



Welcome to the International Ocean Colour Science Meeting 2023

14 - 17 Nov 2023, St. Petersburg, Florida, USA.

Hosted by the University of South Florida, NOAA &
NASA

Shubha Sathyendranath, IOCCG Chair
Raisha Lovindeer, IOCCG Project Coordinator



The IOCCG Committee

The IOCCG committee consists of:

- sponsoring agency representatives
- scientists from the ocean colour community that serve 3-year terms
- a chair on a 3-year term, which may extend for a second term
- Initiated by Robert Frouin when he was at NASA



Chairs of the IOCCG Committee →



Current chair

Dr. S Sathyendranath
Plymouth Marine Lab, UK

Past chairs



Dr. Cara
Wilson
2017-2022



Dr. Stewart
Bernard
2014-2017



Dr. David
Antoine
2010-2014



Dr. Jim Yoder
2006-2009

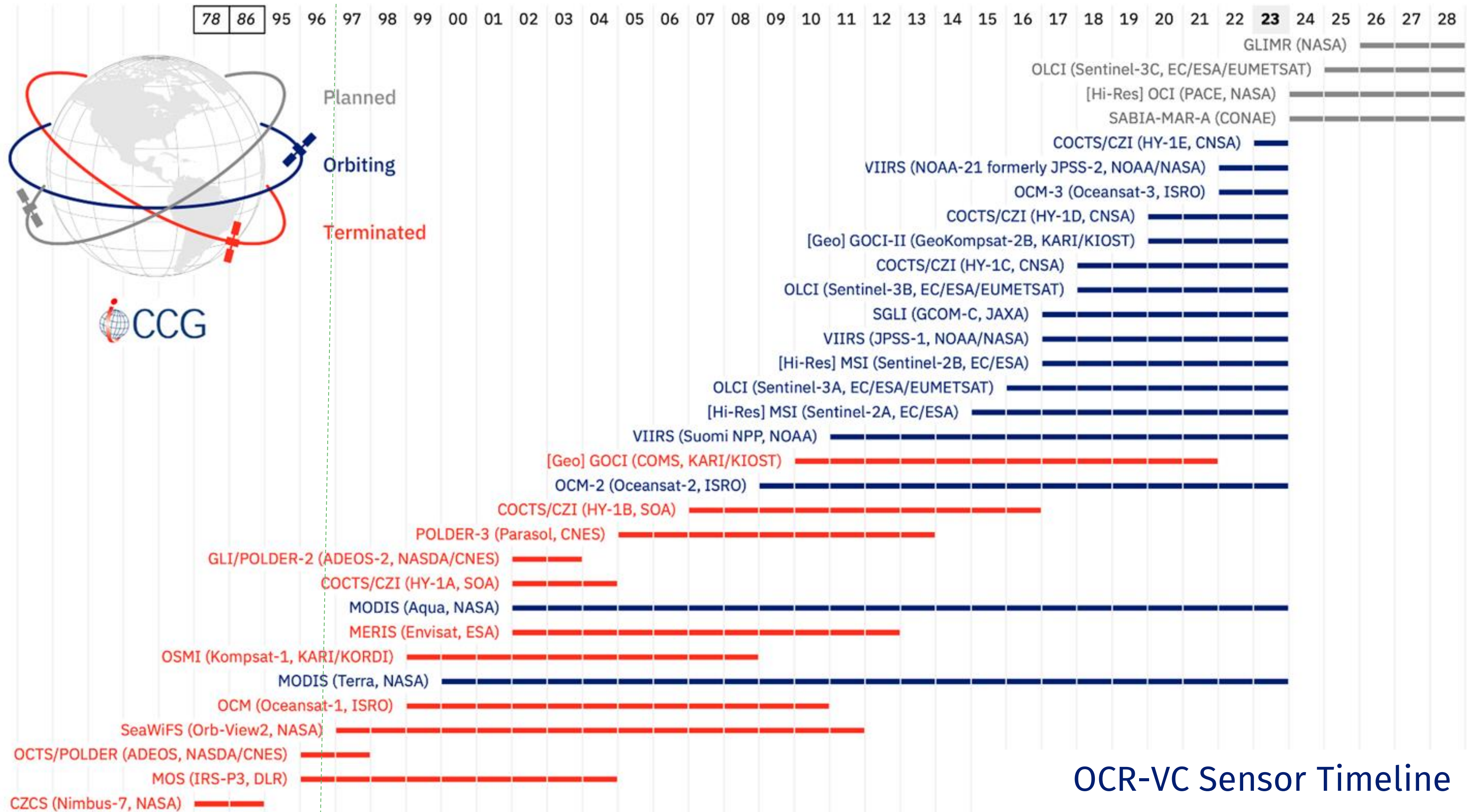


Dr. Trevor
Platt
1996-2006



IOCCG Project Coordinator

Dr. Venetia
Stuart
1996-2022



OCR-VC Sensor Timeline

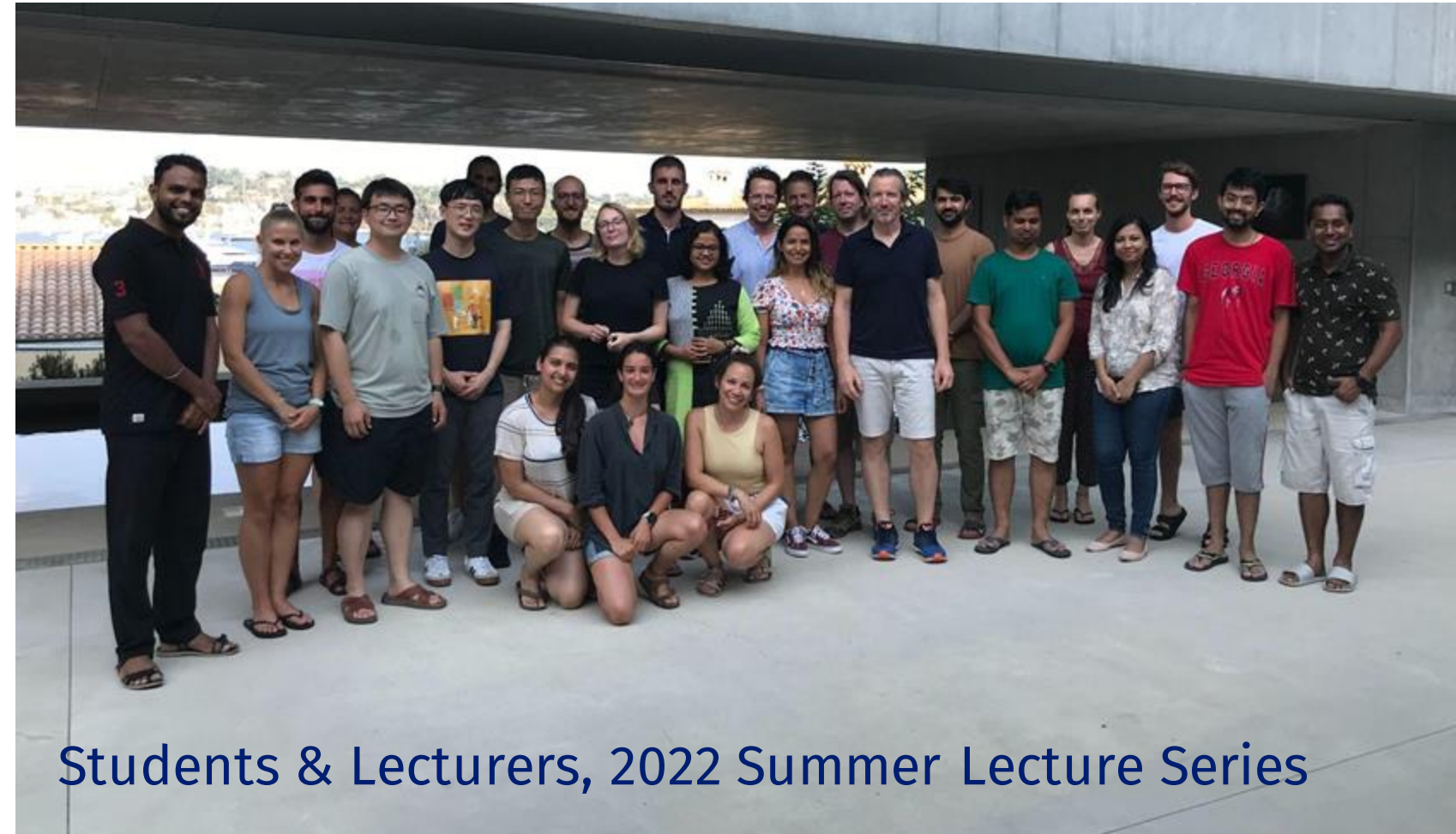


Capacity Building

Summer Lecture Series

- Biennial 2-week training course, with emphasis on fundamental optics and radiative transfer that underpin ocean colour science
- Established under the leadership of David Antoine
- 20+ Students
- Hosted by France at Villefranche-sur-Mer, from 2012-2022
- New venue from 2024 onwards: Indian National Centre for Ocean Information Services (INCOIS) in Hyderabad, India
- All previous course material made available on the IOCCG website along with a host of other ocean colour resources

ioccg.org/what-we-do/training-and-education/educational-links-and-resources



Students & Lecturers, 2022 Summer Lecture Series

Trevor Platt Memorial Scholarship

USD 5000 awarded to a student / scholar from a developing country to conduct hands-on research or receive in-depth training in ocean colour at a foreign institution for up to 3 months.



Our 2023 awardees →



Arjun Adhikari
India

Proposed research: Satellite derived coastal colour components and physical processes: a numerical study with Hans Burchard at the Leibniz Institute for Baltic Sea Research, Germany.



David Alejandro Gonzalez Rivas
Mexico

Proposed research: Using Ocean color data for understanding shrimp farms water discharge in the coastal ecosystems of the Gulf of California with Heidi Dierssen at the University of Connecticut, USA.



PROGRAMME OF THE
EUROPEAN UNION



co-funded with



SATELLITE-BASED TOOLS FOR INVESTIGATING AQUATIC ECOSYSTEMS TRAINING 2023



Joint-funded hybrid training course, April - Aug 2023





Promote Scientific Excellence

Scientific working groups

- Investigate aspects of ocean colour science, technology and its applications
- Contribute to CEOS deliverables
- Publish their findings in scientific reports
- Progress is reviewed annually at the IOCCG Committee meeting
- The first volume contains 20 reports (Series Editor: Venetia Stuart)
- Series Editor for Volume 2 will be Raisha Lovindeer

Latest in the IOCCG Report Series →



Ocean Optics & Biogeochemistry Protocol Series

- Community consensus protocols for ocean colour sensor validation.
- Vetted by the ocean colour community during a 60-day review period.
- Available on the IOCCG website & OBP Repository.
- Initially formed through workshops and working groups sponsored by NASA.
- Now developed by specialized working groups also supported by IOCCG.

Latest in the IOCCG Protocol Series →

Ocean Optics & Biogeochemistry Protocols for Satellite Ocean Colour Sensor Validation

Volume 7: Aquatic Primary Productivity Field Protocols for Satellite Validation and Model Synthesis (v7.0)

Editors

Ryan A. Vandermeulen and Joaquín E. Chaves

Authors

Balch, W.M., Carranza, M., Cetinić, I., Chaves, J.E., Duhamel, S., Fassbender, A., Fernandez-Carrera, A., Ferrón, S., García-Martín, E., Goes, J., Gomes, H., Gundersen, K., Halsey, K., Hirawake, T., Isada, T., Juranek, L., Kulk, G., Langdon, C., Letelier, R., López-Sandoval, D., Mannino, A., Marra, J.F., Neale, P., Nicholson, D., Silsbe, G., Stanley, R.H., Vandermeulen, R.A

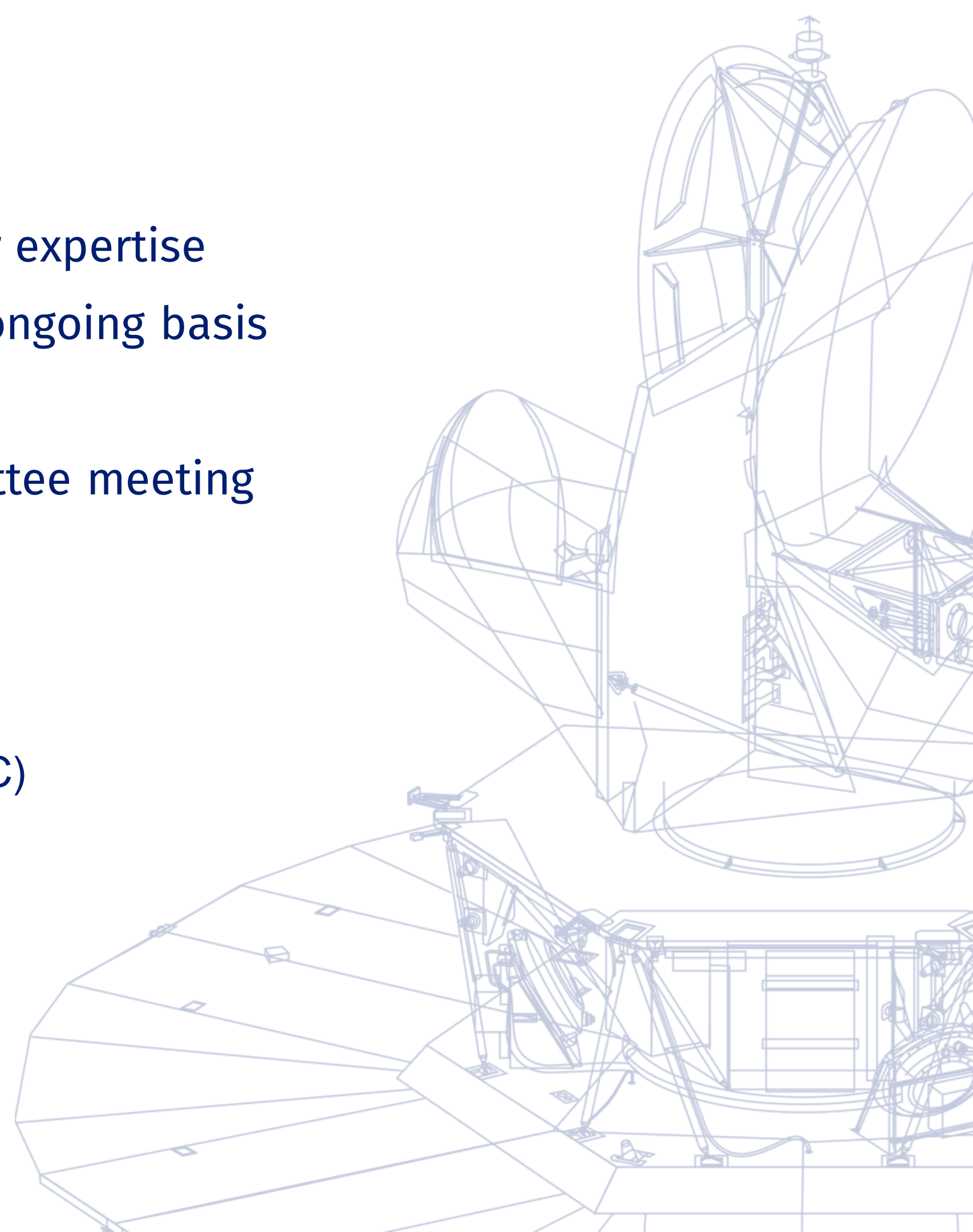
International Ocean Colour Coordinating Group (IOCCG) in collaboration with National Aeronautics and Space Administration (NASA)

IOCCG, Dartmouth, Canada

September 2022

Long Duration Task Forces

- address issues that require ongoing capabilities or expertise
- help to facilitate interagency collaboration on an ongoing basis
- remain until the need they serve no longer exists
- progress is reviewed annually at the IOCCG Committee meeting
- **Current Task Forces:**
 - Ocean Colour Satellite Sensor
 - Remote Sensing of Marine Litter & Debris
 - Ocean Colour System Vicarious Calibration (OC-SVC)
 - Aquatic Carbon from Space
 - Hyperspectral Ocean Colour Radiometry





Liaison with other international
bodies

IOCCG in the International Context



Affiliate programme of SCOR (Scientific Committee on Oceanic Research)



Associate Member of CEOS (Committee on Earth Observation Satellites)

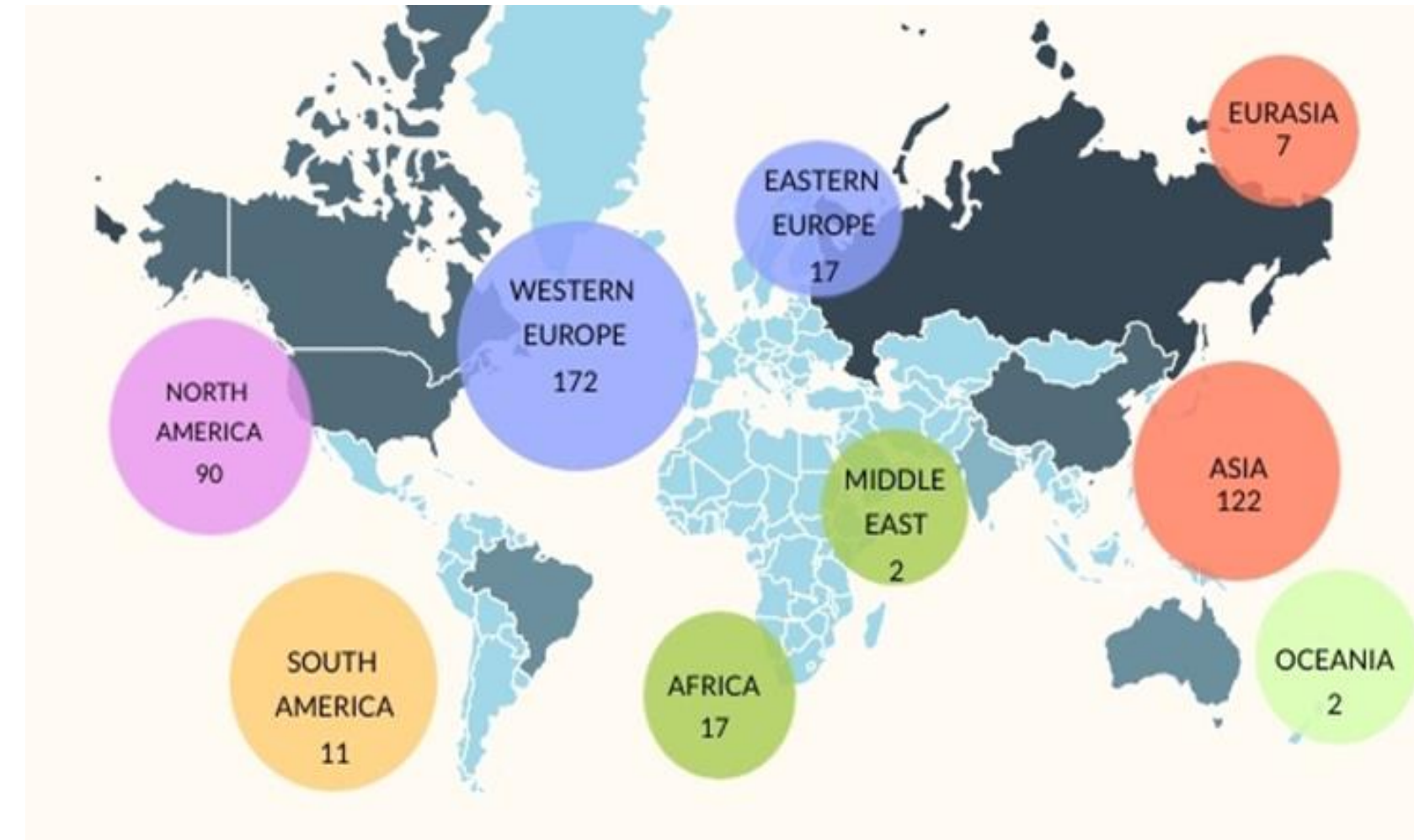


Contributes to the activities of GEO (Group on Earth Observations) Blue Planet initiative

Ocean Carbon from Space Workshop

Hosted by OCR-VC with ESA in Feb 2022, leading to:

- special issue in *Frontiers in Marine Science* to capture individual contribution to the workshop and related work
- a community whitepaper to gather the workshop outcomes and recommendations, and has been published in the *Aquatic Carbon From Space Special Issue in Earth Science Reviews*
- The Special Issue in *Earth Science Reviews* also contains many reviews on aspects of ocean-colour research related to ocean carbon
- Creation of a strong momentum around aquatic carbon from space, a key contribution to the Global Carbon Budget



oceancarbonfromspace2022.esa.int

Aquatic Carbon Roadmap

- To improve understanding of what controls the trends and variability in the ocean carbon sink, and better align model carbon estimates with observation-based data
- A deliverable to CEOS led by the OCR-VC
- To include contributions from
 - OCCG Task Force on Aquatic Carbon from Space
 - IOCCG Working Group on Ocean Primary Production



IOCCG and GEO: History & Timeline

- July 2007, request from GEO to assimilate satellite Earth Observation (EO) into fisheries research and ecosystem-based fisheries management.
- Development of SAFARI Programme, quickly accepted by GEO as a way forward.
- International coordination and Canadian activities funded for three years by Canadian Space Agency, November 2007 and extended for another three years in 2010.
- Activities executed jointly with IOCCG

One of many products of the collaboration →



Remote Sensing in Fisheries
and Aquaculture

Reports of the
International Ocean-Colour
Coordinating Group

REPORT NUMBER 8



An Affiliated Program of SCOR
An Associate Member of CEOS

IOCCG and GEO: Current Opportunities

- Current IOCCG Chair is a member of GEO Blue Planet Fisheries working group
geoblueplanet.org/fisheries/
- IOCCG involvement in planning of 3rd SAFARI Symposium
- GEO Aqua Watch Team meeting at IOCS-2023

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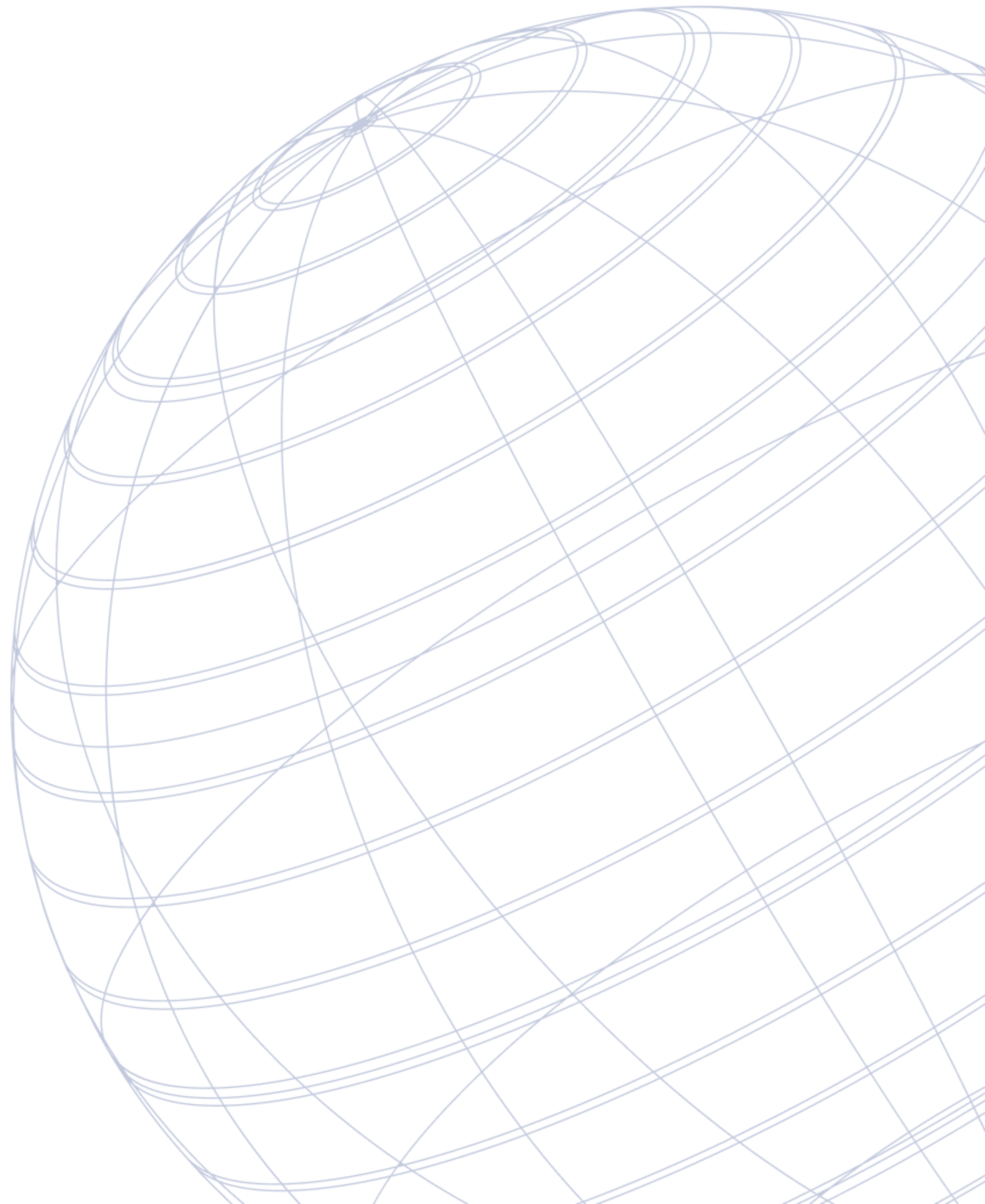
Serving the Community



International Ocean Colour Science Meeting 2023

- IOCS meetings serve as a forum for the ocean colour community to communicate their views, ideas, concerns and issues with the satellite agencies
- The overarching theme for IOCS-2023: ***Impact and Value of Ocean Colour Observations in a Changing World: Water in all its Colours***
- We have ahead of us:
 - exciting keynote lectures
 - agency talks
 - breakout workshops
 - poster sessions
 - community Town Halls
 - training events
 - side meetings
- Overall goal of nurturing a strong global user community for ocean colour science and applications





- We are now at a time when we need international coordination and collaboration more than ever, to address the grand challenges that we face today
- The effort that IOCCG has invested in capacity building and coordination is now paying rich dividends, with training activities leading to collaborations and partnerships
- Many former trainees are now trainers in their turn
- We need to build on the strengths of IOCCG and the IOCS is an important avenue for building the ocean colour community.
- Welcome to IOCS 2023



International Ocean Colour Science Meeting 2023

We thank all the sponsors: NOAA, NASA, USF and OCB.

A special thanks to University of South Florida at St. Petersburg.

- The support we have received at various levels, both logistical and financial, has been whole hearted.
- Many people have volunteered their time unstintingly for organisation of the meeting, under the leadership of Chuanmin Hu.
- I now invite Chancellor Christian E. Hardigree to address the gathering.

