



International Ocean Vector Wind
Science Team Meeting
April 24-26, 2018



TUESDAY MORNING

8:15 Registration and poster set up (posters will be up for the whole meeting)

Programmatic Talks

Chair: Mark Bourassa

8:45 Welcome to Institute of Marine Sciences (ICM-CSIC)

5 m Marcos Portabella (ICM-CSIC)

8:40 Meeting Introduction

5 m Mark Bourassa (Florida State University)

8:55 Global Change Observation Mission (GCOM)

10m Haruhisa Shimoda (Tokai University)

9:05 The Ocean Surface Vector Wind Satellite Constellation: Status, Health and Future?

10 m Paul Chang (NOAA/NESDIS/Center for Satellite Applications and Research), Rashmi Sharma and Stefanie Linow

9:20 Update on NASA and Global Ocean Observing System (GOOS) Programs

15 m Nadya Vinogradova-Shiffer and Eric Lindstrom (NASA HQ) (Invited talk)

9:35 EUMETSAT Status Update

15 m Stefanie Linow (Invited talk)

Pre-break Poster Highlights (one minute and one slide summaries)

Chair: Mark Bourassa

9:51 Land Contamination Ratio (LCR) in ASCAT level 1b Products

1 m Craig Anderson (Eumetsat), Stefanie Linow

9:52 Sea surface model wind bias reduction with satellite scatterometer observations

1 m Francesco De Biasio (National Research Council of Italy), Stefano Zecchetto

9:53 Advanced RapidScat UHR Wind Retrieval and Ambiguity Selection

1 m David Long (Brigham Young University), Nolan Hutchings

9:55 Break and poster viewing (35 minutes)

Ocean Applications

Chair: Dmitry Dukhovskoy

10:30 Toward predicting the spatial pattern of mid-latitude marine heat waves based on the imprinting of regional wind anomalies

15 m Melanie Fewings (University of Connecticut), Kevin S. Brown, University of Connecticut

10:45 Characterizing Submesoscale Ocean Currents using a Doppler Scatterometer

15 m Ernesto Rodriguez (JPL/Caltech), Alexander Wineteer, Dragana Perkovic-Martin

11:00 Wind-driven circulation on the Arctic shelves

15 m Dmitry Dukhovskoy (COAPS FSU) and Mark Bourassa

11:15 Upwelling hot spot in the Southern California Bight

15 m Thomas Kilpatrick (Scripps Institution of Oceanography, UCSD), Shang-Ping Xie and Niklas Schneider

11:30 When Mixed Layers Are Not Mixed: Using Vector Wind Products to Evaluate Storm Recurrence and Upper Ocean Mixing

7 m Sarah Gille (Scripps Institution of Oceanography), Magdalena M. Carranza, Peter J. S. Franks, Kenneth S. Johnson, Robert Pinkel, James B. Girton

11:40 Discussion (20 minutes)

12:00 Lunch (90 minutes)

TUESDAY AFTERNOON

Rain-Related Topics

Co-Chairs: Bryan Stiles and Heather Holbach

- 1:30 Sensitivity of the Time-Mean Mid-Latitude Surface Circulation to Strong Storms
15 m Larry O'Neill (Oregon State University) and Ralph Milliff
- 1:45 A model-base assessment of the impacts of sampling differences on satellite-buoy wind consistency in convective regions
15 m Tong Lee (Jet Propulsion Laboratory, California Institute of Technology)
- 2:00 Rain Impact on SFMR Measurements
15 m Heather Holbach (FSU, NGI, NOAA/AOML/HRD), Bradley W. Klotz, Mark A. Bourassa
- 2:15 Improvements in the Version 2.0 RapidScat Ocean Vector Winds Climate Product
15 m Bryan Stiles (Jet Propulsion Laboratory), Alexander Fore, Lucrezia Ricciardulli, Alexander G. Wineteer, Svetla Hristova-Veleva, Ernesto Rodriguez, Frank Wentz, and David Long
- 2:30 Examining convective signatures in scatterometer data
15 m Timothy Lang (NASA MSFC), Piyush Garg, Georgios Priftis, Steve Nesbitt, Themis Chronis, Richard Lindsley
- 2:45 Examination of the Daily Modes of Wind Variability Near Tropical Convection
15 m Joe Turk (Jet Propulsion Laboratory), Svetla Hristova-Veleva
- 3:00 Correlating extremes in wind and stress divergence with extremes in rain over the Tropical Atlantic
7 m Gregory King (Institut de Ciencies del Mar (ICM - CSIC) and University of South Florida), Marcos Portabella, Wenming Lin, and Ad Stoffelen
- 3:10 Discussion (11 minutes)

Pre-break Poster Highlights (one minute and one slide summaries)

Chair: Mark Bourassa

- 3:21 Determination and use of the wind field from SAR in coastal areas
1 m Stefano Zecchetto (National Council of Researches, Institute of Atmospheric Sciences and Climate)
- 3:22 A Consistent Rain Flag for Ocean Vector Winds
1 m Bryan Stiles (Jet Propulsion Laboratory), Alexander Fore
- 3:23 A Web-Based Toolkit for Satellite-Derived Coastal Upwelling Analyses
1 m Steven Morey (Florida State University)
- 3:24 Offshore transport of coastal water in the California Current System due to winds and mesoscale eddies
1 m Caitlin Amos (University of Georgia), Renato M. Castelao
- 3:25 Validation of AMSR-2 Oceanic Environmental Data Records Using Tropical Cyclone Composite Fields
1 m Joe Sapp (NOAA/NESDIS/STAR), Suleiman Alsheiss, Zorana Jelenak, Paul Chang
- 3:27 Creating an extended and consistent ESDR of the ocean surface winds, stress and their dynamically-significant derivatives for the period 1999-2022: A MEaSURES proposal
1 m Dr. Svetla Hristova-Veleva (Jet Propulsion Laboratory), Mark Bourassa, Alexander Fore, Thomas Kilpatrick, David Moroni, Larry O'Neill, Ernesto Rodriguez, Bryan Stiles, Francis Turk, Douglas Vandemark, Shang-Ping Xie
- 3:28 Improvements in the climate data record of QuikSCAT and RapidScat as seen in the latest reprocessing.
1 m Svetla Hristova-Veleva (Jet Propulsion Laboratory), B. Stiles, L. Ricciardulli, A. Fore, A. Wineteer, E. Rodriguez
- 3:30 Break and poster viewing (40 minutes)**

TUESDAY AFTERNOON

Report from the Coastal Working Group and Discussion

Co-Chair: Melanie Fewings & Steve Morey

4:10 Summary of progress and issues (invited talk)

5 m Melanie Fewings

4:15 Improvements in the Version 4.0 QuikSCAT Ocean Vector Winds

10 m Bryan Stiles (Jet Propulsion Laboratory), Alexander Fore, Lucrezia Ricciardulli, Alexander G. Wineteer, Svetla Hristova-Veleva, Ernesto Rodriguez, Frank Wentz, and David Long

4:25 Discussion on Coastal Issues and Ways Forward (10 minutes)

ASCAT-Related Products and Updates

Co-Chairs: Ad Stoffelen

4:40 Cone Metrics for ASCAT

15 m Anton Verhoef (KNMI Royal Netherlands Meteorological Institute), Jeroen Verspeek (presenting), Maria Belmonte Rivas and Ad Stoffelen

4:55 Characterizing the differences between ASCAT and ECMWF reanalysis winds (ERAint, ERA5)

15 m Maria Belmonte Rivas (KNMI - Royal Netherlands Meteorological Institute) and Ad Stoffelen

5:10 Discussion (15 minutes)

5:25 End of 1st day

Dinner at restaurant Agua (19:30)

WEDNESDAY MORNING

8:15 Registration and poster set up

High Wind Speed and Surface Stress (Part 1)

Co-Chairs: Jim Edson and Federica Polverari

8:45 Evaluating several key issues in satellite wind stress validation

7 m Doug Vandemark (Univ. of New Hampshire), James Edson and Marc Emond

8:53 Scale-dependence of observed wind stress response to ocean- mesoscale surface temperatures

15 m Niklas Schneider (University of Hawaii)

9:08 SMAP Radiometer-Only Tropical Cyclone Intensity and Size

7 m Alexander Fore (Jet Propulsion Laboratory), Simon Yueh, Wenqing Tang, Bryan Stiles, Akiko Hayashi

9:15 Extreme Wind Speed Measurements from NASA's SMAP L-Band Radiometer

15 m Thomas Meissner (Remote Sensing Systems), Lucrezia Ricciardulli, Frank Wentz, Andrew Manaster, Charles Sampson

9:30 Validation of scatterometer and radiometer high winds using oil platform anemometers

15 m Lucrezia Ricciardulli (Remote Sensing Systems), Andrew Manaster, Thomas Meissner

Pre-break Poster Highlights (one minute and one slide summaries)

Chair: Mark Bourassa

9:46 Quantifying the Effect of Rain-Induced Sub-Footprint Scale Variability on the RapidScat Ku-band NRCS

1 m David Weissman (Hofstra University)

9:47 Detailed investigation of the role of buoy wind errors in buoy- scatterometer disagreement

1 m Michael Schlundt (WHOI), J. Tom Farrar; James B. Edson; Sebastien Bigorre; Doug Vandemark; Marc Emond

9:48 The influence of in situ wind measurements on CCMP winds.

1 m Carl Mears (Remote Sensing Systems), Lucrezia Ricciardulli and Frank Wentz

9:49 Preliminary study of ScatSat-1 OVW assimilation in JMA's global NWP system

1 m Masami Moriya (Japan Meteorological Agency)

9:50 Break and poster viewing (40 minutes)

High Wind Speed and Surface Stress (Part 2)

Co-Chairs: Jim Edson and Federica Polverari

10:30 Scatterometer, Radiometer and Altimeter Observations of High Wind Events - Tropical Cyclones

15 m Zorana Jelenak (NOAA/NESDIS/STAR-UCAR), Seubson Soisuvam, Joe Sapp, Faozi Said, Qi Zhu and Paul S. Chang

10:45 C-band High and Extreme Force Speeds (CHEFS)

15 m Ad Stoffelen (KNMI), Alexis Mouche, Marcos Portabella, Wenming Lin, Federica Polverari, Gerd-Jan van Zadelhoff, Paul Chang, Zorana Jelenak, Joseph Sapp, Jean-Raymond Bidlot, and Mark Bourassa

11:00 Towards a consolidated wind reference for assessing scatterometer high and extreme-force wind capabilities

15 m Federica Polverari (Institut de Ciencies del Mar (ICM - CSIC)), Wenming Lin, Joe Sapp, Marcos Portabella, Ad Stoffelen, Alexis Mouche, Gerd-Jan van Zadelhoff, Anton Verhoef, Jos De Kloe, Paul Chang, Zorana Jelenak, Jean-Raymond Bidlot, and Mark Bourassa

11:15 Discussion (45 minutes, Facilitated by Jim Edson)

12:00 Lunch (90 minutes)

WEDNESDAY AFTERNOON

Atmosphere and Ocean Coupling

Co-Chairs: Larry O'Neill

- 1:30 Time and length scales of upper ocean response to winds
15 m Kathleen Dohan (Earth and Space Research)
- 1:45 Air-Sea Coupling and Fluxes: Wind-Wave-Current in High-Impact Weather and Implications for Earth System Modeling and Prediction
15 m Shuyi Chen (Department of Atmospheric Sciences, University of Washington), Milan Curcic, Benjamin Barr, Brandon Kerns
- 2:00 Coupling ocean currents and waves with wind stress over the Gulf Stream
7 m Mark Bourassa (COAPS & EOAS, Florida State University), Qi Shi
- 2:08 Discussion (30 minutes)

Doppler Scatterometry Products and Updates

Chair: Ernesto Rodriguez

- 2:40 Measuring Ocean Vector Winds with a Ka-Band Pencil Beam Doppler Scatterometer
15 m Alexander Wineteer (JPL), Ernesto Rodriguez, Dragana Perkovic- Martin and Bryan Stiles
- 2:55 Summary of the Winds and Currents Mission Workshop
15 m Mark Bourassa (Florida State University), Ernesto Rodriguez and Sarah Gille
- 3:10 EPS-SG SCA Doppler capability
7 m Ad Stoffelen (KNMI) and Peter Hogeboom
- 3:07 Discussion of Doppler Scatterometry (18 minutes)

Pre-break Poster Highlights (one minute and one slide summaries)

Chair: Mark Bourassa

- 3:24 Investigating the Effects of Sea Spray on Surface Wind Stress and Waves under Hurricane Conditions
1 m Renee Richardson (Florida State University) and Mark Bourassa
- 3:25 The Role of Oceanic Processes in the Initiation of Indian Summer Monsoon Intraseasonal Oscillations over the Indian Ocean
1 m Jason West (University of Colorado Boulder), Weiqing Han, Yuanlong Li
- 3:26 Detailed investigation of the role of buoy wind errors in buoy-scatterometer disagreement
1 m Michael Schlundt (WHOI), J. Tom Farrar; James B. Edson; Sebastien Bigorre; Doug Vandemark; Marc Emond
- 3:27 Comparison of Cross-Polarized C-band Airborne Scatterometer and Spaceborne SAR Measurements of the Sea Surface in High Winds
1 m Joe Sapp (NOAA/NESDIS/STAR), Alexis Mouche, Zorana Jelenak, Paul Chang, Steve Frasier
- 3:28 Observational Analysis of Extratropical Cyclone Interactions with Northeast Pacific Sea Surface Temperature Anomalies
1 m Briana Phillips (Oregon State University), Larry O'Neill
- 3:29 ASCAT UHR Processing Enhancements
1 m David Long (Brigham Young University), Jordan Brown, and Harrison Garrett

3:30 Break and poster viewing (40 minutes)

CFOSAT and FengYun-3E Products and Updates

Chair: Marcos Portabella

- 4:10 System Characteristics Design of WindRadar on FengYun-3E Meteorological Satellite
15 m Honggang Yin
- 4:25 Simulation of Wind Performance in Tropical Cyclone for China's Future Dual-frequency Scatterometer WindRAD
15 m Fangli Dou (National Satellite Meteorological Center), Honggang Yin, and Jian Shang
- 4:40 Assessment of the CFOSAT Scatterometer Backscatter and Wind Quality
15 m Wenming Lin (School of Marine Sciences, Nanjing University of Information Science and Technology), Xiaolong Dong, Marcos Portabella, Xing-ou Xu, Di Zhu, Zhixiong Wang, and Yijun He
- 4:55 Wind Field Retrieving for Scat Onboard CFOSAT Based On PCA Method
15 m Xingou Xu (The Key Laboratory of Microwave Remote Sensing, NSSC, CAS) and Xiaolong Dong
- 5:10 CFOSAT Level 1B simulator and wind processor retrieval result comparison with WindRad
15 m Zhen Li (Royal Netherlands Meteorological Institute) and Ad Stoffelen
- 5:25 Discussion of CFOSAT (15 minutes)

5:40 End of 2nd day

THURSDAY MORNING

8:15 Registration

Meteorological Applications

Co-Chairs: TBD

8:30 Temporal and spatial variability of Wind Intensifications assessed from scatterometers

15 m Isabel Monteiro (IPMA - Portuguese Institute for the Sea and the Atmosphere), Jur Vogelzang, KNMI- Royal Netherlands Meteorological Institute

8:45 Mesoscale wind data assimilation

15 m Ad Stoffelen (KNMI), Gert-Jan Marseille and Jur Vogelzang

9:00 Modulation of diurnal winds in the tropical oceans

15 m Donata Giglio (University of California San Diego), Bruce D Cornuelle, Devon M Northcott, Sarah T Gille

9:15 Degradation of the scatterometer wind data probably due to ships

10 m Stefano Zecchetto (National Council of Researches, Institute of Atmospheric Sciences and Climate) and Francesco De Biasio

9:25 QNSE Theory of Turbulence in Rotating Fluids and the Nastrom & Gage Spectrum

15 m Boris Galperin (University of South Florida)

9:40 Discussion (15 minutes)

9:55 Break and poster viewing (35 minutes)

Climate Data Record Development and Analysis

Co-chairs: Ad Stoffelen and Lucrezia Ricciardulli

10:30 Report from Climate and Applications working (Invited talk)

15 m Frank Wentz and Ad Stoffelen

10:45 Intercalibration of the C-band scatterometer record using cone metrics

15 m Maria Belmonte Rivas (KNMI), A. Stoffelen, A. Verhoef, J. Verspeek and J. Vogelzang

11:00 Ku Band geophysical model functions and SST

15 m Ad Stoffelen (KNMI), Zhixiong Wang and Jur Vogelzang

11:15 SST impact on RapidScat and QuikSCAT measurements

15 m Lucrezia Ricciardulli (Remote Sensing Systems) and Frank Wentz

11:30 Discussion on Climate Data Record Development and Analysis (30 minutes)

12:00 Lunch (90 minutes)

THURSDAY AFTERNOON

ScatSAT-1 Products and Updates

Co-Chairs: Jur Vogelzang

- 1:30 On the development of geophysical model functions for Ku-band scatterometer wind retrievals: SCATSAT-GMF
15 m Zhixiong WANG (Nanjing University of Information Science and Technology), Ad Stoffelen, Anton. Verhoef, HE Yijun, ZHANG Biao, LIN Wenming and Marcos Portabella
- 1:45 Calibration, Validation and Status of OSI SAF ScatSat-1 products
15 m Anton Verhoef (KNMI Royal Netherlands Meteorological Institute), Jeroen Verspeek and Ad Stoffelen
- 2:00 SCATSAT-1 Calibration and Data Quality
15 m Alexander Fore (Jet Propulsion Laboratory), Bryan Stiles, Sermsak Jaruwatanadilok, and Ernesto Rodriguez
- 2:15 Discussion of ScatSAT-1 (15 minutes)

Global Navigation Satellite System Products and Updates

Co-Chairs: Wenming Lin

- 2:30 GNSS-R ocean properties by Delay Doppler Map stare processing
15 m Giuseppe Grieco (Koninklijk Nederlands Meteorologisch Instituut (KNMI)), Ad Stoffelen, Marcos Portabella, Maria Belmonte Rivas and Wenming Lin
- 2:45 Validation of CYGNSS winds using microwave scatterometers/radiometers
15 m Lucrezia Ricciardulli (Remote Sensing Systems), Thomas Meissner, Frank Wentz
- 3:00 Comprehensive Analysis of CYGNSS Wind Products
15 m Zorana Jelenak (NOAA/NESDIS/STAR-UCAR), Faozi Said, Seubson Soisuvann, Paul S Chang
- 3:15 Discussion of GNSS (15 minutes)
- 3:30 Break and Poster viewing (40 minutes)**

COWVR and Other Products and Updates

Co-Chairs: Thomas Meissner

- 4:10 Evaluation of COWVR as a Cost-Effective Sensor for Ocean Vector Winds and Other Air-Sea Variables
15 m Frank Wentz (Remote Sensing Systems), Lucrezia Ricciardulli, Thomas Meissner, Carl Mears
- 4:25 A novel azimuth cut-off implementation to improve sea surface wind retrievals from SAR images
15 m Marcos Portabella (Institute of Marine Sciences (ICM-CSIC)), Valeria Corcione, Giuseppe Grieco, Ferdinando Nunziata, Maurizio Migliaccio
- 4:30 Latest Datasets and Services at the PO.DAAC
7 m David Moroni (Jet Propulsion Laboratory)
- 4:37 Discussion (13 minutes)

End of Meeting Wrap-up

Co-Chairs: Mark Bourassa

- 4:50 End of meeting discussion (30 minutes)

5:20 End of Meeting

POSTERS PRESENTATIONS AND TIMES FOR ONE-MINUTE HIGHLIGHT PRESENTATION
(Posters will be up throughout the meeting)

Coastal Applications **(1 m talks on Tuesday)**

- 3:21 Determination and use of the wind field from SAR in coastal areas
1 m Stefano Zecchetto (National Council of Researches, Institute of Atmospheric Sciences and Climate)
- 3:23 A Web-Based Toolkit for Satellite-Derived Coastal Upwelling Analyses
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Meteorological Applications **(1 m talks on Tuesday)**

- 3:24 Offshore transport of coastal water in the California Current System due to winds and mesoscale eddies
1 m Caitlin Amos (University of Georgia), Renato M. Castelao

Climate Data Record Development and Analysis **(1 m talks on Tuesday)**

- 3:25 Validation of AMSR-2 Oceanic Environmental Data Records Using Tropical Cyclone Composite Fields
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New Products and Applications **(1 m talks on Tuesday)**

- 3:27 Creating an extended and consistent ESDR of the ocean surface winds, stress and their dynamically-significant derivatives for the period 1999-2022: A MEaSURES proposal
1 m Dr. Svetla Hristova-Veleva (Jet Propulsion Laboratory), Mark Bourassa, Alexander Fore, Thomas Kilpatrick, David Moroni, Larry O'Neill, Ernesto Rodriguez, Bryan Stiles, Francis Turk, Douglas Vandemark, Shang-Ping Xie
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1 m Carl Mears (Remote Sensing Systems), Lucrezia Ricciardulli and Frank Wentz

Meteorological Applications **(1m talk Wednesday)**

- 9:49 Preliminary study of ScatSat-1 OVW assimilation in JMA's global NWP system
1 m Masami Moriya (Japan Meteorological Agency)

Current and Future Ocean Vector Wind Mission Updates **(1m talk Wednesday)**

- 3:27 Comparison of Cross-Polarized C-band Airborne Scatterometer and Spaceborne SAR Measurements of the Sea Surface in High Winds
1 m Joe Sapp (NOAA/NESDIS/STAR), Alexis Mouche, Zorana Jelenak, Paul Chang, Steve Frasier

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- 3:28 Observational Analysis of Extratropical Cyclone Interactions with Northeast Pacific Sea Surface Temperature Anomalies
1 m Briana Phillips (Oregon State University), Larry O'Neill

Waves, Currents and Ice**(1m talk Wednesday)**

- 3:29 ASCAT UHR Processing Enhancements
1 m David Long (Brigham Young University), Jordan Brown, and Harrison Garrett