

The logo for Ocean Optics XXII features a stylized white wave icon on the left, followed by the text "Ocean Optics XXII" in a bold, white, sans-serif font. The background of the top half of the page is a dark blue gradient with large, overlapping, semi-transparent circular shapes in various shades of blue.

Ocean Optics XXII



OCTOBER 26–31, 2014 | HOLIDAY INN BY THE BAY, PORTLAND, MAINE



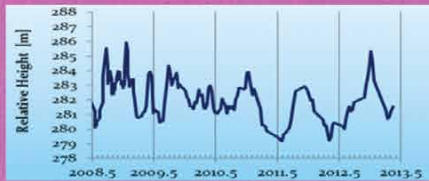
<http://www.linkedin.com/in/samanthalvndr>



@SamLvndr

Experts in:

- Atmospheric Correction and Algorithm Development.
- Water Height Determination from Altimetry.
- Data Interpretation.



Pixalytics

Interpreting our world

Earth observation focused:

- Consultancy and scientific research.
- Software development.
- Bid support and project management.
- Development and delivery of educational material.

www.pixalytics.com

Contents

WELCOME.....	1	MONDAY, OCTOBER 27.....	18
PLANNING COMMITTEE.....	1	Opening Remarks.....	18
SCHEDULE AT A GLANCE.....	2	Oral Session 1.....	18
POSTER/EXHIBIT HALL MAP.....	3	Plenary Session 1.....	19
SUPPORTERS.....	4	Plenary Session 2.....	19
Sponsoring Organization.....	4	Oral Session 2.....	19
Supporting Organizations.....	4	Poster Session 1.....	19
Contributing Organizations.....	4	Town Hall.....	23
EXHIBITORS.....	5	TUESDAY, OCTOBER 28.....	24
SCHEDULE HIGHLIGHTS.....	8	Oral Session 3.....	24
Registration.....	8	Poster Session 2.....	25
Icebreaker Reception.....	8	Plenary Session 3.....	29
Oral Presentations.....	8	Oral Session 4.....	29
Refreshment Breaks.....	8	Poster Session 3.....	29
Posters and Exhibits.....	8	Plenary Session 4.....	33
Career Center.....	8	WEDNESDAY, OCTOBER 29.....	34
Town Hall Meetings.....	9	Oral Session 5.....	34
Best Speaker and Best Poster Awards.....	10	Oral Session 6.....	34
Online Abstracts Access and Itinerary Tool.....	10	Town Halls.....	35
Awards Banquet.....	11	Plenary Session 5.....	35
Jerlov Award.....	11	Plenary Session 6.....	35
Best Student Paper Award.....	11	Poster Session 4.....	36
Guest Speaker.....	11	THURSDAY, OCTOBER 30.....	40
Optional Microbreweries Trolley Tour.....	12	Oral Session 7.....	40
PLENARY SESSION SPEAKERS.....	13	Oral Session 8.....	41
		Plenary Session 7.....	41
		Oral Session 9.....	41
		Poster Session 5.....	42
		Awards Banquet.....	45
		FRIDAY, OCTOBER 31.....	46
		Plenary Session 8.....	46
		Oral Session 10.....	46
		Closing Remarks.....	46

**The School of Marine Sciences,
Darling Marine Center,
and Maine Sea Grant have been
supporting marine science for the
State of Maine since 1965.**

**Marine science is a
signature program area of
the University of Maine.**

**School of
Marine
Sciences**

**DARLING
MARINE
CENTER**

Sea Grant
Maine
at the University of Maine

1865 THE UNIVERSITY OF
MAINE



Welcome

Dear Attendees:

On behalf of the planning committee, welcome to Portland, Maine and the twenty second installment of the Ocean Optics Conference.

For nearly a half century, starting in 1965, the Ocean Optics Conference series has convened approximately every two years and has attracted a diverse audience of oceanographers, marine ecologists, optical engineers, marine resource managers, and policy professionals, unified around the topic of light in the ocean. Attendees at the early conferences tended to represent the United States science community and addressed the physical processes of radiative transfer and the development of instruments to measure fundamental ocean optical properties. With growing awareness of global-scale ocean processes, fueled by satellite observations of ocean color, the conference has increased in scope, attracting an international audience, and has become spiced with topics of local interest as venues have become international, reflecting the global nature of the optical oceanographic community.

The need for such a periodic discussion and exchange of new knowledge is elevated by the realization that humans are having an increasing impact on the global climate with detrimental consequences for the marine services that society derives. Many core environmental issues related to climate change, e.g., the carbon budget, harmful algal blooms, environmental based management, human health, and recreation, require knowledge of how light interacts with the marine environment, the ability to monitor conditions in near-real time, and the capability to predict future conditions. As a result, optical observations have become a core requirement in ocean observing programs around the world.

This year, we are pleased to convene in Portland, the largest town in the State of Maine. With its rich history, active artistic community, abundance of outdoor activities, and diverse culinary experiences, we are confident that this will be one of the most interesting ocean optics conferences yet. We look forward to constructive and thought-provoking interactions!

Sincerely,

Steven Ackleson
Ocean Optics XXII Co-Chair

PLANNING COMMITTEE

CO-CHAIRS

Steven Ackleson, USA
Mary Jane Perry, USA

COMMITTEE MEMBERS

Paula Bontempi, USA
Ivona Cetinic, USA
Grace Chang, USA
Aurea Ciotti, Brasil
Joan Cleveland, USA
Robyn Conmy, USA
Susanne Craig, Canada
Victoria Hill, USA
Victor Kuwahara, Japan
Ru Morrison, USA
Jennifer Ramarui, USA
Collin Roesler, USA
Shaoling Shang, China
Wayne Slade, USA
Jeremy Werdell, USA
Oliver Zielinski, Germany

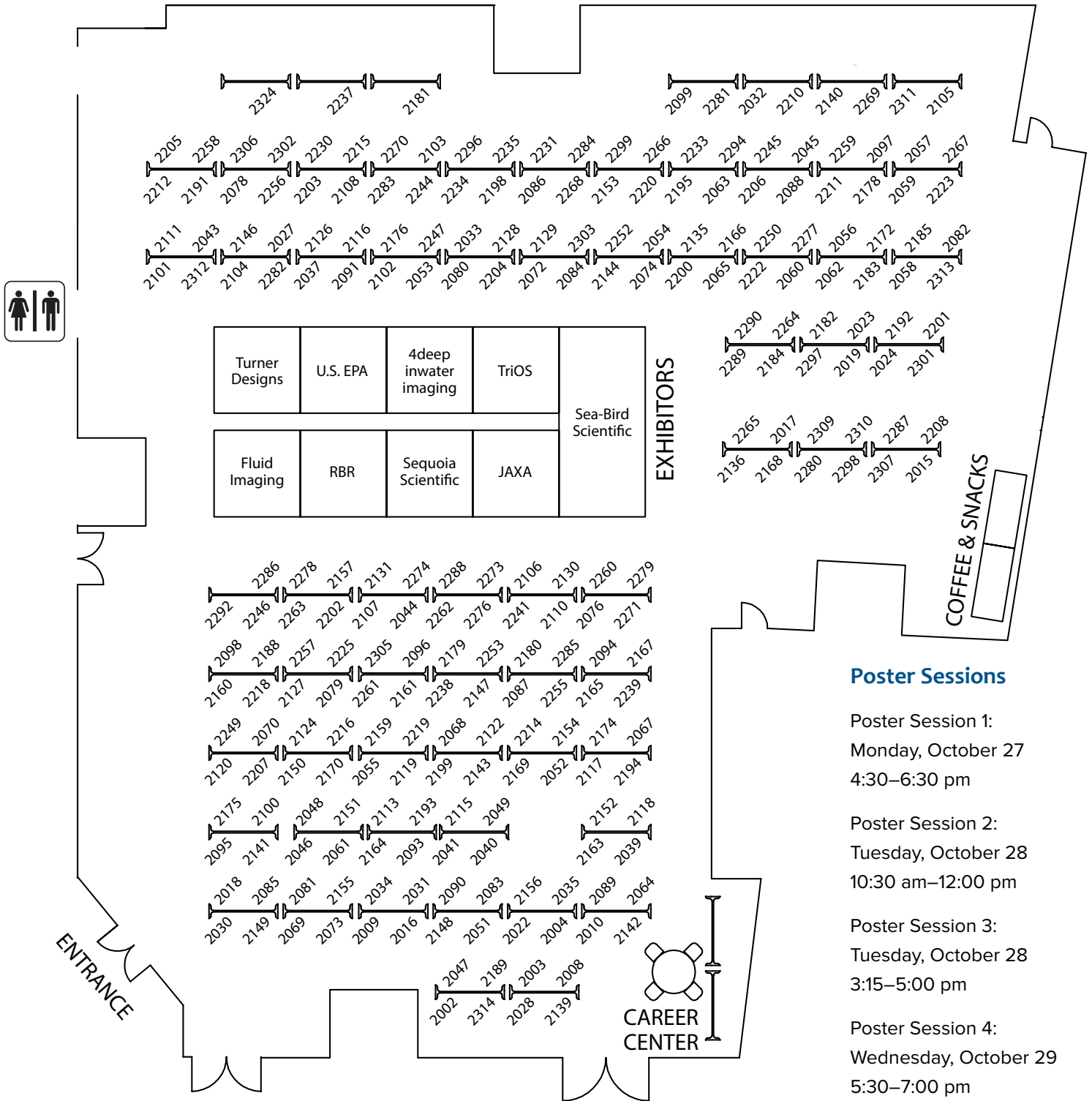
Schedule At a Glance

	Saturday October 25	Sunday October 26	Monday October 27	Tuesday October 28	Wednesday October 29	Thursday October 30	Friday October 31			
7:30 am			Registration*	Registration*	Registration*	Registration*				
8:00 am				Oral 3 8:00–10:00	Oral 5 8:00–10:00	Oral 7 8:00–10:00				
8:30 am										
9:00 am	Workshops, Short Courses, and Meetings	Workshops, Short Courses, and Meetings	Opening Remarks 9:30–10:00	Oral 1 10:00–12:00	Break	Break	Plenary 8 9:30–10:15			
9:30 am										
10:00 am										
10:30 am						Poster 2 10:30–12:00	Oral 6 10:30–12:10	Oral 8 10:30–12:10	Oral 10 10:15–11:55	
11:00 am									Closing Remarks 11:55–12:15	
11:30 am										
12:00 pm					Lunch 12:00–1:30	Lunch 12:00–1:30	Lunch 12:10–1:00	Lunch 12:10–1:30		
12:30 pm							Free Period or Town Halls 1:00–4:00		Optional Microbreweries Trolley Tour 1:30–5:30	
1:00 pm										
1:30 pm					Plenary 1 & 2 1:30–3:00	Plenary 3 1:30–2:15				Plenary 7 1:30–2:15
2:00 pm						Oral 4 2:15–3:15		Oral 9 2:15–3:15		
2:30 pm				Registration* 2:30–5:00	Break					
3:00 pm						Oral 2 3:30–4:30	Poster 3 3:15–5:00	Poster 5 3:15–5:00		
3:30 pm										
4:00 pm							Plenary 5 & 6 4:00–5:30			
4:30 pm					Poster 1 4:30–6:30	Plenary 4 5:00–5:45				
5:00 pm							Poster 4 5:30–7:00	Free Period 5:00–7:00		
5:30 pm				Icebreaker Reception 5:30–7:30						
6:00 pm						Town Hall 6:30–7:00				
6:30 pm										
7:00 pm						Awards Banquet 7:00–12:00				
7:30 pm										
8:00 pm										

* Registration at the Holiday Inn is open Sunday, 2:30–5:00 pm, and Monday–Thursday, 7:30 am–5:00 pm

Poster/Exhibit Hall Map

Casco Bay Hall, Holiday Inn by the Bay



Poster and Exhibit Setup

Exhibitors and poster presenters will have access to the hall on:
 Sunday, October 26, 12:00–5:00 pm, and
 Monday, October 27, beginning at 8:00 am

Poster Sessions

- Poster Session 1:
Monday, October 27
4:30–6:30 pm
- Poster Session 2:
Tuesday, October 28
10:30 am–12:00 pm
- Poster Session 3:
Tuesday, October 28
3:15–5:00 pm
- Poster Session 4:
Wednesday, October 29
5:30–7:00 pm
- Poster Session 5:
Thursday, October 30
3:15–5:00 pm

Supporters

SPONSORING ORGANIZATION



THE OCEANOGRAPHY SOCIETY

SUPPORTING ORGANIZATIONS



CONTRIBUTING ORGANIZATIONS



Exhibitors

Turner Designs, Inc.

Turner Designs provides innovative optics-based solutions for basic research, water quality analysis, pollution control analysis and industrial applications. Having a unique focus on optical instrumentation for over 42 years and customers throughout the world, Turner Designs is known for rugged, reliable and stable submersible, field, handheld, laboratory and online fluorometers, turbidimeters, absorbance meters, and pCO₂ sensors. Customers rate us an average of 9.3, on a scale of 1-10, when asked how



likely they would be to recommend us.

Sea-Bird Scientific, Inc.

Sea-Bird Electronics, WET Labs and Satlantic have recently combined to form Sea-Bird Scientific. By combining the three companies, Sea-Bird Scientific has assembled unprecedented capabilities in providing best-of-class instruments and sensor systems for monitoring physical and biogeochemical variability in the world's oceans and coastal waters. Today Sea-Bird Scientific employs over 200 people in the US, Canada and Europe in the development, manufacture, calibration, sales and support of our products. Parameters Include: Temperature, Salinity, Oxygen, pH, Fluorescence, Nutrients, Scattering/Turbidity, Inherent Optical Properties (IOP)/Apparent Optical



Properties (AOP), and Irradiance.

4Deep inwater imaging

4Deep inwater imaging produces a submersible holographic microscope system that can image, count, size, characterize and classify microorganisms and particles in virtually any body of water. The microscope can acquire and analyze up to 16 images per second, has a resolution of 1 micron up to several mm in size. The system provides in-situ, real-time monitoring of water. Typical applications include oceanographic research, algae monitoring, oil detection, ship ballast water and aquaculture.

Also on display is a new cuvette-based microscope that uses a traditional quartz glass cuvette to monitor water samples using the same software programs as the submersible microscope.



U.S. Environmental Protection Agency



The U.S. Environmental Protection Agency (EPA) Office of Research and Development's Safe and Sustainable Water Resources research program provides the scientific results and innovative technologies that are

needed to protect the chemical, physical and biological integrity of the Nation's waters and to ensure safe drinking water and water systems. Agency scientists and engineers and their partners are addressing 21st century water resources challenges by integrating research on environmental, economic and social factors to provide lasting, sustainable solutions.

Fluid Imaging Technologies, Inc.

With over 500 in use worldwide, the FlowCAM® continuous imaging flow cytometer and particle analyzer from Fluid Imaging Technologies is designed for conducting research and monitoring of microorganisms and particles in both marine and freshwater systems. By providing high resolution digital images of discrete particles, the FlowCAM can provide cell counts, size data, including length, width, area, various diameter readings, as well as biovolume measurements, along with some 25 additional image parameters of imaged particles. FlowCAM aquatic research applications include plankton community structure determination, HAB monitoring, invasive species



monitoring, and ballast water research.

Sequoia Scientific, Inc.

Sequoia Scientific manufactures laser diffraction and holographic particle size analyzers. Our LISST-100X, -Deep, -Portable, and -Holo instruments are widely used from the deep sea to your lab bench to measure particles from sub-micron to several millimeters. The LISST-100X and LISST-Deep are also widely used in ocean optics for measuring forward-angle volume scattering function (VSF) and beam attenuation to depths of 3500 meters. The LISST-Holo is the first commercially available submersible digital holographic particle imaging system. Our latest addition, LISST-VSF, measures VSF from 0.01 to 150 degrees, and the degree of linear polarization from 15-150 degrees.



RBR

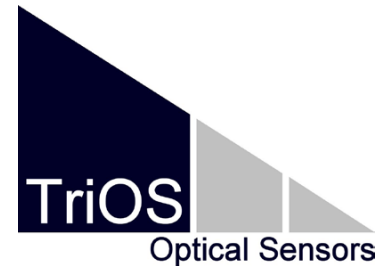
RBR manufactures submersible data loggers, recorders, sondes, controllers and sensors for



water quality measurement. Our standard data logging instruments range from one to 24 channels, configured as a CTD, conductivity, temperature, depth (pressure) or multi-parameter (sensor) recorders. Specialty loggers are available with specific sensors for harsh environments or unique applications like measuring tides and waves. All of the data loggers share a common core and operating software. Optional sensors include: conductivity, pressure, temperature, pH, ORP (RedOx), fluorescence, PAR, turbidity (OBS, TSS), and dissolved oxygen. Supported by a global network of agents, RBR delivers high quality data in any deployment condition.

TriOS

TriOS Mess- und Datentechnik GmbH is a leading company in the field of optical sensors and accessories, which



is well-known for high quality and accuracy. During the Ocean Optics conference, we will present a range of our new developments, beside the well-known units. One of the highlights is the new TriOS G2 interface, which allows system setup and control by simply using a device like your smartphone, tablet or any other kind of instrument offering WiFi and a web browser. One of the new products on showcase is our new OPUS hyperspectral transmissiometer. Don't hesitate to visit us on our stand on this Ocean Optics exhibition to get more information.

JAXA

JAXA, has developed, launched and operated several earth observation satellites to observe ocean phenomena since 1987. Currently, GCOM-W is in operation and its instrument, AMSR2, is providing ocean related geophysical products, such as sea surface temperature, sea surface wind speed, sea ice concentration. On May 24, 2014, ALOS-2, a successor to ALOS, was launched. PALSAR-2 onboard ALOS-2 is expected to observe sea ice, sea surface wind speed etc. with better resolution and performance than PALSAR onboard ALOS. JAXA is planning to launch GCOM-C to measure high resolution sea surface temperature, sea ice, ocean color and so on in JFY 2016.



Schedule Highlights

REGISTRATION

The registration desk in the lobby of the Holiday Inn will be open on Sunday from 2:30 – 5:00 pm and each morning from 7:30 am – 5:00 pm. Badges may also be picked up during the Icebreaker Reception from 5:30 – 9:00 pm.

ICEBREAKER RECEPTION

We've reserved the entire Port City Music Hall (504 Congress Street) for the opening Icebreaker Reception. This event will take place on Sunday, October 26, 2014 from 5:30 PM – late. In addition to providing a chance for all attendees to gather in a casual atmosphere, we're using the venue's capabilities to allow you to dazzle fellow colleagues with your unique talents. Please bring along your favorite instrument, a song, a poem, a skit, anything that you would like to share with colleagues and friends. The activity is from 6 to 9 pm.

ORAL PRESENTATIONS

At least one day before your presentation is scheduled to take place, all oral presenters should visit the "speaker ready" room to upload their presentation file to the main presentation computer system. The speaker ready room is located next to the State of Maine ballroom, where all oral presentations take place. Representatives from Headlight Audio-Visual will be available to assist with this process.

REFRESHMENT BREAKS

Morning and mid-afternoon refreshment breaks (coffee, soda, etc.) will be held in the Casco Bay Exhibit Hall.

CAREER CENTER

The career center is located in the exhibit hall. The space includes a table and chairs for informal conversations and a poster board where employment information may be posted.

POSTERS AND EXHIBITS

Poster and Exhibit Setup/Takedown

Exhibitors and poster presenters will have access to Casco Bay Exhibit Hall on Sunday, October 26th from noon – 5:00 pm, and again on Monday morning, October 27th beginning at 8:00 am. Poster viewing and exhibits will close promptly at 5:00 pm on Thursday, October 30th. All posters must be removed by 7:00 pm that evening or they will be discarded.

Poster and Exhibit Viewing Hours

The Casco Bay Exhibit Hall (attached to the Holiday Inn by the Bay) will officially open for poster and exhibit viewing at 3:00 pm on Monday, October 26th, and at 10:00 am on Tuesday through Thursday. Exhibitors will staff their booths during all breaks and poster sessions and at other times as noted in signs located in their booth area.

Poster Session Receptions

Poster Session 1*

Monday, October 27, 4:30 PM – 6:30 PM

Poster Session 2

Tuesday, October 28, 10:30 AM – 12:00 PM

Poster Session 3**

Tuesday, October 28, 3:15 PM – 5:00 PM

Poster Session 4*

Wednesday, October 29, 5:30 PM – 7:00 PM

Poster Session 5**

Thursday, October 30, 3:15 PM – 5:00 PM

* Appetizers will be served and a cash bar will be available.

** Light snacks and refreshments will be served.

TOWN HALL MEETINGS

PACE

Monday, October 27, 2014, 6:30 PM – 7:00 PM
Somerset Room

Increasing climate variability is having measurable impact on aquatic ecosystems within our lifespans. To understand and be better prepared to respond to these challenges, we must expand our capabilities to investigate and understand ecological and biogeochemical processes in the oceans. We must also understand the changing physical climate, particularly aerosols and clouds. NASA's Pre-Aerosol, Cloud, ocean Ecosystem (PACE) mission will make global ocean color measurements to provide extended data records on global ocean ecology and biogeochemistry, along with polarimetry measurements to extend data records on clouds and aerosols. Global ocean color measurements are essential for understanding ocean ecology and the global carbon cycle and how it affects and is affected by climate change. PACE data will document changes in the function of aquatic ecosystems as they respond to human activities and natural processes over time. A polarimeter instrument would reduce uncertainty in aerosols and clouds, quantify the role of aerosols in cloud formation, and improve the understanding of cloud feedback processes. This Town Hall will provide an update on the recently selected aspects of PACE science and discuss other mission aspects.

HyspIRI and Future Hyperspectral Coastal and Inland Water Remote Sensing

Wednesday, October 29, 2014, 1:00 PM – 2:30 PM
Maine Ballroom

Hyperspectral Infrared Imager (HyspIRI) Aquatic Study Group (HASG) is a growing international organization of scientists and researchers from the coastal and inland water remote sensing community. The group is chartered to identify community supported coastal and inland water data products for NASA's HyspIRI mission. This meeting will provide an update of what the group has accomplished, its recommendations to NASA, and to discuss key issues and future directions.

Arctic-COLORS

Wednesday, October 29, 2014, 1:00 PM – 2:30 PM
Somerset Room

The Arctic region is warming faster than anywhere else on the planet, triggering rapid social and economic changes and impacting both terrestrial and marine ecosystems. Yet, our understanding of critical processes and interactions along the Arctic land-ocean interface is limited. Arctic-COLORS (Arctic-COastal Land Ocean inteRactions) is a Field Campaign Scoping Study funded by NASA's Ocean Biology and Biogeochemistry Program that aims to improve understanding and prediction of land-ocean interactions in a rapidly changing Arctic coastal zone, and assess vulnerability, response, feedbacks and resilience of coastal ecosystems, communities and natural resources to current and future pressures.

This Town-Hall invites the broader research community to learn more about the objectives of the Arctic-COLORS Field Campaign, and become engaged in the development of the initial study design and implementation concept.

GEOstationary Coastal Air Pollution Events (GEO-CAPE)

Wednesday, October 29, 2014, 2:30 PM – 4:00 PM
Somerset Room

The purpose of the GEOstationary Coastal Air Pollution Events (GEO-CAPE) town hall is to discuss:

- (1) the status of the NASA GEO-CAPE mission concept
- (2) obtain feedback from the ocean optics community on science and instrument requirements for GEO-CAPE
- (3) a global constellation of geostationary ocean color missions
- (4) novel science applications from GEO-CAPE
- (5) how to promote the mission to decision makers and public through an overarching science team



BEST SPEAKER AND BEST POSTER AWARDS

An ongoing tradition of the Ocean Optics conference series is the selection of the Best Speaker Award. All attendees are able to cast their vote for the best oral presentation. All presentations (except for invited plenary presentations) are eligible to receive a vote.

A new award being implemented this year is the selection

of the best conference poster. Please be sure to view posters during the Monday–Thursday poster sessions.

The winners of the Best Speaker Award and Best Poster Award will receive certificates, and their names will be announced to all conference attendees after the conclusion of the conference.

Ballots for both of these awards will be included in each attendee's registration badge holder. A collection box will be located at the registration desk, and all votes must be cast by Friday, October 31, at noon.

ONLINE ABSTRACTS ACCESS AND ITINERARY TOOL

There is a new tool available to view abstracts and build an itinerary, just follow the instructions below.

1. Login and Search Abstracts

To begin, go to the Attendee Service Center at https://s4.goeshow.com/tos/ocean_optics/2014/registration_update.cfm.

- Log in using the email and password that you were provided during registration (use the password recovery tool if needed)
- Click on the Networking Center link on the left side of the screen
- A Search Page will appear. You may search on any of the fields below
 - Abstract Title (entering a portion of the full title will work)
 - Description/Keyword
 - Abstract Presentation Date
 - Presenter's Name
- A list of all presentations associated with your search criteria will appear; scroll to view titles.
- To read the short abstract, click on the blue title text.
- To view the extended abstract (if submitted), scroll to the bottom of the screen and click on the PDF file below the word "handout." The extended abstract will be downloaded to your computer.

2. Build an Itinerary

As you find presentations that you would like to attend:

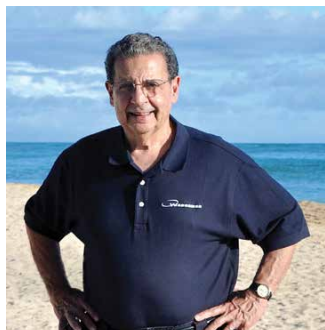
- Click the checkbox on the right side next to the abstract title (the word "bookmark" appears at the top right side). This action will place this presentation in your Itinerary.
- To view your itinerary, click the Itinerary tab in the upper part of the screen between "Search" and "Profile Setup" tabs.
- For a downloadable and printable version of your itinerary, click on PDF Itinerary.

3. View and Download Extended Abstracts

- Click on Extended Abstract Download on the menu located on the left side of the screen.
- You may search using the criteria below
 - Title
 - Abstract Code (refers to abstract number)
 - Presenter's Name
 - Clicking on the title brings up the short abstract
 - Clicking on the Adobe Acrobat PDF icon to the right downloads the abstract to your computer.
 - Clicking on the author's name shows all presentations on which this author is a primary or co-author.

AWARDS BANQUET

The award banquet will take place in the State of Maine Ballroom on Thursday, October 30th from 7:00 pm – 12:00 midnight. After dinner is served, presentations of the Jerlov Award and Best Student Paper Award will take place, followed by a guest speaker and dancing.



Jerlov Award: George W. Kattawar

The Oceanography Society is pleased to announce that Professor George W. Kattawar has been selected as the 2014 recipient of The Nils Gunnar Jerlov

Award recognizing his contributions to the advancement of our knowledge of the nature and consequences of light in the ocean.

Dr. Kattawar is internationally recognized for his contributions to radiative transfer theory and its applications to light propagation in the ocean. His work has centered on the use of polarization to study a wide variety of theoretical and applied topics in oceanic optics and related fields, including three-dimensional geometries and time dependence. He has mentored over 40 graduate and postdoctoral students, and his courses and lectures have received numerous teaching awards. He has also served on many government and academic advisory committees. Dr. Kattawar received his Ph.D. in Physics from Texas A&M University in 1964, and he has been at Texas A&M since 1968, where he is now professor emeritus.

About the Award. Nils Gunnar Jerlov was an early leader in the area of ocean optics research. His name is recognized widely within the entire international oceanographic research community. Jerlov's theoretical and experimental work on ocean optical and related processes helped form the foundation of modern ocean optical research. He proposed the concept of an optical ocean water mass classification and the Jerlov water types are familiar to many outside of the ocean

optics community. His book, *Marine Optics*, published in 1976, remains widely referenced and is considered required reading for all students of ocean optics and ocean color remote sensing.

The Oceanography Society (TOS) commemorates Dr. Jerlov and his many contributions to the study of light in the ocean with an international award, established in his name, to recognize outstanding achievements in ocean optics and ocean color remote sensing research. For more information visit: www.tos.org/awards_honors/jerlov_award.html

Best Student Paper Award

The OOXII Planning Committee selects the winner of this award based on a review of extended abstracts. The winner of this award will receive a check for \$500, a certificate, and will have their name added to the plaque recognizing previous recipients.



Guest Speaker: Robert McKenna **Smuggling at Sea During Prohibition: The Real McCoy, the Bootleg Queen, Rum Row, and the Origin of the U.S. Coast Guard**

Robert McKenna is an author and the expert on rum running during Prohibition. He has researched, updated, edited, and republished six books about rum running, and was the researcher and the Executive Producer of the documentary film "The Real McCoy" (winner of 5 Emmy Awards, 2012); and a contributor to Connecticut Public Television's "Connecticut Goes Dry" (Emmy Award Winner, 2012). He's a lecturer at the U.S. Coast Guard Academy about the "The Rum War at Sea," and his article in *WoodenBoat* Magazine, about boat building and rum running ("The McCoy Brothers," 2009) was one of that magazine's most popular articles ever.

OPTIONAL MICROBREWERIES TROLLEY TOUR

Get on board for a trolley tour of some of Maine's premier microbreweries! Maine has been a leader in the craft brewing revolution since the 1980s and is currently home to around 40 breweries. This guided trolley tour which will visit several Portland area breweries from 1:30–5:30 pm on Friday, October 31st. The tour includes round trip transportation (from the Holiday Inn at the Bay) to the breweries, tastings at each location, as well as additional beer tastings and excellent snacks from Maine-based businesses on the trolley. Experienced guides from Maine Beer Tours will talk about the history of beer brewing in the area.

Meet in the lobby of the Holiday Inn by 1:15 pm.

The trolley will pick up passengers at 1:30.

Plenary Session Speakers

Plenary Session 1 | Sunlight and Sea Ice in a Changing Arctic

Don Perovich, Thayer School of Engineering

Monday, October 27, 1:30 PM – 2:15 PM

Abstract #2319



The reflection, absorption, and transmission of solar radiation by a sea ice cover affect the ice cover and the marine ecosystem. Through the sea ice albedo feedback, sea ice optical properties have climate

implications. Sea ice is a translucent material with an intricate structure of ice platelets, brine pockets, air bubbles, and sometimes precipitated salt crystals and particulates. This small scale structure governs the optical properties of sea ice. Differences in the magnitude of sea ice optical properties are primarily due to scattering, while spectral variations result from absorption. In recent years changes in the physical properties of the Arctic sea ice cover have resulted in greater absorption of sunlight by the ice and ocean, leading to enhanced summer melting. Surface features, such as melt ponds, reduce the albedo and increase the transmittance. A thinner, ponded ice cover transmits enough light to support under-ice phytoplankton blooms.

My research is focused on the geophysics of sea ice, with particular emphasis on electromagnetic, thermodynamic, and morphological properties. The central goal of my research is deceptively simple to state: where does all the sunlight go? This simple statement belies the rich complexity of the topic. The interaction of solar radiation with sea ice is interrelated with sea ice optical properties, thermodynamics, physical properties, ecology, and radiative transfer. A central element of my research is assessing the role of the

sea ice albedo feedback in the Arctic climate system. Past work also included studies of sea ice growth and decay, mass balance, and thermodynamic properties. I have been addressing these topics through a combination of laboratory studies, field experiments, and theoretical models.

Plenary Session 2 | Applications of Lidar Systems for Ocean Ecosystem and Ocean-Atmosphere Studies

Chris Hostetler, NASA Langley Research Center

Monday, October 27, 2:15 PM – 3:00 PM

Abstract #2316



Dr. Hostetler is the Senior Scientist for Active Remote Sensing at NASA Langley Research Center (LaRC) and has 26 years of experience in ground-, aircraft-, and space-based lidar.

He received his B.S. degree in Electrical Engineering at Case Western Reserve University in 1987 and his M.S. and Ph.D. degrees in Electrical Engineering at the University of Illinois in Urbana-Champaign in 1990 and 1993, respectively. Since 1993, he has worked as an atmospheric scientist at NASA Langley Research Center. In 1993-1994, he served on the Shuttle-based Lidar In-Space Technology Experiment (LITE) mission team in a science and mission operations capacity. Immediately following LITE, he worked on teams developing concepts for future satellite lidar missions, one of which became what is now known as CALIPSO, which launched in 2006. Concurrent with the development

of the CALIPSO mission, he formed the team that developed the Langley airborne High Spectral Resolution Lidar (HSRL-1) and has led over twenty field missions with that instrument. He is also the Principal Investigator on the multi-wavelength HSRL-2 instrument which serves as the airborne prototype for the lidar called for on the Aerosol-Clouds-Ecosystems (ACE) Mission recommended by the National Academy of Sciences Decadal Survey for Earth science. More recently, he has focused on ocean applications of lidar, and has conducted two ocean-focused field campaigns to assess and improve retrievals of ocean optical properties via the HSRL technique. Dr. Hostetler is a member of the CALIPSO Science Team and the lead for lidar on the ACE Science Working Group.

Plenary Session 3 | Crowdsourcing Ocean Optics

Samantha Lavender, Pixalytics Ltd

Tuesday, October 28, 1:30 PM – 2:15 PM
Abstract #2317



Dr Samantha Lavender has 15+ years research experience with a focus on the use of satellite Earth Observation to help answer questions about our planet's resources and behaviour; currently

Honorary Reader of Geomatics at Plymouth University and a co-supervisor of 4 PhD students. She has also been involved in running companies for just over 6 years; currently Managing Director of Pixalytics Ltd and Director of Ocean Nourishment (UK) Ltd.

Sam's always been a scientist who's interested in learning and collaborating across a range of different interests, with a strong focus in developing products for a wide community of users. Therefore, recently, she's been working on both satellite altimetry and the

atmospheric correction of high / medium resolution optical imagery alongside data visualisation. More broadly, her water focused research extends from mapping water levels for inland waters, to the movement of sediments in the coastal zone and phytoplankton dynamics / succession in the open ocean; including the Citizen Science SecchiDisk.org project. The project was launched in February 2013 and has currently resulted in over 300 global measurements.

Sam is also actively involved with volunteering, having previously been Chairman of the Remote Sensing and Photogrammetry Society (RSPSoc), and now as a member of the UK Space Agency Earth Observation Advisory Committee (EOAC), Vice-Chairman of the British Association of Remote Sensing Companies (BARSC) and Chair of the International Society for Photogrammetry and Remote Sensing (ISPRS) Working Group VIII/9 - Coastal and Ocean Applications.

Plenary Session 4 | Ocean Colour Applications in Inland Waters: Mission Requirements

**Stewart Bernard,
Council for Scientific and Industrial Research**

Tuesday, October 28, 5:00 PM – 5:45 PM
Abstract #2308



Stewart Bernard grew up in Zimbabwe, Malawi and England before completing his M.Sc and PhD at the University of Cape Town. He has worked for the Council for Scientific and Industrial Research in Cape Town for the

last eight years, now as a principal researcher. His main research interests are in the field of bio-optics and ocean colour applications in eutrophic waters: phytoplankton optical and radiative transfer modelling, algorithm development particularly for harmful algal bloom

applications, ocean colour validation, and application of these algorithms for ecosystem characterisation in upwelling and freshwater systems. He also has interests in developing operational earth observation systems and low cost autonomous bio-optical observation technology. Teaching and building capacity, particularly in Africa, is important and he has taught at many ocean colour courses and has supervised or is supervising fifteen PhD and M.Sc students.

Plenary Session 5 | Towards Development of New Satellite Ocean Colour Products: Phytoplankton Community Structure and Its Related Properties

Takafumi Hirata, Hokkaido University

Wednesday, October 29, 4:00 PM – 4:45 PM
Abstract #2315



Taka Hirata is currently an adjunct associate professor of the Faculty of Environmental Earth Science at Hokkaido University (HU). He is a scientific member of International Ocean Colour Coordinating

Group (IOCCG) and Marine Ecosystem Model Intercomparison Project (MAREMIP), and is a co-chair of the Satellite Phytoplankton Functional Type Algorithm Intercomparison Project. His research interest is bio-optical oceanography. He received Ph.D. in physics from University of Copenhagen. While he worked at Plymouth Marine Laboratory as a bio-optical modeller, he participated in carbon cycle programme by Centre for observation of Air-Sea Interactions and fluxes (CASIX) and National Centre for Earth Observation (NCEO) of the Natural Environment Research Council. He joined HU to work on marine ecosystem modelling as a post-doc, while participating as a PI in Global Climate Observation Mission - Climate (GCOM-C) by Japan Aerospace eXploration Agency (JAXA) to

develop satellite ocean colour algorithms. He is currently working on physical-biological interactions in the western boundary current (i.e. the Kuroshio current) in context of ecology of lower trophic levels under Fisheries Research Agency's programme. Also he is working on phytoplankton diversity in the western North Pacific under Japan Science and Technology Agency's programme.

Plenary Session 6 | Progresses and Challenges Towards Achieving Consensus in Estimating Basin-Scale Primary Production

ZhongPing Lee, University of Massachusetts at Boston

John Marra, Brooklyn College

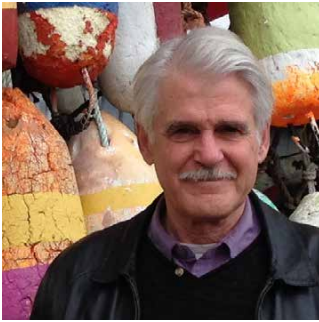
Paul Quay, University of Washington

Wednesday, October 29, 4:45 PM – 5:30 PM
Abstract #2318



ZhongPing Lee got his Ph.D in 1994 from the University of South Florida. Before that, he got his B.S. in physics from the Sichuan University (Chengdu, China) in 1984 and M.S. in physics from the Ocean University of

China (Qingdao, China). Dr. Lee is currently a Professor at the School For the Environment of the University of Massachusetts Boston. Dr. Lee's main research interests are in oceanic light field, algorithms for sub-surface properties from measurements of ocean color, as well as applications of ocean color products for the study of aquatic environments. He led the development of the quasi-analytical algorithm (QAA) and the Hyperspectral Optimization Processing Exemplar (HOPE) for processing of both optically deep- and shallow-waters.



John Marra received a Ph.D. in Biological Oceanography from Dalhousie University in 1977. He then accepted a post-doctoral fellowship at Lamont-Doherty Earth Observatory. He was appointed to the

research staff in 1979, and to the Senior Staff of the Observatory in 1983. In 1987 he became a Doherty Senior Scientist, and later one of the Doherty Senior Scholars. He also served as Associate Director for the Division of Biology and Paleoenvironment beginning in 2001. In 2007, he accepted a position at Brooklyn College, to be Director of the Aquatic Research and Environmental Assessment Center, and Professor in the Department of Earth and Environmental Sciences. While at Lamont, he was engaged in a variety of programs and initiatives in oceanography, such as Biowatt, Marine-Light Mixed Layers, Arlindo, and the Joint Global Ocean Flux Study, logging many, many days at sea. From 1999-2001, he served as a program officer in Biological Oceanography at NASA. Recently, he contributed significantly to the creation of the Science and Resilience Institute at Jamaica Bay (New York).



Paul Quay is the Richard H. Fleming Professor in the School of Oceanography at the University of Washington. He was born and raised in New York where he attended Queens

College for his undergraduate degree and Columbia University for his PhD. He has been happily living and working in Seattle since his arrival at the UW as a post-doc 35 years ago.

His research interests have focused on understanding carbon cycling in aquatic systems and the role of the ocean in the earth's carbon cycle. Currently, he has two major research themes the first of which is quantifying the rate at which the global ocean is taking up

CO₂ produced from fossil fuel combustion. The second is quantifying the variability of primary production rates in the ocean. A key analytical tool used to unravel these problems is the measurement of the isotopic composition of CO₂ and O₂. He directs the Stable Isotope Laboratory in the School of Oceanography through which many undergraduate and graduate students have passed over the years.

He teaches at both the undergraduate and graduate level on an annual basis. He enjoys teaching a two introductory Oceanography classes as well as a more advanced undergraduate class on the Ocean and Climate and a graduate class on Isotope Biogeochemistry.

He has received an Excellence in Teaching award at the UW and the Cleveland-Newcomb Prize by the AAAS and is a Fellow of the AGU. He bikes to work every day looking forward to thinking about how the ocean works and sharing this knowledge with students.

Plenary Session 7 | Coastal Plankton Ecology Research with AUV-Based Optical Sensing and Imaging

John Ryan,
Monterey Bay Aquarium Research Institute

Thursday, October 30, 1:30 PM – 2:15 PM
 Abstract #2320



John Ryan is a Biological Oceanographer at the Monterey Bay Aquarium Research Institute (MBARI) in central California. John's research explores marine ecological processes across spatial

scales from thousands of kilometers to a few meters, temporal scales from decades to hours, and life forms from phytoplankton to fish. This collaborative interdisciplinary research integrates data from satellite

and airborne remote sensing, ships, autonomous underwater vehicles, towed vehicles, moorings, drifters, animal tags, and numerical model simulations. In alignment with the mission of MBARI to advance technological systems for ocean research through collaborations between science, engineering, and operations personnel, John also contributes to the development and application of novel methods of observation, sampling, analysis and visualization. Through mentoring and teaching, John has supported education and career advancement for levels ranging from high school students to post-doctoral researchers.

Plenary Session 8 | New Insights Into Phytoplankton Blooms From Multi-Scale Observations With Autonomous Flow Cytometry

Heidi Sosik,
Woods Hole Oceanographic Institution

Friday, October 31, 9:30 AM – 10:15 AM

Abstract #2321



Dr. Heidi Sosik is a biological oceanographer and phytoplankton ecologist. She holds Bachelor and Masters degrees in Civil Engineering from the Massachusetts Institute of Technology

and a PhD in Oceanography from Scripps Institution of Oceanography at the University of California, San Diego. Dr. Sosik received a WHOI Postdoctoral Scholar award, a DOE Global Change Distinguished Postdoctoral Fellowship, a NASA New Investigator Program award, and an ONR Young Investigator Program award. She is currently a Senior Scientist in the Biology Department at Woods Hole Oceanographic Institution (WHOI).

Dr. Sosik was honored with a Presidential Early

Career Award for Scientists and Engineers in 1996 and WHOI's Senior Scientist Leadership Prize in 2013. She has been a joint Fellow of WHOI's Ocean Life Institute and Coastal Ocean Institute and currently serves as Director of the Center for Ocean, Marine, and Seafloor Observing Systems (COSMOS) and Chief Scientist of the Martha's Vineyard Coastal Observatory (MVCO). Sosik is active in many national and international roles including Associate Editor for leading journals; service on a National Academy of Sciences review committee, a SCOR panel, and the International Ocean Colour Coordinating Group; membership on NASA mission Science Working Groups and Research Teams for Ocean Color, and Biodiversity and Ecological Forecasting, and GEO-CAPE mission planning; and scientific steering committees for the NSF OceanObs Research Coordination Network and for JSOST's workshop on developing a Marine Biodiversity Observing Network.

Monday, October 27

MONDAY

REGISTRATION | 7:30 AM – 5:00 PM

Lobby

OPENING REMARKS | 9:30 AM – 10:00 AM

Maine Ballroom

9:30 AM – 10:00 AM **Steve Ackleson** and **Mary Jane Perry**, OOXII Co-Chairs

ORAL SESSION 1 | Chair: Victor Kuwahara, Soka University

Maine Ballroom

10:00 AM – 10:20 AM	COASTAL BIO-OPTICAL CHANGE IN THE GULF OF MAINE DURING THE ANTHROPOCENE William Balch , Bigelow Lab for Ocean Sciences; Thomas Huntington, USGS; George Aiken, USGS; David Drapeau, Bigelow Lab for Ocean Sciences; Bruce Bowler, Bigelow Lab for Ocean Sciences; Laura Lubelczyk, Bigelow Lab for Ocean Sciences; Meredith White, Bigelow Lab for Ocean Sciences; Kenna Butler, USGS	2251
10:20 AM – 10:40 AM	RELATIONSHIPS BETWEEN INHERENT OPTICAL PROPERTIES AND THE GEOGRAPHIC CHARACTERISTICS OF SUBESTUARIES OF THE CHESAPEAKE AND DELMARVA COASTAL BAYS Charles Gallegos , Smithsonian Environmental Research Center; Donald Weller, Smithsonian Environmental Research Center; Meghan Williams, Smithsonian Environmental Research Center; Christopher Patrick, Smithsonian Environmental Research Center	2236
10:40 AM – 11:00 AM	PIER RECOGNITION: AN IN SITU PLANKTON WEB CAMERA Paul Roberts , Scripps Institution of Oceanography; Jules Jaffe, Scripps Institution of Oceanography; Eric Orenstein, Scripps Institution of Oceanography; Ben Laxton, Scripps Institution of Oceanography; Peter Franks, Scripps Institution of Oceanography; Christian Briseno, Scripps Institution of Oceanography; Melissa Carter, Scripps Institution of Oceanography; Mary Hilbern, Scripps Institution of Oceanography	2232
11:00 AM – 11:20 AM	USING MULTI-COLOUR FAST REPETITION RATE FLUOROMETERS TO DISCRIMINATE THE TAXON SPECIFIC PHOTOACCLIMATION STRATEGIES OF MIXED PHYTOPLANKTON COMMUNITIES Charlotte Robinson , Plant Functional Biology and Climate Change Cluster, University of Technology Sydney; David Hughes, Plant Functional Biology and Climate Change Cluster, University of Technology Sydney; Peter Ralph, Plant Functional Biology and Climate Change Cluster, University of Technology Sydney; David Suggett, Plant Functional Biology and Climate Change Cluster, University of Technology Sydney; Zbigniew Kolber, Institute of Marine Sciences, University of California Santa Cruz; Nagur Cherukuru, CSIRO Oceans and Atmosphere; Martina Doblin, Plant Functional Biology and Climate Change Cluster, University of Technology Sydney	2158
11:20 AM – 11:40 AM	CHARACTERIZING NATURAL, UNDISTURBED PARTICLE FIELDS AND THEIR RELATION TO OPTICS USING IN-SITU HOLOGRAPHIC MICROSCOPY James Sullivan , WET Labs; Michael Twardowski, WET Labs; Nicole Stockley, WET Labs	2109
11:40 AM – 12:00 PM	INVESTIGATING THE SPECTRAL PROPERTIES OF FLOATING SEAGRASS WRACK OF DIFFERENT AGES USING AIRBORNE HYPERSPECTRAL PRISM IMAGERY AND THE IMPLICATIONS ON CARBON DYNAMICS Heidi Dierssen , University of Connecticut; Adam Chlus, University of Connecticut; Brandon Russell, University of Connecticut; Rachel Perry, University of Connecticut; Bo-Cai Gao, Naval Research Laboratory; David Thompson, Jet Propulsion Laboratory; Byron Van Gorp, Jet Propulsion Laboratory; Robert Green, Jet Propulsion Laboratory; Ian Mccubbin, Jet Propulsion Laboratory	2217

LUNCH | 12:00 PM – 1:30 PM

PLENARY SESSION 1 | Introduction: Shungu Garaba, University of Oldenburg

Maine Ballroom

1:30 PM – 2:15 PM **SUNLIGHT AND SEA ICE IN A CHANGING ARCTIC** 2319
Don Perovich, Thayer School of Engineering

PLENARY SESSION 2 | Introduction: Carlos Carrizo, The City College of New York

Maine Ballroom

2:15 PM – 3:00 PM **APPLICATIONS OF LIDAR SYSTEMS FOR OCEAN ECOSYSTEM AND OCEAN-ATMOSPHERE STUDIES** 2316
Chris Hostetler, NASA Langley Research Center; Michael Behrenfeld, Oregon State University; Yongxiang Hu, NASA Langley Research Center; Johnathan Hair, NASA Langley Research Center

BREAK | 3:00 PM – 3:30 PM

ORAL SESSION 2 | Chair: Jeremy Werdell, NASA Goddard Space Flight Center

Maine Ballroom

3:30 PM – 3:50 PM **MULTI-WAVELENGTH LIDAR FOR REMOTE SENSING OF NATURAL WATERS** 2196
Deric Gray, Naval Research Laboratory

3:50 PM – 4:10 PM **YEAR-LONG, DAILY-SCALE BIO-OPTICAL OBSERVATIONS UNDER PERENNIAL ICE COVER IN THE ARCTIC OCEAN** 2021
Samuel Laney, Woods Hole Oceanographic Institution; Richard Krishfield, Woods Hole Oceanographic Institution; John Toole, Woods Hole Oceanographic Institution

4:10 PM – 4:30 PM **RETRIEVALS OF THE ATTENUATION AND SCATTERING COEFFICIENTS OF MARINE PARTICLES USING THE POLARIZATION OF LIGHT** 2121
Amir Ibrahim, The City College of the City University of New York; Alex Gilerson, The City College of the City University of New York; Robert Foster, City College of New York; Carlos Carrizo, The City College of New York/Optical Remote Sensing Lab; Ahmed El-Habashi, The City College of the City University of New York; Sam Ahmed, The City College of the City University of New York

POSTER SESSION 1 | 4:30 PM – 6:30 PM

Casco Bay Exhibit Hall

SUMMERTIME CHANGJIANG RIVER PLUME VARIATION DURING 1998-2010 WITH SATELLITE-DERIVED SALINITY DATA 2018
Yan Bai, Second Institute of Oceanography, State Oceanic Administration, China; Xianqiang He, Second Institute of Oceanography; Delu Pan, Second Institute of Oceanography; Chen Chen-Tung Arthur, Institute of Marine Geology and Chemistry, National Sun Yat-sen University, Kaohsiung, Taiwan; Yan Kang, Institute of Economic and Social Development, Zhejiang University of Finance and Economics, China; Xiaoyan Chen, State Key Laboratory of Satellite Ocean Environment Dynamics, Second Institute of Oceanography, Stat; Cai Wei-Jun, School of Marine Science and Policy, University of Delaware, Newark, Delaware, USA

EVOLUTION OF CHLOROPHYLL PATTERNS AND PHYTOPLANKTON ECOLOGY IN THE UPPER WATER COLUMN USING MULTI-PARAMETER OPTICAL MEASUREMENTS 2259
Andrew Barnard, Sea-Bird Scientific; Collin Roesler, Bowdoin College

MONDAY

DIEL- TO SEASONAL-SCALE VARIATIONS OF THE SPECTRAL SLOPE OF PARTICULATE BACKSCATTERING IN THE NW MEDITERRANEAN	2019
Morvan Barnes , CNRS-LOV; David Antoine, Curtin University	
ASSESSMENT OF UNCERTAINTIES IN IDENTIFYING PHYTOPLANKTON GROUPS FROM SPACE USING HYPERSPECTRAL SATELLITE DATA	2094
Astrid Bracher , Alfred Wegener Institute for Polar and Marine Research-AWI; Tilman Dinter, University of Bremen; Mariana Altenburg Soppa, Alfred-Wegener- Institute for Polar and Marine Research; Vladimir Rozanov, University of Bremen	
USE OF INLINE HYPERSPECTRAL ABSORPTION MEASUREMENTS ALONG THE TARA OCEANS EXPEDITION TO PROVIDE A VIEW OF SIZE VARIATIONS IN ALGAL COMMUNITIES	2065
Annick Bricaud , LOV CNRS-UPMC; Tatiana Donnay, LOV, CNRS and UPMC-Université Paris 6; Emmanuel Boss, University of Maine; Aurea Ciotti, CEBIMAR/USP; Joséphine RAS, LOV, CNRS and UPMC-Université Paris 6	
CHARACTERIZING UPPER OCEAN MIXING AND ITS EFFECT ON THE SPRING PHYTOPLANKTON BLOOM WITH IN-SITU DATA	2178
Sarah Brody , Duke University; M. Lozier, Duke University	
PHYTOPLANKTON OPTICAL VARIABILITY IN THE NORTHERN GULF OF MEXICO	2281
Sumit Chakraborty , University of Massachusetts Dartmouth; Steven Lohrenz, University of Massachusetts Dartmouth	
REMOTE SENSING OF EUPHOTIC DEPTH VARIABILITY AND ITS CONSEQUENCES FOR PHYTOPLANKTON GROWTH IN A SEASONALLY STRATIFIED SHELF SEA	2039
Alex Cunningham , University of Strathclyde; Catherine Mitchell, University of Strathclyde	
SOURCES OF MARINE PARTICLE BACKSCATTERING COEFFICIENT ACROSS THE SOUTHERN ATLANTIC AND SOUTHEASTERN PACIFIC	2135
Natalia de Moraes Rudorff , National Institute for Space Research (Brazil); Robert Frouin, University of California, San Diego; Milton Kampel, National Institute for Space Research (Brazil)	
HYPERSPECTRAL REMOTE SENSING OF SHALLOW COASTAL WATERS IN THE FLORIDA KEYS USING UNMANNED AIRCRAFT SYSTEMS (UAS): INITIAL RESULTS FROM ATMOSPHERIC CORRECTION AND GLINT CORRECTION	2110
David English , University of South Florida; Minwei Zhang, University of South Florida; Chuanmin Hu, University of South Florida; Paul Carlson, Florida Fish and Wildlife Research Institute; Stan Herwitz, UAV Collaborative; Keith Nakanishi, NovaSol; Zhihong Pan, Galileo Group, Inc.; John Merrill, Galileo Group, Inc.	
INVESTIGATION OF FLUORESCENCE YIELD VARIABILITY IN EMILIANIA HUXLEYI	2215
Stefan Faulkner , University Of South Carolina Department of Chemistry and Biochemistry; Cameron Reully, University of South Carolina Department of Chemistry and Biochemistry; Joe Swanstrom, University of South Carolina Department of Chemistry and Biochemistry; Shawna Tazik, University of South Carolina; Timothy Shaw, University of South Carolina Department of Chemistry and Biochemistry; Tammi Richardson, University of South Carolina; Michael Myrick, University of South Carolina Department of Chemistry and Biochemistry	
PHOTO-PHYSIOLOGICAL PARAMETERS DRIVEN BY NUTRIENTS AVAILABILITY AND PHYTOPLANKTON SIZE	2023
Maria Fernanda Giannini , Centro de Biologia Marinha/Universidade de São Paulo; Aurea Ciotti, CEBIMAR/USP	
ASSESSMENT OF THE IMPACTS OF OCEAN ACIDIFICATION ON PHYTOPLANKTON FUNCTIONAL TYPES FROM THE AMAZON RIVER PLUME USING BIO-OPTICAL DATA	2203
Joaquim Goes , Lamont Doherty Earth Observatory, Columbia University; Helga Gomes, Lamont Doherty Earth Observatory at Columbia University; Kali McKee, Lamont Doherty Earth Observatory at Columbia University; Patricia Yager, University of Georgia	
IMPROVED OCEAN COLOR ESTIMATES USING A COMBINED ATMOSPHERIC CORRECTION ALGORITHM CONSTRAINED WITH SPECTRAL WATER-LEAVING REFLECTANCE RELATIONSHIPS	2041
Clemence Goyens , UQAR; Jamet Cedric, Université du Littoral Côte d'Opale, LOG, MREN	
A NEW SIMPLE CONCEPT FOR OCEAN COLOR REMOTE SENSING USING PARALLEL POLARIZATION RADIANCE	2009
Xianqiang He , Second Institute of Oceanography; Delu Pan, Second Institute of Oceanography; Yan Bai, Second Institute of Oceanography, State Oceanic Administration, China; Difeng Wang, Second Institute of Oceanography; Zengzhou Hao, Second Institute of Oceanography	

<p>MINIMIZE CDOM IMPACT ON THE BAND-SUBTRACTION CHLOROPHYLL ALGORITHM THROUGH OPTICAL WEIGHTING: PRELIMINARY RESULTS WITH SEAWIFS, MODIS, AND VIIRS OBSERVATIONS</p> <p>Chuanmin Hu, University of South Florida; Lin Qi, Nanjing Institute of Geography and Limnology, Chinese Academy of Sciences; ZhongPing Lee, University of Massachusetts at Boston; Bryan Franz, NASA GSFC</p>	2052
<p>SUN GLITTER IMAGING ANALYSIS OF SUBMARINE SAND WAVES IN HJ-1A/B SATELLITE CCD IMAGES</p> <p>Zhang Huaguo, Second Institute of Oceanography.SOA</p>	2002
<p>DERIVING DIEL CHANGES OF THE BACKSCATTERING COEFFICIENT FROM APPARENT OPTICAL PROPERTIES: A CASE STUDY IN THE MEDITERRANEAN SEA (BOUSSOLE SITE)</p> <p>Malika Kheireddine, LOV UPMC-CNRS; David Antoine, Curtin University</p>	2015
<p>INTER-COMPARISON OF PHENOLOGICAL PARAMETERS DERIVED FROM DIFFERENT OCEAN COLOR PHYTOPLANKTON FUNCTIONAL TYPES ALGORITHMS</p> <p>Tihomir Kostadinov, University of Richmond; Anna Cabre, University of Pennsylvania; Harish Vedantham, University of Groningen; Ningxi Wei, University of Richmond; Danica Fine, University of Pennsylvania; Takafumi Hirata, Hokkaido University; Irina Marinov, University of Pennsylvania</p>	2136
<p>AUTOMATED FRRF MEASUREMENTS AS ALTERNATIVE TOOL TO MEASURE PHYTOPLANKTON PRIMARY PRODUCTION</p> <p>Jacco Kromkamp, Royal Netherlands Institute for Sea Research</p>	2198
<p>REMOTE SENSING OF CHLOROPHYLL-A IN TAIHU LAKE FROM MERIS IMAGES BASED ON SOFT CLASSIFICATION ESTIMATION SCHEME</p> <p>Junsheng Li, Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences; Qian Shen, Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences</p>	2079
<p>APPLICATIONS OF SATELLITE OCEAN COLOR PRODUCT IN HYCOM MODEL SIMULATIONS</p> <p>Xiaoming Liu, CIRA/CSU, STAR/NOAA; Menghua Wang, NOAA/NESDIS/STAR</p>	2068
<p>OCEAN COLOR REMOTE SENSING ASSESSMENT OF DISSOLVED ORGANIC CARBON TRANSPORT AND CLIMATE FORCING SIGNALS ON RIVER PLUMES: IMPLICATIONS FOR THE CARBON CYCLE</p> <p>Ramon Lopez-Rosado, Intitute for Coastal Science and Policy, East Carolina University; Carlos Del Castillo, Ocean Ecology Laboratory, NASA Goddard Space Flight Center; Richard Miller, East Carolina University; Christopher Buonassissi, East Carolina University</p>	2046
<p>SPECIFIC ABSORPTION COEFFICIENT OF PHYTOPLANKTON IN THE NORTHERN GULF OF CALIFORNIA DURING SPRINGS OF 2010 AND 2011</p> <p>Roberto Millan Nuñez, Facultad de Ciencias Marinas, UABC; Maria Fernanda Gracia-Escobar, Facultad de Ciencias Marinas, UABC; Adriana Gonzalez-Silvera, Facultad de Ciencias Marinas, UABC; Eduardo Santamaria-del-Angel, Facultad de Ciencias Marinas, UABC</p>	2072
<p>POTENTIAL OF GEOSTATIONARY SENSOR FOR THE WATER QUALITY SURVEY OF A DYNAMIC COASTAL AREA</p> <p>Audrey Minghelli-Roman, Université de Toulon; Manchun Lei, LSIS; Marion Fraysse, MIO, Aix-Marseille University; Christel Pinazo, MIO, Aix-Marseille University; Ivane Pairaud, Ifremer; Romaric Verney, Ifremer</p>	2003
<p>OPTICAL QUALITY OF DISSOLVED ORGANIC MATTER (DOM) AND ITS RELATIONSHIP TO ULTRAVIOLET RADIATION (UVR) ATTENUATION IN CLEAR-WATERS</p> <p>Keiko Mizubayashi, Soka University-Japan Society for the Promotion of Science; Victor Kuwahara, Soka University, Japan; Nobuyuki Nakatomi, Soka University-Japan Society for the Promotion of Science; Teruaki Yoshida, Universiti Kebangsaan Malaysia; A.W.M. Effendy, Universiti Malaysia Terengganu; M.R.M. Kushairi, Universiti Selangor; Tatsushi Matsuyama, Soka University, Japan; Tatsuki Toda, Soka University, Japan</p>	2049
<p>VALORIZATION OF COMPLEMENTARY APPROACHES TO STUDY THE IMPACT OF PHYTOPLANKTON SPECIES ON IOPS DURING A 23 DAY MICROCOSM EXPERIMENT</p> <p>William Moutier, LOG ULCO; Lucile Duforêt-Gaurier, LOG ULCO; Natacha Guiselin, LOG CNRS; Laurent Brutier, LOG ULCO; Lucie Courcot, LOG ULCO; Xavier Mériaux, LOG ULCO; Severine ALVAIN, LOG-CNRS; Méliilotus Thyssen, MIO CNRS; Mathilde Dugenne, MIO CNRS; Hubert Loisel, LOG UMR CNRS 8187</p>	2101
<p>ESTIMATION OF CHLOROPHYLL-A FOR COASTAL WATERS OF HONG KONG BY CHARACTERIZING THE OPTICALLY DIFFERENT WATER TYPES</p> <p>Majid Nazeer, Department of Land Surveying and Geo-Informatics/The Hong Kong Polytechnic University; Janet Nichol, Department of Land Surveying and Geo-Informatics/The Hong Kong Polytechnic University; Shaode Yu, Shenzhen Institutes of Advanced Technology, CAS</p>	2048

ACCURATELY MEASURING THE COLOR OF THE OCEAN ON EARTH AND FROM SPACE: A REPORT FROM THE COMMUNITY-LEAD SPECTRAL ABSORPTION WORKSHOP TO UPDATE AND REVISE THE NASA INHERENT OPTICAL PROPERTIES PROTOCOL	2131
Aimee Neeley , NASA Goddard Space Flight Center	
BIO-OPTICAL VARIABILITY IN THE BAY OF BENGAL	2269
Melissa Omand , WHOI; Amala Mahadevan, WHOI; Joe Salisbury, UNH; Samuel Laney, Woods Hole Oceanographic Institution; Emily Shroyer, Oregon State University; Andrew J. Lucas, Scripps Institution of Oceanography	
PARAMETRISATION OF LIGHT ABSORPTION BY PHYTOPLANKTON FOR EUTROPHIC LAKE WATERS	2126
Birgot Paavel , Estonian Marine Institute, University of Tallinn; Helgi Arst, Estonian Marine Institute, University of Tartu; Kersti Kangro, Tartu Observatory; Tiit Kutser, Estonian Marine Institute, University of Tartu	
MULTI-SCALE ANALYSIS OF MODIS-AQUA CHLOROPHYLL-A AND SEA SURFACE TEMPERATURE: STATISTICAL CHARACTERIZATION USING TURBULENCE TOOLS	2031
Renosh Pannipullath Remanan , University of Lille-1 Science and Technology; Francois Schmitt, CNRS; Hubert Loisel, LOG UMR CNRS 8187	
FUSION OF GEOSTATIONARY (FCI/METEOSAT) AND SUN-SYNCHRONOUS (OLCI) SENSORS	2004
Cécile Peschoud , University of Toulon; Audrey Minghelli-Roman, Université de Toulon; Sandrine Mathieu, Thales Alenia Space	
DESIGN OF MULTIVARIATE OPTICAL ELEMENTS FOR TAXONOMIC CLASSIFICATION OF PHYTOPLANKTON	2233
Cameron Reully , University of South Carolina Department of Chemistry and Biochemistry; Shawna Tazik, University of South Carolina; Stefan Faulkner, University Of South Carolina Department of Chemistry and Biochemistry; Timothy Shaw, University of South Carolina Department of Chemistry and Biochemistry; Tammi Richardson, University of South Carolina; Michael Myrick, University of South Carolina Department of Chemistry and Biochemistry	
TRENDS IN NUTRIENTS AND PHYTOPLANKTON COMPOSITION AT A GLOBAL SCALE FOR THE PERIOD 1998-2012 USING MULTIPLE OCEAN COLOR SATELLITES	2070
Cecile Rousseaux , NASA / USRA; Watson Gregg, NASA/GSFC	
SATELLITE DERIVED PRIMARY PRODUCTIVITY ESTIMATES FOR THE LAURENTIAN GREAT LAKES	2130
Michael Sayers , Michigan Tech Research Institute; Gary Fahnenstiel, Michigan Tech Research Institute; Robert Shuchman, Michigan Tech Research Institute; Foad Yousef, Michigan Technological University	
DEVELOPMENT OF HYPERSPECTRAL REMOTE SENSING CAPABILITY FOR DETECTION AND DISCRIMINATION OF ALGAL BLOOMS	2058
Palanisamy Shanmugam , Indian Institute of Technology Madras	
SENSITIVITY OF THE RETRIEVAL OF WATER CONSTITUENTS FROM THE VARIATIONS IN SIOPS - A CASE IN TAIHU	2087
Qian Shen , Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences; Junsheng Li, Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences; Xiaogang Xing, Ocean University of China	
ATMOSPHERIC CORRECTION OF OCEAN COLOUR DATA OVER OPTICALLY COMPLEX WATERS: NEW RESULTS FROM MODIS-AQUA IMAGERY	2055
Rakesh Singh , Indian Institute of Technology Madras; Palanisamy Shanmugam, Indian Institute of Technology Madras	
WATER PROPERTIES IN THE GREAT LAKES FROM MODIS MEASUREMENTS	2096
Seunghyun Son , NOAA/NESDIS/STAR; Menghua Wang, NOAA/NESDIS/STAR	
DETERMINATION OF PHYTOPLANKTON GROUPS FROM OCEAN COLOR SPECTRAL MEASUREMENTS IN THE SENEGALO-MAURITANIAN UPWELLING	2091
Ymane Taoufiq , LOCEAN/UPMC; Ousmane Farikou, University Cheikh Anta Diop; Severine Alvain, LOG-CNRS; Michel Crépon, LOCEAN/UPMC; Julien Brajard, LOCEAN/UPMC; Malick Ngom, LOCEAN/UPMC; Sylvie Thiria, LOCEAN/UPMC	
FOCUS-INDEPENDENT SIZING OF PHYTOPLANKTON IN AN IMAGING MULTIVARIATE OPTICAL COMPUTING PHOTOMETER	2231
Shawna Tazik , University of South Carolina; Joseph Swannstrom, University of South Carolina Department of Chemistry and Biochemistry; Cameron Reully, University of South Carolina Department of Chemistry and Biochemistry; Stefan Faulkner, University Of South Carolina Department of Chemistry and Biochemistry; Nicholas Viole, University of South Carolina Department of Chemistry and Biochemistry; Timothy Shaw, University of South Carolina Department of Chemistry and Biochemistry; Tammi Richardson, University of South Carolina; Michael Myrick, University of South Carolina Department of Chemistry and Biochemistry	

ASSESSMENT OF THE VARYING OCEAN SURFACE ALGAL BLOOM PARADIGMS IN COASTAL AND OCEANIC WATERS AROUND INDIA	2067
Muniyandi Tholkapiyan , Agni College of Technology; Palanisamy Shanmugam, Indian Institute of Technology Madras	
BIO-OPTICAL MONITORING OF THE PHYTOPLANKTON COMMUNITY STRUCTURE AT THE SEMI-ENCLOSED ALFACS BAY (NW MEDITERRANEAN)	2195
Elena Torrecilla , Institute of Marine Sciences (ICM-CSIC); Marta Ramírez-Pérez, Institute of Marine Sciences (ICM-CSIC); Astrid Bracher, Alfred Wegener Institute for Polar and Marine Research-AWI; Rafael Gonçalves-Araujo, Alfred Wegener Institute for Polar and Marine Research - AWI; Sonja Wiegmann, Alfred Wegener Institute for Polar and Marine Research; Eloy ZAFRA, Institute of Marine Sciences (ICM-CSIC); Raul Bardaji, Institute of Marine Sciences (ICM-CSIC); Albert-Miquel Sánchez, Institute of Marine Sciences (ICM-CSIC); Jaume Piera, Institute of Marine Sciences (ICM-CSIC)	
DERIVING OF PHYTOPLANKTON SIZE SPECTRUM USING ABSORPTION PROPERTY	2172
Hisatomo Waga , Hokkaido University; Toru Hirawake, Faculty of Fisheries Sciences, Hokkaido University; Koji Suzuki, Faculty of Environmental Earth Science, Hokkaido University; Amane Fujiwara, National Institute of Polar Research	
RETRIEVING ABSORPTION COEFFICIENT OF SPECIFIC PIGMENTS FROM HYPERSPECTRAL REMOTE SENSING REFLECTANCE MEASURED OVER PHYTOPLANKTON BLOOM WATERS	2267
Guoqing Wang , University of Massachusetts Boston; ZhongPing Lee, University of Massachusetts at Boston; Deepak Mishra, University of Georgia	
VIIRS OCEAN COLOR PRODUCTS	2098
Menghua Wang , NOAA/NESDIS/STAR; Lide Jiang, NOAA/STAR & CSU/CIRA; Xiaoming Liu, CIRA/CSU, STAR/NOAA; Seunghyun Son, NOAA/NESDIS/STAR; Wei Shi, NOAA/NESDIS/STAR & CIRA/CSU; Liqin Tan, NOAA/NESDIS/STAR & CIRA/CSU; Puneeta Naik, NOAA/NESDIS/STAR & CIRA/CSU; Junqiang Sun, NOAA/NESDIS/STAR & GST; Xiao-long Wang, NOAA/NESDIS/STAR & CIRA/CSU; Veronica Lance, NOAA/NESDIS/STAR & GST	
REMOTELY SEARCHING FOR NOCTILUCA MILIARIS IN THE ARABIAN SEA	2107
Jeremy Werdell , NASA Goddard Space Flight Center; Collin Roesler, Bowdoin College; Joaquim Goes, Lamont Doherty Earth Observatory, Columbia University	
DIFFERENTIATION OF PHYTOPLANKTON GROUPS USING DERIVATIVE ANALYSIS OF HYPERSPECTRAL OPTICAL DATA	2205
Hongyan Xi , Institute of Coastal Research, Helmholtz-Zentrum Geesthacht; Ruediger Roettgers, Helmholtz-Zentrum Geesthacht; Martin Hieronymi, Helmholtz-Zentrum Geesthacht; Hajo Krasemann, Institute of Coastal Research, Helmholtz-Zentrum Geesthacht	
COMPARISON OF REMOTELY SENSED BIO-OPTICAL PROPERTIES WITH IOPS AND AOPS FOR THE NORTH – CENTRAL RED SEA	2128
Nikolaos Zarokanellos , King Abdullah University for Science and Technology (KAUST); Burton Jones, King Abdullah University for Science and Technology (KAUST); Dionysios Raitsos, Plymouth Marine Laboratory (PML); Surya Tiwari, King Abdullah University for Science and Technology (KAUST)	
A MODEL FOR PARTITIONING THE LIGHT ABSORPTION COEFFICIENT OF THE CHESAPEAKE BAY WATERS INTO PHYTOPLANKTON, NON-ALGAL PARTICULATE, AND DISSOLVED ORGANIC COMPONENTS	2017
Guangming Zheng , NOAA/NESDIS/STAR, University of Maryland College Park; Dariusz Stramski, Scripps Institution of Oceanography; Paul DiGiacomo, NOAA/NESDIS/STAR	

TOWN HALL OR FREE PERIOD | 6:30 PM – 7:00 PM

Somerset Room

6:30 PM – 7:30 PM

PACE

Contact: Paula Bontempi (paula.bontempi@nasa.gov)

Tuesday, October 28

REGISTRATION | 7:30 AM – 5:00 PM

Lobby

ORAL SESSION 3 | Chair: Grace Chang, Integral Consulting, Inc.

Maine Ballroom

8:00 AM – 8:20 AM	SETTLING VELOCITIES OF PARTICLE FIELDS FROM OPTICAL AND ACOUSTIC PROFILES Emmanuel Boss, University of Maine; Christopher Sherwood , USGS	2254
8:20 AM – 8:40 AM	BACKSCATTERING BY DISSOLVED PARTICLES IN COASTAL WATERS Xiaodong Zhang , University of North Dakota; Deric Gray, Naval Research Laboratory; Emmanuel Boss, University of Maine; Marlon Lewis, Dalhousie University	2013
8:40 AM – 9:00 AM	BENEFIT OF THE SYNERGY BETWEEN OCEAN COLOR OBSERVATIONS AND A 3D HYDRODYNAMIC SEDIMENT TRANSPORT MODEL (MARS-3D) FOR THE PREDICTION OF RIVERINE SUSPENDED PARTICULATE MATTER FLUXES IN COASTAL WATERS Malik Chami , LOV - Université Pierre et Marie Curie; Vincent Le Fouest, LOV - Université Pierre et Marie Curie; Romaric Verney, Ifremer	2007
9:00 AM – 9:20 AM	A NOVEL ALGORITHM TO DERIVE CYANOBACTERIAL PHYCOCYANIN PIGMENT CONCENTRATIONS IN A EUTROPHIC LAKE FROM MERIS MEASUREMENTS: THEORETICAL BASIS AND PRACTICAL CONSIDERATIONS Lin Qi , Nanjing Institute of Geography and Limnology, Chinese Academy of Sciences; Chuanmin Hu, University of South Florida; Hongtao Duan, Nanjing Institute of Geography and Limnology, Chinese Academy of Sciences; Jennifer Cannizzaro, University of South Florida; Ronghua Ma, Nanjing Institute of Geography and Limnology, Chinese Academy of Sciences	2125
9:20 AM – 9:40 AM	VALIDATION OF GEOSTATIONARY OCEAN COLOR IMAGER (GOCI) RADIOMETRIC PRODUCTS FROM GDPS 1.3 USING IN-SITU MEASUREMENTS AND MODIS DATA Wonkook Kim , Korea Institute of Ocean Science and Technology; Jeong-Eon Moon, Korea Institute of Ocean Science and Technology; Jae-Hyun Ahn, Korea Institute of Ocean Science and Technology; Boram Lee, Korea Institute of Ocean Science and Technology; Young-Je Park, Korea Institute of Ocean Science and Technology	2145
9:40 AM – 10:00 AM	THE TEMPORAL AND SPATIAL VARIABILITY OF SATELLITE DERIVED CHL AND SST USING SPARSE DAILY DATA FIELDS Bror Jonsson , Princeton University; Melissa Omand, WHOI; Amala Mahadevan, WHOI; Joe Salisbury, UNH	2242

BREAK | 10:00 AM – 10:30 AM

<p>IMPROVEMENT OF REDTIDE INDEX Yu-Hwan Ahn, KIOST; Im-Sang Oh, Seoul Nation University</p>	2157
<p>VERTICAL STRUCTURE AND ENVIRONMENTAL FORCING OF PHYTOPLANKTON COMMUNITIES IN THE BEAUFORT SEA: VALIDATION AND APPLICATION OF NOVEL SATELLITE-DERIVED PHYTOPLANKTON INDICATORS Mathieu Ardyna, Takuvik, Université Laval-CNRS; Marcel Babin, Takuvik, Université Laval-CNRS; Emmanuel Devred, Takuvik, Université Laval-CNRS; Eric Rehm, Université Laval; Maxime Benoît-Gagné, Takuvik, Université Laval-CNRS; Michel Gosselin, Institut des sciences de la mer de Rimouski; Jean-Éric Tremblay, Takuvik (Université Laval/CNRS)</p>	2270
<p>EVALUATION OF SATELLITE-BASED METHODS FOR THE ASSESSMENT OF PHOTOSYNTHETICALLY AVAILABLE RADIATION REACHING SEA SURFACE OVER HIGH NORTHERN LATITUDES Simon Bélanger, UQAR; Julien Laliberté, UQAR</p>	2116
<p>VARIABILITY OF PARTICLE SIZE DISTRIBUTION AND PARTICLES VOLUME CONCENTRATION IN FJORDS OF WESTERN SVALBARD, NORWAY Karolina Borzycka, Institute of Oceanology Polish Academy of Sciences; Slawomir Sagan, Institute of Oceanology Polish Academy of Sciences</p>	2105
<p>REMOTE SENSING OF IOPS IN THE ARCTIC OCEAN Emmanuel Boss, University of Maine; Thomas Leeuw, University of Maine; Chris Proctor, NASA; Jeremy Werdell, NASA Goddard Space Flight Center; Alison Chase, University of Maine; Marcel Babin, Takuvik, Université Laval-CNRS; Atsushi Matsuoka, University of Laval</p>	2256
<p>EVALUATION OF ADAPTIVE INVERSION APPROACHES OF HICO IMAGERY IN THE NORTHERN ADRIATIC SEA OPTICALLY COMPLEX WATERS Vittorio Brando, CNR - IREA; Federica Braga, CNR-ISMAR; Patrizia Adamo, CNR-ISSIA; Mariano Bresciani, CNR-IREA; Luca Zaggia, CNR-ISMAR; Claudia Giardino, CNR-IREA</p>	2151
<p>OPTICAL METHODS FOR QUANTIFYING BIOGEOCHEMICAL VARIABILITY IN A TIDAL ESTUARY Grace Chang, Integral Consulting, Inc.; Craig Jones, Integral Consulting, Inc.; Todd Martin, Integral Consulting Inc.; Frank Spada, Integral Consulting, Inc.</p>	2249
<p>DISTRIBUTION OF PHYTOPLANKTON TYPES IN THE ARCTIC OCEAN DETECTED USING A VARIETY OF OPTICAL METHODS Alison Chase, University of Maine; Emmanuel Boss, University of Maine; Alexander Chekalyuk, Lamont Doherty Earth Observatory of Columbia University; Lee Karp-Boss, University of Maine; Thomas Leeuw, University of Maine</p>	2258
<p>ASSESSMENT OF OCEAN COLOR DATA RECORDS FROM MODIS-AQUA IN THE WESTERN ARCTIC OCEAN Joaquin Chaves, NASA; Jeremy Werdell, NASA Goddard Space Flight Center; Christopher Proctor, NASA Goddard Space Flight Center; Aimee Neeley, NASA Goddard Space Flight Center; Scott Freeman, NASA/GSFC; Crystal Thomas, NASA Goddard Space Flight Center; Stanford Hooker, NASA/GSFC</p>	2140
<p>MONITORING HARMFUL ALGAL BLOOM IN KOREAN COASTAL WATERS USING GOCI Jong Kuk Choi, Korea Institute of Ocean Science and Technology; Eunsong Oh, Korea Institution of Ocean Science and Technology; Young-Je Park, Korea Institute of Ocean Science and Technology; Jae Hoon Noh, Korea Institute of Ocean Science & Technology</p>	2168
<p>IMPACT OF THE MARINE PRODUCTION OF DISSOLVED ORGANIC MATTER ON CDOM OPTICAL PROPERTIES AND CDOM-DOC RELATIONSHIPS François-Pierre Danhiez, Laboratoire d’Oceanologie et de Geosciences; Vincent Vantrepotte, LOG-CNRS; Arnaud Cauvin, LOG-CNRS; Xavier Meriaux, LOG-CNRS; Hubert Loisel, LOG UMR CNRS 8187</p>	2305
<p>MONITORING THE SPM CONCENTRATION IN THE MACKENZIE RIVER DELTA AND PLUME (BEAUFORT SEA, ARCTIC OCEAN) OVER 10 YEARS (2003-2013) USING MODIS-AQUA SATELLITE DATA Emmanuel Devred, Takuvik, Université Laval-CNRS; David Doxaran, LOV-CNRS; Marcel Babin, Takuvik, Université Laval-CNRS</p>	2129

<p>FIRST COMPARATIVE ASSESSMENT OF PRIMARY PRODUCTION ESTIMATES IN AUSTRALIAN COASTAL WATERS FROM CARBON AND CHLOROPHYLL BASED SATELLITE MODELS</p> <p>Martina Doblin, Plant Functional Biology and Climate Change Cluster, University of Technology Sydney; Virginie van Dongen-Vogels, University of Technology, Sydney; Jason Everett, The University of New South Wales; Charlotte Robinson, Plant Functional Biology and Climate Change Cluster, University of Technology Sydney; James McLaughlin, CSIRO Marine and Atmospheric Research; Nagur Cherukuru, CSIRO Oceans and Atmosphere; Edward King, CSIRO Oceans and Atmosphere; Nick Hardman-Mountford, CSIRO Marine and Atmospheric Research; Peter Thompson, CSIRO Marine and Atmospheric Research; Peter Ralph, Plant Functional Biology and Climate Change Cluster, University of Technology Sydney</p>	2169
<p>MINERALS, PHYTOPLANKTON, CDOM AND HYPERSPECTRAL REFLECTANCE IN THE TROPICS (LAGOON OF NEW CALEDONIA)</p> <p>Cécile Dupouy, IRD; Ruediger Roettgers, Helmholtz-Zentrum Geesthacht Zentrum; David Doxaran, CNRS; Hiroshi Murakami, JAXA; Robert Frouin, Scripps Institution of Oceanography; Annick Bricaud, CNRS</p>	2324
<p>CARBON FLUX FROM BIO-OPTICAL PROFILING FLOATS: CALIBRATING TRANSMISSOMETERS FOR USE AS “OPTICAL SEDIMENT TRAPS”</p> <p>Margaret Estapa, Skidmore College</p>	2255
<p>TOWARD THE REMOTE SENSING OF WATER QUALITY AND CONTAMINANTS IN THE CALIFORNIA DELTA</p> <p>Cedric Fichot, Jet Propulsion Laboratory; Bryan Downing, US Geological Survey; Michelle Gierach, Jet Propulsion Laboratory; Lisamarie Windham-Myers, United States Geological Survey; Mark Marvin-DiPasquale, United States Geological Survey; Brian Bergamaschi, United States Geological Survey; David Thompson, Jet Propulsion Laboratory; Emmanuel Boss, University of Maine</p>	2292
<p>CHANGES IN EXCITATION-EMISSION MATRIX FLUORESCENCE AND OTHER OPTICAL CHARACTERISTICS IN AUSTRALIAN TROPICAL WATERS IN PRE- AND POST-FLOOD CONDITIONS</p> <p>Phillip Ford, CSIRO Oceans and Atmosphere; Kadija Oubelkheir, CSIRO Oceans and Atmosphere; Lesley Clementson, CSIRO Oceans and Atmosphere; Heidi Franklin, CSIRO Oceans and Atmosphere; Nagur Cherukuru, CSIRO Oceans and Atmosphere; Thomas Schroeder, CSIRO Oceans and Atmosphere; Michelle Devlin, Centre for tropical water and aquatic ecosystem research</p>	2152
<p>DERIVING OF MAJOR ALGAL PIGMENT CONCENTRATIONS USING SPECTRAL ABSORPTION COEFFICIENT IN THE WESTERN ARCTIC OCEAN</p> <p>Amane Fujiwara, National Institute of Polar Research; Toru Hirawake, Faculty of Fisheries Sciences, Hokkaido University; Koji Suzuki, Faculty of Environmental Earth Science, Hokkaido University; Ichiro Imai, Faculty of Fisheries Sciences, Hokkaido University; Sei-ichi Saitoh, Faculty of Fisheries Sciences, Hokkaido University; Takashi Kikuchi, Japan Agency for Marine-Earth Science and Technology</p>	2234
<p>BIO-OPTICAL AND PHYSICAL STATE OF HIGH LATITUDE SURFACE WATERS AROUND SOUTH GREENLAND</p> <p>Shungudzemwoyo Garaba, University of Oldenburg; Oliver Zielinski, University Oldenburg</p>	2166
<p>INVERSION OF CDOM ABSORPTION AND FLUORESCENCE SPECTRA TO EXPLORE STORAGE DEGRADATION EFFECTS</p> <p>Anna Göritz, Technische Universität München; Peter Gege, DLR</p>	2219
<p>DISTRIBUTIONS AND OPTICAL PROPERTIES OF COLOURED DISSOLVED ORGANIC MATTER (CDOM) AND DISSOLVED ORGANIC MATTER (DOC) IN COASTAL GRADIENTS OF THE BALTIC SEA</p> <p>E. Therese Harvey, Department of Ecology, Environment and Plant Sciences; Susanne Kratzer, University of Stockholm; Agneta Andersson, Department of Ecology and Environmental Sciences</p>	2073
<p>OPTICAL SENSING OF PAHS WITHIN BILGE AND PROCESS WATERS</p> <p>Rohan Henkel, University Oldenburg - ICBM; Rüdiger Heuermann, TriOS Mess- und Datentechnik GmbH; Daniela Meier, Institute for Chemistry and Biology of the Marine Environment - ICBM; Karin Munderloh, TriOS Mess- und Datentechnik GmbH; Oliver Zielinski, University Oldenburg; Daniela Voss, Institute for Chemistry and Biology of the Marine Environment - ICBM</p>	2182
<p>WAVE SHADOWING EFFECTS ON THE LIGHT TRANSFER AT THE OCEAN SURFACE</p> <p>Martin Hieronymi, Helmholtz-Zentrum Geesthacht; Dagmar Mueller, Helmholtz-Zentrum Geesthacht</p>	2111

HYPERSPECTRAL LIGHT AVAILABILITY AND ALGAE CYST ABUNDANCE IN TWO FJORD SYSTEMS (WEST GREENLAND)	2099
Lars Holinde , Institute for Chemistry and Biology of the Marine Environment; Oliver Zielinski, University Oldenburg; Mindy L. Richlen, Woods Hole Oceanographic Institution; Donald M. Anderson, Woods Hole Oceanographic Institution	
SATELLITE-SENSED BIO-OPTICAL PROPERTIES OF NORTHEASTERN GULF OF MEXICO IMPACTED BY THE SOUTH-EASTWARD EXTENSION OF THE MISSISSIPPI RIVER PLUME	2314
Erin Jones , University of Southern Mississippi; Erin Jones, University of Southern Mississippi; Jerry Wiggert, The University of Southern Mississippi	
AN INTERCOMPARISON OF THE SKILL OF SATELLITE-BASED PHYTOPLANKTON FUNCTIONAL TYPE ALGORITHMS FOR THE WESTERN ANTARCTIC PENINSULA	2220
Maria Kavanaugh , Woods Hole Oceanographic Institution; Hugh Ducklow, Lamont-Doherty Earth Observatory; David Glover, Woods Hole Oceanographic Institution; Oscar Schofield, Rutgers University; Scott Doney, Woods Hole Oceanographic Institution	
ASSESSMENT OF BALTIC SEA WATERS OUTFLOW IMPACT ON THE SPECTRAL PROPERTIES OF CDOM ABSORPTION AND FLUORESCENCE IN THE NORWEGIAN COASTAL WATERS	2170
Piotr Kowalczyk , Institute of Oceanology Polish Academy of Sciences; Monika Zablocka, Institute of Oceanology Polish Academy of Sciences; Karolina Borzycka, Institute of Oceanology Polish Academy of Sciences; Slawomir Sagan, Institute of Oceanology Polish Academy of Sciences	
PHYTOPLANKTON AND NITRATE IN HARPSWELL SOUND, A MULTISCALE INVESTIGATION	2064
Sasha Kramer , Bowdoin College; Collin Roesler, Bowdoin College	
INTERANNUAL VARIABILITY OF UVR PENETRATION MODULATED BY BIO-OPTICAL FACTORS IN THE TEMPERATE COASTAL WATERS OF SAGAMI BAY	2022
Victor Kuwahara , Soka University, Japan; Sena Nozaki, Soka University; Junji Nakano, Institute of Statistical Mathematics; Satoru Taguchi, Soka University; Tomohiko Kikuchi, Yokohama National University; Tatsuki Toda, Soka University, Japan	
SIX YEARS OF CHLOROPHYLL AND TURBIDITY MEASUREMENTS IN DISKO BAY, GREENLAND	2294
Margaret Lindeman , Bowdoin College; Collin Roesler, Bowdoin College	
SATELLITE DISTRIBUTIONS AND FLUXES OF DISSOLVED ORGANIC MATTER AND PARTICULATE ORGANIC CARBON IN THE MIDDLE ATLANTIC BIGHT, USA	2285
Antonio Mannino , NASA/Goddard Space Flight Center; Sergio Signorini, SAIC/NASA Goddard Space Flight Center; Michael Novak, NASA/Goddard Space Flight Center; John Wilkin, Rutgers University; Marjorie Friedrichs, VIMS; Kimberly Hyde, NOAA Fisheries	
OPTICALLY-BASED DETERMINATIONS OF BIOGEOCHEMICAL VARIABILITY IN A TIDAL ESTUARY	2261
Todd Martin , Integral Consulting Inc.; Grace Chang, Integral Consulting, Inc.; Craig Jones, Integral Consulting, Inc.	
A SYNTHESIS OF ABSORPTION PROPERTIES OF THE ARCTIC OCEAN: APPLICATION TO SEMI-ANALYTICAL ESTIMATES OF DISSOLVED ORGANIC CARBON CONCENTRATIONS FROM SPACE	2037
Atsushi Matsuoka , University of Laval; Marcel Babin, Takuvik, Université Laval-CNRS; David DOXARAN, LOV-CNRS; Stanford Hooker, NASA/GSFC; B Mitchell, Scripps/UCSD; Simon Bélanger, UQAR; ANNICK BRICAUD, LOV CNRS-UPMC	
TOWARDS EXAMINING THE TRANSPORT OF CDOM IN THE NEUSE RIVER ESTUARY, NC USA FOLLOWING MAJOR STORM EVENTS	2044
Richard Miller , East Carolina University; Matthew Brown, East Carolina University; Ryan Mulligan, Ryan Mulligan Queen's University; Christopher Buonassissi, East Carolina University; Ramón López, East Carolina University	
OPTICAL CHARACTERISTICS OF DEVELOPING HARMFUL ALGAL BLOOMS IN WESTERN LAKE ERIE: IMPACTS ON INHERENT OPTICAL PROPERTIES AND OCEAN COLOR REMOTE SENSING	2265
Timothy Moore , University of New Hampshire; Colleen Mouw, Michigan Technological University; James Sullivan, WET Labs; Michael Twardowski, WET Labs	
EVALUATION OF CHLOROPHYLL-A ALGORITHMS IN THE EASTERN BERING SEA	2185
Puneeta Naik , NOAA/NESDIS/STAR & CIRA/CSU; Menghua Wang, NOAA/NESDIS/STAR	

OPTICAL DIFFERENTIATION OF ECOLOGICAL REGIMES IN THE ARCTIC OCEAN	2032
Griet Neukermans , Takuvik, ULaval; Rick Reynolds, Scripps Institution of Oceanography; Dariusz Stramski, Scripps Institution of Oceanography	
SPATIAL-TEMPORAL DYNAMICS OF CHROMOPHORIC DISSOLVED ORGANIC MATTER (CDOM) AND COLORED DETRITAL MATTER (CDM) LIGHT ABSORPTION COEFFICIENTS IN THE MEDITERRANEAN SEA: FROM IN SITU DATA TO A SEAWIFS CLIMATOLOGY	2085
Emanuele Organelli , LOV UPMC-CNRS; Annick Bricaud, LOV CNRS-UPMC; David Antoine, Curtin University; Bernard Gentili, LOV-CNRS; Atsushi Matsuoka, University of Laval; Melek Golbol, LOV UPMC CNRS; Vincenzo Vellucci, LOV UPMC-CNRS	
REMOTE SENSING OF PHYTOPLANKTON FUNCTIONAL TYPES IN THE COASTAL OCEAN FROM THE HYSPIRI PREPARATORY FLIGHT CAMPAIGN	2141
Sherry Palacios , Oak Ridge Affiliated Universities; Raphael Kudela, University of California - Santa Cruz; Liane Guild, NASA Ames Research Center; Kendra Negrey, University of California - Santa Cruz; Juan Torres-Perez, Bay Area Environmental Research Institute; Jennifer Broughton, University of California - Santa Cruz	
MODIS/AQUA L2 ALGORITHM TO ESTIMATE CHLOROPHYLL-A CONCENTRATIONS IN BRANSFIELD STRAIT ADJACENT WATERS	2211
Ella Pereira , Federal University of Rio Grande	
PHYTOPLANKTON DISTRIBUTION MEASURED BY GLIDERS DURING THE MARGINAL ICE ZONE EXPERIMENT	2097
Mary Jane Perry , University of Maine; Craig Lee, University of Washington; Eun Jin Yang, KOPRI; Ivona Cetinic, University of Maine	
SPATIAL DISTRIBUTION OF DOM ABSORPTION AND FLUORESCENCE ALONG SPITSBERGEN SHELF AND IN THE BARENTS SEA	2174
Anna Raczkowska , Institute of Oceanology Polish Academy of Sciences; Piotr Kowalczyk, Institute of Oceanology Polish Academy of Sciences; Monika Zablocka, Institute of Oceanology Polish Academy of Sciences; Slawomir Sagan, Institute of Oceanology Polish Academy of Sciences	
CHARACTERIZATION OF MODIS MULTIPLE OBSERVATIONS IN HIGH-LATITUDE REGIONS	2284
Zhehai Shang , University of Massachusetts at Boston; ZhongPing Lee, University of Massachusetts at Boston	
WATER TRANSPARENCY ESTIMATION FROM CITIZEN SCIENCE UNDERWATER IMAGES	2183
Carine Simon , Marine Science Institute, Spanish National Research Council (CSIC); Raul Bardají, Institute of Marine Sciences (ICM-CSIC); Jaume Piera, Institute of Marine Sciences (ICM-CSIC)	
TOUCAN: TOOLSET FOR OPTICAL SENSOR USER-DEFINED CALIBRATION AND ANALYSIS	2200
Emsley Stephen , ARGANS Ltd; Daniel Marrable, ARGANS Ltd; Clare O'Neill, ARGANS Ltd; Kathryn Barker, ARGANS Ltd	
ASSESSING THE DYNAMICS OF THE SAN FRANCISCO BAY ECOSYSTEM USING THE HYPERSPECTRAL IMAGER FOR THE COASTAL OCEAN (HICO)	2204
Nicholas Tufflaro , Oregon State University; Curtiss Davis, Oregon State University; Jasmine Nahorniak, Oregon State University	
RAPID DETECTION AND CHARACTERIZATION OF DISSOLVED ORGANIC SUBSTANCES IN WATER – A NEW IN-SITU MATRIX FLUORESCENCE SENSOR	2106
Daniela Voss , Institute for Chemistry and Biology of the Marine Environment - ICBM; Rüdiger Heuermann, TriOS Mess- und Datentechnik GmbH; Daniela Meier, Institute for Chemistry and Biology of the Marine Environment - ICBM; Karin Munderloh, TriOS Mess- und Datentechnik GmbH; Oliver Zielinski, University Oldenburg	
PARTICIPATORY SCIENCE AND THE COLOR OF NATURAL WATERS; CONNECTING PAST AND PRESENT	2024
Marcel Wernand , Royal Netherlands Institute for Sea Research; Stefani Novoa, Royal Netherlands Institute for Sea Research	
OPTICAL CHARACTERIZATION OF DISSOLVED ORGANIC MATTER IN MAINE RIVERS	2189
Dana White , Bowdoin College; Collin Roesler, Bowdoin College	

BALANCE BETWEEN PHYSICAL, CHEMICAL AND BIOLOGICAL PROCESSES IN DRIVING SURFACE CDOM DYNAMICS IN THE MEDITERRANEAN SEA 2076

Xiaogang Xing, Ocean University of China; Herve Claustre, LOV UPMC-CNRS; Qian Shen, Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences; Junsheng Li, Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences

OPTICAL CHARACTERISTICS OF HARMFUL DINOFLAGELLATE BLOOM IN THE COAST OF OITA, SOUTH-WESTERN JAPAN 2208

Hisashi Yamaguchi, Japan Aerospace Exploration Agency; Hiroshi Murakami, Japan Aerospace Exploration Agency; Kazuyoshi Miyamura, Oita Prefectural Agriculture; Hiroshi Kobayashi, University of Yamanashi; Eko Siswanto, Japan Agency for Marine-Earth Science and Technology; Joji Ishizaka, Hydrospheric Atmospheric Research Center

ANNUAL AND INTERANNUAL CYCLE OF SELECTED FLUOROPHORES IN THE BALTIC SEA 2090

Monika Zablocka, Institute of Oceanology Polish Academy of Sciences; Piotr Kowalczyk, Institute of Oceanology Polish Academy of Sciences

LUNCH | 12:00 PM – 1:30 PM**PLENARY SESSION 3** | Introduction: Thomas Leeuw, University of Maine Maine Ballroom

1:30 PM – 2:15 PM **CROWDSOURCING OCEAN OPTICS** 2317
Samantha Lavender, Pixalytics Ltd

ORAL SESSION 4 | Chair: Oliver Zielinski, University of Oldenburg Maine Ballroom

2:15 PM – 2:35 PM **CHANGES OF WATER COLOUR IN THE AQUACULTURE ZONE OF THE EBRO DELTA, NW MEDITERRANEAN- PILOT SITE FOR CITIZEN OBSERVATORY** 2197
Julia Busch, Carl von Ossietzky Universitaet Oldenburg/Institut fuer Chemie und Biologie des Meeres (ICBM); Emilien Bernard, Noveltis; Eric Jeansou, Noveltis; Ivan Price, Noveltis; Hans van der Woerd, Institute for Environmental Studies (IVM), VU University Amsterdam; Oliver Zielinski, University Oldenburg

2:35 PM – 2:55 PM **THE FOREL-ULE SCALE CONVERTED TO A MODERN TOOL FOR WATER QUALITY MONITORING BY CITIZENS** 2025
Stefani Novoa, Royal netherlands Institute for Sea Reserach; Marcel Wernand, Royal Netherlands Institute for Sea Research

2:55 PM – 3:15 PM **INTEGRATING REMOTE SENSING, MOBILE DEVICES, AND CROWD SOURCING FOR WATER QUALITY MANAGEMENT** 2012
Blake Schaeffer, U.S. Environmental Protection Agency; Robyn Conmy, US EPA; Darryl Keith, U.S. EPA; Richard Stumpf, NOAA; Ross Lunetta, US EPA

POSTER SESSION 3 | 3:15 PM – 5:00 PM Casco Bay Exhibit Hall

PARTICLE AGGREGATION DYNAMICS AND OPTICAL RESPONSES 2180
Steven Ackleson, Naval Research Laboratory

STUDIES ON THE OPTICAL PROPERTIES OF COASTAL WATERS OFF KOCHI, SOUTHEASTERN ARABIAN SEA 2160
P. Muhamed Ashraf, Central Institute of Fisheries Technology

A SPATIO-TEMPORAL ANALYSIS WITH KDUINO DATA, A DIY CITIZEN SCIENCE INSTRUMENT	2176
Raul Bardají , Institute of Marine Sciences (ICM-CSIC); Carine Simon, Marine Science Institute, Spanish National Research Council (CSIC); Eloy ZAFRA, Institute of Marine Sciences (ICM-CSIC); Jaume Piera, Institute of Marine Sciences (ICM-CSIC)	
PERFORMANCE OF A FLOW-THROUGH INTEGRATING CAVITY ABSORPTION METER (A-SPHERE) FOR THE MEASUREMENT OF SPECTRAL ABSORPTION COEFFICIENTS IN CONTRASTING OPTICAL WATERS	2113
Simon Bélanger , UQAR; Thomas Jaegler, UQAR; Julien Laliberté, UQAR; David Dana, HOBI Instrument services	
EVALUATING OCEAN COLOUR DATA USING UNDERWAY OPTICAL SAMPLING ALONG THE ATLANTIC MERIDIONAL TRANSECT	2250
Bob Brewin , Plymouth Marine Laboratory; Giorgio Dall'Olmo, Plymouth Marine Laboratory	
IMPACT OF THE NIR SUNGLINT CORRECTIONS ON BATHYMETRY RETRIEVAL FROM VERY HIGH SPATIAL RESOLUTION SENSORS	2080
Driss Bru , EPOC, University of Bordeaux	
EXAMINATION OF COLORED AND FLUORESCENT DISSOLVED ORGANIC MATTER IN THE TAR-PAMLICO ESTUARY, NC USA	2047
Christopher Buonassissi , East Carolina University; Richard Miller, East Carolina University; Ramon Lopez-Rosado, Intitute for Coastal Science and Policy, East Carolina University	
INFLUENCE OF SUSPENDED PARTICLE CONCENTRATION, COMPOSITION AND SIZE ON THE VARIABILITY OF LIGHT BACKSCATTERING IN THE GREAT BARRIER REEF REGION, AUSTRALIA	2154
Nagur Cherukuru , CSIRO Oceans and Atmosphere; Janet Anstee, CSIRO Oceans and Atmosphere; Kadija Oubelkheir, CSIRO; Thomas Schroeder, CSIRO Oceans and Atmosphere; Lesley Clementson, CSIRO Oceans and Atmosphere	
FIRST OPTICAL OBSERVATIONS IN THE TURBIDITY MAXIMUM ZONE IN THE RÍO DE LA PLATA ESTUARY: A CHALLENGE FOR ATMOSPHERIC CORRECTION ALGORITHMS	2062
Ana Dogliotti , Institute of Astronomy and Space Physics (IAFE); Martina Camiolo, Instituto Nacional de Investigación y Desarrollo Pesquero (INIDEP); Claudia Simionato, Centro de Investigaciones del Mar y la Atmósfera (CIMA/CONICET-UBA); Andrés Jaureguizar, Comisión de Investigaciones Científicas (CIC), Instituto Nacional de Investigación y Desarrollo Pesq; Raul Guerrero, Instituto Nacional de Investigación y Desarrollo Pesquero (INIDEP); Carlos Lasta, Instituto Nacional de Investigación y Desarrollo Pesquero (INIDEP)	
MULTI-SENSOR MONITORING OF DREDGE OPERATIONS IN WESTERN AUSTRALIA	2161
Peter Fearn s, Remote Sensing and Satellite Research Group (RSSRG), Curtin University; Mark Broomhall, Remote Sensing and Satellite Research Group (RSSRG), Curtin University; Graham Symonds, CSIRO Marine and Atmospheric Research	
PARTICULATE BACKSCATTERING COEFFICIENTS AS RELATED TO TOTAL AND SIZE-FRACTIONATED CHLOROPHYLL-A CONCENTRATION IN A COASTAL ENVIRONMENT	2273
Amabile Ferreira , CEBIMAR/USP; Aurea Ciotti, CEBIMAR/USP	
PHYSICAL AND BIOLOGICAL CONTROLS ON LIGHT ATTENUATION IN A EUTROPHIC, BACK-BARRIER ESTUARY	2028
Neil Ganju , US Geological Survey; Jennifer Miselis, US Geological Survey	
OCEAN COLOR AND TURBIDITY OBSERVATIONS AT WADDEN SEA TIME SERIES STATION SPIEKEROOG (NORTH SEA)	2081
Oliver Zielinski , University Oldenburg; Shungudzemwoyo Garaba, University of Oldenburg; Anne-Christin Schulz, University Oldenburg; Axel Braun, University Oldenburg; Thomas Badewien, University Oldenburg	
OPTIMAL CHOICE OF SPECTRAL CLASSES FOR HIGHER PRECISION BENTHIC CLASSIFICATION	2159
Rodrigo Garcia , Remote Sensing and Satellite Research Group (RSSRG), Curtin University; John Hedley, Environmental Computer Science Ltd.; Peter Fearn, Remote Sensing and Satellite Research Group (RSSRG), Curtin University	
APPLICATION OF HYPERSPECTRAL AIRBORNE PRISM IMAGERY TO EVALUATE COASTAL AND INLAND ENVIRONMENTS IN CALIFORNIA	2271
Michelle Gierach , Jet Propulsion Laboratory; Cedric Fichot, Jet Propulsion Laboratory; David Thompson, Jet Propulsion Laboratory; Robert Green, Jet Propulsion Laboratory	

COLORED DISSOLVED ORGANIC MATTER (CDOM) CHARACTERIZATION BY ABSORPTION AND FLUORESCENCE SPECTRA	2083
Rafael Gonçalves-Araujo , Alfred Wegener Institute for Polar and Marine Research - AWI; Marta Ramírez-Pérez, Institute of Marine Sciences (ICM-CSIC); Alexandra Kraberg, Alfred Wegener Institute for Polar and Marine Research-AWI; Jaume Piera, Institute of Marine Sciences (ICM-CSIC); Astrid Bracher, Alfred Wegener Institute for Polar and Marine Research-AWI	
ASSESSMENT OF CORRELATION BETWEEN SUSPENDED PARTICLE AREA-TO-MASS RATIO AND BACKSCATTER RATIO IN COASTAL WATERS	2069
Paul Hill , Dalhousie University; Emmanuel Boss, University of Maine; Jing Tao, Dalhousie University; Timothy Milligan, Bedford Institute of Oceanography	
SEASONALLY VARIABLE CORAL PIGMENT RESPONSE TO AND ANTICIPATION OF CHANGES IN TEMPERATURE AND LIGHT	2278
Eric Hochberg , Bermuda Institute of Ocean Sciences	
MAPPING SINKS AND SOURCES OF SUSPENDED PARTICULATE MATTER IN THE SAINT LAWRENCE GULF: A COMBINED APPROACH USING SATELLITE ABSOLUTE DYNAMIC TOPOGRAPHY AND OCEAN COLOR MEASUREMENTS	2301
Jorge Kurczyn , ISMER (Institut des Sciences de la Mer de Rimouski); Martin Montes-Hugo, ISMER (Institut des Sciences de la Mer de Rimouski); Emilio Beier, CICESE; Cédric Chavanne, ISMER (Institut des Sciences de la Mer de Rimouski)	
ANALYSIS OF VARIATION IN APPARENT OPTICAL PROPERTIES OF SOUTHERN BALTIC COASTAL WATERS AND SPITSBERGEN FJORDS	2089
Barbara Lednicka , Institute of Oceanology Polish Academy of Sciences; Mirosława Ostrowska, Institute of Oceanology Polish Academy of Sciences	
REMOTE SENSING OF TSM FROM THE GROUND UP: A SYNTHESIS OF GROUND, AIRCRAFT, AND SATELLITE REFLECTANCE DATA	2280
Thomas Leeuw , University of Maine; Emmanuel Boss, University of Maine; Paul Hill, Dalhousie University; Bryan Downing, US Geological Survey; Cedric Fichot, Jet Propulsion Laboratory	
SPATIAL VARIATIONS OF BALTIC SEA IOPS	2153
Martin Ligi , Tartu Observatory; Tiit Kutser, Estonian Marine Institute, University of Tartu; Birgot Paavel, Estonian Marine Institute, University of Tallinn; Tuuli Kauer, Estonian Marine Institute, University of Tartu	
RETRIEVAL OF BIOGEOCHEMICAL PARAMETERS AND SEABED CLASSIFICATION WITH PLEIADES DATA IN COASTAL AREAS	2264
Antoine Mangin , ACRI-ST; Chloe Vincent, ACRI-ST; Romain Serra, ACRI-ST; John Hedley, Environmental Computer Science Ltd.	
SWIM: A SEMI-ANALYTICAL OCEAN COLOR INVERSION ALGORITHM FOR OPTICALLY SHALLOW WATERS	2246
Lachlan McKinna , NASA Postdoctoral Program Fellow; Peter Fearn, Remote Sensing and Satellite Research Group (RSSRG), Curtin University; Scarla Weeks, University of Queensland; Jeremy Werdell, NASA Goddard Space Flight Center; Martina Reichstetter, University of Queensland; Bryan Franz, NASA GSFC; Don Shea, NASA GSFC; Sean Bailey, NASA/Ocean Biology Processing Group; Gene Feldman, NASA Goddard Space Flight Center	
SPATIAL AND SEASONAL VARIABILITY OF PHYTOPLANKTON AND NONALGAL ABSORPTION PROPERTIES IN THE SURFACE WATERS OF THE SOUTHERN BALTIC SEA	2088
Justyna Meler , Institute of Oceanology Polish Academy of Sciences; Mirosława Ostrowska, Institute of Oceanology Polish Academy of Sciences	
HOW OPTICALLY DIVERSE IS THE COASTAL OCEAN?	2225
Frederic Melin , E.C. Joint Research Centre; Vincent Vantrepotte, LOG-CNRS	
ALGORITHM DEVELOPMENT FOR PREDICTING BIODIVERSITY BASED ON PHYTOPLANKTON ABSORPTION IN THE MID ATLANTIC BIGHT AND GULF OF MAINE	2103
Tiffany Moisan , NASA	
REMOTE SENSING OF TURBIDITY IN CLEAR TO EXTREMELY TURBID COASTAL WATERS	2082
Bouchra Nechad , RBINS/OD Nature; Ana Dogliotti, Institute of Astronomy and Space Physics (IAFE); Kevin Ruddick, RBINS	

<p>SPECTRAL LIGHT ATTENUATION IN THE LAURENTIAN GREAT LAKES AND LAKE CHAMPLAIN (NORTH AMERICA) 2244 David O'Donnell, Upstate Freshwater Institute; Christopher Strait, Upstate Freshwater Institute; Steven Effler, Upstate Freshwater Institute; MaryGail Perkins, Upstate Freshwater Institute</p>	
<p>SEAFLOOR CHARACTERIZATION AND MONITORING OF THE INNER SHELF IN NORTHERN ISRAEL USING REMOTE SENSING 2303 Shachak Peeri, Center for Coastal and Ocean Mapping, UNH; Gideon Tibor, Israel Oceanographic and Limnological Research; Brian Madore, Center for Coastal and Ocean Mapping, UNH; Vicky Illin, Tel Aviv University; Zvi Ben-Avraham, Tel Aviv University; Gil Rilov, Israel Oceanographic and Limnological Research; Tomer Ketter, Tel Aviv University; Jenn Dijkstra, Center for Coastal and Ocean Mapping, UNH</p>	
<p>BIOPHYSICAL AND OPTICAL CLASSIFICATION OF COMPLEX CASE 2 WATERS IN THE STRAIT OF GEORGIA, WEST COAST OF CANADA AND IMPLICATIONS FOR COASTAL REMOTE SENSING 2143 Stephen Phillips, Remote Sensing and Spectral Research Laboratory</p>	
<p>NEW APPROACH TO EVALUATE VERY SHALLOW AND COMPLEX WATERS BY MEANS OF HYPERSPECTRAL TRANSMISSOMETRY 2093 Marta Ramírez-Pérez, Institute of Marine Sciences (ICM-CSIC); Rafael Gonçalves-Araujo, Alfred Wegener Institute for Polar and Marine Research - AWI; Sonja Wiegmann, Alfred Wegener Institute for Polar and Marine Research; Elena Torrecilla, Institute of Marine Sciences (ICM-CSIC); Astrid Bracher, Alfred Wegener Institute for Polar and Marine Research-AWI; Jaume Piera, Institute of Marine Sciences (ICM-CSIC)</p>	
<p>AN ANALYSIS OF GLOBCOLOUR CHLOROPHYLL MATCHUPS IN THE NORTHWEST ATLANTIC 2262 Eric Rehm, Université Laval; Emmanuel Devred, Takuvik, Université Laval-CNRS; William Li, Bedford Institute of Oceanography</p>	
<p>ABSORPTION OF NEAR INFRARED (NIR) AND SHORT WAVELENGTH INFRARED RADIATION (SWIR) BY NATURAL AQUATIC PARTICLES 2165 Ruediger Roettgers, Helmholtz-Zentrum Geesthacht; Christian Utschig, Helmholtz-Zentrum Geesthacht</p>	
<p>ESTIMATION OF THE SHALLOW WATER OPTICAL PROPERTIES USING REMOTE SENSING DATA AND APPLICATION TO THE HABITAT MAPPING 2289 Liisa Rohtla, NCRI, NOVA Southeastern University</p>	
<p>OPTICS OF THE OFFSHORE COLUMBIA RIVER PLUME IN SPRING-SUMMER 2282 Gonzalo Saldías, Oregon State University; R. Shearman, Oregon State University; John Barth, Oregon State University; Nicholas Tuffillaro, Oregon State University; Curtiss Davis, Oregon State University</p>	
<p>PHYTOPLANKTON BLOOMS IN THE GULF OF OMAN: A COMPARISON BETWEEN SATELLITE DATA AND AN EARTH SYSTEM MODEL 2237 Seyedehsafoura Sedigh Marvasti, Islamic Azad University; Anand Gnanadesikan, Johns Hopkins University</p>	
<p>MODEL II MULTIPLE REGRESSION: DETERMINING OPTICAL PROPERTIES AND OCEANOGRAPHIC RELATIONS 2078 Robert Stavn, University of North Carolina; Scott Richter, University of North Carolina</p>	
<p>VARIABILITY OF PARTICLE DISTRIBUTION USING OPTICAL MEASUREMENTS WITHIN THE COLUMBIA RIVER PLUME 2043 Jing Tao, Dalhousie University; Paul Hill, Dalhousie University; Emmanuel Boss, University of Maine; Timothy Milligan, Bedford Institute of Oceanography</p>	
<p>MODIS-ESTIMATED PATTERNS OF WATER QUALITY IN A LARGE, EXTREMELY TURBID, COASTAL LAGOON 2118 Juliana Tavora, Federal University of Rio Grande - FURG; Andrew Thomas, University of Maine; Ryan Weatherbee, University of Maine</p>	
<p>APPLICATION OF HYPERSPECTRAL MEASUREMENTS OF PHYTOPLANKTON ABSORPTION COEFFICIENT AND REMOTE-SENSING REFLECTANCE TO DETERMINE THE DIVERSITY OF PHYTOPLANKTON COMMUNITIES IN OPEN-OCEAN WATERS 2051 Julia Uitz, LOV CNRS-UPMC; Dariusz Stramski, Scripps Institution of Oceanography; Rick Reynolds, Scripps Institution of Oceanography; Jean Dubranna, LOV CNRS-UPMC; Herve Claustre, LOV UPMC-CNRS</p>	

DEFINING OCEANOGRAPHIC REGIMES IMPACTING CONTINENTAL SHELF HABITATS IN THE EASTERN INDIAN OCEAN OFF NW AUSTRALIA	2150
Anya Waite , University of Western Australia; Adam Rountrey, University of Michigan	
APPLICATION OF NEAR INFRARED-RED ALGORITHMS AND SEMI-ANALYTICAL MODEL FOR ESTIMATING OF CHLOROPHYLL-A IN BARRA BONITA RESERVOIR, TIETÊ RIVER (BRAZIL)	2074
Fernanda Watanabe , UNESP; Enner Alcântara, UNESP; Cláudio Barbosa, INPE; Thanan Rodrigues, UNESP; Luiz Rotta, UNESP; Nilton Imai, UNESP	
A BIO-OPTICAL MODEL FOR CHLOROPHYLL CONCENTRATION USING MOORED MEASUREMENTS OF WAVELENGTH-SPECIFIC DIFFUSE ATTENUATION	2306
Samuel Wilson , Scripps Institution of Oceanography; Uwe Send, Scripps Institution of Oceanography; B Mitchell, Scripps/UCSD; Mark Ohman, Scripps Institution of Oceanography	
IMPACTS OF TERRESTRIAL RUNOFF ON THE VULNERABILITY OF THE GREAT BARRIER REEF	2287
Nicholas Wolff , University of Queensland; Michelle Devlin, Centre for tropical water and aquatic ecosystem research; Eduardo Teixeira da Silva, James Cook University; Richard Brinkman, Australian Institute of Marine Science; Caroline Petus, James Cook University; Dieter Tracey, James Cook University; Hemerson Tonin, Australian Institute of Marine Sciences; Peter Mumby, University of Queensland; Kenneth Anthony, Australian Institute of Marine Science	
LIGHT BACKSCATTERING AND SCATTERING BY MARINE PARTICLES IN RELATION TO PARTICLE CONCENTRATION, COMPOSITION, AND SIZE DISTRIBUTION IN THE SOUTHERN BALTIC SEA	2095
Slawomir Wozniak , Institute of Oceanology, Polish Academy of Sciences; Slawomir Sagan, Institute of Oceanology Polish Academy of Sciences; Joanna Ston-Egiert, Institute of Oceanology, Polish Academy of Sciences; Dorota Burska, Institute of Oceanography, University of Gdansk; Monika Zablocka, Institute of Oceanology Polish Academy of Sciences	

PLENARY SESSION 4 Introduction: Therese Harvey, Stockholm University		Maine Ballroom
5:00 PM – 5:45 PM	OCEAN COLOUR APPLICATIONS IN INLAND WATERS: MISSION REQUIREMENTS	2308
Stewart Bernard , Council for Scientific and Industrial Research; Mark Matthews, University of Cape Town; Derek Griffith, Council for Scientific & Industrial Research; Lisl Robertson Lain, University of Cape Town; Michel Verstraete, South African National Space Agency; Carsten Brockmann, Brockmann Consult; Daniel Odermatt, Brockmann Consult; Steven Greb, Wisconsin Department of Natural Resources; Paul DiGiacomo, NOAA/NESDIS/STAR		

Wednesday, October 29

REGISTRATION | 7:30 AM – 5:00 PM

Lobby

ORAL SESSION 5 | Chair: Ivona Cetinic, University of Maine

Maine Ballroom

8:00 AM – 8:20 AM	REFLECTANCE BIDIRECTIONALITY IN COASTAL TURBID WATERS David Antoine , Curtin University; Edouard Leymarie, LOV UPMC-CNRS; David Doxaran, LOV-CNRS; Sabine Marty, LOV-CNRS; Bernard GENTILI, LOV-CNRS	2026
8:20 AM – 8:40 AM	CONTINUOUS MEASUREMENTS OF THE UNDER-ICE LIGHT FIELD IN THE ARCTIC OCEAN Victoria Hill , Old Dominion University; Bonnie Light, University of Washington; Mike Steele, University of Washington	2077
8:40 AM – 9:00 AM	CHARACTERIZATION OF THE SOLAR LIGHT FIELD WITHIN THE OCEAN MESOPELAGIC ZONE BASED ON RADIATIVE TRANSFER SIMULATIONS Linhai Li , Scripps Institution of Oceanography; Dariusz Stramski, Scripps Institution of Oceanography; Rick Reynolds, Scripps Institution of Oceanography	2029
9:00 AM – 9:20 AM	IMPACT OF CANYON DYNAMICS ON THE SPRING PHYTOPLANKTON BLOOM (PALMER DEEP CANYON, WEST ANTARCTIC PENINSULA) Ana Filipa Carvalho , Rutgers University; Oscar Schofield, Rutgers University; Nicole Couto, Rutgers University; Josh Kohut, Rutgers University	2293
9:20 AM – 9:40 AM	INFLUENCE OF THE BERING SEA ON ARCTIC ECOSYSTEMS EXPERIENCING RAPID REDUCTIONS IN SEA-ICE Joaquim Goes , Lamont Doherty Earth Observatory, Columbia University; Eurico D'Sa, Louisiana State University; Helga Gomes, Lamont Doherty Earth Observatory at Columbia University; Jennifer Miksis-Olds, Penn State University; Colleen Mouw, Michigan Technological University; Jia Wang, NOAA Great Lakes Environmental Research Laboratory; Haoguo Hu, University of Michigan, Ann Arbor	2186
9:40 AM – 10:00 AM	MAPPING OF SUSPENDED SEDIMENTS IN EXTREMELY TURBID WATERS WITH LANDSAT-8 Quinten Vanhellemont , Royal Belgian Institute of Natural Sciences; Kevin Ruddick, RBINS	2162

BREAK | 10:00 AM – 10:30 AM

ORAL SESSION 6 | Chair: Robyn Conmy, U.S. Environmental Protection Agency

Maine Ballroom

10:30 AM – 10:50 AM	A NEW ALGORITHM FOR ESTIMATING AEROSOL SCATTERING REFLECTANCE FROM SATELLITE REMOTE SENSING DATA Zhihua Mao , Second Institute of Oceanography, SOA; Delu Pan, Second Institute of Oceanography	2036
10:50 AM – 11:10 AM	MARINE CHLOROPHYLL FLUORESCENCE FROM HIGH SPECTRALLY RESOLVED SATELLITE MEASUREMENTS Aleksandra Wolanin , Alfred Wegener Institute; Tilman Dinter, University of Bremen; Vladimir Rozanov, University of Bremen; Stefan Noël, University of Bremen; Marco Vountas, University of Bremen; Astrid Bracher, Alfred Wegener Institute for Polar and Marine Research-AWI	2092

11:10 AM – 11:30 AM	BOREALI-OSW- A NEW BIO-OPTICAL RETRIEVAL ALGORITHM FOR SPACEBORNE MONITORING OF OPTICALLY SHALLOW WATERS IN LAKE MICHIGAN Anton Korosov , Nansen Environmental and Remote Sensing Centre; Dmitry Pozdnyakov, Nansen International Environmental and Remote Sensing Centre; Robert Shuchman, Michigan Tech Research Institute; Michael Sayers, Michigan Tech Research Institute; Reid Sawtell, Michigan Tech Research Institute	2137
11:30 AM – 11:50 AM	A PHYSICS-BASED MODEL FOR THE REMOTE SENSING OF SEAGRASS CANOPIES John Hedley , Environmental Computer Science Ltd.; Heidi Dierssen, University of Connecticut; Susana Enriquez, Universidad Nacional Autonoma de Mexico	2114
11:50 AM – 12:10 PM	OBJECT ORIENTED APPROACH TO IMPROVING OPTICALLY SHALLOW-WATER BENTHIC CLASSIFICATION Daniel Marrable , ARGANS Ltd; John Hedley, Environmental Computer Science Ltd.; Peter Fearn, Remote Sensing and Satellite Research Group (RSSRG), Curtin University	2112

LUNCH | 12:10 PM – 1:00 PM

TOWN HALLS OR FREE PERIOD | 1:00 PM – 4:00 PM

1:00 PM – 2:30 PM	HYSPIRI AND FUTURE HYPERSPECTRAL COASTAL AND INLAND WATER REMOTE SENSING Contact: Kevin Turpie (kevin.r.turpie@nasa.gov) Maine Ballroom
1:00 PM – 2:30 PM	ARCTIC-COLORS Contact: Antonio Mannino (antonio.mannino-1@nasa.gov) Somerset Room
2:30 PM – 4:00 PM	GEOSTATIONARY COASTAL AIR POLLUTION EVENTS (GEO-CAPE) Contact: Antonio Mannino (antonio.mannino-1@nasa.gov) Somerset Room

PLENARY SESSION 5 | Introduction: Allison Chase, University of Maine Maine Ballroom

4:00 PM – 4:45 PM	TOWARDS DEVELOPMENT OF NEW SATELLITE OCEAN COLOUR PRODUCTS: PHYTOPLANKTON COMMUNITY STRUCTURE AND ITS RELATED PROPERTIES Takafumi Hirata , Hokkaido University	2315
-------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------

PLENARY SESSION 6 | Introduction: Mary Jane Perry, University of Maine Maine Ballroom

4:45 PM – 5:30 PM	PROGRESSES AND CHALLENGES TOWARDS ACHIEVING CONSENSUS IN ESTIMATING BASIN-SCALE PRIMARY PRODUCTION ZhongPing Lee , University of Massachusetts at Boston; John Marra , Brooklyn College; Paul Quay , University of Washington	2318
-------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------

<p>ATMOSPHERIC CORRECTION USING MULTIPLE-SCATTERING EPSILON VALUES: A NEW METHOD FOR OCEAN COLOR RETRIEVAL</p> <p>Ziauddin Ahmad, NASA/GSFC/OBPG; Bryan Franz, NASA GSFC</p>	2253
<p>UPDATES OF THE GEOSTATIONARY OCEAN COLOR IMAGER (GOCI) STANDARD ATMOSPHERIC CORRECTION FOR GDPS 1.3</p> <p>Jae-Hyun Ahn, Korea Institute of Ocean Science and Technology; Young-Je Park, Korea Institute of Ocean Science and Technology; Wonkook Kim, Korea Institute of Ocean Science and Technology; Boram Lee, Korea Institute of Ocean Science and Technology</p>	2149
<p>ATMOSPHERIC CORRECTION OVER COASTAL WATERS: A SPATIAL ANALYSIS METHOD</p> <p>Julien Brajard, LOCEAN/UPMC; Cedric Jamet, LOG-ULCO</p>	2164
<p>FRACEX: UNDERSTANDING THE EFFECTS OF PHYTOPLANKTON SIZE ON OPTICAL PROPERTIES</p> <p>Ivona Cetinic, University of Maine; Wayne Slade, Sequoia, Inc.; Nicole Poulton, Bigelow Laboratory for Ocean Sciences; Mary Jane Perry, University of Maine</p>	2299
<p>CASE STUDIES FOR UV, O2-A BAND AND POLARIMETRIC AIRBORNE REMOTE SENSING OBSERVATIONS OF COASTAL WATERS: IMPLICATIONS FOR ATMOSPHERIC CORRECTION</p> <p>Jacek Chowdhary, Columbia University & NASA/GISS; Bastiaan van Diedenhoven, Columbia University & NASA/GISS; Kirk Knobelspiesse, NASA Ames Research Center; Brian Cairns, NASA/GISS; Ian Mccubbin, Jet Propulsion Laboratory</p>	2239
<p>DISTRIBUTION OF PHYTOPLANKTON FUNCTIONAL TYPES (PFTS) IN THE LOW PRODUCTIVITY WATERS OFF WESTERN AUSTRALIA – A COMPARISON OF SATELLITE AND IN SITU METHODS</p> <p>Lesley Clementson, CSIRO Oceans and Atmosphere; Edward King, CSIRO Oceans and Atmosphere; Nick Hardman-Mountford, CSIRO Marine and Atmospheric Research; Rasanthi Gunasekera, CSIRO Oceans and Atmosphere; Yueqi Wang, Yantai Institute of Coastal Zone Research, Chinese Academy of Sciences; Dongyan Liu, Yantai Institute of Coastal Zone Research, Chinese Academy of Sciences</p>	2146
<p>NOVEL OCEAN COLOUR MODELS FOR INHERENT OPTICAL PROPERTIES AND CHLOROPHYLL A IN THE NORTHWEST ATLANTIC OCEAN</p> <p>Susanne Craig, Dalhousie University; Carla Caverhill, Bedford Institute of Oceanography; Heidi Maass, Bedford Institute of Oceanography</p>	2257
<p>OPTIMISATION OF SIMEC, A SENSOR-GENERIC ADJACENCY CORRECTION ALGORITHM</p> <p>Liesbeth De Keukelaere, VITO; Els Knaeps, VITO; Sindy Sterckx, VITO</p>	2053
<p>AN APPROACH TO CORRECT RRS(412) AND ITS IMPACT ON THE RETRIEVAL OF PRIMARY ABSORPTION PROPERTIES IN COASTAL AND OCEANIC WATERS</p> <p>Qiang Dong, Research and Development Center for Ocean Observation Technologies, Xiamen University; Shaoling Shang, State Key Laboratory of Marine Environmental Science; Shaoping Shang, Key Laboratory of Underwater Acoustic Communication and Marine Information Technology, Xiamen University</p>	2148
<p>ECOSYSTEM VARIABILITY IN A NUMERICAL MODEL: HOW MUCH OF THE STORY IS CAPTURED BY “SATELLITE-DERIVED” OPTICAL PRODUCTS?</p> <p>Stephanie Dutkiewicz, Massachusetts Institute of Technology; Anna Hickman, University of Southampton; Oliver Jahn, Massachusetts Institute of Technology; Michelle Gierach, Jet Propulsion Laboratory; Mick Follows, Massachusetts Institute of Technology</p>	2268
<p>REMOTE SENSING OF PARTICLE MASS CONCENTRATION IN ALPINE RESERVOIRS</p> <p>Elisabeth Eder, Eawag, Swiss Federal Institute of Aquatic Science and Technology; Ruediger Roettgers, Helmholtz-Zentrum Geesthacht; Alexander Damm, Remote Sensing Laboratories, University of Zurich; Thomas Heege, EOMAP; Alfred Wüest, Eawag, Swiss Federal Institute of Aquatic Science and Technology; Daniel Odermatt, Eawag, Swiss Federal Institute of Aquatic Science and Technology</p>	2201
<p>OCEAN COLOR MEASUREMENTS FROM LANDSAT-8 OLI USING SEADAS</p> <p>Bryan Franz, NASA GSFC; Sean Bailey, NASA/Ocean Biology Processing Group; Jeremy Werdell, NASA Goddard Space Flight Center</p>	2142

MEASURING FLUORESCENCE BY MEANS OF SMARTPHONES WITH THE NEW CITCLOPS-APPLICATION	2184
Anna Friedrichs , University of Oldenburg/ Institut for Chemistry and Biology of the Marine Environment, Germany; Julia Busch, Carl von Ossietzky Universitaet Oldenburg/Institut fuer Chemie und Biologie des Meeres (ICBM); Rohan Henkel, University Oldenburg - ICBM; Rüdiger Heuermann, TriOS Mess- und Datentechnik GmbH; Christopher John, Universität Oldenburg, ICBM; Oliver Zielinski, University Oldenburg	
POLARIMETRIC SPECTROMETER (POL-SPEC) FOR REMOTE SENSING OF THE OCEANS	2194
David Gills , Naval Research Laboratory	
OPPORTUNITIES FOR CONSTRAINING OCEAN BIOGEOCHEMICAL MODELS- THE ROLE OF STATISTICAL RELATIONSHIPS	2247
Anand Gnanadesikan , Johns Hopkins University	
ABSORPTION-BASED PRIMARY PRODUCTION ALGORITHM FOR THE GCOM-C1/SGLI	2163
Toru Hirawake , Faculty of Fisheries Sciences, Hokkaido University; Ryosuke Futsuki, Graduate School of Fisheries Sciences, Hokkaido University; Katsuhito Shinmyo, NTT Data MSE Co., Ltd.; Shintaro Takao, Faculty of Environmental Earth Science, Hokkaido University; Amane Fujiwara, National Institute of Polar Research; Koji Suzuki, Faculty of Environmental Earth Science, Hokkaido University; Tomonori Isada, Field Science Center for Northern Biosphere, Hokkaido University; Yuichi Nosaka, Ishinomaki Senshu University; Yutaka Watanabe, Faculty of Environmental Earth Science, Hokkaido University; Sei-ichi Saitoh, Faculty of Fisheries Sciences, Hokkaido University	
APPLICATION OF SIZE-FRACTIONATED PRIMARY PRODUCTION ESTIMATES TO IMPROVE MODELS OF FISHERIES PRODUCTION POTENTIAL IN THE NORTHEAST US CONTINENTAL SHELF LARGE MARINE ECOSYSTEM	2252
Kimberly Hyde , NOAA Fisheries; Michael Fogarty, NOAA/NMFS/NEFSC; Kristin Kleisner, NOAA/NMFS/NEFSC; Elizabeth Fulton, CSIRO; Trond Kristiansen, Institute of Marine Research	
OBSERVATIONS OF SURFACE CURRENTS IN THE BOHAI SEA FROM THE KOREAN GEOSTATIONARY OCEAN COLOR IMAGER (GOCI)	2060
Lide Jiang , NOAA/STAR & CSU/CIRA; Menghua Wang, NOAA/NESDIS/STAR	
THE RELATIONSHIP BETWEEN THE PHYTOPLANKTON ABSORPTION COEFFICIENT AND CHLOROPHYLL-A CONCENTRATION FOR REMOTE SENSING APPLICATION OF ESTONIAN LARGE LAKES	2175
Evelin Kangro , Tartu Observatory; Kersti Kangro, Tartu Observatory; Krista Alikas, Tõravere Observatory	
OPTICAL CLOSURE OF CDOM-RICH LAKES	2155
Tiit Kutser , Estonian Marine Institute, University of Tartu; Birgot Paavel, Estonian Marine Institute, University of Tallinn; Daniel Odermatt, Brockmann Consult; Laura Lõugas, Estonian Marine Institute, University of Tartu; Tuuli Kauer, Estonian Marine Institute, University of Tartu	
SATELLITE-DERIVED WATER QUALITY DYNAMICS IN A MODERATE-SIZED SHALLOW ESTUARY: SUSCEPTIBLE TO RIVER DISCHARGE AND WIND SPEED	2310
Chengfeng Le , US EPA	
ODESA AND MERMAID: EARTH OBSERVATION PROCESSING AND VALIDATION FACILITIES. FROM MERIS TO OLCI AND SLSTR ON-BOARD SENTINEL-3	2214
Christophe Lerebourg , ACRI-ST; Kathryn Barker, ARGANS Ltd; Ludovic Bourg, ACRI-ST; Odile Fanton d'Andon, ACRI-ST; Jean-Paul Huot, ESA/ESTEC; Philippe Goryl, ESA/ESRIN; Henri Laur, ESA/ESRIN	
OCEAN COLOR REMOTE SENSING USING HIGH SPATIAL RESOLUTION SATELLITES WITH LIMITED SPECTRAL BANDS	2298
Soo Chin Liew , National University of Singapore; Chew Wai Chang, National University of Singapore; Boredin Saengtuksin, National University of Singapore	
DEVELOPMENT OF CLOUD MASKING ALGORITHMS FOR HIGH SPATIAL RESOLUTION SENSORS (LANDSAT 8 OLI, AND VNREDSAT-1A) OVER VIETNAM TURBID COASTAL WATER	2193
Hubert Loisel , LOG UMR CNRS 8187; Dat Dinh, SPACE TECHNOLOGY INSTITUTE	
TEMPORAL COVARIABILITY BETWEEN PHYTOPLANKTON FUNCTIONAL TYPES AND NUTRIENT COMPOSITION IN FOUR MAINE RIVERS	2296
Alana Menendez , Bowdoin College; Collin Roesler, Bowdoin College	

CONTRIBUTION OF OFFSHORE PETROLEUM DEPOSITES TO MARINE FOOD CHAIN ORIGIN OBSERVED BY OCEAN OPTICS Shuji Mori, Geodyne One	2223
PHYTOPLANKTON SIZE – VARIABILITY CHARACTERIZATION AND IMPLICATIONS OF ICE AND EXPORT Colleen Mouw, Michigan Technological University	2191
OVERVIEW OF KOREAN GEOSTATIONARY OCEAN COLOR MISSION - GOCI AND GOCI-II Young-Je Park, Korea Institute of Ocean Science and Technology; Jong Kuk Choi, Korea Institute of Ocean Science and Technology; Hee-Jeong Han, Korea Institute of Science and Technology; Seongick Choi, Korea Institute of Science and Technology; Sun-Je Lee, Korea Institute of Science and Technology; Hyun Yang, Korea Institute of Science and Technology; Jeong-Eon Moon, Korea Institute of Ocean Science and Technology; JeeEn Min, Korea Institute of Science and Technology; Jae-Hyun Ahn, Korea Institute of Ocean Science and Technology; Eunsong Oh, Korea Institution of Ocean Science and Technology; Tai-Hyun Han, Korea Institute of Science and Technology; Sang Soo Bae, Korea Institute of Science and Technology; Boram Lee, Korea Institute of Ocean Science and Technology; KiBeom Ahn, Korea Institute of Science and Technology; Wonkook Kim, Korea Institute of Ocean Science and Technology; Joo-Hyung Ryu, Korea Institute of Science and Technology; Yu-Hwan Ahn, KIOST	2288
CHARACTERIZATION OF LIGHT ABSORBING COMPONENTS FOR THE LAURENTIAN GREAT LAKES AND FOURTEEN SMALL LAKES MaryGail Perkins, Upstate Freshwater Institute; Steven Effler, Upstate Freshwater Institute; Christopher Strait, Upstate Freshwater Institute; David O'Donnell, Upstate Freshwater Institute	2218
CHARACTERIZING THE SENSOR USING THE USING THE OCEAN COLOR OPERATIONAL DATA FROM THE SUOMI NPP MISSION Patty Pratt, Northrop Grumman Aerospace Systems; Justin Ip, Northrop Grumman Aerospace Systems	2279
RETRIEVAL OF WATER INHERENT OPTICAL PROPERTIES BY OPTIMAL ESTIMATION Rene Preusker, Freie Universitaet Berlin; Lena Kritten, Freie Universitaet Berlin; Carsten Brockmann, Brockmann Consult; Daniel Odermatt, Brockmann Consult; Juergen Fischer, Freie Universitaet Berlin	2263
THE SEABASS VALIDATION SYSTEM: REDESIGNED TOOLS AND ONLINE RESOURCES FOR OCEAN COLOR SATELLITE VALIDATION Christopher Proctor, NASA Goddard Space Flight Center; Jason Lefler, NASA Goddard Space Flight Center; Sean Bailey, NASA/Ocean Biology Processing Group; Jeremy Werdell, NASA Goddard Space Flight Center	2199
NOVEL METHODS FOR RADIOMETRICALLY ESTIMATING WHITECAP COVERAGE UNDER NATURAL WAVE BREAKING CONDITIONS PARAMETERIZED IN THE SOUTHERN OCEAN Kaylan Randolph, University of Connecticut; Heidi Dierssen, University of Connecticut; William Balch, Bigelow Lab for Ocean Sciences; Christopher Zappa, Lamont-Doherty Earth Observatory of Columbia University; Edward Monahan, University of Connecticut at Avery Point; Michael Twardowski, WET Labs; Bruce Bowler, Bigelow Lab for Ocean Sciences; David Drapeau, Bigelow Lab for Ocean Sciences	2276
A FIRST EVALUATION OF LARGE AND DETAILED IN-SITU DATABASE (CPR) POTENTIAL FOR THE DETECTION OF PHYTOPLANKTON SPECIES ASSEMBLAGES FROM SPACE Anne-Helene Reve, LOG-CNRS; Severine Alvain, LOG-CNRS; Natacha Guiselin, LOG-CNRS; Marie-Fanny Racault, PML; david dessailly, LOG-ULCO; Vincent Vantrepotte, LOG-CNRS; Cedric Jamet, LOG-ULCO	2104
RECENT DEVELOPMENTS IN THE CHARACTERIZATION OF PHYTOPLANKTON SIZE AND TAXONOMIC COMPOSITION BY SHIPBOARD STREAK IMAGING MULTIVARIATE OPTICAL COMPUTING Tammi Richardson, University of South Carolina; Stefan Faulkner, University Of South Carolina Department of Chemistry and Biochemistry; Cameron Rekully, University of South Carolina Department of Chemistry and Biochemistry; Heidi Sosik, Woods Hole Oceanographic Institution; Joe Swanstrom, University of South Carolina Department of Chemistry and Biochemistry; Shawna Tazik, University of South Carolina; Timothy Shaw, University of South Carolina Department of Chemistry and Biochemistry; Michael Myrick, University of South Carolina Department of Chemistry and Biochemistry	2283
OPTICAL PROPERTIES OF NOCTILUCA MILIARIS IN THE ARABIAN SEA, A PATHWAY TO REMOTE DETECTION Collin Roesler, Bowdoin College; Jeremy Werdell, NASA Goddard Space Flight Center; Joaquim Goes, Lamont Doherty Earth Observatory, Columbia University; Helga Gomes, Lamont Doherty Earth Observatory at Columbia University; S. G. P Matondkar, National Institute of Oceanography; Patricia Thibodeau, Bowdoin College	2245

MULTI-SENSOR OCEAN COLOUR VALIDATION IN BELGIAN WATERS	2139
Kevin Ruddick , RBINS; Dmitry Van der Zande, RBINS / OD Nature; Quinten Vanhellemont, Royal Belgian Institute of Natural Sciences	
TRACKING THE VARIABILITY OF NET COMMUNITY PRODUCTIVITY (NCP) IN THE EUPHOTIC ZONE WITH OPTICAL AND SATELLITE DATA	2277
Joe Salisbury , UNH; Bror Jonsson, Princeton University; Olivia DeMeo, VCU	
OPTICAL WATER TYPES AND SOLAR HEAT CONTENT IN THE LIGURAN BASIN	2206
Violeta Sanjuan Calzado , CMRE; Roseanne Clement, Stathclyde University; David McKee, University of Strathclyde; Charles Trees, CMRE	
USING NG'S EVEREST TO EVALUATE NEXT-GENERATION OCEAN COLOR REMOTE SENSING SYSTEMS	2144
Alain Sei , Northrop Grumman Aerospace Systems	
IS WATER CLARITY CHANGING IN THE COASTAL WATERS OF CHINA?	2156
Shaoling Shang , State Key Laboratory of Marine Environmental Science; Guomei Wei, Research and Development Center for Ocean Observation Technologies, Xiamen University; Jushi Zhang, Key Laboratory of Underwater Acoustic Communication and Marine Information Technology (Xiamen Univer; Gong Lin, State Key Laboratory of Marine Environmental Science, Xiamen University	
THE USE OF OPTICAL WATER TYPE CLASSIFICATION AS A BASIS FOR CHL-A ALGORITHM APPLICATION IN SOUTH AFRICAN COASTAL WATERS	2207
Marie Smith , University of Cape Town; Stewart Bernard, Council for Scientific and Industrial Research	
MODELLING THE DIRECT TO DIFFUSE DOWNWELLING IRRADIANCE RATIO BASED ON ATMOSPHERIC SPECTRAL RADIATION MODEL	2290
Leonid Sokoletsky , East China Normal University; Yang Xianping, East China Normal University; Fang Shen, East China Normal University	
IMPACT OF THE TEMPORAL BINNING ON THE DERIVED BIO-OPTICAL PRODUCTS FROM OCEAN COLOR OBSERVATIONS. APPLICATION TO THE 14 YEARS OF SEAWIFS DATA	2216
Charles Verpoorter , LOG UMR-CNRS 8187 Laboratory of Oceanology and Geosciences; Hubert Loisel, LOG UMR CNRS 8187; Vincent Vantrepotte, LOG-CNRS; David Desailly, LOG UMR CNRS 8187	
DECADAL CHANGES OF REMOTELY SENSED OPTICAL PROPERTIES IN THE OCEAN GYRES	2238
Jianwei Wei , University of Massachusetts Boston; ZhongPing Lee, University of Massachusetts at Boston	
ESTIMATING IN SITU PRIMARY PRODUCTION RATES FROM DIURNAL CHANGES IN PARTICULATE CARBON	2302
Angelicque White , Oregon State University; Ricardo Letelier, Oregon State University	

Thursday, October 30

REGISTRATION | 7:30 AM – 5:00 PM

Lobby

ORAL SESSION 7 | Chair: Joan Cleveland, Office of Naval Research

Maine Ballroom

8:00 AM – 8:20 AM	DERIVING AQUACULTURE INDICATORS FROM EARTH OBSERVATION IN THE AQUA-USERS PROJECT (AQUACULTURE USER DRIVEN OPERATIONAL REMOTE SENSING INFORMATION SERVICES) Vanda Brotas , University of Lisbon, Centre of Oceanography; Andre Couto, University of Lisbon, Centre of Oceanography; Carolina Sá, Centro de Oceanografia Faculdade de Ciências da Universidade de Lisboa; Ana Amorim, University of Lisbon, Centre of Oceanography; Andrey Kurekin, Plymouth Marine Laboratory; Marnix Laanen, Water Insight; Steef Peters, WaterInsight; Kathrin Poser, Water Insight; Ana Brito, University of Lisbon, Centre of Oceanography; Marieke Eleveld, VU University Amsterdam; Steve Groom, Plymouth Marine Laboratory; Trina Dale, NIVA; Kai Sorensen, NIVA; Lars Hansen, DHI GRAS; Hanne Kaas, DHI GRAS; Andersson Andersson, DHI; Bruno Fragoso, Sagresmarisco; John Icely, SAGREMARISCO; Pete Miller, Plymouth Marine Laboratory; Silvia Huber, DHI GRAS	2209
8:20 AM – 8:40 AM	ARE KRILL EYES USEFUL IN THE HIGH ARCTIC POLAR NIGHT? Jonathan Cohen , University of Delaware; Heather Cronin, University of Delaware; Mark Moline, University of Delaware; Jørgen Berge, University of Tromsø; Geir Johnsen, Norwegian University of Science and Technology; Asgeir Sorensen, Norwegian University of Science and Technology	2213
8:40 AM – 9:00 AM	JELLYSPEC: DETERMINING THE SPECTRAL CHARACTERISTICS OF JELLYFISH FROM BELGIAN WATERS Dimitry Van der Zande , RBINS / OD Nature; Kevin Ruddick, RBINS	2138
9:00 AM – 9:20 AM	EVALUATING MERGED ZEU PRODUCTS IN THE SOUTHERN OCEAN FOR APPLICATION TOWARDS AN OPTIMISED FLUORESCENCE QUENCHING CORRECTION METHOD Lauren Biermann , Sea Mammal Research Unit; Christophe Guinet, CEBC-CNRS; Andrew Brierley, Pelagic Ecology Research Group; Lars Boehme, Sea Mammal Research Unit	2066
9:20 AM – 9:40 AM	GEOSTATIONARY SATELLITE OBSERVATIONS OF DYNAMIC PHYTOPLANKTON PHOTOPHYSIOLOGY Toby Westberry , Oregon State University; Robert O'Malley, Oregon State University; Michael Behrenfeld, Oregon State University; Allen Milligan, Oregon State University; Shaoling Shang, State Key Laboratory of Marine Environmental Science; Jing Yan, State Key Laboratory of Marine Environmental Science	2248
9:40 AM – 10:00 AM	LIGHT CLIMATE AND STATUS OF THE PHOTOSYNTHETIC MACHINERY IN MACROALGAE IN THE POLAR NIGHT Inga Aamot , Norwegian University of Science and Technology; Kaytee Pokrzywinski, University of Delaware; Geir Johnsen, Norwegian University of Science and Technology; Jørgen Berge, University of Tromsø; Asgeir Sorensen, NTNU	2050

BREAK | 10:00 AM – 10:30 AM

ORAL SESSION 8 | Chair: Aurea Ciotti, University of São Paulo

Maine Ballroom

10:30 AM – 10:50 AM	USE OF UNDERWATER HYPERSPECTRAL IMAGER (UHI) IN MARINE ARCHAEOLOGY Øyvind Ødegård , NTNU; Geir Johnsen, Norwegian University of Science and Technology; Asgeir Sørensen, NTNU	2042
10:50 AM – 11:10 AM	USE OF POLARIZATION TO RETRIEVE AEROSOL PARAMETERS IN COUPLED ATMOSPHERE-WATER SYSTEMS Knut Stamnes , Stevens Institute of Technology; Snorre Stamnes, Stevens Institute of Technology; Wei Li, Stevens Institute of Technology; Yongzhen Fan, Stevens Institute of Technology; Nan Chen, Stevens Institute of Technology; Tomonori Tanikawa, Japanese Exploration Agency (JAXA); Jakob Stamnes, University of Bergen	2071
11:10 AM – 11:30 AM	COSINE COLLECTOR INSTRUMENTATION TO DIRECTLY MEASURE THE BACKSCATTERING COEFFICIENT BB Edward Fry , Texas A&M University; Eleonora Figueroa , Texas A&M UNIVERSITY	2243
11:30 AM – 11:50 AM	INHERENT OPTICAL PROPERTIES AND PHYTOPLANKTON COMMUNITY CHARACTERISTICS OVER SMALL VERTICAL SCALES IN COASTAL WATERS Malcolm McFarland , University of Rhode Island; James Sullivan, WET Labs; Jan Rines, University of Rhode Island; Percy Donaghay, University of Southern Mississippi	2226
11:50 AM – 12:10 PM	LEVERAGING UV OBSERVATIONS FOR ATMOSPHERIC CORRECTION OF COASTAL/OCEAN COLOR IMAGERY Nima Pahlevan , University of Massachusetts Boston; ZhongPing Lee, University of Massachusetts at Boston	2229

LUNCH | 12:10 PM – 1:30 PM**PLENARY SESSION 7** | Introduction: Maria Giannini, University of São Paulo

Maine Ballroom

1:30 PM – 2:15 PM	COASTAL PLANKTON ECOLOGY RESEARCH WITH AUV-BASED OPTICAL SENSING AND IMAGING John Ryan , Monterey Bay Aquarium Research Institute	2320
-------------------	----------------------------------------------------------------------------------------------------------------------------------------------------	------

ORAL SESSION 9 | Chair: Wayne Slade, Sequoia Scientific, Inc.

Maine Ballroom

2:15 PM – 2:35 PM	OPTICAL TOOLS IN OIL SPILL RESPONSE: AN HISTORICAL AND CURRENT PERSPECTIVE IN DECISION-MAKING Robyn Conmy , US EPA; Brian Robinson, Bedford Institute of Oceanography, Department of Fisheries and Oceans Canada; Thomas King, Bedford Institute of Oceanography, Department of Fisheries and Oceans Canada; Mary Abercrombie, University of South Florida; Paula Coble, University of South Florida; Kenneth Lee, CSIRO; Albert Venosa, U.S. Environmental Protection Agency	2221
2:35 PM – 2:55 PM	POLARIZED REFLECTION AND TRANSMISSION PROPERTIES OF WIND-BLOWN SEA SURFACES Curtis Mobley , Sequoia Scientific, Inc.	2014
2:55 PM – 3:15 PM	RELATIONSHIPS BETWEEN SIZE FACTOR, SIZE INDEX AND MICROSCOPIC MEASUREMENTS OF PHYTOPLANKTON SIZE Aurea Ciotti , CEBIMAR/USP; Andre Bucci, CEBIMar, Universidade de São Paulo; Annick Bricaud, LOV CNRS-UPMC; Carlos Rafael Mendes, Instituto de Oceanografia, Universidade Federal do Rio Grande	2224

<p>ACTIVITIES OF THE MERIS VALIDATION TEAM: THE 4TH MERIS REPROCESSING Kathryn Barker, ARGANS Ltd; Jean-Paul Huot, ESA/ESTEC; Philippe Goryl, ESA/ESRIN; Susanne Kratzer, University of Stockholm; Davide D'Alimonte, Centre for Marine and Environmental Research (CIMA); Carolina Sá, Centro de Oceanografia Faculdade de Ciências da Universidade de Lisboa; Gerald Moore, Bio-Optika; Cedric Jamet, LOG-ULCO; Anu Reinart, Tartu Observatory; John Icely, SAGREMARISCO; Ludovic Bourg, ACRI-ST</p>	<p>2181</p>
<p>POLARIMETRIC IMAGING OF THE COASTAL OCEAN Jeffrey Bowles, Naval Research Laboratory; Deric Gray, Naval Research Laboratory; Daniel Korwan, Naval Research Laboratory; David Gillis, Naval Research Laboratory; Gia Lamela, Naval Research Laboratory; W Miller, Naval Research Laboratory</p>	<p>2222</p>
<p>IMAGING OF UNDERWATER TARGETS WITH POLARIMETRIC CAMERA Carlos Carrizo, The City College of New York/Optical Remote Sensing Lab; Amir Ibrahim, The City College of the City University of New York; Robert Foster, City College of New York</p>	<p>2120</p>
<p>FLUID LENSING & APPLICATIONS TO HIGH-RESOLUTION 3D SUBAQUEOUS IMAGING FROM AIRBORNE AND SPACE-BORNE PLATFORMS Ved Chirayath, Stanford University / NASA Ames Research Center</p>	<p>2297</p>
<p>NEW NUCLEIC DYES FOR PICO- AND NANOPANKTON CYTOMETRIC ANALYSIS Veronika Dashkova, Nazarbayev university; Einat Segev, Department of Microbiology and Immunobiology, Harvard Medical School; Viktor Khromov, Department of Hydrobiology, M.V. Lomonosov Moscow State University; Roberto Kolter, Department of Microbiology and Immunobiology, Harvard Medical School; Ivan Vorobjev, Department of Cell Biology and Histology, M.V. Lomonosov Moscow State University; Natasha Barteneva, PCMM, Harvard Medical School</p>	<p>2010</p>
<p>MEASUREMENT OF WATER LEAVING RADIANCES IN CLEAR AND TURBID WATERS Pravin Dev, Indian Institute of Technology Madras; Palanisamy Shanmugam, Indian Institute of Technology Madras</p>	<p>2057</p>
<p>FIELD MEASUREMENTS OF THE SPECTRAL PARTICULATE LIGHT BACKSCATTERING COEFFICIENT IN TURBID COASTAL WATERS: A NEW CORRECTION METHOD David Doxaran, LOV-CNRS; Edouard Leymarie, LOV UPMC-CNRS; Bouchra Nechad, RBINS/OD Nature; Kevin Ruddick, RBINS; Ana Dogliotti, Institute of Astronomy and Space Physics (IAFE); Els Knaeps, VITO; Pierre Gernez, IUML - Université de Nantes</p>	<p>2040</p>
<p>REMOTE-SENSING REFLECTANCE FROM ABOVE-SURFACE MEASUREMENTS: A REVISIT BASED ON A COUPLED OCEAN-ATMOSPHERE MODEL Keping Du, Beijing Normal University; ZhongPing Lee, University of Massachusetts at Boston</p>	<p>2063</p>
<p>DETERMINATION OF BACKSCATTERING COEFFICIENT OF INDIVIDUAL PHYTOPLANKTON CELLS FROM MEASUREMENTS OF CYTOSENSE CYTOMETER Lucile Duforêt-Gaurier, LOG ULCO; Natacha Guiselin, LOG CNRS; William Moutier, LOG ULCO; Xavier Mériaux, LOG ULCO</p>	<p>2102</p>
<p>NEW PHASE FUNCTION FOR IMPROVED INFORMATION RETRIEVAL FROM LIDAR AND OPTICAL INVERSION ALGORITHMS Georges Fournier, DRDC Valcartier Research Center; Violeta Sanjuan Calzado, CMRE; Charles Trees, CMRE</p>	<p>2059</p>
<p>OBTAINING RRS FROM MULTIPLE INSTRUMENT SYSTEMS Scott Freeman, NASA/GSFC; Jeremy Werdell, NASA Goddard Space Flight Center; Christopher Proctor, NASA Goddard Space Flight Center</p>	<p>2241</p>
<p>THE SAILBUOY REMOTELY-CONTROLLED UNMANNED VESSEL: MEASUREMENTS OF NEAR SURFACE TEMPERATURE, SALINITY AND OXYGEN CONCENTRATION IN THE GULF OF MEXICO Mahmud Hasan Ghani, Geophysical Institute; Lars Hole, Norwegian Meteorological Institute</p>	<p>2274</p>
<p>A RADIATIVE TRANSFER BASED APPROACH FOR VICARIOUS CALIBRATION, VALIDATION AND MONITORING OF THE RADIOMETRIC ACCURACIES OF CURRENT AND FUTURE OCEAN COLOR SATELLITE SENSORS Alex Gilerson, The City College of the City University of New York; Soe Hlaing, City College of New York; Robert Foster, City College of New York; Robert Arnone, University of Southern Mississippi; Sam Ahmed, The City College of the City University of New York</p>	<p>2266</p>

THURSDAY

<p>THE BOUSSOLE BIO-OPTICS TIME SERIES - NEW DEVELOPMENTS IN THE FRAME OF THE BIOCAREX PROJECT</p> <p>Melek Golbol, LOV UPMC CNRS; Vincenzo Vellucci, LOV UPMC-CNRS; David Antoine, Curtin University; Malika Kheireddine, LOV UPMC-CNRS; Emanuele Organelli, LOV UPMC-CNRS; Morvan Barnes, CNRS-LOV; Jacqueline Boutin, CNRS - LOCEAN; Liliane Merlivat, CNRS - LOCEAN; Laurence Beaumont, CNRS - DT INSU; Bernard Gentili, LOV-CNRS; Grigor Obolensky, LOV UPMC-CNRS</p>	2122
<p>PHYTOPLANKTON BLOOM PATTERNS IN THE BALTIC SEA FROM 18 YEARS OF SHIP-OF-OPPORTUNITY OBSERVATIONS</p> <p>Philipp Groetsch, VU Amsterdam / WaterInsight; Stefan Simis, Finnish Environment Institute SYKE; Marieke Eleveld, VU University Amsterdam; Steef Peters, WaterInsight</p>	2115
<p>POLARIMETRIC IMAGING OF TARGETS IN UNDERWATER ENVIRONMENT</p> <p>Yalong Gu, The City College of the City University of New York; Alex Gilerson, The City College of the City University of New York; Carlos Carrizo, The City College of New York/Optical Remote Sensing Lab; Parrish Brady, Section of Integrative Biology, University of Texas at Austin; Molly Cummings, Section of Integrative Biology, University of Texas at Austin; Sam Ahmed, The City College of the City University of New York</p>	2210
<p>A VERSATILE TOOL FOR RADIATIVE TRANSFER SIMULATIONS IN THE COUPLED ATMOSPHERE-OCEAN SYSTEM: INTRODUCING ACCURT</p> <p>Borge Hamre, University of Bergen; Snorre Stamnes, Stevens Institute of Technology; Jakob Stamnes, University of Bergen; Knut Stamnes, Stevens Institute of Technology</p>	2235
<p>UNDERWATER HYPERSPECTRAL IMAGING (UHI) FOR ENVIRONMENTAL MAPPING AND MONITORING OF SEABED HABITATS</p> <p>Ingrid Hansen, Ecotone AS; Ragnhild Pettersen, Ecotone AS and Akvaplan-niva; Frank Beuchel, Akvaplan-niva; Sabine Cochrane, Akvaplan-niva; Marianne Frantzen, Akvaplan-niva; Stefan Ekehaug, Ecotone AS; Ivar Erdal, Ecotone AS; Geir Johnsen, Norwegian University of Science and Technology; Lionel Camus, Akvaplan-niva and The Arctic University of Norway (UiT), Department of Engineering and Safety</p>	2061
<p>BIO-OPTICAL CHARACTERISATION OF BIOGEOCHEMICAL HOTSPOTS IN THE INDIAN OCEAN USING PROFILING FLOATS</p> <p>Nick Hardman-Mountford, CSIRO Marine and Atmospheric Research; Tom Trull, CSIRO Ocean and Atmosphere Flagship; Jim Greenwood, CSIRO Ocean and Atmosphere Flagship; Francois Dufois, CSIRO Ocean and Atmosphere Flagship; M. Ravichandran, INCOIS</p>	2147
<p>MEASUREMENTS AND ANALYSIS OF DIRECTIONAL EFFECTS AND POLARIZATION PROPERTIES OF SUSPENDED PARTICULATE MATTER (PHYTOPLANKTON AND INORGANIC MATTER). IMPLICATIONS FOR SATELLITE OCEAN COLOR OBSERVATIONS</p> <p>Tristan Harmel, LOV - Université Pierre et Marie Curie; MALIK CHAMI, LOV - Université Pierre et Marie Curie; François Roullier, LOV - Université Pierre et Marie Curie</p>	2008
<p>USE OF UNDERWATER HYPERSPECTRAL IMAGERY TO ENHANCE MAPPING OF SEAGRASS DISTRIBUTION IN ADELAIDE, SOUTH AUSTRALIA</p> <p>Charnsmorn Hwang, National Cheng Kung University; Chih-hua Chang, National Cheng Kung University; Long-Jeng Lee, Instrument Technology Research Center; Michael Burch, Australian Water Quality Centre; Milena Fernandes, Australia Water Quality Centre</p>	2167
<p>DOES CASCADE TROPICAL RESERVOIRS CHANGE LIMNOLOGICAL AND OPTICAL PROPERTIES? FIRST RESULTS FROM NOVA AVANHANDAVA AND BARRA BONITA RESERVOIRS (SÃO PAULO STATE BRAZIL).</p> <p>Nilton Imai, UNESP; Nilton Imai, UNESP; Fernanda Watanabe, UNESP; Thanan Rodrigues, UNESP; Luiz Rotta, UNESP; Enner Alcântara, UNESP</p>	2312
<p>THE USE OF UNDERWATER HYPERSPECTRAL IMAGING DEPLOYED ON REMOTELY OPERATED VEHICLES TO IDENTIFY, MAP AND MONITOR BIO-GEO-CHEMICAL OBJECTS OF INTEREST</p> <p>Geir Johnsen, Norwegian University of Science and Technology; Stefan Ekehaug, Ecotone AS; Ingrid Hansen, Ecotone AS; Asgeir Sørensen, NTNU</p>	2034
<p>UNCERTAINTY IN THE MARINE OPTICAL BUOY (MOBY) WATER-LEAVING PRODUCTS</p> <p>B. Carol Johnson, NIST; Dennis Clark, Space Dynamics Laboratory; Michael Feinholz, Moss Landing Marine Laboratories; Stephanie Flora, Moss Landing Marine Laboratories; Howard Gordon, University of Miami; James Mueller, San Diego State University Research Foundation; Albert Parr, Space Dynamics Laboratory; Kenneth Voss, University of Miami; Mark Yarbrough, Moss Landing Marine Laboratories</p>	2127

OPTICAL CLOSURE: ARE WE THERE YET? Katharina Lefering, University of Strathclyde; David McKee, University of Strathclyde	2027
PROVAL: A NEW ARGO PROFILER FOR HIGH QUALITY RADIOMETRIC MEASUREMENTS Edouard Leymarie, LOV UPMC-CNRS; Christophe Penkerch, LOV UPMC-CNRS; Herve CLAUSTRE, LOV UPMC-CNRS; David ANTOINE, Curtin University; Grigor OBOLENSKY, LOV UPMC-CNRS; Antoine Poteau, LOV UPMC-CNRS	2119
DETECTION ANGLE SELECTION FOR PRECISE TURBIDITY MEASUREMENT Hongbo Liu, Ocean College, Zhejiang University	2307
RETRIEVAL OF OPTICAL PROPERTIES USING UNDERWAY AND PROFILING HYPERSPECTRAL REMOTE SENSING REFLECTANCE IN OPTICALLY COMPLEX COASTAL WATERS Steven Lohrenz, University of Massachusetts Dartmouth; Ruiping Ma, University of Massachusetts Dartmouth	2035
POTENTIAL SOURCES OF WAVELENGTH DEPENDENT SCATTERING PHASE FUNCTIONS David McKee, University of Strathclyde; Jacopo Agagliate, University of Strathclyde; Steven Crossan, University of Strathclyde; Alex Nimmo-Smith, University of Plymouth; Emlyn Davies, SINTEF	2212
DETERMINATION OF THE ABSORPTION AND BACKSCATTERING COEFFICIENTS OF PHYTOPLANKTON AND MINERAL PARTICLES FROM REMOTE SENSING REFLECTANCE, AND QUANTIFICATION OF THE INFLUENCE OF THESE TWO PARTICLE CLASSES ON UNDERWATER LIGHT FIELDS Catherine Mitchell, University of Strathclyde; Alex Cunningham, University of Strathclyde	2045
BENTHIC UNDERWATER MICROSCOPE: A NOVEL TOOL FOR IN SITU MICRO-SCALE IMAGING Andrew Mullen, Scripps Institution of Oceanography; Tali Treibitz, University of Haifa; Jules Jaffe, Scripps Institution of Oceanography; Paul Roberts, Scripps Institution of Oceanography; Ben Laxton, Scripps Institution of Oceanography	2124
USING DATA FROM THE LISST-100 TO RECREATE PHYTOPLANKTON SIZE DISTRIBUTION AND PROCESSES IN HARPSWELL SOUND, MAINE Schuyler Nardelli, Bowdoin College; Collin Roesler, Bowdoin College	2179
INTEGRATED ENVIRONMENTAL MONITORING; A METHODOLOGICAL APPROACH TO OPTIMISE KNOWLEDGE GATHERING AND SAMPLING STRATEGY Ingunn Nilssen, Norwegian University of Science and Technology (NTNU) and Statoil ASA; Øyvind Ødegård, NTNU; Geir Johnsen, Norwegian University of Science and Technology; Asgeir Sørensen, NTNU; Jørgen Berge, University of Tromsø; Stein Nornes, Norwegian University of Science and Technology; Petter Norgren, Norwegian University of Science and Technology (NTNU); Ireen Vieweg, University of Tromsø	2054
PHOTOMOSAIC CAMERA AS SIMULTANEOUS DATA COLLECTOR AND NAVIGATION AID ON UNMANNED UNDERWATER VEHICLES Stein Nornes, Norwegian University of Science and Technology; Mauro Candeloro, Norwegian University of Science and Technology; Øyvind Ødegård, NTNU; Geir Johnsen, Norwegian University of Science and Technology; Asgeir Sørensen, NTNU	2100
IN SITU VALIDATION OF SUOMI JPSS VIIRS OCEAN COLOR IN COASTAL AND OPEN-OCEAN WATERS Michael Ondrusek, NOAA; Eric Stengel, NOAA	2192
SINGLE-PARTICLE OPTICS APPROACH IN STUDYING INHERENT OPTICAL PROPERTIES OF MINERAL PARTICLES AND OPTICAL VARIABILITY OF AQUATIC SYSTEMS Feng Peng, Upstate Freshwater Institute; Steven Effler, Upstate Freshwater Institute	2016
HIDING IN DRIFT WEED: EVALUATION OF SPECTRAL BACKGROUND MATCHING AND CRYPSIS IN SARGASSUM ASSOCIATED CRABS Brandon Russell, University of Connecticut; Heidi Dierssen, University of Connecticut	2286
OPTICS FROM FERRIES AS GROUND TRUTH FOR SATELLITE OCEAN COLOR PRODUCTS IN PUGET SOUND Brandon Sackmann, Integral Consulting Inc.; Christopher Krembs, Washington State Department of Ecology	2313
CHARACTERIZATION OF MARINE PARTICLES BASED ON MIE-LORENTZ AND T-MATRIX CODES AND A GENETIC ALGORITHM Albert-Miquel Sánchez, Institute of Marine Sciences (ICM-CSIC); Jaume Piera, Institute of Marine Sciences (ICM-CSIC); Eloy ZAFRA, Institute of Marine Sciences (ICM-CSIC)	2086

MODELING OF UNDERWATER AVERAGE COSINE IN CLEAR AND TURBID WATERS Arthi Simon , Indian Institute of Technology Madras; Palanisamy Shanmugam, Indian Institute of Technology Madras	2056
IN SITU MEASUREMENTS OF VOLUME SCATTERING FUNCTION AND LINEAR POLARIZATION PROPERTIES OF MARINE PARTICLES USING THE LISST-VSF INSTRUMENT Wayne Slade , Sequoia, Inc.; Yogesh Agrawal, Sequoia Scientific, Inc.; Ivona Cetinic, University of Maine	2260
SIMULTANEOUS RETRIEVAL OF AEROSOL AND MARINE PARAMETERS IN COASTAL WATERS Taddeo Ssenyonga , University of Bergen; Borge Hamre, University of Bergen; Oyvind Frette, University of Bergen; Knut Stamnes, Stevens Institute of Technology; Jakob Stamnes, University of Bergen	2311
WIDE-ANGLE SCATTERING MEASUREMENT AND INVERSION ALGORITHM FOR CHARACTERIZING SUSPENDED OIL DROPLETS IN NATURAL WATER Nicole Stockley , WET Labs; Michael Twardowski, WET Labs; James Sullivan, WET Labs; Xiaodong Zhang, University of North Dakota; Fraser Dalgleish, Harbor Branch Oceanographic Institution	2117
PROGRESS DEVELOPING AN ANALYTICAL MODEL TO DERIVE SUSPENDED PARTICULATE MATTER (SPM) CONCENTRATION IN NATURAL WATERS BY INVERSION OF OPTICAL ATTENUATION AND BACKSCATTERING Michael Twardowski , WET Labs	2033
SHADOWING CORRECTIONS OF BOUSSOLE RADIOMETRIC MEASUREMENTS Vincenzo Vellucci , LOV UPMC-CNRS; Edouard Leymarie, LOV UPMC-CNRS; Bernard Gentili, LOV-CNRS; David Antoine, Curtin University	2084
EXPERIMENTAL NLW AND LW PRODUCTS FROM THE MARINE OPTICAL BUOY (MOBY) Kenneth Voss , University of Miami; Dennis Clark, Space Dynamics Laboratory; Michael Feinholz, Moss Landing Marine Laboratories; Stephanie Flora, Moss Landing Marine Laboratories; Howard Gordon, University of Miami; B. Carol Johnson, NIST; James Mueller, San Diego State University Research Foundation; Mark Yarbrough, Moss Landing Marine Laboratories	2202
USING PROFILING BIOGEOCHEMICAL FLOATS AS MONITORS OF SLOPE TO BASIN FLUX PROCESSES Ian Walsh , Sea-Bird Scientific; David Murphy, Sea-Bird Scientific; Thomas Mitchell, Sea-Bird Scientific	2309
FILTER TECHNIQUE FOR MEASURING THE LIGHT ABSORPTION OF PHYTOPLANKTON - THE EFFECT OF THE PARTICLES' OPTICAL PROPERTIES ON THE PATH-LENGTH AMPLIFICATION Bozena Wojtasiewicz , Institute of Oceanography, University of Gdansk; Maciej Matciak, Institute of Oceanography, University of Gdansk; Adam Krezel, Institute of Oceanography, University of Gdansk	2188
THEORETICAL MODEL FOR NEAR-SURFACE UNDERWATER IRRADIANCE STATISTICS Zao Xu , MIT	2230
MODELLING COMPLEX OPTICAL MARINE SCENARIOS WITH A LOW-COST COMPUTATIONALLY HYPERSPECTRAL SIMULATOR Eloy Zafra , Institute of Marine Sciences (ICM-CSIC); Albert-Miquel Sánchez, Institute of Marine Sciences (ICM-CSIC); Elena Torrecilla, Institute of Marine Sciences (ICM-CSIC); Jaume Piera, Institute of Marine Sciences (ICM-CSIC)	2108
EXPLOITING LIDAR TO RETRIEVE PARTICLE DISTRIBUTIONS OF THE UPPER OCEAN Richard Zimmerman , Old Dominion University; Charles Sukenik, Old Dominion University; Victoria Hill, Old Dominion University	2030

FREE PERIOD | 5:00 PM – 7:00 PM

AWARDS BANQUET | 7:00 PM – 12:00 Midnight Maine Ballroom

Friday, October 31

PLENARY SESSION 8 | Introduction: Shawna Tazik, University of South Carolina

Maine Ballroom

9:30 AM – 10:15 AM **NEW INSIGHTS INTO PHYTOPLANKTON BLOOMS FROM MULTI-SCALE OBSERVATIONS WITH AUTONOMOUS FLOW CYTOMETRY** 2321
Heidi Sosik, Woods Hole Oceanographic Institution

ORAL SESSION 10 | Chair: Susanne Craig, Dalhousie University

Maine Ballroom

10:15 AM – 10:35 AM **MEASUREMENTS OF CDOM ABSORPTION SPECTRA USING DIFFERENT INSTRUMENTS AND TECHNIQUES: A ROUND ROBIN EXERCISE AND EXTENSIVE FIELD DATA SET** 2171
Michael Novak, NASA/Goddard Space Flight Center; Antonio Mannino, NASA/Goddard Space Flight Center; Richard Miller, East Carolina University; Joaquin Chaves, NASA; Scott Freeman, NASA/GSFC; Jean-Francois Berthon, ISPRA; Emmanuel Boss, University of Maine; Norman Nelson, UCSB; Jeremy Werdell, NASA Goddard Space Flight Center; Maria Tzortziou, NASA Goddard Space Flight Center; Carlos Del Castillo, Ocean Ecology Laboratory, NASA Goddard Space Flight Center; ANNICK BRICAUD, LOV CNRS-UPMC; Eurico D'Sa, Louisiana State University; Aimee Neeley, NASA Goddard Space Flight Center; Atsushi Matsuoka, Université Laval

10:35 AM – 10:55 AM **THE IMPACTS OF ADDING LIGHT ABSORPTION BY CHROMOPHORIC DISSOLVED ORGANIC MATTER (CDOM) TO THE SURFACE OCEAN IN THE GFDL CM2MC EARTH SYSTEM MODEL** 2240
Grace Kim, Johns Hopkins University; Anand Gnanadesikan, Johns Hopkins University; Carlos Del Castillo, Ocean Ecology Laboratory, NASA Goddard Space Flight Center

10:55 AM – 11:15 AM **TIGHT COUPLING BETWEEN AUTONOMOUS MEASUREMENTS OF PRIMARY PRODUCTIVITY, PARTICLE SIZE, EXPORT, AND SEQUESTRATION FLUX DURING THE NORTH ATLANTIC SPRING BLOOM** 2291
Nathan Briggs, University of Maine; Mary Jane Perry, University of Maine; Ivona Cetinic, University of Maine; Eric D'Asaro, University of Washington; Craig Lee, University of Washington; Eric Rehm, Université Laval

11:15 AM – 11:35 AM **INCORPORATING OPTICAL PROCESSES INTO PHYSICAL-BIOGEOCHEMICAL MODELS** 2123
Fei Chai, University of Maine; Curtis Mobley, Sequoia Scientific, Inc.; Peng Xiu, University of Maine

11:35 AM – 11:55 AM **DECADAL TRENDS IN GLOBAL PELAGIC OCEAN CHLOROPHYLL: A NEW ASSESSMENT COMBINING MULTIPLE SATELLITES, IN SITU DATA, AND MODELS** 2187
Watson Gregg, NASA Goddard Space Flight Center; Cecile S. Rousseaux, NASA Goddard Space Flight Center

CLOSING REMARKS | 11:55 AM – 12:15 PM

Maine Ballroom

11:55 AM – 12:15 PM **Susanne Craig** and **Jeremy Werdell**, OOX XIII Co-Chairs

OPTIONAL MICROBREWERIES TOUR | 1:30 PM – 5:30 PM

FRIDAY

