

# Aeolus Cal/Val and Science Workshop Programme

## 2-6 November 2020

### Virtual Workshop (Webex)

When	Who	What/Title
<b>2 November 2020, Monday, 13:00 – 18:05 (CET, UTC+1)</b>		
<b>13:00 – 14:30</b>		
<b>Opening Session, Conveners: A.G. Straume and J. von Bismarck</b>		
13:00-13:05	T. Parrinello	Welcome on behalf of the workshop organizing committee
13:05-13:25	J. Aschbacher (ESA), A. Ratier (EUMETSAT), G. Adrian (WMO)	<a href="#">Welcome on behalf of ESA, EUMETSAT, WMO and DWD</a>
13:25-13:40	G. Adrian	<a href="#">The needs for wind observations in the global observing system</a>
13:40-13:55	S. Osprey	<a href="#">Winds of Change - A New Light on the Dynamics of the Tropical Stratosphere</a>
13:55-14:10	P. Knippertz	<a href="#">Equatorial waves as a key element for weather prediction in the tropics</a>
14:10-14:25	L. Cucurull	<a href="#">ADM-Aeolus data exploitation to improve hurricane numerical weather analyses and forecasts at NOAA</a>
14:25-14:30	J. von Bismarck	<a href="#">Workshop Practical Information</a>
<b>14:30 – 14:45</b>		
<b>Coffee Break</b>		
<b>14:45 – 17:05</b>		
<b>Aeolus Mission and Product Status, Conveners: L. Isaksen and T. Kanitz</b>		
14:45-15:00	T. Parrinello	<a href="#">Aeolus Overview &amp; Mission Status</a>
15:00-15:30	O. Reitebuch	<a href="#">Assessment of the Aeolus performance and bias correction - results from the Aeolus DISC</a>
15:30-15:45	M. Rennie	<a href="#">The M1 mirror temperature bias correction for Aeolus L2B HLOS winds</a>
15:45-16:00	A. Dabas	<a href="#">Calibration and L2A products: latest developments</a>
16:00-16:15	F. Ehlers	<a href="#">Novel Noise Suppression in Aeolus Optical Properties Retrieval without the Need of Spatial Filtering</a>
16:15-16:30	J. De Kloe	<a href="#">Recent and Planned Improvements to the L2B Wind Processing Software</a>
<b>16:30 – 16:45</b>		
<b>Coffee Break</b>		
<b>16:45-17:05</b>		
<b>Flash session - Mission (2 min each)</b>		
<b>Conveners: L. Isaksen and T. Kanitz</b>		
<ol style="list-style-type: none"> <li>1. K. Schmidt: <a href="#">Radiometric Performance of the ALADIN Instrument</a></li> <li>2. M. De Laurentis: <a href="#">Overview of the AEOLUS Weekly Mission Planning</a></li> <li>3. S. Bley: <a href="#">Aeolus Range Bin Settings - How Aeolus Samples the Atmosphere</a></li> <li>4. U. Marksteiner: <a href="#">Bias Correction Methods for Aeolus Winds – Harmonic Bias Estimator and M1 Temperature Correlation</a></li> <li>5. S. Abdalla: <a href="#">Aeolus: First FM-B science data reprocessing campaign – preparation, status, data access and verification</a></li> <li>6. N. Masoumzadeh: <a href="#">Strategy for re-processing of Aeolus data products</a></li> </ol>		
<b>17:05-18:05</b>		
<b>Mission Status discussion and questions (Conveners: L. Isaksen and T. Kanitz)</b>		

When	Who	What/Title
<b>3 November 2020, Tuesday, 13:00 – 18:30 (CET, UTC+1)</b>		
<b>13:00 – 16:00</b>	<b>Cal/Val session - Part 1</b> <b>Conveners: O. Reitebuch and J. v. Bismarck</b>	
13:00-13:15	S. Khaykin	<a href="#">Validation of ESA Aeolus wind observations using Rayleigh Doppler lidar at the tropical La Reunion island</a>
13:15-13:30	G. Dai	<a href="#">Validation of Aeolus wind products by means of ground-based lidars over observation stations in China</a>
13:30-13:45	A. Geiß	<a href="#">Validation of the Aeolus L2B Product With Operational Radar Wind Profiler Measurements</a>
13:45-14:00	A. Martin	<a href="#">Validation of Aeolus Wind Observations Using Radiosonde Measurements and NWP Model Equivalents</a>
14:00-14:15	Q. Cazenave	<a href="#">Contribution to the 2019 CAL/VAL of the Aeolus mission using the airborne Doppler radar-lidar RALI payload and dropsondes</a>
14:15-14:30	P. Paschou	<a href="#">EVE: ESA's ground reference polarization lidar system for Aeolus Cal/Val activities</a>
14:30-14:45	J. De Kloe	<a href="#">Using Paramaribo Radiosonde Wind Data to Assess the Aeolus Wind LIDAR Quality in the Tropical Region</a>
<b>14:45 – 15:00</b>	<b>Coffee Break</b>	
15:00-15:15	A. Feofilov	<a href="#">Statistically Based Calibration/Validation Control of ALADIN/ADM-Aeolus Data</a>
15:15-15:30	M. T. Bushair	<a href="#">Validation of Aeolus/ALADIN Wind Observations With in-situ and Satellite Winds</a>
15:30-15:45	M. Hardesty	<a href="#">Comparing Aeolus Wind Observations With Atmospheric Motion Vectors, Sondes, and Lidar measurements</a>
<b>15:45 – 17:55</b>	<b>Cal/Val session – Part 2</b> <b>Conveners: D. Donovan and S. Bley</b>	
15:45-16:00	H. Baars	<a href="#">Validation of Aeolus L2A data with ground-based lidar in Israel for the aerosol-optimized range-bin setting in the Eastern Mediterranean (MARS) and in Leipzig, Germany, for the operational range bin setting</a>
16:00 -16:15	A. Gkikas	<a href="#">Validation of Aeolus L2A Products versus ground-based Lidars of the PANACEA network</a>
16:15-16:30	L. Ivanescu	<a href="#">Aeolus slant-pass optical depth validation with High-Arctic starphotometer measurements</a>
16:30-16:45	J. Abril-Gago	<a href="#">Validation of ADM-Aeolus Particle Backscatter Retrievals under SCA Algorithm over 21 Months at Spain and Portugal</a>
<b>16:45 – 17:00</b>	<b>Coffee Break</b>	
<b>17:00 – 17:55</b>	<b>Flash session – Cal/Val (2 min each)</b> <b>Conveners: D. Donovan and S. Bley</b>	
		<ol style="list-style-type: none"> <li>1. P. Voelger: <a href="#">Validation of Aeolus winds using ground-based radars in northern Sweden and Antarctica</a></li> <li>2. J. Walchester: <a href="#">Validation of Aeolus wind products with sophisticated ground-based instruments in the Northern and Southern Hemisphere</a></li> <li>3. S. Tsyro: <a href="#">Validation of Aeolus L2A Extinction With EMEP MSC-W Model</a></li> <li>4. R. Rüfenacht: <a href="#">The E-PROFILE Observation Networks for Wind, Aerosols and Clouds and Possibilities to serve as Calibration Standard for Aeolus</a></li> <li>5. G. Chou: <a href="#">Aeolus cal/val in data sparse regions</a></li> <li>6. I. Hanssen: <a href="#">ALIVO Aeolus CAL/VAL project at Andøya Space Center – results, status and outlook</a></li> <li>7. S. Bley: <a href="#">Validation of Aeolus L2B Winds Using Atmospheric Motion Vectors</a></li> <li>8. E. Basharova: <a href="#">Statistical validation of Aeolus wind products at Leipzig, Germany using radiosondes and ground-based Doppler wind lidar</a></li> </ol>

	<p>9. N. Siomos: <a href="#">Status of the AEOLUS L2A aerosol product validation using ground based lidar measurements from EARLINET</a></p> <p>10. A. Cacheffo: <a href="#">Validation of AEOLUS L2A products using a multiwavelength lidar system at SPU Lidar Station – Brazil</a></p> <p>11. S. Ishii: <a href="#">Result of validation experiment for Aeolus wind data in Japan</a></p> <p>12. O. Lux: <a href="#">Intercomparison of Wind Observations From Aeolus and the ALADIN Airborne Demonstrator</a></p> <p>13. G. Močnik: Measurements of Aerosol Optical Properties Using Ultra-Light Aircraft</p> <p>14. D. Emmitt: <a href="#">DAWN, Dropsonde and Aeolus Wind Comparisons from the April 2019 NASA Aeolus Cal/Val Test Flight Campaign</a></p> <p>15. M. Kezoudi: <a href="#">Integration of several instruments on the UAV-balloon system of the Cyprus Institute for Aeolus Cal/Val within ASKOS campaign</a></p> <p>16. D. Santillan Pedrosa: <a href="#">VirES for Aeolus - Online Visual Analysis of Aeolus Data</a></p> <p>17. A.M. Fjæraa: <a href="#">EVDC: Portal updates and newly submitted Cal/Val data</a></p>
<b>17:55-18:30</b>	<b>Cal/Val discussion and questions (Conveners: O. Reitebuch, J. v. Bismarck, D. Donovan, S. Bley)</b>
<b>18:30</b>	<b>Group photo</b>

When	Who	What/Title
<b>4 November 2020, Wednesday, 13:00 – 18:20 (CET, UTC+1)</b>		
<b>13:00 – 16:00</b>	<b>Aeolus Cal/Val campaigns Conveners: S. Tucker and T. Parrinello</b>	
13:00-13:15	C. Lemmerz	<a href="#">Aeolus Validation With the 2-µm Coherent and the ALADIN Airborne Demonstrator Doppler Wind Lidars on-board the DLR Falcon</a>
13:15-13:30	A. Hertzog	<a href="#">First Results of the Strateole-2 Long-Duration Balloon Campaign in the Tropical Lower Stratosphere</a>
13:30-13:45	S. Bley	<a href="#">Intercomparison of Stratospheric Wind Observations from the Aeolus Satellite and the Loon Balloon Network</a>
13:45-14:00	T. Fehr	<a href="#">Aeolus Campaigns: Overview and the Tropical Campaign 2021</a>
14:00-14:15	K. Bedka	<a href="#">The NASA Aeolus Cal/Val Test Flight Campaign: Initial Results and a Look Ahead to Cabo Verde</a>
14:15-14:30	E. Marinou	<a href="#">The ASKOS Cal/Val campaign for the validation of the Aeolus aerosol product</a>
<b>14:30 – 14:45</b>	<b>Coffee Break</b>	
14:45-15:00	C. Flamant	<a href="#">CADDIWA: Aerosol-Radiation-Cloud Interactions in the Tropics Investigated by Synergism of an Airborne Campaign and Multi-Mission Satellite Observations</a>
15:00-15:15	G. Skofronick-Jackson	NASA's Contributions to the 2021 Aeolus Field Campaign
15:15-15:30	S. Chen	<a href="#">CPEX-AW and Aeolus Cal/Val Tropical Field Campaign</a>
<b>15:30-15:45</b>	<b>Cal/Val campaigns discussion and questions (Conveners: S. Tucker, T. Parrinello and T. Fehr)</b>	
<b>15:45 – 16:00</b>	<b>Coffee Break</b>	

<b>16:00 – 18:20</b>	<b>NWP impact – part 1</b> <b>Conveners: G.J. Marseille and A.G. Straume</b>	
16:00-16:15	G. Halloran	<a href="#">Assessment and assimilation of Level 2B winds at the Met Office</a>
16:15-16:30	M. Rennie	<a href="#">An Assessment of the Impact of Aeolus Doppler Wind Lidar Observations for Use in Numerical Weather Prediction at ECMWF</a>
16:30-16:45	A. Cress	<a href="#">Validation and Impact Assessment Of Aeolus Observations in the DWD Modelling System</a>
16:45-17:00	M. Šavli	<a href="#">Towards Increasing the Potential of L2B HLOS Winds for NWP at Météo-France</a>
17:00-17:15	V. Pourret	<a href="#">Recent developments around the assimilation of AEOLUS winds in the Météo-France global NWP model</a>
17:15-17:30	N. Zagar	<a href="#">Equatorial wave dynamics: insights from Aeolus</a>
<b>17:30-18:00</b>	<b>Flash session – NWP (2 min each)</b> <b>Conveners: G.J. Marseille and A.G. Straume</b> <ol style="list-style-type: none"> <li>1. I. Krisch: <a href="#">Influence of Aeolus data assimilation on the representation of gravity waves in ECMWF analysis fields</a></li> <li>2. H. Liu: <a href="#">Evaluation, Observation Error Estimation, and Bias Correction of Aeolus Winds for NOAA Global Data Assimilation System (GDAS)</a></li> <li>3. K. Apodaca: <a href="#">Assessment of data assimilation techniques for improved use of Aeolus wind profiles in NOAA’s NWP systems with a focus on TC Predictability</a></li> <li>4. A. Kliewer: <a href="#">Assimilation of Aeolus and Forecast Verification with NASA DAWN Observations</a></li> <li>5. M. Borne: <a href="#">The Impact of Aeolus wind observations on the representation of the West African Monsoon in ECMWF analyses and forecasts</a></li> <li>6. P. Marinescu: <a href="#">The Impacts on Tropical Cyclone Forecasts From Assimilating ADM-Aeolus Observations in the Hurricane Weather Research and Forecasting Model</a></li> <li>7. S. Kumar: <a href="#">Impact of Aeolus Wind Observations on Global NWP Model Forecast: Study using an adjoint-based FSOI approach</a></li> <li>8. I. Rani: <a href="#">Assessment of NWP impact of ALADIN-HLOS winds through Single profile assimilation experiments and its verification against radio sonde profiles over</a></li> <li>9. S. Hagelin: <a href="#">Validation of Aeolus L2B winds over the Nordic countries using Harmonie-Arome and wind radar data from Northern Sweden</a></li> </ol>	
<b>18:00-18:20</b>	<b>NWP Impact discussion and questions - part 1 (Conveners: G.J. Marseille and A.G. Straume)</b>	

When	Who	What/Title
<b>5 November 2020, Thursday, 13:00 – 18:00 (CET, UTC+1)</b>		
<b>13:00 – 14:30</b>	<b>NWP impact – part 2 Conveners: G.J. Marseille and A.G. Straume</b>	
13:00-13:15	S. Dutta	<a href="#">Assimilation of ADM-Aeolus HLOS Winds in Hybrid 4D-EnVar GSI Assimilation System</a>
13:15-13:30	R. Azad	<a href="#">Assimilation of Aeolus wind in an Arctic Mesoscale Numerical Weather Prediction Model</a>
13:30-13:45	G. George	<a href="#">Impact of Aeolus HLOS Winds on the Simulation of Nisarga Severe Cyclonic Storm over the Arabian Sea</a>
13:45-14:00	K. Garrett	<a href="#">Evaluation of Aeolus L2B data quality and impact on NOAA global NWP</a>
<b>14:00-14:30</b>	<b>NWP Impact discussion and questions - part 2 (Conveners: G.J. Marseille and A.G. Straume)</b>	
<b>14:30 – 14:45</b>	<b>Coffee Break</b>	
<b>14:45 – 18:00</b>	<b>Further scientific exploitation and new data products Conveners: N. Zagar and C. Retscher</b>	
14:45-15:00	P. Preusse	<a href="#">The tropical Quasi-Biennial Oscillation</a>
15:00-15:15	G.L. Chau	<a href="#">Investigating stratospheric winds using high-power large-aperture radars</a>
15:15-15:30	U. Wandinger	<a href="#">Towards a Synergetic Exploitation of Space-Based Aerosol Datasets From CALIPSO, Aeolus, and EarthCARE</a>
15:30-15:45	J. Guo	First Comparison of Wind Products between Aeolus Mission and Radar Wind Profiler of China and Boundary Layer Height Estimation
15:45-16:00	S. Wu	<a href="#">Lidar Concept of “Guanlan” Mission for Space Oceanography</a>
16:00-16:15	D. Winker	<a href="#">CALIPSO spin-off products</a>
<b>16:15 – 16:30</b>	<b>Coffee Break</b>	
16:30-16:45	D. Donovan	<a href="#">The Application of ATLID Aerosol and Cloud Retrieval Techniques to ALADIN Data.</a>
16:45-17:00	G.-J. Marseille	<a href="#">Status of Aeolus L2B scene classification and Optical Properties Code</a>
17:00-17:15	J. Letertre-Danczak	<a href="#">The ESA-funded Aeolus/EarthCARE Aerosol Assimilation Study (A3S)</a>
<b>17:15-17:30</b>	<b>Flash session – Science and new data products (2 min each) Conveners: N. Zagar and C. Retscher</b>	
	<ol style="list-style-type: none"> <li>1. T. Banyard: <a href="#">Atmospheric Gravity Waves in ADM-Aeolus Wind Lidar Observations</a></li> <li>2. X. Zhai: <a href="#">The study of Aeolus wind product in typhoon "HAGUPIT" monitoring</a></li> <li>3. S. Tjemkes: <a href="#">Ocean Surface Wind from Aeolus Sea Surface Returns</a></li> <li>4. M. Stelmaszyk: The Browse Processor (BRPF) - Python-based Earth Observation Satellites Data Visualization Software</li> <li>5. D. Santillan Pedrosa: <a href="#">VirES Virtual Research Environment (VRE) idea and concept</a></li> </ol>	
<b>17:30-18:00</b>	<b>Science and new data products discussion and questions (Conveners: N. Zagar and C. Retscher)</b>	

When	Who	What/Title
<b>6 November 2020, Friday, 13:00 – 17:45 (CET, UTC+1)</b>		
<b>13:00-13:05</b>	<b>Announcement of splinter panel discussions (S. Bley)</b>	
<b>13:05 – 14:10</b>	<b>Splinter Panel Discussions – Separate Webex links</b>	
	Aerosols & Clouds (product quality and scientific exploitation)	Chairs: A. Dabas, H. Baars, T. Kanitz, S. Bley
	Winds (product quality, NWP impact and scientific exploitation)	Chairs: G. Halloran and A.G. Straume, J. v. Bismarck
	Instrument (Operations Board)	Chairs: O. Reitebuch and T. Parrinello, D. Wernham
<b>14:10 – 14:15</b>	<b>Short break to leave splinter session webex and re-connect to main webex</b>	
<b>14:15 – 16:00</b>	<b>Aeolus Follow-on studies Conveners: A. Stoffelen and D. Wernham</b>	
14:15-14:30	G.-J. Marseille	<a href="#">Aeolus follow-on configurations</a>
14:30-14:45	S. Ishii	<a href="#">Concepts for a future space-based DWL</a>
14:45-15:00	S. Tucker	<a href="#">The "Nested-OAWL" Approach to Full Tropospheric Global Wind Measurements that build on CALIPSO and Aeolus</a>
15:00-15:15	O. Reitebuch	<a href="#">Some thoughts on an Aeolus follow-on mission</a>
15:15-15:30	A. Heliere	<a href="#">Aeolus Follow-On preparatory activities and road map</a>
<b>15:30-16:00</b>	<b>Follow-on studies discussion and questions (Conveners: A. Stoffelen and D. Wernham)</b>	
<b>16:00 – 16:30</b>	<b>Coffee Break and preparation time for splinter session reports</b>	
<b>16:30 - 17:15</b>	<b>Splinter session reports and discussion Conveners: J. v. Bismarck and S. Bley</b>	
16:30-16:45	Report Aerosols & Clouds	A. Dabas, H. Baars, T. Kanitz, S. Bley
16:45 -17:00	Report Winds	G. Halloran and A.G. Straume, J. v. Bismarck
17:00-17:15	Report Instrument	T. Parrinello, D. Wernham, O. Reitebuch
<b>17:15 – 17:45</b>	<b>Workshop wrap-up Conveners: L. Isaksen and O. Reitebuch, T. Parrinello Summaries from the sessions and splinters, and next steps</b>	
<b>17:45</b>	<b>End</b>	