Annapolis - Newport Weather Safety

Joe Sienkiewicz
Chief, Ocean Applications Branch,
NOAA/NWS Ocean Prediction Center

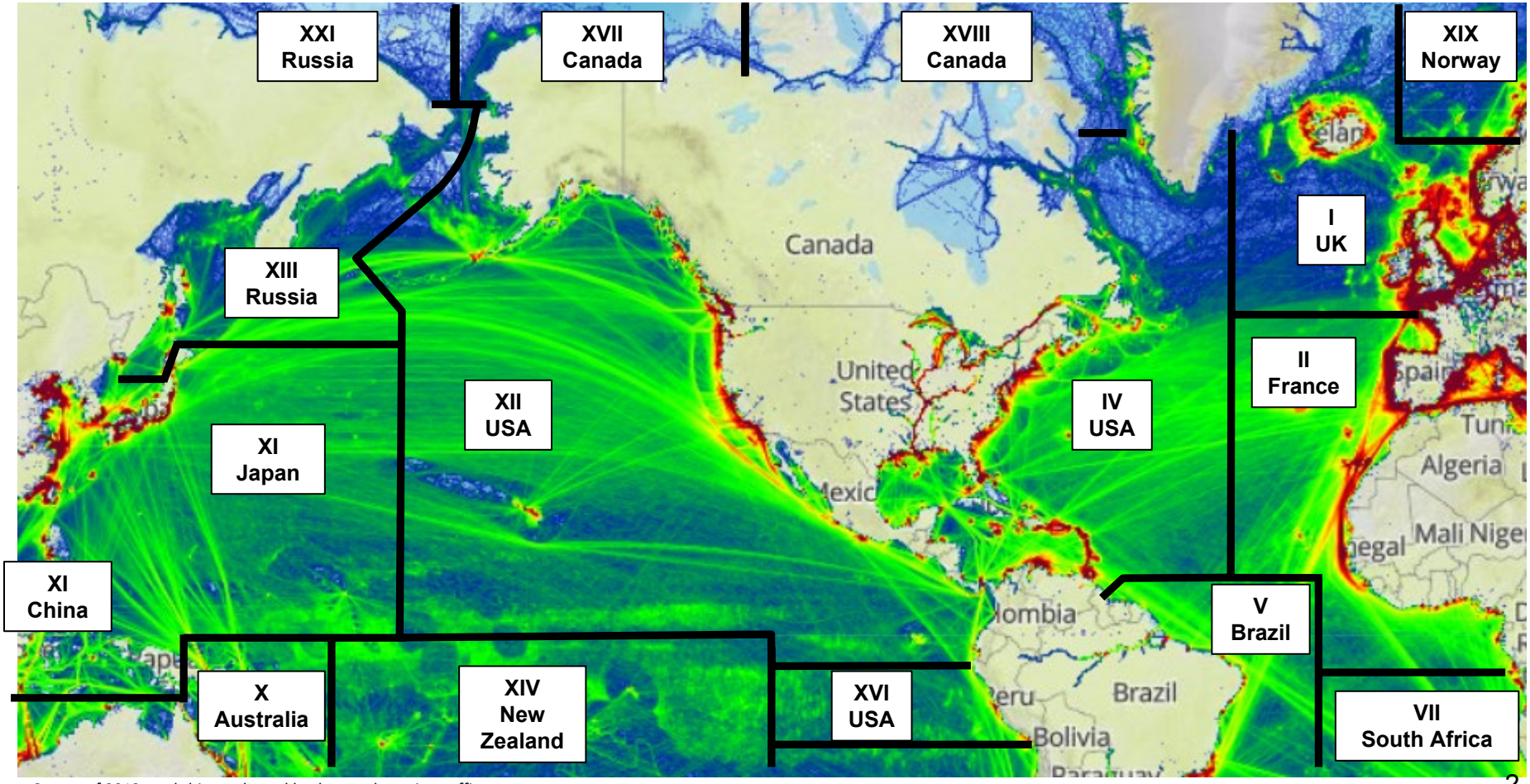
ocean.weather.gov

2016 Global Ship Tracks

(WMO METAREAs)

Shipping lanes in green:

[Metarea IV forecast]

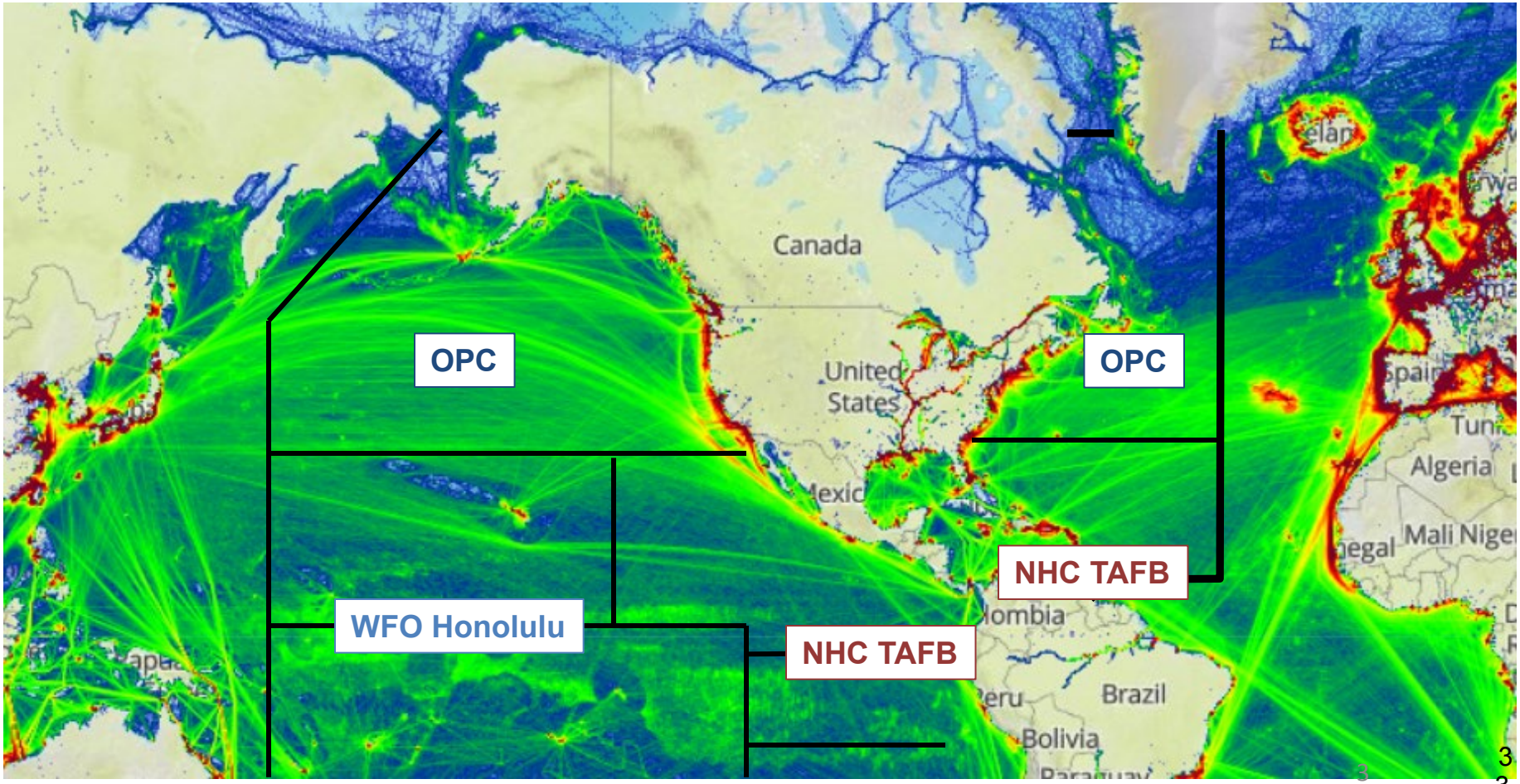


Source of 2013 total ship tracks and background: marinetraffic.com

2016 Global Ship Tracks

(NWS High Seas Marine Zones)

Shipping lanes in green:



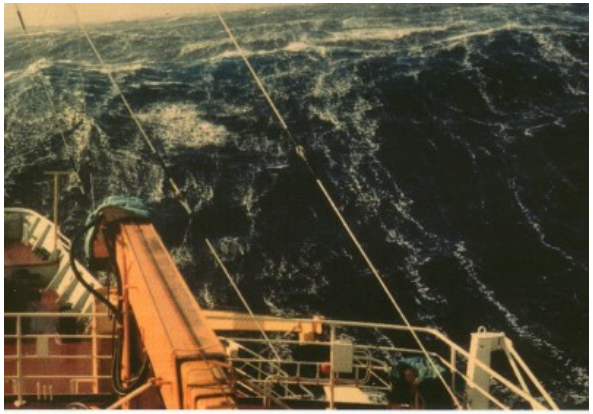
Source of 2013 total ship tracks and background: marinetraffic.com

WARNINGS (non-TROPICAL)

BEAUFORT FORCE 8
WIND SPEED: 34-40 KNOTS

SEA: WAVE HEIGHT 5.5-7.5M (18-25FT), MODERATELY HIGH WAVES OF GREATER LENGTH, EDGES OF CREST BEGIN TO BREAK INTO THE SPINDRIFT, FOAM BLOWN IN WELL MARKED STREAKS ALONG WIND DIRECTION.

GALE WARNING
Force 8,9



BEAUFORT FORCE 9
WIND SPEED: 41-47 KNOTS

SEA: WAVE HEIGHT 7-10M (23-32FT), HIGH WAVES, DENSE STREAKS OF FOAM ALONG DIRECTION OF THE WIND, WAVE CRESTS BEGIN TO TOPPLE, TUMBLE, AND ROLL OVER. SPRAY MAY AFFECT VISIBILITY.

BEAUFORT FORCE 10
WIND SPEED: 48-55 KNOTS

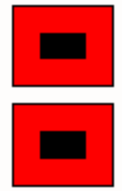
SEA: WAVE HEIGHT 9-12.5M (29-41FT), VERY HIGH WAVES WITH LONG OVERHANGING CRESTS, THE RESULTING FOAM, IN GREAT PATCHES, IS BLOWN IN DENSE WHITE STREAKS ALONG WIND DIRECTION. ON THE WHOLE, SEA SURFACE TAKES A WHITE APPEARANCE, TUMBLING OF THE SEA IS HEAVY AND SHOCK-LIKE, VISIBILITY AFFECTED.

STORM WARNING
Force 10,11

BEAUFORT FORCE 12
WIND SPEED: 64 KNOTS

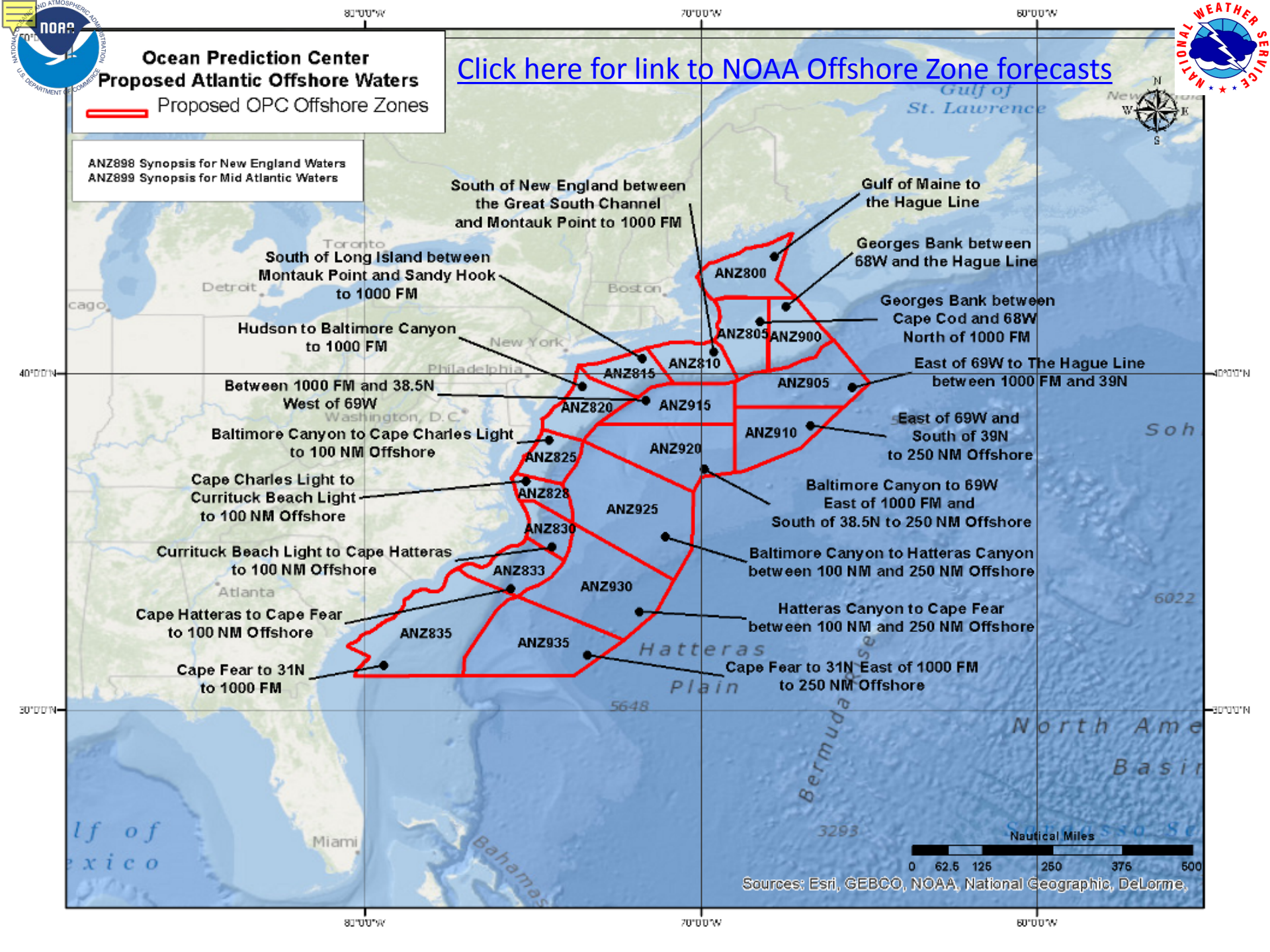
SEA: SEA COMPLETELY WHITE WITH DRIVING SPRAY, VISIBILITY VERY SERIOUSLY AFFECTED. THE AIR IS FILLED WITH FOAM AND SPRAY

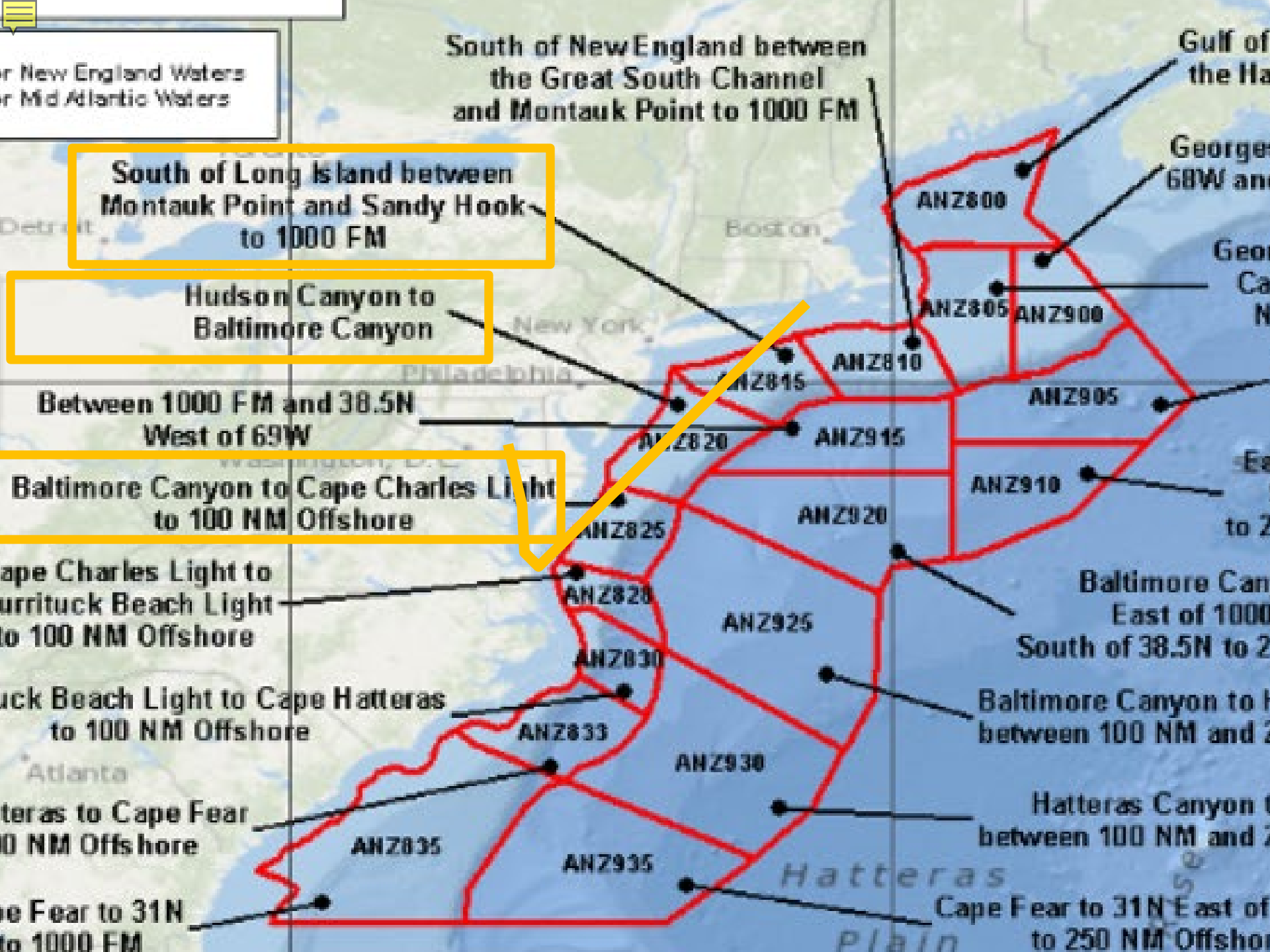
HURRICANE FORCE WARNING
Force 12



[Beaufort Wind Scale]

[NWS Marine Weather]


Ocean Prediction Center
Proposed Atlantic Offshore Waters
Proposed OPC Offshore Zones
Click here for link to NOAA Offshore Zone forecasts
ANZ898 Synopsis for New England Waters
ANZ899 Synopsis for Mid Atlantic Waters
South of New England between the Great South Channel and Montauk Point to 1000 FM
Gulf of Maine to the Hague Line
Georges Bank between 68W and the Hague Line
South of Long Island between Montauk Point and Sandy Hook to 1000 FM
Georges Bank between Cape Cod and 68W North of 1000 FM
Hudson to Baltimore Canyon to 1000 FM
East of 69W to The Hague Line between 1000 FM and 39N
Between 1000 FM and 38.5N West of 69W
East of 69W and South of 39N to 250 NM Offshore
Baltimore Canyon to Cape Charles Light to 100 NM Offshore
Cape Charles Light to Currituck Beach Light to 100 NM Offshore
Baltimore Canyon to 69W East of 1000 FM and South of 38.5N to 250 NM Offshore
Currituck Beach Light to Cape Hatteras to 100 NM Offshore
Baltimore Canyon to Hatteras Canyon between 100 NM and 250 NM Offshore
Cape Hatteras to Cape Fear to 100 NM Offshore
Hatteras Canyon to Cape Fear between 100 NM and 250 NM Offshore
Cape Fear to 31N to 1000 FM
Cape Fear to 31N East of 1000 FM to 250 NM Offshore
ANZ800
ANZ805
ANZ900
ANZ810
ANZ815
ANZ905
ANZ820
ANZ915
ANZ910
ANZ825
ANZ920
ANZ828
ANZ925
ANZ830
ANZ833
ANZ930
ANZ835
ANZ935
Gulf of St. Lawrence
Toronto
Detroit
Boston
New York
Philadelphia
Washington, D.C.
Atlanta
Miami
Hatteras Plain
Bermuda
Nautical Miles
0 62.5 125 250 375 500
Sources: Esri, GEBCO, NOAA, National Geographic, DeLorme,


r New England Waters
r Mid Atlantic Waters
South of New England between the Great South Channel and Montauk Point to 1000 FM
South of Long Island between Montauk Point and Sandy Hook to 1000 FM
Hudson Canyon to Baltimore Canyon
Between 1000 FM and 38.5N West of 69W
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Baltimore Canyon to between 100 NM and
Hatteras Canyon between 100 NM and
Cape Fear to 31N East of to 250 NM Offshor
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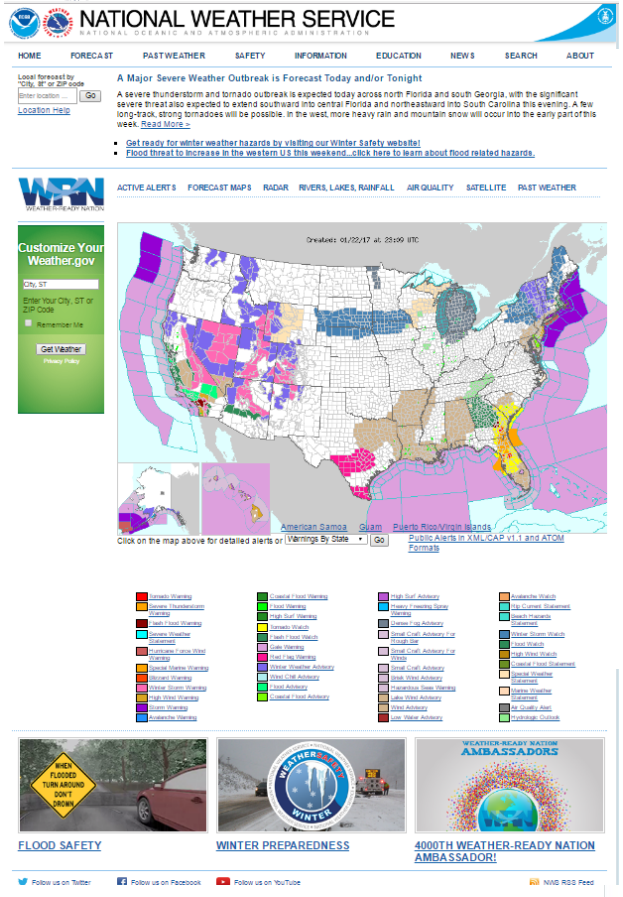
ANZ830
ANZ925
ANZ833
ANZ930
ANZ835
ANZ935
Detroit
Boston
New York
Philadelphia
Washington, D.C.
Atlanta
Hatteras

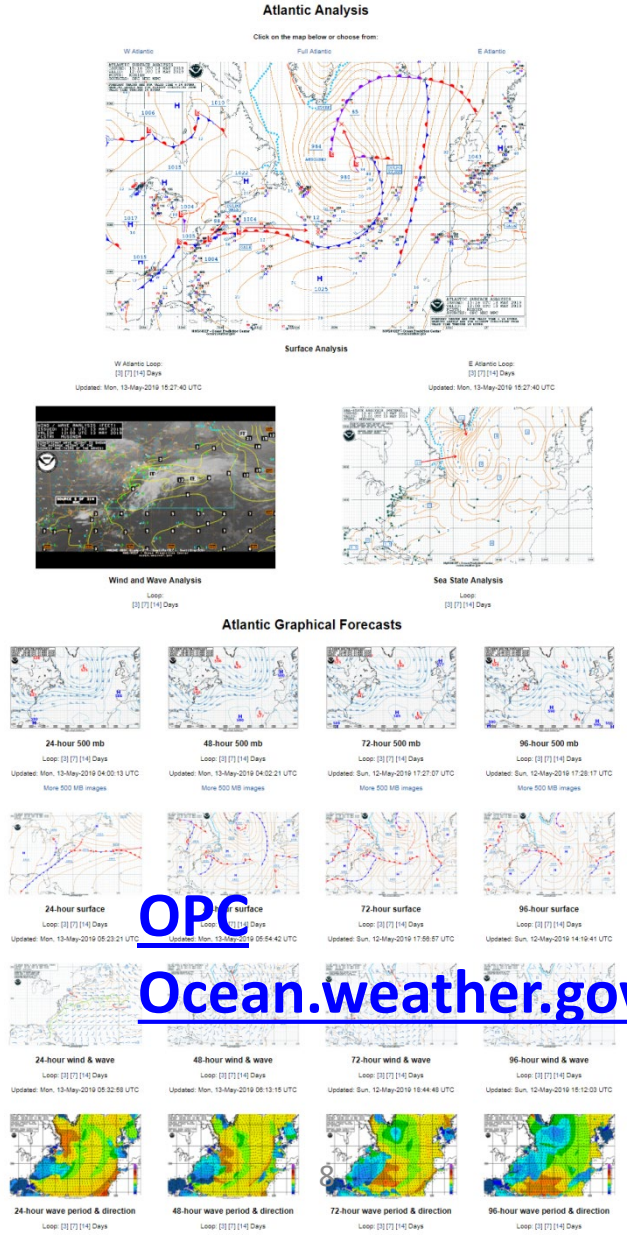
Outline

- NWS Forecasts
- National Hurricane Center
- GRIBS
- FTPmail
- HFRadar
- Tides and Currents
- Climatology

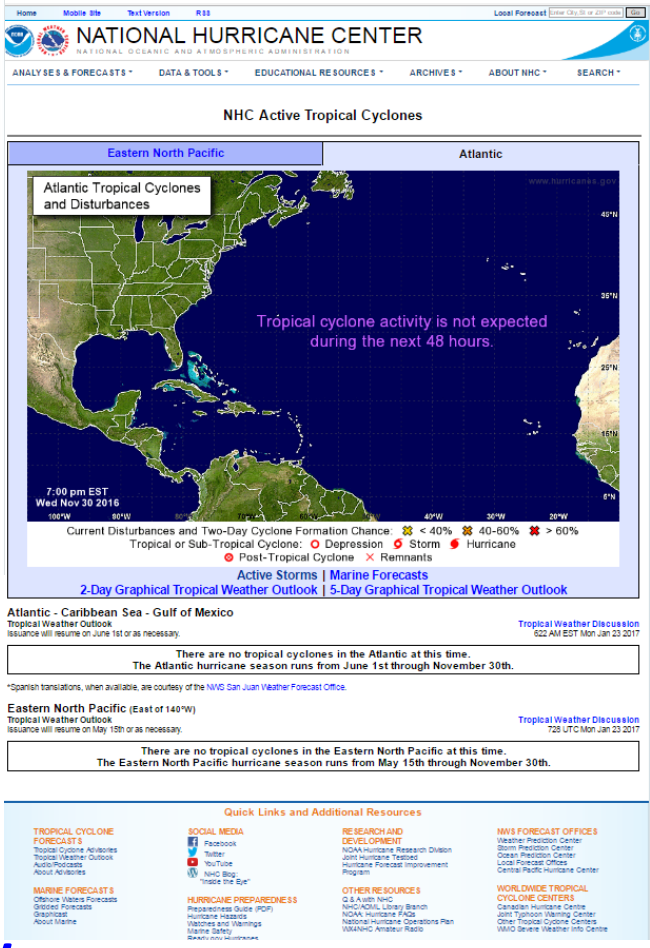
Weather Sources



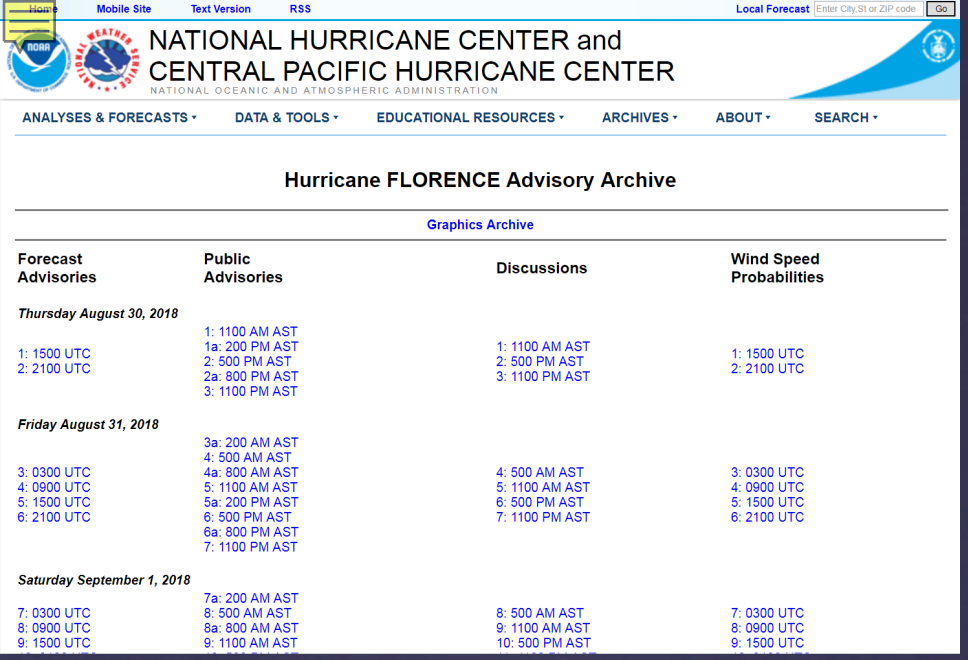
[NWS Weather.gov]



[OPC Ocean.weather.gov]



[NHC Hurricanes.gov]



- TCM - Tropical Cyclone Advisories
- TCP – Tropical Cyclone Public Advisories
- TCD – Tropical Cyclone Discussions

ZCZC MIATCDAT1 ALL
TTAA00 KNHC DDHHMM

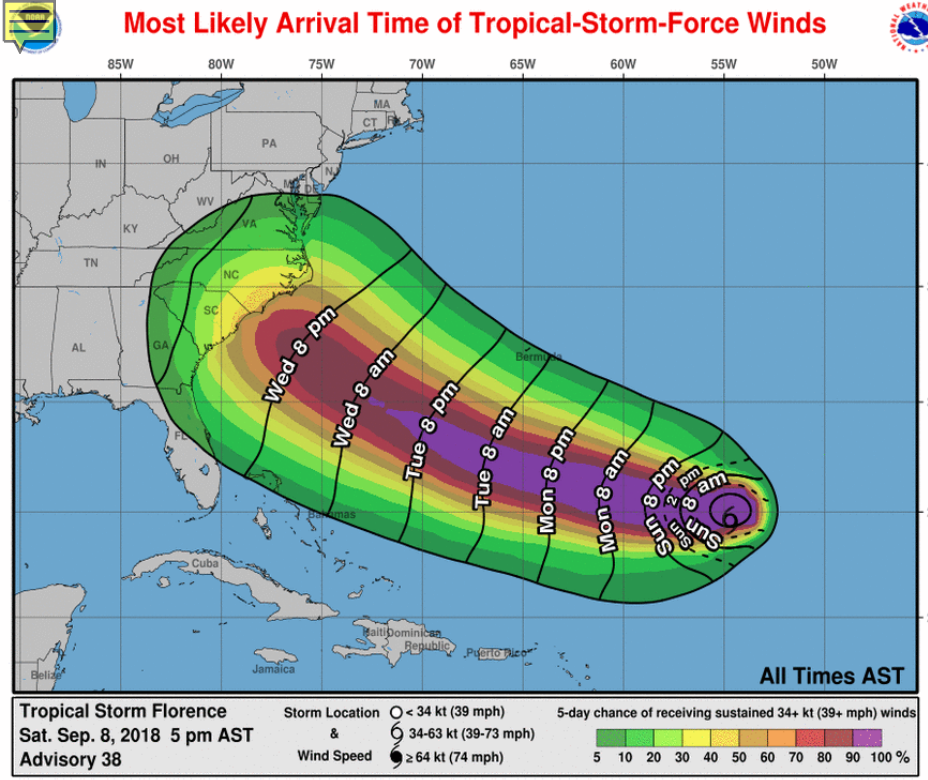
Hurricane Florence Discussion Number 46
NWS National Hurricane Center Miami FL AL062018
500 PM AST Mon Sep 10 2018

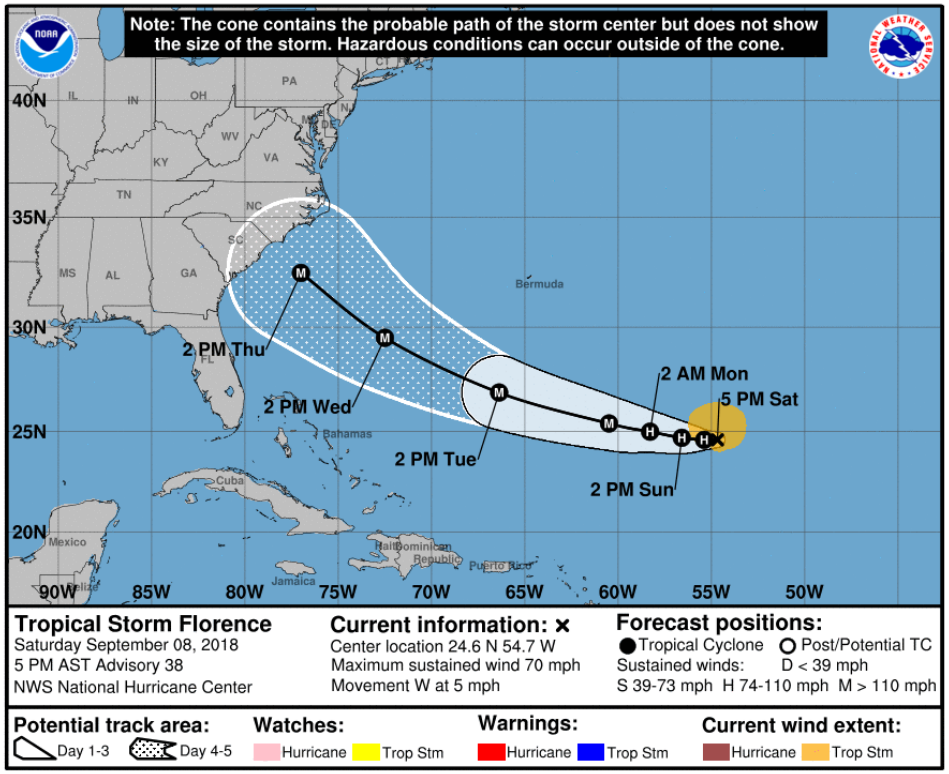
Unfortunately, the models were right. Florence has rapidly intensified into an extremely dangerous hurricane, with 30-second GOES-16 visible imagery showing well-defined eyewall mesovortices rotating inside of the eye. A NOAA Hurricane Hunter aircraft found peak SFMR winds of about 120 kt, with flight-level winds and dropsonde measurements also supporting that value for the initial wind speed estimate. Notably, the aircraft data also show the size of the hurricane-force winds has doubled in the past 12 hours.

None of the guidance suggest that Florence has peaked in intensity, and this is supported by a continuation of a low-shear environment, and even warmer waters over the next 36 hours. Thus, the intensity forecast is raised from the previous one, bringing Florence close to category 5 strength tomorrow. Near landfall, the vertical wind shear could increase, along with the increasing likelihood of eyewall cycles. While the intensity forecast shows some weakening of the maximum winds near landfall, the wind field is expected to grow with time, which increases the storm surge and inland wind threats. The bottom line is that there is high confidence that Florence will be a large and extremely dangerous hurricane, regardless of its exact intensity.

http://www.nhc.noaa.gov/data/

Tropical Cyclone Products



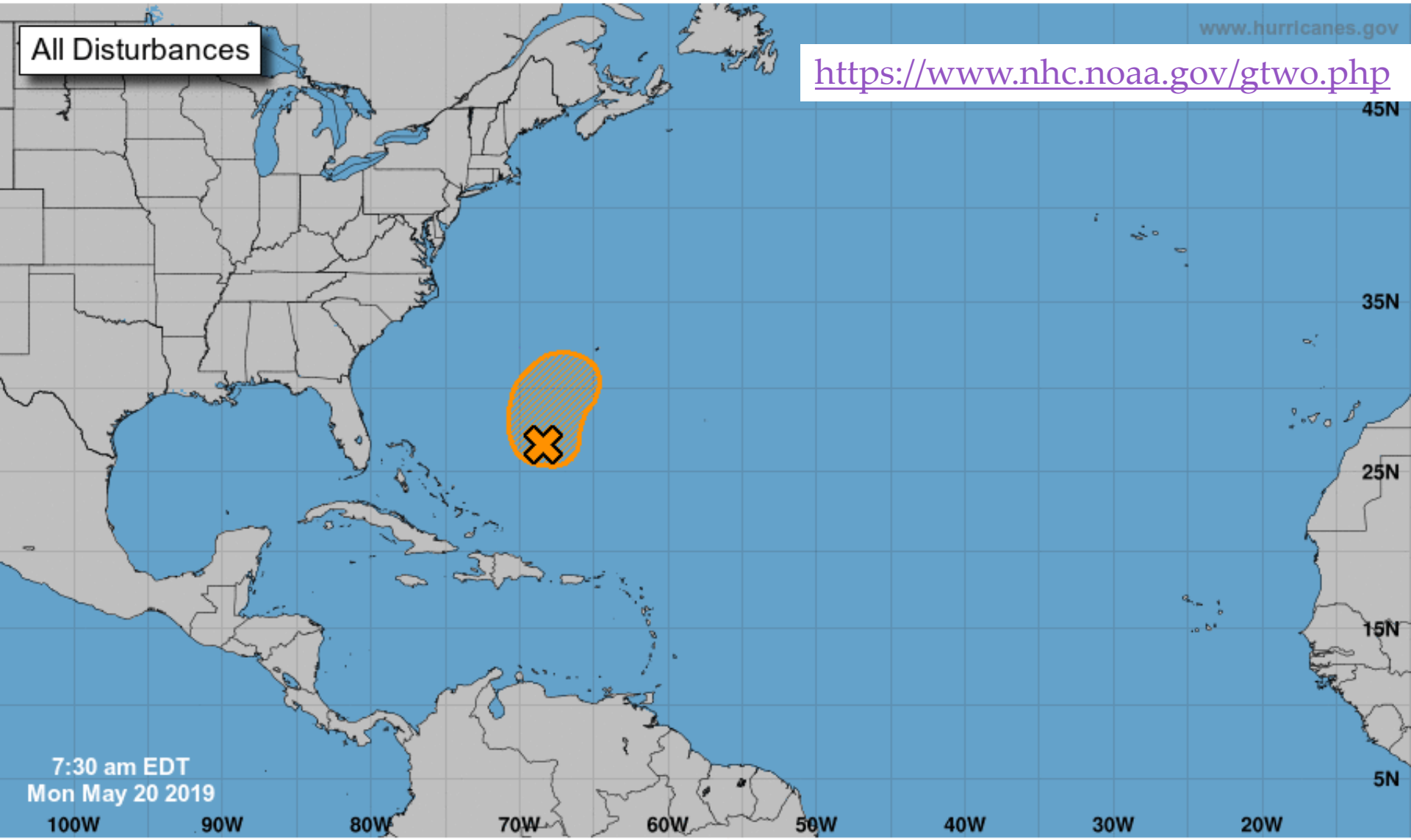


https://www.nhc.noaa.gov/data/#advisories

Tropical Cyclone Products

Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



Current Disturbances and Five-Day Cyclone Formation Chance: < 40% 40-60% > 60%

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

Post-Tropical Cyclone or Remnants

The legacy OPC website URL https://www.opc.ncep.noaa.gov permanently redirects to https://ocean.weather.gov. On or after July 9, 2019 the old URL will not work. Users must use https://ocean.weather.gov to access the OPC website. More information is available at https://www.weather.gov/media/notification/scn19-10opc_terminate.pdf.

PLEASE NOTE: This .shtml webpage is going to be converted to .php format on June 4, 2019. On that date you will need to replace ".shtml" with ".php" in the URL address bar. The actual page content will remain the same. More information is available at https://www.weather.gov/media/notification/scn19-11opc_shtml.pdf.

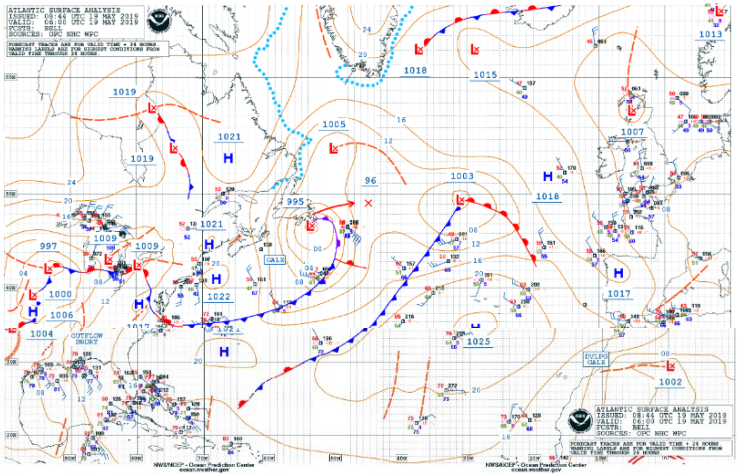
Atlantic Weather | Pacific Weather | Alaska/Arctic Weather

Analysis – Graphical Forecasts – Text Forecasts – Iceberg Analysis/Outlook – Hazards – Gridded – Other Marine

Atlantic Analysis

Click on the map below or choose from:

W Atlantic | Full Atlantic | E Atlantic



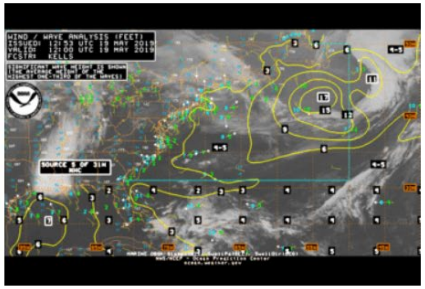
Surface Analysis

W Atlantic Loop:
[3] [7] [14] Days

Updated: Sun, 19-May-2019 08:56:29 UTC

E Atlantic Loop:
[3] [7] [14] Days

Updated: Sun, 19-May-2019 08:56:29 UTC



Wind and Wave Analysis

Loop:
[3] [7] [14] Days

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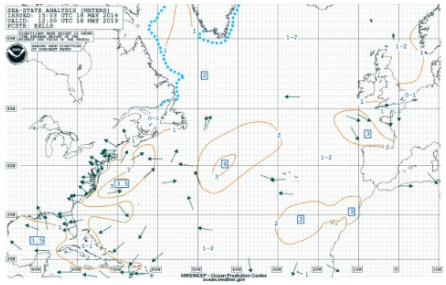


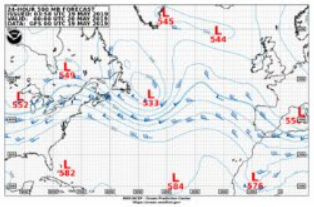
Sea State Analysis

Loop:
[3] [7] [14] Days

Updated: Sat, 18-May-2019 15:04:49 UTC

Atlantic Graphical Forecasts

500 mb

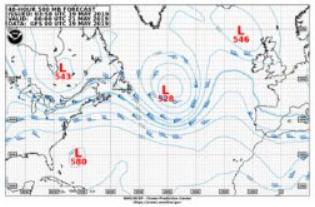


24-hour 500 mb

Loop: [3] [7] [14] Days

Updated: Sun, 19-May-2019 04:00:13 UTC

More 500 MB images



48-hour 500 mb

Loop: [3] [7] [14] Days

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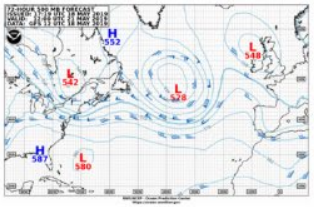
More 500 MB images

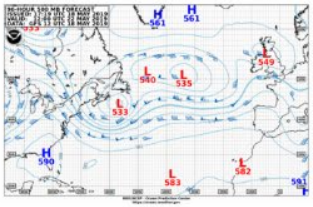


72-hour 500 mb

Loop: [3] [7] [14] Days

Updated: Sat, 18-May-2019 17:27:06 UTC

More 500 MB images



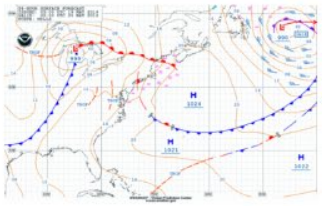
96-hour 500 mb

Loop: [3] [7] [14] Days

Updated: Sat, 18-May-2019 17:28:21 UTC

More 500 MB images

Surface



24-hour surface

Loop: [3] [7] [14] Days

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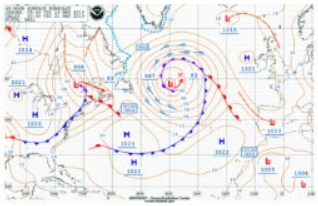

48-hour surface

Loop: [3] [7] [14] Days

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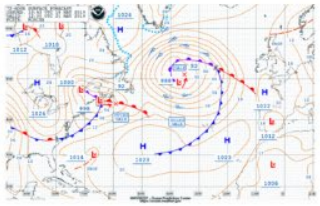

72-hour surface

Loop: [3] [7] [14] Days

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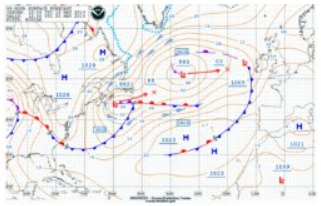
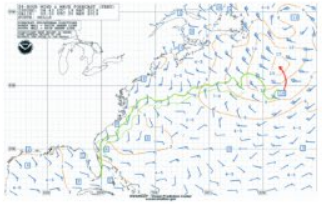


96-hour surface

Loop: [3] [7] [14] Days

Updated: Sat, 18-May-2019 15:25:14 UTC

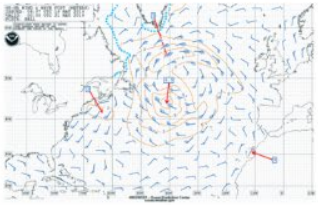
Wind/ Wave



24-hour wind & wave

Loop: [3] [7] [14] Days

Updated: Sun, 19-May-2019 04:44:13 UTC



48-hour wind & wave

Loop: [3] [7] [14] Days

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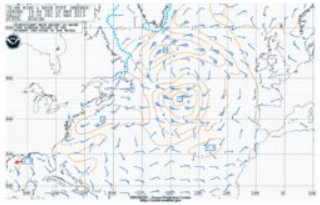
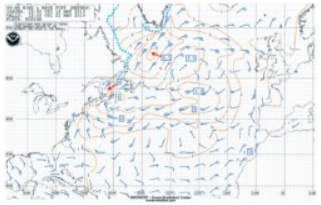


72-hour wind & wave

Loop: [3] [7] [14] Days

Updated: Sat, 18-May-2019 19:50:47 UTC

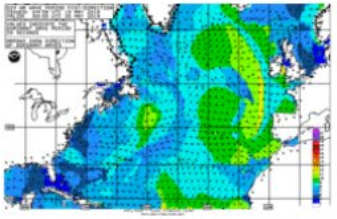


96-hour wind & wave

Loop: [3] [7] [14] Days

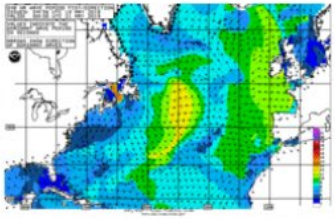
Updated: Sat, 18-May-2019 15:53:19 UTC

Wave Period



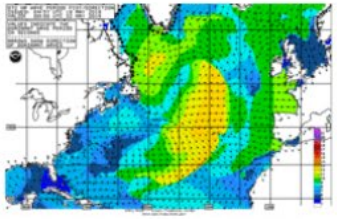
24-hour wave period & direction

Loop: [3] [7] [14] Days



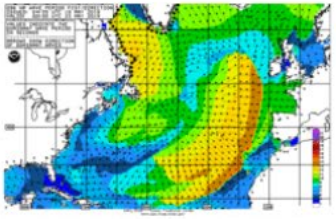
48-hour wave period & direction

Loop: [3] [7] [14] Days



72-hour wave period & direction

Loop: [3] [7] [14] Days



96-hour wave period & direction

Loop: [3] [7] [14] Days

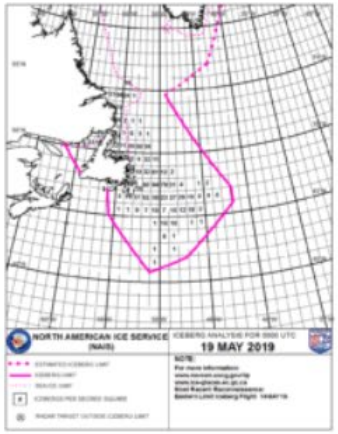
Atlantic Text Forecasts

Marine Weather Discussion *description*	**North Atlantic Ocean** Updated: Sun, 19-May-2019 07:59:59 UTC
Offshore Waters Forecasts *description*	 Live Map **New England continental shelf and slope waters** Updated: Sun, 19-May-2019 08:26:08 UTC **West Central North Atlantic continental shelf and slope waters** Updated: Sun, 19-May-2019 08:46:04 UTC
NAVTEX Coastal & Offshore Waters Forecasts *description*	 Live Map **Boston, MA: Eastport, ME to South of New England** Updated: Sun, 19-May-2019 08:57:16 UTC **Portsmouth, VA: Sandy Hook, NJ to Murrells Inlet, SC** Updated: Sun, 19-May-2019 08:58:59 UTC **Charleston, SC: Murrells Inlet, SC to Flagler Beach, FL** Updated: Sun, 19-May-2019 08:59:52 UTC
High Frequency Voice Broadcast for Offshore Waters (VOBRA) *description*	 Live Map **New England continental shelf and slope waters** Updated: Sun, 19-May-2019 08:29:09 UTC **West Central North Atlantic continental shelf and slope waters** Updated: Sun, 19-May-2019 08:51:06 UTC
High Seas Forecast *description*	**North Atlantic Ocean (Metarea IV)** Updated: Sun, 19-May-2019 09:34:14 UTC

Atlantic Iceberg Analysis and Outlook Products

North American Ice Service (NAIS) Products - Courtesy of the U.S. Coast Guard International Ice Patrol

North American Ice Services Iceberg Outlook

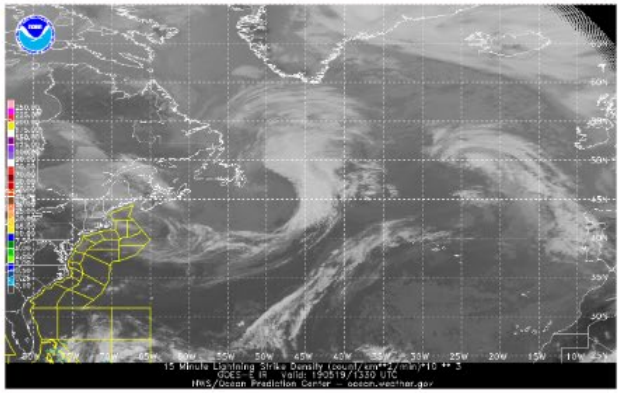


NAIS Iceberg Chart

NAIS Weekly Iceberg Outlook (pdf)
NAIS outlooks are typically updated on Wednesday.

Atlantic Hazard Products

Lightning Strike Density



Lightning Strike Density

Current time (in UTC/GMT/Zulu): 14:47:28 | Site Map | Organization | About Us | Mobile | Feedback | Local Forecast by ZIP/

Storm Prediction Center

N O A A / National Weather Service

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https://www.spc.noaa.gov/

A Moderate Risk of Severe Thunderstorms is forecast for Mon (05/20)

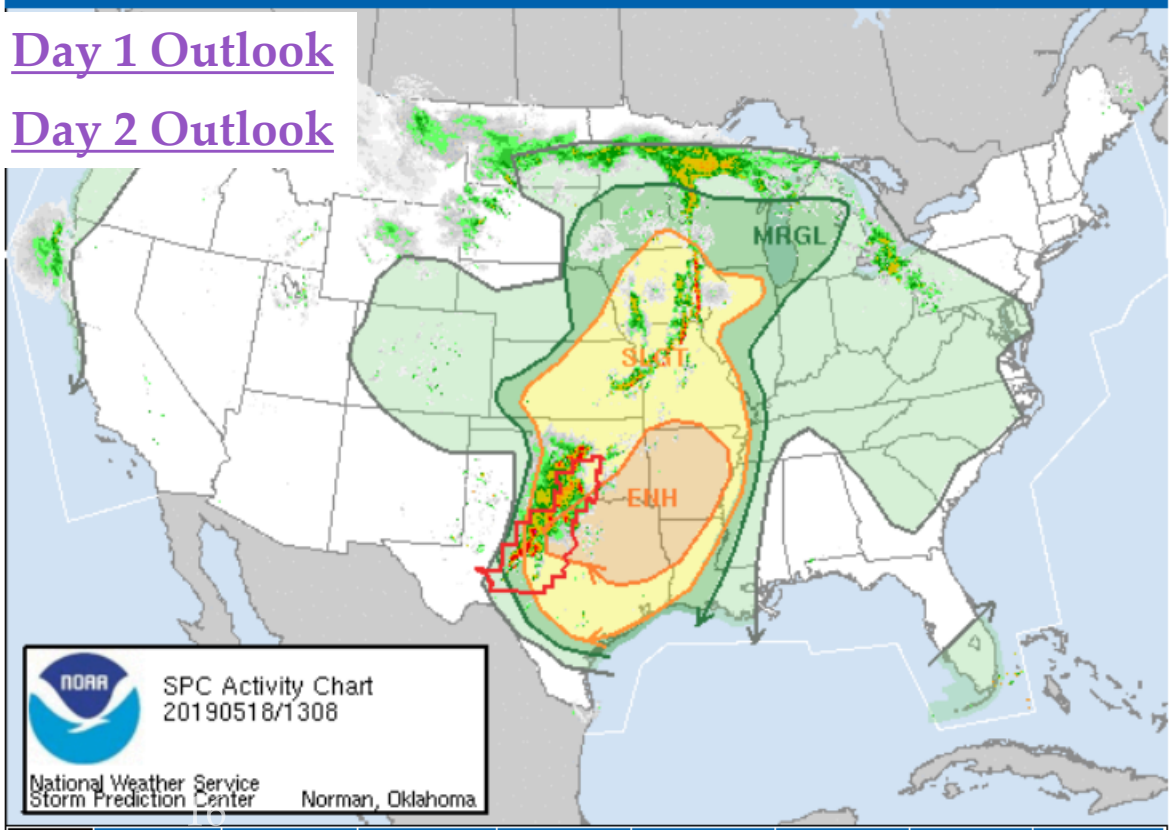
Severe thunderstorms capable of all severe hazards, including strong tornadoes, are expected across portions of the southern Plains on Monday.

» For additional details, see the latest Day 3 Convective Outlook.

Overview | Conv. Outlook | Watches | MDs | Storm Reports | Mesoanalysis | Fire | Hazards

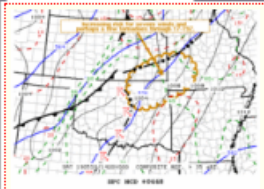
Day 1 Outlook

Day 2 Outlook

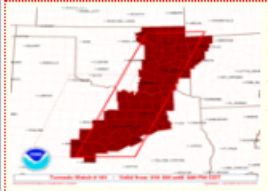


Hazard	Sat (05/18)	Sun (05/19)	Mon (05/20)	Tue (05/21)	Wed (05/22)	Thu (05/23)	Fri (05/24)	Sat (05/25)
Severe	Enhanced	Slight	Moderate	Severe	No Area	No Area	No Area	No Area
Fire	Elevated	No Critical	No Area	No Area	No Area	No Area	No Area	No Area

All Products | Watches | MDs | Outlooks | Fire



Mesoscale Discussion 0668
– Concerning: SEVERE POTENTIAL...WATCH LIKELY
– Issued: 3 minutes ago



TORNADO 0181
– Valid until: 05/18/2019 2200Z
– States affected: AR OK TX
– Issued: 31 minutes ago

Thunderstorm Outlook
– Issued: 05/18/2019 at 1311Z

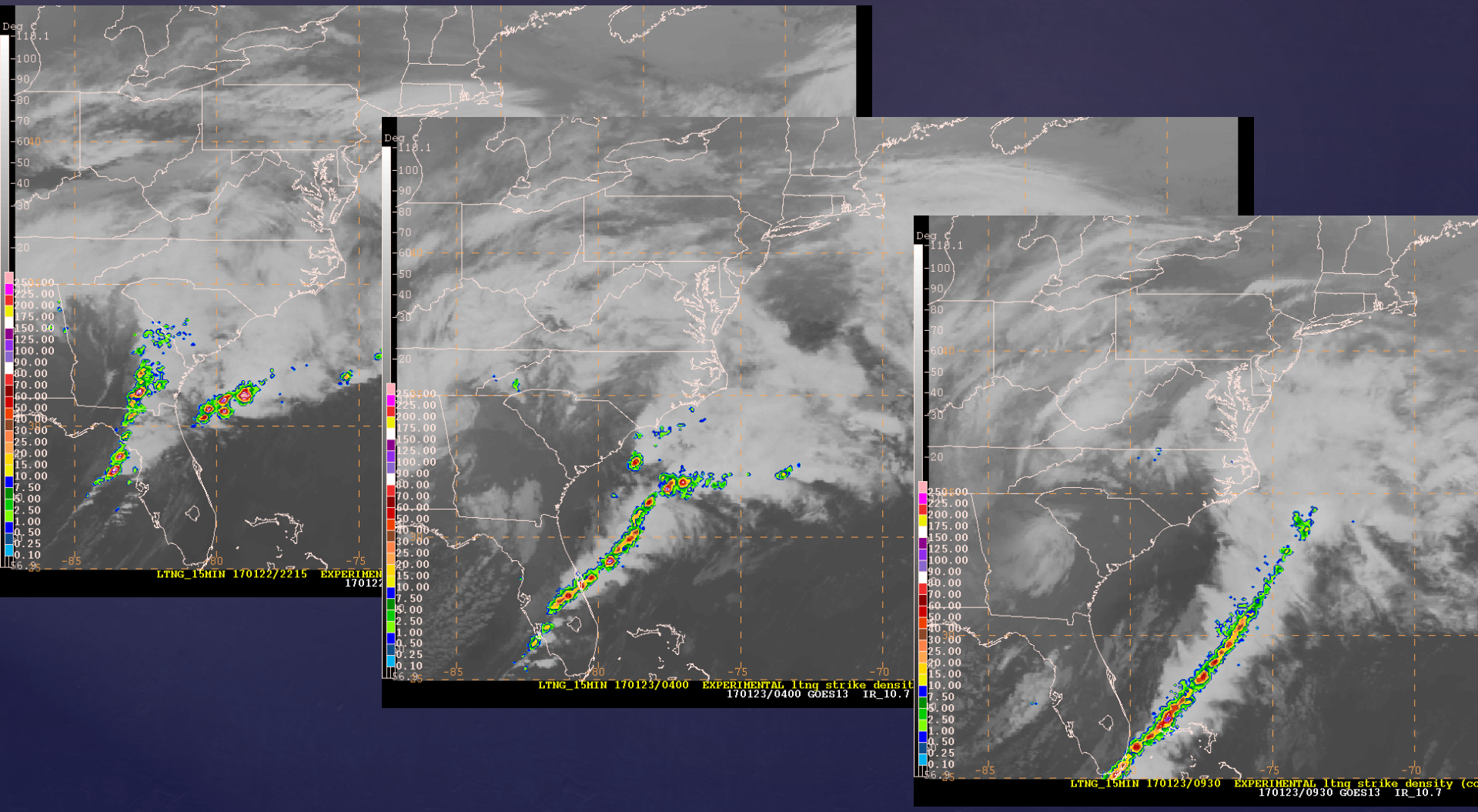
Day 1 Convective Outlook
– Categorical Risk: Enhanced
– Issued: 05/18/2019 at 1257Z

Day 4-8 Convective Outlook
– Categorical Risk: Severe
– Issued: 05/18/2019 at 0852Z

Day 3 Convective Outlook

Thunderstorms Lightning Density

NOAA_OPC_Lightning_Density



Ocean Prediction Center

https://ocean.weather.gov

e-facing re... | New Tab | webTA | Log In | Inbox (8,321) - jose... | NOAA/NCEP Wave... | Delayed by another... | Possible Vessel Disc... | Ocean Prediction C... | SeaVision

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OCEAN PREDICTION CENTER

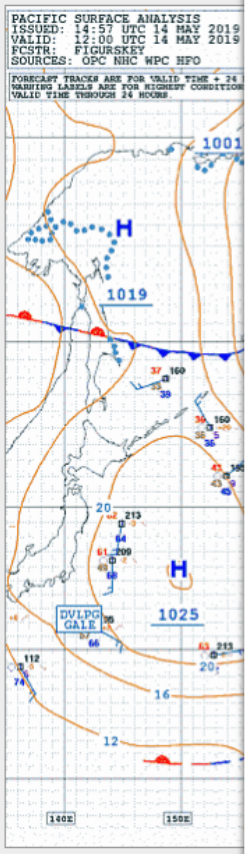
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

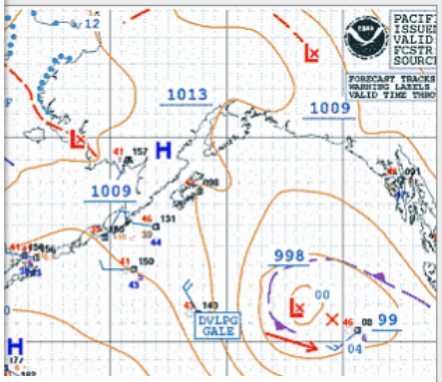
ANALYSIS & FORECAST | DATA | INFORMATION | NEWS | SEARCH

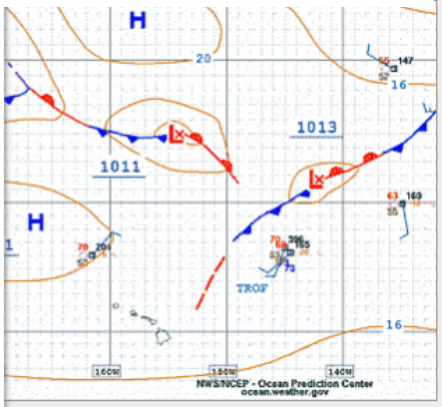
The legacy OPC website URL htt... to https://ocean.weather.gov. On or after July 9, 2019 the old URL will not work. Users must use https://ocean.we... ion is available at https://www.weather.gov/media/notification/scn19-10opc_terminate.pdf.

Weather Analysis & Fo...

(Click image for more)







- Archive Data
  - Product Archives
- Digital Forecasts
  - Digital Forecast Data
- Electronic Marine Charting (ECDIS)
  - Adding Weather to ECDIS: The S412 Standard
- Environmental
  - Sea Nettles (jellyfish)
- Extratropical Storm Surge Models
  - ESTOFS Atlantic
  - ESTOFS Pacific
  - ET-SURGE
- Freezing Spray
  - Freezing Spray Guidance
- GIS
  - GIS Data
- Observations
  - GOES SST Imagery ← Western Atlantic Loop
  - Gridded ASCAT Scatterometer Winds
  - Lightning Strike Density
  - Satellite Imagery
- Ocean
  - Global Ocean Model Currents
  - Global Ocean Model Sea Surface Temperatures
  - Gulf Stream ASCII Data
  - Gulf Stream Comparison
- Probabilistic
  - Wave Height Guidance
  - Wind Speed Guidance ←

- Weather
- Ice & Icebergs
- Ocean
- Observations
- Digital Forecasts
- Model Guidance

Go directly to Atlantic, Pacific, or Alaska/Arctic weather.

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Local forecast by "City, St" or "ZIP"
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Wave Height Probs
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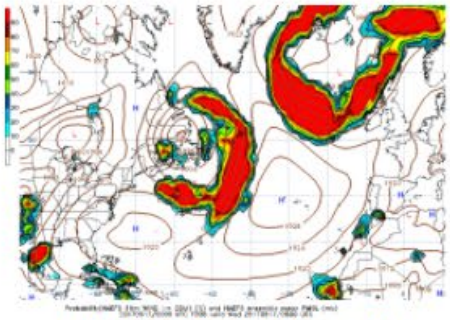
NAEFS Probabilistic Wind Speed Guidance

[NOAA Wind Speed Probabilities]

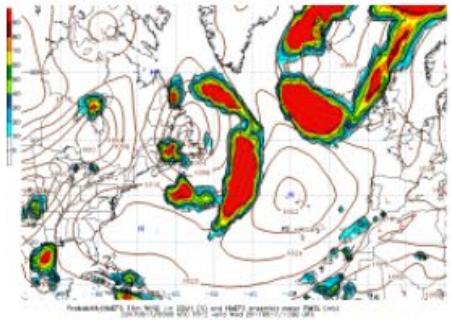
[NOAA Wave Height Probabilities]

Basin: Atlantic Pacific Arctic Cycle: 00Z 12Z Loop: Off On

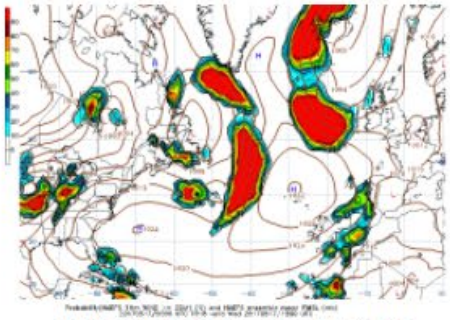
Likelihood of Exceedance: Greater Than: 15kt 20kt 25kt 30kt 34kt 40kt 48kt 60kt 64kt



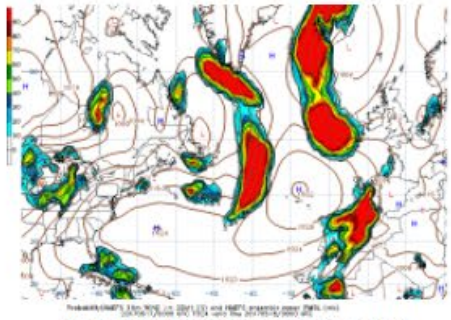
006 Hour Prob 10m Wind >= 20kt



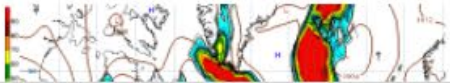
012 Hour Prob 10m Wind >= 20kt

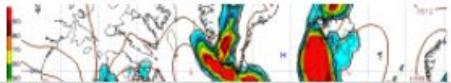


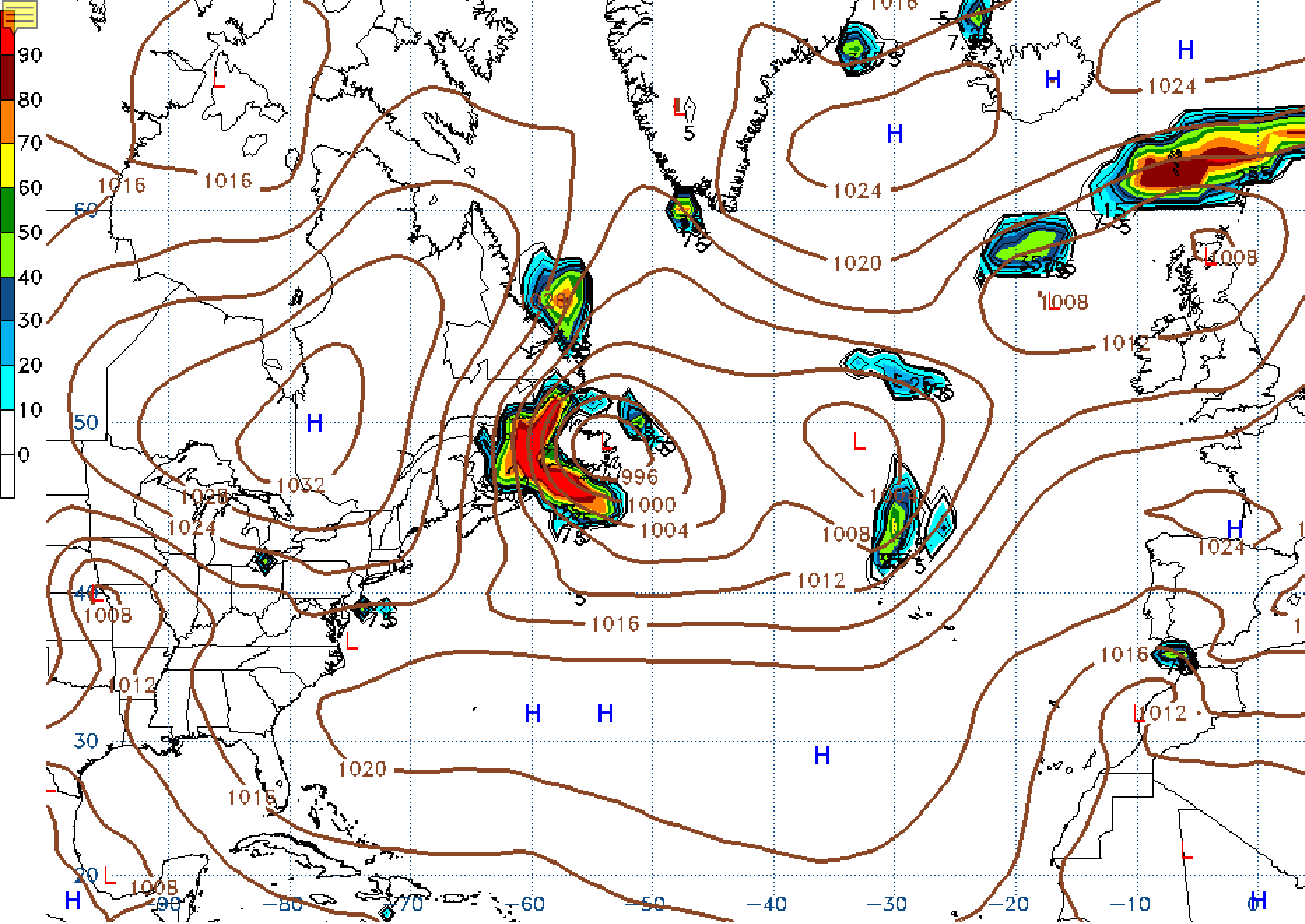
018 Hour Prob 10m Wind >= 20kt



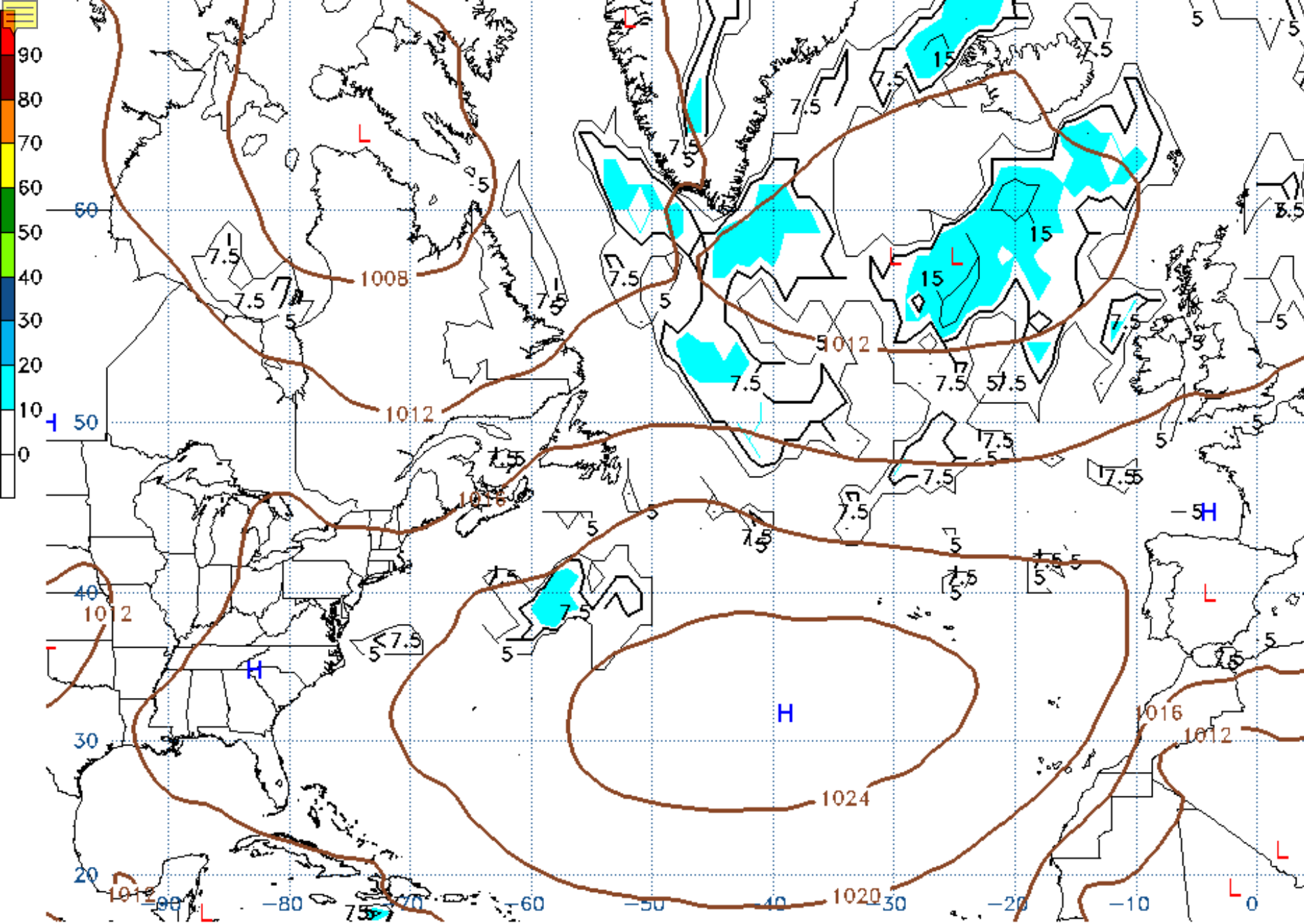
024 Hour Prob 10m Wind >= 20kt



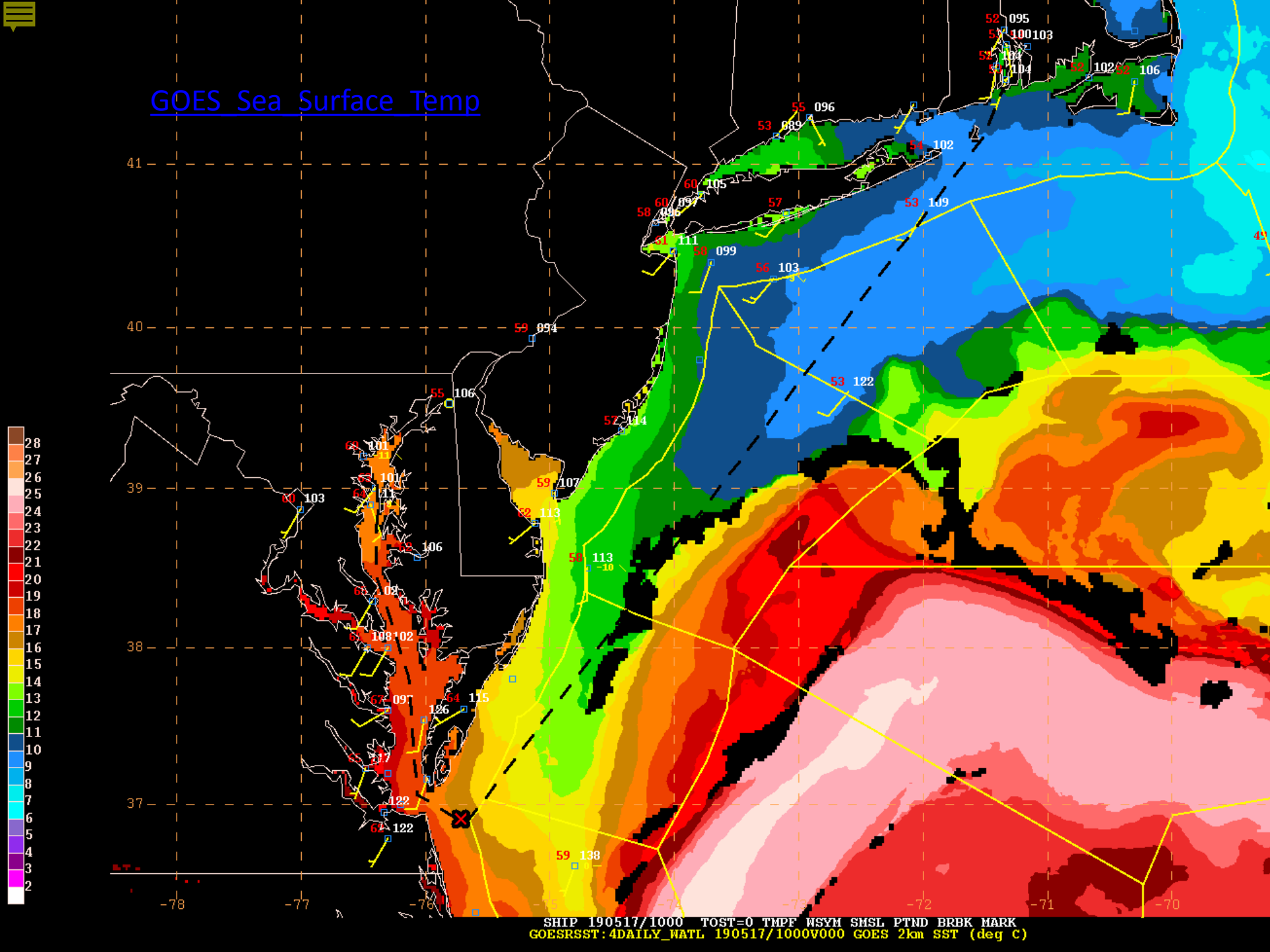


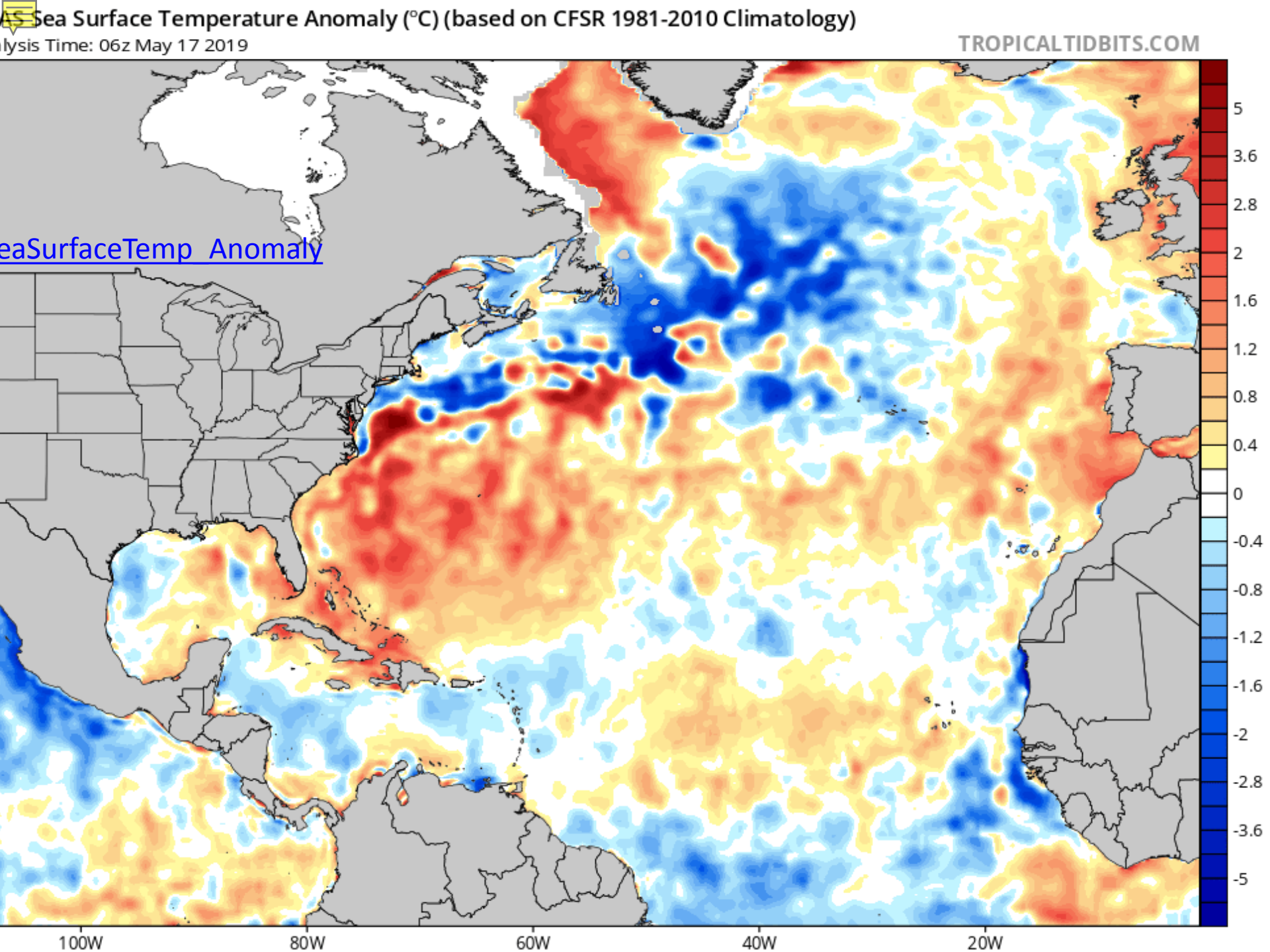


Probability(NAEFS 10m WIND >= 25kt) (%) and NAEFS ensemble mean PMSL (mb)
20170520/0000 UTC F012 valid Sat 20170520/1200 UTC



Probability(NAEFS 10m WIND >= 25kt) (%) and NAEFS ensemble mean PMSL (mb)
20170520/0000 UTC F348 valid Sat 20170603/1200 UTC


GOES_Sea_Surface_Temp
SHIP 190517/1000 TOST=0 TMPF WSYM SMSL PTND BRBK MARK
GOESRSST:4DAILY_WATL 190517/1000V000 GOES 2km SST (deg C)

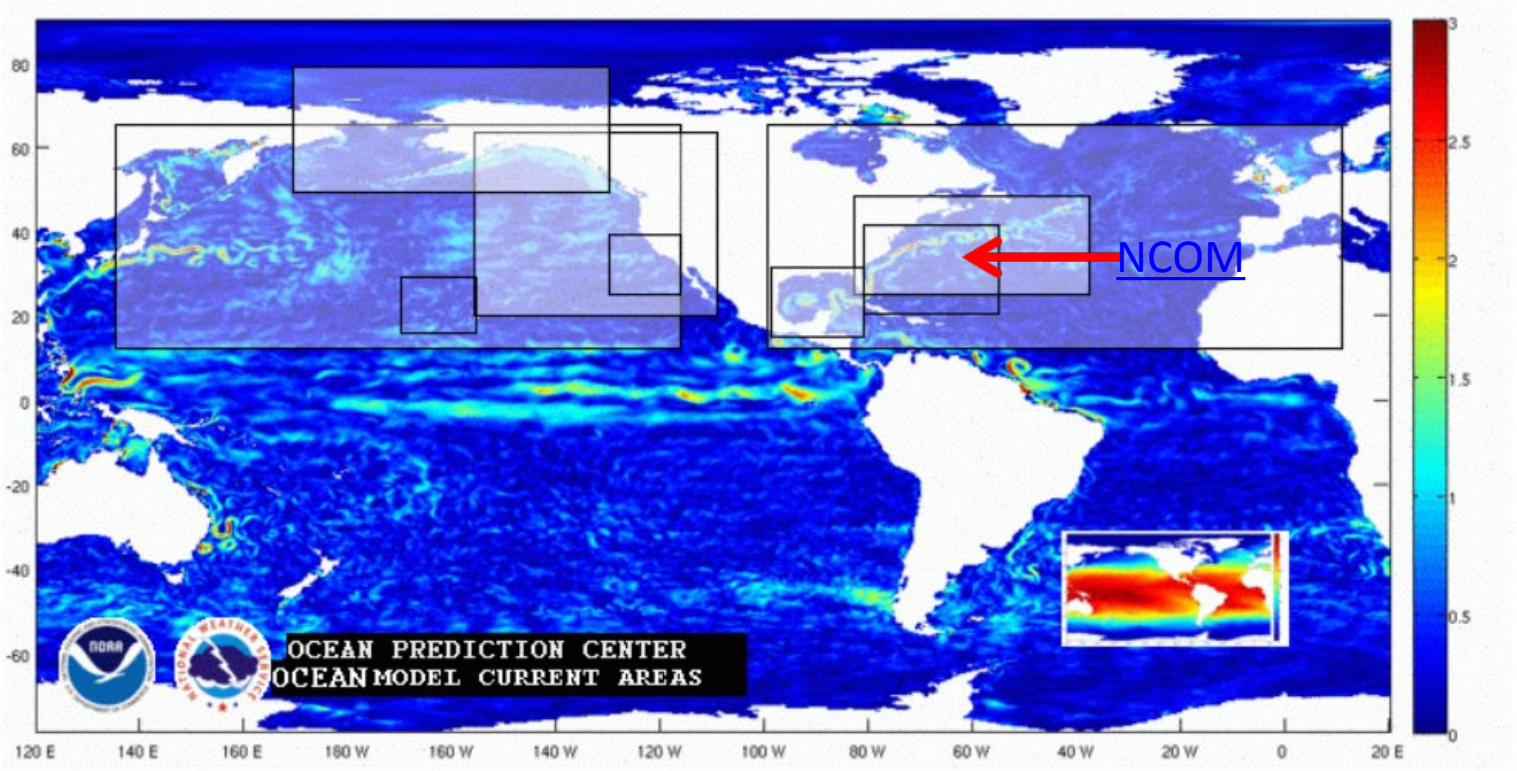

Sea Surface Temperature Anomaly (°C) (based on CFSR 1981-2010 Climatology)
lysis Time: 06z May 17 2019
TROPICALTIDBITS.COM
eaSurfaceTemp_Anomaly
5
3.6
2.8
2
1.6
1.2
0.8
0.4
0
-0.4
-0.8
-1.2
-1.6
-2
-2.8
-3.6
-5
100W
80W
60W
40W
20W

Ocean Model Current Areas

The NCEP Global Real-Time Ocean Forecast System (Global RTOFS) data is based on the U.S. Navy implementation of Global HYCOM.
Regional NCOM data is provided by the Naval Oceanographic Office (NAVO).

*(**Mouseover and click** the desired area to view the valid Global Ocean Model Currents 0-72 hour forecast data)*

NCOM



Attention **NCOM Regional files with surface temperature and currents are available in GRIB2 format. See the link below.**

For NCOM GRIB2 files with surface temperature and currents via ftp: http://ftp.ocean.weather.gov/grids/operational/NCOM/regional/GRIB2/

NCOM GRIBs via ftp

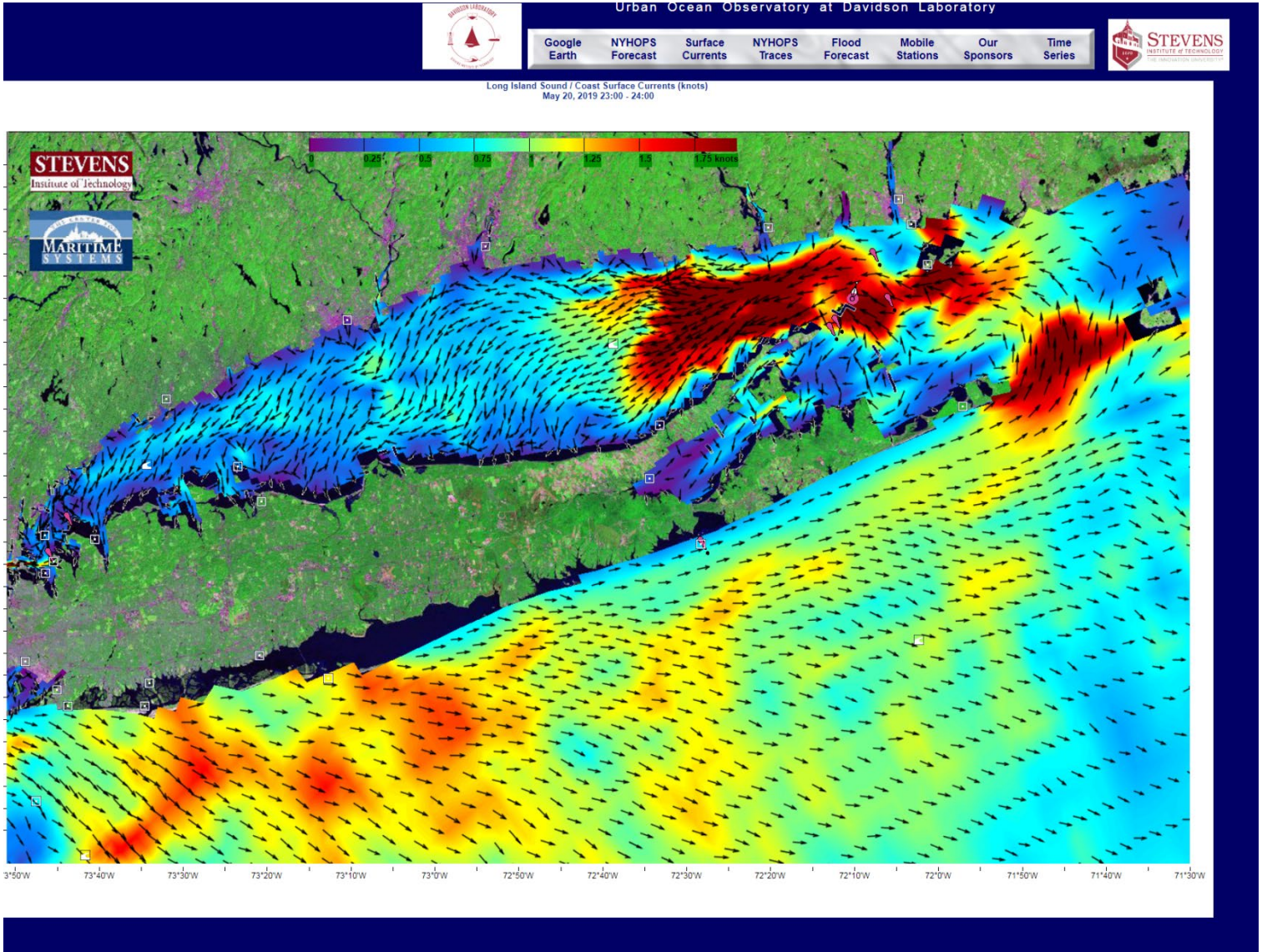
For NCOM Regional Data via ftp: http://ftp.ocean.weather.gov/grids/operational/NCOM/regional/

For archived NCOM Data: http://www.ncddc.noaa.gov/ocean-nomads/global-ncom/

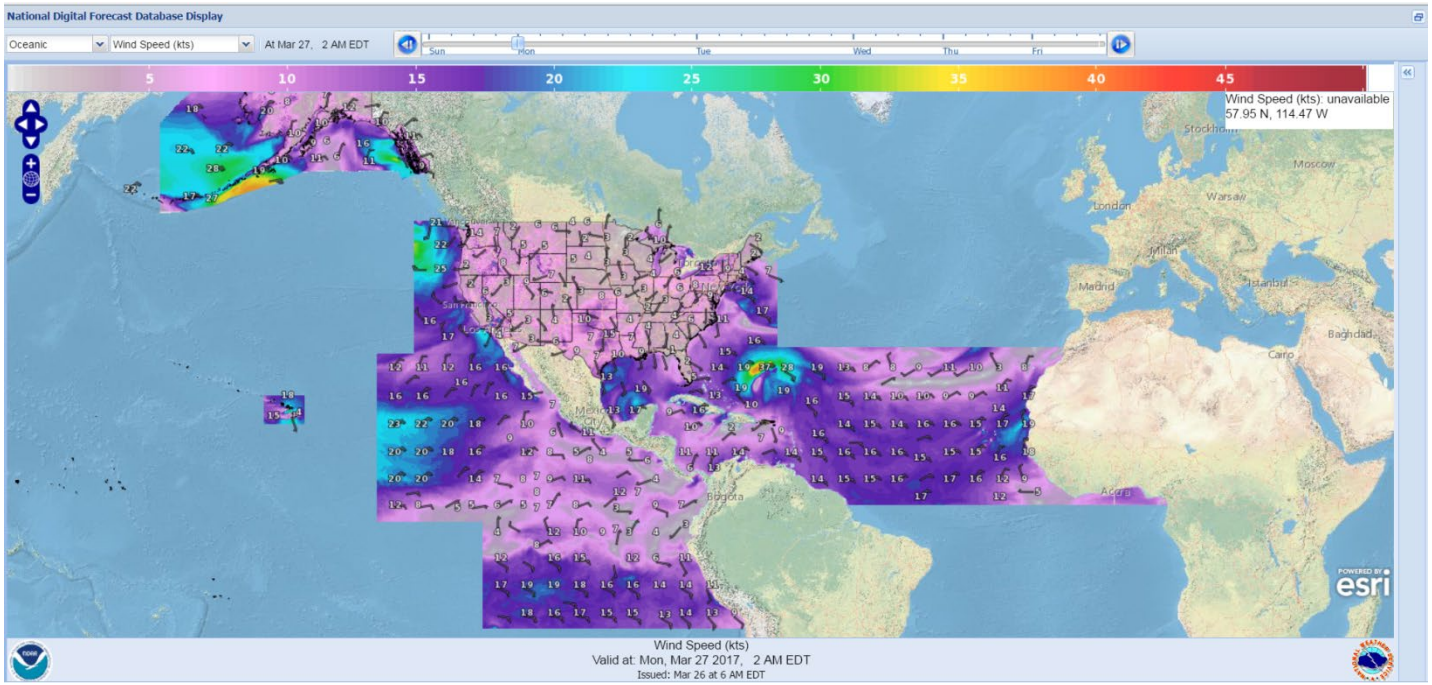
For Data via Nomads GDS server: http://nomads.ncep.noaa.gov:9090/dods/ncom

For East Coast images: http://ftp.ocean.weather.gov/grids/operational/NCOM/images/

Stevens Institute New York Harbor Observing and Prediction System



National Digital Forecast Database



FTPMail

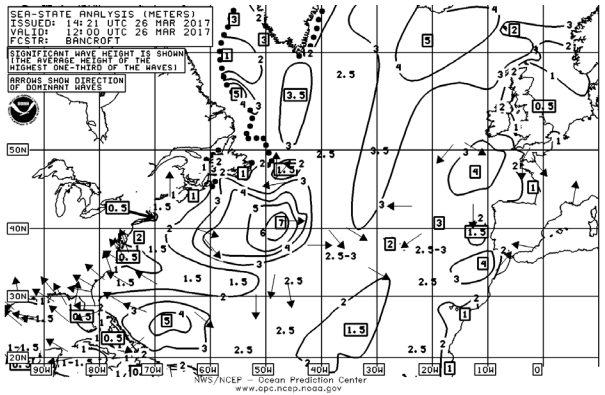
e-mail address : NWS.FTPMail.OPS@noaa.gov

Subject line : sea-state analysis

Content:

```
open
cd fax
get PJAA99.gif
quit
```

HF Fax Sched and ftp file names



Web sources

- Chesapeake Bay Operational Forecast System
- http://hfradar.ndbc.noaa.gov/
  - Coastal radar ocean surface current displays (real time) Pay attention to selection window at top
- NOAA High Resolution Rapid Refresh Model
  - NCEP Sub-hourly NE - 10 m wind
    - 18 hour predictions
    - 36 hour forecasts for 00, 06, 12, 18 UTC runs
  - Available from Saildocs

National Oceanic and Atmospheric Administration's

National Data Buoy Center

Center of Excellence in Marine Technology

http://hfradar.ndbc.noaa.gov/

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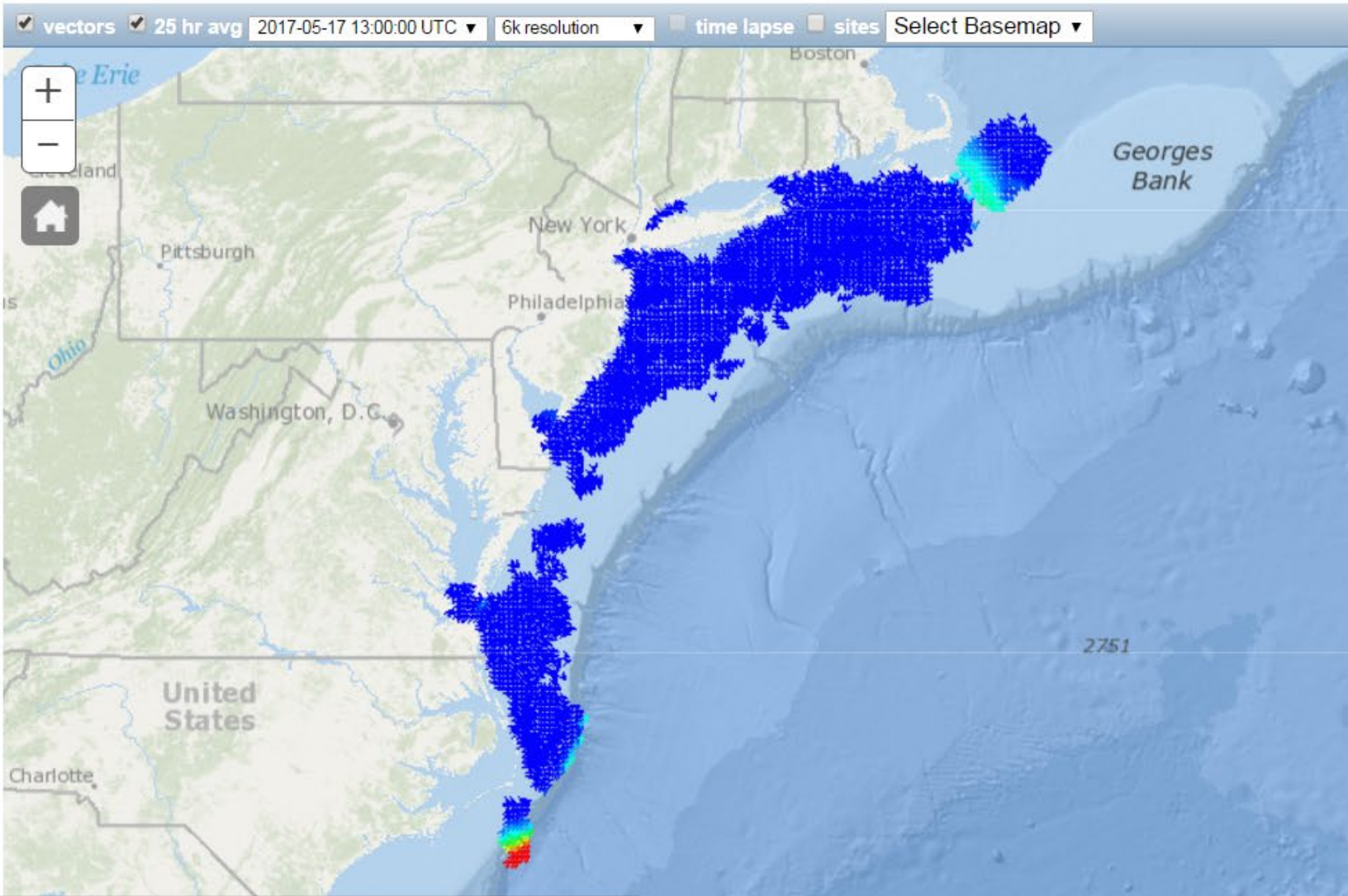
NDBC Platforms
Partner Platforms

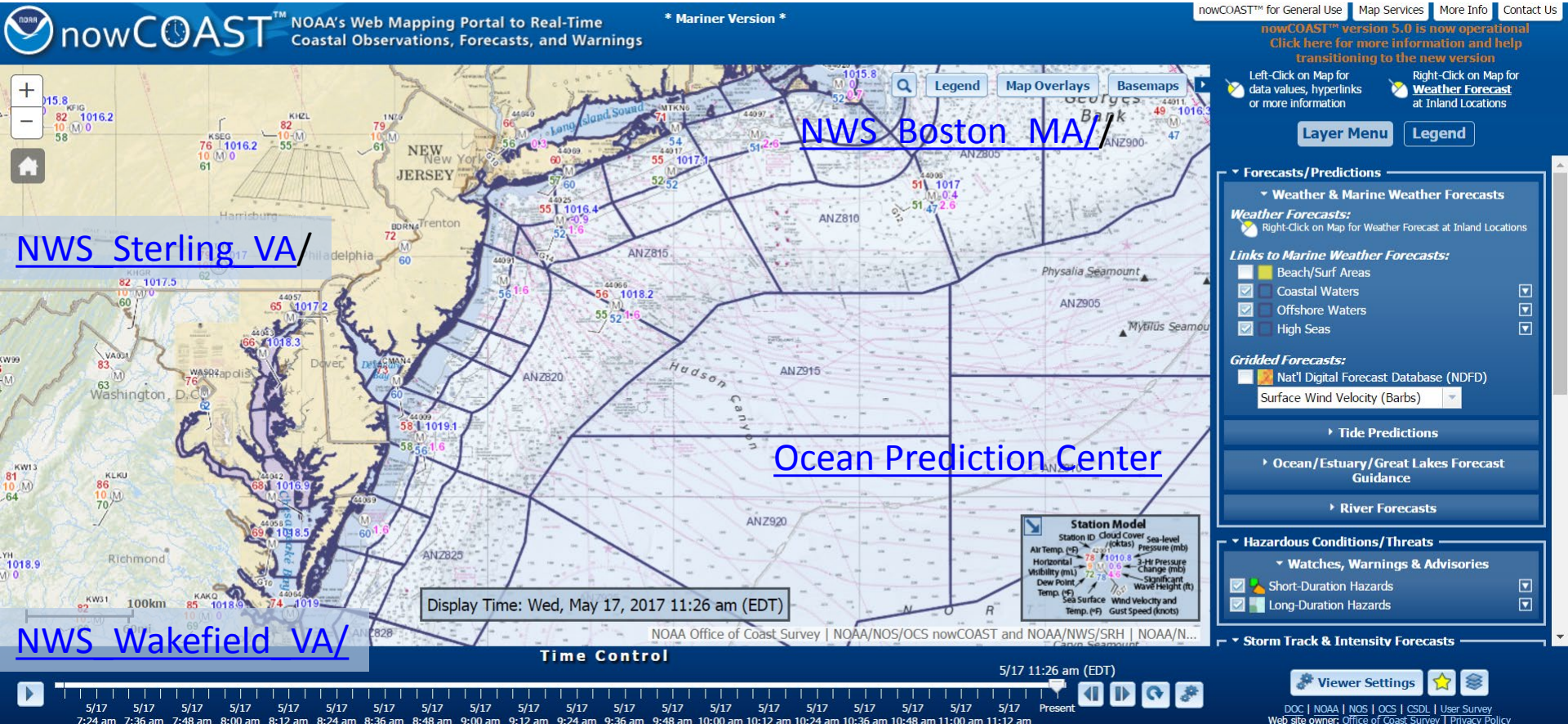
Program Info
About NDBC
Met/Ocean
Moored Buoy
C-MAN
TAO
DART®
VOS
CSP
IOOS® Program
IOOS® DAC

This is the **NOAA HF Radar National Server**. HF Radar is used to remotely measure ocean surface currents.



NOAA Nowcoast

- https://nowcoast.noaa.gov/mariner.html



https://tidesandcurrents.noaa.gov/noaacurrents/Regions

Not secure | https://tidesandcurrents.noaa.gov/noaacurrents/Predictions?id=ACT4866_3&d=2017-06-02&r=1&t=am%2Fpm&u=1&tz=LST%2FLDT&threshold=leEq&thresholdvalue=

Stations | Help | FAQ | Prediction Plots | Annual Prediction Tables

Cove Point, 2.7 n.mi. east of (ACT4866) Depth: 98 feet

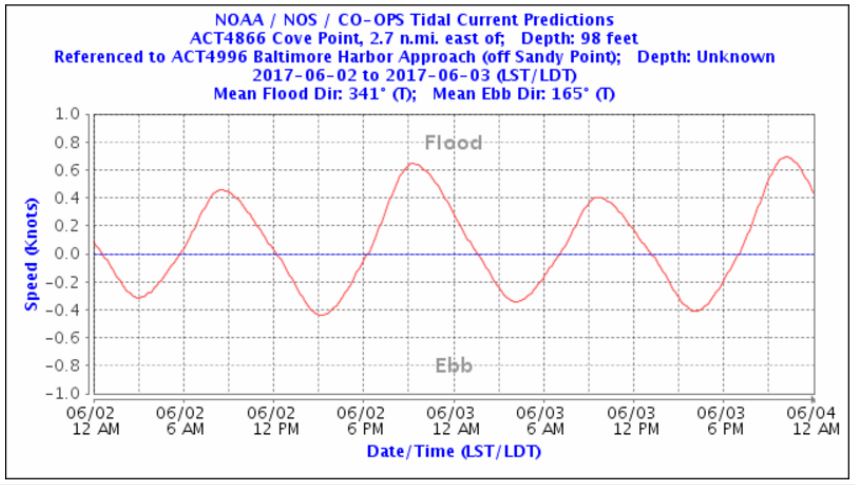
LAT/LON: 38.3800° N 76.3253° W

Prediction Uncertainty

Note: Depth is measured below chart datum. Subordinate station: only max/slack predictions available.

Reference station: Baltimore Harbor Approach (off Sandy Point) (ACT4996).

For predictions of Subordinate stations, the solid red line depicts a curve fit between the flood, ebb and slack values and approximates the segments between.



DOWNLOAD: TEXT | CSV | XML

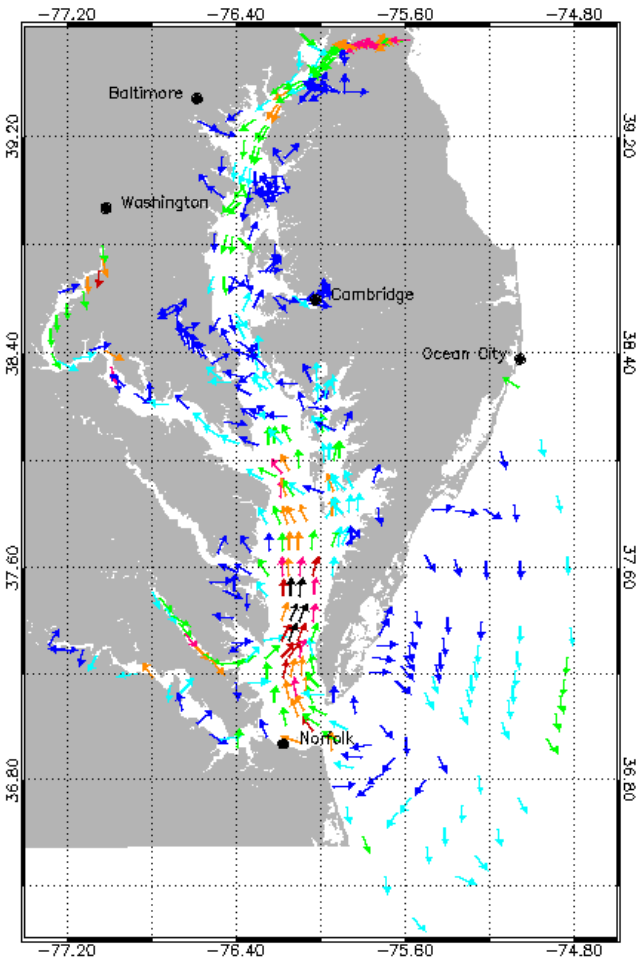
Time (LST/LDT)	Event	Speed (knots)
2017-06-02 12:35 AM	slack	-
2017-06-02 03:00 AM	ebb	-0.31
2017-06-02 05:47 AM	slack	-
2017-06-02 08:28 AM	flood	0.46
2017-06-02 12:11 PM	slack	-
2017-06-02 03:12 PM	ebb	-0.44
2017-06-02 06:17 PM	slack	-
2017-06-02 09:16 PM	flood	0.64
2017-06-03 01:35 AM	slack	-
2017-06-03 04:06 AM	ebb	-0.34
2017-06-03 07:05 AM	slack	-
2017-06-03 09:34 AM	flood	0.40
2017-06-03 01:11 PM	slack	-

Disclaimer: These data are based upon the latest information available as of the date of your request, and may differ from the published tidal current tables.

https://tidesandcurrents.noaa.gov/ofs/ofs_animation.shtml?ofsregion=cb&subdomain=0&model_type=currents_forecast

Chesapeake Bay OFS Currents Forecast Guidance

All model nowcast and forecast information is based on a hydrodynamic model and should be considered as computer-generated nowcast and forecast guidance.

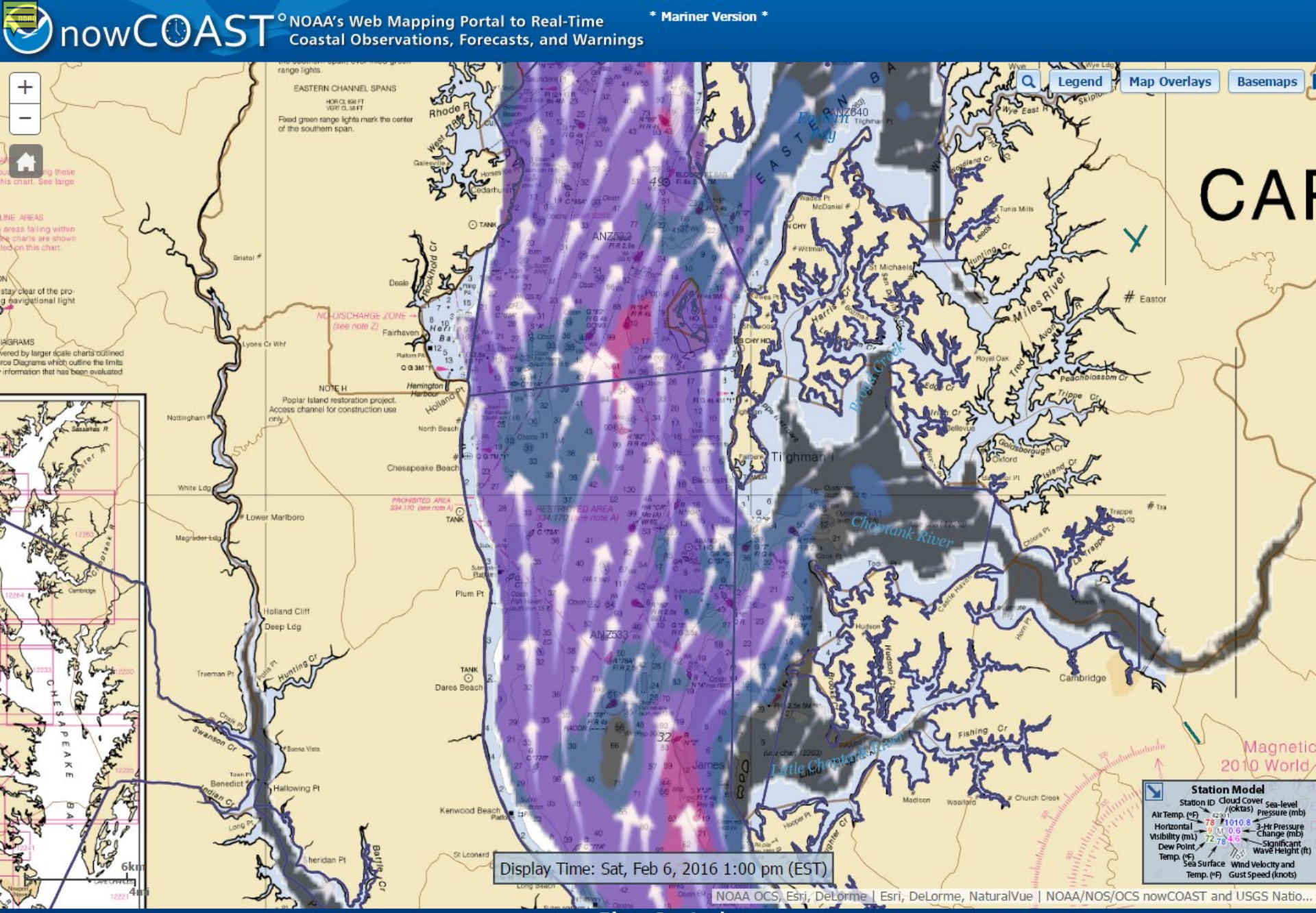


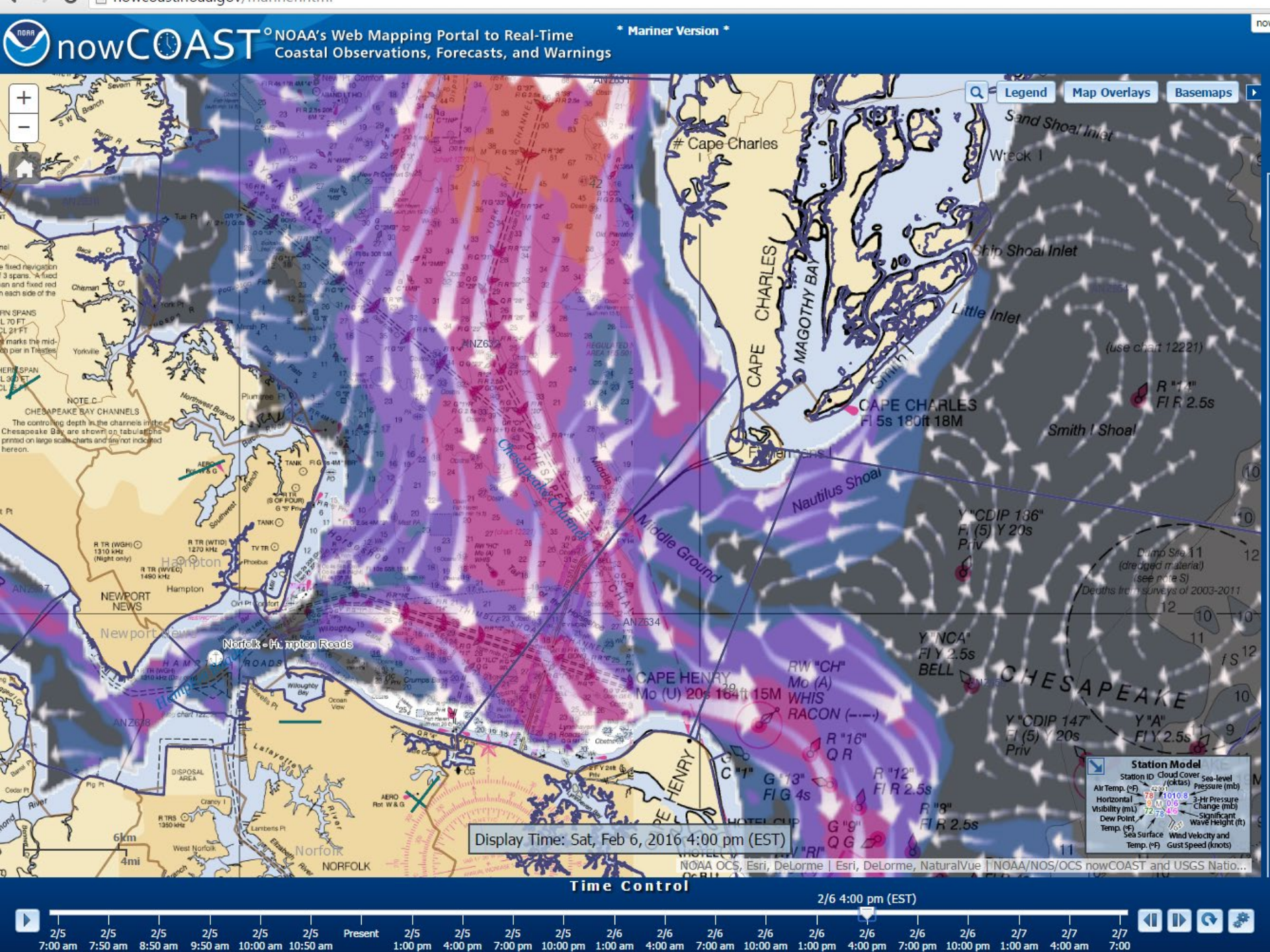
Valid at 0900 (EST) 02/06/16

Time/Date: 0900 (EST) 02/06/16 ▾ Prev Start Animation Next

Currents Forecast Guidance

This near surface currents velocity animation was created from the latest CBOFS forecast guidance in the Chesapeake Bay. The forecast is for the next 48 hours of current velocities as simulated by CBOFS when it is


nowCOAST
NOAA's Web Mapping Portal to Real-Time Coastal Observations, Forecasts, and Warnings
* Mariner Version *
Legend
Map Overlays
Basemaps
Display Time: Sat, Feb 6, 2016 1:00 pm (EST)
Station Model
Time Control
2/6 1:00 pm (EST)
2/5 7:00 am
2/5 7:50 am
2/5 8:50 am
2/5 9:50 am
2/5 10:00 am
2/5 10:50 am
Present
2/5 1:00 pm
2/5 4:00 pm
2/5 7:00 pm
2/5 10:00 pm
2/6 1:00 am
2/6 4:00 am
2/6 7:00 am
2/6 10:00 am
2/6 1:00 pm
2/6 4:00 pm
2/6 7:00 pm
2/6 10:00 pm
2/7 1:00 am
2/7 4:00 am
2/7 7:00


nowCOAST
NOAA's Web Mapping Portal to Real-Time Coastal Observations, Forecasts, and Warnings
* Mariner Version *
Legend
Map Overlays
Basemaps
Cape Charles
Sand Shoal Inlet
Wreck I
Ship Shoal Inlet
Little Inlet
CAPE CHARLES
MAGOTHY BAY
CAPE CHARLES
Fl 5s 180ft 18M
Smith I Shoal
Nautilus Shoal
Middle Ground
Chesapeake Channel
CHESAPEAKE
CAPE HENRY
Mo (U) 20s 164ft 15M
WHIS
RACON (-·-·)
Norfolk - Hampton Roads
NEWPORT NEWS
Hampton
NORFOLK
Display Time: Sat, Feb 6, 2016 4:00 pm (EST)
Station Model
Time Control
2/6 4:00 pm (EST)
2/5 7:00 am
2/5 7:50 am
2/5 8:50 am
2/5 9:50 am
2/5 10:50 am
Present
2/5 1:00 pm
2/5 4:00 pm
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2/6 4:00 am
2/6 7:00 am
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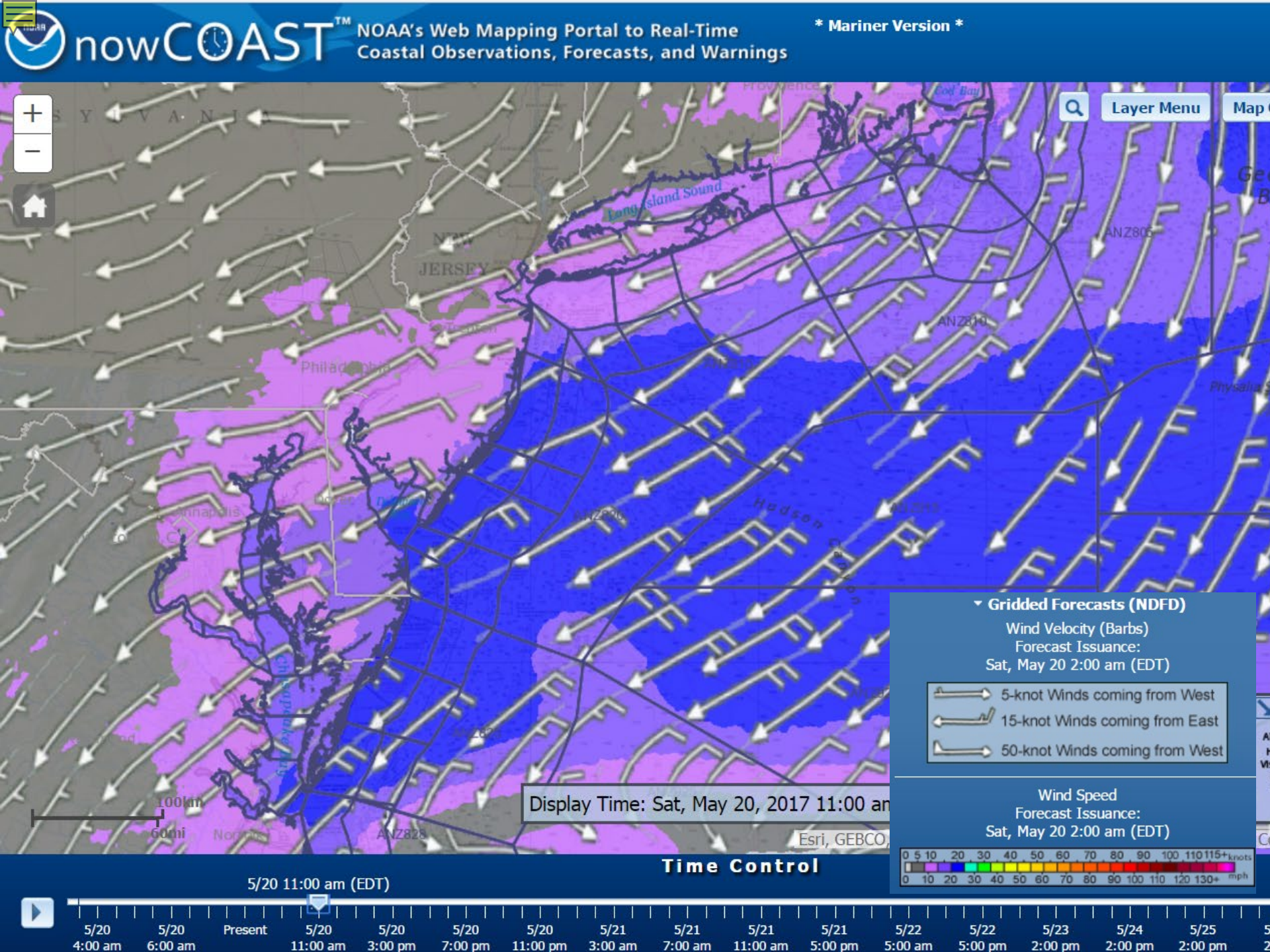
2/6 7:00 pm
2/6 10:00 pm
2/7 1:00 am
2/7 4:00 am
2/7 7:00


nowCOAST™ NOAA's Web Mapping Portal to Real-Time Coastal Observations, Forecasts, and Warnings
* Mariner Version *
Layer Menu
Map
Gridded Forecasts (NDFD)
Wind Velocity (Barbs)
Forecast Issuance:
Sat, May 20 2:00 am (EDT)
5-knot Winds coming from West
15-knot Winds coming from East
50-knot Winds coming from West
Wind Speed
Forecast Issuance:
Sat, May 20 2:00 am (EDT)
0 5 10 20 30 40 50 60 70 80 90 100 110 115+ knots
0 10 20 30 40 50 60 70 80 90 100 110 120 130+ mph
Display Time: Sat, May 20, 2017 11:00 am
Esri, GEBCO,
100km
60mi
Time Control
5/20 11:00 am (EDT)
5/20 4:00 am
5/20 6:00 am
Present
5/20 11:00 am
5/20 3:00 pm
5/20 7:00 pm
5/20 11:00 pm
5/21 3:00 am
5/21 7:00 am
5/21 11:00 am
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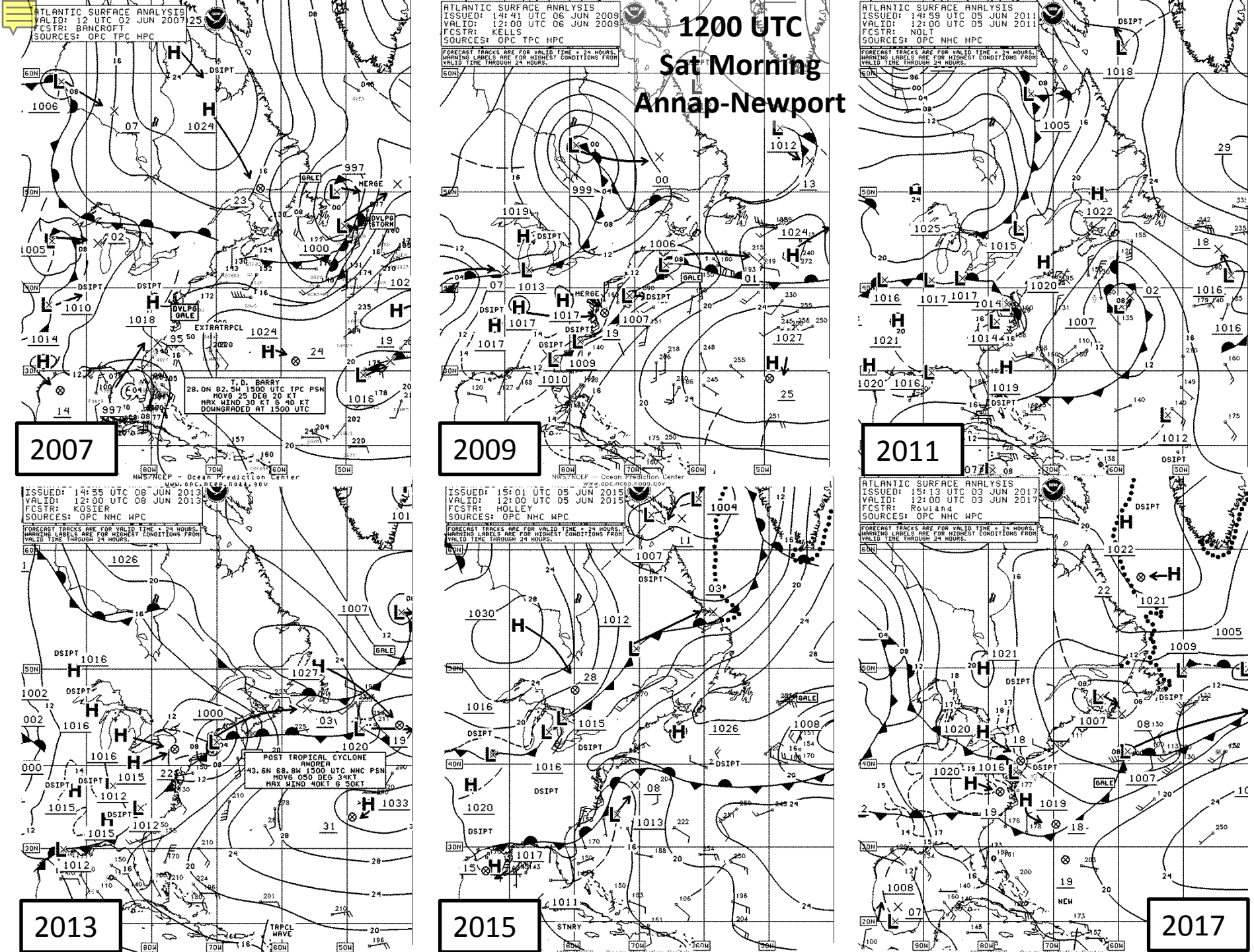
5/22 5:00 am
5/22 5:00 pm
5/23 2:00 pm
5/24 2:00 pm
5/25 2:00 pm


1200 UTC
Sat Morning
Annap-Newport
2007
2009
2011
2013
2015
2017

cogow homepage >>>

http://cioss.coas.oregonstate.edu/cogow/

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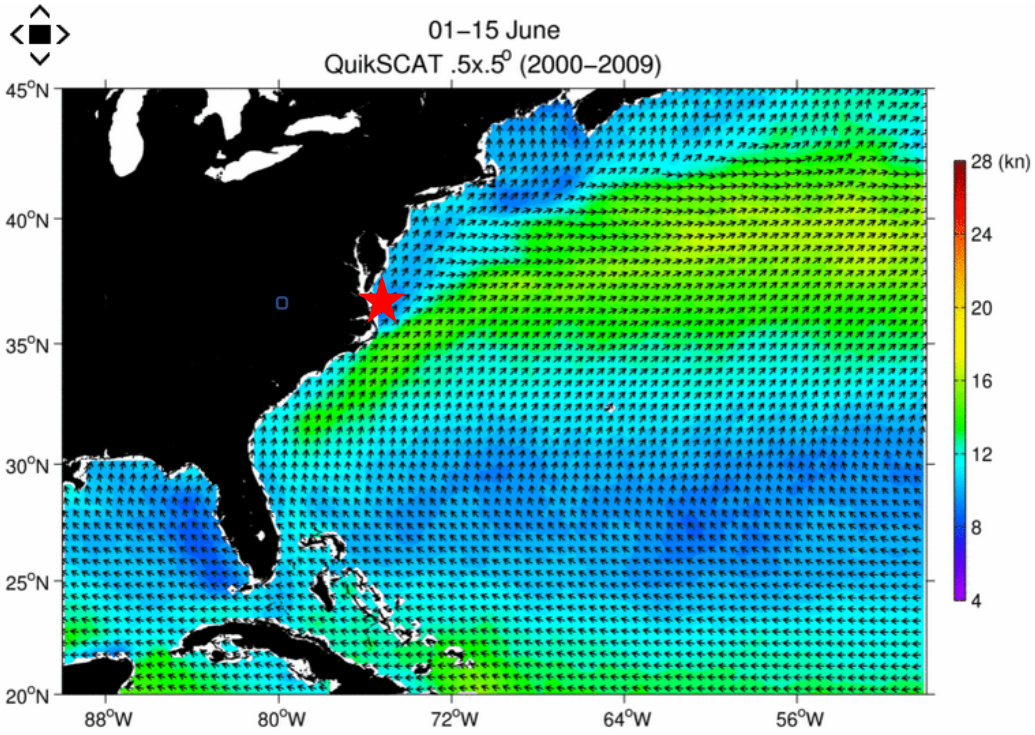

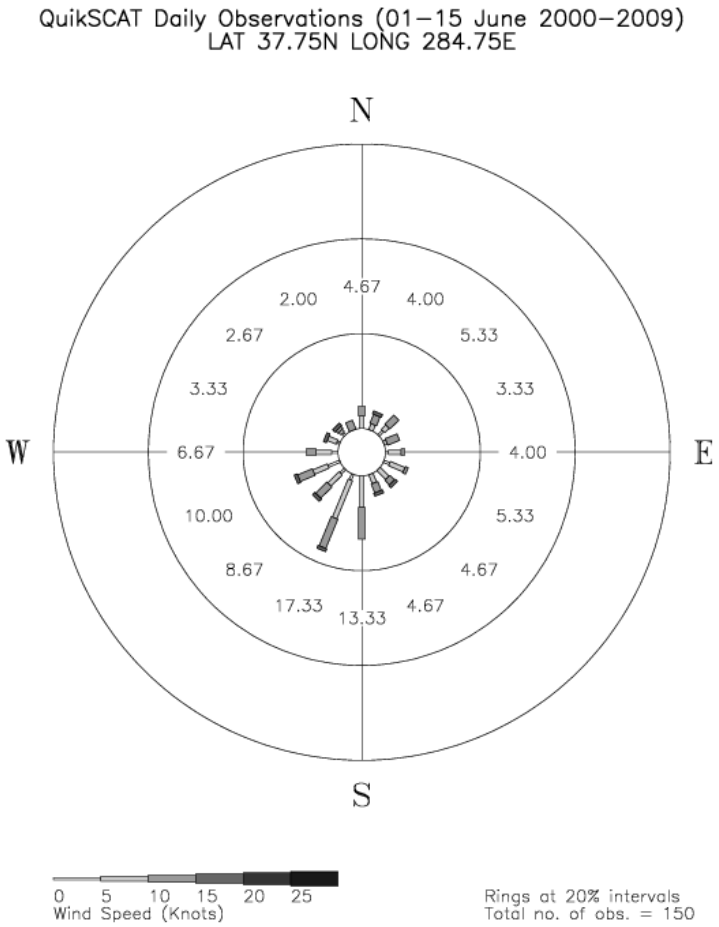

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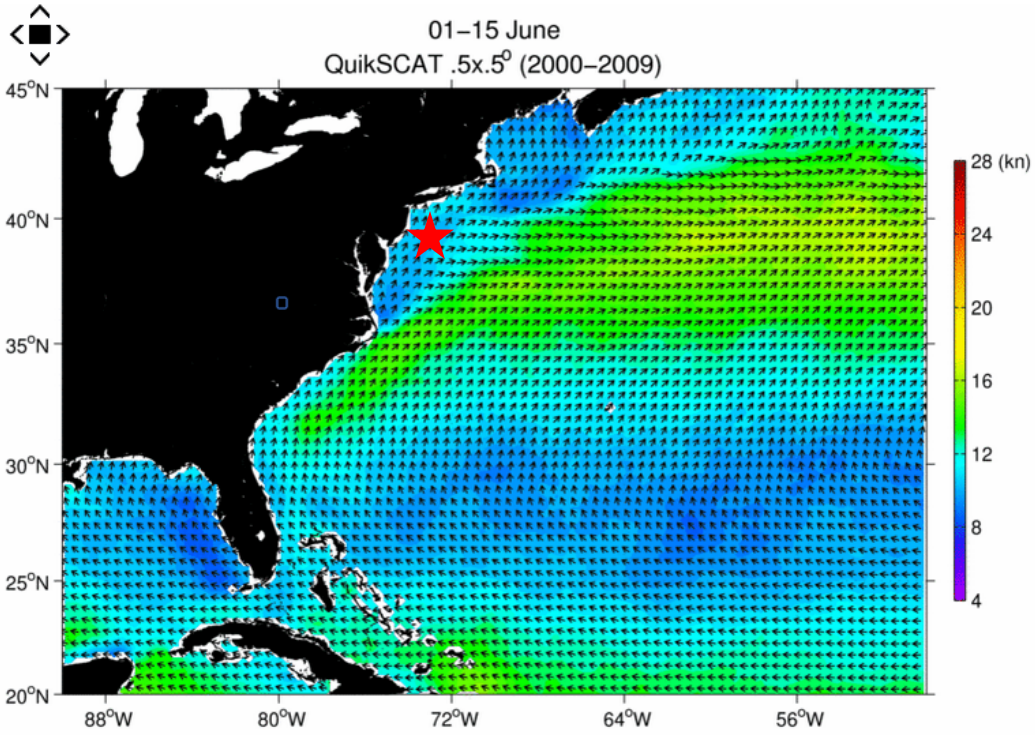

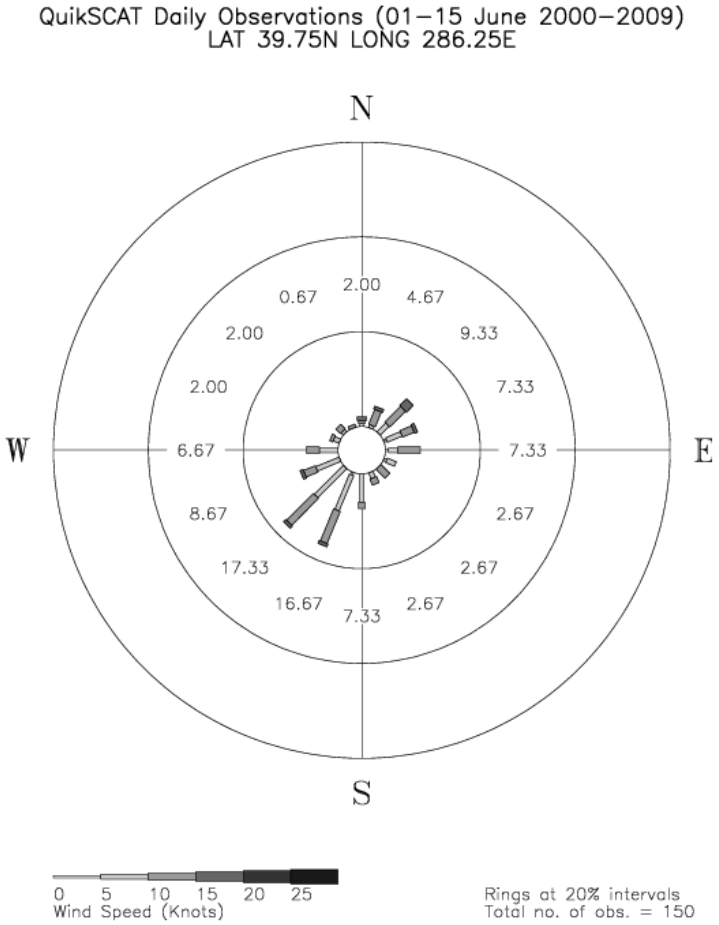

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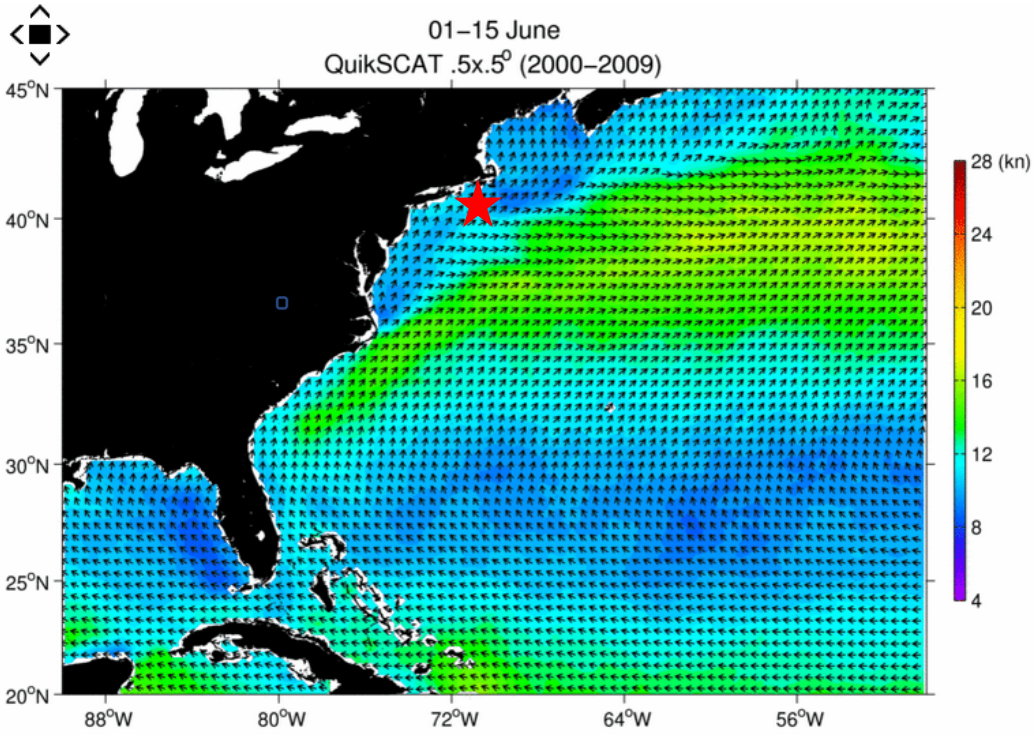

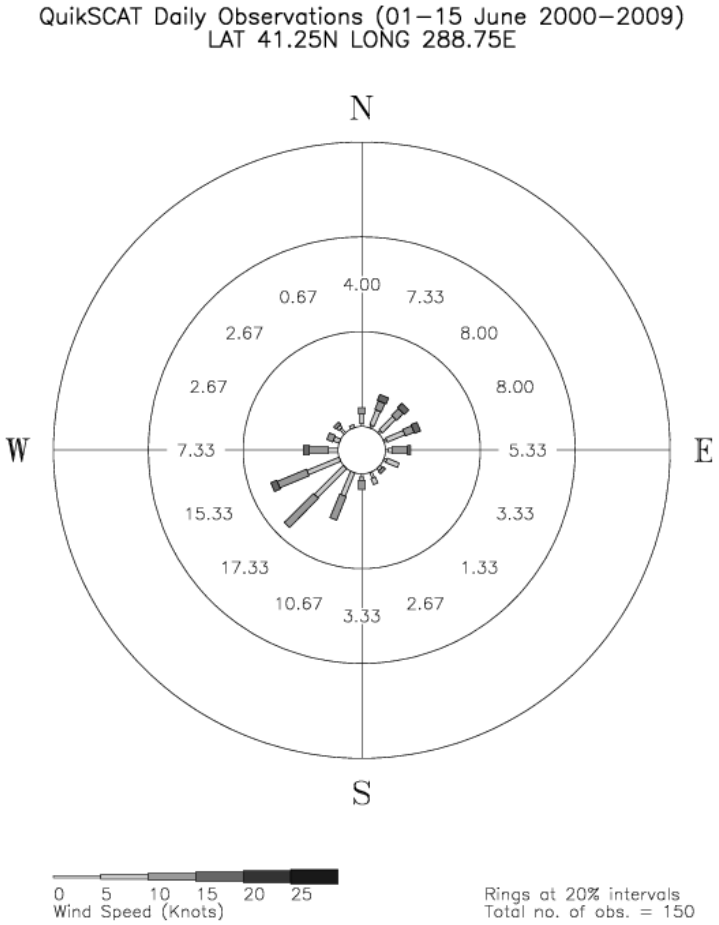

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HRRR Home Info Page

Current and Forecast Graphics

NCEP HRRR Now Operational Effective 30 Sept 2014
NCEP HRRR Hourly
NCEP HRRR Subhourly
Experimental HRRR:
HRRR Hourly
HRRR Subhourly
HRRR (alternative)
HRRR-Aviation Hourly
HRRR-Aviation Subhourly
HRRR Soundings
HRRR-chem-fire (W US)
HRRR-smoke (CONUS)
HRRR Reflectivity Matrix

HRRR Configuration Info

CONUS-HRRR domain parms
HRRR static fields inc lat/lon (NetCDF-952 MB)
WFIP-HRRR domain
CONUS-HRRR terrain info
HRRR WPS Namelist
HRRR WRF Namelist
HRRR GRIB2 Table 2-D Hourly
HRRR GRIB2 Table 2-D 15 min
HRRR GRIB2 Table Native
HRRR GRIB2 Table Press
HRRR-NCEP GRIB2 Table 2-D Hourly
HRRR-NCEP GRIB2 Table 2-D 15 min
HRRR-NCEP GRIB2 Table Native
HRRR-NCEP GRIB2 Table Press
HRRR/RAP diagnosis of output fields
Rapid Refresh web page

The High-Resolution Rapid Refresh (HRRR)

http://ruc.noaa.gov/hrrr/

The HRRR is a NOAA real-time 3-km resolution, hourly updated, cloud-resolving atmospheric model, initialized by 3km grids with 3km radar
2013), adding further detail to the HRRR initial conditions otherwise determined by the hourly data assimilation from the 13km radar-enhance

An **experimental** version of the HRRR model is run in real-time at NOAA/ESRL,
The **operational** version of the HRRR was implemented at NCEP as of 14 UTC 30 September 2014.
The experimental version of the HRRR started to run in 2010 and from October 2014 onward, continues to run more advanced versions than
lower reliability. Yearly upgrades are made in the HRRR-ESRL and ESRL-RAP configuration, last in **March-April 2014, complete on 11 Ap**

Experimental HRRRv2/RAPv3 - implemented at ESRL 1 Jan 2015. - significant further improvement for summer/winter storm environmen
assimilation, improved initial conditions for HRRR. More information in graphic summary, changes shaded red. and in HRRR/RAP Dec 2014
Review.

The experimental HRRR is run by NOAA/ESRL/GSD as a real-time demonstration.
The NCEP HRRR is now operational as of 14 UTC 30 September 2014 with hourly and sub-hourly graphics and grids available.

More Information on the Sept 2014 NCEP Operational Implementation:
NOAA/OAR Hot Item High-Resolution Rapid Refresh Model Implemented Operationally at NWS
NOAA News NOAA's weather forecasts go hyper local with next-generation weather model
NCEP Release Notes HRRR v1.0.4

The HRRR uses

- a configuration of the WRF model, updated significantly most recently in March-April 2014, similar to that used for the Rapid Refresh
  defined here), but without any convective parameterization.
- initialized with latest 3-d radar reflectivity via the 13km hourly updated model (Rapid Refresh run at ESRL/GSD starting 14 April 2011
  assimilation/model systems (RAP or RUC) both include radar reflectivity assimilation via radar-DFI (digital filter initialization) technique
- **1 Jan 2015 - HRRRv2-ESRL upgrade completed.** Graphic summary, changes shaded red.
- **2 May 2014 - Major HRRR ESRL upgrade completed early April 2014 - summary and details**

HRRR Selection Window

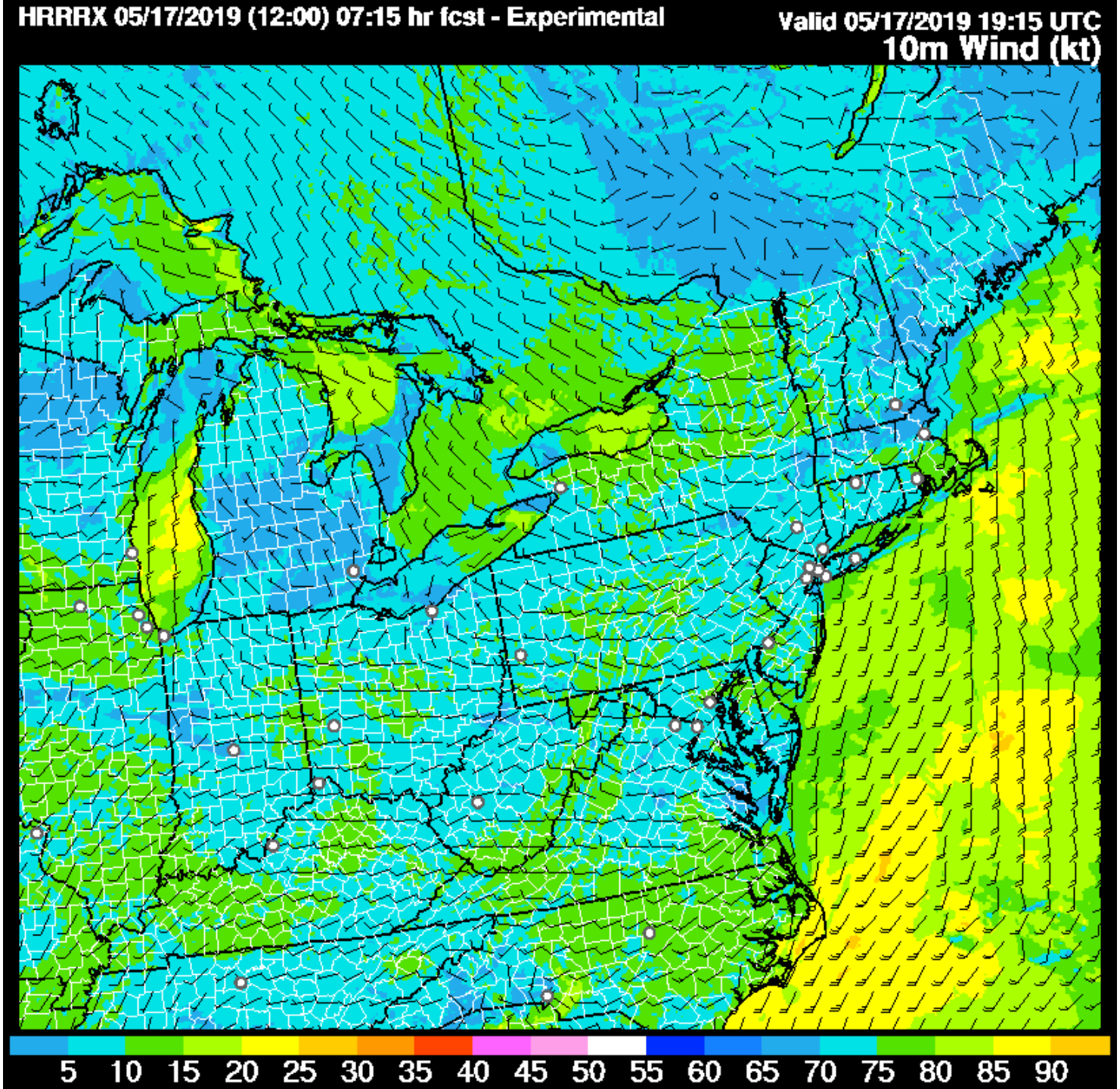
Model: HRRR-NCEP Subhourly (Operational) ▾ **Domain:** NE ▾ **Date:** 20 May 2019 - 16Z ▾

	All times	Loop	Mon 1600	Mon 1615	Mon 1630	Mon 1645	Mon 1700	Mon 1715	Mon 1730	Mon 1745	Mon 1800	Mon 1815	Mon 1830	Mon 1845	Mon 1900	Mon 1915	Mon 1930	Mon 1945	Mon 2000	Mon 2015	Mon 2030	Mon 2045	Mon 2100	Mon 2115	Mon 2130	Mon 2145
			0000	0015	0030	0045	0100	0115	0130	0145	0200	0215	0230	0245	0300	0315	0330	0345	0400	0415	0430	0445	0500	0515	0530	0545
all fields																										
1 km agl reflectivity																										
composite reflectivity																										
ensemble comp reflectivity																										
GOES-W water vapor																										
GOES-E water vapor																										
GOES-W infrared																										
GOES-E infrared																										
2-5 km updraft helicity																										
1-6 km updraft helicity																										
10m wind																										
5 min avg 10m wind																										
10m wind gust																										
80m wind																										
2m temp																										
2m dew point																										
surface pressure																										
cloud top height																										
ceiling																										
echotop height																										
VIL																										
RADAR VIL																										
outgoing longwave radiation																										
incoming shortwave radiation																										
15 min avg incoming shortwave radiation																										

Domain is set to CONUS, change to NE

Select 10m winds (it is the standard for surface winds)

You can select the time of interest of check the box for loop


HRRRX 05/17/2019 (12:00) 07:15 hr fcst - Experimental
Valid 05/17/2019 19:15 UTC
10m Wind (kt)
5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90

Summary

- Preparation
  - Know what you will be relying on
  - Practice data access and decision process
  - Know your weather tolerances (winds and waves)
- Underway
  - Maintain situational awareness
    - Data access
    - Decision process