



TROPICAL UPDATE

5 PM EDT

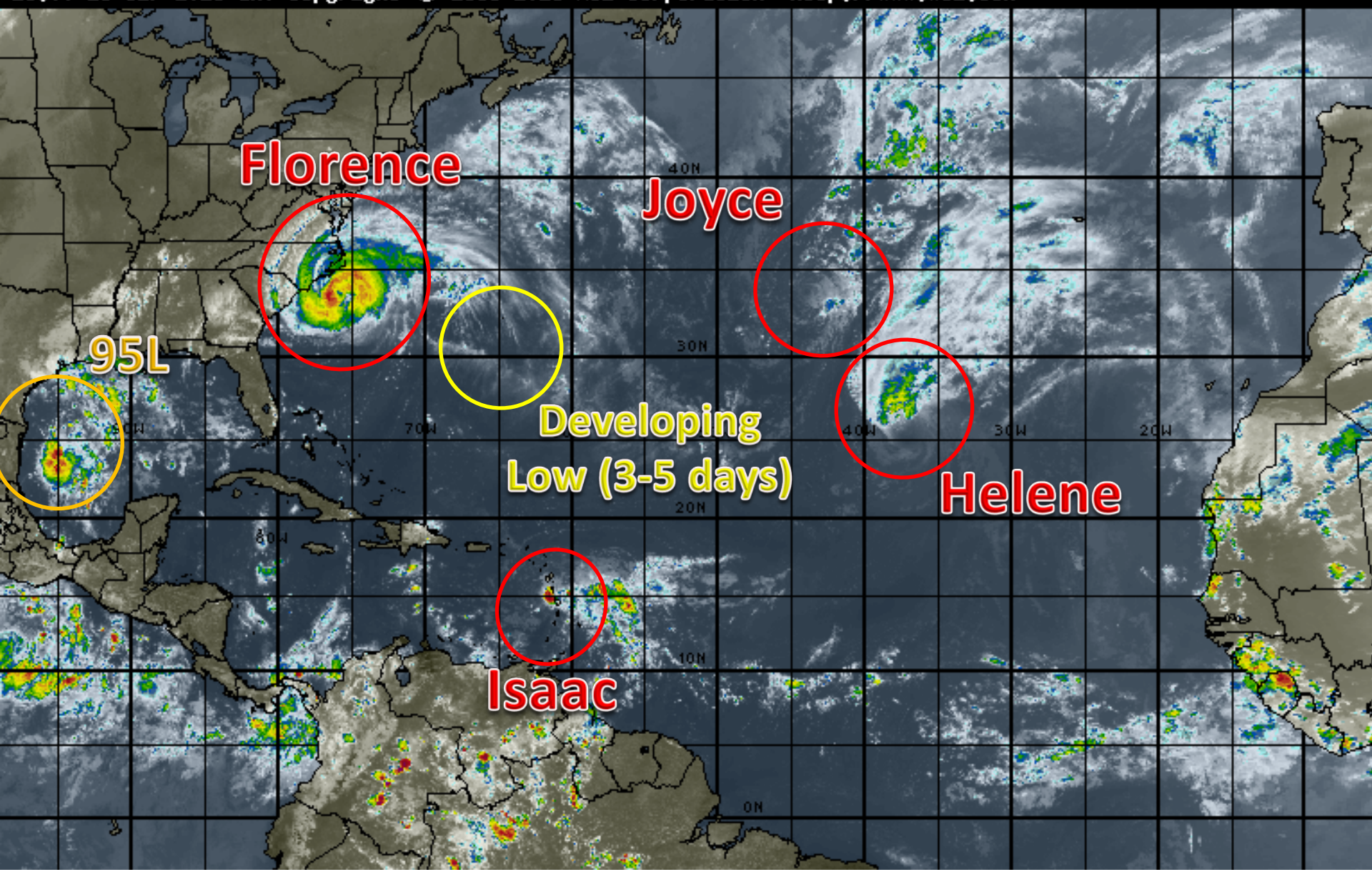
Thursday, September 13, 2018

**Hurricane Florence, Tropical Storm Helene,
Tropical Storm Isaac, Subtropical Storm Joyce,
Invest 95L (50%) & Bermuda Low (20%)**

This update is intended for government and emergency response officials, and is provided for informational and situational awareness purposes only. Forecast conditions are subject to change based on a variety of environmental factors. For additional information, or for any life safety concerns with an active weather event please contact your County Emergency Management or Public Safety Office, local National Weather Service forecast office or visit the National Hurricane Center website at www.nhc.noaa.gov.

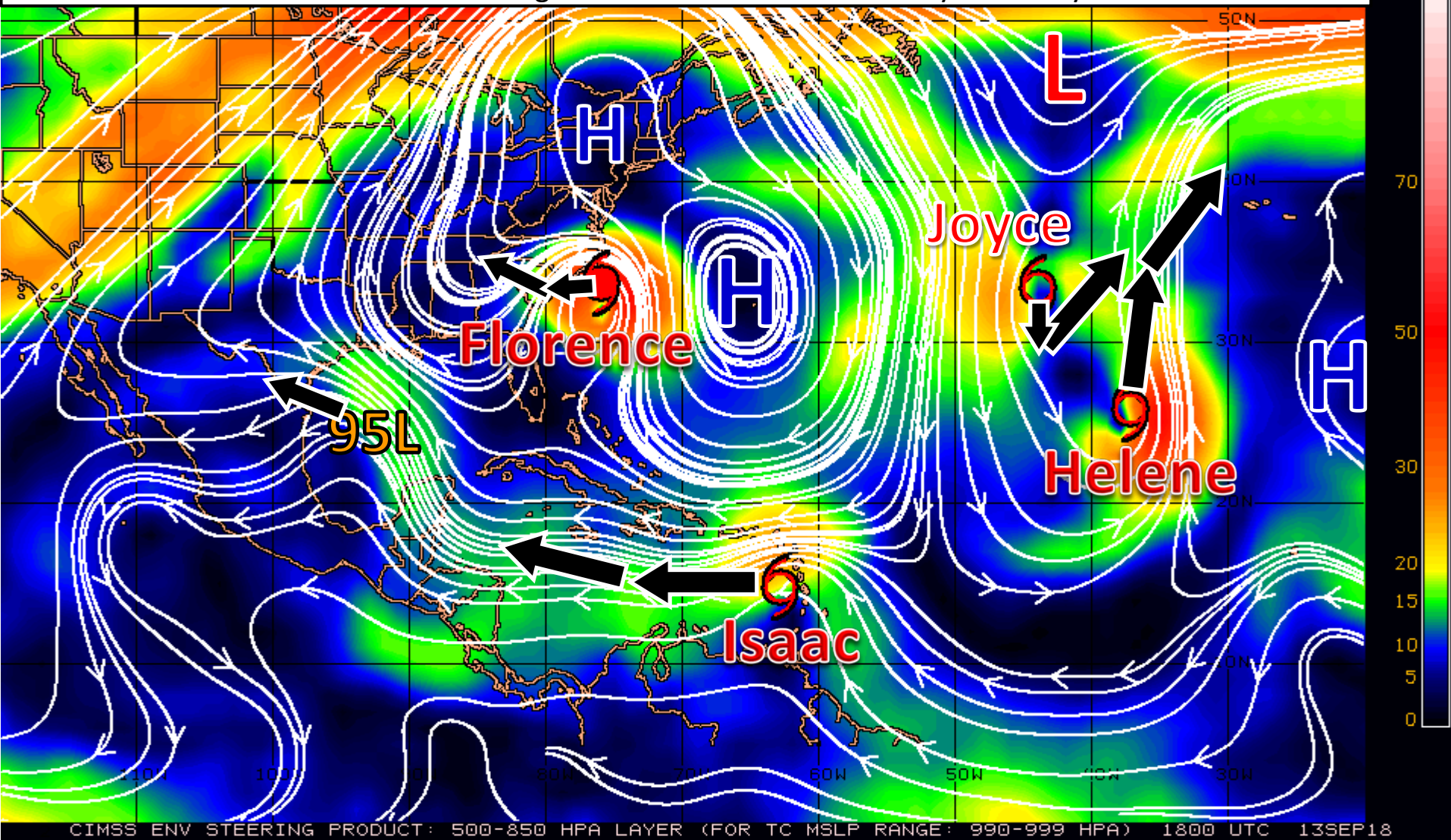
Atlantic Basin Satellite Image

18:00 13-SEP-2018 GMT Copyright © 1998-2018 WSI Corporation <http://www.wsi.com>



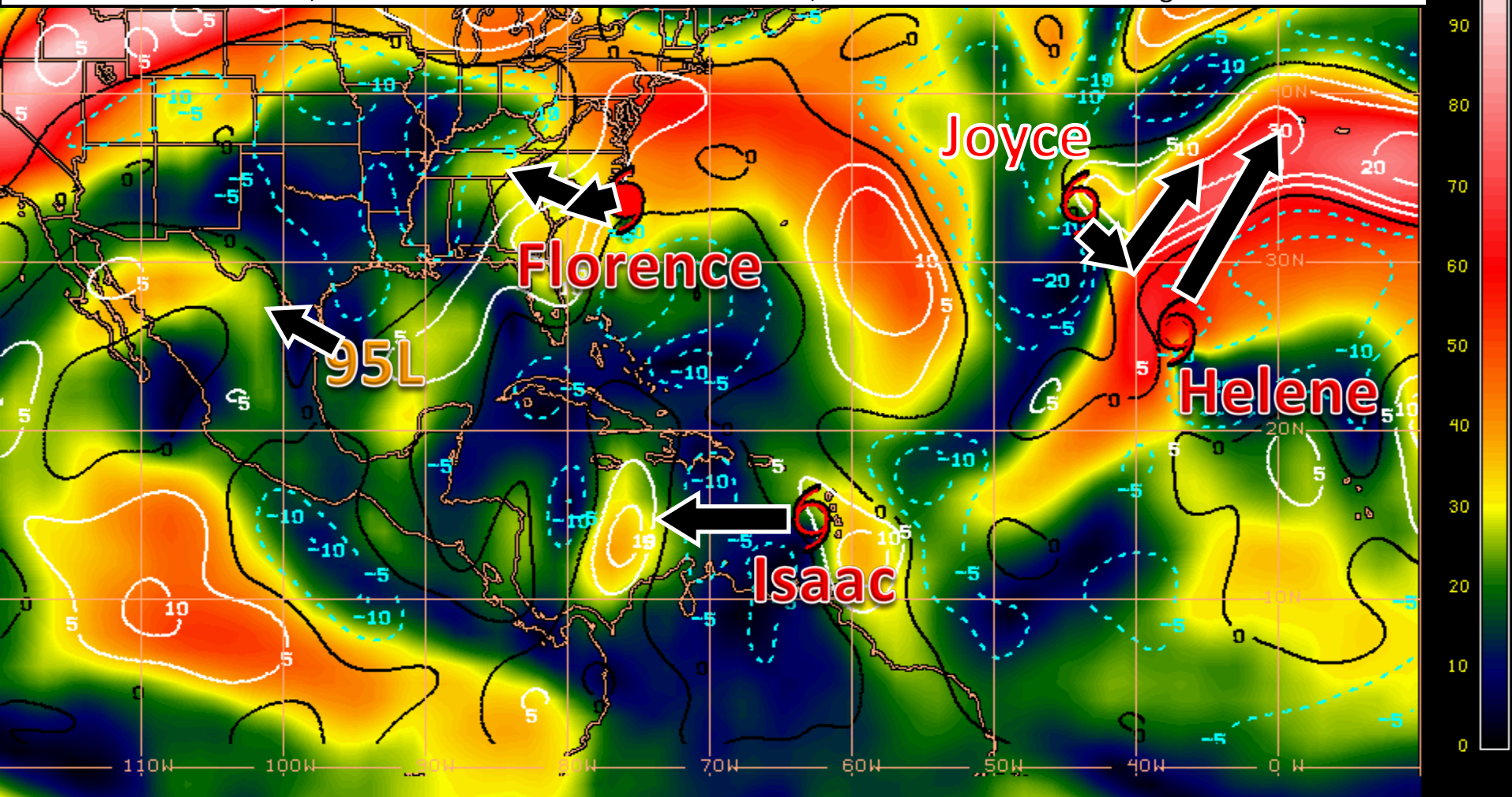
Steering Currents

A large and strong high pressure system in the western Atlantic will steer Florence, Isaac, and 95L while an area of high pressure in the eastern Atlantic pulls Helene and Joyce northward. Weaker steering flow (larger spaces between the streamlines) will be responsible for the slow westward drift of Florence until it reaches better steering flow near the Tennessee Valley in 3-4 days.



Wind Shear (shaded) and Wind Shear Tendencies (contoured)

Florence is battling wind shear, which has somewhat disrupted its core. It has also prevented Florence from strengthening as it reached the coast. Isaac will encounter some pockets of low to moderate wind shear over the next 4 days and may cause fluctuations in intensity. 95L in the Gulf is in a relatively low shear environment, but it is running out of time to take advantage of the hospitable conditions before moving inland tomorrow. Helene and Joyce will encounter strong wind shear, which when combined with cooler waters, will lead to further weakening.

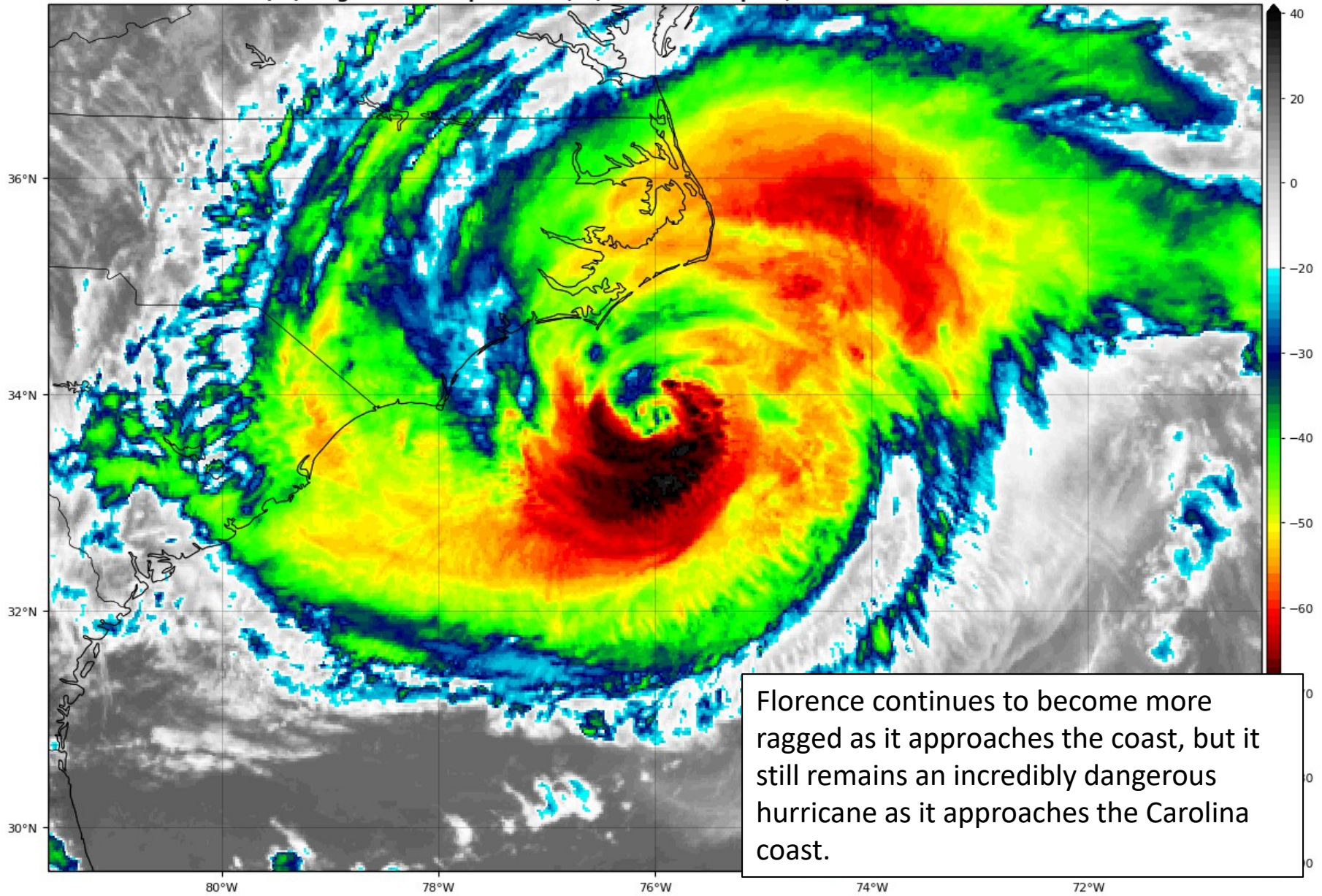


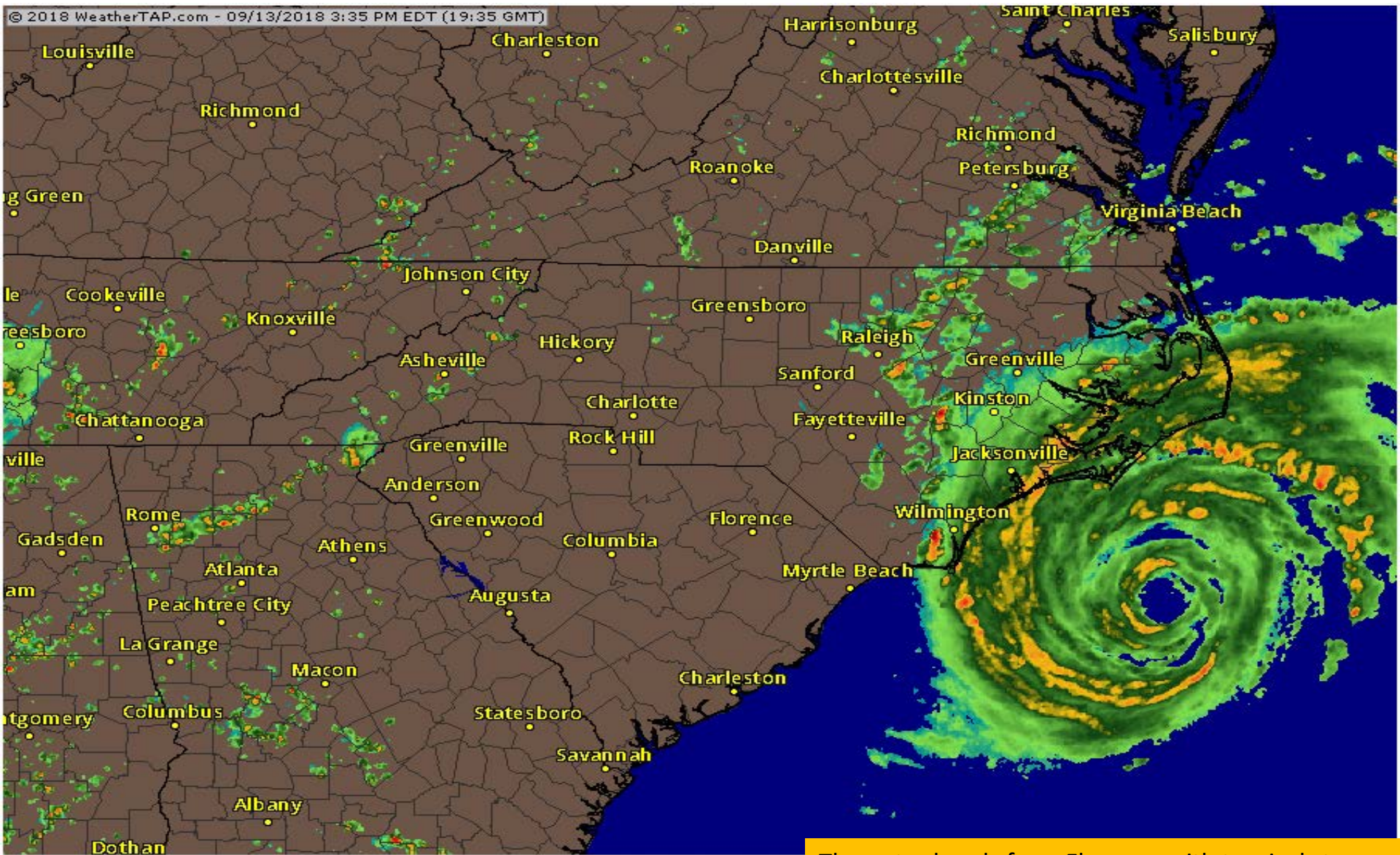
Shear Tendency (KTS) Over Past 24 Hours: Increasing — Decreasing ----

Hurricane Florence Satellite Image

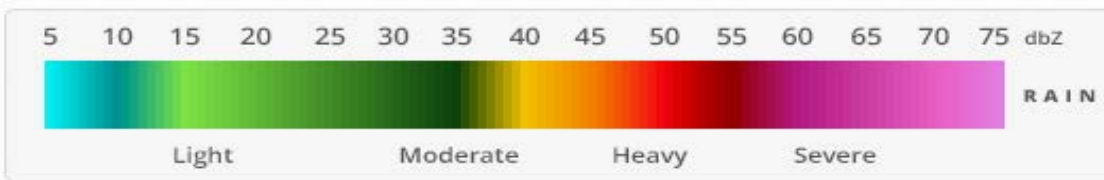
GOES-16 Channel 13 (IR) Brightness Temperature (°C) at 20:33Z Sep 13, 2018

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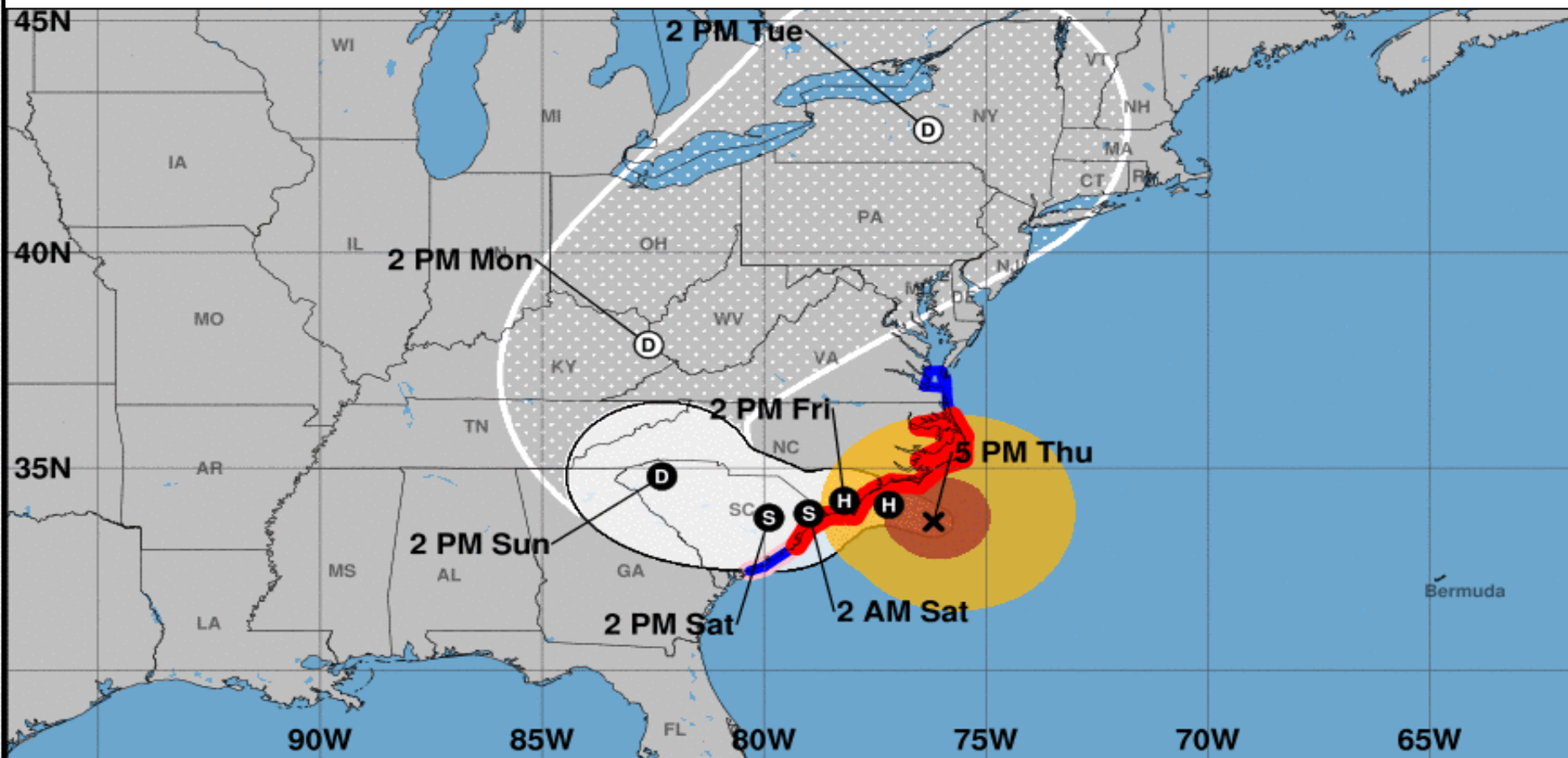


Click on the map to access the closest NEXRAD site



The outer bands from Florence with tropical storm winds have reached eastern North Carolina. The eye is visible on radar. Tornadoes are possible in the outer bands to the north of Florence. Florence will slowly approach southeastern North Carolina tonight and Friday morning.

Confidence is increasing in the track through the next 3 days and has shifted a little north since yesterday afternoon. Florence is expected to make landfall near Wilmington, North Carolina or in northeastern South Carolina on Friday and move slowly westward into the Piedmont of South Carolina this weekend before finally being pulled northward on Monday.



Hurricane Florence
 Thursday September 13, 2018
 5 PM EDT Advisory 58
 NWS National Hurricane Center

Current information: x
 Center location 33.7 N 76.2 W
 Maximum sustained wind 100 mph
 Movement WNW at 5 mph

Forecast positions:
 ● Tropical Cyclone ○ Post/Potential TC
 Sustained winds: D < 39 mph
 S 39-73 mph H 74-110 mph M > 110 mph

Potential track area:

Day 1-3 Day 4-5

Watches:

Hurricane Trop Stm

Warnings:

Hurricane Trop Stm

Current wind extent:

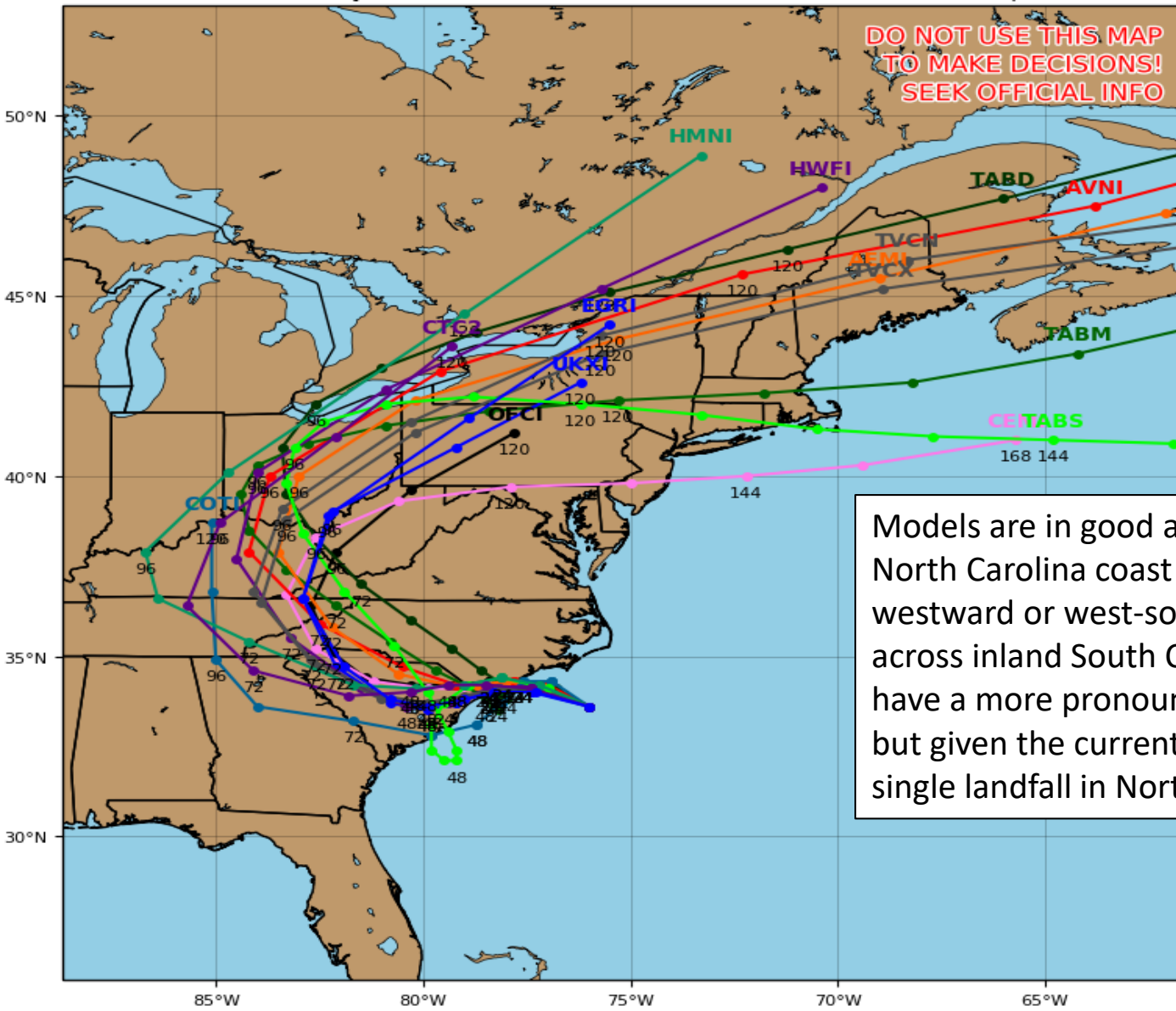
Hurricane Trop Stm

Track Models (Florence)

Hurricane FLORENCE Model Track Guidance

Initialized at 18z Sep 13 2018

Levi Cowan - tropicaltidbits.com

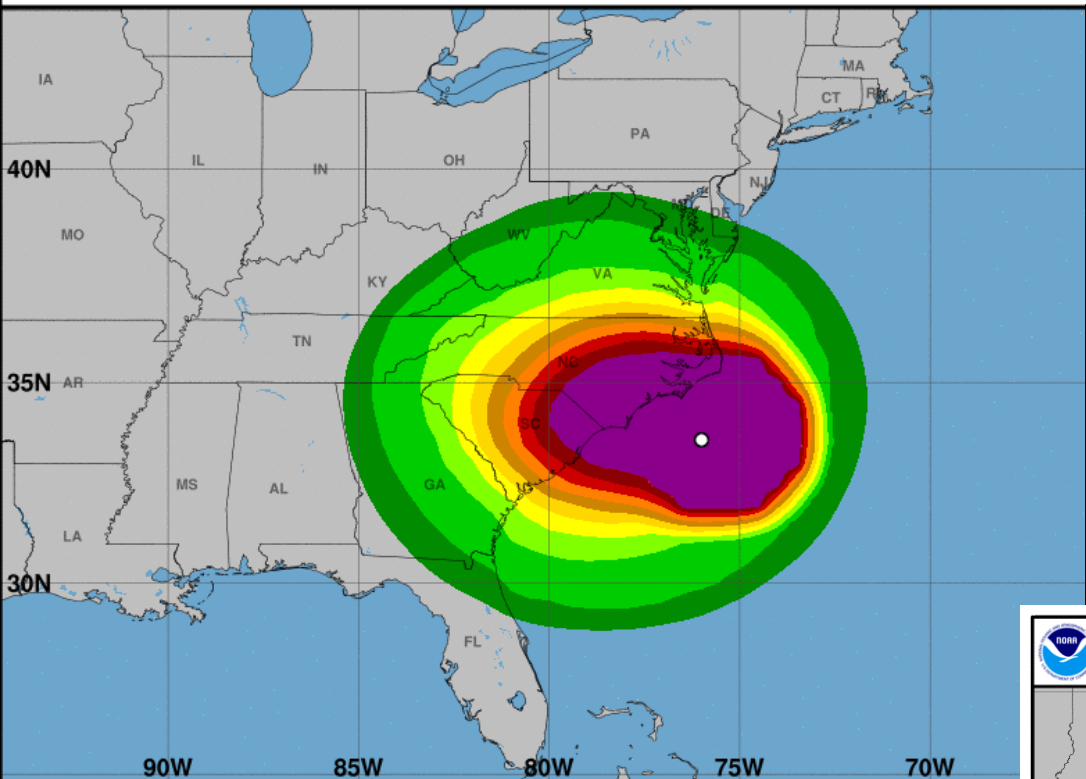


Models are in good agreement on approach to the North Carolina coast near Wilmington and then westward or west-southwestward movement across inland South Carolina. A few models still have a more pronounced southwest movement, but given the current forward speed of Florence, a single landfall in North Carolina seems more likely.

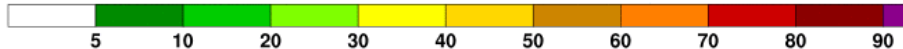


Tropical-Storm-Force Wind Speed Probabilities (Preliminary)

For the 120 hours (5.0 days) from 2 PM EDT THU SEP 13 to 2 PM EDT TUE SEP 18



Probability of tropical-storm-force winds (1-minute average ≥ 39 mph) from Hurricane F
○ indicates Hurricane Florence center location at 2 PM EDT THU SEP 13, 2018 (Forecast/Advis

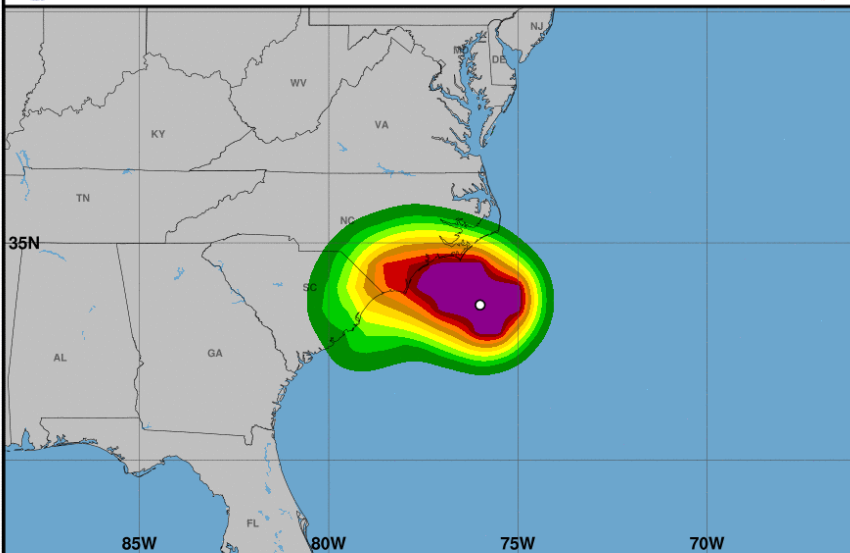


The odds of sustained tropical storm force winds have decreased for Northeast Florida. This is due to the slight northward shift in the track and more model confidence in keeping Florence away from Florida. Odds in Nassau and coastal Duval County are near 10%. There continues to be no chance of hurricane force winds in Florida.



Hurricane-Force Wind Speed Probabilities (Preliminary)

For the 120 hours (5.0 days) from 2 PM EDT THU SEP 13 to 2 PM EDT TUE SEP 18



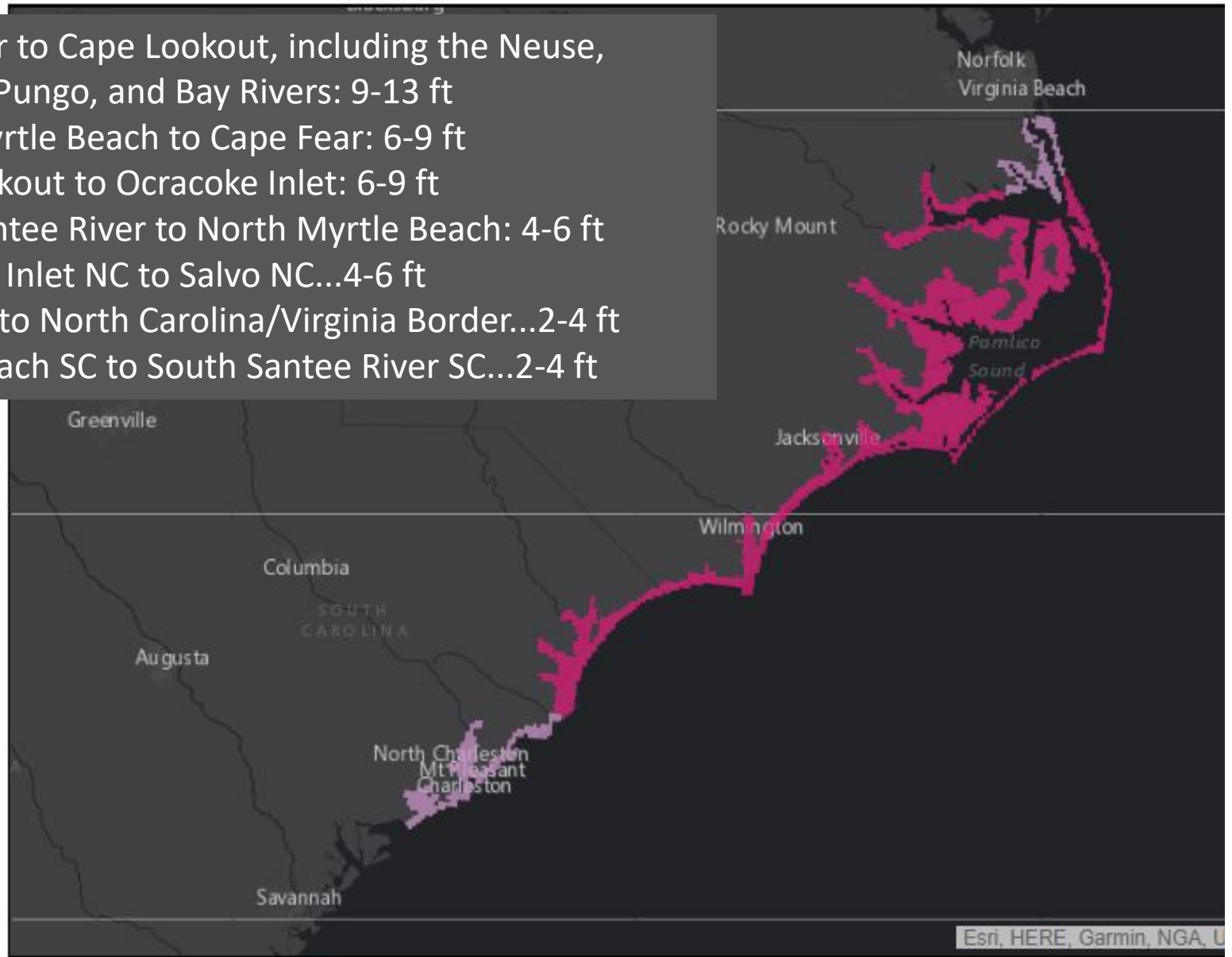
Probability of hurricane-force winds (1-minute average ≥ 74 mph) from Hurricane Florence
○ indicates Hurricane Florence center location at 2 PM EDT THU SEP 13, 2018 (Forecast/Advisory #58)



Hurricane Florence

Advisory 052 Issued: 5:00 AM EDT Wed Sep 12

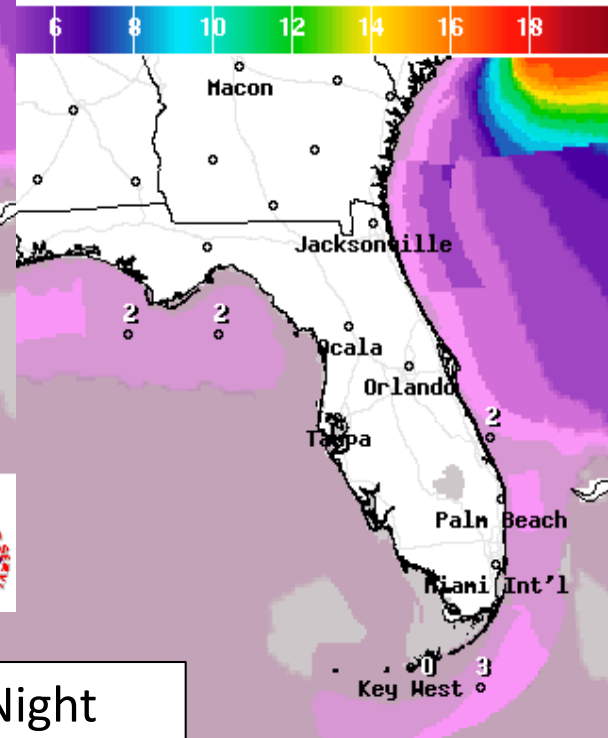
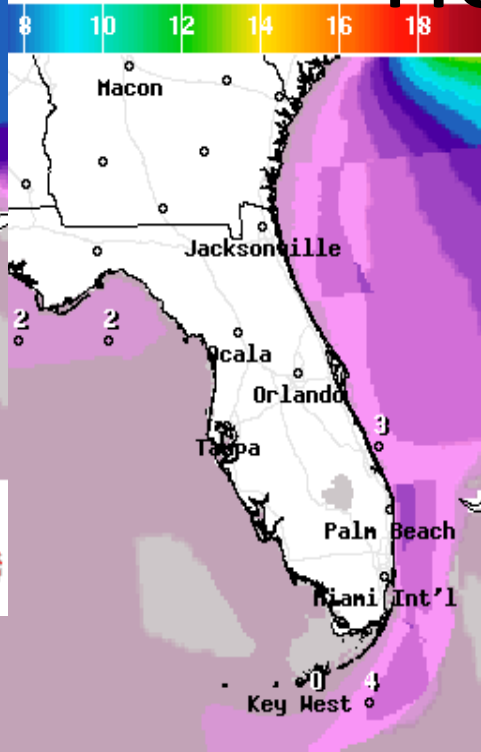
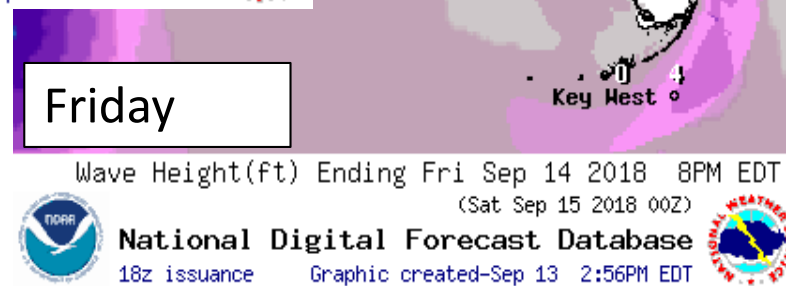
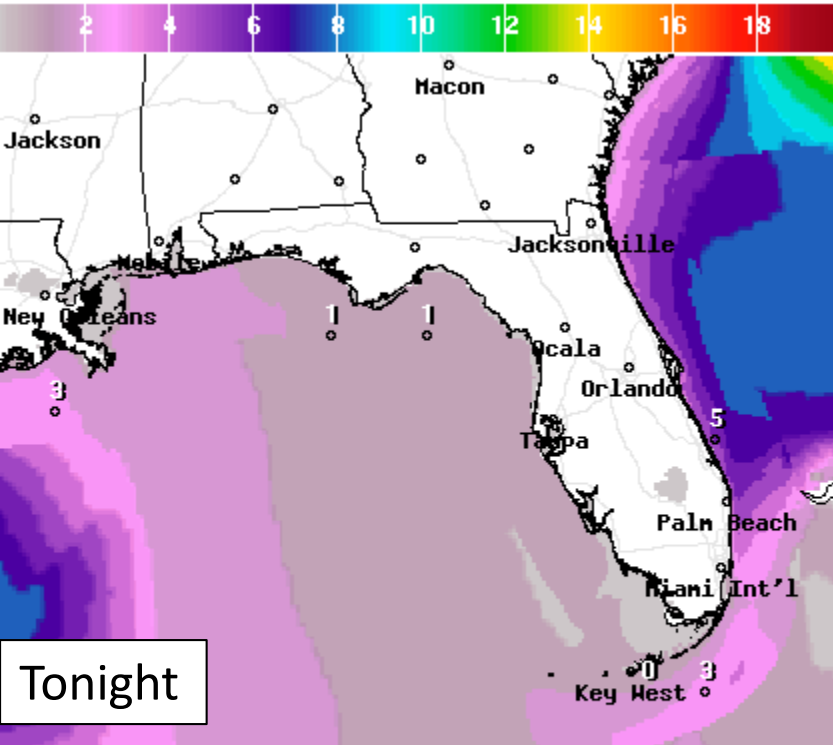
- Cape Fear to Cape Lookout, including the Neuse, Pamlico, Pungo, and Bay Rivers: 9-13 ft
- North Myrtle Beach to Cape Fear: 6-9 ft
- Cape Lookout to Ocracoke Inlet: 6-9 ft
- South Santee River to North Myrtle Beach: 4-6 ft
- Ocracoke Inlet NC to Salvo NC...4-6 ft
- Salvo NC to North Carolina/Virginia Border...2-4 ft
- Edisto Beach SC to South Santee River SC...2-4 ft



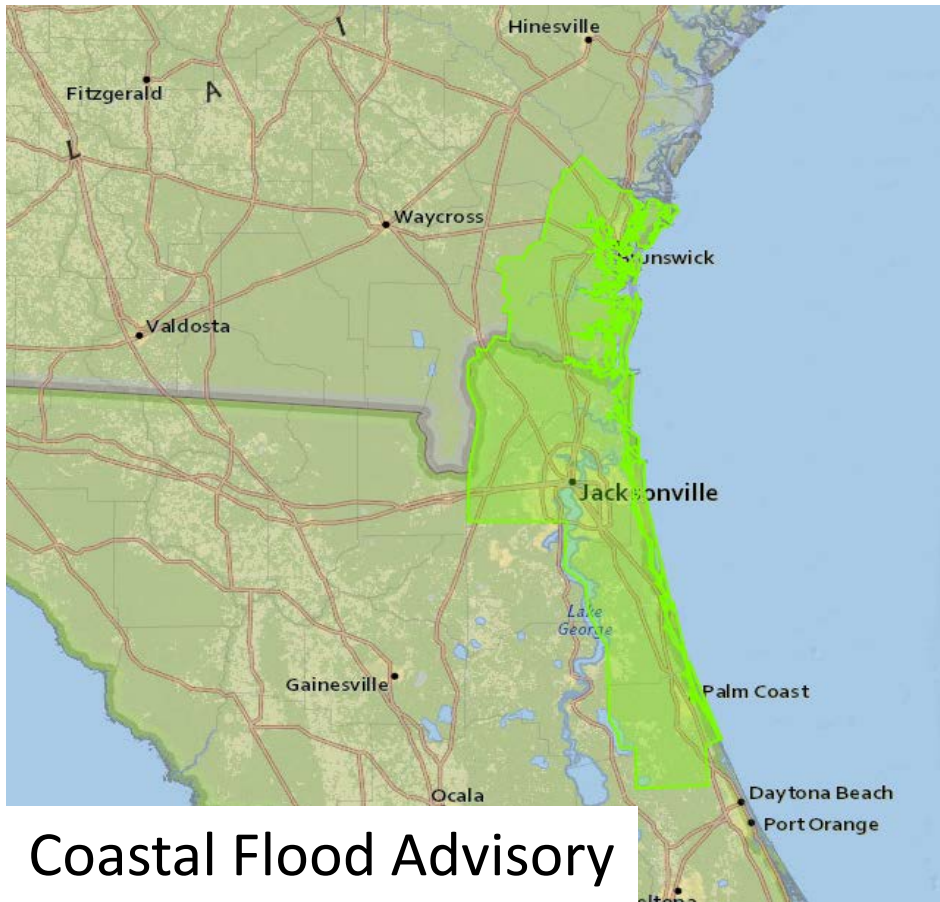
0 30 60mi

Storm Surge Warning
 Storm Surge Watch

Forecast Wave Heights



Wave heights will peak today before beginning to decrease tonight into Friday. This will result in a high risk of rip currents, minor beach erosion, and possible coastal flooding issues during high tide.



Coastal Flood Advisory

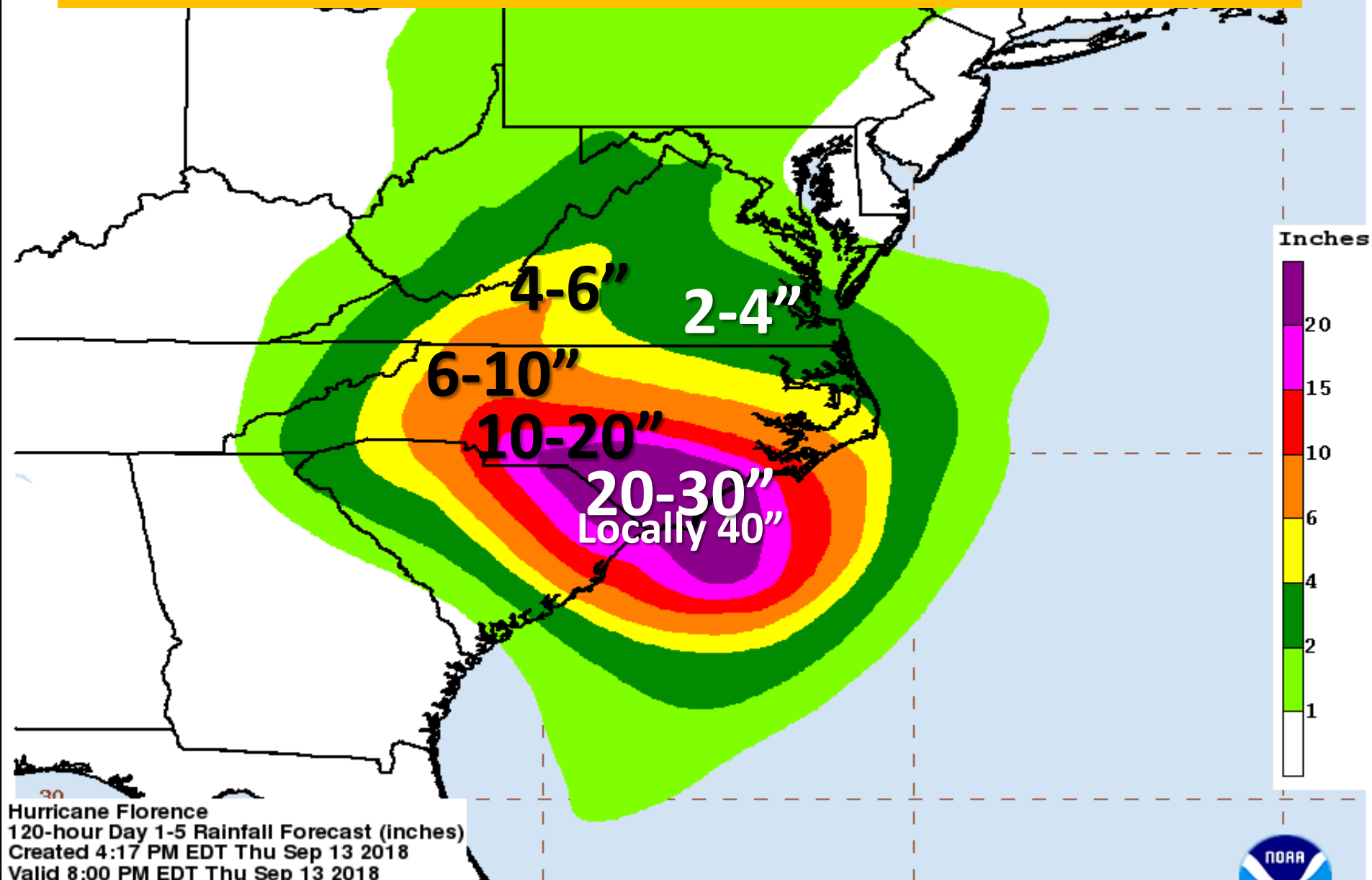


High Surf Advisory

Rip Current Forecast Today



Forecast rainfall – Next 7 Days



Hurricane Florence
120-hour Day 1-5 Rainfall Forecast (inches)
Created 4:17 PM EDT Thu Sep 13 2018
Valid 8:00 PM EDT Thu Sep 13 2018
through 8:00 PM EDT Tue Sep 18 2018
NOAA/NWS/NCEP/WPC

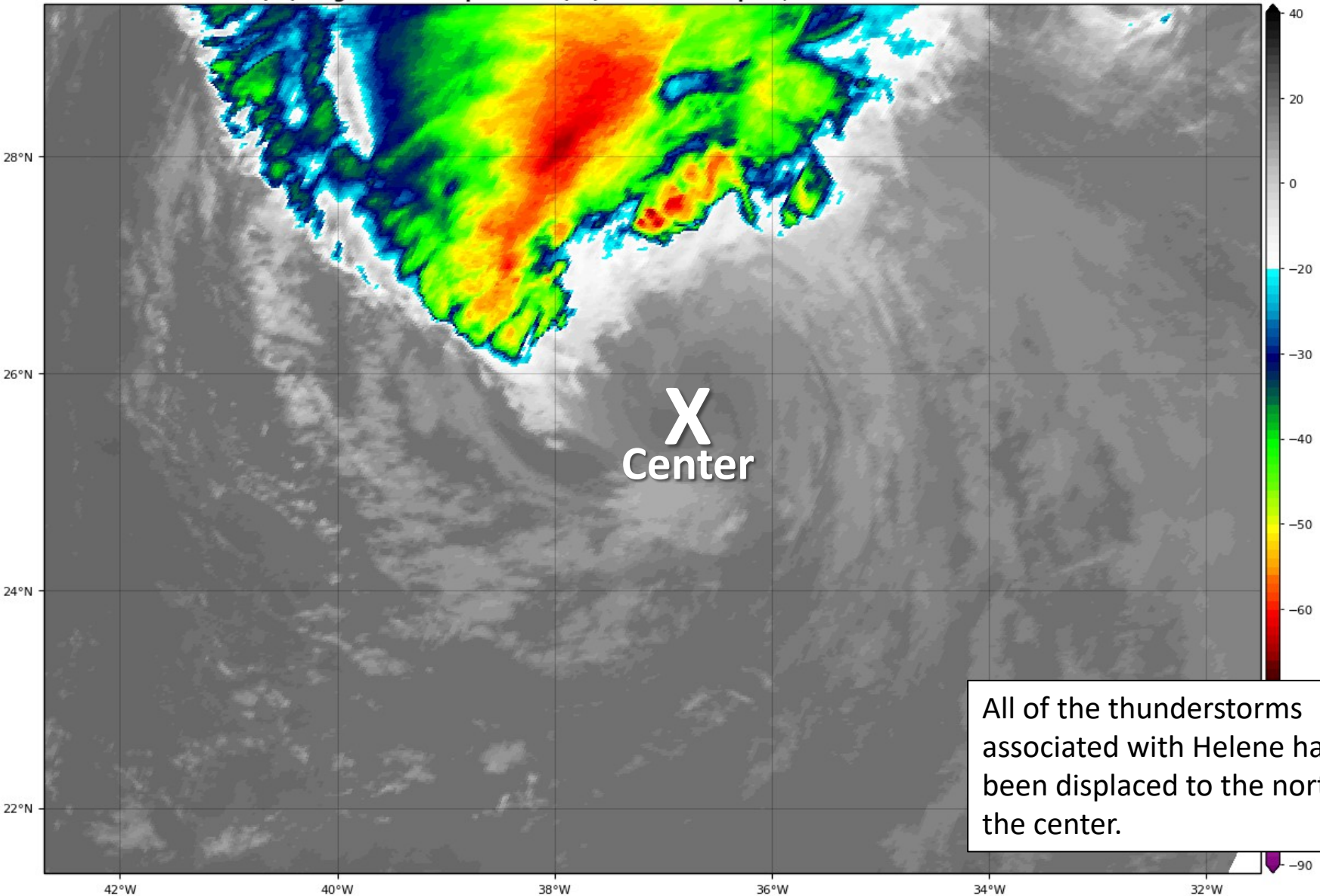
Local point maximum rainfall may be higher than shown.
See the NHC public advisories for the latest tropical cyclone information.



Tropical Storm Helene Satellite Image

GOES-16 Channel 13 (IR) Brightness Temperature (°C) at 19:50Z Sep 13, 2018

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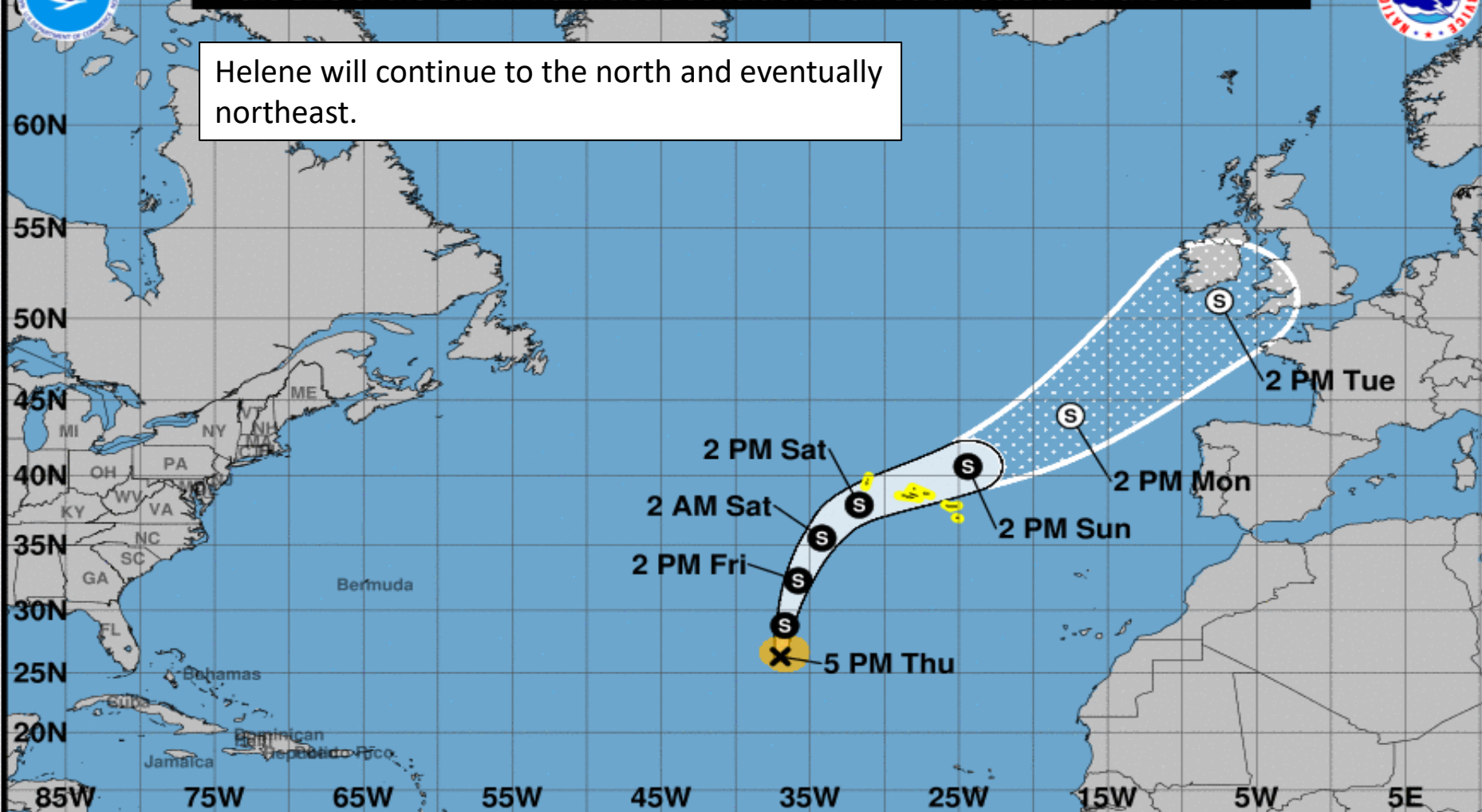


All of the thunderstorms associated with Helene have been displaced to the north of the center.



Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.

Helene will continue to the north and eventually northeast.



Tropical Storm Helene

Thursday September 13, 2018

5 PM AST Advisory 26

NWS National Hurricane Center

Current information: X

Center location 26.3 N 37.0 W

Maximum sustained wind 65 mph

Movement N at 21 mph

Forecast positions:

● Tropical Cyclone ○ Post/Potential TC

Sustained winds: D < 39 mph

S 39-73 mph H 74-110 mph M > 110 mph

Potential track area:

Day 1-3 Day 4-5

Watches:

Hurricane Trop Stm

Warnings:

Hurricane Trop Stm

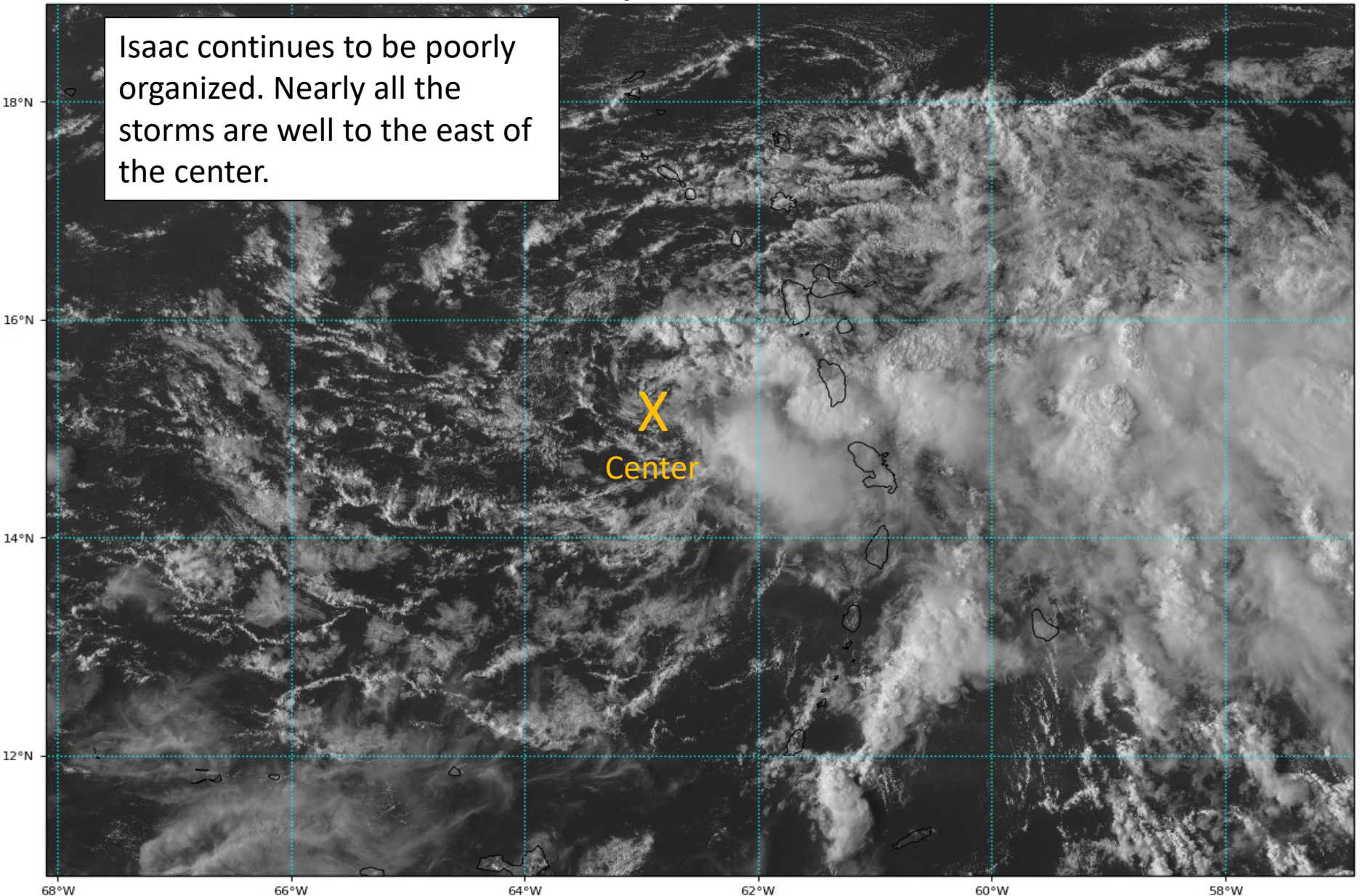
Current wind extent:

Hurricane Trop Stm

Tropical Storm Isaac Satellite Image

GOES-16 Channel 2 (visible) Reflectance at 19:50Z Sep 13, 2018

TROPICALTIDBITS.COM





Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.



Tropical Storm Isaac

Thursday September 13, 2018

5 PM AST Advisory 25

NWS National Hurricane Center

Current information: x

Center location 14.9 N 63.2 W

Maximum sustained wind 40 mph

Movement W at 16 mph

Forecast positions:

● Tropical Cyclone ○ Post/Potential TC

Sustained winds: D < 39 mph

S 39-73 mph H 74-110 mph M > 110 mph

Potential track area:

Day 1-3 Day 4-5

Watches:

Hurricane Trop Stm

Warnings:

Hurricane Trop Stm

Current wind extent:

Hurricane Trop Stm

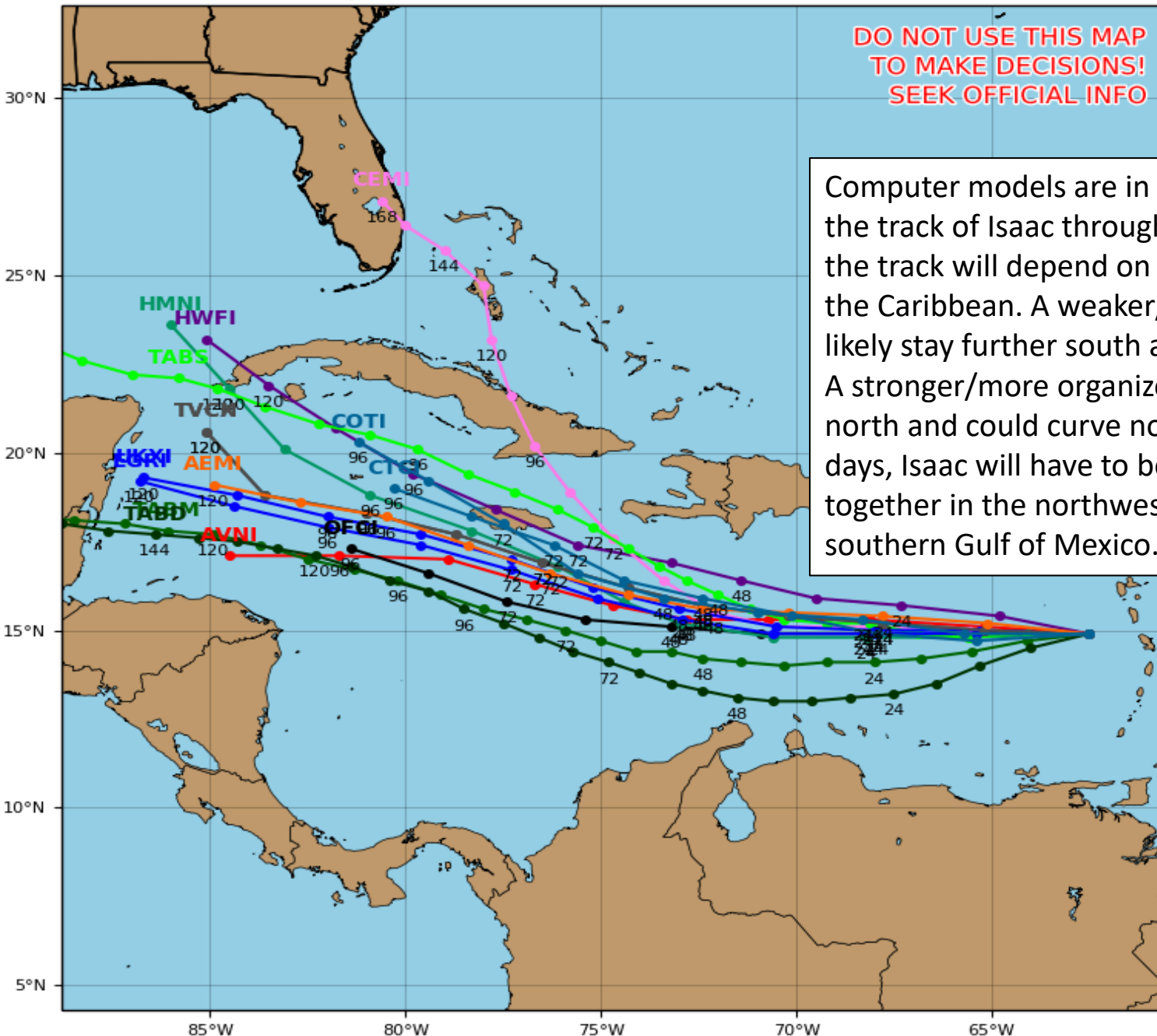
Tropical Storm ISAAC Model Track Guidance

Initialized at 18z Sep 13 2018

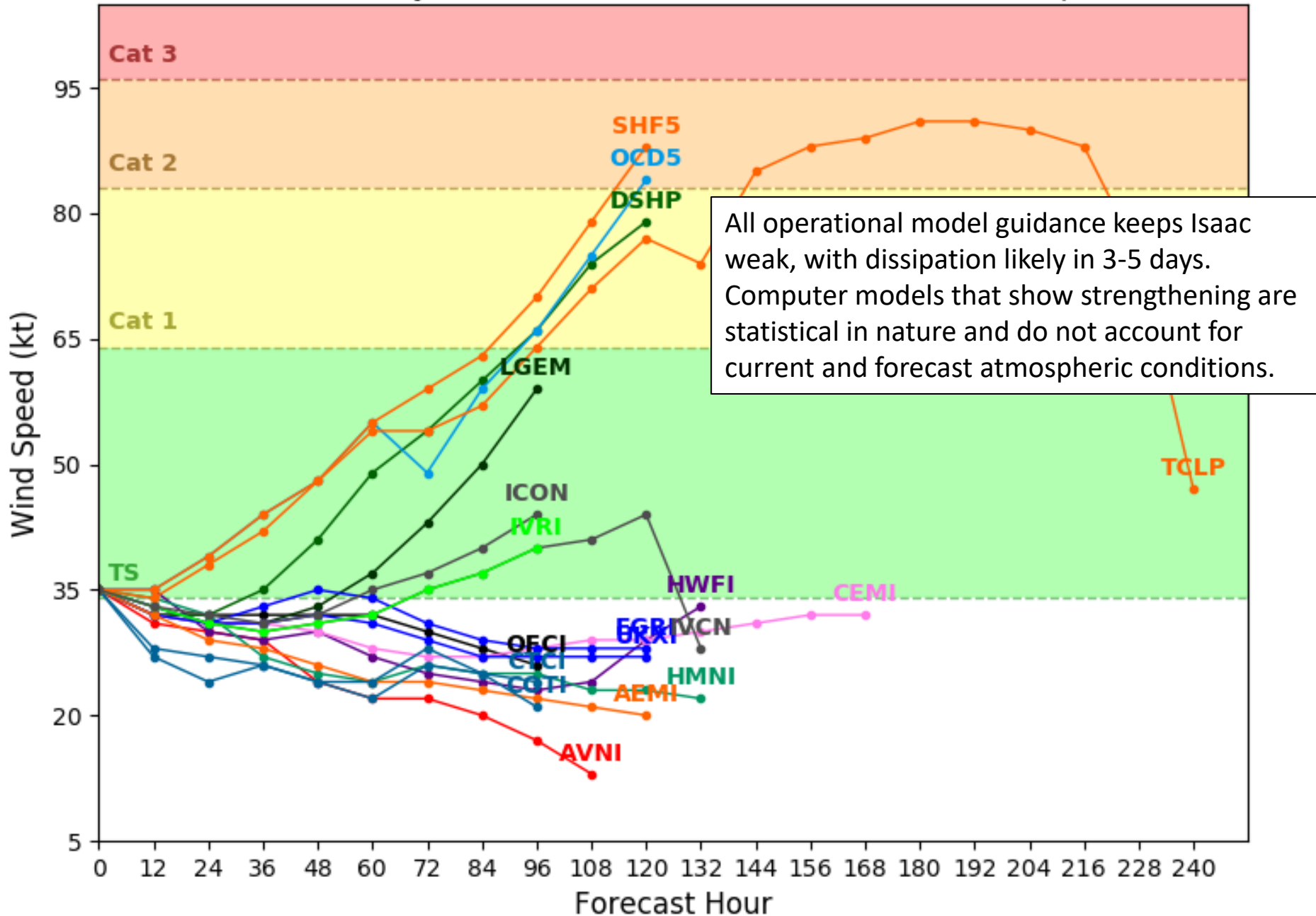
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**DO NOT USE THIS MAP
TO MAKE DECISIONS!
SEEK OFFICIAL INFO**

Computer models are in general agreement on the track of Isaac through 4-5 days. However, the track will depend on Isaac's survival through the Caribbean. A weaker/disorganized Isaac will likely stay further south and head further west. A stronger/more organized Isaac will stay further north and could curve northwestward. In 6-7 days, Isaac will have to be monitored if it stays together in the northwest Caribbean or southern Gulf of Mexico.

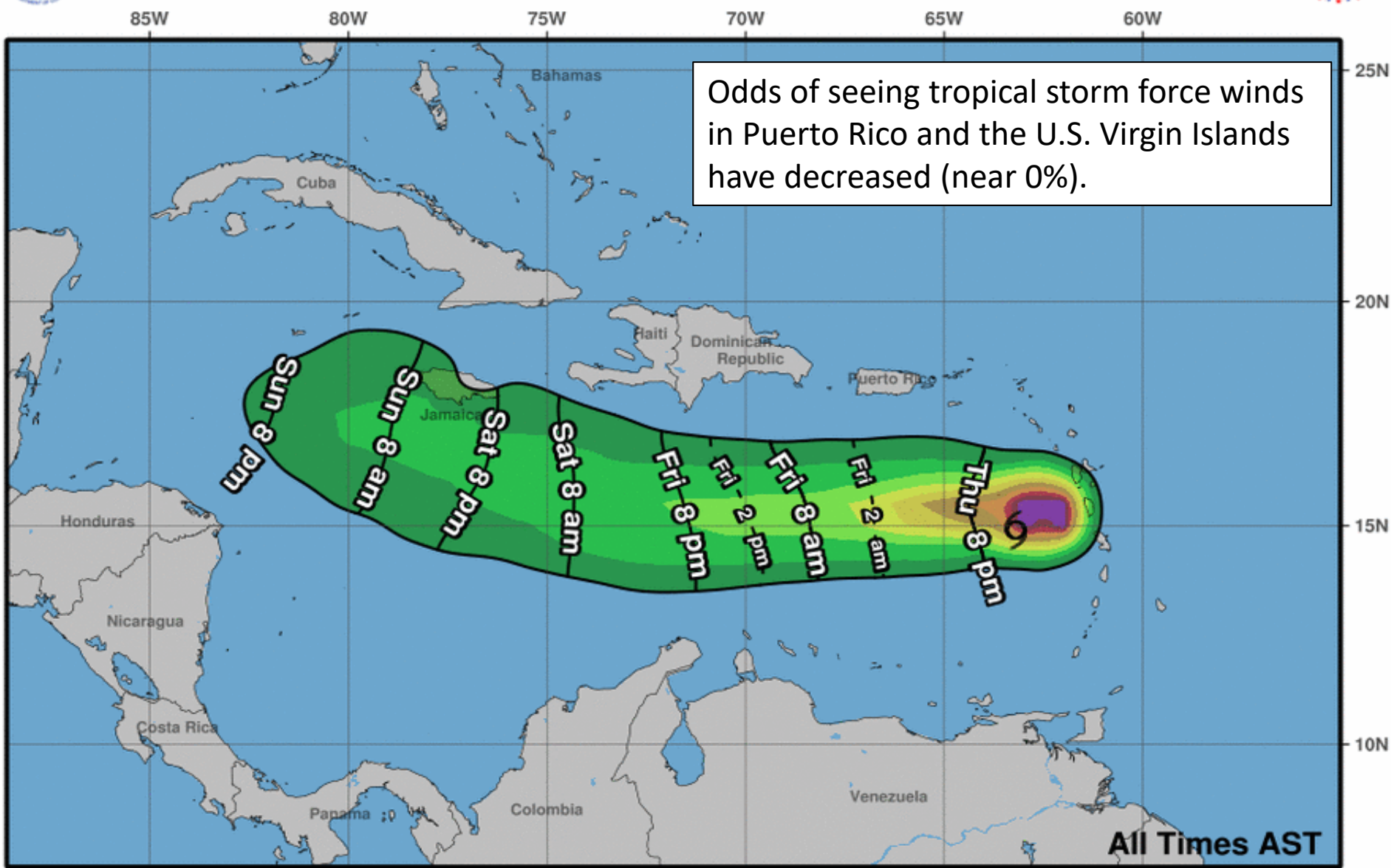


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Earliest Reasonable Arrival Time of Tropical-Storm-Force Winds

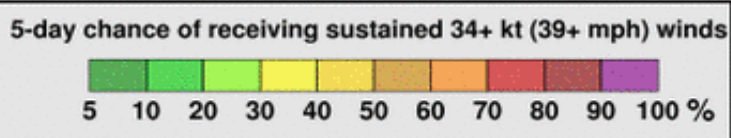


Odds of seeing tropical storm force winds in Puerto Rico and the U.S. Virgin Islands have decreased (near 0%).

Tropical Storm Isaac
Thu. Sep. 13, 2018 5 pm AST
Advisory 25

Storm Location & Wind Speed

- < 34 kt (39 mph)
- ◉ 34-63 kt (39-73 mph)
- ≥ 64 kt (74 mph)

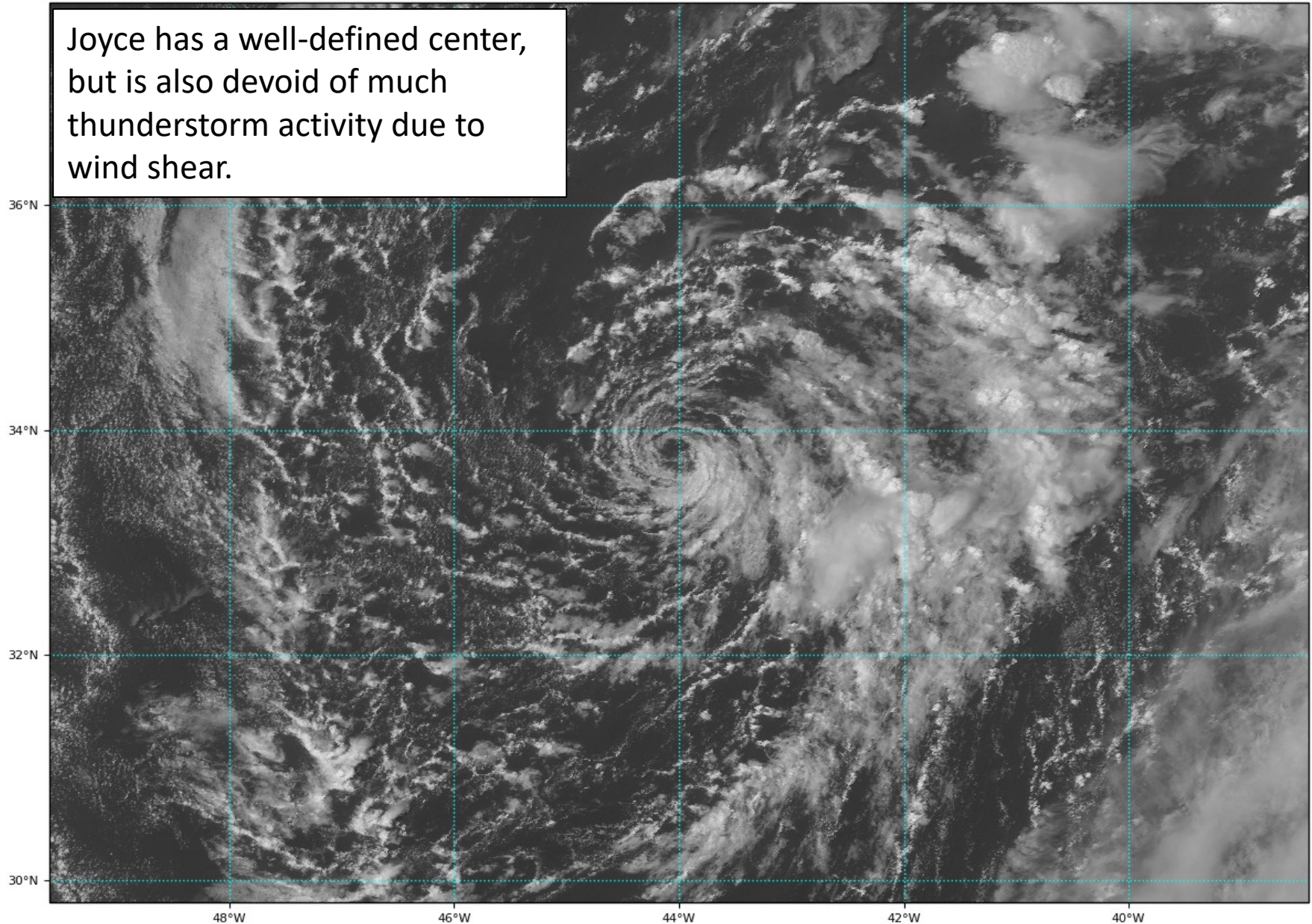


Subtropical Storm Joyce Satellite Image

GOES-16 Channel 2 (visible) Reflectance at 18:05Z Sep 13, 2018

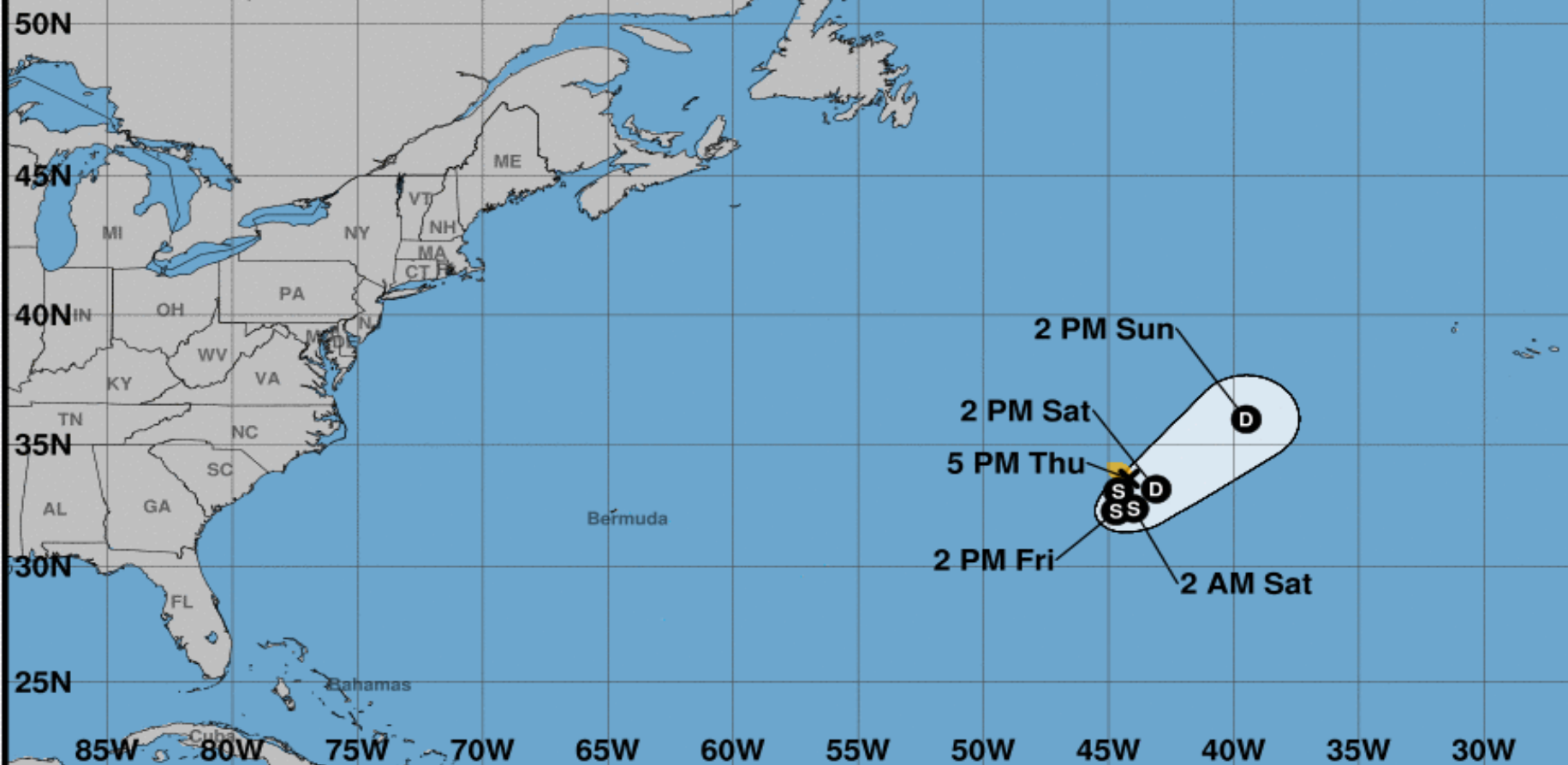
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Joyce has a well-defined center, but is also devoid of much thunderstorm activity due to wind shear.





Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.



Subtropical Storm Joyce

Thursday September 13, 2018

5 PM AST Advisory 5

NWS National Hurricane Center

Current information: x

Center location 33.6 N 44.2 W

Maximum sustained wind 40 mph

Movement SW at 6 mph

Forecast positions:

● Tropical Cyclone ○ Post/Potential TC

Sustained winds: D < 39 mph

S 39-73 mph H 74-110 mph M > 110 mph

Potential track area:

Day 1-3 Day 4-5

Watches:

Hurricane Trop Stm

Warnings:

Hurricane Trop Stm

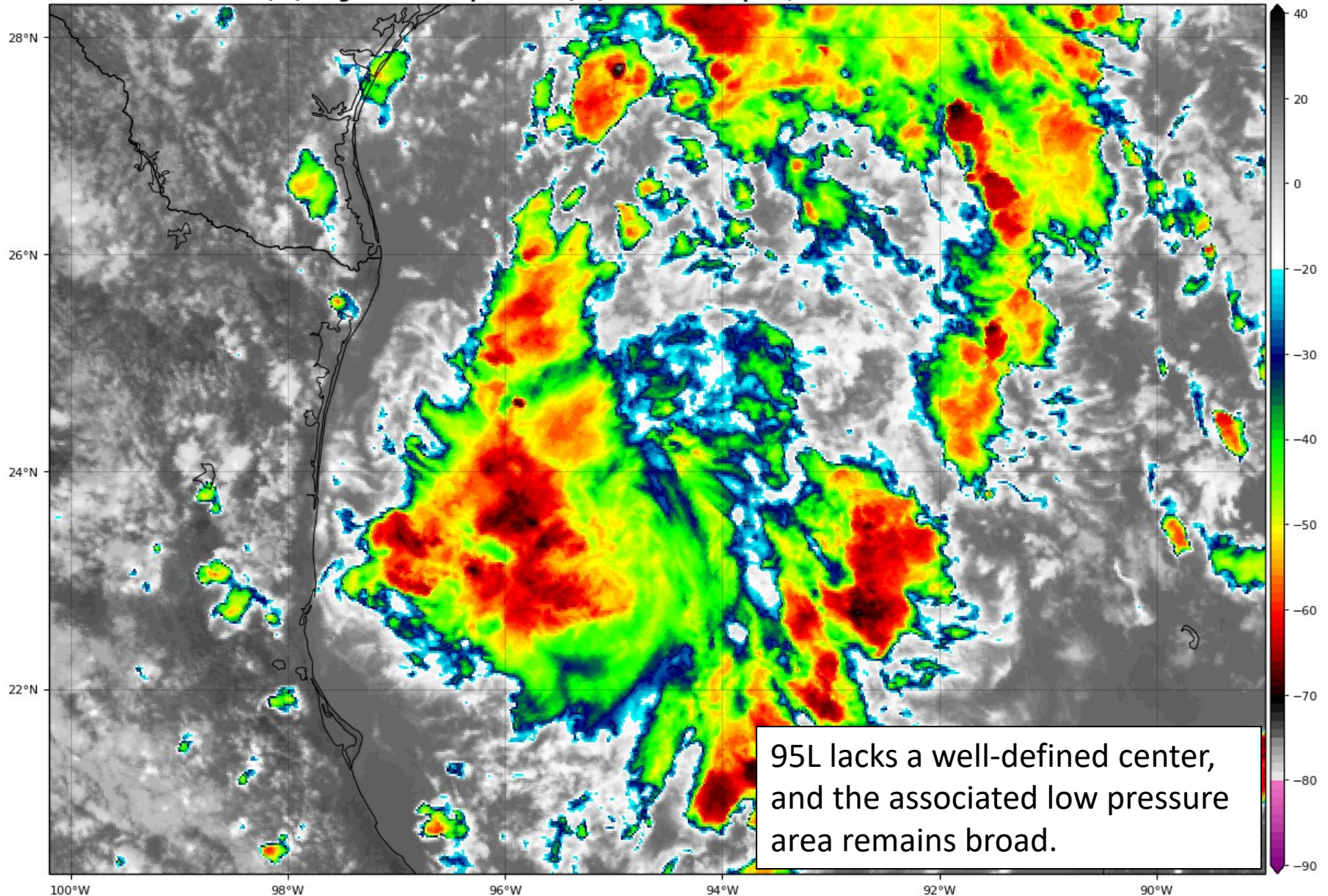
Current wind extent:

Hurricane Trop Stm

Invest 95L Satellite Image

GOES-16 Channel 13 (IR) Brightness Temperature (°C) at 20:03Z Sep 13, 2018

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Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



1. A weak low pressure center has formed a couple hundred miles east-southeast of Brownsville, Texas. While upper-level winds are generally conducive for development of a tropical depression, the system only has about a day before it reaches the western Gulf Coast.

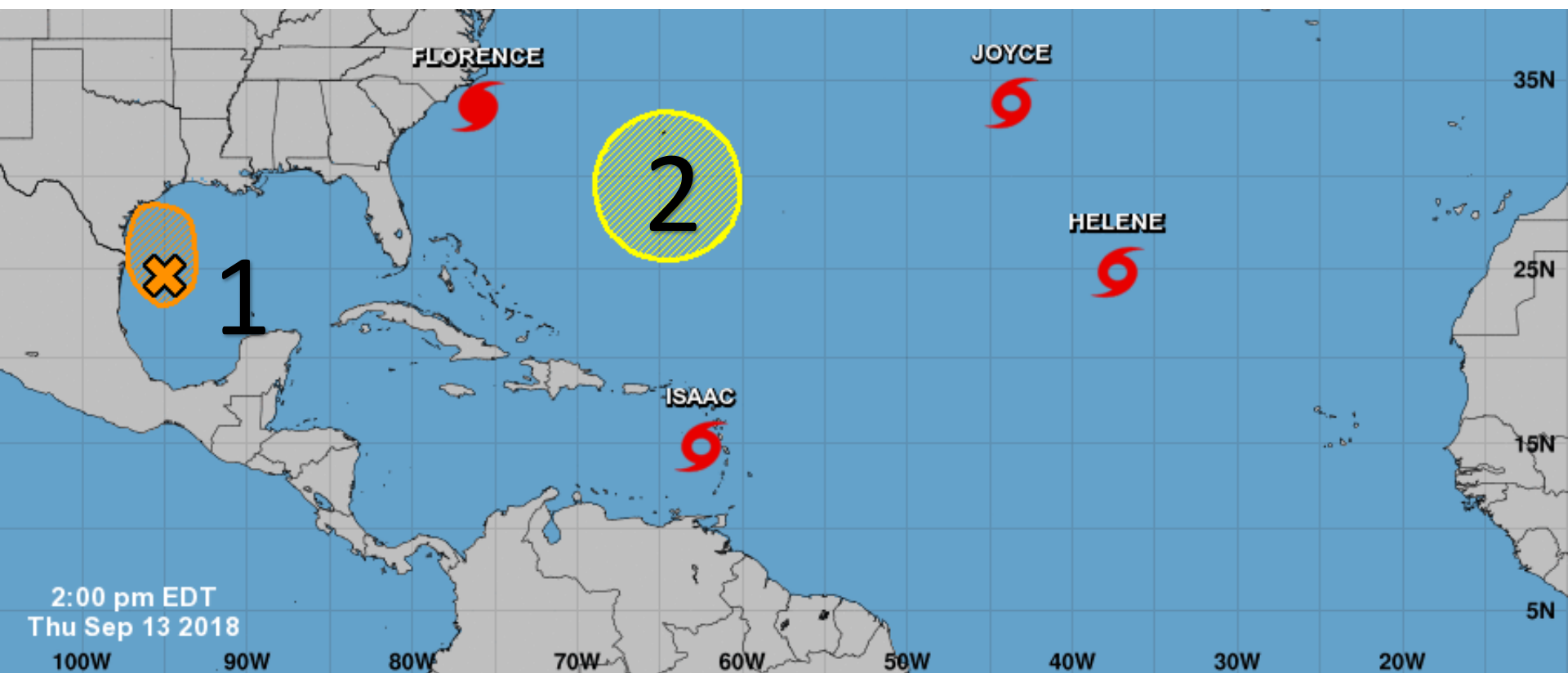
* Formation chance through 48 hours...**medium**...50 percent.

* Formation chance through 5 days...**medium**...50 percent.

2. An area of low pressure is expected to develop near Bermuda late this weekend or early next week. Some gradual development is possible after that time while the system drifts westward over the western Atlantic.

* Formation chance through 48 hours...**low**...near 0 percent.

* Formation chance through 5 days...**low**...20 percent.



2:00 pm EDT
Thu Sep 13 2018

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

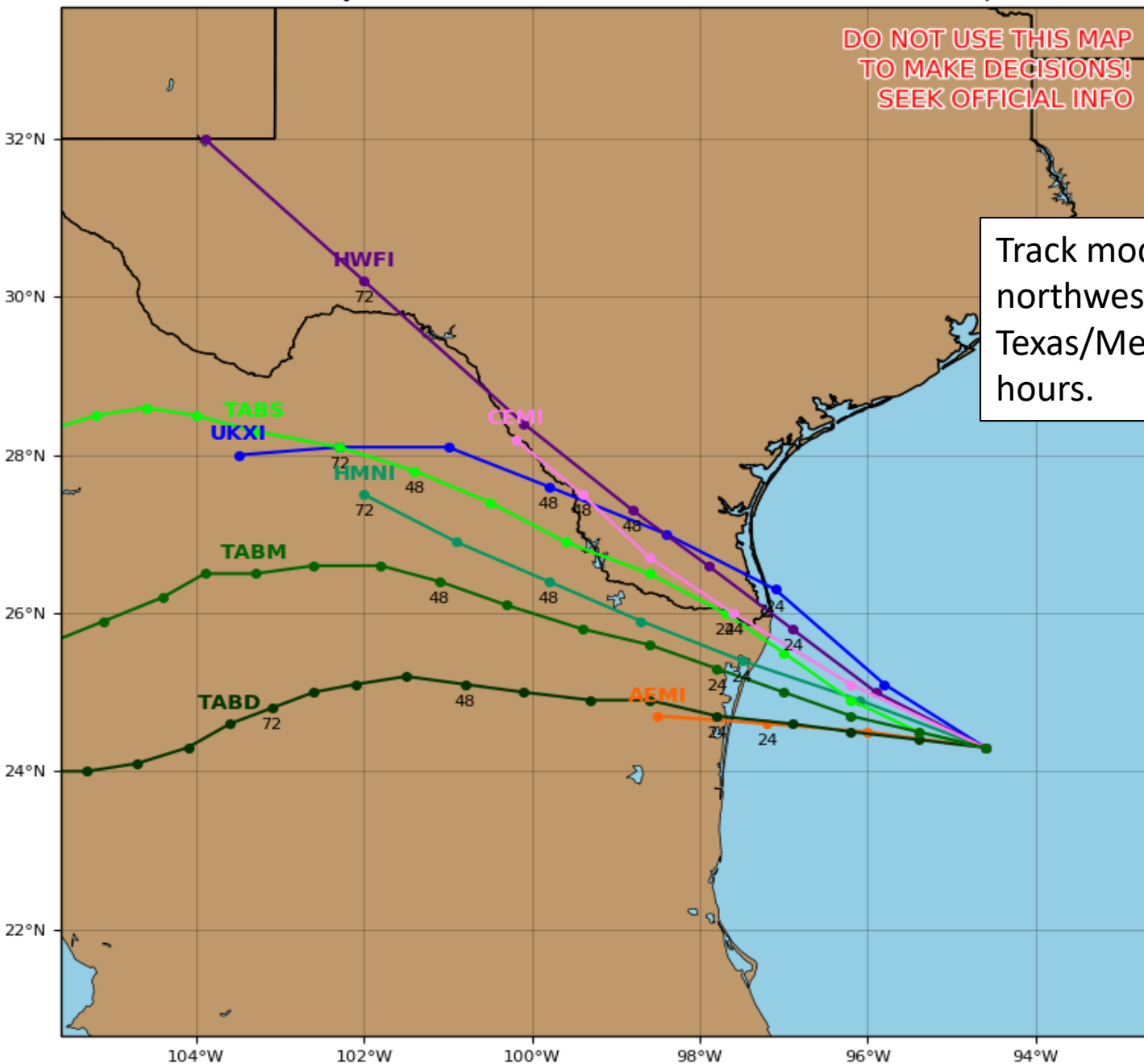
Invest 95L Model Track Guidance

Initialized at 18z Sep 13 2018

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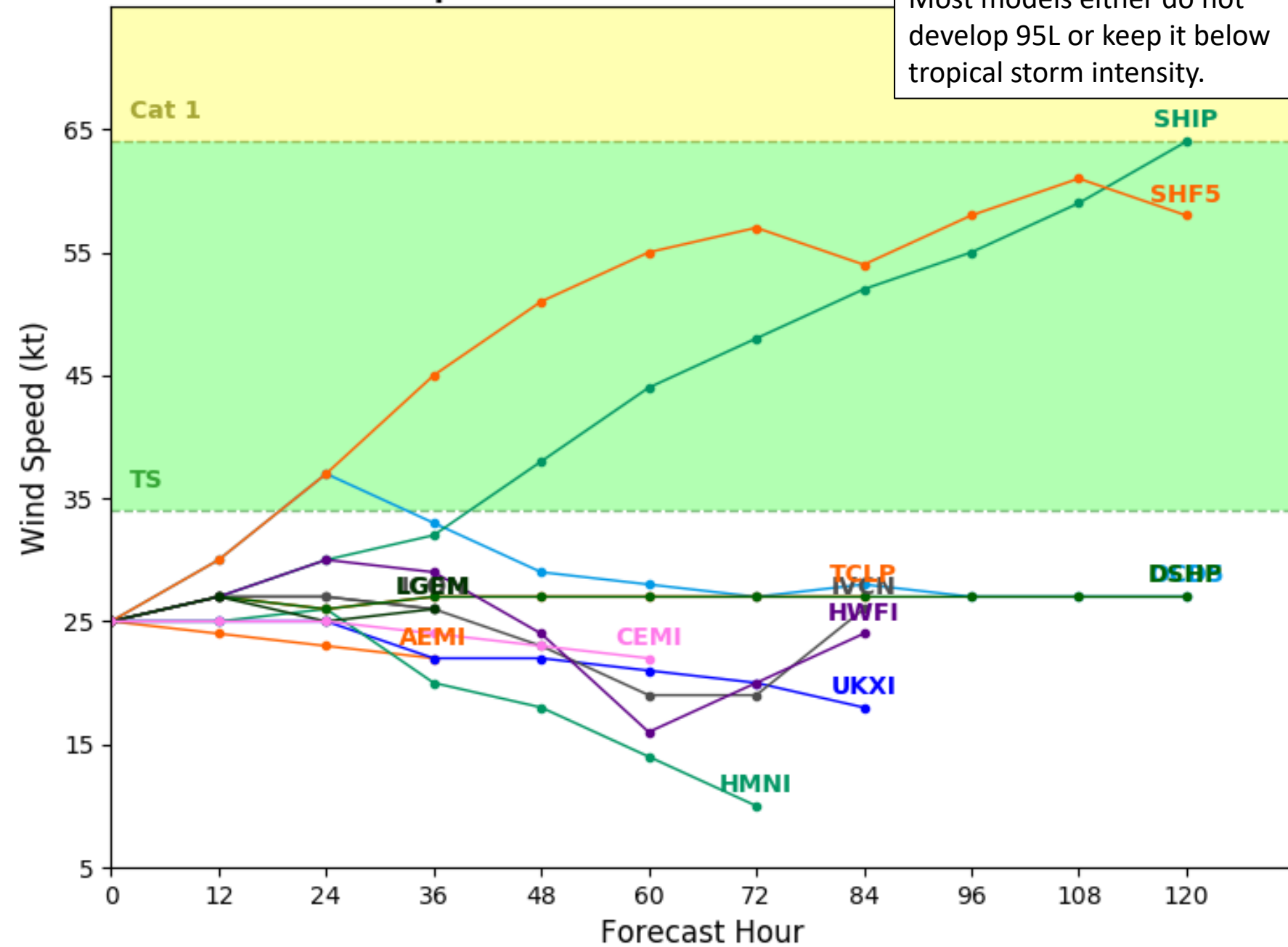
DO NOT USE THIS MAP
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Track models are confident on a northwest trajectory toward the Texas/Mexico border within 24 hours.



Initialized at 18z Sep 13 2018

Most models either do not develop 95L or keep it below tropical storm intensity.



Summary

Florence:

- At 5 PM EDT Thursday, Hurricane Florence was located 100 miles east-southeast of Wilmington, North Carolina, or 155 miles east of Myrtle Beach, South Carolina.
- Maximum sustained winds have decreased to 100 mph, but Florence remains a Category 2 on the Saffir-Simpson Hurricane Wind Scale with a very large wind field of tropical storm force winds extending up to 195 miles from the center and hurricane force winds up to 80 miles from the center.
- Florence has slowed down considerably, moving to the northwest at 10 mph earlier today and now moving west-northwest at only 5mph. A continued slow motion is expected tonight and tomorrow.
- Landfall is likely near the NC/SC border early Friday morning as a Category 2 hurricane.
- Florence will then slowly drift west or southwest through Saturday across the Carolinas under very light steering currents while gradually weakening before finally being pulled north on Sunday and Monday.

Helene:

- At 11 AM EDT Thursday, Helene was downgraded to a tropical storm and has maximum wind near 65 mph.
- Additional weakening is expected this week and weekend as it moves quickly north and northeast, eventually reaching the British Isles as a post-tropical storm.

Isaac:

- At 5 PM EDT Thursday, Tropical Storm Isaac was located in the far eastern Caribbean Sea about 130 miles west of Martinique, or about 310 miles southeast of San Juan, Puerto Rico and moving quickly west at 16 mph.
- This motion is expected to continue through the next 2-3 days before moving more to the west-northwest early next week.
- Maximum sustained winds have decreased to near 40 mph, additional weakening is expected, and Isaac is forecast to become a tropical depression sometime tomorrow and degenerate into a tropical wave by Tuesday in the northwestern Caribbean.
- There is still some model disagreement on dissipation in 4 days and some suggest the remnants of Isaac or a weak system could enter the southern Gulf of Mexico in 6 days. The chances of this happening is currently low and therefore not reflected in the official forecast.
- The chance of tropical storm force winds in Puerto Rico or the Virgin Islands continues to decrease and are now 0%, however, some locally heavy rainfall and high seas are possible as Isaac passes south of Puerto Rico on Friday.
- A Flash Flood Watch is in effect for approximately 60% of Puerto Rico, and a High Surf Advisory is in effect for the Virgin Islands and southeastern parts of Puerto Rico.

Joyce:

- Subtropical Storm Joyce is located in the far north central Atlantic with maximum sustained winds of 40 mph.
- Joyce will meander in the north central Atlantic before moving toward the northeast this weekend.

Other Disturbances:

- A weak low pressure center (designated as Invest 95L) has formed a couple of hundred miles east-southeast of Brownsville, Texas. In addition, showers and thunderstorms in association with this system have become more numerous today.
- While conditions are conducive for development of a tropical depression, the system only has about a day before it reaches the Texas/Mexico coast.
- A NOAA hurricane hunter reconnaissance aircraft is currently investigating the system to see if a tropical depression has formed. If so, a special advisory could be issued this evening from the National Hurricane Center.
- An area of low pressure is expected to develop near Bermuda late this weekend or early next week. Some gradual development is possible after that time while the system drifts westward over the western Atlantic.
- The next names on the list are Kirk and Leslie, or number 11 and 12 if first designated a Potential Tropical Cyclone or Tropical Depression.

Florida Outlook:

- Chances of direct impacts to Northeast Florida from Florence remain very low, with a less than 20% chance of experiencing tropical storm force winds. Gusts near 20mph are possible near the Northeast Florida coast on Saturday.
- Large swells emanating from the storm will continue to impact the Florida East Coast through weekend, resulting in life-threatening rip currents.
- A Coastal Flood Advisory is in effect through Friday for Nassau, Duval, St. Johns, and Flagler Counties. Minor coastal flooding at high tide will be possible.
- Tropical Storm Isaac should continue to be monitored over the next 5-7 days as it moves through the Caribbean, but is not a direct threat to Florida at this time.
- Hurricane Helene, Sub-tropical Storm Joyce, Invest 95L in the Gulf and the developing low near Bermuda pose no threat to the Florida at this time.

Another briefing packet will be issued Friday morning. For the latest information on the tropics, please visit the National Hurricane Center website at www.hurricanes.gov.



TROPICAL UPDATE

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State Meteorological Support Unit

Florida Division of Emergency Management

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