



International Ocean Vector Winds Science Team

May 2013

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NASA Headquarters
Washington, D.C.

Eric Lindstrom
NASA HQ 5/2013

NASA Physical Oceanography Program

1) Support missions on orbit: Jason, Jason-2 (altimetry), QuikSCAT (winds), Aquarius (sea surface salinity), GRACE (ocean gravity)

2) Support missions in development: Surface Water and Ocean Topography (SWOT), Jason-3 (altimetry), RapidSCAT (winds), Venture Class (ocean proposals)

3) Support “virtual missions”: Next Generation SST (GHRSSST), Atlantic Meridional Overturning Circulation (AMOC)

4) Support Climate Focus Area/Ocean

Observing: US CLIVAR, USGCRP, GOOS, GCOS, OOPC, GODAE OceanView,, NOAA COSC, IOOC, CEOS,



Funding for NASA PO – ROSES 13

- Sea Level Change (May)
- Terra and Aqua (May)
- Physical Oceanography R&A (June)
- Sea Surface Salinity Science Team (July)
- Ocean Vector Winds Science Team (October)
- SPURS Analysis and Synthesis (November)

- Ocean Surface Topography Science Team (new starts this month)



Science Teams

- Ocean Salinity (2013)
- Ocean Vector Winds (2014)
- Sea Surface Temperature (Rolling)
- Atlantic MOC (Rolling)

- SWOT Science Team (2016)
- Ocean Surface Topography (2016)

Evolution since last IOVWST

Program Planning Activities - NASA HQ

- Senior Review 2013 for QuikSCAT (in process)
- ROSES 2013 (US OVWST recompetition)
- Budget constraints (obligation/costing, sequestration)
- Decadal Survey (planning for DS2017)

Program Science Activities

- Continue to mature IOVWST (scope)
 - Research and Applications/Science and Operations
 - Number of data sources
- Seeking more synergy with other measured variables

Mission Activities

- QuikSCAT
- OSCAT
- ASCAT
- RAPIDSCAT on ISS
- AQUARIUS/SMOS/SMAP L-BAND winds

Eric Lindstrom – JAXA/JPL/ISRO discussions
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Senior Review 2013

Provides Guidance for ESD mission operations and data analysis budgets for next 2-4 cycle (2014-2017)

Remaining Schedule

- ~ May 2013 Senior Review Science Panel report
- ~ June 2013 ESD budget guidelines to missions
- ~ July 2013 Project responses to guidelines
- ~ September 2013 Final mission budgets established

Evolution of US OVWST



- **OVWST Re-compete in ROSES 13**
- **Proposals due 10/31/13 (NOI 6 Sept 2013)**
- **Similar size team with some newer topical foci (see announcement for details!). I expect more:**
 - **Science from the OVW climatology (ten years+)**
 - **Development/work on products from variety of sources**
 - **Science foreshadowing RapidSCAT availability**
 - **Synergy with other science teams (SST, Salinity, OSTST)**

Successful proposals will be implemented as grants through NASA Shared Services Center. Funding level similar to past announcements but larger uncertainty. (\$4M/yr advertised)

Decadal Survey 2017



- Community discussion and preparation has already begun (Water Cycle Workshop last week in Baltimore).
- Recall that the last DS called for community input via mission white papers
 - Should there be a strategy for US OVWST?
 - What activities in the coming year?
- In 2007 mission concept recommendations revolved around increased interdisciplinary synergies.

Building more science synergy



- Science team meetings as SOLE (Self-Organized Learning Environments)
 - What we get out is more than the sum of the individual funded projects.
- Over time can we develop more synergy with SST, SSS, and OSTST teams within Physical Oceanography (and others)?
 - SST Science Team meeting (28-31 Oct 2013)
 - L-Band winds (Aquarius/SMOS/SMAP)
 - NRT Ocean Product (CEOS Proposal under development)



Questions?

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BACKUP

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OVWST Organization

- Ernesto Rodriguez, QuikSCAT **Project Scientist**, JPL
- Mark Bourassa, OVWST **Team Leader**, FSU
- Robert Gaston, QuikSCAT Project Manager, JPL
- Eric Lindstrom, QuikSCAT and OVW Program Scientist, NASA HQ



Project Scientist

- The QuikSCAT Project Scientist is responsible for:
 - 1) Maintaining the set of science requirements for the QuikSCAT mission.
 - 2) Monitoring the scientific aspects of QuikSCAT that impact the overall mission cost, schedule, and performance.
 - 3) Serving as the primary representative of the 22 member science team within the JPL Quikscat Project.
 - 4) Working with the science community to define quantitative science requirements for future ocean vector winds measurements in light of QuikSCAT results.
 - 5) Acting as the single point of contact for the scientific representation and decisions required by the QuikSCAT Project and NASA.
 - 6) Tasking OVWST members and subgroups to address key technical issues as necessary.



Team Leader

- In close association with the JPL QuikSCAT Project Scientist, the Team Leader will have the following responsibilities in addition to his research activities:
 - 1) As necessary, author and coordinate the OVWST's corporate input with regard to Science Requirements related to NASA's ocean vector winds products;
 - 2) Coordinate with appropriate foreign and interagency partners (technical or scientific) to facilitate data access for OVWST science team members and scientific collaboration with like groups;
 - 3) Organize, plan, and chair Science Team meetings and author reports of the meetings;
 - 4) Organize, plan, and chair Ocean Vector Winds Special Sections at appropriate professional society meetings;
 - 5) Organize, plan, and solicit publication of OVWST results in special journal issues or sections of journals; and
 - 6) Assist NASA Headquarters Program Scientist to coordinate OVWST and Research and Analysis (R&A) program activities where synergistic and/or promising developments are possible.



OVWST Member Responsibilities

- 1) Deliver scientific breakthroughs and well-cited publications.
- 2) Report these results/publications to the QuikSCAT project and OVWST.
- 3) Attend and actively support science team meetings on a regular basis (generally one OVWST meeting and one specialized workshop per year).
- 4) Respond, as necessary, to requests from the Project Scientist and Team Leader for scientific and technical input.

Interagency/International (Lindstrom chair/co-chair)



- GOOS Steering Committee (2nd meeting March 2013)
- GODAE OceanView Patrons Group (Review and Symposium, Nov 2013)
- Interagency Ocean Observation Committee (IOOC)
- CEOS Ocean Surface Topography Virtual Constellation
- (A potential CEOS/GEO Project on NRT Oceanography – Under development).

Interagency/International (PO Program membership)



- Ocean Observation Panel for Climate
- CEOS Climate Working Group
- NOAA Climate Observing System Council
- Task Force on Ocean Exploration and Undersea Research Technology and Infrastructure (TFORT)
- Interagency Ocean Partnership Committee
- Oceans and Coasts Indicators Technical Team for the USGCRP National Climate Assessment