



GOES-R Proving Ground CIRA / RAMMB Progress Report

***PG All-Hands Meeting
09 September 2013***

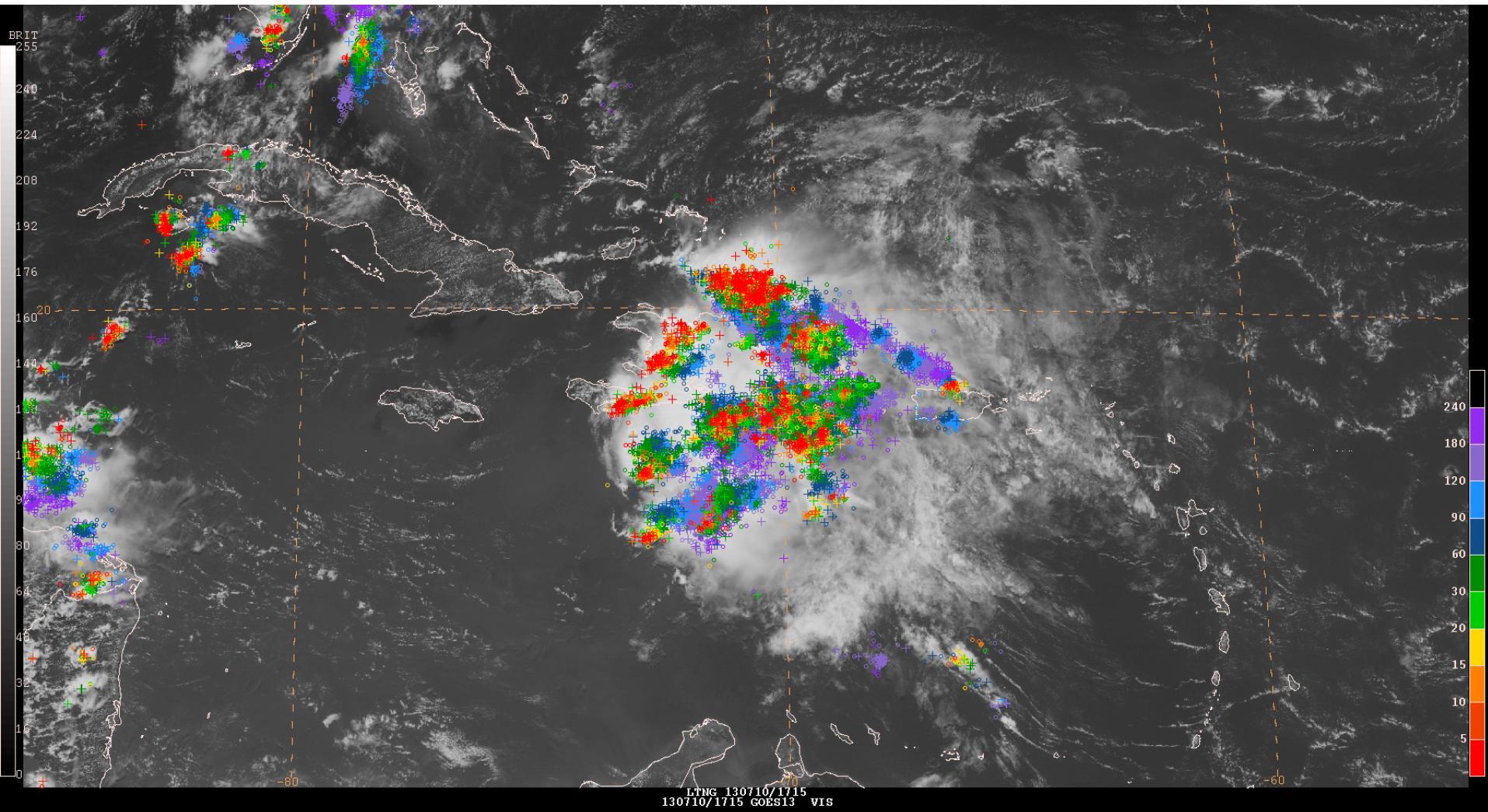
Outline

- **NHC and Pacific Region Proving Grounds**
- **Updates and Selected User Interactions/Examples**
 - BAMS article
 - GeoColor – latest improvements
 - Fog over DIA example shown on 14 Aug at the 2013 Summer Experiment at the AWT
 - Nice fog loop and Synthetic Imagery for San Francisco fog case
 - Use of SSRO by SPC
 - ORI update
 - Hawaii Flossie case
- **Systems Report**
- **Conferences and Meetings**

NHC Proving Ground

- 2013 experiment officially started Aug 1st
 - Same 9 products as 2012
- LDM feed from SPoRT waiting for NCEP/NCO approval
 - Will allow for new RGBs and VIIRS DNB
 - More efficient management of existing products
- Briefing provided to NHC forecasters 8/20
- Ops plan almost finalized
- Jim Gurka visit to NHC 9/10-9/11
- Very slow starting Atlantic season
- Feedback on lightning products, RGBs
 - Several large lightning outbreaks associated with weakening TCs

N-AWIPS View of Lightning Outbreak Associated with the Demise of TS Chantal (GLD360 Data)

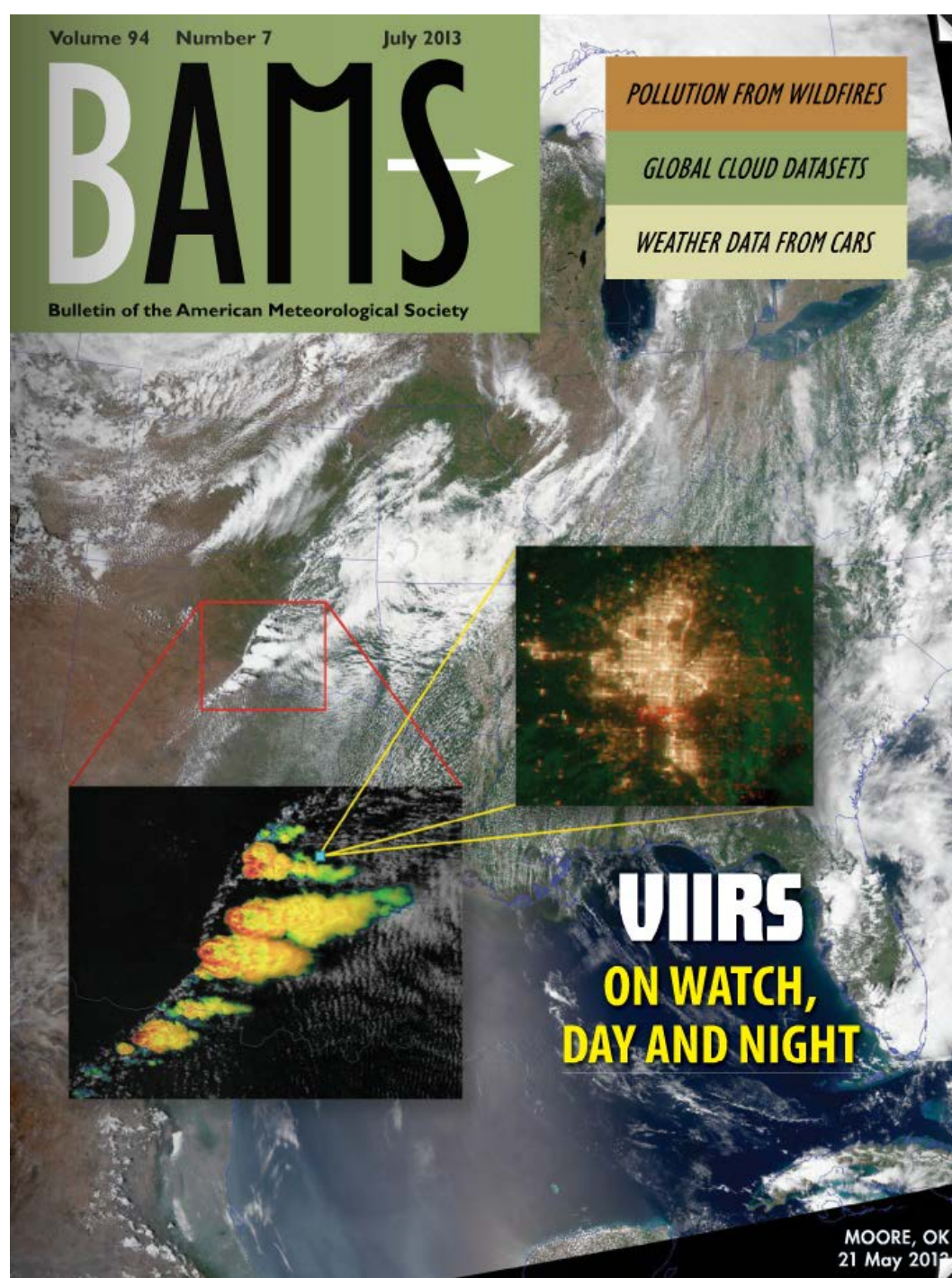


CIRA Participation in the Pacific Proving Ground

- Aug 28 briefing by M. DeMaria to JTWC and HFO on new tropical cyclone products
 - WP, SH and IO versions of SHIPS, LGEM and RII statistical intensity models
 - Lightning version of RII
- Implementation in progress in coordination with NRL and JTWC
- Briefing on ORI product needed



VIIRS
article in
July 2013
BAMS by
Don Hillger
and many
others





Improvements to GeoColor Processing

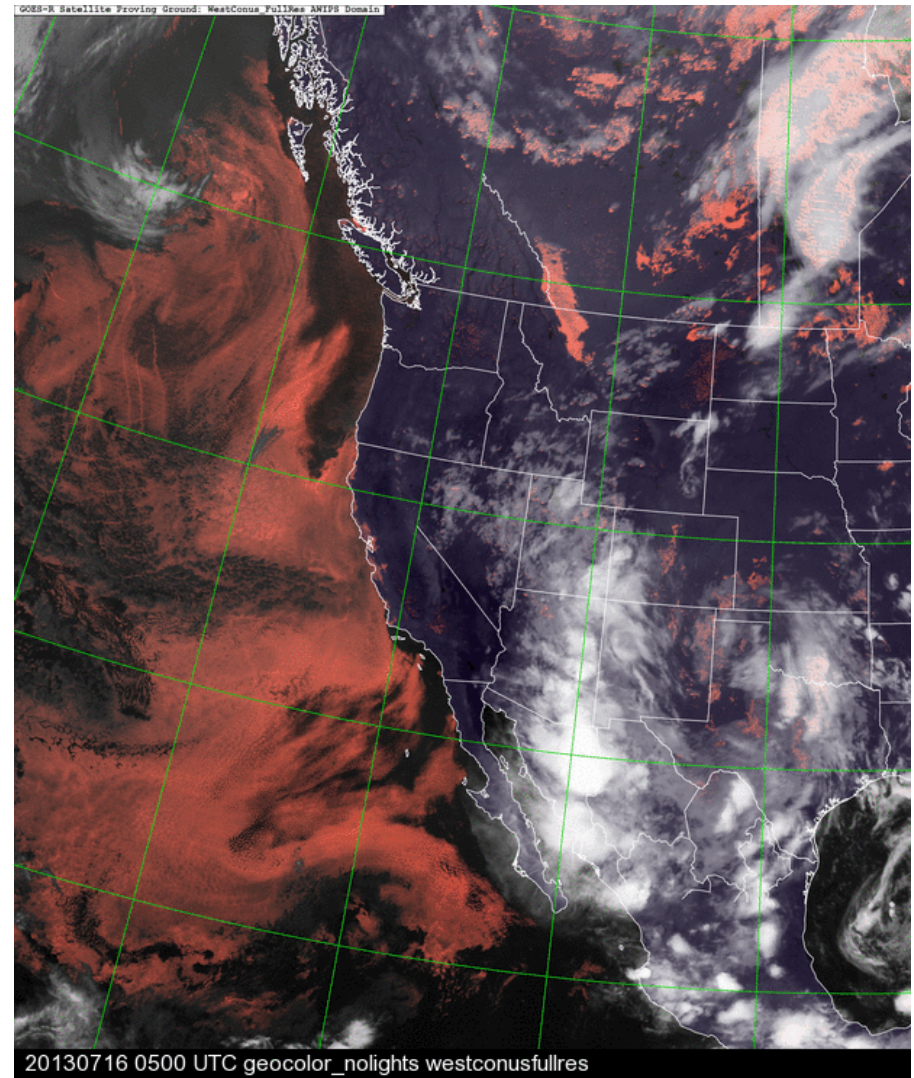
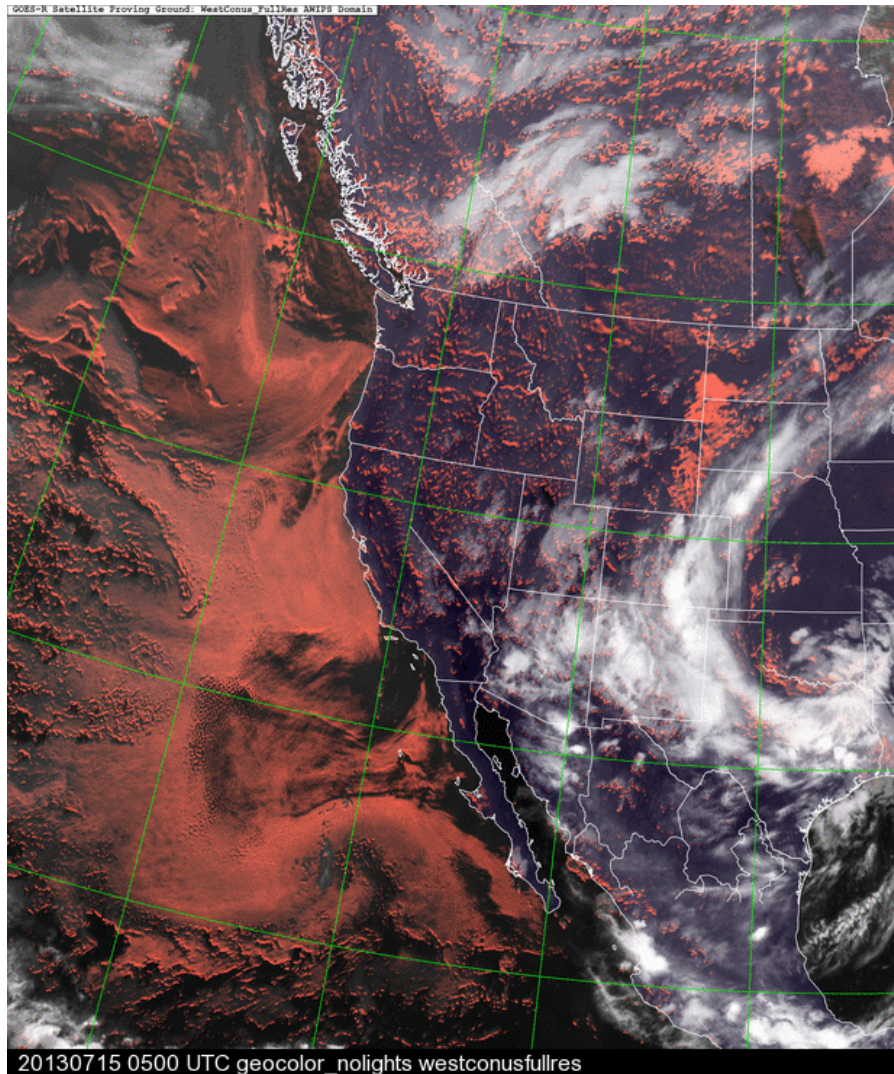
Steven D. Miller

16 July 2013

Improved GeoColor

Before: GeoColor 15 July 2013

After: GeoColor 16 July 2013





Fog case: Fog intruding on DIA on 14 August – shown at AWC Testbed Week 1

How it looked with:

GeoColor

CIARA Low/cloud fog

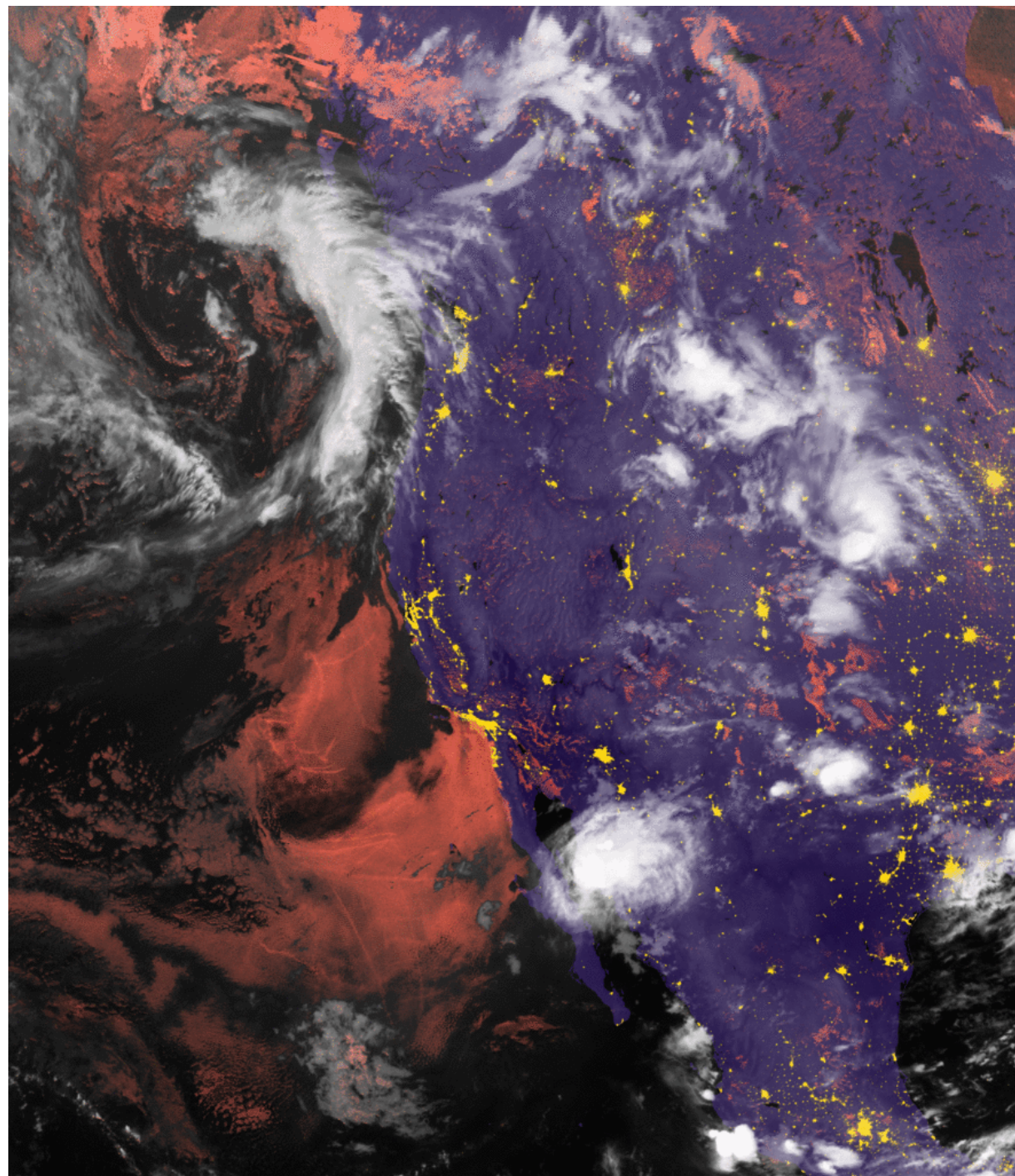
Synthetic imagery

Front Range fog at DIA on 14 August (note 1200z = 6 AM LT)

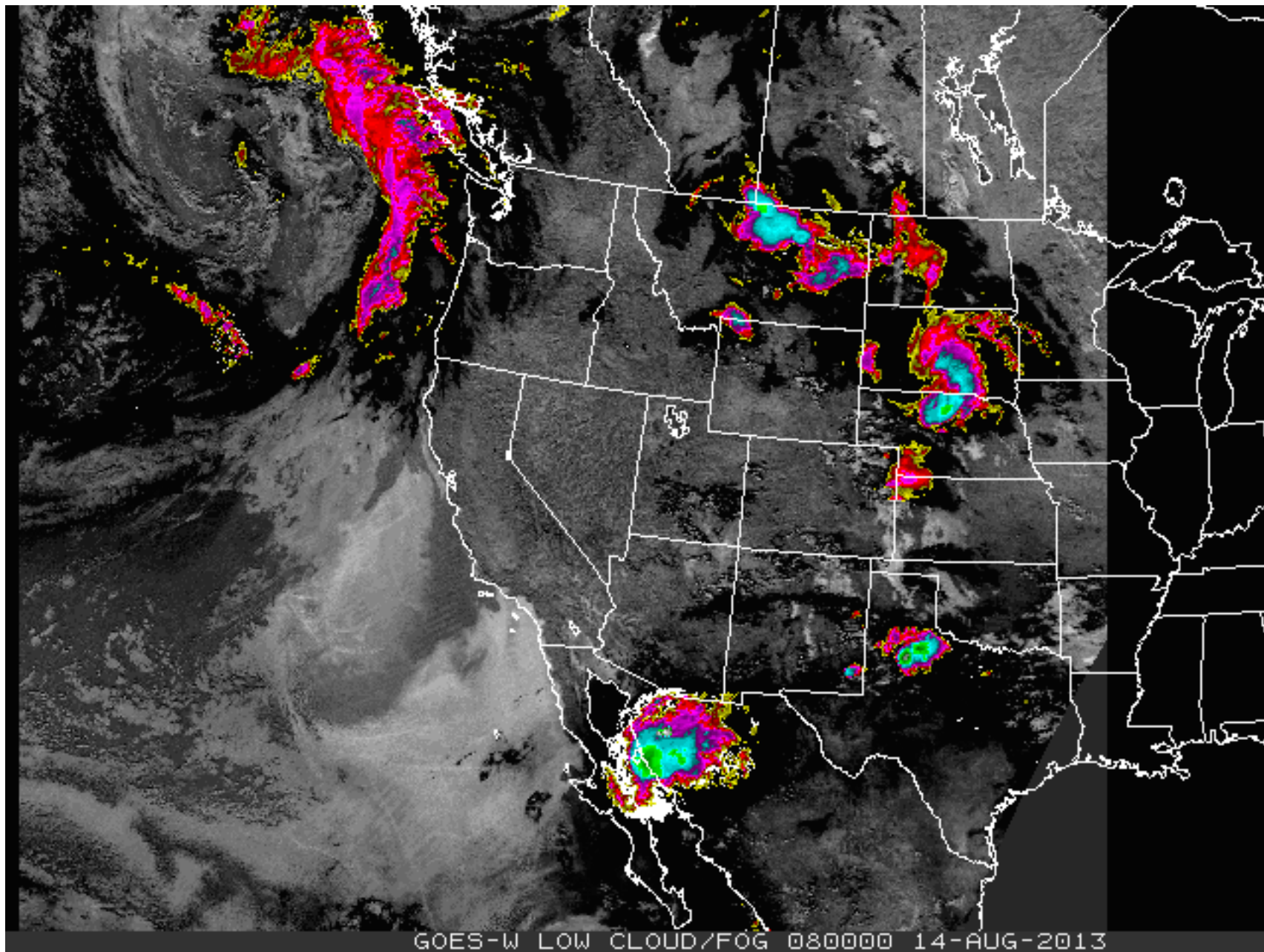
KDEN 141453Z 27008KT 7SM SCT006 BKN250 17/12 A3026 RMK AO2 SLP183 T01720122 50000
KDEN 141449Z 27007KT 7SM SCT006 BKN250 17/12 A3026 RMK AO2
KDEN 141436Z 26006KT 3SM HZ BKN006 BKN250 16/12 A3026 RMK AO2 SFC VIS 5
KDEN 141353Z 26006KT 2SM BR OVC006 14/12 A3026 RMK AO2 SFC VIS 4 SLP188 T01440122
KDEN 141345Z 25004KT 2SM BR OVC006 14/12 A3026 RMK AO2 SFC VIS 4
KDEN 141331Z 25006KT 1/4SM BR OVC006 14/13 A3026 RMK AO2 SFC VIS 1 1/2
KDEN 141253Z VRB03KT 1/4SM R35L/P6000FT FG OVC002 14/13 A3026 RMK AO2 SFC VIS 1/2 SLP179
TWR IN CLDS T01390128
KDEN 141218Z VRB03KT 1/4SM R35L/4000VP6000FT FG OVC002 13/12 A3025 RMK AO2 SFC VIS 1/2
TWR IN CLDS
KDEN 141153Z 00000KT 1/4SM R35L/4500VP6000FT FG VV001 13/13 A3025 RMK AO2 SFC VIS 1/2
SLP176 TWR IN CLDS T01330128 10183 20128 50003
KDEN 141129Z 30003KT 1/2SM R35L/P6000FT FG VV001 13/12 A3026 RMK AO2 TWR VIS 3/4 TWR IN
CLDS
KDEN 141053Z 30004KT 3/4SM BR OVC004 13/12 A3025 RMK AO2 SFC VIS 2 SLP180 TWR IN CLDS
T01330122
KDEN 141043Z 32003KT 7SM BKN004 13/12 A3026 RMK AO2
KDEN 140953Z 27007KT 10SM FEW130 SCT200 13/11 A3025 RMK AO2 SLP176 T01330106
KDEN 140853Z 26009KT 10SM SCT130 SCT200 15/11 A3024 RMK AO2 SLP170 T01500106 51000
KDEN 140753Z 18010KT 10SM SCT130 SCT200 15/11 A3024 RMK AO2 SLP166 T01500111
KDEN 140653Z 12008KT 10SM FEW100 SCT130 SCT200 15/11 A3026 RMK AO2 SLP175 T01500111
402780122
KDEN 140553Z 20008KT 10SM FEW110 SCT130 SCT200 17/11 A3024 RMK AO2 SLP168 T01720106
10250 20156 50002

GeoColor loop from 0815 to 1445z on 14 August.

Based on my experience at the AWT Summer Experiment, it might be interesting to test this and the following overview type imagery with the forecasters at the AWC.



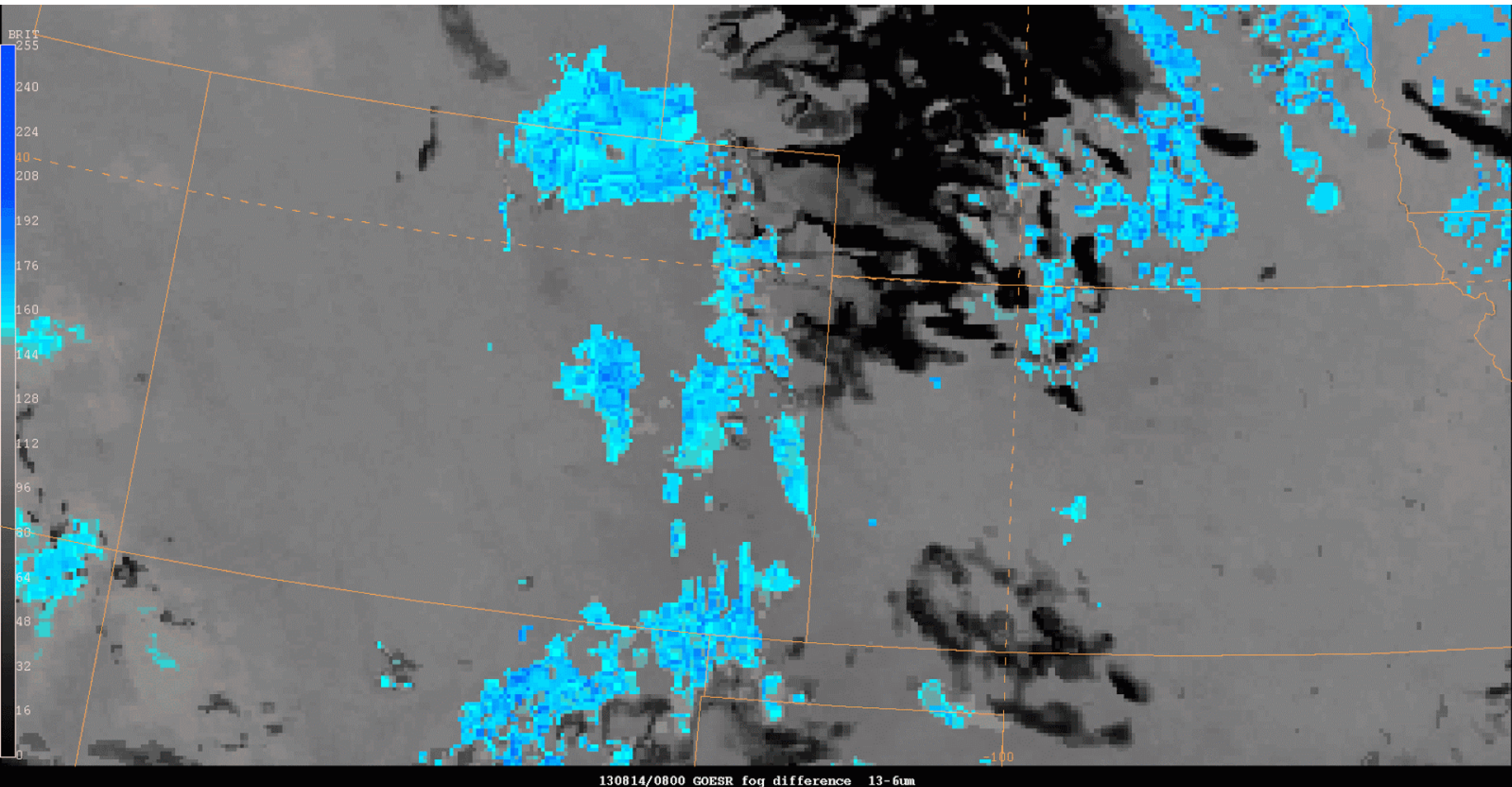
CIRA “low cloud/fog” image loop from 0800 to 1500 UTC on 14 August



Closeup view of the fog intruding into Denver at 1200z on 14 August

KDEN 141153Z 00000KT 1/4SM R35L/4500VP6000FT FG VV001 13/13 A3025 RMK AO2 SFC VIS
1/2 SLP176 TWR IN CLDS T01330128 10183 20128 50003

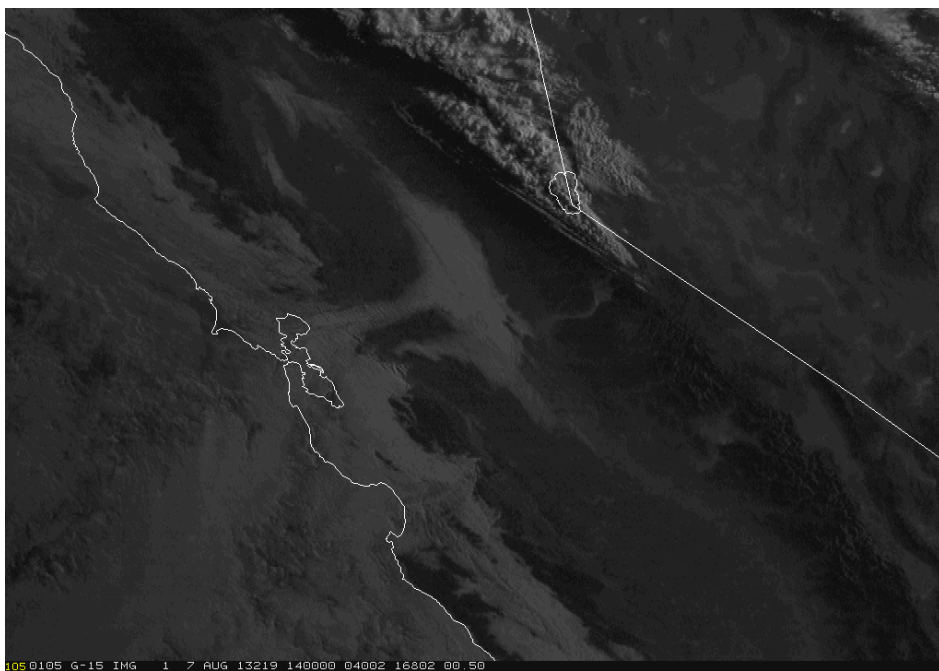
Synthetic 10.35-3.9 μm 32- to 36-hour forecast valid 08-12 Z on Aug. 14



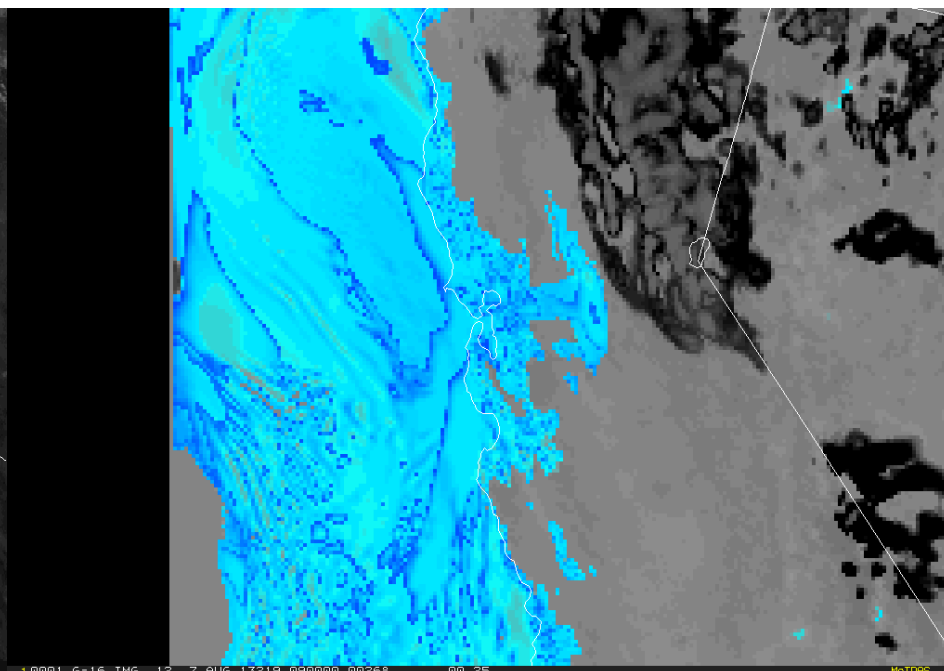
Loop courtesy of Amanda's blog

More fog

- loop of fog moving inland over San Francisco area on 7 August
- comparison with synthetic fog product



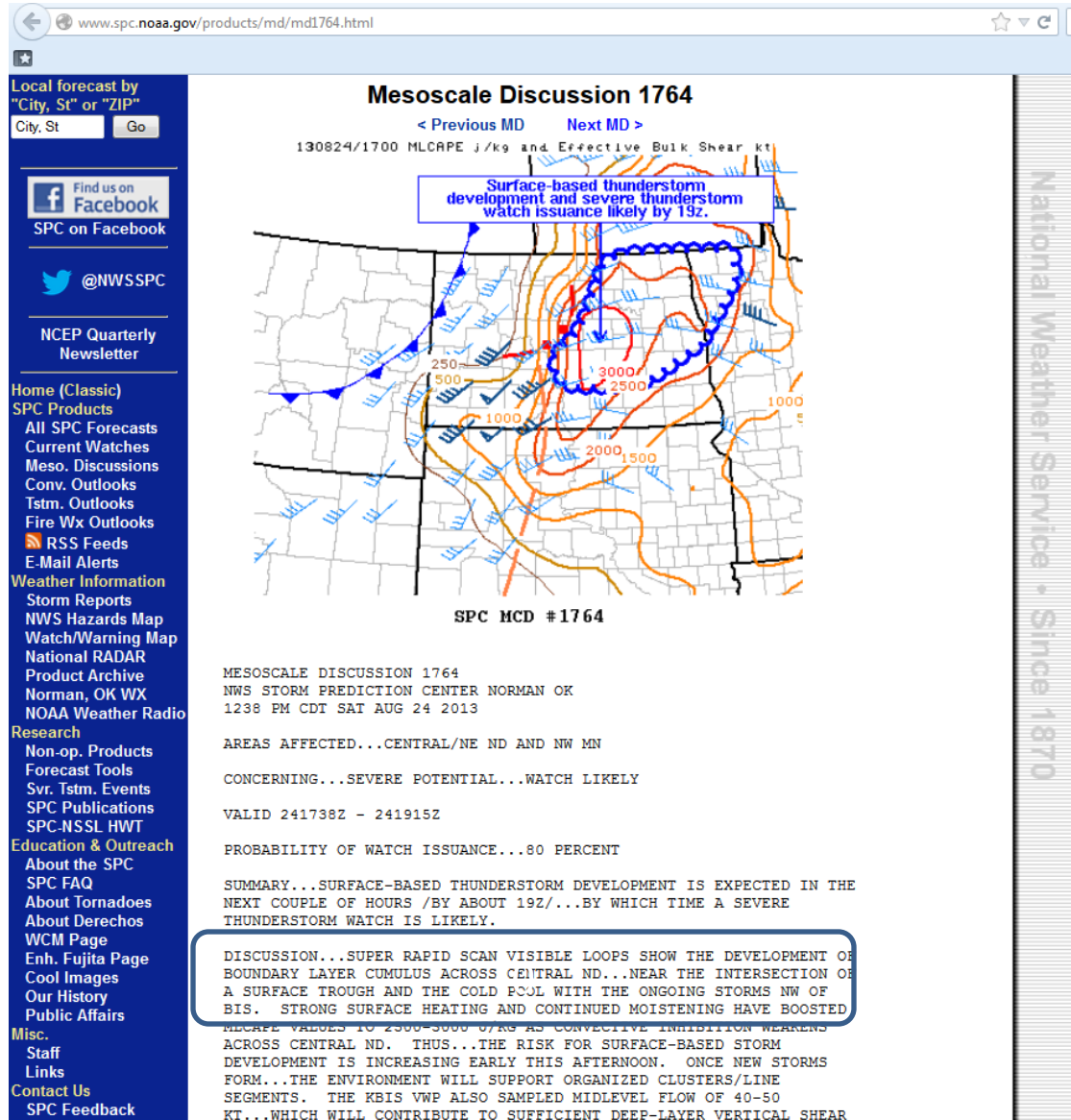
Visible loop 1400-1800z every 15 min



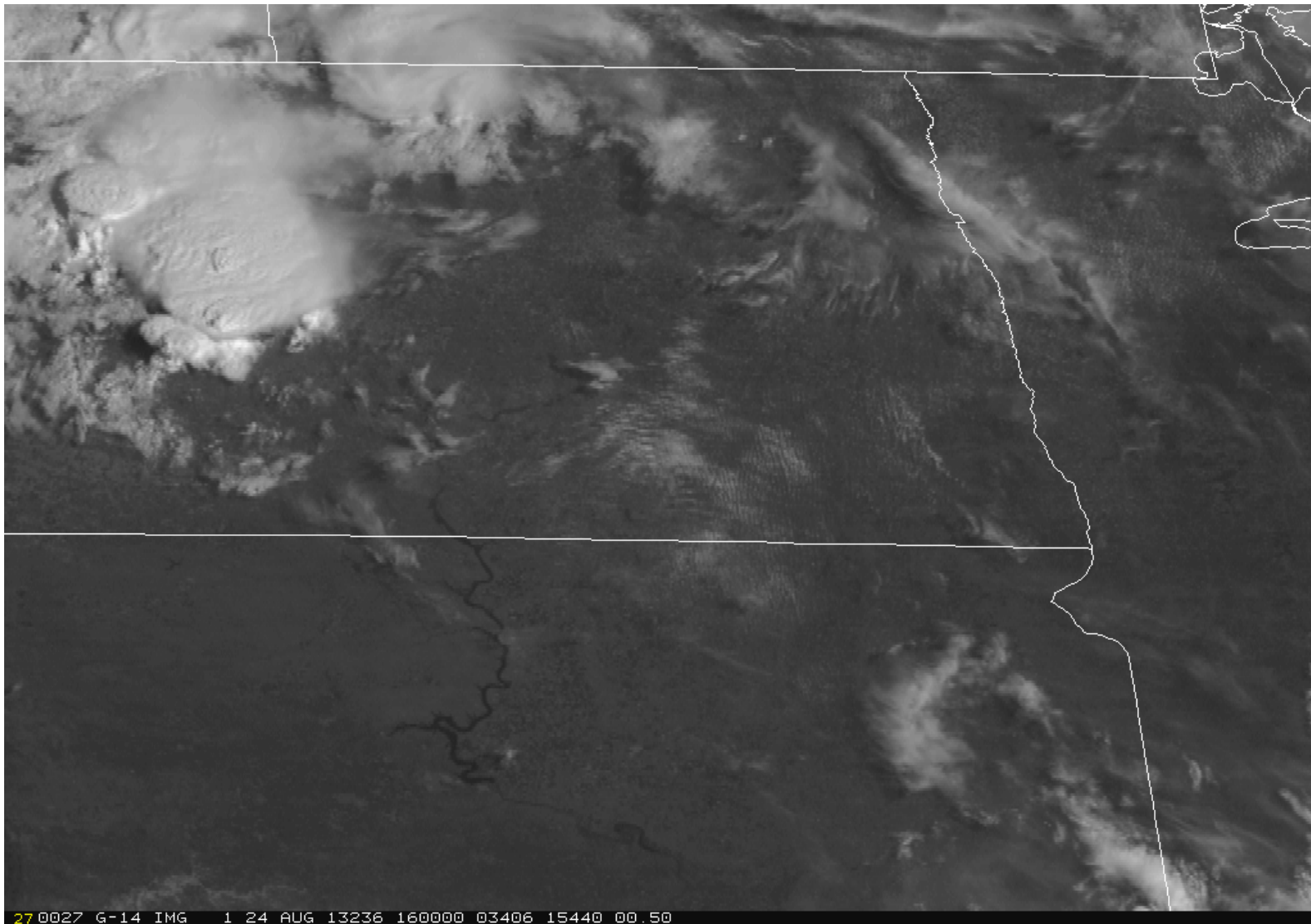
Synthetic fog product 0900-1900z every 1 hour

One-Minute Data used in SPC Operations

- GOES-14 collected special SRSO-R data, or nearly continuous 1-minute data Aug. 13-28, 2013
- The SPC is unable to pull in and display this data in operations, so CIRA helped by pulling in the data via our local ground station, converting it to N-AWIPS format, and sending it to the SPC
- Thanks to Israel Jirak (SOO @ SPC) and Bill Line for facilitating
- The 1-minute data was used by the operational forecasters and mentioned in at least 2 Mesoscale Discussions



GOES-14 Visible 1-minute data, 24 Aug 2013

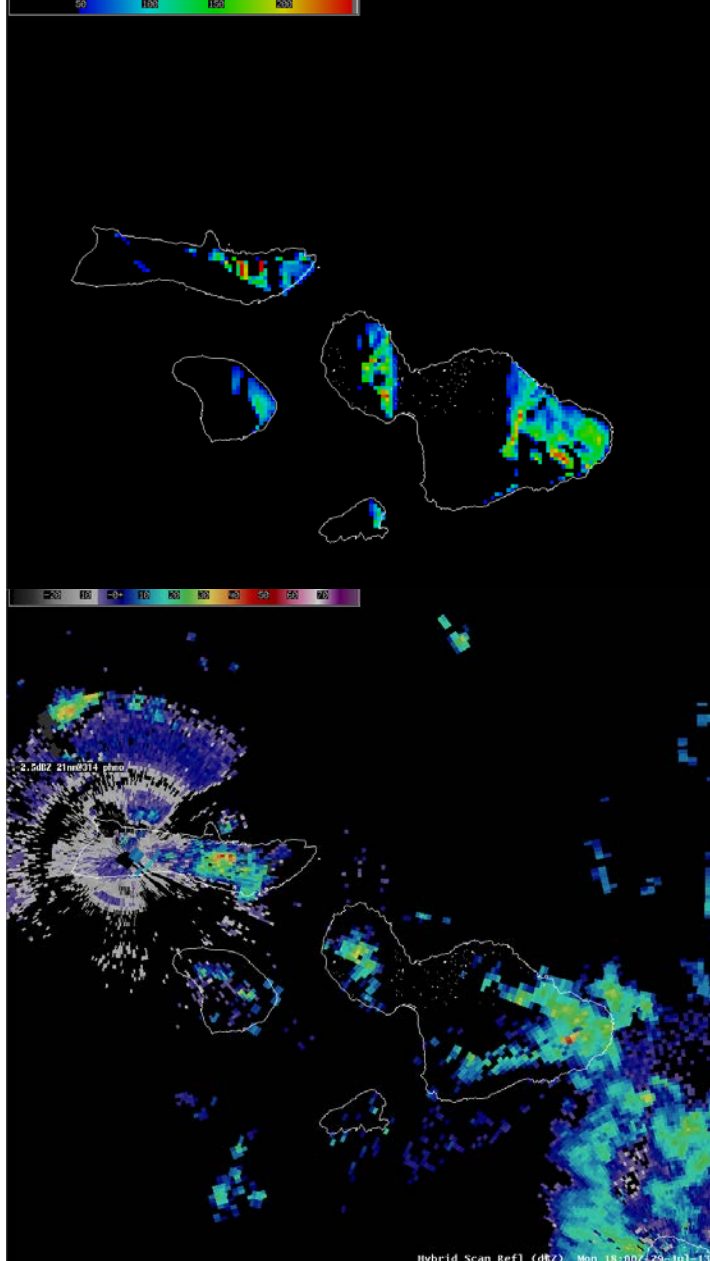


27 0027 G-14 IMG 1 24 AUG 13236 160000 03406 15440 00.50

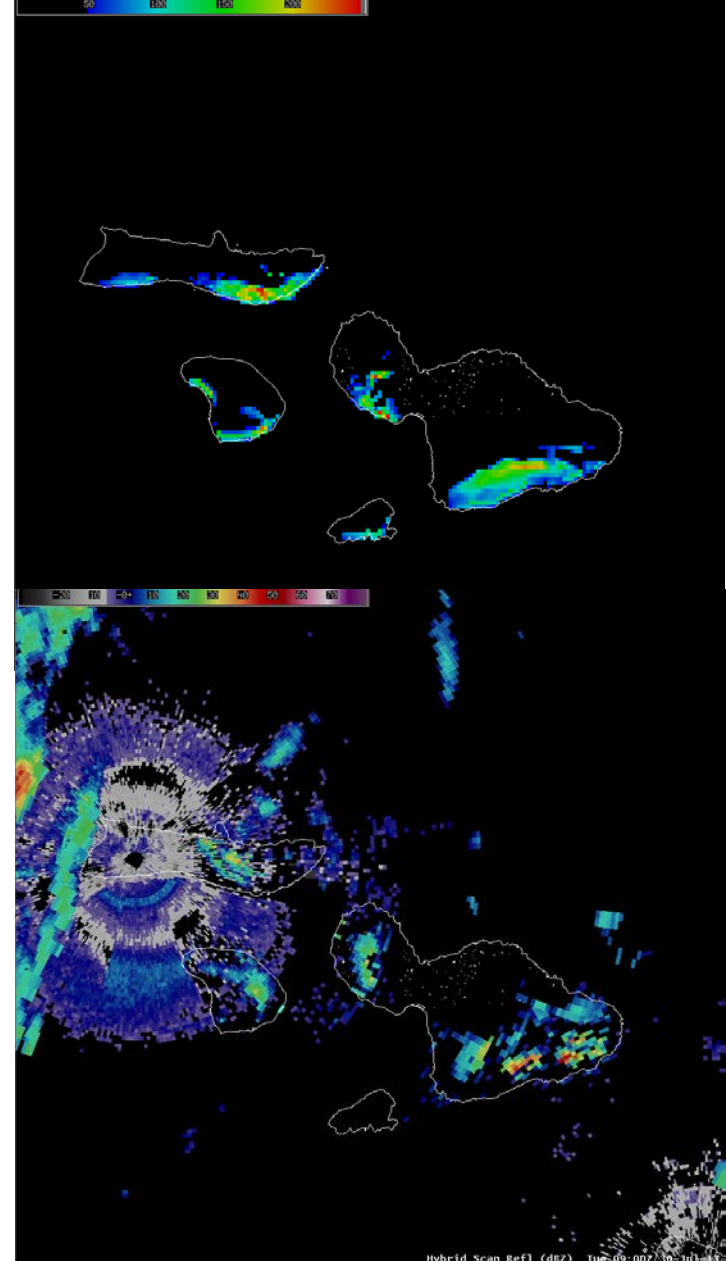


ORI update: ORI in HA during passage of Flossie 29-30 July

Before Flossie – northeast flow



After Flossie – southerly flow



ORI

Radar

Systems Report

AWIPS I

- ORI product installed at San Juan, PR FO
 - Case study data collection for TS Gabrielle is under way
- New real-time AWIPS I is operational in CIRA Weather Lab for use in daily weather briefings
 - old AWIPS I is still sending PG products via LDM; transition to new LDM server is in progress

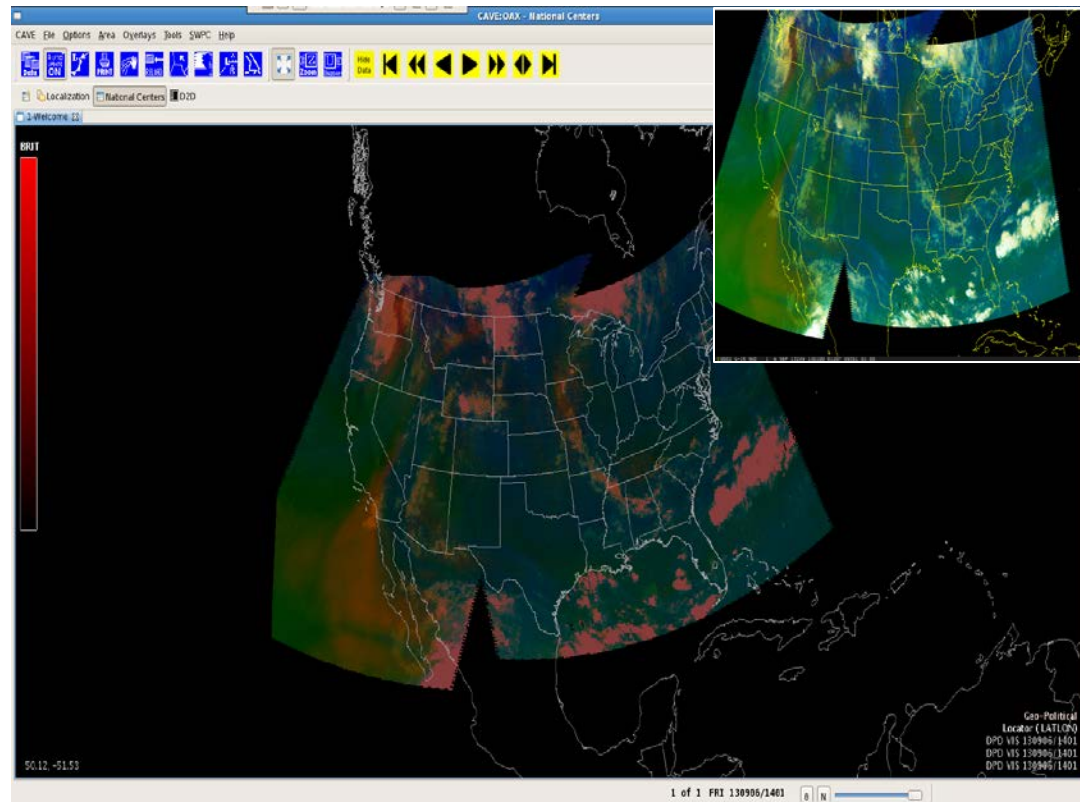
AWIPS II

- Participation in the SPoRT led Experimental Products Development Team (EPDT) bi-weekly telecons is ongoing.
 - D. Molenaar will attend Huntsville EPDT code sprint; development task involves expansion of existing Raytheon (VIIRS) RGB capabilities.
- Participation in the Raytheon AWIPS II Developers Forum is ongoing.
- Participation in the monthly NDE-AWIPS telecons is ongoing.
- New CIRA Weather Lab AWIPS II has been configured
 - Development of 'quick start' training on AWIPS II use for CIRA research staff is in the works

Systems Report

AWIPS II

- New AWIPS II RGB development workstation has been configured
- Currently working to evaluate existing AWIPS II National Centers Perspective (NCP) display capabilities using CIRA/SPoRT GOES Sounder Air Mass red, green & blue imagery



Main image: RGB Air Mass product displayed in AWIPS II NCP
Upper right inset image: Actual RGB Air Mass product

Recent:

- **July 23-24** **CoRP Symposium Madison, Wisconsin**
– *Chris Kummerow, Curtis Seaman, Robert DeMaria, Chris Slocum (CSU/Atmos Grad. Student)*
- **August 12 – 16** **Aviation Weather Center Testbed** – *Ed Szoke*

Upcoming:

- **September 16 – 20** **EUMETSAT/AMS Satellite Conference, Vienna, Austria**
– *Steve Miller, Galina Chirokova, Curtis Seaman*
- **September 23 – 27** **AWIPS II EPDT code spring working session, Huntsville, AL**
– *Debra Molenaar*
- **Sept 30 & Oct 2** **Boulder WFO Winter Weather Workshop**
– *Ed Szoke and Dan Lindsey*
- **October 12 – 17** **NWA Annual Meeting, Charleston SC**
– *Ed Szoke, Dan Bikos, Dan Lindsey*

Thanks!

Questions..?