

Working Group on Space-based Lidar Winds
February 7-8, 2018, David Skaggs Research Center, Boulder, CO
AGENDA

WEDNESDAY, FEBRUARY 7, 2018

<i>Title</i>	<i>Speaker</i>
8:30 Coffee and Registration	
9:00 Welcome and Outline of Meeting	M. Hardesty U. Singh
The Decadal Survey	
9:15 Overview of the Decadal Survey	W. Abdalati
9:45 Global Winds in the Decadal Survey	W. Baker
10:05 Discussion	
10:25 Break	
Update on NOAA Activities	
10:45 The NOAA Satellite Observing System Architecture Study	F. Gallagher
11:05 Wind Lidar in the NOAA Future Space Architecture Study	R. Menzies
Update on NASA Activities	
11:25 Wind Lidar in NASA's Weather Focus Area	T. Lee
11:45 Wind Lidar Related Activities in ESTO	P. Millar
12:05 Discussion	
12:25 Lunch	
Wind Lidar Technology	
13:25 Transmitters for Doppler Wind Lidar Missions	F. Hovis
13:40 Recent Developments in 2-micron Sources	P. Moulton
Direct-Detection Doppler Wind Lidar	
13:55 The ATHENA-OAWL Winds Mission	M. Hardesty
14:10 An OAWL Overview: the ATHENA airborne demonstrator, HAWC-OAWL for the DC-8, and new technology developments for space-based operation.	S. Tucker
14:25 Review of GrOAWL airborne validation and new results from ground-based studies	S. Baidar
14:40 The Airborne Cloud-Aerosol Transport System (ACATS): a status and update on development efforts at GSFC	S. Ozog
14:55 Discussion	
15:15 Break	
Atmospheric Motion Vectors	
15:35 MISTiC Winds-Progress on a LEO Hyperspectral Approach to Provide Vertically Resolved Wind Observations using Motion Vector Methods.	K. Maschhoff
15:50 Wide Field-of-View Stereo Capability for 24/7 Sensing of Atmospheric Motion Vectors	M. Kelly

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| 16:05 | A GEOS-based OSSE for the MISTiC-Wind Concept. | S. Pawson |
| 16:20 | Simulating 3D Atmospheric Motion Vectors (AMVs) using Water Vapor Feature Tracking | D. Posselt |
| 16:35 | Discussion | |
| 17:00 | Adjourn | |
| 18:30 | Group Dinner at The Med restaurant in Boulder | |

THURSDAY, FEBRUARY 8, 2018

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| 8:00 | Coffee | |
| 8:30 | Review of Previous Day and Objectives for Today | M. Hardesty
U. Singh |

Aeolus: Preparing for the First Wind Lidar Mission

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| 8:40 | Overview and Status of the Aeolus Mission | A. G. Straume |
| 9:00 | Validating Aeolus with an Airborne Demonstrator | O. Reitebuch |
| 9:20 | The Aeolus Cal-Val Plan | A. G. Straume |
| 9:40 | Observational Requirements and Capabilities for Vertical Wind Profiles | A. Stoffelen |
| 10:00 | Discussion | |
| 10:20 | Break | |

Coherent Doppler Wind Lidar

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| 10:40 | Modeled performance of a coherent DWL in a pathfinder mission | D. Emmitt |
| 10:55 | Advancement of Pulsed 2-Micron Coherent Wind Lidar Technology Towards Space Readiness | M. Kavaya |
| 11:10 | DAWN performance during CPEX 2017, comparison with dropsondes, and future applications | D. Emmitt |
| 11:25 | Preparing DAWN for Future Airborne Campaigns | J. Marketon |
| 11:40 | Discussion | |
| 12:00 | Lunch | |

Japanese Activities toward Space-based Wind Lidar

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| 13:00 | Future Plans and Activities for a Space-borne DWL in JAXA | D. Sakaisawa |
| 13:15 | Doppler Wind Activities at NICT | S. Ishii |
| 13:30 | Discussion | |

Assessing and Assimilating Wind Observations

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| 13:40 | NOAA's Quantitative Observing System Assessment Program | L. Cucurull |
| 13:55 | Uncertainty in Operational Wind Analysis Products | R. Langland |
| 14:10 | A new method for more accurate estimation of forecast impacts from observing system changes | Z. Toth |
| 14:25 | On the essential practices of lidar wind data assimilation | Z. Pu |
| 14:40 | A JCSDA perspective on global wind observations | J. Yoe |
| 14:55 | Discussion | |
| 15:15 | Break | |

Next Steps in Spacebased Measurements

- 15:35 Synergistic Active and Passive Wind Observations for Studying Dynamical Processes in the Troposphere D. Wu
- 15:50 A potential roadmap for meeting full tropospheric wind measurement needs S. Tucker
- 16:05 Discussion

Airborne Doppler Wind Lidar Science Studies

- 16:35 CPEX 2017: Utilizing DAWN wind measurements for convective process studies and mass budget calculations S. Greco
- 16:50 Airborne lidar hurricane and boundary layer studies D. Emmitt
- 17:10 Review Action Items and Schedule Next Meeting M. Hardesty
U. Singh
- 17:25 Adjourn