



# TROPICAL UPDATE



5 PM EDT

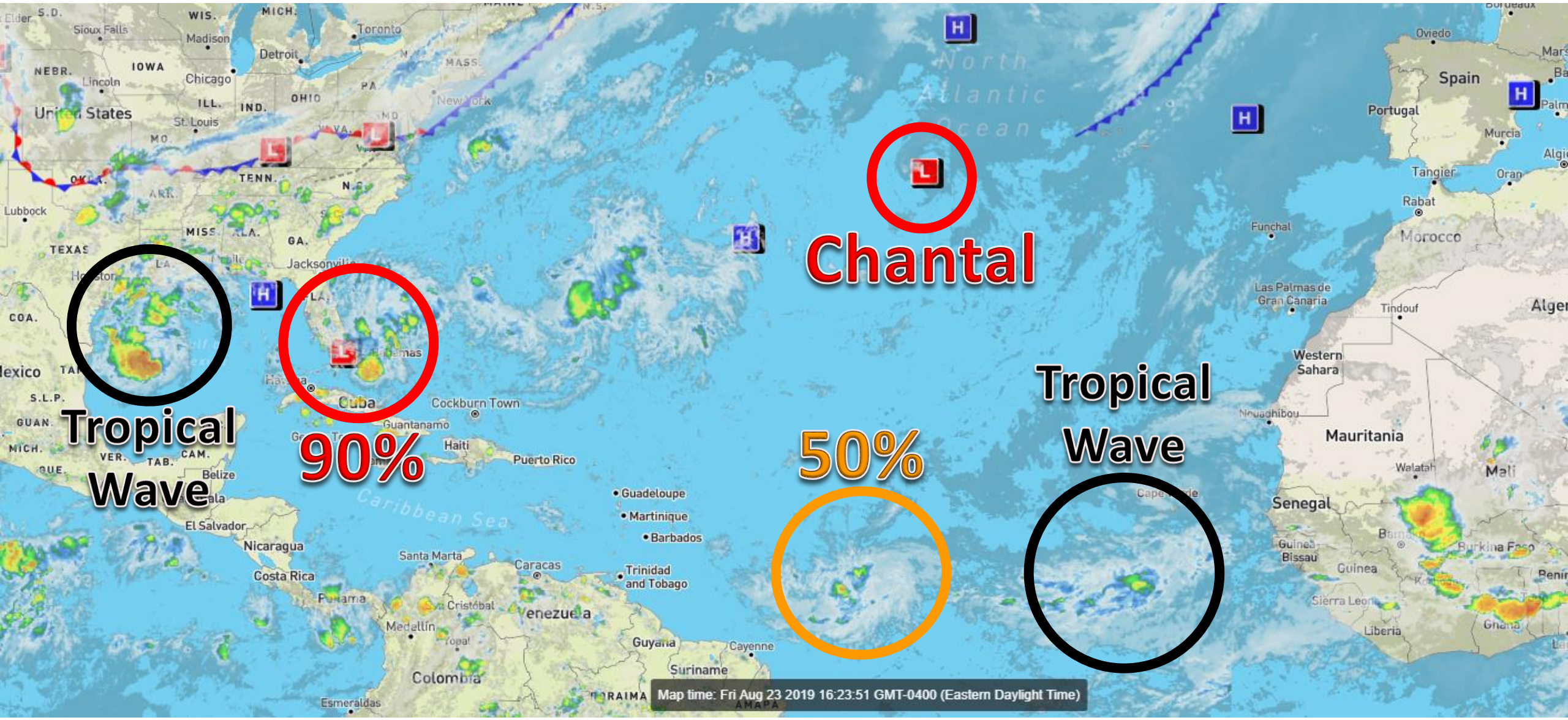
Friday, August 23, 2019

Tropical Depression Chantal, Invest 98L  
(90%), Invest 99L (50%)

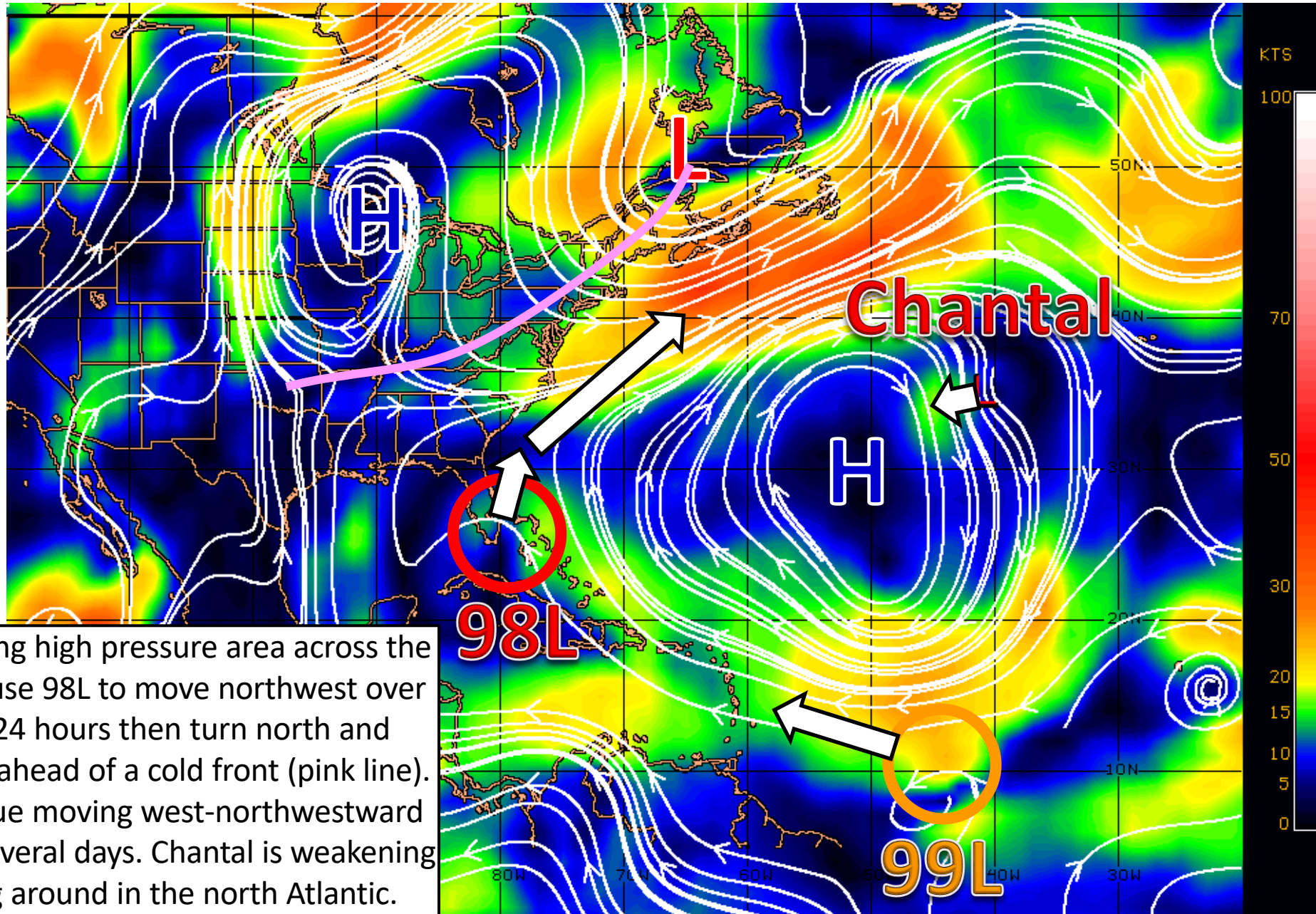
This update is intended for government and emergency response officials, and is provided for informational and situational awareness purposes only. Forecast conditions are subject to change based on a variety of environmental factors. For additional information, or for any life safety concerns with an 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.hurricanes.gov](http://www.hurricanes.gov).

# Atlantic Basin Satellite Image

Chance of development: — None    — Low    — Medium    — High

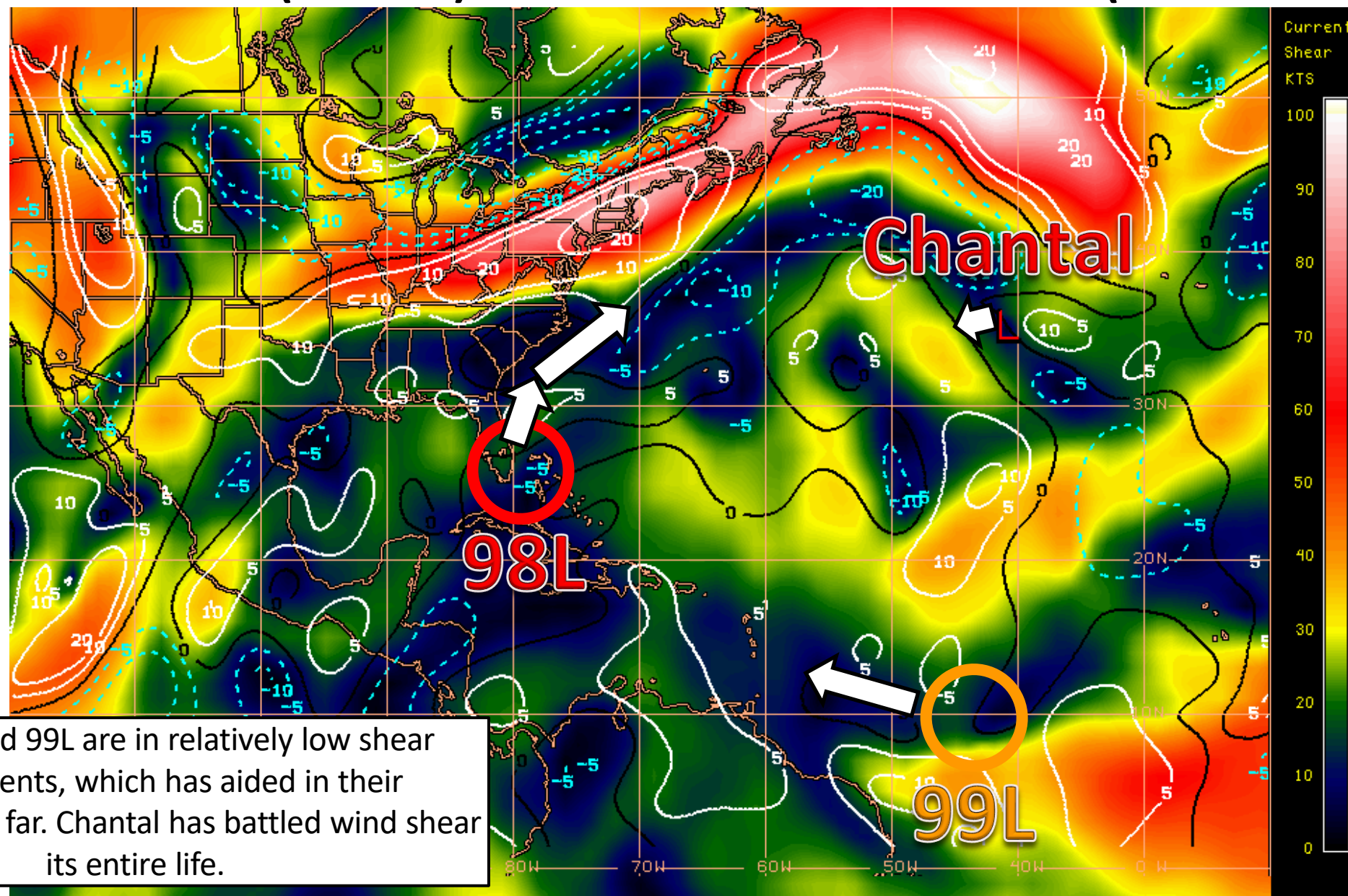


# Steering Currents



A large, sprawling high pressure area across the Atlantic will cause 98L to move northwest over the next 12-24 hours then turn north and northeastward ahead of a cold front (pink line). 99L will continue moving west-northwestward over the next several days. Chantal is weakening while looping around in the north Atlantic.

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



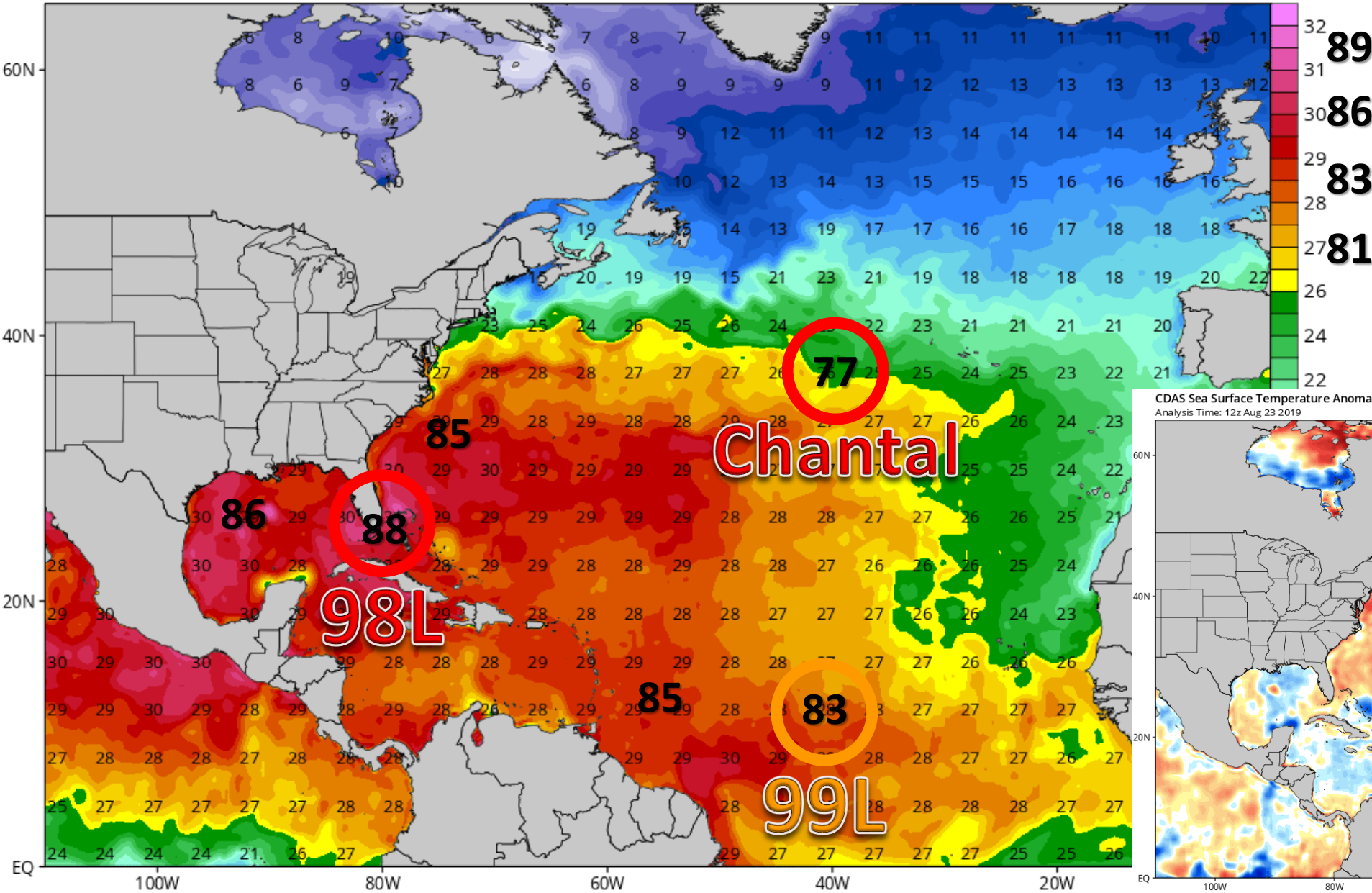
Both 98L and 99L are in relatively low shear environments, which has aided in their organization so far. Chantal has battled wind shear its entire life.

# North Atlantic Sea Surface Temperatures and Anomalies

CDAS Sea Surface Temperature (°C)

Analysis Time: 12z Aug 23 2019

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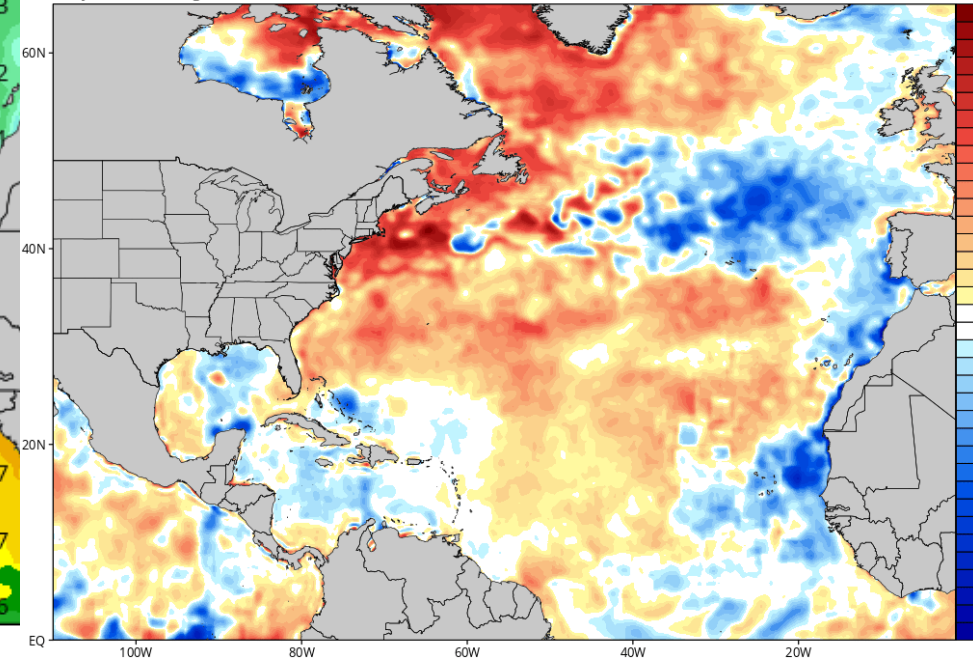


Water temperatures near and ahead of 98L and 99L are warm enough to support tropical development. Chantal is in cooler waters, aiding in its weakening.

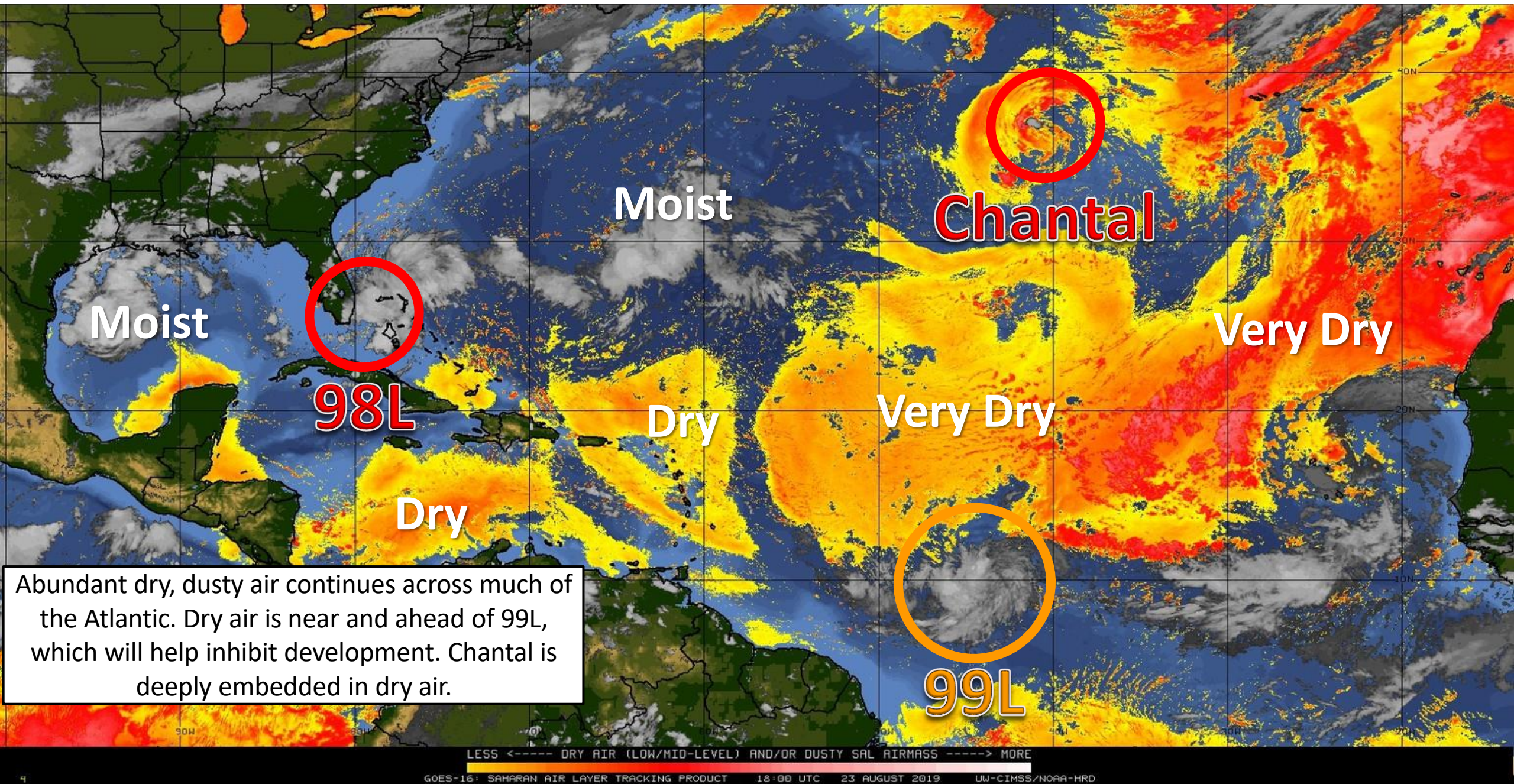
CDAS Sea Surface Temperature Anomaly (°C) (based on CFSR 1981-2010 Climatology)

Analysis Time: 12z Aug 23 2019

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# Dry Air & Saharan Dust





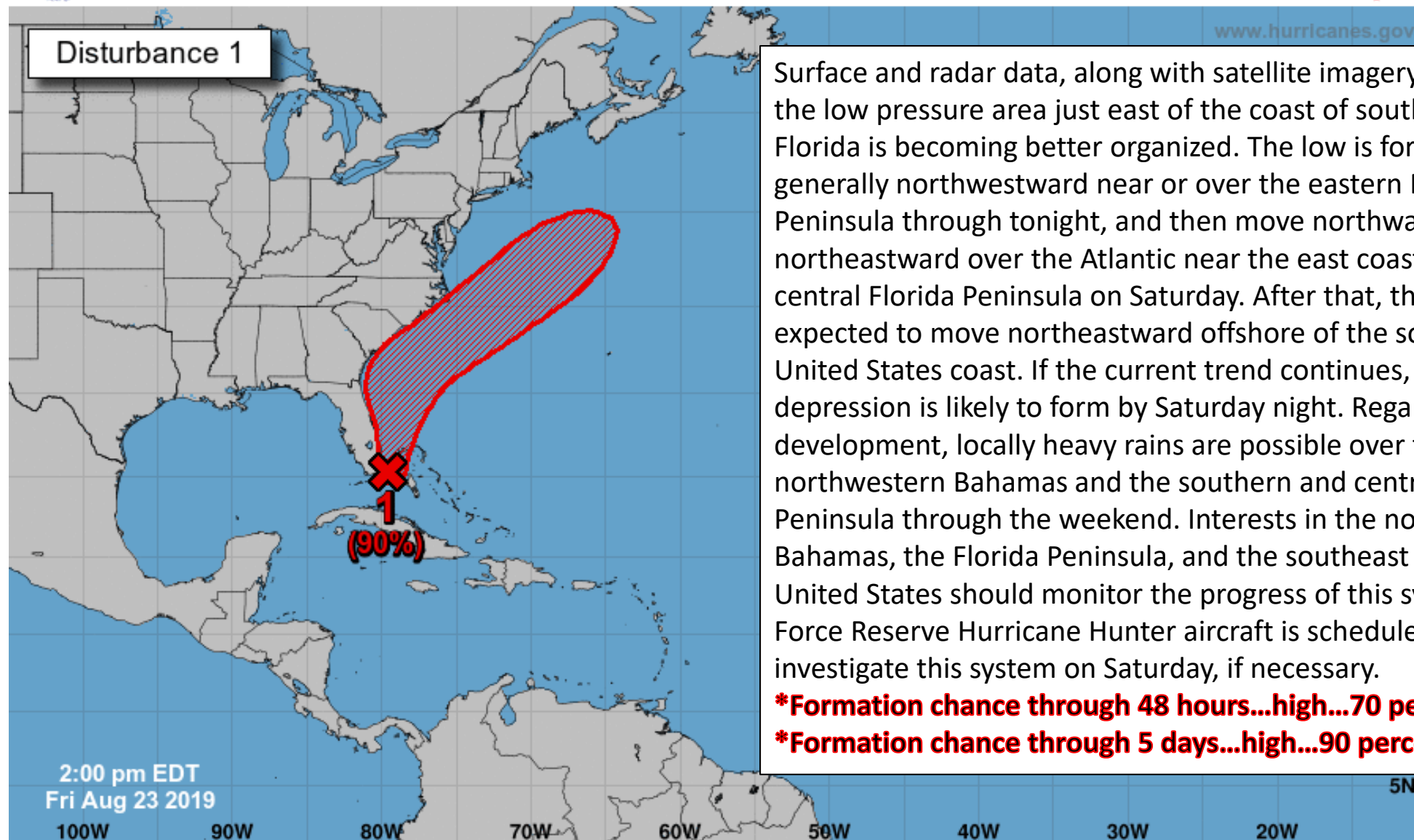
# Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



[www.hurricanes.gov](http://www.hurricanes.gov)

Disturbance 1



Surface and radar data, along with satellite imagery, indicate that the low pressure area just east of the coast of southeastern Florida is becoming better organized. The low is forecast to move generally northwestward near or over the eastern Florida Peninsula through tonight, and then move northward to northeastward over the Atlantic near the east coast of the central Florida Peninsula on Saturday. After that, the system is expected to move northeastward offshore of the southeastern United States coast. If the current trend continues, a tropical depression is likely to form by Saturday night. Regardless of development, locally heavy rains are possible over the northwestern Bahamas and the southern and central Florida Peninsula through the weekend. Interests in the northwestern Bahamas, the Florida Peninsula, and the southeast coast of the United States should monitor the progress of this system. An Air Force Reserve Hurricane Hunter aircraft is scheduled to investigate this system on Saturday, if necessary.

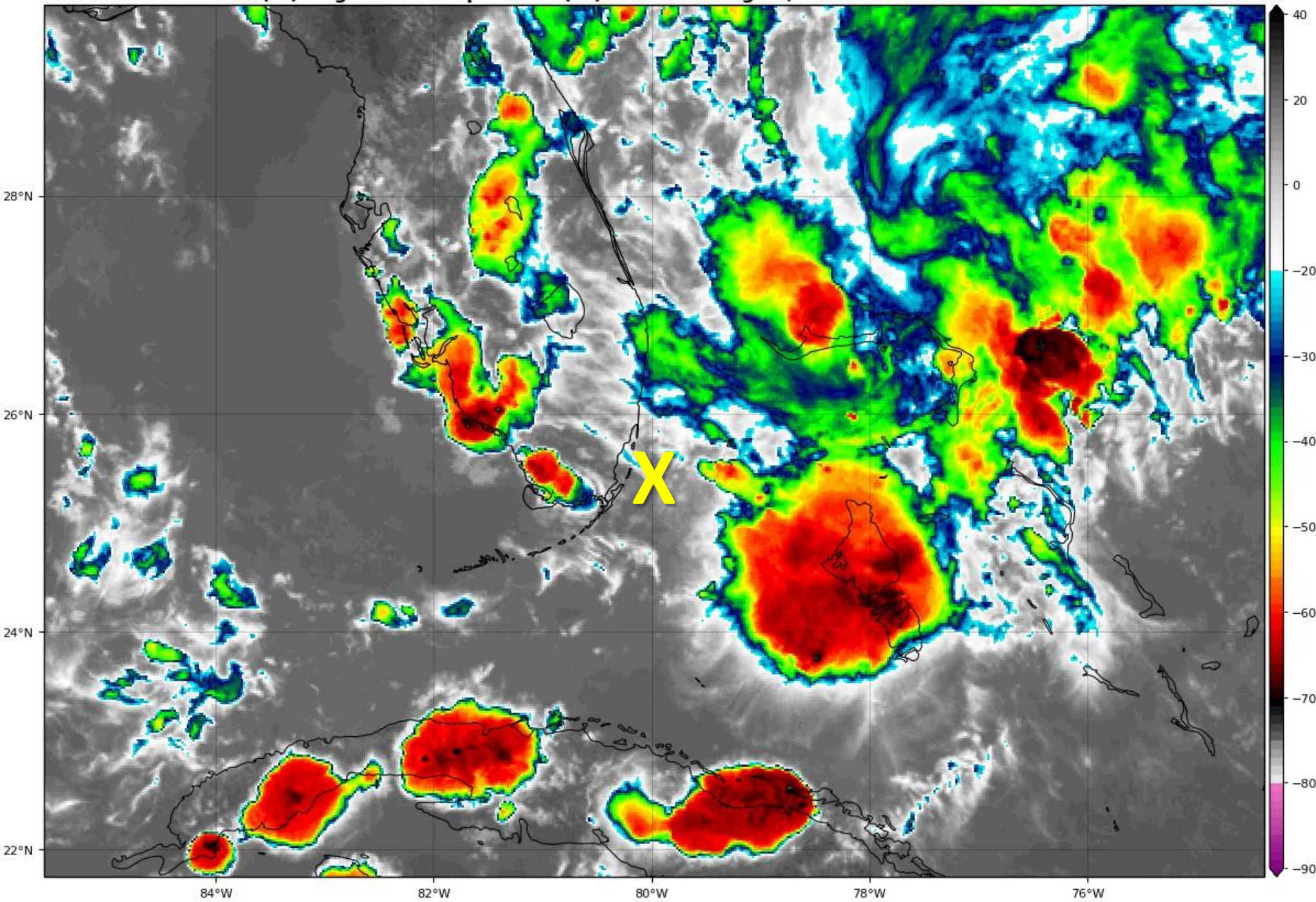
**\*Formation chance through 48 hours...high...70 percent.**

**\*Formation chance through 5 days...high...90 percent.**

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

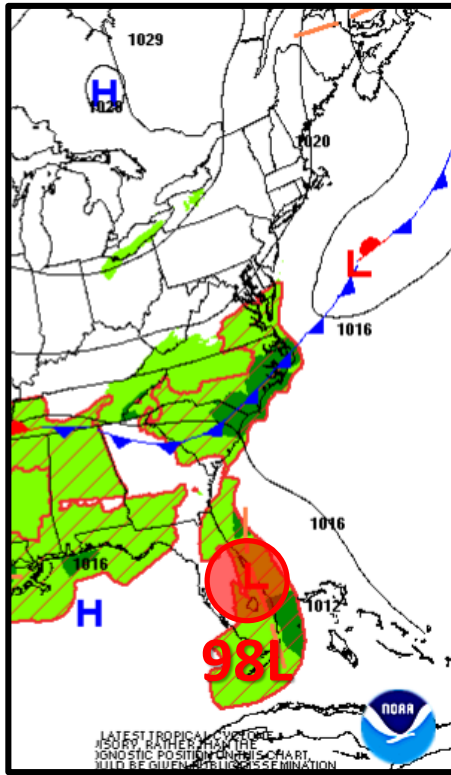


## Invest 98L Satellite Image

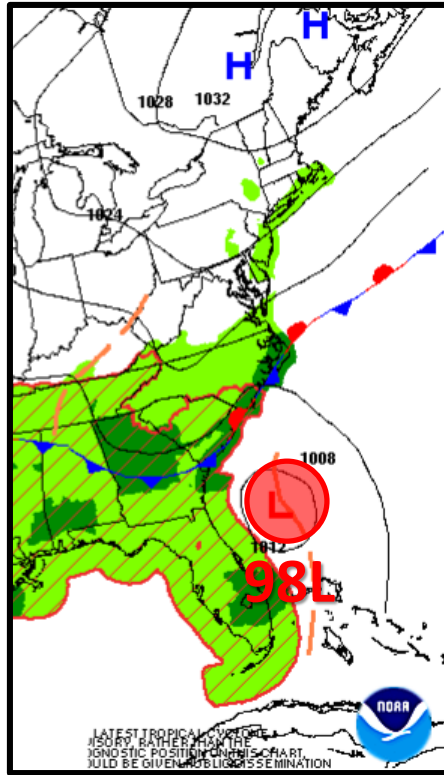
Most of the showers and thunderstorms remain displaced off to the east and northeast of the center (yellow X). This system has become better organized since yesterday. However, land interaction over the next 24 hours will inhibit development until it moves back into the Atlantic Saturday.

# Forecast Weather Maps with Fronts

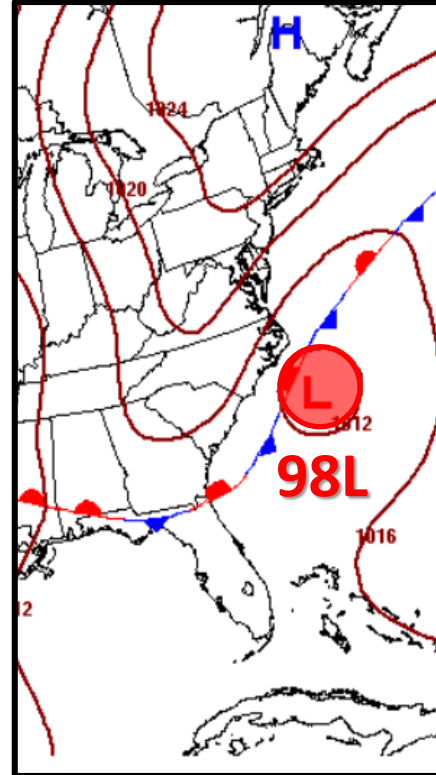
← Possible Tropical Depression or Tropical Storm →



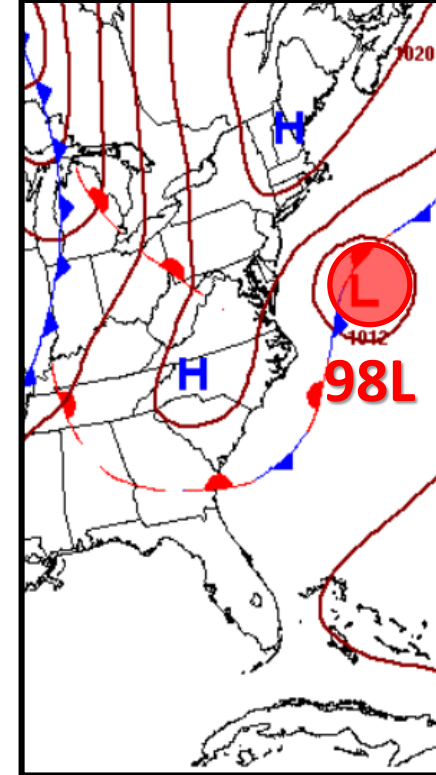
**Saturday**



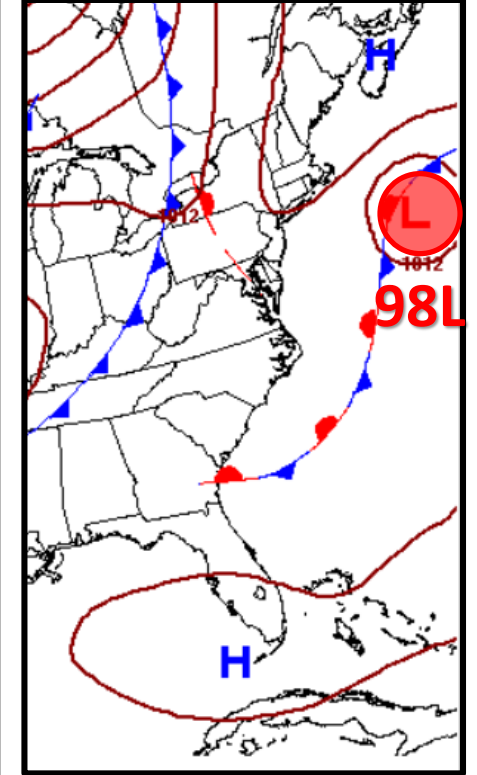
**Sunday**



**Monday**



**Tuesday**



**Wednesday**

Invest 98L will move near or over the Florida Peninsula today and Saturday before moving offshore sometime Saturday. At the same time, a cold front will move southward toward the Gulf Coast, which will steer 98L (or possibly a tropical depression or tropical storm) northeastward early next week, paralleling the U.S. East Coast. Locally heavy rainfall will be possible across Central and South Florida over the weekend.

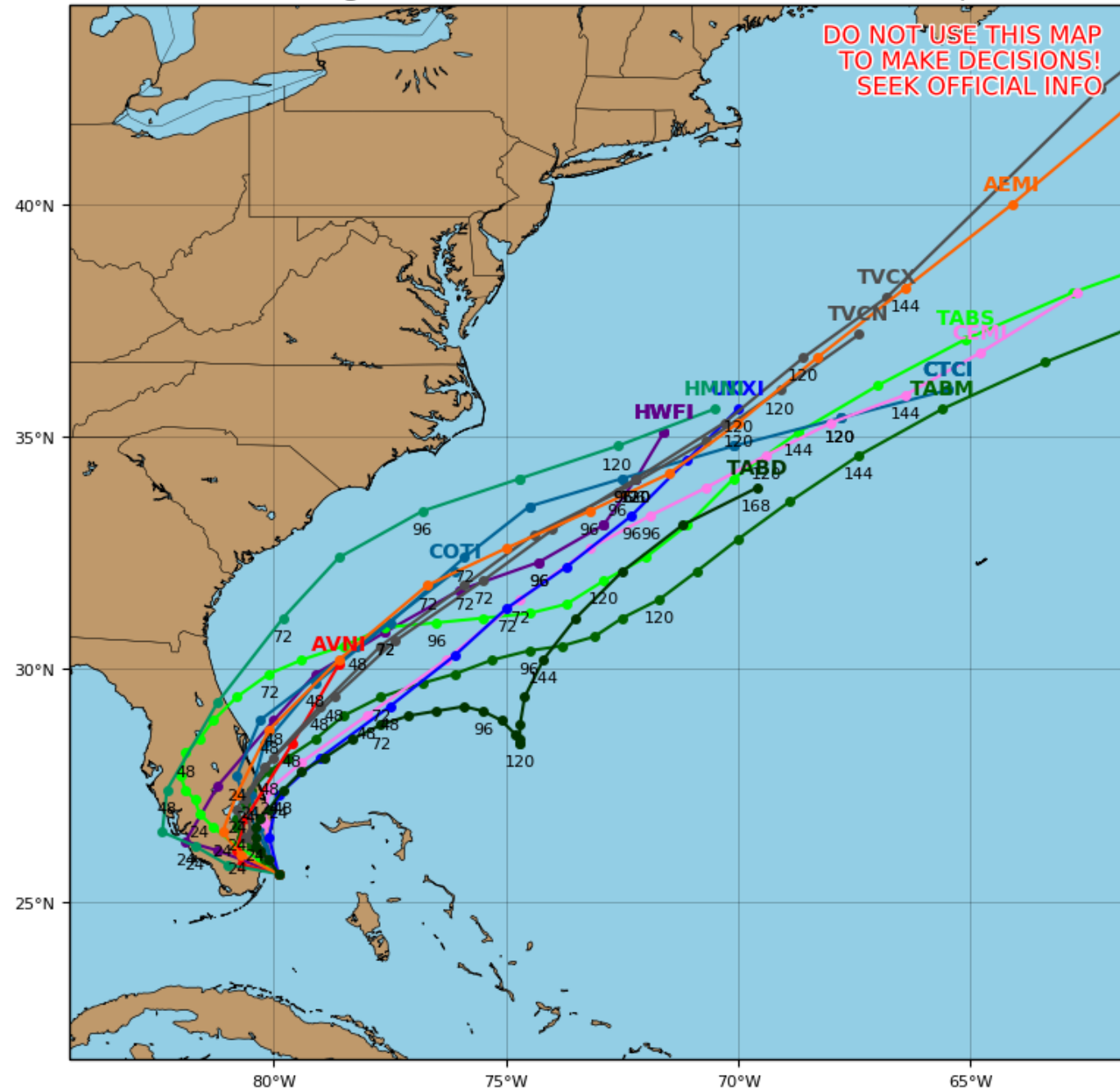
## Invest 98L Model Tracks

98L will move northwestward near or over the Florida Peninsula tonight before turning back toward the Atlantic. After 98L moves offshore of the Florida Peninsula Saturday, it will continue to move northeastward between the U.S. East Coast and Bermuda next week.

## Invest 98L Model Track Guidance

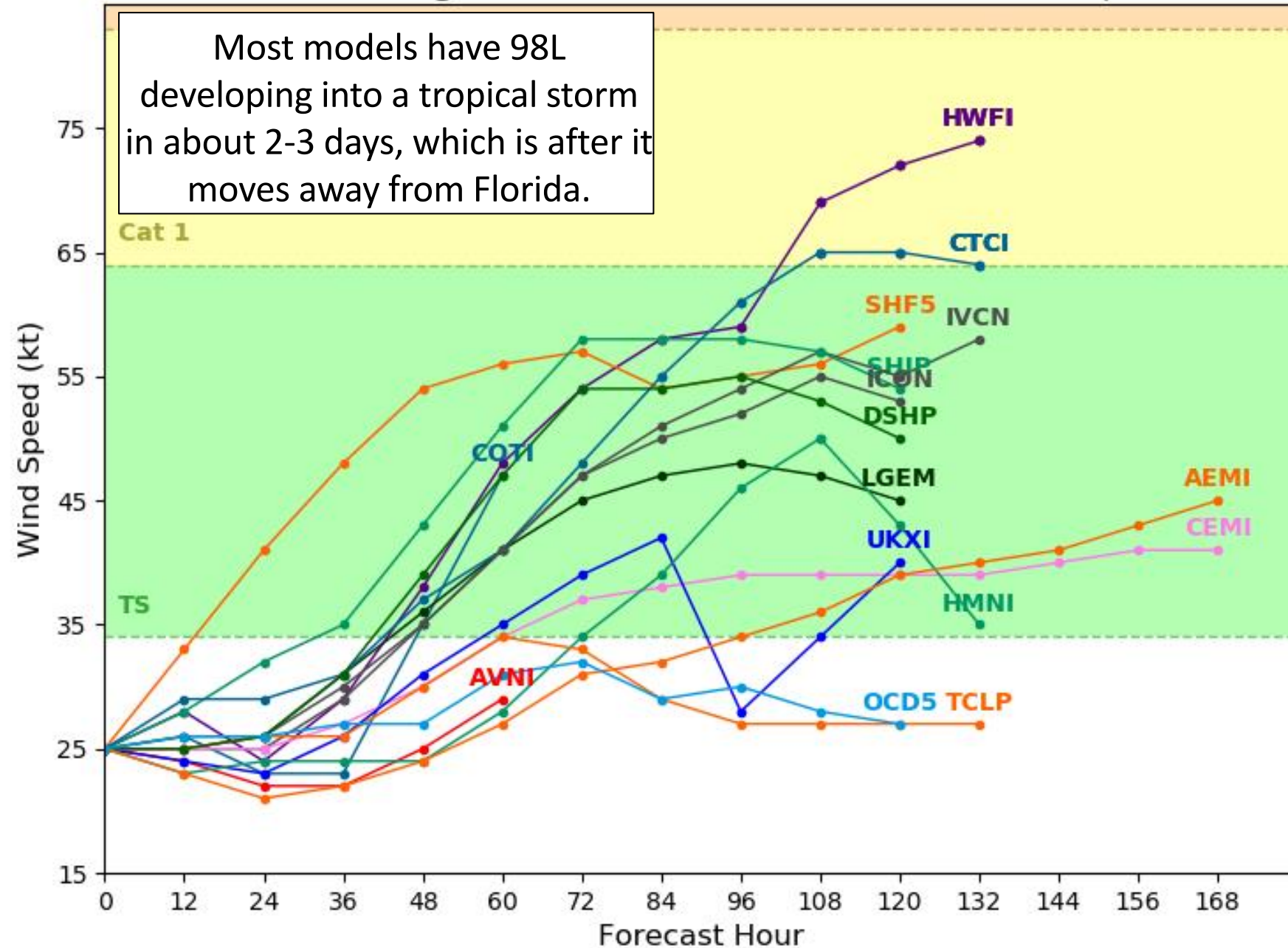
Initialized at 18z Aug 23 2019

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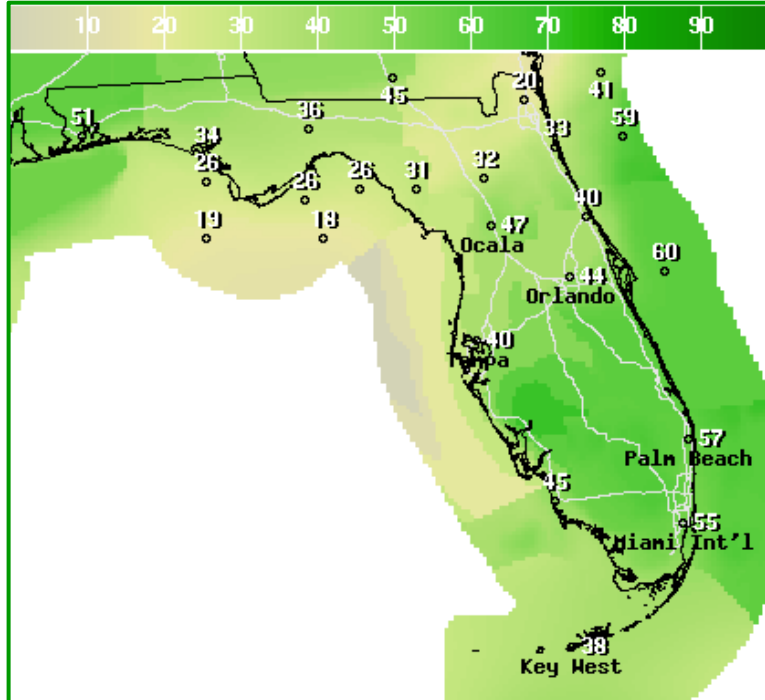


**Initialized at 18z Aug 23 2019**

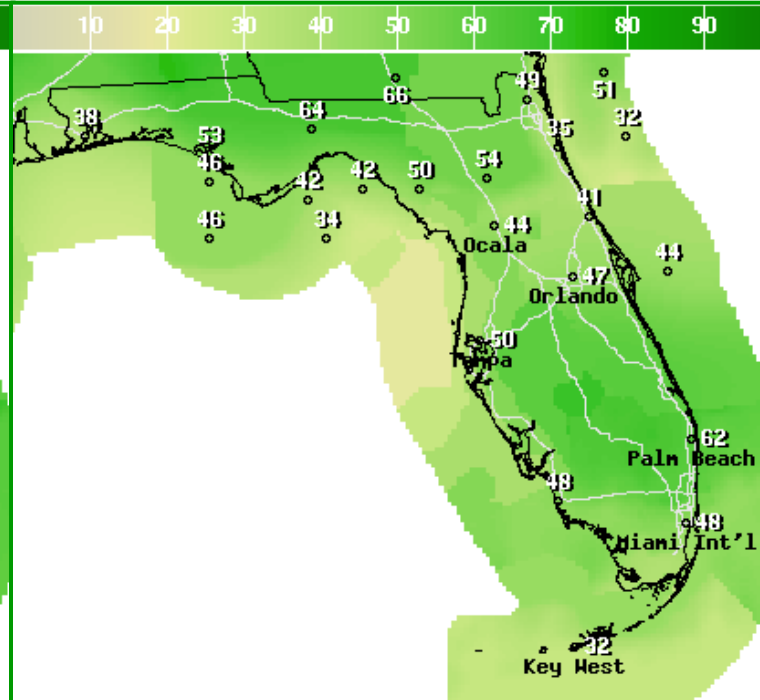
Most models have 98L developing into a tropical storm in about 2-3 days, which is after it moves away from Florida.



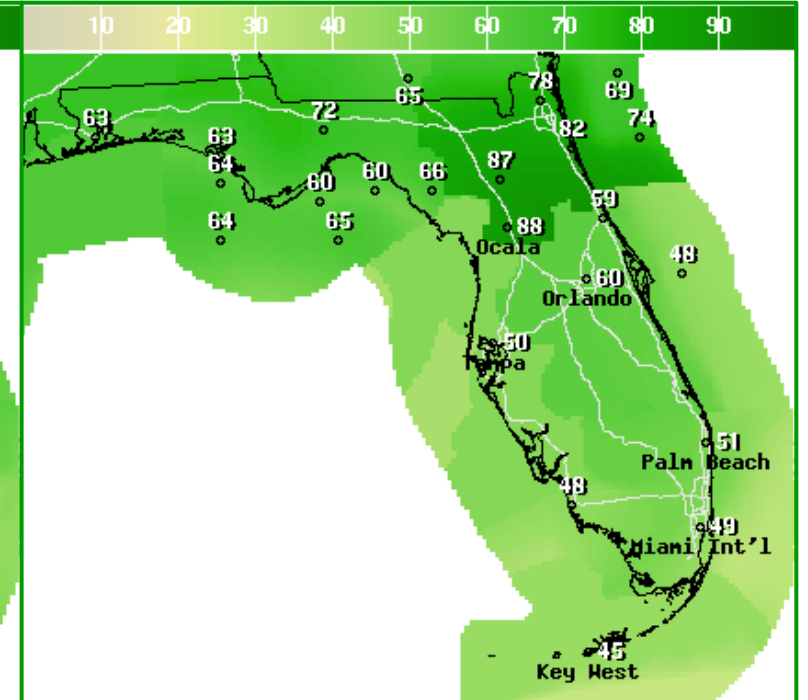
# Rain Chances Into Early Next Week



**Saturday**



**Sunday**



**Monday**

Rain chances will remain high as Invest 98L moves near or over South Florida. 98L will then turn northward or northeastward on Saturday and move back offshore into the Atlantic. In addition to 98L, a cold front will also move southward into North Florida, enhancing rain chances across the northern part of the state into early next week.

# Rainfall Totals Next 3 Days

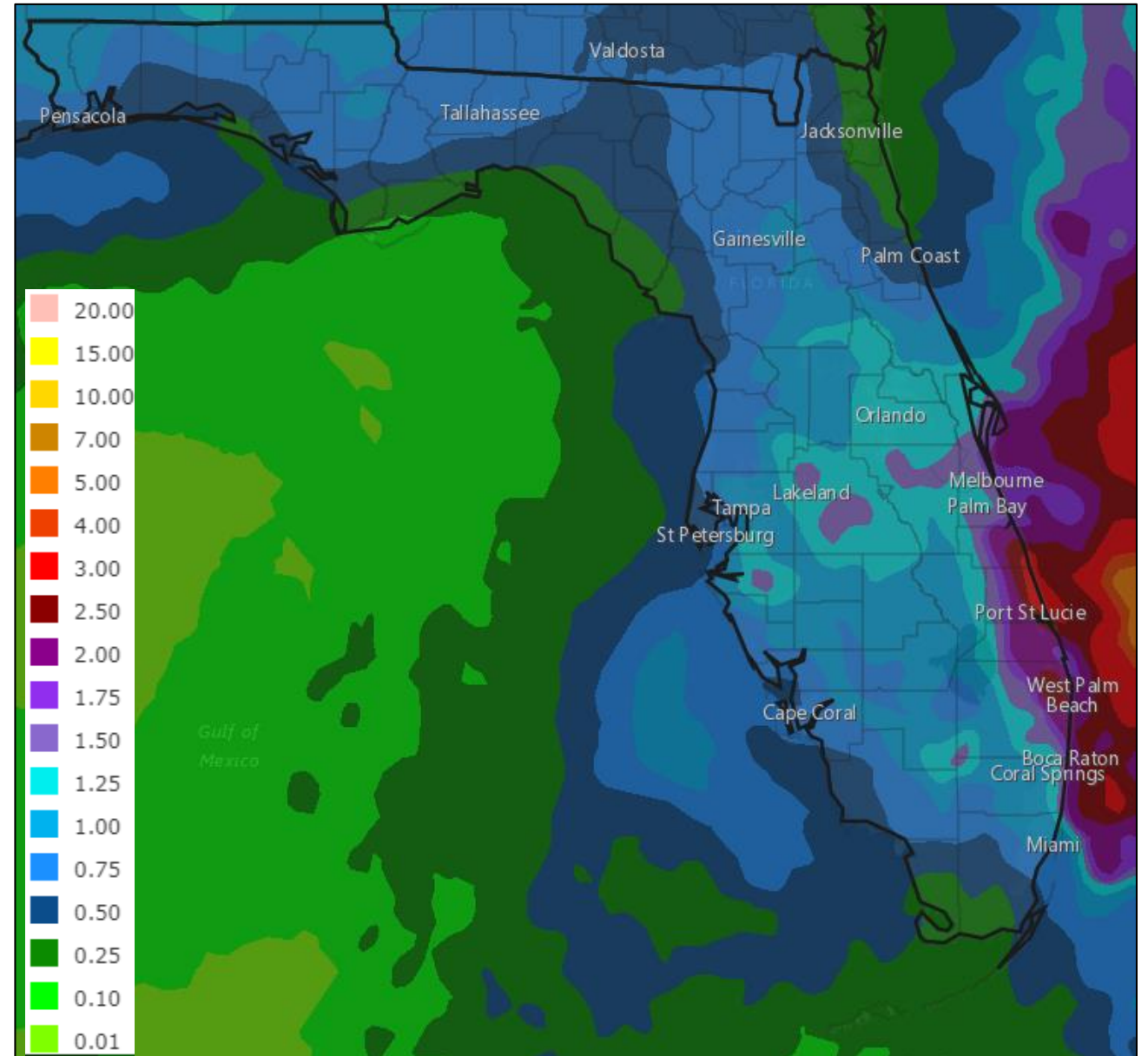
**MARGINAL  
(MRGL)**

**Isolated flash  
floods possible**

Localized and  
primarily affecting  
places that can  
experience rapid  
runoff with heavy  
rainfall.

## Flash Flood Risk Friday

The latest 3-day rainfall forecast confines the heavier rainfall amounts to the immediate coast. Still, 1-3" of rain is possible across much of the Peninsula with higher values near the coast. Localized totals of 4"+ are possible along the immediate East Coast. There remains a **Marginal Risk for flash flooding** (level 1 of 4) for tonight across South Florida.





# Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



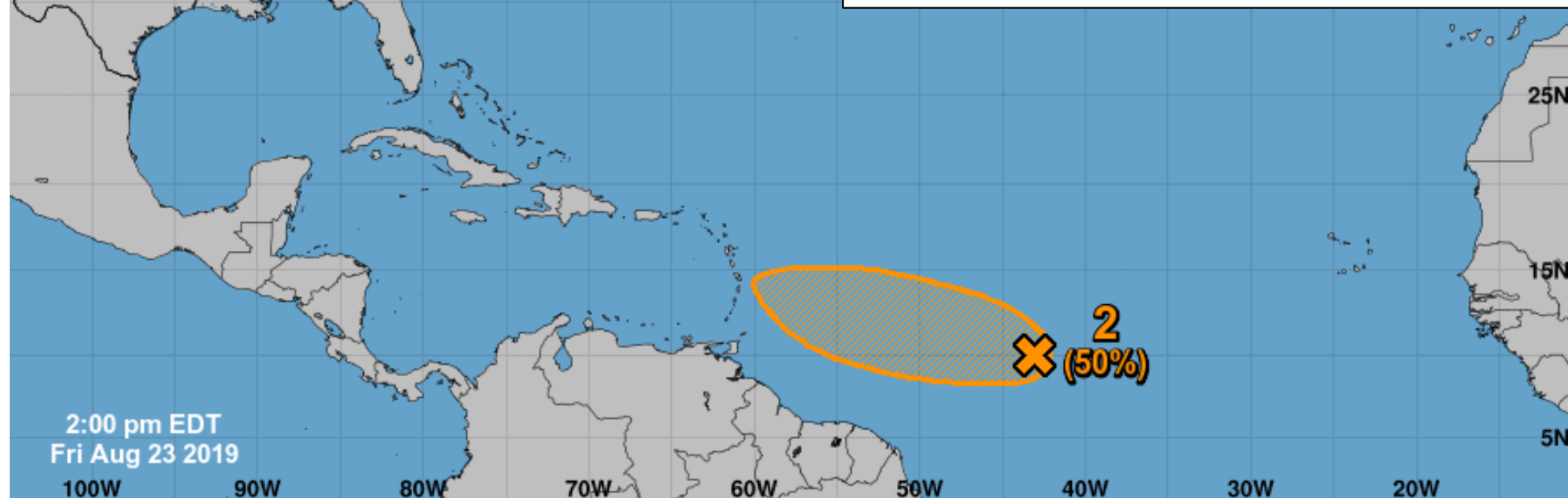
[www.hurricanes.gov](http://www.hurricanes.gov)

Disturbance 2

Recent satellite wind data indicate that a low pressure area has formed in association with a tropical wave located about 1300 miles east-southeast of the Windward Islands. Additional development of this system is possible during the next few days, and a tropical depression could form late this weekend or early next week as it moves generally westward to west-northwestward near 15 mph.

**\*Formation chance through 48 hours...medium...40 percent.**

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

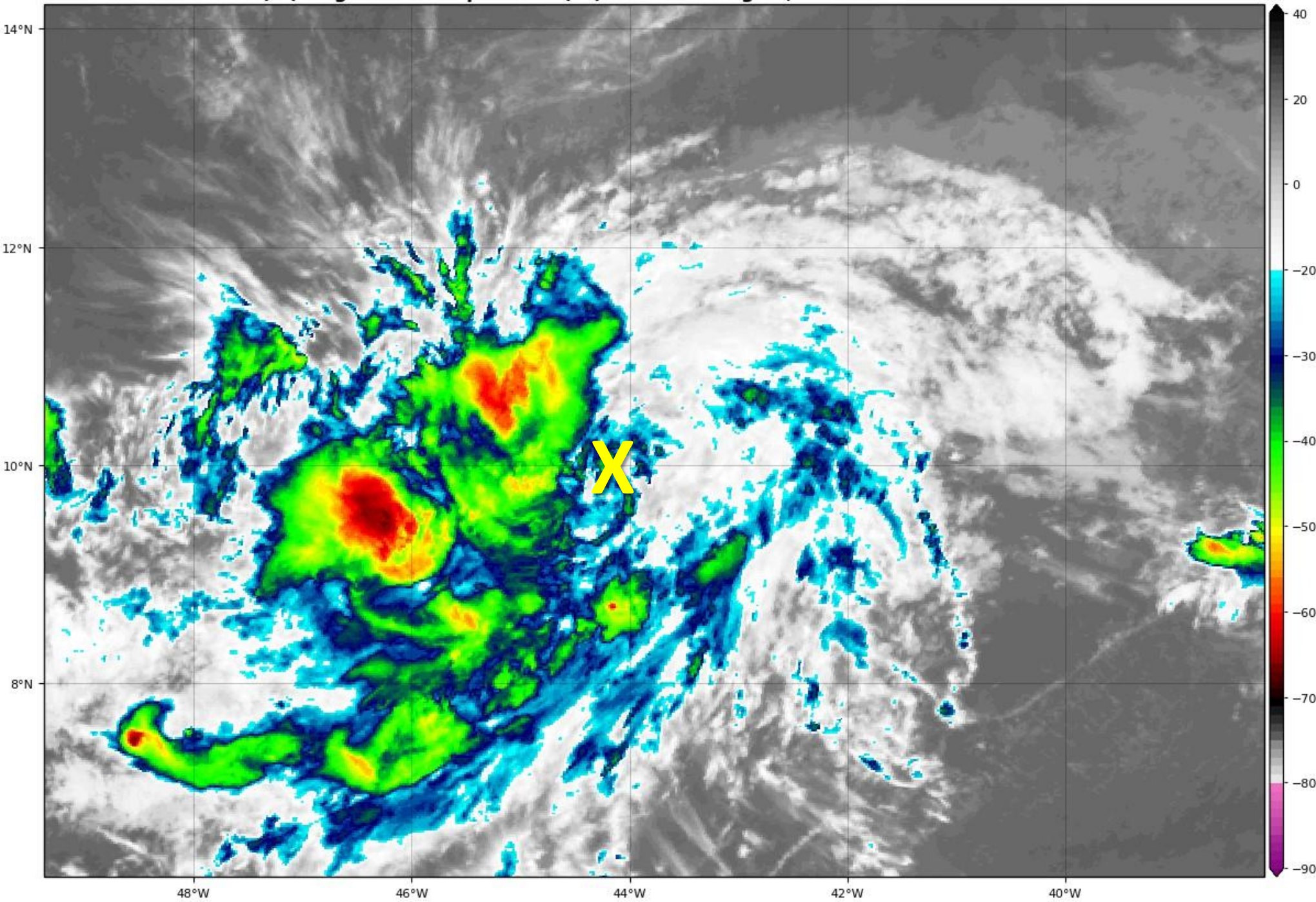


2:00 pm EDT  
Fri Aug 23 2019

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 99L Satellite Image

Showers and thunderstorms have increased over the last 24 hours. The wave is also more organized than it was at this time yesterday. It has continued to increase in organization through today.

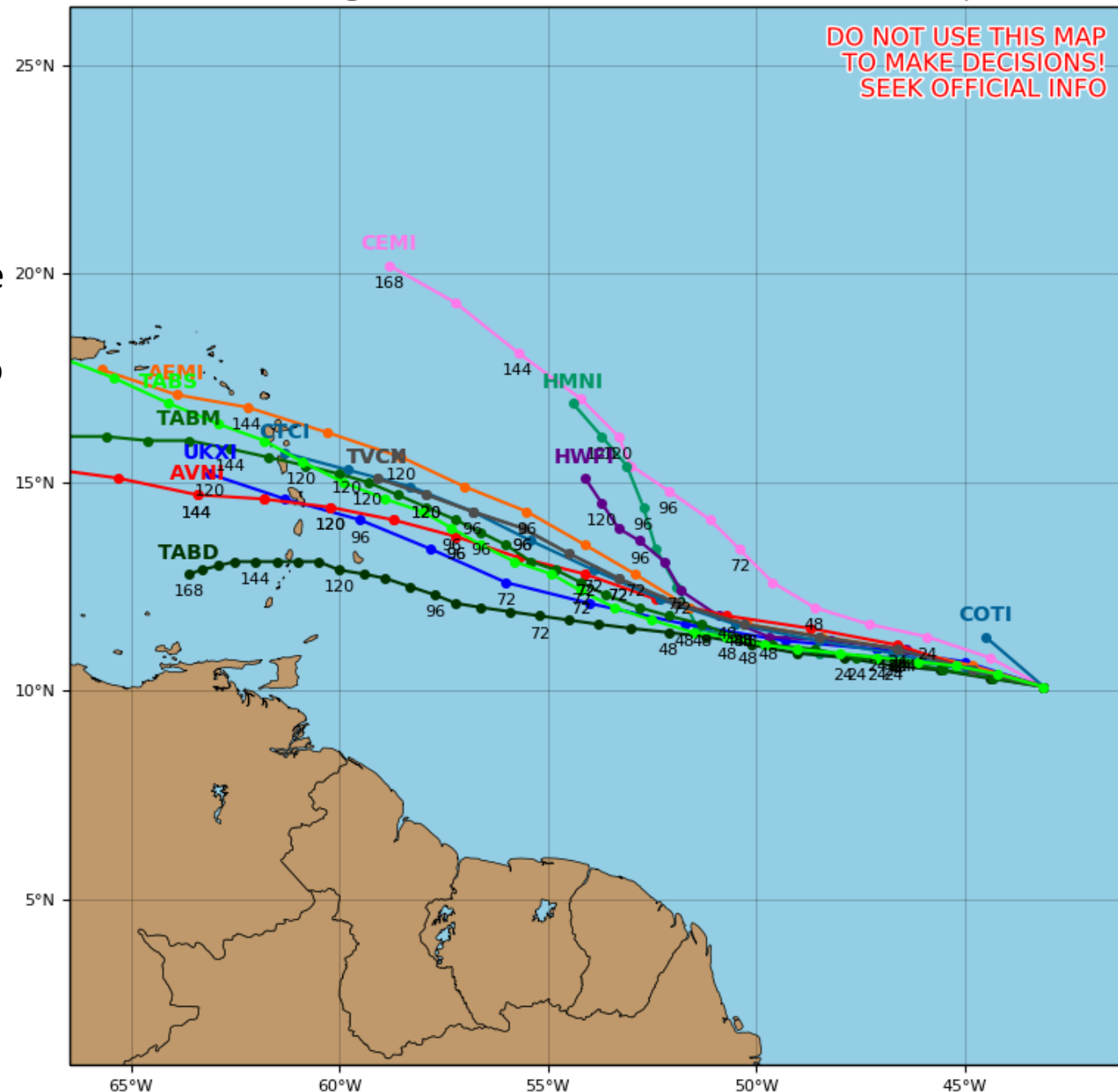
# Invest 99L Model Guidance

Invest 99L will generally move westward or west-northwestward over the next several days. If it maintains its organization, it could reach the Lesser Antilles in about 5 days. Statistical models (which do NOT account for the current state of the atmosphere) are likely strengthening the system too much. Dynamical models (which account for current atmospheric conditions) show tropical depression to tropical storm strength.

## Invest 99L Model Track Guidance

Initialized at 18z Aug 23 2019

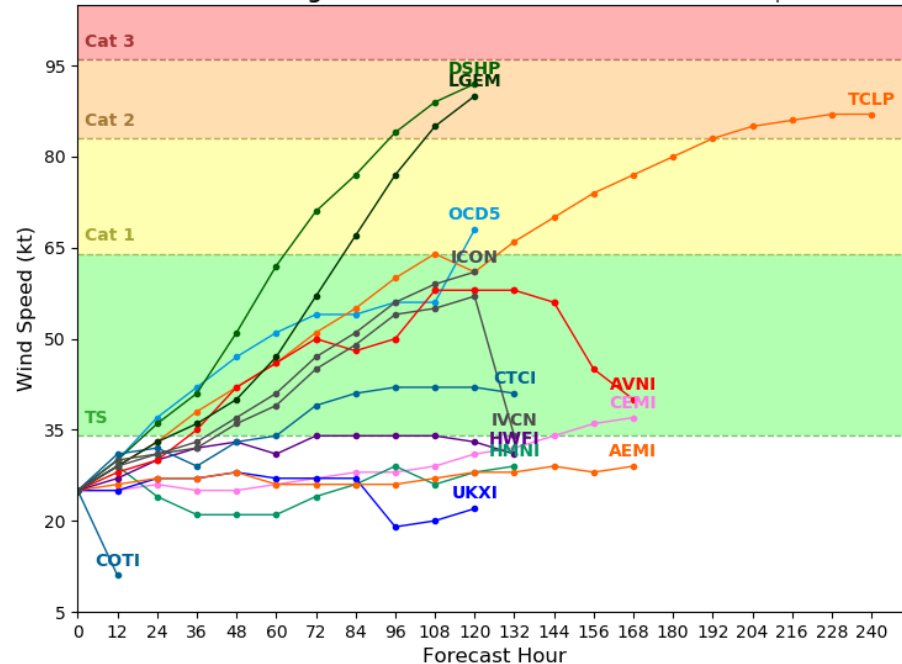
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## Invest 99L Model Intensity Guidance

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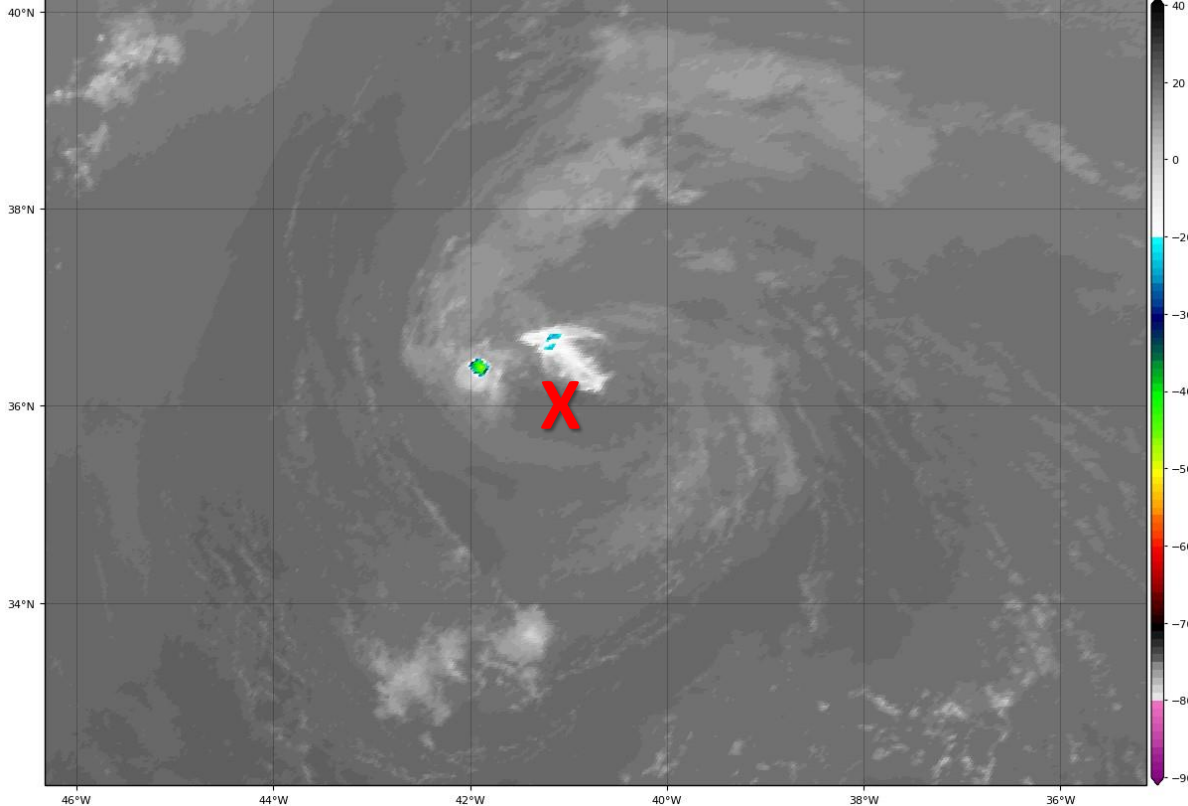




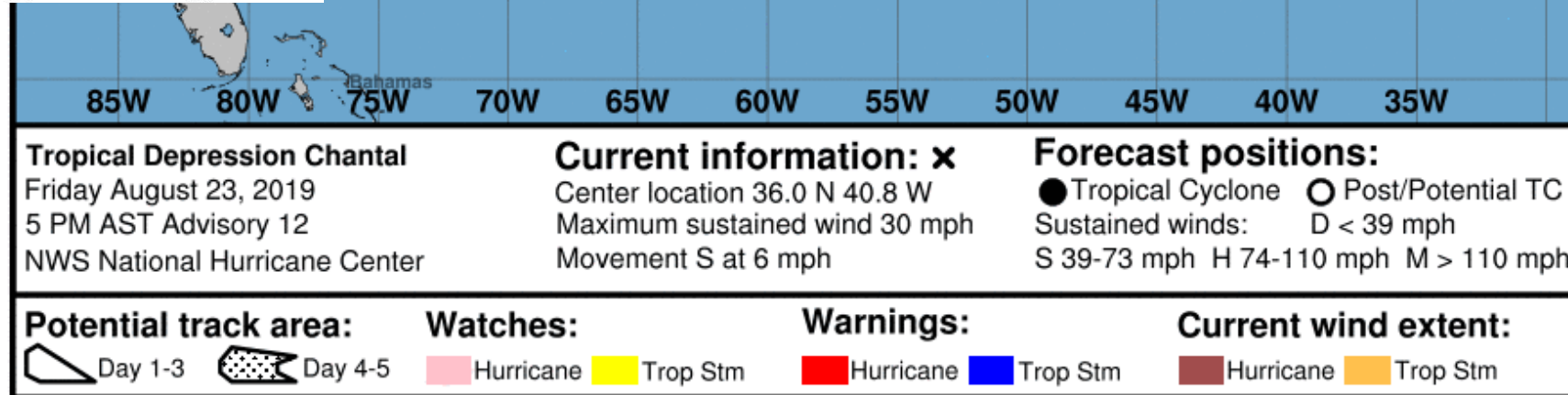
Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.



GOES-16 Channel 13 (IR) Brightness Temperature (°C) at 20:25Z Aug 23, 2019



Chantal continues to weaken as it battles dry air, wind shear, and cooler water temperatures. Chantal has almost no storms with it and will become a remnant low in a few hours.



# Summary

## **Tropical Depression Chantal**

- Tropical Depression Chantal is located about 775 miles west of the Azores and moving to the south at 6 mph. Maximum sustained winds are at 30 mph. Chantal will dissipate tonight.

## **Invest 98L**

- Invest 98L just off the coast of the upper Florida Keys and Miami-Dade County has become better organized today.
- The system is expected to move near or over South Florida tonight and Saturday morning, then move back into the Atlantic Saturday afternoon or Saturday night and move parallel to the U.S. East Coast through next week.
- 98L is likely to become a tropical depression as early as Saturday afternoon. Hurricane Hunters are scheduled to investigate tomorrow, if necessary.
- This system has a 70% (medium) chance of formation during the next 48 hours and a 90% (high) chance of formation during the next 5 days.
- Regardless of development, locally heavy rainfall is possible across South and Central Florida over the weekend, which could lead to some minor flooding.
- How close 98L (or what becomes of it) moves to the Southeast U.S. coast is still uncertain.

## **Invest 99L**

- A tropical wave about 1300 miles east-southeast of the Windward Islands has become better organized today.
- This system will continue to move westward or west-northwestward at 15 mph over the next several days and approach the Lesser Antilles in 5 days.
- This system has a 40% (medium) chance of formation during the next 48 hours and a 50% (medium) chance of formation during the next 5 days.
- Beyond 5 days, it is uncertain where 99L will continue move or how strong it will be.

## Florida Outlook:

- Tropical Depression Chantal poses no threat to Florida or the United States. Invest 99L also poses no threat to Florida or the U.S. at this time.
- Locally heavy rainfall is possible across South Florida today and across Central and South Florida over the weekend. As a cold front approaches, rain chances will increase further across much of the state.
- Current rainfall totals across the Peninsula are 1-3" this weekend with locally higher totals of 4" possible, mainly near the coast.
- Due to antecedent saturated soils across the Peninsula, some isolated flooding is possible, especially in low-lying, poor drainage, or urban areas. There is a Marginal Risk of flash flooding through tonight in South Florida.
- Onshore winds may be occasionally gusty. This combined with waves around 2-3' may result in at least a moderate rip current risk for East Coast beaches this weekend.
- Some of the heavier showers could contain brief gusty winds and isolated waterspouts.
- Due to recent rainfall, several Big Bend and West Coast rivers remain in minor flood stage, but have crested and are falling.

The next tropics packet will be issued Saturday morning. For the latest information on the tropics, please visit the National Hurricane Center website at [www.hurricanes.gov](http://www.hurricanes.gov). For the latest flood updates, see the latest products from your local National Weather Service, the [Southeast River Forecast Center](#), and the [Weather Prediction Center](#).



# TROPICAL UPDATE



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State Meteorological Support Unit

Florida Division of Emergency Management

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