

International Ocean Vector Wind

Science Team meeting

EUMETSAT,

Darmstadt

05 – 08 May 2025



5th

May

Time	Duration	Title	Presenter / Chair
		Welcome	Mark Bourassa
13:30	00:05	Welcome to Darmstadt	Stefanie Linow
13:35	00:05	Introduction to IOVWST 2025	Mark Bourassa
13:40	00:10	Status and recent developments of the EUMETSAT scatterometer missions	Stefanie Linow
		Sea State	Luc Lenain and Nick Pizzo
13:50	00:15	Ocean Surface Wind Retrieval and Quality Control Near Sea Ice	Bryan W. Stiles
14:05	00:15	Analysis of the scatterometer ocean surface measurement dependency on sea state: an update	Federico Cossu
14:20	00:15	Impact of Swell-induced Tilt on Scatterometer Wind Retrieval	Sthitapragya Ray
14:35	00:25	Discussion: Sea state, Wind, and Stress	
15:00	00:30	break and group photo	

5th

May

Time	Duration	Title	Presenter / Chair
		Air / Sea Fluxes, Flux Products, and Methods for Calculating Equivalent Neutral Winds	S. Ray and Steve Morey
15:30	00:15	Advancing CYGNSS Derived Ocean Surface Heat Fluxes using a Data-Driven and Physical Model Fusion	Shakeel Asharaf
15:45	00:15	Enhanced Tropical Cyclone ASCAT Winds Guided by SAR-Learned Spatial Structure Functions	Weicheng Ni
16:00	00:15	Satellite-Based Ocean Surface Stress in Ice-Free and Ice-Covered Polar Oceans: Recent Arctic Changes	Lisan Yu
16:15	00:15	Enhanced Tropical Cyclone PenWP Winds Guided by SAR-Learned Spatial Structure Functions	Ad Stoffelen
16:30	00:30	Discussion on flux products and flux calculations	
17:00		Close of day	
18:00		Icebreaker	

6th

May

Time	Duration	Title	Presenter / Chair
09:00	00:10	Meeting Summary: Monday's Activities	
		Mission Updates Session 1	Juhong Zou and Craig Anderson
09:10	00:15	The passive microwave imaging missions MWI and CIMR and their synergies with SCA	Robin Ekelund
09:25	00:07	Present status of AMSR3	Naoto Ebuchi
09:32	00:07	The Veery Small Scatterometer: Development Update	Patrick Walton
09:40	00:10	Compact Ocean Wind Vector Radiometer: Mission Status and Future Constellations	Shannon Brown
09:50	00:10	Evaluation of COWVR as a Cost-Effective Sensor for Providing Climate Data Records of Ocean Vector Winds and Other Air-Sea Variables	Richard Lindsley
10:00	00:10	Discussion on Passive Microwave Winds	
10:10	00:20	Lightning talks 1	Frederico Cossu
10:30	00:30	- break -	

Lightning talks

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Poster #	Title	Presenter
1	Comprehensive Validation of Imaging Wind and Rain Atmospheric Profiler Wind Measurements	Zorana Jelenak
2	Evaluation and Applications of Ocean Surface Wind Product From Fengyun-3 and Tianmu-1 GNSS-R Constellations	Feixiong Huang
3	Ocean Vector Winds from the EOS6 scatterometer	Alexander Fore
4	Coupling Atmospheric Dynamics and Ocean with Winds from Satellites	Stavroula Biri
5	The effect of the Stokes drift on submesoscale feature evolution	Kayli Matsuyoshi
6	Modeling Spray Impacts on Wind Speed, Stress, and Drag Coefficients	Mark Bourassa
7	ASCAT higher resolution winds closer to the coast	Anton Verhoef
8	ASCAT scatterometer wind product calibration and reprocessing	Jeroen Verspeek
9	Identifying tropical cold pools with singularity exponents	Gregory King

6th

May

Time	Duration	Title	Presenter / Chair
Mission Updates Session 2			Shannon Brown and Zhixiong Wang
11:00	00:15	Post-launch performance evaluation of EOS-06/Oceansat-3 Scattermeter winds using HY-2D, In-situ and NWP model fields	Sikhakolli Rajesh
11:15	00:10	Near-real Time Sea-surface Wind Derived from the Haiyang-2B/C/D Scatterometer Constellation	Zou Juhong
11:25	00:10	Update on DopSCA	Ad Stoffelen
11:35	00:10	Retrieval of ocean surface wind and current using OSCOM airborne campaign dataset	Shilei Wang
11:45	00:10	Simultaneous Winds and Surface Currents via the proposed ODYSEA Doppler Scatterometer	Mark Bourassa
11:55	00:35	Discussion of mission synergies for science and data quality assessment	

6th

May

Time	Duration	Title	Presenter / Chair
NWP-Related Applications			Giovanna De Chiara and Anton Verhoef
12:30	00:10	Calculating Fluxes from satellite wind data vs buoy wind data	Shakeel Asharaf
12:40	00:10	Evaluation of HSCAT Observations from HY-2B and HY-2C Satellites in KIM Data Assimilation	Hyemin Shin
12:50	00:10	Downscaling Mesoscale Wind Fields Using Lightweight U-shaped State Space Duality Network	Qingguo Su
13:00	00:10	Accurate initial field estimation for weather forecasting with a variational constrained neural network	Wuxin Wang
13:10	00:05	Enhancing Short-Range Weather Forecasts with Oceansat-3 Retrieved Wind Vectors in WRF	Meenakshi Shenoy
13:15	01:00	Lunch	

6th

May

Time	Duration	Title	Presenter / Chair
NWP-Related Applications (continued)			Giovanna De Chiara and Anton Verhoef
14:15	00:10	Performance Evaluation of HY-2 Satellite Scatterometer Wind Data in the Yin He Global Spectral Model	Boheng Duan
14:25	00:10	Brief Discussion	
14:35	00:25	Lightning talks 2	Giuseppe Grieco
15:00	00:30	- break -	
Outreach and Communicating Science			Justin Stopa
15:30	00:05	Expanding the Impact of Your Research	Annette deCharon

Lightning talks

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Poster #	Title	Presenter
10	The Global L-band Observatory for Water Cycle Studies (GLOWS): High Resolution L-band Wind speeds	David Long
11	Arctic Sea Ice Extent Mapping Using Artificial Intelligence	Nathan Roberts
12	Progress in the Analysis of Antarctica as a Target for Multifrequency Cross Calibration Between ASCAT and NSCAT	Nathan Porter
13	Comprehensive Validation of Imaging Wind and Rain Atmospheric Profiler Wind Measurements	Zorana Jelenak
14	Data denial experiments of scatterometer winds in the JMA's global data assimilation system	Yusuke Ioka
15	Let Us Help Tell Your Research Story	Annette deCharon
16	C- and Ku-band enhanced-resolution radar backscatter image products	Julie Z. Miller
17	Detecting landscape degradation in the South American Pantanal using ASCAT microwave imaging	Alex N. McBride
18	OSCAT Simultaneous Wind/Rain Geophysical Model Function	Benjamin Fogg
19	Multidecadal OSCAT Calibrated sigma0 database using the Amazon	Benjamin Fogg

6th

May

Time	Duration	Title	Presenter / Chair
Air / Sea Interaction, Session 1			Kayli Matsuyoshi and Justin Stopa
15:35	00:15	Marine Heatwaves Increased the Risk of Extreme Precipitation Events Along Southwest Coast of India during Indian Summer Monsoon	Suhas Dasenahalli Lingaraju
15:50	00:15	Surface winds, air-sea flux, and SST variability associated with atmospheric rivers over the Arabian Sea	Toshi Shinoda
16:05	00:15	Seasonal dependence of atmospheric river impacts on marine heatwaves	Suqiong Hu
16:20	00:15	An Algorithm to Develop a Satellite-Based Atmospheric River Database	Shineng Hu
16:35	00:25	Discussion	
17:00		Close of day	

7th

May

Time	Duration	Title	Presenter / Chair
09:00	00:10	Meeting Summary: Tuesday's Activities	
		Retrieval Methodologies Session 1	Roger Samelson and Ad Stoffelen
09:10	00:15	Wind and wave signatures in wind scatterometry	Xingou Xu
09:25	00:10	CANVAS project: A Calibration and Validation tool for SAR	Alberto Rabaneda
09:35	00:10	A Novel Optimization Approach for Ocean Vector Wind Retrievals Using SAR Measurements	Giuseppe Grieco
09:45	00:15	Review of the NSCAT GMF in Ku-band Scatterometer Wind Retrieval	Zhixiong Wang
10:00	00:15	A Cross-Comparison Validation between Sentinel-3A SRAL Altimeter and Metop ASCAT-B Scatterometer Wind Speed	Salvatore Dinardo
10:15	00:15	Discussion	
10:30	00:30	- break -	

7th May

Time	Duration	Title	Presenter / Chair
Oceanographic Processes Session			Lisan Yu and Kathleen Dohan
11:00	00:10	The Role of the Lagrangian Mean Flow in Air-Sea Momentum Flux	Mara Freilich
11:10	00:15	Machine Learning Approaches for Characterizing Upwelling-Favorable Winds along Complex Coastlines	Steven Morey
11:25	00:15	Between the clouds: An unprecedented view of ocean surface currents	Luc Lenain
11:40	00:15	Near-surface wind and wave drift currents in the coupled air-sea boundary layer	R. M Samelson
11:55	00:35	Discussion	

7th

May

Time	Duration	Title	Presenter / Chair
Air/Sea Interaction, Session 2			Toshi Shinoda and Mara Freilich
12:30	00:15	Momentum and Energy Fluxes in Wind-Forced Breaking Waves at High Wind Speeds	Nicolo Scapin
12:45	00:15	Observations and theory of the initial waves generated by wind	Nick Pizzo
13:00	00:15	Multilayer simulation of wind-forced breaking wave fields statistics and Langmuir circulation	Rui Yang
13:15	01:00	Lunch	
Air/Sea Interaction, Session 2 (continued)			Toshi Shinoda and Mara Freilich
14:15	00:10	Wind roll impacts on ocean circulation	Ernesto Rodriguez
14:25	00:10	Kinematics of broad-banded gravity-capillary waves coupled with boundary layers	Clara Martin Blanco
14:35	00:25	Discussion	
15:00	00:30	- break -	

7th

May

Time	Duration	Title	Presenter / Chair
Meteorological Science and Applications, Session 1			Lucrezia Ricciardulli and Marcos Portabella
15:30	00:15	Relationship of rain rates and marine boundary layer states as observed by synthetic aperture radar over the subtropical ocean	Justin Stopa
15:45	00:15	Inferring Tropical Cyclone Boundary Layer Roll Circulations from SAR	Ralph Foster
16:00	00:10	Estimating Surface Winds from IWRAP wind speed profiles	Mark Bourassa
16:10	00:10	Characterization of hurricane structure from satellite-derived wind fields	Marcos Portabella
16:20	00:40	Discussion of Hurricane Observation Strategy	
17:00		Close of day	

8th

May

Time	Duration	Title	Presenter / Chair
09:00	00:10	Meeting Summary: Wednesday's Activities	
		Retrieval Methodologies & Validation, Session 2	Bryan Stiles and Craig Anderson
09:10	00:15	The calibration and reprocessing of the ASCAT-A mission	Narges Khosravi
09:25	00:10	WindRAD scatterometer quality control in rain	Zhen Li
09:35	00:15	Triple Collocation-Based Network for Ocean Surface Wind Speed Retrieval on CYGNSS	Xinjie Shi
09:50	00:10	On the COWVR wind vector retrieval capabilities and the use of COWVR + TMPEST sensor combination for precipitation vertical structure estimates	Federica Polverari
10:00	00:15	RSS Updates on Satellite Wind Processing and Validation	Lucrezia Ricciardulli
10:15	00:15	Discussion: cross swath consistency, SST, air density and communication	
10:30	00:30	- break -	

8th

May

Time	Duration	Title	Presenter / Chair
Retrieval Methodologies & Validation, Session 2 (continued)			Mark Bourassa and Tony Lee
11:00	00:15	Analysis of Coastal Winds Derived From QuikSCAT at OSI-SAF	Giuseppe Grieco
11:15	00:10	Buoy Validation of SAR Derived Ocean Surface Winds using CMOD7	Christopher Jackson
11:25	00:10	Geophysical Model Function to Retrieve Ocean Surface Wind Speeds with High-Resolution X-band Synthetic Aperture Radar (SAR) Data	Yuriy Goncharenko
11:35	00:15	ASCAT higher resolution winds closer to the coast	Lucrezia Ricciardulli
11:50	00:15	Comprehensive Validation Analysis of the Stepped Frequency Microwave Radiometer Data from 2024 Hurricane Season – Implications for the Entire 20 Years Data Record	Zorana Jelenak
12:05	00:25	Discussion: high resolution & coastal winds	

8th

May

Time	Duration	Title	Presenter / Chair
		Meteorological Processes	Federica Polverari and Ad Stoffelen
12:30	00:10	Improving Ocean Wind Forcing Reanalysis and Forecasting: Machine Learning Approaches for NWP Bias Correction	Portabella, Marcos
12:40	00:15	Hadley Cell structure and evolution revisited: Did the use of retrieval algorithms, that are consistent across different instruments, alleviate the previously found discontinuity in Hadley cell width when changing the record from the QuikSCAT to the ASCAT era?	Svetla Hristova-Veleva
12:55	00:15	Examining the diurnal variability in the Hadley cell width using CYGNSS wind speed observations complemented with a constellation of satellite instruments	Federica Polverari
13:10	01:00	Lunch	

8th

May

Time	Duration	Title	Presenter / Chair
		Meteorological Processes (continued)	Federica Polverari and Ad Stoffelen
14:10	00:15	Intraseasonal to Decadal Wind Variability from Satellite Observations	Lucrezia Ricciardulli
14:25	00:35	Discussion (Large- and/or Long-scale Wind Variability)	
15:00	00:30	- break -	
15:30	00:45	Meeting Summary, Tasks and Goals for (or before) the next meeting	
16:15		Close of Meeting	

**Thank
you**

Hope to see you again soon!