



GOES-R Proving Ground CIRA / RAMMB Progress Report

07 November 2011



Overview

- User Interactions
- New On-Line CIRA/RAMMB PG Product Table
- CIRA/RAMMB PG – News on Products
- System Report
- Meeting and Conferences

User Interactions

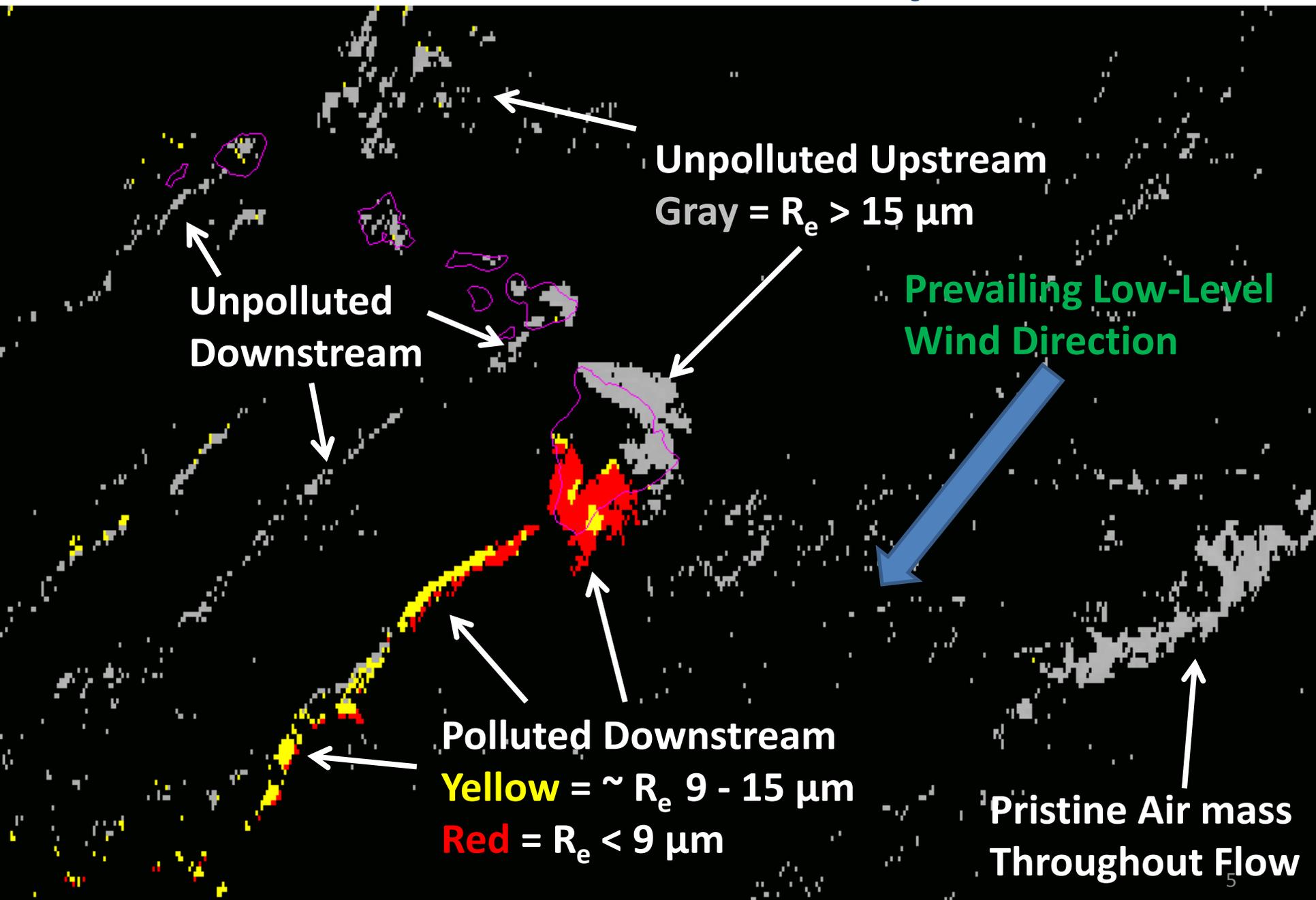
- **CIRA PG team visited WFO CYS for detailed discussion on new PG product palette.**
- **CIRA and CSU/Atmospheric Science Department hosted Steve Apfel (MIC, WFO CYS) , Nezette Rydell (MIC, WFO BOU) , Jennifer Stark (MIC, WFO Pueblo) , and Paul Wolyn (SOO, WFO Pueblo) : Seminar and PG discussions**
- **Visit to NHC – composition of the PG mid-year report**
- **On-going interaction with Alaska region regarding night-time visible product**
- **Interaction with Air Quality PG team – CIRA/RAMMB’s Green Look-Up-Table code was made available to the AQPG team**
- **Meeting with Pacific Region – discussion of PG products**
- **Participation in two WFO BOU winter workshops**
- **Preparation of the PG provider agreements for WFO BOU and CYS**
- **Discussion with WFO forecasters at the NWA Annual Conference in Birmingham**
- **Interaction with Southern Region, SOO from WFO Austin/San Antonio, and SOO from WFO Corpus Christi about new synthetic imagery band difference products.**
- **Interaction with Monterey regarding Synthetic Imagery band difference product (10.35 μm – 3.9 μm ; useful for low cloud/fog detection)**
- **Interaction with WFO Milwaukee-Sullivan regarding the GeoColor product.**



Proposed edits to the CIRA GOES-R product list web-page:



Product & Description	Developer / Contact	Status	Platform	Product Description (PD) / Related Training	Location (WFO or testbed) / Feedback	Usage
GeoColor Imagery	Steve Miller	Developmental	AWIPS web	PD	WFO	Visualization
MODIS Simulated True Color Imagery	Steve Miller	Developmental	web	PD	WFO	Visualization
GOES Low Cloud / Fog Imagery	Don Hillger	Developmental	AWIPS web	PD COMET	WFO	Cloud determination
MODIS Cirrus Detection	Steve Miller	Developmental	AWIPS web	PD	WFO	Cloud determination
Orographic Rain Index (ORI)	Steve Miller	Developmental	AWIPS web	PD	HWT	Hazard
Marine Stratus Cloud Climatology	Cindy Combs	Developmental		PD VISIT	WFO	Cloud determination
GOES Blowing Dust	Don Hillger	Developmental	AWIPS web	PD COMET COMET EUMETRAIN	HWT	Hazard
MODIS Based Blowing Dust	Steve Miller	Developmental	AWIPS web	PD COMET COMET EUMETRAIN	HWT	Hazard
MODIS Cloud / Snow Discriminator	Steve Miller	Developmental	AWIPS web	PD COMET	WFO	Snow / Cloud determination
MODIS Cloud Layers & Snow Cover Discriminator	Steve Miller	Developmental	AWIPS web	PD COMET	WFO	Snow / Cloud determination
GOES Snow / Cloud Discriminator (3-color technique)	Don Hillger	Developmental	web	PD COMET	WFO	Snow / Cloud determination

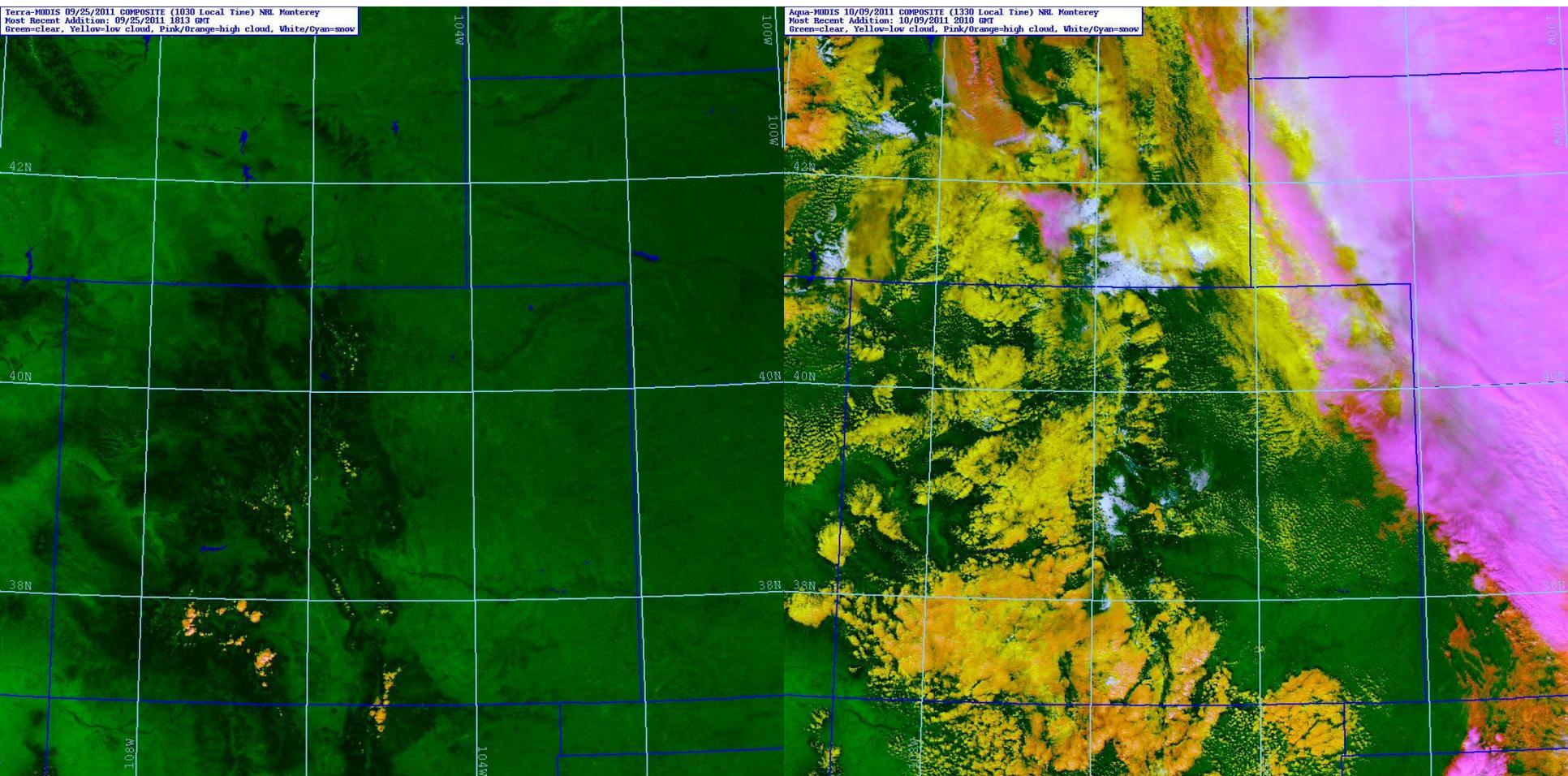


MODIS Cloud Layers/Snow Cover Discrimination product

First Additions to Snowpack

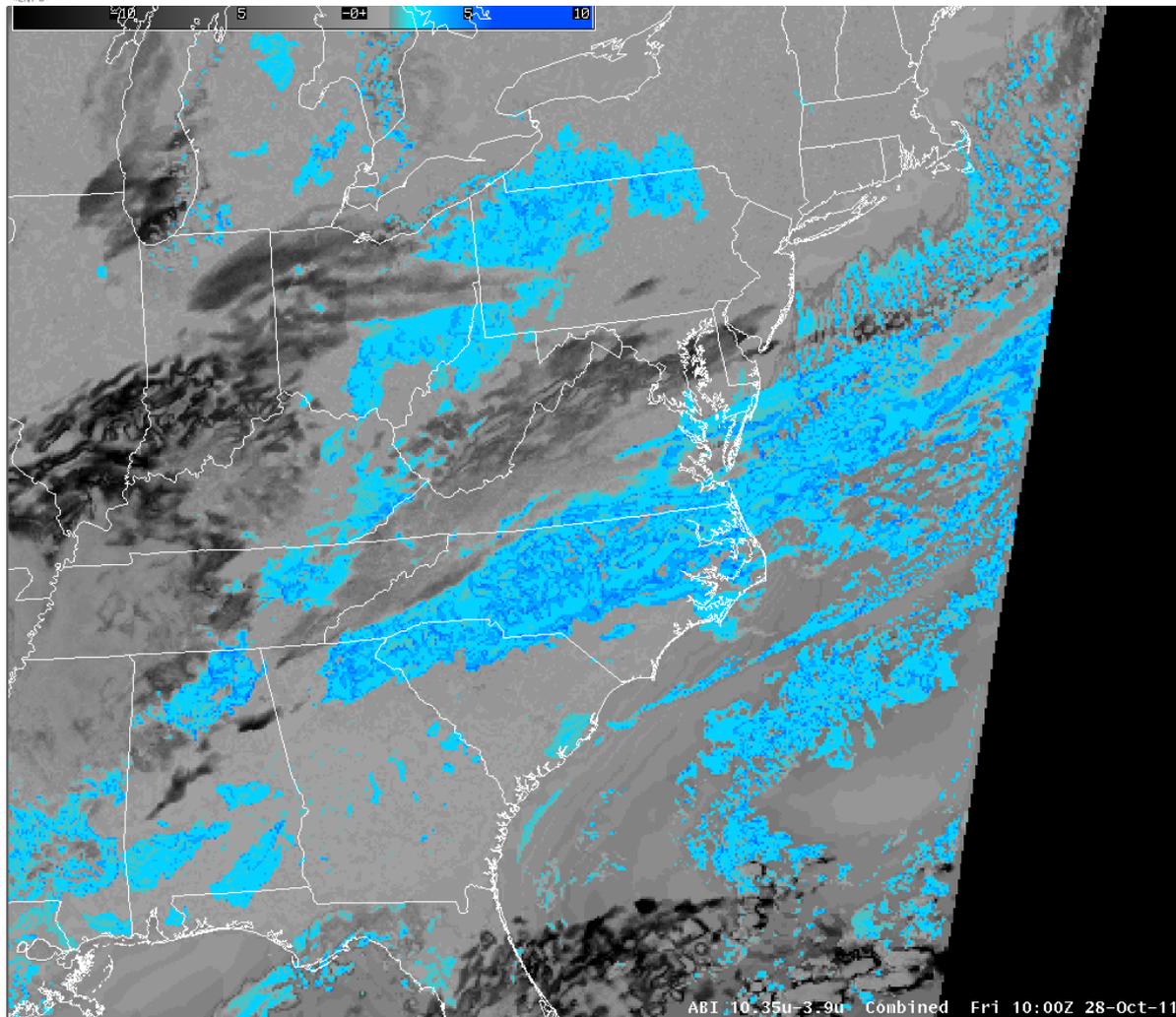
Discussion included on CIRA's Proving Ground Blog Site:

http://rammb.cira.colostate.edu/research/goes-r/proving_ground/blog/?p=222&preview=true



25 September 2011

9 October 2011



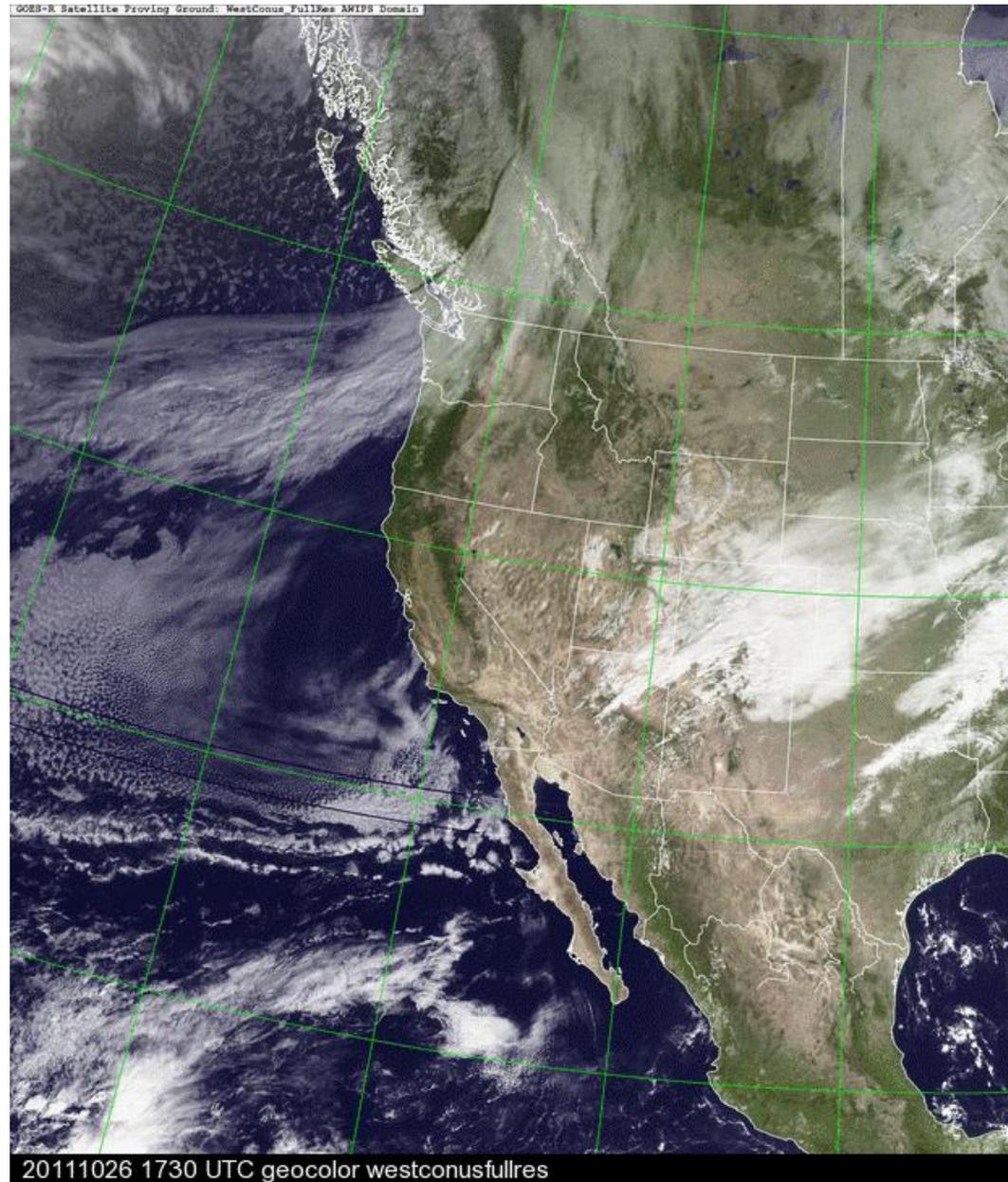
- CIRA began simulating the 3.9 μm band.
- It was necessary to neglect the solar reflected component .
- The band difference product 10.35 μm - 3.9 μm is being produced.
- This product highlights low clouds (in height) that are liquid (referred to as the “fog product” by forecasters).

Figure: Synthetic 10.35-3.9 μm image based on the 10-hour forecast of the NSSL WRF-ARW as viewed in AWIPS. The blue pixels represent likely low liquid water clouds.

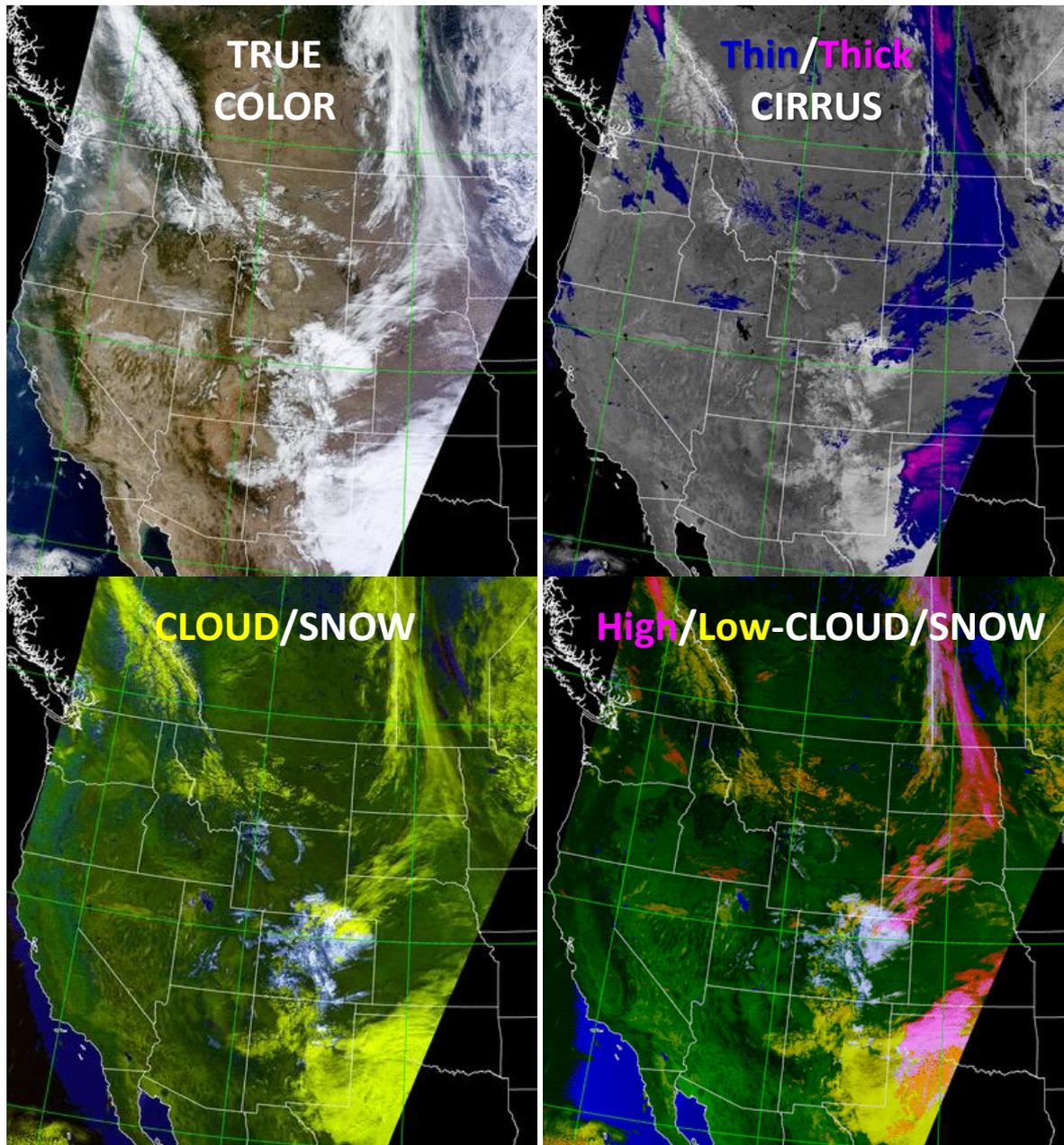
26 October 2011 – Snowstorm over Colorado

GeoColor West-CONUS

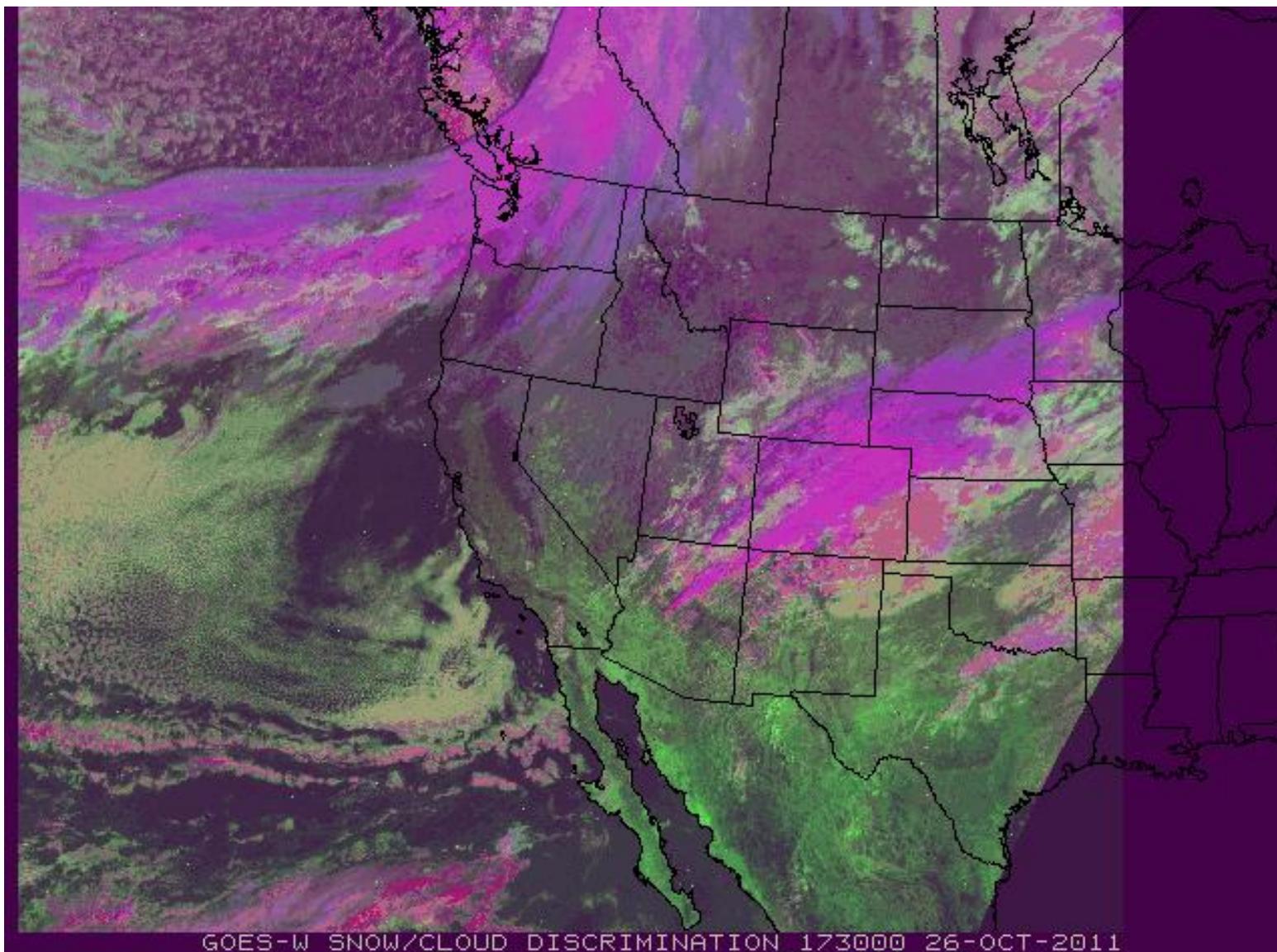
26 Oct 2011 1730 UTC
to
27 Oct 2011 1745 UTC



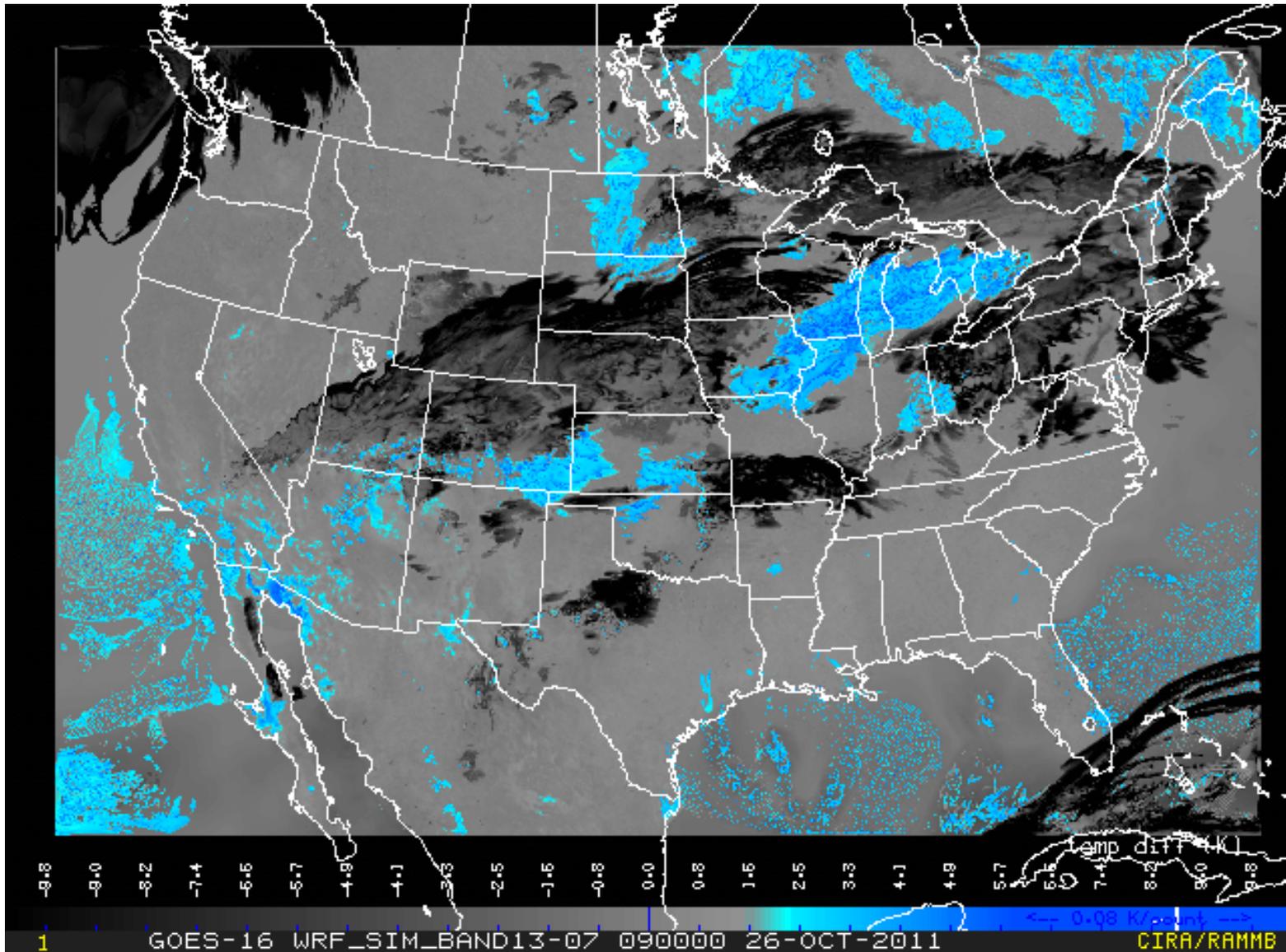
26 October 2011 – Snowstorm over Colorado



Proving Ground
MODIS imagery
27 October, 2011



26 October 2011 – Snowstorm over Colorado



WRF Synthetic Imagery Band Difference product 10.35 μ m - 3.9 μ m

From 26 Oct 2011 0900 UTC to 27 Oct 2011 1200 UTC



AWIPS II Training Request

The CIRA/RAMMB team sees an urgent need for some formal agreement between the GOES-R PG and the NWS regarding AWIPS II training and hands on experience.

There are multiple WFO sites (OAX, then BOU, others....) going live with AWIPS II that want to get PG products but we don't have enough knowledge about to serve them any PG products.

AWIPS II

- OB 11.8 has been loaded onto new system and is being tested with a subset of AWIPS 1 real-time ingest.
- So far, system has to be rebooted every day.
- Problems getting McIDAS plug-in to work, but not sure who can trouble-shoot as this plug-in was developed by NCEP.
- Efforts are underway to convert SIMWRF imagery to netCDF4-CF for GSD use in AWIPS2.
- **What are PG goals as far as support for FOTE sites as they go 'live'?**

PG Product Update

■ NWS WFO Product Interaction

- MODIS based Snow/Cloud Layer product installation instructions sent to Cheyenne, WY (CYS: per request of Rebecca Mazur and Ray Gomez).
- GeoColor product installation instructions sent to WFO Milwaukee-Sullivan (MKX). Requested by Jeff Craven and Jerry Wiedenfeld.
- Sounder RGB product request. Sending SPoRT the three corresponding RGB McIDAS AREA files for them to create the RGB product. Received requests from both CYS and MKX for this product. CIRA will work with SPoRT to figure out the logistics for distribution and installation of this product.
- Will be working with the NWS SRHQ to distribute the NSSL WRF simulated products to their WFO's.

■ New Products

- NSSL WRF Simulated 3.9 μm and 7.34 μm ABI bands. CIRA has begun generating these two new bands and has implemented them into AWIPS. The 3.9 μm band is used to create the 10.35-3.9 μm difference product. Multiple WFOs have specifically requested this band difference.
- GOES-R Snow/Cloud Product. CIRA has added the GOES-R based Snow/Cloud discrimination product into AWIPS.
- CIRA is coordinating with CIMSS to provide fire products: GOES WF-ABBA (CIMMS) and MODIS-based (CIRA) versions to be fielded to BOU and other interested WFOs.

Conference / Meetings

Recently Attended:

- **September 7th:** CIRA/RAMMB PG team visited WFO CYS to discuss revised PG product suite.
- **September 15th:** Visitors to CIRA and CSU/Atmospheric Science Department Steve Apfel (MIC, WFO CYS) , Nezette Rydell (MIC, WFO BOU) , Jennifer Stark (MIC, WFO Pueblo) , Paul Wolyn (SOO, WFO Pueblo)
- **September 12 -16:** Visit to NHC (mid-year PG report) - Mark DeMaria
- **September 12-17:** Pacific Region Proving Ground meeting in Hawaii - John Knaff
- **October 3-7:** CALMET Conference, Pretoria, South Africa – Bernie Connell
- **October 4 + 13 :** BOU WFO Fall Workshops - Ed Szoke
- **October 17-21:** NWA and GOES User Conference in Birmingham, AL - Dan Lindsey

Upcoming:

- **January 2012:** AMS meeting in New Orleans