

Session Number & Time	Session Chairs/ CoChairs	Session and Papers
<b>Day 1</b>		
<b>Monday, July 9, 2007</b>		
9:00 AM	Sammy Henderson	<b>Welcome and Opening Remarks</b>
<b>1</b>	Milton Huffaker Sammy Henderson Guifang Li	<b>Opening Session - Fundamental Coherent Science and Technology</b>
9:15 AM		<b>Keynote Speaker, John Hall</b> , JILA (University of CO and NIST) - "Vibration-Resistant Laser Reference Cavity Design - a Highway to Optical Phase Stability and sub-Hz Linewidth in the Real World"
9:55 AM		<b>Marian Scully</b> , Texas A&M University and Princeton University, "The Photon Concept"
10:25 AM		<b>Prem Kumar</b> , Northwestern University, "Noise-Free Amplification: Towards Quantum Laser Radar"
10:55 - 11:10	<b>BREAK</b>	<b>MORNING</b>
11:10 AM		<b>David Payne</b> , Optoelectronics Research Centre at the University of Southampton (UK), "Kilowatt Fibre Amplifiers as Highly Coherent Sources for Laser Radar"
11:40 AM		<b>Robert L. Byer</b> and A. K. Sridharan, Stanford University, rbyer@stanford.edu "A Proposed 1-micron Eyesafe Lidar System for Global Space-based Remote Wind Measurements"
12:10-1:10		<b>LUNCH</b>
<b>2</b>	Mike Hardesty Bob Menzies	<b>Remote Sensing Priorities for the Future</b>
1:10 PM		<b>TBD</b> , NASA, Priorities in Remote Sensing for Earth Science
1:40 PM		<b>Paul McManamon</b> , Air Force Research Laboratory, "The Roles of Laser Radar in Layered Sensing"
<b>3A</b>	Kasu Asai Yoshihito Hirino Alain Debas Upendra Singh Anicento Belmonte	<b>Ground and Airborne Wind Measurement Systems</b>
2:10 PM		<b>S. Tucker</b> , NOAA Earth System Research Laboratory, "Ship-based High Resolution Doppler Lidar (HRDL) Measurements of Boundary Layer Winds and Relative Aerosol Backscatter during the 2006 Texas Air Quality Study."
2:40 PM		<b>Stephan Rahm</b> (stephan.rahm@dlr.de) DLR Germany, "Recent Lidar-based Wake Vortex Measurements at DLR"
3:10 - 3:25	<b>BREAK</b>	<b>AFTERNOON</b>
3:25 PM		<b>Dolfi-Bouteyre Agnes</b> (adolff@onera.fr) Onera, "1.5 µm All Fiber Pulsed Lidar for Wake Vortex Monitoring"
3:45 PM		<b>Toshiyuki Ando</b> (Ando.Toshiyuki@ap.MitsubishiElectric.co.jp) "Long range all-fiber Coherent Doppler LIDAR (CDL) system for wind sensing," Mitsubishi Electric Corporation
4:05 PM		<b>CARIOU Jean-Pierre</b> (jpcaiou@leosphere.fr) LEOSPHERE, "An innovative and autonomous 1.5µm Coherent lidar for PBL wind profiling"
4:25 PM		<b>P.W. Chan</b> (pwchan@hko.gov.hk) Chinese Academy of Meteorological Sciences, Beijing, China Hong Kong Observatory, Hong Kong, China, "Retrieval of 3D Wind Field from LIDAR Velocity Data"
4:45 PM		<b>P.W. Chan</b> Hong Kong Observatory, Hong Kong, China "Automatic LIDAR Windshear Detection Algorithm – a Refinement"
5:05 PM		<b>Rod Frehlich</b> (rgf@cires.colorado.edu) University of Colorado, "Coherent Doppler Lidar Measurements of the Atmospheric Boundary Layer"
<b>DAY 2</b>		
<b>Tuesday, July 10, 2007</b>		
8:00 AM	Sammy Henderson	<b>Announcements</b>
<b>3B</b>	Kasu Asai Yoshihito Hirino Alain Debas Upendra Singh Anicento Belmonte	<b>Ground and Airborne Wind Measurement Systems (Continued)</b>
8:10 AM		<b>Jakob Mann</b> , Risø National Laboratory at the Danish Technical University, Denmark, "Lidars in Wind Energy"
8:40 AM		<b>K. Mizutani</b> , National Institute of Information and Communication Technology, Japan, "Wind Lidar Developments and Measurements at NICT"
9:10 AM		<b>Abhijeeth Linganagari</b> (alingana@asu.edu) Abhijeeth Linganagari - Department of Mechanical & Aerospace Engineering, Arizona State University, "Analysis of the Nocturnal Development & Dispersion of Smoke Puffs in the Atmosphere using Lidar"
9:30 AM		<b>Yelena Pichugina</b> (yelena.pichugina@noaa.gov) NOAA Earth System Research, "Advantage of the High Resolution Doppler Lidar measurements for nighttime BL study and wind-energy applications"
9:50 AM		<b>Stephen M. Hannon</b> Lockheed Martin Coherent Technologies, (steve.hannon@lmct.com) "Next Generation Doppler Lidar Sensor at 1.6 microns"

10:10 AM		David Emmitt (gde@swa.com) Simpson Weather "Airborne Doppler Wind Lidar prospecting for vertical structures at flight level"
10:30-10:45	MORNING	BREAK
10:45 AM		Michael Kavaya, NASA Langley Research Center, (michael.kavaya@nasa.gov), "Coherent Lidar Activities at NASA Langley Research Center"
11:15 AM		Nikolaus Schmitt (nikolaus.schmitt@eads.net) EADS, "Flight of the Aviator Airborne LIDAR Turbulence Sensor – Final Results"
4	Pierre Flamant Kohel Mizutani Alan Brewer	Space-Based Lidar
11:35 AM		Herbert Nett and Martin Endeman, European Space Agency / ESTEC, "ADM-Aeolus Mission: Operation and Data Processing"
12:05 PM		Yannig Durand (yannig.durand@esa.int) ESTEC, Earth Observation Programmes, "Lidars in ESA's Earth Observation Missions"
12:20-1:20		LUNCH
1:20 PM		Alain DABAS alain.dabas@meteo.fr "Wind retrieval from ADM-Aeolus signals"
1:40 PM		Marie-Laure Denneulin (marie-laure.denneulin@cnrm.meteo.fr) Météo-France/CNRS, "ADM-Aeolus spin-off products and retrieval algorithms"
2:00 PM		Yannig Durand (yannig.durand@esa.int) ESTEC, Earth Observation Programmes, "Lidar Technology Developments for ESA's Earth Observation Missions"
2:20 PM		Chris Grund (cgrund@ball.com) Ball Aerospace & Technologies Corporation (all) "Optical Autocovariance Wind Lidar and Performance from LEO"
2:40 PM		Michael J. Kavaya, NASA Langley Research Center (michael.kavaya@nasa.gov) "Lidar and Mission Parameter Trade Study of Space-Based Coherent Wind Measurement Centered on NASA's 2006 GWOS Wind Mission Study Parameters"
3:00-3:15	AFTERNOON	BREAK
3:15 PM		Bruce Gentry, NASA Goddard Space Flight Center, "Direct Detection Doppler Lidar Development at NASA's Goddard Space Flight Center: Past, Present, and Future"
3:45 PM		Dave Winker and Yong Hu, NASA Langley Research Center, "The CALIPSO Mission and Initial Inputs for Doppler Wind Lidar Studies"
5	Dennis Killinger Fabien Gibert Nobuo Sugimoto	Coherent DIAL Systems
4:15 PM		James B. Abshire, NASA Goddard Space Flight Center, "Laser Sounder Approach for Global Measurement of CO2 Concentrations in the Troposphere from Space"
4:45 PM		Gary Spiers, NASA Jet Propulsion Laboratory, "Recent results and progress on the development of a Laser Absorption Spectrometer for carbon dioxide sink and source detection"
Tuesday 7:00-9:00	Session	POSTERS
POSTER		Victor Banakh (banakh@iao.ru) Institute of Atmospheric Optics SB RAS, Russia, "Reconstruction of cross-wind profile from turbulent intensity fluctuations of diffusely scattered optical wave"
POSTER		George Busch, Coherent Applications, Inc., "Dispelling the Myth of Reduced Heterodyne Efficiency With Increasing Detection Aperture"
POSTER		P. W. Chan Hong Kong Observatory, Hong Kong China "LIDAR-based Turbulence Intensity Calculation along Glide Paths"
POSTER		David Emmitt (gde@swa.com) Simpson Weather, "CFLOS statistics for design of future space based lidars"
POSTER		Philip Gatt (phil.gatt@lmco.com) Lockheed Martin Coherent Technologies, "Coherent Lidar Angle Estimation Error Analysis"
POSTER		Hironori Iwai (iwai@nict.go.jp) Institute of Information and Communications Technology (NICT), "Single- and Dual-lidar measurements of the sea breeze at Ssendai Airport"
POSTER		Jeffrey W. Katz (j-katz@tam.u.edu) Texas A&M University Physics Department, "Laboratory Development of a Brillouin LIDAR Using Edge-Filter Detection for Measurement of Sound Velocity in the Ocean"
POSTER		K. Todd Lowe (toddlowe@aurinc.com) Applied University Research Inc., "Doppler Chirp Signal Processing for Particle Acceleration Measurement with Laser-Doppler Velocimetry"
POSTER		James Mason, (james.e.mason@lmco.com) Lockheed Martin Advanced Technology Center, "Experiments with Multi-Aperture Three Dimensional Coherent Imaging"

POSTER		Narasimha S. Prasad (n.s.prasad@lerc.nasa.gov) NASA Langley Research Center, "A deeper look at the fundamentals of heterodyne detection requirements"
POSTER		Steven Serati (sserati@bnonlinear.com) Boulder Nonlinear Systems, Inc. "Dynamic Holographic Beam Steering"
POSTER		Scott Shald (scott.shald@lmco.com) Lockheed Martin, "Comparison of FIR and IR Filters in Coherent Lidar Processing"
POSTER		I. Shpantzer, Pak Cho (pscho@celight.com) - "A novel coherent laser radar architecture based on temporal-diversified optical orthogonal-frequency-division-multiplexing"
POSTER		David Tan (david.tan@ecmf.int) ECMWF "ADM-Aeolus Level-2B Wind Retrieval Algorithms"
POSTER		Sara Tucker, (sara.tucker@noaa.gov) NOAA, "Platform-Motion Compensation for Velocity Measured by Doppler Lidar"
POSTER		Nobumitsu Tsunematsu (n.tsunematsu@nict.go.jp) National Institute of Information and Communications Technology (NICT), "A case study of multi-layered wind structure over Tokyo associated with sea breeze circulation by use of a coherent Doppler Lidar and the WRF model"
POSTER		Douglas Youmans (DYoumans@sparta.com) ; SPARTA, Inc. "Range-Doppler Imaging Using Pseudo-Random Phase Modulation Coherent Lidar: A Study Using the SEASAT Satellite Retro-Reflectors"
<b>DAY 3</b>		
<b>Wednesday, July 11, 2007</b>		
8:00 AM	Sammy Henderson	<b>Announcements</b>
8:10 AM		Pierre Flamant, Ecole Polytechnique, France, "Road to CO2 DIAL Mission"
8:40 AM		Michael Dobbs and William Sharp, ITT Space Systems, "Method and Performance of Modulated-CW Lidar for Mapping Sources and Sinks of Carbon Dioxide"
9:10 AM		Fabien Gilbert (fabien.gilbert@lmd.polytechnique.fr) (1)JPSL-LMD, Ecole Polytechnique, 91128 Palaiseau Cedex, France "2-µm Heterodyne Differential Absorption Lidar for both atmospheric CO <sub>2</sub> and wind measurements: validation and geophysical application"
9:30 AM		Shoken Ishii (sishii@nict.go.jp) National Institute of Information and Communications Technology, Japan, "Coherent Differential Absorption Lidar for atmospheric CO <sub>2</sub> measurement"
9:50 AM		Shumpei Kameyama (Kameyama.Shumpei@dn.MitsubishiElectric.co.jp) Mitsubishi Electric Corporation
9:50-10:05	MORNING	<b>BREAK</b>
<b>6</b>		
Ove Steinvall Thomas Karr Renny Fields		
<b>Hard Target Laser Radar</b>		
10:05 AM		James M. Sabatier, University of Mississippi and V. Aranchuk, Metrolaser, Inc., "Multiple Beam Laser Doppler Vibrometry for Landmine Detection"
10:35 AM		Ove Steinvall - FOI, Sweden- Recent Lidar Developments at FOI
11:05 AM		Mohan Vaidyanathan, Steve Blask, Van Reynolds (Harris Corporation) and Richard Marino (MIT Lincoln Laboratory) - "Field Demonstration of 3-D Photon Counting Lidar for Imaging Through Foliage"
11:35 PM		Joseph Buck Lockheed Martin (joe.buck@lmco.com) "S3 Program Update: High-Resolution Three-dimensional Imaging"
12:05 PM		Doug Jameson (Douglas.Jameson@wpafb.af.mil) AFRL/SNJM, "Effects of Spatial Averaging on Coherent Lidar Pulse-Pair Vibration Measurements"
<b>AFTERNOON FREE</b>		
1:30-9:30 PM		<b>PANEL DISCUSSION</b>
<b>DAY 4</b>		
<b>Thursday, July 12, 2007</b>		
8:30 AM	Sammy Henderson	<b>Announcements</b>
<b>7</b>		
Michael Kavaya Phil Gatt Gary Spiers		
<b>Modeling and Simulation</b>		
8:40 AM		Aniceto Belmonte, Technical University of Catalonia, Barcelona, Spain (belmonte@isc.upc.edu) "Atmospheric aberrations in coherent laser systems"
9:10 AM		Don Jacob (don.jacob@lmco.com) Lockheed Martin Coherent Technologies, "Coherent Lidar CNR: A Summary of the Effects of Refractive Turbulence and the Dependence on the Normalized Irradiance Variance"
9:30 AM		Philip Gatt (phil.gatt@lmco.com) Lockheed Martin Coherent Technologies, "Finite Dead-Time Geiger-Mode APD Performance"
9:50 AM		Michael A. Greiner (Greiner@wpafb.af.mil) Electro-Optics Program, University of Dayton, "Monte Carlo Canopy Propagation Model"

10:10-10:25		MORNING	BREAK
8		Stojan Radic Steve Alejandro Gary Kammerman	<b>Related Coherent Optical Technologies and Applications</b>
10:25 AM			Michael Taylor, University College London, "Coherent Detection for Fiber Optic Communications using Real Time Digital Signal Processing"
10:55 AM			Volker Quetschke for the LIGO Scientific Collaboration University of Florida, "LIGO - Coherent optical length measurement with 10 <sup>-18</sup> m accuracy"
11:25 AM			Berry Smutny, Tesat-Spacecom GmbH & Co.KG, Germany, "Coherent Laser Communications Terminals for LEO-GEO Data Links"
11:55-1:00			LUNCH
9		Paul McManamon Wally Buell Maurice Helmos	<b>Synthetic and MultiAperture Coherent Laser Radar Systems</b>
1:00 PM			Phil Tomlinson, DARPA, "Synthetic Aperture Radar for Tactical Imaging (SALTI) Flight Test Results and Path Forward"
1:30 PM			Joseph C. Marron, (joe.marron@lmco.com) Lockheed Martin Coherent Technologies, "Novel Multiaperture 3D Imaging Systems"
2:00 PM			Nicholas J. Miller and Bradley D. Duncan University of Dayton., "Sparse Aperture Imaging"
10A		Richard Heinrichs Michael Harris Richard Richmond Farzin Amzajerdian	<b>Novel Systems</b>
2:20 PM			Mark Rubin, (rubin@LL.mit.edu) MIT Lincoln Laboratories, "Quantum States and Coherent Laser Radar"
2:50 PM			J. Ashcom, MIT-Lincoln Laboratories, "Coherent Detection with Photon Counting Receivers"
3:20-3:35		AFTERNOON	BREAK
3:35 PM			Nathan Newbury, National Institute of Standards and Technology, Boulder, "Lidar with Femtosecond Fiber-Laser Frequency Combs"
4:05 PM			Randall Babbitt, Montana State University, "High Resolution Range/Doppler Lidar Using Broadband Coherent Optical Processing"
4:35 PM			Dr. S. L. Jain (sjain@nplindia.ernet.in) National Physical Laboratory
4:55 AM			Peter Lindelow, (pl@oersted.dtu.dk) Orsted-DTU, COM/DTU, Technical University of Denmark, "Velocity sensing FSPT-modulated coherent lidar"
6:30-9:30 PM			BANQUET DINNER
DAY 5			Friday, July 13, 2007
8:00 AM		Sammy Henderson	Announcements
10B		Richard Heinrichs Michael Harris Richard Richmond Farzin Amzajerdian	<b>Novel Systems (Continued)</b>
8:10 AM			Jerry C Chen, M.I.T. Lincoln Laboratory (jochen@ll.mit.edu) "Terahertz Vibrometer that Senses Sub-micron Vibrations Behind Barriers"
8:30 AM			M. Jalal Khan (mj Khan@ll.mit.edu) MIT Lincoln Laboratory, "Optical Detection of Terahertz using Nonlinear Parametric Upconversion"
11		David Tratt Stephan Rahm Joseph Paranto Diego Pierrotet	<b>Advanced Component Technologies</b>
8:50 AM			Farzin Amzajerdian, NASA Langley Research Center, "Qualification Testing of Laser Diode Pump Arrays for a Space-based 2-micron Coherent Doppler Lidar"
9:20 AM			Mike Salisbury, Boeing SVS, "Geiger Mode Array Tech Transfer and Terrain Mapping Data Collection"
9:50-10:05		MORNING	BREAK
10:05 AM			Floyd Hovis, Fibertek, "Advanced Transmitters for Lidar Applications"
10:35 AM			Ken Dinndorf, BAE, "Recent Advances in Coherent Laser Radar Components"
11:05 AM			Dimitri Edouart (edouart@lmd.polytechnique.fr) IPSL-LMD, "Using a photo-acoustic cell to manage pulsed laser spectral shift: application to accurate atmospheric CO2 Heterodyne Differential Absorption Lidar measurements"
11:25 AM			Frank Heine (frank.heine@tesat.de) Tesat-Spacecom GmbH & Co.KG, "Coherent Seed Laser for the AEOLUS Mission"

Bob Stoneman (bob.stoneman@lmco.com) Lockheed Martin, "Eyesafe  
1.6 micron Er:YAG transmitters for coherent laser radar"

11:45 AM

2:12:05:00 AM

POST DEADLINE PAPERS

1:00 PM

CONFERENCE ADJOURNS