Aeolus CAL/VAL and Science Workshop Programme
ESA-ESRIN, Frascati, Italy, Big Hall
Tuesday 26 March 09:00 – Friday 29 March 14:00

When	Who	What / Title
Tuesday 26 March – morning programme		
08:00 – 09:00	Workshop registration and coffee	
09:00 – 09:35	**Opening session** Chairs: A.G. Straume (ESA), J.v. Bismarck (ESA)	
09:00 – 09:05	A.G. Straume, J. von Bismarck	Opening
09:05 – 09:15	J. Aschbacher	Welcome speech
09:15 – 09:35	A. Stoffelen	Scientific rationale of the Aeolus mission
09:35 – 11:05	**Aeolus Mission Session** Chairs: J. Marshall (ADS), T. Kanitz (ESA)	
09:35 – 09:55	R. Floberghagen	Aeolus mission status
09:55 – 10:25	M. Rennie	A First Look at the Aeolus Wind Product
10:25 – 10:45	D. Wernham	The Aladin Laser - From Development Challenges to Early In-Orbit Operations
10:45 – 11:05	O. Reitebuch	Aladin's radiometric and frequency performance
11:05 – 11:30	**Coffee**	
11:30 – 12:50	**Aeolus Mission Session – continued** Chairs: M. Schillinger (ADS), R. Floberghagen (ESA)	
11:30 – 11:50	B. Witschas	Analysis and characterization of Aladin instrumental drifts
11:50 – 12:10	F. Weiler	Aeolus Dark Currents
12:10 – 12:30	T. Flament	First Glimpse on Aeolus Aerosol Product
12:30 – 12:50	T. Kanitz	Aeolus Measurements during its first months in space and the way forward
12:50 – 14:00	**Lunch**	

When	Who	What / Title
Tuesday 26 March – afternoon programme		
14:00 – 15:30	**Aeolus CAL/VAL Session – Overview** Chairs: J. von Bismarck (ESA), A. Geiss (DLR)	
14:00 – 14:05	J. von Bismarck	Introduction
14:05 – 14:25	S. Bley	Aeolus Cal/Val Implementation and Organization
14:25 – 14:35	O. Reitebuch	The Aeolus Data Innovation and Science Cluster DISC
14:35 – 14:55	T. Fehr	ESA supported campaigns for Aeolus
14:55 – 15:15	A.M. Fjæraa	Evolution of EVDC - ESA atmospheric validation data center
15:15 – 15:25	M. Pinol Sole	A set of Software Tools supporting Aeolus for Instrument Calibration and Validation
15:25 – 15:35	D. Santillan	VirES for Aeolus
15:35 – 16:00	**Coffee & posters**	
16:00 – 17:20	**Aeolus CAL/VAL Session** Chairs: S. Bley (ESA), A. Dabas (Météo-France)	
16:00 – 16:20	V. Amiridis	Cal/Val Considerations for Spaceborne Lidars (keynote presentation)
16:20 – 16:40	A. Geiss	Validation of Aeolus Observations by Means of Co-Located Reference Measurements
16:40 – 17:00	U. Wandinger	First Aeolus Cal/Val Results From Ground-Based Aerosol and Wind Lidar Measurements at Leipzig, Germany and Punta Arenas, Chile
17:00 – 17:20	H. Baars	Evaluating the prototype Aeolus 2A product with PollyNET measurements of lofted aerosol layers at Haifa, Israel and Al Dhaid, United Arab Emirates
17:20 – 19:00	**Poster session and icebreaker**	

When	Who	What / Title
Wednesday 27 March – morning programme		
09:00 – 10:40	**Aeolus CAL/VAL Session – continued** Chairs: I. Hanssen (ALOMAR), T. Parrinello (ESA)	
09:00 – 09:20	M. Hardesty	Overview of **US Activities** for Calibration, Validation, and Impact Assessment of Aeolus Observations
09:20 – 09:40	A. Benedetti	Results from the ESA-funded Aeolus/EarthCARE Aerosol Assimilation Study (A3S) and future perspectives
09:40 – 10:00	P. Kushner	Overview of Canadian Cal/Val Activities for Aeolus
10:00 – 10:20	D. Rees	Ground-Based Fringe-Imaging Direct-Detection Doppler Wind Lidar System for Aeolus
10:20 – 10:40	S. Tsyro	Validation of ADM-Aeolus Aerosol Products With EMEP MSC-W Model
10:40 – 11:10	**Coffee poster session**	
11:10 – 12:50	**Aeolus CAL/VAL Session – continued** Chairs: A. Benedetti (ECMWF), T. Kanitz (ESA)	
11:10 – 11:30	I. Hanssen	Airborne and Lidar Validation of Aeolus at ALOMAR (ALIVO ALOMAR)
11:30 – 11:50	A. Apituley	The ACTRIS contribution to Aeolus CAL/VAL
11:50 – 12:10	S. Wu	Validation of ADM-Aeolus wind and aerosol products by means of ground observations over six stations in China
12:10 – 12:30	S. Khaykin	Validation of ESA Aeolus wind profiling capacities using ground-based Rayleigh Doppler lidar at Haute Provence observatory
12:30 – 12:50	D. Emmitt	Evaluating airborne DAWN's accuracy in preparation for AEOLUS under flights with NASA's DC-8
12:50 – 14:00	**Lunch**	

When	Who	What / Title
Wednesday 27 March – afternoon programme		
14:00 – 16:00	**Aeolus Campaigns** Chair: M. Hardesty (NOAA), T. Fehr (ESA)	
14:00 – 14:20	J. Tackett	The role of airborne campaigns for calibration and validation of space-borne lidars
14:20 – 14:40	C. Lemmerz	First Airborne Wind Lidar Campaign for the Validation of Aeolus
14:40 – 15:00	V. Amiridis	The ASKOS Cal/Val campaign for the validation of the Aeolus aerosol product
15:00 – 15:20	A. Hertzog	Validating Aeolus Winds With the Strateole-2 Long-Duration Balloon Campaign in the Tropical Lower Stratosphere
15:20 – 15:40	K. Bedka	A NASA Airborne Flight Campaign Preparing for ADM Aeolus Calibration and Validation Activities
15:40 – 16:00	J. Pélon	Contribution to the CAL/VAL of the Aeolus mission using 355 nm HSR Doppler Lidar and 95 GHz Doppler cloud radar
16:00 – 16:30	**Coffee and poster session**	
16:30 – 18:00	Chairs: R. Floberghagen (ESA), T. Parrinello (ESA), O. Reitebuch (DLR), L. Isaksen (ECMWF)	**Plenary session on Aeolus instrument operations and planning**
19:00 – 22:00	**Workshop Dinner**	

When	Who	What / Title
Thursday 28 March		
09:00 – 10:00	Chairs: J. von Bismarck (ESA), T. Fehr (ESA), U. Wandinger (TROPOS), A. Stoffelen (KNMI)	**Plenary session on Aeolus CAL/VAL progress and planning**
10:00 – 11:00	**Aeolus Science Session** Chairs: J.-F. Mahfouf (Météo-France), A.G. Straume (ESA)	
10:00 – 10:20	A. Stoffelen	Using spatial wind information in NWP data assimilation
10:20 – 10:40	N. Bormann	Wind impact from different observing systems in the ECMWF 4D-Var system
10:40 – 11:00	M. Rennie	First Results of the Impact of Aeolus Observations on ECMWF Forecasts
11:00 – 11:30	**Coffee and poster session**	
11:30 – 11:50	A. Cress	Validation and impact assessment of ADM-AEOLUS observations in the DWD modelling system
11:50 – 12:10	G. Halloran	Assessment of Aeolus Level 2B HLOS winds at the Met Office
12:10 – 12:30	I. Genkova	Aeolus wind profiles and the NCEP's NWP model
12:30 – 12:50	C. Shuyi	NASA Convective Process Experiment (CPEX): Wind Lidar, Dropsonde, and Precipitation Radar Observations from the Airborne Field Campaign
12:50 – 14:00	**Lunch**	
14:00 – 16:00	**Aeolus Science Session – continued** Chairs: G. Halloran (MetOffice), C. Retscher (ESA)	
14:00 – 14:20	J.-F. Mahfouf	Preparatory Activities Towards the Assimilation of AEOLUS Winds in the Météo-France Global NWP Model
14:20 – 14:40	K. Lean	Improving the Use of AMVs in Numerical Weather Prediction With Aeolus
14:40 – 15:00	R. Azad	Aeolus wind cal/val and data assimilation at MET Norway
15:00 – 15:20	T. Lee	Initial Assessment and Assimilation of Aeolus Measurements at the NASA Global Modeling and Assimilation Office
15:20 – 15:40	G.J. Marseille	First Results on Aeolus L2B Scene Classification and Optical Properties Code
15:40 – 16:00	J. de Kloe	Trade-off between accumulation length and wind retrieval quality
16:00 – 16:30	**Coffee and poster session**	
16:30 – 17:30	**Visit of Phi-Experience for interested sub-group**	
17:30	**Adjourn**	

When	Who	What
Friday 29 March		
09:00 – 11:10	**Aeolus Science Session – continued** Chairs: A. Cress (DWD), J. von Bismarck (ESA)	
09:00 – 09:10	A.G. Straume	Aeolus Science Activities Plan
09:10 – 09:30	S. Laroche	Validation of HLOS Winds With ECCC Global Deterministic Short-range Forecasts
09:30 – 09:50	H. Liu	A Comparative Study of Winds From ADM L2B and NWP Analyses
09:50 – 10:10	L. Isaksen	The use of Aeolus observations for reanalysis and climate-related process studies
10:10 – 10:30	A. Feofilov	Statistically Based Calibration/Validation Control of ALADIN/ADM-Aeolus Level 1 Data
10:30 – 10:50	H. Okamoto	Synergetic-ground-based lidar-systems for evaluation of information content of Aeolus and EarthCARE
10:50 – 11:30	**Coffee and poster session**	
11:30 – 12:30	Chairs: R. Borde (EUMETSAT), A.G. Straume (ESA)	**NWP impact assessment coordination and planning**
12:30– 13:00	Chairs: L. Isaksen (ECMWF), T. Parrinello (ESA)	**Workshop Wrap-up**
13:00	**End**	

Posters:

1. Ground-based wind and HSRL measurements for Aeolus CalVal from Boulder, CO (S. Tucker)
2. Aeolus Cal/Val on Board Polarstern During the North-South Transatlantic Cruise PS116 in November/December 2018 (A. Herzog)
3. Experimental Validation of Aeolus Wind Observations (A. Martin)
4. First results from British and Korean Lidars for AEOLUS Validation (M. Tesche)
5. LALINET SPU Lidar station: Preparation for Validation Process of AEOLUS ESA Satellite Mission (F. Lopes)
6. Validation of Aeolus using ground-based Lidar in Japan (S. Ishii)
7. Validation of Aeolus winds using radar measurements in Arctic Sweden and Antarctica (H. Körnich)
8. Rayleigh Wind Retrieval for the ALADIN Airborne Demonstrator of the Aeolus Mission Using Simulated Response Calibration (Z. Xiaochun)
9. Simulations and ground-based observations for cloud studies from space-borne lidars (S. Kaori)

10. Preliminary Comparisons of Aerosol and Cloud Detection Frequencies Between Aladin Level 2A Products and CALIOP (J. Tackett)
11. Continuous Wind-Profile Measurements Made by a Lower-VHF Radar in West Wales (D. Hooper)
12. Validation of Aeolus HLOS Wind Using the Ground-Based Instruments at Canadian Arctic and Comparison to Reanalysis Data (G. Chou)