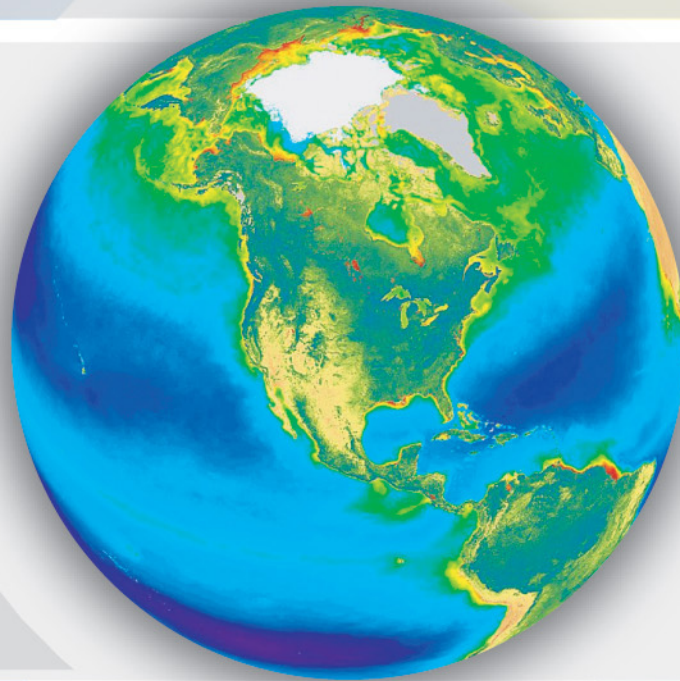
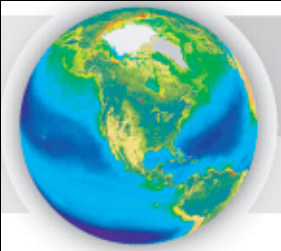


PACE SDT Introduction / Meeting Goals and Objectives



Paula Bontempi, Betsy Edwards, Hal Maring, Woody Turner
NASA Headquarters
PACE SDT Meeting
16-18 November 2011

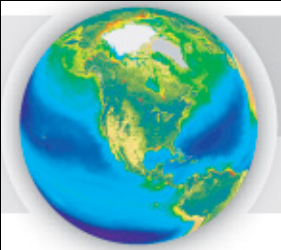




PACE Program Science

- **Paula Bontempi** (paula.bontempi@nasa.gov) -
Program Scientist
- **Betsy Edwards** (betsy.edwards@nasa.gov) - Program Executive
- **Hal Maring** (hal.maring@nasa.gov) -
Deputy Program Scientist
- **Woody Turner** (woody.turner@nasa.gov) - Applied Sciences
 - Ex officio members of the SDT
 - **Eric Ianson** – PE for missions in formulation





PACE SDT Members



Ocean Biology:

Antoine, David – LOV, France

Balch, Barney – Bigelow Lab

Behrenfeld, Mike – Oregon State Univ

Boss, Emmanuel- Univ of Maine

Del Castillo, Carlos* – Johns Hopkins – APL (Chair)

Franz, Bryan- NASA GSFC

Frouin, Robert – UCSD-SIO

Gregg, Watson – NASA GSFC

McClain, Chuck – NASA GSFC

Meister, Gerhard- NASA GSFC

Mitchell, Greg – UCSD-SIO

Muller-Karger, Frank – Univ of S. Florida

Siegel, David – UC-Santa Barbara

Wang, Menghua – NOAA NESDIS

Werdell, Jeremy- NASA GSFC (SSAI)

Atmosphere Aerosols & Clouds:

Cairns, Brian – NASA GISS

DaSilva, Arlindo – NASA GSFC

Diner, David – NASA JPL

Dubovik, Oleg – Univ. of Lille, France

Kahn, Ralph – NASA GSFC

Marshak, Sasha – NASA GSFC

Massie, Steve – NCAR

Platnick, Steve- NASA GSFC (Deputy Chair)**

Reidi, Jerome – Univ. of Lille, France

Atmosphere/Ocean:

Chowdhary, Jacek – NASA GISS

Terrestrial:

Huemmrich, K. Fred – NASA GSFC

Instrument

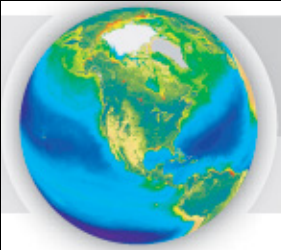
Engineering:

Puschell, Jeffery – Raytheon

Commercial Data Use:

McNaughton, Cameron – Golder Associates, Canada





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Unable to attend

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Instrument

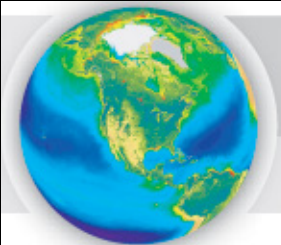
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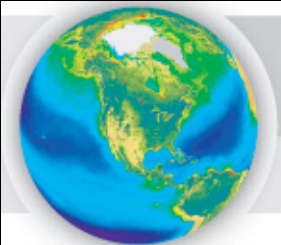




Pre-Aerosol, Cloud, ocean Ecosystem (PACE) mission

- 2010 - New Report - Responding to the Challenge of Climate and Environmental Change: NASA's Plan for a Climate-Centric Architecture for Earth Observations and Applications from Space
(<http://science.nasa.gov/earth-science/>)
- The Pre-Aerosol, Clouds, and ocean Ecosystem (PACE) mission will make new, global ocean color radiometry measurements essential for understanding ocean biology and ecology, and the carbon cycle and its relationship to climate change, along with polarimetry measurements to provide extended data records on clouds and aerosols (<http://dsm.gsfc.nasa.gov/PACE.html>)
- The PACE mission will extend key global climate data records based on SeaWiFS, MODIS heritage for ocean color, and begun by PARASOL, MODIS, and MISR for aerosols and clouds.
 - The 2007 IPCC identified the largest uncertainty in our understanding of physical climate as that due to aerosols and clouds.
 - New and continuing global observations of ocean ecology, biology, and chemistry are required to quantify aquatic carbon storage and ecosystem function in response to human activities and natural events. A key goal is the improvement of climate-carbon and climate-ecology model prediction. The blend of atmosphere and oceanic requirements is critical as ocean biology is affected by deposition of aerosols into the ocean, which produce aerosol precursors that influence climate.

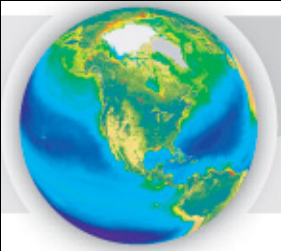




PACE Timeline

- Targeting LRD of FY19 (end 2018) - +/- 1yr
- 25 July 2011 – PACE SDT DCL released
- 9 September 2011 – PACE SDT DCL applications due (50)
- 18 October 2011 – PACE SDT Selection
- 16-18 November 2011– First PACE SDT Workshop (Washington, D.C.)
- March 2012 (tentative) – Second SDT workshop (Los Angeles or San Francisco, CA)
- June 2012 (tentative) – Third SDT workshop (New York City, NY or Boston, MA)
- July 2012 – SDT final report due
- August/September 2012 – Target AO release
- November 2012 – AO Proposals Due
- 2013 – ROSES Program element for PACE Science Team
- April 2013 – AO review
- July 2013 – AO Selection
- 1 October 2013 – Phase A begins for Selectees

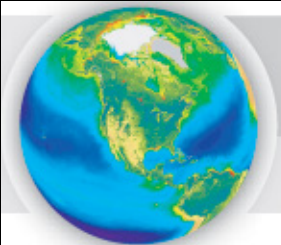




PACE SDT Approach

- Chair and Deputy Chair coordinate/Lead
- NOT advisory, input regarding mission science and potential applications reach
- Everything transparent and open for discussion
- Weekly telecons?
- Science writer/editor – working under contract to HQ - TBD
- Web site: <http://dsm.gsfc.nasa.gov/PACE.html>
 - Documents
 - Workshops/meetings – agendas, participants
 - Report?





Meeting Goals and Objectives

- Mission Science and Timeline – Climate Initiative and Management Overview
- Introduction of Science Definition Team and Chairs
- Tasking of the SDT and structure/production of a science report (Table of Contents)
- Guidance on writing science requirements
- CNES planning for polarimeter (University of Lille)
- Organization of the SDT Science and Tasks (Chair)
- Introduction of documents/reports/information from science community that might help
 - IOCCG Level 1 Requirements report
 - ACE STMs
- Discussion sessions to organize ocean, atmosphere, and ocean/atm science
- Summarize plan for developing/writing of PACE science report





Sample Table of Contents – Magnetospheric MultiScale mission (MMS)

- Executive Summary
- Introduction
- Science Objectives and Measurement Requirements
- Measurement Approach
- Instrumentation
- Phases of the Mission
- Spacecraft Separation Strategies
- Orbit and Flight
- Spacecraft
- Mission Lifetime and Reliability
- Mission Schedule

