CISESS Science Meeting Agenda

Earth System Science Interdisciplinary Center (ESSIC)
5825 University Research Court, Suite 4001
University of Maryland, College Park, MD 20740-3823

The CISESS Science Meeting will be held in the 4th Floor ESSIC Conference Room.

Day One – November 12, 2019

Session 1: Welcome and institutional presentations (Chair: Hugo Berbery)		
8:30 - 9:00		Registration
9:00 - 9:05	Hugo Berbery	Logistics
9:05 - 9:25	Harry Cikanek	The NOAA Center for Satellite Applications and Research (STAR): Mission and priorities
9:25 - 9:35	Christopher Brown	NOAA's Cooperative Research Program (CoRP)
9:35 - 9:50	Hugo Berbery	From CICS to CISESS
9:50 - 10:05	Fernando Miralles-Wilhelm	The CISESS Consortium: North Carolina
10:05	**Break**	

Session 2: Polar Orbiting Satellites (Chair: Xi Shao)		
10:20 - 10:40	**(I) Shunlin Liang**	**The Land cOntinuous Variable Estimator for Polar-orbiting MODIS and VIIRS data (LoVE-P)**
10:40 - 10:55	Chengquan Huang	Global Surface Type Products from VIIRS
10:55 - 11:10	Hu Yang	On-orbit Calibration of ATMS by Combined Using Ground Test and Space Maneuver Datasets
11:10 - 11:25	John Xun Yang	Estimating Noise Equivalent Delta Temperature (NEDT) of Inflight ATMS
11:25 - 11:40	Yong-Keun Lee	The Microwave Integrated Retrieval System (MiRS): Validation Activities for NOAA-20/ATMS Products and New Science Developments
12:00 - 12:50	**ESSIC SEMINAR / LUNCH**	

Session 2 (cont.): Polar Orbiting Satellites (Chair: Li Fang)		
1:20 - 1:40	**(I) Satya Kalluri**	**Continuity of Mid-Morning Polar Observations through EUMETSAT Metop-SG Satellites**
1:40 -1:55	Xi Shao	Modeling Spectral Degradation of MODIS and VIIRS Solar Diffusers
1:55 - 2:10	Sirish Uprety	Radiometric Consistency between S-NPP and NOAA-20 VIIRS Reflective Solar Bands
2:10 - 2:25	Bin Zhang	Error Assessments in the GNSS Radio Occultation Excess Phase/Bending Angle Calculation
2:25 - 2:40	Xiaoxu Tian	Comparison of ATMS Striping Noise Between NOAA-20 and S-NPP and Noise Impact on Warm Core Retrieval of Typhoon Jelawat (2018)
2:40 -2:55	Isaac Moradi	Radiative Transfer Models Intercomparison in the Microwave Region
2:55 - 3:20	**Break**	

Session 3: Earth System Data Assimilation (Chair: Xiaoxu Tian)		
3:20 - 3:35	Biljana Orescanin	Data Assimilation Efforts: MW Radiances Over Land
3:35 - 3:350	Katherine Lukens	Assessment of Stratospheric Balloon Observations towards Assimilation in NOAA's GSI-based Global Data Assimilation System
3:50 - 4:05	Hui Liu	Initial Impact Assessment of the ADM-Aeolus Space-Based Lidar Winds on NCEP Global Analysis and Forecast
4:05 - 4:20	Erin Jones	Evaluating Shortwave Observations from the CrIS Hyperspectral Infrared Instrument in the NOAA Global Data Assimilation System
4:20 - 4:35	Sarah O'Connor	CoRIS: the Evolution of a Data Management Program
4:35 - 4:50	Manik Bali	GSICS Coordination Center activities

5:00 - 7:00	**Poster Session / CISESS Reception**
	Third floor lounge (room 3024, SW corner)
	See poster list at the end of the Agenda

Day Two – November 13, 2019		
Session 4: Geostationary Satellites (Chair: Patrick Meyers)		
9:00 - 9:20	**(I) Steve Goodman**	**Lightning: An Essential Climate Variable**
9:20 - 9:35	Mason Quick	Mid-Atlantic Lightning Mapping Array Deployment
9:35 - 9:50	Daile Zhang	Time Evolution of Satellite-based Optical Properties in Lightning Flashes, and its Impact on GLM Flash Detection
9:50 -10:05	Veljko Petkovic	Predicting GLM Flash Rate Class: Deep Neural Network Approach
10:05 - 10:20	Jonathan Wynn Smith	A Review of GLM Gridded Product Training Activities
10:20 - 10:40	**Break**	

Session 4 (cont.): Geostationary Satellites (Chair: Daile Zhang)		
10:40 - 10:55	Fangfang Yu	In-orbit Radiometric Calibration Accuracy of GOES-16/17 ABI
10:55 - 11:10	Vladimir Kondratovich	CENRAIS - CWG Extended Navigation and Registration Assessment and Improvement System for GOES-R ABI Sensor
11:10 - 11:25	Zhipeng Wang	On-orbit Radiometric Calibration of GOES-R ABI IR Bands
11:25 - 11:40	Patrick Meyers	Exploring JPSS and GOES-R Observations in Virtual Reality
11:40 - 11:55	Patrick Meyers	Updates from the CISESS Proving Ground and Training Center
12-12:50	**Lunch**	
12:50 - 1:15	**Group Photo**	

Session 5: Earth System - Ocean (Chair: Katherine Lukens)		
1:15 - 1:35	**(I) Paul DiGiacomo**	**Satellite Oceanography at NOAA: Research, Applications and Services**
1:35 - 1:50	Kyle Duncan	Analysis of Arctic Sea Ice Pressure Ridges from ICESat-2
1:50 - 2:05	Sheekela Baker-Yeboah	Physical and Biological Implications of Eddy Signatures in the Benguela and California Current Regions
2:05 - 2:20	Gang Liu	From Near Real-Time Monitoring and Seasonal Outlooks to an Historical Assessment of Coral Bleaching Heat Stress Over 30 Years: Coral Reef Watch's Decision Support System for Coral Reef Management
2:20 - 2:35	Alexey Mishonov	Variability of the Gulf Stream Path on Decadal and Longer Timescales
2:35 - 2:50	Guangyang Fang	Seasonal Predictability of Tropical Atlantic Variability
2:50-3:15	**Break**	

Session 5 (cont.): Earth System - Ocean (Chair: Hugo Berbery)		
3:15 - 3:35	**(I) Veronica Lance**	**Ocean Satellite Data for Research and Applications: Expanding Paradigms, Aiding Transitions**
3:35 - 3:50	Eviatar Bach	Local Atmosphere-Ocean Predictability: Dynamical Origins, Lead Times, and Seasonality
3:50 - 4:05	James Biard	Atmospheric Fronts in Climate Models: Inter-comparison Across Historical and Future Scenarios

Session 6: Monitoring the Earth System (Chair: Daniel Tong)		
4:05 - 4:25	**(I) Russ Dickerson**	**Air Quality Projects: NOAA/UMD Cooperation**
4:25 - 4:40	Youhua Tang	Development of a Fast-Response Volcanic SO_2 Prediction System: A Study for the 2018 Mt. Kilauea Eruption using a Chemical Transport Model and Satellite Data
4:40 - 4:55	Yunyao Li	Ensemble Forecast of $PM_{2.5}$ during the 2018 Camp Fire Event Using the HYSPLIT Transport and Dispersion Model
4:55 - 5:10	Heshun Wang	Monitoring the Heatwave and Wildfire Events in 2019 Using Multiple NOAA VIIRS Land Surface Products
5:10 -5:25	Evan Ellicott	Timeliness of Remotely-Sensed Active Fire Products

Day Three – November 14, 2019		
Session 7: Earth System - Land / Hydrological Cycle (Chair: Jingjing Peng)		
9:00 - 9:20	**(I) Ralph Ferraro**	**Satellite Hydrological Products - Recent Advances and Applications, Future Challenges**
9:20 - 9:35	Li Fang	Evapotranspiration Data Product from NESDIS GET-D System Upgraded for GOES-16 ABI Observations
9:35 - 9:50	Jifu Yin	Near Rear Time 1 km SMAP Soil Moisture Data Product for Potential Use in National Water Model
9:50 - 10:05	Mitch Schull	A Pythonic Implementation of the ALEXI/DisALEXI Modeling Suite
10:05 - 10:20	Eli Dennis	Simulating Regional Climate: What is the Role of Soil Texture?
10:20 - 10:40	**Break**	

Session 7 (cont.): Earth System - Land / Hydrological Cycle (Chair: Veljko Petkovic)		
10:40 - 11:00	**(I) Bob Adler**	**The GPCP Climate Data Record (CDR)--Global Precipitation Monitoring and Trends**
11:00 - 11:15	Peng Yu	The GOES-R Land Surface Temperature Product Assessment
11:15 - 11:30	Jun Dong	Passive Microwave Snowfall Rate Product - New Calibration and Application
11:30 - 11:45	Yalei You	Time-Lag Correlation Between Passive Microwave Measurements and Surface Precipitation and Its Impact on Precipitation Retrieval Evaluation
11:45 - 12:00	Peter Romanov	Enhanced 30+ Year Global Snow and Ice Dataset and Climatology

12:00 **END OF MEETING**

Poster Session		
1	Yan Bai	Comparing S-NPP/NOAA-20 VIIRS DNB Reflected Lunar Radiances over Deep Convective Clouds
2	Lin Lin	The Effects of VIIRS Detector-Level and Band-Averaged Relative Spectral Response Differences on the Thermal Emissive Bands
3	Xin Jing	Evaluation of RadCalNet Output Data Using Landsat 7, Landsat 8, Sentinel 2A, and Sentinel 2B Sensors
4	Jun Zhou	Comparison of the Remapping Algorithms for Advanced Technology Microwave Sounder (ATMS)
5	Haifeng Qian	GOES-17 ABI VNIR Bands Radiometric Calibration and Performance
6	Xi Shao	Inter-Calibration of Small Satellite-based Microwave, Infrared and Radio Occultation Sensors and Demonstration with Proxy Data
7	Erick Geiger	Overview of NOAA Coral Reef Watch's Daily 5km-resolution Satellite Regional Virtual Stations for Monitoring and Responding to Mass Coral Bleaching
8	Tung-Chang Liu	Modeling of Solar Diffuser Stability Monitor Sun View Screen Transmittance
9	Patrick Meyers	Evaluation of NOAA's Reprocessed AMSR2 Environmental Data Records
10	Yan Zhou	Development of a Machine Learning-Based Radiometric Bias Correction for NOAA's Microwave Integrated Retrieval System (MiRS)
11	Ronald Vogel	Satellite Data Stakeholder Engagement Methodology Supports Regional Environmental Decision-Making Through Collaborative Applications
12	Jeannette Wild	Overview of CISESS Stratospheric Projects at the NCEP Climate Prediction Center
13	Peter Beierle	Towards Evaluating the Performance of the J-2/CrIS Instrument during Thermal Vacuum Testing
14	Hyelim Yoo	Desert Monitoring at Uyuni site for validation of GOES-16 ABI visible bands
15	Hui Xu	An Artificial Deep Neural Network Based Hyperspectral Infrared Sounder Uniform Scene Detection Model
16	Xinrong Ren	Aircraft Measurements of Air Pollutants and Greenhouse Gases in the Mid-Atlantic States
17	Tarendra Lakhankar	Hydrological Analysis using WRF-Hydro Model for Puerto Rico
18	Ricardo Kendi Sakai	Howard University Beltsville Campus (HUBC) Atmospheric Science Research Activities
19	Fantine Ngan	The Evaluation of Turbulent Mixing in HYSPLIT using MEASUREMENTs from Controlled Tracer Experiments
20	Yuling Liu	Enterprise LST Product Status and Its Readiness to Users
21	Yingtao Ma	Enhancement in CRTM non-LTE Correction Scheme and Implementation of Scene-Dependent Observation Error in GSI for Assimilation of CrIS SWIR