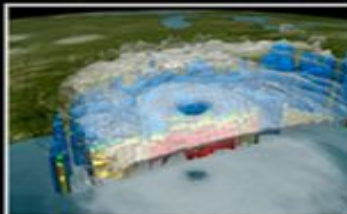
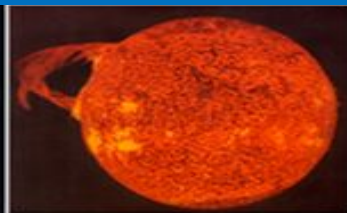
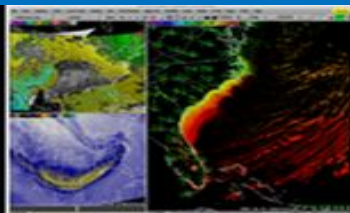


NOAA

National
Weather
Service

Ocean Prediction Center

Darin J. Figurskey
Operations Branch Chief





Our Home

National Centers for Environmental Prediction

Specialized Services – Common Mission



Aviation Weather Center
Kansas City, MO



Space Weather Prediction Center
Boulder, CO



Storm Prediction Center
Norman, OK



National Hurricane Center
Miami, FL



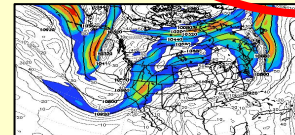
NCEP Central Operations
College Park, MD
(Supercomputers in
Reston & Orlando)



Ocean Prediction Center
College Park, MD



Climate Prediction Center
College Park, MD



Environmental Modeling Center
College Park, MD



Weather Prediction Center
College Park, MD

Mission

Deliver national and global operational weather, water and climate products and services essential to protecting life, property and economic well-being.

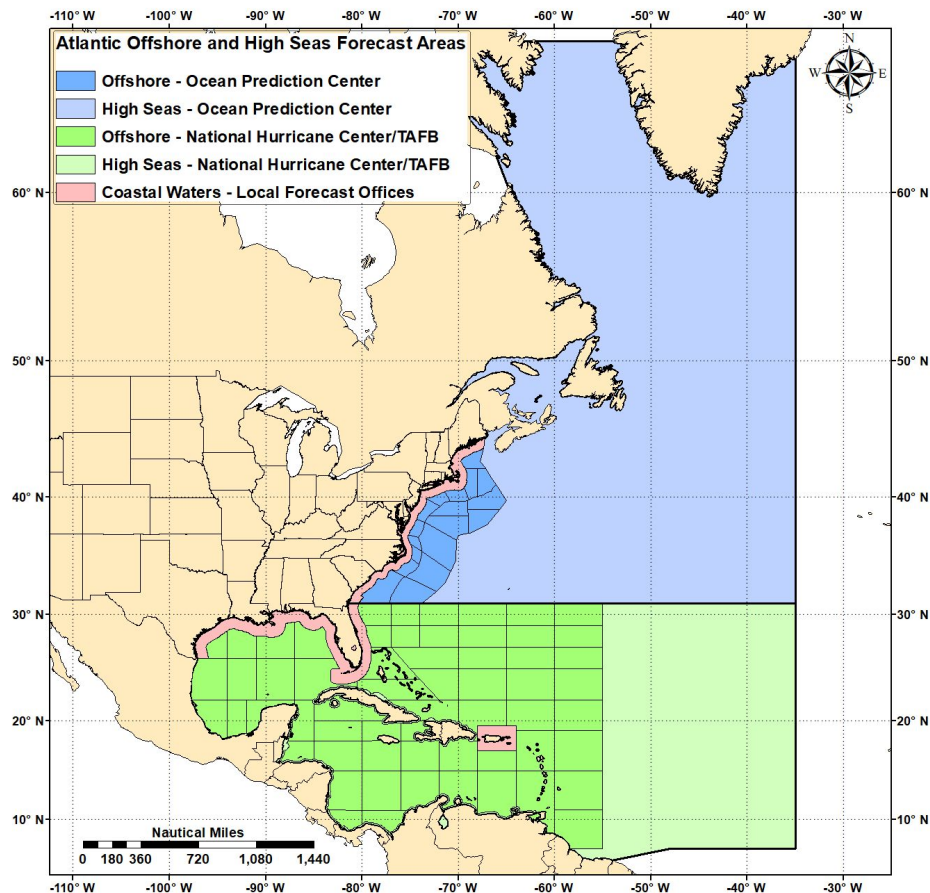
Vision

The trusted source for environmental predictions from the sun to the sea, when it matters most.



Atlantic Forecast Area

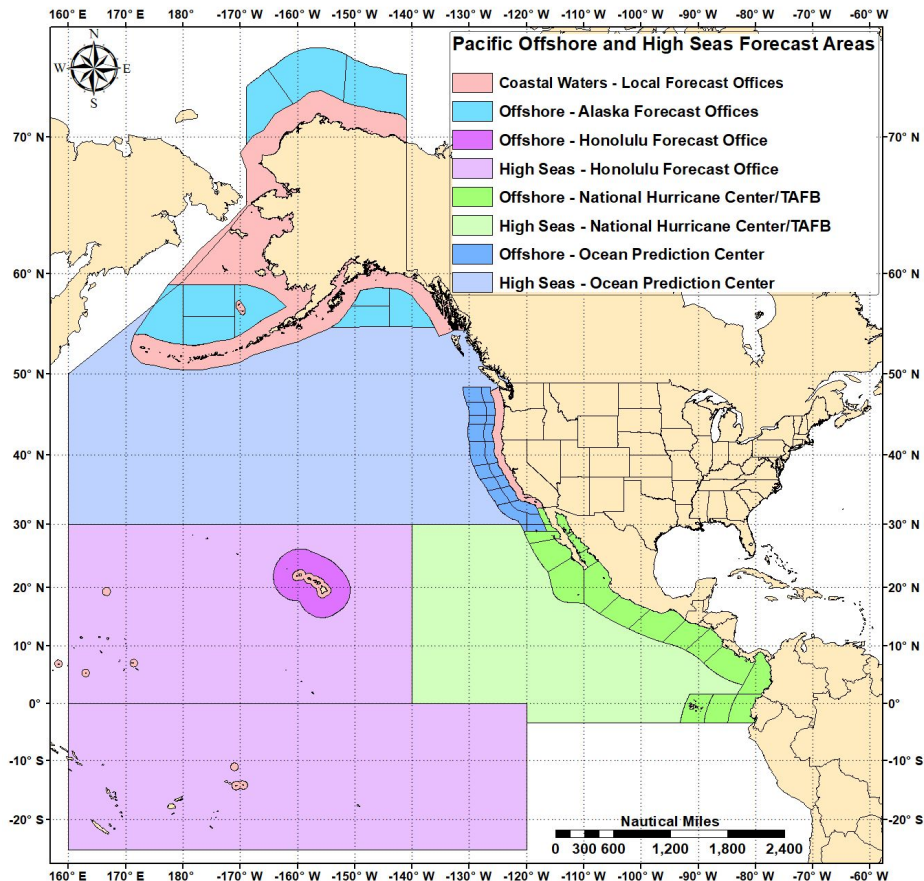
Offshore and High Seas
(radiofax charts to Europe and
Africa)





Pacific Forecast Area

Offshore and High Seas (radiofax charts to Asia)





WMO Metareas





Why?

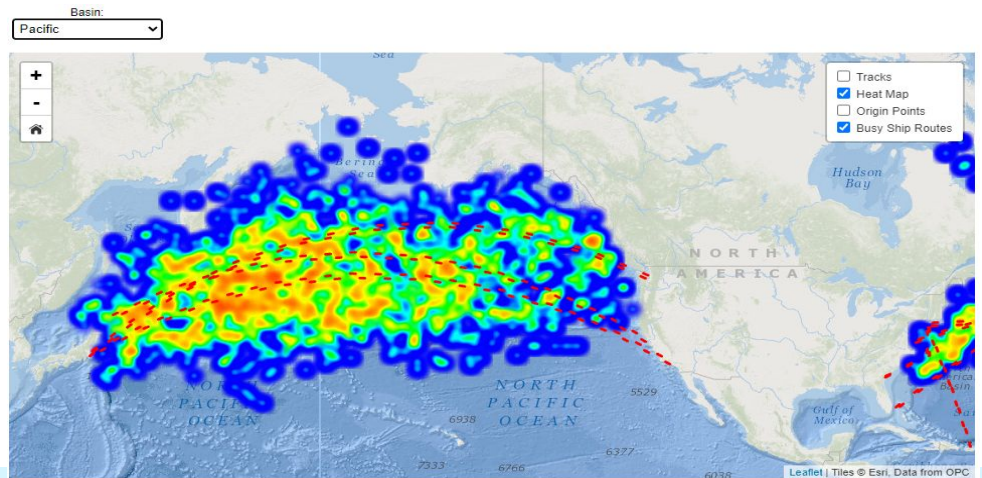
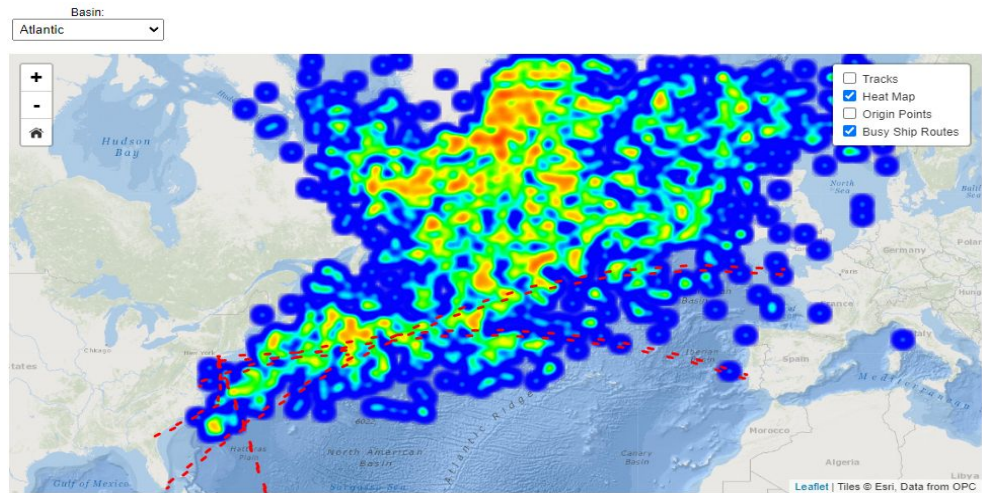


Heat Maps of extratropical hurricane-force lows in the Atlantic and Pacific



Atlantic average, 45

Pacific average, 36



At least 11
events from
4/7 to 4/11
2022

Why?

M/V TRUONG NGUYEN 136, TEN PERSONS ON BOARD,
SANK IN 14-30.7N 109-12.7E AT 062130Z APR.
NINE PERSONS RESCUED, ONE REMAIN MISSING.
VESSELS IN VICINITY REQUESTED TO KEEP A SHARP

070939Z APR 22
HYDROPAC 945/22(63).
ARABIAN SEA.
INDIA.
DNC 03.

DISTRESS SIGNAL RECEIVED ON 406 MHZ FROM SIX
METER M/V PARA-DICE, WHITE AND BLUE HULL IN
VICINITY 30-14.20S 114-58.40E AT 090335Z APR.
VESSELS IN VICINITY REQUESTED TO KEEP A SHARP
LOOKOUT, ASSIST IF POSSIBLE.

MAN OVERBOARD FROM F/V ESURAJAN IN
12-17.20N 080-08.25E AT 090330Z APR.
VESSELS IN VICINITY REQUESTED TO KEEP
A SHARP LOOKOUT, ASSIST IF POSSIBLE.

FISHERMAN MISSING FROM F/V MARANATHA IN
VICINITY 10-18.5N 075-55.0E AT 070330Z APR.
VESSELS IN VICINITY REQUESTED TO KEEP A SHARP
LOOKOUT, ASSIST IF POSSIBLE.

DISTRESS SIGNAL RECEIVED ON 406 MHZ
IN VICINITY 11-14N 144-45E AT 090838Z APR.
VESSELS IN VICINITY REQUESTED TO KEEP A SHARP
LOOKOUT, ASSIST IF POSSIBLE.

REPORTS TO MRCC MUMBAI,
PHONE: 9122 2438 8065, 9122 2438 3592,
FAX: 9122 2431 6558,
E-MAIL: INDSAR@VSNL.NET,
MRCC-WEST@INDIANCOASTGUARD.NIC.IN.

RUBBER BOAT IN DISTRESS, UNKNOWN NUMBER OF PERSONS
ON BOARD, IN 33-35N 012-02E AT 091220Z APR.
VESSELS IN VICINITY REQUESTED TO KEEP A SHARP
LOOKOUT, ASSIST IF POSSIBLE.

080027Z APR 22
HYDROLANT 995/22(24).
WESTERN SOUTH ATLANTIC.
BRAZIL-NORTH COAST.
DNC 01.

MAN OVERBOARD FROM F/V DE HAI NO26 IN VICINITY
41-00S 070-00E AT 091825 APR.
VESSELS IN VICINITY REQUESTED TO KEEP A SHARP
LOOKOUT, ASSIST IF POSSIBLE.

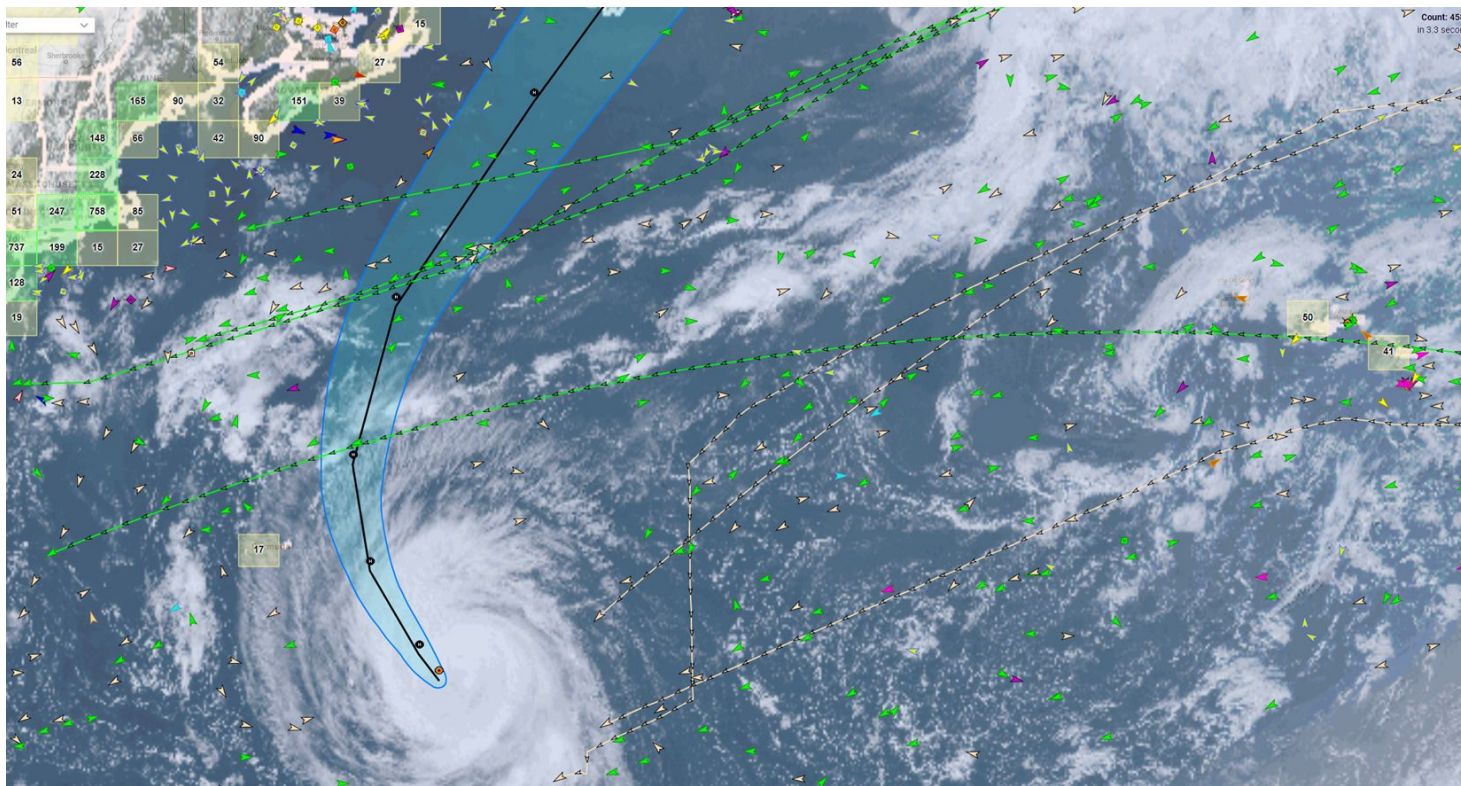
DISTRESS SIGNAL RECEIVED ON 406 MHZ
IN 16-09.20S 142-24.06W. VESSELS IN VICINITY
REQUESTED TO KEEP A SHARP
LOOKOUT, ASSIST IF POSSIBLE.

THREE CREWMEN MISSING FROM M/V MILA MARIA IN
VICINITY 02-39.47S 040-40.40W ON 05 APRIL.
VESSELS IN VICINITY REQUESTED TO KEEP A SHARP
LOOKOUT, ASSIST IF POSSIBLE.
REPORTS TO ANY COASTAL RADIO STATION.

DISTRESS SIGNAL RECEIVED ON 406 MHZ FROM
M/V BUNGA MAWAR IN 01-23.5N 120-50.3E
AT 092039Z APR.



Why?



Vessel Avoidance
18 UTC
September 8,
2021

Courtesy - Seavision





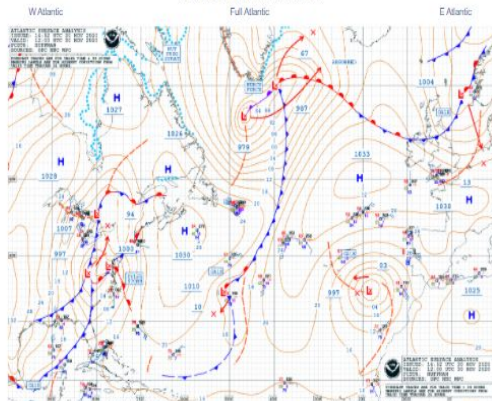
What We Do

Over 150 products each day

<https://ocean.weather.gov>

Atlantic Analysis

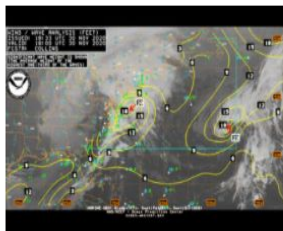
Click on the map below or choose from:



Surface Analysis

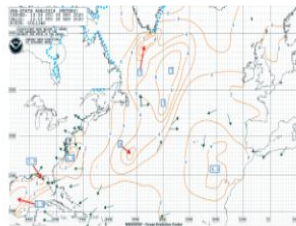
W Atlantic Loop:
[9] [7] [14] Days
Updated: Mon, 30 Nov 2020 15:04:51 UTC

E Atlantic Loop:
[9] [7] [14] Days
Updated: Mon, 30 Nov 2020 15:04:51 UTC



Wind and Wave Analysis

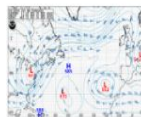
Loop:
[9] [7] [14] Days
Updated: Mon, 30 Nov 2020 18:37:06 UTC



Sea State Analysis

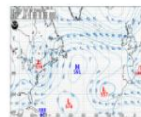
Loop:
[9] [7] [14] Days
Updated: Mon, 30 Nov 2020 13:38:50 UTC

Atlantic Graphical Forecasts



24-hour 500 mb

Loop: [9] [7] [14] Days
Updated: Mon, 30 Nov 2020 17:21:38 UTC
More 500 MB images



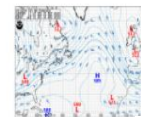
48-hour 500 mb

Loop: [9] [7] [14] Days
Updated: Mon, 30 Nov 2020 17:24:14 UTC
More 500 MB images



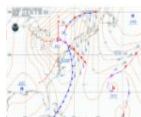
72-hour 500 mb

Loop: [9] [7] [14] Days
Updated: Mon, 30 Nov 2020 17:25:30 UTC
More 500 MB images



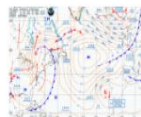
96-hour 500 mb

Loop: [9] [7] [14] Days
Updated: Mon, 30 Nov 2020 17:28:43
More 500 MB images



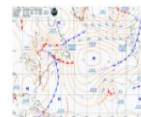
24-hour surface

Loop: [9] [7] [14] Days
Updated: Mon, 30 Nov 2020 17:17:02 UTC



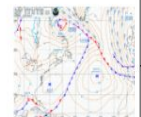
48-hour surface

Loop: [9] [7] [14] Days
Updated: Mon, 30 Nov 2020 17:51:13 UTC



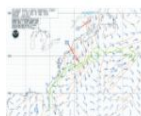
72-hour surface

Loop: [9] [7] [14] Days
Updated: Sun, 29 Nov 2020 20:09:58 UTC



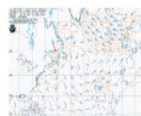
96-hour surface

Loop: [9] [7] [14] Days
Updated: Mon, 30 Nov 2020 15:22:23



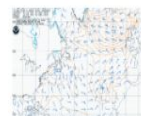
24-hour wind & wave

Loop: [9] [7] [14] Days
Updated: Mon, 30 Nov 2020 17:37:11 UTC



48-hour wind & wave

Loop: [9] [7] [14] Days
Updated: Mon, 30 Nov 2020 18:18:13 UTC



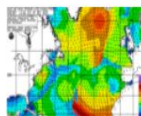
72-hour wind & wave

Loop: [9] [7] [14] Days
Updated: Sun, 29 Nov 2020 20:28:59 UTC



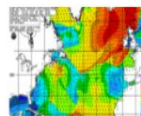
96-hour wind & wave

Loop: [9] [7] [14] Days
Updated: Mon, 30 Nov 2020 16:11:03 UTC



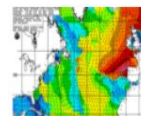
24-hour wave period & direction

Loop: [9] [7] [14] Days
Updated: Mon, 30 Nov 2020 17:02:51 UTC



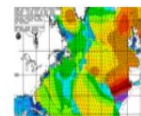
48-hour wave period & direction

Loop: [9] [7] [14] Days
Updated: Mon, 30 Nov 2020 18:58:44 UTC



72-hour wave period & direction

Loop: [9] [7] [14] Days
Updated: Mon, 30 Nov 2020 17:01:01 UTC



96-hour wave period & direction

Loop: [9] [7] [14] Days
Updated: Mon, 30 Nov 2020 16:56:45 UTC

Atlantic Text Forecasts

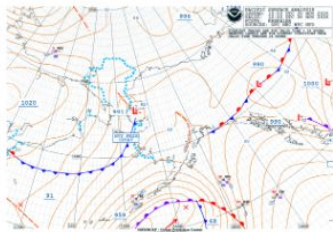
Marine Weather Discussion description	North Atlantic Ocean Updated: Mon, 30 Nov 2020 14:40:25 UTC
Offshore Waters Forecasts description	New England continental shelf and slope waters Updated: Mon, 30 Nov 2020 15:03:03 UTC West Central North Atlantic continental shelf and slope waters Updated: Mon, 30 Nov 2020 15:05:52 UTC Live Map
NAVTEX Coastal & Offshore Waters Forecasts description	Boston, MA: Eastport, ME to South of New England Updated: Mon, 30 Nov 2020 15:51:19 UTC Portsmouth, VA: Sandy Hook, NJ to Murrells Inlet, SC Updated: Mon, 30 Nov 2020 15:52:01 UTC Charleston, SC: Murrells Inlet, SC to Flagler Beach, FL Updated: Mon, 30 Nov 2020 15:52:32 UTC Live Map
High Frequency Voice Broadcast for Offshore Waters (VOBRA) description	New England continental shelf and slope waters Updated: Mon, 30 Nov 2020 15:08:24 UTC West Central North Atlantic continental shelf and slope waters Updated: Mon, 30 Nov 2020 15:07:32 UTC Live Map
High Seas Forecast description	North Atlantic Ocean (Metarea IV) Updated: Mon, 30 Nov 2020 16:19:55 UTC



What We Do

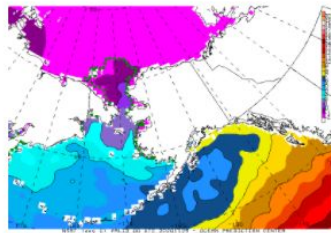


Alaska/Arctic Analysis



Latest Surface Analysis

Updated: Mon, 30 Nov-2020 15:13:01 UTC



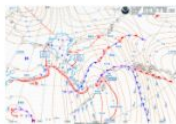
Latest SST/Ice Edge Analysis

Updated: Sun, 29 Nov-2020 23:11:04 UTC

Forecasts and analyses for parts of the Arctic



Alaska/Arctic Graphical Forecasts



24-hour surface

Loop: [3] [7] [1-4] Days

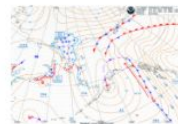
Updated: Mon, 30 Nov-2020 18:08:29 UTC



48-hour surface

Loop: [3] [7] [1-4] Days

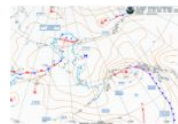
Updated: Mon, 30 Nov-2020 18:43:02 UTC



72-hour surface

Loop: [3] [7] [1-4] Days

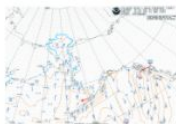
Updated: Sun, 29 Nov-2020 18:17:11 UTC



96-hour surface

Loop: [3] [7] [1-4] Days

Updated: Mon, 30 Nov-2020 15:54:35 UTC



Loop: [3] [7] [1-4] Days

24-hour wind & wave

Updated: Mon, 30 Nov-2020 18:52:43 UTC



Loop: [3] [7] [1-4] Days

48-hour wind & wave

Updated: Mon, 30 Nov-2020 19:00:04 UTC



Loop: [3] [7] [1-4] Days

72-hour wind & wave

Updated: Sun, 29 Nov-2020 18:39:12 UTC



Loop: [3] [7] [1-4] Days

96-hour wind & wave

Updated: Mon, 30 Nov-2020 17:07:36 UTC

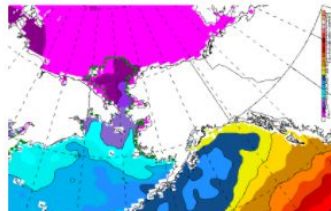




What We Do



Alaska/Arctic Analysis



U.S. National Ice Center
NOAA component = OPC Ice
Services Branch

<https://usicecenter.gov>



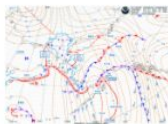
U.S. NATIONAL ICE CENTER

ABOUT ▾ PRODUCTS ▾ RESOURCES NEWS CONTACT US ▾ 🔍

Latest
Updated: Mon, 30-Nov-2020 18:08:29 UTC

NOTICE: Starting 04 October 2021, USNIC will be revising the Arctic Weekly Hemispheric Analysis. Ice thickness characterization egg codes 7 (Thin First Year Ice), 1-Dot (Medium First Year Ice), and 4-Dot (Thick First Year Ice) will be characterized as 6 (First Year Ice). Further characterization will be available for Tailored Support based on customer mission requirements.

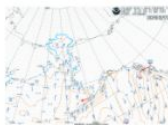
Featured Highlights



24-hour surface

Loop: [3] [7] [1-4] Days

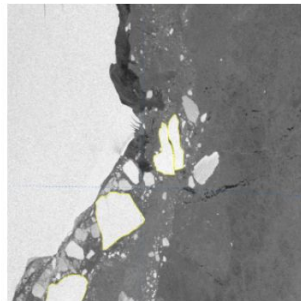
Updated: Mon, 30-Nov-2020 18:08:29 UTC



Loop: [3] [7] [1-4] Days

24-hour wind & wave

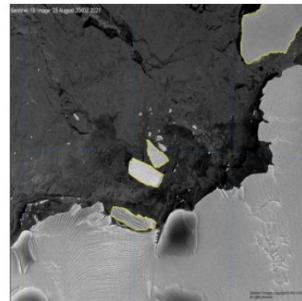
Updated: Mon, 30-Nov-2020 18:52:43 UTC



Updated: Mon, 30-Nov-2020 19:00:04 UTC



Updated: Sun, 29-Nov-2020 18:39:12 UTC

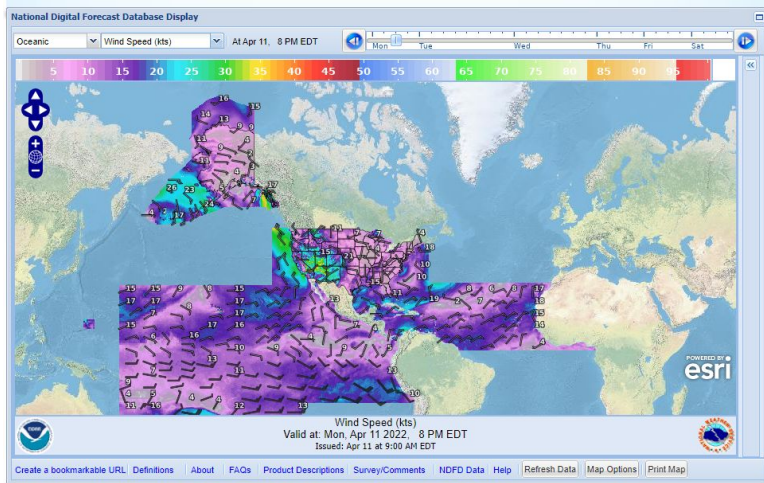


Updated: Mon, 30-Nov-2020 17:07:36 UTC





What We Do



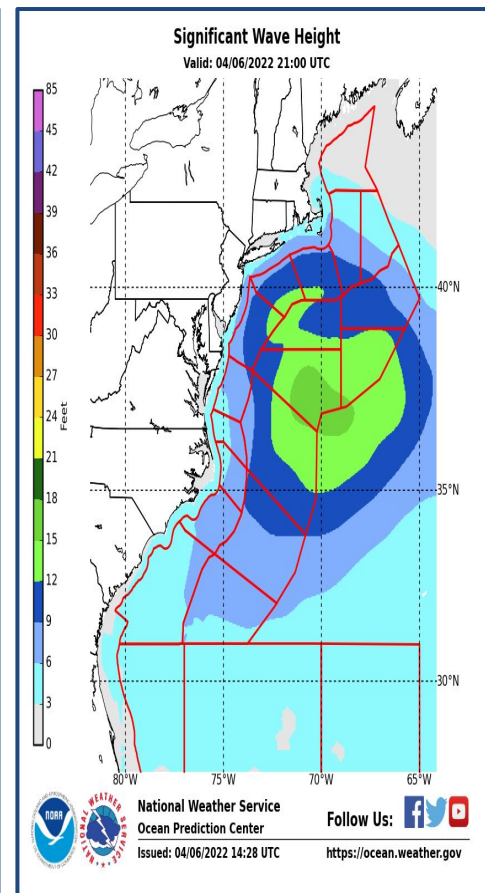
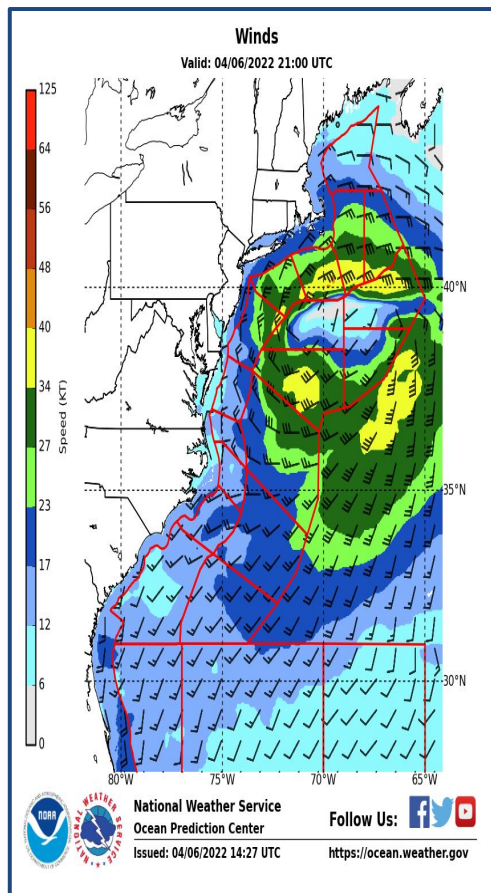
National Digital Forecast Database (NDFD)

https://www.weather.gov/mdl/ndfd_info

<https://digital.weather.gov/>

Top: oceanic domain of the NDFD, forecast, April 12, 2022, 0000 UTC

Upper Right: wind and wave forecasts, April 6, 2022, 2100 UTC





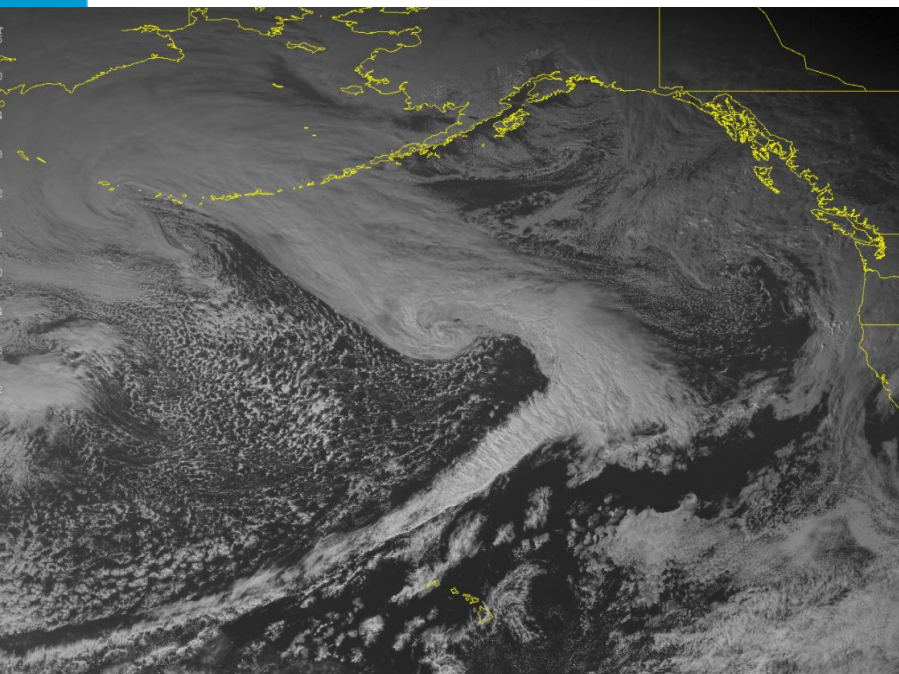
How We Do It



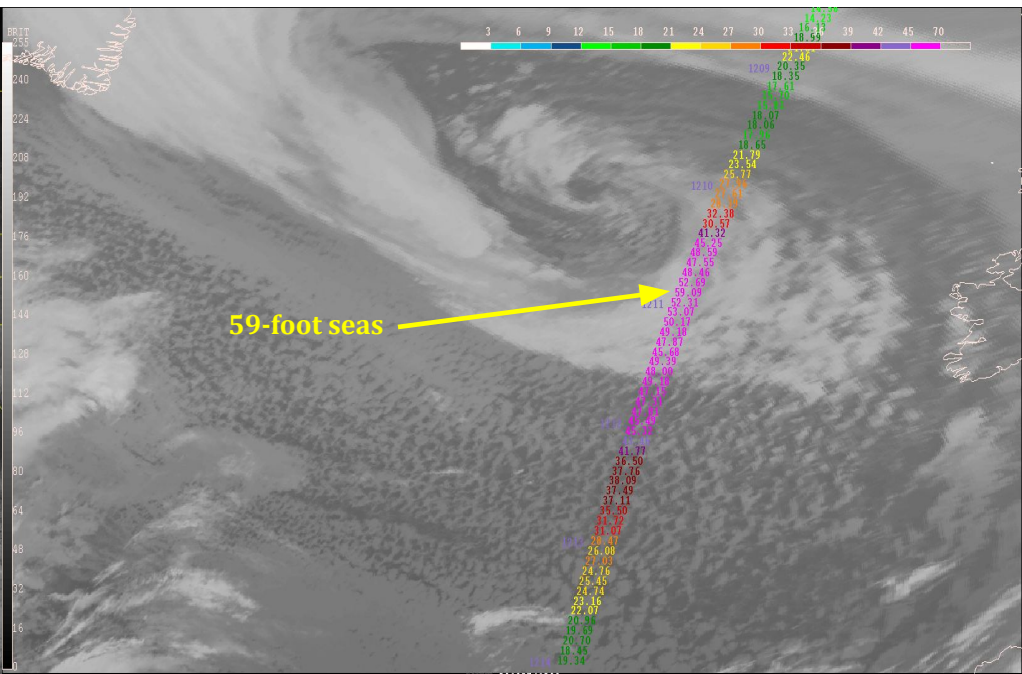
Satellite imagery

*L: visible image, Pacific, January 24, 2020,
00 UTC*

*R: infrared image + altimeter, Atlantic,
October 27, 2020, 12 UTC*



200124/0000 GOES17 CH02 VIS_0.64

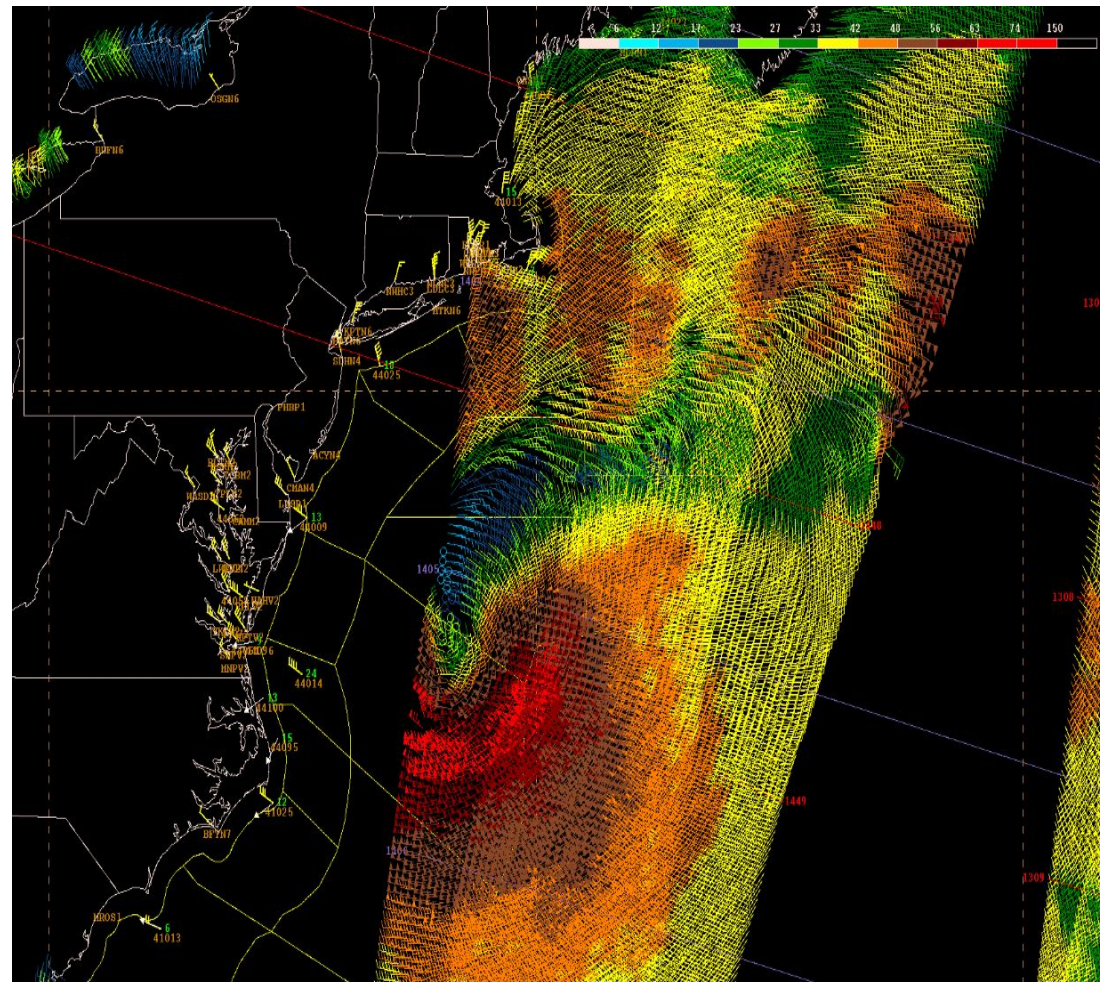


201027/1200 GOES16 CH13 IR_10.4



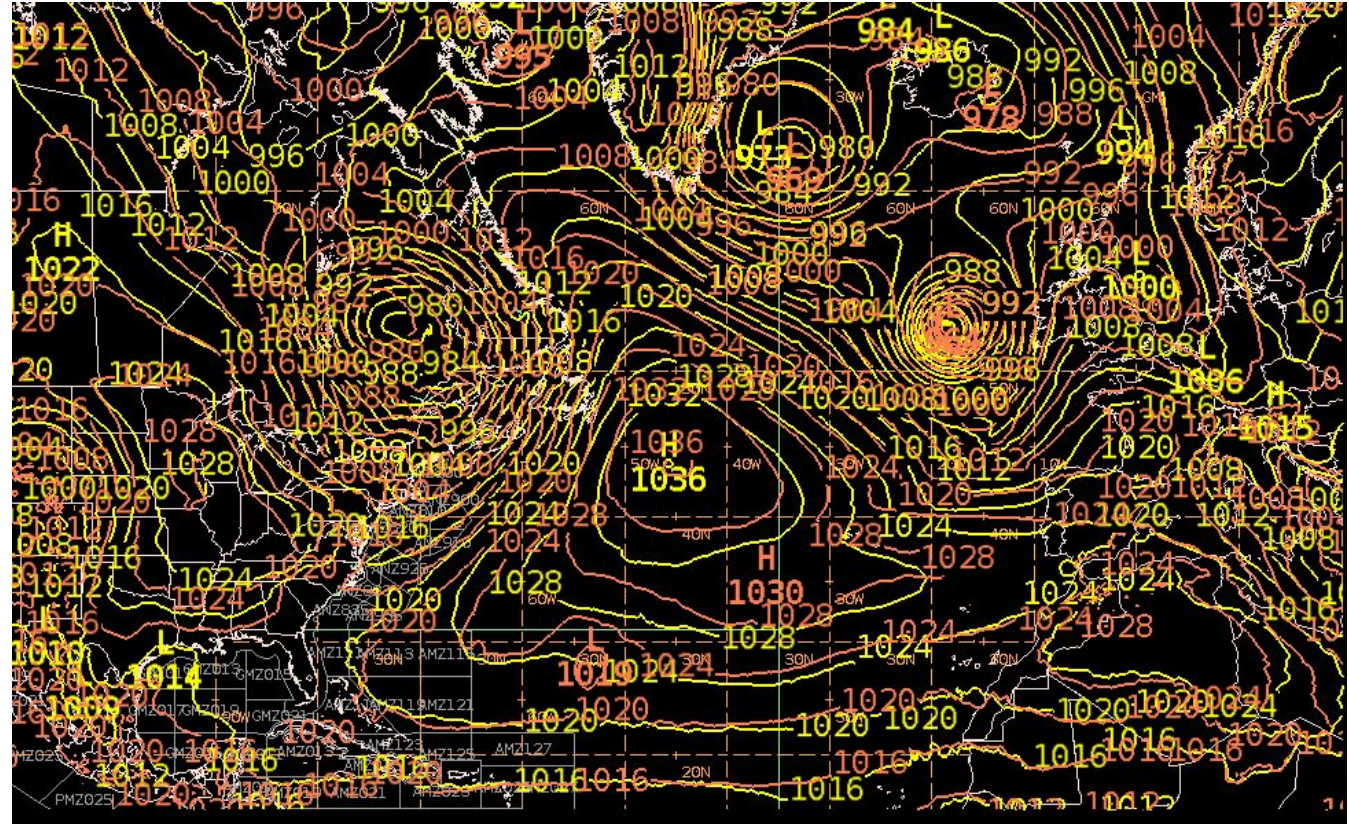


*Scatterometer data, January
4, 2018, from 1618 UTC*





Surface pressure
87 hour forecast
December 7, 2021 0300 UTC





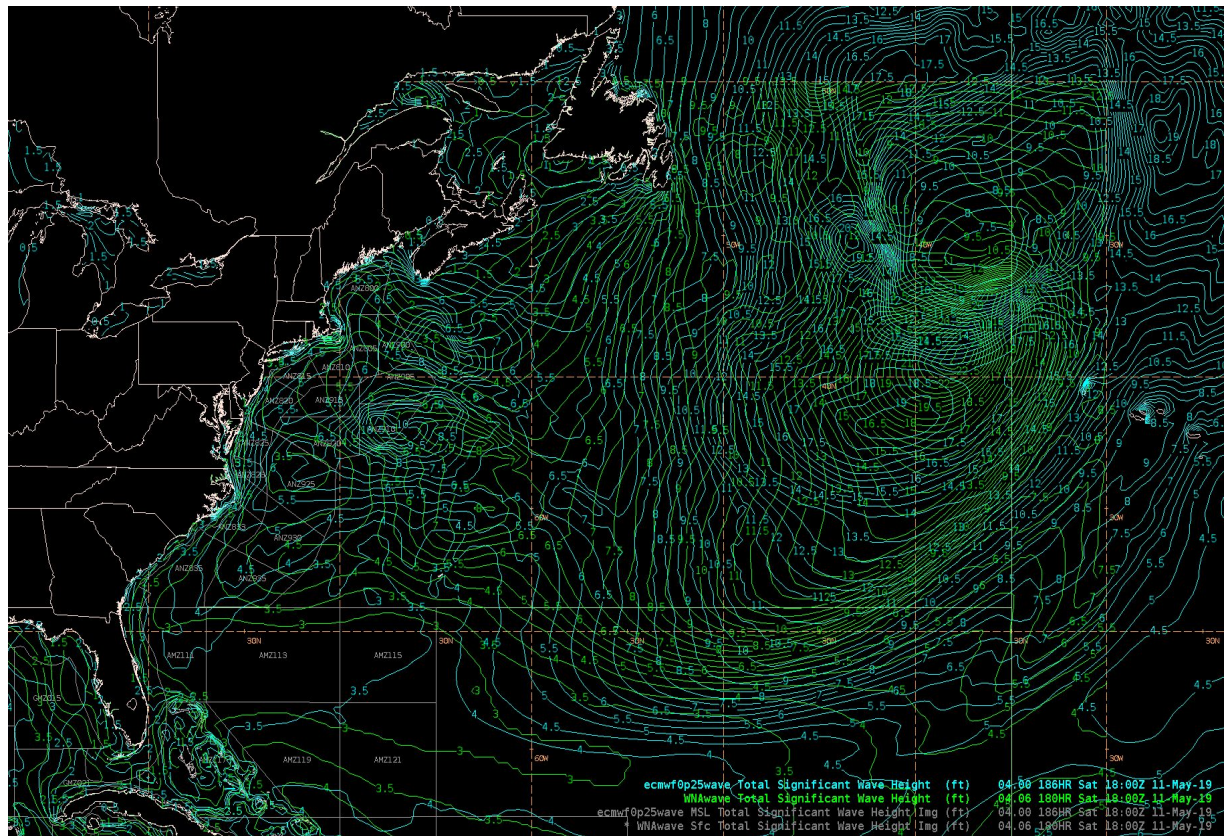
How We Do It



Wavewatch and European
Centre for
Medium-Range Weather
Forecast (ECMWF)



Significant Wave Height
180 hour / 186 hour forecast
May 11, 2019



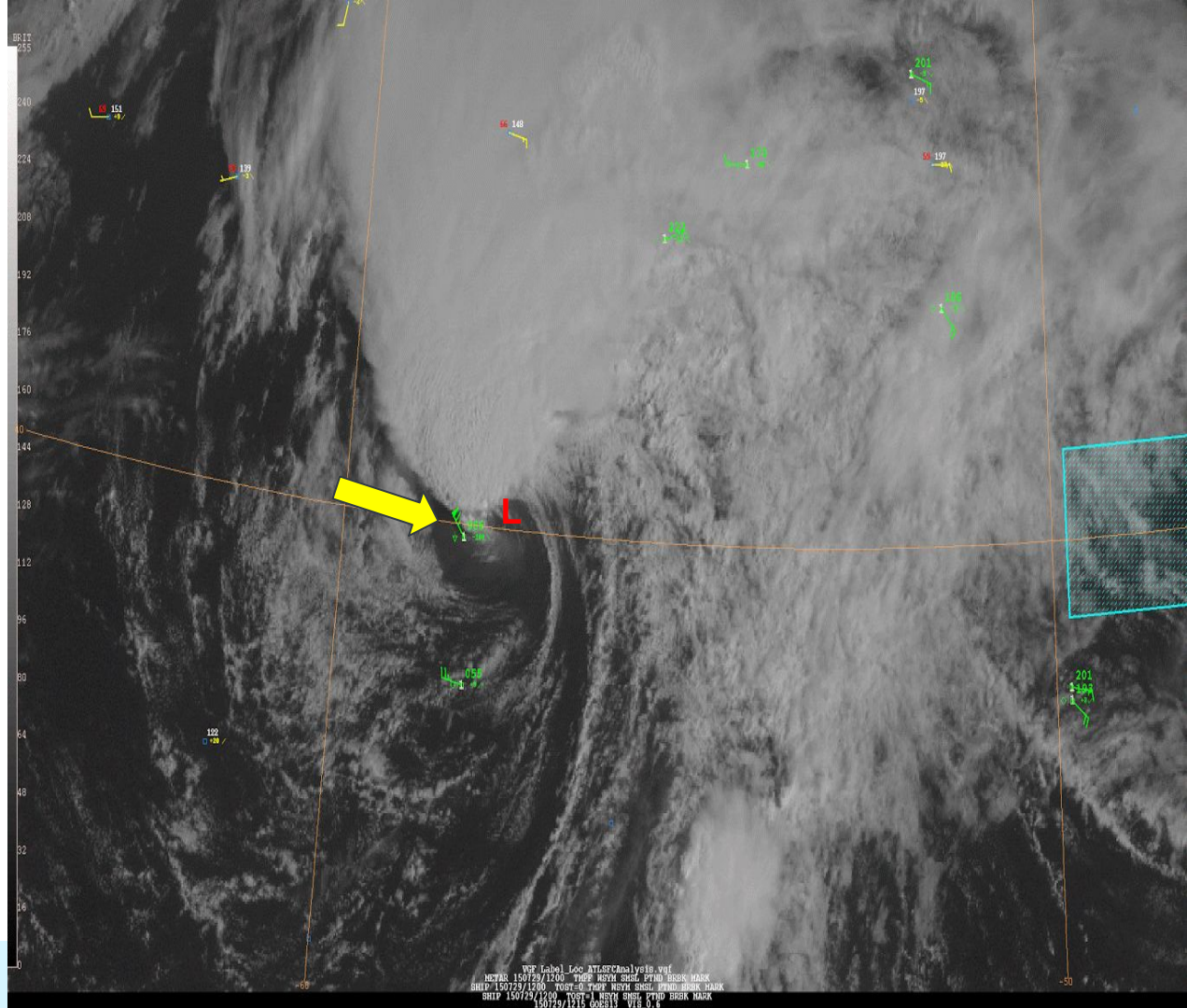


Observations



Satellite imagery

*Visible image, July 29, 2015,
12 UTC*



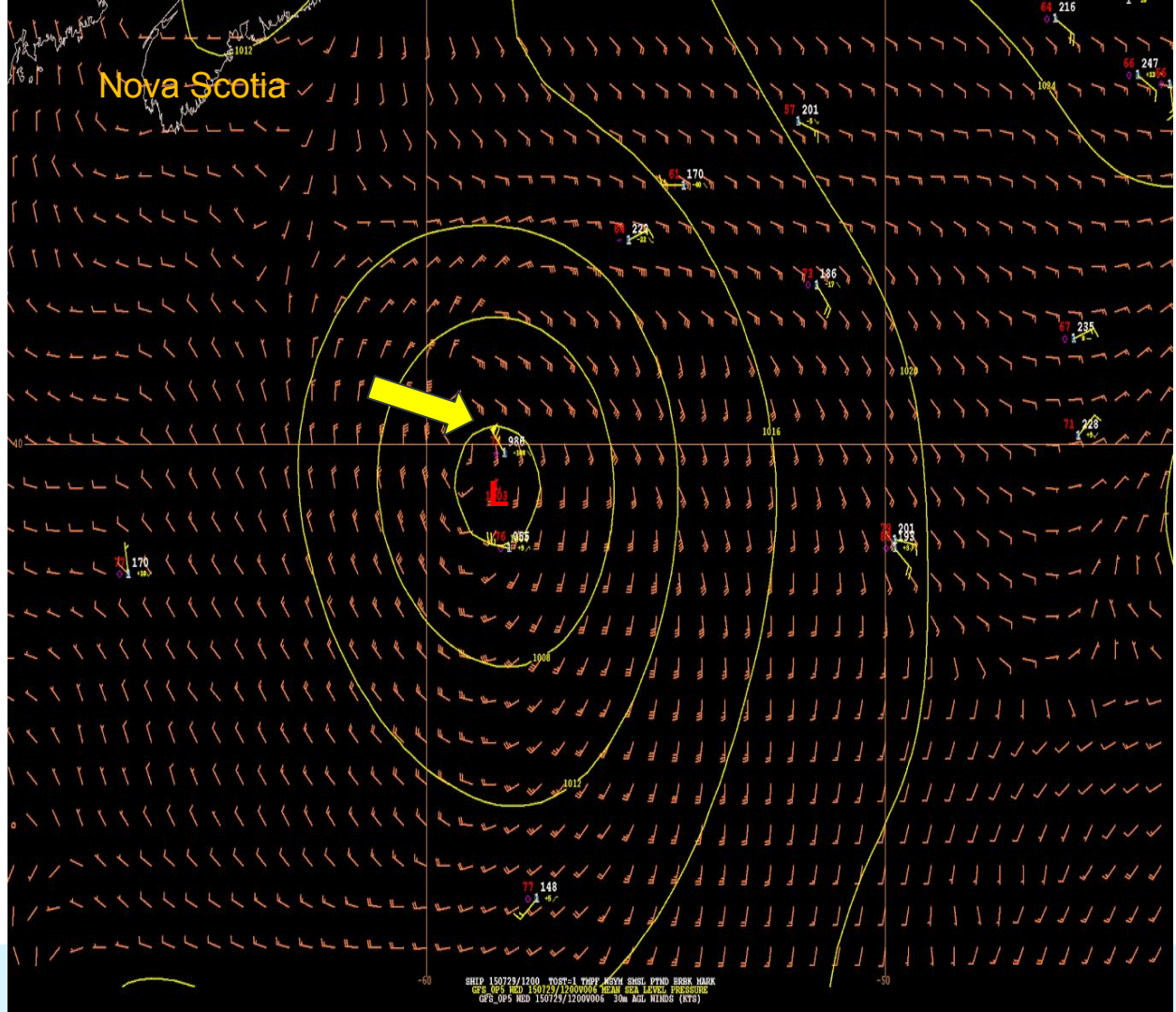


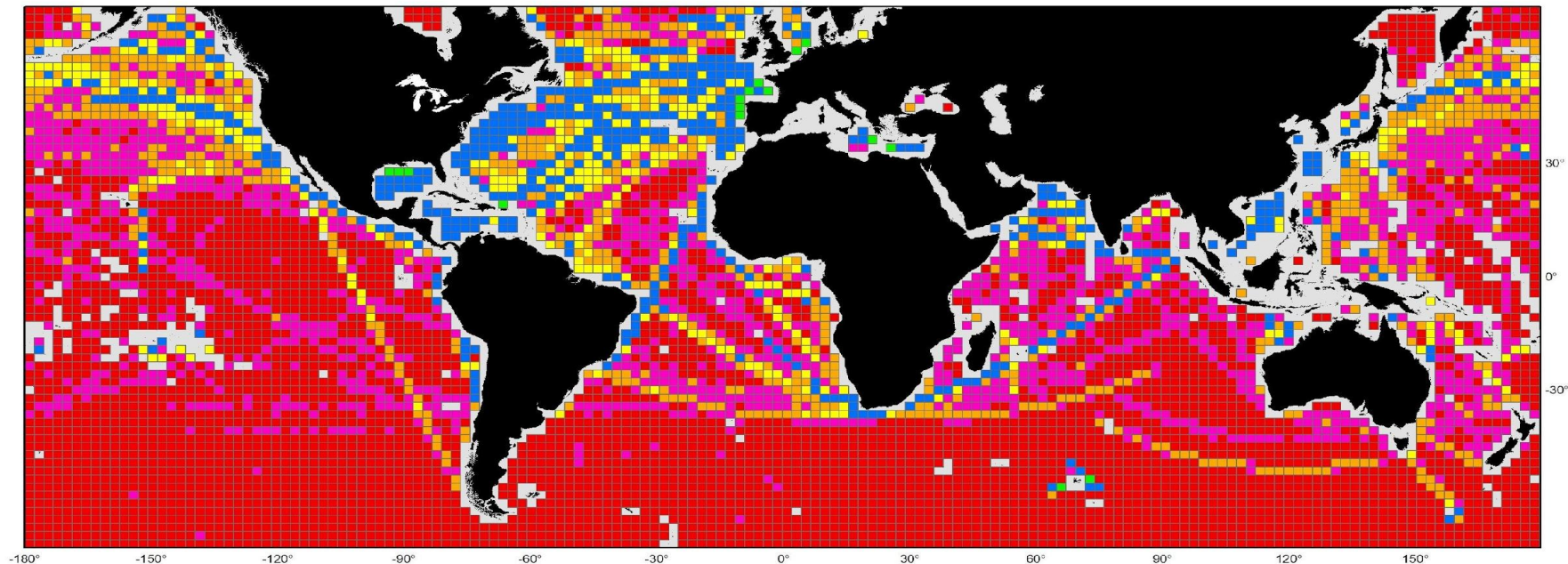
Observations



Global Forecast System (GFS)

*Six-hour forecast, July 29,
2015, 12 UTC*



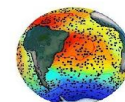
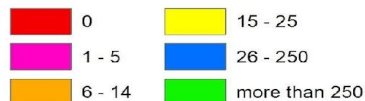


Ship Observations Team

VOS Data Coverage between 60° North and 60° South

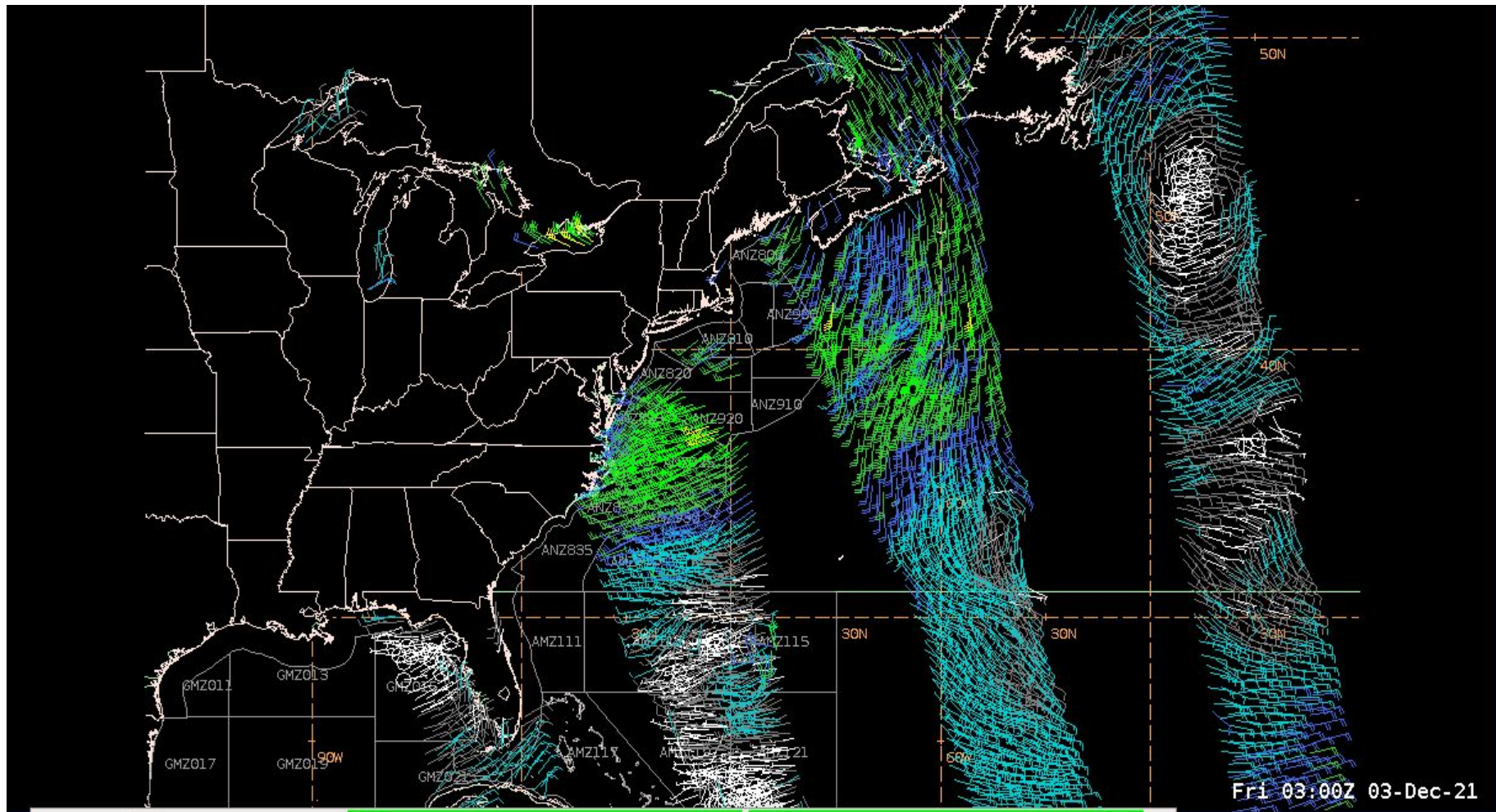
October 2020

Near surface air pressure requirements for global Numerical Weather Prediction
(Threshold value for WMO-OSCAR Requirement #251 in this grid: 15; breakthrough: 750)



Generated by www.ocean-ops.org. 11/11/2020





Fri 03:00Z 03-Dec-21





VOS / SOOP / ASAP

<https://www.wmo.int/pages/prog/amp/mmop/sot.html>



- WMO Observing Systems Capability Analysis and Review Tool (OSCAR) requirements for air pressure measurements for global Numerical Weather Prediction (NWP):



- Goal of observations every 15 km taken every 60 minutes
- Breakthrough goal of observations every 100 km taken every 6 hours
 - **"Breakthrough"**, if achieved, would result in a significant improvement for air pressure, and can be considered an optimum when planning or designing observing systems.
- For high-resolution NWP, breakthrough goal is observations every 10 km taken every 60 minutes



E

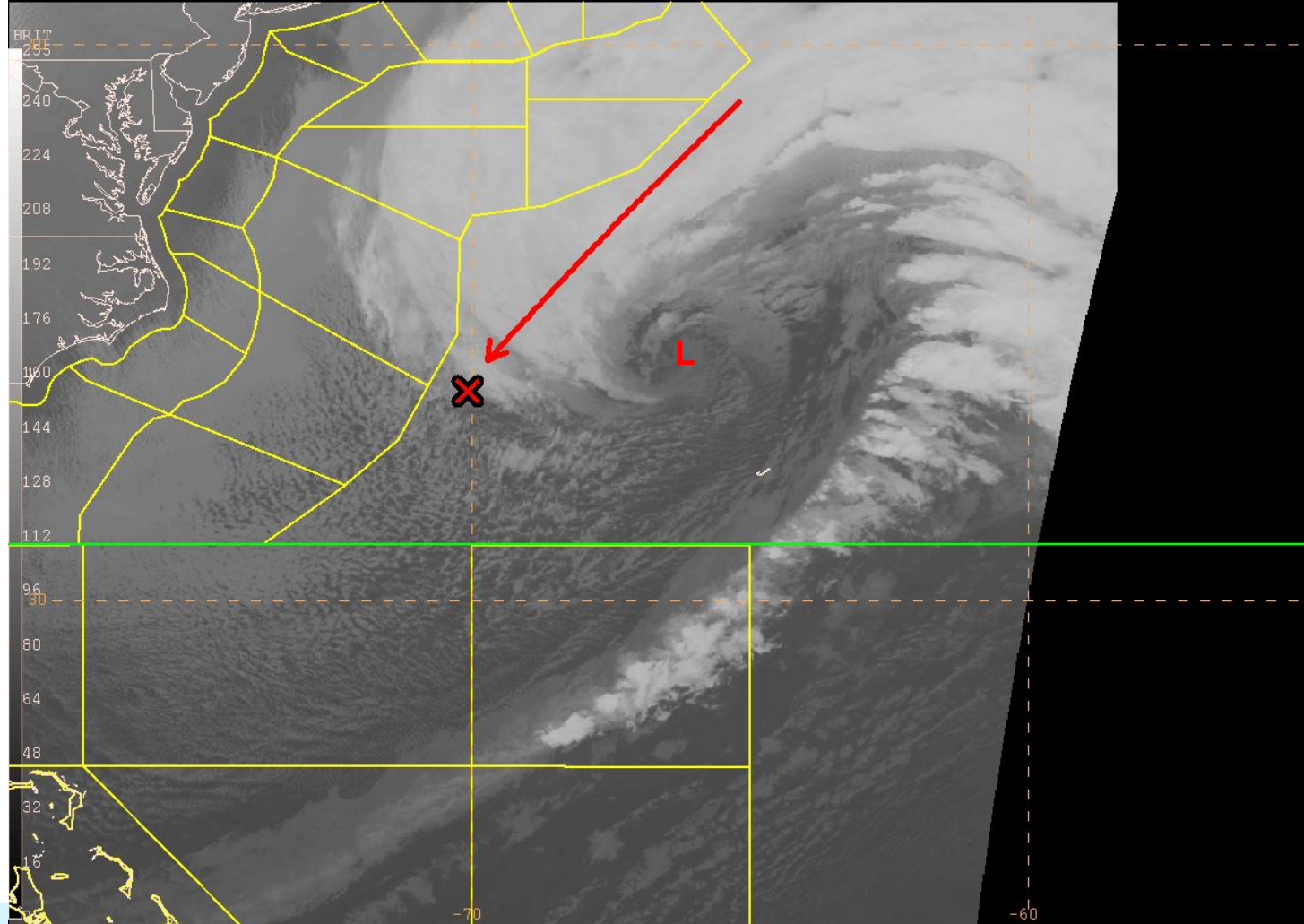
4 ALBERT EMBANKMENT
LONDON SE1 7SR

Telephone: +44 (0)20 7735 7611

Fax: +44 (0)20 7587 3210

MSC.1/Circ.1293/Rev.1
25 May 2018







Decision Support Services



Hurricane-Force Wind Warning

Today into Tonight

KEY MESSAGES:

CALL TO ACTION: Vessels planning to be in the area should be executing avoidance!

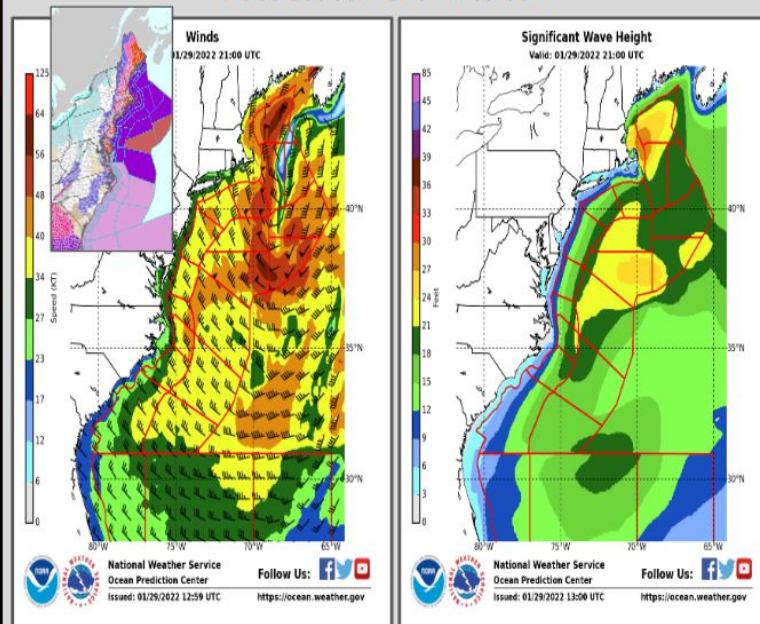
- Powerful low pressure off of the mid-Atlantic and southern New England coasts will continue to move northeast, reaching the Canadian Maritimes tonight.
- Areas of hurricane-force sustained winds will develop by early this afternoon in vicinity of the Gulf Stream, well offshore of Delmarva. These hurricane-force sustained winds will spread east along the Gulf Stream late in the day.
- Tonight, areas of hurricane-force winds will shift north to offshore of Nova Scotia.
- Elsewhere, widespread gales will be in place off of the U.S. east coast, with numerous areas of storm-force conditions from offshore of the northeast North Carolina coast north and northeast into the Gulf of Maine.
- Hurricane-force wind gusts can accompany the storm-force sustained winds.
- Areas of freezing spray will develop in cold air behind the low today from the Gulf of Maine to the mid-Atlantic coast. Areas of moderate freezing spray will occur in the Gulf of Maine from late today into Sunday.



ISSUED: 14 UTC January 29, 2022

@NWSOPC
@NHC_Atlantie

Outlook for the Western Atlantic East Coast N of 31N to 65W



Wind Forecast (knots) and Wave Forecast (Feet) Valid 4 PM EST / 21 UTC
January 29. Inset shows warnings in effect at 1328 UTC January 29
(hurricane-force in red, storm in purple, gale in light purple).





Decision Support Services



Ocean Prediction Center
College Park, MD



Spot Forecast for vicinity 36N 128W

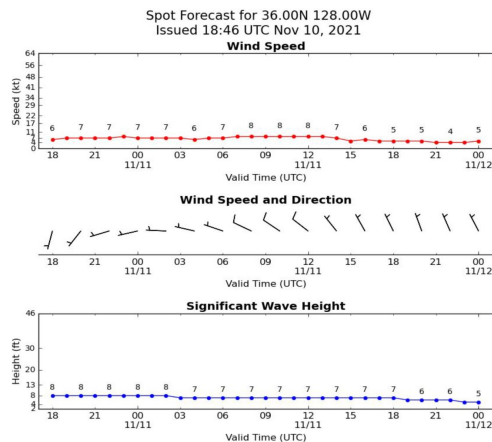
Issued: 2000 UTC November 10, 2021

Valid: 1800 UTC November 10, 2021 through 0000 UTC November 12, 2021

Overview: A northeast-to-southwest oriented high pressure ridge will persist across this area over the next 24 hours, and as a result winds are expected to remain 10 knots or less. Northwest swell, 6 to 8 feet at 11 to 14 seconds, will impact the area through the forecast period. Surface visibility is generally expected to remain around 3 nautical miles over the next 24 hours, with a chance for visibilities of less than 1 nm from 0300 UTC to 0600 UTC, and again from 1000 UTC to 1800 UTC. Ceilings, mostly LIFR conditions, around 500 ft are expected tonight and tomorrow.

Sea surface temperature : 62 F Next update will be at: As requested

Meteogram:



Please contact OPC with any forecast frequency changes, position updates, or questions.

NOAA Ocean Prediction Center
ncep.opc.idss@noaa.gov
301-683-1520

News Release

U.S. Coast Guard 1st District PA Detachment New York

Contact: Coast Guard PA Detachment New York

Office: (212) 514-4291

After Hours: (917) 703-0983

[PA Detachment New York online newsroom](#)

Response crews recover more than 450,000 gallons of oil from Coimbra shipwreck

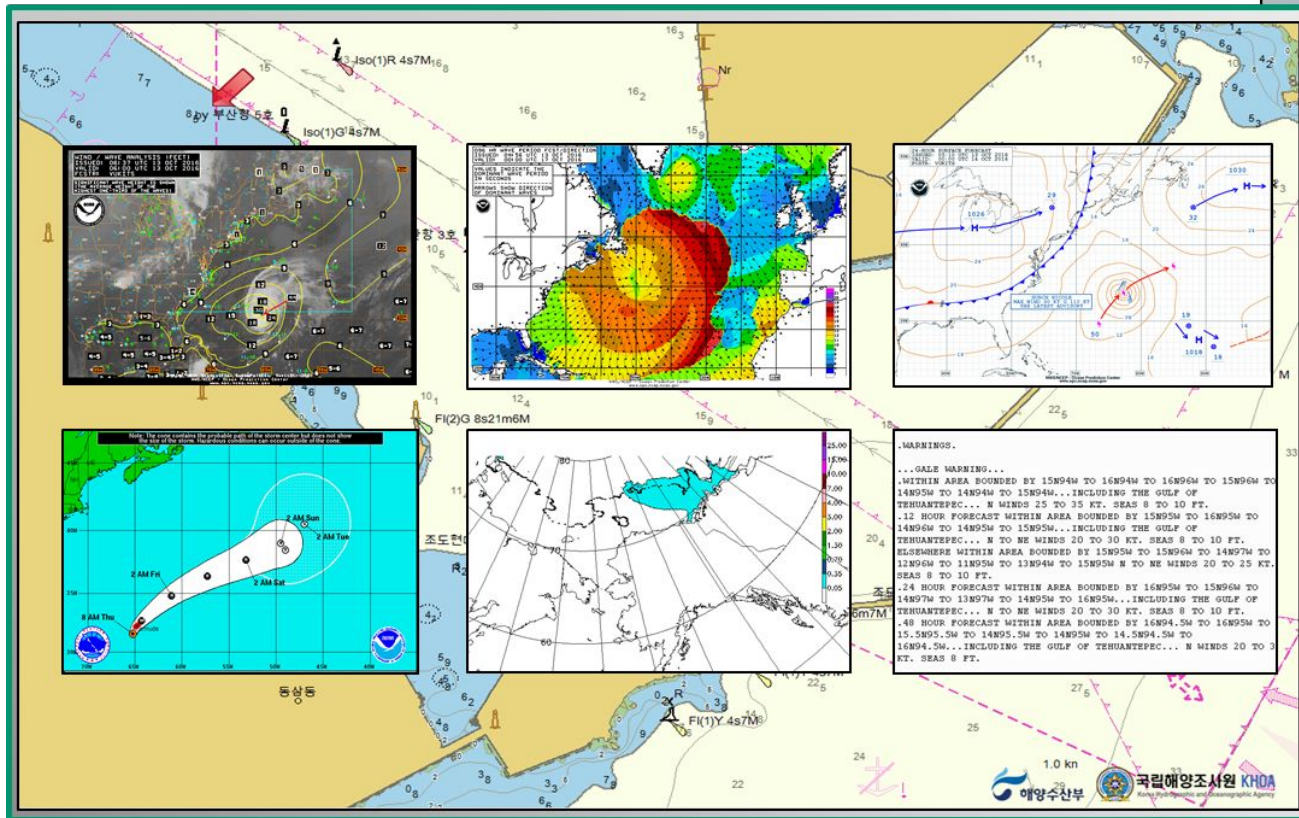


<https://content.govdelivery.com/accounts/USDHSCG/bulletins/25234c3>





ECDIS





Future of High Seas Forecasts?

HIGH SEAS FORECAST
NWS OCEAN PREDICTION CENTER WASHINGTON DC
1630 UTC WED DEC 02 2020

SUPERSEDED BY NEXT ISSUANCE IN 6 HOURS

SEAS GIVEN AS SIGNIFICANT WAVE HEIGHT...WHICH IS THE AVERAGE HEIGHT OF THE HIGHEST 1/3 OF THE WAVES. INDIVIDUAL WAVES MAY BE MORE THAN TWICE THE SIGNIFICANT WAVE HEIGHT.

ONLY YOU KNOW THE WEATHER AT YOUR POSITION. REPORT IT TO THE NATIONAL WEATHER SERVICE. EMAIL US AT VOSOPS@NOAA.GOV(LOWER CASE).

SECURITE

PACIFIC N OF 30N AND S OF 67N E OF A LINE FROM BERING STRAIT TO 50N 160E

ALL FORECASTS VALID OVER ICE FREE FORECAST WATERS

SYNOPSIS VALID 1200 UTC DEC 02.
24 HOUR FORECAST VALID 1200 UTC DEC 03.
48 HOUR FORECAST VALID 1200 UTC DEC 04.

.WARNINGS.

...STORM WARNING...
.LOW 50N141W 992 MB MOVING NE 30 KT THEN TURNING NW AFTER 12 HOURS. WITHIN 240 NM E OF FRONT FROM 58N139W TO 53N141W TO LOW CENTER TO 44N138W WINDS 35 TO 50 KT. SEAS 18 TO 28 FT. ELSEWHERE WITHIN 420 NM E OF FRONT AND FROM 31N TO 43N BETWEEN 132W AND A LINE FROM 45N155W TO 31N142W WINDS 25 TO 35 KT. SEAS 12 TO 24 FT. ALSO...EXCEPT WHERE DESCRIBED BELOW... BETWEEN A LINE FROM 48N124W TO 30N139W AND A LINE FROM 60N163W TO 30N164E WINDS LESS THAN 25 KT. SEAS 8 TO 20 FT.
.24 HOUR FORECAST LOW 62N146W 991 MB. WITHIN 480 NM S SEMICIRCLE...EXCEPT BERING SEA...AND 180 NM NE OF A LINE FROM 55N137W TO 48N126W WINDS 25 TO 35 KT. SEAS 8 TO 17 FT. ALSO...EXCEPT WHERE DESCRIBED BELOW...N OF 30N E OF 159E WINDS LESS THAN 25 KT. SEAS 8 TO 16 FT.
.48 HOUR FORECAST LOW DISSIPATED AND ASSOCIATED CONDITIONS DIMINISHED.

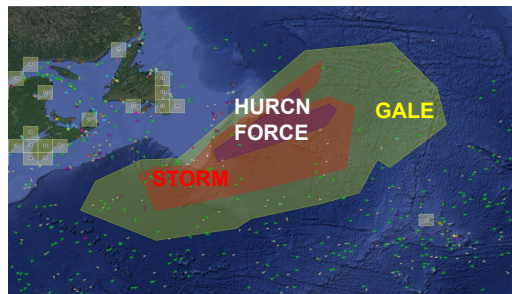
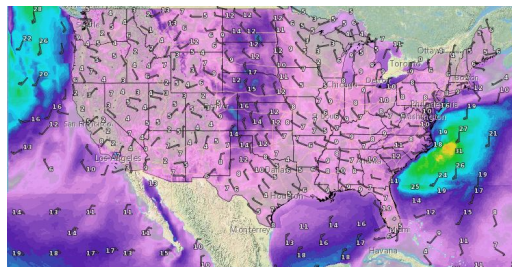
...STORM WARNING...
.LOW 39N157W 999 MB MOVING NE 40 KT. WITHIN 300 NM S QUADRANT WINDS 35 TO 50 KT. SEAS 19 TO 24 FT. ELSEWHERE FROM 30N TO 40N BETWEEN 153W AND 169W WINDS 25 TO 35 KT. SEAS 16 TO 20 FT.
.24 HOUR FORECAST LOW 48N140W 991 MB. WITHIN 180 NM S QUADRANT WINDS 45 TO 60 KT. SEAS 18 TO 28 FT. ELSEWHERE WITHIN 360 NM S AND 180 NM N SEMICIRCLE WINDS 30 TO 45 KT. SEAS 12 TO 24 FT. ALSO WITHIN 180 NM SE OF A LINE FROM 42N139W TO 35N146W WINDS 20 TO 30 KT. SEAS 14 TO 18 FT.
.48 HOUR FORECAST LOW DISSIPATED INLAND. ASSOCIATED CONDITIONS DIMINISHED.

Storm (Low, Front, Area, Line) -- TAFB (Gap Winds), OPC

Event Level Parts	Example
eventHeader	WARNING 2020-00012: STORM
issueTime	ISSUED 1745 UTC TUE JUL 14 2020
initialDetails	.WITHIN 47N55W 46N51W 44N45W 47N55W WINDS 40 TO 50 KT.
forecastDetails	24 HOUR FORECAST WITHIN 47N55W 46N42W 45N52W 44N44W 47N55W. WINDS 40 TO 50 KT. .48 HOUR FORECAST WITHIN 48N56W 46N41W 46N52W 45N45W 48N56W. WINDS 40 TO 50 KT.

Gale (Low, Front, Area, Line) -- TAFB (Gap Winds), OPC

Event Level Parts	Example
eventHeader	WARNING 2020-00012: GALE
issueTime	ISSUED 1745 UTC TUE JUL 14 2020
initialDetails	.WITHIN 47N55W 46N51W 44N45W 47N55W WINDS 30 TO 40 KT.
forecastDetails	24 HOUR FORECAST WITHIN 48N56W 46N41W 46N53W 46N47W 48N47W 53N49W 56N52W 48N56W. WINDS 30 TO 40 KT. .48 HOUR FORECAST WITHIN 49N57W 47N42W 47N54W 47N48W 49N48W 54N50W 57N53W 49N57W. WINDS 30 TO 45 KT.

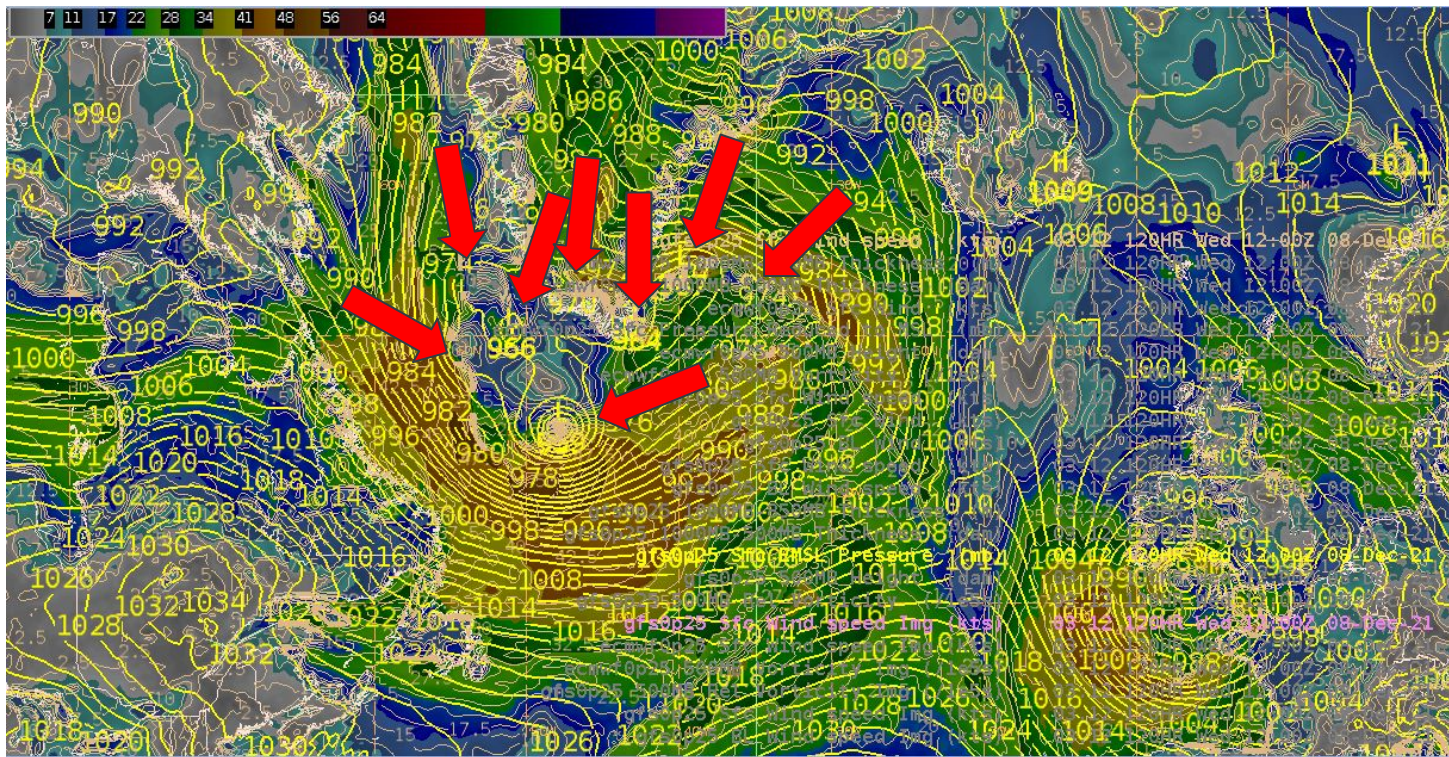


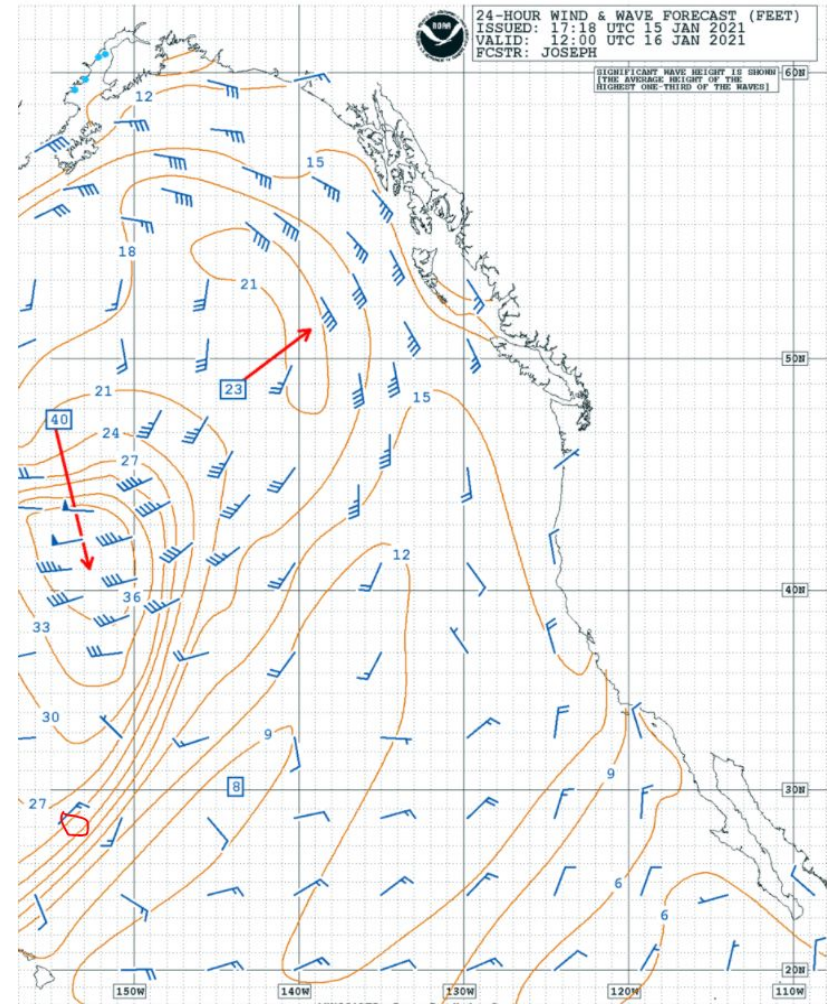
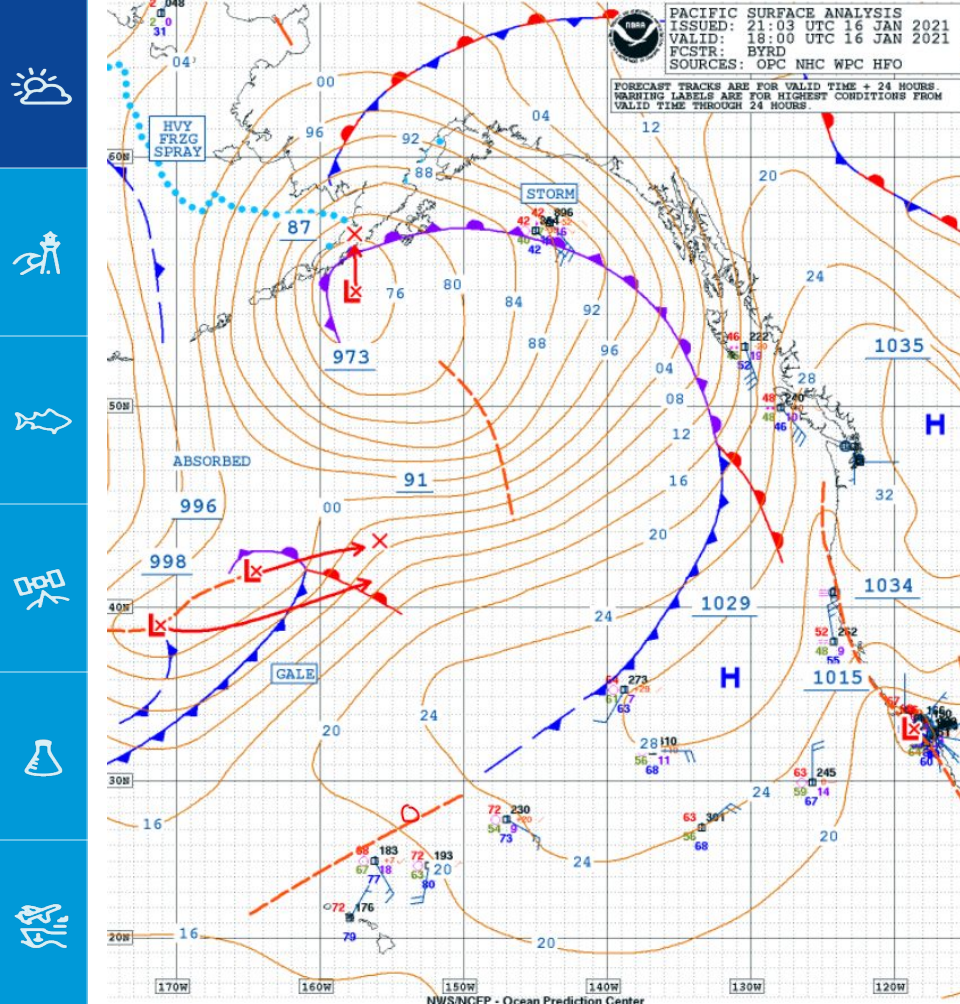


Need to Serve Mariners with 21st Century Information



*GFS 120-hour
forecast, valid
December 8,
2021, 12 UTC*







Forecasting and Decision Support at High Latitudes



*Research Vessel Nathaniel B. Palmer
Antarctica
November 18, 2020*





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<https://www.facebook.com/NWSOPC>



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@NWSOPC

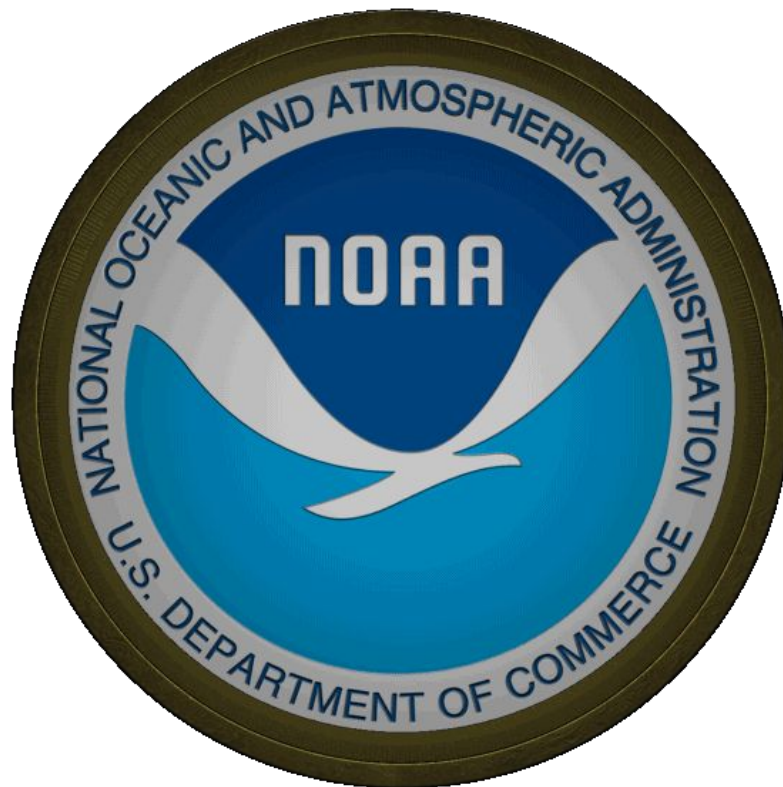


<https://storymaps.arcgis.com/stories/608b5b390dec433c92dd26b0a7817e44>





Thank you!



Darin Figurskey

darin.figurskey@noaa.gov

