



An Update on the 2012 NHC GOES-R Proving Ground

***10 Sept 2012 All Hands Conference Call
John Knaff, NESDIS/STAR/RAMMB***

***With input from NHC, CIRA, CIMSS, CICS,
SPoRT, HRD***

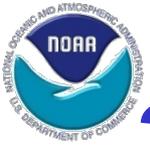


Goals of NHC PG Experiment

- Demonstrate identified GOES-R surrogate products in real-time at NHC during the 2012 hurricane season
- Ensure that NHC forecasters can use and get familiar with GOES-R surrogate products
- Evaluate products and provide valuable feedback to GOES-R Program Office and developers

Project Schedule

- Jul 31, 2012 – Project Briefing to NHC
- Aug 1, 2012 - NHC PG begins
- ***Sep 11, 2012*** – ***Mid-project review at NHC***
- Oct 31, 2012 - Mid-project report completed
- Nov 30, 2012 – NHC PG ends
- Jan 2013 - Project debriefing
- Feb 28, 2013 - Final report completed
- Mar 2013 - IHC Presentation and planning for 2013 experiment



2012 NHC Proving Ground Products

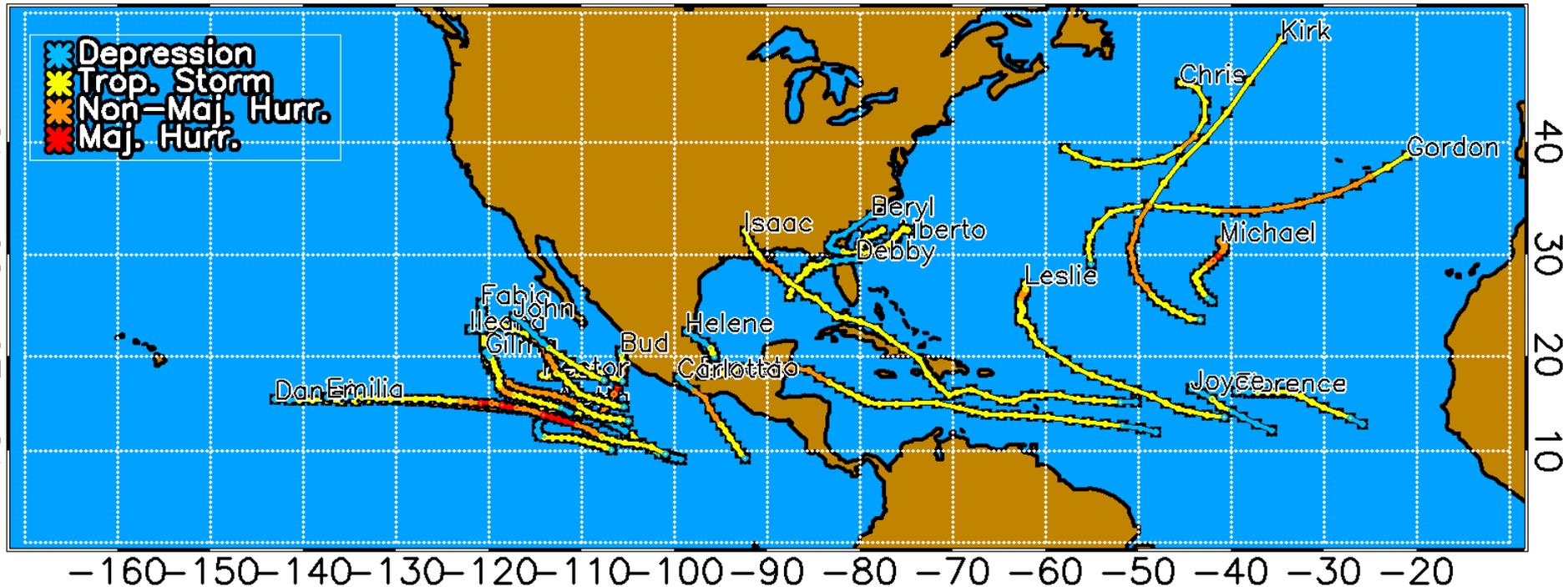
- 1. Hurricane Intensity Estimate (HIE)**
- 2. Super Rapid Scan Imagery**
- 3. Objective Tropical Overshooting Tops (TOT)**
- 4. Saharan Air Layer (SAL) Product**
- 5. Pseudo Natural Color Imagery**
- 6. GOES-R Natural Color Imagery**
- 7. Red-Green-Blue (RGB) Air Mass Product**
- 8. RGB Dust Product**
- 9. Rapid Intensification Index (RII)**

NHC Forecaster Feedback

- Mid-project review (Sept 11) and final reports
- Blogs
 - http://rammb.cira.colostate.edu/research/goes-r/proving_ground/blog
 - <http://nasasport.wordpress.com>
- Informal communications with developers
- New NHC feedback form
 - Automatic e-mail to NHC PG participants

The 2012 Hurricane Season as of Sept 7th

-160 -150 -140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20



Atlantic 13 TS, 7 hurricanes, 1 major hurricane

E. Pacific 10 TS, 7 hurricanes, 3 major hurricanes

2012 Season similar to 2011 so far

- Fewer but more intense East Pacific storms
- Most Atlantic hurricane activity north of 25 N

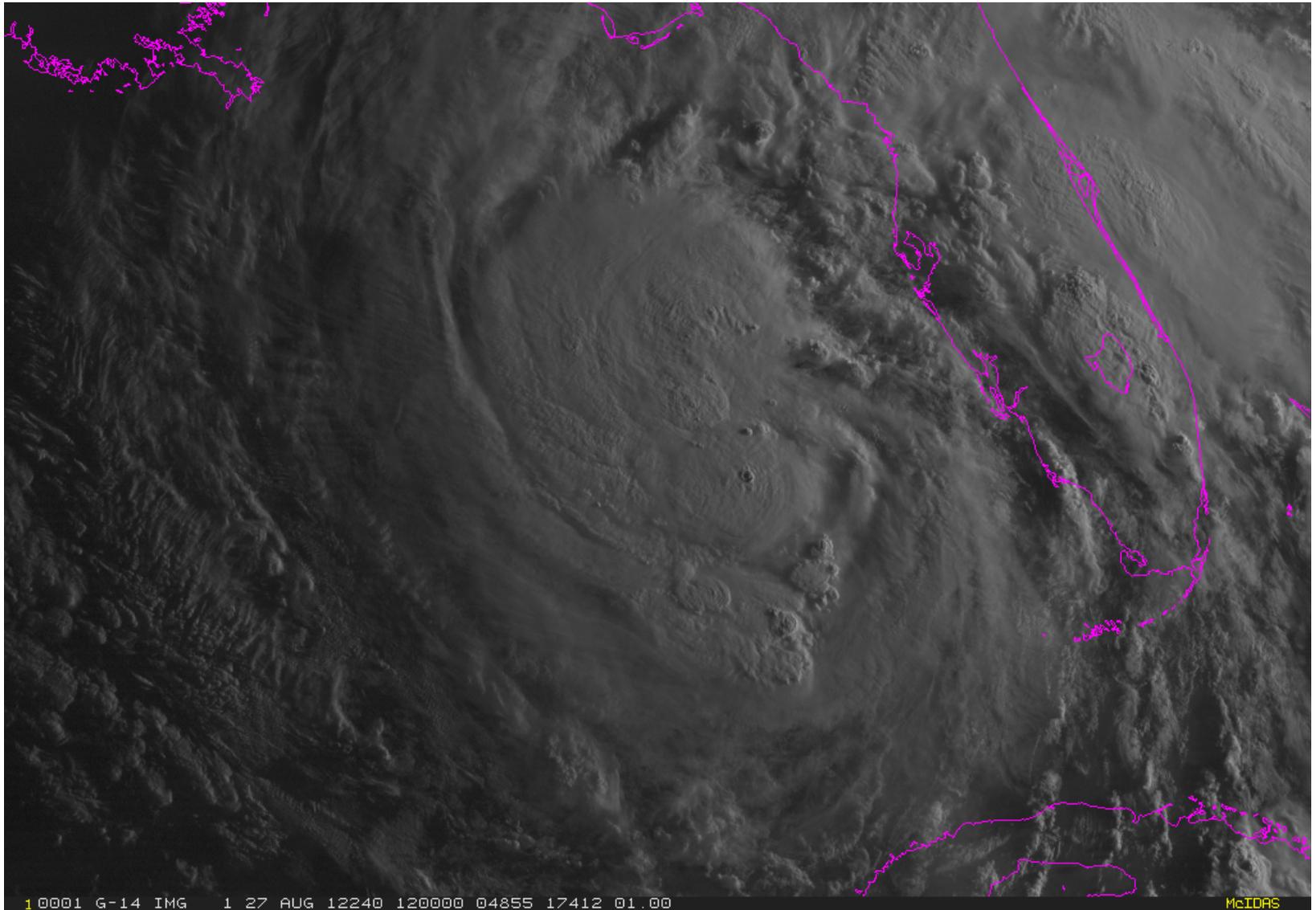
First Half Highlights

- Many SRSO cases obtained from GOES-14
 - ASPB and CIMSS lead
- Most RGB and related products in N-AWIPS
 - Air Mass (SEVIRI and GOES sounder), Dust, Pseudo-Natural Color, SAL
- More involvement from TAFB
 - Thanks to Michael Folmer
- New forecaster feedback form working well
- Most feedback on RGB Air Mass Product

Super Rapid Scan Imagery

- GOES-14 providing good opportunities for SRSO
- 28 images per half hour
 - Helene
 - Aug 18, 23N, 97W
 - Isaac
 - Aug 23-31, 18N, 68W to 35N, 88W
 - Leslie
 - Sep 7, 27N, 63W
- More info at:
http://cimss.ssec.wisc.edu/goes/srsor/GOES-14_SRSOR.html

GOES-14 SRSO for Isaac 8/27



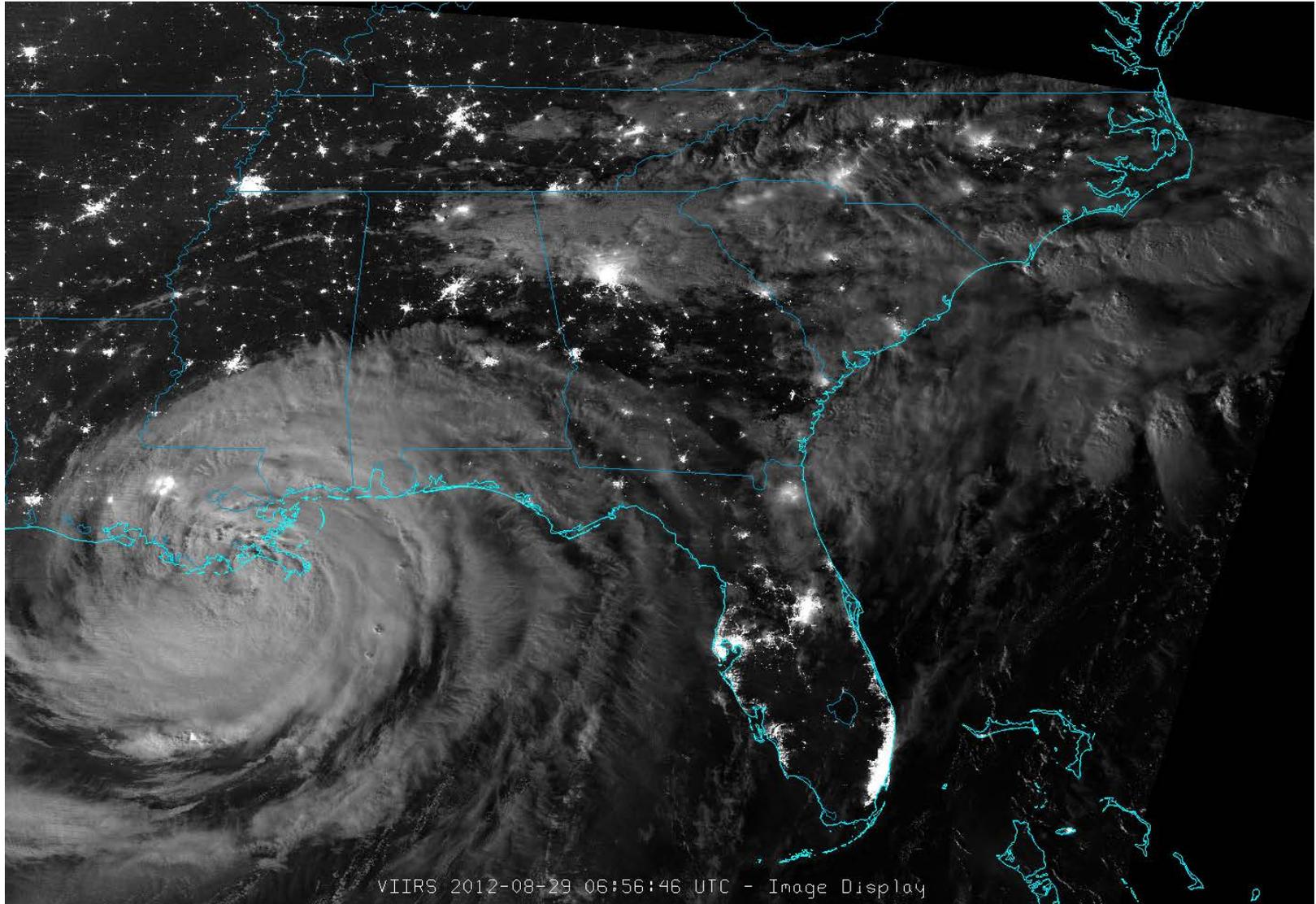
RGB Air Mass Feedback

- 5/27, HSU, Used in ST Beryl moisture analysis
- 8/19, TAFB, Marine analysis of tropical lows, SAL air to the N and NE
- 8/17, HSU, Dry air wrapping around Gordon
- 8/18, HSU, SW trough to upstream of Gordon
 - Gordon case added to CIRA RGB case study page
- 8/23, TAFB, TD 10 analysis, center fixing

Possible NPP Products for 2013

- VIIRS imagery and products
 - High resolution Vis, IR, Day-Night Band
 - Automated center fix algorithm, true color
- ATMS/CrIS
 - Temperature/moisture soundings
 - Intensity/size retrievals
 - Maximum potential intensity estimates
- Possible NPP data sources
 - UW/SSEC Direct Broadcast for U.S. east coast
 - Honolulu WFO Direct Broadcast for Central Pacific
 - NESDIS NDE environment

Day-Night Band for Isaac





VIIRS DB Coverage



Dashed line represents antenna range from SSEC.

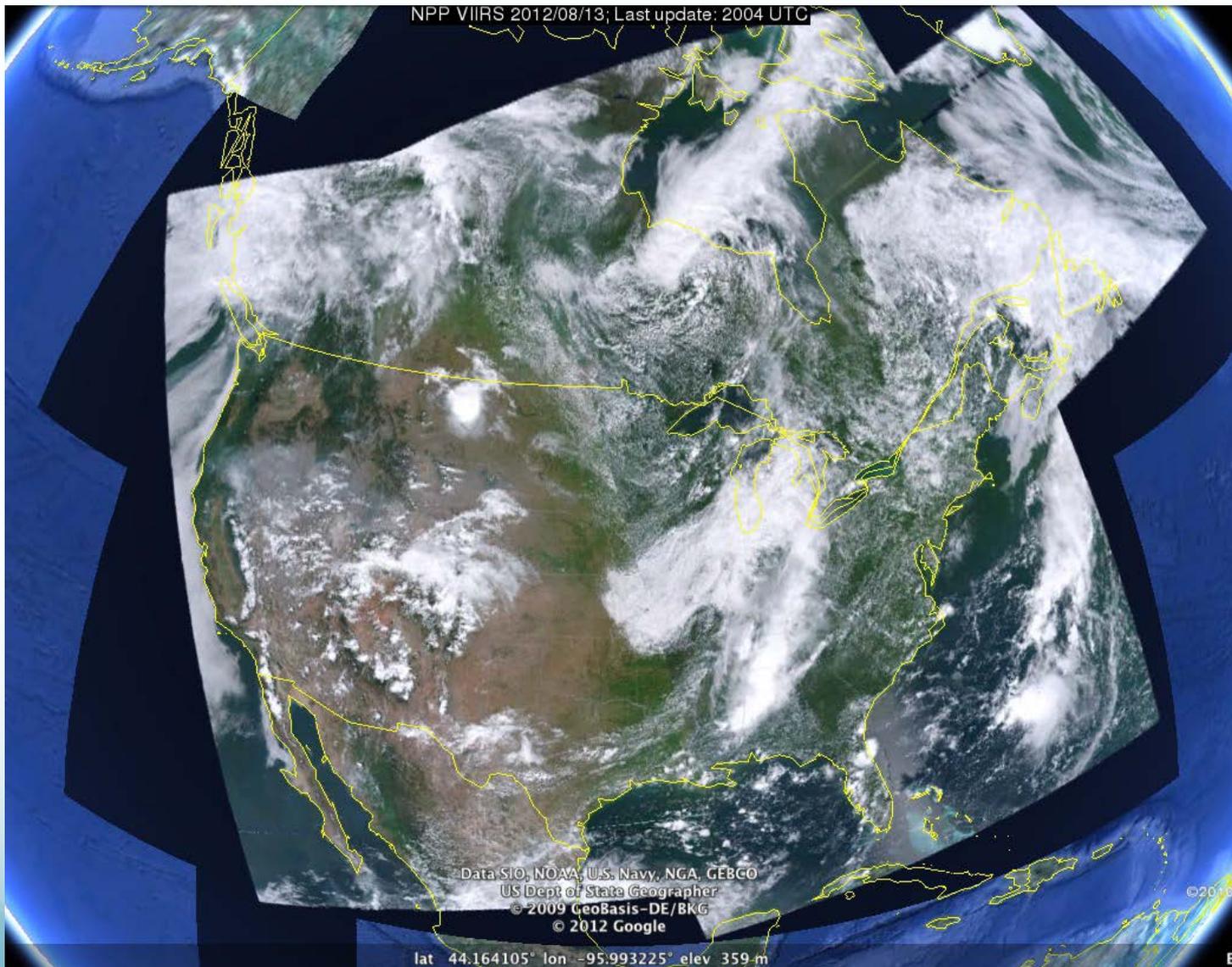
NPP orbits are overlaid. Orbit tracks change from day to day.

Typical coverage is 3 passes acquired during the day, and 3 during the night.

Wisconsin Direct Broadcast coverage example from 13 August 2012



VIIRS DB Coverage



- Wisconsin Direct Broadcast coverage example from 13 August 2012