



International Ocean Vector Wind
Science Team Meeting
6-8 May 2013

The EUMETSAT
Network of
Satellite Application
Facilities



Monday May 6th: Morning

8:00 Poster boards ready for setup in Ballroom 2 (posters are up the whole meeting)

Talks will be in Ballrooms 3 and 4, which will be configured as one room

Introductory Session

Chair: Mark Bourassa

- 9:00 Introduction from the organizing committee
Mark Bourassa (FSU)
- 9:10 CEOS OSVW Virtual Constellation Update
Dr. Paul Chang (NOAA/NESDIS), Julia Figa and B.S. Gohil
- 9:30 NASA Programmatic Perspectives: Present Status and the Way Forward
Dr. Eric Lindstrom (NASA HQ)
- 9:50 ASCAT backscatter: Mission overview and current developments
Ms. Julia Figa Saldana (EUMETSAT)
- 10:10 Break & Poster Viewing (30 minutes)
- 10:40 Discussion (20 minutes)

First Results from OSCAT, HY2A and MetOp-B

Co-chairs: Lucrezia Ricciardulli and Marcos Portabella

- 11:00 Intercomparison of Three Ocean Vector Wind Products from OCEANSAT-2 Scatterometer
Professor Naoto Ebuchi (Hokkaido University)
- 11:15 Calibration and Validation of the Advanced Scatterometer on Metop-B
Dr. Craig Anderson (EUMETSAT), Julia Figa Saldana, and Julian Wilson
- 11:30 Tandem ASCAT winds and climatologies
Dr. Ad Stoffelen (KNMI), Anton Verhoef, Jeroen Verspeek, Jur Vogelzang and Tilly Driesenaar
- 11:45 Wind product developments for the ASCAT, OSCAT and HY2A scatterometer constellation
Dr. Ad Stoffelen (KNMI), Anton Verhoef, Jeroen Verspeek, Jur Vogelzang and Tilly Driesenaar
- 12:00 **Lunch (60 minutes) at Paddlers**

Monday May 6th: Afternoon

First Results from OSCAT, HY2A and MetOp-B (continued) Co-chairs: Lucrezia Ricciardulli and Marcos Portabella

13:00 Validation of GCOM-W1 geophysical product using in-situ ocean observation
Masahisa Kubota, Tsutomu Hihara, Atsushi Okuro, and Hiroyuki Tomita

13:15 Discussion (30 minutes)

Calibration/Validation and Climate Records

Chair: Craig Anderson and Doug Vandemark

13:45 Cross calibration between QuikSCAT and Oceansat-2
Dr. Sermsak Jaruwatanadilok (Jet Propulsion Laboratory), Bryan W. Stiles, and Alexander Fore

14:00 Production and Validation of QuikSCAT Climate Data Product, and Extension of Climate Data Record with OceanSat-2 at Jet Propulsion Laboratory
Dr. Alexander Fore (JPL), Bryan Stiles, Alexandra Chau, Brent Williams, Sermsak Jaruwatanadilok, R. Scott Dunbar, and Ernesto Rodríguez

14:15 Challenges of Integrating Multiple Scatterometer Observations into a Climate Data Record: The Effect of Diurnal Variability
Lucrezia Ricciardulli (Remote Sensing Systems), and Frank Wentz

14:30 Platform and Across Swath Comparison of Vorticity Spectra from QuikSCAT, ASCAT, and OSCAT Scatterometers
Heather Holbach (COAPS, Florida State University), and Mark A. Bourassa

14:45 C-band scatterometers inter-calibration: from ERS-1 to Metop-B
Anis Elyouncha (Royal Military Academy of Belgium) and Xavier Neyt

15:00 Break and Poster Viewing (30 minutes)

15:15 Towards An Improved ASCAT Wind Product Under Rain Conditions
Dr. Marcos Portabella (Instituto de Ciencias del Mar (ICM-CSIC)), Wenming Lin, Ad Stoffelen, Antonio Turiel, Anton Verhoef, and David Weissman

15:30 Comparisons of ocean surface wind speeds from CALIPSO, AMSR-E and CloudSat measurements
Dr. Yongxiang Hu (NASA Langley Research Center), Damien Josset and Sharon Rodier

15:45 Coincident, High Resolution Measurements of Ocean Surface Rain in Support of Improved ASCAT-Retrieved Winds
Dr. David Weissman (Hofstra University), T. Johnson, J.Wolf, M.Portabella, W.Lin, A.Stoffelen and A.Verhoef

16:00 On The Characteristics Of ASCAT Wind Direction Ambiguities
Dr. Wenming Lin (Institut de Ciències del Mar (ICM-CSIC)), Marcos Portabella, Ad Stoffelen, and Anton Verhoef

16:30 Detection of the Weakening Westerly Winds in the Pacific Ocean using Satellite-derived Wind Data Set/J-OFURO in Recent Decade
Dr. Kunio Kutsuwada (Tokai University), Suguru Kameda and Koh Kamemura

16:45 Discussion (30 minutes)

17:15 Close for the day

CEOS Dinner (12 people maximum)

Tuesday May 7th: Morning

8:00 Meeting space open

Oceanography

Co-chairs: Dmitry Dukhovskoy and Kathleen Dohan

9:00 Some thoughts on the resolution of satellite sampling patterns, with application to QuikSCAT
Dr. Tom Farrar (Woods Hole Oceanographic Institution), Michael Schlax, Dudley Chelton, and Theodore Durland

9:15 Toward the assimilation of multiple satellite vector wind data products in a global, eddying, ocean and sea ice model
Dr. Dimitris Menemenlis (Jet Propulsion Laboratory, California Institute of Technology), Hong Zhang, and David Moroni

9:30 Influence of group velocity on the relative distributions of equatorial wind forcing and oceanic response
Dr. Ted Durland (CEOAS, Oregon State University), and Dr. J. Thomas Farrar

9:45 Intraseasonal variability of sea surface height in the Bay of Bengal: Remote v.s local wind forcing
Professor Shang-Ping Xie (Scripps Institution of Oceanography), Xuhua Cheng, and Julian P. McCreary

10:00 Break & Poster Viewing (30 minutes)

10:30 Sensitivity of Ocean Processes in the Nordic Seas to Surface Winds Inferred from the 1/12° Arctic Ocean HYCOM-CICE
Dmitry Dukhovskoy (FSU COAPS), and Mark Bourassa

10:45 Poleward Shift of Southern Hemisphere Surface Westerly winds: New Insights into interactions between wind stress and the Antarctic Circumpolar Current
Dr. Lisan Yu (Woods Hole Oceanographic Institution)

11:00 Global Coastal Upwelling/Downwelling Estimates from SeaWinds
Dr. Steven Morey (COAPS/FSU)

11:15 Improving the Turbulence in Time-Dependent OSCAR Wind-Driven Surface Currents
Dr. Kathleen Dohan (Earth and Space Research)

11:30 Discussion (30 minutes)

12:00 **Lunch (1 hour) at Paddlers**

Tuesday May 7th: Afternoon

Surface Fluxes

Chair: Masahisa Kubota and Jim Edson

- 13:00 Impacts of Sea Surface Temperature Gradients and Surface Roughness Changes on the Motion of Surface Oil: A Simple Idealized Study
Dr. Yangxing Zheng (FSU-COAPS), Mark A. Bourassa, and Paul Hughes
- 13:15 New release of oceanic scatterometer and radiometer turbulent air-sea fluxes
Dr. Abderrahim Bentamy (IFREMER), S. Grodsky; K. Katsaros; A. Mestas-Nuñez; J. Hanafin; B. Blanke; and F. Desbiolles
- 13:30 25-Year Consistent Record of High-Resolution Satellite-based Ocean Surface Turbulent Heat and Momentum Fluxes
Dr. Lisan Yu (Woods Hole Oceanographic Institution), and Xiangze Jin
- 13:45 Estimating the active and total whitecap coverage globally using satellite-derived winds
Mr. Aaron Paget (COAPS, Florida State University), and Mark A. Bourassa
- 14:00 Discussion (30 minutes)

Future Missions

Co-Chairs: Naoto Ebuchi and Ad Stoffelen

- 14:30 The NASA EV-2 Cyclone Global Navigation Satellite System (CYGNSS) Mission (Invited)
Professor Christopher Ruf (University of Michigan)
- 14:50 Cyclone Global Navigation Satellite System (CYGNSS) Wind Retrieval Performance (Invited)
Professor Christopher Ruf (University of Michigan)

15:05 Break & Poster Viewing (30 minutes)

- 15:35 Global Change Observation Mission (GCOM) (Invited)
Professor Haruhisa Shimoda
- 15:55 The Scientific Goals of the RapidScat Mission (Invited)
Dr. Ernesto Rodriguez (JPL/CalTech)
- 16:15 ISS-RapidScat Mission, Instrument and Expected Performance (Invited)
Dragana Perkovic-Martin, Stephen L. Durden, Alexander Fore, Bryan W. Stiles, Gregory A. Sadowy, Simon A. Collins, Howard J. Eisen, Yuhsyen Shen (presented by Ernesto Rodriguez)
- 16:30 Wind Measurements from Combined Active and Passive L-Band Sensors
Dr. Thomas Meissner (Remote Sensing Systems), Lucrezia Ricciardulli, Frank Wentz
- 16:45 Discussion (30 minutes)
- 17:15 Close of day

GCOM-W2 Session (invitation only)

17:30 to 19:30

- 18:00 **Group Dinner** (cocktails at 18:00; dinner at 19:00)

Wednesday May 8th: Morning

8:00 Meeting space open

New Products

Co-chairs: Julia Figa-Saldana and David Long

9:00 Global 12-year Scatterometer Tropical Cyclone Wind Data Set from QuikSCAT and OceanSAT-2: Validation and Trends in Tropical Cyclone Intensity, Intensification, Size, and Shape
Dr. Bryan Stiles (Jet Propulsion Laboratory, California Institute of Technology), Alex G. Fore, Tsae-Pyng J. Shen, W. Lee Poulsen, Michael J. Brennan, and Svetla Hristova-Veleva

9:20 Cross-Calibrating OSCAT Land Sigma-0 to Extend the QuikSCAT Land Sigma-0 Climate Record
Professor David Long (Brigham Young University)

9:40 Intercomparison of C- and Ku-band scatterometer winds
Dr. Abderrahim Bentamy (IFREMER), Semyon A. Grodsky, Bertrand Chapron, James A. Carton

10:00 Break & Poster viewing (30 minutes)

10:30 Evaluation of modeled diurnally varying sea surface temperatures and the influence of surface winds
Ms. Rachel Weihs (COAPS), and Mark A. Bourassa

10:45 Towards a Climate Data Record of Ocean Vector Winds: The New RSS ASCAT
Dr. Lucrezia Ricciardulli (Remote Sensing Systems), Frank Wentz

11:00 A satellite surface wind product benefiting from boundary-layer physics
Professor Mark Bourassa (COAPS, Florida State University), Paul J. Hughes and David Moroni

11:15 Direct retrieval of stress from scatterometer measurement compared with stress derived from wind retrieval
Dr. W. Timothy Liu (Jet Propulsion Laboratory), Wenqing Tang and Xiaosu Xie

11:30 Discussion (30 minutes)

12:00 Lunch (1 hour) at Paddlers

Wednesday May 8th: Afternoon

Meteorology

Co-Chairs: Michael Brennan and Larry O'Neill

- 13:00 Operational Use of ASCAT-A, ASCAT-B, and OSCAT OVW in NOAA Ocean Prediction Center Operations
Mr. Joseph Sienkiewicz (NOAA Ocean Prediction Center), Gregory McFadden, Paul Chang, Zorana Jelenak
- 13:15 Status of Scatterometer Winds Assimilation at ECMWF
Dr. Giovanna De Chiara (ECMWF), Peter Janssen
- 13:30 The development of applying Metop-B/ASCAT to JMA global analysis
Mr. Masami Moriya (Japan Meteorological Agency)
- 13:45 Extratropical Cyclone Hurricane Force Winds
Dr. Zorana Jelenak (NOAA/NESDIS/STAR-UCAR), Paul S Chang; Joseph Sienkiewicz, Jerome Patoux, and Qi Zhu
- 14:00 National Hurricane Center Ocean Vector Wind Update
Dr. Michael J. Brennan (NOAA/NWS/NCEP National Hurricane Center)
- 14:15 Analysis of Co-located Synthetic Aperture Radar and QuikSCAT Neural-Net Surface Wind Vectors Retrieved in Tropical Cyclones
Ralph Foster (APL, University of Washington), Jerome Patoux, Bryan Stiles, Jochen Horstmann, Chris Wackerman, Roland Romeisser, Hans Graber, Mike Caruso
- 14:30 Estimating Winds from Synthetic Aperture Radar in Typhoon Conditions
Jochen Horstmann (Center for Maritime Research and Experimentation), C. Wackerman, R. Foster, M. Caruso, R. Romeiser, and H. Graber
- 14:45 Signatures of upscale and downscale energy transfer in the near-surface winds over the Tropical Pacific
Dr. Ad Stoffelen (KNMI), Dr. Gregory P. King, Dr. Jur Vogelzang
- 15:00 Break & Poster viewing (30 minutes)**
- 15:30 Dynamics and variability of surface wind speed and divergence over mid-latitude ocean fronts
Dr. Larry O'Neill (Oregon State University), Tracy Haack, and Simon de Szoeke
- 15:45 The Response of Surface Wind, Wind Stress and Pressure to SST Variability on Monthly to Seasonal Time Scales
Professor James Edson (University of Connecticut), Amanda Plagge and Doug Vandemark
- 16:00 Discussion (30 Minutes)
- 16:30 Wrap up Discussion (30 minutes)
- 17:00 End of day

Posters

New Products

ASCAT Spatial Response Function and Enhanced Resolution Processing
Professor David Long (Brigham Young University),

Construction and Validation of Gridded Data Sets of Global Surface Wind Field by Satellite Scatterometer
Mr. Suguru Kameda (Tokai University Graduate School of Marine Science and Technology), Kunio Kutsuwada

GMES-PURE: Shaping the marine GMES/COPERNICUS user requirements
Ms. Julia Figa Saldana (EUMETSAT), P. Gorringer, H. Bonekamp, G. Dybkjær, K. Nittis, P. Albert

Ocean Winds Team NRT satellite ocean winds processing system overview
Ms. Qi Zhu (NOAA)

A New Perspective on Uncertainty in the Cross-Calibrated Wind Vector Climate Data Record
David F. Moroni (JPL/Caltech), Mark Bourassa, and Paul Hughes

First Results from OSCAT, HY2A and MetOp-B

NOAA Scatterometer Ocean Surface Wind Vector Retrievals from the OceanSat-2 Mission
Dr. Seubson Soisuvann (NOAA/NESDIS-UCAR), Zorana Jelenak, Suleiman Alswiss, Paul Chang

Meteorology

A Kinematic Analysis of the MJO by Wind Partitioning
Dr. Jerome Patoux (University of Washington), Ángel Adames-Corraliza, Jérôme Patoux, and Ralph C. Foster

Scatterometer Representations of Wind Fields in the Coastal Ocean Along the U. S. West Coast
Professor P. Ted Strub (CEOAS, Oregon State University) and Corinne James

Long-Term Trends, and Lack of Climate Variability, in Upwelling Wind Relaxations off California
Professor Melanie Fewings (University of Connecticut – Avery Point), Libe Washburn, Clive E. Dorman, Christopher Gotschalk

Surface wind convergence near oceanic and atmospheric fronts: Comparison of QuikSCAT and WindSAT
Dr. Hiroki Tokinaga (IPRC/Univ. of Hawaii), Shang-Ping Xie

Estimation of Sea-Level Pressure Fields during Cyclone Nilam from Oceansat-2
Purna Chand Ch, M.V.Rao, I.V.Ramana, M.M.Ali, J Patoux, M.A.Bourassa

Contribution of Oceansat-2 to Vector Wind Constellation in Characterizing Diurnal Cycle
W. Timothy Liu (JPL & CalTech), Wenqing Tang, and Xiaosu Xie

Surface Fluxes

The Effects of Sea Surface Temperature Gradients on Surface Turbulent Heat Fluxes
Mr. John Steffen (FSU COAPS), Mark Bourassa and Mr. Paul Hughes

Oceanography

The Effects of Seasonal Wind on the Loop Current and Loop Current Eddy Shedding
Robert Nedbor-Gross (Florida State University Center for Ocean-Atmospheric Prediction Studies), Dr. Dmitry Dukhovshoy

Calibration/Validation and Climate Records

ASCAT backscatter: Mission overview and current developments
Ms. Julia Figa Saldana (EUMETSAT), C. Anderson, H. Bonekamp, J. Wilson, C. Duff, H. Bauch, and J. Miller