



Virtual NASA AIRS/Sounder Science Team Meeting

(Times indicated are Pacific time)

Session 1: Introduction

Chair: Joao Teixeira

Tuesday, October 26, 2021

Time (PDT)	Name	Affiliation	Title
9:00 AM	Joao Teixeira Vivienne Payne Larrabee Strow	NASA JPL NASA JPL UMBC	Introduction to the NASA AIRS/Sounder Science Team Meeting
9:20 AM	Jeffrey Piepmeier	NASA GSFC	Remembering Gail Skofronick Jackson
9:40 AM	Claire Parkinson	NASA GSFC	Aqua Status, Activities in the Past 12 Months, and Future Plans
10:00 AM	TBD	NASA HQ	NASA Headquarters Perspective
10:20 AM	Tom Pagano Ruth Monarrez	NASA JPL NASA JPL	AIRS and SIPS Programmatic Updates

AM Break: 10:40-11:00

11:00 AM	William Blackwell	MIT	An update on the NASA TROPICS mission
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Session 2: Weather

Chair: Eric Fetzer

11:20 AM	Emily Berndt	NASA MSFC	Prototyping and Evaluating NUCAPS-Aqua as Part of a multi-instrument near-real time capability to support pre-convective forecasting
11:40 AM	Amir Ouyed Hernandez	U. Arizona	3D water vapor feature-tracking atmospheric motion vectors calculated from hyperspectral infrared sounders
12:00 PM	Eric Wilcox	DRI	The AIRS day-night temperature contrast as an indicator of light-absorbing aerosols and associated responses in low clouds
12:20 PM	Bill Irion	NASA JPL	Preparations for Operational JOSFRA Retrievals and Preliminary Science Goals
12:40 PM	Yixin Wen	U. Oklahoma	Explainable AI models for precipitation retrievals: a case study based on atmospheric sounding systems
1:00 PM	Derek Posselt	NASA JPL	Impact of Assimilating Geostationary Microwave and Infrared Soundings in Regional and Global Observing System Simulation Experiments
1:20 PM	Brian Kahn	NASA JPL	An AIRS perspective of aircraft turbulence within the transatlantic flight corridor
1:40 PM	Jennifer Gahtan	NASA JPL	Stratospheric Kelvin wave activity as a function of equivalent depth in AIRS and MERRA-2

End of Session: 2:00 PM



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Session 2: Weather (continued)

Chair: Eric Fetzer

Wednesday, October 27, 2021

Time (PDT)	Name	Affiliation	Title
9:00 AM	Oreste Reale	NASA GSFC	An overview of using AIRS and CrIS cloud-cleared radiances in the NASA GEOS data assimilation and forecast system: Advances towards multi-instrument and adaptive thinning assimilation
9:20 AM	Evan Fishbein	NASA JPL	What an AIRS-like Sounder Can Say about Boundary Layer Turbulence

Session 3: Climate

Chair: Joao Teixeira

9:40 AM	Larrabee Strow	UMBC	Climate Trends and Outliers from AIRS L1c 19-Year Radiance Time Series
10:00 AM	George Aumann	NASA JPL	Clouds in the ECMWF Integrated Forecast System and AIRS
10:20 AM	Sergio DeSouza-Machado	UMBC	AIRS Climate Temperature and Humidity 19-Year Trends: Is Relative Humidity Changing?
AM Break: 10:40 - 11:00			
11:00 AM	Chongxing Fan	U. Michigan	Use different machine-learning algorithms for clear-sky detections in infrared hyperspectral observations: assessment and physical interpretability
11:20 AM	Qing Yue	NASA JPL	Consistency and Continuity of Pixel-Scale Cloud Property Records From Aqua and SNPP
11:40 AM	Sun Wong	NASA JPL	Convection and Indian Monsoon Lifecycle in Observations and Climate Models
12:00 PM	Haozhe He	U. Miami	Evaluating Observational Constraints on Intermodel Spread in Cloud, Temperature and Humidity Feedbacks
12:20 PM	Shay Liu	Indiana University	Cloud types and vertical structure associated with MJO and CCEWs from legacy satellites

End of Session: 12:40 PM



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Session 3: Climate (continued)

Chair: Joao Teixeira

Thursday, October 28, 2021

Time (PDT)	Name	Affiliation	Presentation
9:00 AM	Joshua Roundy	U. Kansas	The impact of switching from AIRS v6 to v7 on diagnosing the land-atmosphere coupling

Session 4: Atmospheric Composition

Chair: Vivienne Payne

9:20 AM	Karen Cady-Pereira	AER	Evaluation of the CrIS MUSES NH3 Product with aircraft profiles and ground observations
9:40 AM	Hansen Cao	U. Colorado Boulder	4D-Var inversion of European emissions using CrIS NH3 measurements and GEOS-Chem adjoint with bi-directional and uni-directional flux schemes
10:00 AM	Kazuyuki Miyazaki	NASA JPL	Global tropospheric ozone responses to reduced NOx emissions linked to the COVID-19 world-wide lockdowns
10:20 AM	Tao Wang	NASA JPL	The Variabilities of O3, CO, CH4, and CO2 from AIRS and CLIMCAPS level-3 data

AM Break: 10:40 - 11:00

11:00 AM	Vivienne Payne	NASA JPL	Evaluation of Sounder CO2 products
11:20 AM	King-Fai Li	UC Riverside	Impact of Amazonian Fires on Atmospheric CO2
11:40 AM	Xianglei Huang	U. Michigan	CFC-11 Column Concentration Retrieved from AIRS and CrIS with Near-global Coverage
12:00 PM	Vivienne Payne	NASA JPL	Impacts of fires on photochemistry: Observations of peroxyacetyl nitrate (PAN) from CrIS and AIRS
12:20 PM	Madison Shogrin	Colorado State University	Multisensor Observations of PAN over Megacities
12:40 PM	Kelley Wells	U. Minnesota	Development and analysis of VOC retrievals from CrIS

End of Session: 1:00 PM