PACE (first) Science Team

Emmanuel Boss, Lorraine Remer & the PACE-ST
UMaine, UMBC & many other places

PACE-ST Timeline

2014 – ROSES Program element for PACE Science Team
April 2014 – AO review
July 2014 – AO Selection
1 October 2014 – Phase A begins for Selectees

Reports from science team due ay HQ by September 2017:

1. Review of state of the art in inversion of Lw to IOPs.
2. Atmospheric correction for and atmospheric products from PACE.

Future:

2018: call for 2nd PACE-ST {2017-2020}

PACE (first) Science team - call

- Three year period.
- Theoretical and analytical studies focused on inherent optical properties (IOPs), and atmospheric correction (including aerosol and cloud retrievals).
- Remote sensing focus on hyperspectral radiometry and polarimetry.
- End-to-end knowledge: laboratory -> field, UV-> SWIR, Ocean-Color, aerosol and cloud algorithms.
- Open to international investigators and with three NASA staff members.
- Team leaders – coordinate, work to achieve consensus.

PACE (first) Science team - charge

- Provide a consensus report(s) outlining the path forward for producing operational algorithms for Atmospheric Correction and Inherent Ocean Properties (IOP) and on getting atmospheric products with PACE.

- Develop community-endorsed path forward for PACE sensor(s).

Membership PIs + associates

IOP

Steve Ackleson (+Moses)
Emmanuel Boss (Lead)
ZhongPing Lee (+Ondrusek)
Stephane Maritorena
Greg Michell (+Kahru)
Collin Roesler
Cecile Rousseaux (+Greg)
Dariusz Stramski
James Sullivan
Michael Twardowski
Maria Tzortziou (Applications)
Jeremy Werdell (NASA)
Xiaodong Zhang (+Slade)
Antonio Mannino (NASA)

Atmospheric correction

Jacek Chowdhary
Susanne Craig
Heidi Dierssen
Bryan Franz
(NASA,+Ibrahim,+Knobelspiesse)
Robert Frouin
Bo-Cai Gao
Olga Kalashnikova (+Davis,+Diner)
Ali Omar (NASA, Applications)
Steve Platnick (+Coddington)
Lorraine Remer (Co-Lead+ Martins)
Brian Cairns (NASA)
Zia Ahmad (NASA)
+Zhai, Zu, Levi, Meyer, Zhang, Xu, Seidel, Hosekamp,Van Diedenhoven

Community products

In-situ datasets – Cecile Rouseaux

Synthetic dataset – ZhongPing Lee

Comparison of absorption methodologies – Twardowski, Sullivan, Roesler, Stramski + colleagues

Applications – Maria Tzortziou & Ali Omar

Benchmark coupled ocean-atmosphere RT calculations – Jacek Chowdhary

Provide advice to NASA HQ

Polarimeter report: what capabilities should be required and what are desirable (for AC and for A, C & O science)?

Provided input on coastal camera for PACE.

Coordination with other hyperspectral missions

PHyG – monthly coordination/updates teleconferences between PACE (Boss, Werdell), Hyspiri (Turpie), Geo-CAPE (Mannino) and applications (Tzortziou).

Making sure we share rather than duplicate efforts (e.g. collection of data for algorithm development).

Parting words

This is a new kind of ST:

Includes atmospheric and ocean scientists working on common as well as disciplinary goals. Great for new science!

A lot of energy is put into community work, working on reports and including doing PR for PACE in particular and our science in general (including reviewing and providing material for web site ← check it, it is impressive).

Thank you