

JPSS Program Science

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August 2015 JPSS Science Meeting



Program Science provides the oversight for Science Operations



- 1) NOAA 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

- 2) NASA JPSS Project Scientist ensures instruments meet their requirements through oversight of prelaunch and post launch commissioning.

- 3) NOAA/NESDIS Center for Satellite Applications and Research (STAR) provide cal/val algorithm support to Ground Segment Product Generation and algorithm maintenance/sustainment

*** STAR supports 2) and 3) and OSPO supports 3 with operational science quality monitoring*



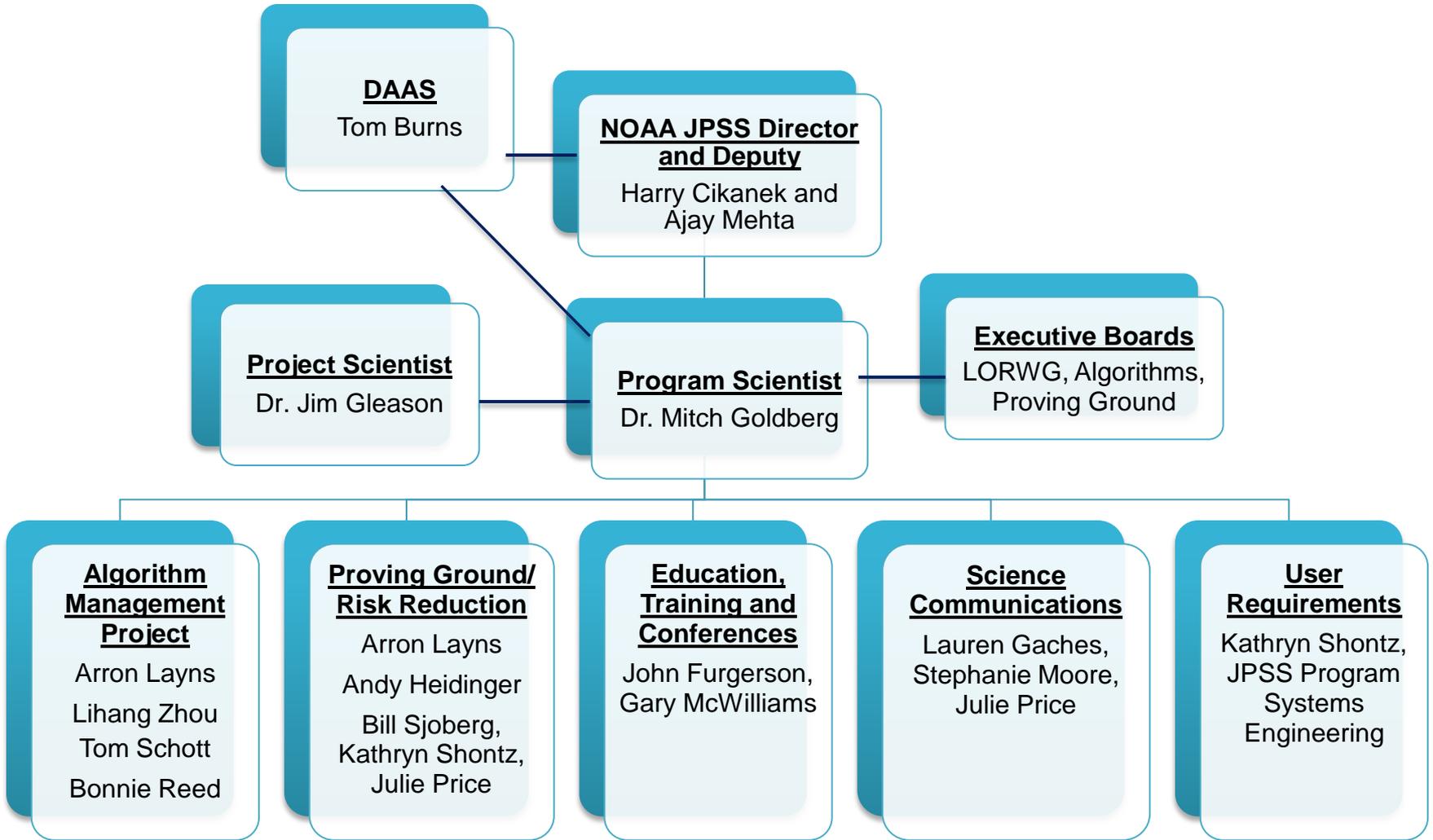
Role of Science in JPSS Operations



- To ensure scientific expertise, processes and organization structure is in place to meet the level 1 performance requirements.
 - Including a well define set of documentation providing artifacts beginning with the traceability of user requirements, to processes for algorithm development/updates, and science performance verification
- The science algorithms for the XDRs are well defined and described by algorithm theoretical basis documents and the validation CONOPS of the XDRs are described in cal/val plans. The verification of performance is carefully reviewed by Program Science and the users.
 - SNPP continues to be an excellent risk reduction for JPSS-1, so successful that SNPP is NOAA's Primary Weather Satellite
- Users are continuously engaged and provide feedback to Program Science through support from JPSS Proving Ground and Risk Reduction.

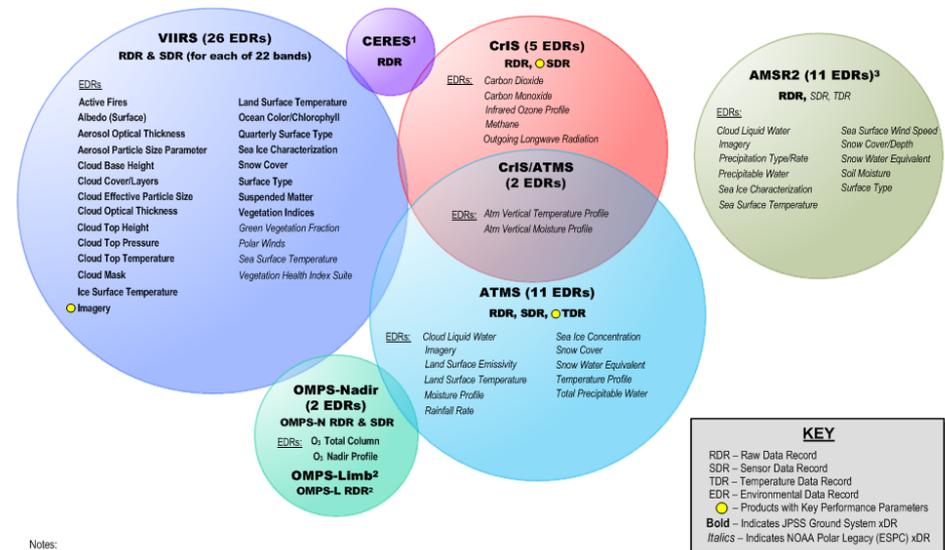


JPSS Program Science Virtual Staff Chart



- User Readiness: Products to Applications
- Ensure users are ready for NPP/JPSS data and improve their key operational and research product and services
 - ✓ Severe weather forecasts and warnings
 - ✓ Aviation weather forecasts and warnings
 - ✓ Improve fire and air quality forecasts and warnings
 - ✓ Improve warnings and prediction of poor water quality in coastal regions
 - ✓ Improve drought, precipitation, snow and ice assessments and predictions
- Periodic feedback from keys users on the impact of NPP/JPSS data and to identify improvements needed for products and applications

JPSS Program Data Products



Notes:
¹RDRs for the JPSS-2 Mission are contingent on NASA manifest of the Radiation Budget Instrument (RBI)
²Not applicable to JPSS-1; contingent on NASA manifest of OMPS-Limb on the JPSS-2 Mission
³Dependent on the Global Change Observation Mission (GCOM) provided by the Japan Aerospace Exploration Agency
 The JPSS Program includes Ground System Support for the Metop, DMSP, and GCOM missions

December 18, 2014
 This chart is controlled by JPSS
 Program Systems Engineering

JPSS-P
 Rev C



Lifecycle



Development

(new or enhanced algorithm)

Validation

(Is the product meeting requirements?)

Long Term Monitoring

(Sustainment)

Application

(last mile)

What is the Proving Ground & Risk Reduction Program for JPSS?

The JPSS Proving Ground and Risk Reduction (PGRR) program's primary objective is to maximize the benefits and performance of NPP/JPSS data, algorithms, and products for downstream operational and research users (gateways to the public) through:

- Engaging users to enhance/improve their applications through the optimal utilization of JPSS data.
- Education, Training and Outreach
- Facilitating transition of improved algorithms to operations.
- Detailed characterization of data attributes such as uncertainty (accuracy and precision) and long-term stability
- Provides user feedback to the cal/val program

- Proving Ground
 - Demonstration and utilization of data products by the end-user operational unit, such as a NWS Weather Forecast Office or Modeling Center.
 - Promote outreach and coordination of new products with the end users, incorporating their feedback for product improvements
- Risk Reduction
 - Address potential risk in algorithms and data products by testing alternative algorithms.
 - JPSS Risk Reduction Algorithms: Replaced many NPOESS algorithms not meeting spec/or the cost to do so was high with NESDIS/STAR Enterprise Algorithms to reduce cost by using same algorithms for GOES-R and VIIRS when possible. Also reduced risk in science overload – algorithm lead does not have to be an expert in two different algorithms.
 - Development of new research and applications to maximize the benefits of JPSS satellite data
 - Example - use of Day Night Band for improved fog and low visibility products at night, benefitting transportation industry.
 - Encourages fusion of data/information from multiple satellite, models and in-situ data



JPSS Proving Ground and Risk Reduction Application Areas



- Weather Forecasting (Improving Global, Regional forecasts)
 - Tropical Cyclones
 - Severe Weather (Nowcasting)
- Ocean/Coastal (Coral Bleaching, Harmful Algal Bloom alerts)
- Land (Droughts, Agriculture)
- Hazards (Smoke, Fire, Volcanic Ash, Air Quality)
- Hydrological (Precipitation, Floods, Soil Moisture, Snow/Ice, River Ice)
- Climate (integrated products, real-time anomaly products)
- Education and Training
- Infrastructure (Direct Readout and Software (CSPP), Airborne campaigns)

JPSS Proving Ground Partners :

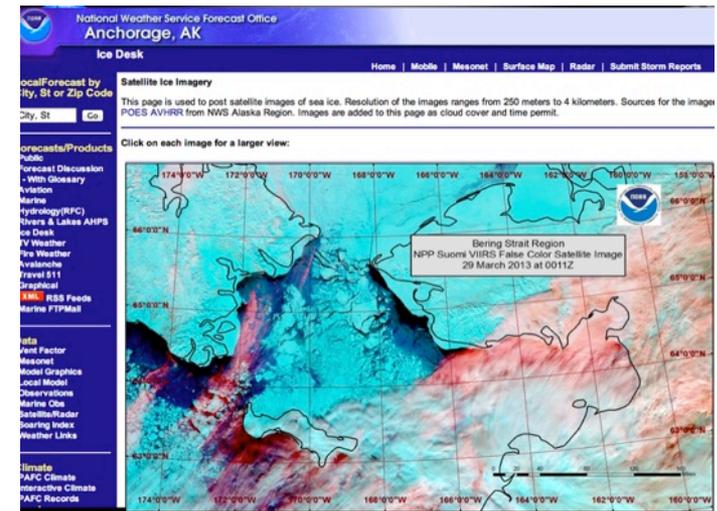
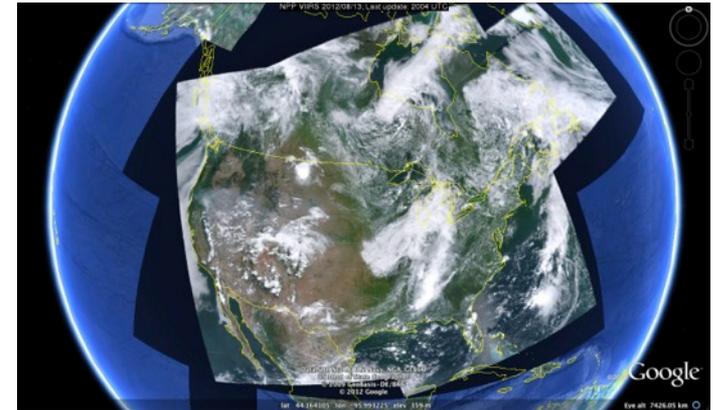
NWS, NOS, NMFS, OAR, NESDIS, NOAA Cooperative Institutes, NASA, and NRL

PGRR Initiatives

An initiative is a group (~10-20 participants) focused on a common goal and operational demonstration and includes product developers and users

- Fire and Smoke
- Aerosol Data Assimilation
- River Ice and Flooding
- Atmospheric Sounding Applications
- NWP impact studies (via HRRR and GFS) and other critical weather applications
- AWIPS Operational Demonstrations
- Cryosphere Initiative
- Land Data Assimilation
- Ocean and Coastal
- Atmospheric Chemistry
- Hydrology
- Innovation
- Training

- S-NPP Direct Broadcast for Alaska, Hawaii, Continental US, and World Wide Users
 - Provide Community Satellite Processing Package (CSPP)
- Routine use of VIIRS Imagery by forecast offices (significant use by Alaska)
- VIIRS Active Fire, Air Quality, and Ocean Color imagery and data portals
- Tropical Cyclone Forecasting Improvements using ATMS and CrIS
- Global Data Assimilation Experiments of ATMS and CrIS
- Education and Training (New COMET VIIRS Day Night Module)
- Two (2013, 2015) Airborne Validation Campaign via NASA ER2 to assess CrIS SDR accuracy @0.1K level
- Established monthly science seminars and operational demonstration initiatives to continue broad user involvement
- Supported pathfinders for reprocessing



DB Antenna Sites



Currently antennas at Hawaii, Alaska, and Wisconsin, are being used routinely by weather forecast offices using AWIPS's Local Data Acquisition and Dissemination (LDAD) System



Easy data access from CLASS



Around CLASS

- » Home
- » Search for Data
- » Upload Search
- » Search Results
- » Shopping Cart
- » Order Status
- » Help

User Account

- » User Profile
- » User Preferences

Advanced Options

- » Download Keys

Release Info

- » Version 6.3.7.1
March 5, 2015

Other Links

- » CLASS Home
- » NODC
- » NCDC
- » NGDC
- » NESDIS
- » NOAA
- » DOC

Please select a product to search

» GO



Image source: Suomi NPP VIIRS

NEWS

Attention CORS users (06/23/14):

Starting January 1, 2014, the National Geodetic Survey's CORS data archived at CLASS now includes GPS+GLONASS data for stations with GNSS-capable equipment. The GLONASS broadcast navigation file (BRDC) is also available for users at the same starting date. (GLO navigation file name example: brdc1680.14g.gz)

CORS data collections include RINEX since 1994 and raw GPS from selected CORS sites since 2004. The original at-sampling rate was retained except where there was only the 30-second decimated rate data. For more info see the CORS CLASS search page.

Attention Suomi NPP Users:

The most recent global NPP operational products are now available in daily tar files for quick and easy downloads at: <ftp://ftp-npp.class.ngdc.noaa.gov/>. Please see the [NPP help page](#) for instructions. Up to the most recent 85 days of data will be available for direct online access.

Suomi NPP data access status (11/25/14):

The majority of S-NPP products are now available and can be ordered through CLASS. The ones available to the public will show the begin dates after the product name on the search page. Also, a "quick look" of which products are at which maturity stages can be easily viewed at the [STAR Algorithm Product Maturity Matrix](#) website. Details of high priority issues related to the data quality are contained in the Readme files provided by the S-NPP Project Scientist. Many of these have recently been updated. Please read these before ordering and using the data.

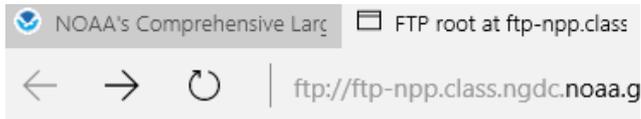
SEARCH FOR DATA

- Environmental Data from Polar-orbiting Satellites
- Environmental Data from Geostationary Satellites
- Defense Meteorological Satellite Program (DMSP)
- Suomi National Polar-orbiting Partnership (NPP)
- Sea Surface Temperature data (SST)
- RADARSAT
- Altimetry / Sea Surface Height Data (JASON)
- Global Navigation Satellite Systems (GNSS)
- Other - Miscellaneous products in CLASS

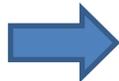
SEARCH COLLECTION METADATA

» GO

Easy Access - 85-day rotating server



07/09/2015 11:42AM	Directory	20150624
07/09/2015 11:56AM	Directory	20150625
07/09/2015 12:08PM	Directory	20150626
07/09/2015 12:21PM	Directory	20150627
07/09/2015 12:34PM	Directory	20150628
07/09/2015 12:47PM	Directory	20150629
07/09/2015 12:59PM	Directory	20150630
07/09/2015 01:09PM	Directory	20150701
07/09/2015 01:22PM	Directory	20150702
07/09/2015 01:37PM	Directory	20150703
07/09/2015 01:49PM	Directory	20150704
07/09/2015 02:00PM	Directory	20150705
07/09/2015 02:11PM	Directory	20150706
07/09/2015 10:47AM	Directory	20150707
07/09/2015 10:35AM	Directory	20150708
07/09/2015 10:47AM	Directory	20150709
07/10/2015 01:30PM	Directory	20150710
07/12/2015 05:15AM	Directory	20150711
07/12/2015 06:15PM	Directory	20150712
07/13/2015 01:30PM	Directory	20150713
07/14/2015 01:30PM	Directory	20150714
07/15/2015 01:30PM	Directory	20150715
07/16/2015 01:30PM	Directory	20150716
07/17/2015 01:30PM	Directory	20150717



FTP directory /20150709/ at ftp-npp.class.ngdc.noaa.gov

[Up to higher level directory](#)

07/09/2015 04:00AM	Directory	ATMS-SDR
07/09/2015 04:15AM	Directory	ATMS-TDR
07/09/2015 06:00AM	Directory	CRIS-SDR
07/16/2015 01:30PM	Directory	NDE-DAILY
07/09/2015 10:48AM	Directory	NDE-L2
07/09/2015 05:15AM	Directory	OMPS-EDR
07/09/2015 05:45AM	Directory	OMPS-IP
07/09/2015 05:46PM	Directory	OMPS-RDR
07/09/2015 05:30AM	Directory	OMPS-SDR
07/09/2015 09:09AM	Directory	VIIRS-EDR
07/09/2015 10:00AM	Directory	VIIRS-IPNG
07/09/2015 12:10PM	Directory	VIIRS-SDR
07/09/2015 08:12AM	Directory	VIIRSI-EDR



FTP directory /20150709/NDE-L2/ at ftp-npp.class.ngdc.noaa.gov

[Up to higher level directory](#)

07/10/2015 01:06PM	Directory	NUCAPS-Cloud-Cleared-Radiances
07/10/2015 01:06PM	Directory	NUCAPS-Environmental-Data-Records



FTP directory /20150709/NDE-L2/NUCAPS-Environmental-Data-Records/ at ftp-npp.class.ngdc.noaa.gov

[Up to higher level directory](#)

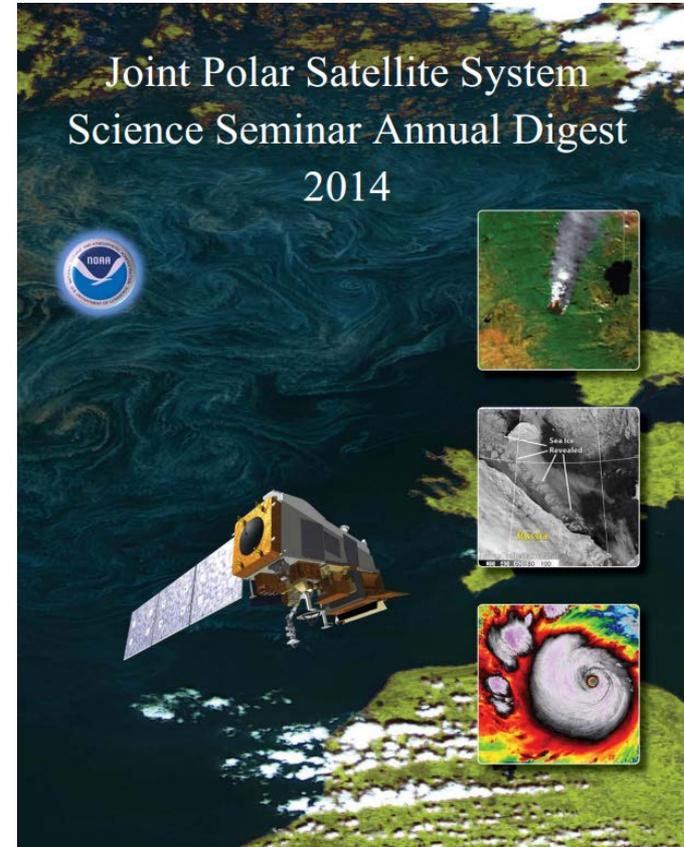
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07/10/2015 01:06PM	186,891,264	NDE-L2 NUCAPS-Environmental-Data-Records 20150709 00004.tar

Program Science Accomplishments

- Advocated STAR leadership for Algorithms and Cal/Val
 - Complete success!!!!
- Establish Proving Ground Program
 - 40% SNPP products used operationally now.
 - Expect to expand to 75% by 2018 via PG Initiatives
- Advocate replacing IDPS algorithms with Enterprise within ESPC (Mission Unique and Enterprise)
- Advocating reprocessing as part of the Cal/Val process
 - Demonstrations of SST, Ocean Color and Soundings (NUCAPS)
 - Using same science software as operations with the same outputs
 - Enables efficient “Archive Refresh” which will be supported by the NOAA Archive
- Using the Configuration Change Request (CCR) process to propose improvement to sensors.

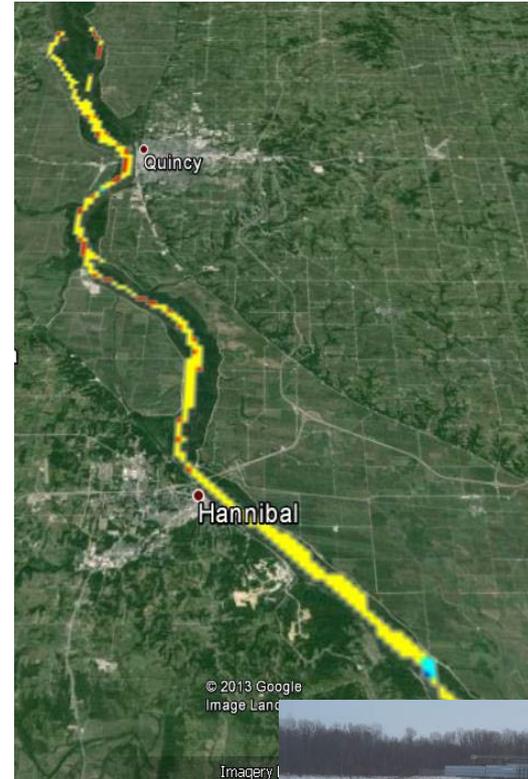
- Science leadership is well established with management and processes in place.
- There has been an increase in the use of SNPP for operational use over the past year
 - The use of ATMS in the Hurricane Weather Research Forecast (HWRF) model which was a JPSS PGRR project is now operational at NCEP
 - The use of VIIRS for river ice and flood detection is being routinely used now by NWS River Forecast Centers, and will follow the path to operations.
 - The use of VIIRS for cloud imagery, fire /smoke monitoring, fog detection, ice detection is now routine.
 - VIIRS ocean color and SST being used routinely by NMFS and NOS
- The JPSS Proving Ground program is working with NOAA users to further promote the use of SNPP data for operational use.
 - Use of fire location and radiative power in regional fire and smoke models
 - Assimilation of VIIRS aerosols and land products in NCEP global models
 - Assimilation of VIIRS snow fraction and ATMS snow information in hydrological models.
 - Better utilization of CrIS/ATMS soundings by forecasters
 - Improved use of VIIRS, ATMS and AMSR-2 for nowcasting imagery.
 - Better assimilation of CrIS in NCEP models
 - Use of CrIS and ATMS in regional models via direct broadcast
- Next priority - reprocessing via Cal/Val and archive refresh (within current budget)

- 2013 and 2014 Annual Science Digests are available
- 2012-2015, and 2015-2018 Portfolios are available
- Join our monthly JPSS Science Seminars
<http://www.jpss.noaa.gov/science-seminars.html>
- Check out the JPSS Website
<http://www.jpss.noaa.gov/science.html>



Additional backup content charts discussing initiatives

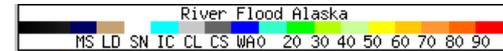
- Ice products to identify locations of river ice and its state
- The flood product should specify the areal extent of the flooding and the capability of overlaying the product on geographic maps and provide an estimation of the depth of the flood waters.
- Users: Primarily the NWS River Forecast Centers
- Focused on VIIRS



Hannibal, MO
Ice Jam
(Jan-Feb 2014)



Working with Alaska River Forecast Center



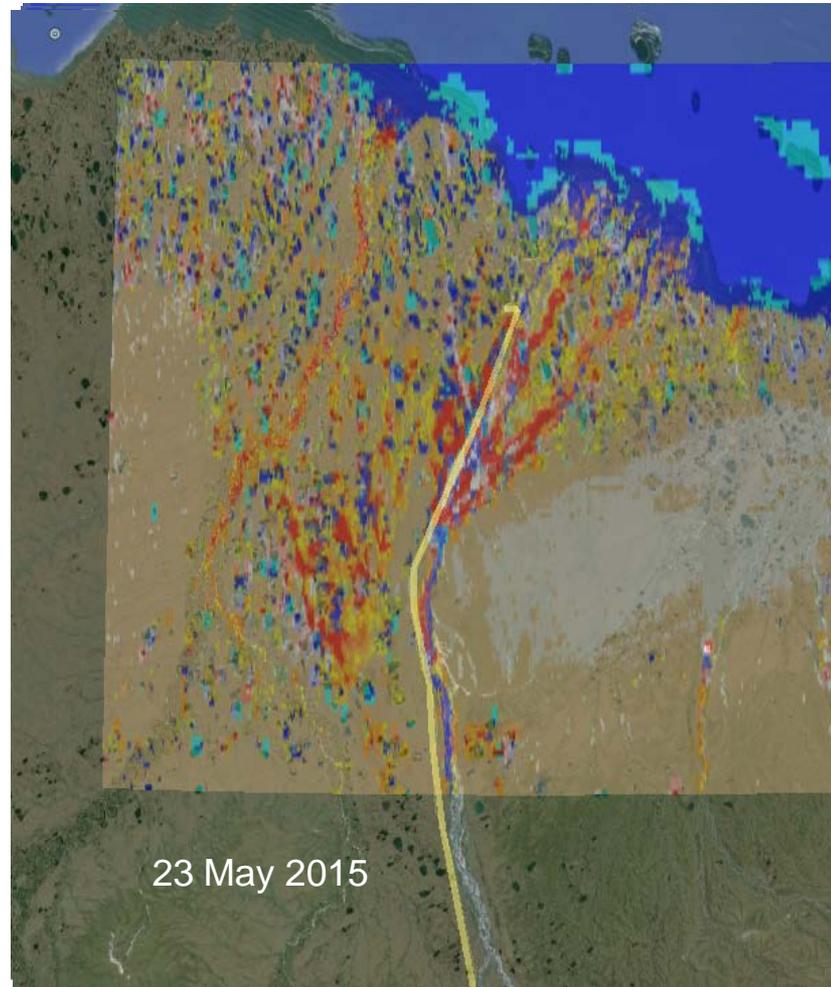
Alaska Pacific River Forecast Center

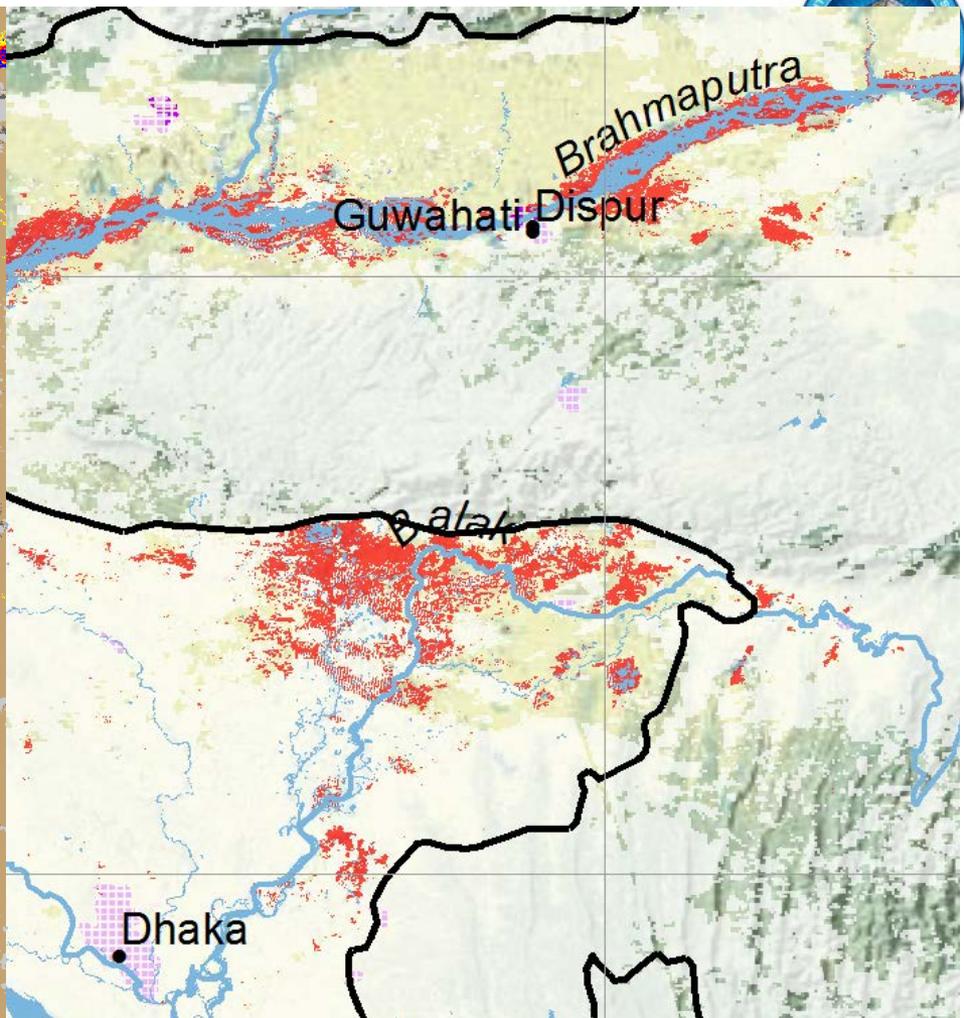
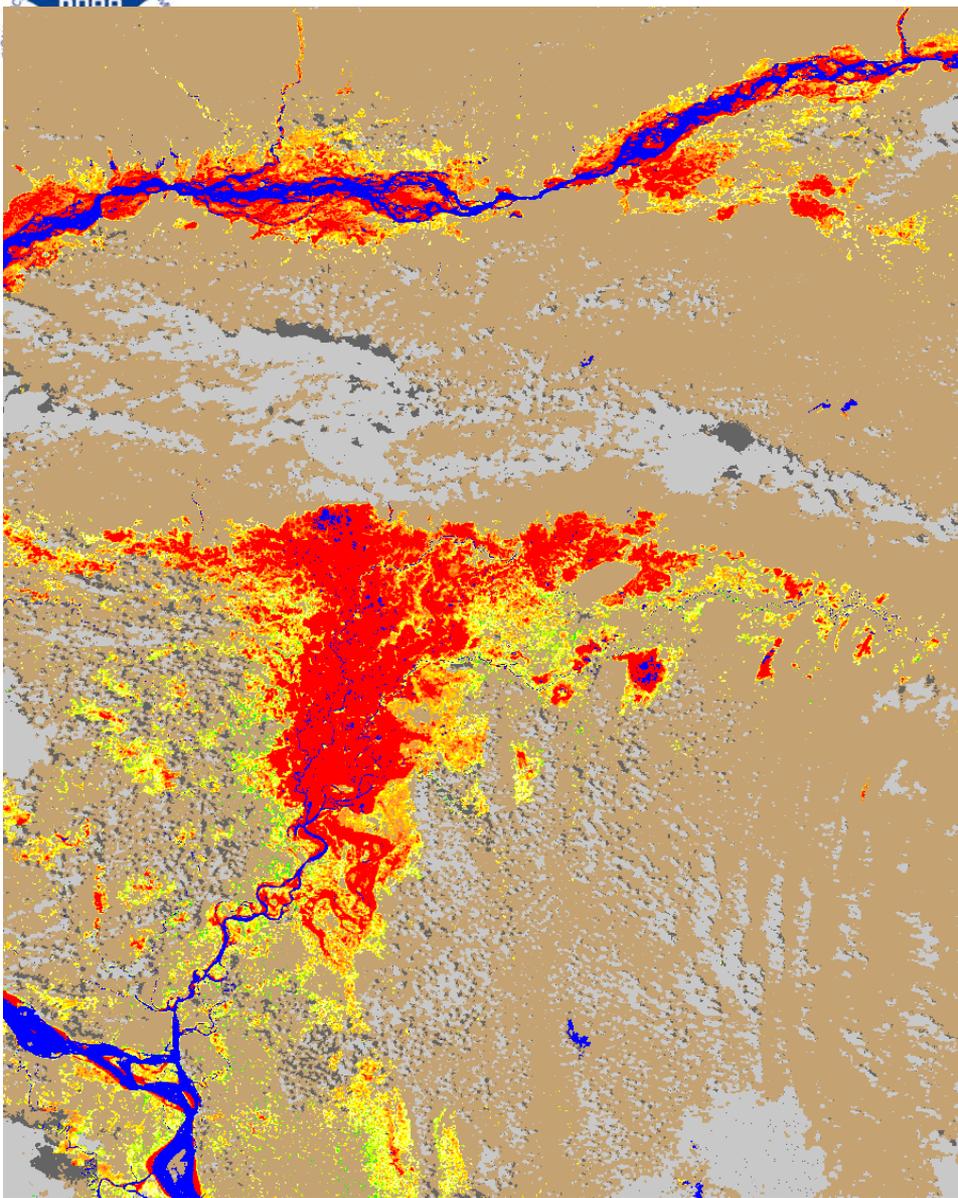


- Fewer than 6000 miles of certified roads and highways
- More than 3000 rivers
- Sparse data networks
- Large glacial and snow components
- Spatial variability in climatology
- Changing climatology
- Jokulhlaups (glacier-dammed lake outburst floods)

" Keeping a Watch Over Alaska's Waterways "

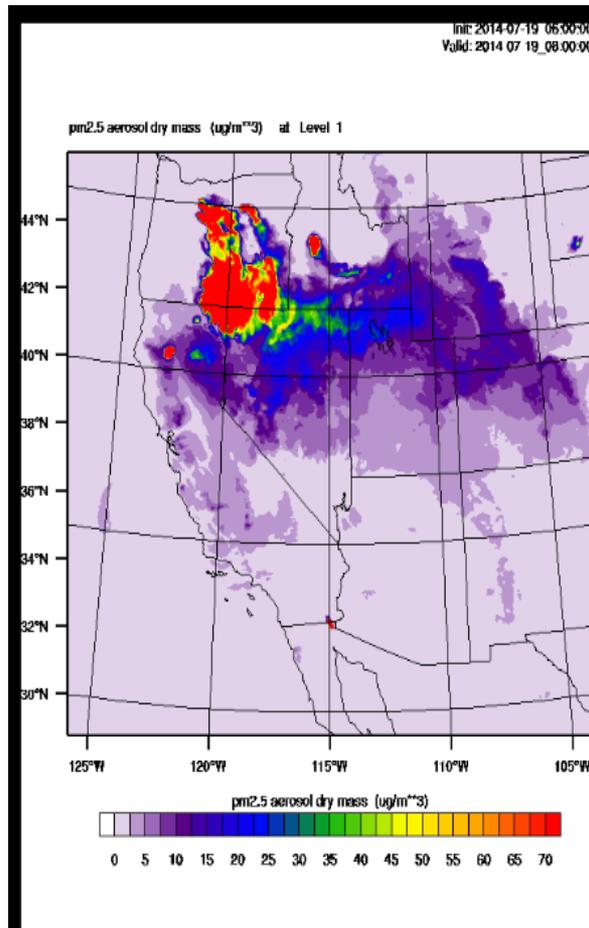
RFCs produce timely and accurate water forecasts and information





Higher spatial resolution VIIRS and better handling of cloud shadows provides better coverage than MODIS

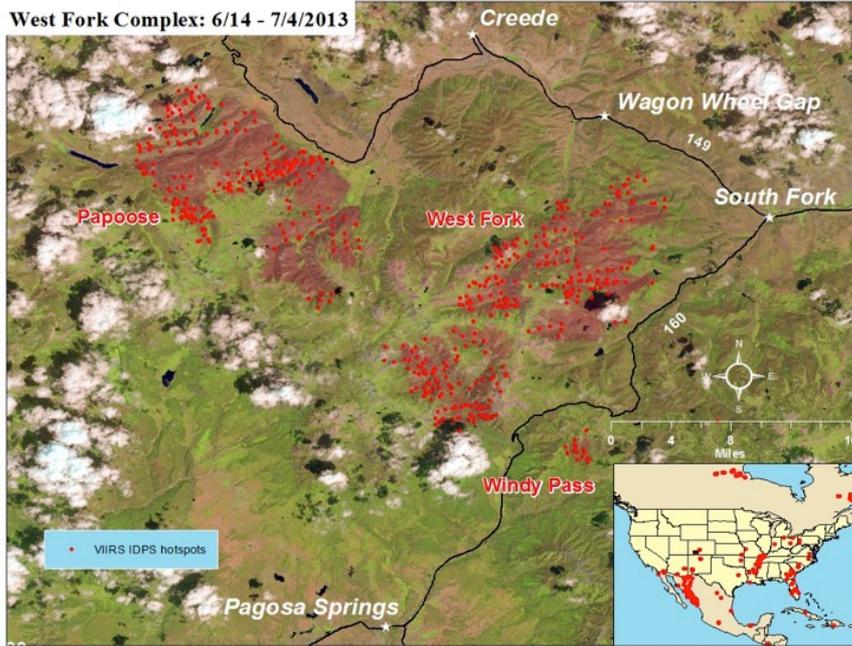
**Bangladesh, August 29, 2014,
Left: VIIRS, right: MODIS**



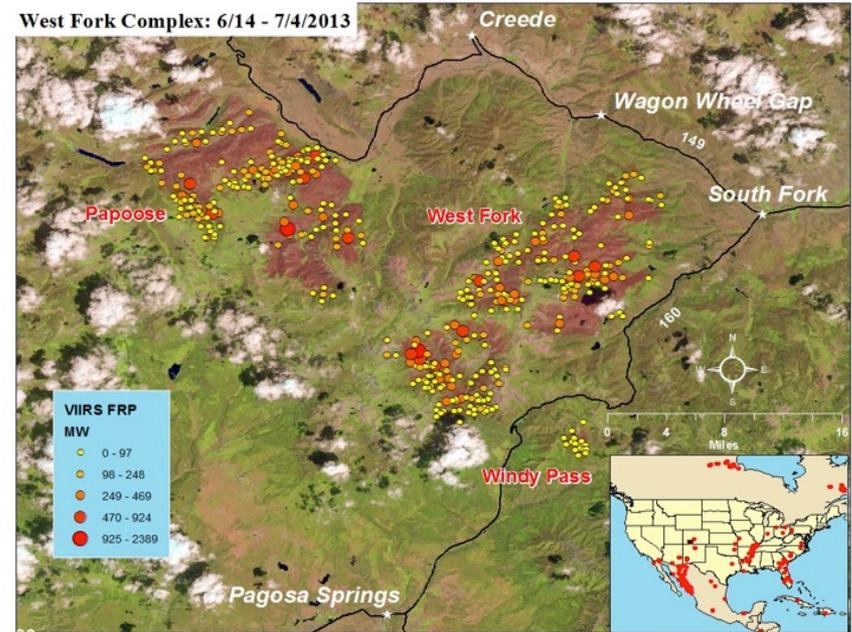
Example of HRRR Smoke Product

- Makes use of the VIIRS active fire location, fire radiative power and aerosol optical depth, and potentially OMPS derived aerosols to predict fire movement and dispersion of smoke using high spatial resolution and timely forecast models
- Products focus on determining the current location of a fire and gathering as much information as possible on its history.

Fire locations



Fire Radiative Power

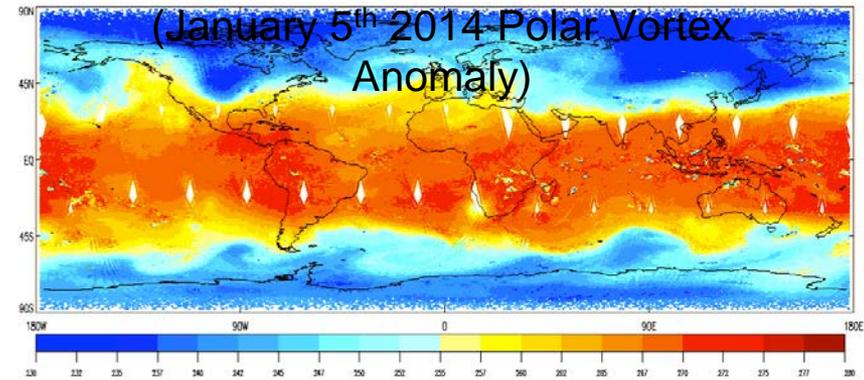


JPSS PGRR has is funding the use of fire locations and radiative power in NOAA's High Resolution Rapid Refresh (HRRR) model to better forecast fire spread and smoke dispersion.

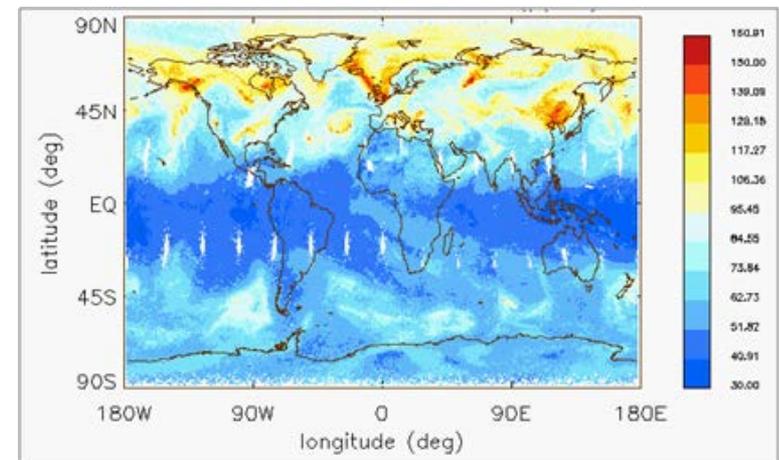
Fire locations is in the NESDIS Hazard Mapping System

- Assist WFOs to make better use of NUCAPS temperature and moisture soundings
- Support NWS/NCEP plans to improve data assimilation of radiances in cloudy conditions
- Use NUCAPS to solve for or derive trace gases

NUCAPS Temperature retrieval @ 500mb



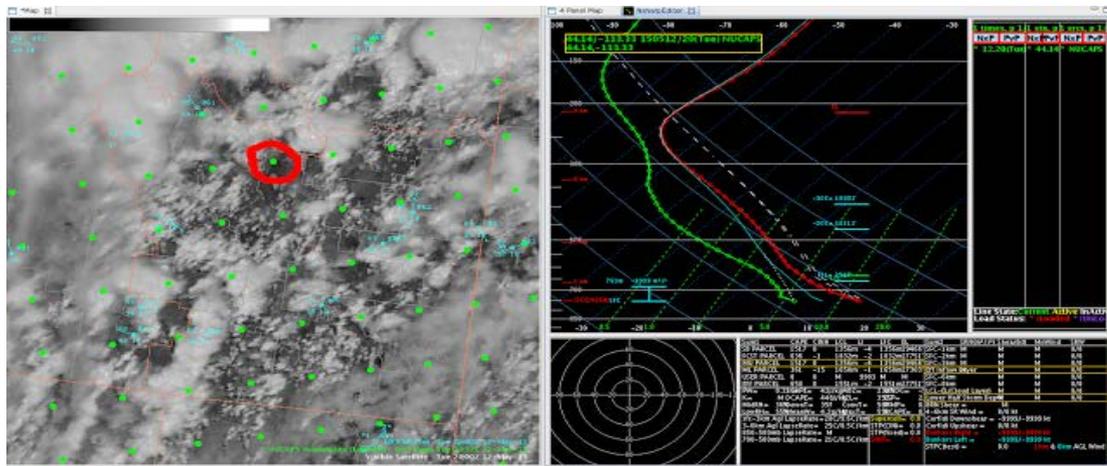
NUCAPS Ozone retrieval @ 500mb



NUCAPS Evaluated in NWS Hazardous Weather Testbed (HWT)

- Background

- What is the HWT: a joint testbed in Norman OK managed by the NWS Storm Prediction Center, the NWS Weather Forecast Office and the National Severe Storms Laboratory
- Purpose: plan and execute operational tests focused on national hazardous weather needs
- Spring Experiment: annual, 5-week test periods. Researchers, forecasters, and broadcast meteorologists evaluate emerging research concepts and tools through experimental forecast and warning generation exercises. NUCAPS was a key focus area in the Spring Experiment 2015



Waiting for deep convection to start. Denver's 18z special sounding showed a strong inversion around 700mb. The 20Z NUCAPS showed the lower levels not quite fully mixed. NUCAPS increased confidence that deep convection would occur but not quite yet. (comment edited)

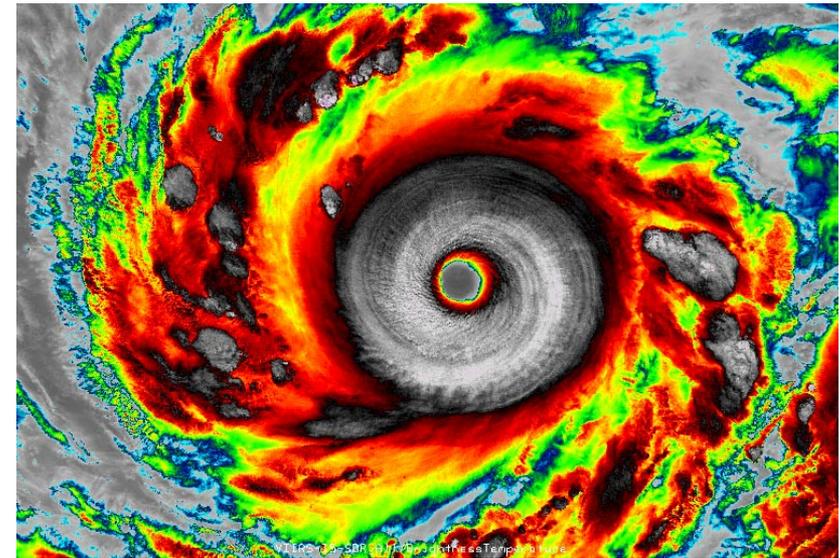
NUCAPS sounding shows the presence of a cold pocket aloft and relatively low precipitable water values around a half an inch confirm elevated convection along with the scattered reports of severe hail in eastern Idaho.

Examples of Forecaster feedback



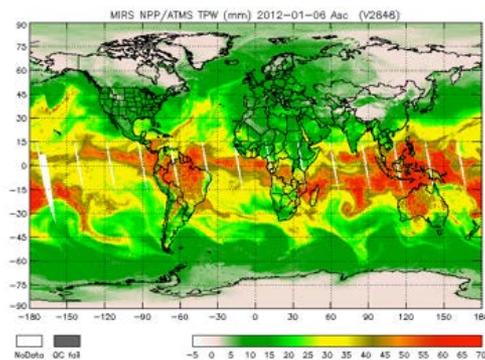
A VIIRS Satellite Pass at 1944Z provided a NUCAPS Profile near some developing storms in Texas. It provided a nice snapshot of the atmosphere in between [radiosonde] soundings.

- Studies on the impact of CrIS and ATMS on the GFS, HRRR, and other operational models to evaluate the performance of these sounders in context with legacy instruments in order to provide feedback on capabilities
- Critical weather applications include focus on use of data products for improving tropical cyclones and other severe weather events.

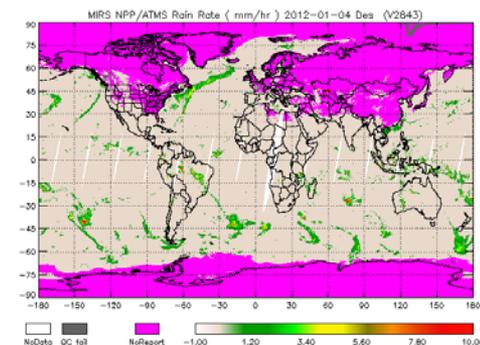


Infrared VIIRS image, October 7, 2014
Super Typhoon Vongfong

- Seeks new, innovative applications for satellite imagery, products, and derivatives that exploit the information from polar-orbiting satellites, particularly S-NPP and GCOM, for improving the analysis and forecast of weather phenomena. Priority applications under this PGI, in no order of preference, include:
 - multi-source, integrated quantitative and qualitative products that combine like information from multiple geostationary and polar-orbiting satellites, potentially composited with in-situ observations and model forecasts,
 - techniques that limit the impact of space and time gaps between polar-orbiting satellite passes,
 - improvements to current satellite products and imagery that make them more useful in data sparse regions (e.g., rainfall rate, cloud properties, etc.),
 - concepts that apply satellite data to address longstanding forecast concerns (e.g., ice, very cold tropospheric temperatures, fog, etc.), and
 - innovations for displaying and interacting qualitative and quantitative data.



Total Precipitable Water



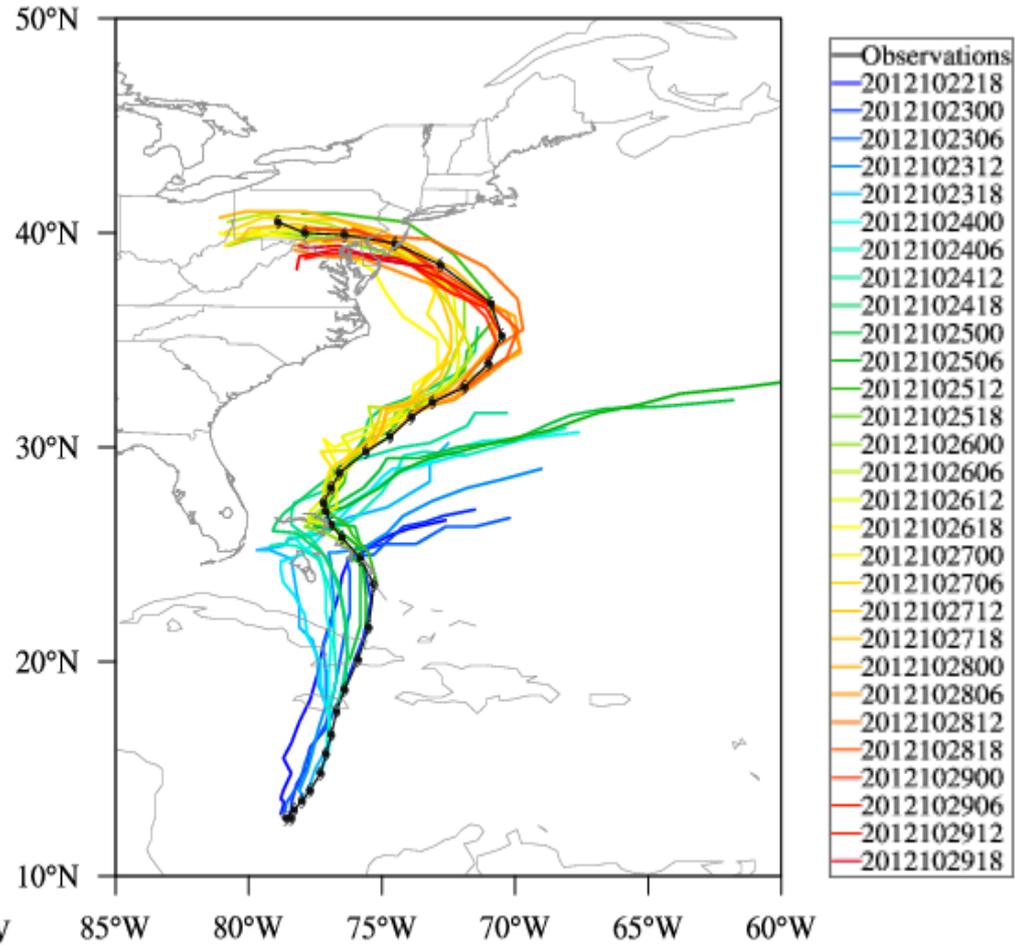
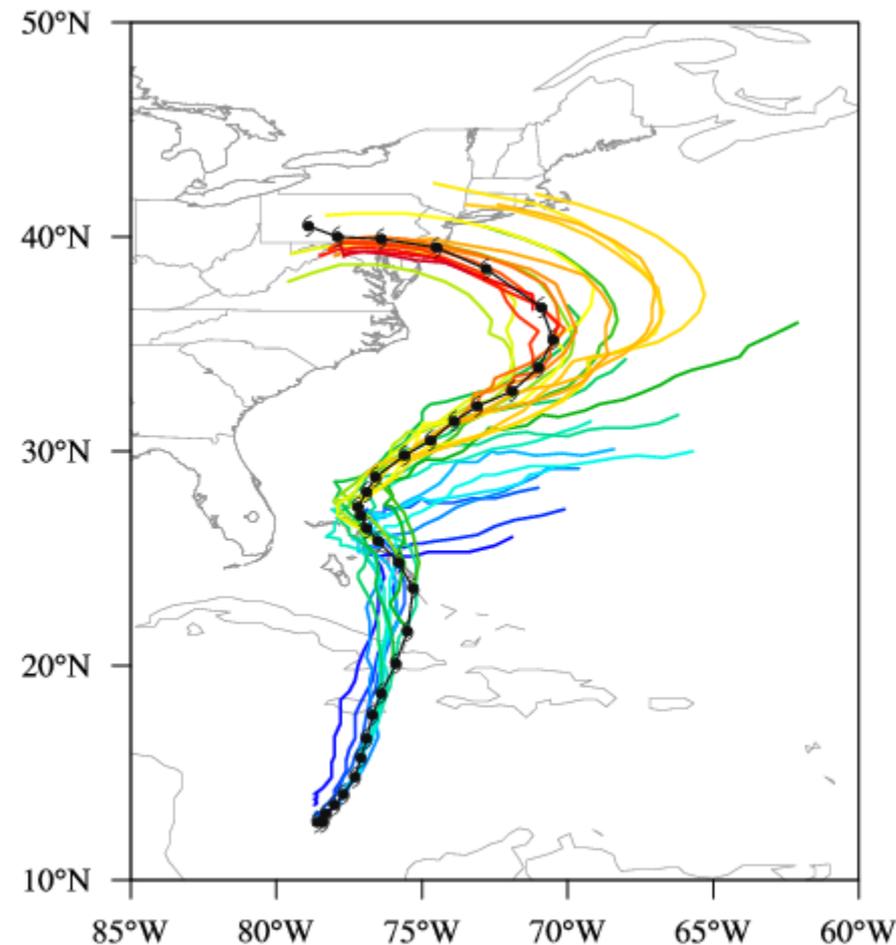
Rain Rates

Direct Assimilation of ATMS into Models

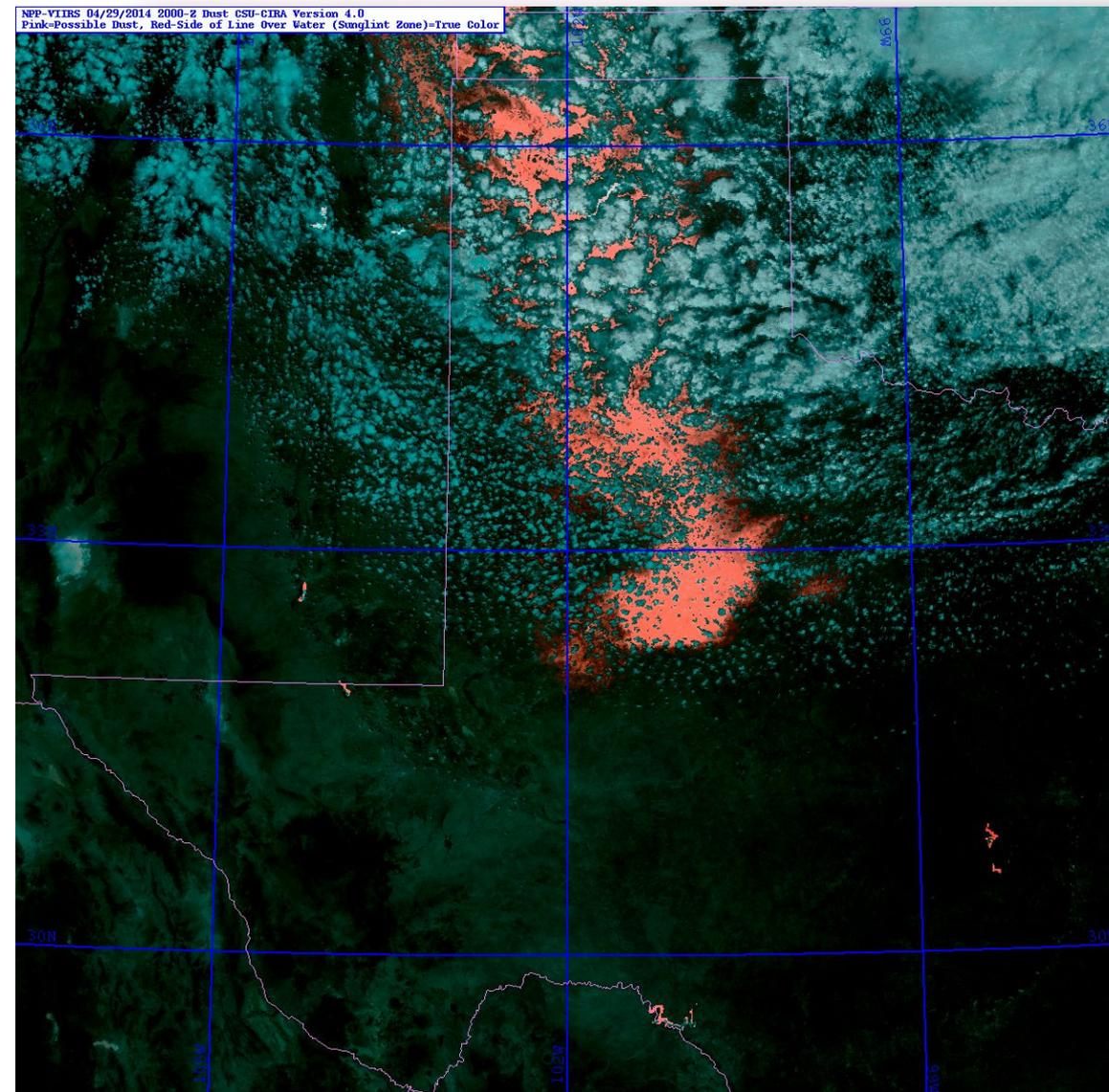
Experimental results showing improvements in Sandy track forecasts from Hurricane Weather Research Forecast model with ATMS: **NOW OPERATIONAL**

HWRF-NCEP Operational

Modified HWRF-NCEP with ATMS



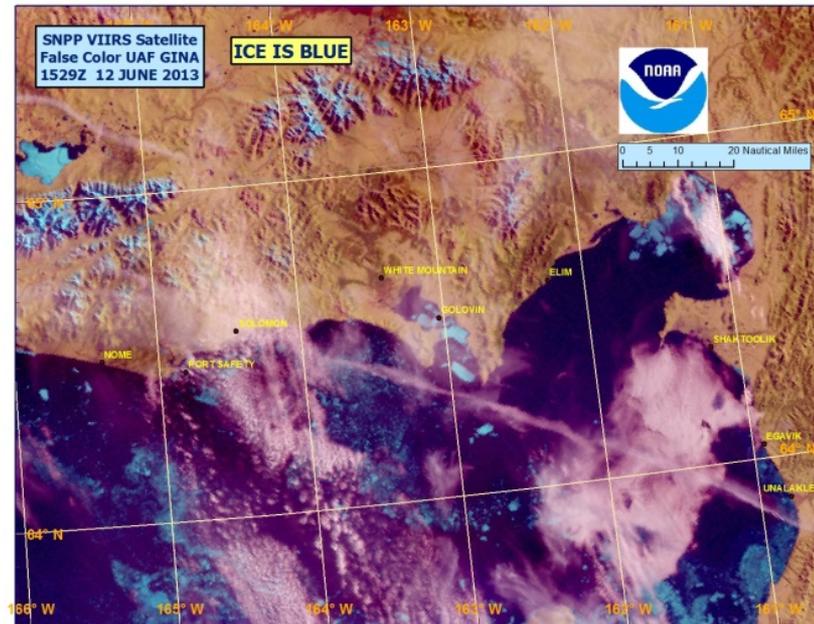
Credit: Fuzhong Weng



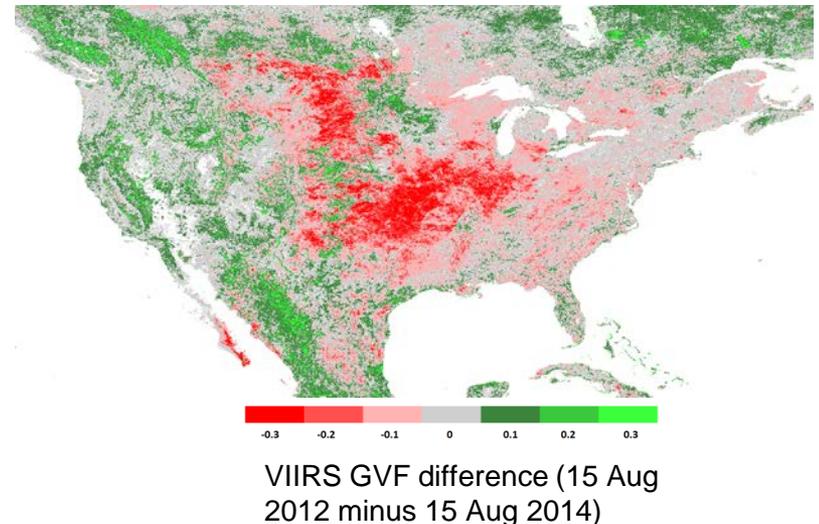
April 29th, 2014

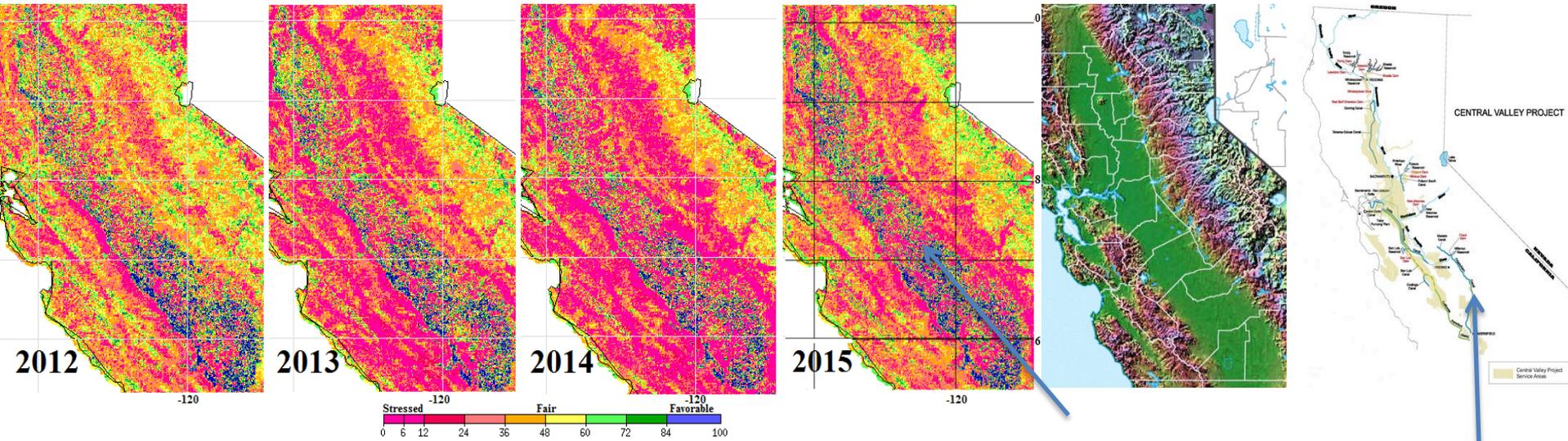
- Three day event
- True color imagery showed some vague dust features
- Dust enhancement uses visible and IR properties, as well as characteristics of dust particles to highlight **only dust**
- Used in SIGMETs for blowing dust

- Improve the utilization of JPSS and other snow and ice products in numerical weather prediction, hydrological analysis and forecasting, climate reanalyses, and ice operations.
- Users: NOAA's Alaska Pacific River Forecast Center (APRFC), NCEP, the National Operational Hydrologic Remote Sensing Center (NOHRSC) and their SNOw Data Assimilation System (SNODAS), and the National Ice Center



- Maximize the utilization of JPSS land surface environmental data products, as well as data products from other environmental satellites, by the NOAA numerical weather prediction community.
- Top priority is given and initial efforts will focus on the utilization of Green Vegetation Fraction (GVF) and Land Surface Temperature (LST) from the S-NPP satellite and a suite of soil moisture products.
- Users: NWS/NCEP





S-NPP/VIIRS-500m Vegetation health, June 12, USA, California, Central Valley

June 2012 -2015 Vegetation Health – Note improvement in 2015 due to late spring precipitation which increased vegetation. (temporary reprieve since snow pack is low and dry summer setting up).

NOAA Service Report on the 2014 California Drought included the need to use remote sensing for assessments of temporal changes in the Central Valley configuration, channel shapes, vegetation cover....

Blue areas show irrigation, If irrigation is cutback, depending on the magnitude, VIIRS VH maps in the central valley can be used for monitoring

Irrigation areas shown in upper right map

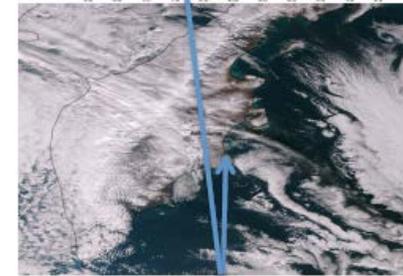
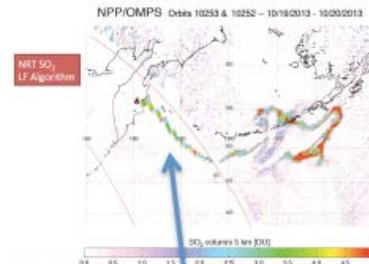


VIIRS coastal true color image of Lake Erie, August 3, 2014 depicting the large bloom of the cyanobacterium, *Microcystis* sp. threatened the water supply of Toledo, OH

- Support the activities that provide users with fit-for-purpose, accurate, consistent and timely ocean data and derived products from VIIRS.
- Focus on the following NOAA service areas: Modeling and Forecasting Physical & Biological Ocean and Coastal Dynamics, Harmful Algal Blooms (HABs), Water Quality, and Ecological Forecasting, Living Marine Resources, and Ocean Acidification and Air Quality

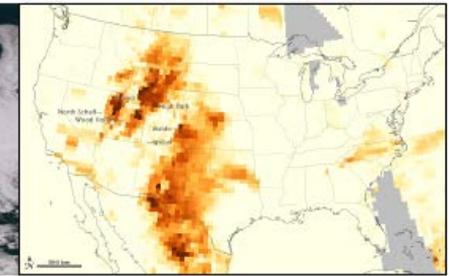
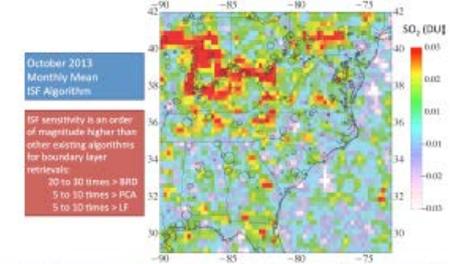
- Increase the utilization of the JPSS atmospheric chemistry products, including improved SO₂ and aerosol products

OMPS Capabilities: Volcanic SO₂



VIIRS sees the ash, but OMPS sees the SO₂

OMPS Capabilities: Pollution SO₂

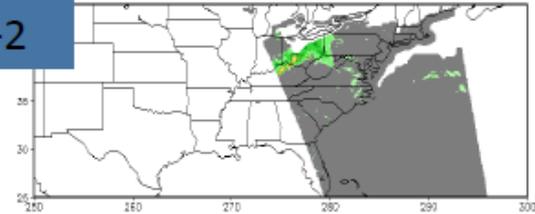


OMPS aerosols over generally bright surfaces from fires

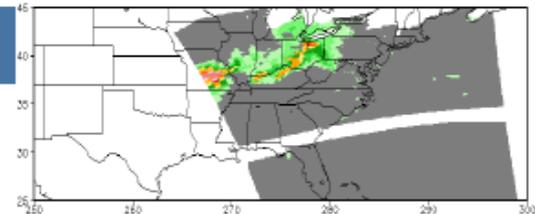
- Use of S-NPP, JPSS, and GCOM precipitation products in areas such as
 - Synergistic use of VIIRS with ATMS or AMSR-2 to improve rainfall and snowfall retrieval
 - Regional algorithm development and application to exploit direct broadcast data
 - Extension of global climate hydrological products from POES/AMSU to JPSS/ATMS
 - Improvements to precipitation retrievals under conditions of orographic forcing, where conventional retrieval algorithms are known to break down.

18:00-18:30 UTC 3 April 2014

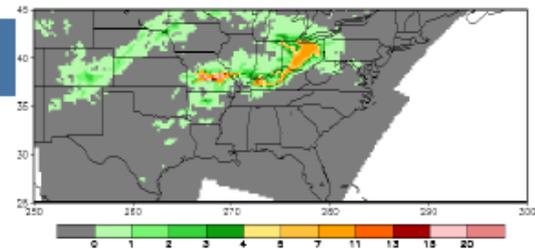
AMSR-2

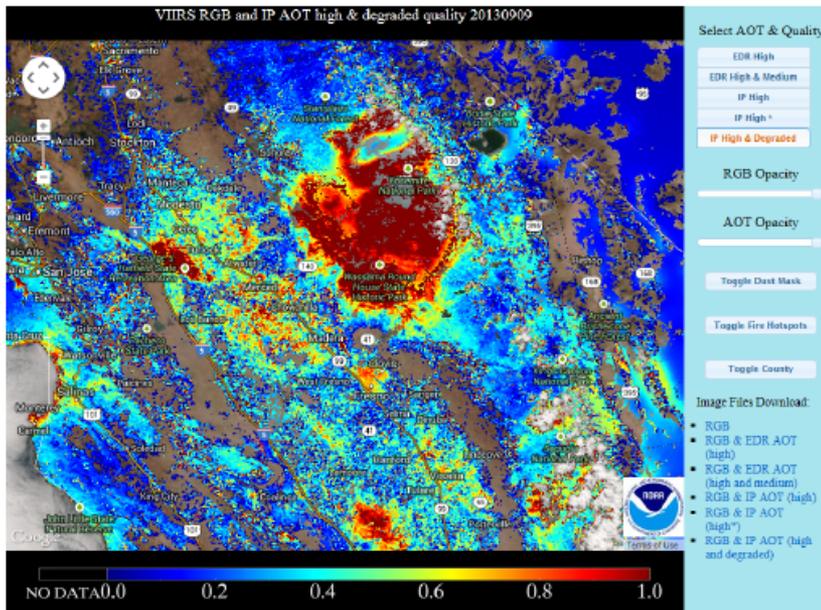


SNPP



Radar





- Improve the use of VIIRS and OMPS aerosol products in operational models at Numerical Weather Prediction (NWP) centers or developmental models at partner agencies that have defined pathways to transition to NWP centers.
- Make use and demonstrate the value of VIIRS aerosol optical depth, aerosol (smoke, dust, volcanic ash) detection, and OMPS UV Aerosol Index products in improving forecasts.



Innovation

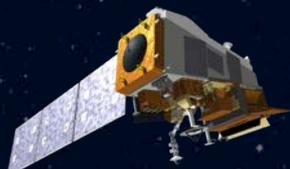


- Looking for “out-of-the-box” ideas and concepts that keep science fresh
- Can include new applications of existing products or development of new algorithms or products

- Focus on improving the utilization of JPSS products and applications by the user community
- Also supports education and training of the next generation of scientists



Not a complete photo – 9 people missing



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Name	Size	Date Modified
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20141220/		1/9/15, 12:01:00 AM
20141221/		1/9/15, 5:00:00 AM
20141222/		1/9/15, 11:31:00 AM
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20141224/		1/10/15, 12:04:00 AM
20141225/		1/8/15, 10:21:00 AM
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20141227/		1/9/15, 5:32:00 AM

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OMPS-RDR/		1/8/15, 10:22:00 AM
OMPS-SDR/		1/8/15, 10:18:00 AM
VIIRS-EDR/		1/8/15, 10:32:00 AM
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VIIRS-Aerosol-Optical-Thickness-AOT-EDR/	
VIIRS-Cloud-Aggregated-EDR-Ellipsoid-Geo/	
VIIRS-Cloud-Base-Height-EDR/	
VIIRS-Cloud-Cover-Layers-EDR/	
VIIRS-Cloud-Effective-Particle-Size-EDR/	
VIIRS-Cloud-Optical-Thickness-EDR/	
VIIRS-Cloud-Top-Height-EDR/	
VIIRS-Cloud-Top-Pressure-EDR/	
VIIRS-Cloud-Top-Temperature-EDR/	
VIIRS-Ice-Surface-Temperature-EDR/	
VIIRS-Land-Surface-Temperature-EDR/	
VIIRS-Near-Constant-Contrast-Imagery-EDR/	
VIIRS-Near-Constant-Contrast-NCC-EDR-GTM-Geo/	
VIIRS-Ocean-Color-Chlorophyll-EDR/	
VIIRS-Sea-Ice-Characterization-EDR/	
VIIRS-Sea-Surface-Temperature-EDR/	
VIIRS-Snow-Cover-Depth-Binary-Map-EDR/	
VIIRS-Snow-Cover-Depth-Snow-Fraction-EDR/	
VIIRS-Surface-Type-EDR/	
VIIRS-Suspended-Matter-EDR/	
VIIRS-Vegetation-Index-EDR/	



Summary - JPSS Program Status



Suomi NPP is producing outstanding data

- The satellite is healthy and producing a high availability of data (~99.99%)
- Operations of the satellite transferred from NASA to NOAA in 2013
- Suomi NPP is the primary operational polar-orbiting satellite for NOAA

JPSS-1 is executing as planned

- Instruments and spacecraft are proceeding well
- Instruments are assembled and undergoing testing; one is prepared for integration
- The spacecraft bus is built and undergoing testing
- Development and implementation of the new ground data processing system are underway

JPSS-2 procurement activities are progressing well

- The VIIRS, OMPS, CrIS, and ATMS and Radiation Budget Instrument are under contract
- The spacecraft bus procurement is underway



Thank You

www.jpss.noaa.gov