



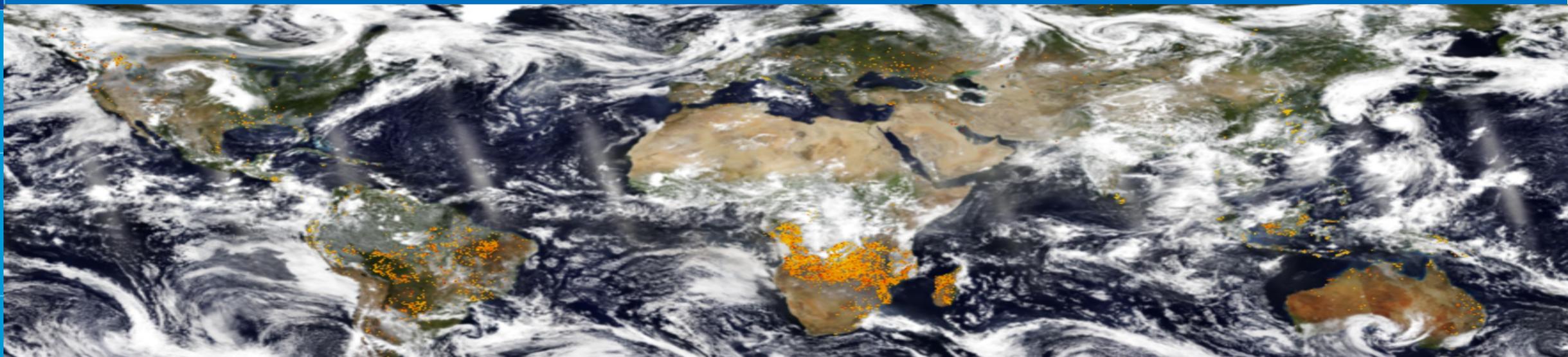
**NOAA**

**Satellite and  
Information  
Service**

August 27, 2018

# JPSS Program Science and Satellite Proving Grounds

Mitch Goldberg, Ph.D., JPSS Program Scientist,  
National Oceanic and Atmospheric Administration



# What is Program Science?

- Program Science provides science integrity for the JPSS Program
- JPSS Program Scientist provides the link between the JPSS operational user community and the JPSS Program through
  - Chairing the Low Earth Orbiting Requirements Working Group for gathering and defining requirements,
  - Managing the JPSS Proving Ground and Risk Reduction program to foster improved user applications and science feedback.
  - Provides overarching science oversight for the Program
- JPSS Project Scientist ensures instruments meet specification through oversight of prelaunch and post launch commissioning of instrument performance.
- NOAA/NESDIS Center for Satellite Applications and Research (STAR) provides the cal/val, algorithms to Ground Operations and providing algorithm maintenance/sustainment
- Algorithm Management Project (AMP) of the JPSS Ground Segment provides the interface between STAR, Ground, Flight, and Operations

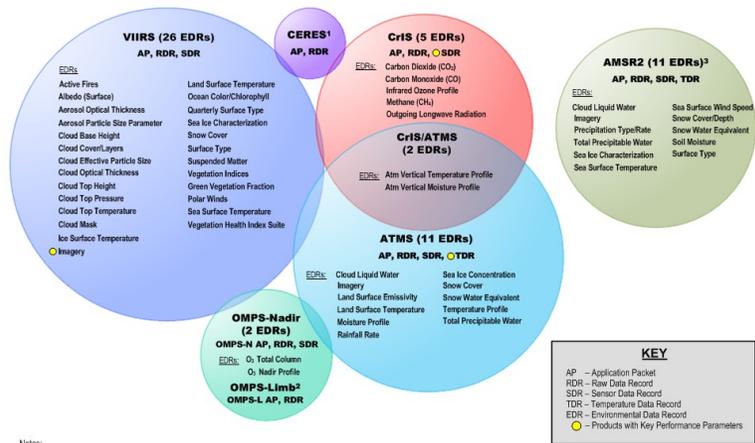


# Satellite Proving Ground: Goal is to improve NOAA Services through optimizing the use of satellite data along with other sources of data & information: Observations to Services to Stakeholders



## JPSS Program Data Products

JPSS Level 1 Requirements Document, v1.8



Notes:  
 \*AP and RDR for the JPSS-2 Mission are contingent on NASA manifest of the Radiation Budget Instrument (RBI)  
 \*Not applicable to JPSS-1, AP and RDR contingent on NASA manifest of OMS-Limb on the JPSS-2 Mission  
 \*All products dependent on the Global Change Observation Mission (GCOM) provided by the Japan Aerospace Exploration Agency

The JPSS Program includes Ground System Support for the Metop, DMSF, and GCOM missions

April 3, 2015  
 This chart is controlled by JPSS Program Systems Engineering  
 JPSS-P Rev C.1

<b>ADVANCED BASELINE IMAGER (ABI)</b> Aerosol Detection (Including Smoke and Dust) Aerosol Optical Depth (AOD) Clear Sky Masks Cloud and Moisture Imagery Cloud Optical Depth Cloud Particle Size Distribution Cloud Top Height Cloud Top Phase Cloud Top Pressure Cloud Top Temperature Derived Motion Winds Derived Stability Indices Downward Shortwave Radiation: Surface Fire/Hot Spot Characterization Hurricane Intensity Estimation Land Surface Temperature (Skin) Legacy Vertical Moisture Profile Legacy Vertical Temperature Profile Radiances Rainfall Rate / QPE Reflected Shortwave Radiation: TOA Sea Surface Temperature (Skin) Snow Cover Total Precipitable Water Volcanic Ash: Detection and Height	<b>GEOSTATIONARY LIGHTNING MAPPER (GLM)</b> Lightning Detection: Events, Groups & Flashes  <b>SPACE ENVIRONMENT IN-SITU SUITE (SEISS)</b> Energetic Heavy Ions Magnetospheric Electrons & Protons: Low Energy Magnetospheric Electrons & Protons: Med & High Energy Solar & Galactic Protons  <b>MAGNETOMETER (MAG)</b> Geomagnetic Field  <b>EXTREME ULTRAVIOLET AND X-RAY IRRADIANCE SUITE (EXIS)</b> Solar Flux: EUV Solar Flux: X-ray Irradiance  <b>SOLAR ULTRAVIOLET IMAGER (SUVI)</b> Solar EUV Imagery
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## GOES-R Baseline Products

### Weather Ready Nation

- Aviation Weather
- Fire Weather
- Hydrology and Water Resources
- Marine Weather and Coastal Events
- Hurricane / Tropical Storms
- Routine Weather
- Severe Weather
- Space Weather
- Tsunami
- Winter Weather

### NOAA Mission Service Areas

- #### Resilient Coasts
- Coastal Water Quality
  - Marine Transportation
  - Planning and Management
  - Resilience to Coastal Hazards and Climate Change

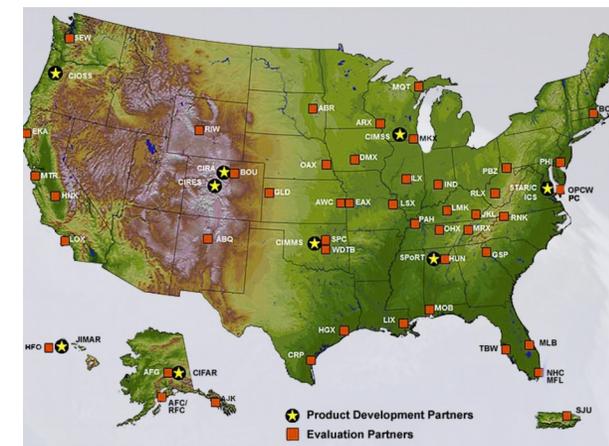
### Healthy Oceans

- Ecosystem Monitoring, Assessment and Forecast
- Fisheries Monitoring, Assessment and Forecast
- Habitat Monitoring and Assessment
- Protected Species Monitoring

### Climate

- Assessment of Climate Change and its Impacts
- Climate Mitigation and Adaption Strategies
- Climate Science and Improved Understanding
- Climate Predictions and Projections

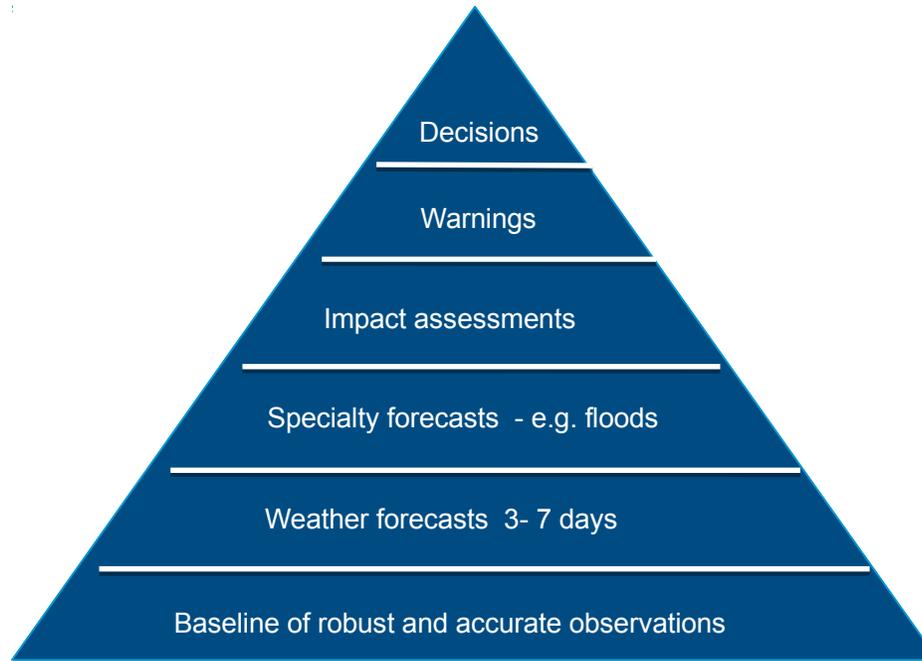
Addressing needs across NOAA



# Proving Ground User Initiatives focus on Applications and Decision Support for NOAA Service Areas and Partners



Starting in 2014 we transitioned from individual projects to coordinated team initiatives



Climb the pyramid through:

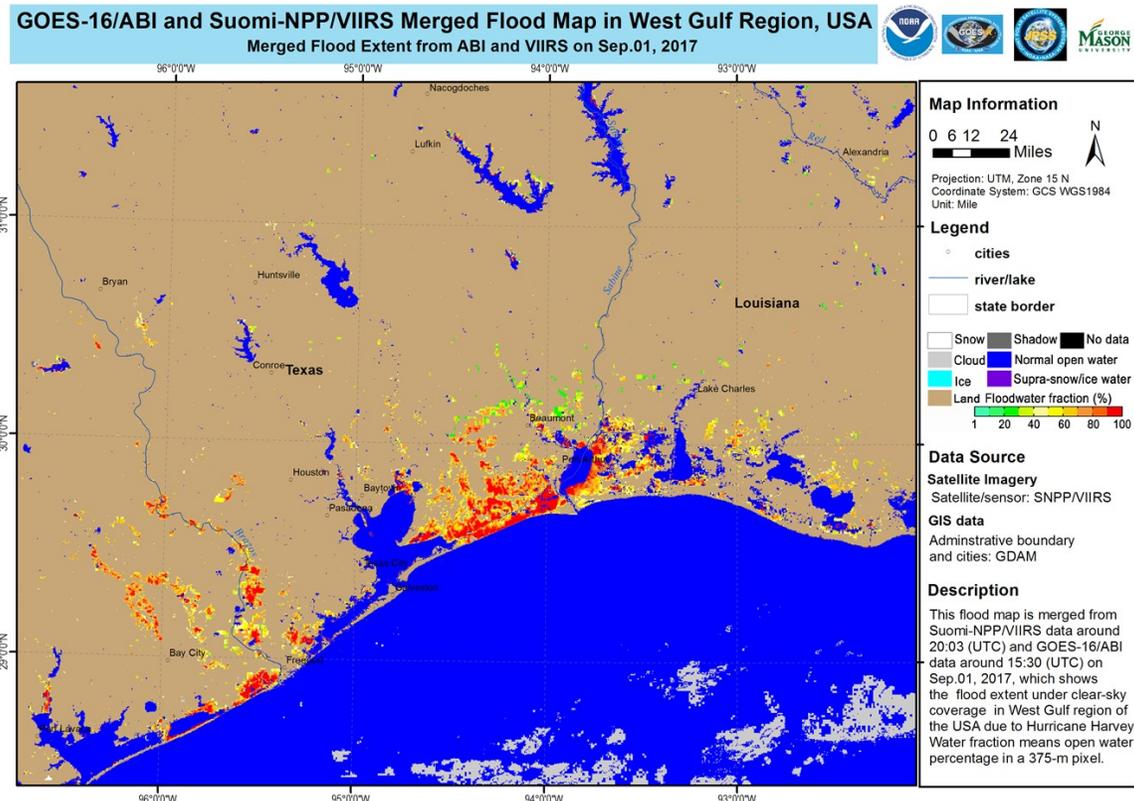
- Communicating our capabilities/needs
- Listening /understanding user needs and feedback
- Identifying user advocates/leaders
- Clearly stated objectives/deliverables
- Facilitators for managing meetings and milestones
- A very capable team

***NESDIS Strategic Metric " The utilization of NESDIS developed science by internal and external partners and stakeholders through enhanced coordination with partners and the user community"***

# The Initiatives

The initiatives comprise of a team of developers and users working together to improve an application in a testbed environment providing assessments of utility from the users and feedback to the developers.

- Arctic
- Fire and Smoke - will include GOES-R in 2018
- Hurricanes and Tropical Storms
- Hydrology
- NWP
- Oceans and Coasts - includes Sentinel 3
- River Ice and Flooding - includes GOES-R since 2017
- Sounding - includes EUMETSAT MeTOP
- Volcanic Hazards - new and includes both JPSS and GOES-R



From Chris Vaughn, FEMA to Mitch Goldberg

“This is some of the best/most comprehensive data I’ve seen to date for this event!” “Thank you all! Very grateful for the quick turn on these products”

# Floods & River Ice

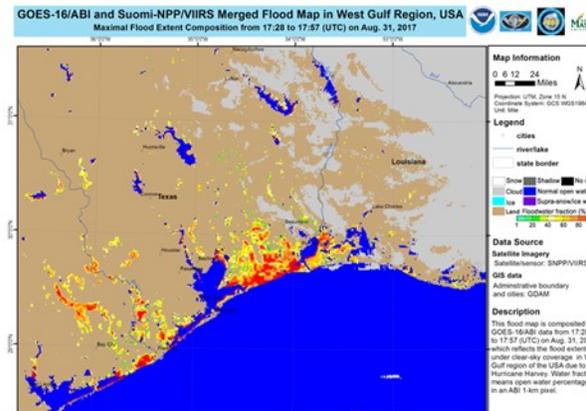
Provide conditions of river ice and standing water (flood) to NWS River Forecast Centers and FEMA. Supports International Disaster Charter

**First initiative to include GOES-R**

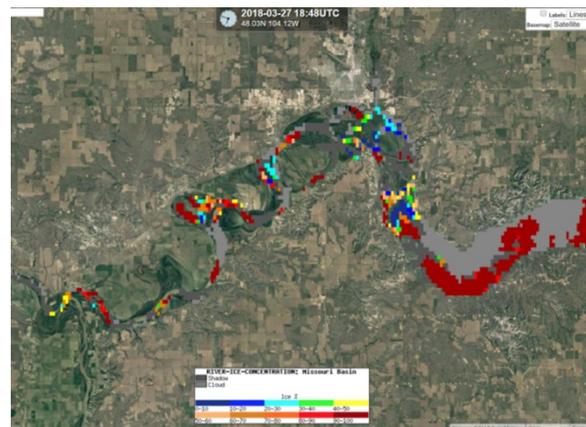
Funded Projects		
Principal Investigator	Title	Institution
Chaouch, Naira (FY15-18)	Operational river ice monitoring and forecasting over the US and the globe using SNPP and NOAA-20 VIIRS imagery	CCNY/CREST
Sun, Donglian Sanmei Li Jay Hoffman	Development of Global Geostationary-JPSS Flood Mapping Software and Products	GMU, CIMSS

Integrated JPSS/GOES-R flood maps:

Harvey



JPSS VIIRS ice map: Missouri and Yellowstone River: 3/27/18



Flood/River Ice maps are integrated into AWIPS2 at each River Forecast Center, and used by FEMA

# River Ice and Flooding Team – (April 2017 telecon)



Name	Organization	Name	Organization
Paul Alabi	CCNY	Paul McKee	WGRFC
Aaron Bisig	NIC	Julie Price	JPSS
Ed Capone	NERFC	Fernado Salas	NWC
Jessica Cherry	APRFC	Bill Sjoberg	JPSS
Reggina Cabrera	SERFC	Donglian Sun	GMU
Gene Derner	MBRFC	Tim Szeliga	NWC
Mitch Goldberg	JPSS	Marouane Temimi	CCNY
Andy Heidinger	STAR	Jonathan Thornburg	NCRFC
Jay Hoffman	CIMSS	Jorel Torres	CIRA
Eric Holloway	APRFC	David Vallee	NERFC
Sanmei Li	GMU	John Walker	NOAA UAS
Yinghui Liu	SSEC		

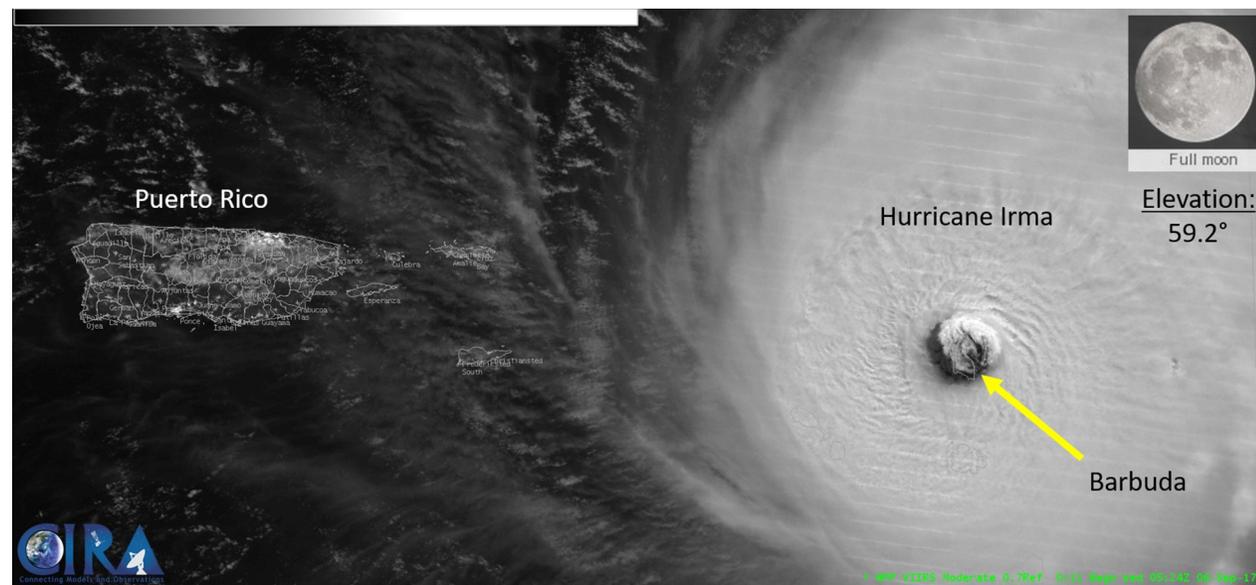


# Hurricanes

Funded Projects		
Principal Investigator	Title	Institution
Chirokova, Galina	Real-time acquisition, processing, analysis, and operational integration of TC-centric polar orbiting data. Part III: Improving Tropical Cyclone Forecast Capabilities Using the JPSS data Suite	Colorado State/CIRA
Cossuth, Josh	Real-time acquisition, processing, analysis, and operational integration of TC-centric polar orbiting data. Part I: Implementation of a data ingest, standardization, and output system.	NRL
Wimmers, Anthony	Real-time acquisition, processing, analysis, and operational integration of TC-centric polar orbiting data. Part II: Serving forecasters with advanced satellite-based TC center-fixing and intensity information.	UW/CIMSS

Making use of Direct Broadcast – Low Latency

Data to improve hurricane intensity and center fixing through use of microwave imagery and products, unique day night band, along with visible/infrared imagery



# Oahu Direct Broadcast provides real-time information

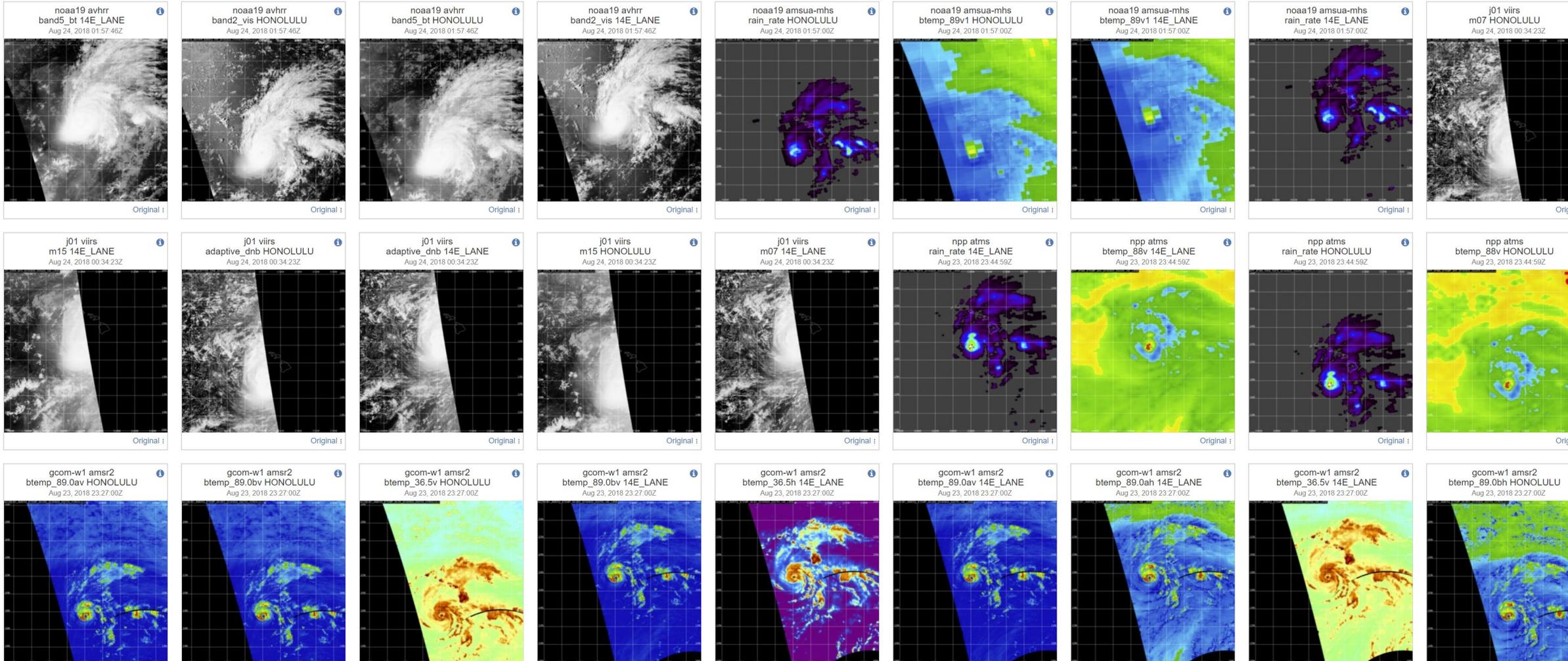


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📱 Apps ⭐ Bookmarks 📄 STAR JPSS Integrated 🗺️ JSTAR Mapper

HCC // DB Processing System

-- all dates -- | -- all products -- | AutoRefresh



# Where is that Eye? (Hurricane Lane – August 23, 2018)



J01\_VIIRS\_M15\_20180823\_225449\_HONOLULU 160W 158W 156W 154W 152W 150W 30N

## NATIONAL HURRICANE CENTER

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

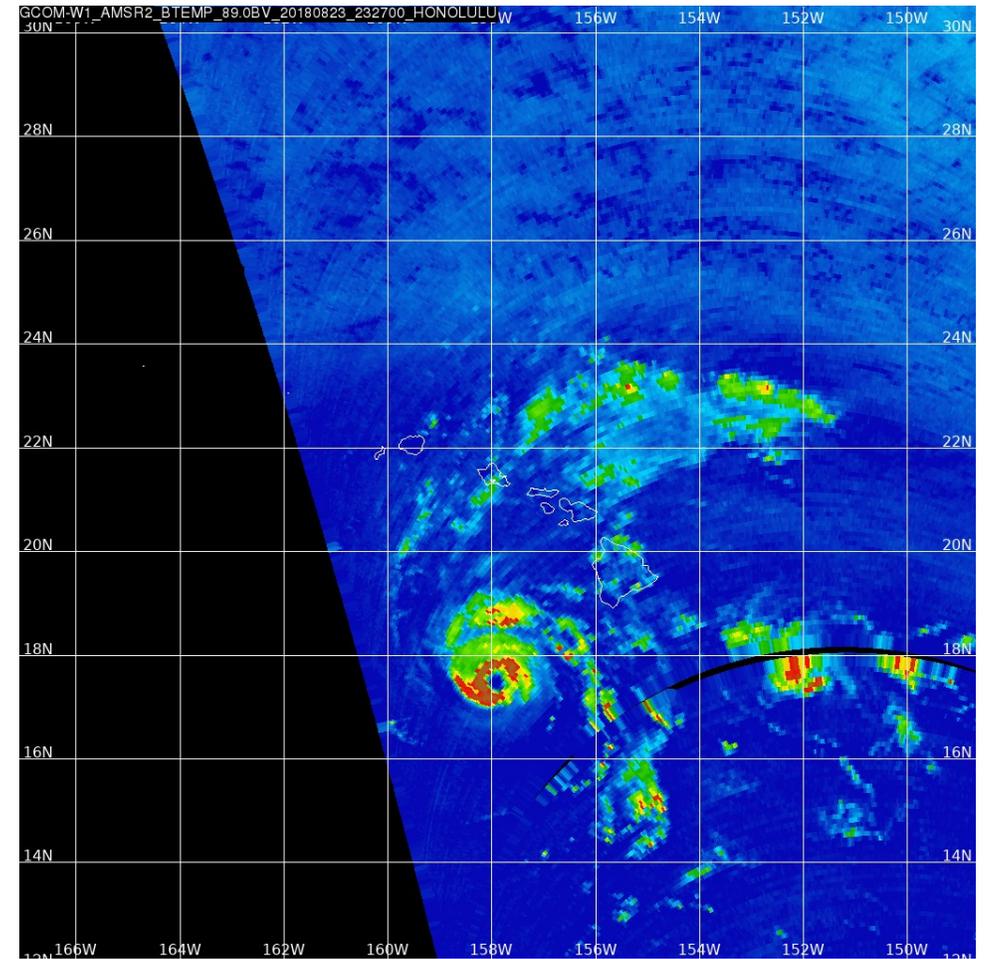
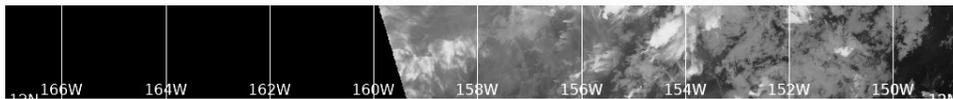
ORECASTS ▾ DATA & TOOLS ▾ EDUCATIONAL RESOURCES ▾ ARCHIVES ▾

### Hurricane LANE

ZCZC MIATCDEP4 ALL  
TTAA00 KNHC DDHMM

Hurricane Lane Discussion Number 10  
NWS National Hurricane Center Miami FL EP142018  
200 AM PDT Fri Aug 17 2018

Lane continues to gradually strengthen. Recent microwave images show a well-defined low-level eye, but this feature is not yet apparent in geostationary satellite images. The latest satellite images show an organized central dense overcast, but convection has decreased in the outer bands. An average of the Dvorak estimates from TAFB and SAB yields an initial intensity of 70 kt.





# Fire &

Tim Gallaudet, Ph.D., Rear Admiral, U.S. Navy (Ret.)  
Assistant Secretary of Commerce for Oceans and Atmosphere / Deputy NOAA Administrator,  
Acting Under Secretary of Commerce for Oceans and Atmosphere / NOAA Administrator



Sent from my iPad

On Aug 14, 2018, at 1:30 AM, Clifford Mass <[cmass@uw.edu](mailto:cmass@uw.edu)> wrote:

Principal Investigator	Title
Ahmadov, Ravan, Shoba Kondragunta, Ivan Csiszar	Rapidly predict weather product High-Res with Sm (RAP/HI)
Batzil, Sam	Web-based Estimat Using V
Ellicott, Evan	Improv applicat Radiom product product
Elvidge, Christopher	Discrim biomass
Frost, Greg	Charact Product
Kondragunta, Shobha	Improv Retrieval (CO/CO Refresh

I have sometimes called NOAA/NWS to task when I thought they were lagging in providing the best NWP that they were capable of....but, on the flip side, it is important to recognize when they make a major advance...and there is huge one that it is important to recognize---HRRR-Smoke.

Wildfires are the the major summer/fall severe weather in the west, with huge economic and health implications. HRRR-smoke combines the increasingly skillful HRRR model with the physics of smoke generation, advection, and radiative effects. Quite honestly, it is a home run--it appears to be highly skillful in predicting the 3D smoke distribution, and although experimental, it is used by operational forecasts and air quality agencies, among others.

Today was a great example. During the past few weeks, HRRR-smoke has accurately predicted that the smoke reaching WA State from BC and California would remain aloft, with little impacts at the surface. It was consistently correct in this. Today it predicted that the smoke would reach the surface in western WA (see graphic)....a perfect forecast as confirmed by the PM2.5 in Seattle (attached). Based on the HRRR-smoke forecast, I blogged last night that vulnerable folks should prepare...and the NWS did the same.

We now have the capability to predict the 3D evolution of wildfire smoke with some realism....a very major advance, and one the folks at ESRL can be very proud of...cliff

nd will be

wer, aerosol



# Soundings – Part of the Hazardous Weather Testbed Resulted in excellent feedback and enhancements; to reduce latency NUCAPS soundings will be delivered experimentally via direct broadcast

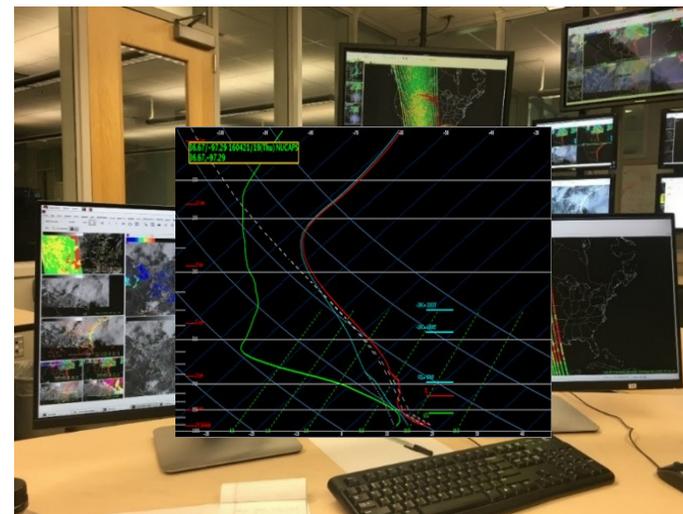
Funded Projects		
Principal Investigator	Title	Institution
Berndt, Emily	Expanded Application and Demonstration of Gridded NUCAPS in AWIPS	NASA/SPORT
Dostalek, Jack	Improving S-NPP and JPSS-1 NUCAPS Retrievals for CONUS Severe Weather Applications via Data Fusion	Colorado State/CIRA
Heidinger, Andrew	Merging NUCAPS with the VIIRS Enterprise Cloud Algorithms for Improved Polar Cloud Detection, Cloud Heights and Polar Winds	STAR
Kuciauskas, Arunas	Demonstrating, Evaluating and Promoting NUCAPS during Saharan Air Layer Events within the North Tropical Atlantic Basin	NRL
Kahn, Brian	“TRAJECTORY MODEL-ENHANCED NUCAPS FOR TRANSITION INTO AWIPS-II AND CONVECTIVE INITIATION FORECAST SKILL ASSESSMENT”	JPL, NASA/SPORT
Smith, Nadia	Improving NUCAPS Applications with product evaluation and design	STC

## Appeal of NUCAPS

Forecasters need to analyze the pre-convective thermodynamic environment

7 hour gap between 7 am and 2 pm!

Most stable time of the day to the most unstable time of the day



# Better with two

## GOES-R and JPSS Proving Ground Demonstration at the Hazardous Weather Testbed 2018 Spring Experiment Final Evaluation

**Project Title:** GOES-R and JPSS Proving Ground Demonstration at the 2018 Spring Experiment - Experimental Warning Program (EWP)

**Organization:** NOAA Hazardous Weather Testbed (HWT)

**Evaluator(s):** National Weather Service (NWS) Forecasters, Broadcast Meteorologists, Storm Prediction Center (SPC), National Severe Storms Laboratory (NSSL), University of Oklahoma (OU), Cooperative Institute for Mesoscale Meteorological Studies (CIMMS)

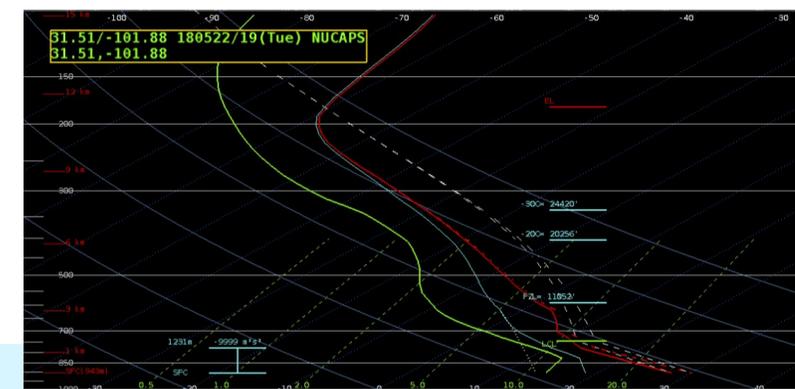
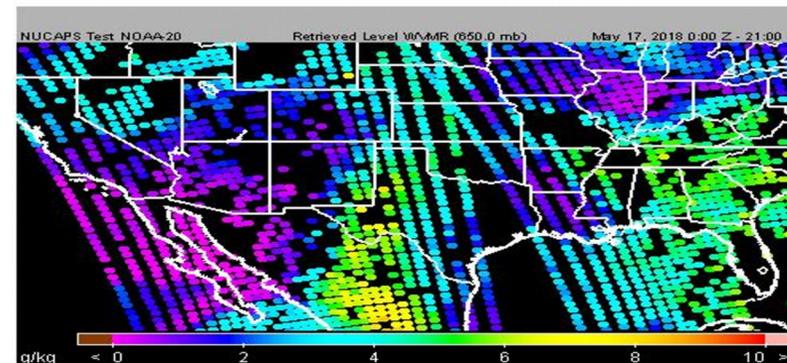
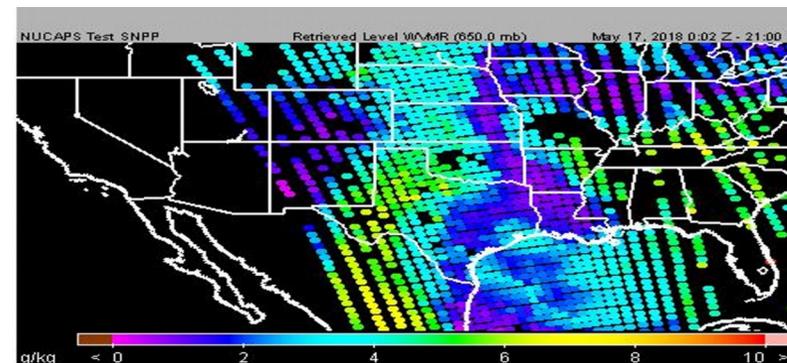
**Duration of Evaluation:** 30 April 2018 – 25 May 2018

**Prepared By:** Michael Bowlan (OU/CIMMS and NOAA/SPC) and Kristin Calhoun (OU/CIMMS and NSSL)

**Submitted Date:**

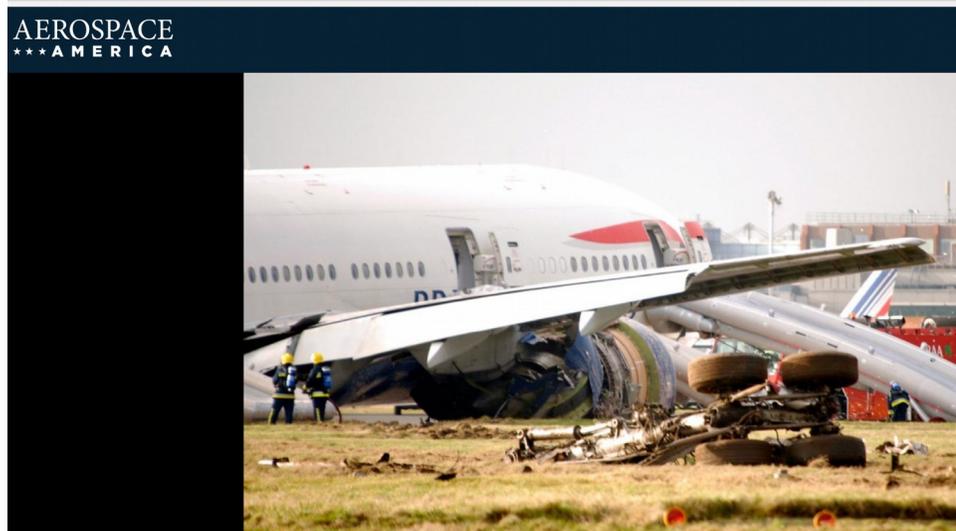
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# NUCAPS -Cold Air Aloft Application

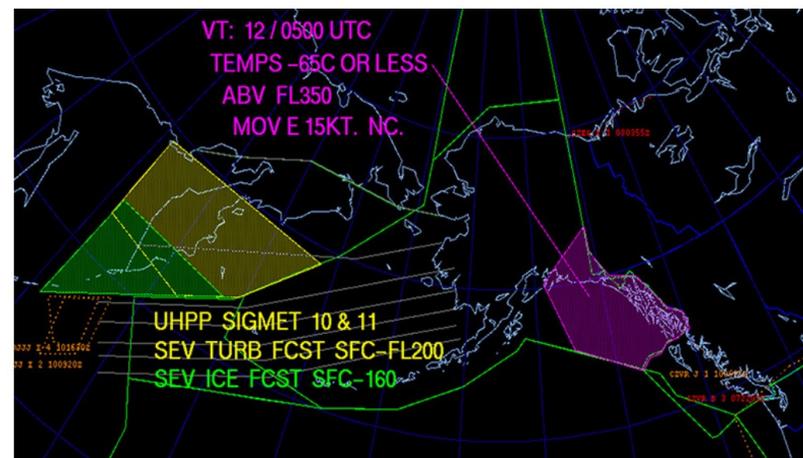
e | <https://aerospaceamerica.aiaa.org/features/danger-in-the-air/>



## Danger in the air

BY DEBRA WERNER | MARCH 2018

**METEOROLOGISTS MIGHT HAVE A WAY TO WAVE PILOTS AROUND DANGEROUS POCKETS OF COLD AIR**



A Meteorological Impact Statement for aircraft controllers (purple hatching) shows dangerously cold air of minus 65 Celsius above 35,000 feet and moving east at 15 knots. Controllers can tell pilots to avoid such air. Credit: National Weather Service

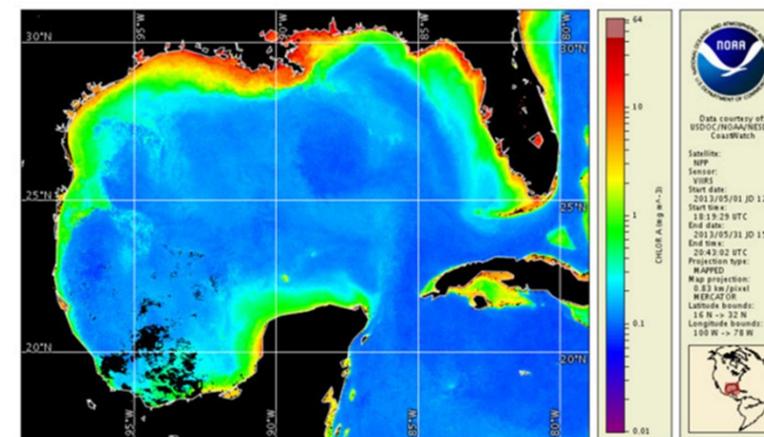
What aviation authorities in the U.S. would really like is to equip air traffic controllers nationwide with forecast maps showing expected cells of dangerously cold air at various altitudes and locations. The controllers could then alert crews to change altitude or heading to avoid this cold air aloft.

# Oceans



Funded Projects		
Principal Investigator	Title	Institution
Ahmed, Sam	CICS-CREST: Extending and Evaluating VIIRS Ocean Color Neural Network Retrievals of Harmful Algal Blooms and IOPs to Complex Inshore, Bay and Inland Waters and Examining Their Applicability to Different Bloom Types	CCNY/CREST
DiGiacomo, Paul	NOAA CoastWatch/ OceanWatch: Implement, process and serve JPSS program ocean products tailored for downstream user needs	STAR
Gladkova, Irina	Multi-sensor high-resolution gridded (super)-collated SST ACSPO L3C/L3S products	STAR
Hazen, Elliott	Using VIIRS to operationalize dynamic EBFM tools on the U.S. East and West Coasts	NMFS/SwFSC
Hyde, Kimberly	Optimization of phytoplankton functional type algorithms for VIIRS ocean color data in the Northeast U.S. Continental Shelf Ecosystem	NMFS/NeFSC
Jacox, Michael	Assimilating NOAA VIIRS Data into Near-Real-Time Ocean Models to Support Fisheries Applications off the US West Coast	NMFS/SwFSC
Mehra, Avichal (FY15- FY18)	Assimilation of VIIRS ocean color into a biogeochemical model for NCEP's Global Real-Time Ocean Forecast System in support of NOAA's Ecological Forecasting Roadmap	NCEP/EMC

- Facilitate the use of VIIRS ocean data products
  - VIIRS SST has been implemented in code handoff for NCEP's real-time global (RTG) SST analysis
  - Annual VIIRS ocean color course
  - Advanced data portal for multitude of users
  - Data assimilation experiments
  - Funding new Fisheries projects

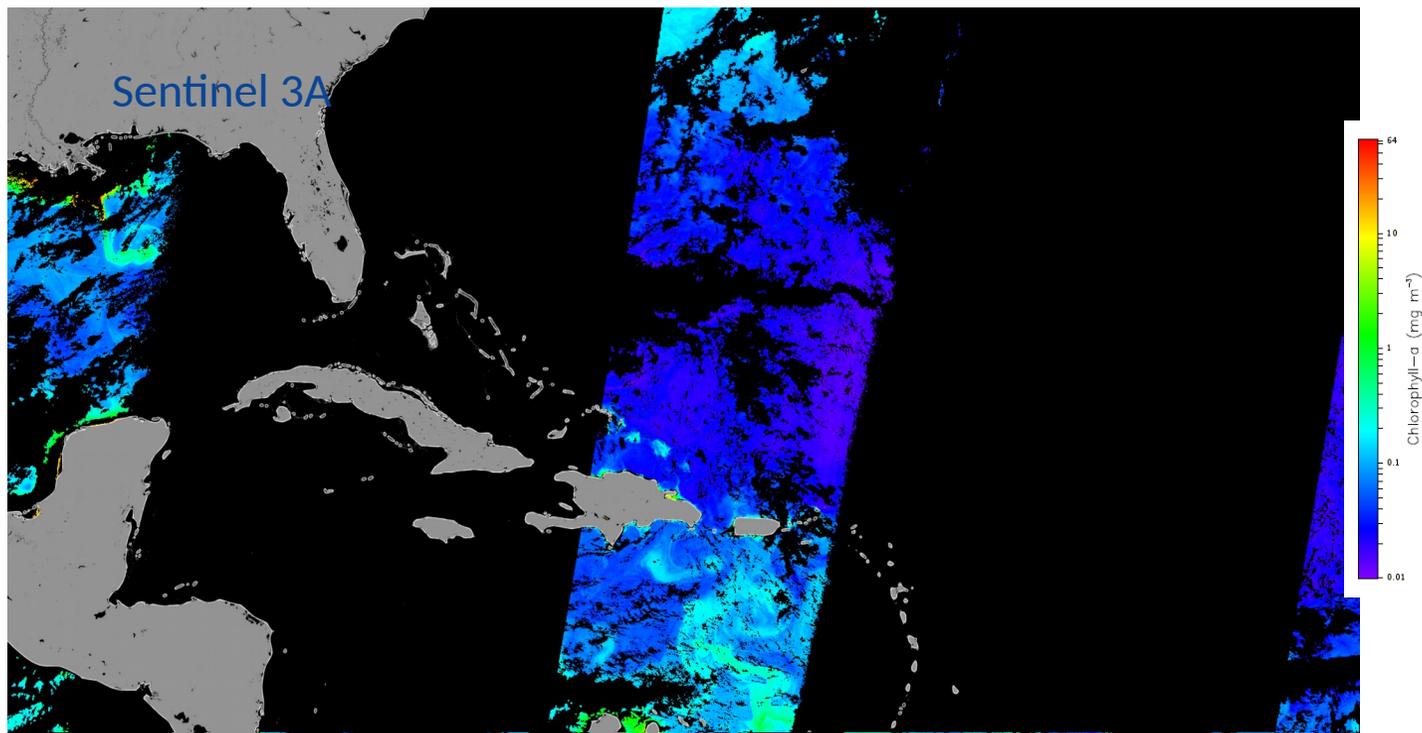


VIIRS derived Chlorophyll-a

# Better with two



NMFS and NOS use satellite ocean color products for a variety of marine ecosystems applications (e.g. HABs) - coverage is critical

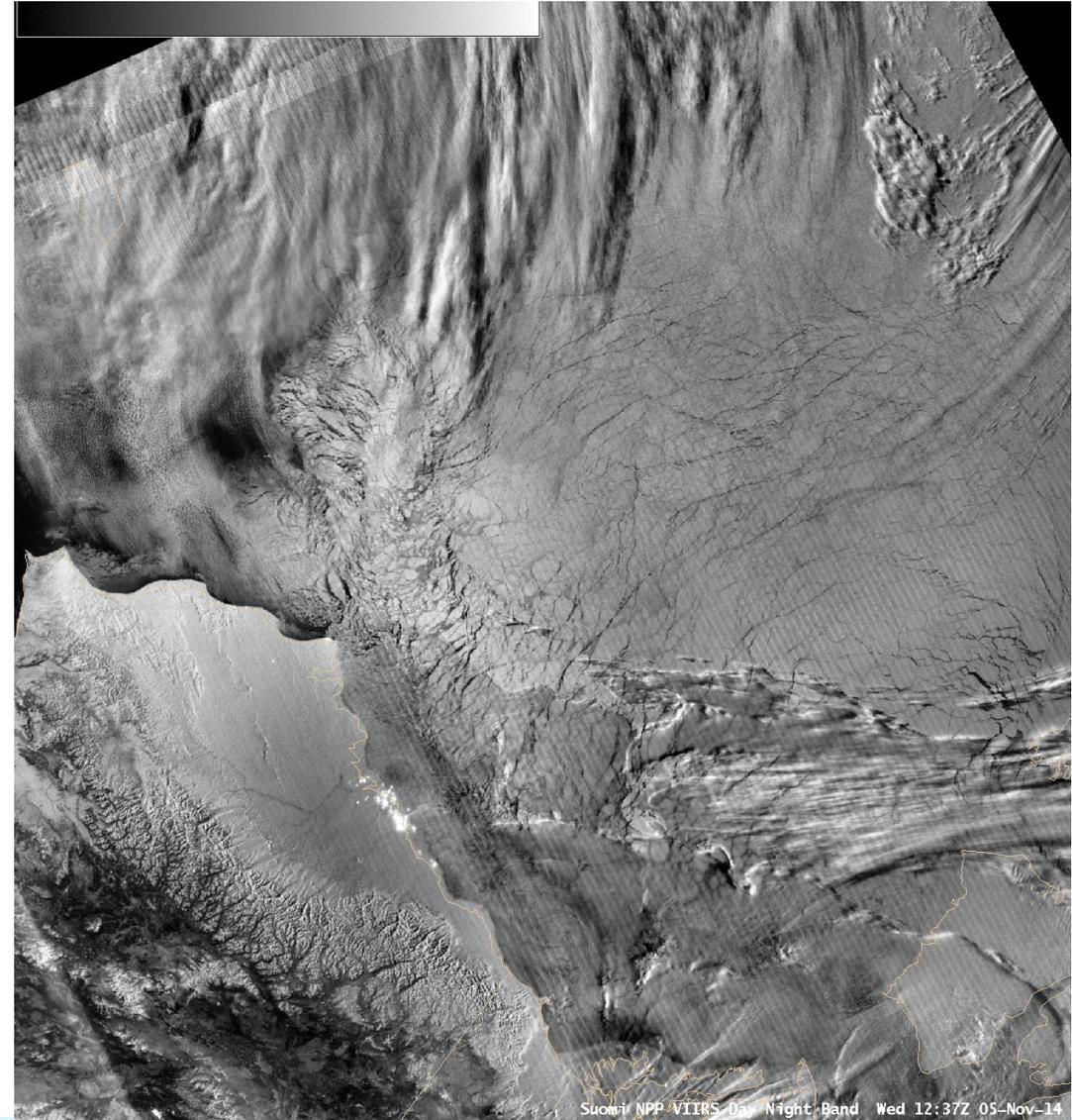


Sequence of derived Chlorophyll-a products from SNPP, NOAA-20, combined SNPP and NOAA-20, and Sentinel 3A. 50 minute separation of SNPP and NOAA-20 alleviates issue of no product in sun glint. Addition of Sentinel 3A and later 3B will fill in remaining gaps and provide exceptional daily global coverage. Enterprise algorithms used for SNPP/JPSS VIIRS and Sentinel 3 OCLI enables blending.

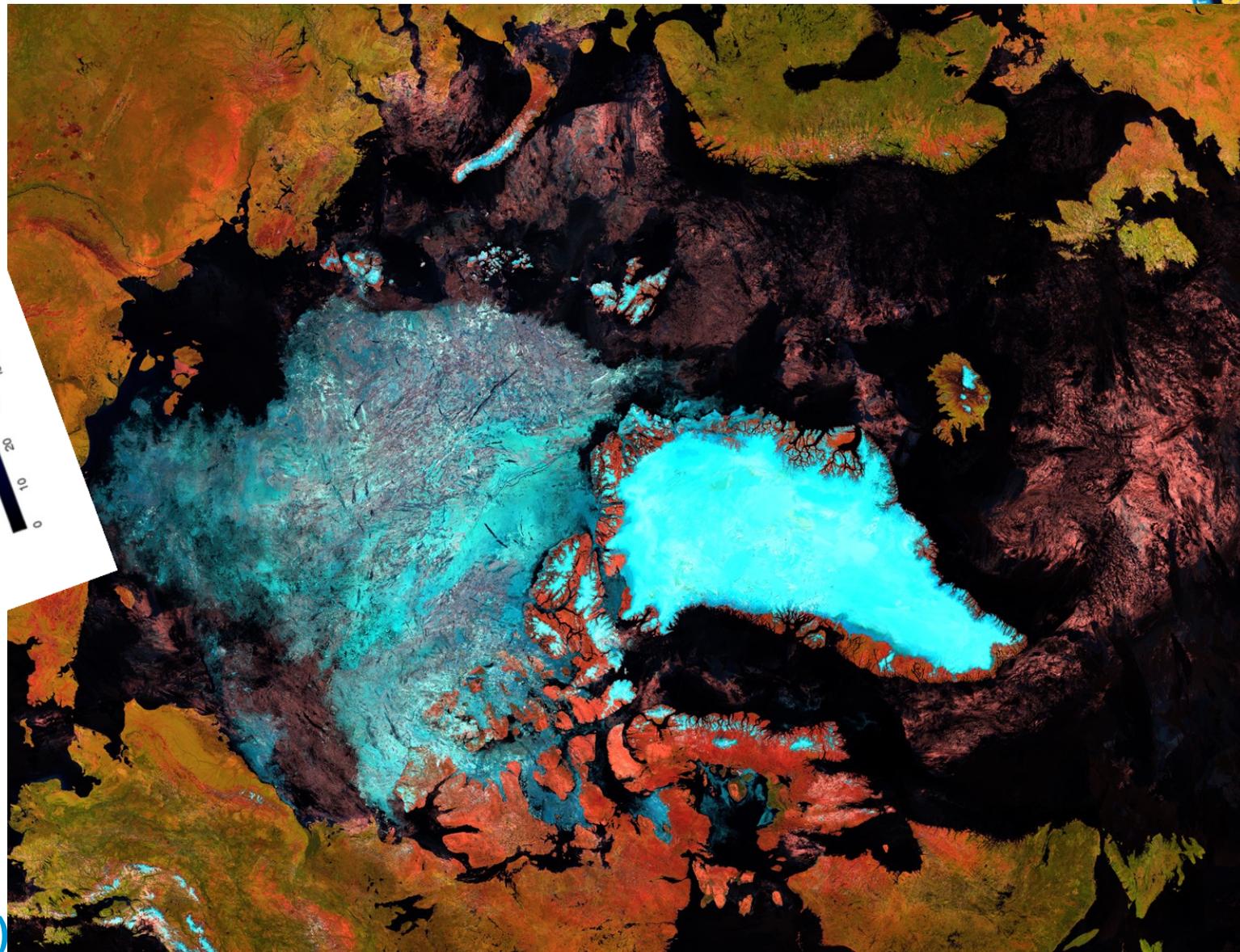
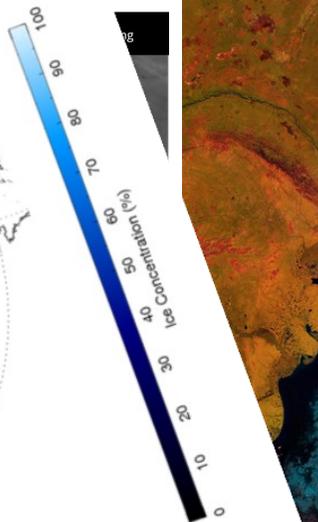
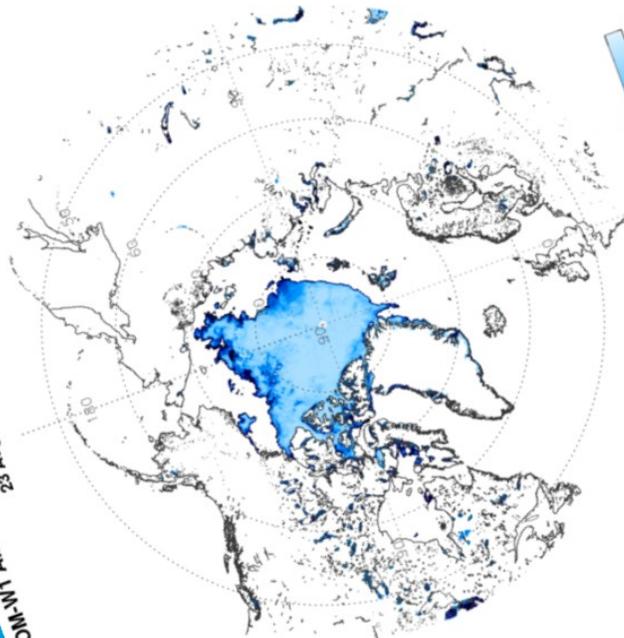
# Arctic

Improving warnings, forecasts and assessments of the Arctic – focused on the Alaska region services including aviation, storms, ice monitoring, fire detection, volcanic eruptions and ocean/coastal conditions ( including surface winds from AMSR2) impacting lives, property and all forms of transportation.

Funded Projects		
Principal Investigator	Title	Institution
Liu, Yinghui	Ice Motion from VIIRS, AMSR2, and SAR –Development and Operational Applications	University of Wisconsin, CIMSS
Noh, Yoo-Jeong	Improving the VIIRS Nighttime Cloud Base Height and Cloud Cover Layers Products for High Latitude Weather and Aviation Forecast Applications	Colorado State, CIRA



10-day clear-sky composite from VIIRS/SNPP for 20180811-20180820 centered over the Arctic Circumpolar Region @250m



23 Aug 2018  
GCOM-W1 AMSR2 Arctic Sea Ice



From:  
Trishchenko, Alexander  
(Natural Resources Canada)

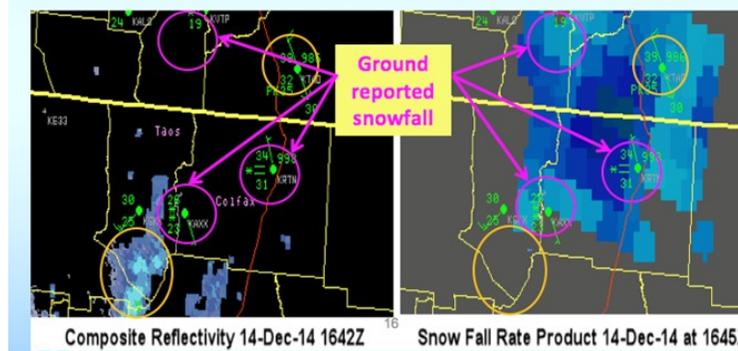


# Hydrology

Funded Projects		
Principal Investigator	Title	Institution
Forsythe, John, Wimmers, Tony	Merged Water Vapor Products for Forecasters using Advanced Visualization Methods	Colorado State/CIRA; UW/CIMSS
Lakhankar, Tarendra	Ensemble flood forecasting system coupling WRF-Hydro with Satellite Data (JPSS and GOES-R) for Puerto Rico	University of Mayaguez, PR
Meng, Huan	Development of Snowfall Rate over Ocean, Sea Ice, and Coast Product to Support Weather Forecasting	STAR
Xie, Pingping	Improving and Reprocessing the CMORPH Satellite Precipitation Estimates and Global OLR Analysis with Retrievals from JPSS	NWS/NCEP/CPC
Zhan, Xiwu; Wang, Nai-Yu	Improving JPSS Soil Moisture Data Products for Use in Evaluation and Benchmarking of the National Water Model	STAR; Univ of MD/CICS

- Evolving connections with the National Water Center
- Need for seasonal stream flow forecasting at NWC.
- Focus on snow, moisture and precipitation
- Multi-sensor /fusion approach for better temporal coverage

**Albuquerque, NM WFO (ABQ):** The product (SFR) did validate that we will be able to complement radar void coverage areas in an operational forecast environment using polar-orbiting satellite imagery.

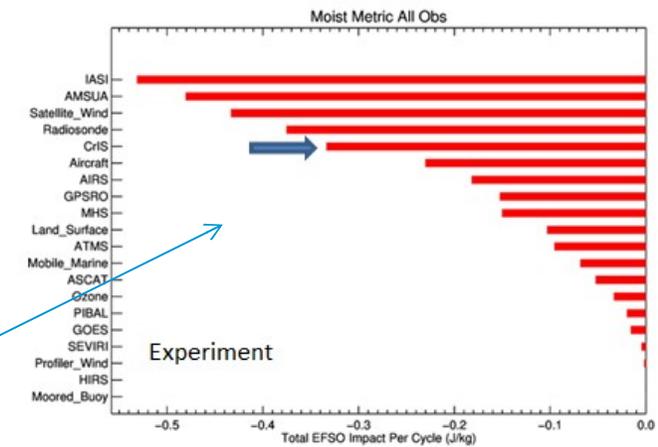
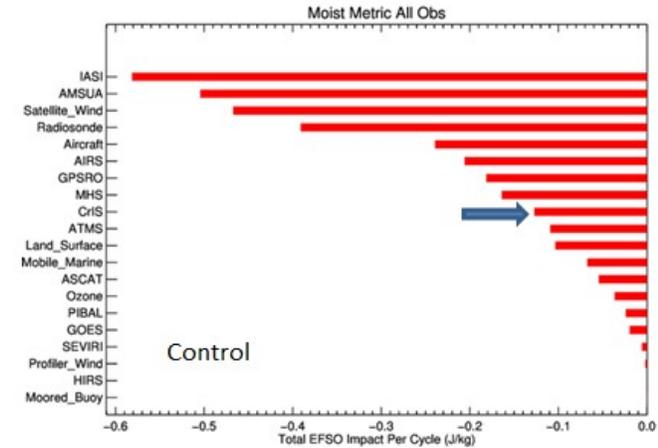


# NWP

## Support improvements in NWP by better use of satellite observations in global and regional models



Funded Projects		
Principal Investigator	Title	Institution
Cao, Changyong	CRTM Development for Direct OMPS UV Radiance Assimilation	STAR
Cronce, Lee	Using JPSS Moisture and Temperature Retrievals to improve NearCasts of Geostationary Moisture and Temperature Retrievals	UW/CIMSS
Kalnay, Eugenia	Advanced EFSO-based QC Methods for Operational Use and Agile Implementation of New Observing Systems	UMD/CICS
Karpowicz, Bryan	ATMS/CrIS Calibration and Validation and Assimilation Improving Correlated Error, Clouds, and the Surface	NRL
Li, Jun	Improving the Assimilation of CrIS Radiances in Operational NWP Models by Using Collocated High Resolution VIIRS Data	UW/CIMSS
Lim, Agnes	Quantifying NCEP's GDAS/GFS Sensitivity to CrIS Detector Differences	UW/CIMSS
Lin, Haidao	Enhancement of direct broadcast satellite radiance assimilation capabilities for regional and global rapid update models and assessment of forecast impact	OAR/ESRL
Jung, Jim	Using Full Spectral Resolution CrIS in GFS	UW/CIMSS (JCSDA)



**Adding 20 channels and adjusting assimilation weights moved CrIS from 9<sup>th</sup> to 5<sup>th</sup>**

# Training – wide variety of material is now available online - JPSS.NOAA.GOV



## Satellite Foundational Course for JPSS (SatFC-J) Training Modules

Funded Projects		
PI	Title	Institution
Connell, Bernadette	International Virtual Lab Training Activities	Colorado State/CIRA
Lindstrom, Scott	The JPSS Advocacy Channel	UW/CIMSS
Jorel Torres	JPSS NWS Satellite Training Liaison	Colorado State/CIRA
Amy Stevermer	COMET	UCAR

- [SHyMet Home](#)
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  - [Forecaster Course](#)
  - [Tropical Course](#)
  - [Severe Course](#)
  - [SatFC-G Course](#)
  - [Training Modules](#)
  - [Objectives](#)
  - [FAQ](#)
- [Quick Reference](#)
- [SHyMet Training DVD](#)
- [Key Contributors](#)
- [Sponsors](#)

Individual training modules are listed by "Title" and grouped under common topic categories. To sort by column, click the column heading at the top to reorder them. Length is given in minutes.

Topic	Title	Length	Contributor	Developed
Introduction to Microwave Remote Sensing	<a href="#">Introduction to Microwave Remote Sensing</a>	12	CIRA	2018
Introduction to Microwave Remote Sensing	<a href="#">Oxygen and water vapor absorption bands</a>	12	CIRA	2018
Introduction to Microwave Remote Sensing	<a href="#">Surface emissivity</a>	12	CIRA	2018
Introduction to Microwave Remote Sensing	<a href="#">Influence of clouds and precipitation</a>	12	CIRA	2018
Introducing Suomi NPP, JPSS, GCOM and GPM	<a href="#">Orbits and Data Availability</a>	10	Dills (COMET)	2018
Introducing Suomi NPP, JPSS, GCOM and GPM	<a href="#">The VIIRS Imager</a>	15	Lee and Dills (COMET)	2018
Introducing Suomi NPP, JPSS, GCOM and GPM	<a href="#">The CrIS and ATMS Sounders</a>	10	Dills (COMET)	2018
Introducing Suomi NPP, JPSS, GCOM and GPM	<a href="#">The AMSR-2 Microwave Imager</a>	10	Lee and Dills (COMET)	2018
Introducing Suomi NPP, JPSS, GCOM and GPM	<a href="#">GPM</a>	10	SPoRT	2018
Beneficial Products and their Applications	<a href="#">Uses of VIIRS Imagery</a>	20	Lindstrom (CIMSS)	2018
Beneficial Products and their Applications	<a href="#">The VIIRS Day / Night Band</a>	20	Lee and Dills (COMET)	2018
Beneficial Products and their Applications	<a href="#">NJCAPS Soundings</a>	9	Lindstrom (CIMSS)	2018
Beneficial Products and their Applications	<a href="#">Impact of Satellite Observations on NWP</a>	15	COMET	2017



Course Listing » Description

### JPSS Satellites: Capabilities and Applications Course



**JPSS Satellites: Capabilities and Applications Course**

The COMET Program

Languages: English  
Completion Time: 3-4 hrs  
Topics: Satellite Meteorology

Enrollment Information:

[Enroll](#)

Description    Objectives    Overview

## AMS Short Course: Using JPSS Data Products to Observe and Forecast Major Environmental Events

Saturday, 6 January 2018, 8:30 a.m.–5:00 p.m.  
Austin Convention Center 17A

### AGENDA

All links will open videos of the specific presentation.

Introduction: Using JPSS Data Products to Observe and Forecast Major Environmental Events

8:40 a.m. Overview of JPSS program; Mitch Goldberg, NESDIS /NJO, Lanham, MD

9:15 a.m. Use of JPSS to support NOAA operational missions; Dan Nietfeld, NOAA /OAR Boulder, CO

9:30 a.m. Introduction to JPSS data and products and their scientific maturity (Suomi-NPP and JPSS -1); Lihang Zhou, NESDIS/STAR, College Park, MD



# Innovation

Proposals		
Principal Investigator	Title	Institution
Berbery, Hugh	Maximizing CICS-MD Contributions to the JPSS PG Initiative	UMD/CICS
Key, Jeff	Development and Impact of Global Winds S-NPP/ NOAA-20 VIIRS	STAR
Miller, Steven	Visible Applications in Dark Environments, Revisited (VADER): NOAA-20 Joins S-NPP on the 'Dark-Side' to Empower Day/Night Band Research and Operational Capabilities	Colorado State/CIRA
Pavolonis, M.	JPSS Initiative for Improving Volcanic Hazard Monitoring/Forecasting	STAR
Seaman, Curtis	Exploiting VIIRS Multispectral Imaging to Support Hazard Detection, Nowcasting, and JPSS PGRR Initiatives for Benefit of Stakeholders	Colorado State/CIRA
Tong, Daniel	Improving NOAA operational forecasts of Dust Weather Hazards through assimilating JPSS aerosols and land products (AOD, Dust Mask, and Albedo)	OAR/ARL/GMU
Weisz, Elisabeth	Concept Study to Extend VIIRS Spectral Coverage Using CrIS Radiance Measurements and to Explore Potential Applications	UW/CIMSS
Zou, Cheng-Zhi	Extending the Atmospheric Temperature Climate Data Record from POES Microwave/Infrared Sounders to JPSS/ATMS/CrIS	STAR
Smith, Bill	Use of Direct Broadcast POES and GOES for Localized Convective Weather Forecasting	Hampton





# Summary

NOAA's Satellite Proving Ground program supports user engagement projects

STAR has the critical role in ensuring the quality of the products.

For this meeting - we decided to combine the two activities for review and discussions.

We also have user presentations to tell us about their needs and to provide feedback.

