A SATELLITE PARADIGM SHIFT:
GOES-R AND JPSS SHED NEW LIGHT ON ANALYZING AND FORECASTING HEAVY PRECIPITATION, MARINE WEATHER, AND TROPICAL CYCLONES

Michael J. Folmer
(UMCP/ESSIC/CICS)
Satellite Liaison at OPC/SAB/TAFB/WPC

JPSS and GOES-R Seminar
05/18/16

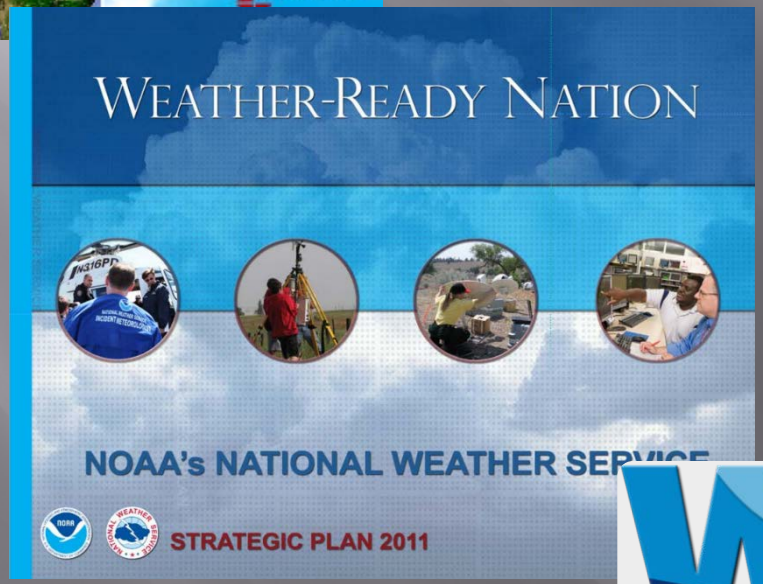
100 km

BUILDING A WEATHER-READY-NATION

Users need and demand:

- **Accuracy**
- **Consistency**
- **Understandable Messaging**

Just one missing link can result in bad decisions



The Weather Prediction Center

America's *Go-To Center*
for high-impact precipitation events
and forecast guidance out to 14 days
for a *Weather-Ready Nation*

David Novak, Director

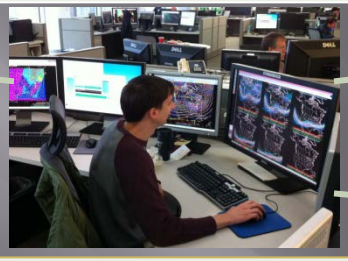
James Nelson, Chief, DTB

Gregory Carbin, Chief, FOB

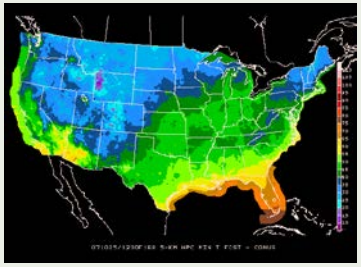
Mark Klein, SOO

PRODUCTS AND SERVICES

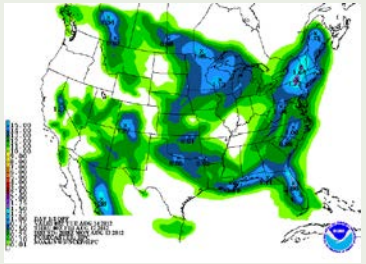
International Model Guidance Suite
NCEP, MDL, CMC, NAEFS, ECMWF, UKMET, FNMOC



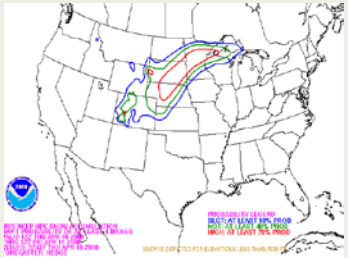
~500 products a day



Medium Range

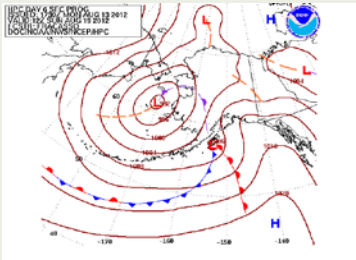


QPF

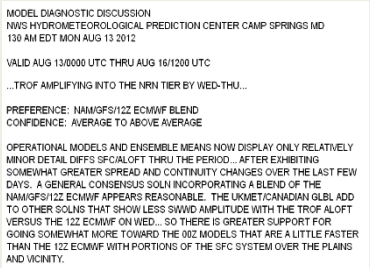


Winter Weather

Met Watch



Alaska



MODEL DIAGNOSTIC DISCUSSION
NWS HYDROMETEOROLOGICAL PREDICTION CENTER CAMP SPRINGS MD
130 AM EDT MON AUG 13 2012

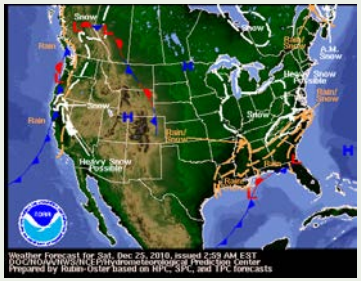
VALID AUG 13/0000 UTC THRU AUG 16/1200 UTC

...TROF AMPLIFYING INTO THE NRN TIER BY WED-THU...

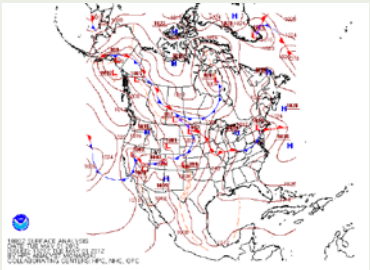
PREFERENCE: NAM/GFS/12Z ECMWF BLEND
CONFIDENCE: AVERAGE TO ABOVE AVERAGE

OPERATIONAL MODELS AND ENSEMBLE MEANS NOW DISPLAY ONLY RELATIVELY MINOR DETAIL DIFFS SFC/ALOFT THRU THE PERIOD... AFTER EXHIBITING SOMEWHAT GREATER SPREAD AND CONTINUITY CHANGES OVER THE LAST FEW DAYS. A GENERAL CONSENSUS SOLN INCORPORATING A BLEND OF THE NAM/GFS/12Z ECMWF APPEARS REASONABLE. THE UKMET/CANADIAN GLBL ADD TO OTHER SOLNS THAT SHOW LESS SWWD AMPLITUDE WITH THE TROF ALOFT VERSUS THE 12Z ECMWF ON WED... SO THERE IS GREATER SUPPORT FOR GOING SOMEWHAT MORE TOWARD THE 00Z MODELS THAT ARE A LITTLE FASTER THAN THE 12Z ECMWF WITH PORTIONS OF THE SFC SYSTEM OVER THE PLAINS AND VICINITY.

Model Diagnostics



Short Range



Analysis

7 Days — forecast lead time → hours

NOAA National Weather Service

Ocean Prediction Center

Thomas Cuff, Director

Joseph Sienkiewicz, Chief, OAB

Darin Figursky, Chief, OFB

http://www.opc.ncep.noaa.gov/

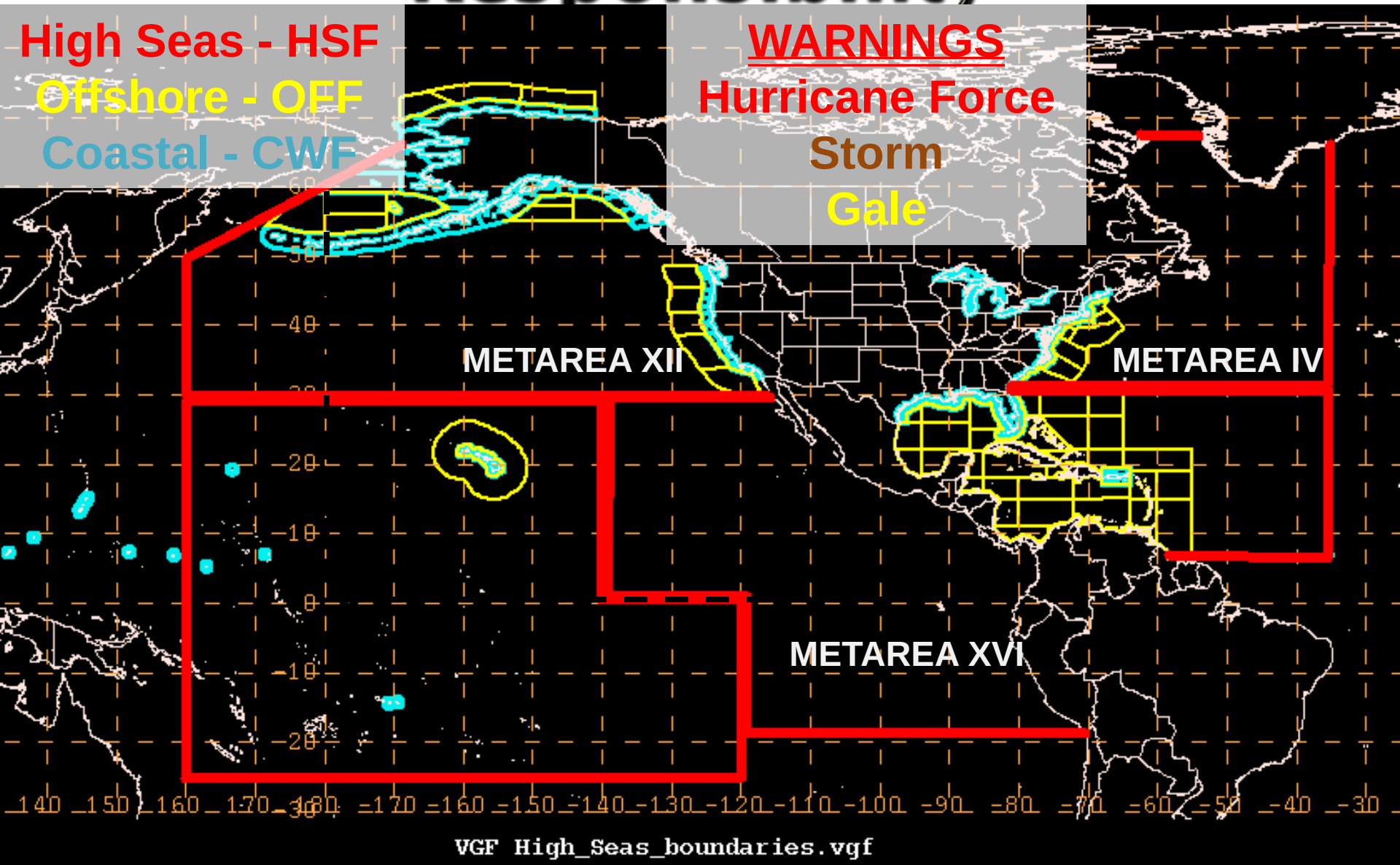
http://www.facebook.com/OceanPredictionCenter

OPC Forecast Functions

Atlantic High Seas Pacific High Seas
Atlantic Offshore Pacific Offshore
Outlook (Medium Range)
Special Project Support

- Antarctica NMFS
- Arctic collaborations
- Freezing Spray

NOAA/NWS Marine Responsibility



Tropical Analysis and Forecast Branch

Rick Knabb, Director

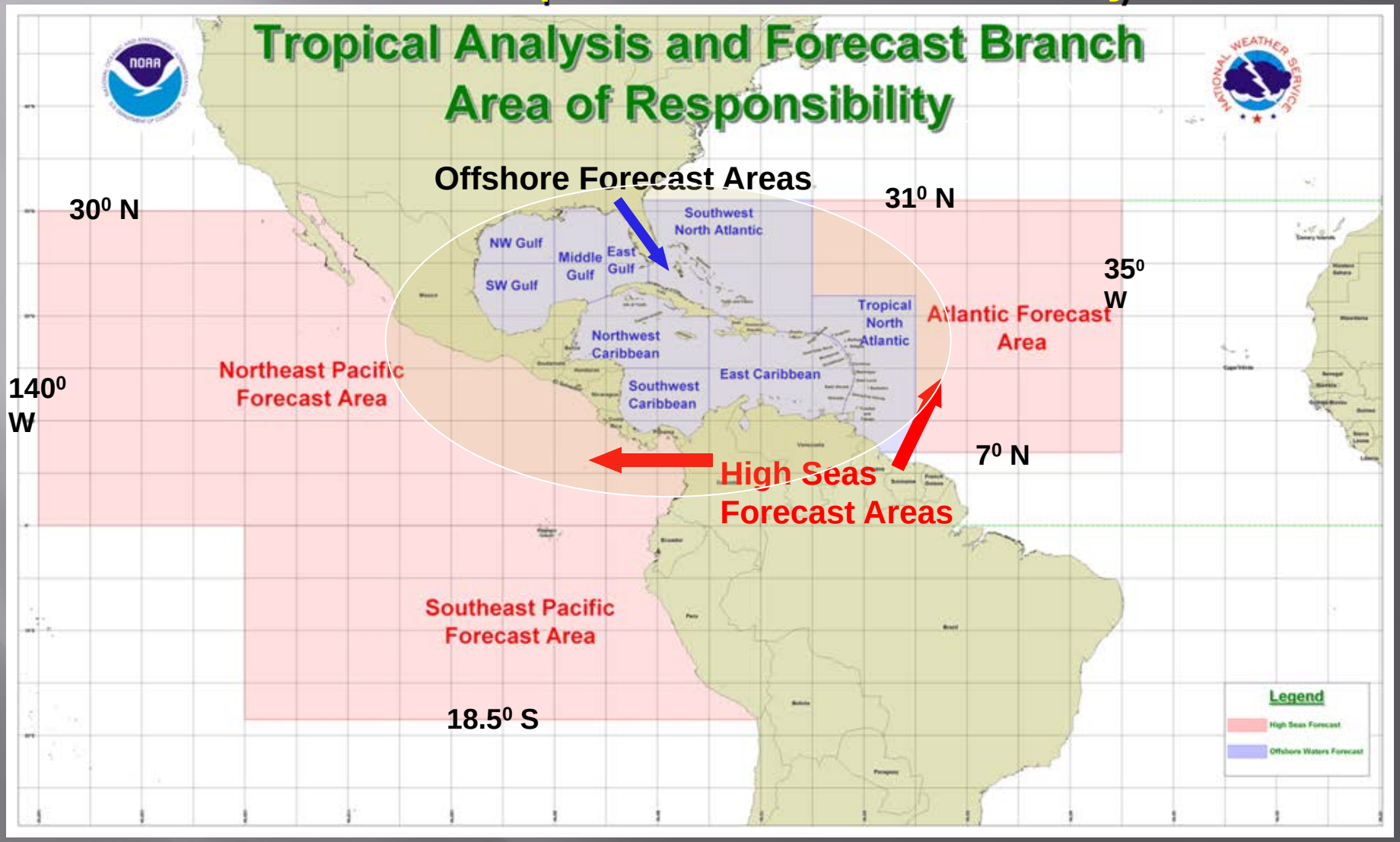
Hugh Cobb, Chief, TAFB

Mark DeMaria, Chief, TSB

Tropical Analysis and Forecast Branch (TAFB)

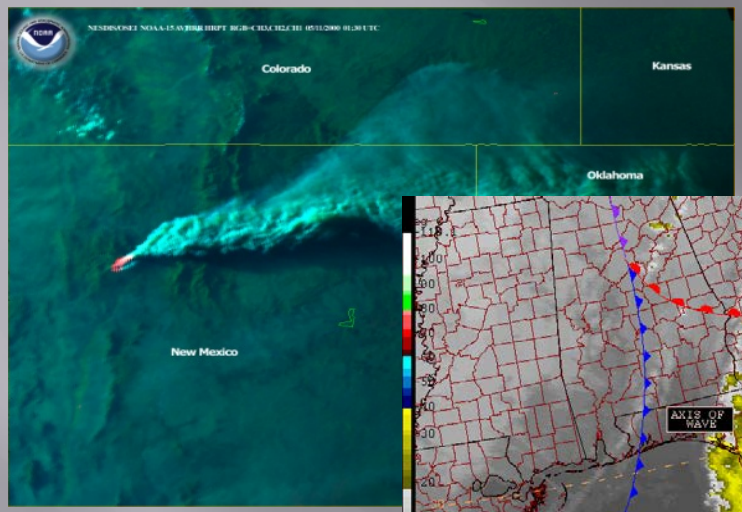
- **Year round (24/7/365) products**
  - Marine forecasts (graphical and text) and discussions (MIM)
  - Surface analyses and discussions (TWD)
  - Aviation forecasts and warnings (backup responsibilities) ***
  - Satellite-derived rainfall estimates
- **Hurricane Season**
  - Tropical cyclone intensity estimates using Dvorak technique
  - Media support to NHC (English, Spanish, French)
  - Radar tracking of tropical cyclones
  - Forecast support to Hurricane Specialists (Marine)

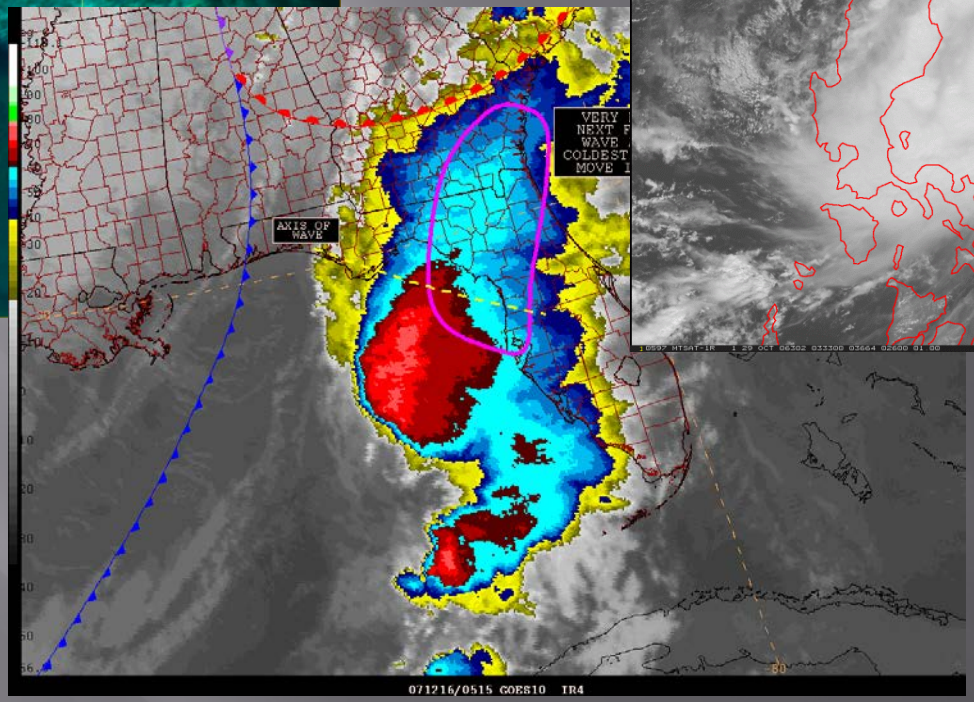
TAFB produces 57 graphic products & 48 text products each day.

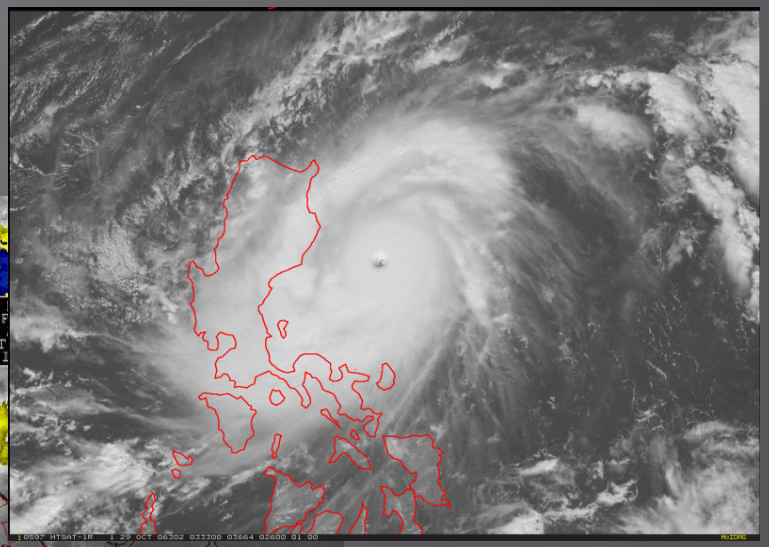


~ 14 million sq. nautical miles

THE NESDIS SATELLITE ANALYSIS BRANCH





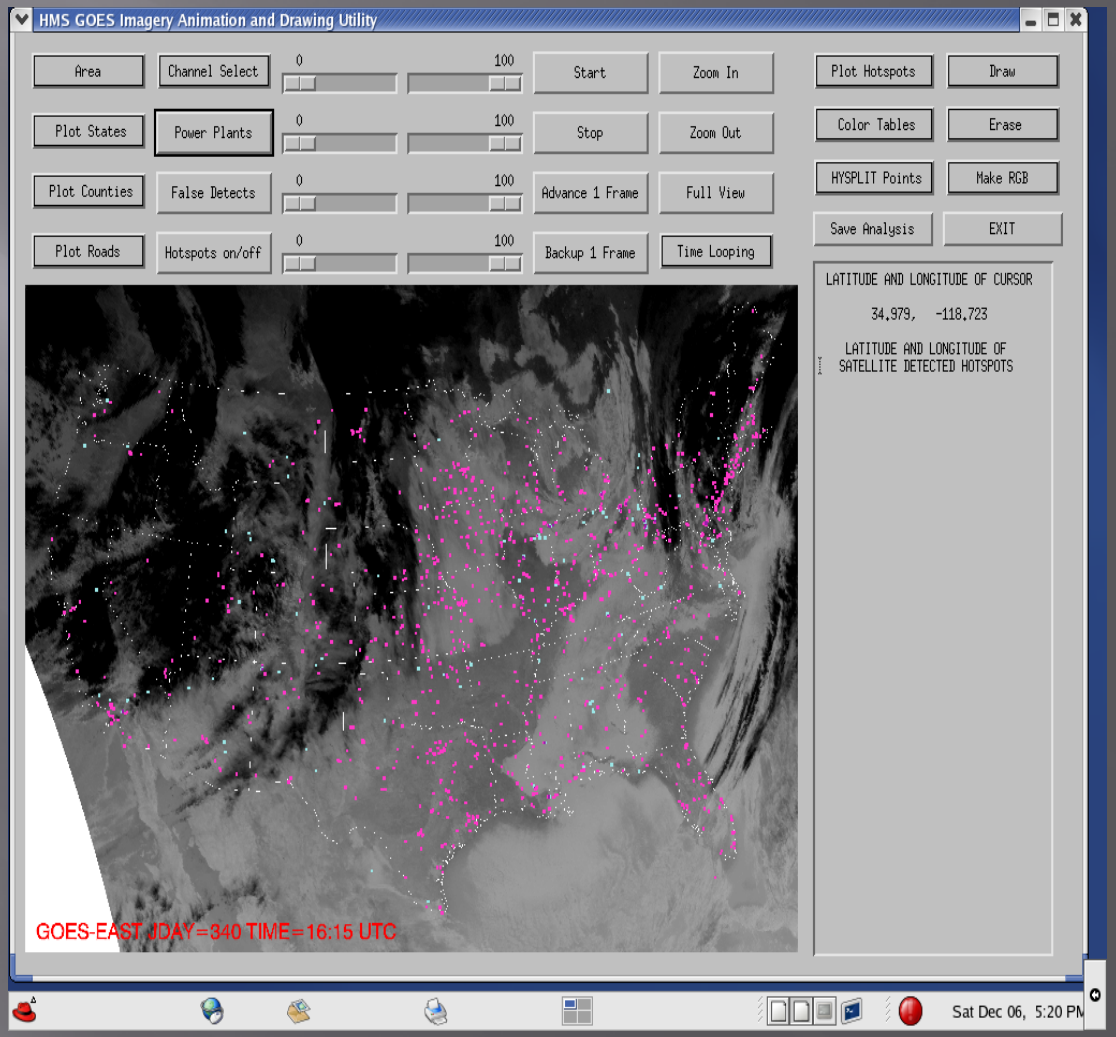


Davida Street, Chief, SAB

Jamie Kibler, GOES-R Lead

SATELLITE ANALYSIS BRANCH SMOKE, FIRE AND AIR QUALITY PROGRAM

- The fire and smoke analysis is performed on the Hazard Mapping System (HMS) for the continental US, Alaska, Hawaii, Canada and Mexico/Central America.



www.osdpd.noaa.gov/ml/land/hms.html

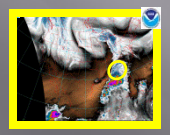
NOAA's Satellite Analysis Branch Precipitation Program

24/7/365 monitoring of precipitation with emphasis on satellite analysis, short term trends and rainfall estimates

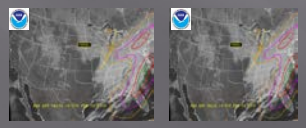
Supporting WPC, Hawaii, and Puerto Rico

Priorities

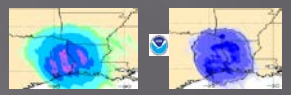
- excessive rainfall area



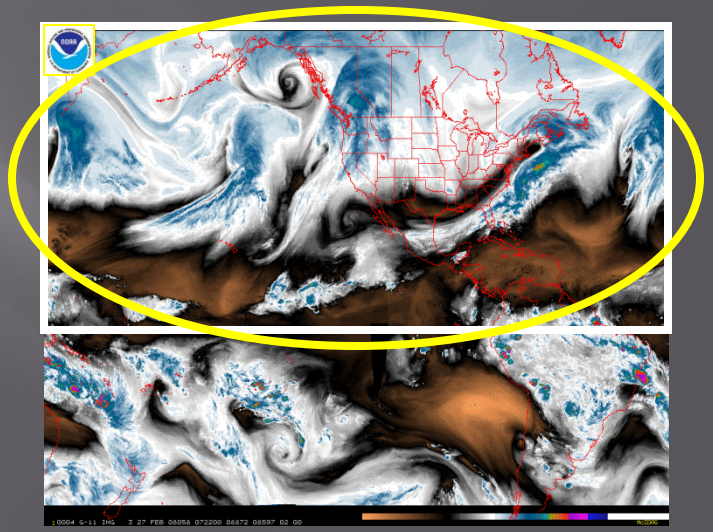
- 0-6 hr rainfall guidance



- precipitation trends
- satellite tropical rainfall

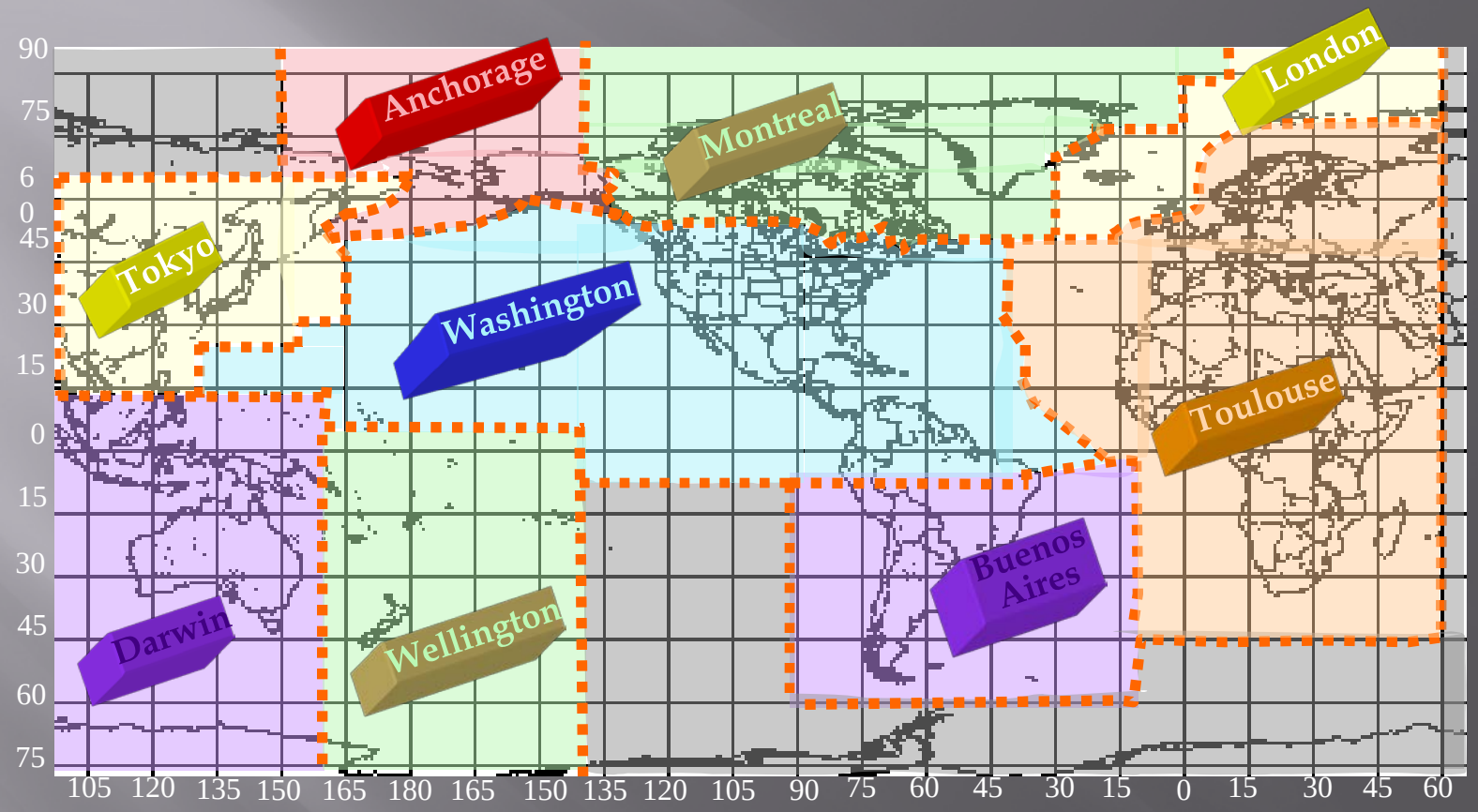


- satellite rainfall estimates



http://www.ssd.noaa.gov/PS/PCPN/

VAAC Boundaries



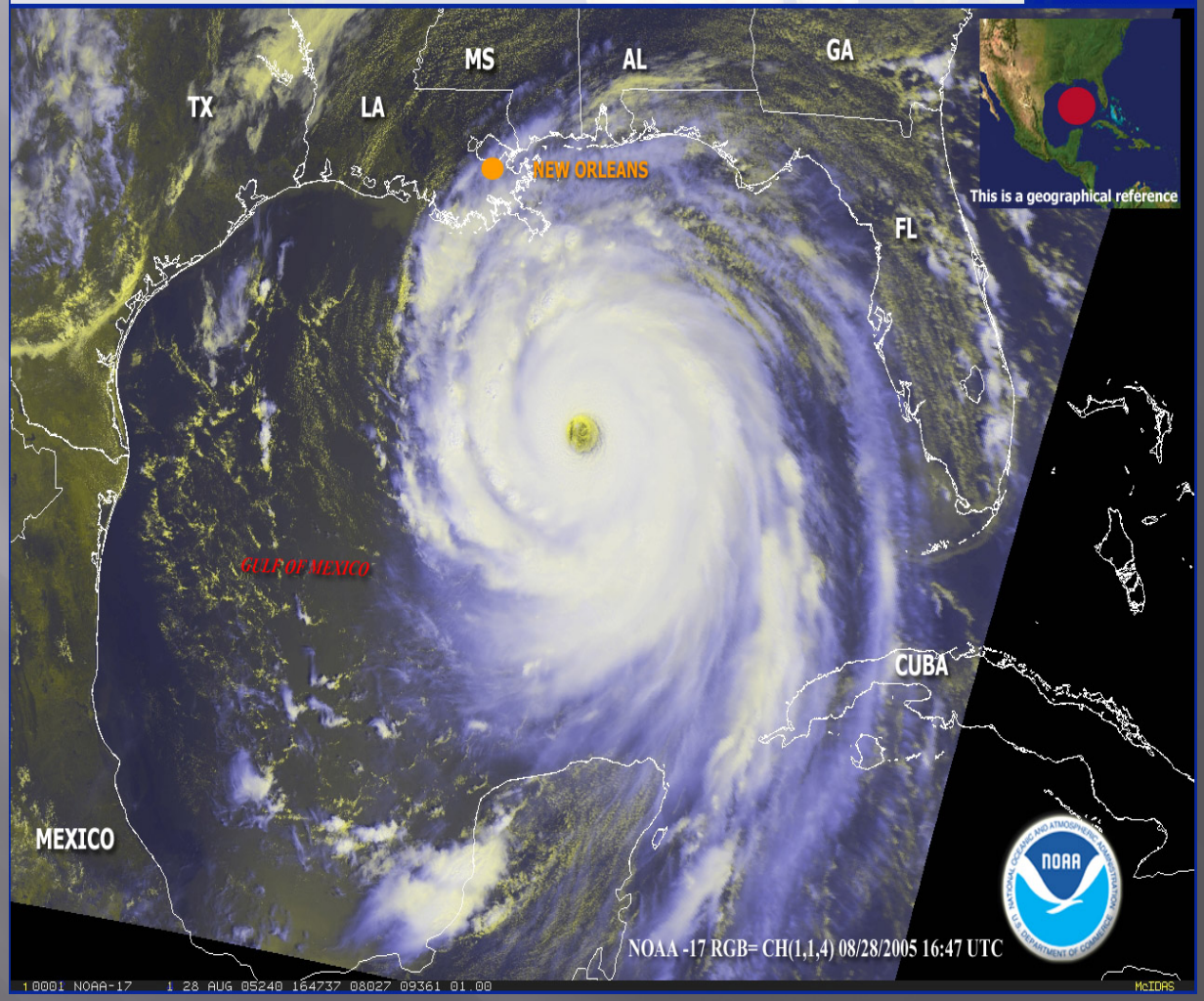
www.ospo.noaa.gov/Products/atmosphere/vaac/index.html

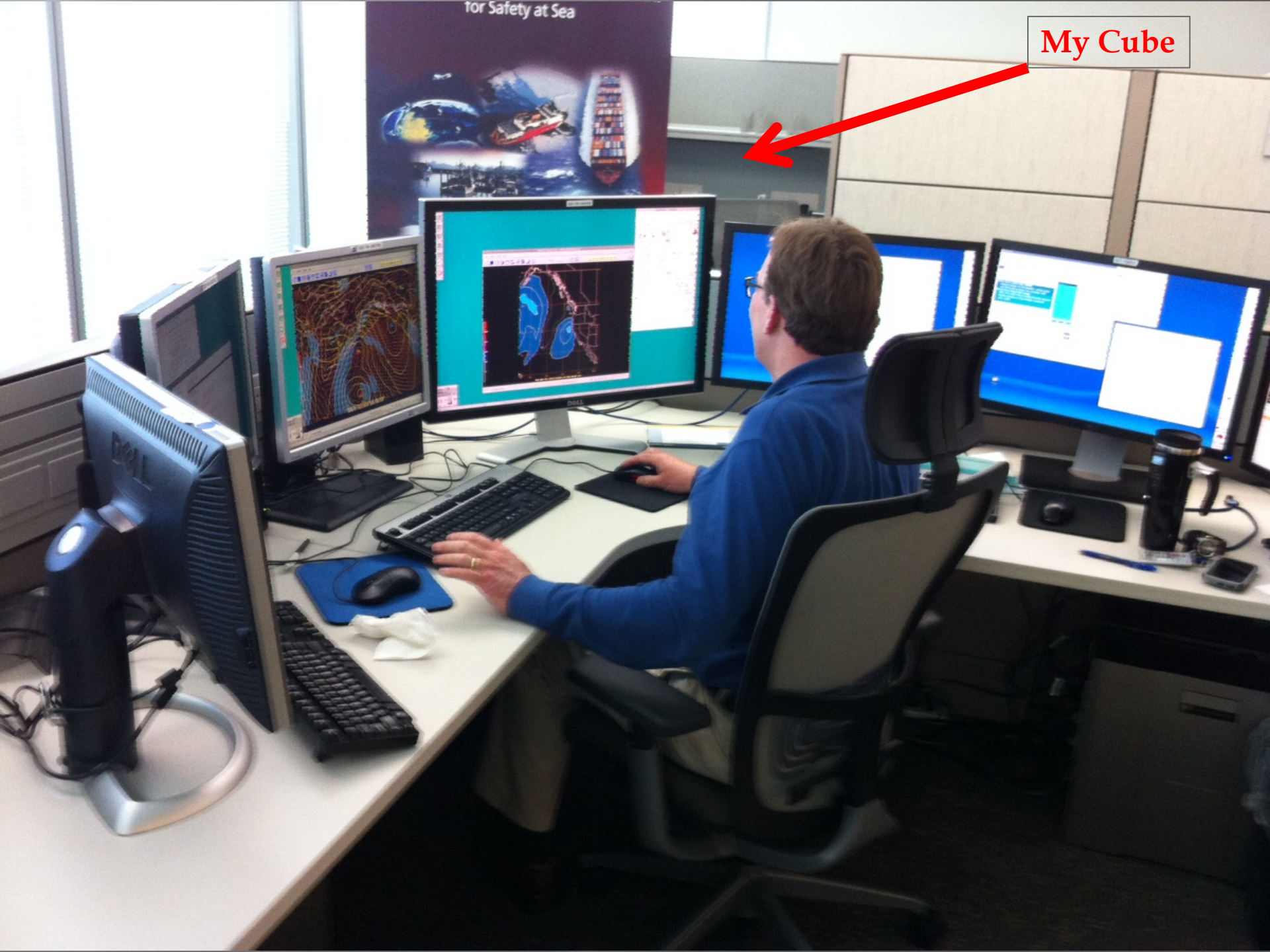
Tropical Program

As of 1800 UTC (1PM CDT), Hurricane Katrina was located 180 mi (290km) SSE of the mouth of the Mississippi River and was moving NW at 13 MPH (21 KPH).

Maximum sustanined winds were 175 MPH (282KPH) making Katrina a category 5 storm on the Saffir-Simpson scale.

Credit: NOAA



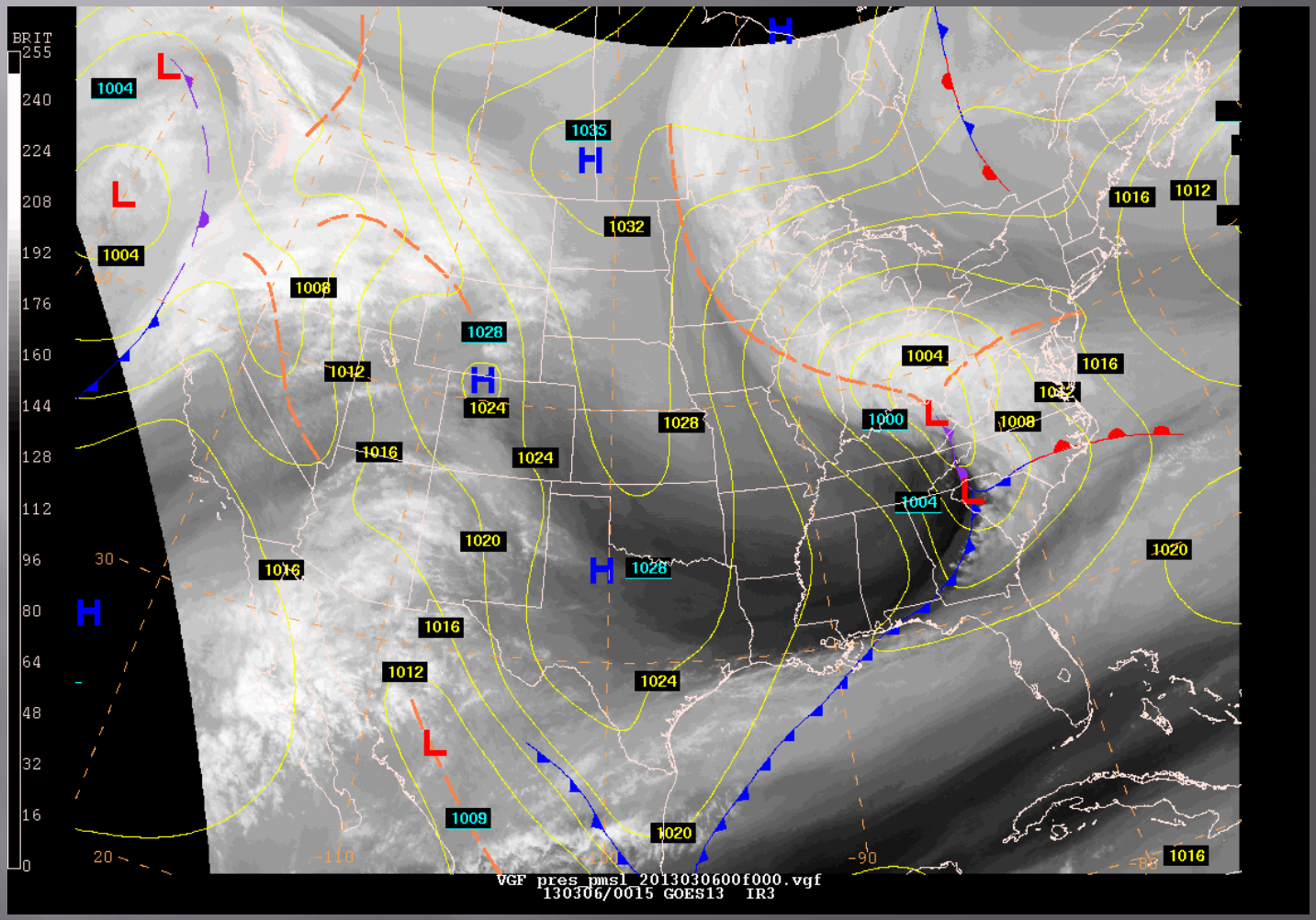

for Safety at Sea
My Cube

WHERE DID WE START (PRIOR TO THE SATELLITE PROVING GROUND)?

Geostationary
Scatterometers
Altimeters
TPW Products

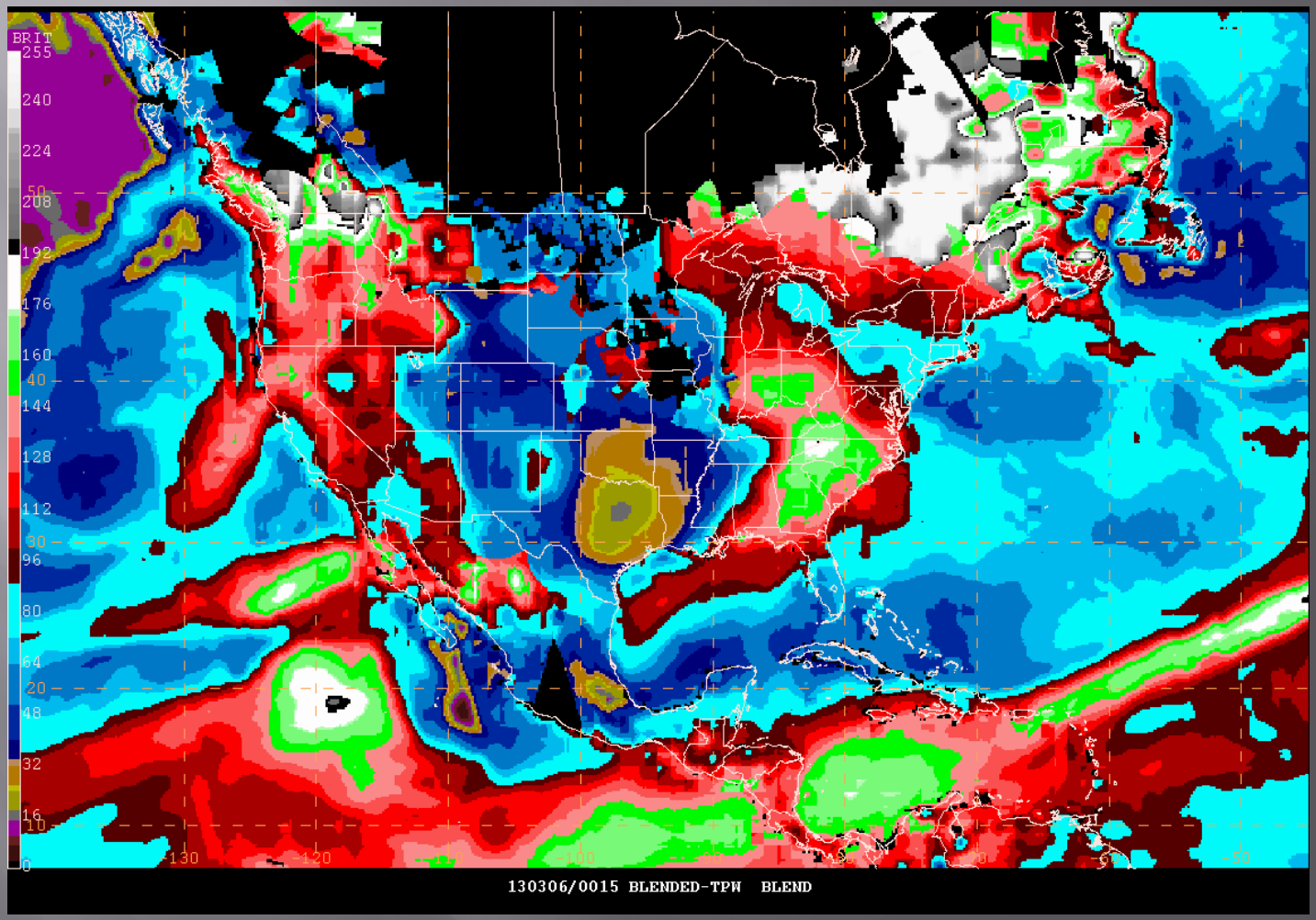
March 6 & 7, 2013 Nor'easter

GOES-13 WV overlaid with WPC sfc analyses



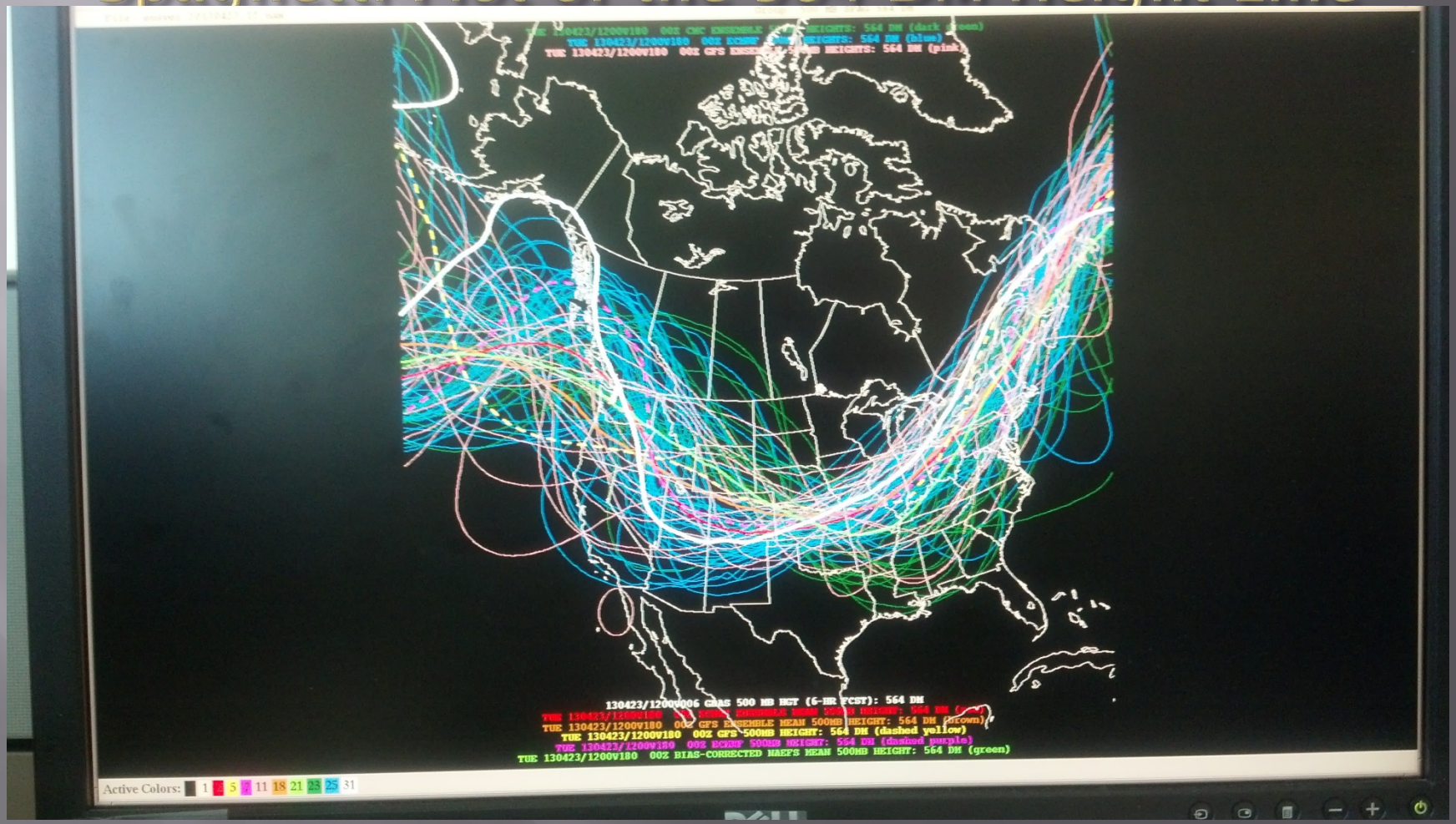
March 6 & 7, 2013 Nor'easter

Blended Total Precipitable Water Percent of Normal



Medium Range Forecast Issues

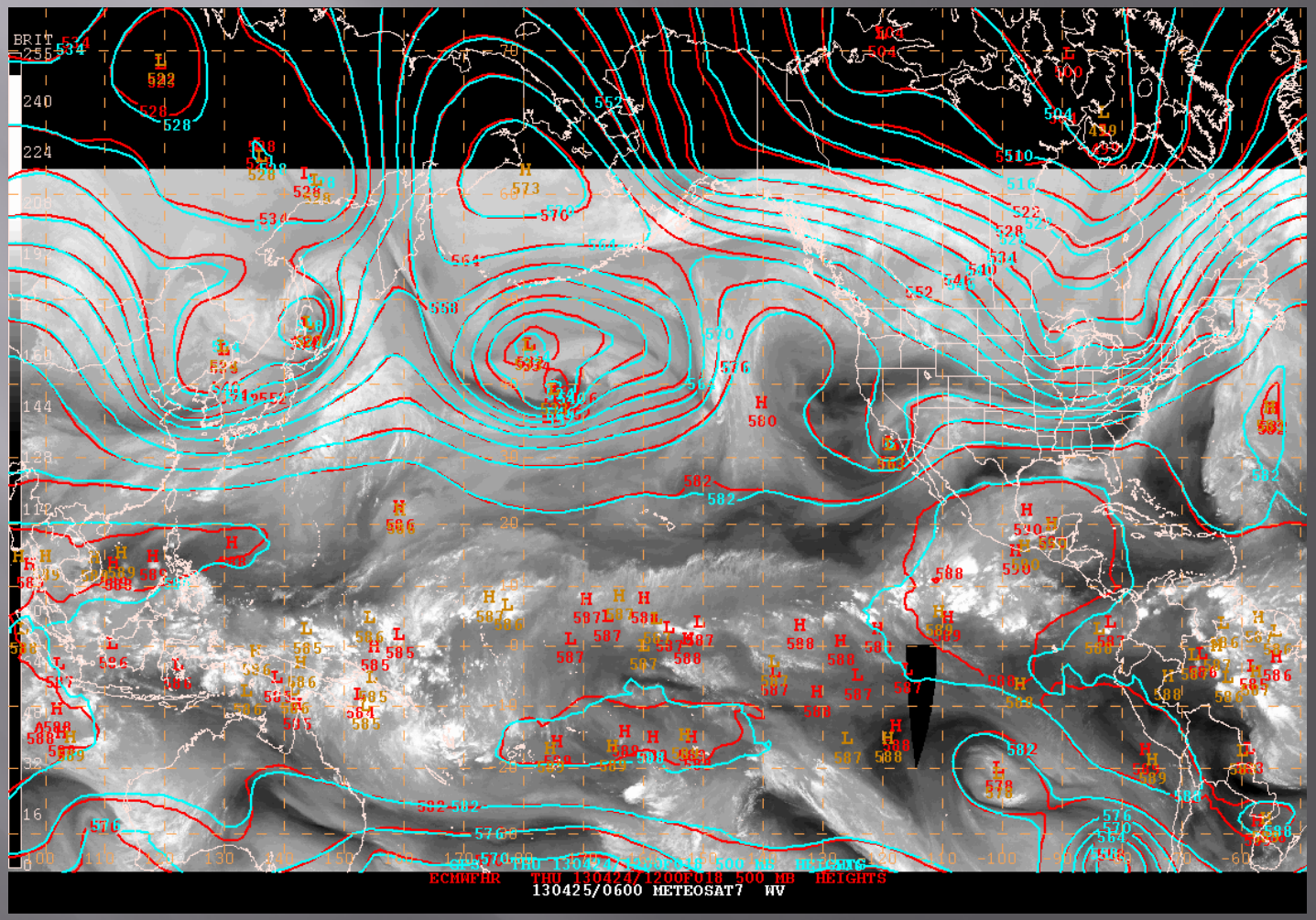
Spaghetti Plot of the 564 DM Height Line



Courtesy of Michael Schichtel (WPC)

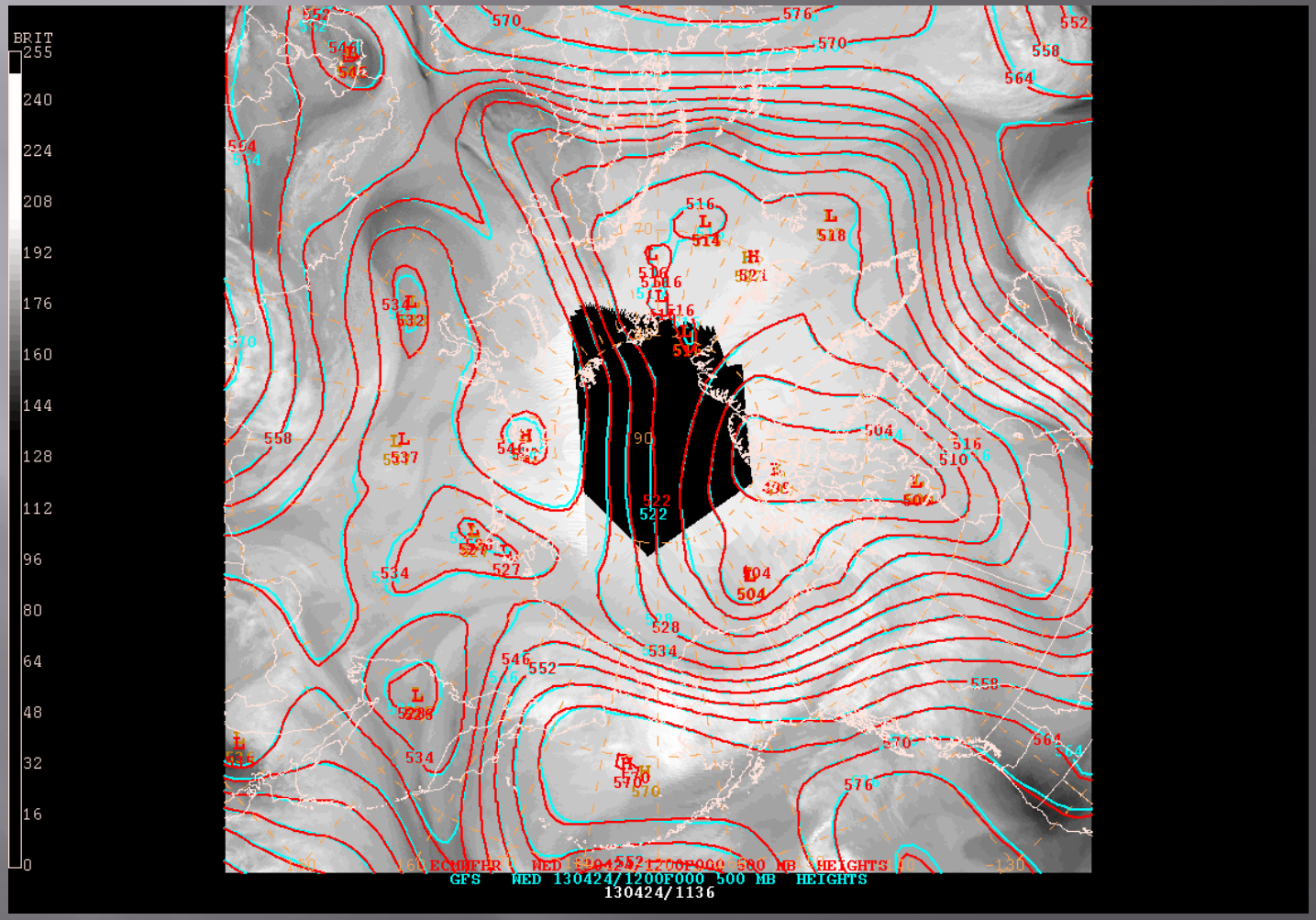
Satellite Observations vs. Model Forecasts

GFS and ECMWF 500 mb Heights overlaid on WV

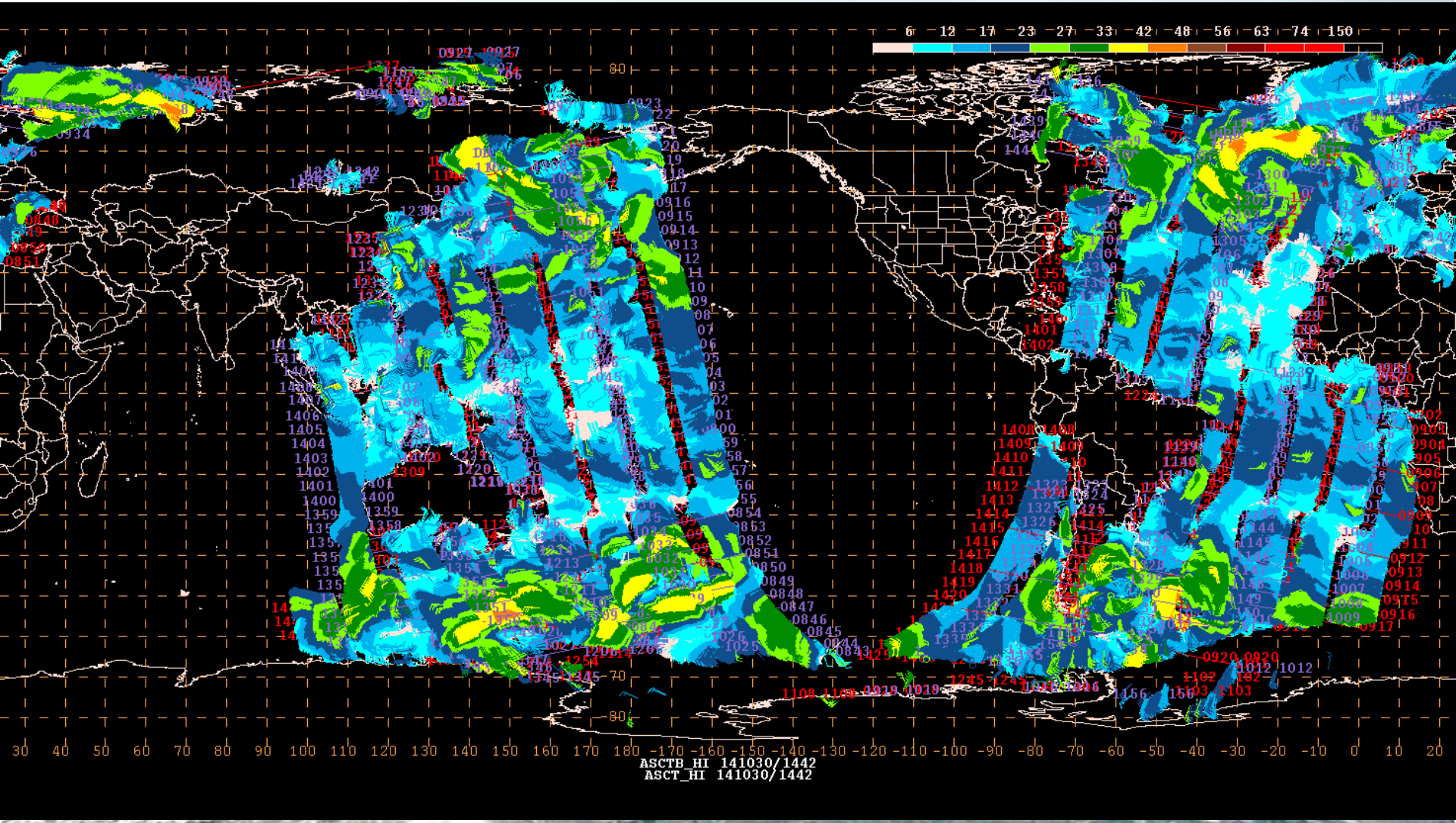


Satellite Observations vs. Model Forecasts

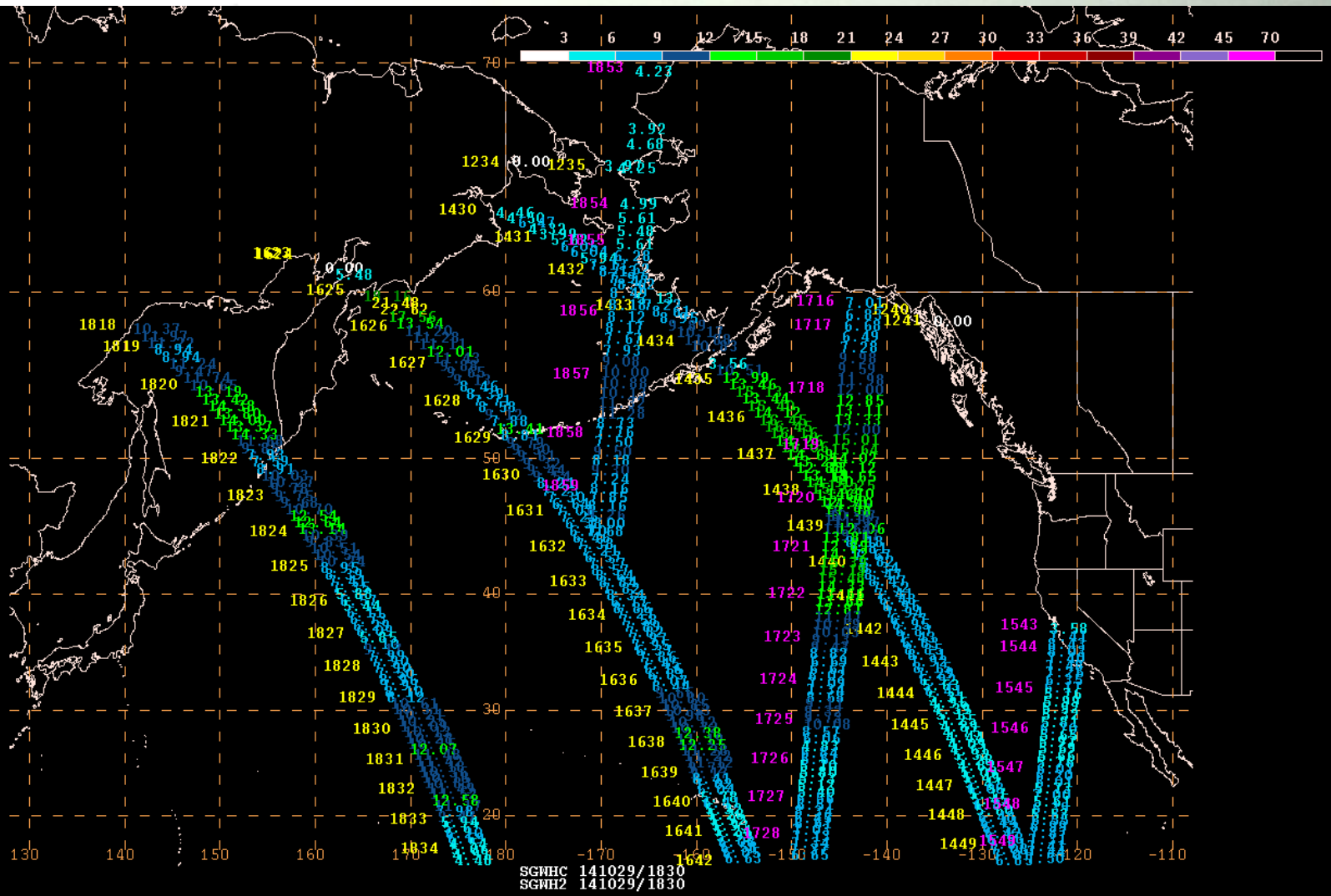
GFS and ECMWF 500 mb Heights overlaid on WV



OPC Activities Ocean Winds ASCAT A & B

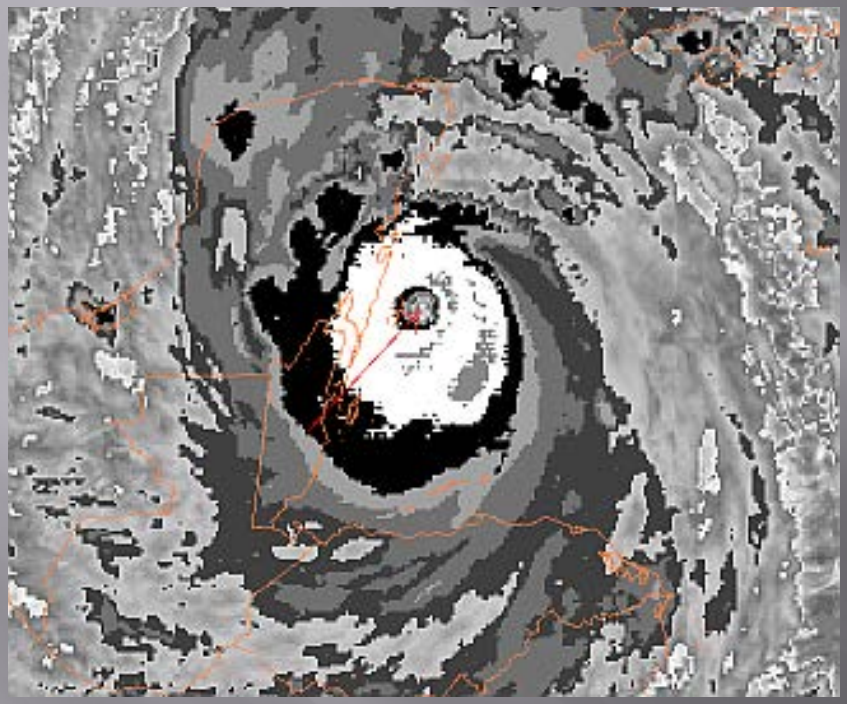


OPC Activities Ocean Waves Jason-2 and Cryosat



Dvorak Classifications

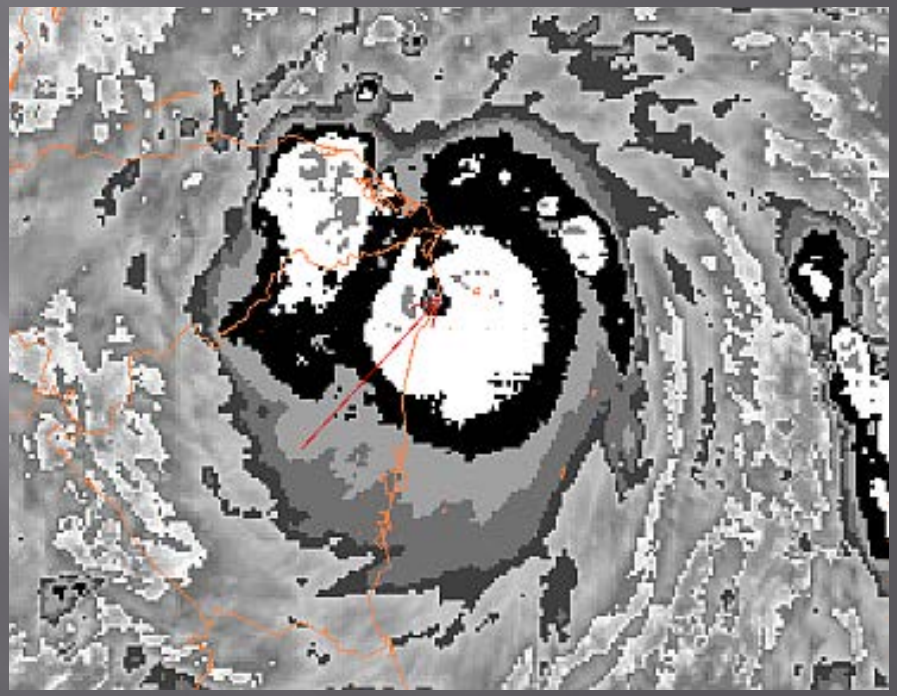
DEAN 21 August 0615 UTC



T 7.0/7.0
140 KT 921 MB

RECON 8/21/0605 UTC
156 KT (FLV) – 140 KT
909 MB

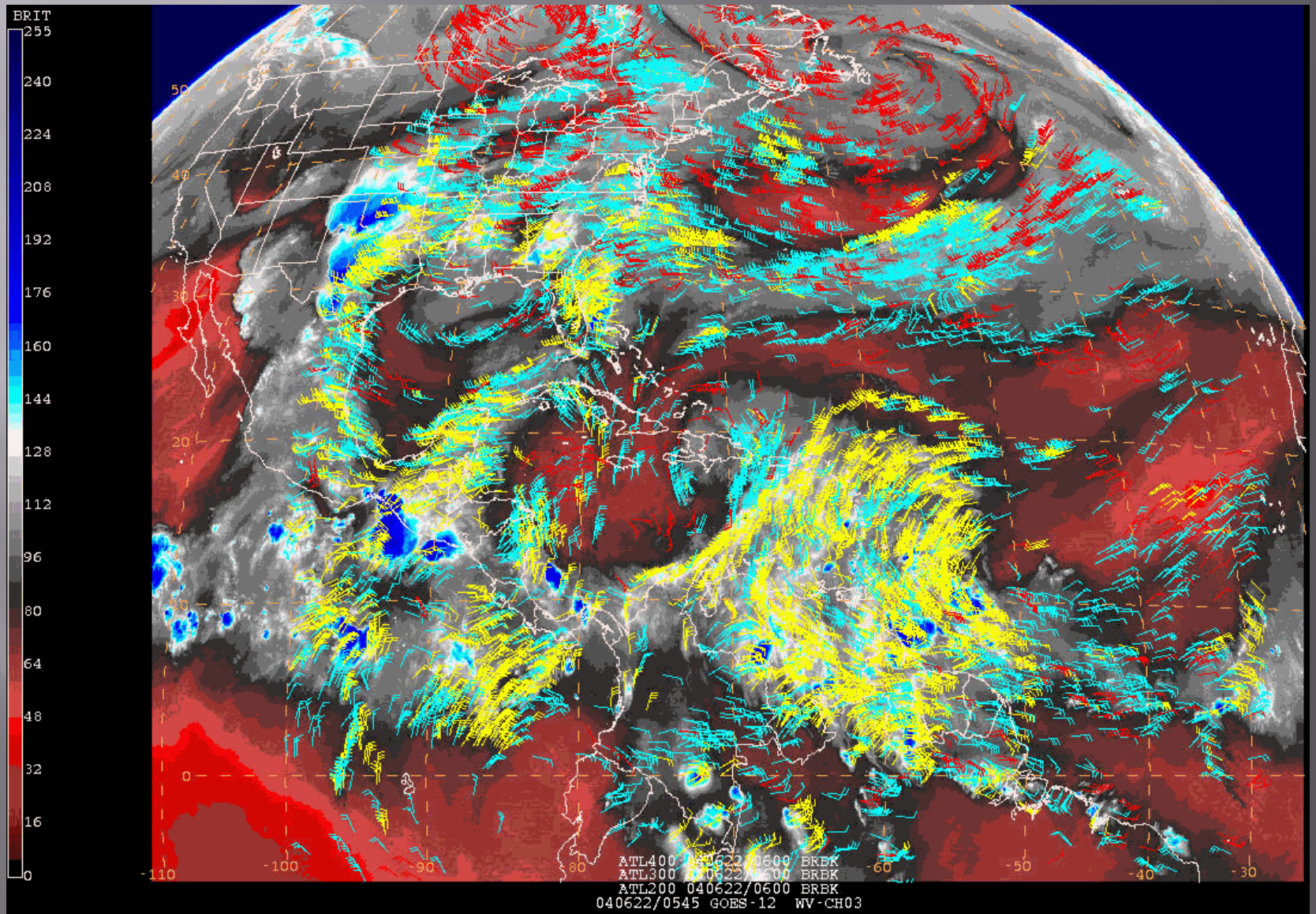
FELIX 4 September 1145 UTC



T 7.0/7.0
140 KT 921 MB

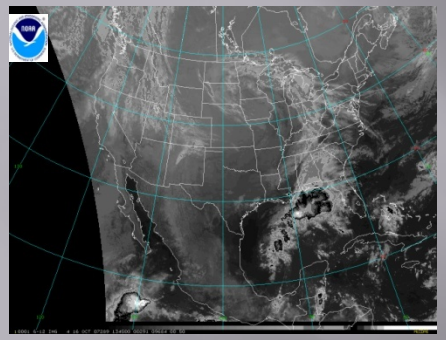
RECON 9/04/0702 UTC
148 KT (FLV) – 133 KT
939 MB

Water Vapor Image Interpretation: Satellite-Derived Wind Vectors

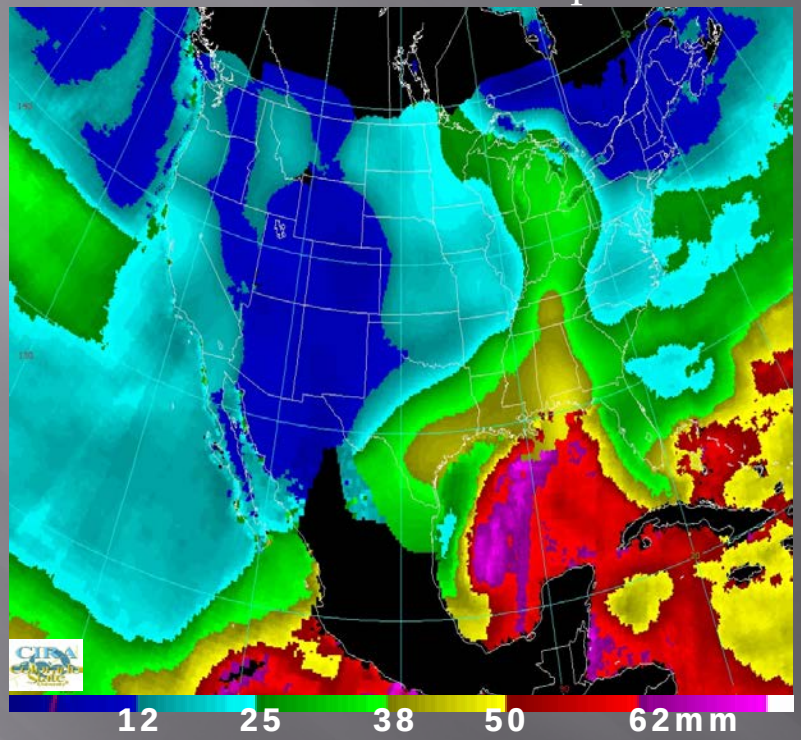


Familiar, Unfamiliar and New Satellite data

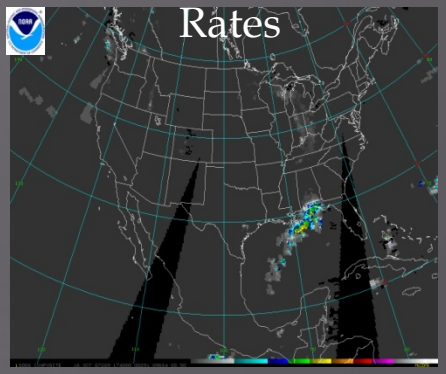
GOES IR



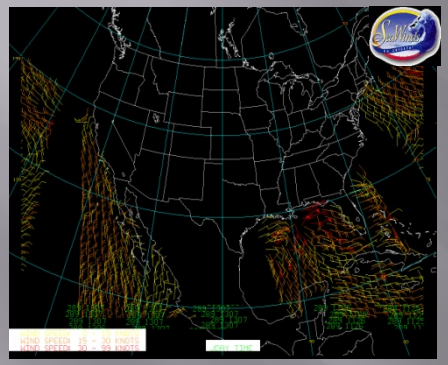
Blended Total Water Vapor



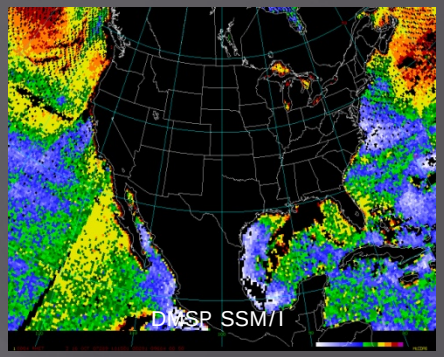
NOAA Microwave Rain Rates



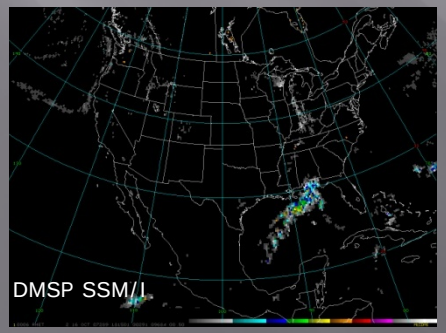
Quikscat Winds



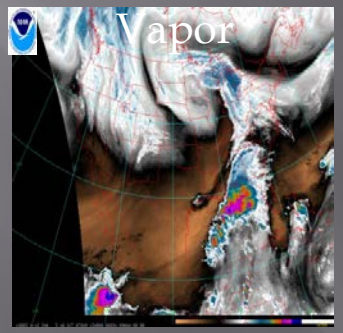
Microwave Winds



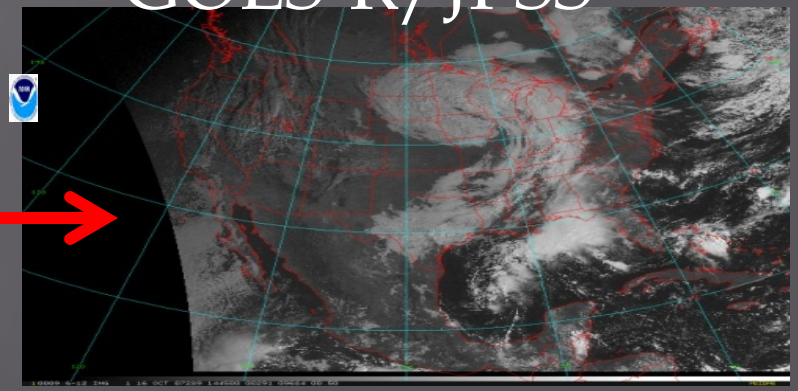
Microwave Rain Rates



GOES Water Vapor



GOES-R/JPSS



WHERE ARE WE NOW?

Improved Satellite Displays
GOES-R Proxy Products
MODIS
S-NPP
Himawari-8

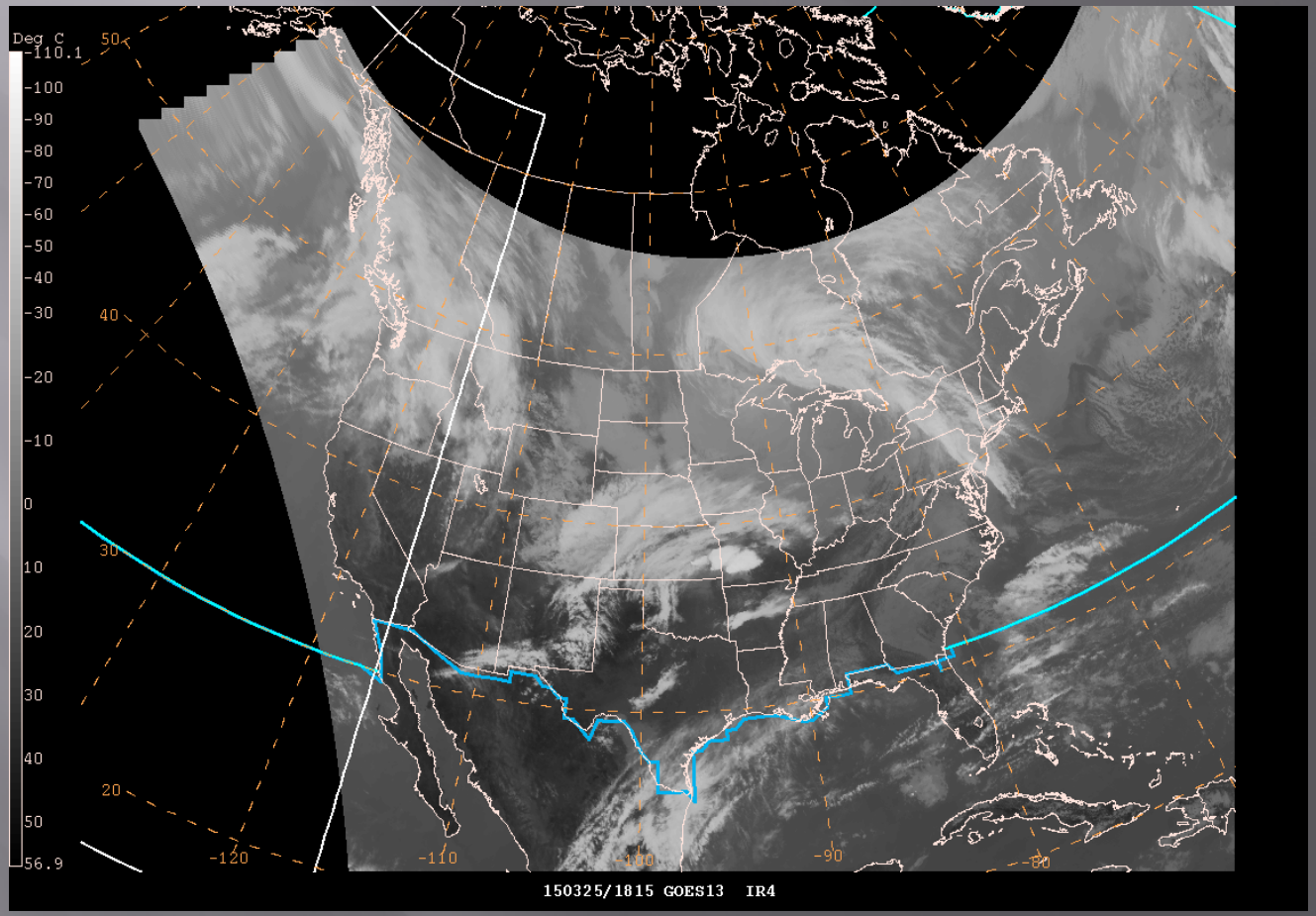
Satellite Improvement Project: The Problem

- Too many sectors, many of which as not being used by any forecasters.
- Poor spatial resolutions:
  - Ranges from 1-28 km
- Poor temporal resolutions:
  - On average, 30 minutes to 1 hour
- In order to prepare for Himawari-8 and GOES-R, we need to maximize our usage of GOES-E, GOES-W, Meteosat-10, MTSAT-2, and Meteosat-7 (IndoEx)

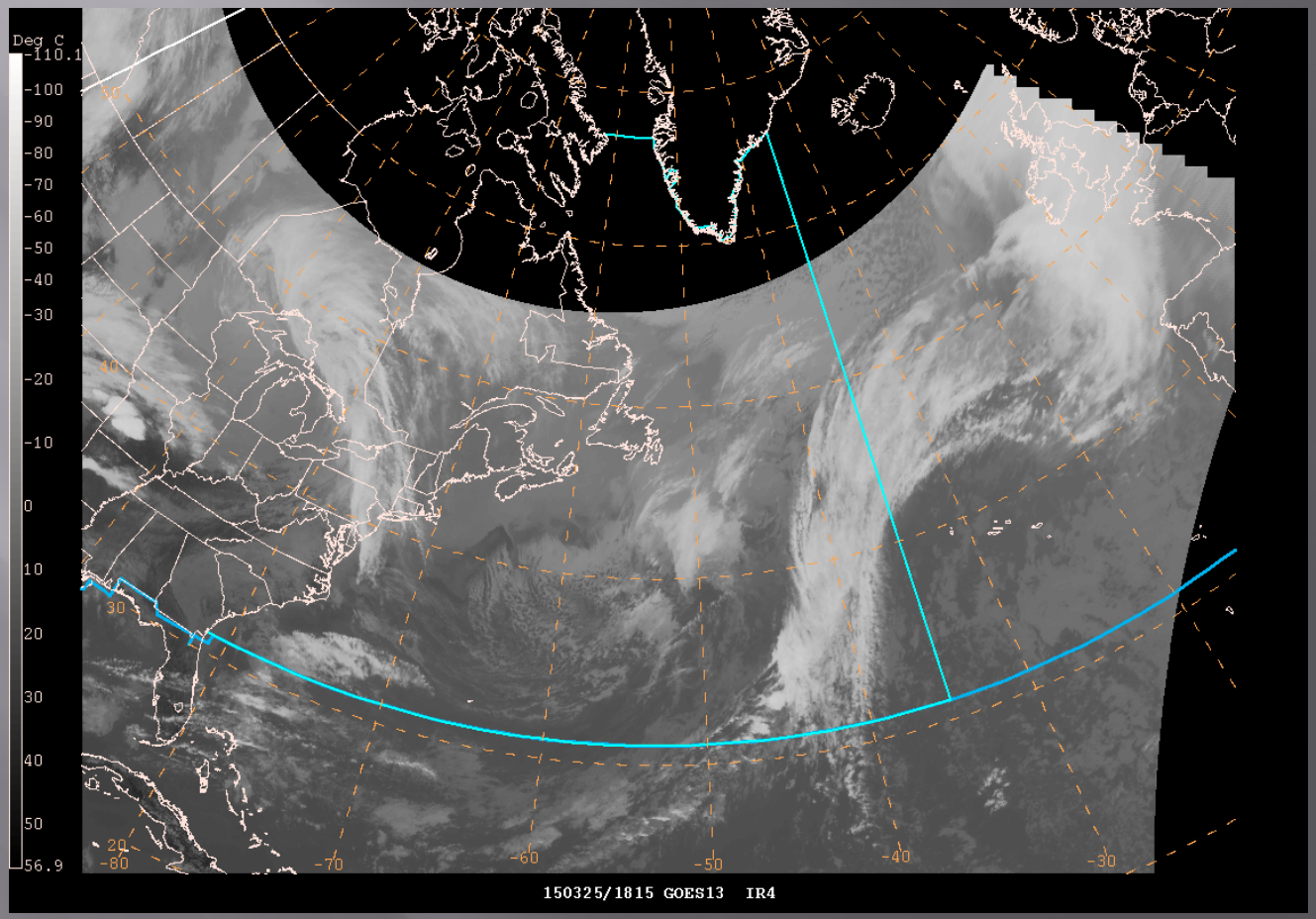
Current Satellite Directories: GOES-East

- Atlantic_10km
- ETropical_2km
- ETropical_4km
- NAmerica_4km
- NAtl_16km
- NAtlantic_2km
- NAtlantic_4km
- NHem_4km
- SHem_28km
- SHem_8km
- TPC
- Tropical_8km
- US_1km
- US_4km
- WAtlc_merc
- WTropical_2km
- WTropical_4km
- WashDC_1km

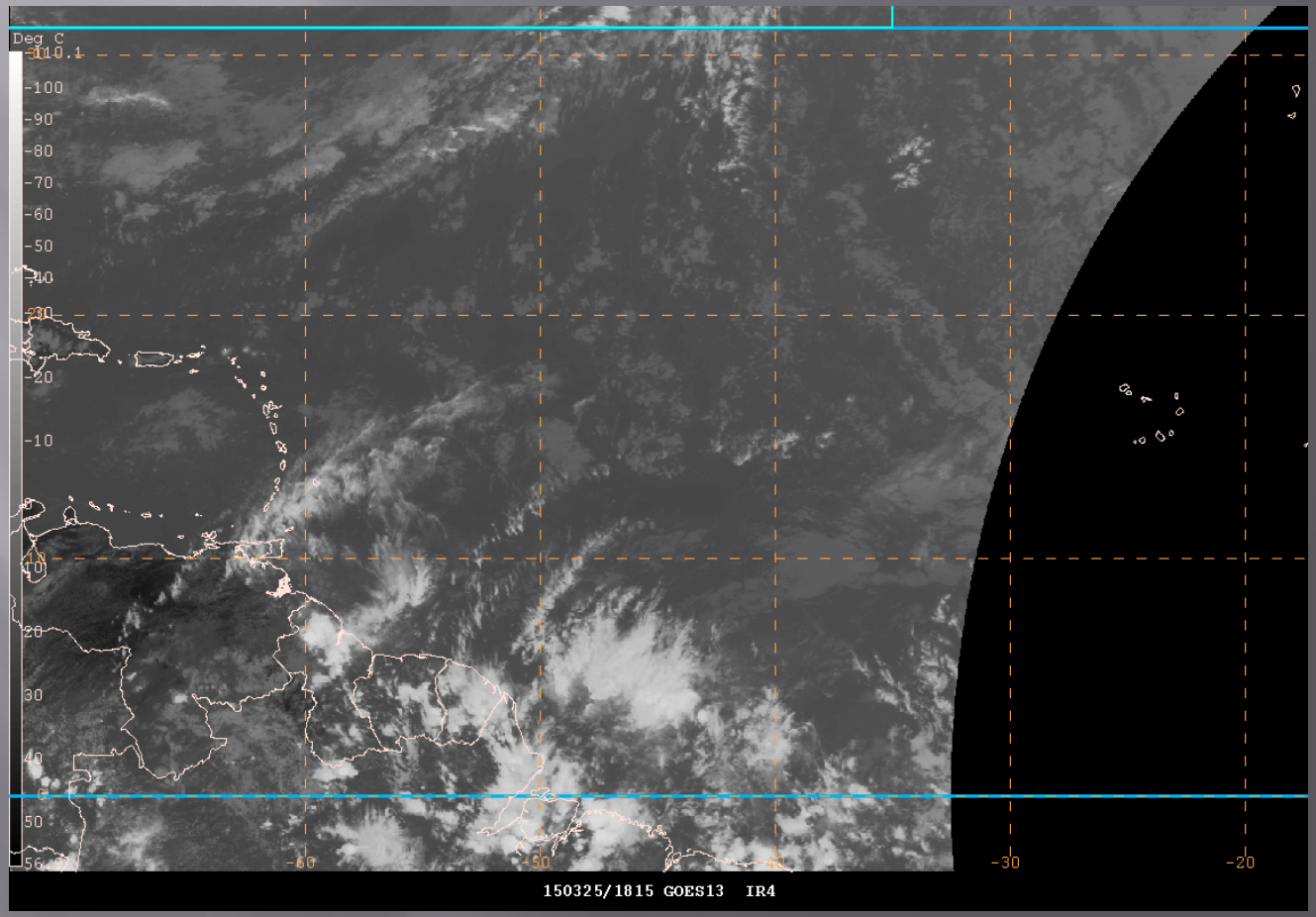
Current Satellite Directories: GOES-East North America



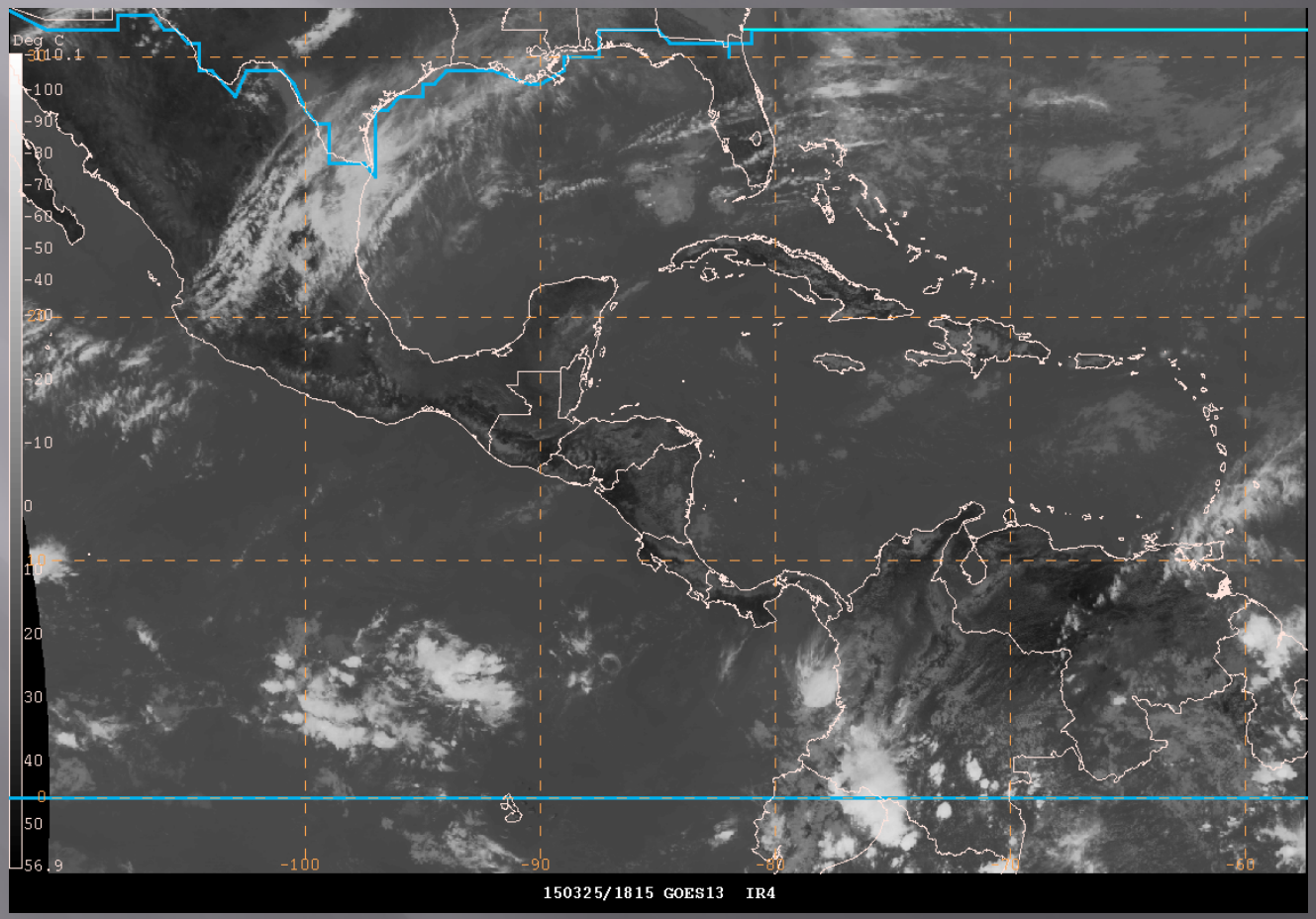
Current Satellite Directories: GOES-East North Atlantic



Current Satellite Directories: GOES-East East Atlantic



Current Satellite Directories: GOES-East West Atlantic



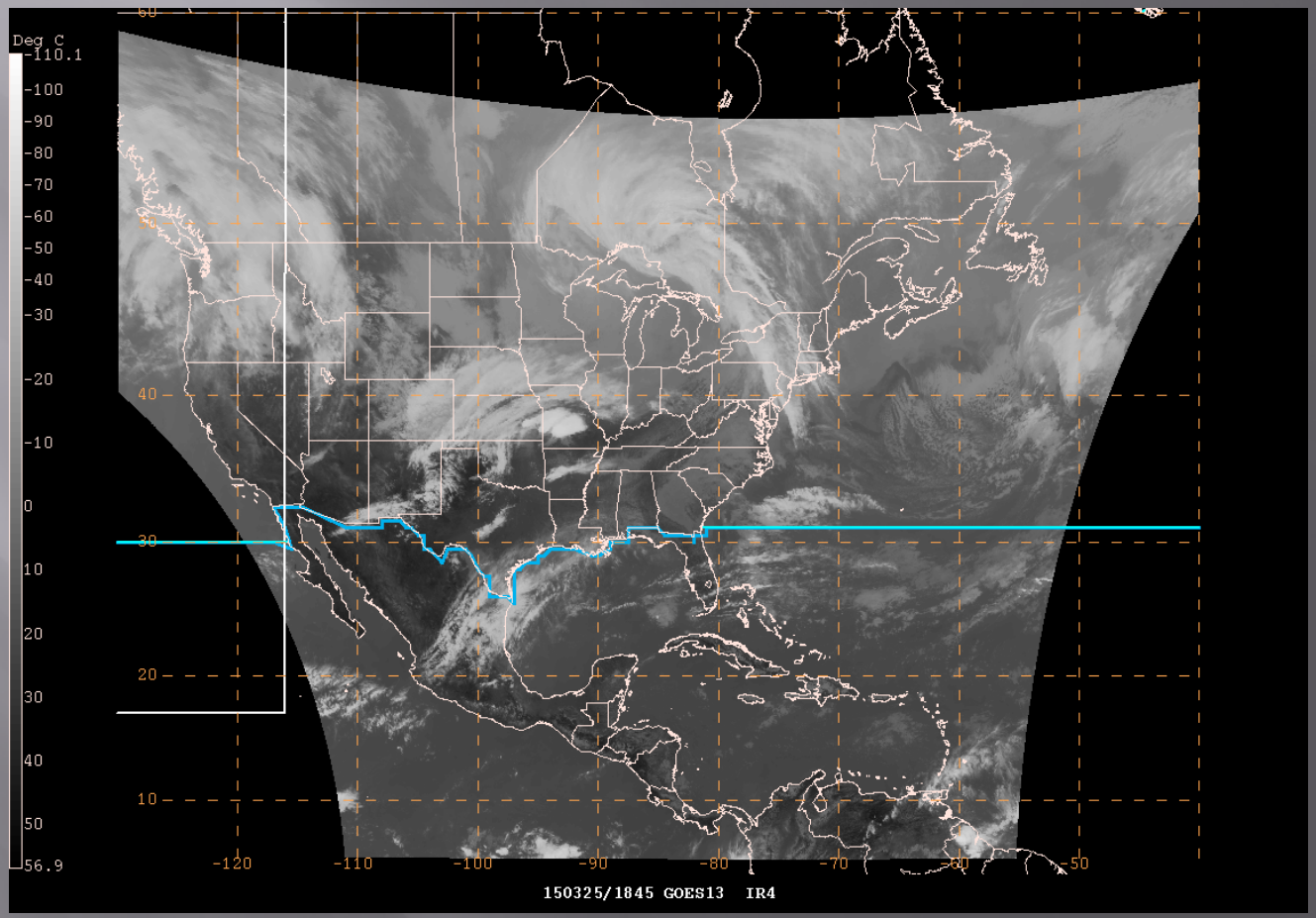
New Satellite Directories: GOES-East

- CONUS
  - Rectilinear and Polar Stereographic
    - 0p64_VIS-Red – 1 km, 15 minutes, RSO (5-7 minutes)
    - 10p7_IR-Clear – 4 km, 15 minutes, RSO (5-7 minutes)
    - 3p9_SWIR – 4 km, 15 minutes, RSO (5-7 minutes)
    - 6p5_WV-UL – 4 km, 15 minutes, RSO (5-7 minutes)
    - 13p3-CO2 – 4 km, 15 minutes, RSO (5-7 minutes)

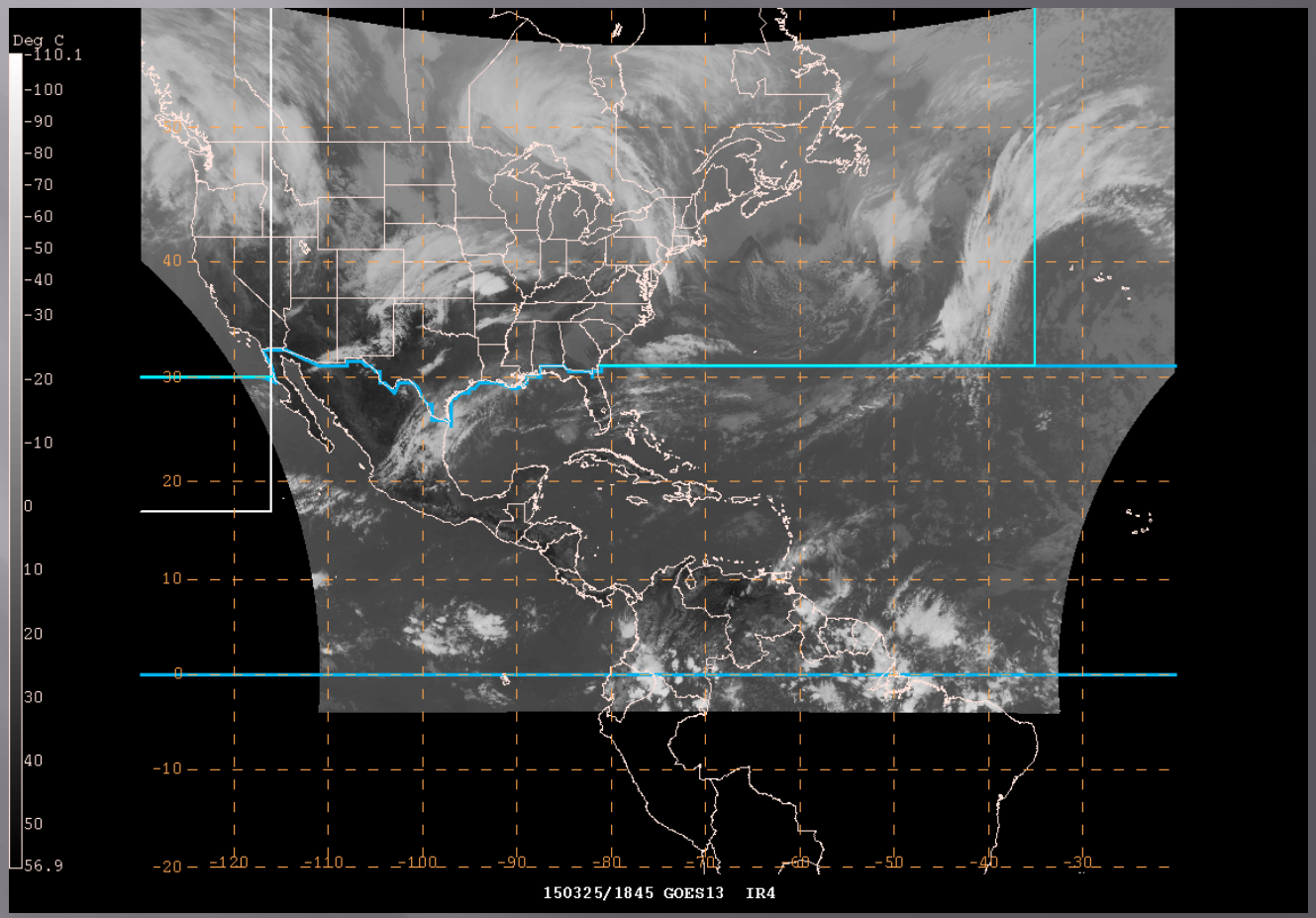
New Satellite Directories: GOES-East

- NHEM
  - Rectilinear and Polar Stereographic
    - 0p64_VIS-Red – 1 km, 30 minutes
    - 10p7_IR-Clear – 4 km, 30 minutes
    - 3p9_SWIR – 4 km, 30 minutes
    - 6p5_WV-UL – 4 km, 30 minutes
    - 13p3-CO2 – 4 km, 30 minutes

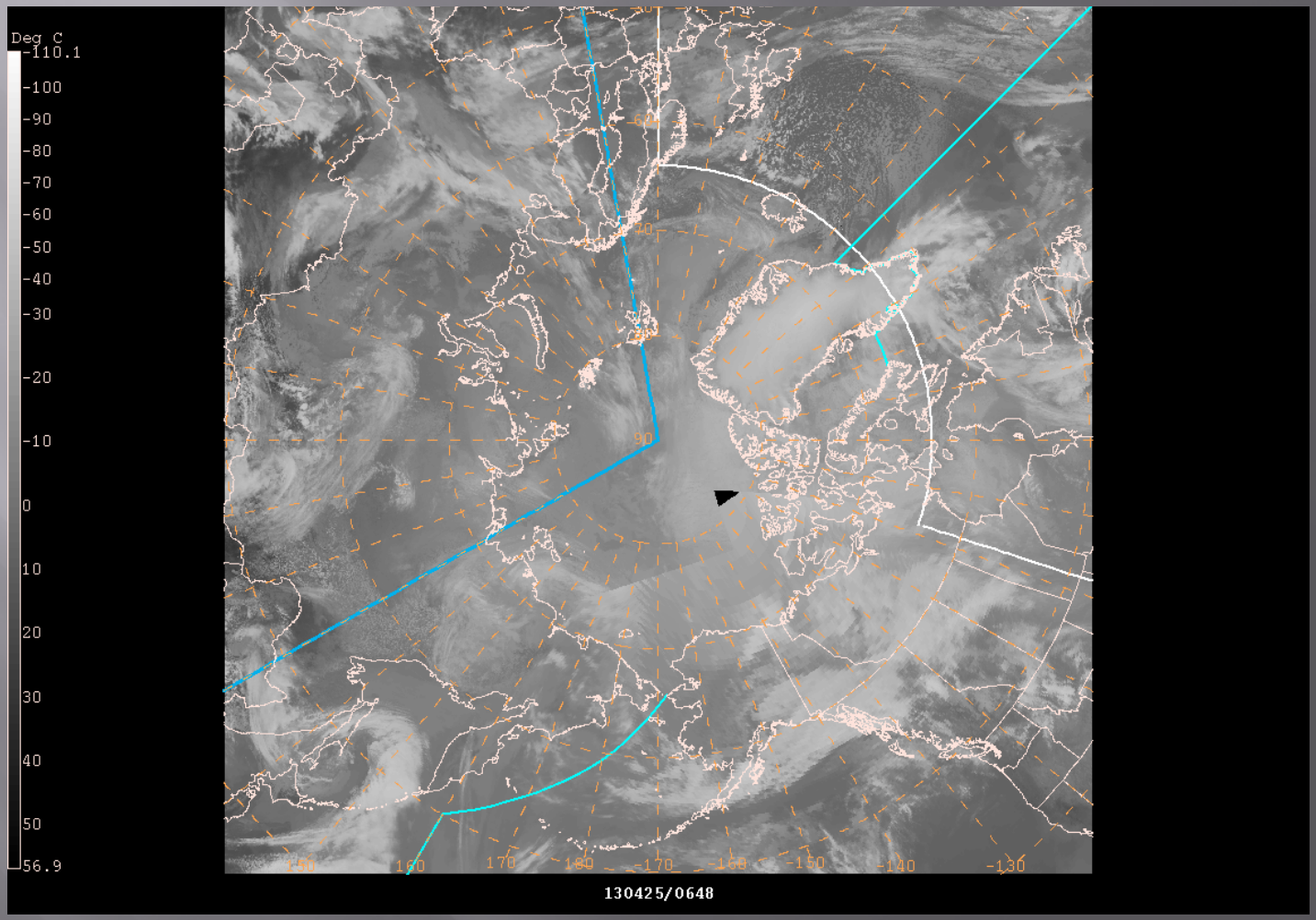
New Satellite Directories: GOES-East CONUS - Rectilinear



New Satellite Directories: GOES-East NHEM - Rectilinear



Arctic Imagery
4 km Infrared Geo/Leo Blend



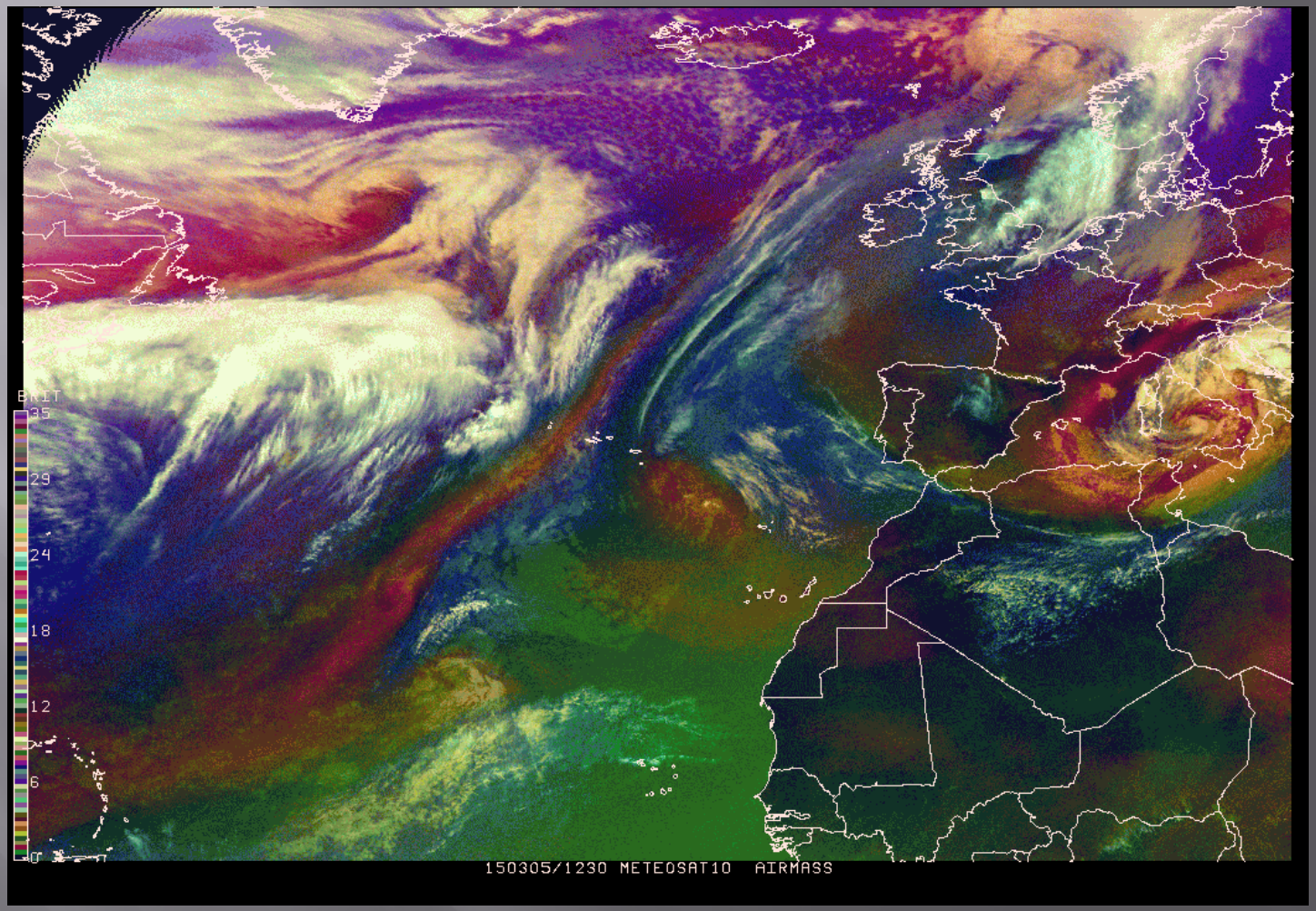
Courtesy of Matthew Lazarra (CIMSS/SSEC)

PROVING GROUND ACTIVITIES

RGB Products were the first introduced to operations at NHC, then OPC, WPC, and SAB. How are they being used today?

SEVIRI Air Mass RGB (GOES-R)

March 2015 Hurricane-Force Storm Events

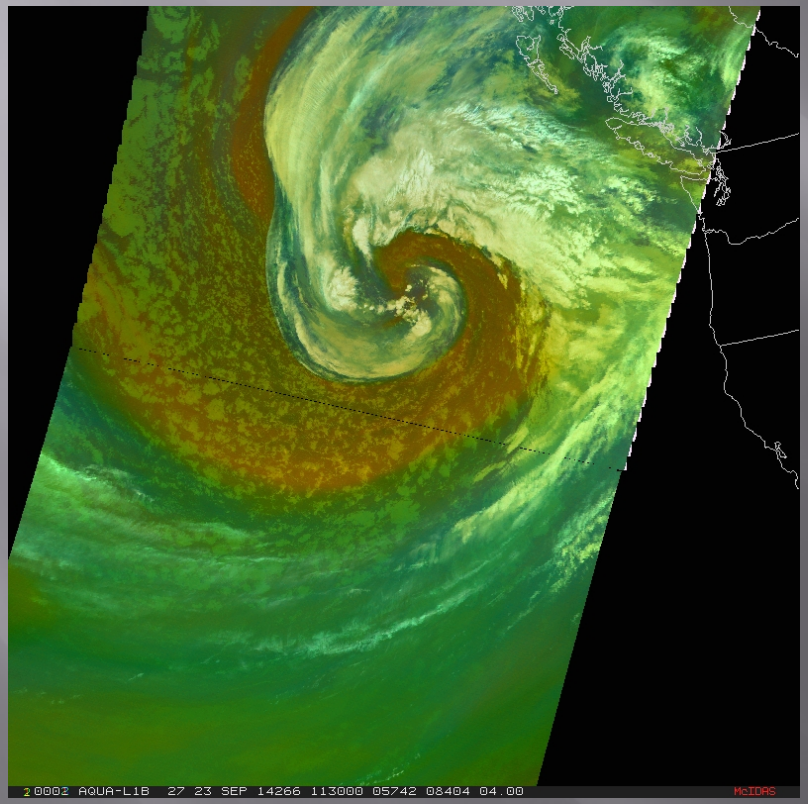


Animation courtesy of James Kells (OPC) and NASA SPoRT

OPC Decision Process

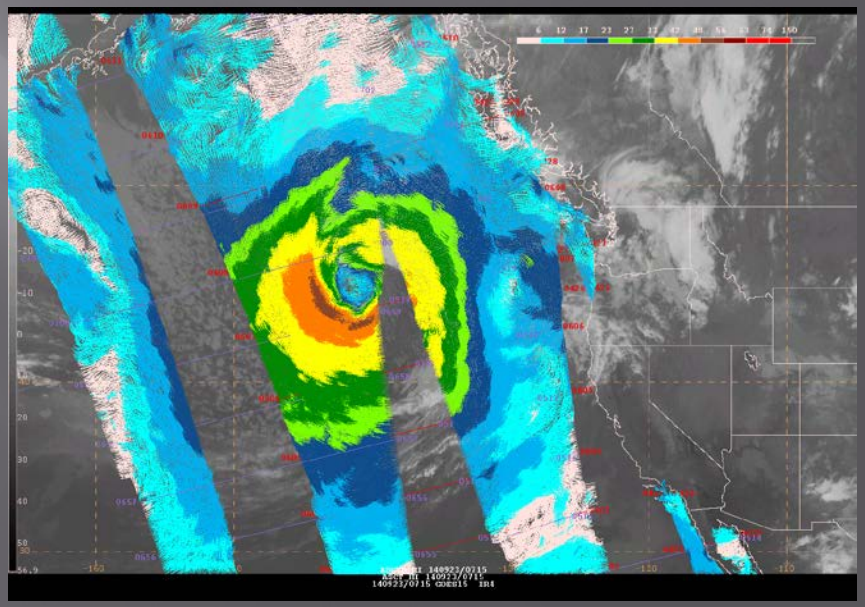
Hurricane-Force Low 1130 UTC on 09/23/14

MODIS AIR MASS RGB



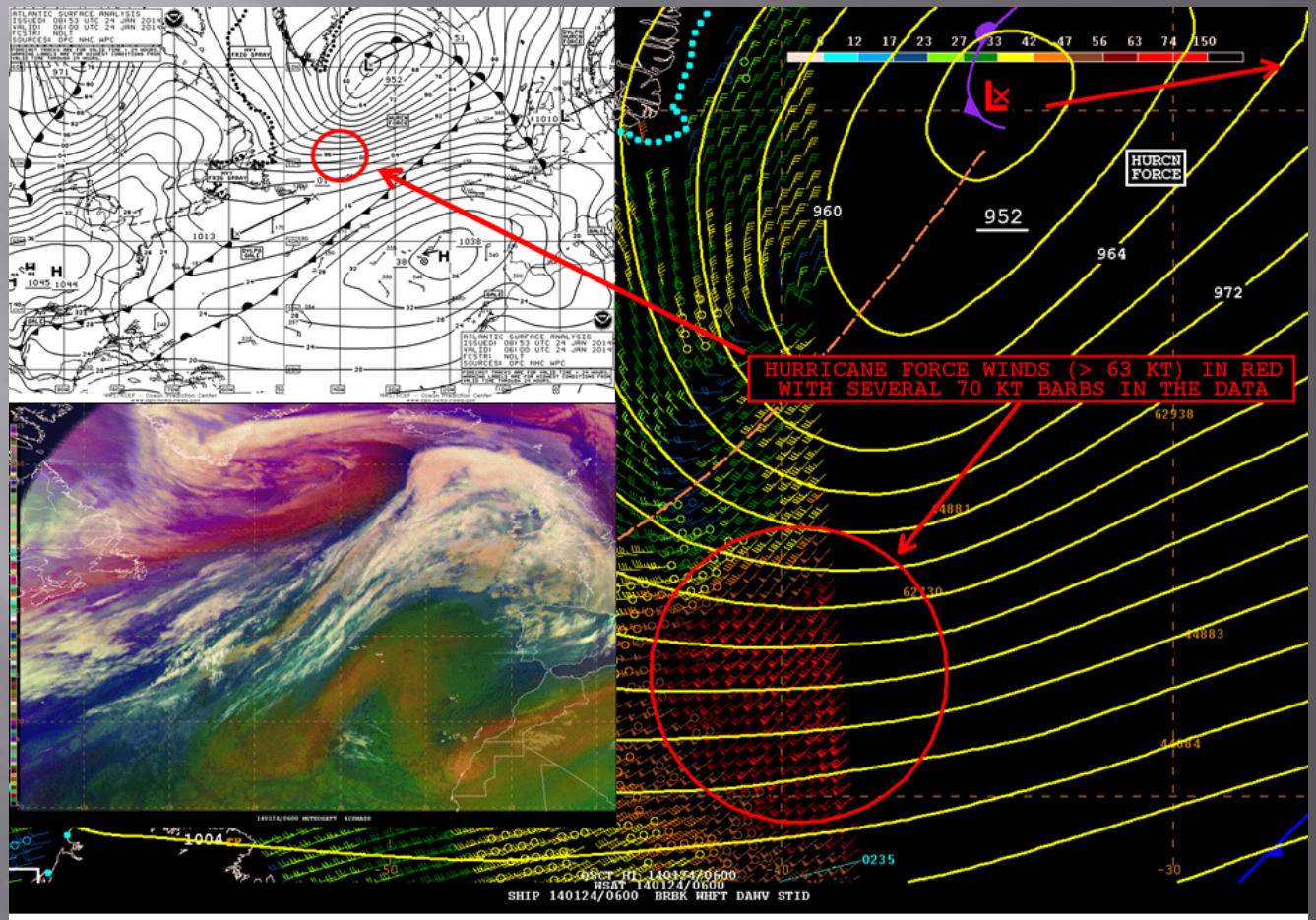
Courtesy of NASA SPoRT

ASCAT WINDS ON
GOES-15 INFRARED



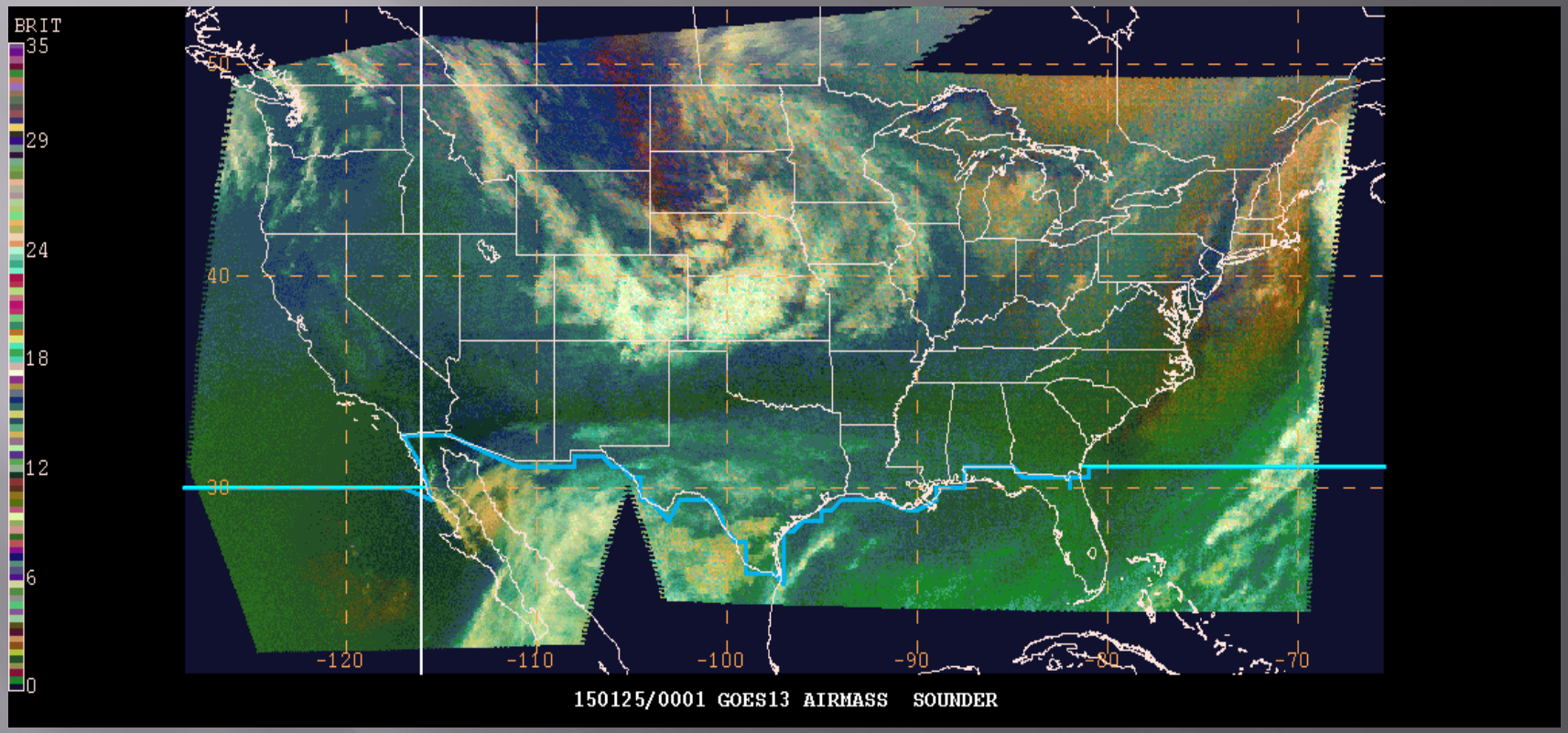
OPC Outreach to Mariners

Using the Air Mass RGB and ASCAT winds to demonstrate where the highest impact is located

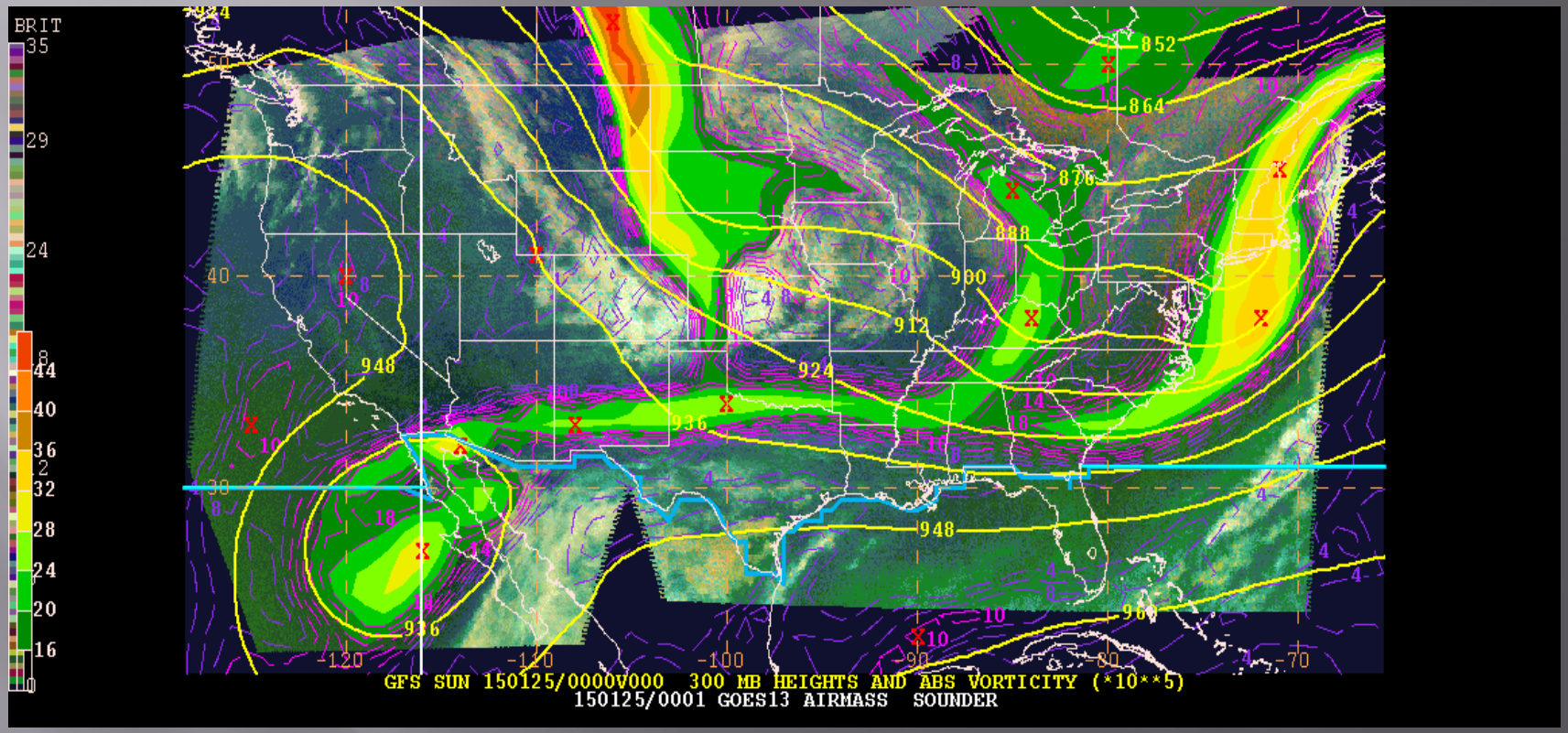


06Z OPC Atlantic Surface Analysis with OSCAT data showing a large area of hurricane force winds. RGB Airmass product shows maturing system with descent in south quadrant of low center.

GOES Sounder RGB Air Mass Application

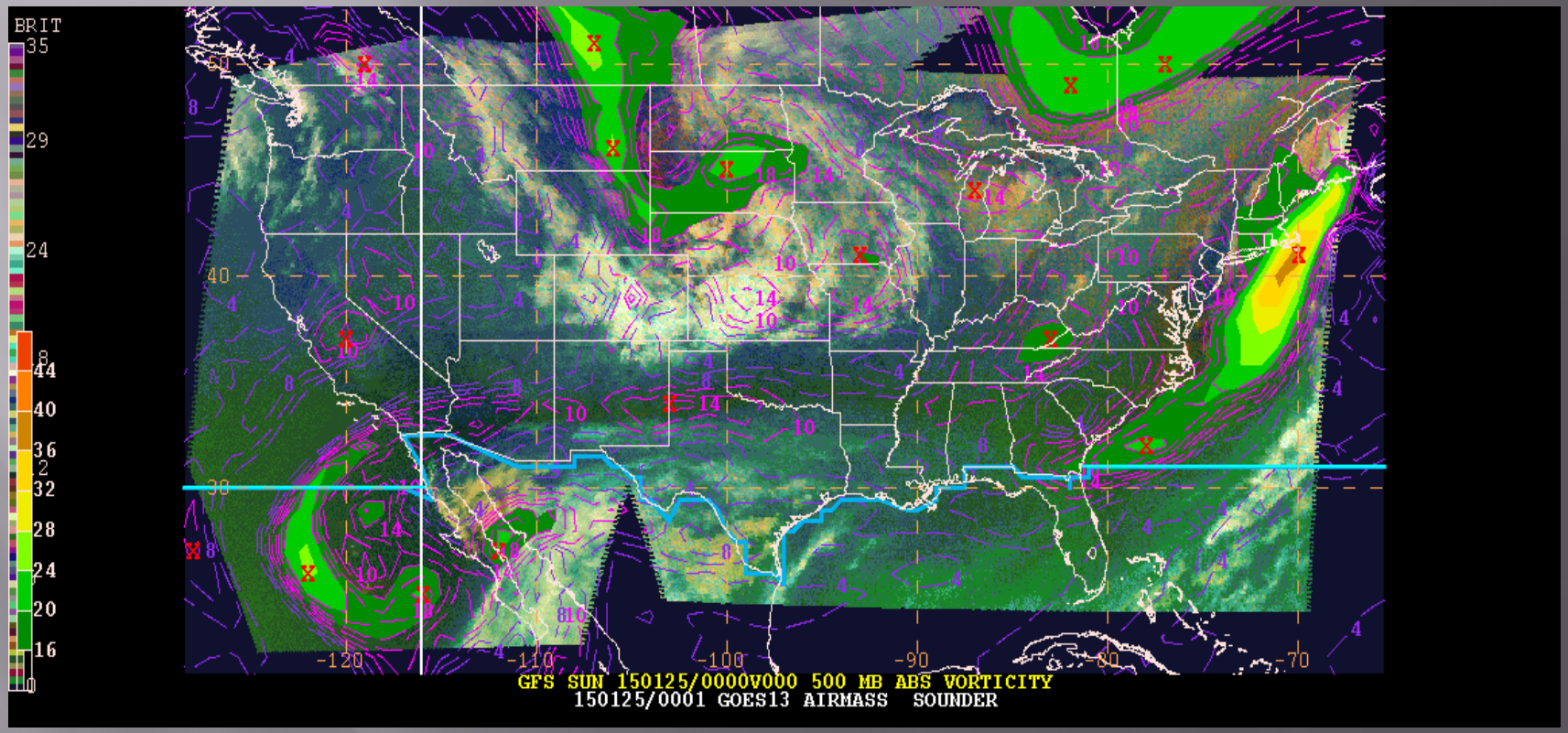


GOES Sounder RGB Air Mass Application



GFS 300 mb Z and ABSV

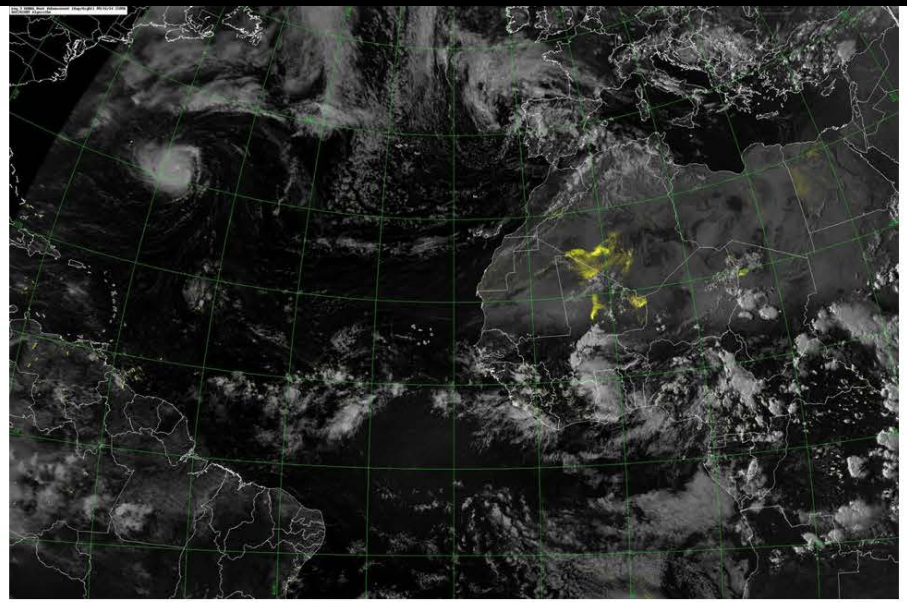
GOES Sounder RGB Air Mass Application



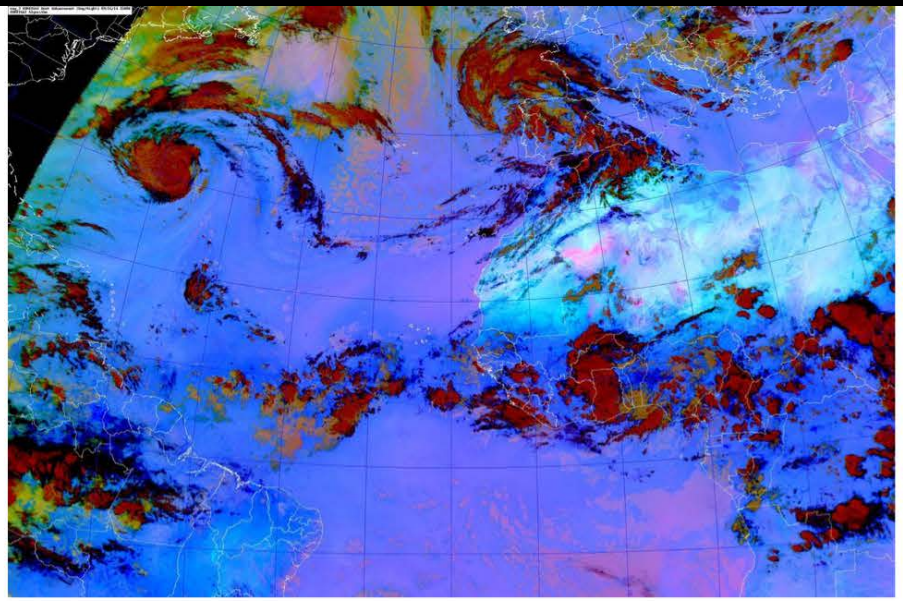
GFS 500 mb ABSV

Dust Product Comparisons

CIRA DEBRA-Dust



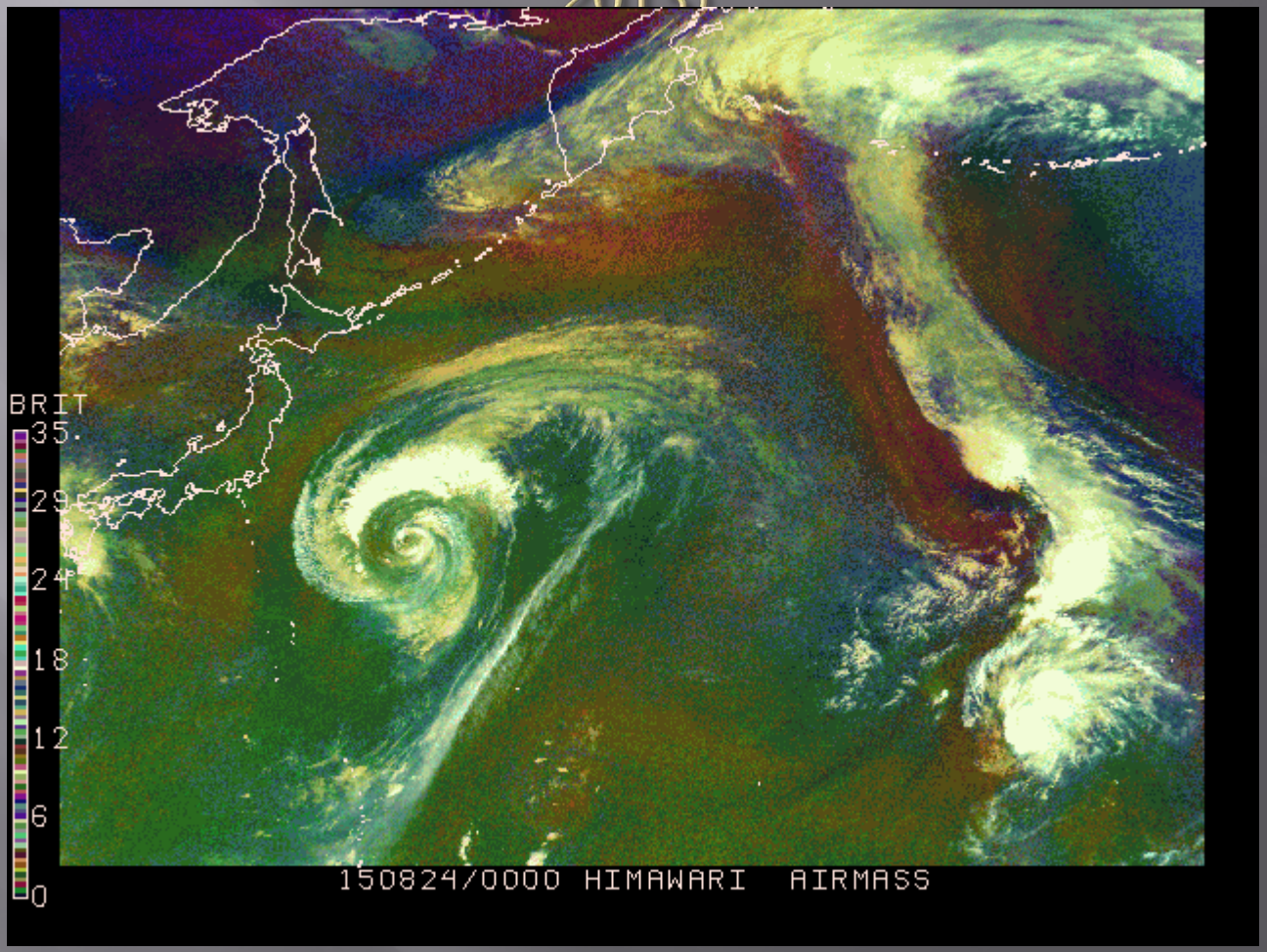
EUMETSAT Dust RGB



- DEBRA-Dust excels at identifying dust & dust boundaries
- EUMETSAT version also highlights large scale features (e.g., tropical waves, moisture boundaries)
- Preference depends on type of analysis being performed

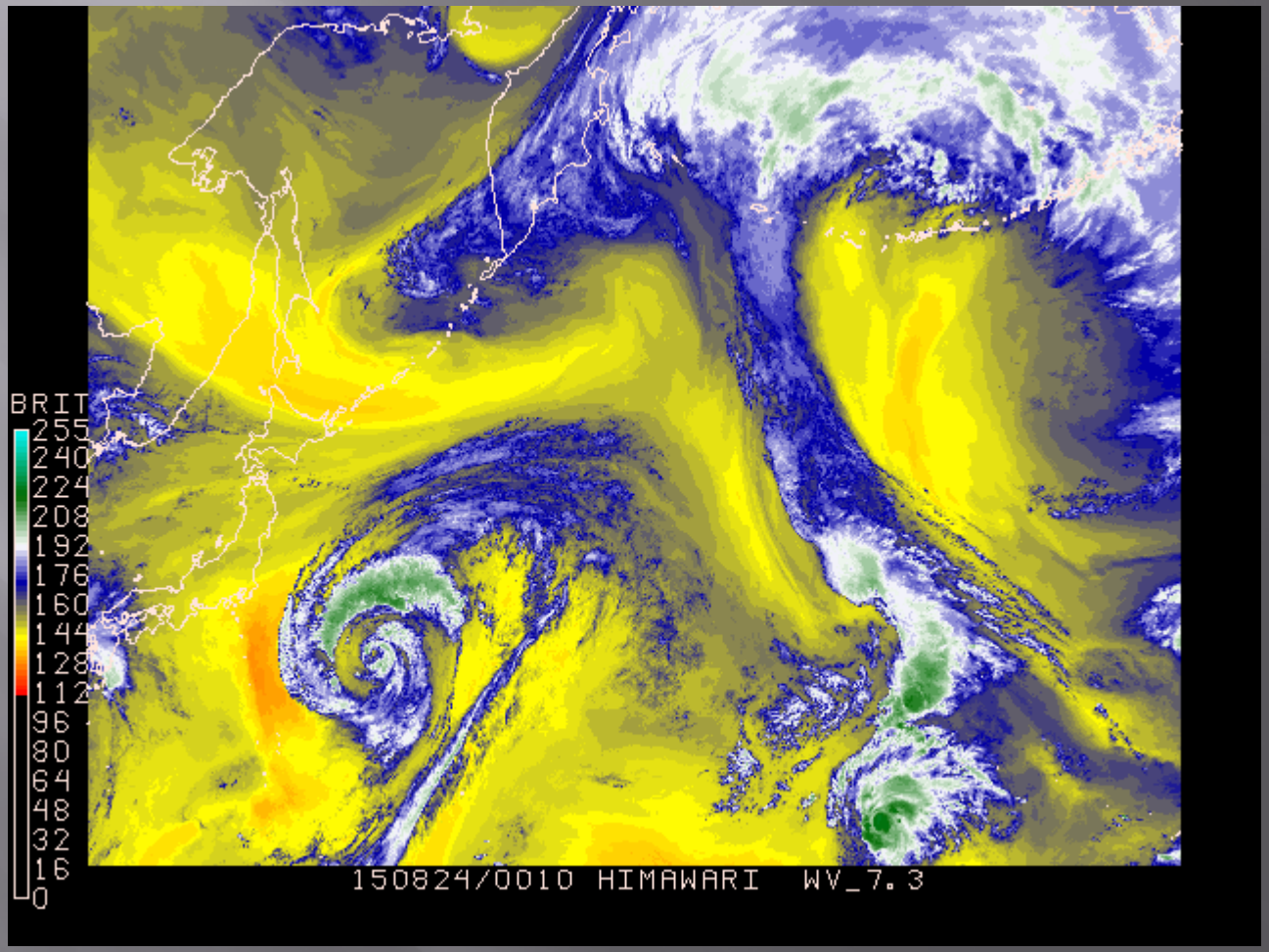
AHI Air Mass RGB use at OPC/WPC/SAB

Super Typhoon Atsani Extratropical Transition (August 2015)

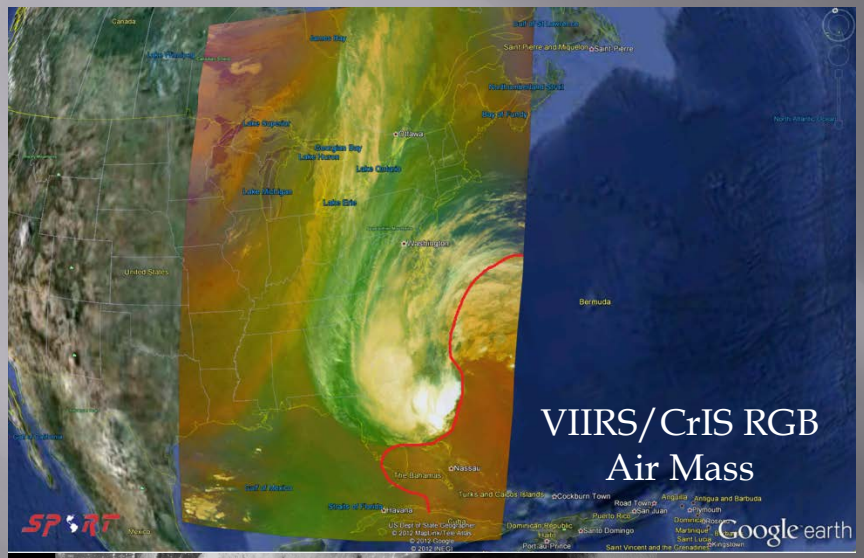


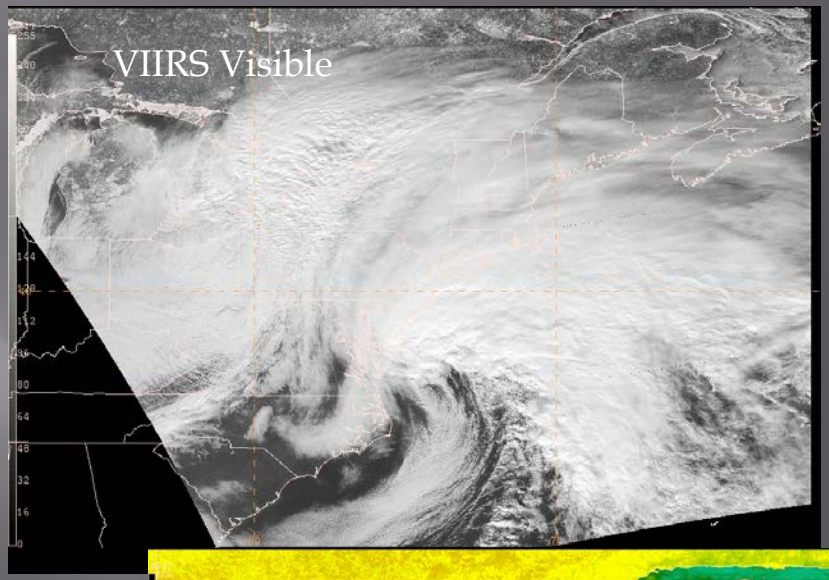
Imagery courtesy of NASA SPoRT

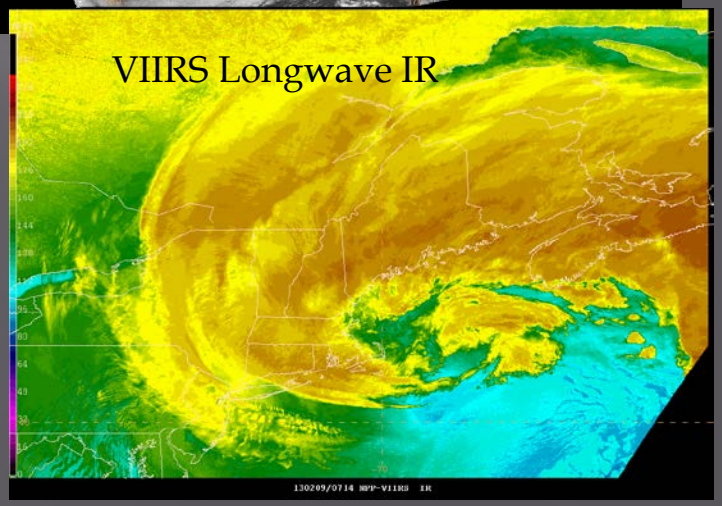
AHI 7.3 μm Low-Level Water Vapor
Super Typhoon Atsani Extratropical Transition (August 2015)



Introducing the JPSS Proving Ground
NCEP Centers Edition



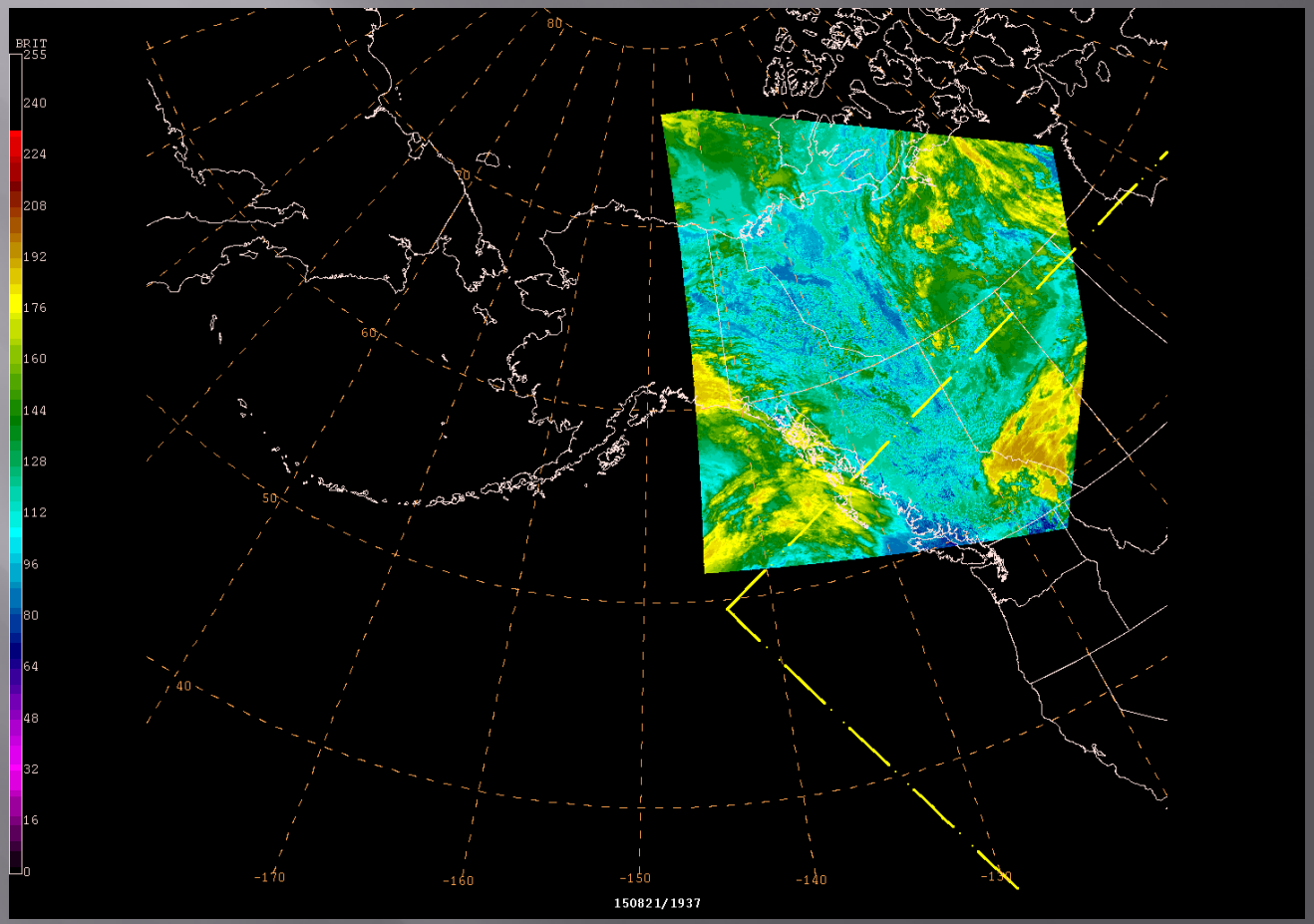




Provided by CIMSS and NASA SPoRT

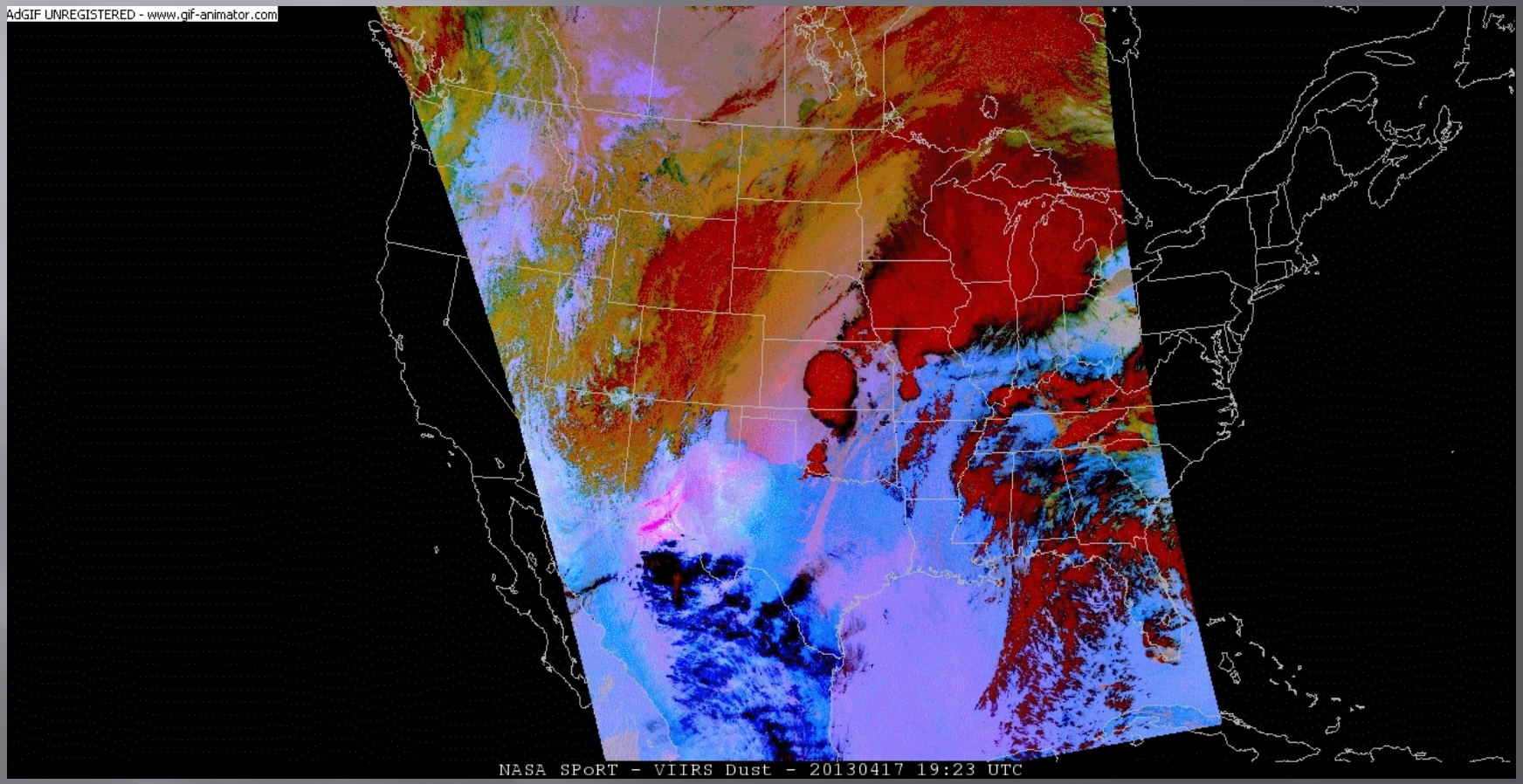
MODIS/VIIRS Longwave IR

Combining MODIS and VIIRS in One Display



Courtesy of CIMSS and NASA SPoRT

Dust Storm on 04/17/2013 VIIRS RGB Dust Product



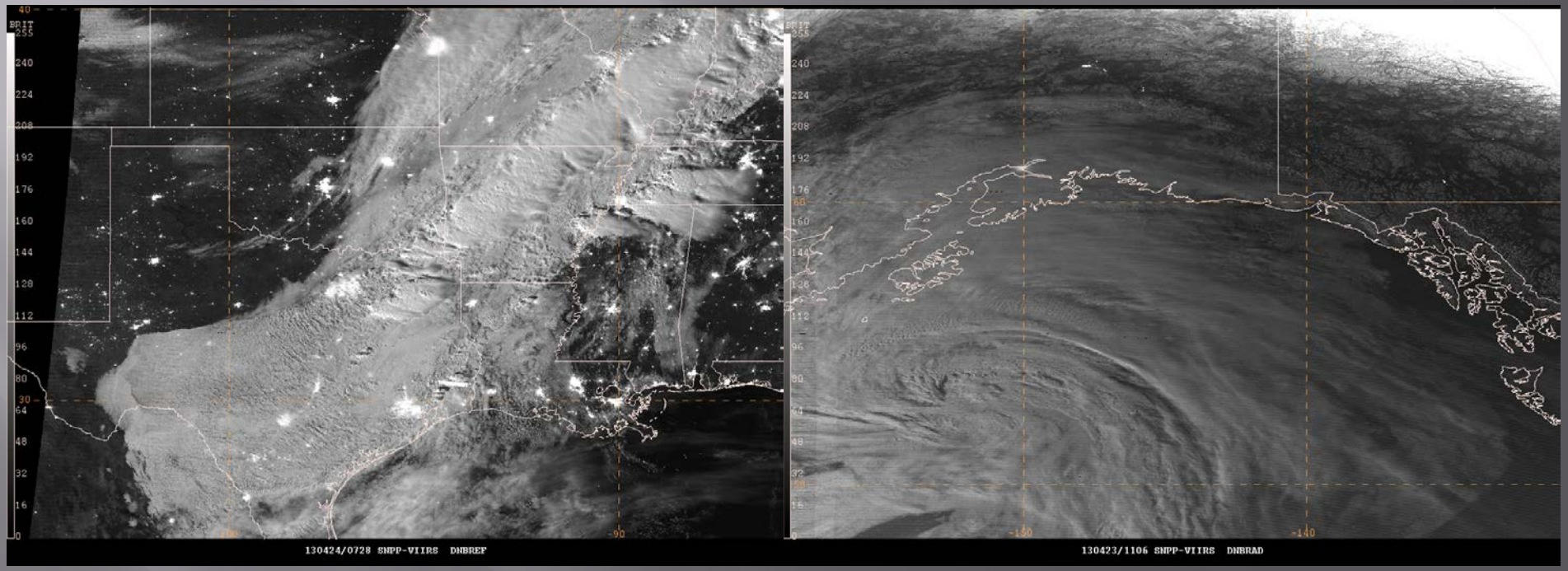
Courtesy of CIMSS and NASA SPoRT

Day-Night Band

Used by WPC and OPC to monitor cold front and storms at night with moonlight!

CONUS

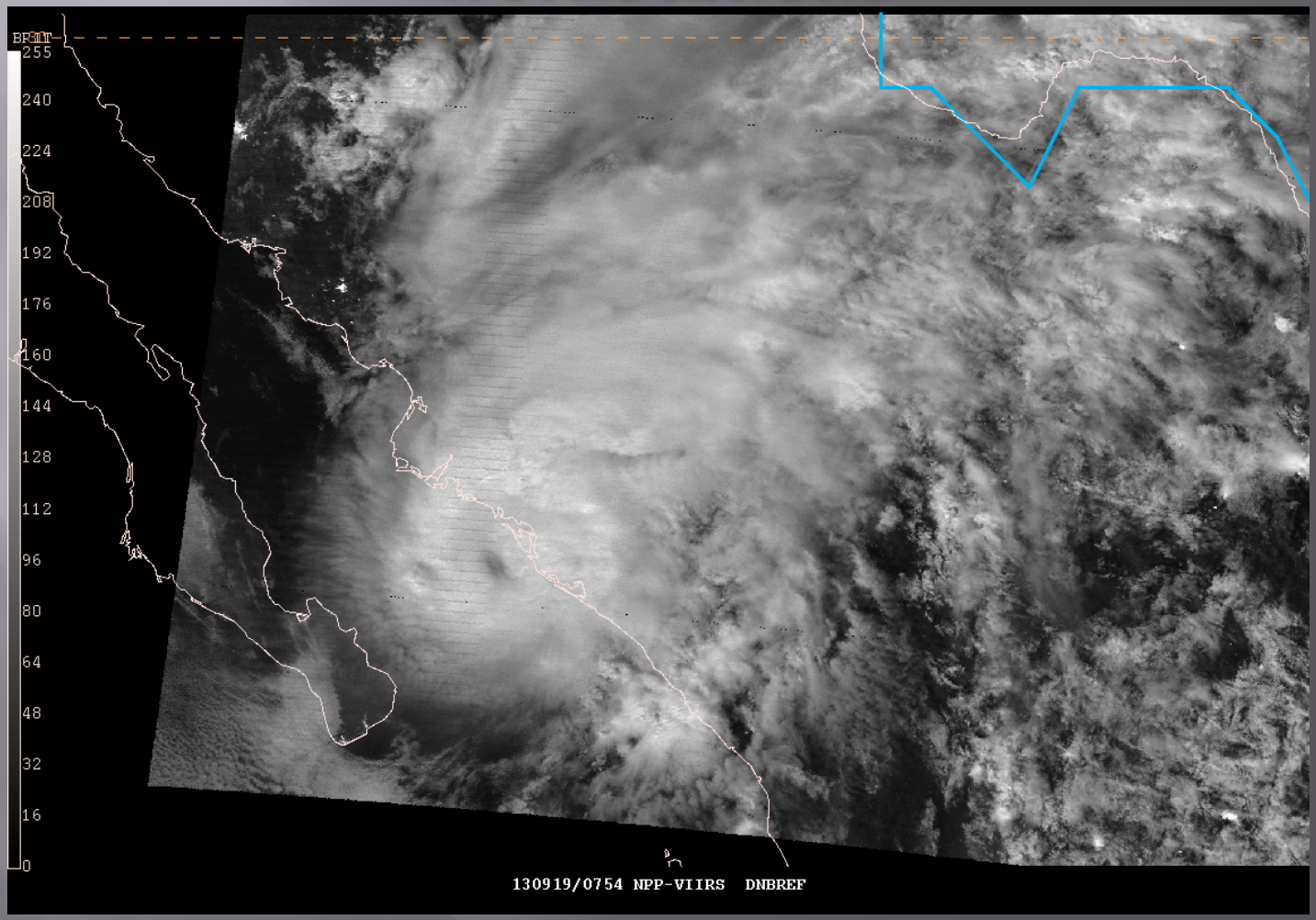
ALASKA



Courtesy of CIMSS and NASA SPoRT

Hurricane Manuel (2013)

First DNB image in NHC N-AWIPS workstations



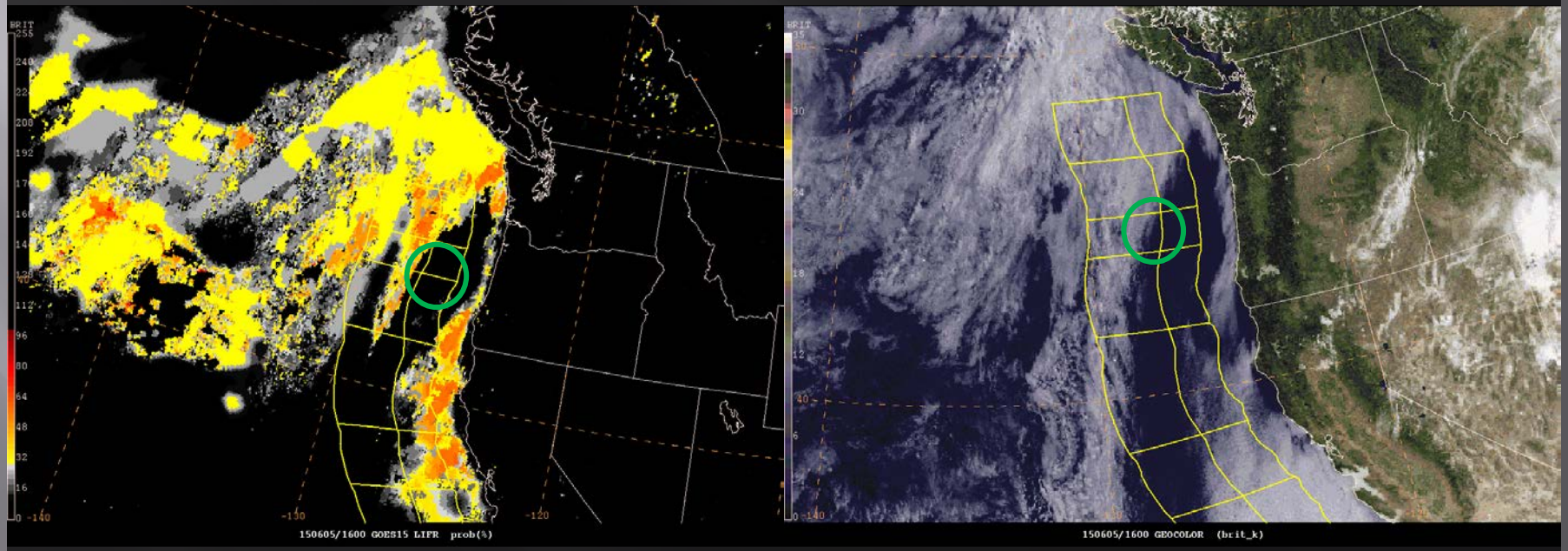
Courtesy of CIMSS and NASA SPoRT

PROVING GROUND ACTIVITIES

Addressing the Marine Fog challenge at OPC and TAFB

FLS Use at OPC

On the morning of 06/05/15, a call was transferred to OPC from the Portland WFO requesting a forecast for the heavy fog and low stratus located ~120 nm west of the Columbia River Bar. A ship sent a distress call to the US Coast Guard requesting a medevac, but conditions were too unsafe. Todd Shaw (OPC) answered the call and used the LIFR product along with the GeoColor imagery and ancillary data to forecast a continuation of <1 mile visibility and low ceilings. The ship had to move west away from the fog bank to within 70 nm west of the Columbia River Bar where a successful medevac occurred.



Full Story: http://www.d13.uscgnews.com/go/doc/4007/2541374/

Courtesy of CIMSS and CIRA

PROVING GROUND ACTIVITIES

Addressing the Heavy Rain, Flash Flood, and Strong Marine Convection challenges at all centers.

TENNESSEE VALLEY

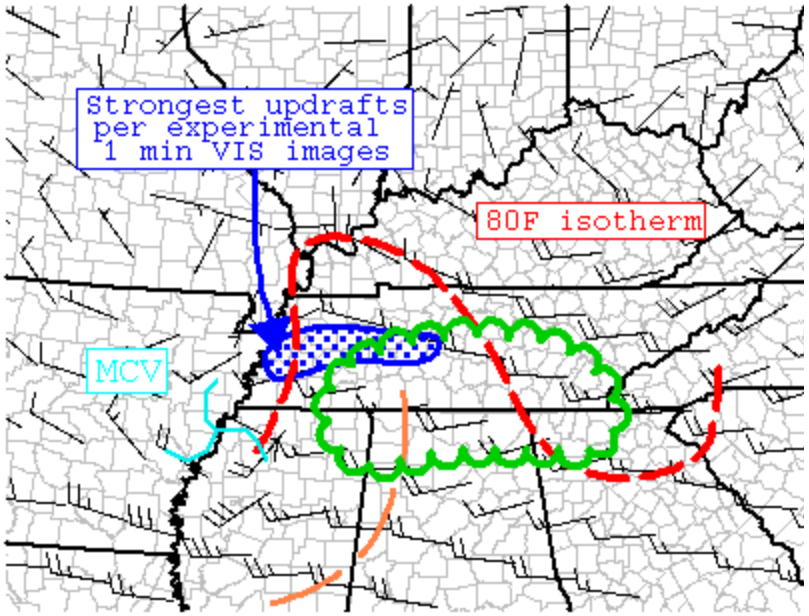
Heavy Rain Event

08/18/14

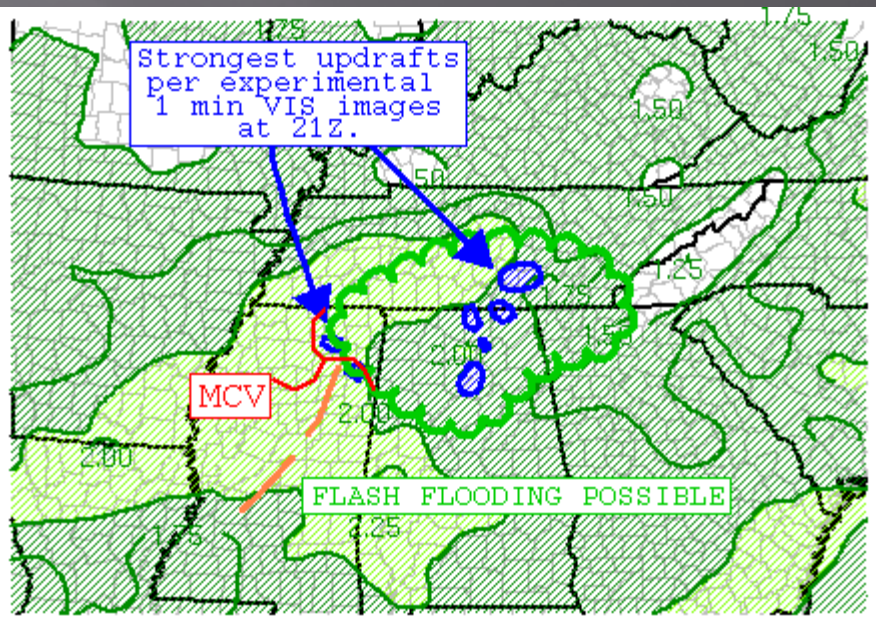
GOES-14 SRSOR

Weather Prediction Center

Mesoscale Precipitation Discussion



850 MB WINDS 140818/1600f002
WPC MPD #0290

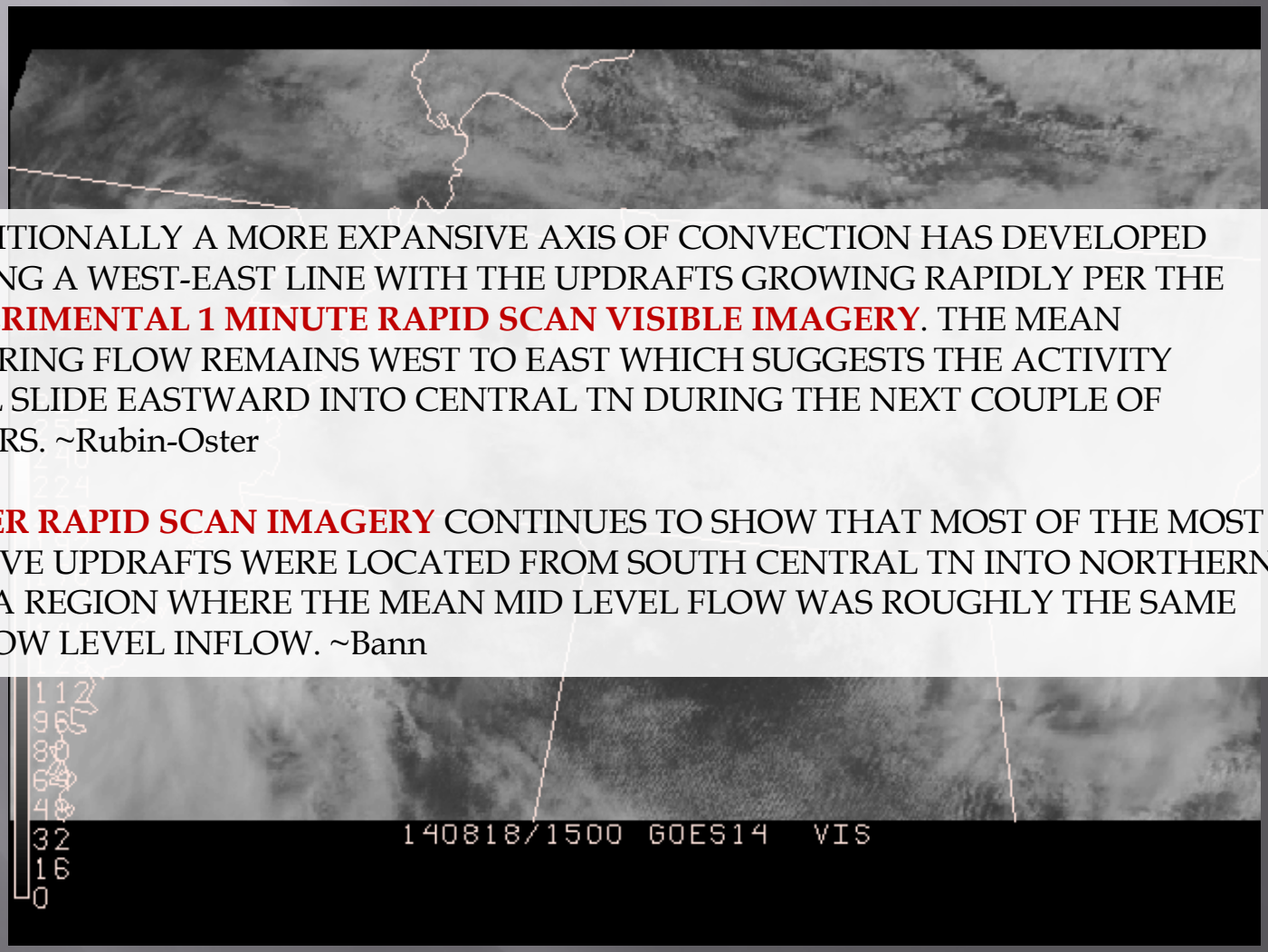


SFC PW 140818/1900f000
WPC MPD #0291

Forecaster Rubin-Oster

Forecaster Bann

08/18/14 Heavy Rain Event
GOES-14 Super Rapid Scan Operations for GOES-R



ADDITIONALLY A MORE EXPANSIVE AXIS OF CONVECTION HAS DEVELOPED ALONG A WEST-EAST LINE WITH THE UPDRAFTS GROWING RAPIDLY PER THE **EXPERIMENTAL 1 MINUTE RAPID SCAN VISIBLE IMAGERY**. THE MEAN STEERING FLOW REMAINS WEST TO EAST WHICH SUGGESTS THE ACTIVITY WILL SLIDE EASTWARD INTO CENTRAL TN DURING THE NEXT COUPLE OF HOURS. ~Rubin-Oster

SUPER RAPID SCAN IMAGERY CONTINUES TO SHOW THAT MOST OF THE MOST ACTIVE UPDRAFTS WERE LOCATED FROM SOUTH CENTRAL TN INTO NORTHERN AL...A REGION WHERE THE MEAN MID LEVEL FLOW WAS ROUGHLY THE SAME AS LOW LEVEL INFLOW. ~Bann

Courtesy of CIMSS and CIRA

UPPER MISSISSIPPI VALLEY

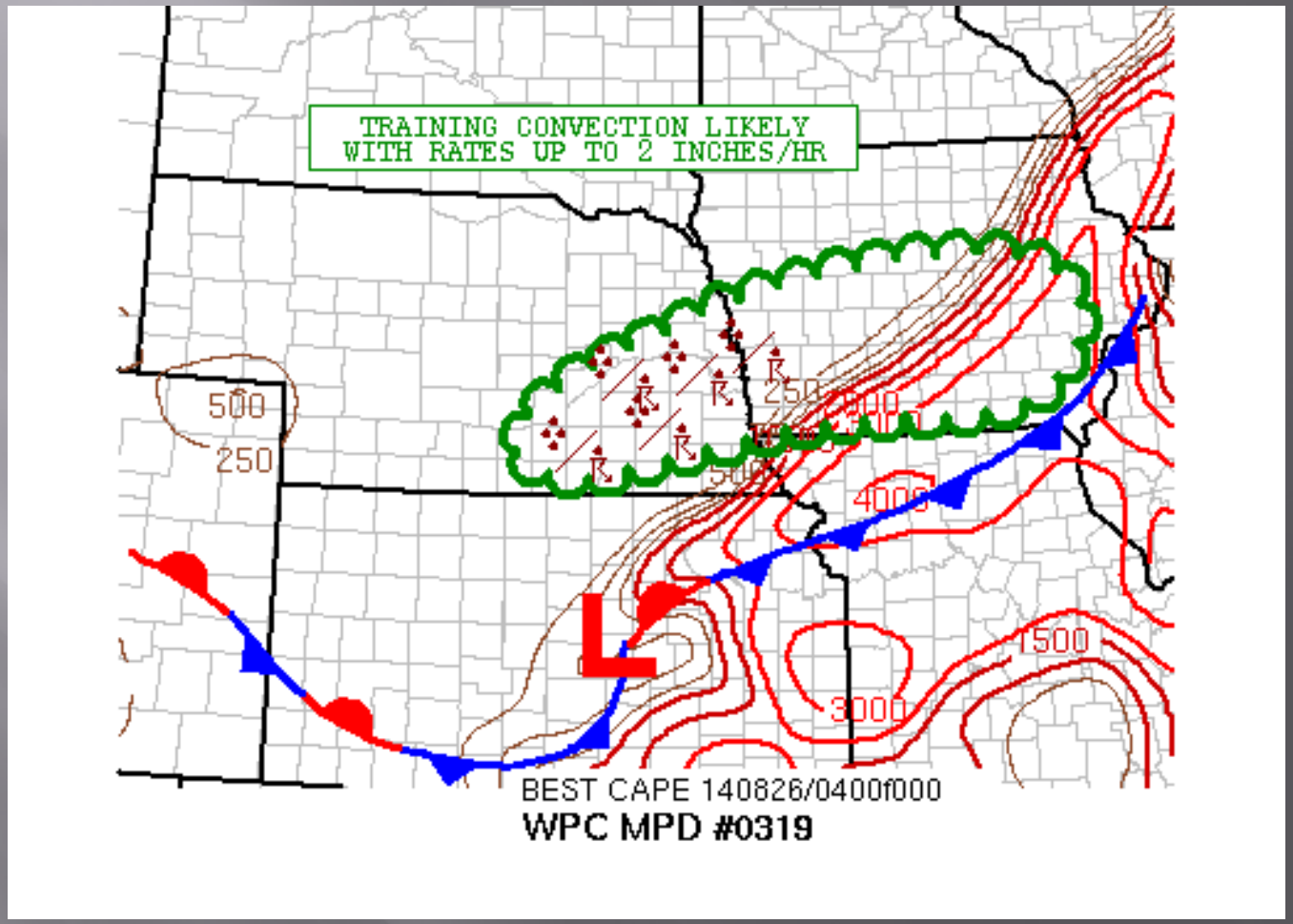
Heavy Rain Event

08/26/14

Nearcast Model

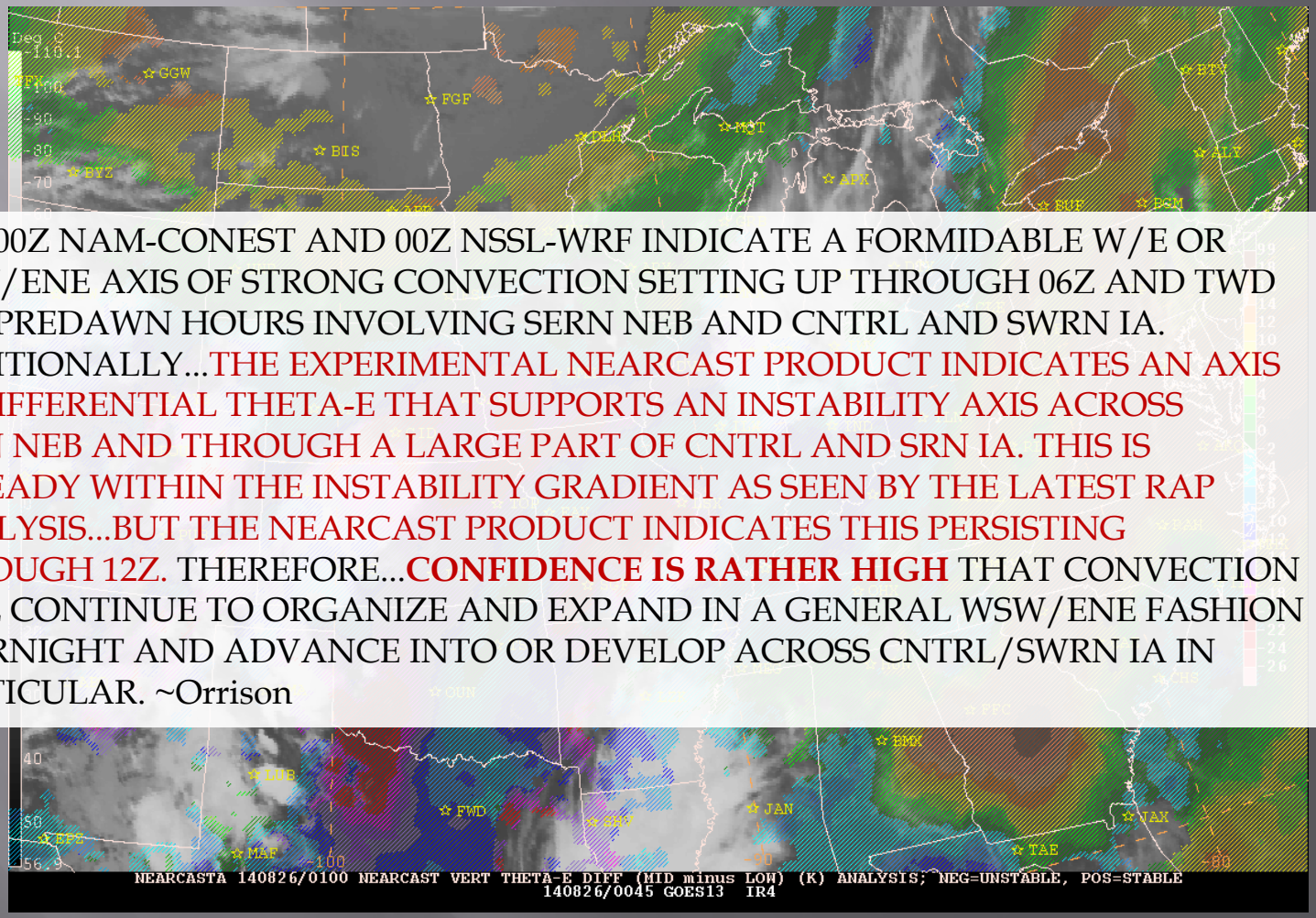
Weather Prediction Center

Mesoscale Precipitation Discussion



Forecaster Orrison

08/26/14 Heavy Rain Event
GOES-13 Infrared and Nearcast Theta-E Difference



THE 00Z NAM-CONEST AND 00Z NSSL-WRF INDICATE A FORMIDABLE W/E OR WSW/ENE AXIS OF STRONG CONVECTION SETTING UP THROUGH 06Z AND TWD THE PREDAWN HOURS INVOLVING SERN NEB AND CNTRL AND SWRN IA. ADDITIONALLY...THE EXPERIMENTAL NEARCAST PRODUCT INDICATES AN AXIS OF DIFFERENTIAL THETA-E THAT SUPPORTS AN INSTABILITY AXIS ACROSS SERN NEB AND THROUGH A LARGE PART OF CNTRL AND SRN IA. THIS IS ALREADY WITHIN THE INSTABILITY GRADIENT AS SEEN BY THE LATEST RAP ANALYSIS...BUT THE NEARCAST PRODUCT INDICATES THIS PERSISTING THROUGH 12Z. THEREFORE...**CONFIDENCE IS RATHER HIGH** THAT CONVECTION WILL CONTINUE TO ORGANIZE AND EXPAND IN A GENERAL WSW/ENE FASHION OVERNIGHT AND ADVANCE INTO OR DEVELOP ACROSS CNTRL/SWRN IA IN PARTICULAR. ~Orrison

Courtesy of CIMSS

TEXAS HEAVY RAIN EVENTS

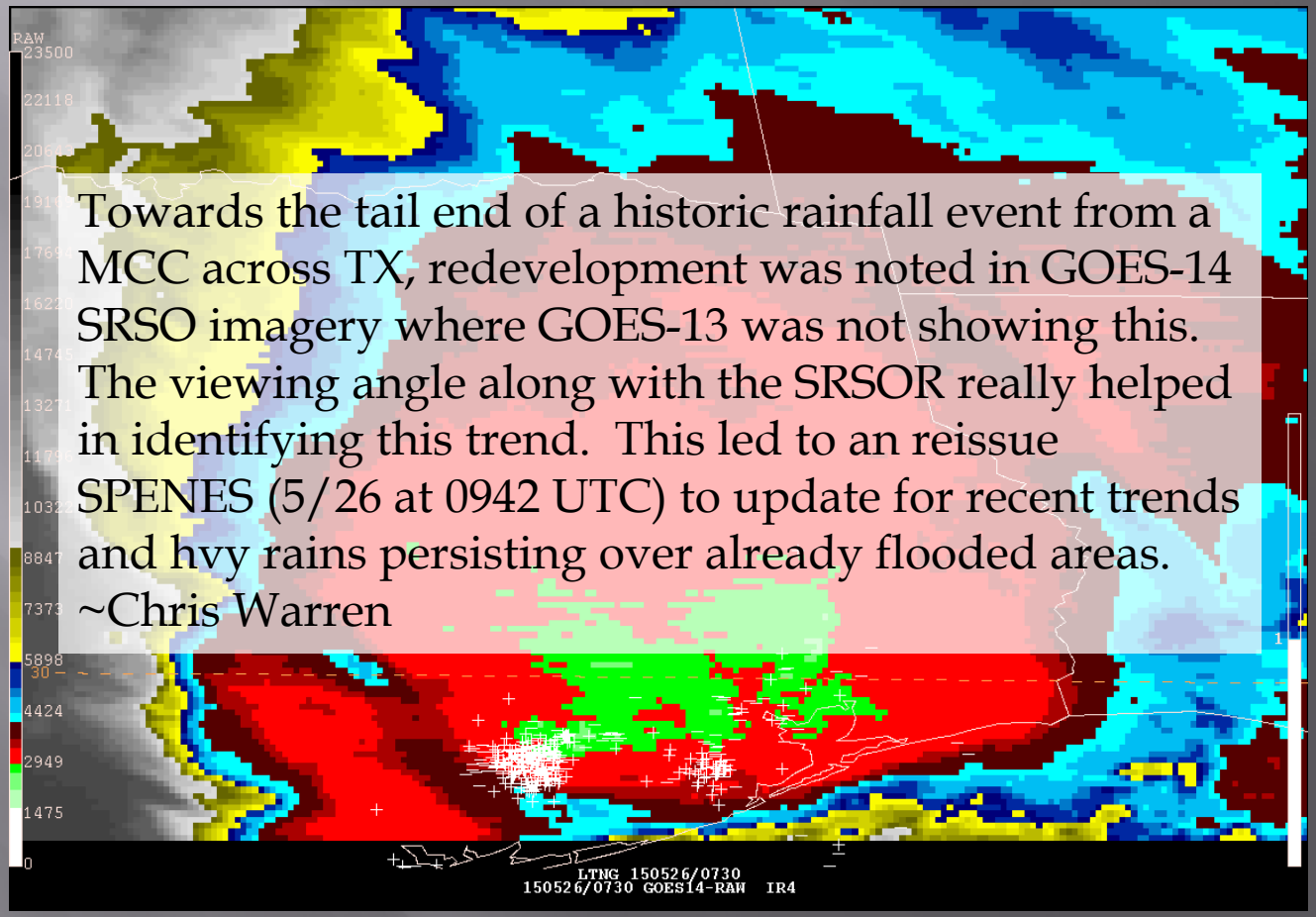
Late May 2015

GOES-14 Super Rapid Scan Operations for GOES-R

Lightning Products

CIRA Layered Precipitable Water

GOES-14 SRSOR May 26, 2015 – TX Historic Rainfall

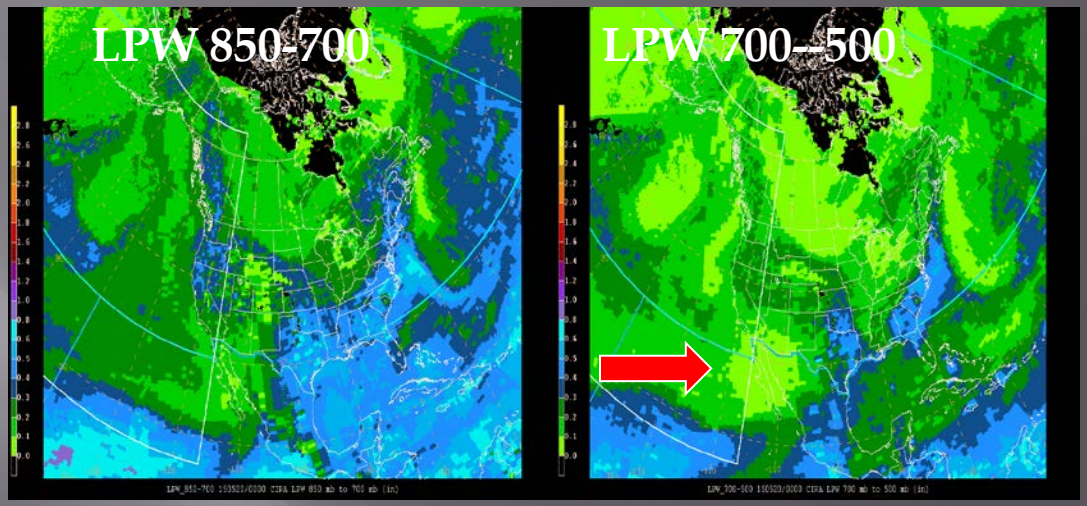


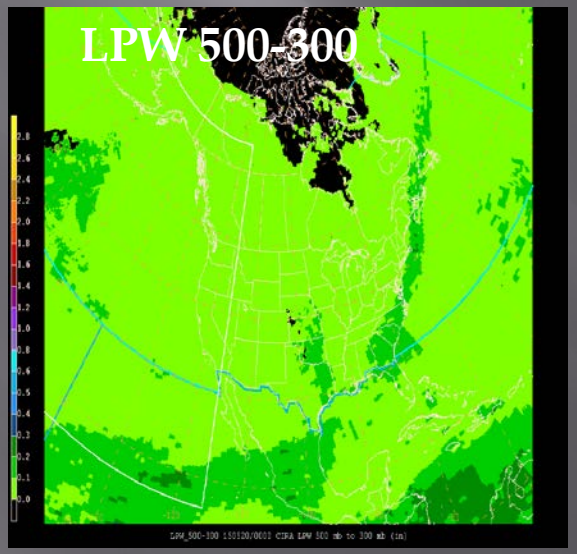
Towards the tail end of a historic rainfall event from a MCC across TX, redevelopment was noted in GOES-14 SRSO imagery where GOES-13 was not showing this. The viewing angle along with the SRSOR really helped in identifying this trend. This led to an reissue SPENES (5/26 at 0942 UTC) to update for recent trends and hvy rains persisting over already flooded areas. ~Chris Warren

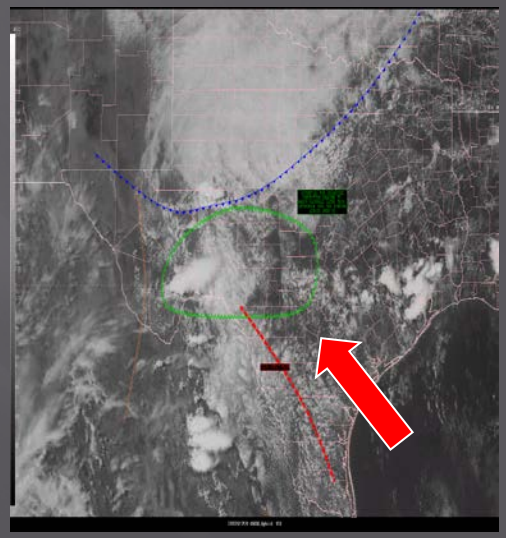
Courtesy of CIMSS

CIRA LPW
May 20, 2015 – TX Heavy Rainfall

.
SATELLITE PRECIPITATION ESTIMATES..DATE/TIME 05/20/15 1942Z
SATELLITE ANALYSIS BRANCH/NESDIS---NPPU---TEL.301-683-1404
LATEST DATA USED: GOES-13 1930Z GOES-14 1938Z
WARREN
.
LOCATION...SW TEXAS...
.
ATTN WFOS...EWX...SJT...MAF...
ATTN RFCS...WGRFC...
..
EVENT...SATELLITE FEATURES CONCERNING HEAVY RAINFALL POTENTIAL DEVELOPING THIS AFTERNOON
.
SATELLITE ANALYSIS AND TRENDS...WATER VAPOR LOOP SHOWS MID LVL RIDGE AXIS RETREATING EWD WITH ACCELERATING HEIGHT FALLS/UL JET STREAK ACROSS SRN CA/AZ. PIECES OF MID-LVL ENERGY WITHIN RETURNING SUBTROPICAL JET SHOULD PROMOTE CONVECTIVE INITIATION ACROSS SW TX OVER THE BIG BEND REGION. LATEST SFC ANALYSIS SHOWS COLD FRONT SINKING SWD ACROSS NRN SW TX AND CENTRAL TX BECOMING MORE W-E ORIENTED WITH S-N DIRECTED DRY LINE BTWN PEQ AND MRF.
EXPERIMENTAL CIRA/NASA SPORT STLT DERIVED BLENDED LAYER PRODUCT SUGGESTS SOMEWHAT SHALLOW (SFC to 700 MB) GULF MOISTURE PLUME (1.2-1.6" PW VALUES) POOLED ACROSS WRN/CENTRAL TX.
THIS SORT OF MOISTURE PROFILE WOULD SEEM TO SUGGEST COLD POOL DEVELOPMENT AND FORWARD PROPAGATING ORGANIZED CONVECTION. HOWEVER BUNKERS TECHNIQUE OFF OF THE 12Z DRT SOUNDING IS SUGGESTING THAT SUPERCELL CONVECTION COULD BE QUITE SLOW MOVING INITIALLY.







- **Eastern Pacific Moisture at LPW 700-500**
- **Gulf Moisture at SFC-700 from Gulf of Mexico**
  - **Flooding over SW Texas**

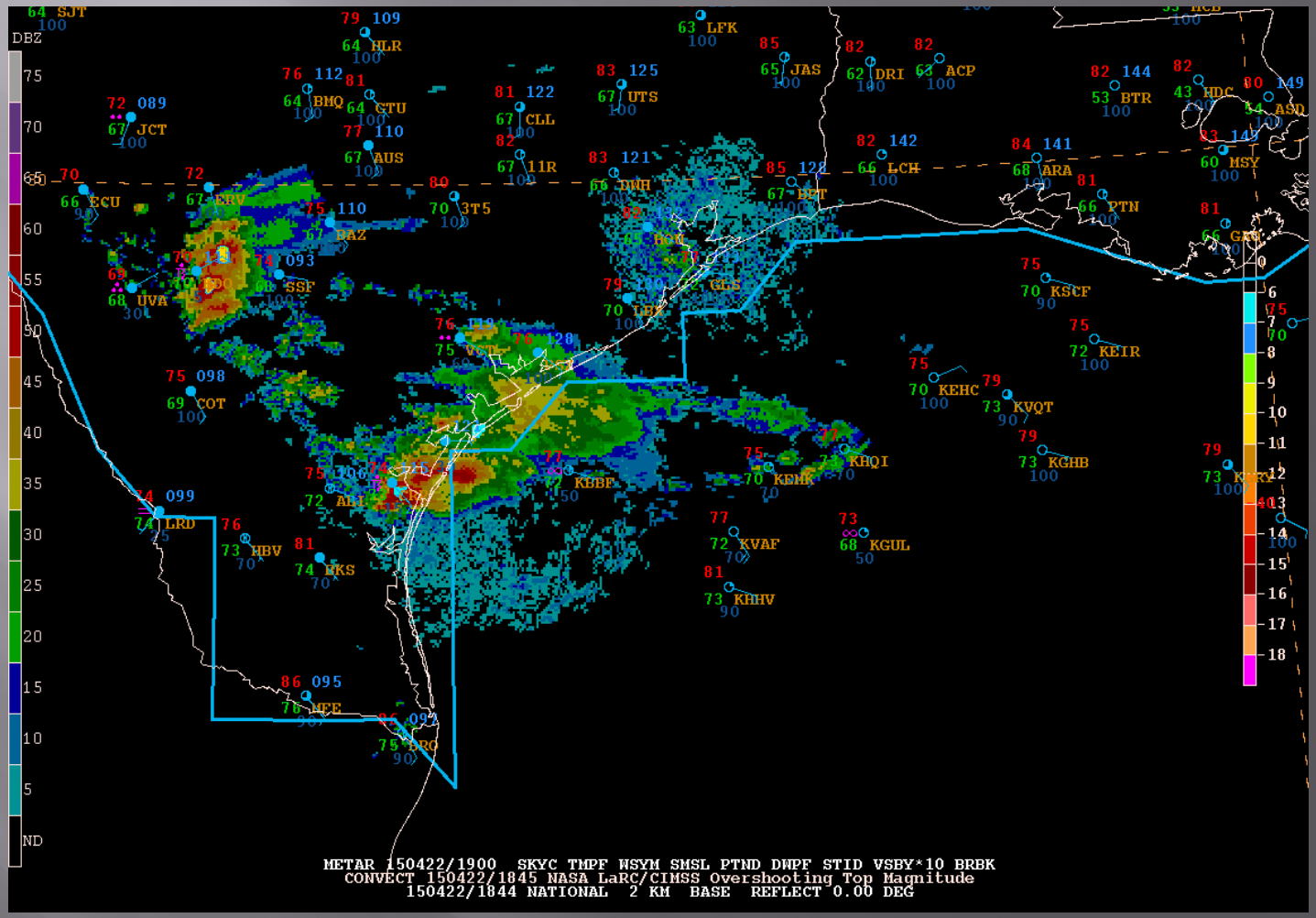
SE TEXAS/WESTERN GULF SUPERCELL EVENT

Heavy Rain Event/Severe Weather
04/22/15

Convective Initiation
Overshooting Top Detection/Magnitude
GLD-360 Lightning Density

Overshooting Top Magnitude

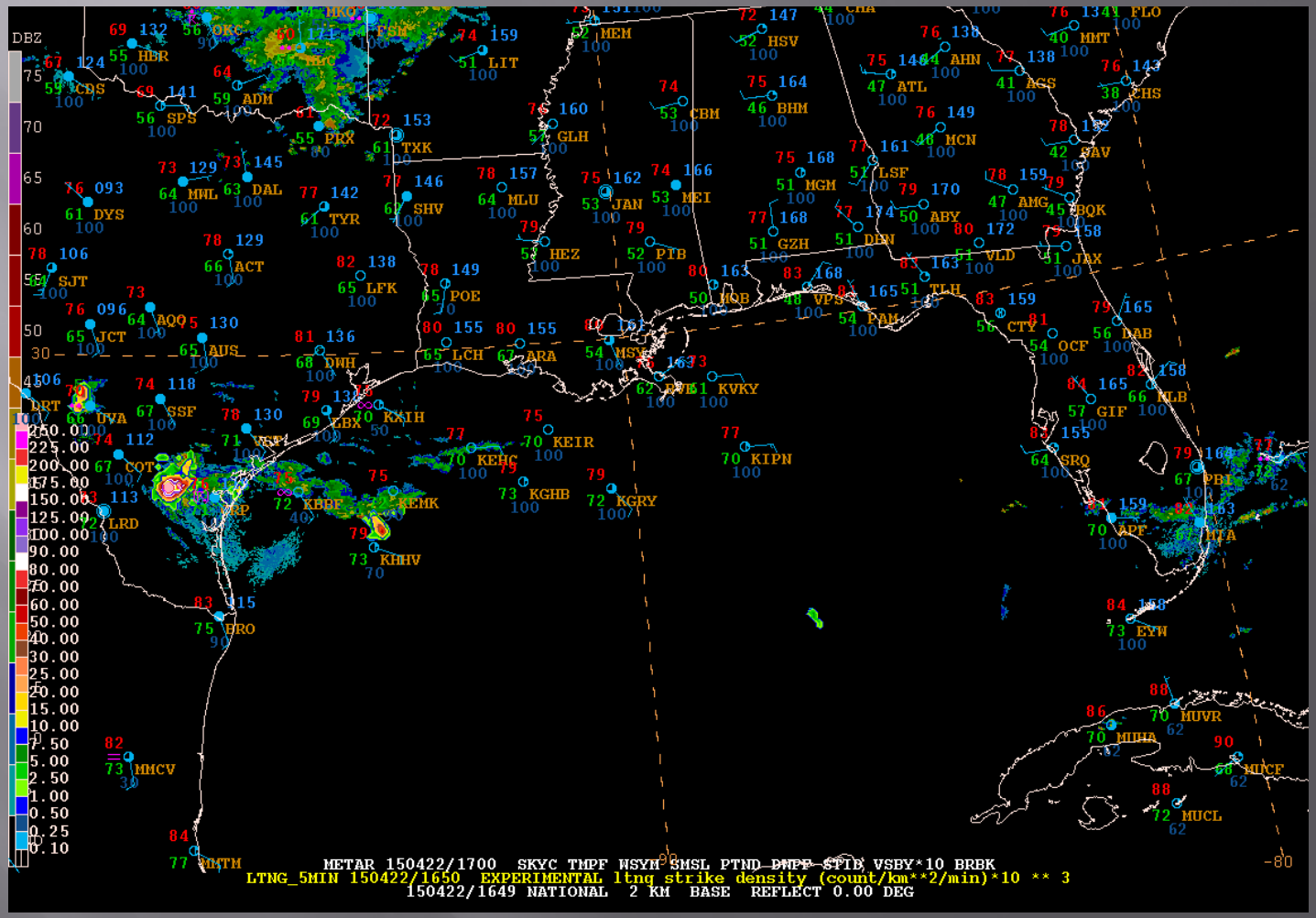
Overlaid on National Base Reflectivity Composite on 04/22/15



Courtesy of CIMSS

GOES-R Lightning Detection

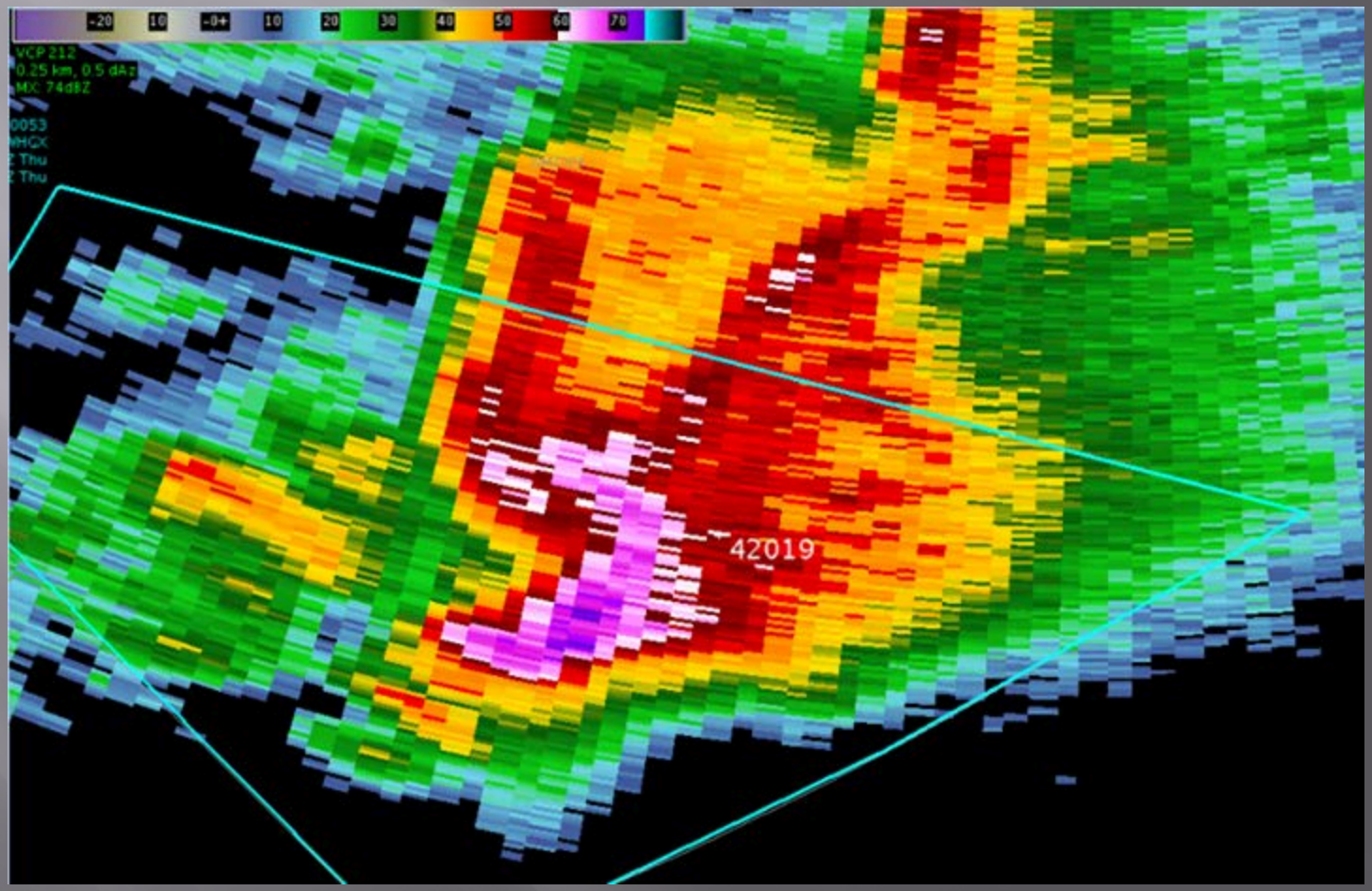
GLD-360 5-min Lightning Density overlaid on National Base Reflectivity



Courtesy of OPC and Vaisala

All mariners out there…this is why you should ALWAYS heed a Special Marine Warning. Buoy 42019 measured a 76 kt / 87 mph wind gust at 729 PM associated with this Gulf of Mexico thunderstorm!

Posted by US National Weather Service Houston-Galveston Texas on Wednesday, April 22, 2015



SOUTH CAROLINA

Historic Flooding

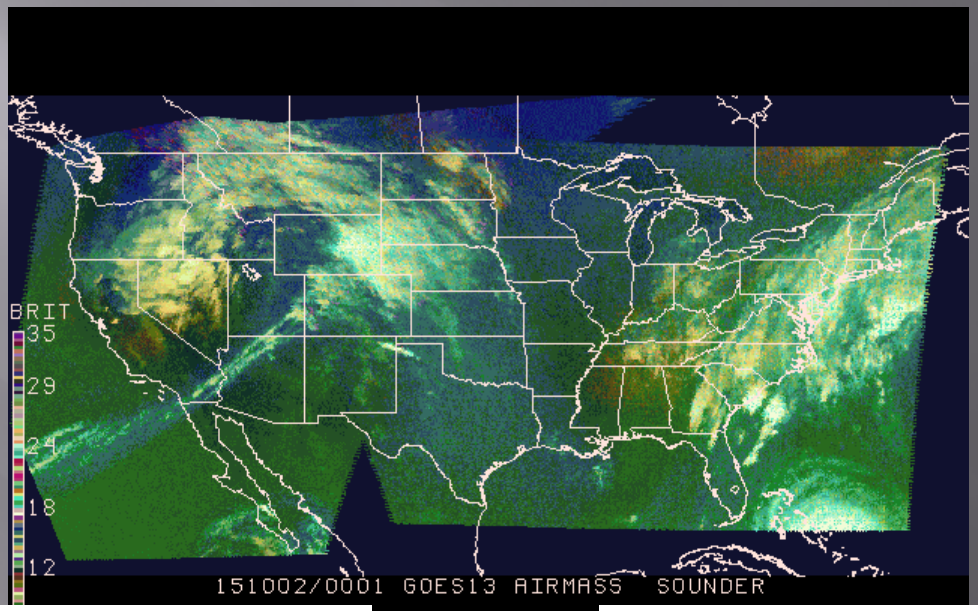
10/02/15 - 10/03/15

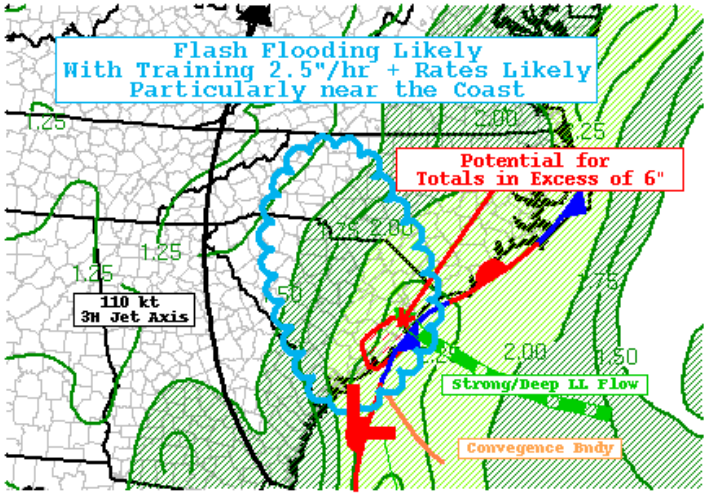
GOES Sounder Air Mass RGB

GLD-360 Lightning Density

South Carolina Historic Flooding

GOES Sounder Air Mass RGB – 10/02/15



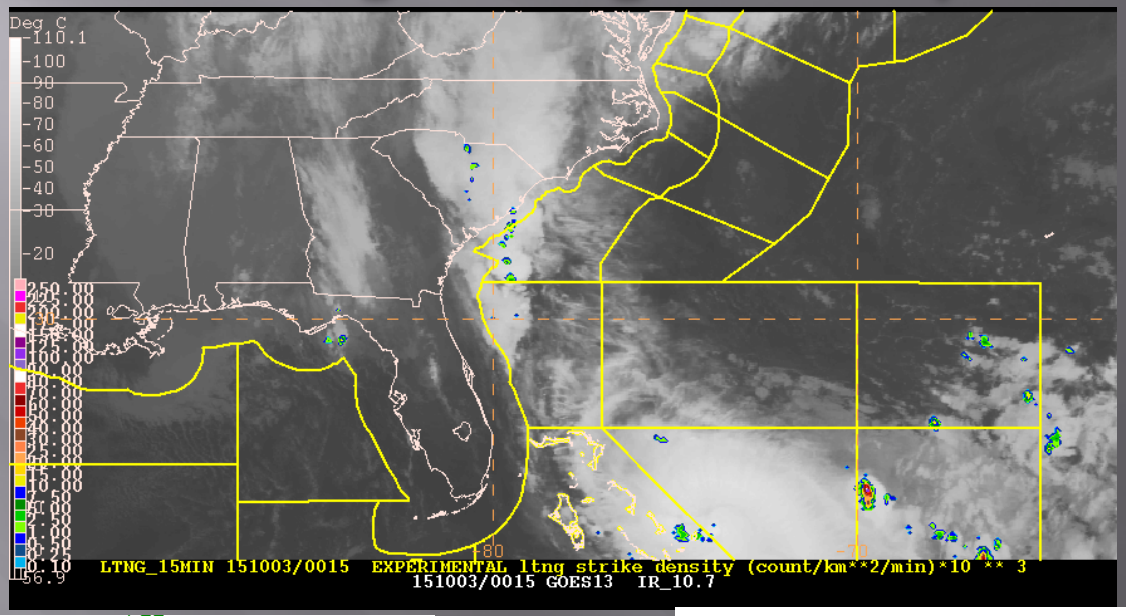


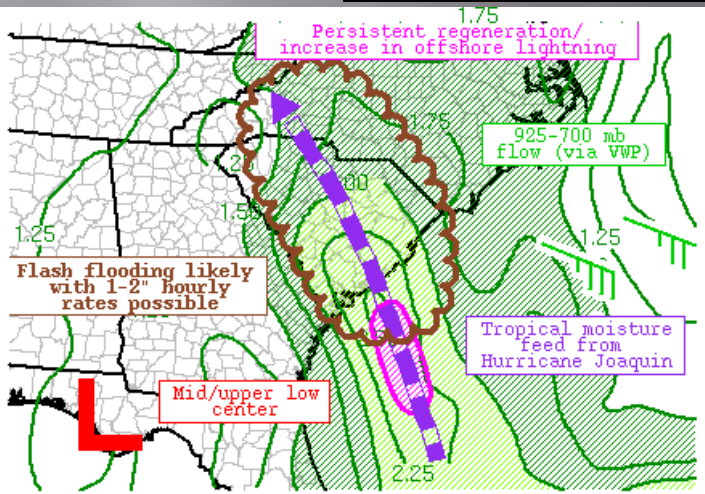
RAP32 PRECIP WATER 151002/2300f000
WPC MPD #0544

DISCUSSION...**DEEP STRATOSPHERIC FOLD SEEN WELL IN STANDARD WV AS WELL AS RGB AIR MASS OCCURRING OVER THE EXTREME NORTHEAST GULF OF MEXICO**... ALLOW EXCELLENT DIVERGENCE WITH STRONG 100-110 KT JET...WHICH WILL SUPPORT VERY STRONG LARGE SCALE ASCENT ACROSS THE DISCUSSION AREA. SURFACE FRONTAL ZONE HUGS THE SOUTH CAROLINA COASTLINE THROUGH CAPE FEAR INTO THE OUTER BANKS OF NC...BROAD/DEEP LOW LEVEL WITH AN EXTREME MOISTURE TONGUE PULLED FROM THE OUTER PORTIONS OF HURRICANE JOAQUIN ARE POOLED AROUND 2.4-2.5" WITHIN TPW ANALYSIS POINTED UPP THE FRONT TOWARD KCHS. ~Gallina

South Carolina Historic Flooding

IR and 15-min Lightning Density - 10/03/15





CURRENT SATELLITE IMAGERY AND LIGHTNING DATA SHOWS A PERSISTENT AREA OF CONVECTIVE REGENERATION JUST OFFSHORE OF CHARLESTON SC WITH AN INCREASE IN LIGHTNING ACTIVITY ACROSS THIS REGION. THE 07Z RAP OBJECTIVE ANALYSIS INDICATED THIS CONTINUAL REGENERATION PROCESS IS OCCURRING IN THE PRESENCE OF MUCAPES ABOVE 3000 J/KG WITH 500 TO 1000 J/KG VALUES EXTENDING ALONG THE MOISTURE PLUME INTO UPSTATE SC. HOURLY RAINFALL RATES IN THE 1 TO 2 INCH RANGE ARE LIKELY ALONG THE COAST WITH SLIGHTLY LOWER RATES FARTHER INLAND WHERE THE INSTABILITY DECREASES. ~Rubin-Oster

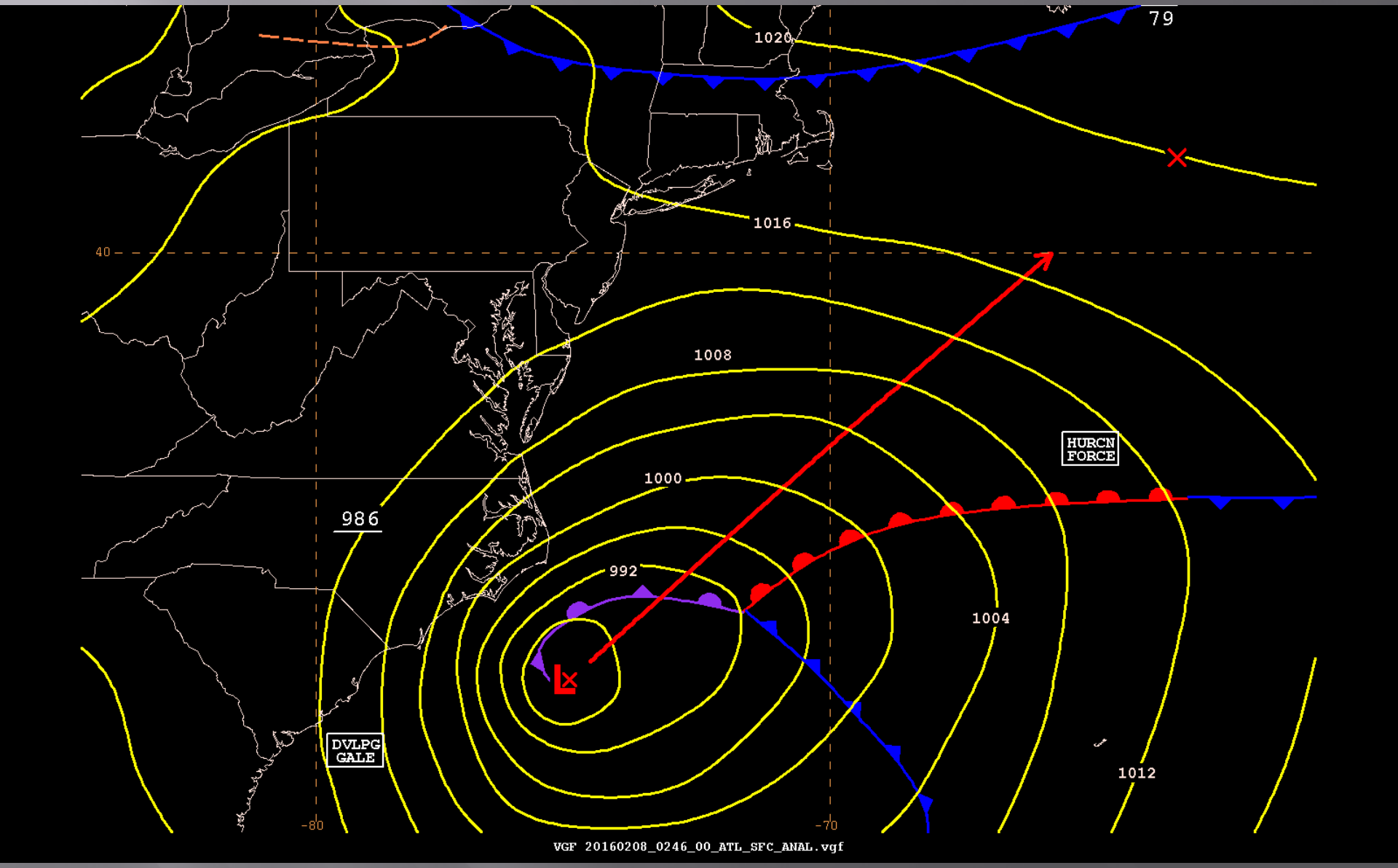
ANTHEM OF THE SEAS

Hurricane-Force winds and high seas

02/07/16 - 02/09/17

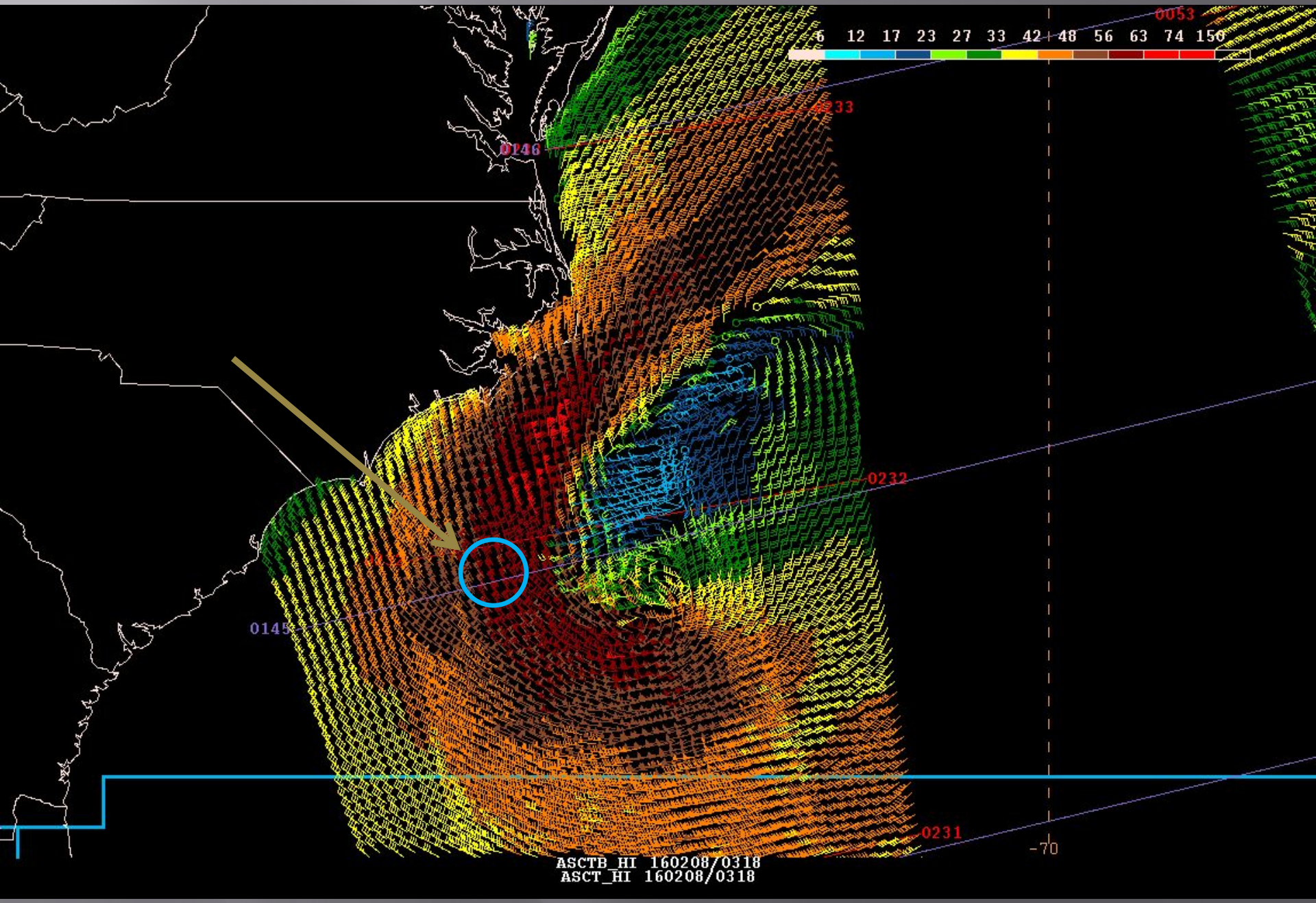
GOES-14 SRSOR

GLD-360 Lightning Density

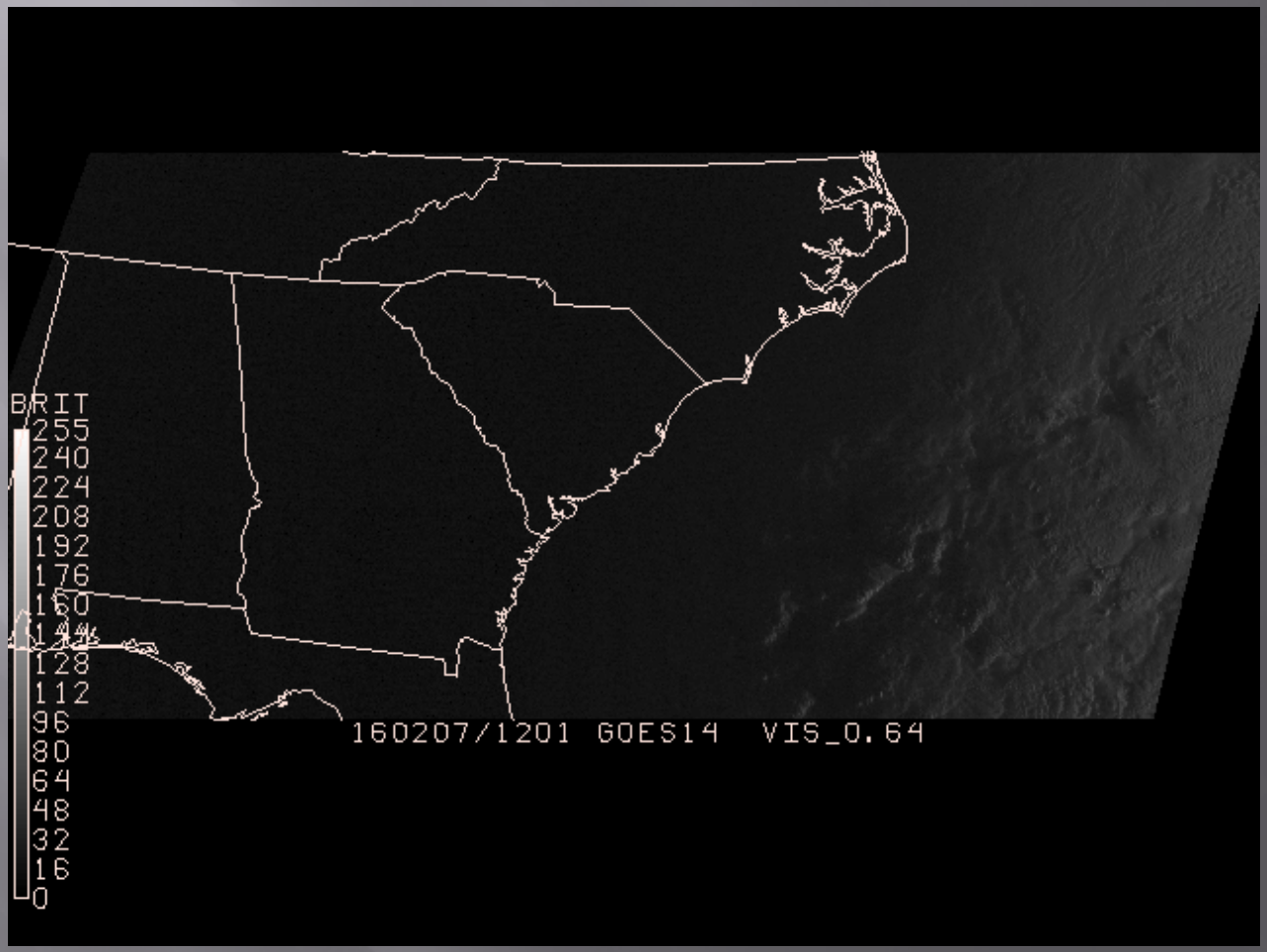


0000 UTC 8 Feb 2016 – Surface Analysis

ASCAT- and B scatterometer winds – B-0145, A-0232

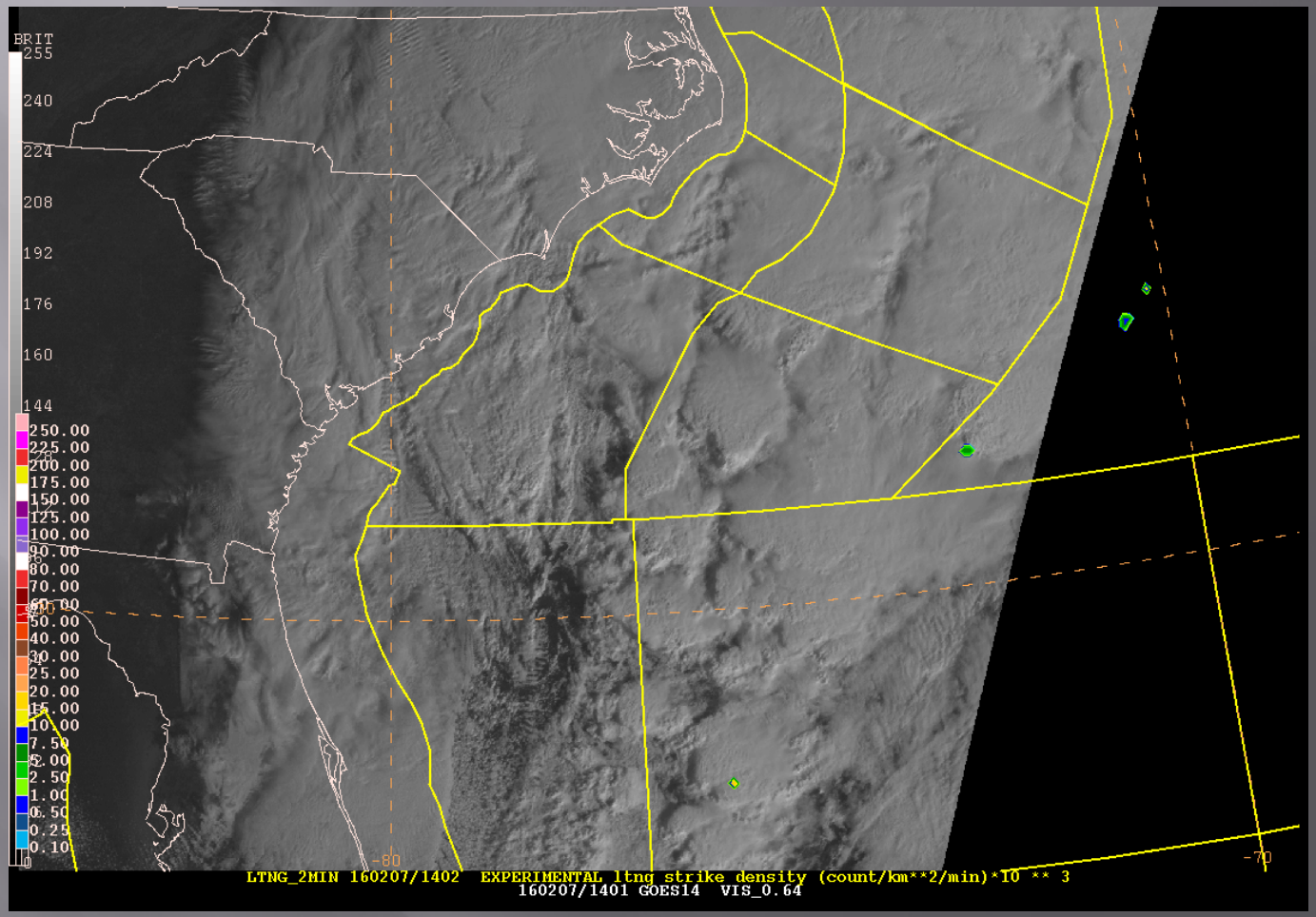


GOES-14 SRSOR – 0.64 µm



Courtesy of CIRA

GOES-14 SRSOR – 0.64 µm with GLD-360 2-min Lightning Density

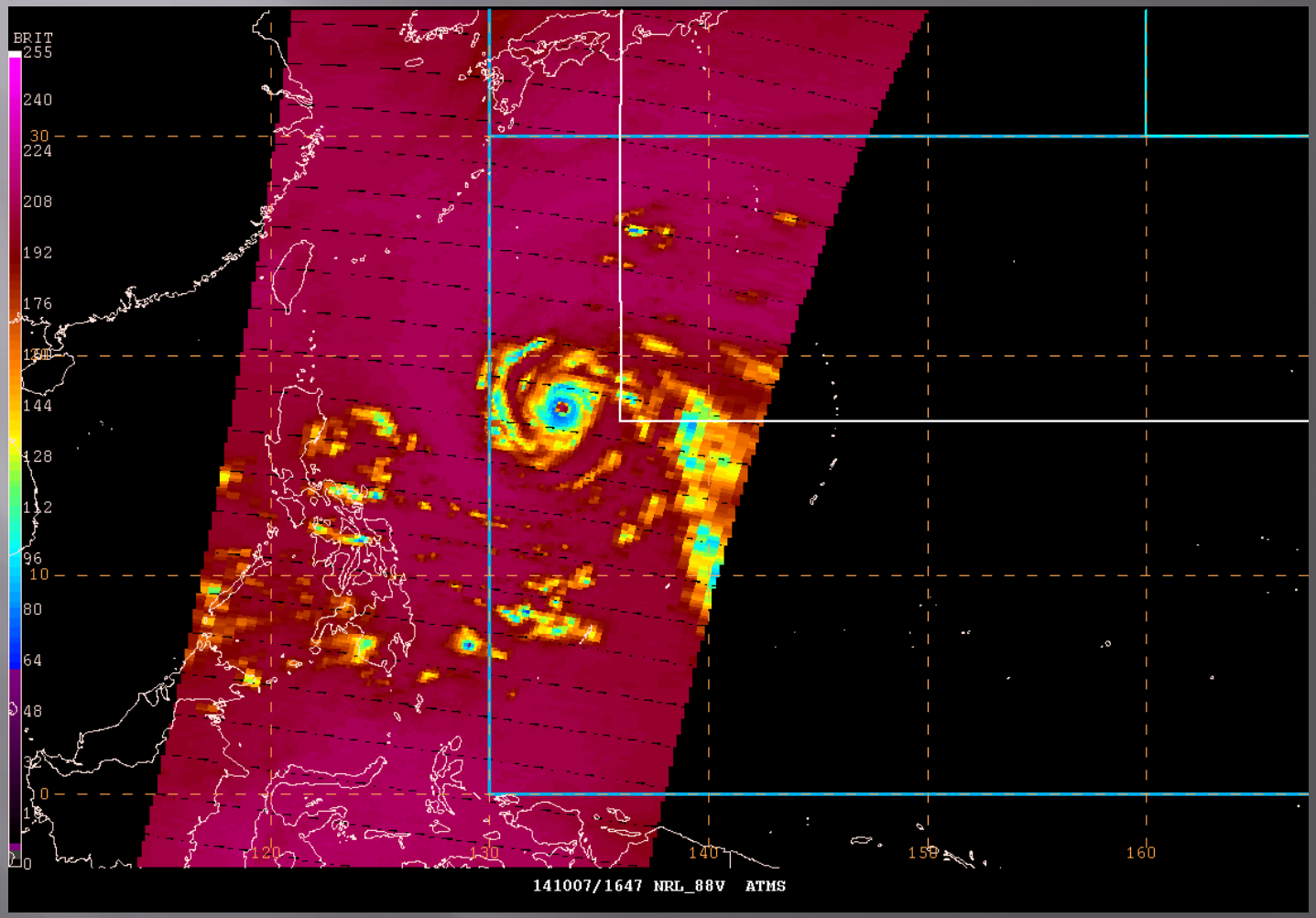


Courtesy of CIRA, OPC, and Vaisala

PROVING GROUND ACTIVITIES

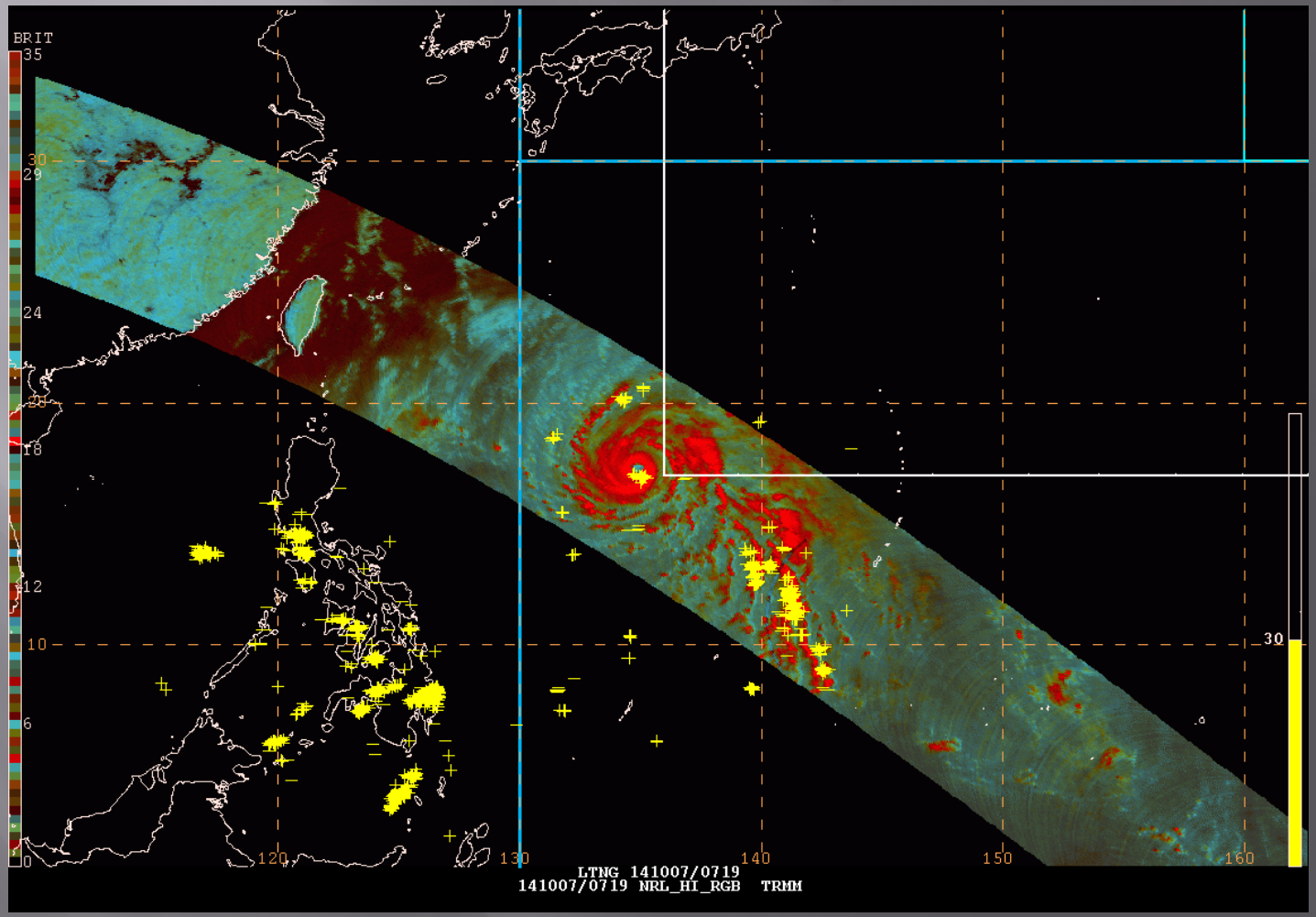
Introducing Passive Microwave imagery into the NAWIPS workstations

Super Typhoon Vongfong (2014) ATMS 88GHz "V"



Courtesy of NASA SPoRT and GPM

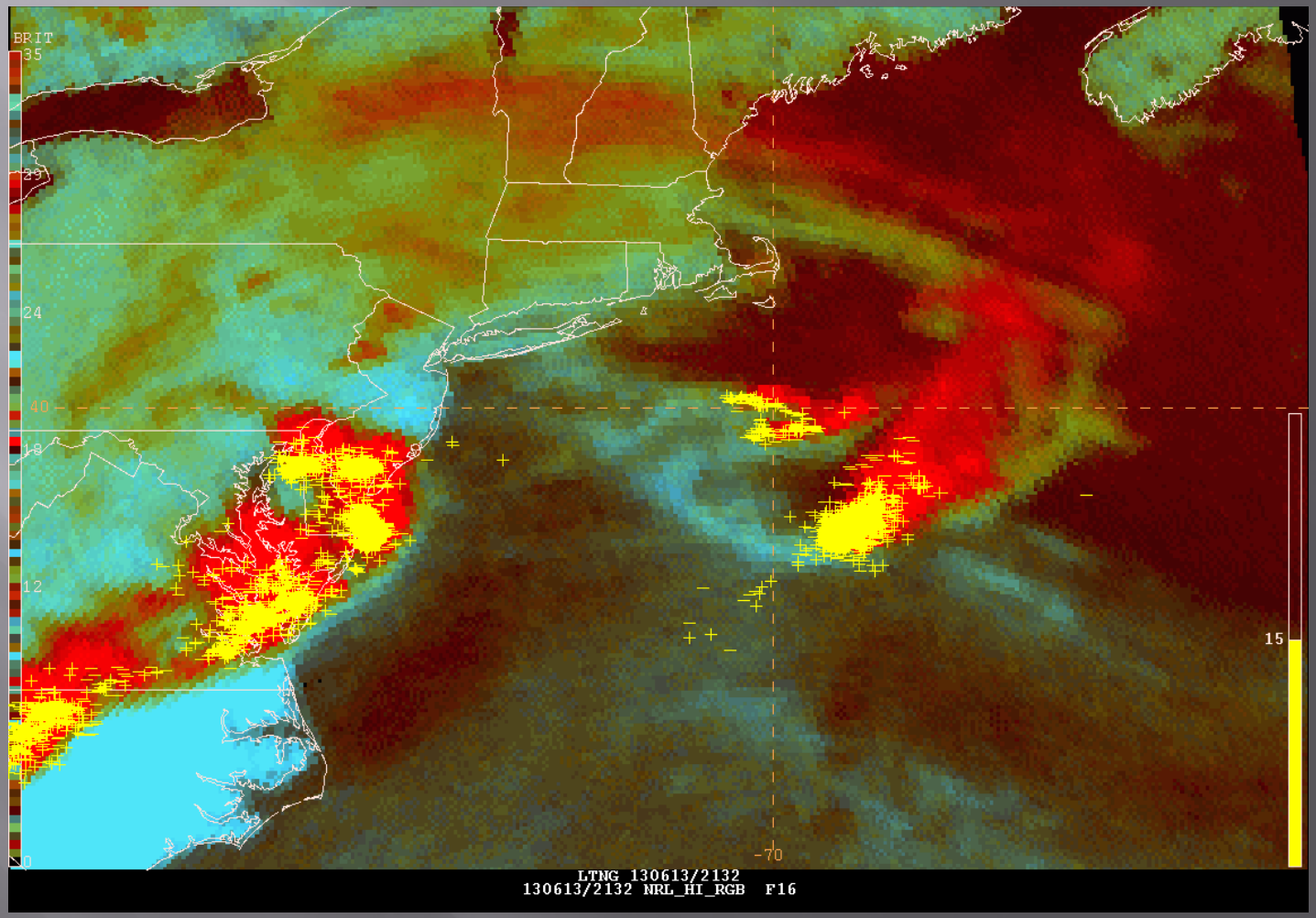
TRMM 89GHz "RGB"
overlaid with GLD-360 Lightning Strokes
Super Typhoon Vongfong near maximum intensity
155 kts (175 mph)



Courtesy of NASA SPoRT, NRL, and Vaisala

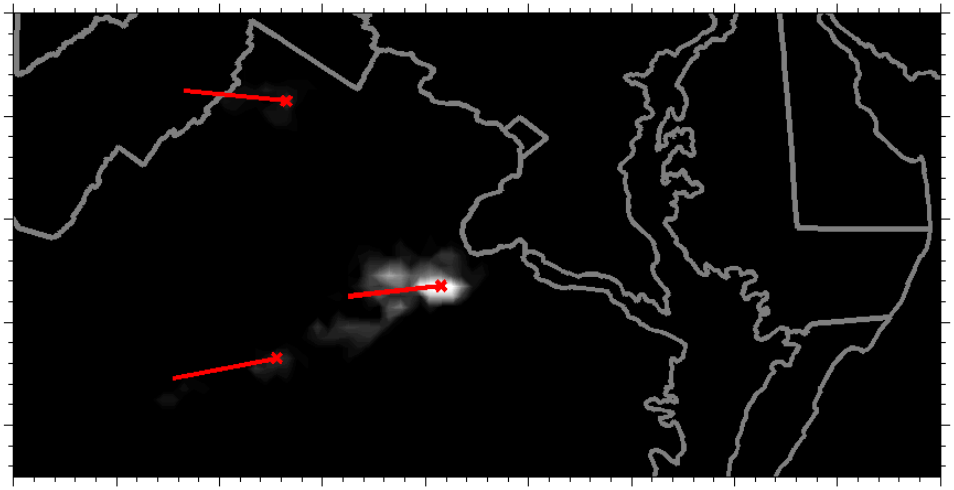
F-16 89GHz "RGB"

Overlaid with GLD-360 Lightning Strokes
06/13/13 Low-End Derecho

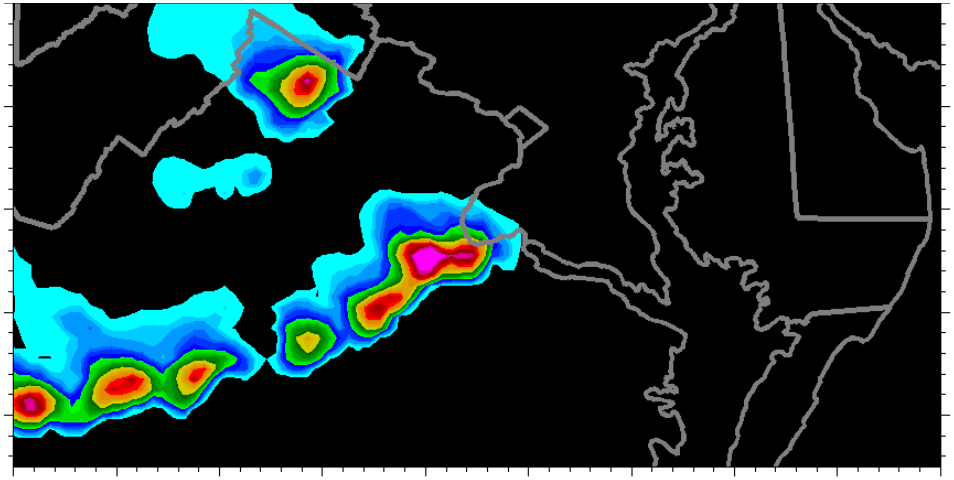


Courtesy of NASA SPoRT, NRL, and Vaisala

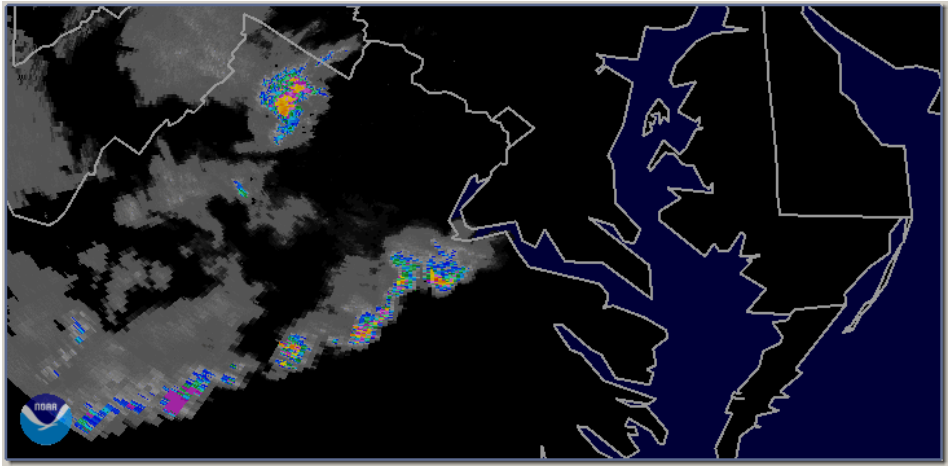
Lightning



AMSR2



NEXRAD



Courtesy of Patrick Meyers and Scott Rudlosky

WHERE ARE WE GOING?

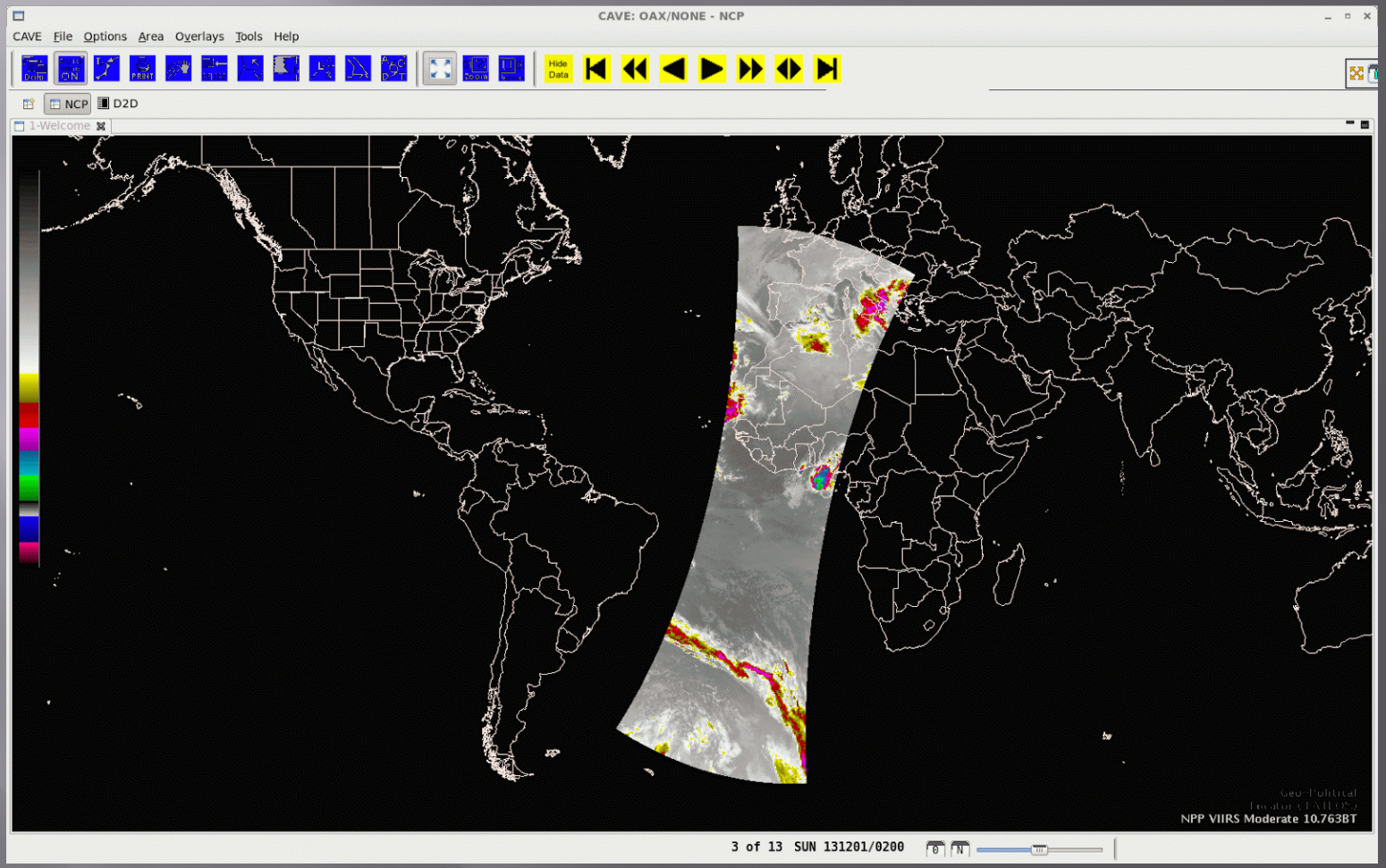
NAWIPS to AWIPS II Transition

Student Intern Projects Addressing Forecast Challenges

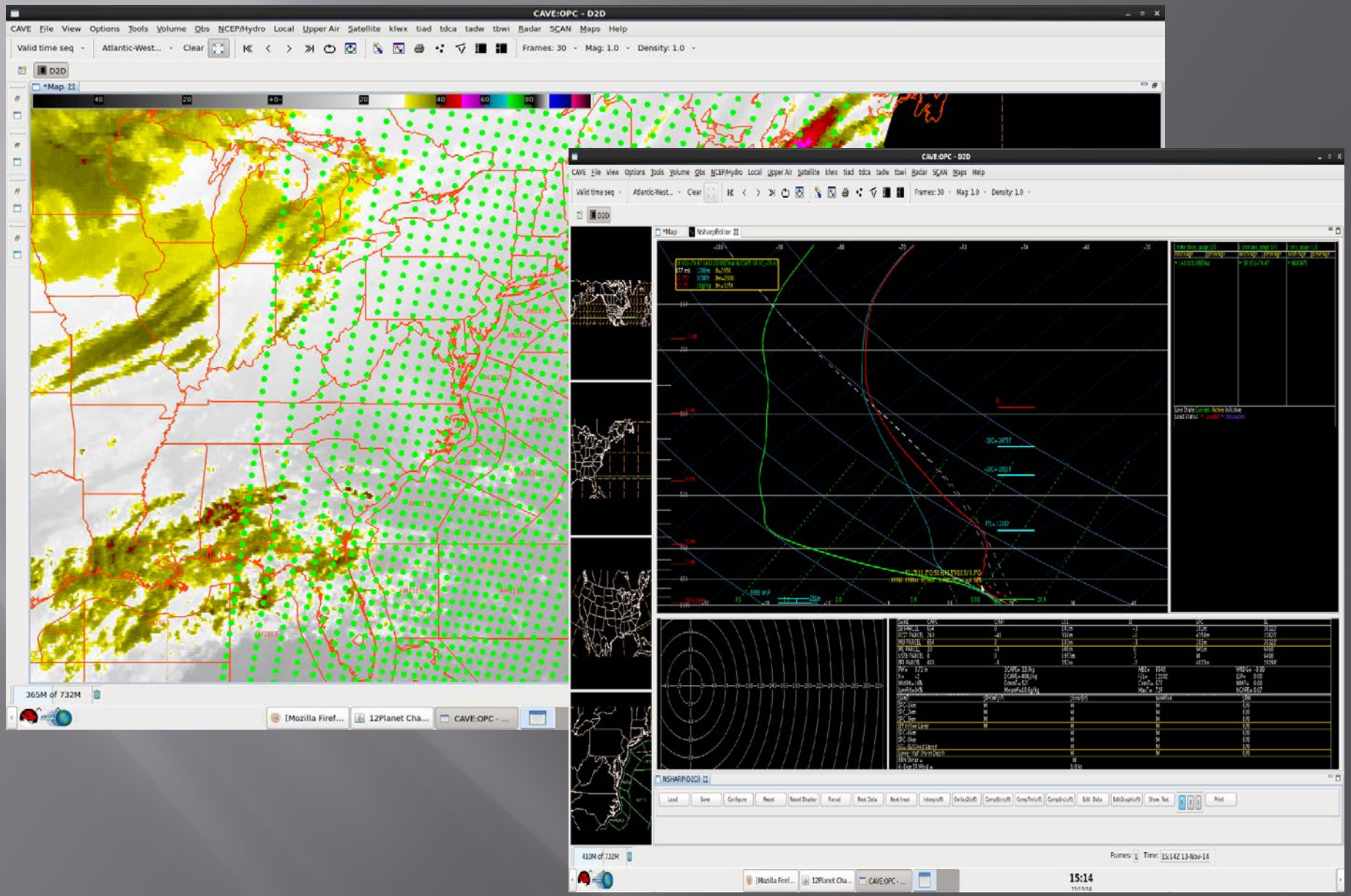
Himawari Training Plan

GOES-R and JPSS Preparation

VIIRS Global Domain AWIPS II NCP



NUCAPS in AWIPS II D2D



Forecast Challenge Projects

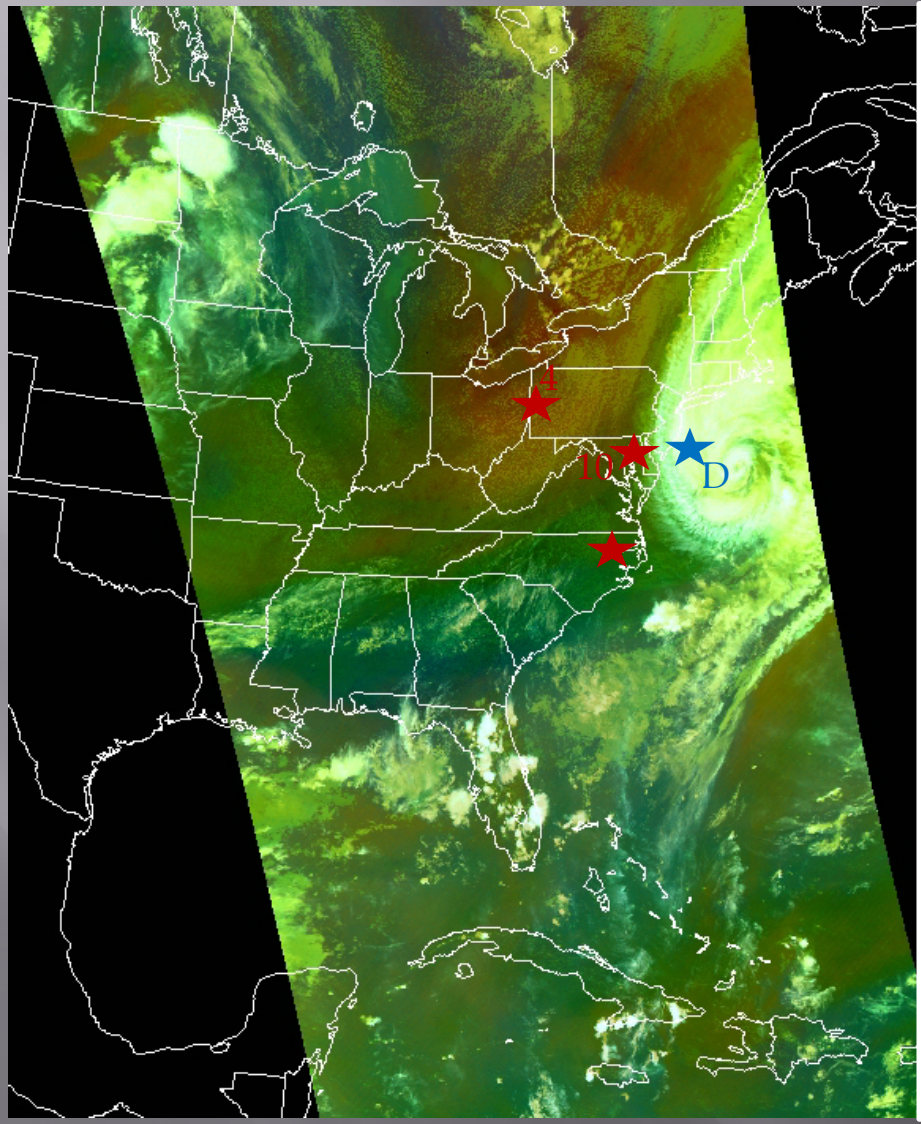
- Tropical to Extratropical Transition – Emily Berndt (SPoRT), Michael Folmer (CICS), Jeff Halverson (UMBC), and Jason Dunion (HRD)
- Marine Supercell Hazard Identification – Kaille Farrell (UMD)
- Hurricane-Force Extratropical Storm Climatology from a Satellite Perspective – Kelsey Malloy (UMD)
- Air Mass RGB and NUCAPS use for North Pacific Hurricane-Force Lows – Mallory Cato (SLU)
- Marine Convective Wind Hazards in OPC and TAFB Offshore Zones – Kelsey Thompson (UAH)

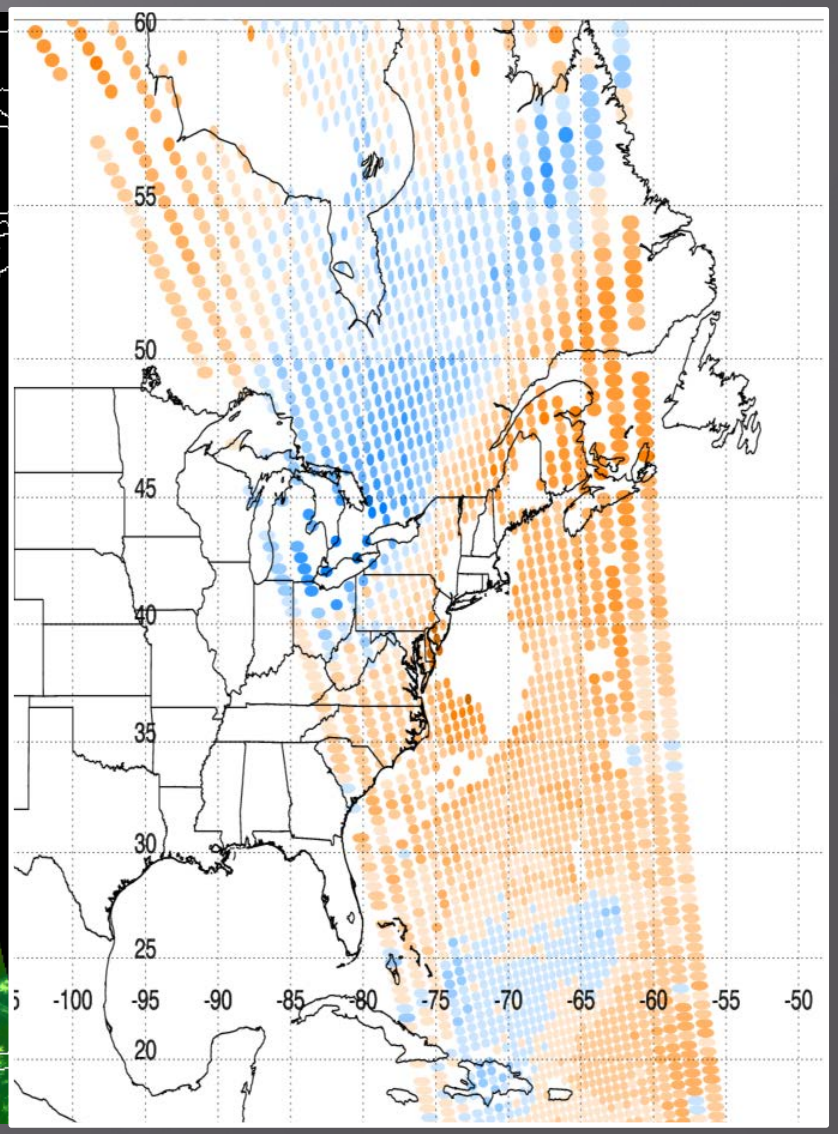
Tropical to Extratropical Transition Project

Emily Berndt (SPoRT), Michael Folmer (CICS),
Jason Dunion (HRD), and Jeff Halverson (UMBC)
Funded by JPSS PG/RR

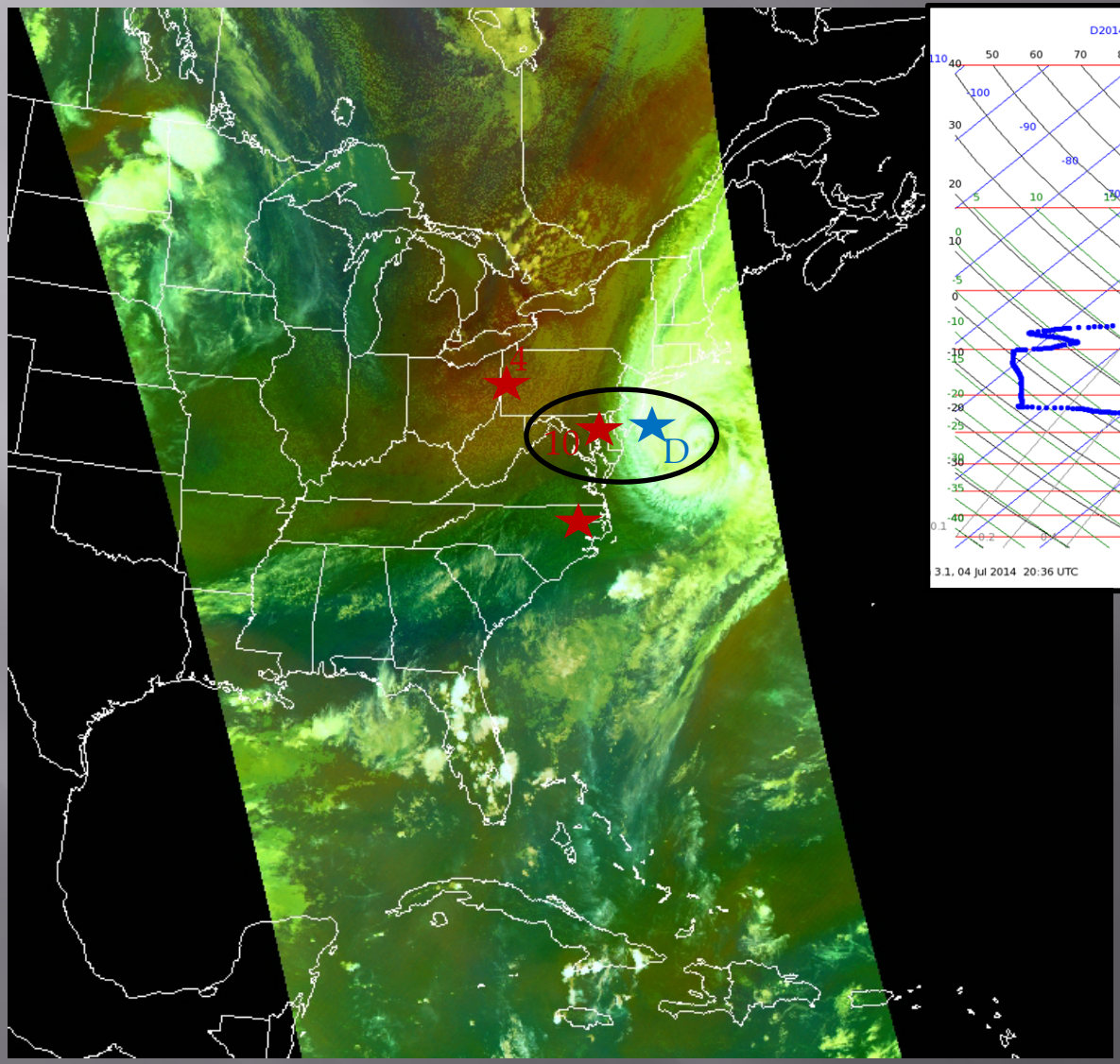
- R2O / O2R project that involves NHC, OPC, SAB, and WPC
- Combines NUCAPS soundings, ozone retrievals, tropopause information, and aircraft data (dropwindsondes) with conventional water vapor imagery and the air mass RGB.
- Goal: Demonstrate the utility of NUCAPS soundings to identify and monitor the onset of a stratospheric air intrusion (SAI) event in the vicinity of a tropical cyclone. Also look for how the SAI evolves and affects the TCs transition to an extratropical storm.
- The first evaluation of this technique is slated for mid-July through 30 November with volunteer forecasters.

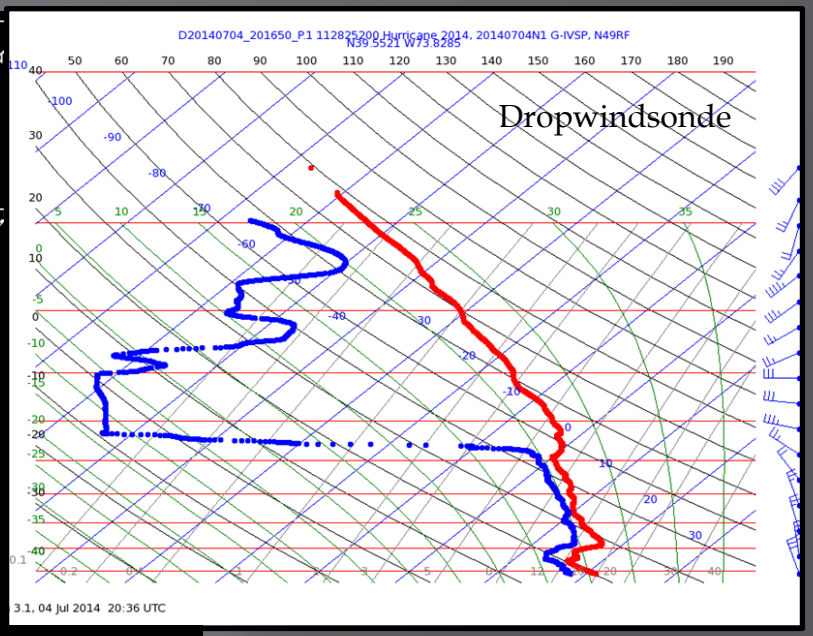
Air Mass RGB & NUCAPS O3 Anomaly:
Hurricane Arthur 1800 UTC on 07/04/14

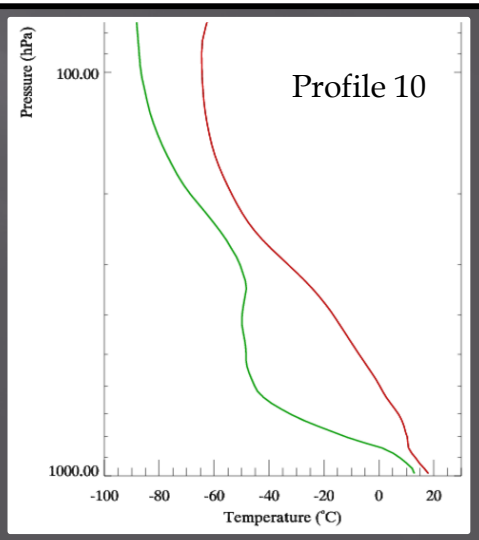




Air Mass RGB: Hurricane Arthur
1800 UTC on 07/04/14







Looking Ahead - Himawari

- Training on AHI will begin June/July 2016 and will be based on the Pacific Region training that was supported by Bill Ward (Pacific Region ESSD Chief) and developed/provided by Jordan Gerth (CIMSS), Scott Lindstrom (CIMSS), Kathy Strabala (CIMSS), and Tim Schmit (NESDIS/STAR).
- Additional AHI products will become available over the next few months, including:
  - Atmospheric Motion Vectors
  - Cloud Top Products
  - Possibly others?
- All 16 channels are currently available in N-AWIPS at full resolution (spatially, temporally), except the full 500 m resolution Band 3 (0.64 μm). It will be available at the NCWCP in prescribed sectors to cut down on the file size. Also available to AWC, but still in testing.

Looking Ahead – GOES-R/JPSS

- 2016 Demonstrations at the MPS Proving Ground:
  - Focus on GOES-R Baseline Products
    - Atmospheric Motion Vectors, Cloud Top Products, QPE/Rain Rate
  - Focus on getting additional SNPP products into operations:
    - SST, Sea Ice, Cloud products, etc.
- Official GOES-R and JPSS training plans are in the works through the Satellite Training Advisory Team (STAT) and Office of the Chief Learning Officer (OCLO).
- RGB Working Group has investigated NCP capabilities to create RGBs "on the fly".
  - Currently look for funding opportunities to pursue this capability further.
- Work will continue with NCO, Joe Zajic's group, and each center on data delivery and NAWIPS/AWIPS-II preparation for an incredible amount of data!!!

GOES-R and JPSS
National Centers Perspective Blog

Satellite Liaison Blog | GO

https://satelliteliaisonblog.wordpress.com

Elkridge, MD | Storm Prediction Ce... | National Hurricane ... | ADDS - METARs | Model Analyses and... | Navy/NRL TC_PAGE... | SLU WxChallenge H... | Weather Prediction ... | Other bookm

Sites | Reader | Following

Satellite Liaison Blog

GOES-R & JPSS: The Future of Weather Satellites

HOME ABOUT THE BLOG

Posted by *Michael Folmer* on *03/17/2015* Edit This

A Wild Week in the Tropical Pacific (follow-up to 3/11/2015 post)

Posted in: MTSAT-2, OPC, Tropical. Tagged: Australia, Infrared, MTSAT-2, TC Nathan, TC Olwyn, TC Pam, Tropical Cyclones, TS Bavi. Leave a comment

Last week I posted on the very active tropical Pacific Ocean with four storms occurring simultaneously. Tropical Cyclone Pam (17P) made a devastating visit to the island nation of Vanuatu as a Category 5 (145 kts or 165 mph) cyclone and has since joined the westerlies after passing near New Zealand as a much weaker system. Currently, the majority of the region has quieted down some, but Tropical Cyclone Nathan (east of Queensland) and Tropical Storm Bavi (West Pacific) are still active, while Tropical Cyclone Olwyn dissipated after making landfall in Western Australia. Jim Kells (OPC) compiled a few animations that show the evolution of all four tropical cyclones starting on 03/08/15. The imagery is courtesy of the MTSAT-2 satellite and we are eagerly anticipating the new Himawari-8 satellite data over the next few months.

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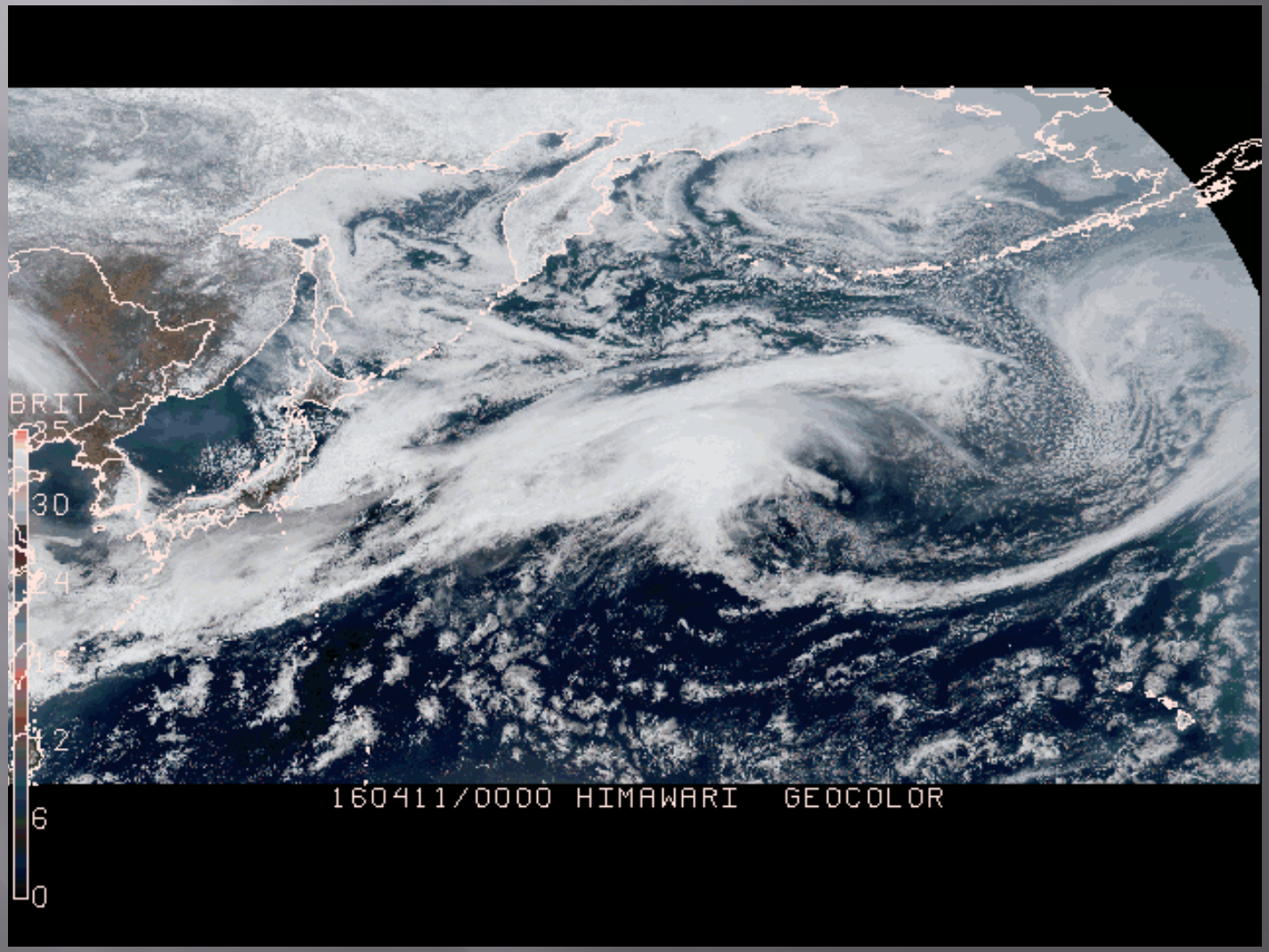
You are following this blog, along with 1,027 other amazing people (manage).

7:15 P
4/4/20

Questions?

michael.folmer@noaa.gov



Courtesy of Steve Miller (CIRA)