



CICS Science Meeting Agenda

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

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



Day One – November 6, 2017

8:30 - 9:00		Registration
9:00 - 9:05	Hugo Berbery	Logistics
9:05 - 9:15	Fernando Miralles-Wilhelm	Welcome and CICS future developments
9:15 - 9:30	Hugo Berbery	CICS research in Maryland (CICS-MD)
9:30 - 10:00	Reza Khanbilvardi (I)	Cooperative Science Center for Earth Systems Science and Remote Sensing Technologies (CREST)
10:00 - 10:15	Shakila Mechant (I)	Outreach at CREST
10:15 - 10:45	Break	

	Session 1	(Chair: Fernando Miralles-Wilhelm)
10:45 - 11:15	Harry Cikaneck (I)	An Update from the NESDIS Center for Satellite Applications and Research (STAR)
11:15 - 11:45	Otis Brown (I)	CICS research in North Carolina (CICS-NC)
11:45 - 12:00	Group Photo	Group Photo
12:00 - 12:50	Mitch Goldberg (I)	Seminar

	Session 2	Land and Hydrology (Chair: Hugo Berbery)
1:15 - 1:45	Lihang Zhou (I)	JPSS Data Products and Cal Val Updates
1:45 - 2:00	Mitch Schull	An Open Source Tool to Estimate Regional and Field-Scale Evapotranspiration
2:00 - 2:15	Li Fang	Merging Microwave and Optical Satellite Observations for High Resolution Soil Moisture Data Products
2:15 - 2:30	Jicheng Liu	NOAA Soil Moisture Operational Product System (SMOPS) Version 3.0: Validations and Improvements
2:30 - 2:45	Xiaxu Tian	Comparisons of Brightness Temperatures and Atmospheric Temperature Retrievals between ATMS and COSMIC RO
2:45 - 3:00	Jifu Yin	Applications of Satellite Soil Moisture in Drought Monitoring and Weather Forecast Improvements
3:00 - 3:15	Yuhan Rao	Land surface temperature retrieval for Himawari-8 Advanced Himawari Imager (AHI) data
3:15 - 3:45	Break	

	Session 3	Ocean Data Stewardship (Chair: Katie Lukens)
3:45 - 4:15	Krisa Arzayus (I)	Stewarding NOAA's data: How NCEI allocates stewardship resources
4:15 - 4:30	Jim Reagan	Nonuniform Warming of the North Atlantic from 1955-2012
4:30 - 4:45	Liqing Jiang	Surface pH in the Global Ocean
4:45 - 5:00	Alexey Mishonov	The World Ocean Database Transmissometry Data: Illuminating the Ocean's Secrets

5:00 - 7:00	Poster Session / CICS-MD Reception - Third floor lounge (room 3024, SW corner)	
	During the poster session, Michael Peterson will show preliminary uses of the new CICS Proving Ground and Training Center	

End of first day sessions

Day Two – November 7, 2017

	Session 4	Climate Research & Environmental Decision Support (Chair: Emily Smail)
8:30 - 9:00	Pasha Groisman (I)	Freezing Precipitation, Characterization of Weather Conditions Associated with It, and Changes in the Frequency of Its Occurrence
9:00 - 9:15	Allison Baer	Diagnosing Understandability Challenges in NOAA Climate Prediction Center's Temperature and Precipitation Outlooks
9:15 - 9:30	Augustin Vintzileos	The Elements of Subseasonal Excessive Heat Outlook Systems (SEHOS)
9:30 - 9:45	Katherine Lukens	The imprint of strong-storm tracks on winter weather in North America
9:45 - 10:00	Xiaoyang Zhang	Generation of Global Biomass Burning Emissions Product Using Fire Radiative Power Retrieved from Multiple Geostationary and Polar-orbiting Satellites
10:00 - 10:20	Break	

	Session 5	Satellite Oceanography & Climatology (Chair: Jifu Yin)
10:20 - 10:50	Eric Leuliette (I)	New insights from the sea level budget
10:50 - 11:05	Sinead Farrell	Measuring and Validating the Snow Depth Distribution on Arctic Sea Ice in Support of Polar Altimetry
11:05 - 11:20	Kyle Duncan	High-Resolution Airborne Observations of Sea Ice Pressure Ridge Sail Height
11:20 - 11:35	Emily Smail	Science for Society: The GEO Blue Planet and AquaWatch Initiatives
11:35 - 11:50	Ge Peng	Temporal and Regional Climate Mean and Variability of Arctic Sea Ice Coverage from Satellite Data
11:50 - 12:00	Pre-seminar break	Pre-seminar break
12:00 - 12:50	Chris Justice (I)	Seminar

	Session 6	Data Fusion and Algorithm Development (Chair: Hugo Berbery)
1:15 - 1:30	Ralph Ferraro (I)	An Update from the Satellite Climate Studies Branch
1:30 - 1:45	Chris Grassotti	NOAA's Microwave Integrated Retrieval System (MIRS): Recent Activity and Science Improvements
1:45 - 2:15	Sid Boukabara (I)	MIIDAPS Algorithm: Inversion of Geophysical Products from MW and IR Space-Based Sensors
2:15 - 2:30	Pat Meyers	Evaluation of AMSR2 Precipitation Algorithms
2:30 - 2:45	Jun Dong	Latest Development with the NOAA/NESDIS Satellite Snowfall Rate Product
2:45 - 3:00	Yalei You	Improving Overland Precipitation Retrieval with Brightness Temperature Temporal Variation
3:00 - 3:15	Veljko Petkovic	Using Large-scale Environment to Improve Passive MW Estimates of Heavy Precipitation
3:15 - 3:45	Break	

	Session 7	Data Assimilation (Chair: Veljko Petkovic)
3:45 - 4:15	Kayo Ide (I)	Impact Assessment of Future Cubesat Constellations on Global Data Assimilation using Observing System Simulation Experiments
4:15 - 4:45	Xiaolei Zou (I)	Importance of Satellite Data Characteristics for Their Assimilation in NWP Models
4:45 - 5:00	Kevin Garrett	An Enterprise Environmental Data Fusion and Assimilation System for Nowcasting Applications
5:00 - 5:15	Youhua Tang	Case Study of Aerosol Data Assimilation with the Community Multi-Scale 1 Air Quality Model over the Contiguous United States using 3D-Var and 2 Optimal

End of second day sessions

Day Three – November 8, 2017

	Session 8	Calibration and Validation (Chair: Fernando Miralles-Wilhelm)
8:30 - 9:00	Changyong Cao (I)	Improving the science quality of VIIRS SDR data through recalibration, reprocessing, and reanalysis
9:00 - 9:15	Heshun Wang	Radiance Based VIIRS Land Surface Temperature Product Validation
9:15 - 9:30	Hui Xu	S-NPP CrIS Gap Channels Prediction, Validation and Application
9:30 - 9:45	Likun Wang	Linking JPSS-1 and SNPP CrIS through Inter-calibration Efforts
9:45 - 10:00	Manik Bali	Use of AMSU/MSU FCDR as an in-orbit reference to monitor ATMS
10:00 - 10:15	Sirish Uprety	Recent Improvements in S-NPP VIIRS DNB Calibration
10:15 - 10:30	Hu Yang	Developing vicarious calibration for microwave sounding instruments using lunar radiation
10:30 - 11:00	Break	

	Session 9	Scientific Support for the New Satellite Missions, GOES-R and JPSS (Chair: Pat Meyers)
11:00 - 11:15	Yuling Liu	Status of the Land Surface Temperature Product Development for JPSS Mission
11:15 - 11:30	Xi Shao	Radiometric Stability and Stray Light Performance Monitoring for VIIRS Day/Night Band with Moon Light
11:30 - 11:45	Michael Folmer	GOES-16: First Uses in the National Weather Service Operations!
11:45 - 12:00	Michael Peterson	A First Look at the New Generation of Lightning Mapping with GOES-16
12:00 - 12:15	Peng Yu	GOES-16 Land Surface Temperature Product Status

Meeting Ends		
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5:00 - 7:00	Poster Session / CICS-MD Reception - Third floor lounge (room 3024, SW corner)	
1	Alexey Mishonov	Ocean climate shift derived from Northwest Atlantic Regional Climatology
2	Alexey Mishonov	Historical and Modern Deep-Sea Transmissometry Data in World Ocean Database: Its Status, Challenges, and Utilization
3	Alexey Mishonov	Particle Mass In Deep-Water Benthic Nepheloid Layers: A Global Synthesis
4	Bin Zhang	Stability Monitoring of the Advanced Microwave Radiometer onboard Jason-3
5	Eli Dennis	Initializing Numerical Weather Prediction Models with Model-derived and Satellite-Based Soil Moisture Data
6	Hyun Cheol Kim	Chemical histories of pollutant plumes in East Asia: Use of HYSPLIT-CMAQ tracking tool during the 2015 MAPS-Seoul campaign
7	James Biard	Automated Detection of Fronts using a Deep Learning Convolutional Neural Network
8	Jingjing Peng	Sea-ice Shortwave Albedo Retrieval Using NPP/VIIRS Data
9	John Yang	Radiometry Calibration with High-Resolution Data of GPM: Application to ATMS 183 GHz Water Vapor Channels
10	Jun Zhou	SNPP ATMS On-Orbit Geolocation Error: Evaluation and Correction Algorithm
11	Lin Lin	Effects of Spectral Response Function (SRF) and Antenna Pattern on the Characterization of ATMS Bias
12	Liwen Wang	Assessment and Enhancement of the Cloud Emission and Scattering Index (CESI) for Detecting Cirrus Clouds
13	Nai-Yu Wang	Combining Imager and Lightning For Enhanced GOES-R Rain Estimates in the NWS Pacific Region
14	Ni Dai	Intercomparison of ENSO Diabatic Heating Distribution and Atmospheric Circulations among ERA-interim, MERRA-2, CFSR Reanalyses and CMIP5 Models
15	Ricardo Kendi Sakai	GRUAN Mid-Atlantic Consortium Activities
16	Tarendra Lakhankar	Validation and Application of JPSS/GCOM-W (AMSR2) Soil Moisture Data Product for Puerto Rico
17	Xi Shao	Orbital Equator Crossing Time Variation for Suomi-NPP, MetOp and JPSS-1 Sun-synchronous Satellites
18	Xi Shao	A Light Contamination Ranking Index-based Method for Automating VIIRS Day/Night Band Stray Light Correction
19	Yan Bai	Lunar Phase-angle Dependent DCC Observations from Suomi NPP VIIRS/DNB
20	Yi Zhang	Developing Hourly Surface Albedo and Reflectance Product Suite for GOES-R ABI