Group Discussion I: Exploiting GOES Data/Products

Deirdre Kann

National Weather Service WFO Albuquerque

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Some Points to Consider

- We have several more years of operational use of the current GOES Platform
- www.GOES-R.com, but is there currently a “One Stop Shop” for GOES products?
- Are websites the best method for the distribution/evaluation of satellite (or other operational) products?
- How can we best communicate what products are available for testing?
- How is the transition from research product to operational product best accomplished?

Current GOES Products

NOAA Satellite and Information Service
National Environmental Satellite, Data and Information Service (NESDIS)

DOC / NOAA / NESDIS / OSDPD

Home | About US | Product Areas | Special Imagery | Geostationary | Polar | Satellite Services

Product Areas

This page replicates the links on the Product Areas Dropdown menu.

Atmosphere

- -- Aerosol
- -- Clouds
- -- Ozone
- -- Precipitation (Rain)
- -- Radiation Budget
- -- Soundings
- -- Volcanic Ash
- -- Winds

bTPW
CoastWatch
Hazards
Imagery

- -- Archives
- -- Composites
- -- Geostationary Server
- -- Land
- -- Ocean
- -- OSEI

Land

- -- Fire and Smoke
- -- Snow and Ice
- -- Surface
- -- Vegetation

MIRS
MSPPS
Ocean

- -- Coral Bleaching
- -- Ocean Color
- -- Sea/Lake Ice
- -- Sea Surface Height
- -- Sea Surface Temperatures
- -- Tropical Systems

Product List (A to Z)

Last Modified: 11/05/2010 12:46:44
You are Here: http://www.osdpd.noaa.gov/ml/products.html

Current GOES Products

- There is no “One Stop Shop” for products, in part because of the number of collaborators and cooperative institutes.

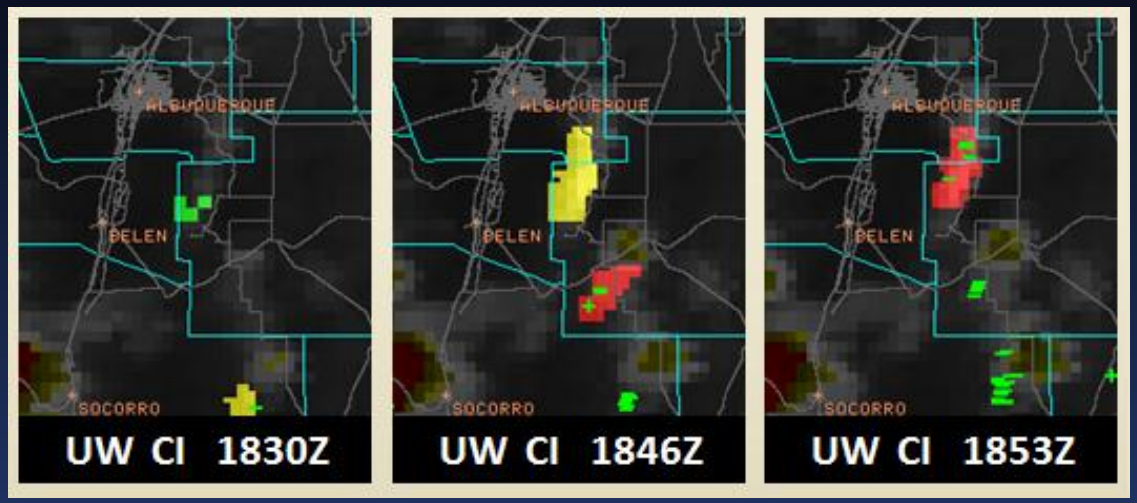
- Are all products under development being tested or evaluated on a daily or regular basis? Is there a standard?

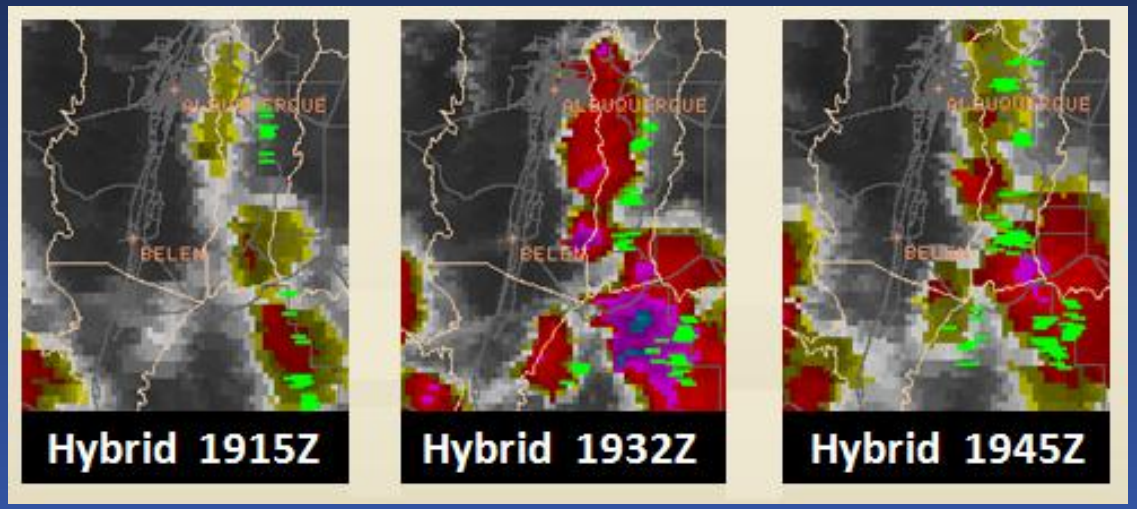
- A number of file formats/color curves exist – how many are necessary?

- For evaluation, it is important that the product be available on the operation platform.

Availability of GOES Products

We need to increase visibility of products not routinely available on workstations or from vendors, and help forecasters and other users learn how new products can enhance the use of baseline or traditional products.





How to “Advertise” Products

- Products not routinely available or under development can be evaluated at exercises such as NOAA’s Hazardous Testbed.
- Forecasters who participate gain expertise with new technologies that they can then share with their local office.

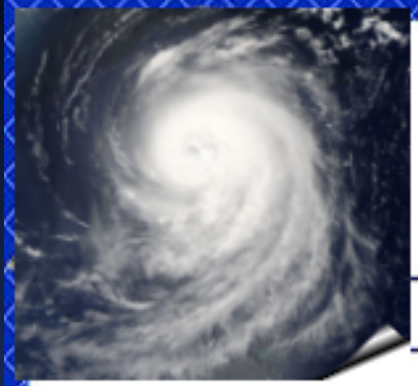
NOAA Hazardous Weather Testbed

BRINGING SEVERE STORM RESEARCH INTO OPERATIONS

NOAA's Hazardous Weather Testbed (HWT) is a facility jointly managed by NSSL, the **Storm Prediction Center (SPC)**, and the **NWS Oklahoma City/Norman Weather Forecast Office (OUN)** within the National Weather Center building on the University of Oklahoma South Research Campus. The HWT is designed to accelerate the transition of promising new meteorological insights and technologies into advances in forecasting and warning for hazardous mesoscale weather events throughout the United States. The HWT facilities include a combined forecast and research area situated between the operations rooms of the SPC and OUN, and a nearby development laboratory. The facilities support enhanced collaboration between research scientists and operational weather forecasters on specific topics that are of mutual interest.

NWC meteorologists discuss observations in the Hazardous Weather Testbed.

How to "Transition" Products



Recipe for: Success

1. A coherent support team
2. "Buy in" from the local staff or users
3. Two way collaboration with developers

Coherent Support Team

- Product Experts - NASA SPoRT Staff
- Technical support - Local AWIPS Focal Point
- Project Manager - Local WFO “Satellite” Focal Point

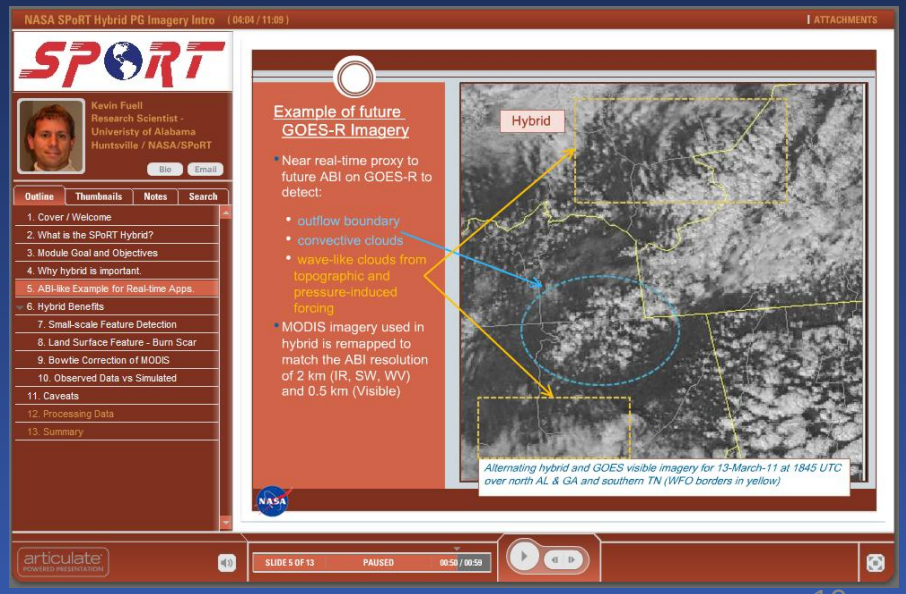
“Buy In” from the Local Staff

- Don’t increase the work load
- Share examples of success with the staff
- Share methodologies, such as AWIPS Procedures
- Provide training and set up examples on a Weather Event Simulator

Support Products

- Framework for providing feedback

- Training Modules



Sharing Information

University of Wisconsin-Madison / Space Science and Engineering Center

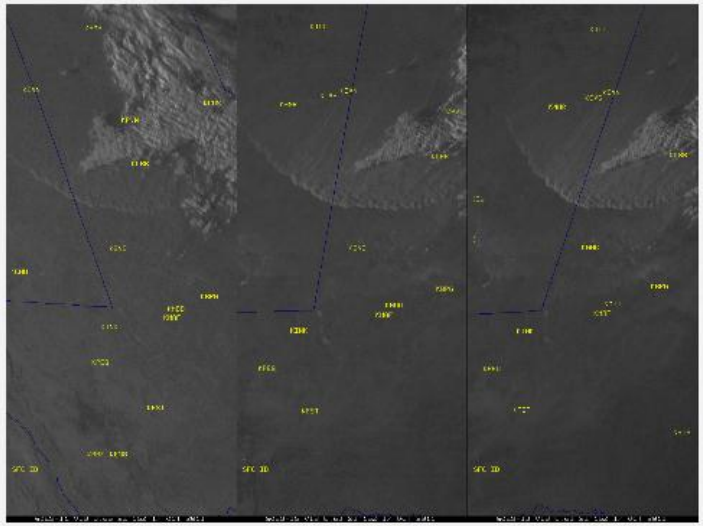
CIMSS Satellite Blog

/ CIMSS / CIMSS Satellite Blog /

Search for: Search

Blowing dust event in Texas and New Mexico

October 18th, 2011



GOES-11, GOES-15, and GOES-13 visible channel images (click image to play animation)

A major blowing dust event in the wake of a strong cold frontal boundary moved southward across western Texas and eastern New Mexico late in the day on **17 October 2011**, which reduced surface visibilities to near zero in some locations as winds gusted as high as 75 mph (see **NWS Lubbock story**). McIDAS images of GOES-11 *(GOES-West)*, GOES-15, and GOES-13 *(GOES-East)* visible channel data during the daylight hours and shortwave IR data after sunset ***(above; click image to play animation)*** showed the southward propagation of the well-defined arc of blowing dust (or "haboob"), along with the surge of cooler air behind the cold front. A few wildfire "hot spots" *(darker black pixels)* were also evident on the GOES shortwave IR images.

Posted in Air quality, Fire detection, GOES-11, GOES-13, GOES-15 | No Comments »

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October 2011

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Categories

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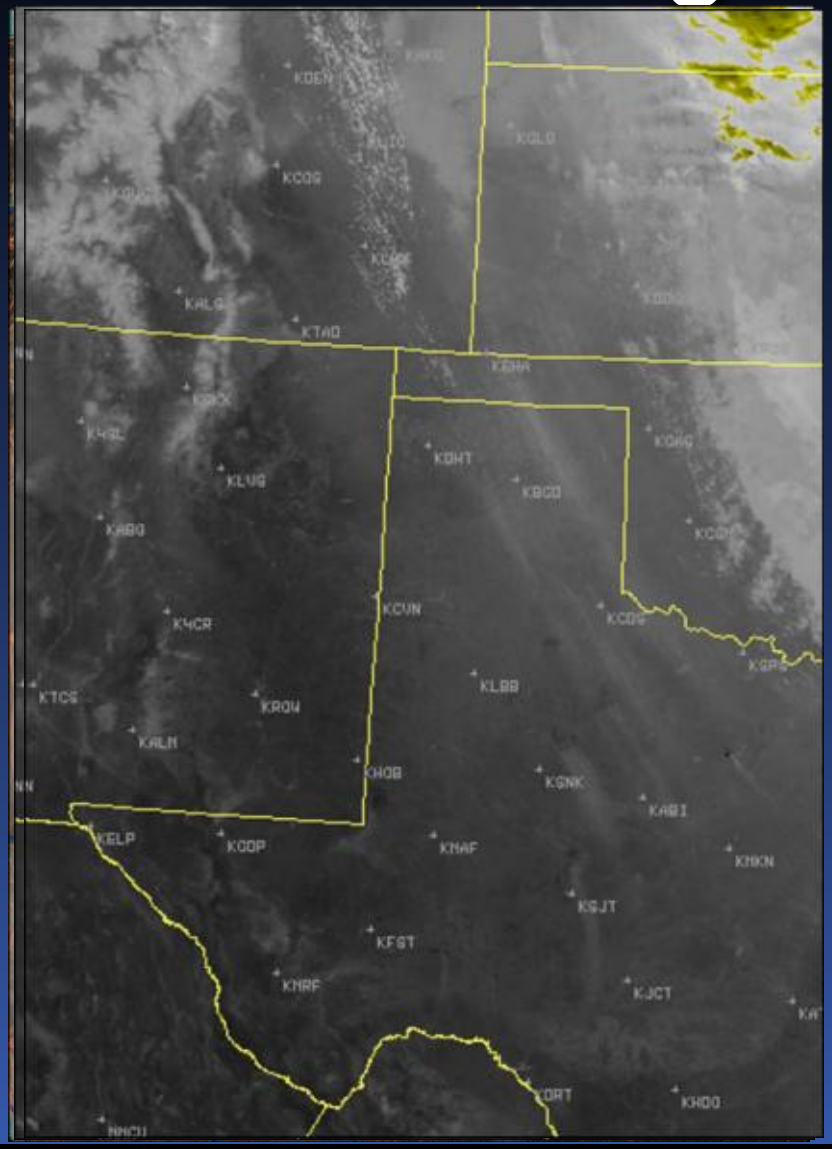
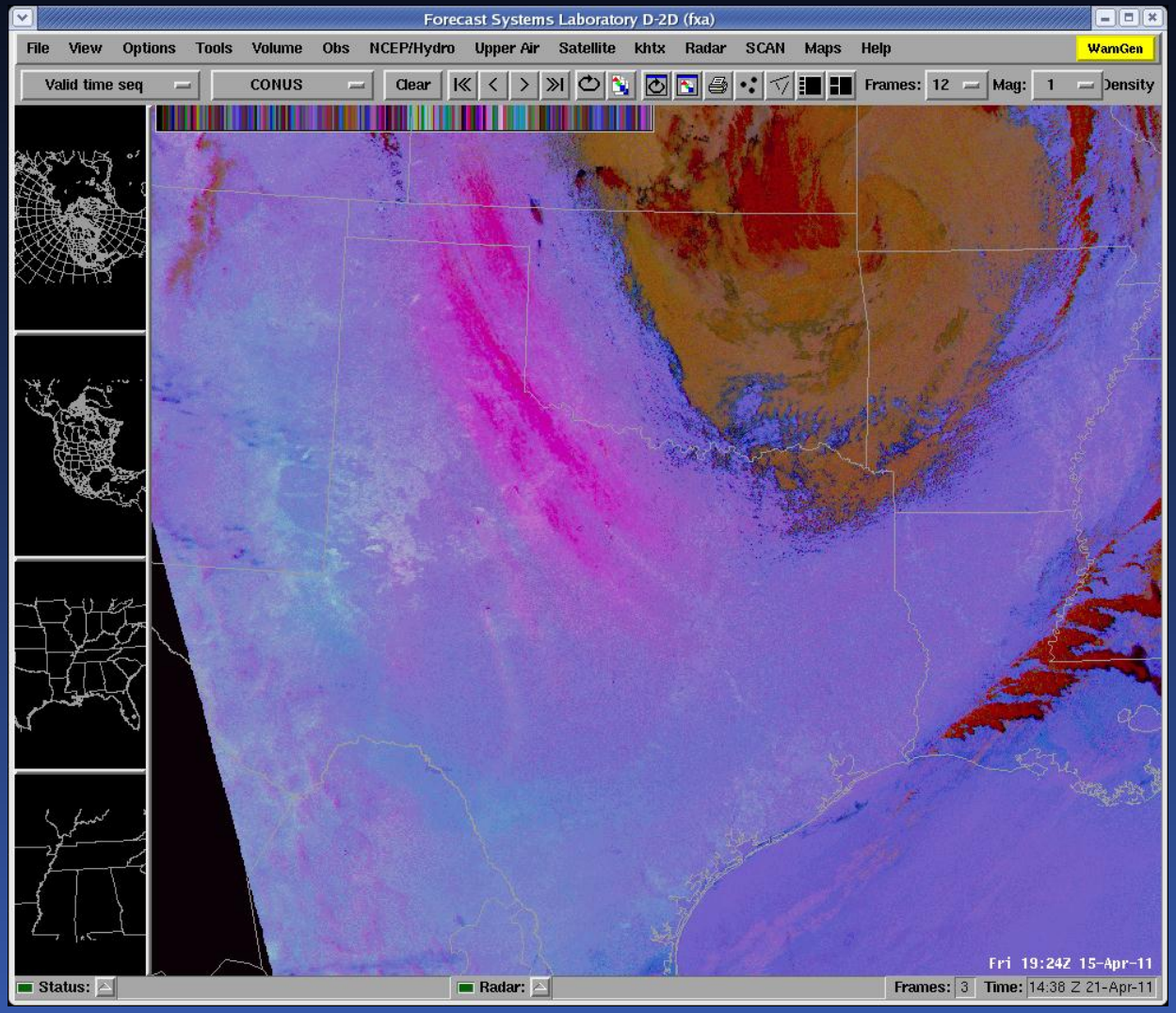
- » GOES-10
- » GOES-11
- » GOES-12
- » GOES-13
- » GOES-14
- » GOES-15
- » GOES-R

ProductsEvaluation: GOES Hybrid SPoRT Blog

- 15 April 2011 – dry north winds and unstable air result in dust plumes in West Texas, visible on 1 km color composite
- At 1732Z, GOES image depicts the hot spots and dust
- AT 1745Z, GOES-R ABQ proxy shows sharper edges on dust plumes, clearer hot spots, and a clearer CO cloud field.



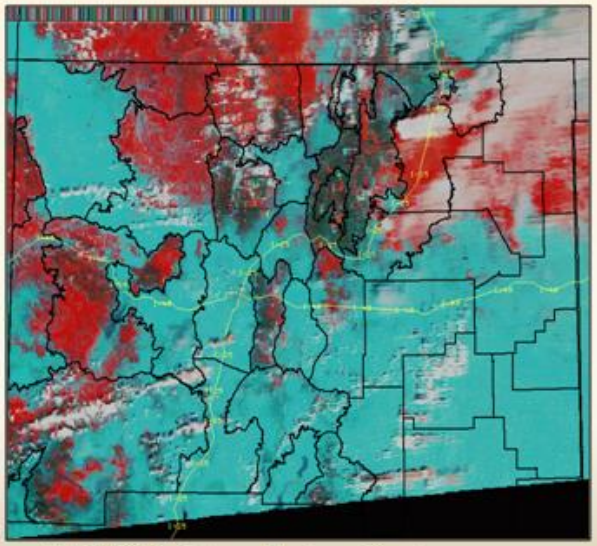
Blog Post Prompts Information on New Product: MODIS RGB Dust



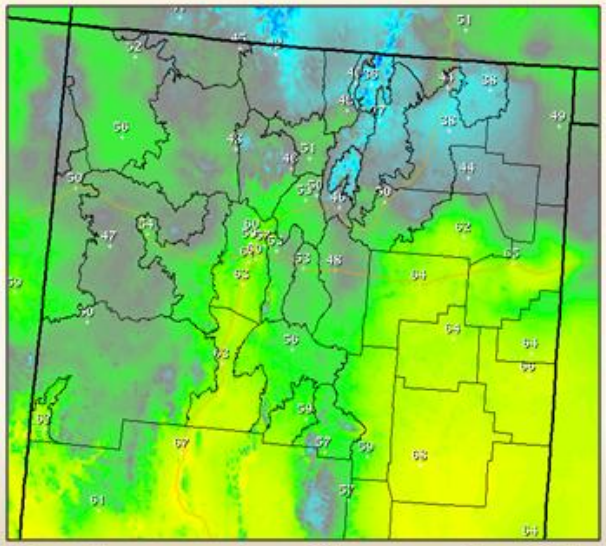
Topics for Possible Discussion

- How can we maximize the use and evaluation of current GOES products (as well as GOES-R products)?
- How can we best communicate information regarding new products available for operational testing? How best to support a 2-way exchange of information?
- How is the transition from research product to operational product best accomplished? Will evaluators have input regarding the end product?

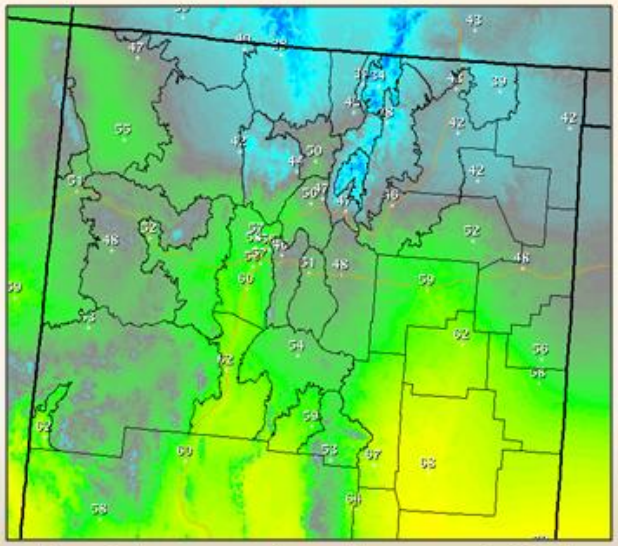
How can the products enhance the skill of forecasts?



MODIS 1km False Color
01/18/10 2049Z



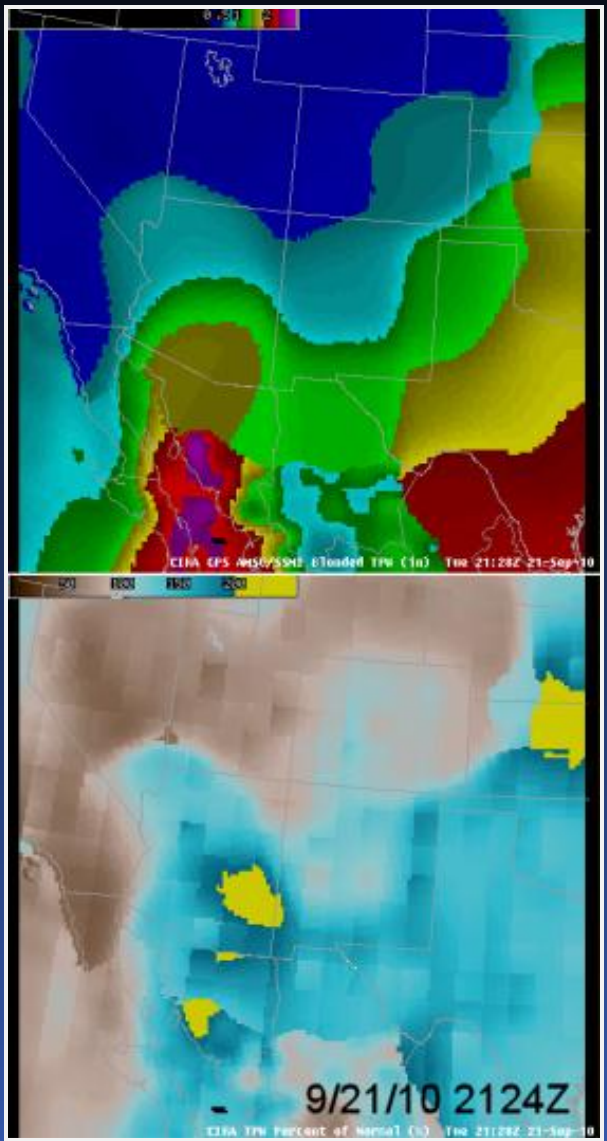
Max Temperature Observation Grid
01/18/10

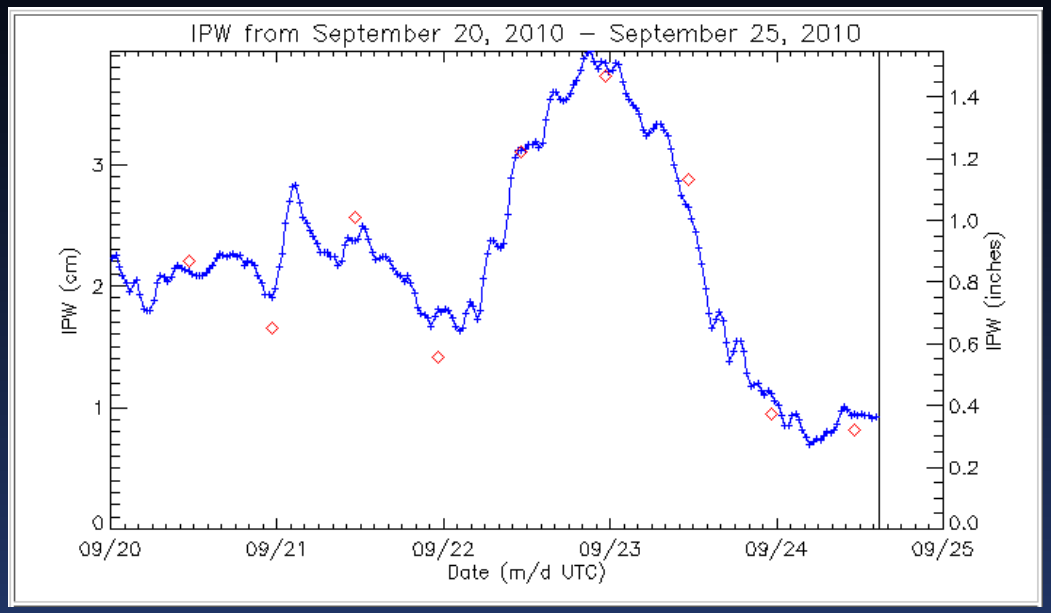


Max Temperature Forecast Grid
01/19/10

January 2010 – Snow cover resulting in a sharp gradient in max T temperatures

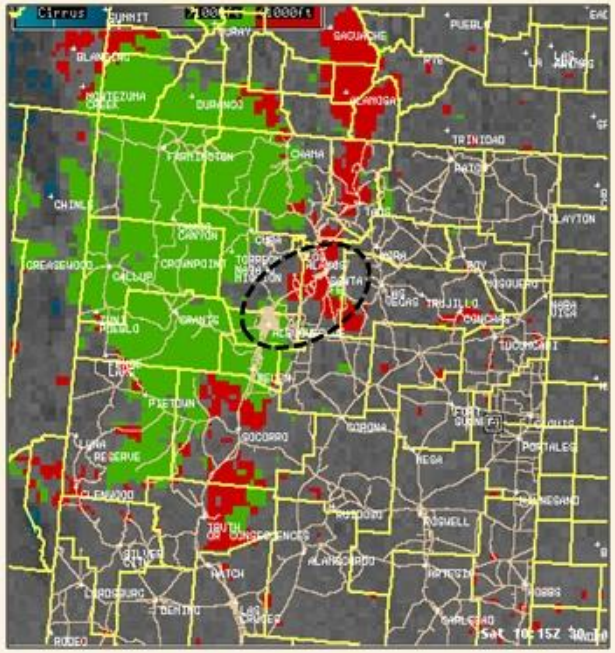
CIRA Blended TPW and PON TPW



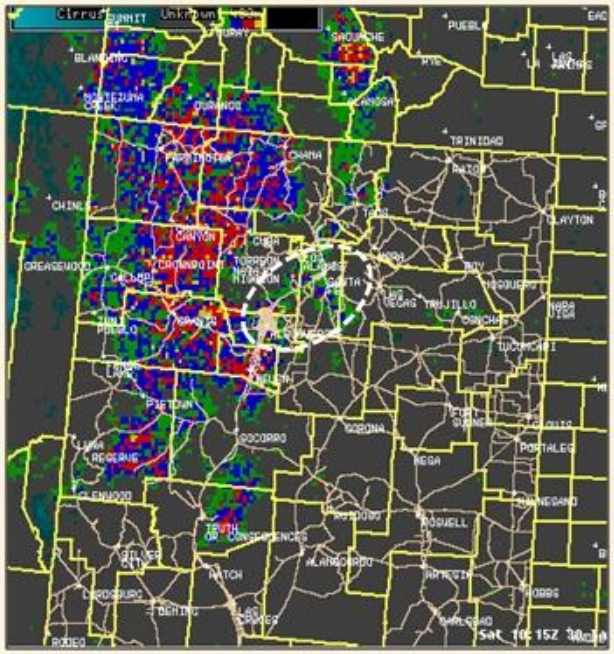


Location	Amount (inches)
Gladstone	6.42
House	3.51
Clayton	3.20
Espanola	3.20
Tesuque 2 W	2.63
Albuquerque - Candelaria & Tramway	2.35
Santa Fe	2.00
Albuquerque Sunport	1.86
Rio Rancho 2 S	1.94
Fort Sumner	1.40

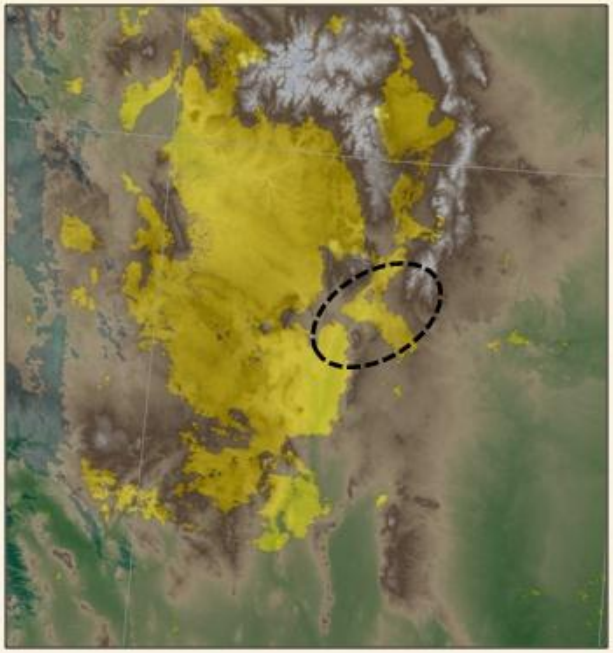
Low Clouds and Fog



1015Z Low Cloud Base Product



1015Z Combined Fog Product

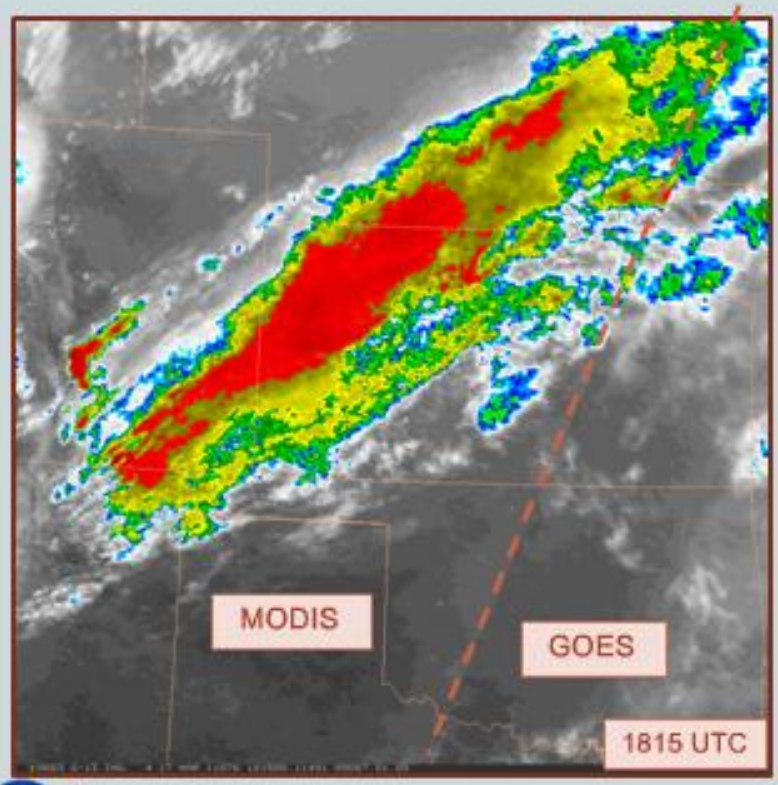


1015Z MODIS 11-3.9um Product

29 Jan 2010 – Snowmelt, clear skies, calm winds lead to widespread low clouds and fog

Products Evaluated And Successes

MODIS-GOES Hybrid Imagery



- Combination of high-resolution imagery from MODIS and standard GOES.
- MODIS swath replaces GOES whenever it is available while GOES fills time periods between MODIS overpasses.
- Four hybrid channels (MODIS/GOES):
  - Longwave IR (11 micron)
  - Shortwave IR (3.9 micron)
  - Water Vapor (6.7 micron)
  - Visible (0.6 micron)