



International Ocean Vector Wind
Science Team Meeting
Utrecht, Netherlands
12-14 June 2012



Royal Netherlands
Meteorological Institute
Ministry of Infrastructure and the
Environment

Tuesday June 12th: Morning

8:30 Centraal Museum building opens
Poster boards ready for setup

Introductory Session

Chair: Ad Stoffelen

9:00 Introduction from the organizing committee
Mark Bourassa (FSU)

9:05 The Local Host
Ad Stoffelen

9:10 CEOS OSVW Virtual Constellation Status and Next Steps
Dr. Paul Chang (NOAA/NESDIS), Hans Bonekamp and B.S. Gohil

9:25 NASA Programmatic Perspectives: Present Status and the Way Forward
Dr. Peter Hacker (NASA HQ) and Dr. Eric Lindstrom

9:40 GCOM Mission Overview
Prof. H. Shimoda (JAXA)

9:55 ASCAT on Metop: status and plans
Dr. Hans Bonekamp (EUMETSAT), Craig Anderson, Julia Figa, Julian Wilson

10:10 Oceansat-2 Scatterometer - Status and Value added Products
Dr. RAJ KUMAR (Indian Space Research Organisation), Suchandra A Bhowmick, Abhisek Chakraborty, and A S Kiran Kumar

10:30 Break & Poster Viewing

11:00 Validation of HY2A Scatterometer data
Dr. Qingtao Song, Xiaolong Dong,

First Results from OSCAT, HY2A and MetOp-B

Chair: Paul Chang

11:20 OCEANSAT Scatterometer Winds By Eumetsat
Dr. Ad Stoffelen (KNMI), Anton Verhoef, Jeroen Verspeek, Yun Richeng

11:40 The JPL Ku-Band Scatterometer Data Product
Dr. Alex Fore (Jet Propulsion Laboratory), Bryan Stiles, Alexandra Chau, Brent Williams, Sermsak Jaruwatanadilok, R. Scott Dunbar, and Ernesto Rodriguez

12:00 NOAA OSCAT Ocean Surface Vector Wind Products
Dr. Zorana Jelenak (NOAA/NESDIS - UCAR), Seubson Soisuvann, Suleiman Alswiss, Qi Zhu, Micah Baker and Paul S. Chang

12:20 Scatterometer Wind Services at KNMI
Dr. Ad Stoffelen (KNMI), Tilly Drienaar, Anton Verhoef, Jeroen Verspeek, Jur Vogelzang and Marivi Tello

12:40 Evaluation of Marine Surface Vectors observed by Oceansat-2 Scatterometer
Professor Naoto Ebuchi (Hokkaido University),

13:00 Lunch (60 minutes)

Tuesday June 12th: Afternoon

First Results from OSCAT, HY2A and MetOp-B Continued

Chair: Paul Chang

- 14:00 OSCAT backscatter drift evaluation using ocean and natural land targets
Dr. Sermsak Jaruwatanadilok (Jet Propulsion Laboratory), Bryan W. Stiles, Alexander Fore, and R. Scott Dunbar
- 14:20 Discussion

New Products

Chair: Svetla M. Hristova-Veleva

- 14:45 Multiple Scatterometer Hurricane Winds Ten years of optimized QuikSCAT cyclone winds validated against best track speeds, H*WIND and SFMR, and initial OceanSAT-2 cyclone winds
Dr. Bryan Stiles (Jet Propulsion Laboratory), Rick Danielson, W. Lee Poulsen, Michael J. Brennan, and Svetla M. Hristova-Veleva
- 15:05 Towards An Optimal Noise Versus Resolution Trade-Off In Wind Scatterometry
Dr. Brent Williams (Jet Propulsion Laboratory)
- 15:25 Break & Poster Viewing
- 15:55 Status Update on PO.DAAC's OVW Products and Services
Mr. David Moroni (JPL)
- 16:15 Development of Consistent Geophysical Model Functions for Different Scatterometer Missions: Ku and C-band
Dr. Lucrezia Ricciardulli (Remote Sensing Systems), Frank J. Wentz
- 16:35 QSCAT2012 Geophysical Model Function
Dr. Alexandra Chau (Jet Propulsion Laboratory), Bryan Stiles, R. Scott Dunbar, Ernesto Rodriguez
- 16:55 The Ice Contamination Ratio Method: Accurately Retrieving Ocean Winds Closer to the Sea Ice Edge While Eliminating "Ice Winds"
Professor David Long (Brigham Young University)
- 17:15 Discussion
- 17:40 Close for the day
- 18:00 Centraal Museum building closes
- 18:00 **Reception at Museum de Speelklok**, Steenweg 6, Utrecht (1.1 km; 15 minute walk)

Wednesday June 13th: Morning

8:30 Centraal Museum building opens

Surface Fluxes

Chair: Mark Bourassa

9:00 QuikSCAT-based evaluation of CMIP3 and CMIP5 models

Dr. Tong Lee (Jet Propulsion Laboratory), Duane Waliser, Frank Li, and Michelle Gierach

9:15 Buoyance Parameterization in Stress Generation

Dr. W Timothy Liu (Jet Propulsion Laboratory), Xiaosu Xie

9:30 Identifying Loci for Ocean Forecast Model Error from Ensembles of Surface Winds based on QuikSCAT and COAMPS

Dr. Ralph Milliff (CIRES, University of Colorado), Dr. Polly Smith, Prof. Andrew M. Moore and Prof. Christopher A. Edwards

9:45 Discussion

Oceanography

Chair: Tony Lee

10:00 Covariability of Wind and Sea Surface Height in the Tropical Pacific: Part 1

Dr. Tom Farrar (Woods Hole Oceanographic Institution), Theodore Durland

10:15 Covariability of Wind and Sea Surface Height in the Tropical Pacific: Part 2

Dr. Ted Durland (College of Earth, Ocean and Atmospheric Sciences, Oregon State University), J. Thomas Farrar, Dudley Chelton

10:30 Break & Poster Viewing

11:00 Self - Induced Ekman Pumping Over Oceanic Mesoscale Eddies

Professor Dudley Chelton (Oregon State University), Peter Gaube

11:15 Bayesian sea-ice detection in the ASCAT Wind Data Processor

Mr. Jeroen Verspeek (KNMI), Maria Belmonte, Ad Stoffelen, Anton Verhoef and Jur Vogelzang

11:30 Modeled sensitivity of the upper-ocean properties in the Nordic Seas to wind forcing

Dr. Dmitry Dukhovskoy (COAPS FSU), Dr. Mark Bourassa

11:45 Time Dependent Wind-Driven Surface Currents

Dr. Kathleen Dohan (Earth and Space Research),

12:00 Constraining a global, eddying, ocean and sea ice model with scatterometer data

Dr. Dimitris Menemenlis (Jet Propulsion Laboratory, California Institute of Technology), David Moroni, Hong Zhang

12:15 Spatial variability of upwelling on a shelf with complex geometry inferred from scatterometry

Dr. Steve Morey (COAPS-FSU)

12:30 Discussion

13:00 Lunch (60 minutes)

Future Missions

Chair: Hans Bonekamp

- 14:00 Development Status of the Wind Scatterometer for EPS Second Generation
Dr. Chung-Chi Lin (ESA - ESTEC), F. Fois, M. Betto, H. Barré and G. Mason, ESA-ESTEC; S. Banfi and P. Schluessel, EUMETSAT
- 14:20 Polarization options for ASCAT Second Generation
Dr. Maria Belmonte Rivas (Atmospheric Chemistry Division - National Center for Atmospheric Research), Ad Stoffelen, Gerd-Jan van Zadelhoff
- 14:40 Preliminary Considerations About the Calibration of a Ku-Band Rotating Fan-Beam Scatterometer of CFOSAT
Dr. Xiaolong Dong (CAS Key Laboratory of Microwave Remote Sensing, National Space Science Center/Center for Space Science and Applied Research, Chinese Academy of Sciences), Jintai Zhu, Risheng Yun, Di Zhu
- 15:00 Wide-Swath Simultaneous Measurements of Winds and Surface Currents
Dr. Ernesto Rodriguez (JPL/Cal Tech),
- 15:15 Derivation of a cross-polarization GMF at extreme wind speeds from RadarSAT-2 measurements
Dr. Gerd-Jan van Zadelhoff (KNMI), Ad Stoffelen, Paris Vachon, John Wolfe
- 15:30 Break & Poster viewing
- 16:00 Applications of L-Band Scatterometry and Radiometry to Aquarius and SMAP
Dr. Simon Yueh (Jet Propulsion Laboratory), Wenqing Tang, Alexander Fore, Jullian Chaubell, Gary Lagerloef
- 16:15 Summary of Science Thoughts for Possible Future NASA Missions, Part I
Professor Mark Bourassa (Florida State University), Ernesto Rodriguez, Alexandra Chau, Dudley Chelton, Alex Fore, Peter Gaube, Michelle Gierach, Tony Lee, Jim McWilliams, Larry O'Neill, Dragana Perkovic, Bryan Stiles, Svetla-Hristova Veleva, Duane Waliser, Brent Williams, Shang-Ping Xie, Simon Yeuh
- 16:30 Summary of Science Thoughts for Possible Future NASA Missions, Part 2
Dr. Ernesto Rodríguez (Jet Propulsion Laboratory), Mark Bourassa, Alexandra Chau, Dudley Chelton, Alex Fore, Peter Gaube, Michelle Gierach, Tony Lee, Jim McWilliams, Larry O'Neill, Dragana Perkovic, Bryan Stiles, Svetla-Hristova Veleva, Duane Waliser, Brent Williams, Shang-Ping Xie, Simon Yeuh
- 16:45 Discussion
- 17:30 Close of day
- 18:00 Centraal Museum building closes
- 18:00 **Dinner at restaurant La Cantina di David**, Oudegracht 88, Utrecht (1.5 km, 18 minute walk)

Thursday June 14th: Morning

8:30 Centraal Museum building opens

Climate Data Records and Calibration/Validation

Co-Chairs: Ralph Milliff and Gerrit Burgers

- 9:00 Rain-induced wind variability depicted by scatterometers
Dr. Marcos Portabella (Unitat de Tecnologia Marina (UTM-CSIC)), Wenming Lin, Ad Stoffelen, Anton Verhoef, Antonio Turiel, Joaquim Ballabrera, Jeroen Verspeek
- 9:15 Singularity analysis for the estimation of rain impact on ASCAT winds
Dr. Wenming Lin (Institut de Ciències del Mar (ICM-CSIC)), Marcos Portabella, Antonio Turiel, Ad Stoffelen, Anton Verhoef, Jur Vogelzang
- 9:30 Using structure functions to compare ASCAT and QuikSCAT winds
Dr. Gregory King (Centro de Geofísica - IDL, University of Lisbon), Jur Vogelzang and Ad Stoffelen
- 9:45 Characterizing Differences between C-band and Ku-band scatterometer winds.
Dr. Abderrahim Bentamy (Ifremer), Semyon A. Grodsky, B. Chapron, D. Croizé-Fillon, Vladimir N. Kudryavtsev, James A. Carton
- 10:00 The impact of resolution on SST-Induced Surface Wind Response: Is that the answer for observed differences in QuikSCAT and ASCAT retrievals?
Dr. Svetla Hristova-Veleva (Jet Propulsion Laboratory), Ernesto Rodriguez
- 10:15 Decadal change in ocean surface vector wind fields suggested by global synthesis of multiple satellite sensors (1987 – present)
Dr. Lisan Yu (Woods Hole Oceanographic Institution)
- 10:30 Break & Poster Viewing
- 11:00 How Precisely Can One Infer Decadal Wind Trends from Satellites?
Mr. Frank Wentz (Remote Sensing Systems)
- 11:15 Sampling needs for Operational Applications (invited)
Ad Stoffelen (KNMI)
- 11:25 Sampling needs for Climate Studies (invited)
Dudley Chelton (Oregon State University)
- 11:35 Discussion

Meteorology

Co-Chairs: Jérôme Patoux and Christophe Payan

- 12:00 Evidence of and a Theory for 10-Km Wavelength Convergence Lines in Tropical Cyclone Surface Wind Retrievals
Ralph Foster (Applied Physics Laboratory)
- 12:15 Towards an extreme wind climatology for Dutch Water Defenses
Dr. Gerrit Burgers (KNMI), Sofia Caires (Deltares)
- 12:30 Seasonal and Geographical Variability of the Surface Wind and Stress Responses to SST over Mid-Latitudes
Dr. Larry O'Neill (Oregon State University), Dudley Chelton, Steve Esbensen
- 12:45 On the Interpretation of Scatterometer Winds Near Sea Surface Temperature Fronts
Professor James Edson (University of Connecticut), Amanda Plagge and Doug Vandemark and Amanda
- 13:00 Lunch

Thursday June 14th: Afternoon

- 14:00 The Effects of Gap Wind Induced Vorticity, the ITCZ, and Monsoon Trough on Tropical Cyclogenesis
Heather Holbach (Florida State University - COAPS), Mark Bourassa
- 14:15 A Decomposition of the MJO by Satellite Wind Partitioning
Dr. Jérôme Patoux (University of Washington), Ángel Adames-Corraliza and Ralph C. Foster
- 14:30 Slow changes in ocean vector wind: Evidence of the Walker circulation slowdown over the past six decades
Dr. Hiroki Tokinaga (IPRC/Univ. of Hawaii), Shang-Ping Xie
- 14:45 Break & Poster viewing
- 15:15 Intensification of the Pacific Walker Circulation (PWC) during the Last Quarter Century
Mr. Frank Wentz (Remote Sensing Systems), Carl Mears and Lucrezia Ricciardulli
- 15:30 Assimilation of Scatterometer Winds at ECMWF
Dr. Giovanna De Chiara (ECMWF)
- 15:45 On the potential benefits of using scatterometer data in the North Sea operational coastal wave forecasting system
Dr. Sofia Caires (Deltares), Dr. Martin Verlaan
- 16:00 Status On The Use Of Scatterometer Winds At METEO-France
Mr. Christophe Payan (CNRM and GAME, Météo France and CNRS)
- 16:15 National Hurricane Center Ocean Vector Wind Update
Dr. Michael Brennan (NOAA/NWS/NCEP/National Hurricane Center), Hugh D. Cobb III, Rick Danielson, Golf Soisuvann, and Bryan W. Stiles
- 16:30 Use of ASCAT and OSCAT Winds at the NOAA Ocean Prediction Center
Mr. Joseph Sienkiewicz (NOAA Ocean Prediction Center), Gregory McFadden, Paul Chang, Zorana Jelenak, Seubson Soiuvarn, Michael Folmer, and Scott Jacobs
- 16:45 Discussion
- 17:15 Wrap up Discussion
- 17:40 End of day
- 18:00 Centraal Museum building closes

Posters

Future Missions

Ocean Calibration And Validation Of Ku-Band Scatterometers

Dr. Risheng Yun (Key Laboratory of Microwave Remote Sensing (MIRS,CAS),Center for Space Science and Applied Research(CSSAR,CAS),Chinese Academy of Sciences), Ad Stoffelen, Jeroen Verspeek, Anton Verhoef, Xiaolong Dong

Meteorology

Using Surface Pressure to Produce Scene-Wide, km-Scale Tropical Cyclone Surface Wind Retrievals From SAR
Ralph Foster (Applied Physics Laboratory), Jerome Patoux, Jochen Horstmann, Chris Wackerman

An Evaluation Study for Improving Gap Flow Simulations in Coastal Areas on Continental Portugal
Dr. Paulo Costa (LNEG),

Marine Training Workshop on the Use of Satellite Wind and Wave Products in South American Waters

Dr. Stan Wilson (UCAR), Luiz Machado, INPE; Mark Bourassa, FSU; Mark Higgins, EUMETSAT; Paul Chang & Zorana Jelenak, NOAA

A Model-Based Examination of SST-Related Changes in Surface Winds Due to Baroclinicity and Boundary-Layer Stability

Mr. Paul Hughes (EOAS and COAPS at Florida State University), Mark A. Bourassa

Steps towards a SAR-based wind atlas in the Baltic Sea

Dr. Charlotte Hasager (DTU Wind Energy), M. Badger, A. Peña, T. Mikkelsen, A. Hahmann, F. Bingöl

Hurricane-force extratropical cyclones measured by satellite scatterometry

Dr. Zorana Jelenak (NOAA/NESDIS - UCAR), Joseph Sienkiewicz and Paul S. Chang

Arctic Sea Ice Age Classification and Mapping using Ku-band Scatterometer Data

Professor David Long (Brigham Young University)

ASCAT wind scaling

Dr. Jur Vogelzang (KNMI), Dr. Ad Stoffelen

Resolving Vorticity in New Wind Products: Advantages of Finer Resolution and Improved Retrievals through Rain

Professor Mark Bourassa (Florida State University), Heather M. Holbach

Space-time interpolation of satellite winds in the Tropics

Dr. Jérôme Patoux (University of Washington), Gad Levy

Scatterometer - Met-Buoy Comparisons: QuickSCAT Versions 2 and 3

Prof. Ted Strub (Oregon State University) and Corinne Janes

Climate Data Records and Cal/Val

Monitoring ASCAT-A Calibration using Ocean Backscatter
Dr. Craig Anderson (eumetsat), Hans Bonekamp, Julia Figa

NWP SAF Scatterometer Monitoring
Mr. James Cotton (UK Met Office), Masaya Takahashi, Robert Tardif, Dave Offiler, Bryan Conway

Extending the Land/Ice Scatterometer Climate Record
Professor David Long (Brigham Young University)

A Comparison of Windspeeds in Extra-Tropical Cyclones
Mr. Tom Philp (NCEO/University of Reading), Dr. Kevin Hodges

Airborne Cross-polarization Observations of the Sea-Surface NRCS in High Winds
Stephen Frasier (University of Massachusetts), Joseph W. Sapp, Paul S. Chang, Zorana Jelenak, Micah Baker

Oceanography

Influence of sea surface temperature gradient and roughness changes due to a slick on the motion of surface oil: A simple idealized study
Dr. Yangxing Zheng (Florida State University), Mark A. Bourassa, Paul Hughes

Measurements of the Effect of Rain on the L-Band Sea Surface Brightness Temperature for the Aquarius Instrument
Dr. David Weissman (Hofstra University)

New Products

Wind Stress Curl Differences in QuikSCAT L2B (R2 vs. R3) and Preliminary OceanSAT-2
Dr. Jeremiah Brown (CIRES, University of Colorado), Dr. Ralph Milliff

Feasibility Assessment of Simultaneous Ocean Wind and Current Measurements
Jos de Kloe, Ad Stoffelen, KNMI; Andrea Recchia, Davide D'Aria, Aresys; Johnny Johannessen, NERSC; Alexis Mouche, Fabrice Collard, CLS; Bertrand Chapron, IFREMER; Vivien Enjolras, TAS-F; Franco Fois, Chung-Chi Lin, ESTEC

The ASCAT Level 3 Global Wind product of MyOcean
Tilly Driesenaar, Anton Verhoef, Ad Stoffelen (KNMI)