

Today's Agenda

- Paula Bontempi, if available, PACE Program Scientist
- Jeremy Werdell, PACE Project Scientist
- Quick introduction from me and Lorraine
- New Business
 1. First meeting logistics
 2. Science Team Introductions – how and when
 3. Telecon overview and scheduling
 4. Subgroup topics
 5. Website
 6. Synergies with other missions
 7. Resources to review
- Next telecon (potential Friday 3 April 2020, 1-2 pm EST)
 - Programmatic: Early Adopters and Applications (Erin Urquhart and Joel Scott)
 - Research: TBD, Volunteers?

Heidi Dierssen

Heidi Dierssen



Heidi Dierssen is Professor and head of the Coastal Ocean Laboratory for Optics and Remote Sensing (COLORS) jointly appointed in the Department of Marine Sciences and Geography at the University of Connecticut and currently a visiting scientist at Flanders Marine Institute (VLIZ). Dr. Dierssen received her B.S. and M.S. from Stanford University, her Ph.D. from the University of California Santa Barbara under the supervision of Raymond Smith, and was a postdoctoral researcher at Moss Landing Marine Labs and the Monterey Bay Aquarium Research Institute. Dr. Dierssen is an optical oceanographer who specializes in developing and using ocean color

imagery and data to map coastal habitats and assess carbon cycling to and from the benthos. She was recently a Fulbright Scholar who is developing methods and technology for hyperspectral remote sensing with colleagues in Belgium. Dr. Dierssen has helped formulate key programmatic questions and areas of future growth for national and international remote sensing programs including the International Ocean Colour Coordinating Group (IOCCG); NASA Ocean Biology and Biogeochemistry (OBB); the U.S. Naval Research Laboratory; and the National Academy of Science Space Studies Board, Committee on Earth Studies.

NASA Science Teams

NASA Science Mission Team Member for Interdisciplinary Research Programs:

1. Phytoplankton Aerosol Cloud and ocean Ecosystem (PACE) Satellite (2014-2018),
2. Earth Venture Coral Reef Ecosystem (CORAL) (2015-2018).
3. NSF/NASA O₂/N₂ Ratio and CO₂ Airborne Southern Ocean (ORCAS) Experiment (2014-2017),
4. Snow Water Imaging Spectrometer (SWIS) Hyperspectral Cubesat (2015-2017),
5. Airborne Portable Remote Imaging SpectroMeter (PRISM)(2010-2017),
6. HypIRI Satellite Team (2007-2016)
7. Southern Ocean Gas Exchange Experiment (2007-2009),
8. Moderate Resolution Imaging Spectrometer Mission (2004-2008).

Lorraine Remer

Research Professor (Physics Affiliate)

JCET Research Group: Climate & Radiation Laboratory

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Biography:

Lorraine Remer spent 21 years at the NASA Goddard Space Flight Center involved in the remote sensing of aerosol and the use of remote sensing data for the study of aerosols in climate processes, how aerosol particles affect clouds, aerosol transport and particulate air pollution. Her first position at Goddard in 1991 was in the role of a support scientist, employed by Science Systems and Applications, Inc. (SSAI), where she contributed to the development of the MODIS aerosol algorithms.

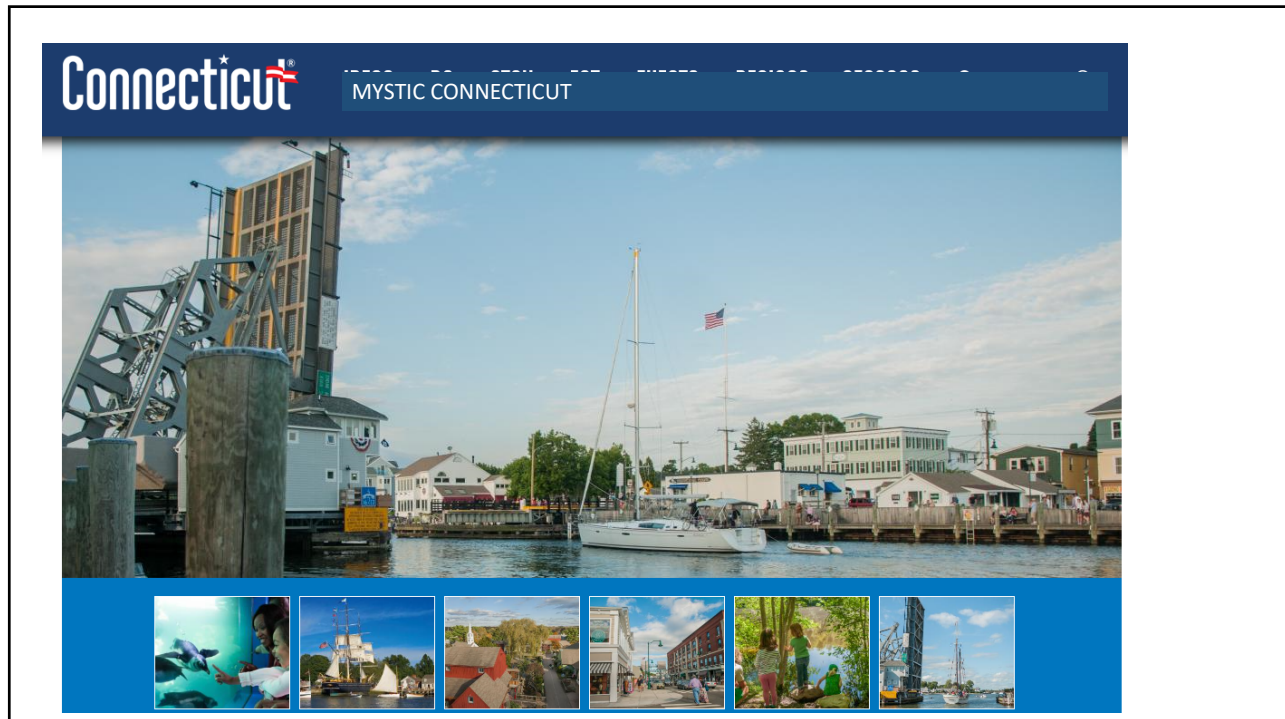
In 1998 Dr. Remer joined the Federal civil service, and in 2012 she left NASA to become a part of JCET. Dr. Remer has been a member of NASA's MODIS, CloudSat/CALIPSO, NPP, Glory and Global Aerosol Climatology Project Science Teams. She has contributed to the U.S. Climate Change Science Change Program (US CCSCP) and to the WMO International Task Force on Hemispheric Transport of Air Pollution (HTAP). She has contributed leadership to more than 12 major field experiments and has over 120 publications in the refereed literature. Her Ph.D. is from the University of California, Davis (U.C. Davis) in Atmospheric Science (1991).

Dr. Remer also has a M.S. in Oceanography from the Scripps Institution of Oceanography, University of California, San Diego and a B.S. in Atmospheric Science from U.C. Davis.



1. First Meeting Logistics

- Mystic CT and University of Connecticut
- Proposed 2-4 June 2020



Mystic CT

- Amtrak to Mystic, CT from New York and Boston airport
- Flights to Providence, RI (PVD) closest (45 min drive to mystic)
- Carpool to campus (15 min drive)
- Bike ~45 min to campus
 - Group rental possible
- Paddleboarding on Mystic River 😊



- Hotels \$100 and up
- Location:
 - Big box near highway 95
 - Smaller inns in town
- I could arrange group rate possibly

Hotel Name	Rating	Price (per night)
Hyatt Place Mystic	4.5/5 Wonderful (1,931 reviews)	\$125
Holiday Inn Express Mystic	4.4/5 Excellent (1,309 reviews)	\$177
The Taber Inne & Suites	4.3/5 Excellent (287 reviews)	\$134
The Whaler's Inn	4.6/5 Wonderful (411 reviews)	\$255
Hyatt Place Mystic	4.5/5 Wonderful (1,931 reviews)	\$125
Howard Johnson by Wyndham Mystic	3.9/5 Good (552 reviews)	\$101

But travel and logistics with COVID-19?

1. Continue with June meeting as planned
2. Make it a fully online 2-3 day meeting
3. Convene before/after Ocean Optics Conference in Norfolk, VA



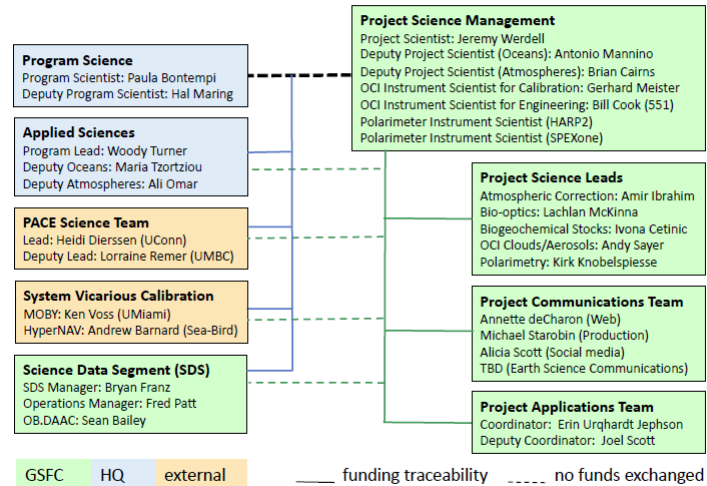
4. Move to Fall 2020 (also nice in CT)

2. Science Team Introductions

OPTIONS

1. Sending out a roster with PI names and projects. Save Personal Introductions until Team Meeting
2. If no Team meeting:
 - Add photos and bios and send around
 - Reserve a 90 min telecon for everybody to say hello and a few words about their role and projects

PACE Science Organization



3. Telecons

- Lorraine and I would like to keep the team together and not divide into oceans and atmosphere or color and polarimetry for main telecons
- Every 4-6 weeks we will have scheduled webex telecons
- Proposing Fridays 1-2 pm EST if that is possible.
- Format
 - 15-20 minutes - Points of Information
 - 15-20 minutes – Programmatic/Technical Presentation
 - 15-20 minutes – Research progress presentation

4. Working Subgroups

- We will need to discuss and come to some consensus on a variety of issues.
- Based on time and interest, we can work in smaller subgroups, make proposals and present to the whole for feedback.
- Seeking minimum best practices, but any group can go above and beyond and be individuals.

Science Data Product Selection Plan -
https://pace.oceansciences.org/documents_more.htm?id=1769

Contributors

Contributors provide algorithms and approaches, including related **documentation**, prototype software, and **performance metrics**, to produce standard and evaluation science data products. Contributors may include the PACE Project Science Team, competitively-selected PACE science team members, and collaborators in the international science and user community.

1. Approach and Implementation
 - a. Brief description of the product
 - b. Description of the algorithm and **implementation approach**, with references to any existing peer-reviewed literature for additional details
 - c. Hyperlinks to key software
2. **Assessment of product uncertainties**
 - a. Approach to estimating uncertainties
 - b. Current state of knowledge
3. Assessment of product quality
 - a. **Validation approach**
 - b. Table or hyperlink to results

5. Science Team Working Website

- Proposing to make a PRIVATE PACE Science Team website hosted UCONN
- Present dates of telecons and minutes from meetings
- Load presentations for those who miss a telecon
 - Not for public dissemination except with EXPLICIT permission from author
- Links to documents for consideration
- Links to documents for editing, etc...
 - Understand NASA has trouble using Google docs. Think about editing
- This will not be searchable and you will need to know the address
- Could make it password protected as well.

6. Resources

- Applications Plan -
https://pace.oceansciences.org/docs/pace_applications_plan_v1-2.pdf
- Vicarious Cal Plan (very incomplete) -
https://pace.oceansciences.org/documents_more.htm?id=1758
- Science Data Product Selection Plan -
https://pace.oceansciences.org/documents_more.htm?id=1769
- PACE Special Volume in Frontiers
 - Ebook
- International Ocean Colour Coordinating Group (IOCCG)
<https://ioccg.org/what-we-do/ioccg-publications/>
 - Reports
 - Protocols

https://pace.oceansciences.org/science_team.htm

PACE Science Team Accomplishments and Consensus Documents

- [A Novel Approach to a Satellite Mission's Science Team](#) (EOS Earth & Space Science News, 2018)
- [An Overview of Approaches and Challenges for Retrieving Marine Inherent Optical Properties from Ocean Color Remote Sensing](#) (Progress in Oceanography, 2018) [PDF \(1.1 MB\) ▶](#)
- [From the Satellite to the Earth's Surface's Studies Relevant to NASA's PACE Mission](#) (Frontiers Research Topics, 2018)
- [Polarimetry in the PACE Mission](#) [PDF \(2.1 MB\) ▶](#)
- [PACE Shortwave Infrared Bands Consensus Document](#) [PDF \(601 KB\) ▶](#)
- [PACE Inherent Optical Properties - Gaps Matrix](#) [PDF \(50 KB\) ▶](#)

SURFACE: STUDIES RELEVANT TO NASA'S PLANKTON AEROSOL CLOUD OCEAN

Research Topic

From the Satellite to the Earth's Surface: Studies Relevant to NASA's Plankton, Aerosol, Cloud, Ocean Ecosystems (PACE) Mission

Download Ebook PDF | Download Ebook EPUB

9 Articles | 69 Authors | Impact | Comments

18,067 VIEWS

About this Research Topic

Earth's atmosphere and oceans play individual and interconnected roles in regulating climate and the hydrological system, supporting organisms and ecosystems, and contributing to the well-being of human communities and economies. Recognizing the importance of these two geophysical fluids, NASA designed the ...

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		REPORT NUMBER 18
		CCG
An Affiliated Program of SCOR An Associate Member of CEOS		An Affiliated Program of SCOR An Associate Member of CEOS
<p><small>IOCCG (2019). <i>Uncertainties in Ocean Colour Remote Sensing</i>. Mélin F. (ed.), IOCCG Report Series, No. 18, International Ocean Colour Coordinating Group, Dartmouth, Canada. http://dx.doi.org/10.25607/OBP-696</small></p>		
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An Affiliated Program of SCOR An Associate Member of CEOS		An Affiliated Program of SCOR An Associate Member of CEOS
<p><small>IOCCG (2020). <i>Synergy between Ocean Colour and Biogeochemical/Ecosystem Models</i>. Dutkiewicz, S. (ed.), IOCCG Report Series, No. 19, International Ocean Colour Coordinating Group, Dartmouth, Canada. http://dx.doi.org/10.25607/OBP-711</small></p>		
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Next Telecon 3 April 2020 ?

Volunteers to present some research in progress?

Programmatic: Early Adopters and Applications (Erin Urquhart and Joel Scott)
 Research: TBD, Volunteers?

Early Adopters

The PACE Early Adopter program promotes applied science and applications research designed to scale and integrate PACE data into policy, business, and management activities that benefit society and inform decision making.

Who are Early Adopters?

PACE Early Adopters are groups and individuals who:

1. Have a direct, clearly-defined need for PACE ocean color, aerosol, cloud or polarimetry data;
2. Have an existing application or new ideas for novel PACE-related applications;
3. Currently work with application end user(s) and can describe their decision-making process;
4. Have an interest in utilizing a proposed PACE product; and
5. Can apply their own resources (personnel, tools, funding, facilities, etc.) to demonstrate the utility of PACE data for their particular system or model.

What are the Benefits of Becoming an Early Adopter?

- Opportunities to engage with the PACE Project
- Interaction with other members of the Early Adopter team
- Participation in PACE Applications Program workshops, focus sessions, and tutorials events
- Access to pre-launch simulated and proxy PACE data
- Updates on the PACE mission, science data products, and field campaigns