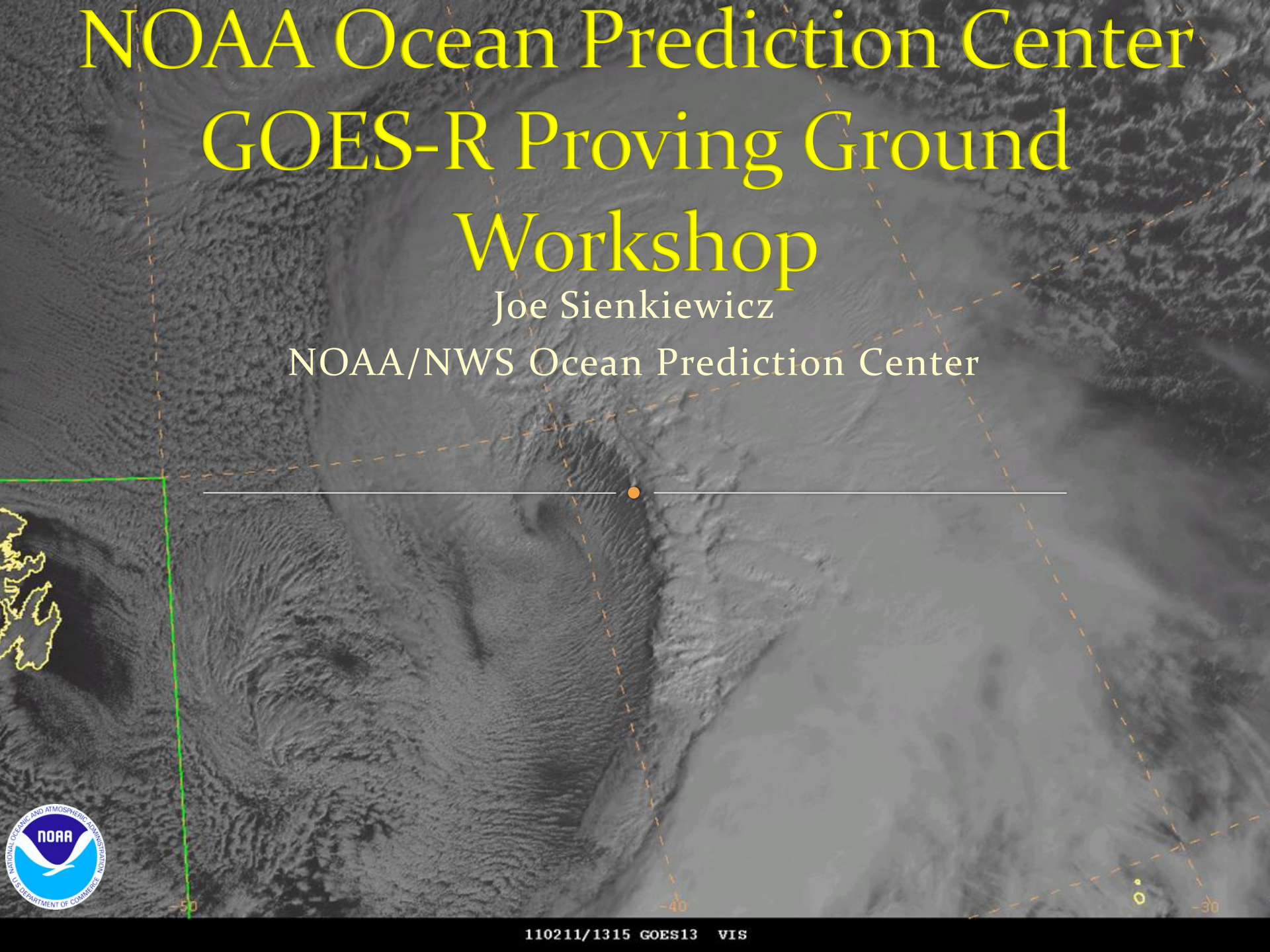
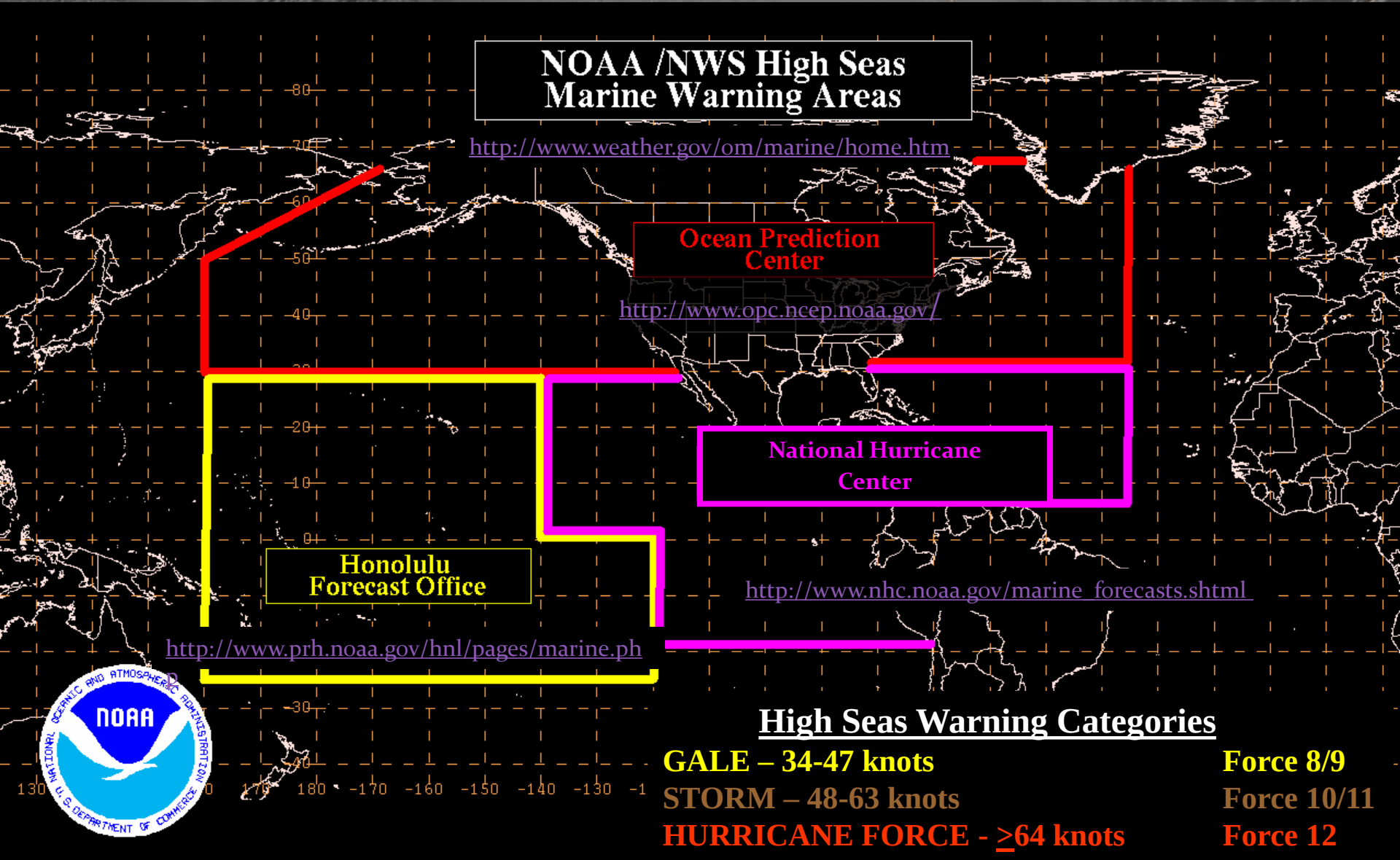
NOAA Ocean Prediction Center GOES-R Proving Ground Workshop

Joe Sienkiewicz

NOAA/NWS Ocean Prediction Center

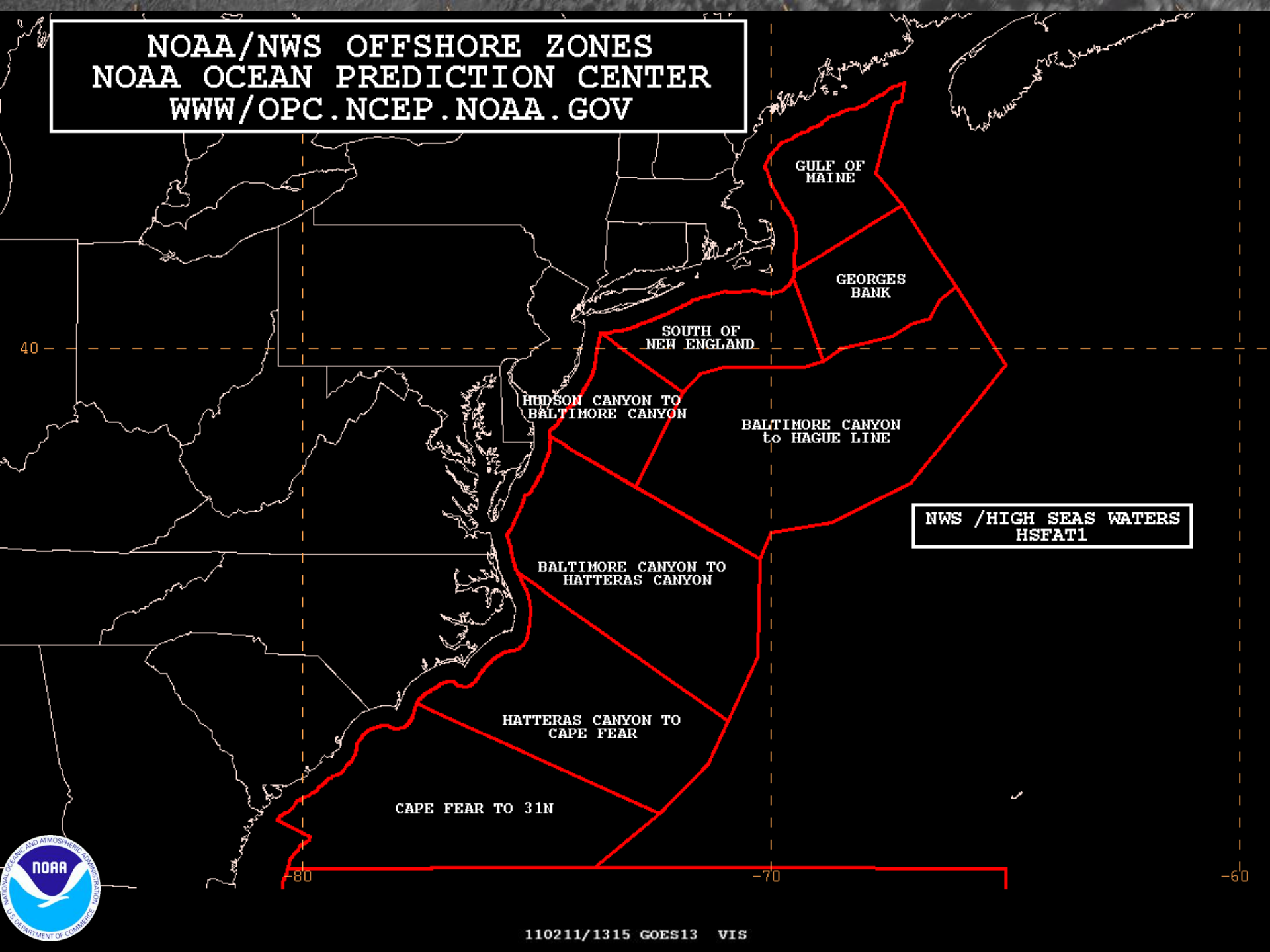


NOAA Forecast Responsibility



High Seas Warning Categories

GALE – 34-47 knots	Force 8/9
STORM – 48-63 knots	Force 10/11
HURRICANE FORCE - ≥64 knots	Force 12


NOAA/NWS OFFSHORE ZONES
NOAA OCEAN PREDICTION CENTER
WWW/OPC.NCEP.NOAA.GOV
GULF OF MAINE
GEORGES BANK
SOUTH OF NEW ENGLAND
HUDSON CANYON TO BALTIMORE CANYON
BALTIMORE CANYON to HAGUE LINE
NWS /HIGH SEAS WATERS HSFAT1
BALTIMORE CANYON TO HATTERAS CANYON
HATTERAS CANYON TO CAPE FEAR
CAPE FEAR TO 31N
40
-80
-70
-60
NOAA
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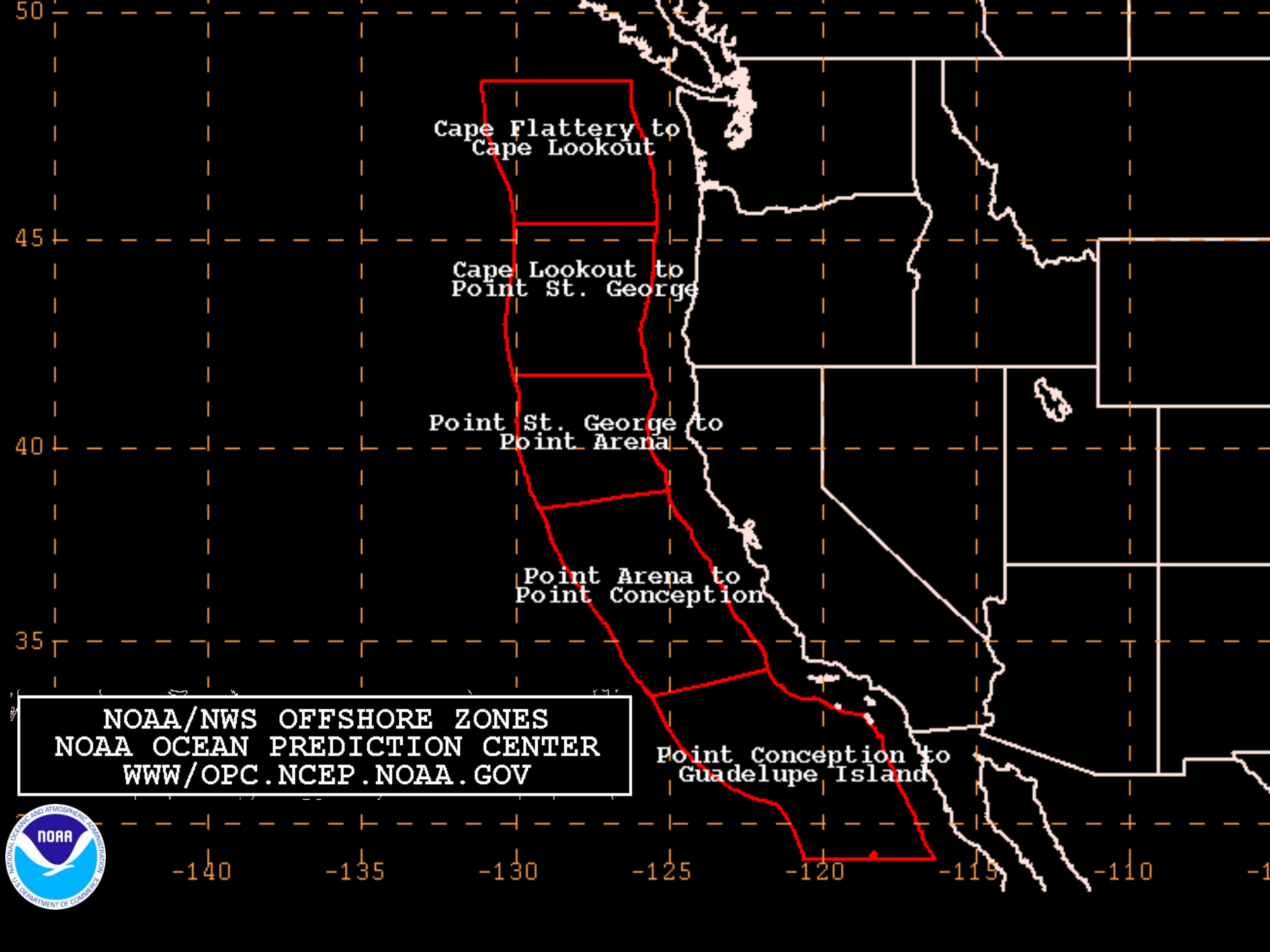
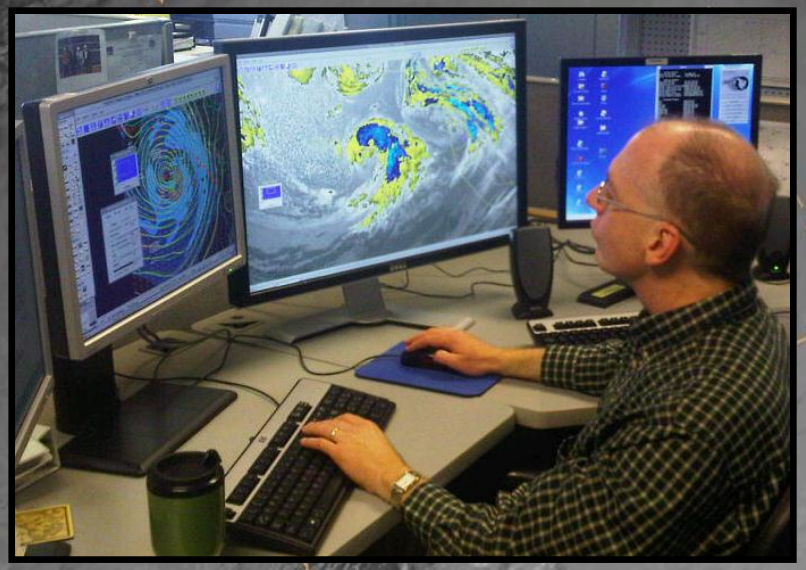

Cape Flattery to
Cape Lookout
Cape Lookout to
Point St. George
Point St. George to
Point Arena
Point Arena to
Point Conception
Point Conception to
Guadelupe Island
NOAA/NWS OFFSHORE ZONES
NOAA OCEAN PREDICTION CENTER
WWW/OPC.NCEP.NOAA.GOV
50
45
40
35
-140
-135
-130
-125
-120
-115
-110
NOAA

OPC Forecast Functions



Atlantic High Seas Pacific High Seas

Atlantic Offshore Pacific Offshore

Outlook (Medium Range)

Special Project Support

- Antarctica NMFS
- USCG Arctic (with AR)
- Japan

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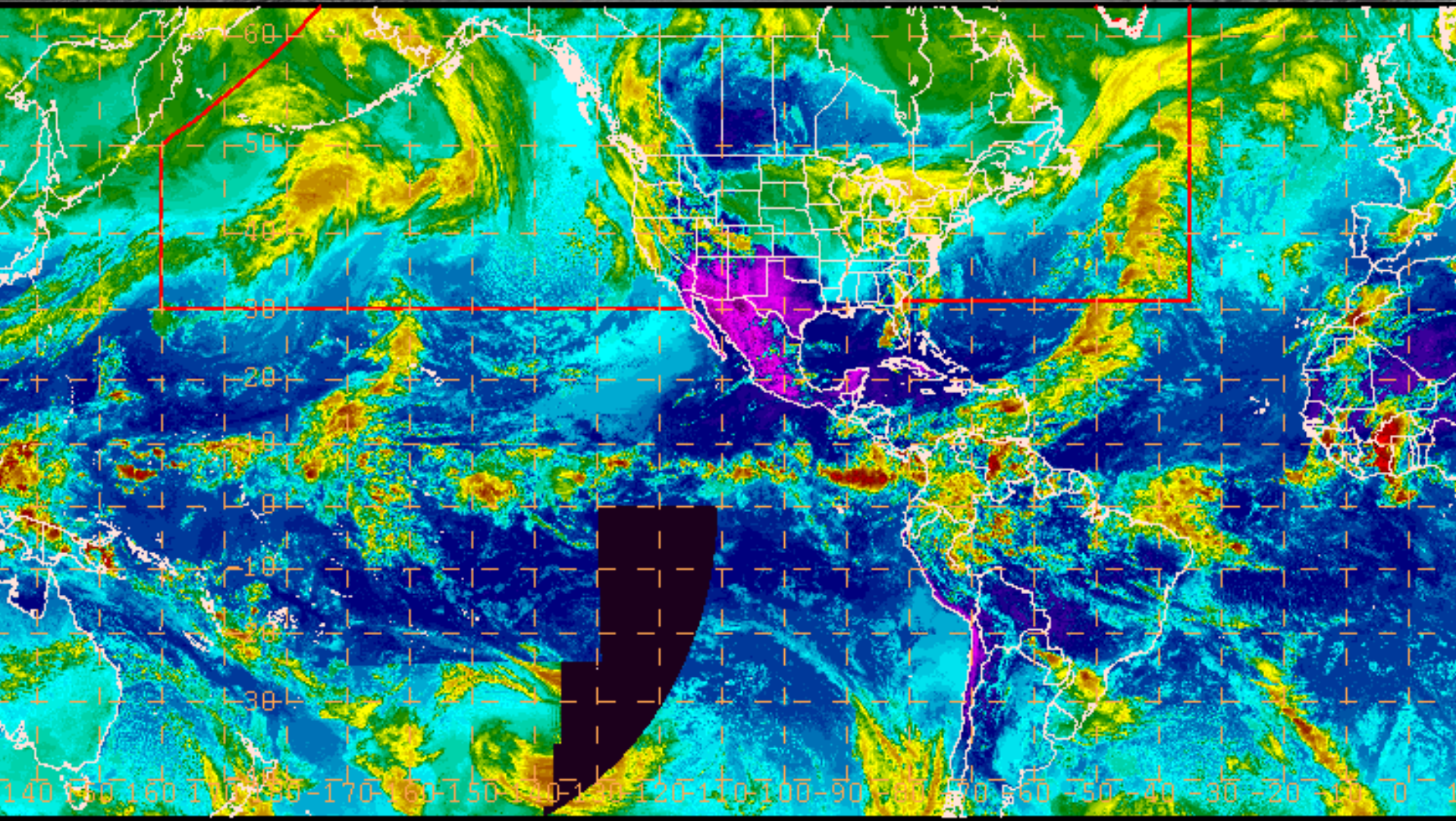
Goals of the OPC Proving Ground

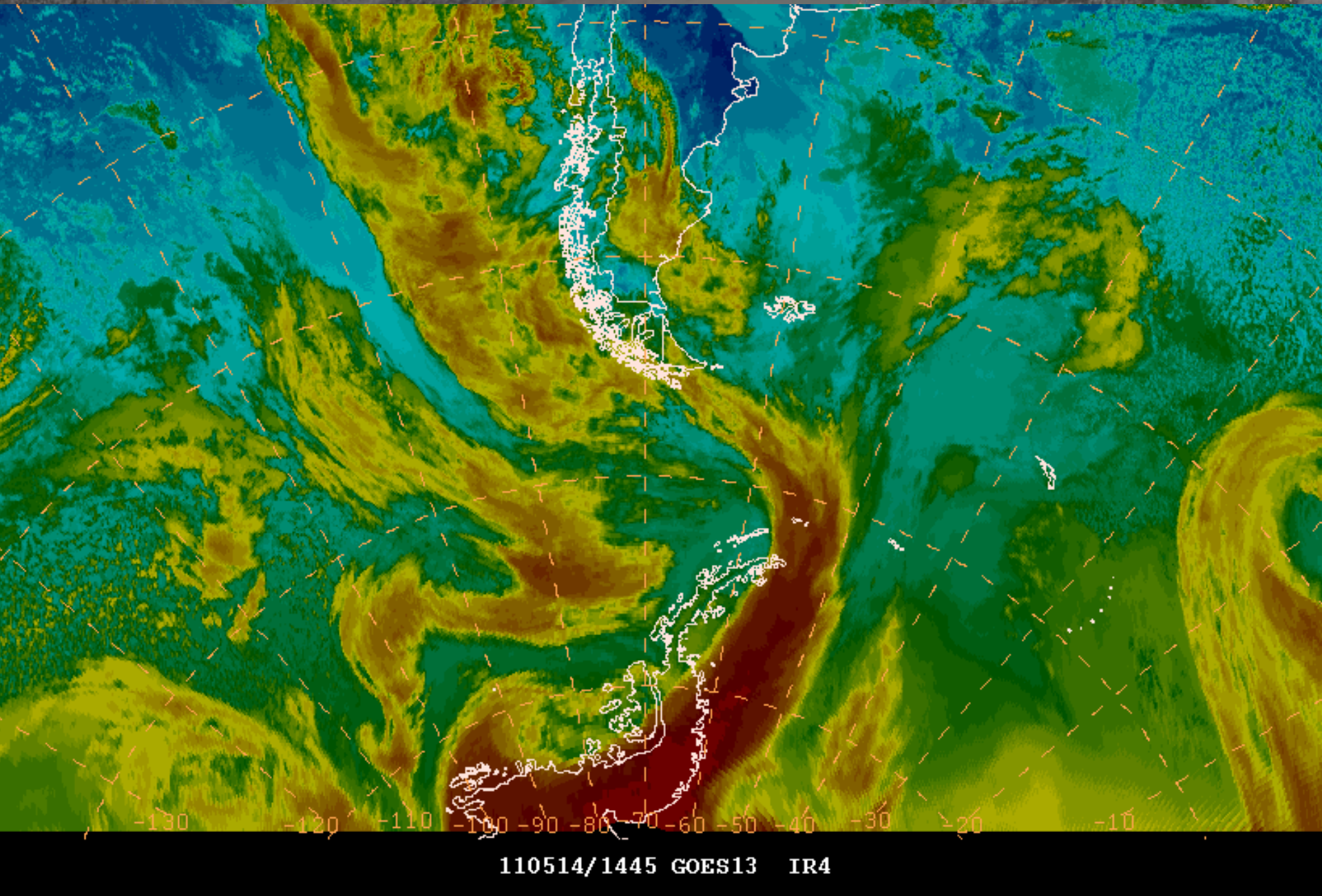
- Raise forecaster awareness of satellite products
- Engage research community in operational needs
- Prepare forecasters for mission-relevant GOES-R products

- Extend application of products to ocean areas and marine community
- Explore integration with other data sources
  - complementary observations
  - diagnostic to assess NWP

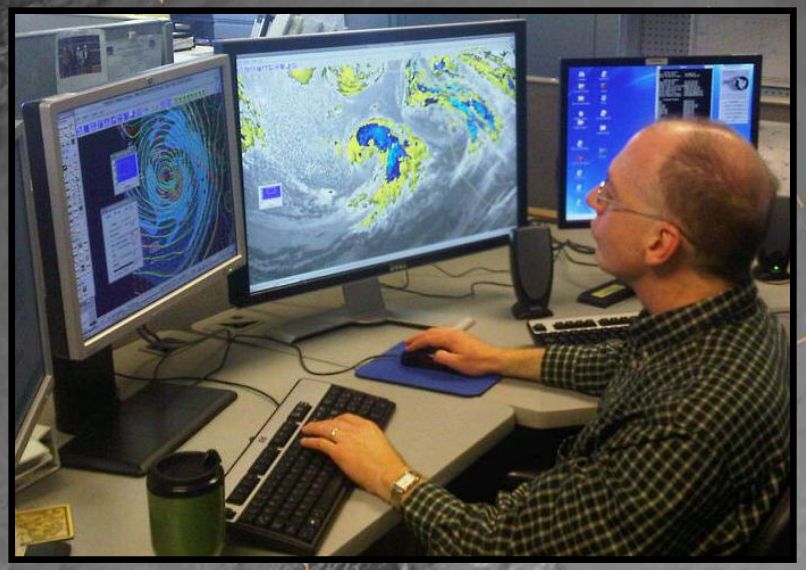
OPC Forecast Interest



OPC Forecast Interest



OPC – GOES-R Focus



- Offshore Thunderstorms
- Explosive Cyclogenesis
- Visibility
- Oceanographic Applications

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Convective Products

• Cloud/Moisture Imager	Tim Schmit/Dan Lindsay
• Convective Initiation	John Walker
• Cloud Top Phase	Mike Pavalonis
• Cloud Top Height	Andy Heidinger
• Derived Stability Inidices	Tim Schmit
• Enhanced “V”/OTD	Kris Bedka
• Lightning Detection	Scott Rudloski
• RGB Airmass	John Knaff

Convective Products

• Cloud/Moisture Imager	SAB HPC
• Convective Initiation	SAB
• Cloud Top Phase	SAB
• Cloud Top Height	SAB
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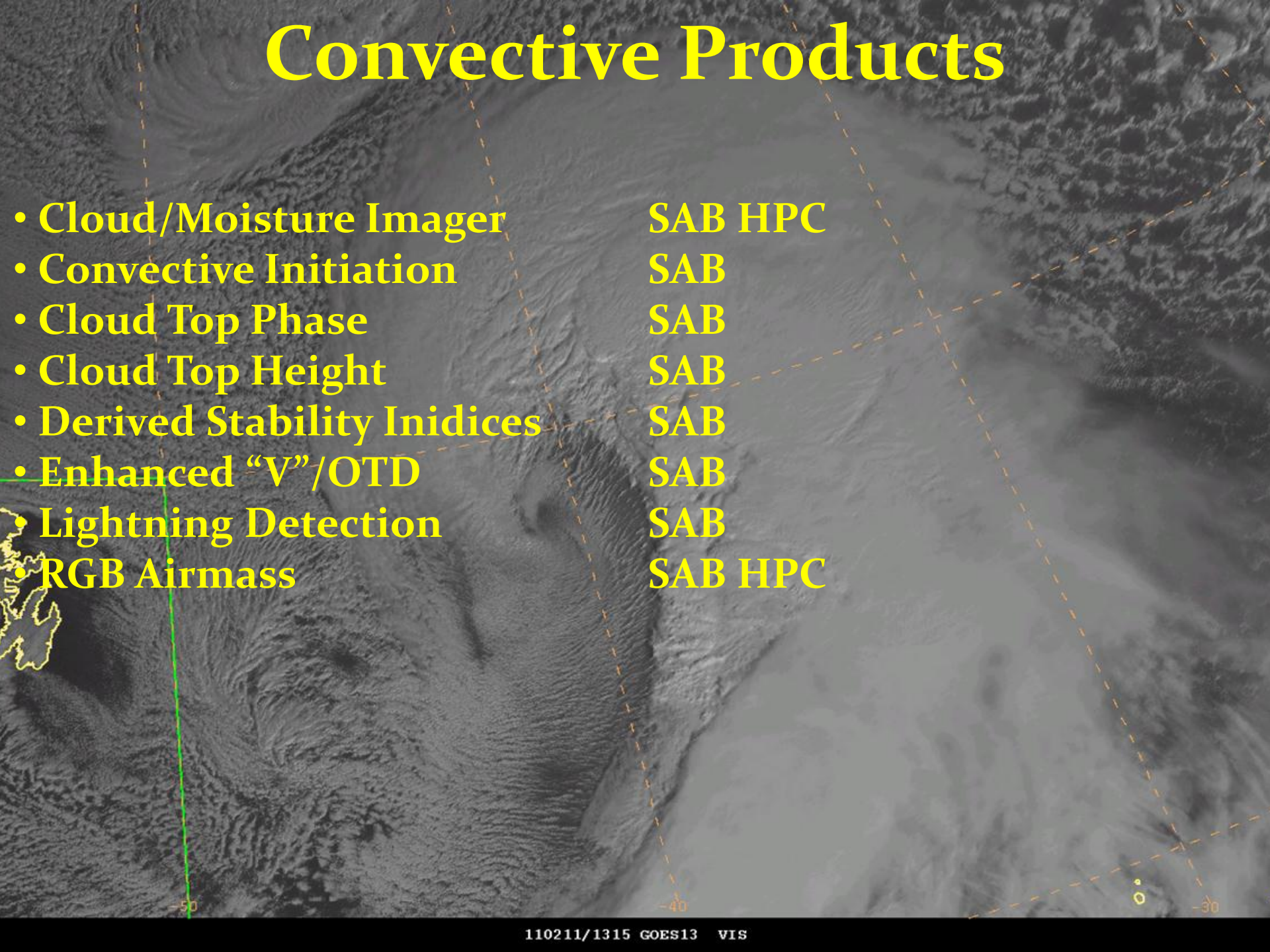
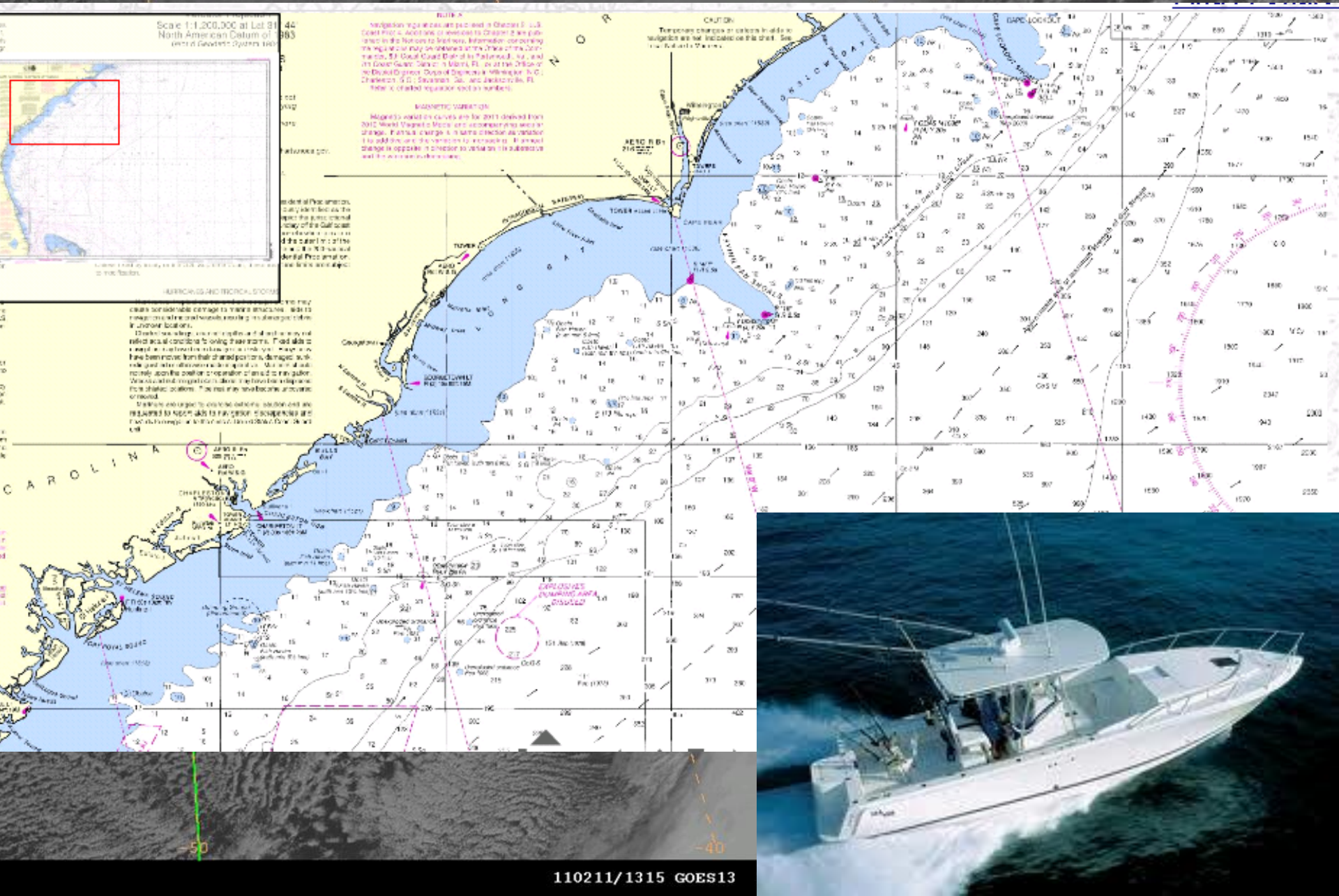
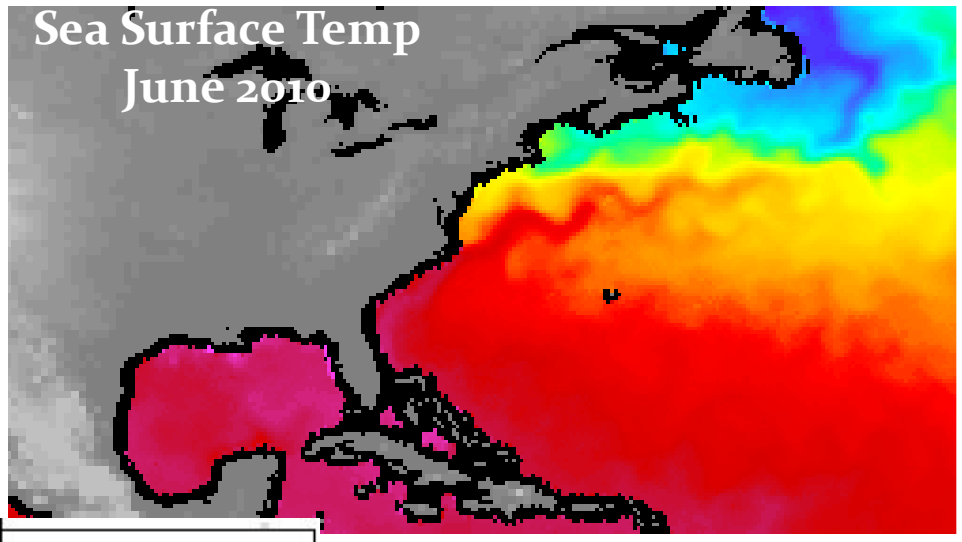
• Enhanced “V”/OTD	SAB
• Lightning Detection	SAB
• RGB Airmass	SAB HPC



Thunderstorms



Lightning activity – June 2010

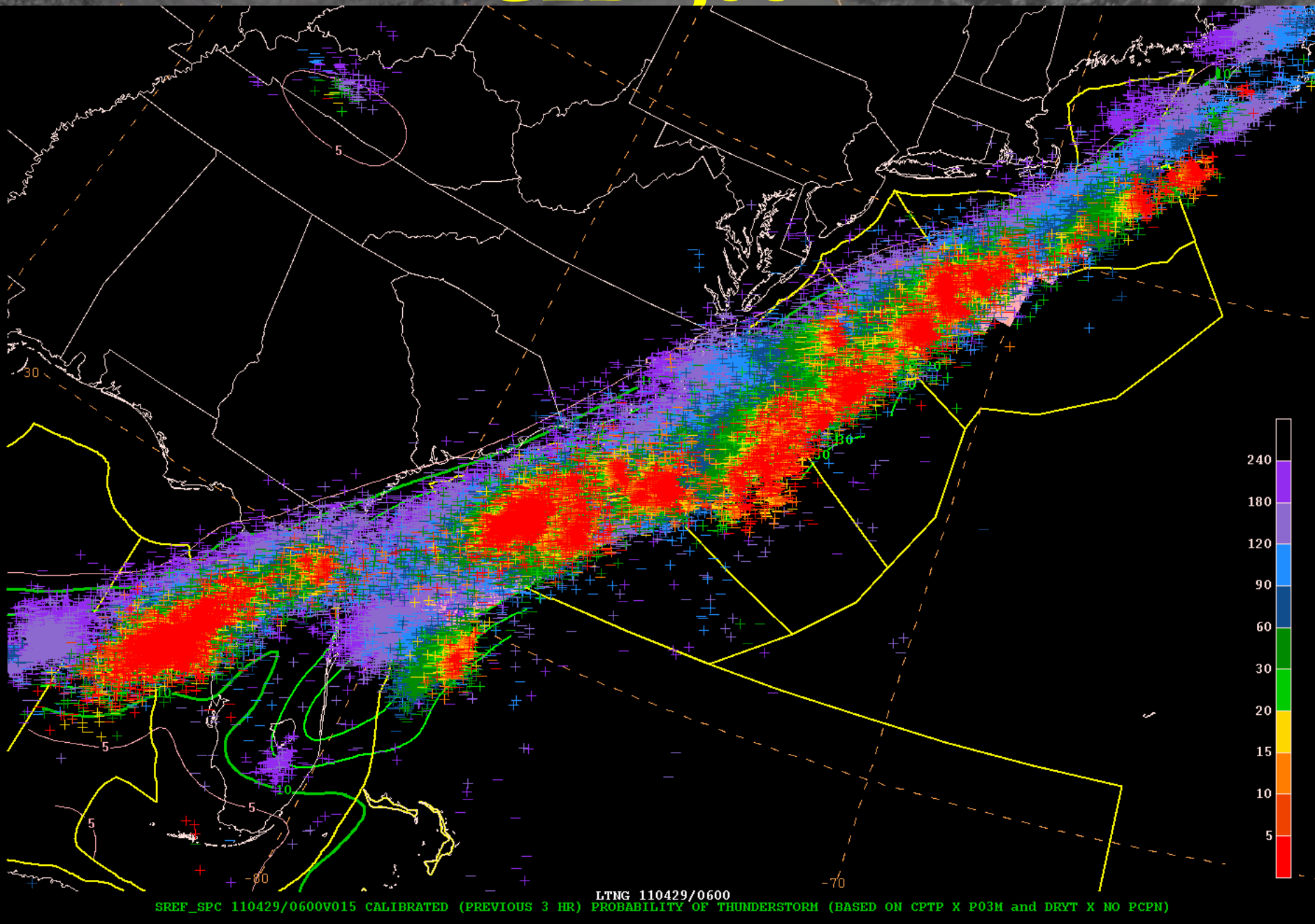


Stroke Density
strokes/sq km

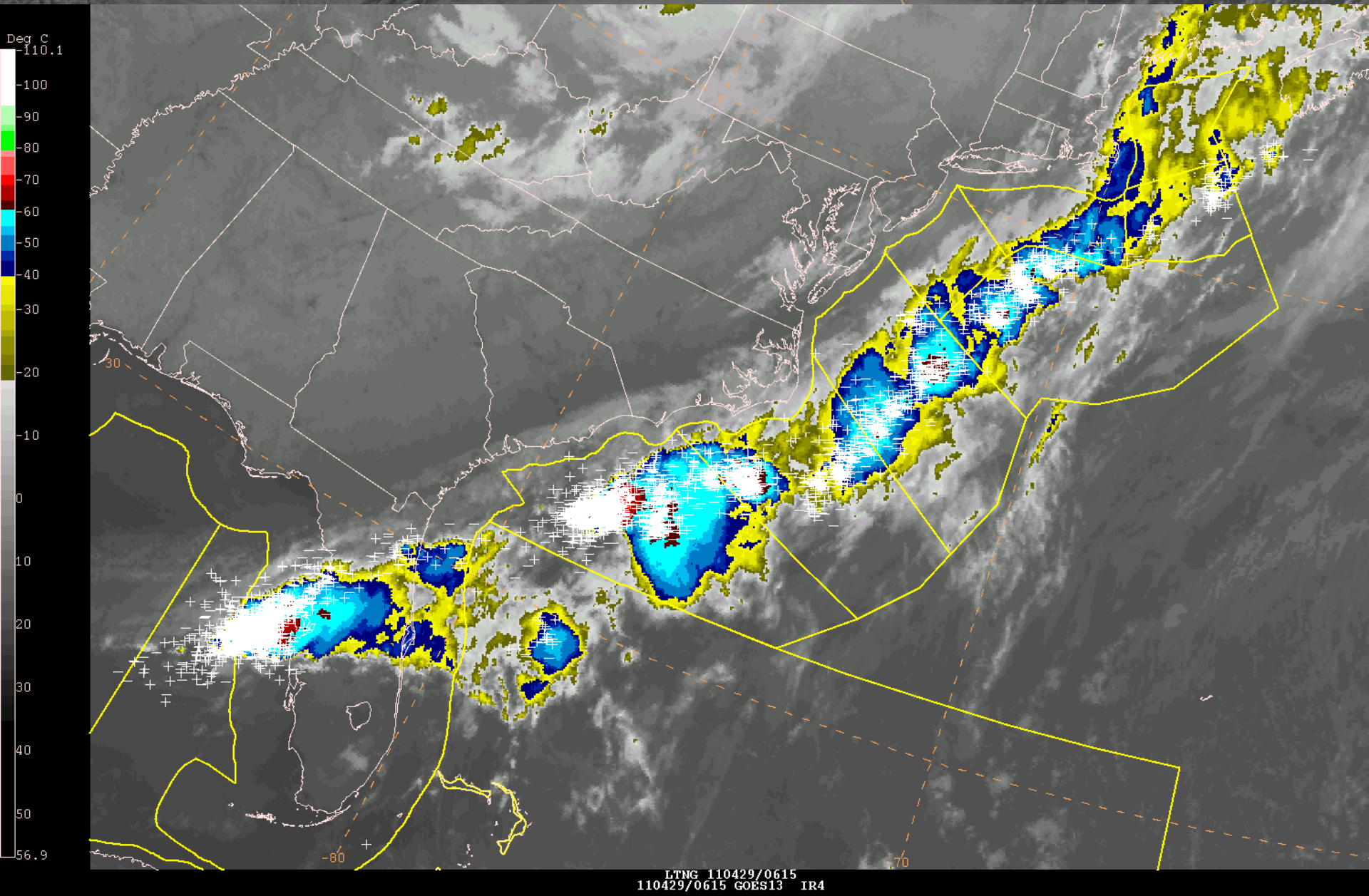
16	and up	
8	to	16
4	to	8
2	to	4
1	to	2
0.5	to	1
0.25	to	0.5
0.125	to	0.25
0+	to	0.125

GLD360 June 2010 stroke density map
Lat 6n - 51n; Lon 127w - 50w
20 km density grid

GLD 360

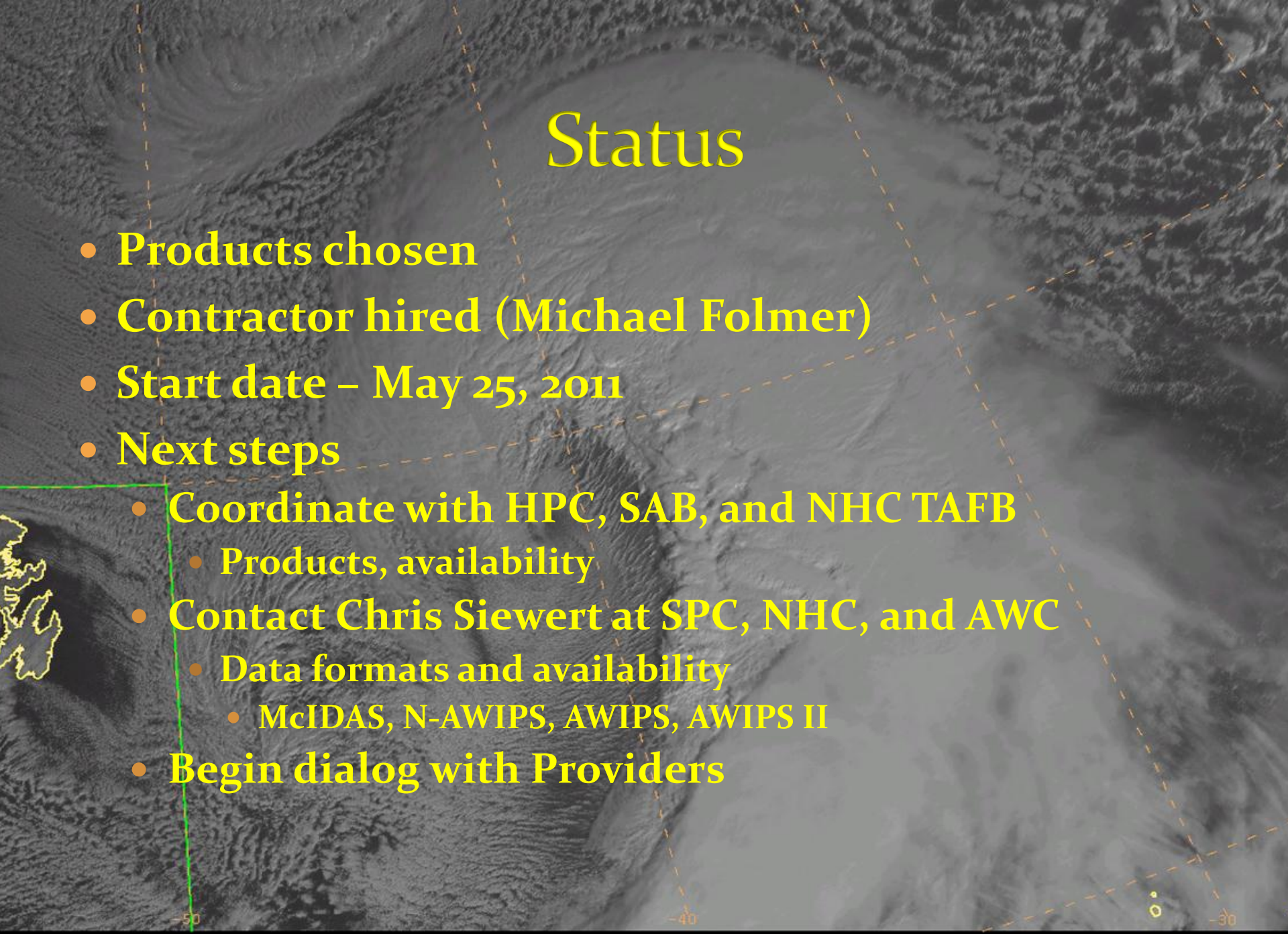

240
180
120
90
60
30
20
15
10
5
LTNG 110429/0600
SREF_SPC 110429/0600V015 CALIBRATED (PREVIOUS 3 HR) PROBABILITY OF THUNDERSTORM (BASED ON CPTP X P03M and DRYT X NO PCPN)

GOES IR / GLD 360



Status

- Products chosen
- Contractor hired (Michael Folmer)
- Start date – May 25, 2011
- Next steps
  - Coordinate with HPC, SAB, and NHC TAFB
    - Products, availability
  - Contact Chris Siewert at SPC, NHC, and AWC
    - Data formats and availability
      - McIDAS, N-AWIPS, AWIPS, AWIPS II
  - Begin dialog with Providers



Thank You!
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