



# CIMSS/ASPB Participation GOES-R Proving Ground Status September 2011

## Contributors to this presentation:

Tim Schmit, Wayne Feltz, Jordan Gerth, Scott Bachmeier,  
Scott Lindstrom, Justin Sieglaff, Lee Cronic, Mike Pavolonis,  
Robert Aune, Gary Wade, Brad Pierce, Kaba Bah, Will Straka



# CIMSS/ASPB GOES-R PG Overview

- Demonstration of GOES-R AWG applications at National Center Testbeds
- AWIPS status/Demonstration of GOES-R AWG applications at Local NWS Offices
- GOES-15 Update
- AWIPS Weather Event Simulator (WES) for the ABI.

# UW-CIMSS PG Decision Support Summary

---

The following list of products offers opportunity for near-real time Warning Related utility. **Now Available – Green, Near Future - Yellow**

## Baseline Products:

Volcanic Ash: detection & Height - Alaska, Pacific, and AWC  
Cloud Top Phase/Cloud Type – Alaska, AWC, and OPC/HPC  
Cloud and Moisture Imagery – All testbeds  
Hurricane Intensity – NHC  
Total Precipitable Water - Pacific  
Fire/Hot Spot Characterization – HWT (Hydrologic and Fire)

## Option 2 Products:

Aircraft Icing Threat – NASA LaRC, Bill Smith Jr  
Turbulence - AWC  
Convective Initiation (UWCI used where SATCAST not automated yet)  
Enhanced “V” / Overshooting Top Detection – HWT and HPC  
Low Cloud and Fog – AWC and Alaska  
SO<sub>2</sub> Detection – Alaska, AWC, and Pacific

## R3 Products:

Nearcasting – AWC, HWT, HPC

# GOES-R PG HWT Testbed

- WRF simulated radiances, Nearcasting, UWCI evaluation took place in May-June 2011
- Distributed GOES-R Fire hotspot and intensity proxy products (GOES imager based) to SPC for fire weather testbed

# GOES-R PG AWC Testbed Progress

- Nearcasting was evaluated during summer experiment
- UWCI, OTTC, fog/low cloud, and cloud top phase/cloud type are available within N-AWIPS for evaluation
- Interviews for AWC position begin on Friday Sept 16th
- Volcanic ash and SO<sub>2</sub> will be implemented in October 2011

## GOES-R PG Alaska/AAWU Testbed

- Volcanic ash, SO<sub>2</sub>, fog/low cloud, cloud top phase/cloud type have been available in AWIPS at all WFO's in AK and the AAWU since January 2011
- Live training sessions were conducted and a volcanic ash VISITview module is now available (VISIT training for fog and cloud phase will be made available in the next month or so)
- A volcanic ash WES case is nearly complete
- UAF will be gathering formal feedback on all products/Alaska WES?

## GOES-R PG Pacific Testbed

- Coordinating with Mark DeMaria and Steve Businger
- U of Hawaii will hire post-doc, integration with commence once hire is in place
- UWCI now working in Hawaii domain ready for AWIPS integration
- Volcanic ash and SO<sub>2</sub> (from MODIS) were added to the plan
- CIMSS Morph TPW is available in AWIPS/GOES Sounder next year

# GOES-R PG Hydromet Prediction Center Testbed

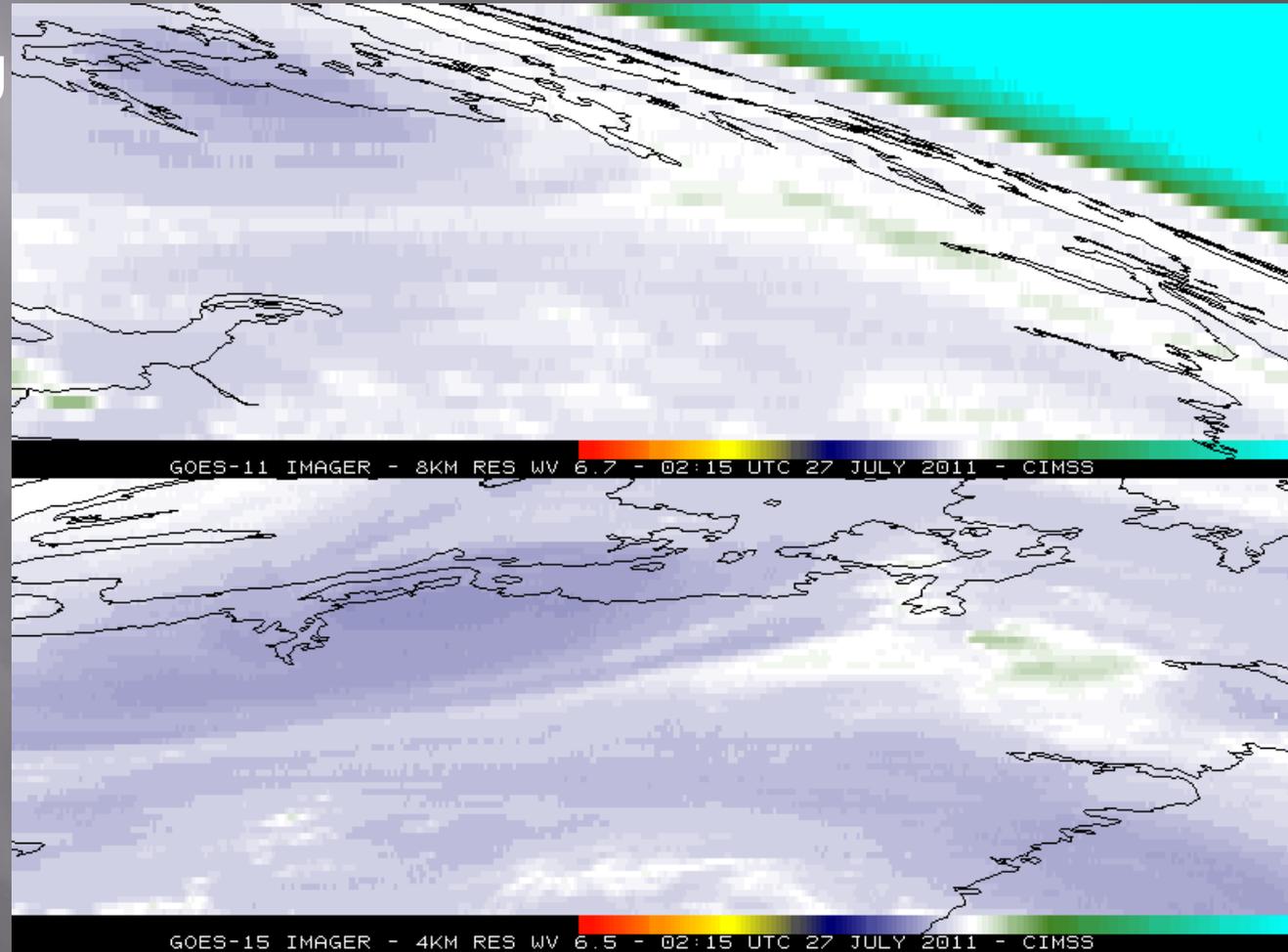
- Simulated ABI Imagery (bands 8-16) over the CONUS
- Hourly ABI IR Bands using NSSL WRF
- Request for nearcasting product for evaluation

# GOES-R PG Ocean Prediction Center Testbed

- Simulated ABI Imagery (bands 8-16) over the CONUS, follow HPC/SPC methodology for delivery, N-AWIPS preferred, SAB wanted McIDAS formatted, sent ADDE server info to Jamie K.
- UW-CIMSS will provide overshooting-top/enhanced-V data (same methods as SPC delivery), training now available via VISITview and available for GOES-W, OPC LDM should be available today
- Cloud top height and cloud top phase from GOES will be made available
- Derived stability indexes (GOES Sounder SFOV), delayed until next year

# GOES-15 Imager and Sounder

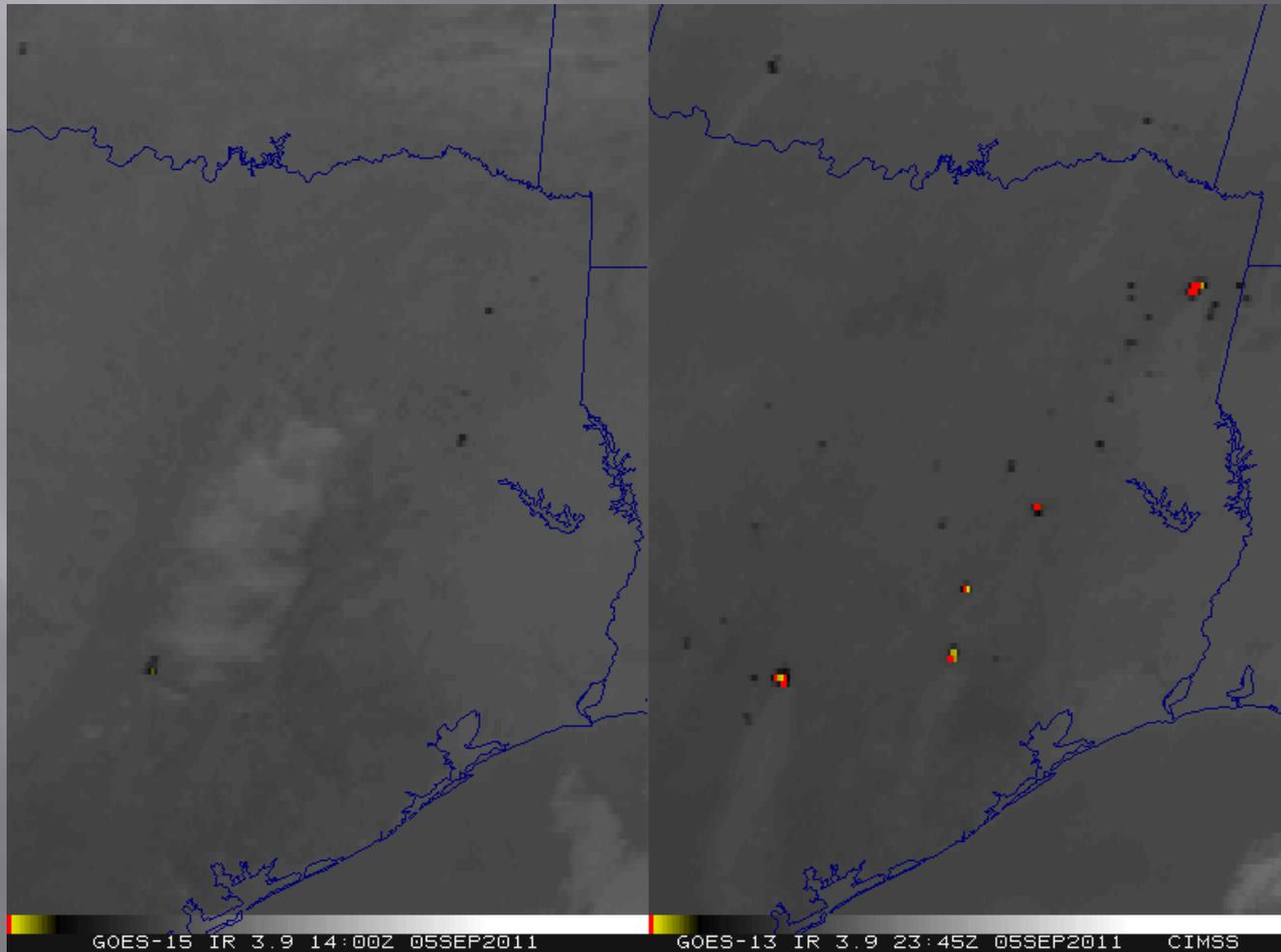
- GOES-15 will replace GOES-11 in December
- Currently sending both Imager and Sounder data
- Improved “water vapor” band on the Imager
- No 12 um on Imager



<http://cimss.ssec.wisc.edu/goes/blog/archives/8529>

Sounder: <http://cimss.ssec.wisc.edu/goes/rt/sounder-dpi.php>

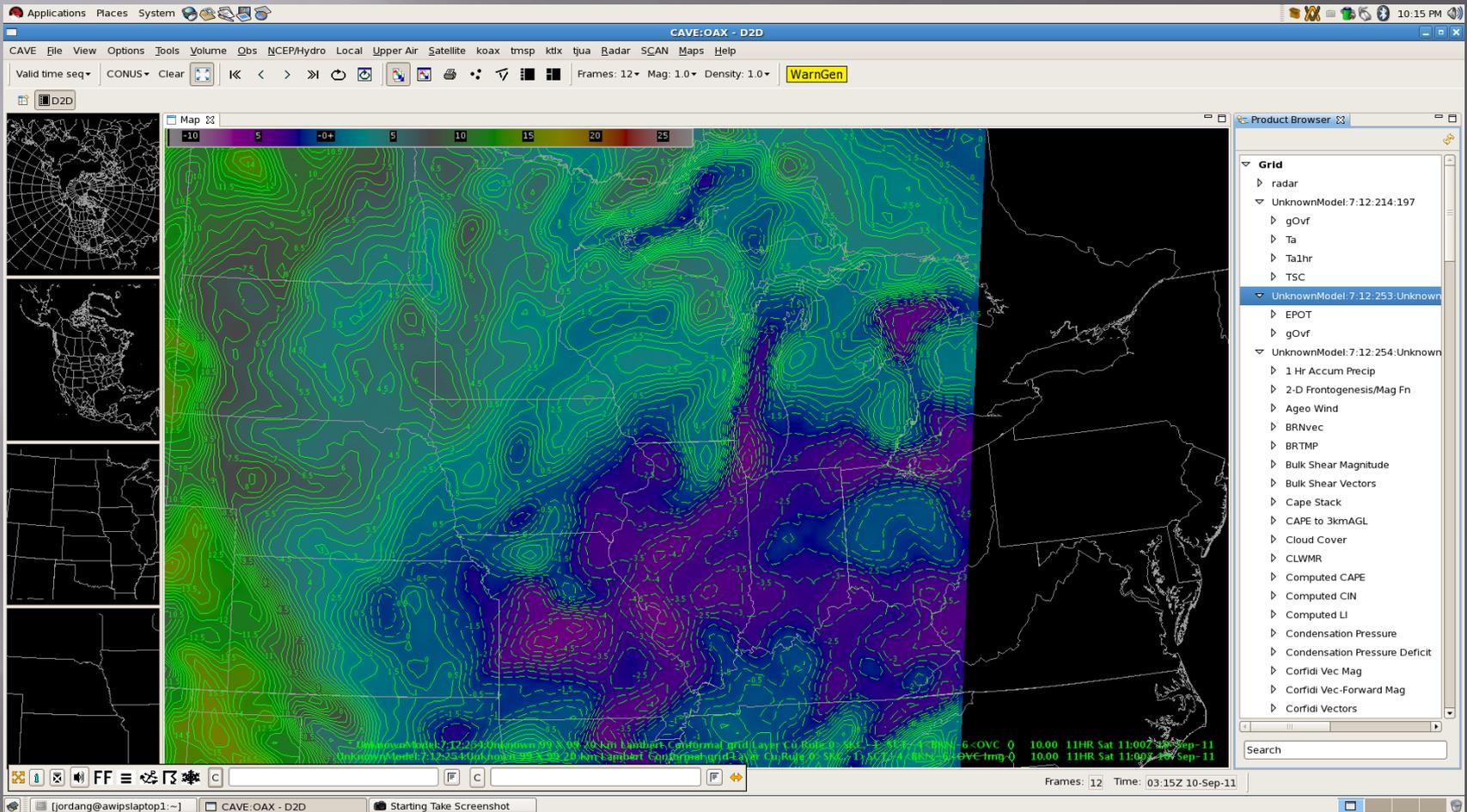
# GOES-13 vs GOES-15 Texas Fires



# In Jordan's Corner @ CIMSS

- ▣ K. Bah, L. Cronic, and J. Gerth participated in the Technical Interchange Meeting with Raytheon Technical Services in Omaha, NE, on August 17<sup>th</sup> and 18<sup>th</sup> to discuss the software components and architecture
- ▣ They visited NWS WFO Omaha/Valley on August 19<sup>th</sup> to talk with SOO Dan Neitfeld and discuss current progress of testing AWIPS II in the operational setting
- ▣ Following the meeting, J. Gerth submitted task descriptions for four candidate TTRs related to differences between the configurability in AWIPS I and AWIPS II
- ▣ He proposed an Ideas and Innovation Tiger Team (IITT) to handle Statement of Need for sweeping changes to the AWIPS II product browser and addition of product maker

# In Jordan's Corner @ CIMSS

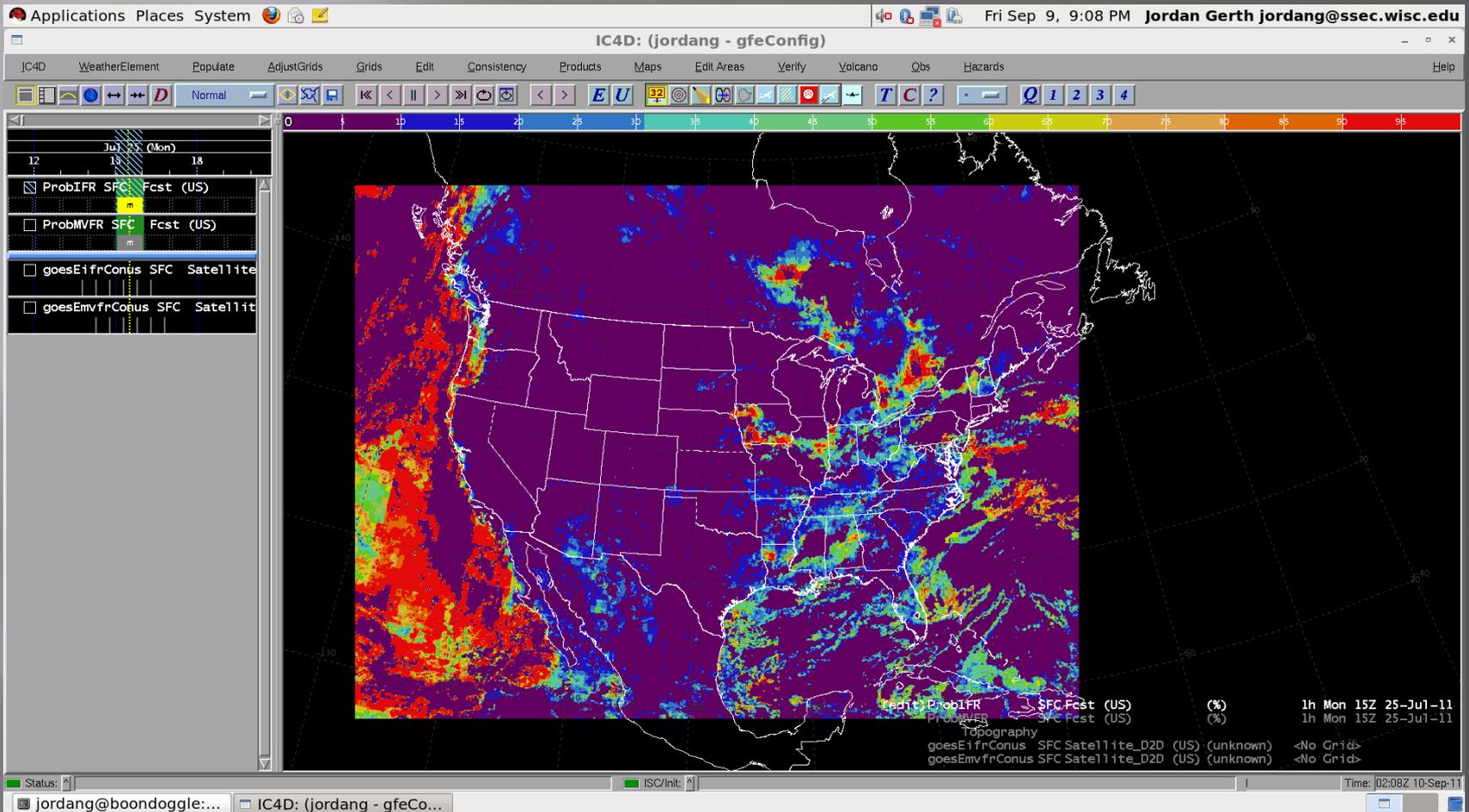


We are working to make all of our GRIB2 files are AWIPS II compatible, especially convective initiation and nearcasting. Some variables are undefined by default.

# In Jordan's Corner @ CIMSS

- ▣ Prototype of AWIPS I instructions for ingesting and displaying MODIS volcanic ash and MODIS and GOES-West low cloud/fog products over the western CONUS (for NWS Western Region, NWS WFO MTR, CWSU ZOA) has been completed
- ▣ Developed initial capability to ingest and display MVFR/IFR probabilities in IC4D (Alaska/Pacific Region)
- ▣ Still struggling to deliver data (simulated ABI longwave imagery) to HPC/OPC/SAB due to firewall issues
- ▣ Continue to support the local area testbed at NWS WFO Milwaukee/Sullivan, which will wrap up in mid October
- ▣ Will participate Birmingham NWA/GUC in mid October
- ▣ Plan to visit Pacific Region in November

# In Jordan's Corner @ CIMSS



GOES-R AWG IFR Probability Product displayed in IC4D, valid 15 UTC 25-Jul-2011

# AWIPS Weather Event Simulations for ABI

- Final official version was packaged and distributed.
- WDTB was able to put the ABI WES case into a virtual machine for demo. Copies are available for download.
- We have started the process of migrating the ABI WES case from AWIPSI to AWIPSII.