



# The NASA Short-term Prediction Research and Transition (SPoRT) Center

GOES-R Proving Ground Update

14 January, 2013

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## **General Outline SPoRT Status Report:**

### **RGB Imagery**

- **User feedback, training, future tasks**

### **Other Activities**

- **QPE (NESDIS), UAH Convective Init., AWIPS II**

### **JPSS**

- **Hurricane Sandy, KML, Hybrid, AWIPS I changes**

### **Total Lightning**

- **New Collaborations, Preparations for Spring 2013**



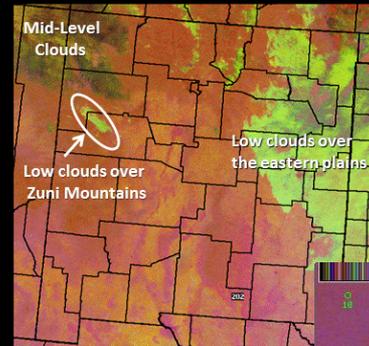
# RGB Imagery

- Night-time Microphysics blog posts by ABQ, RAH and interest by MFR (recently installed)
- Have begun to create laminated Quick Guides for users to have in operations
- Upcoming tasks:
  - Finish Air Mass RGB case of Hurricane Philippe
  - Use 2012 TC cases to create introductory training for Day-time Microphysics and Convective Storms RGBs for use at NHC in 2013 tropical testbed period.

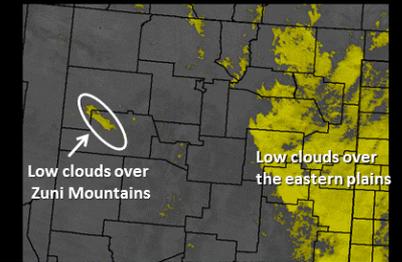
## Viewing Night-time Cloud Cover

There are many satellite images available to forecasters to determine where clouds are located during the overnight hours. The images below depict cloud cover across NM just after 2 am this morning.

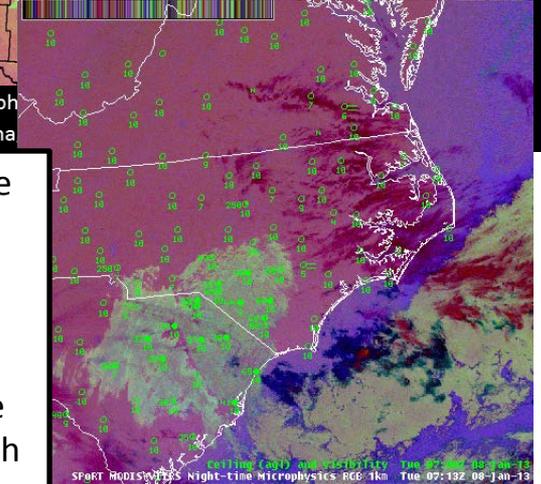
The image below distinguishes low level clouds from mid level clouds. **Lime greens** indicate low clouds, while **browns** indicate mid level clouds. **Pinks** and **oranges** indicate clear skies.



The image below focuses the forecasters attention to where low clouds only are, which can be especially dangerous to aviators. These clouds are shown in bright **yellow**.



Above: Albuquerque Graphicast comparing Ntmicro and 11-3.9um  
Right: Ntmicro application example submitted by Raleigh WFO



# Other PG Transition Activities

## QPE:

- 12/3/12: Had telecon with AK WFOs and MTR, EKA, MFR to discuss needs and plan evaluation activities
- Users desire accumulation products (1,3,6,24,72,168hr) and Bob K. has started to produce. Menu items being added at WFOs
- Bob K. providing expertise for initial training materials by SPoRT
- Evaluate with W. Coast ~March and AK ~late summer
- SPoRT adjusted product to differentiate non-data points with values of 0

## UAHCI:

- Developers are testing algorithm with GOES-W and making improvements in preparation for Spring 2013

## AWIPS II:

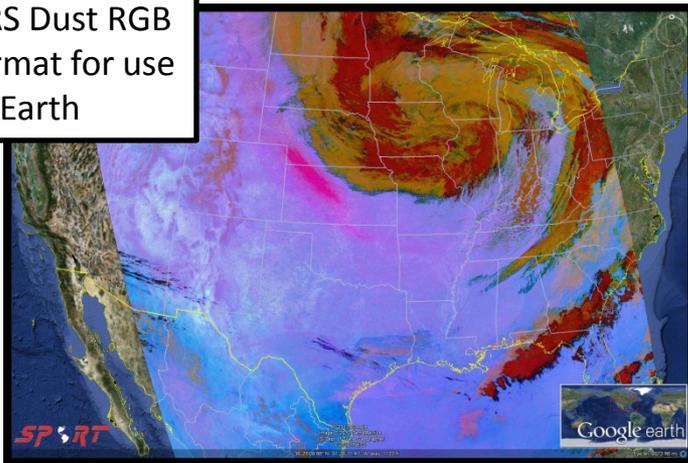
- SPoRT plans to participate in development of software governance policy with NWS/OST (traveling to D.C. late Jan.)



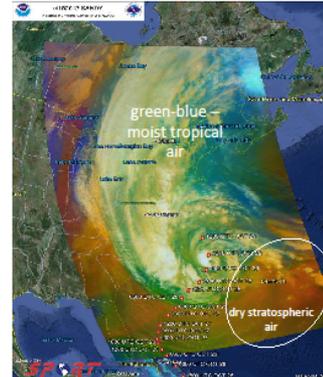
# JPSS Proving Ground

- Used VIIRS data (DNB) in support of forecasting and relief efforts associated with Hurricane Sandy
- Expanded dissemination of RGB products to National Centers (N-AWIPS and KML)
- Began dissemination of VIIRS real-time imagery to several WFOS in AWIPS. Implementing menu changes with SPoRT WFO partners (includes RGBs and hybrids)
- Created several quick-guide documents for forecaster training: VIIRS v MODIS; DNB

Right: VIIRS Dust RGB in KML format for use in Google Earth



NASA Short-term Prediction Research and Transition (SPoRT) project has been transitioning data to the NWS from Terra and Aqua satellites for several years and has recently added data from the Suomi NPP satellite. Derived products from MODIS and VIIRS help forecasters monitor hazardous weather events like Hurricane Sandy.



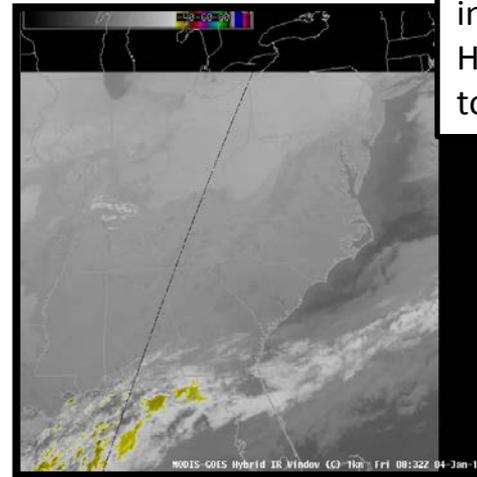
MODIS RGB composite image from October 29, 2012 @0258UTC indicating dry stratospheric air (orange) from a troposphere fold getting tangled with Sandy adding to the complexity of forecasting its continued development.

**SPoRT** transitioning research data to

NWS Scientists blog about use of VIIRS products from SPoRT to monitor Hurricane Sandy



Above: HPC blog using SPoRT-provided VIIRS/CrIS Air Mass  
Below: VIIRS incorporated to Hybrid imagery sent to WFOs



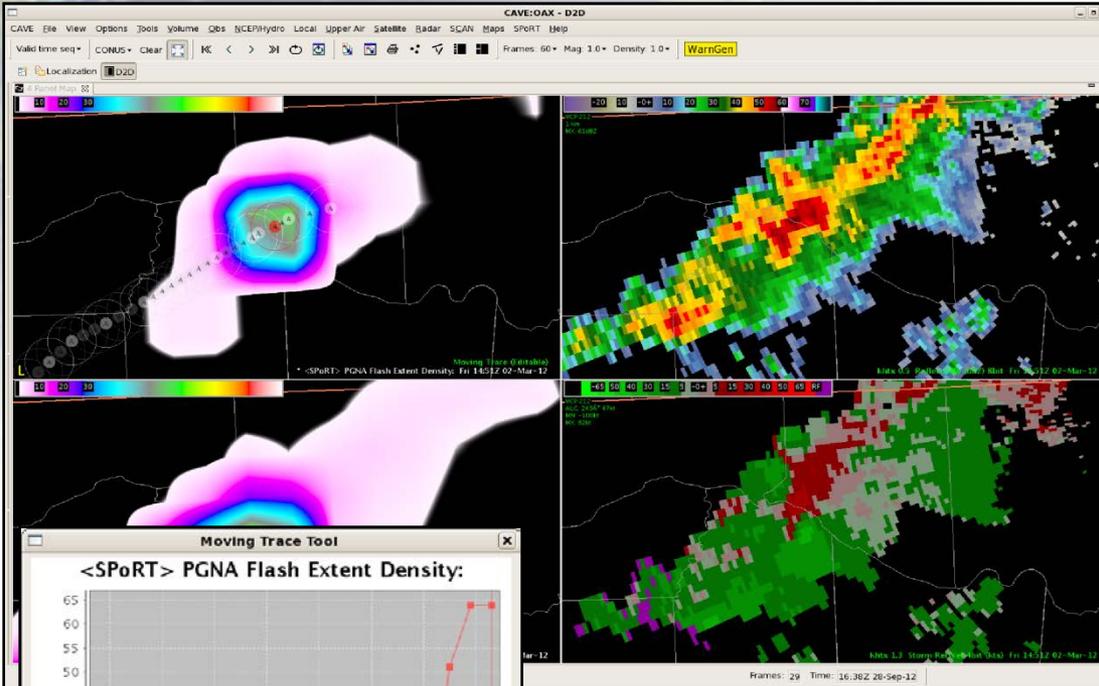
**SPoRT**





# Preparations for Spring Program

- Coordinating with Hazardous Weather Testbed
- Will demonstrate SPoRT's AWIPS II tracking tool
  - Forecaster highlights cell of interest
  - Tool generates time series
  - Most requested tool from forecasters



- Will include a first order lightning jump algorithm
- Effort with UAHuntsville developers
- Extend current tracking tool and calculate on the fly

