained scientific research community, with the necessary background and expertise to address current critical issues.

- Inversion Methods in Ocean Colour Remote Sensing (Germany, 2009)
- Summer Lecture Series (France, 2012).
This week’s meeting
International Ocean Colour Science Meeting
IOCS, 1st edition
IOCS meeting rationale

- Ocean colour scientific communities are differently organized across the World
  - In the US: NASA Ocean Color Research Team Meetings (http://oceancolor.gsfc.nasa.gov/MEETINGS/)
  - In France: a research consortium called “GIS COOC” (http://gis-cooc.org)
  - In Canada: emergence of a Canadian Ocean Colour Network
  - In South America: Antares http://home.antares.ws
  - Others?
- Several space Agencies have launched or plan to launch ocean color sensors
  NASA, NOAA, ESA/EUMETSAT, CNES, JAXA, KORDI/KARI, CNSA, INPE/CONAE
- A number of issues are faced, in terms of calibration (instr. & vicarious), building of long-term time series, data merging, distribution etc....
- These issues exist for all missions, yet each mission responds differently to them
- There is, therefore, a need for more communication / exchange / collaboration etc... among ocean color missions and communities

Hence the IOCS meeting
This need for better coordination, exchanges etc... is particularly important when it comes to merging data from multiple missions in view of generating long-term consistent global time series for analyzing climate-driven changes.

That’s why the overarching theme of the 2013 IOCS meeting is

Building of global, multi-mission, long-term (multi decadal) ocean color time series for climate research
The IOCS meeting should allow

- Agencies to deliver information about their current and future missions to the scientific community
- Setting up the “big picture” of today's ocean color science (keynotes)
- Providing a forum for discussions on various topics
- Helping IOCCG in its oversight role
- Building/reinforcing our community at global scale
- Enrolling more people into community work than is feasible through the IOCCG meetings and WGs alone
- Producing synthesis documents of interest for the community in question (meeting report)
- Reinforcing our voice when it comes to high-level discussions with agencies
IOCS meeting goals

The IOCS is not another ocean optics conference, not another (smaller) ocean sciences meeting etc...

It is a community consultation meeting

(cf. science teams meetings of the GHRSSST, the OST-ST, etc ...)

It is a working meeting

It is your meeting
Great thanks to:

- NASA and EUMETSAT for their generous support to the 2013 IOCS meeting
- ESA & CNES for their contribution
- All IOCCG sponsoring agencies for their recurrent support
- Venetia Stuart, IOCCG project scientist, for her unremitting help and dedication to IOCCG
- Rowanna Comerford and Sylwia Miechurska, from EUMETSAT, for outstanding efficiency in preparing this meeting
- The IOCS Scientific & Organizing Committees
- The session leads for their help in preparing the agenda
2015 IOCS Meeting

Will be somewhere in the US