



NASA Sounder Science Team Meeting
09/30 - 10/02/2014
Marriott Greenbelt

Tuesday, September 30, 2014

Session 1: Introduction and Team Lead Report (Chair: Teixeira)

	ALL	Registration	8:00 AM
Joao Teixeira	JPL	AIRS Science Team Lead Report	8:30 AM
Lazarous Oreopoulos	GSFC	Overview of the status of Aqua	8:45 AM

Session 2: Operational Data Products Systems (Chair: Pagano)

Thomas Pagano	JPL	AIRS Project Status and Data Products	9:00 AM
Thomas August	EUMETSAT	The operational IASI L2 products version 6 at EUMETSAT	9:15 AM
Mark Liu	NOAA	NOAA Unique CrIS ATMS Processing System	9:35 AM
Hank Revercomb	UW	Summary of University of Wisconsin, Space Science and Engineering Center Sounder Activities	9:55 AM
BREAK			10:15 AM
Ramesh Kakar	NASA HQ	NASA Headquarters Perspective	10:35 AM
Steve Friedman	JPL	SNPP Sounder SIPS: Development Plans and Product Descriptions	10:50 AM

Session 3: Atmospheric Sounding for Climate (Chair: Teixeira/Kahn)

Lazarous Oreopoulos	GSFC	MODIS Dynamical and Microphysical Regimes as Viewed by AIRS	11:10 AM
Joel Susskind	NASA GSFC	Version 6 Surface Skin/Surface Air Temperature Differences and their inter-annual Variability	11:30 AM
Jae Lee	UMBC	Seasonal and Interannual Variation of Surface Temperature Over Greenland As Observed In AIRS, MODIS and In-Situ Measurements	11:50 AM

LUNCH **12:10 - 1:15**

George Aumann	JPL	Search for Climate Signals in the AIRS and IASI Data	1:15 PM
Alexander Ruzmaikin	JPL	On the Hemispheric Distribution of the Earth's Radiative Components	1:35 PM
Sergio De-Souza Machado	UMBC	Analyzing AIRS data for evidence of stochastic forcing	1:55 PM
Qing Yue	JPL	The Cloud Radiative Masking Effect as Observed by Collocated AIRS, MODIS, CERES, and MERRA Reanalysis Data	2:15 PM
Brian Kahn	JPL	Observing warm marine boundary layer cloud organization with AIRS VIS, IR and Level 2 geophysical parameters	2:35 PM
Jie Gong	GSFC	Global survey of concentric gravity waves in AIRS images and ECMWF analysis	2:55 PM
Mathias Schreier	JPL	Analysis of Radiances from AIRS and CrIS with Respect to Clouds: Observations and Comparisons with Simulations	3:15 PM

BREAK **3:35 PM**

Baijun Tian	JPL	The moisture and double-ITCZ biases in CMIP5 models	3:55 PM
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Session 4: Applications using Sounding Data (Chair: Ray)

Sharon Ray	JPL	AIRS Applications effort overview and development pipeline	4:15 PM
Darren Drewry	JPL	AIRS, Climate and Vector-Borne Disease	4:30 PM
Stepanie Granger	JPL	Potential for AIRS observations (as VPDa) to be used for drought (and other) applications	4:45 PM
Ali Behrangi	JPL	Application of AIRS for drought analysis and prediction	5:00 PM
Julie Wallace	Consultant	Developing a Temperature Inversion Strength Product for Public Health and other Applications	5:15 PM

ADJOURN **5:30 PM**

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Wednesday, October 1, 2014

Session 5: Weather Forecast Improvement and Data Assimilation (Chair: Lambrigtsen)

David Santek	UW	The Forecast Impact of Atmospheric Motion Vectors Derived from AIRS Moisture Retrievals	8:00 AM
Mitch Goldberg	NOAA	Use of CrIS for NWS nowcasting applications	8:20 AM
Andrew Collard	NOAA	The Assimilation of Satellite Radiances at NCEP	8:40 AM
Will McCarty	GSFC	Progress towards the Assimilation of Infrared and Microwave Radiances Affected by Clouds and Precipitation at the GMAO	9:00 AM
Oreste Reale	GSFC	Impact of AIRS and AMSU/A data assimilation on tropical cyclones and extreme precipitation events	9:20 AM

Session 6: Atmospheric Composition and Aerosols (Chair: Olsen/Warner)

David Crisp	JPL	OCO-2 Status	9:40 AM
BREAK			10:00 AM
Edward Olsen	JPL	AIRS V6 CO2 Interim Product Testing and Plans for Future Development	10:20 AM
Xun Jiang	UH	Modulation of AIRS Mid-tropospheric CO2 by the Large-scale Circulations	10:40 AM
Kang Sun	Princeton	Validation of Satellite Ammonia Retrievals Using Ground-based Mobile Measurements	11:00 AM
Juying Warner	UMD	Decadal Record of Ammonia Observed by AIRS	11:20 AM
Sergio De-Souza Machado	UMBC	Retrieving Daytime Desert Dust and Volcanic Ash Layer Heights	11:40 AM
LUNCH			12:00 - 1:00
Xiaozhen (Shawn) Xiong	NOAA	Atmospheric CH4 and N2O from Thermal Infrared Sounders: Retrieval, Validation and Monitoring of their Increase Trends	1:00 PM
Leonid Yurganov	UMBC	Evaluation of CH4 standard AIRS and IASI retrievals for the Arctic and recent findings	1:20 PM

Session 7: Atmospheric Thermodynamics (Chair: Fetzer)

Eric Fetzer	JPL	AIRS V6 Validation	1:40 PM
Linette Boisvert	GSFC	Verification of air / surface humidity differences from AIRS and ERA-Interim in support of turbulent flux estimation	2:00 PM
Patrick Boylan	UCAR	AIRS Version 6 Temperature Profiles over Antarctica	2:20 PM
Junghong (June) Wang	SUNY	Validation of AIRS V6 Products from South Pole to Tropics using Dropsonde Data	2:40 PM
BREAK			3:00 PM
Feng Ding	GSFC	Comparison of Temperature and Humidity Profiles between the "TqJoint" and "Standard" Data Group in AIRS Version 6 Product	3:20 PM
Chris Barnet	NOAA	The CalWater-2 field campaign: an opportunity for evaluation of moisture products in extreme environments	3:40 PM
Chris Wilson	JPL	Validation of AIRS temperature as a function of surface heterogeneity	4:00 PM
Van Dang	JPL	Validation of AIRS Sea Surface Temperature and Near Surface Air Temperature and the Affects of Neural Network First Guess on Their Retrieval	4:15 PM
Sun Wong	JPL	Cloud-Dependent Uncertainties in AIRS V6 and ECMWF Temperature and Specific Humidity	4:30 PM
Antonia Gambacorta	NOAA	The NOAA operational hyper spectral retrieval system: algorithm description and inter-consistency among the AIRS/AMSU, IASI/AMSU/MHS and CrIS/ATMS systems	4:45 PM
Tony Reale	NOAA	Comparison of IASI, NUCAPS and AIRS V6 Soundings Using the NOAA Products Validation System	5:00 PM
Nicholas Nalli	NOAA	Validation of the NOAA Unique CrIS/ATMS Processing System (NUCAPS) Operational Retrieval Products	5:15 PM
ADJOURN			5:30 PM

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Thursday, October 2, 2014

Session 8: Algorithm Improvements and Research Products (Chair: Iron/Barnet)

Bill Irion	JPL	Single-footprint retrievals of water vapor profiles and cloud properties	8:00 AM
Joel Susskind	GSFC	Improved Water Vapor Profile and Total Ozone Products in AIRS Version 6X	8:20 AM
Larrabee Strow	UMBC	AIRS Forward Model Improvements	8:40 AM
Bjorn Lambrigtsen	JPL	Microwave Sounder Earth System Data Records	9:00 AM
Adam Milstein	MIT	Neural network updates	9:20 AM
Xu Liu	LARC	Single Field of View Cloudy Retrieval using Combined IR and MW Sounder Data	9:40 AM
BREAK			10:00 AM
Chris Barnet	NOAA	The development and validation of the Community Hyper-Spectral Infrared Microwave Earth Retrieval Algorithm (CHIMERA): the path forward	10:30 AM
Larabee Strow	UMBC	OEM Retrievals of AIRS Radiances: Single Footprints to Time Series	10:50 AM
Tim Hultberg	EUMETSAT	Piecewise linear regression (PWL) and optimal estimation (OE) retrieval of temperature and humidity in EUMETSAT's IASI Level 2 Processor	11:10 AM
Evan Fishbein	JPL	Comparison of AIRS/AMSU and CrIS Retrieval Error Characteristics	11:30 AM
Leonid Yurganov	UMBC	Intercomparison of three algorithms for retrievals of volcanic SO ₂ from AIRS data	11:50 AM
LUNCH			12:10 - 1:15
Jack Kaye	NASA HQ	Earth Science at NASA HQ	1:15 PM
Thomas Hearty	GSFC	Level 3 Revisited: Monthly Means, Climatologies, and AIRS L3 Lite	1:35 PM

Session 9: Instrument Calibration (Chair: Aumann/Strow)

Denis Elliott	JPL	AIRS, AMSU-A, and Aqua Operations Status	1:55 PM
George Aumann	JPL	Evaluation of AIRS and CrIS Relative Radiometric Calibration Under Cloudy Conditions	2:15 PM
Antonia Gambacorta	NOAA	Scene in-homogeneity effects on interferometer-based radiance measurements and their impact on the retrieval of atmospheric variables: a case study for IASI and CrIS	2:35 PM
Evan Manning	JPL	AIRS Level-1C with applications to AIRS retrieval and to cross-calibration with MODIS and CrIS	2:55 PM
Chris Hepplewhite	UMBC	Limitations of SNO Data for AIRS and CrIS Radiance Comparisons	3:15 PM
BREAK			3:35 PM
Isaac Moradi	UMD	Inter-calibration and validation of observations from ATMS and SAPHIR microwave sounders	3:55 PM

Session 10: Future Atmospheric Sounding Measurement Ideas (Chair: Pagano)

Lambrigtsen, Bjorn	JPL	Geostationary Microwave Sounders	4:15 PM
Blackwell, Bill	MIT	Microwave Atmospheric Sounding with Small Satellites	4:25 PM
Revercomb, Hank	UW	Recommendations for Future IR High Spectral Resolution Observations	4:35 PM
Casey, Sean	NOAA	Status of the Hyperspectral Infrared Observing System Simulation Experiment effort at the Joint Center for Satellite Data Assimilation.	4:45 PM
Mashoff, Kevin R.	BAE	MISTiC Winds, a Distributed Architecture Approach to Dynamic Weather Observations	4:55 PM
Pagano, Thomas	JPL	Next-gen IR sounding for weather, climate and composition	5:05 PM
Discussion	All		5:30 PM