



JPSS Proving Ground and Risk Reduction Update 7 Jul 2014



Important Topics

- JPSS Program Status
- SNPP Initiatives of Interest
- JPSS Science Seminars
- Conferences and Meetings



JPSS Program Status

- Program Systems Engineering (PSE) led the Flight Vehicle Test Simulator (FVTS) Critical Design Review (CDR) on 3-5 Jun 2014. It was a successful event, with only ~7 Requests for Action (RFAs). The Board concluded the FVTS Design was acceptable and the team was ready to move to integration & test.
- The JPSS outbrief from the JPSS-1 Mission Critical Design Review (MCDR) to the joint Agency Program Management Council (APMC) was presented on June 18, 2014. The JPSS Director, Program Manager, and Standing Review Board (SRB) Chair provided a status on the JPSS-1 mission and summary of results from the JPSS-1 MCDR to the management council for information purposes.
- Construction for the buildout of the operations and office areas at the Consolidated Backup Unit (CBU) in Fairmont, WV is in final stages. Systems furniture has shipped to the site and installation is in progress for both the office and operations spaces. Full space readiness, including construction complete, furnishing, and IT cabling/network systems targeted for mid-July 2014.



The CERES instrument was successfully delivered to Ball Aerospace & Technologies Corporation (BATC) in Boulder, CO on June 17, 2014.



JPSS PGRR Project Accomplishments

- **River Ice and Flooding Product Initiative completed its Winter 2013-2014 Operational Demonstration. Conclusions**
 - The 2014 ice breakup and associated high water and flooding was considered very benign relative to a normal year and therefore did not represent a good year to evaluate the capabilities of the different algorithms
 - River Flood Product
 - Additional benefits quickly recognized in monitoring extent of snow cover and levee breaches.
 - Proved useful for delineating areas of active snowmelt at multiple basin scales.
 - Incorrect typing of shallow snow cover as cloud cover did not prove problematic for operational use.
 - Problems remain classifying some grids with standing water as land.
 - Alaska RFC identified problems at high latitudes in early morning and evening products.
 - Both RFCs identified significant value and future potential for the River Flooding Product for river forecasting applications.
 - River Ice Product
 - The challenges with the CCNY algorithm could not be fixed fast enough for operational demonstration during ice break-up. Propose going back over the RFC areas of interest for the Winter 2013-2014 with improved algorithm.
 - Seems to be limited clouds, even thin cloud layers, no clear images have been received since testing began.
 - Limited to wide river channels only due to resolution.
 - Has not proved effective for operational use at NCRFC thus far



JPSS PGRR Project Accomplishments

- **Fire and Smoke Initiative has begun. Telecon in May and Jun established draft objectives for initiative**
 - Organize a forum to allow stakeholder supporting Fire and Smoke detection and forecasting to interact
 - Encourage participation of the stakeholder organizations with current responsibilities in Fire and Smoke detection and forecasting.
 - Understand the current use of geostationary and polar orbiting satellite capabilities in support of Fire and Smoke detection and forecasting mission
 - Identify current SNPP/JPSS and new GOES-R data and capabilities with the potential to improve support to this mission
 - Establish methodologies and procedures for the operational demonstrations of these capabilities
 - Following these operational demonstrations, identify the satellite capabilities whose operational impacts are sufficient to warrant transition from research to operations
 - Determine required actions for an effective transition of these capabilities to operations
- **Satellite Proving Ground/User Readiness Meeting (2-5 Jun 2014, Kansas City MO)**
 - Participants considered the meeting to be very successful
 - Excellent participation from NWS – Regional SSD Chiefs, NCEP Center personnel, and WFO SOOs
 - Both JPSS and GOES-R Programs received detailed feedback on their satellite products
 - Training was a big area of emphasis
 - Draft Action Items identified and will be finalized in meeting report
- **Project Report for 2CY2014 are beginning to come in. Summary of accomplishments, issues, and future actions to be created in July 2014**



Upcoming Conferences/Workshops

- **Satellite OCONUS R2O Interchange Meeting (29 Jul – 1 Aug, HI). Meeting Objectives**
 - Assess the GOES-R JPSS science portfolios and NOAA's operational objectives/missions in tandem, specifically identifying cross-cutting priorities as they pertain to Alaska, Hawaii, and U.S. possessions in the Pacific Ocean (e.g., focused presentations on both operational problems, from NWS, and potential science solutions, from GOES-R, JPSS, and NOAA-supported scientists)
 - Determine high-priority, low-effort projects that increase the value of the GOES, GOES-R, NPP, and JPSS missions to the National Weather Service in Alaska Region and Pacific Region (e.g., group discussions about where to focus attention for GOES-R and JPSS OCONUS proving ground activities)
 - Introduce operational meteorologists to GOES-R and JPSS science and initiate a dialogue for subsequent science development (e.g., perpetuate the research to operations cycle through in-person interactions)
 - Review the progress in implementing NPP imagery and science products into the operational weather forecasting environment (e.g., hear from forecasters about the use of Suomi NPP during the previous tropical cyclone season)
 - Understand the extent of NOAA's mission and resources in Hawaii and Pacific Region.
 - Develop a plan forward with contributions from operations (i.e., NWS) and research (i.e., GOES-R, JPSS, and Cooperative Institutes), establish timelines, and identify funding opportunities if applicable
- **NWA Annual Meeting (18-23 Oct 2014, SLC). Theme: *"Building a 21st Century Weather Enterprise: Facilitating Research to Operations – Optimizing Communication and Response.***



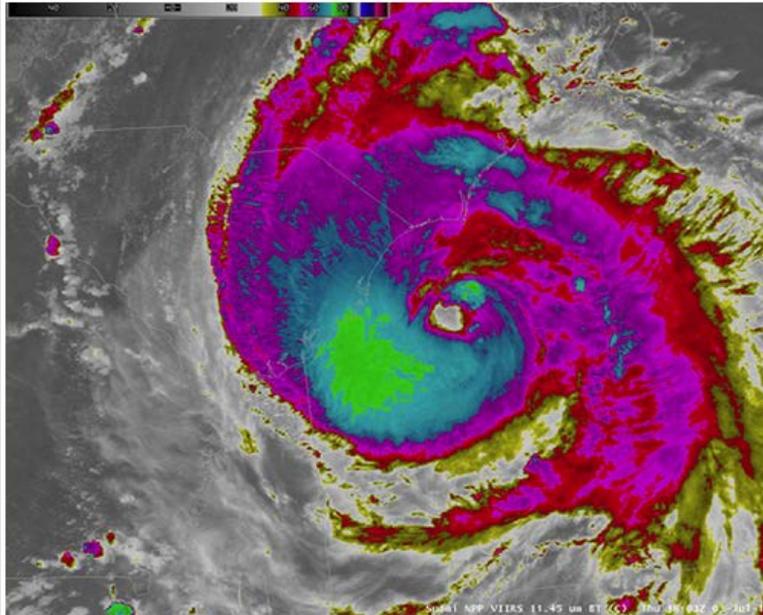
WFO Charleston 3 Jul Tweet



US National Weather Service Charleston SC

July 3

Here's an impressive 1km IR satellite image of Hurricane Arthur from the SNPP VIIRS instrument. You can really see some of the details of the convection which you can't see on the traditional 4km imagery from the GOES satellites.



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Bill Bates Cool picture ... great technology

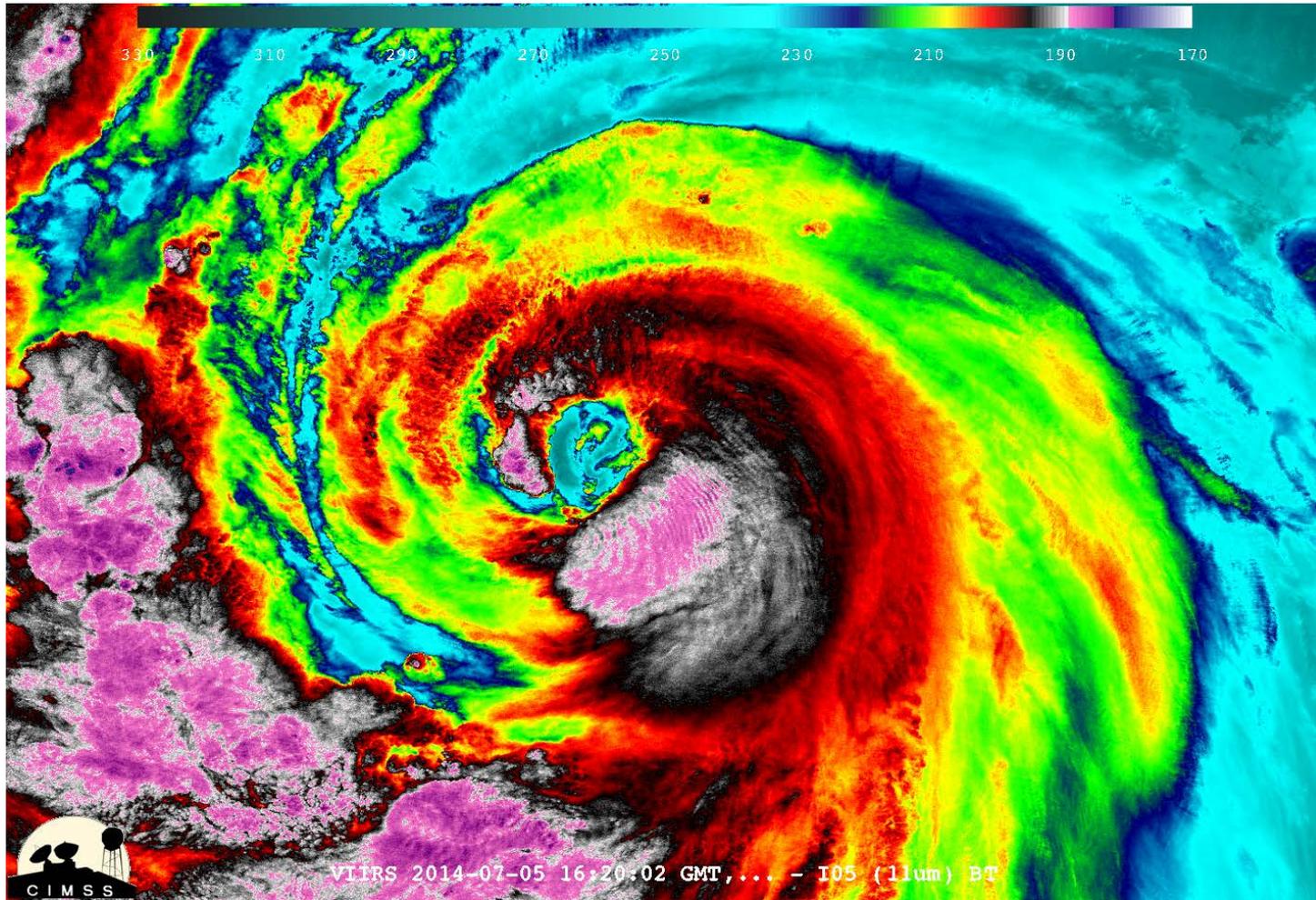
July 3 at 3:29pm · Like · 1



Eddie Hernandez Keep Safe from Texas!



Typhoon Neoguri





JPSS Science Seminars - Past

Date	Presenters	Topic
November 18, 2013	Mark DeMaria	Joint JPSS-GOES-R Tropical Cyclone Satellite Data Assimilation Discussion
December 16, 2013	Arunas Kuciauskas and Jeff Hawkins	NexSat JPSS Demonstration Project NRL-MRY VIIRS Data and Cal-Val Work
January 27, 2014	Cara Wilson	Facilitating NOS/NMFS End-User Access to VIIRS data
February 24, 2014	Walter Wolf	Uniform Multi-Sensor Algorithms for Consistent Products
March 21, 2014	Alex Gilerson	Development of algorithms for retrieval of chlorophyll-a in the Chesapeake Bay and other coastal waters based on JPSS-VIIRS bands
April 21, 2014	Active Fire Team	JPSS and GOES-R Activities Supporting 2013 Fire Outbreaks
May 19, 2014	Amy Huff Shobha Kondragunta	VIIRS Aerosol Products for Air Quality Applications
June 23, 2014	Dan Pisut	Visualization of Suomi NPP Data



JPSS Science Seminars

Future

Date	Presenters	Topic
July 21, 2014	Daisuke Hotta Eugenia Kalnay	Application of EFSO to Proactive Quality Control, and Efficient Testing of Forecast Impact of New Instruments
August 18, 2014	Training Team	Joint JPSS/GOES-R Training
September 29, 2014	Pingping Xie	Infusing JPSS PMW Retrievals to CMORPH Precipitation Estimates for Improved Weather, Climate, and Water Applications
October 20, 2014	Jerry Zhan	Enhance Agricultural Drought Monitoring Using NPP/JPSS Land EDRs For NIDIS
November 17, 2014	SPORT, Mike Pavolonis	Joint JPSS/GOES-R Low Cloud and Fog
December 15, 2014	Jeff Key	Development, Generation, and Demonstration of New JPSS Ice Products in Support of a National Ice Center JPSS Proving Ground and Risk Reduction Activity
January 26, 2015	Mark Eakin	Pushing the Limits: Increasing Resolution of Satellite-Derived Coral Bleaching Products using VIIRS and Geo-Polar Blended SSTs
February 23, 2015	Gary Jedlovec	SPoRT Product Assessments for JPSS
March 23, 2015	Huan Meng	ATMS-Derived Snowfall Rate Product and its Applications in Weather Forecasting and Hydrology
April 20, 2015	Danny Satterfield	Broadcast Meteorology use of Satellites
May 18, 2015		
June 22, 2015		
July 20, 2015		
August 17, 2015		
September 21, 2015		