

Ocean Vector Winds

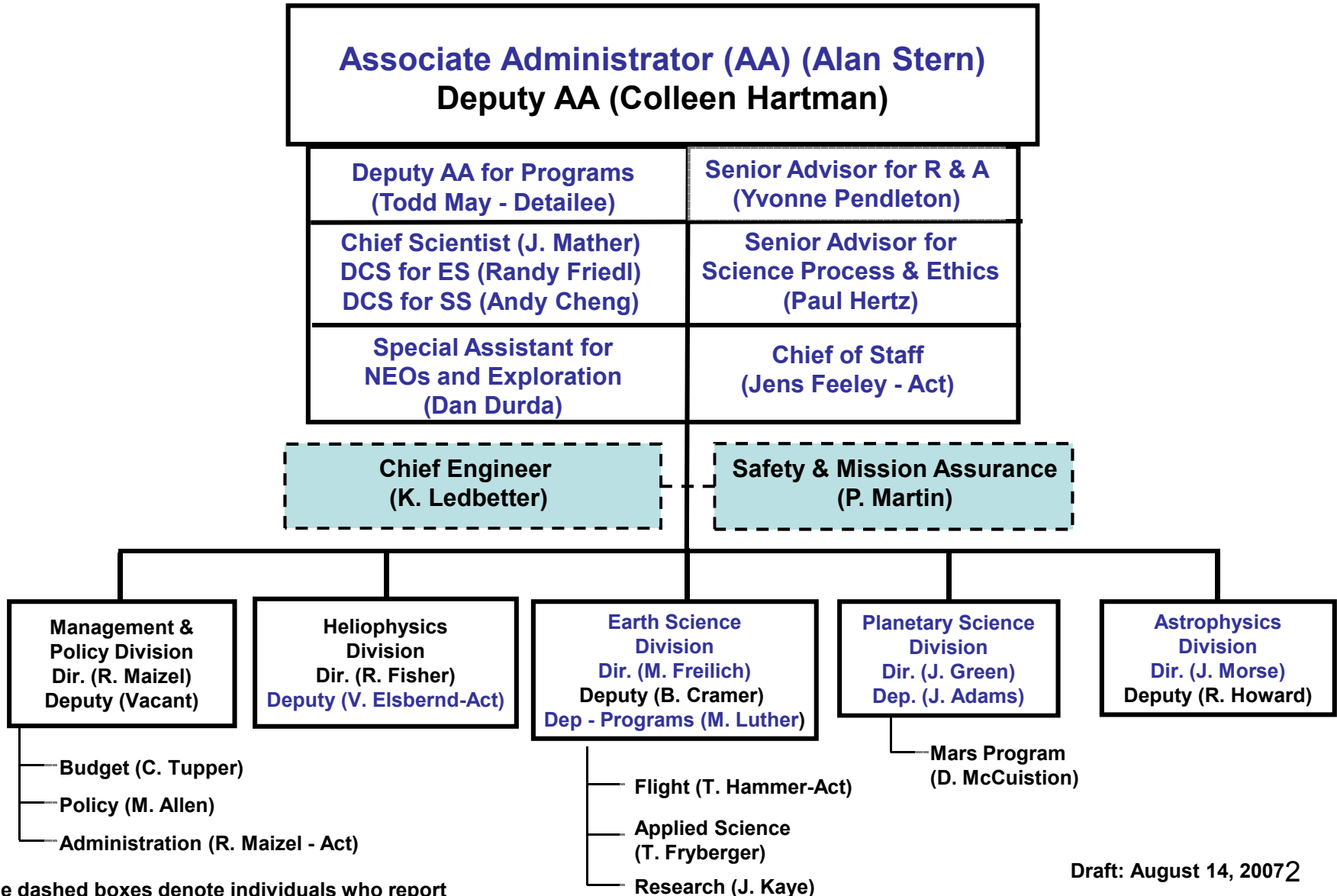
Science Team

September 2007

Dr. Eric Lindstrom
NASA Headquarters
Washington, D.C.

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NASA HQ

SMD Organization



Blue dashed boxes denote individuals who report to other organizations, but support SMD

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NASA Physical Oceanography Priorities

- 1) Support missions on orbit:** Jason (Altimetry), QuikSCAT (Winds)
- 2) Support missions in development:** Ocean Surface Topography Mission (Altimetry), Aquarius (Sea Surface Salinity)
- 3) Support next generation mission concepts:** Ocean Vector Winds, High Resolution Ocean Altimetry, Next Generation SST Products
- 4) Support Climate Focus Area:** Decadal Climate Variability, US CLIVAR, CCSP, GCOS, JCOMM
- 5) Support the National Oceanographic Partnership Program:** GODAE, CODAE, GHRSSST-PP

Evolution since last OVWST

- **NASA Imperatives**

- Decadal Survey/XOVW Studies
- Budget constraint
 - » Continued pressure on R&A funding
- Senior Review
 - » Results of 2007 review

- **Interagency Pressures**

- NPOESS Re-Scope
- **Ocean Action Plan** (Administration response to Ocean Commission Report - Dec 2004)
- Near-Term Priority on Atlantic Meridional Overturning Circulation

- **International Activities**


- ASCAT Commissioning

Results of Senior Review 2007

- Continuation of Quikscat recommended through FY11 (FY10-11 support contingent upon SR'09)

The Science panel observed that the scientific merit of QuikSCAT is very high, and recognizes the unique role the satellite plays as the only operating US mission providing high resolution ocean surface vector winds. The operations team has done an excellent job of streamlining the data processing to provide real time data to national operational users. The CoMRP observed that the data products are critical to the national needs, and noted that although single string in critical areas, the instrument continues to perform and provide quality data.


www.oceanmotion.org



Ocean Motion and surface currents

[Home](#) [Credits](#) [Help](#) [Standard View](#)

[Background](#) [Impact](#) [Gathering Data](#) [Researchers/Applications](#) [Data Resources](#) [Teachers](#) [Students](#) [Glossary](#)



What do you know about:

Navigation? [Quiz](#)

Coriolis force? [Quiz](#)

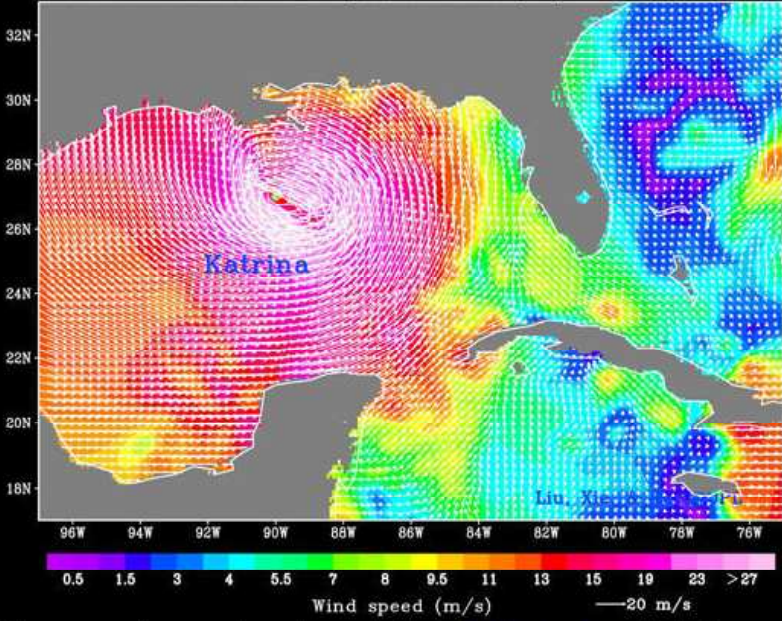
Satellites? [Quiz](#)

Ocean warming? [Quiz](#)

Energy balance? [Quiz](#)

Ocean gyres? [Quiz](#)

Hurricane Katrina Observed by QuikSCAT 09/29/2005 UTC 23:14-01:09



Wind speed (m/s) — 20 m/s

The ocean is a major player in the [Earth system](#). It is in constant motion. [Winds](#) drive currents on the ocean surface and these currents in turn mix down into the ocean depths. Data from buoys, drifters, and satellites such as [ocean color](#), [sea height](#), [temperature](#), and [winds](#), provide us with observations about the speed and direction of currents and about heat stored in the ocean, which help to predict global climate variations.

The QuikSCAT mission is intended to record sea-surface wind speed and direction data under all weather and cloud conditions over Earth's oceans. SeaWinds is the main instrument on the QuikSCAT satellite.

The SeaWinds scatterometer is providing unprecedented, frequent surface wind speed and direction measurements over the global oceans. Coupled with other satellite measurements of cloud patterns, water vapor and rain, the data are contributing to scientists' ability to predict the intensity, location and movement of hurricanes and other severe marine weather patterns.

[Background - Equatorial Currents](#)

[Gathering Data - QuikSCAT](#)

[Data Resources - Sea Surface Environment Visualizer](#)

[Background - Timeline : 1990 - 1999 A.D.](#)

Eric Lindstr
NASA HQ

OVWST Organization

- Ernesto Rodriguez, QuikSCAT **Project Scientist**, JPL
- W. Timothy Liu, OVWST **Team Leader**, JPL
- 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.