

08:00 - 09:00 Badge collection & Sign-in

Opening Session

Session Chair: **Shubha Sathyendranath**09:00 - 09:05 [Opening of the IOCS](#). **Shubha Sathyendranath**, Chair, IOCCG09:05 - 09:10 [EUMETSAT Welcome](#). **Phil Evans**, Director-General, EUMETSAT**Bojan Bojkov**, Head, Remote Sensing and Products Division, EUMETSAT09:10 - 09:15 [ESA Welcome](#). **Inge Jonckheere**, Head, Green Solutions Division, ESA

Opening Keynote

09:15 - 09:50 **Keynote:** Current status, and future of Ocean Colour. **Paula Bontempi**09:50 - 10:00 [Keynote Q&A](#)10:00 - 10:15 **Poster lightning talks 1A**

Agency Presentations

10:15 - 10:30 [EUMETSAT's Ocean Colour application and research activities](#). **Ewa Kwiatkowska** (EUMETSAT)10:30 - 10:45 [Ocean Colour application & research at ESA](#). **Marie-Hélène Rio** (ESA)10:45 - 11:00 **Poster lightning talks 1B**11:00 - 11:45 **Poster Session 1**
(with coffee break)

Oral Session 1 : Insitu Data




Session Chair: **Giuseppe Zibordi**11:45 - 12:30 **Panel Discussion:** [Supporting EO with high quality insitu measurements](#)

Panelists:

Agnieszka Bialek (National Physical Laboratory, UK), **Andrew Barnard** (Oregon State U., USA),**Stefan Simis** (Plymouth Marine Lab, PML, UK), **Sindy Sterckx** (VITO, Belgium).12:30 - 13:30 **Lunch Break**13:30 - 14:00 **Poster Session 1**
Continued

Agency Presentations

14:00 - 14:15 [Ocean Colour activities in NCEO](#). **Steve Groom** (NCEO, UK) (remote)14:15 - 14:30 [Australian Ocean Colour activities](#). **Thomas Schroeder** (CSIRO, Australia)14:30 - 17:30 **Breakout Workshops 1, 2, 3 & 4**

1. Inland & coastal waters: current status & future directions in the correction of adjacency effects (Spectrum A) <i>Chairs: Barbara Bulgarelli, Alexandre Castagna, Nima Pahlevan</i> 14:30 Introduction, Barbara Bulgarelli (JRC-EC) 14:42 Impact of adjacency effect on high resolution products in operational services, Carsten Brockman (Brockman Consult, DE) 14:54 Assessing the impact of adjacency effects on atmospheric correction using Monte-Carlo simulations with the SMART-G radiative transfer code, François Steinmetz (HYGEOS, F) 15:06 Quantification of adjacency effects in inland and coastal waters by the sensor-agnostic MIP-Adjacency correction processor, Thomas Heege (EOMAP GmbH) 15:18 GAAC: a Genetic Algorithm for Adjacency Correction for Inland Waters, Simon Belanger (University of Quebec, CA)	2. In water radiometry on autonomous profiling floats in support of satellite ocean colour validation activities (Chromium) <i>Chairs: Vincenzo Vellucci, Nils Haëntjens, Marine Bretagnon</i> 14:30 Introduction, V. Vellucci (Sorbonne University, IMEV) 14:35 State of the art of in-water radiometry instrumentation and data acquisition protocols, G. Zibordi (EOSCIENCE) 14:50 The HyperNav, a profiling float designed for PACE system vicarious calibration, N. Haëntjens (University of Maine, School of Marine Sciences) 15:05 The BGC-Argo profiling floats programme, status and synergy with satellite OC, H. Claustre (CNRS, LOV) 15:20 Questions	3. Priority list of marine biodiversity metrics to observe from space: synthesis and planning for next steps (Titanium 2) <i>Chairs: Victor Martinez-Vicente, Maycira Costa</i> 14:30 Introduction, aims and objectives. Summary of the results from questionnaire, Victor Martinez 14:45 Part 1: Status and trends of EO products for Biodiversity <i>Break out in two sub-groups of Essential Ocean Variables (EOV):</i> 1. Phytoplankton and seascapes - Victor Martinez 2. Habitats (seagrass, seaweed, corals, mangroves, saltmarshes) - Maycira Costa 	4. Ocean Colour Satellite Sensor Calibration (Platinum 2) <i>Chairs: Gerhard Meister, Ewa Kwiatkowska, Hiroshi Murakami</i> 14:30 Introduction and recommendations in previous meetings, Gerhard Meister 1. Hyperspectral lessons learned 14:35 1-1 PACE OCI, Gerhard Meister 2. POL sensors lessons learned 14:45 2-1 PACE SPEXone, Jeroen Rietjens 14:55 2-2 PACE HARP2, Brent McBride 15:05 2-3 SGLI POL, Hiroshi Murakami 15:15 2-4 3MI, Bertrand Fougne and Margarita Vazquez , 3MI 3. Operational OC lessons learned 15:25 3-1 OLCI, Ludovic Bourg 15:35 <i>Coffee Break</i>
15:30 - 16:00 Coffee Break			
16:00 Sensor-generic AE correction in aquatic remote sensing using T-Mart, Yulun Wu (University of Ottawa, CA, online) 16:12 Atmospheric correction in the presence of adjacency with ACOLITE/RADCor, Alexandre Castagna (Ghent University, BE) and Quinten Vanhellemont (RBINS, BE) 16:24 Open discussion	16:00 The Provor CTS5, a BGC-Argo float to deploy radiometry at Argo scale, E. Leymarie (CNRS, LOV) 16:15 Potential of BGC-Argo floats as data source for satellite OC validation, A. Mangin (ACRI-ST) 16:30 Discussion 17:15 Wrap-up	16:00 Summary from Part 1 and introduction to part 2 (5' max per sub group) Victor Martinez and Maycira Costa 16:20 Part 2: Revision of recommendations moving forwards and priorities results  17:00 Summary from Part 2 and final discussion (5' max per sub group) Victor Martinez and Maycira Costa 17:20 Plan for submission for an IOCCG WG and next steps, Maycira Costa	16:05 3-2 VIIRS, Menghua Wang 4. GEO and lessons learned 16:15 4-1 GOCI-2, co-presented by Minsang Kim and Myung-Sook Park 16:25 4-2 GLIMR, Bror F. Jönsson 5. New OC missions 16:35 5-1 CONAE SABIA-MAR, Robert Frouin 16:45 5-2 S3NGO, Paolo Cipollini 6. Lunar calibration 16:50 6-1 Updates of lunar model development and lessons learned from application by the model users, Sebastien Wagner (coordinated with Tom Stone) 7. Discussions Led by Gerhard Meister , Ewa Kwiatkowska , Hiroshi Murakami 17:25 Wrap-up, Gerhard Meister 

17:30 **Sessions End**17:30 - 19:00 **Icebreaker Reception**

Oral Session 2: Ocean Carbon

Session Chair: **Marie-Hélène Rio**

09:00 - 09:35 **Keynote:** Aquatic Carbon from Space. **Robert Brewin**
09:35 - 09:45 Keynote Q&A

09:45 - 10:00 **Poster lightning talks 2A**

10:00 - 10:45 **Panel Discussion:** Ocean Carbon: policy, adaptation and mitigation.
Panelists:
Gemma Kulk (PML), **Rosa Roman** (Technical University of Munich, TUM),
Hubert Loisel (U. Littoral), **Luke Gregor** (Swiss Data Science Centre, Zürich)

10:45 - 11:00 **Poster lightning talks 2B**

11:00 - 11:30 **Poster Session 2**
(with Coffee Break)

Oral Session 3: Reports

Session Chair: **Hellen J. Kizenga**

11:30 - 11:40 Reports from breakout workshop 1. **Barbara Bulgarelli**
11:40 - 11:50 Reports from breakout workshop 2. **Vincenzo Vellucci**
11:50 - 12:00 Reports from breakout workshop 3. **Victor Martinez-Vicente**
12:00 - 12:10 Reports from breakout workshop 4. **Gerhard Meister**

Agency Presentations

12:10 - 12:20 JAXA GCOM-C research and applications. **Hiroshi Murakami** (JAXA, Japan)
12:20 - 12:30 GOCI-II, current status, validation and applications. **Jongkuk Choi** (KIOST, Republic of Korea)

12:30 - 13:30 **Lunch Break**

13:30 - 14:00 **Poster Session 2**
Continued

Agency Presentations

14:00 - 14:15 NOAA ocean colour science & applications. **Menghua Wang** (NOAA, USA) (remote)
14:15 - 14:30 Emerging applications and science from NASA. **Laura Lorenzoni** (NASA, USA)

14:30 - 17:30 **Breakout Workshops 5, 6 & 7**

5. Blueprint for large-scale, operational, EO-based systems for Harmful Algal Blooms monitoring

(Spectrum A)

Chairs: *Ilaria Cazzaniga, Krista Alikas, Jeremy Kravitz*

14:30 Introduction and invited presentations

CyanoTRACKER: Solving CyanoHABs Monitoring Challenges using Sensing Integrated Cyber-Physical Systems Approach, **Deepak Mishra** (University of Georgia, Athens)

The National Oceans and Coastal Information Management System Fisheries and Aquaculture Decision Support Tool, **Marie Smith** (CSIR, Cape Town)

HABs and gaps: constructing climate data records to assess lake functioning over decadal timescales, **Stefan Simis** (PML, Plymouth)

15:30 - 16:00 **Coffee Break**

16:00 Discussion, Moderated by co-chairs

17:20 Wrap up, Moderated by co-chairs

17:30 **Sessions End**

6. SI-Traceable In-Situ Aquatic Radiometry: Bridging the Gap Between Different Measurement Methodologies

(Chromium)

Chairs: *Agnieszka Bialek, Carol Johnson, Giuseppe Zibordi*

14:30 Welcome, **All Chairs**

14:35 SI Traceable Aquatic Radiometry, **Carol Johnson**

15:00 Field Radiometry Methodologies, **Giuseppe Zibordi**

16:00 Modelling and simulations, **Davide D'Alimonte**

16:35 Uncertainties, **Agnieszka Bialek**

17:00 Final discussion addressing the session main questions, conclusion and recommendation, All

7. Challenges on Optical Remote Sensing for Marine Litter and Floating Matter

(Platinum 2)

Chairs: *Shungu Garaba, Victor Martinez-Vicente,*

14:30 Welcome Note - Agenda Overview (Aim of session, List of Questions + Key Questions-Challenges), **Victor Martinez-Vicente**

Two group discussions Dataset (Lab and Field/Direct)

16:00 Recap - of the first session

Identify the priority list for agencies in the same two groups

Conference Dinner (details to be communicated)

08:00 - 09:00 Community Forum on Aquatic Hyperspectral RS hosted by the IOCCG Hyperspectral Task Force (**Platinum 2**)**Oral Session 4: Water Quality**Session Chair: **Milton Kampel**09:00 - 09:35 **Keynote:** EO Application to Water Quality. **Tiit Kutser**

09:35 - 09:45 Keynote Q&A

09:45 - 10:00 **Poster lightning talks 3A**10:00 - 10:45 **Panel Discussion:** Water Quality

Panelists:

Jenni Attila (Finnish Environment Institute, Syke), **Alessandro De Carli** (Bocconi U.),**Karin Schenk** (EOMAP Fugro), **Marie Smith** (Council for Scientific & Industrial Research, CSIR)10:45 - 11:00 **Poster lightning talks 3B**11:00 - 11:30 **Poster Session 3**
(with Coffee Break)**Oral Session 5: Reports**Session Chair: **Wonkook Kim**11:30 - 11:40 Reports from breakout workshop 5. **Ilaria Cazzaniga**11:40 - 11:50 Reports from breakout workshop 6. **Agnieszka Bialek**11:50 - 12:00 Reports from breakout workshop 7. **Shungu Garaba****Agency Presentations**12:00 - 12:15 Progress in China's OC satellite missions & remote sensing application technologies. **Xianqiang He** (SIO, China)12:15 - 12:30 Ocean Colour science and applications at ISRO. **PV Nagamani** (ISRO, India)12:30 - 1:30 **Lunch Break**1:30 - 2:00 **Poster Session 3**
Continued**Agency Presentations**2:00 - 2:15 Ocean Colour application & research at CNES. **Aurelien Carbonniere** (CNES, France) (remote)2:15 - 2:30 Status of SABIA-Mar mission and ocean applications of CONAE. **Carolina Tauro** (CONAE, Argentina) (remote)2:30 - 5:00 **Breakout Workshops 8, 9 & 10****8. Ocean Carbon from Space****(Spectrum A)***Chairs: Gemma Kulk, Shubha Sathyendranath, Bob Brewin, Jamie Shutler, Cecile Rousseaux, Roberto Sabia, Juan Ignacio Gossn*14:30 Introduction - Results from the Second Ocean Carbon from Space Workshop, **Gemma Kulk**14:40 Introduction - Breakout Workshop & Key Questions, **Gemma Kulk**14:50 Group Discussions, participants rotate every 20 minutes for:
Key Question 1, **Juan Ignacio Gossn, Bob Brewin**
Key Question 2, **Shubha Sathyendranath, Gemma Kulk**
Key Question 3, **Roberto Sabia, Laura Lorenzoni**
And parallel online: Key Questions 1-3, **Cecile Rousseaux, Jamie Shutler**15:50 *Coffee Break*15:30 - 16:00 **Coffee Break**16:20 Summary of discussions of Key Questions 1-3, **all chairs**16:50 Final discussion & wrap-up, **Roberto Sabia, Gemma Kulk****9. Water Quality Demonstration****(Chromium)***Chairs: Tiit Kutser, Bridget Seegers, Hubert Loisel, Jongkuk Choi*14:30 Summary and key conclusions from the Water Quality keynote and panel, **Tiit Kutser, University of Tartu**14:45 Requirements from water monitoring agencies + list of main conclusions, **Jenni Attila, SYKE**Water Quality products and services from space agencies + list of main conclusions, **Bridget Seegers, NASA**15:00 Water Quality products and services from space agencies + list of main conclusions, **Jongkuk Choi, KIOST**16:00 Discussion and joint drafting of the recommendations, **Tiit Kutser**, University of Tartu and **Ewa Kwiatkowska**, EUMETSAT**10. Merged, long-term ocean-colour products****(Platinum 2)***Chairs: Robert Frouin (SIO), Liz Atwood (PML)*14:30 Welcome and Introductory Remarks, **Robert Frouin, Liz Atwood**14:35 Framing Talk: The Importance of Harmonized Long-Term Records, **Robert Frouin**14:40 LTTS Task Force Overview, **Liz Atwood** (TF Secretariat), **Robert Frouin** (TF Chair)

15:00 Survey of activities with lightning presentations (5-10 minutes each)

16:00 Continued survey of activities with lightning presentations

16:30 General interactive discussion, Moderated by **Robert Frouin** and **Liz Atwood**17:25 Closing Remarks, **Robert Frouin**17:30 **Sessions End**

Oral Session 6: Biodiversity & Reports

Session Chair: **Laura Zoffoli**

09:00 - 09:45 **Keynote:** Application of ocean colour to biodiversity. **Roy El Hourany**

09:35 - 09:45 Keynote Q&A

09:45 - 09:55 Reports from breakout workshop 8. **Gemma Kulk**

09:55 - 10:05 Reports from breakout workshop 9. **Tiit Kutser**

10:05 - 10:15 Reports from breakout workshop 10. **Robert Frouin**

10:15 - 10:30 **Poster lightning talks 4**

10:30 - 11:30 **Poster Session 4**
(with Coffee Break)

Closing Session

Session Chair: **Shubha Sathyendranath**

11:30 - 12:20 **Community Town Hall and Q&A. Space Agency Representatives**

12:20 - 12:30 Closing Remarks.

12:30 **Lunch**

1:00 - 2:00 **GEO AquaWatch & GEO BluePlanet Industry Panel**

Spectrum A (Hybrid)

Moderators: **Pedro Ribeiro** (INDRA) & **Paula Bontempi** (U. of Rhode Island)

Panelists:

Carsten Brockmann (Brockmann Consult GmbH), **Thomas Heege** (EOMAP), **Andy Shaw** (Assimila), **Mark Matthews** (CyanoLakes) and **Xianqiang He** (Second Institute of Oceanography).

[Agenda & Participant Bios](#)

Co Sponsored by:

Ghada El Serafy, Deltares & GEO AquaWatch Director

Audrey Hasson, Mercator Ocean & GEO Blue Planet Executive Director

2:00 - 3:30 **IOCCG Capacity Building Forum**

Spectrum A

[Agenda](#)

2:00 - 5:00 **WATERHYPERNETS Data Users Meeting**

Platinum 2

[Agenda](#)