2022 IOVWST Meeting

Start times for discussions are
11 PM JDT, 7:30 PM IST, 4 PM CEST, 3 PM BST, 10 AM EDT, 7 AM PDT, 4 AM HST

April 12th 10:00 AM to 11:30 AM ET
10:00 2022 Meeting kick off
5 m Mark Bourassa and Stefanie Linow

Session: Discussion of Satellite Missions to Measure Winds and Currents
Session Chairs: Sarah Gille and TBD
10:05 An Instrument for Measuring Winds and Currents
5 m Ernesto Rodriguez and Alexander Wineteer
10:10 Science priorities for a winds and currents mission
5 m Sarah Gille
10:15 Navy Applications
5 m Gregg Jacobs and TBD
10:20 NOAA Applications
5 m Paul Chang and TBD
10:25 Impact of Dynamic Coupling from Currents to Wind Stress over the Gulf Stream
5 m Jackie May (Naval Research Laboratory - Stennis Space Center, MS) and Mark Bourassa
10:30 Wind and Current Coupling: Large Impacts but Large Uncertainties
5 m Lionel Renault
10:35 Update on the Harmony and SeaStar Missions
5 m Ad Stoffelen
10:40 Group Discussion
11:30 Close of meeting

Winds and Currents Asynchronous Presentations (Posters)

Difficulty and partial success in diagnosing cross-equatorial surface currents from satellite: Yanai-mode tropical instability waves
Shang-Ping Xie (UC San Diego)

Wind and Wave Effects on Surface Currents from Doppler Scatterometry
Ernesto Rodriguez (Jet Propulsion Laboratory, California Institute of Technology), J. Tom Farrar, Paul Siqueira, Max Adam, James Edson, Anthony Kirincich

Ocean Current Gradients Modify the Atmosphere
Mark A. Bourassa and Jackie May

On The Characterization of The Ka-Band Ocean Surface Backscatter Using Doppler Scatterometer Measurements From The Air-Sea Interaction Tower Experiment
Federica Polverari (Jet Propulsion Laboratory, California Institute of Technology), Alexander Wineteer, Ernesto Rodriguez, Dragana Perkovic-Martin, Paul Siqueira, J. Thomas Farrar, J. Max Adam, James Edson

Impact of Ocean Currents on Wind Stress in the Tropical Indian Ocean
Neethu Chacko, Meer M Ali and Mark A Bourassa

April 19th 10:00 AM to 11:30 AM ET

Session: Mission Updates

Session Chairs: Mark Bourassa

10:00 TBD
8 m Nadya Vinogradova Shiffer
10:08 Status of EUMETSAT scatterometer missions
8 m Stefanie Linow (EUMETSAT), Narges Khosravi, Craig Anderson, Marc Cloarec
10:16 Compact Ocean Wind Vector Radiometer Mission Status
5 m Shannon Brown (Jet Propulsion Laboratory), Mary Morris and Amarit Kitiyakara
10:21 Update on Oceansat-3
5 m Raj Kumar-Sharma

Session: Tropical Cyclones

Session Chairs:Heather Holbach and Ralph Foster

10:27 Next Generation Hurricane Boundary Layer Observations During The 2021 Hurricane Season By IWRAP
8 m Paul Chang (NOAA/NESDIS/STAR), Zorana Jelenak, Joe Sapp, Jim Carswell, Casey Shoup, Qi Zhu, Steve Frasier, Steve Guimond
10:35 Physics of the Ocean-Atmosphere Coupling in Extreme Winds
8 m Stephen Guimond (UMBC and NASA/GSFC), S. Sroka, D. Protzko, J. Sapp, Z. Jelenak and P. Chang
10:43 Assessment of Saildrone extreme wind measurements in Hurricane Sam using MW satellite sensors
8 m Lucrezia Ricciardulli (Remote Sensing Systems), Gregory Foltz (NOAA/AOML), Andrew Manaster (RSS), Thomas Meissner (RSS)
10:51 Towards a Theory of Turbulence Spectra of Tropical Cyclones
8 m Boris Galperin (College of Marine Science, University of South Florida), Alexander K. Nickerson, Gregory P. King, Jun A. Zhang, and Semion Sukoriansky
10:59 Estimating Boundary Layer Eddy Viscosity in Tropical Cyclones from Synthetic Aperture Radar Images
8 m Ralph Foster (Applied Physics Laboratory, University of Washington), Alexis Mouche, Bertrand Chapron

Session: Coastal Applications

Session Chairs: Melanie Fewings and Marcos Portabella

11:07 Marine Heat Waves in the Chile-Peru Current System: Role of Sea-Surface Physical Processes in Mixed-Layer Temperature Changes
5 m Melanie Fewings (Oregon State University), Kylene M. Cooley, James A. Lerczak, Larry A. O'Neill, and Kevin S. Brown
11:12 Toward Coincident Winds and Currents with Coastal HF Radar
9 m Brian Emery (UCSB Marine Science Institute), and Anthony Kirincich
11:21 QuikSCAT radar cross section correction for improved coastal winds retrieval
9 m Giuseppe Grieco (Institute of Marine Sciences - CNR), Ad Stoffelen, Jur Vogelzang, Anton Verhoef, and Marcos Portabella
11:30 Close of oral session

Mission Update Asynchronous Presentations (Posters)

Latest Status of the AMSR Series
Naoto Ebuchi, Misako Kachi, Rigen Shimada, Eri Yoshizawa, Hideyuki Fujii, Keiichi Ohara, Marehito Kasahara, Kazuya Inaoka, and Yasushi Kojima

The status of OSCOM mission
Xiaolong Dong

Tropical Cyclone Asynchronous Presentations (Posters)

Estimation of tropical cyclone location and intensity using HY-2B scatterometer data
Wenming Lin (Nanjing University of Information Science and Technology), Siqi Liu, Marcos Portabella, Carla Chevillard

Global L-band Observatory for Water Cycle Studies (GLOWS): L-band Active/Passive Ocean Observations
Professor David Long (Brigham Young University), Rajat Bindlish, Giovanni De Amici, Jeffrey R. Piepmeier, and Mark Bailey

Operational SFMR Algorithm Update: Rain Impacts
Heather M. Holbach (COAPS, Florida State University)

Coastal Applications Asynchronous Presentations (Posters)

In situ measurements of short wave directional spectra in an open shelf coastal environment: finding the lower bound for radar-based wind extraction methods.
Anthony Kirincich (Woods Hole Oceanographic Institution), Brian Emery, University of California at Santa Barbara

NOAA ASCAT Near Real-Time Coastal Winds
Paul Chang (NOAA/NESDIS/STAR), Seubson Soisuvarn, Zorana Jelenak, Qi Zhu

A land-corrected ASCAT coastal wind product
Jur Vogelzang (KNMI), Ad Stoffelen

April 26th 10:00 AM to 11:30 AM ET

Session: Discussion of new Wind-Related Products and Calibration
Co-Chairs: Federica Polverari and

10:00 Creating an extended and consistent ESDR of the ocean surface winds, stress and their dynamically-significant derivatives for the period 1999-2022 - a MEaSUREs-funded project: A subset of new products now available to the IOVWST
5 m Svetla Hristova-Veleva (Jet Propulsion Laboratory, California Institute of Technology), B. Stiles, A. Fore, A. Wineteer, D. Moroni, M. Bourassa, D. Vandemark, L. O'Neill, T. Kilpatrick, S. Asharaf, E. Wright, X. Xie, F. J. Turk, M. Emond, P. P. Li, B. Knosp, Q. Vu, J. Jacob, F. Polverari, P. Callahan, R. S. Dunbar, E. Rodriguez
10:05 Rain Contamination Corrected ScatSAT Ocean Wind Vector Product
5 m Bryan Stiles (Jet Propulsion Laboratory), Alexander Fore, Alexander Wineteer, and Svetla Hristova-Veleva
10:10 Recent Update on Operational Use of Scatterometer Winds in JMA's Mesoscale NWP System
5 m Yusuke Ioka (Japan Meteorological Agency)
10:15 Development of a 11-year ERA* high resolution ocean forcing dataset
5 m Evgeniia Makarova (Institute of Marine Sciences (ICM-CSIC)), Ana Trindade, Giuseppe Grieco, Marcos Portabella, Rianne Giesen, Ad Stoffelen, Anton Verhoef
10:20 Inter-calibration of scatterometers and radiometers under extreme wind conditions using NOAA hurricane hunter flight data
5 m Alberto Rabaneda (Barcelona Expert Centre (BEC), Institute of Marine Sciences (ICM-CSIC)), Marcos Portabella, Giuseppe Grieco, Federica Polverari, Ad Stoffelen, Joseph Sapp, Zorana Jelenak, Paul Chang
10:25 Improved Rain Screening Methods for Advanced Quality Control and Wind-Rain Estimation Models for Ku-band Wind Scatterometry (pdf)
5 m Xingou Xu (Chinese Academy of Sciences), Ad Stoffelen, Anton Verhoef and Ke Zhao
10:30 Estimating Sea Surface Local Wind Variability from ASCAT-derived information
5 m Wenming Lin (Nanjing University of Information Science and Technology), Marcos Portabella
10:35 A look at v1.2 NOAA CyGNSS wind retrieval performance through the use of tropical cyclone composite imagery
5 m Faozi Said (National Oceanic and Atmospheric Administration/Global Science & Technology), Zorana Jelenak, Paul S. Chang
10:40 Intercalibration of HY-2/SCAT and MetOp/ASCAT scatterometer winds
5 m Zhixiong Wang (NUIST), Juhong Zou, Qian Feng, Wenming Lin, Ad Stoffelen
10:45 Intercalibration of the Virtual Scatterometer Constellation
5 m Ad Stoffelen (KNMI), Jeroen Verspeek, Anton Verhoef, Zhen Li, with help from CGMS OSW TG / CEOS OSVW VC
10:50 Group Discussion

Related Asynchronous Presentations (Posters)

Compact Ocean Wind Vector Radiometer Mission Current Calibration Status
Dr. Sidharth Misra (JPL CalTech), Maryam Salim, Jinzheng Peng, Jeffrey Piepmeier, Shannon Brown

Tropical Cyclone Inner-Core Structure Enhancement in Scatterometer Data with 2DVAR
Weicheng Ni (The Royal Netherlands Meteorological Institute (KNMI)), Ad Stoffelen, Jur Vogelzang, Kaijun Ren

The Cross-Calibrated Multi-Platform (CCMP) Analysis Version 3.0
Carl Mears (Remote Sensing Systems), Tong Lee, Susan Wijffels and Frank Wentz

New dual frequency rotating fan-beam scatterometer WindRAD status
Zhen Li (knmi), Ad Stoffelen, Anton Verhoef

Triple collocation analysis of 4D wind observations
Federico Cossu (Institute of Marine Sciences (ICM-CSIC)), Marcos Portabella, Wenming Lin, Ad Stoffelen, Jur Vogelzang, Gert-Jan Marseille, Siebren de Haan

Three decades of global trends in microwave backscatter correlates with urban building volume and city-level GDP
Steve Frolking (University of New Hampshire), Richa Mahtta, Tom Milliman, Karen C. Seto

An analysis of Antarctica as a target for first order cross-calibration between QuikSCAT, OSCAT, and ASCAT
Nathan Porter (Brigham Young University) and David G. Long

Calibration of the ERS scatterometer wind product with NOC and cone metrics
Jeroen Verspeek (KNMI Royal Dutch Meteorological Institute), Ad Stoffelen, Anton Verhoef

Developing a Simultaneous Wind and Rain Geophysical Model for OSCAT
Benjamin Fogg (Brigham Young University) and David G. Long

Using Vorticity Spectra to Compare Noise Characteristics from Scatterometer Based Wind Records
Ethan Wright (COAPS - Florida State University), Mark Bourassa

Involving Ocean Vector Wind Products in Undergraduate Education
Aaron Paget (Concord University)

Evaluation of blended wind products and its implications for off-shore wind power estimation
Tong Lee (Jet Propulsion Laboratory), Carl Mears, Xiaochun Wang

Calibration Drift in AMSR-2 Brightness Temperatures: The Effect on Wind Speed and SST
Frank Wentz (Remote Sensing Systems), Andy Manaster, Richard Lindsley

AMSR-2 All-weather Wind Speed Product
Suleiman Alsweiss (Global Science & Technology, Inc.), Zorana Jelenak, Paul S. Chang

PO.DAAC Data in the Cloud: Access, Services, and Available Data
David Moroni (JPL)

May 3rd 10:00 AM to 11:30 AM ET

Session: Boundary-layer processes
Co-Chairs: Bia Villas Boas and Larry O'Neill

10:00 Global identification of atmospheric surface layer stratification states through the imprint of boundary layer coherent structures on the sea-surface roughness
5 m Justin Stopa (The University of Hawaii at Manoa), Chen Wang, Douglas Vandemark, Ralph Foster, Alexis Mouche, Bertrand Chapron
10:05 Wind drift in a homogeneous equilibrium sea
5 m Roger Samelson (CEOAS, Oregon State University)
10:10 Wind work at the air-sea interface: A modeling study in anticipation of future space missions
5 m Hector Torres (JPL,Caltech), Patrice Klein, Jinbo Wang, Alexander Wineteer, Bo Qiu, Andrew Thompson, Ernesto Rodriguez, Dimitris Menemenlis, Hong Zhang, Ehud Strobach, Mar Flexas, and Dragana Perkovic-Martin
10:15 Tropical Oceanic Cold Pools in High-Resolution Cloud Resolving Model Compared with Satellite Scatterometers
5 m Piyush Garg (Argonne National Laboratory, Lemont IL), Stephen W. Nesbitt, University of Illinois Urbana-Champaign; Timothy J. Lang, NASA MSFC; George Priftis, University of Alabama Huntsville
10:20 Annual Modulation of Diurnal Winds in the Tropical Oceans
5 m Donata Giglio (University of Colorado Boulder), Sarah T. Gille, Bruce D. Cornuelle, Aneesh C. Subramanian, F. Joseph Turk, Svetla Hristova-Veleva, Devon Northcott
10:25 Analysis of Ocean Wind Vector Divergence And Vorticity Co-Variability In The Pacific Ocean Through Steady State Ekman Balance
5 m Robert Jacobs (Oregon State University), Larry O'Neill
10:30 Anchoring of the Gulf Stream Convergence Zones by the storm track and sea surface temperatures
5 m Niklas Schneider (University of Hawai'i at Mānoa), Ryusuke Masunaga, Bruce Cornuelle, Larry O'Neill, Thomas Kilpatrick, Masami Nonaka, Justin Small and Shang-Ping Xie
10:35 Impact of Boundary Layer on Biomass Burning Aerosol Transportation in Coastal Regions within Tropics
5 m Georgrios Priftis (University of Alabama in Huntsville), Udayshankar Nair, Timothy J. Lang
10:40 Group Discussion

Related Asynchronous Presentations (Posters)

The impact of surface oil on ocean surface winds
Yangxing Zheng (Florida State University, USA), Mark A. Bourassa, Daneisha Blair

Analysis of Surface Heat Flux Anomalies to Understand Recent Northeast Pacific Marine Heatwave Events
Yi-Wei Chen (Oregon State University) and Larry O'Neill

Log-Profile Analysis of the Near-Surface Layer and Air-Sea Turbulent Fluxes in Hurricanes using Dropsondes
Daniel Wallace (EOAS & COAPS, Florida State University), Mark A. Bourassa, and Heather M. Holbach

Variability in atmospheric circulation over the Bering Sea and its impact on air-sea heat fluxes
Emily Hayden (Oregon State University), and Larry W. O'Neill

Extratropical cyclones fundamentally shape the maritime wind climatology
Larry O'Neill (Oregon State University), Ralph Milliff and Dudley Chelton

Influence of Surface Current on Vertical Distribution of Potential Vorticity Flux
Xu Chen (Florida A&M University), William Dewar, Eric Chassignet, Mark Bourassa, and Steve Morey

Impact of Boundary Layer on Biomass Burning Aerosol Transportation in Coastal Regions within Tropics
Georgrios Priftis (University of Alabama in Huntsville), Udayshankar Nair, Timothy J. Lang

Correlating extremes in wind divergence with extremes in rain over the Tropical Atlantic
Gregory P. King, Marcos Portabella, Wenming Lin, and Ad Stoffelen

Observing Oceanic Plastic with ASCAT Ultra High Resolution Backscatter
Harrison Garrett (Brigham Young University) and David G. Long

Summary of Asynchronous Presentations (Posters)

New Products and Applications

Compact Ocean Wind Vector Radiometer Mission Current Calibration Status
Dr. Sidharth Misra (JPL CalTech), Maryam Salim, Jinzheng Peng, Jeffrey Piepmeier, Shannon Brown

Tropical Cyclone Inner-Core Structure Enhancement in Scatterometer Data with 2DVAR
Weicheng Ni (The Royal Netherlands Meteorological Institute (KNMI)), Ad Stoffelen, Jur Vogelzang, Kaijun Ren

The Cross-Calibrated Multi-Platform (CCMP) Analysis Version 3.0
Carl Mears (Remote Sensing Systems), Tong Lee, Susan Wijffels and Frank Wentz

Preliminary Wind Retrieval Result from WindRad Scatterometer
Zhen Li (knmi), Ad Stoffelen, Anton Verhoef

Triple collocation analysis of 4D wind observations
Federico Cossu (Institute of Marine Sciences (ICM-CSIC)), Marcos Portabella, Wenming Lin, Ad Stoffelen, Jur Vogelzang, Gert-Jan Marseille, Siebren de Haan

Three decades of global trends in microwave backscatter correlates with urban building volume and city-level GDP
Steve Frolking (University of New Hampshire), Richa Mahtta, Tom Milliman, Karen C. Seto

An analysis of Antarctica as a target for first order cross-calibration between QuikSCAT, OSCAT, and ASCAT
Nathan Porter (Brigham Young University) and David G. Long

Calibration of the ERS scatterometer wind product with NOC and cone metrics
Jeroen Verspeek (KNMI Royal Dutch Meteorological Institute), Ad Stoffelen, Anton Verhoef

Developing a Simultaneous Wind and Rain Geophysical Model for OSCAT
Benjamin Fogg (Brigham Young University) and David G. Long

Using Vorticity Spectra to Compare Noise Characteristics from Scatterometer Based Wind Records
Ethan Wright (COAPS - Florida State University), Mark Bourassa

Involving Ocean Vector Wind Products in Undergraduate Education
Aaron Paget (Concord University)

Evaluation of blended wind products and its implications for off-shore wind power estimation
Tong Lee (Jet Propulsion Laboratory), Carl Mears, Xiaochun Wang

Calibration Drift in AMSR-2 Brightness Temperatures: The Effect on Wind Speed and SST
Frank Wentz (Remote Sensing Systems), Andy Manaster, Richard Lindsley

AMSR-2 All-weather Wind Speed Product
Suleiman Alsweiss (Global Science & Technology, Inc.), Zorana Jelenak, Paul S. Chang

PO.DAAC Data in the Cloud: Access, Services, and Available Data
David Moroni (JPL)

Boundary-layer processes

The impact of surface oil on ocean surface winds
Yangxing Zheng (Florida State University, USA), Mark A. Bourassa, Daneisha Blair

Analysis of Surface Heat Flux Anomalies to Understand Recent Northeast Pacific Marine Heatwave Events
Yi-Wei Chen (Oregon State University) and Larry O'Neill

Log-Profile Analysis of the Near-Surface Layer and Air-Sea Turbulent Fluxes in Hurricanes using Dropsondes
Daniel Wallace (EOAS & COAPS, Florida State University), Mark A. Bourassa, and Heather M. Holbach

Variability in atmospheric circulation over the Bering Sea and its impact on air-sea heat fluxes
Emily Hayden (Oregon State University), and Larry W. O'Neill

Extratropical cyclones fundamentally shape the maritime wind climatology
Larry O'Neill (Oregon State University), Ralph Milliff and Dudley Chelton

Influence of Surface Current on Vertical Distribution of Potential Vorticity Flux
Xu Chen (Florida A&M University), William Dewar, Eric Chassignet, Mark Bourassa, and Steve Morey

Impact of Boundary Layer on Biomass Burning Aerosol Transportation in Coastal Regions within Tropics
Georgrios Priftis (University of Alabama in Huntsville), Udayshankar Nair, Timothy J. Lang

Correlating extremes in wind divergence with extremes in rain over the Tropical Atlantic
Gregory P. King, Marcos Portabella, Wenming Lin, and Ad Stoffelen

Observing Oceanic Plastic with ASCAT Ultra High Resolution Backscatter
Harrison Garrett (Brigham Young University) and David G. Long

Mission Update Asynchronous Presentations (Posters)

Latest Status of the AMSR Series
Naoto Ebuchi, Misako Kachi, Rigen Shimada, Eri Yoshizawa, Hideyuki Fujii, Keiichi Ohara, Marehito Kasahara, Kazuya Inaoka, and Yasushi Kojima

The status of OSCOM mission
Xiaolong Dong

Coastal Working Group contributions

In situ measurements of short wave directional spectra in an open shelf coastal environment: finding the lower bound for radar-based wind extraction methods.
Anthony Kirincich (Woods Hole Oceanographic Institution), Brian Emery, University of California at Santa Barbara

NOAA ASCAT Near Real-Time Coastal Winds
Paul Chang (NOAA/NESDIS/STAR), Seubson Soisuvarn, Zorana Jelenak, Qi Zhu

A land-corrected ASCAT coastal wind product
Jur Vogelzang (KNMI), Ad Stoffelen

Discussion of a Satellite Mission to Measure Winds and Currents

Difficulty and partial success in diagnosing cross-equatorial surface currents from satellite: Yanai-mode tropical instability waves
Shang-Ping Xie (UC San Diego)

Wind and Wave Effects on Surface Currents from Doppler Scatterometry
Ernesto Rodriguez (Jet Propulsion Laboratory, California Institute of Technology), J. Tom Farrar, Paul Siqueira, Max Adam, James Edson, Anthony Kirincich

Ocean Current Gradients Modify the Atmosphere
Mark A. Bourassa and Jackie May

On The Characterization of The Ka-Band Ocean Surface Backscatter Using Doppler Scatterometer Measurements From The Air-Sea Interaction Tower Experiment
Federica Polverari (Jet Propulsion Laboratory, California Institute of Technology), Alexander Wineteer, Ernesto Rodriguez, Dragana Perkovic-Martin, Paul Siqueira, J. Thomas Farrar, J. Max Adam, James Edson

Impact of Ocean Currents on Wind Stress in the Tropical Indian Ocean
Neethu Chacko, Meer M Ali and Mark A Bourassa

Tropical Cyclone Asynchronous Presentations (Posters)

Estimation of tropical cyclone location and intensity using HY-2B scatterometer data
Wenming Lin (Nanjing University of Information Science and Technology), Siqi Liu, Marcos Portabella, Carla Chevillard

Global L-band Observatory for Water Cycle Studies (GLOWS): L-band Active/Passive Ocean Observations
Professor David Long (Brigham Young University), Rajat Bindlish, Giovanni De Amici, Jeffrey R. Piepmeier, and Mark Bailey

Operational SFMR Algorithm Update: Rain Impacts
Heather M. Holbach (COAPS, Florida State University)