



Potential Applications in AWIPS II

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CIRA / RAMMB PG Team Members

Project Leads

- **Steve Miller (CIRA; PI)**
- **Renate Brummer (CIRA; Co-PI)**
- **Mark DeMaria (NOAA/StAR RAMMB)**

NWS Liaisons / Interaction

- **Ed Szoke (CIRA – ESRL/GSD)**

Technical Support / AWIPS

- **Deb Molenar (NOAA/StAR RAMMB)**
- **Hiro Gosden (CIRA)**
- **Robert DeMaria (CIRA)**
- **Kevin Micke (CIRA)**

Satellite Algorithm Developers & Modelers

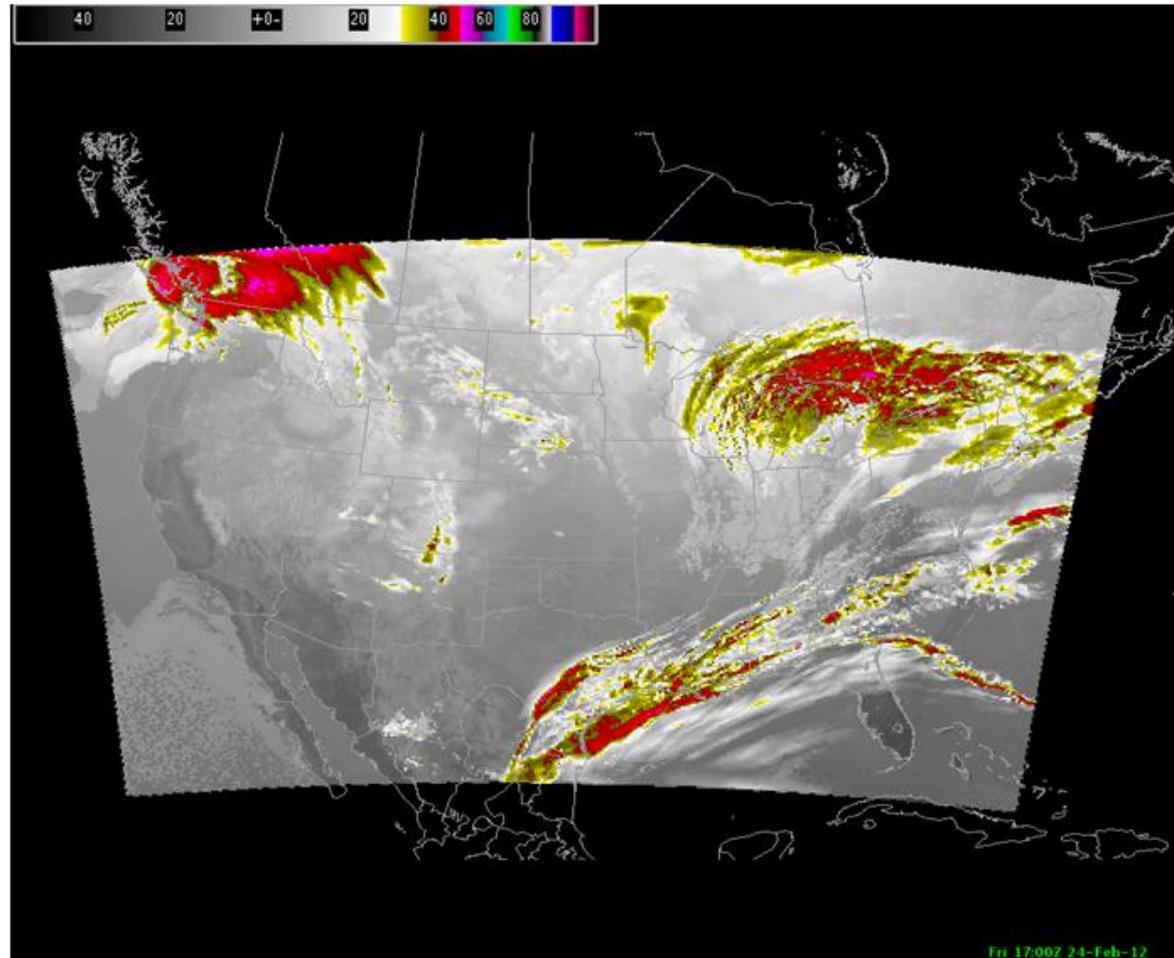
- **Don Hillger (NOAA/StAR RAMMB)**
- **Steve Miller (CIRA)**
- **Dan Lindsey (NOAA/StAR RAMMB)**
- **Louie Grasso (CIRA)**
- **John Knaff (NOAA/StAR RAMMB)**
- **Stan Kidder (CIRA)**

Training / Education Materials

- **Bernie Connell (CIRA)**
- **Dan Bikos (CIRA)**
- **Jeff Braun (CIRA)**

Talk Overview

1. CIRA Products and WFO & National Center Interactions
2. AWIPS I to AWIPS II Transition and Challenges
3. Some Potential Future Applications in AWIPS II



Above: Synthetic 10.35 μm imagery displayed in AWIPS II

(Courtesy of D. Molenaar & D. Lindsey)

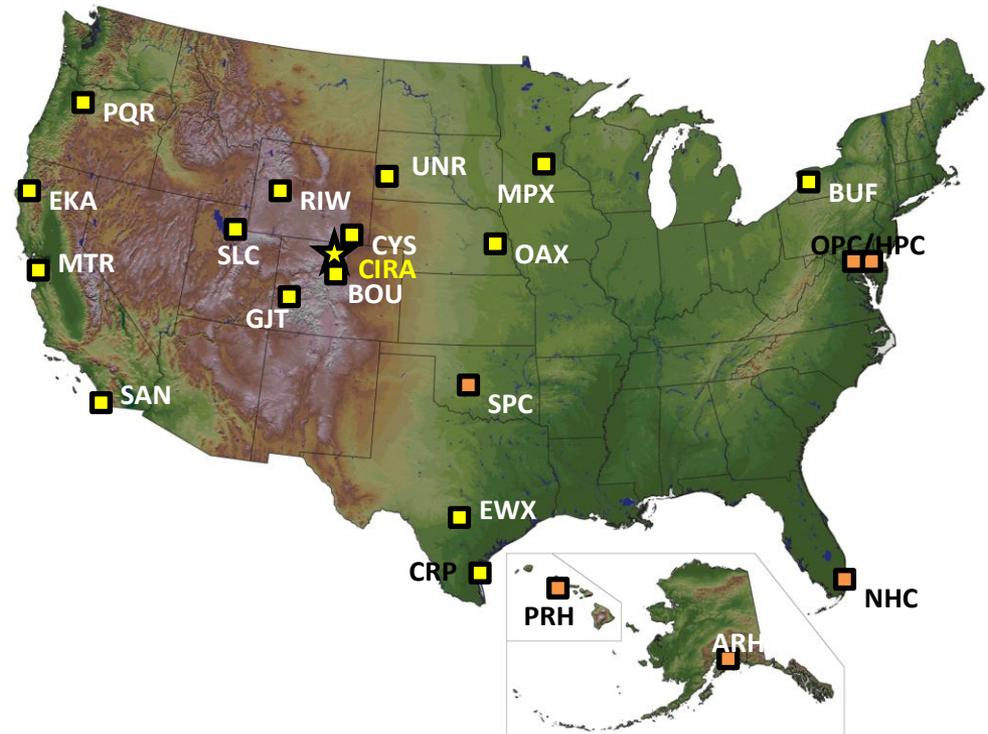
Sponsor: GOES-R Proving Ground funded project

WFO and National Center Interactions

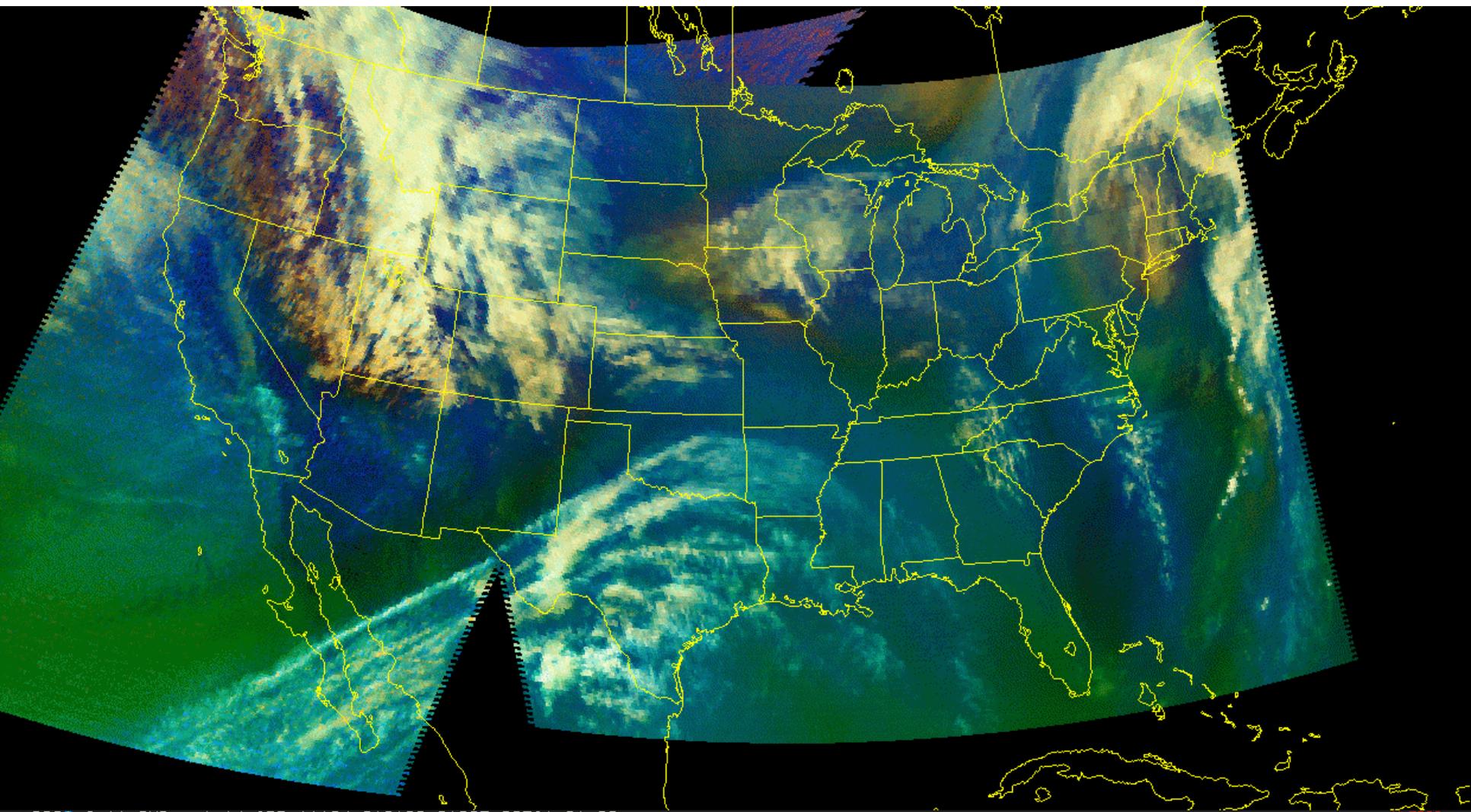
20 GOES + MODIS Proving Ground Products

- 18 available for AWIPS I distribution and plan on porting these for AWIPS II distribution.
- Most frequently requested CIRA PG products: GeoColor, NSSL-WRF Synthetic Imagery, ORI, GOES Low Cloud/Fog, MODIS snow/cloud discrimination, and GOES-sounder RGB Airmass products.
- CIRA's GOES Imager Dust product is being replaced by GOES Sounder Dust product.
- http://rammb.cira.colostate.edu/research/goes-r/proving_ground/cira_product_list/

Active CIRA PG Partners



Product Examples: GOES Sounder RGB Airmass Product



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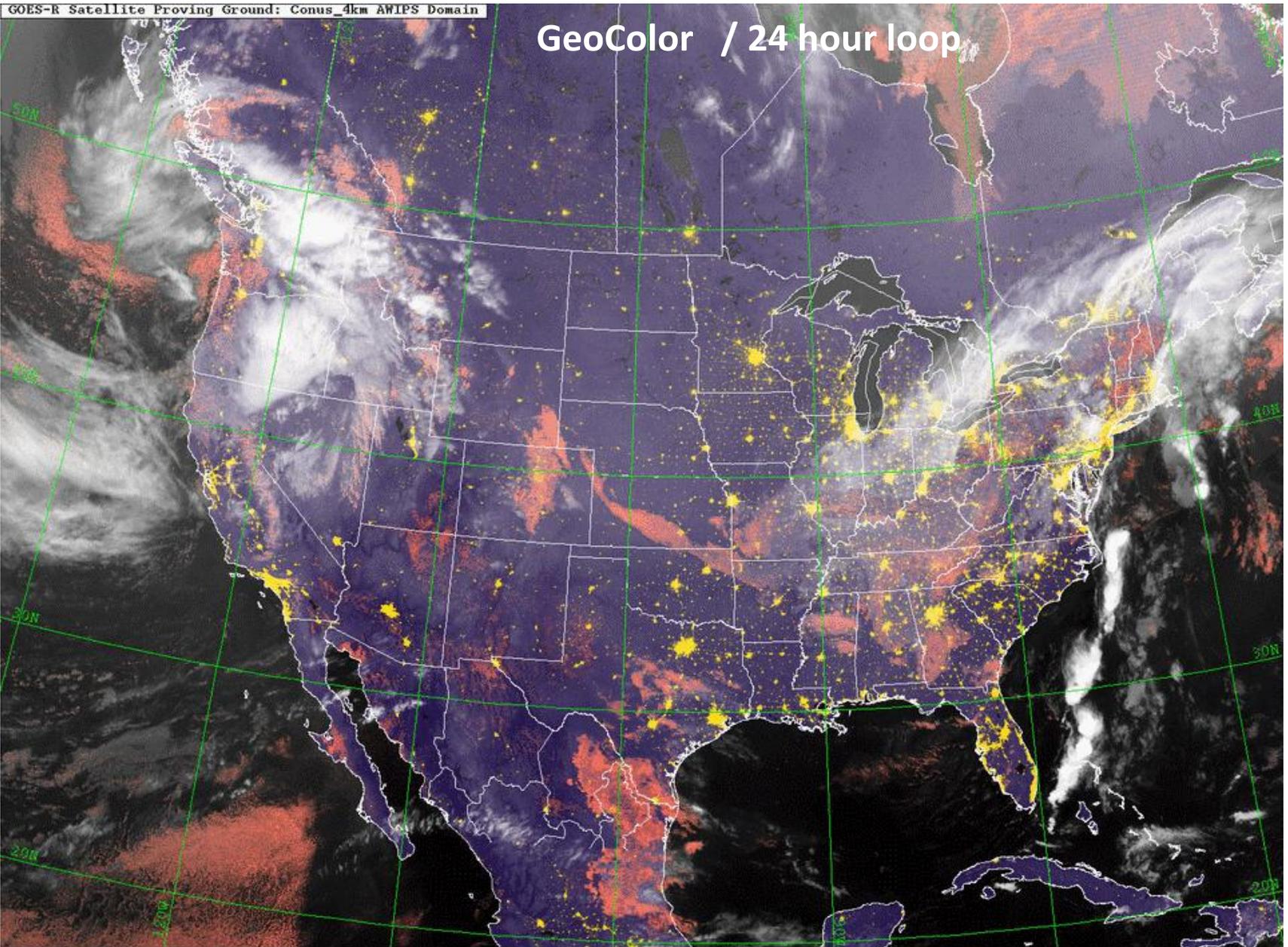
McIDAS

Airmass product example 14 April 2011 0000 UTC to 17 April 2011 2300 UTC (4 day loop / 1 frame per hour).

Based on EUMETSAT algorithm - Warmer air is displayed in green. Mid-latitude air has a bluish color .

Areas of dark red show subsidence and high ozone and PV.

GeoColor / 24 hour loop



Blended satellite product: GOES IR, GOES VIS, MODIS background, DMSP city lights

AWIPS I to AWIPS II Transition

❑ CIRA/RAMMB Infrastructure Additions to support AWIPS II

- New NOAAPORT ingestor (required for AWIPS II real-time data ingest & display)
- 1 stand-alone ingest & display workstation
- 1 development workstation (2 more on order)
- Currently we have OB 12.3.1 installed

❑ Product Transition

- All CIRA/RAMMB AWIPS I McIDAS products and color tables have been imported into AWIPS II
- For non-McIDAS products, CIRA is working with Tom Kretz to evaluate netCDF plugin
- Visiting scientist program with SPoRT provided helpful information on additional plugin development
- Delivering 3 NSSL-WRF Synthetic ABI products in real time for AWIPS II display to SPC for the 2012 Spring Experiment

AWIPS I to AWIPS II Transition

❑ Challenges

- The support of AWIPS I and AWIPS II field product generation and dissemination requires significant resources for the next 1-2 years.
- Will there be an LDAD in the future? If not, how will the products get distributed? LDAD is the only way to get our PG products into WFOs.
- Current WFO Internet bandwidth issues need to be addressed so they can handle more data volume needed for the RGB and for the simulated GOES-R products
- More AWIPS II training is needed
 - the technical documentation from Raytheon has been very helpful
 - simple Q & A sessions and face-to-face TIMs with Raytheon save development time
 - But: ITO-level AWIPS II training would truly result in the necessary technical know-how of the AWIPS II system
- In addition, there is also a need for an AWIPS II in-house training (CIRA IT group and scientists)



Potential Future Applications in AWIPS II

Some Examples of CIRA/RAMMB future product ideas:

- Highlighting Risk/Warning Areas in Products**
 - Image overlays with polygons like used by SPC

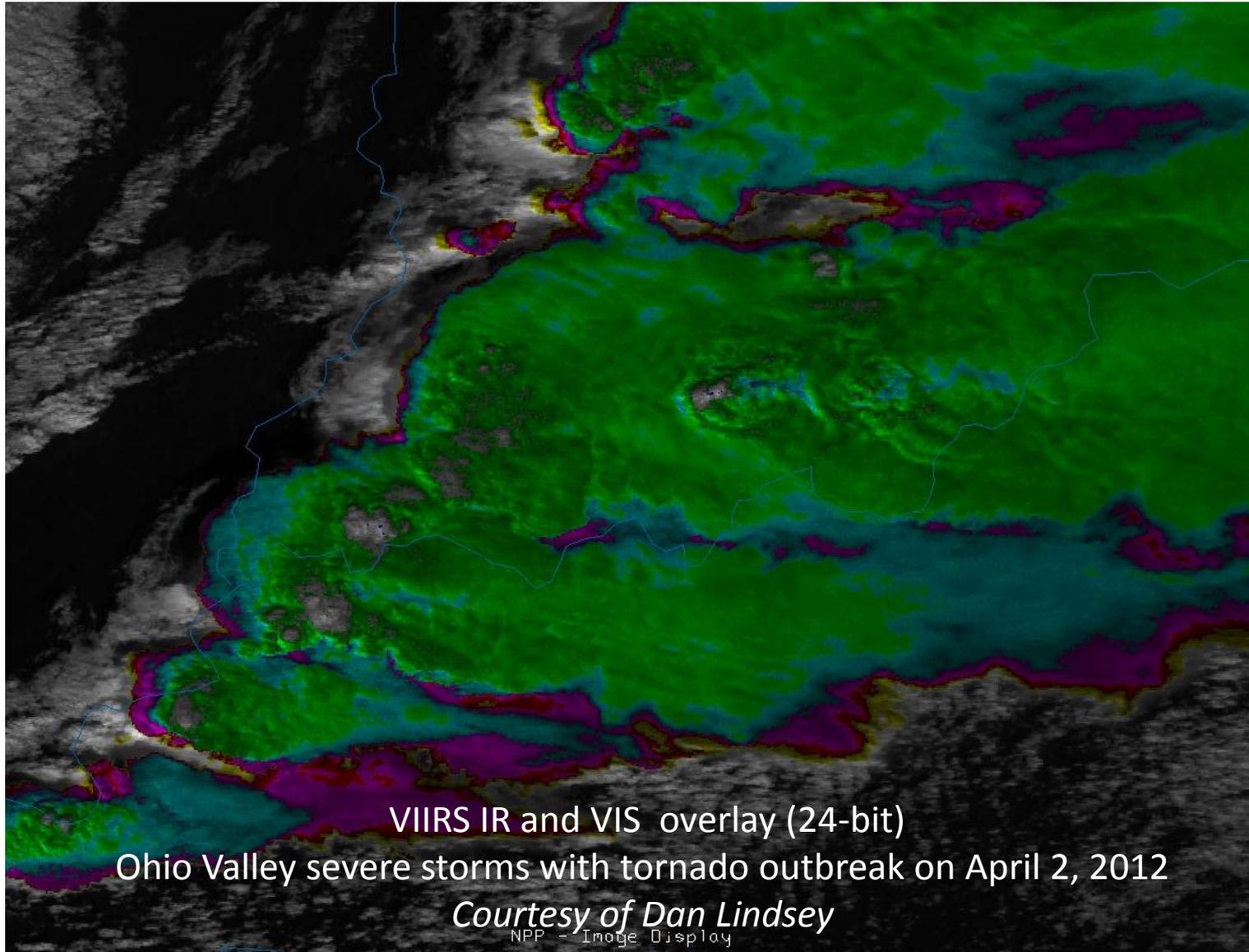
- Multi-image overlay products beyond 8-bit**

- New JPSS Products**

- Combining Real-time Satellite and Model-derived Image Data**

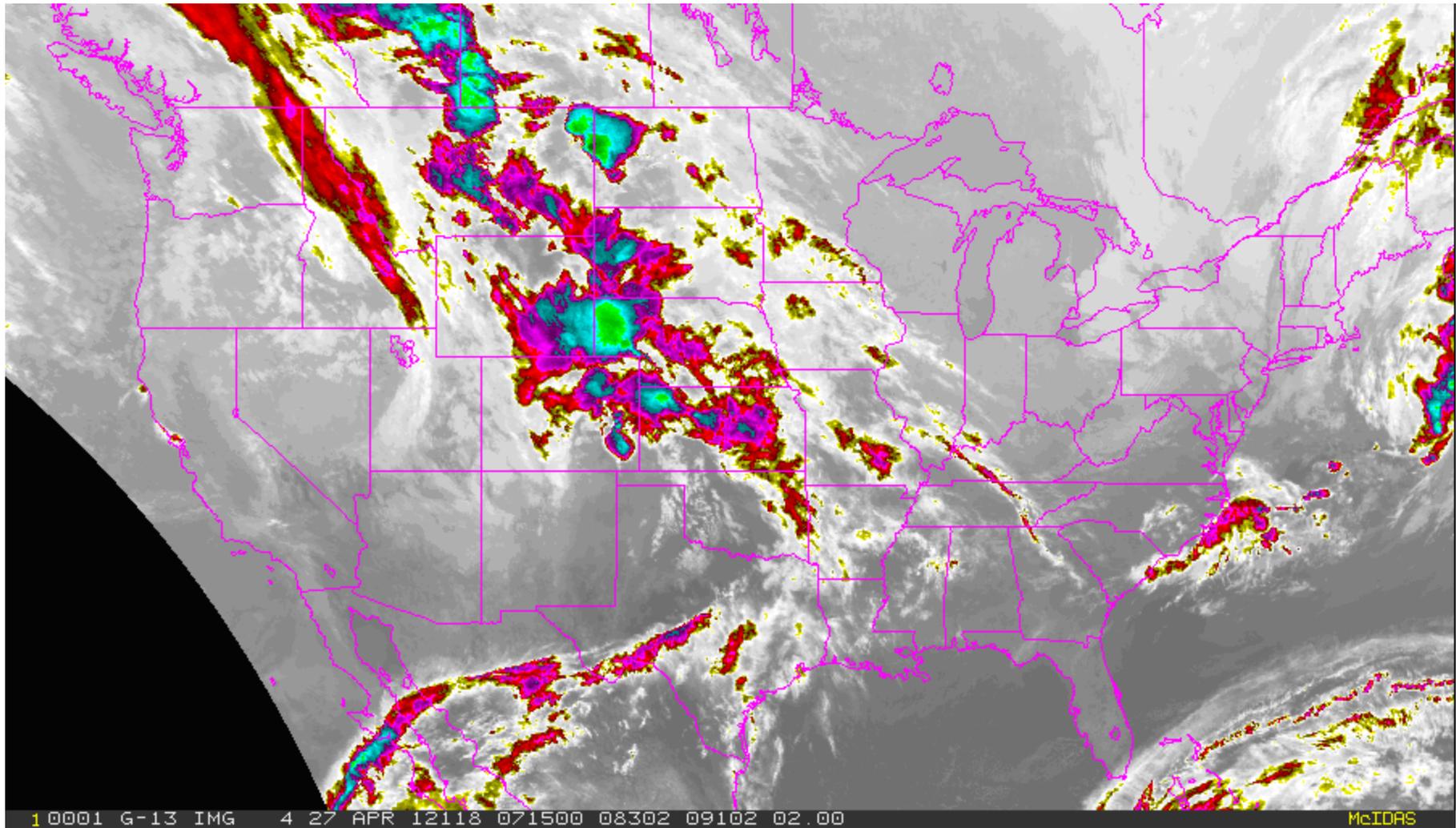
Potential Future Product Examples

Multi-image overlay product



Potential Future Product Examples

Combining Real-time Satellite and Model-derived Image Data



This is a GOES-13 IR imagery from 27 April 2012 .

At 1615 UTC our synthetic 10.35 IR imagery takes over and goes out to 28 April at 12Z.