

International Workshop on Measuring High Wind Speeds over the Ocean

15-17 November 2016 | Met Office, Exeter, UK

Programme (Conference Rooms 1+2)

Tuesday 15 November

	Introduction	
08:15 – 09:00	Registration	
09:00 – 09:10	Welcome and local arrangements	Pete Francis, James Cotton (Met Office)
09:10 – 09:20	Welcome from Met Office	Andy Brown, Director of Science (Met Office)
09:20 – 09:30	Welcome from ESA	Craig Donlon (ESA)

	Session 1a: Satellite Measurement Techniques	Chairs: Marcos Portabella, Lucrezia Ricciardulli
09:30 – 09:55	Keynote Sensor Physics and the Complementarity of Ocean Surface Satellite Measurements	Bertrand Chapron (IFREMER)
09:55 – 10:05	ESA's Soil Moisture and Ocean Salinity Mission: current status	Susanne Mecklenburg (ESA)
10:05 – 10:30	The SMOS-STORM project : a New Generation of Extreme Wind Speed Measurements from Space	Nicolas Reul (IFREMER)

10:30 – 11:00 Coffee break

	Session 1a: Satellite Measurement Techniques	Chairs: Nicolas Reul, Thomas Meissner
11:00 – 11:20	Ocean Vector Winds in Storms from the SMAP L-Band Radiometer	Thomas Meissner (Remote Sensing Systems)
11:20 – 11:40	SMAP Observations of Extreme Ocean Winds	Alexander Fore (JPL)
11:40 – 12:00	RapidScat High Wind Observations	Alexander Wineteer (NASA/JPL), on behalf of Bryan W. Stiles
12:00 – 12:20	Wind Fields Retrieving for Typhoon Using Neural Network for Combined Observations of Radiometer and Scatterometer onboard HY-2A	Xingou Xu (The CAS Key Laboratory of Microwave Remote Sensing, NSSC)
12:20 – 12:40	Sentinel-1 Hurricane Observation Campaign	Alexis Mouche (IFREMER)
12:40 – 13:00	Hurricane Matthew extreme winds and precipitation from space	Lucrezia Ricciardulli (Remote Sensing Systems)

13:00 – 14:00 Lunch break

	Session 1a: Satellite Measurement Techniques	

14:00 – 14:30	Plenary discussion – Satellite Measurement Techniques (L-Band/Radiometer/Scat/SAR)	Marcos Portabella, Lucrezia Ricciardulli, Nicolas Reul, Thomas Meissner
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	Session 2: Core Applications	Chairs: Mark Powell, Svetla Hristova-Veleva
14:30 – 15:00	Keynote HWIND fields in support of high wind remote sensing in tropical cyclones	Mark D. Powell (Risk Management Solutions)
15:00 – 15:30	Keynote A consensus approach to operationally estimate and forecast tropical cyclone wind radii	John A. Knaff (NOAA Center for Satellite Applications and Research)

15:30 – 16:00 Coffee break

16:00 – 16:20	Hurricane Patricia winds from Hwind	J-P Michael (RMS)
16:20 – 16:40	Accurate estimation of the ocean surface winds in hurricanes: a critical component for developing predictors for hurricane Rapid Intensification potential	Svetla Hristova-Veleva (JPL)
16:40 – 17:00	Synthetic Aperture Radar for wind energy applications: potential and challenges at high wind speeds	Merete Badger (DTU Wind Energy)
17:00 – 17:30	Plenary discussion – core applications	Mark Powell, Svetla Hristova-Veleva

19:30 - Workshop dinner (Cosy Club, 1 Southernhay Gardens, Exeter, EX1 1SG)

Wednesday 16 November

	Session 3: Calibration and Validation of High Winds	Chairs: Mark Bourassa, Zorana Jelenak
09:00 – 09:30	Keynote Major issues associated with impacts and remotely sensed observations of high wind speeds	Mark Bourassa (Florida State University)
09:30 – 09:50	Validation of Strong Ocean Surface Wind Speeds	Paul Chang (NOAA/NESDIS)
09:50 – 10:10	Extreme scatterometer winds at C band	Ad Stoffelen (KNMI)
10:10 – 10:30	Development and application of a global satellite database of wind and wave conditions	Ian Young (University of Melbourne)
10:30	Poster introduction	

10:30 – 11:30 Coffee break and Poster viewing

11:30 – 11:50	Assessment of Altimeter, Scatterometer and Model High Surface Wind Speeds	Saleh Abdalla (ECMWF)
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11:50 – 12:10	Measuring coastal winds with multiple remote sensing systems: a comparison of SAR wind retrievals and lidar wind measurements	Tobias Ahsbahs (Technical University of Denmark)
12:10 – 12:40	Plenary discussion – cal/val	Mark Bourassa, Zorana Jelenak

	Session 1b: Satellite Measurement Techniques	Chairs: Estel Cardellach, David Cotton
12:40 – 13:00	Ocean wind retrieval using GNSS Reflectometry data from the UK TechDemoSat-1 mission	Christine Gommenginger (National Oceanography Centre)

13:00 – 14:00 Lunch break

14:00 – 14:20	The NASA CYGNSS Tropical Cyclone Mission	Paul Chang / Zorana Jelenak (on behalf of Maria Paola Clarizia)
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	Session 4: Air/Sea Interaction	Chairs: Alex Babanin, Bertrand Chapron
14:20 – 14:50	Keynote Air-Sea Interactions at Extreme Wind Speeds	Alexander Babanin (University of Melbourne)
14:50 – 15:10	Sensitivity to wind stress formulation in a coupled wave-atmosphere model	Lucia Pineau-Guillou (Ifremer / LOPS)
15:10 – 15:30	Sea State Influence on SFMR Wind Speed Retrievals in Tropical Cyclones	Heather Holbach (COAPS/FSU)

15:30 – 16:00 Coffee break and Poster viewing

16:00 – 16:20	Effects of tropical cyclones on the sea-air flux of CO ₂	Ute Schuster (University of Exeter)
16:20 – 16:50	Keynote X-band radar cross-section and sea spray at gale force winds: towards cross-polarization GMF for retrieval of hurricane wind speed and surface stress	Yulia Troitskaya (Russian Academy of Sciences)
16:50 – 17:20	Plenary discussion – air/sea interaction	Alex Babanin, Bertrand Chapron

Thursday 17 November

	Session 5: Applications – NWP & NOP	Chairs: John Eyre, Ad Stoffelen
09:00 – 09:20	An overview of Tropical Cyclone Prediction at the Met Office	Julian Heming (Met Office)
09:20 – 09:40	Assimilation and Impact of SMOS Wind Speeds on Global NWP	James Cotton (Met Office)
09:40 – 10:00	On the use of satellite ocean surface winds at ECMWF	Giovanna De Chiara (ECMWF)
10:00 – 10:20	On the use of SMOS winds in the wave model MFWAM	Lotfi Aouf (Météo France)

10:30 – 11:00 Coffee break and Poster viewing

11:00 – 11:20	A coupled wind and wave forecasting system for the North Sea	Merete Badger (DTU Wind Energy), on behalf of Jianting Du
11:20 – 11:40	Discussion – NWP/NOP	John Eyre, Ad Stoffelen

	Session 6: Future Directions	Chairs: Christine Gommenginger, Craig Donlon
11:40 – 12:00	Blending multiple-source wind data including SMOS, SMAP and AMSR-2 new products	Fabrice Collard / Joe Tenerelli (OCEANDATALAB)
12:00 – 12:20	Improved forecasts of extreme weather events by the Aeolus Doppler Wind Lidar	Ad Stoffelen (KNMI)
12:20 – 12:40	ORORO - Orbital Radio Occultation and Reflectometry Observers	Martin Unwin (SSTL)
12:40 – 13:00	A mission concept for geostationary passive microwave interferometric radiometry using formation flight	Ahmed Kiyoshi Sugihara El Maghraby (University of Southampton)

13:00 – 14:00 Lunch break

14:00 – 14:15	ESA's Soil Moisture and Ocean Salinity Mission: future evolutions	Susanne Mecklenburg (ESA)
14:15 – 15:00	Final Discussion and wrap-up	
15:00	Close and coffee	

15:00 – 15:30 Coffee break**Posters**

	Posters	
1	Development and Validation of AMSR2 All-weather Sea Surface Wind Speed	Naoto Ebuchi (Hokkaido University), on behalf of Misako Kachi
2	Synthetic hurricane wind fields based on modelled winds and infrared imagery: Method, results, and potential applications	John Knaff (NOAA Center for Satellite Applications and Research)
3	High Winds from RapidScat	Alexander Wineteer (NASA-JPL)
4	Multi-sensor and multi-product observations of hurricane force winds in extratropical cyclones	Paul Chang (NOAA/NESDIS)
5	Assessing Southern Ocean winds in Met Office climate models	Dan Copsey (Met Office)
6	Offshore wind mapped from Jaxa's Satellite remote sensing in Baltic Sea: new possibilities opened by "Global Change Observation Mission-W1"	Elisa Sorrivi (University of Bologna)
7	Impact of ASCAT scatterometer winds on the quality of HIRLAM analysis in case of severe storms	Jekaterina Služenikina (Estonian Environment Agency)
8	Wave impacts on microwave radiometer and scatterometer wind retrievals	Paul Chang (NOAA/NESDIS)

9	Operational National SAR Winds System Current and Future Activities	Shahid Khurshid (Environment and Climate Change Canada)
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