



# **TROPICAL UPDATE**

**11 AM EDT**

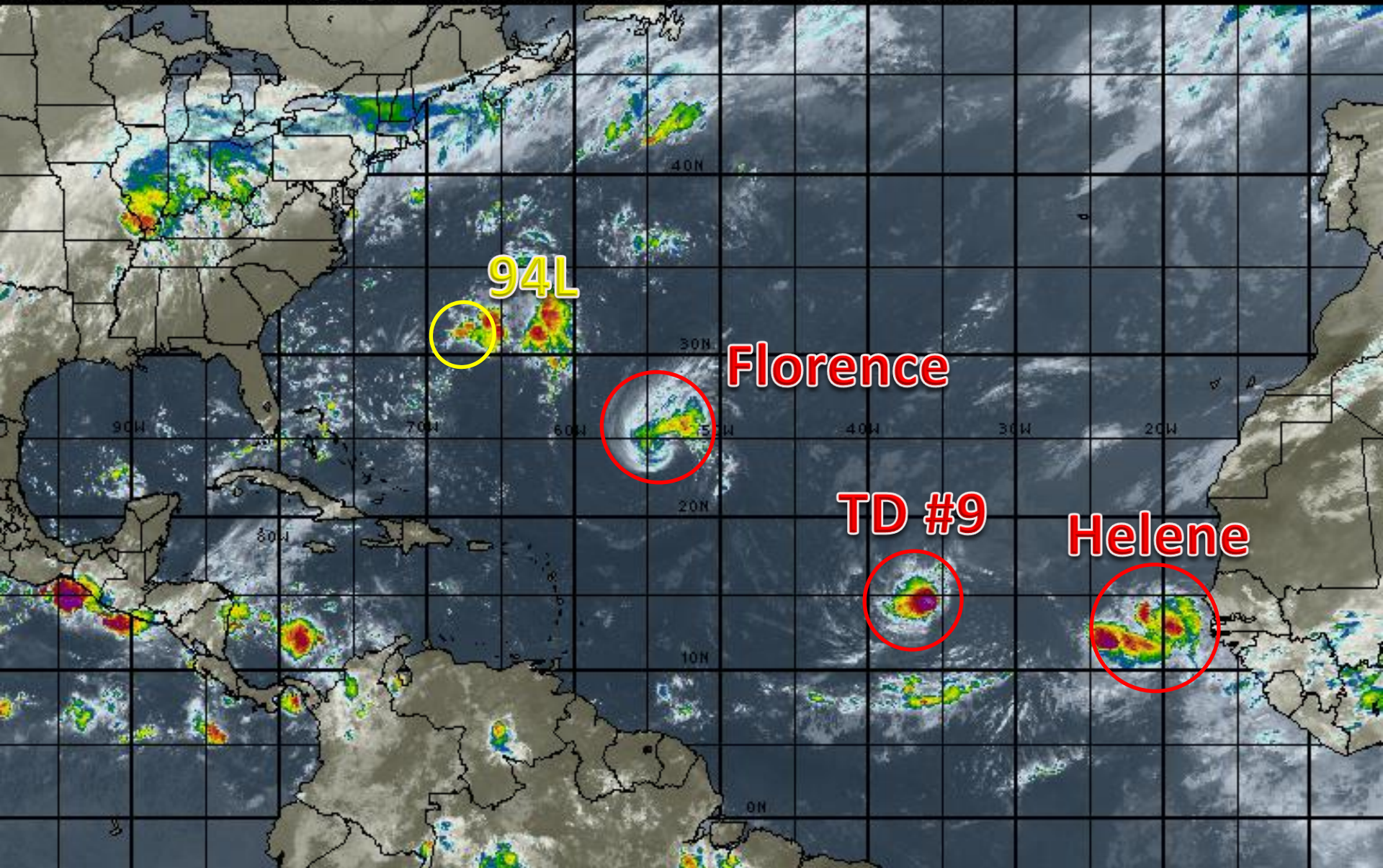
**Saturday, September 8, 2018**

**Tropical Storm Florence, Tropical Storm Helene,  
Tropical Depression #9, Invest 94L (10%)**

**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](http://www.nhc.noaa.gov).**

# Atlantic Basin Satellite Image

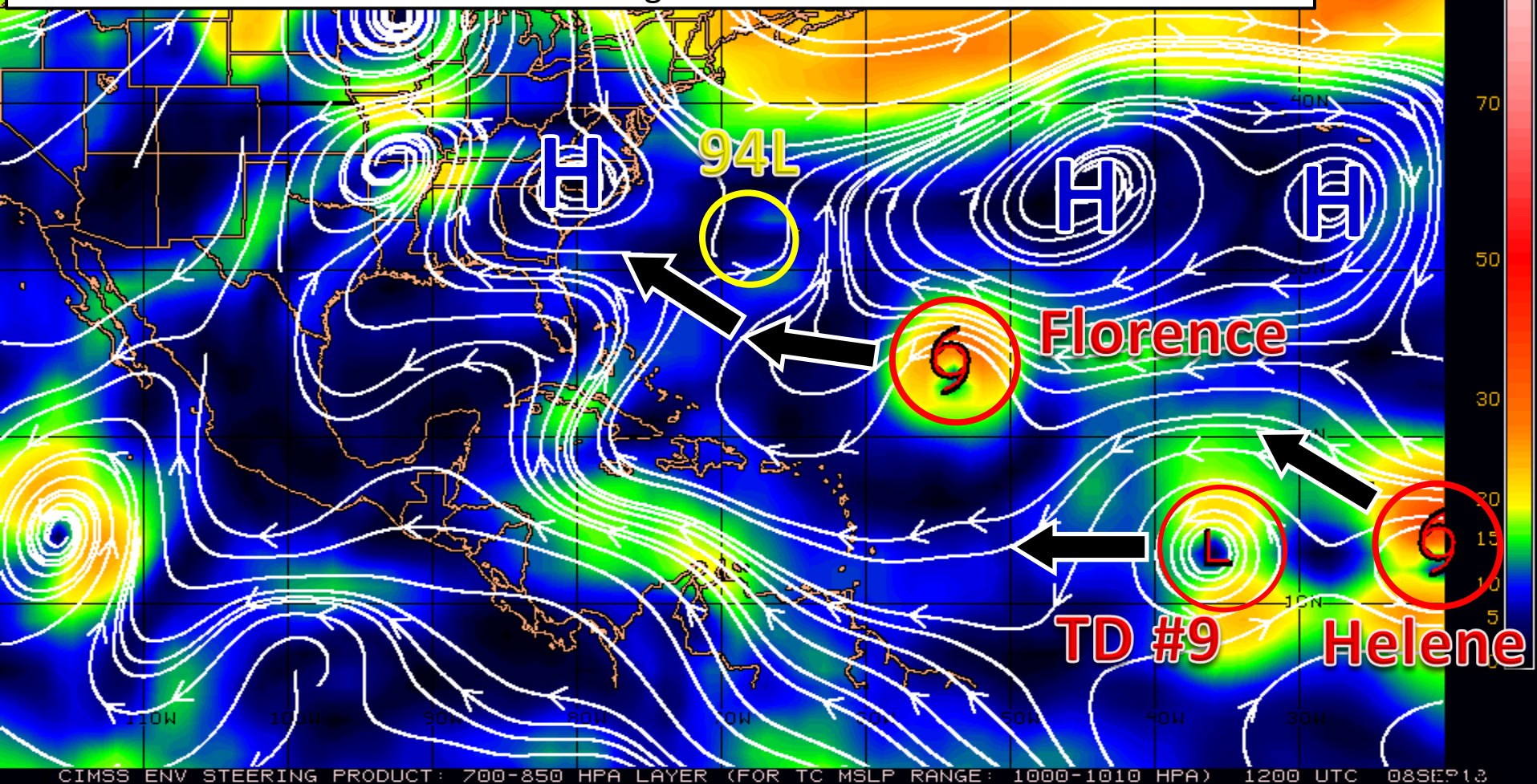
12:00 08-SEP-2018 GMT Copyright © 1998-2018 MSI Corporation <http://www.wsi.com>





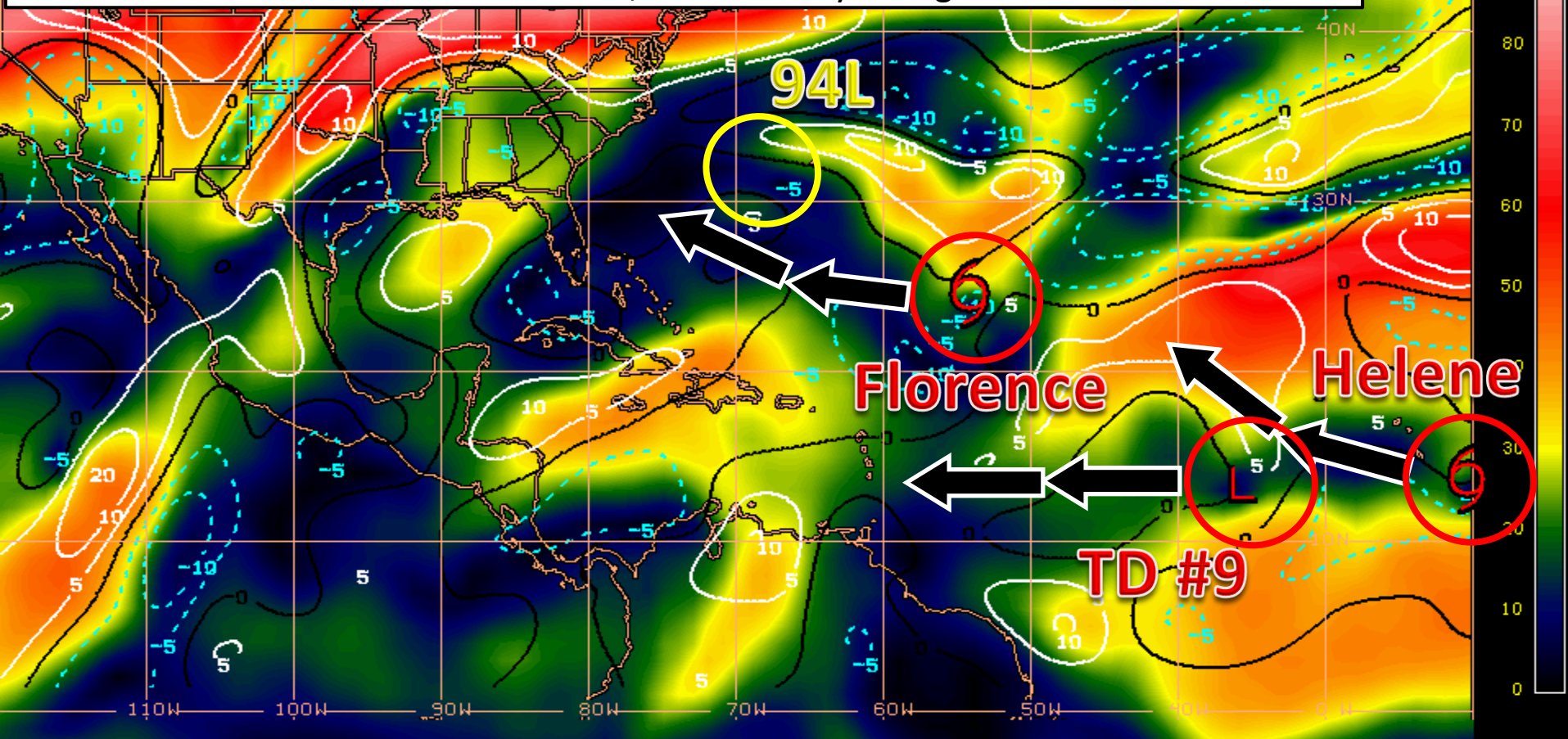
# Steering Currents

94L will meander near Bermuda for the next few days before eventually moving out to sea. Florence will generally move westward through the weekend before turning west-northwestward next week. TD #9 will slowly move westward over the coming days. Helene will move west-northwestward near the Cabo Verde Islands, then will turn northwest and north during the middle to end of next week.



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

94L is currently in a low shear environment, but it lacks a well-defined center. Florence has been battling shear for the last couple days, causing it to weaken. However, it is moving into a lower-shear environment, which will allow for strengthening. TD #9 is battling some shear right now, which will prohibit any rapid strengthening. Helene is in favorable shear conditions, but that may change next week.



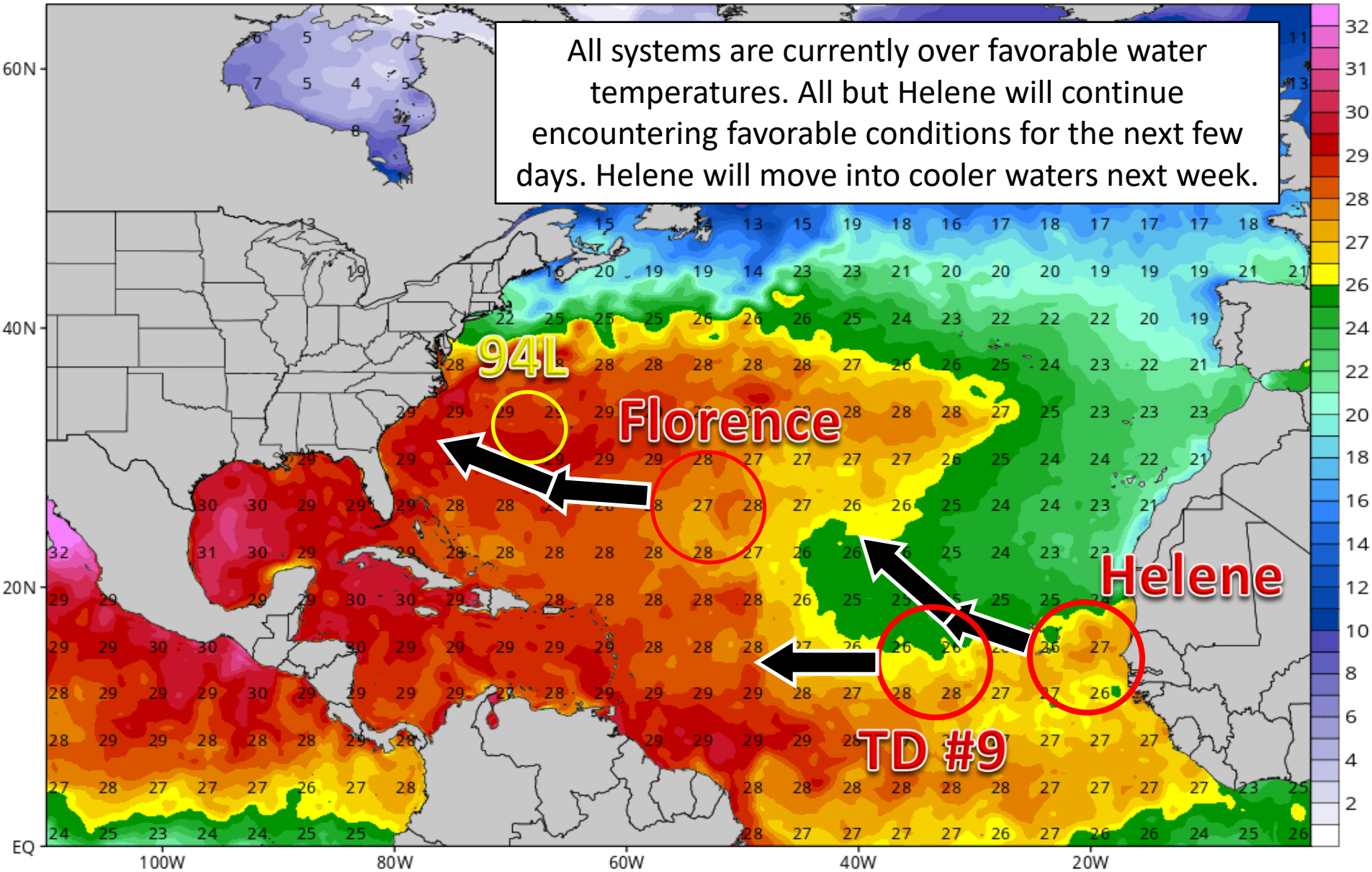
Shear Tendency (KTS) Over Past 24 Hours: Increasing — Decreasing ----

# Water Temperatures

CDAS Sea Surface Temperature (°C)

Analysis Time: 06z Sep 08 2018

TROPICALTIDBITS.COM

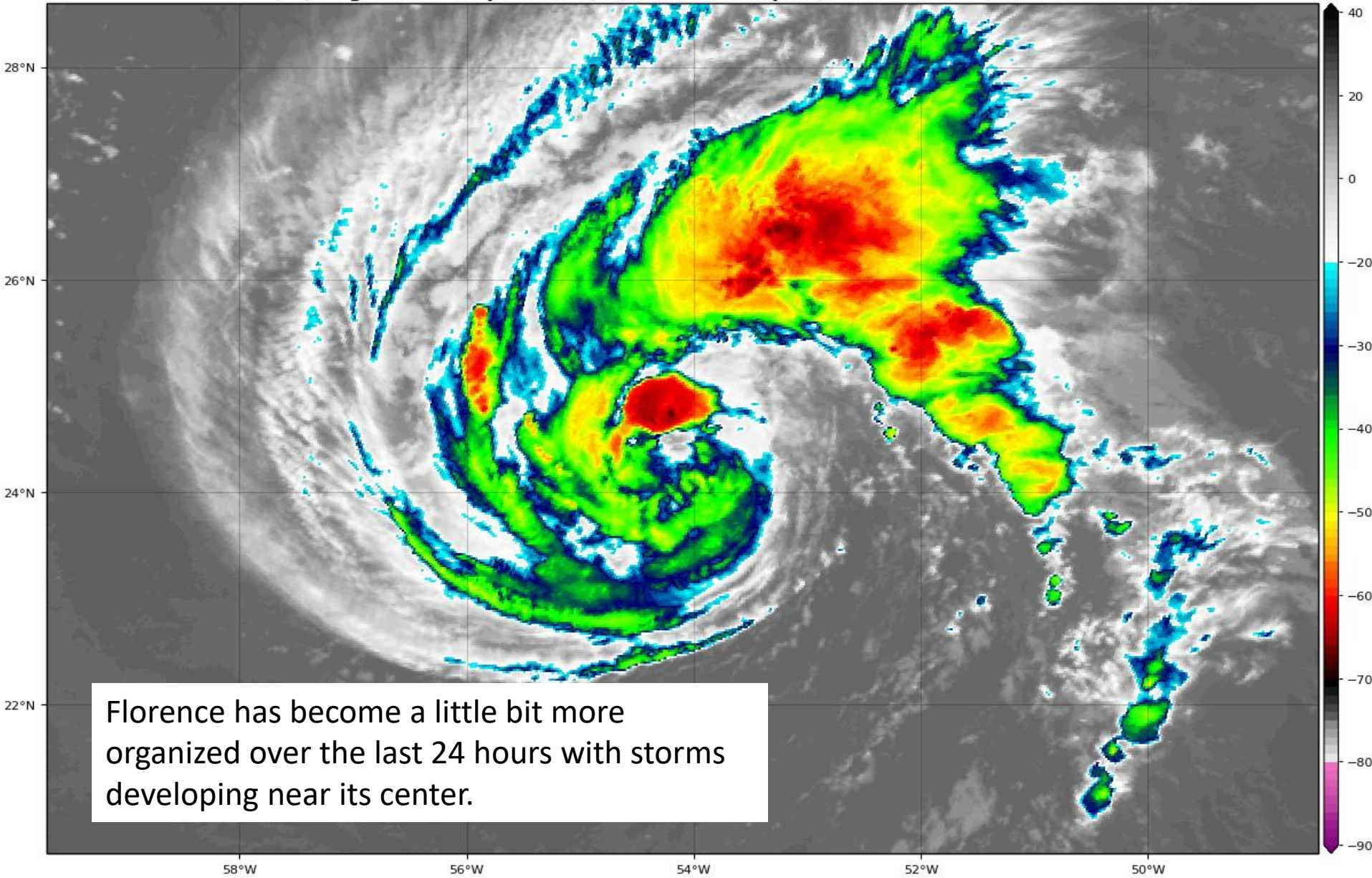




# Hurricane Florence Satellite Image

GOES-16 Channel 13 (IR) Brightness Temperature (°C) at 14:20Z Sep 08, 2018

TROPICALTIDBITS.COM

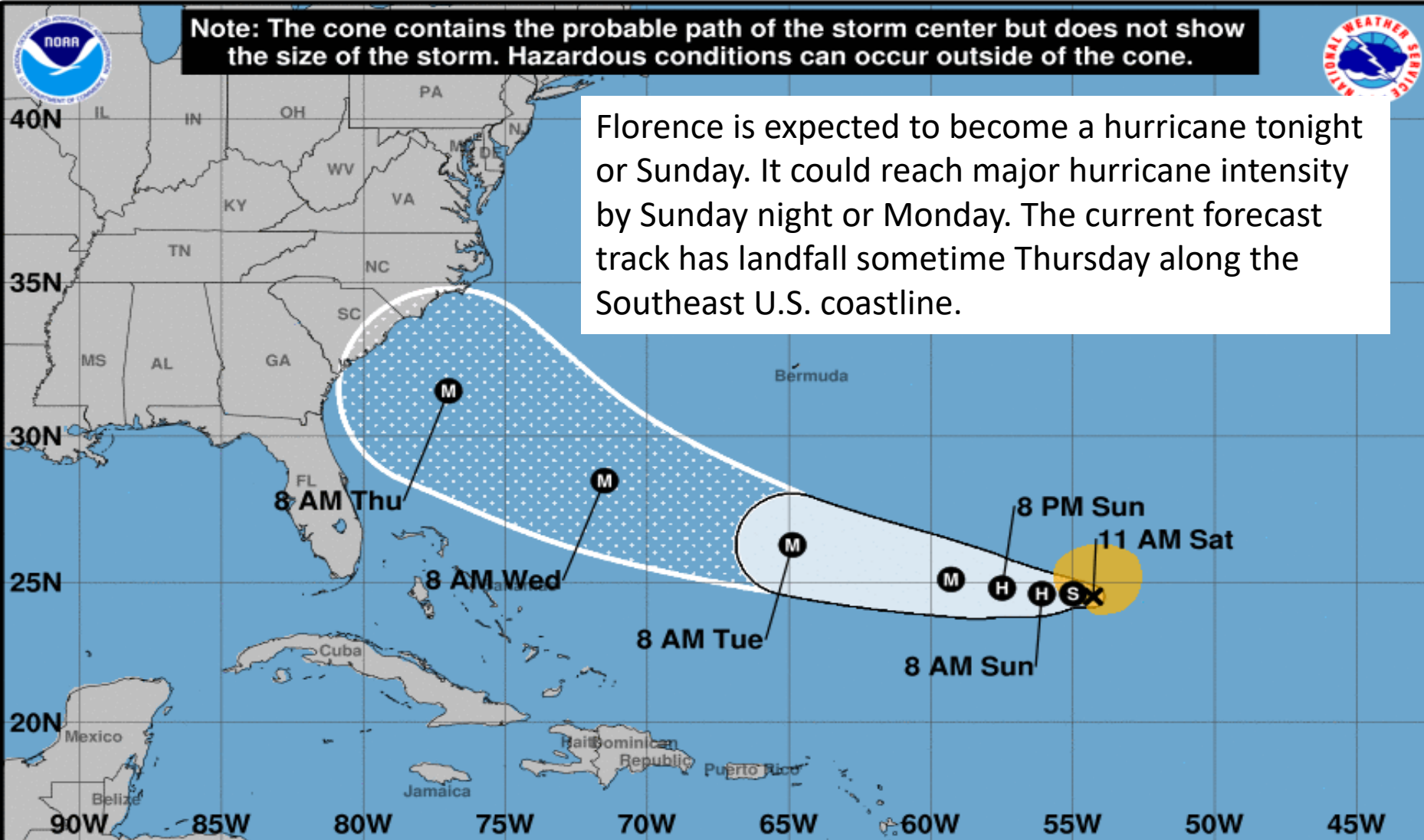


Florence has become a little bit more organized over the last 24 hours with storms developing near its center.



**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.**

Florence is expected to become a hurricane tonight or Sunday. It could reach major hurricane intensity by Sunday night or Monday. The current forecast track has landfall sometime Thursday along the Southeast U.S. coastline.



### Tropical Storm Florence

Saturday September 08, 2018

11 AM AST Advisory 37

NWS National Hurricane Center

### Current information: x

Center location 24.5 N 54.3 W

Maximum sustained wind 65 mph

Movement W at 7 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:

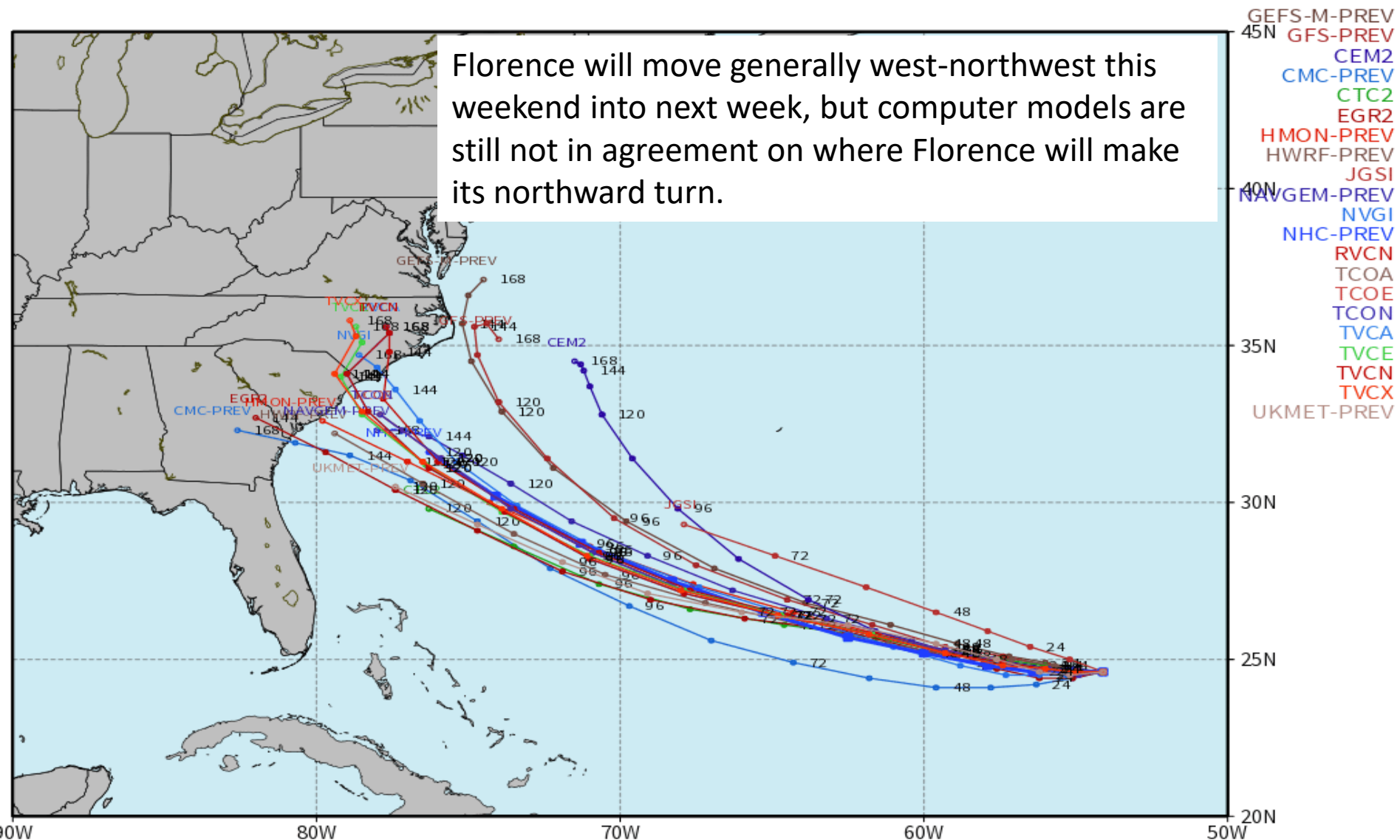
Hurricane Trop Stm

# Track Models (Florence)

AL06 FLORENCE Guidance valid: 2018090812

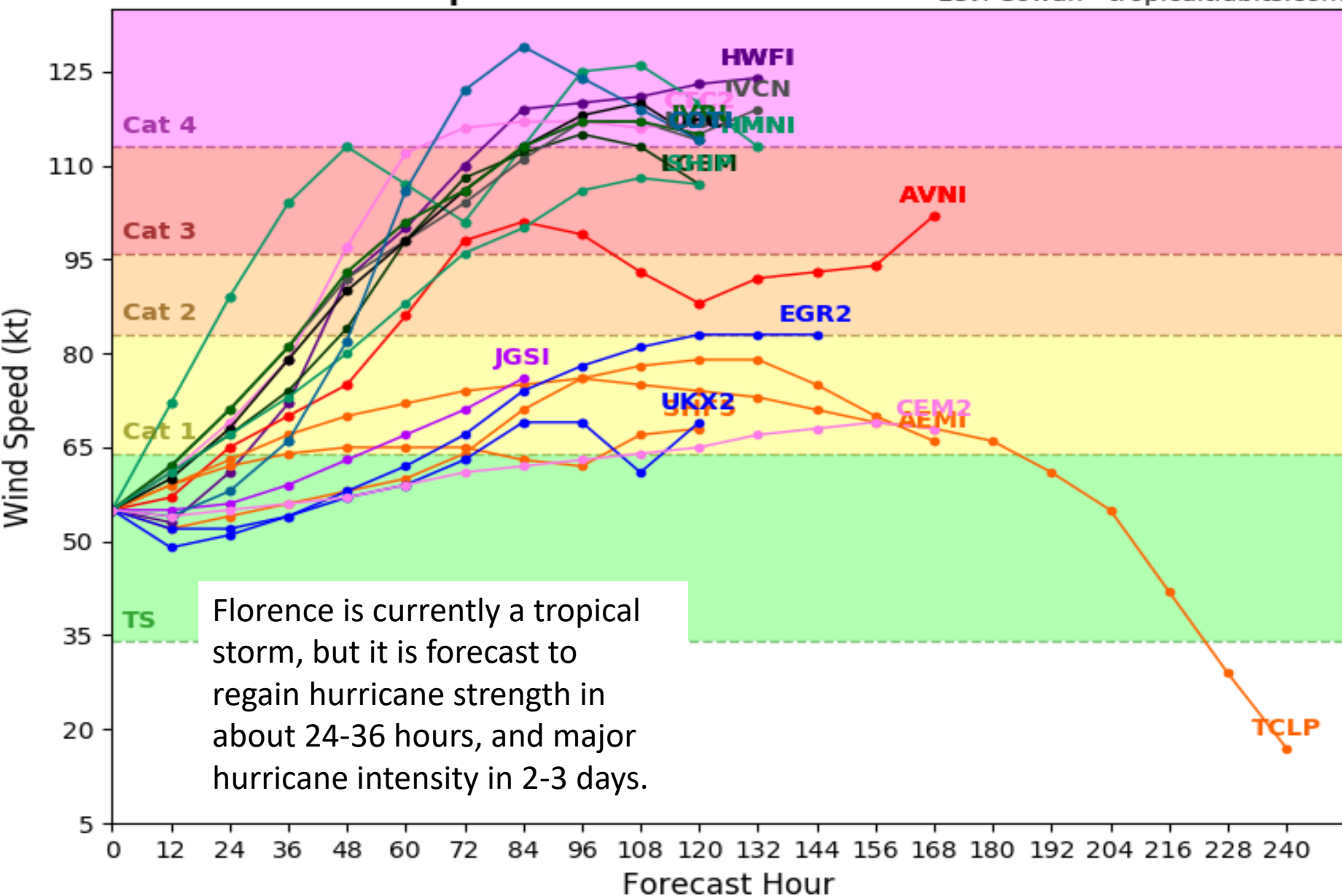
Track Models

Florence will move generally west-northwest this weekend into next week, but computer models are still not in agreement on where Florence will make its northward turn.

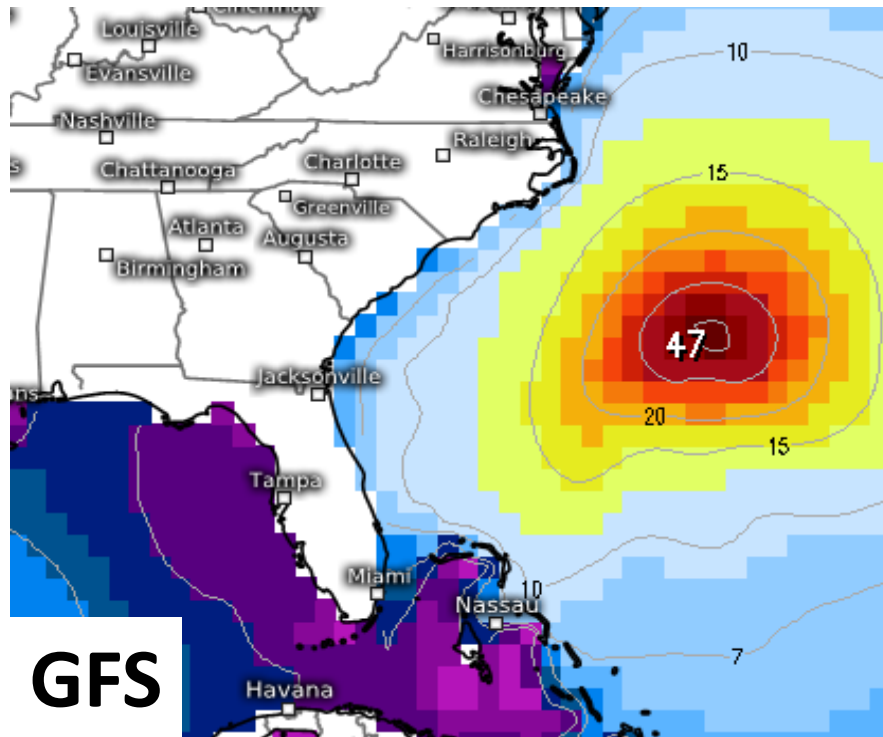




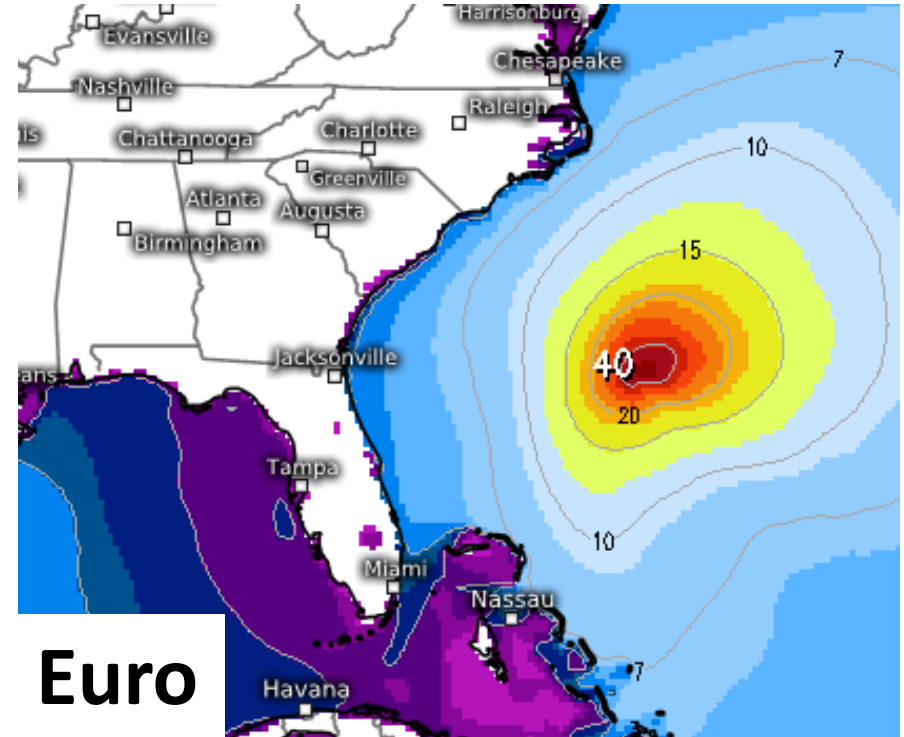
Levi Cowan - [tropicaltidbits.com](http://tropicaltidbits.com)



# Model Wave Heights (Florence)

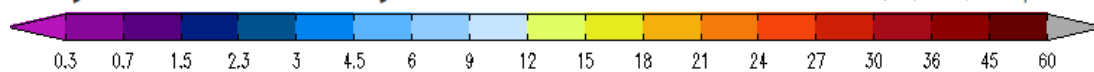


**GFS**



**Euro**

Significant Wave Height (ft) 



Valid for  
09/12/2018, 07:00pm CDT

Regardless of track, as Florence nears the East Coast next week, wave heights will increase along the East Coast of Florida. This could result in a high risk of rip currents, minor beach erosion, and some coastal flooding issues.





# Key Messages for Tropical Storm Florence

Advisory 37: 11:00 AM AST Sat Sep 08, 2018

1. Florence is forecast to be a dangerous major hurricane near the southeast U.S. coast by late next week, and the risk of direct impacts continues to increase. However, given the uncertainty in track and intensity forecasts at those time ranges, it's too soon to determine the exact timing, location, and magnitude of those impacts.
2. Interests along the U.S. East Coast, particularly from north Florida through North Carolina, should closely monitor the progress of Florence, ensure they have their hurricane plan in place, and follow any advice given by local officials.
3. Large swells are affecting Bermuda and will begin to affect portions of the U.S. East Coast this weekend, resulting in life-threatening surf and rip currents.



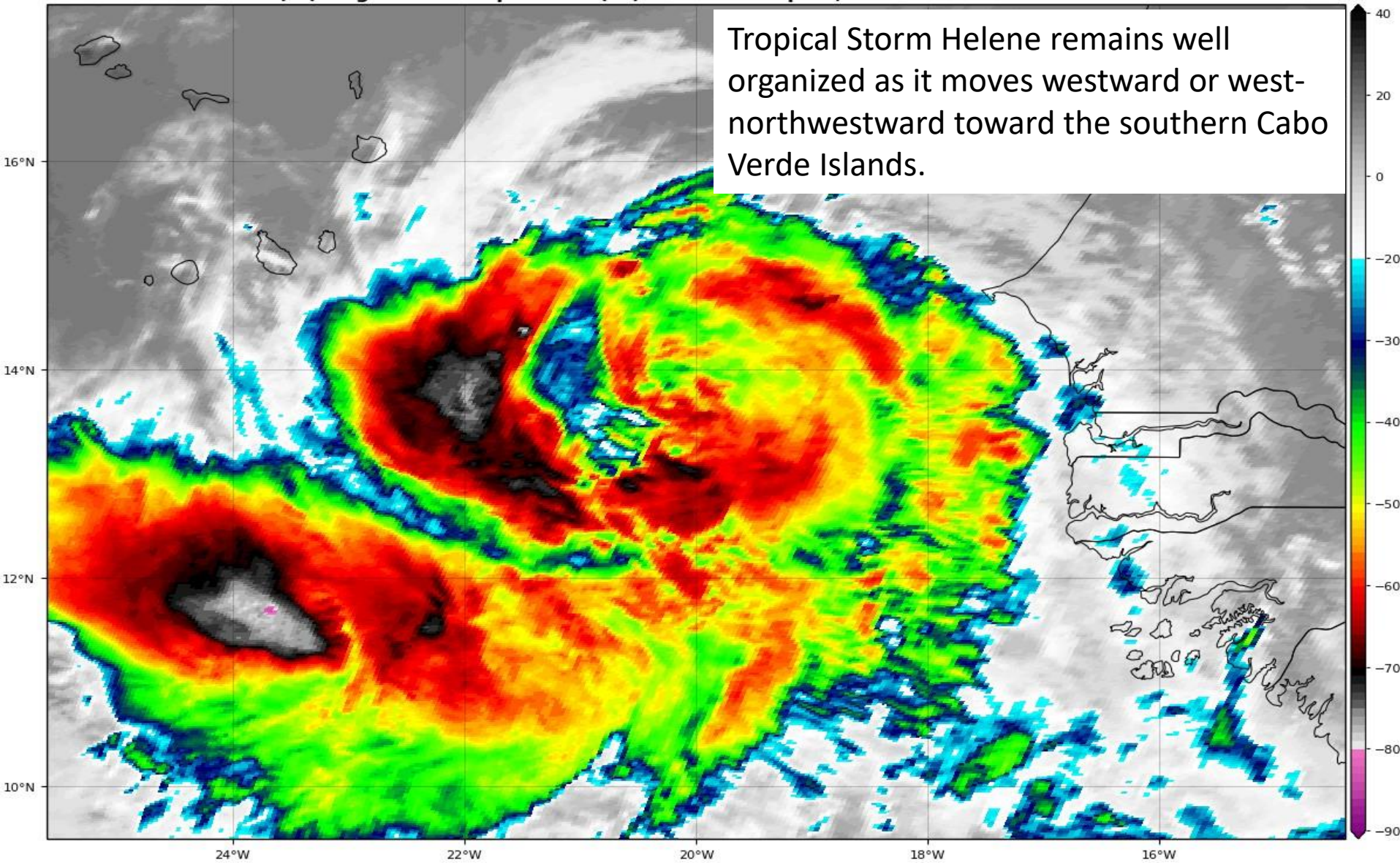
For more information go to [hurricanes.gov](http://hurricanes.gov)



# Tropical Storm Helene Satellite Image

GOES-16 Channel 13 (IR) Brightness Temperature (°C) at 14:35Z Sep 08, 2018

TROPICALTIDBITS.COM

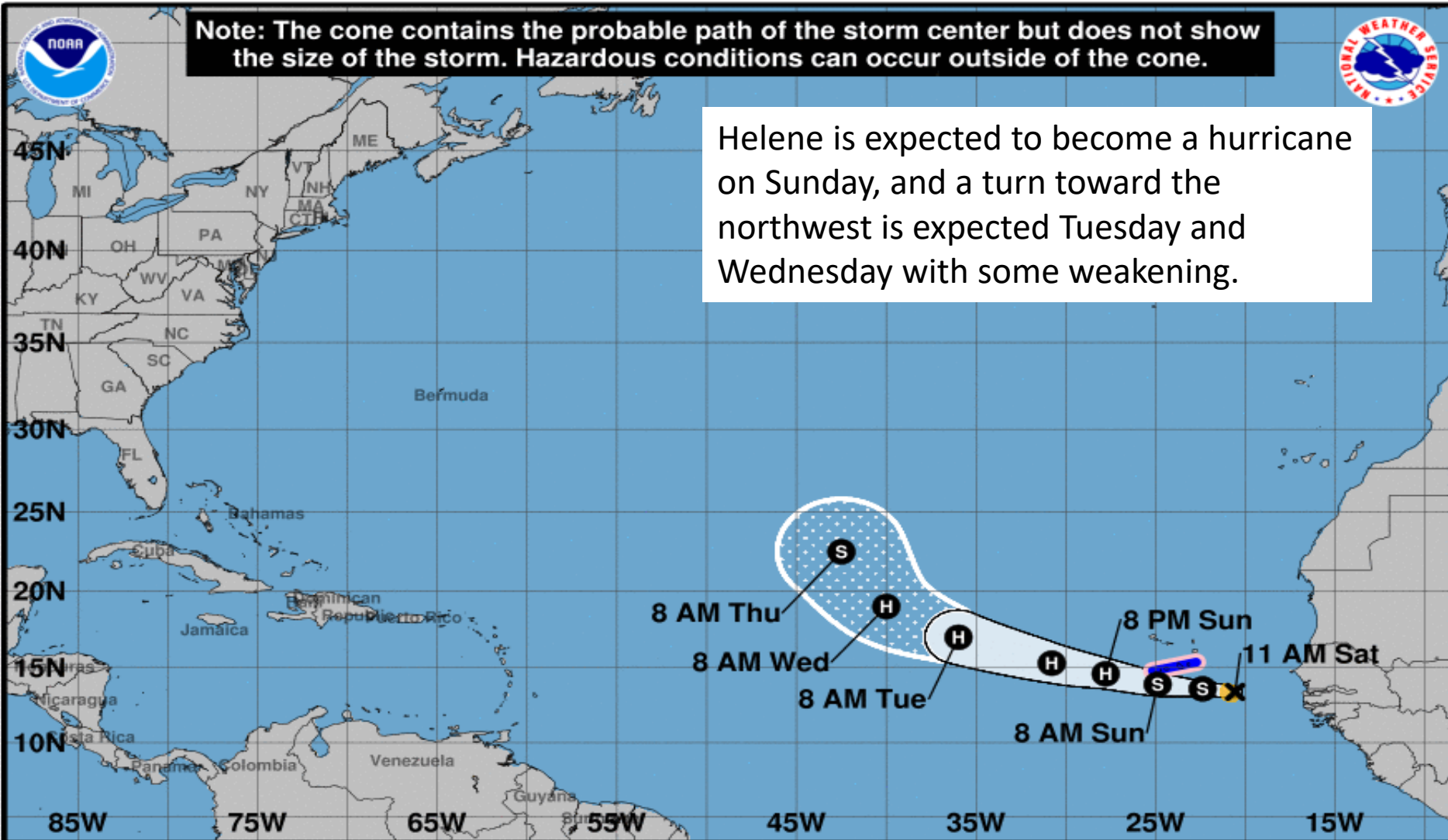






Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.

Helene is expected to become a hurricane on Sunday, and a turn toward the northwest is expected Tuesday and Wednesday with some weakening.



### Tropical Storm Helene

Saturday September 08, 2018

11 AM AST Advisory 5

NWS National Hurricane Center

### Current information: X

Center location 13.4 N 20.6 W

Maximum sustained wind 45 mph

Movement W at 13 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:

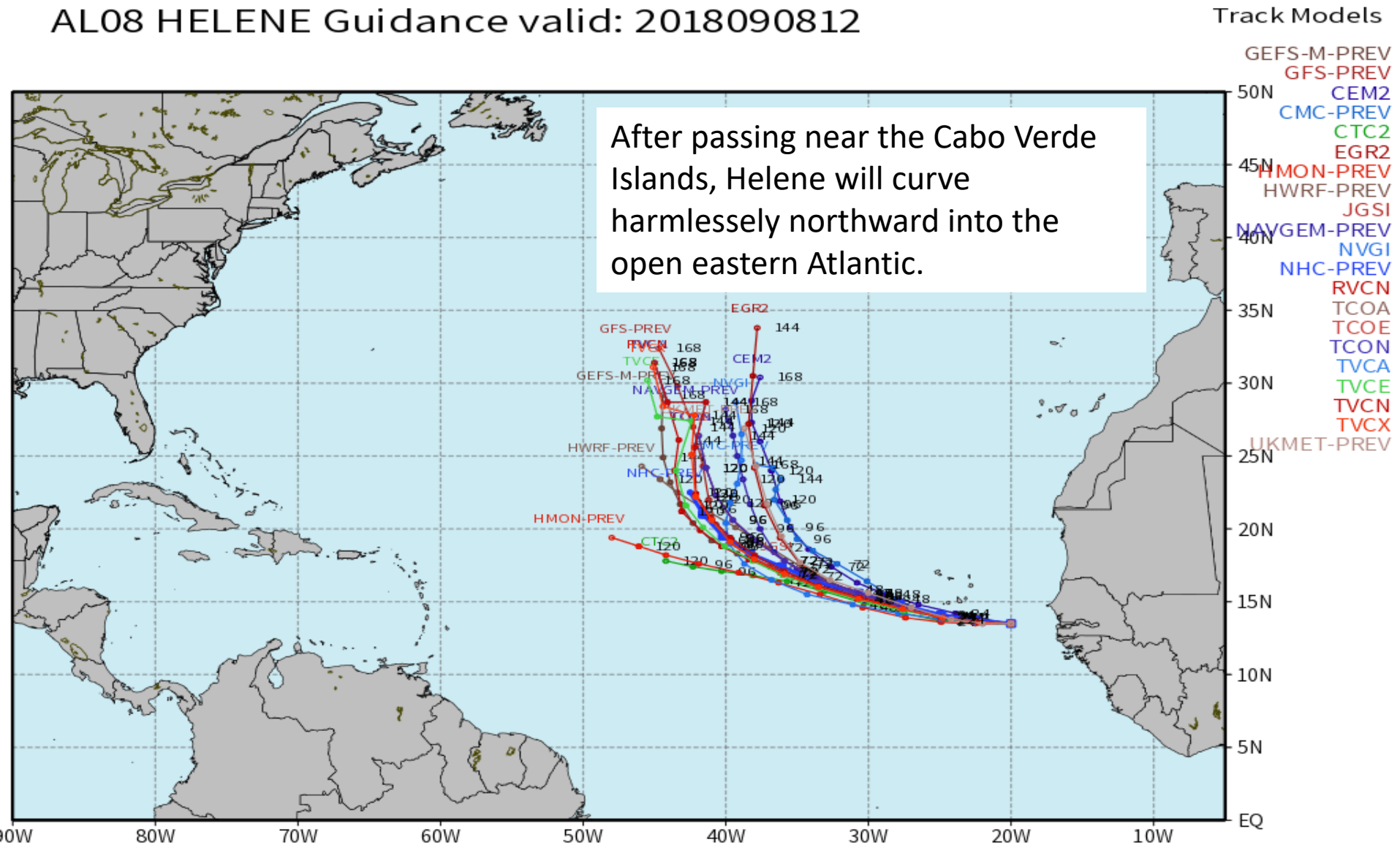
Hurricane Trop Stm

### Current wind extent:

Hurricane Trop Stm

# Track Models (Helene)

AL08 HELENE Guidance valid: 2018090812



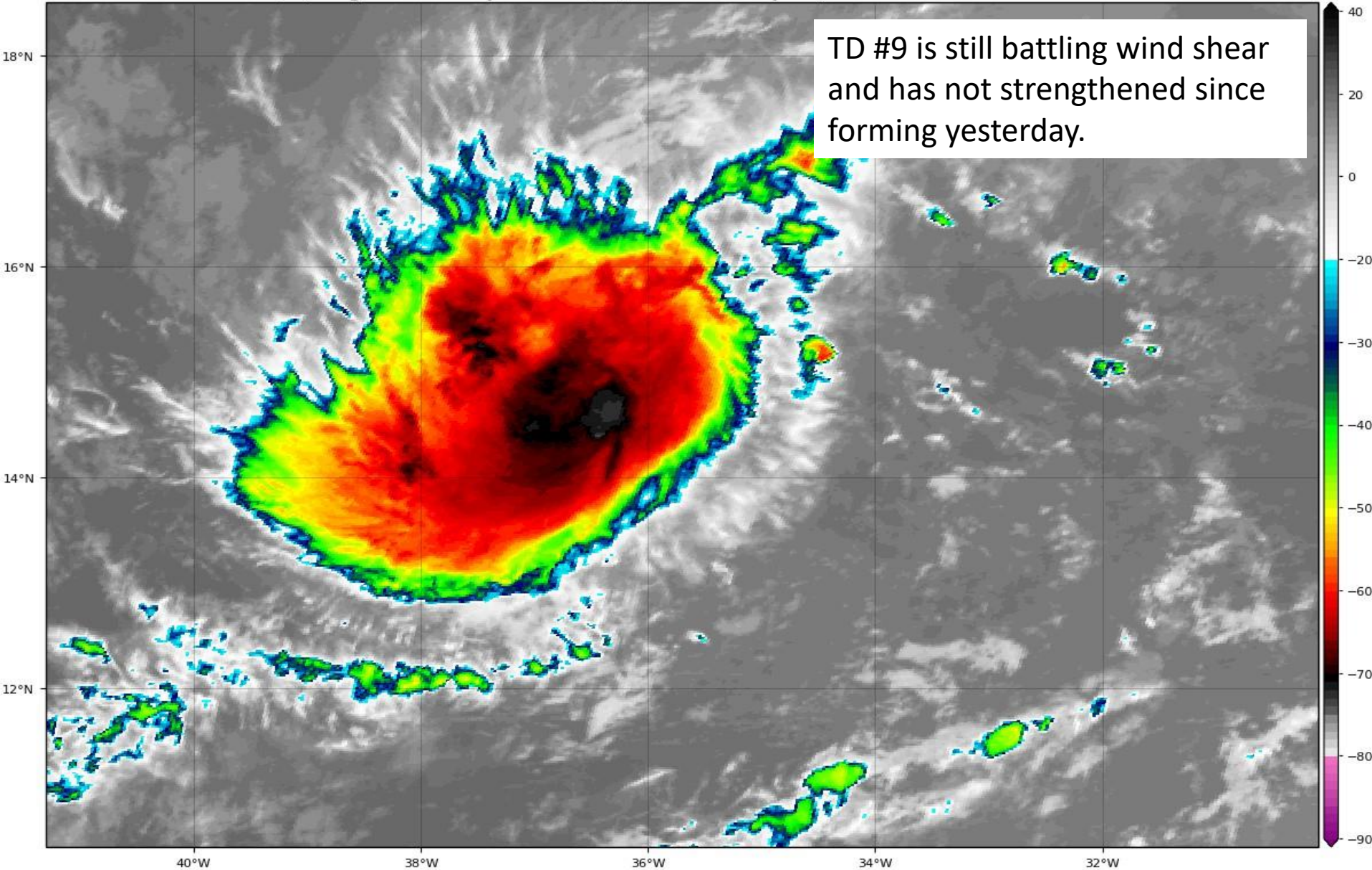




# Tropical Depression #9 Satellite Image

GOES-16 Channel 13 (IR) Brightness Temperature (°C) at 14:35Z Sep 08, 2018

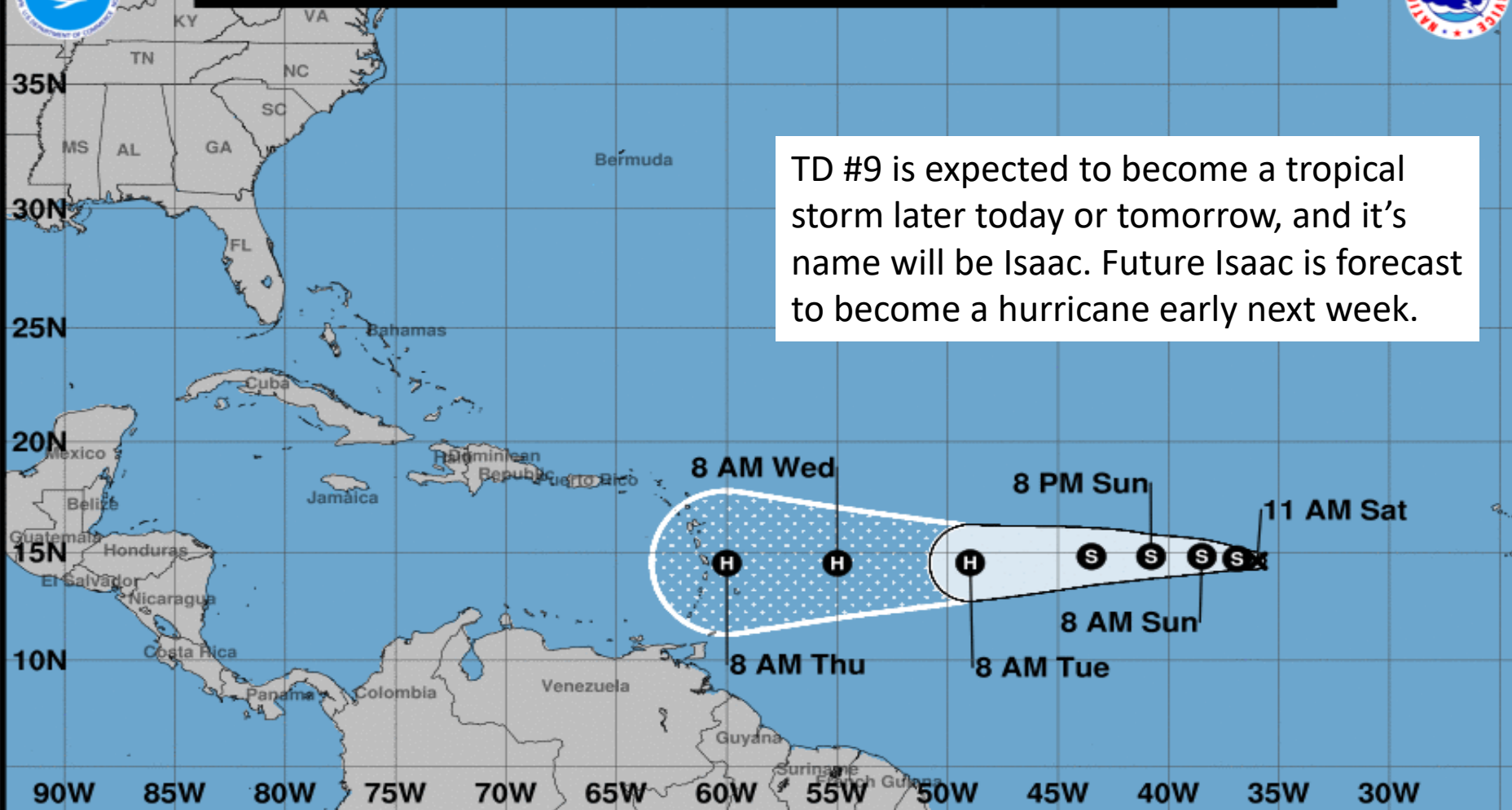
TROPICALTIDBITS.COM





**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.**

TD #9 is expected to become a tropical storm later today or tomorrow, and it's name will be Isaac. Future Isaac is forecast to become a hurricane early next week.



### Tropical Depression Nine

Saturday September 08, 2018

11 AM AST Advisory 4

NWS National Hurricane Center

### Current information: x

Center location 14.6 N 36.0 W

Maximum sustained wind 35 mph

Movement WNW 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



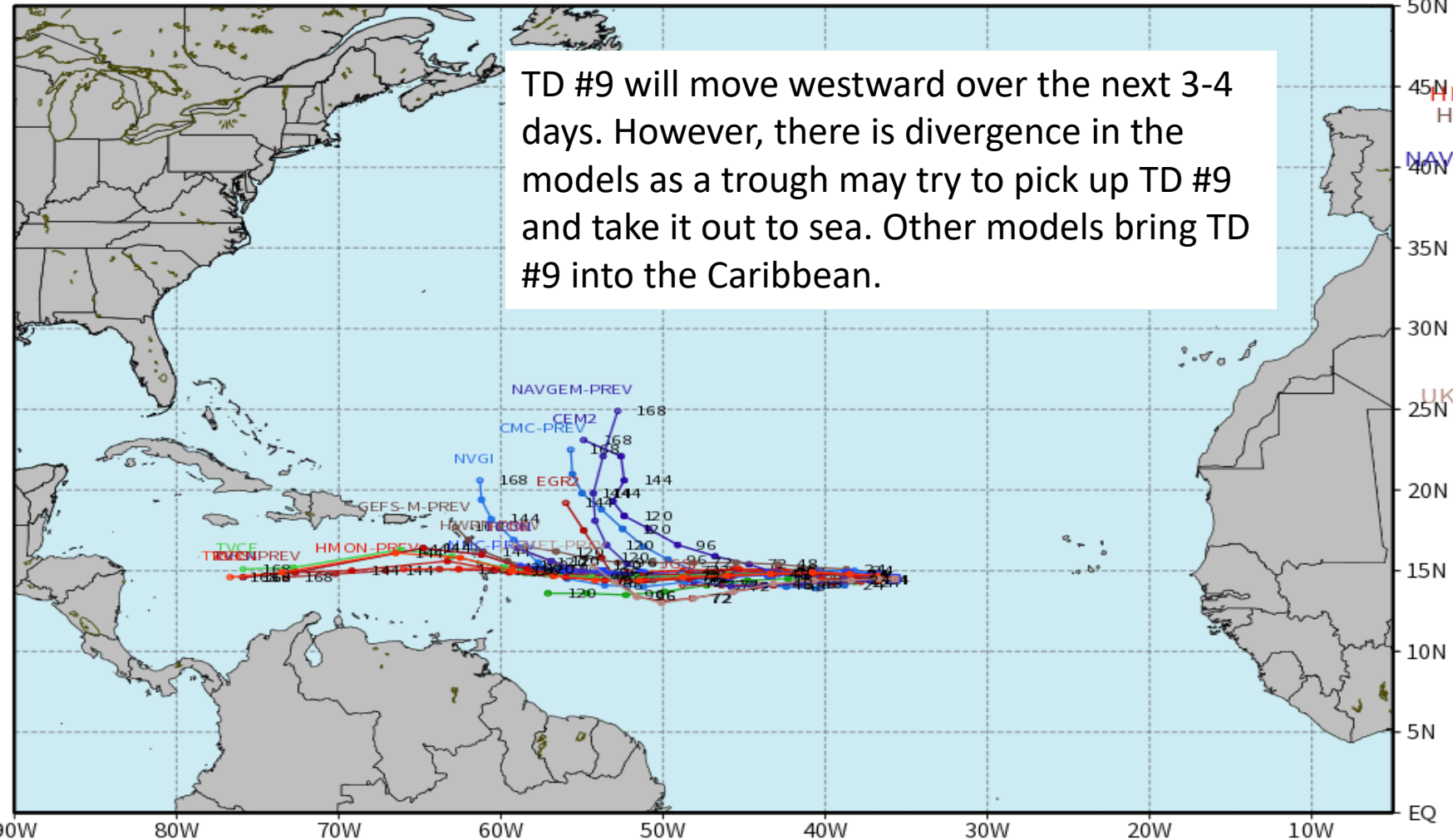
# Track Models (TD #9)

AL09 Guidance valid: 2018090812

TD #9 will move westward over the next 3-4 days. However, there is divergence in the models as a trough may try to pick up TD #9 and take it out to sea. Other models bring TD #9 into the Caribbean.

Track Models

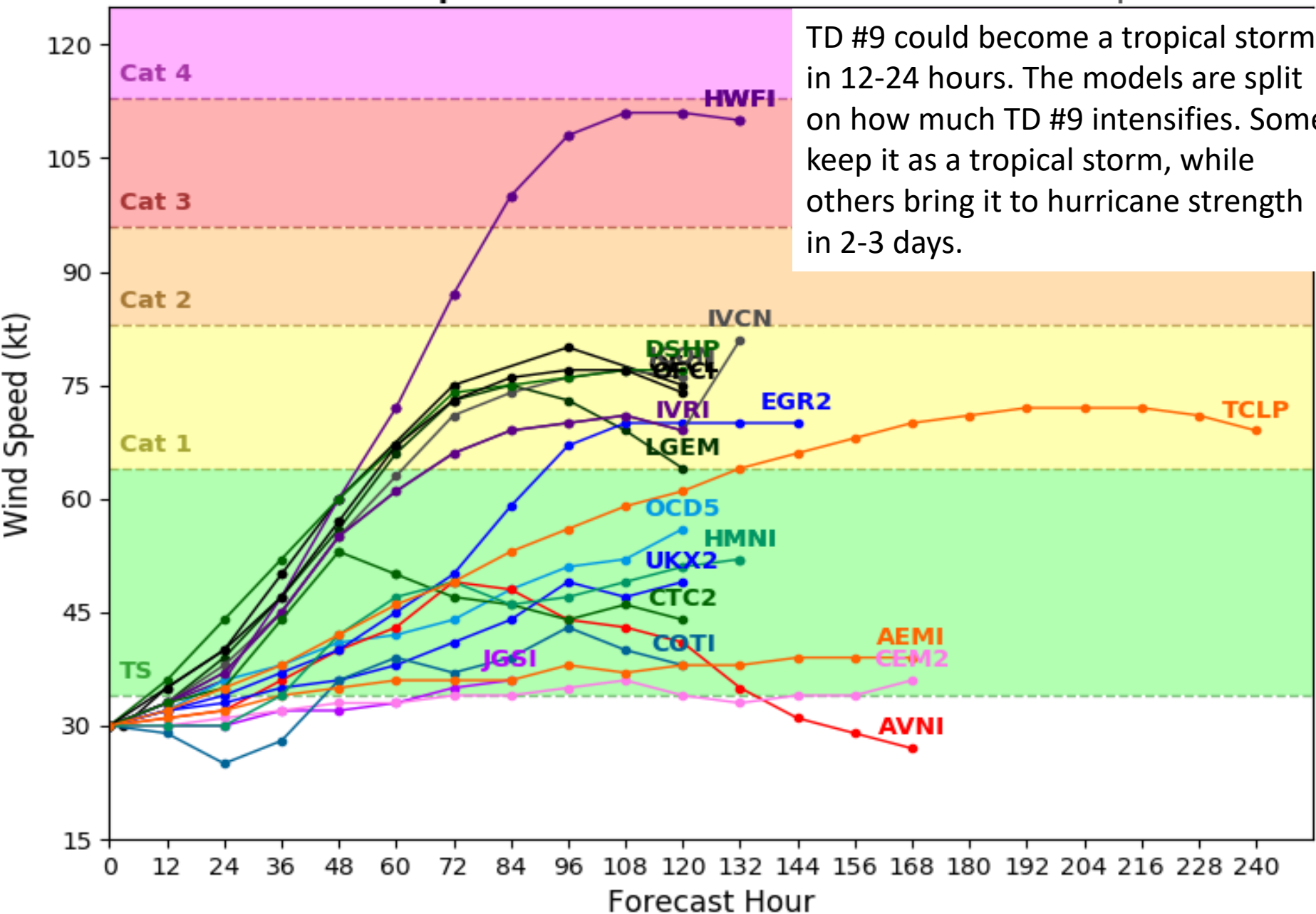
GEFS-M-PREV  
GFS-PREV  
CEM2  
CMC-PREV  
CTC2  
EGR2  
HMON-PREV  
HWRF-PREV  
JGSI  
NAVGEM-PREV  
NVGI  
NHC-PREV  
RVCN  
TCOA  
TCOE  
TCO  
TVCA  
TVCE  
TVCN  
TVCX  
UKMET-PREV



# Tropical Depression 09L Model Intensity Guidance

Initialized at 12z Sep 08 2018

Levi Cowan - [tropicaltidbits.com](http://tropicaltidbits.com)

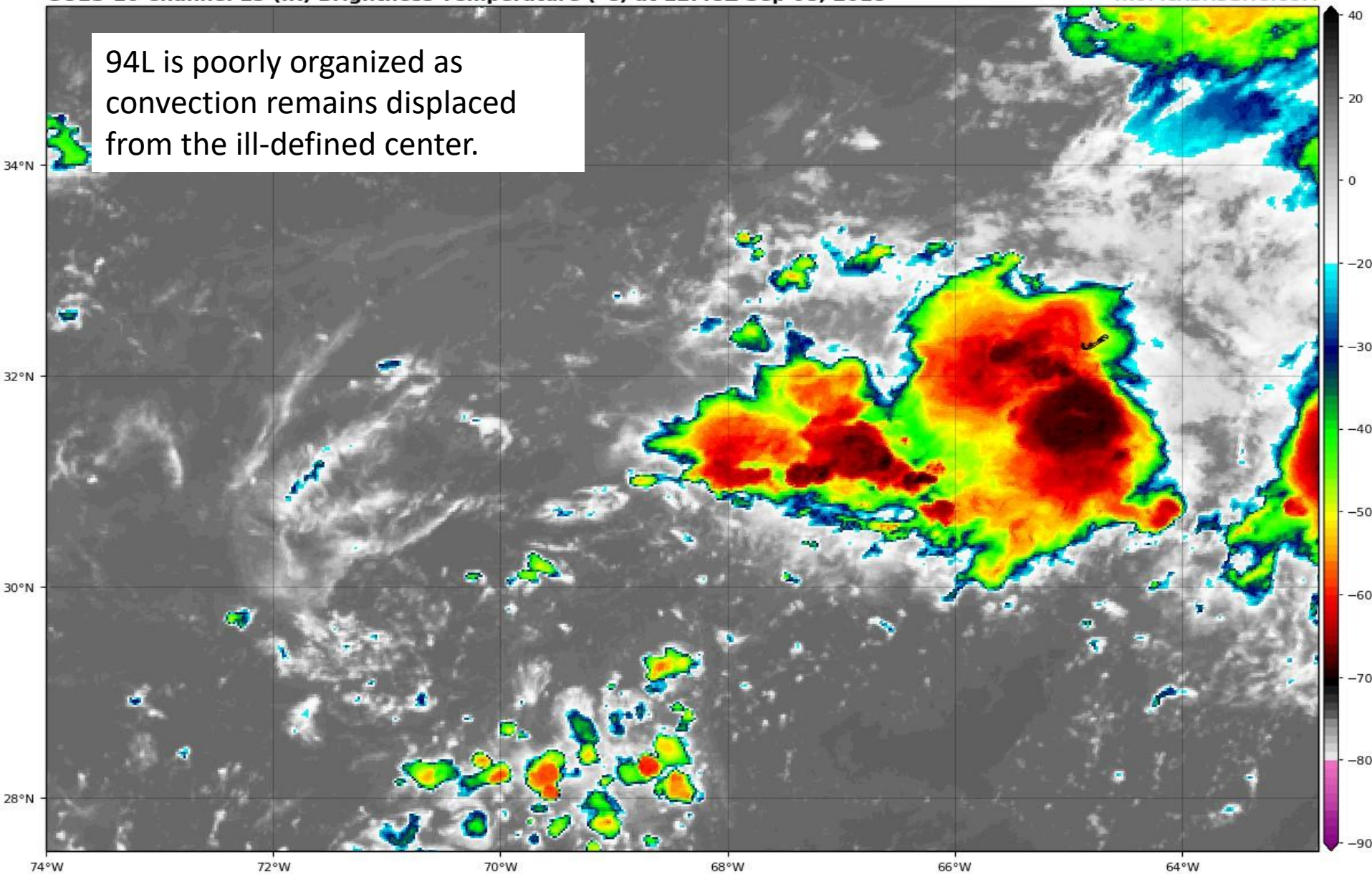


# Invest 94L Satellite Image

GOES-16 Channel 13 (IR) Brightness Temperature (°C) at 12:48Z Sep 08, 2018

TROPICALTIDBITS.COM

94L is poorly organized as convection remains displaced from the ill-defined center.







# Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



www.hurricanes.gov

Disturbance 1

94L will likely meander near Bermuda for the next few days. Development, if any, would be slow to occur. Formation chances through the next 5 days is only 10%.

1  
(10%)

8:00 am EDT  
Sat Sep 8 2018

100W 90W 80W 70W 60W 50W 40W 30W 20W

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

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

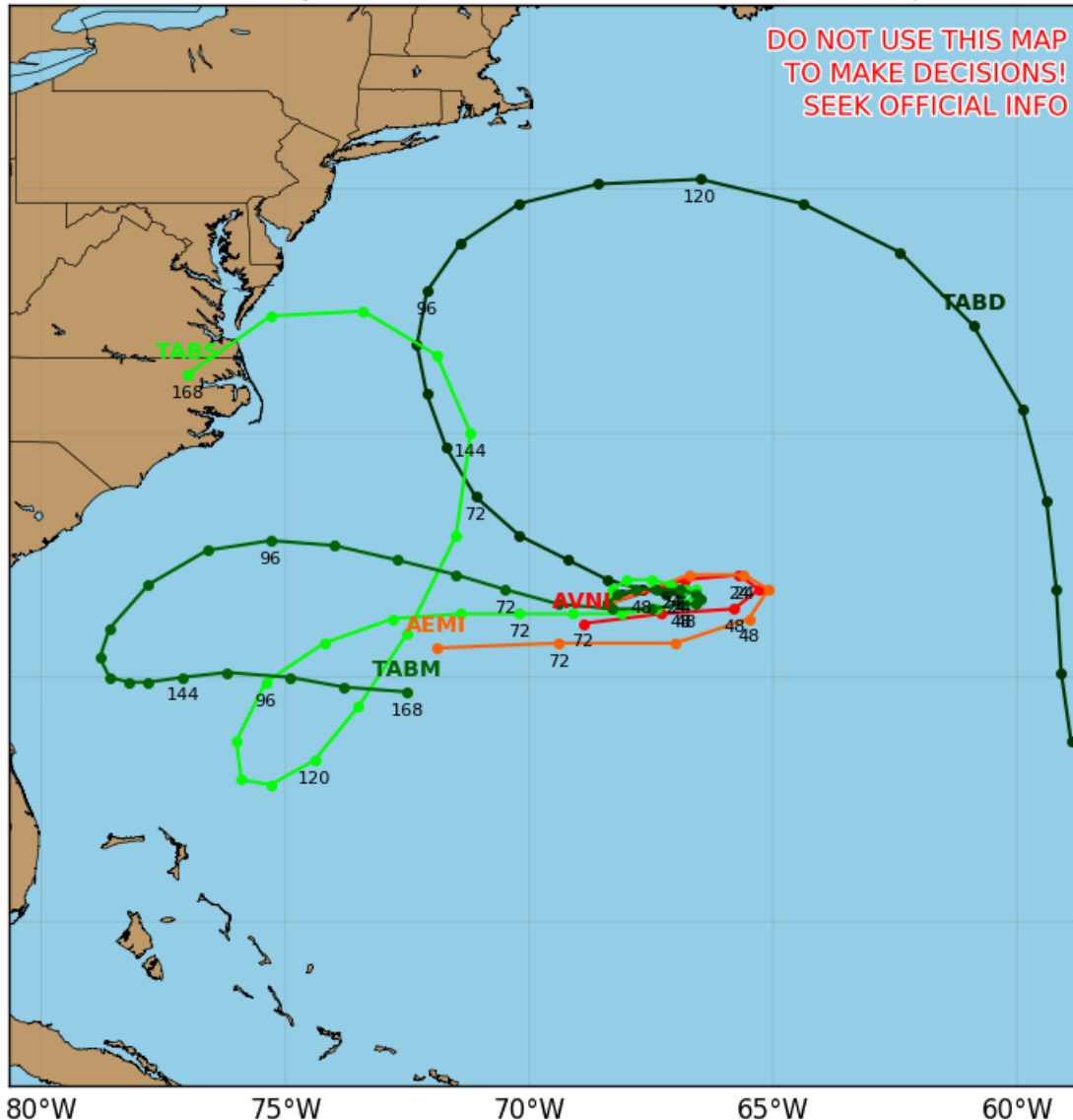
Post-Tropical Cyclone or Remnants

# Track Models (Invest 94L)

## Invest 94L Model Track Guidance

**Initialized at 12z Sep 08 2018**

Levi Cowan - [tropicaltidbits.com](http://tropicaltidbits.com)

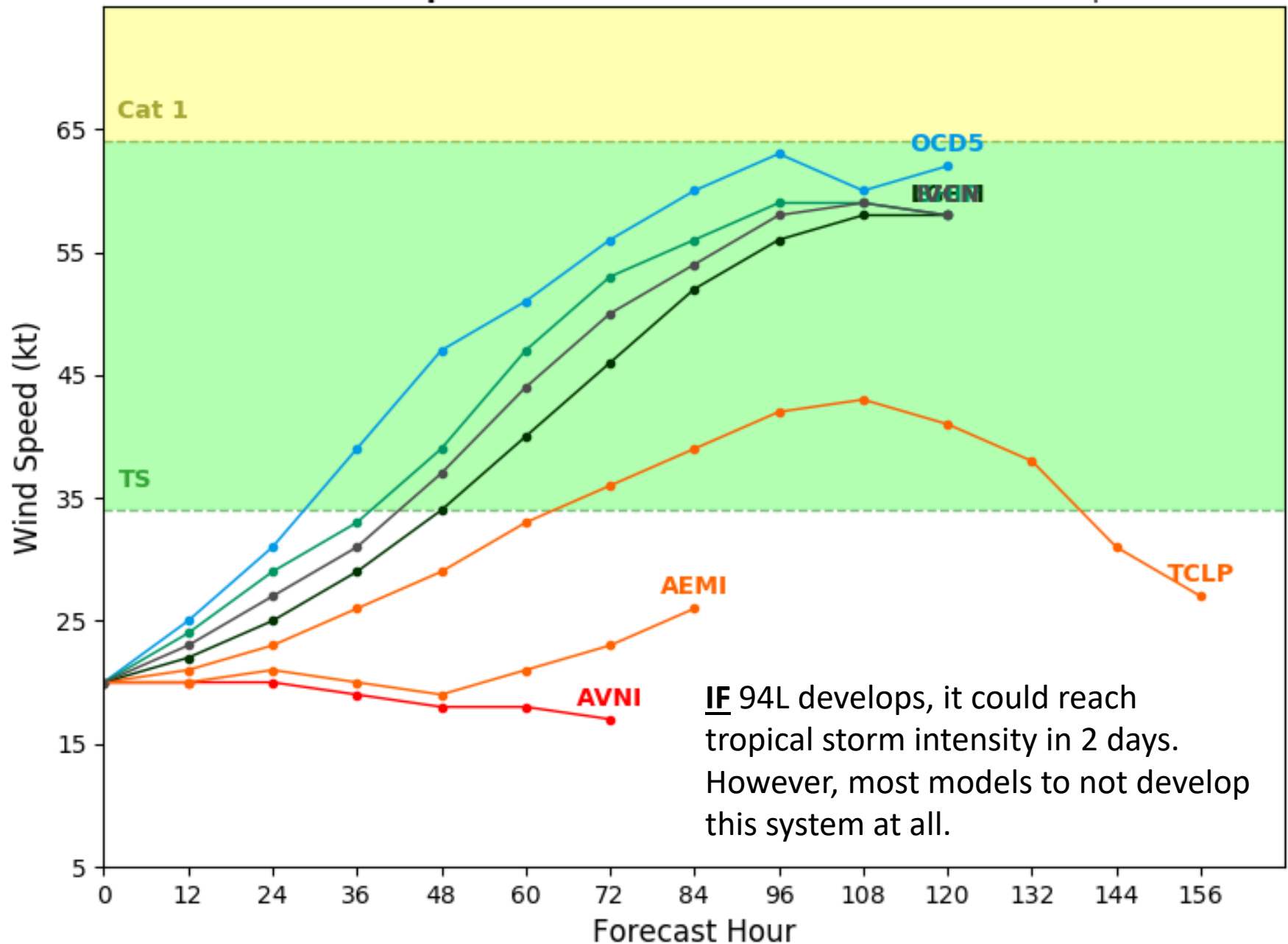


94L will meander around over the next several days over the western Atlantic. It could bring some enhance rain to Bermuda. Since 94L is expected to remain weak, it will have little to no impact on Florence's future track.

# Invest 94L Model Intensity Guidance

Initialized at 12z Sep 08 2018

Levi Cowan - tropicaltidbits.com





# Summary

- Florence is becoming better organized over the central Atlantic Ocean this morning.
- At 11 AM EDT Saturday, Tropical Storm Florence was located in the central Atlantic Ocean about 835 miles southeast of Bermuda, or approximately 1,630 miles east of Miami, Florida.
- Maximum sustained winds remain near 65 mph. Strengthening is forecast, and Florence could become a hurricane tonight or Sunday.
- Florence is moving slower, to the west near 8 mph, and this motion and speed is expected to continue for the next day or two while strengthening.
- A slight turn to the west-northwest along with an increase in forward speed is forecast next week, and conditions will allow for additional intensification to major hurricane by Monday or Tuesday.
- Beyond 4-5 days, there is still some disagreement in the computer models on the eventual track of Florence, and will be dependent on the strength of Florence as well as forecast steering currents. However, landfall could occur on Thursday along the Southeast U.S. coast.
- Hurricane Hunters and NOAA research aircraft are investigating the system and the surrounding environment over the weekend, and this extra data will go into the models, improving the forecasts.
- Tropical Storm Helene is located in the eastern Atlantic Ocean about 270 miles east-southeast of the Cabo Verde Islands with winds of 45 mph.
- Helene has not strengthened much since yesterday. However, strengthening is forecast for the next few days, and Helene could become a hurricane on Sunday.
- Helene will pass near or over the southern Cabo Verde Islands and continue moving west-northwestward into the eastern tropical Atlantic. A turn toward the northwest and north is expected during the middle to end of next week.
- Tropical Depression #9 is located about 1,680 miles east of the Lesser Antilles with winds of 35 mph.
- This system moved little yesterday, but has begun moving slowly west-northwestward. This general motion is expected during the next several days.
- Gradual strengthening is forecast, and TD #9 could become a tropical storm tonight or Sunday and a hurricane by early next week.
- The forecast track remains uncertain past 3-4 days as the system may be drawn northward by a trough or continue westward into the Caribbean.
- The next name on the list is Isaac.
- Invest 94L, located near Bermuda, is very disorganized with convection away from its ill-defined center.
- The NHC only gives this system a 10% chance of formation over the next 5 days as it generally meanders near Bermuda.
- Since this system is likely to remain weak, it will likely have little to no impact on Florence's future track.

**Florida Outlook:**

- The risk of direct impacts associated with Florence along the U.S. East Coast next week is increasing. However, there is still very large uncertainty in model forecasts of Florence's track, making it too soon to determine the exact location, magnitude, and timing of these impacts. Interests near and along the U.S. East Coast should monitor the progress of Florence through the weekend.
- Regardless of Florence's eventual track, large swells emanating from the storm will reach portions of the Florida East Coast late this weekend, resulting in life-threatening rip currents. Increasing impacts including large breaking waves, erosion and coastal flooding will be possible towards the middle of next week.
- It is also too early to tell if Helene and TD #9 will have any impact on Florida.

Another briefing packet will be issued late Sunday morning. For the latest information on the tropics, please visit the National Hurricane Center website at [www.hurricanes.gov](http://www.hurricanes.gov).



# TROPICAL UPDATE

Created by:

Cameron Young, Assistant State Meteorologist

[Cameron.Young@em.myflorida.com](mailto:Cameron.Young@em.myflorida.com)

State Meteorological Support Unit

Florida Division of Emergency  
Management

Users wishing to subscribe (approval pending) to this distribution list, register at [https://public.govdelivery.com/accounts/FLDEM/subscriber/new?topic\\_id=SERT\\_Met\\_Tropics](https://public.govdelivery.com/accounts/FLDEM/subscriber/new?topic_id=SERT_Met_Tropics).

Other reports available for subscription are available at

<https://public.govdelivery.com/accounts/FLDEM/subscriber/new?preferences=true>