



Tropical Update



11:30 AM EDT

Saturday, August 19, 2023

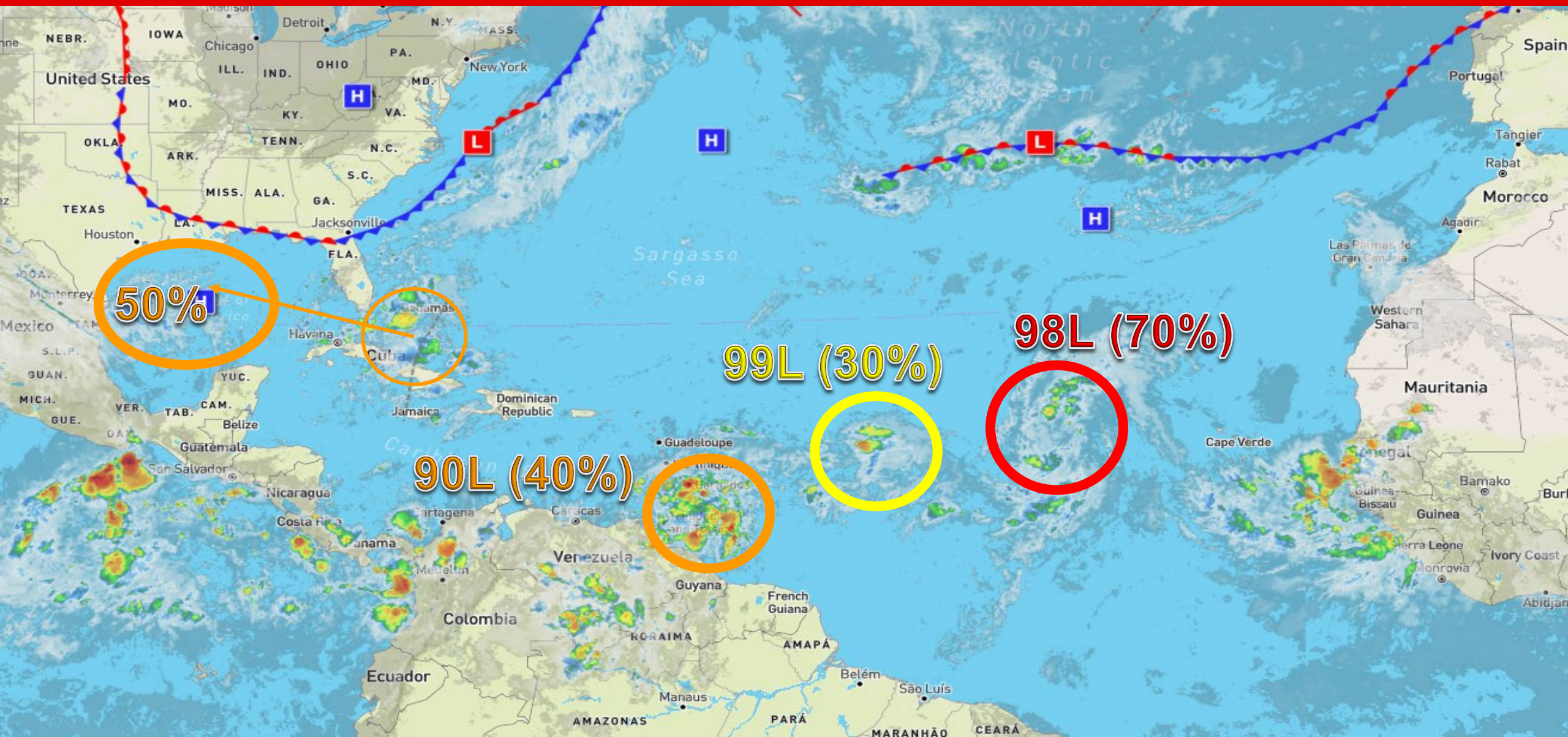
**Invest 98L (70%), Invest 99L (30%),
Invest 90L (40%), &
Southwest Atlantic Wave (50%)**

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.



Atlantic Basin Satellite Image

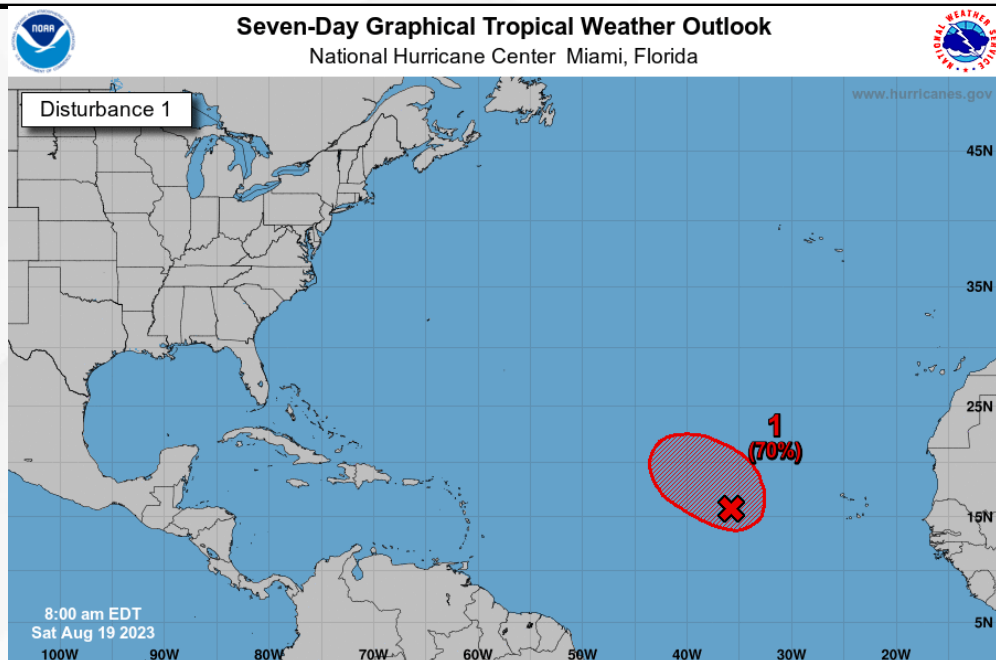
Chance of development: None Low Medium High





Tropical Weather Outlook

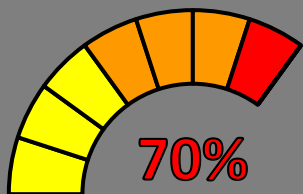
Disturbance 1 – Invest 98L ([LINK](#))



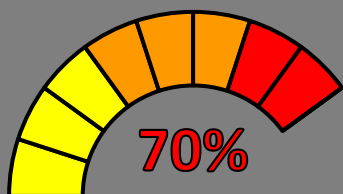
Shower and thunderstorm activity associated with a broad area of low pressure located several hundred miles west of the Cabo Verde Islands continues. The system is moving west-northwestward or northwestward at around 10 mph across the eastern tropical Atlantic. Environmental conditions appear generally favorable for further development, and a short-lived tropical depression is likely to form this weekend. By early next week, upper-level winds are forecast to increase, and further development is not expected.

Invest 98L poses no threat to Florida.

- * Formation chance through 48 hours...**high...70%.**
- * Formation chance through 7 days...**high...70%.**



48 Hour Formation

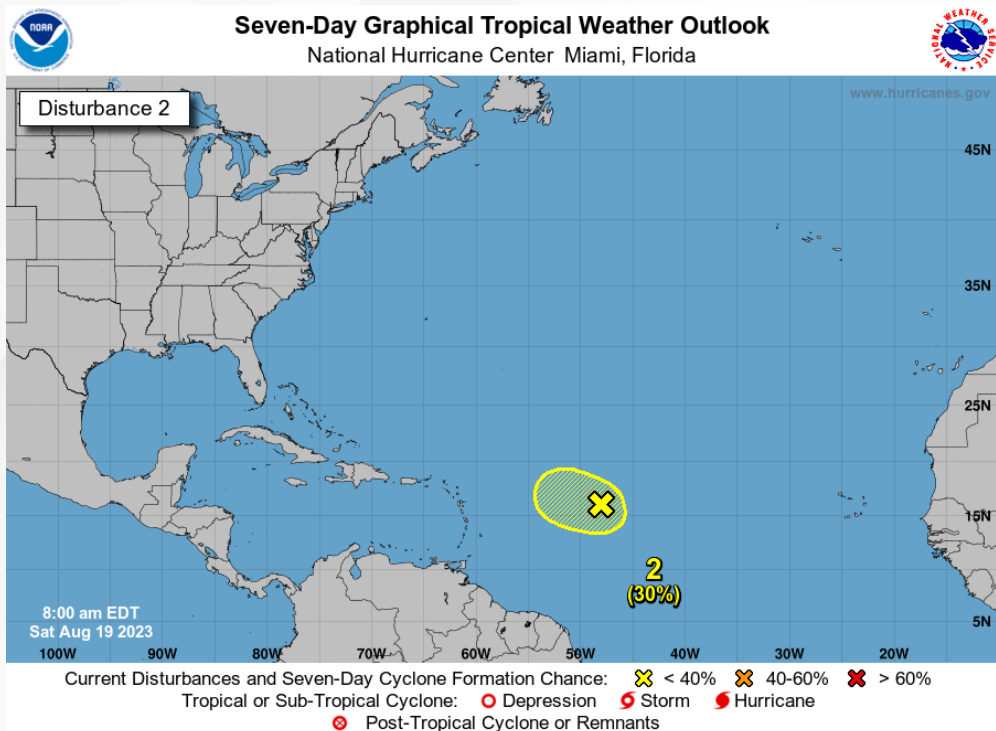


7 Day Formation



Tropical Weather Outlook

Disturbance 2 – Invest 99L ([LINK](#))

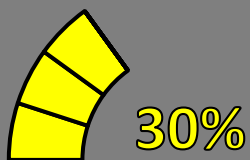


An area of low pressure located roughly halfway between the Cabo Verde Islands and the Lesser Antilles is producing disorganized showers and thunderstorms to the east of its center. The system is currently moving west-northwestward at 10-15 mph across the central tropical Atlantic. Environmental conditions are forecast to become increasingly unfavorable for further development over the next few days.

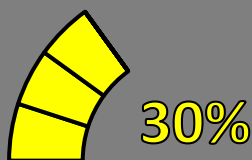
Invest 99L poses no threat to Florida.

* Formation chance through 48 hours...**low...30%**.

* Formation chance through 7 days...**low...30%**.



48 Hour Formation

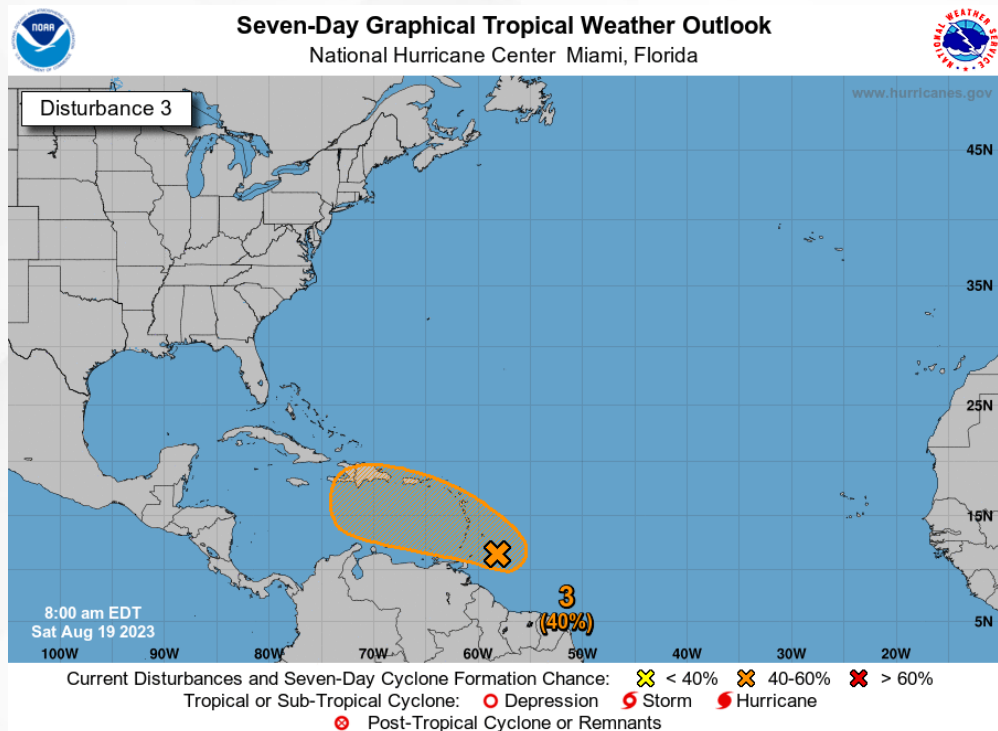


5 Day Formation



Tropical Weather Outlook

Disturbance 3 – Invest 90L ([LINK](#))



A tropical wave located just east of the Windward Islands is producing disorganized showers and thunderstorms. The system is moving westward to west-northwestward at 10-15 mph across the Lesser Antilles and over the eastern and central Caribbean Sea. Some gradual development is possible, and a tropical depression could form early to mid-week.

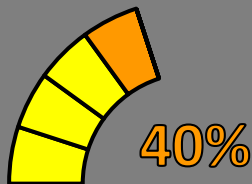
This system poses no direct threat to Florida over the next 5-7 days, at least.

* Formation chance through 48 hours...**low...20%.**

* Formation chance through 7 days...**medium...40%.**



48 Hour Formation

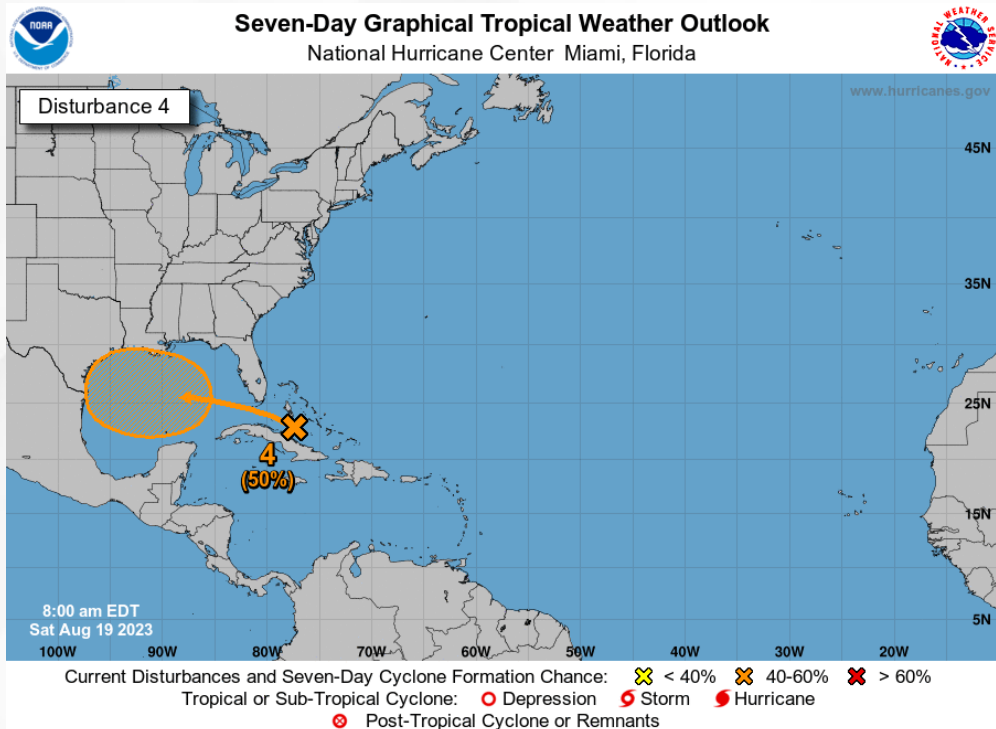


5 Day Formation



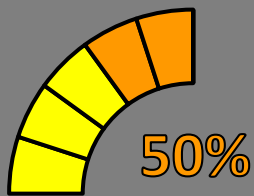
Tropical Weather Outlook

Disturbance 4 – Southwest Atlantic Wave ([LINK](#))



Near 0%

48 Hour Formation



50%

5 Day Formation

An area of disturbed weather located near the northwestern and central Bahamas is forecast to move into the Gulf of Mexico by early next week, where a broad area of low pressure is expected to form. Some slow development of the system is possible after the low forms, and a tropical depression could form as it moves westward, approaching the western Gulf of Mexico coastline by mid-week.

This system will bring an increased risk for heavy rainfall and flooding over the Florida Peninsula (mainly along and south of the I-4 corridor) this weekend. Widespread rainfall totals of 1-3" can be expected, with locally higher amounts of 4-7" possible. Breezy conditions and elevated wave heights can be expected statewide over the coming days.

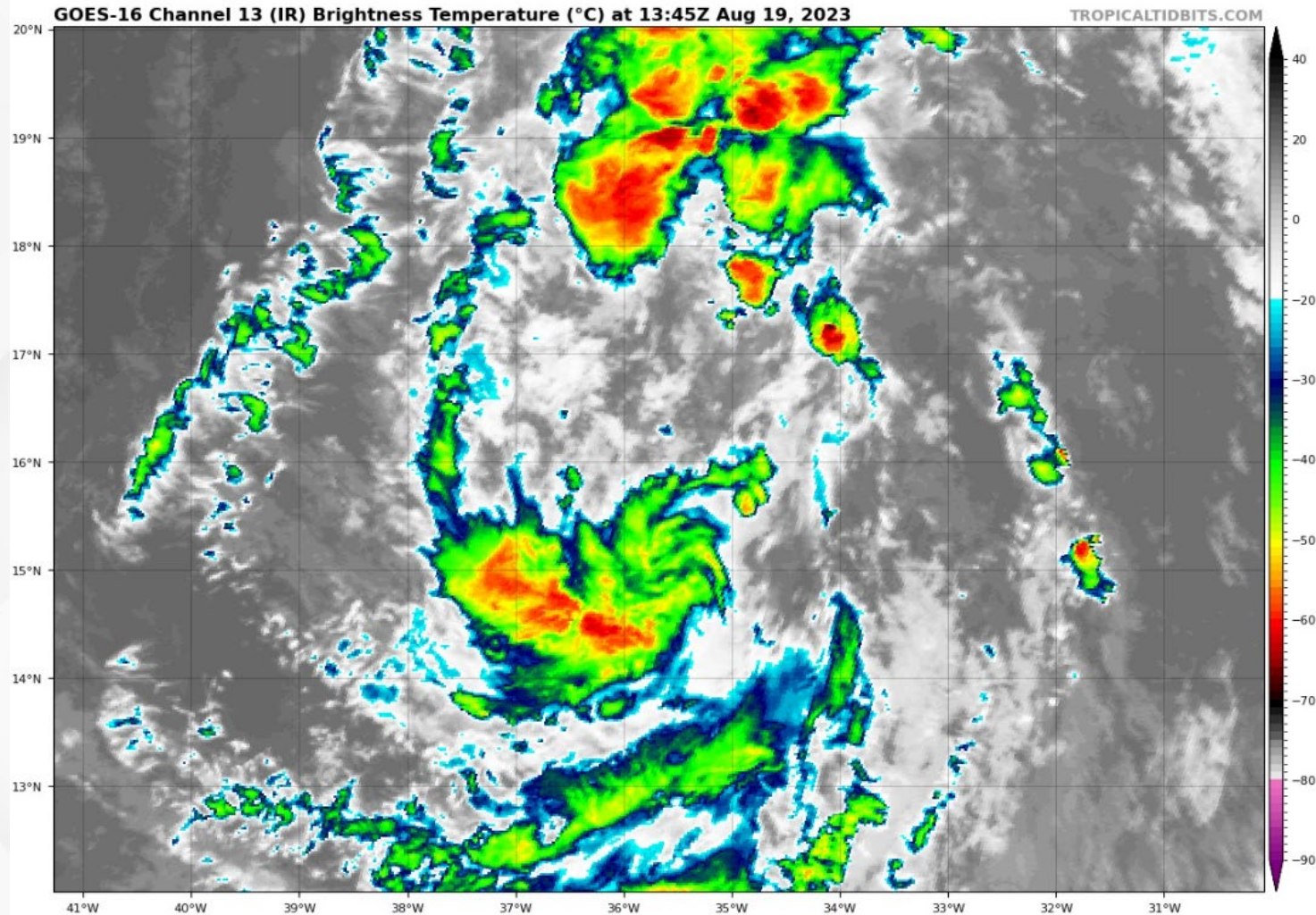
* Formation chance through 48 hours...**low...near 0%**.

* Formation chance through 7 days...**medium...50%**.



Current Satellite Imagery

Invest 98L

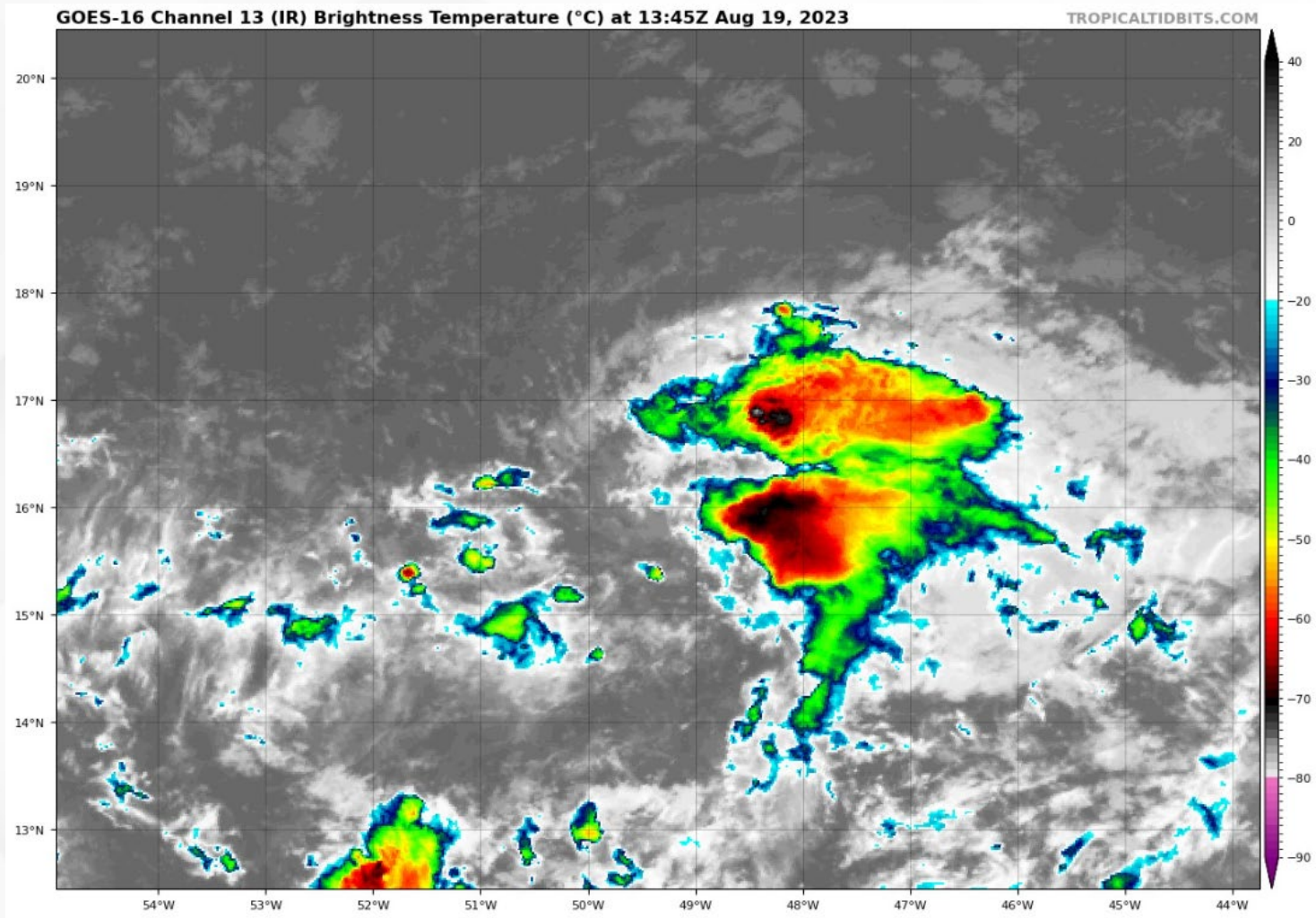


Shower and thunderstorm activity has remained rather constant to the North and South of the low pressure center this morning as Invest 98L continues to show signs of better organization and structure. However, the system is still lacking a well-defined center of circulation.



Current Satellite Imagery

Invest 99L

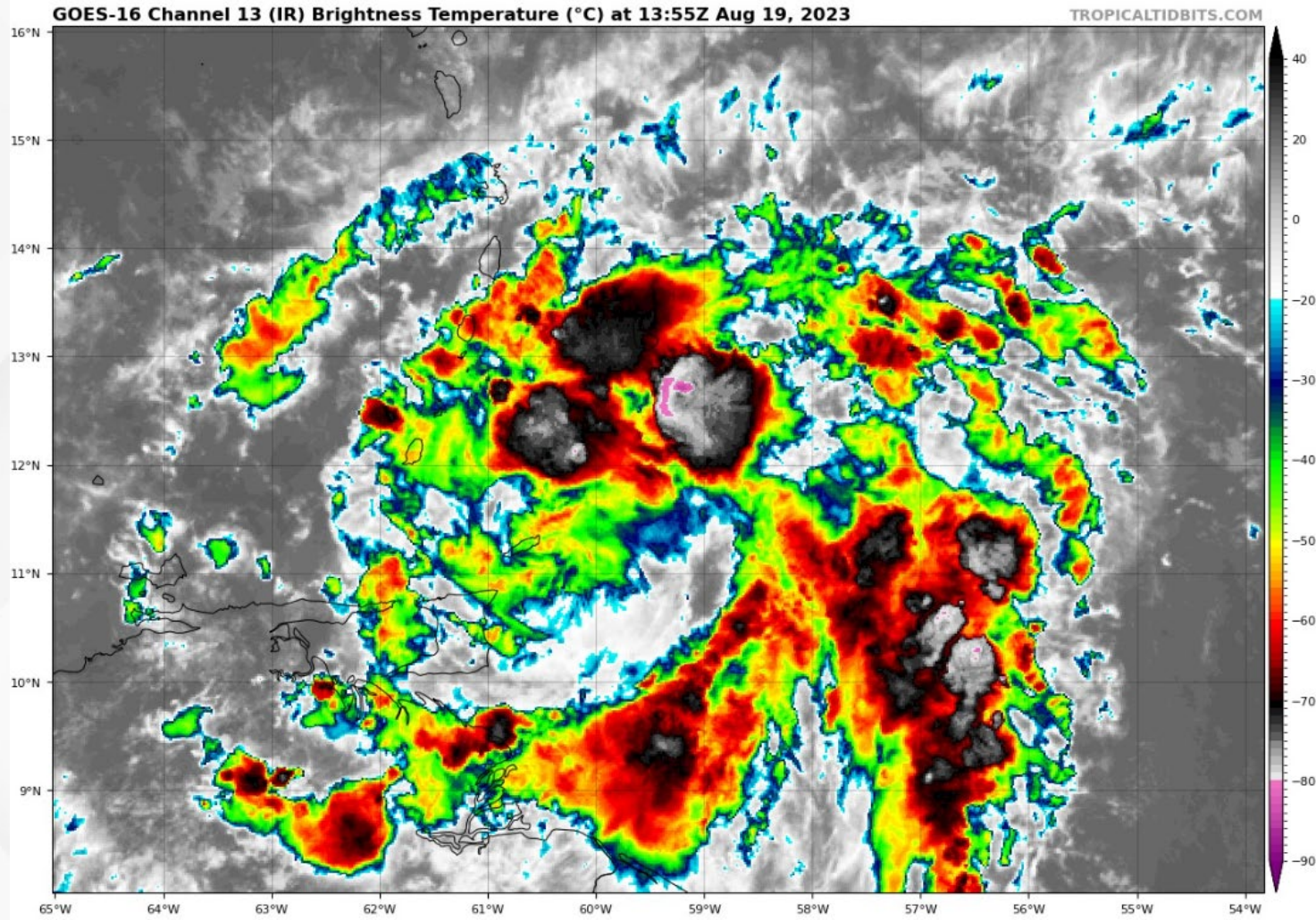


Shower and thunderstorm activity remains disorganized and concentrated to the east-northeast of the center of the low pressure this morning. Invest 99L has shown no improvement in organization or structure over the last 4 hours and continues to lack a well-defined center of circulation.



Current Satellite Imagery

Invest 90L



Numerous disorganized showers and thunderstorms continue along the tropical wave this morning. Over the last 4 hours, storm activity associated with Invest 90L has become more spread out, going from one broad area of concentrated storm activity to 3 general areas of stronger activity. The system continues to lack structure and a well-defined center of circulation.



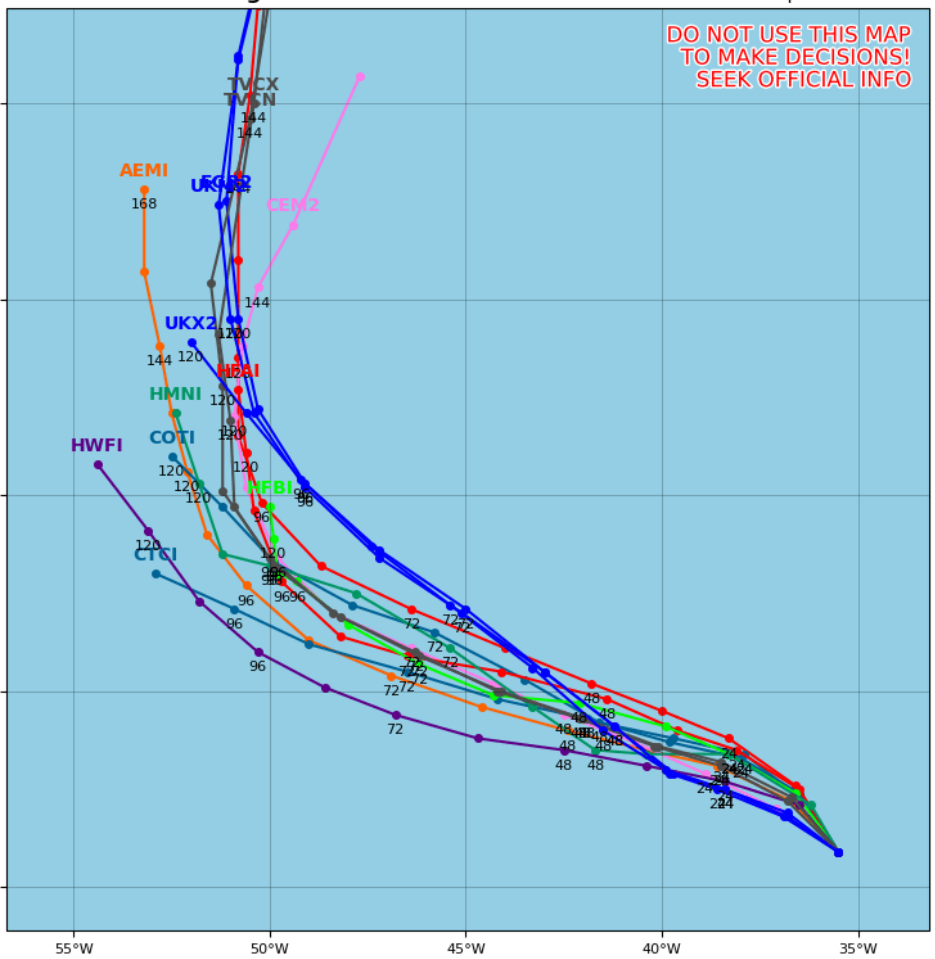
Model Forecasts – Next 5 Days

Invest 98L

Invest 98L Model Track Guidance

Initialized at 12z Aug 19 2023

Levi Cowan - tropicaltidbits.com

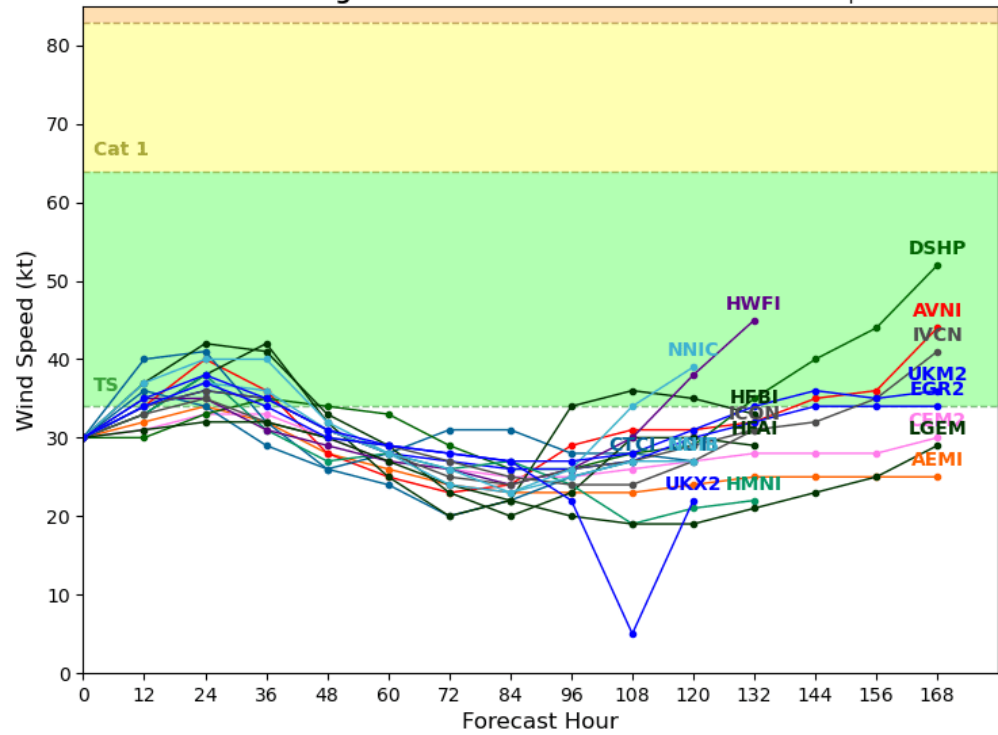


Computer models are still in good agreement that Invest 98L will maintain a west-northwestward to northwestward motion during the next 5-7 days over the open Atlantic. While there is no organized center of circulation, guidance is in decent agreement that Invest 98L is likely to become a tropical depression or weak tropical storm over the next 24-48 hours before encountering unfavorable upper-level winds. The system looks to lose intensity during the next 3-5 days.

Invest 98L Model Intensity Guidance

Initialized at 12z Aug 19 2023

Levi Cowan - tropicaltidbits.com





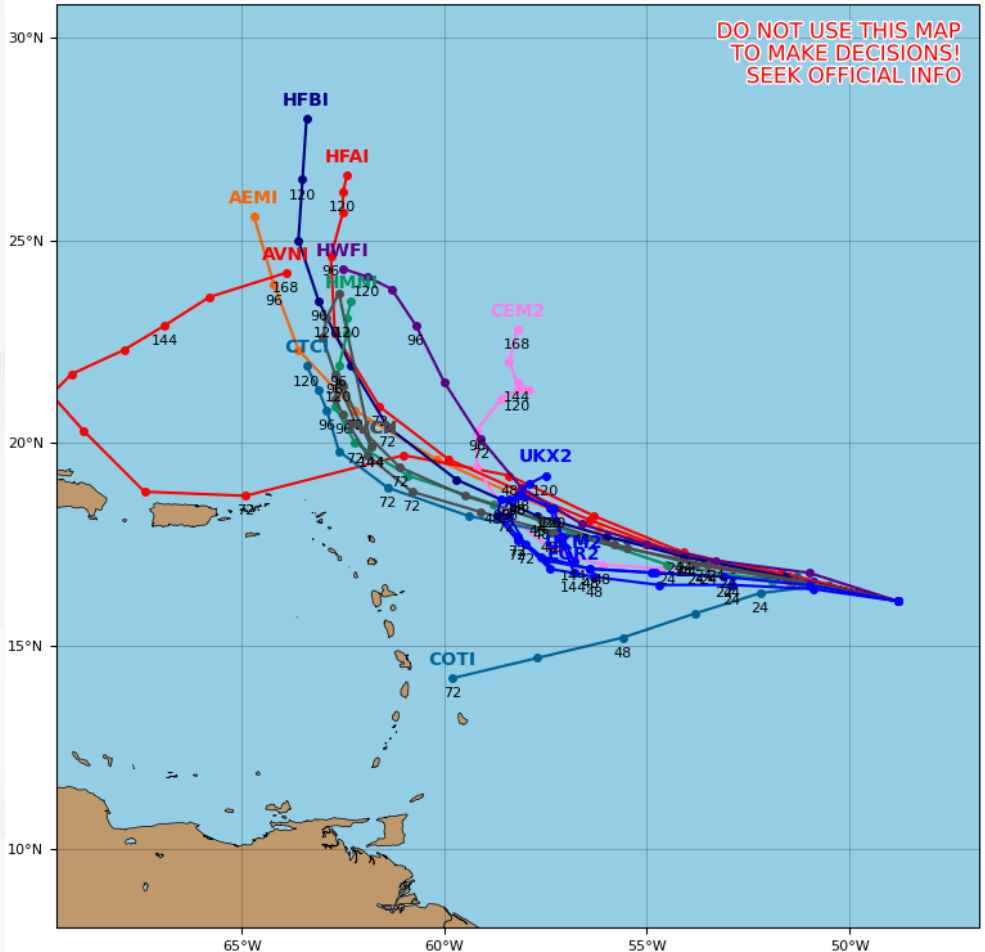
Model Forecasts – Next 5 Days

Invest 99L

Invest 99L Model Track Guidance

Initialized at 12z Aug 19 2023

Levi Cowan - tropicaltidbits.com

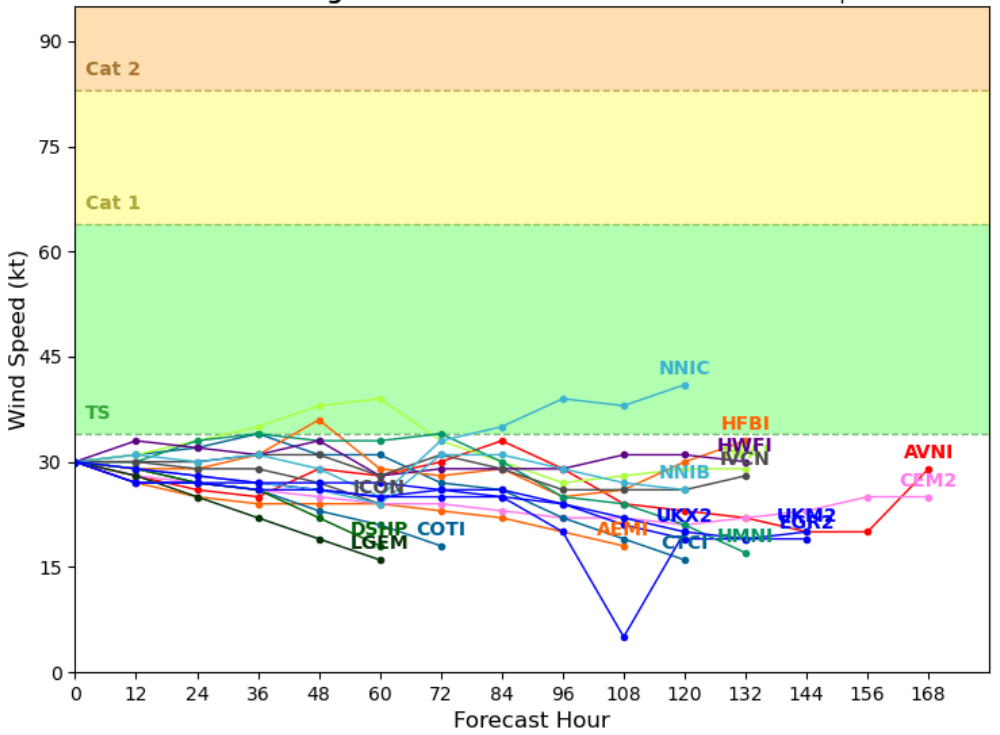


Computer model guidance is in decent agreement that Invest 99L will progress west-northwestward over the next 3-5 days, with a more northward pull by the end of the forecast period. There is a decent consensus that Invest 99L may briefly have the opportunity to become a tropical depression over the next couple of days; however, the introduction of strong upper-level winds early next week will further inhibit any organization or strengthening.

Invest 99L Model Intensity Guidance

Initialized at 12z Aug 19 2023

Levi Cowan - tropicaltidbits.com





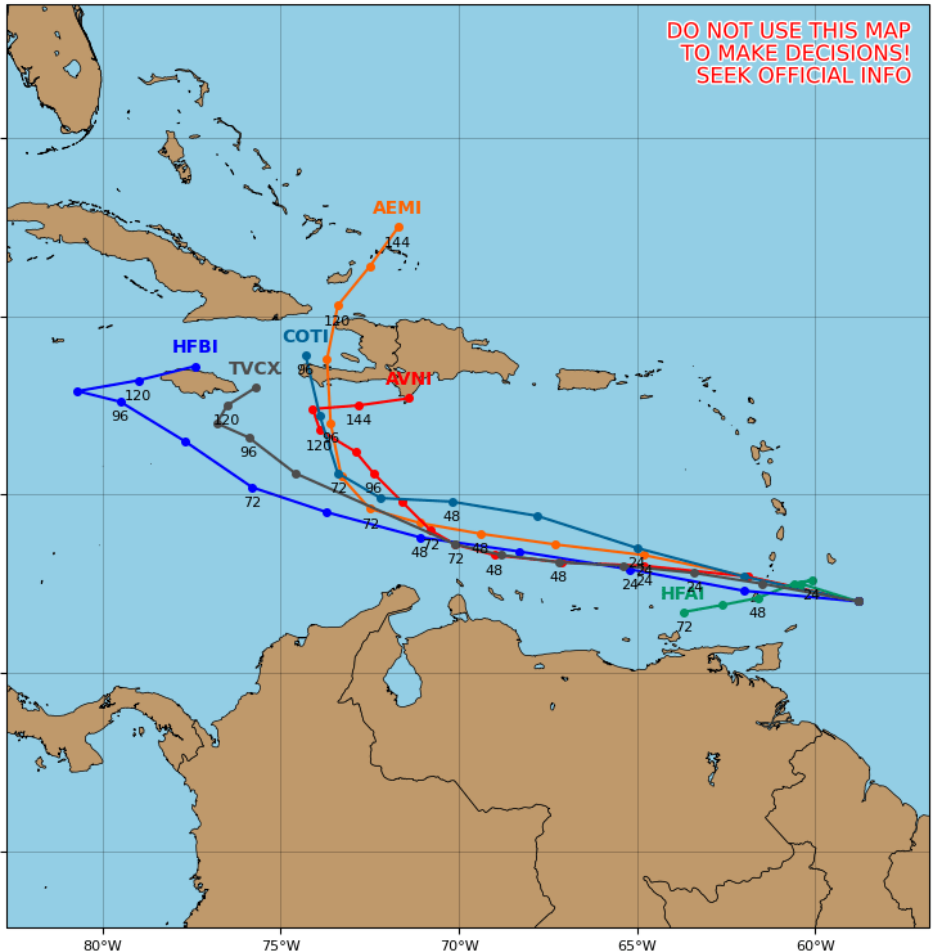
Model Forecasts – Next 5 Days

Invest 90L

Invest 90L Model Track Guidance

Initialized at 12z Aug 19 2023

Levi Cowan - tropicaltidbits.com



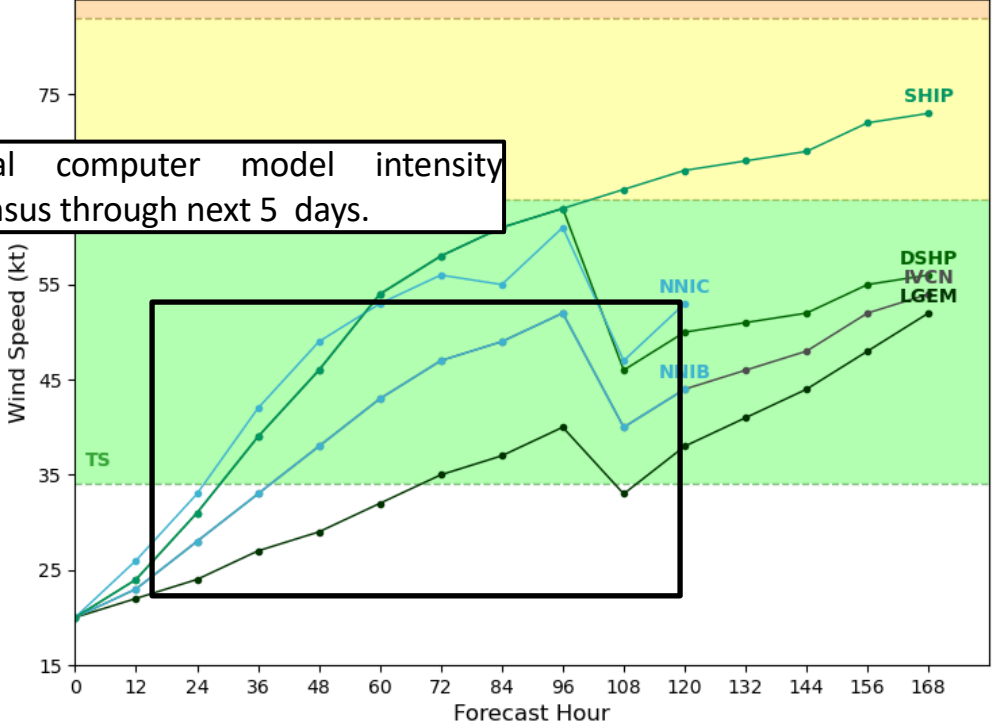
Computer model guidance is in general agreement that Invest 90L will progress west-northwestward over the next 3-5 days, with a more northward pull by the end of the forecast period. Computer models somewhat disagree on how much of a northward shift the system will see as there is not a defined center of circulation, and further updates to this parameter can be expected. Computer models generally agree that Invest 90L will likely become a tropical depression in the next 2-3 days. Models begin to see quite a bit of disagreement past 3-days; however, the general consensus is that Invest 90L could strengthen to a tropical storm in the next 3-5 days. Computer models do not handle intensity forecast guidance well without a defined center of circulation, and further updates to this parameter can be expected.

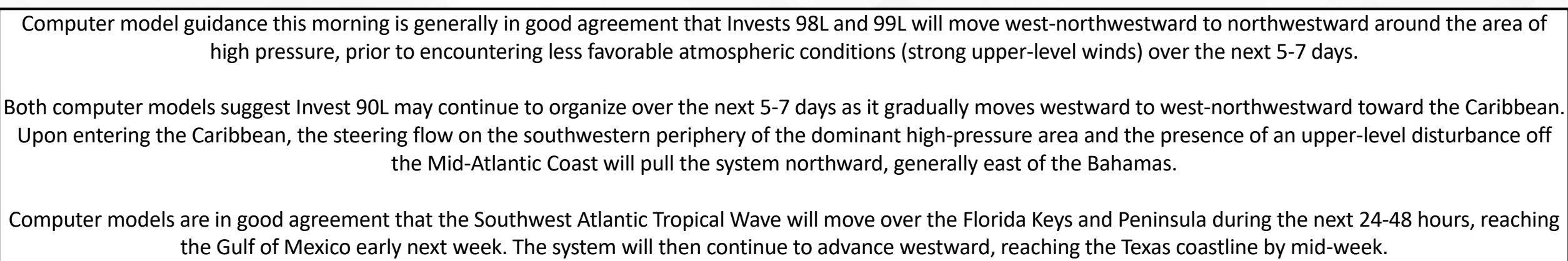
Invest 90L Model Intensity Guidance

Initialized at 06z Aug 19 2023

Levi Cowan - tropicaltidbits.com

General computer model intensity consensus through next 5 days.







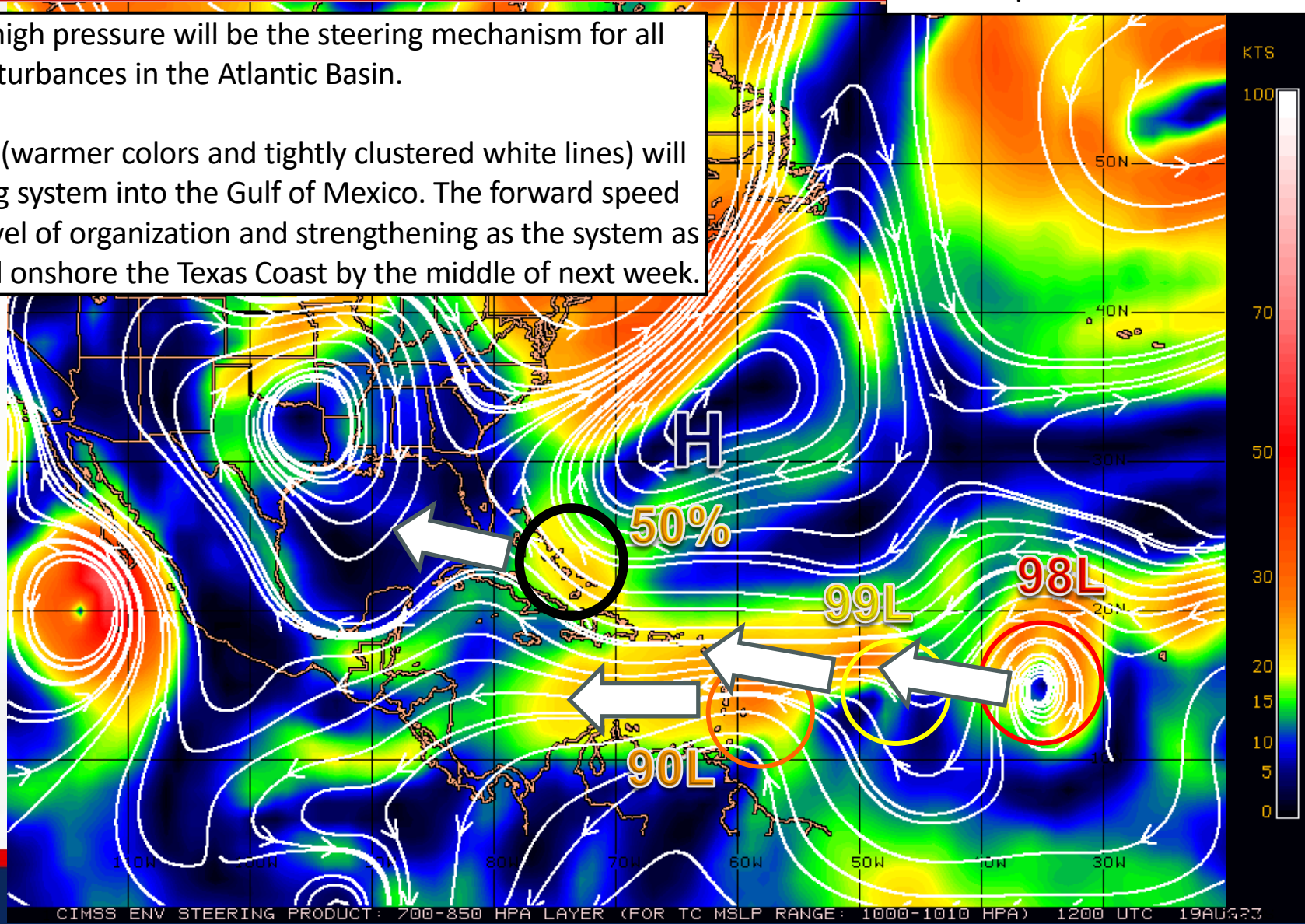
Steering Currents

What is Moving the System?

Color denotes the movement speed through the atmosphere and thin white lines denote direction. Tightly clustered white lines represent faster movement as well.

The dominant area of high pressure will be the steering mechanism for all disturbances in the Atlantic Basin.

The strong steering flow (warmer colors and tightly clustered white lines) will promote a faster-moving system into the Gulf of Mexico. The forward speed may hinder the overall level of organization and strengthening as the system as it moves into the Gulf and onshore the Texas Coast by the middle of next week.



Fast Moving Storm

Fast Moving Storm

Typical Moving Storm

Slow Moving Storm



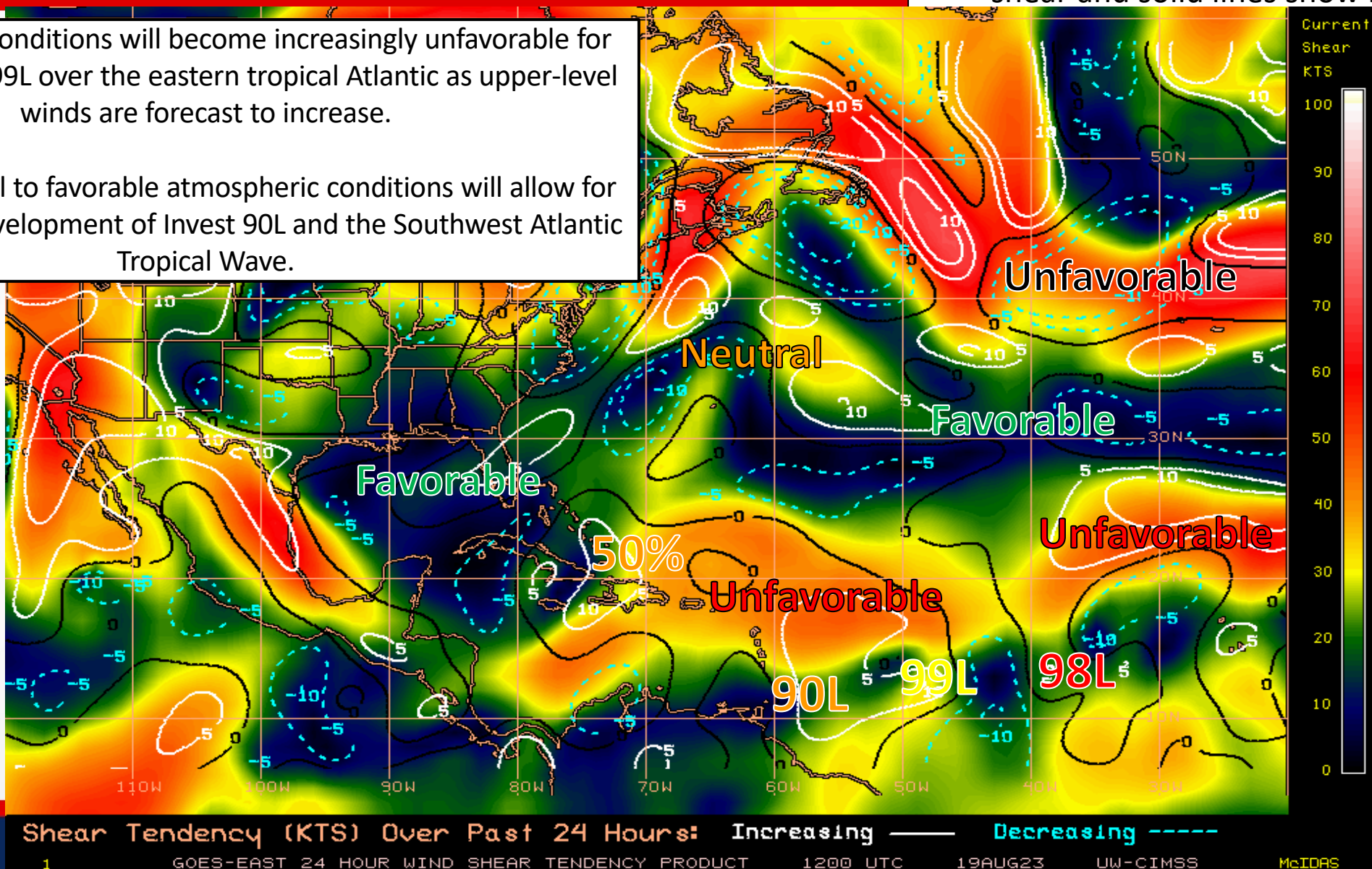
Wind Shear

Is the environment favorable for the system?

Color denotes the amount of wind shear and the lines denote how it have changed over the last 24 hours (dotted lines show decreasing shear and solid lines show increasing).

Environmental conditions will become increasingly unfavorable for Invests 98L and 99L over the eastern tropical Atlantic as upper-level winds are forecast to increase.

Generally neutral to favorable atmospheric conditions will allow for some gradual development of Invest 90L and the Southwest Atlantic Tropical Wave.





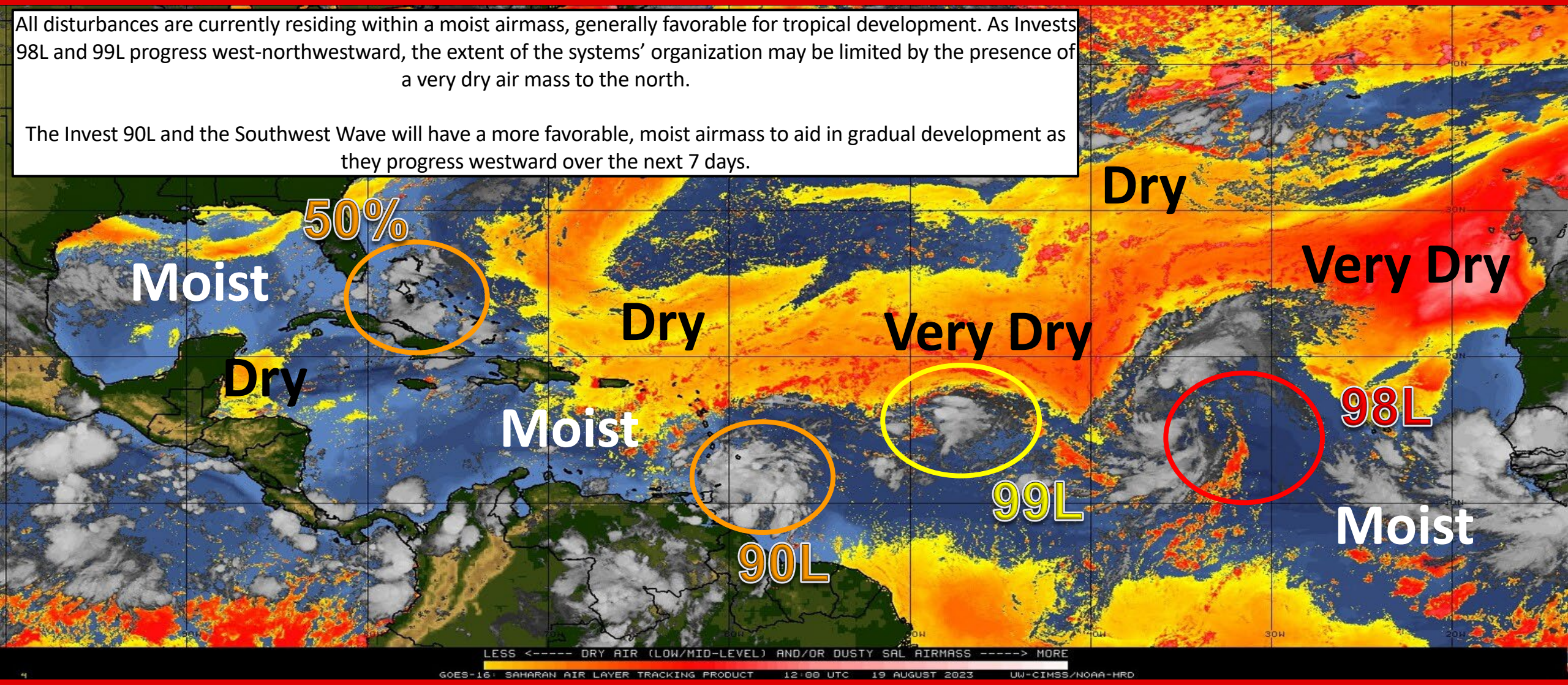
Dry Air & Saharan Dust

Is the environment favorable for the system?

Color denotes concentration of Saharan Dust or dry, stable air.

All disturbances are currently residing within a moist airmass, generally favorable for tropical development. As Invests 98L and 99L progress west-northwestward, the extent of the systems' organization may be limited by the presence of a very dry air mass to the north.

The Invest 90L and the Southwest Wave will have a more favorable, moist airmass to aid in gradual development as they progress westward over the next 7 days.

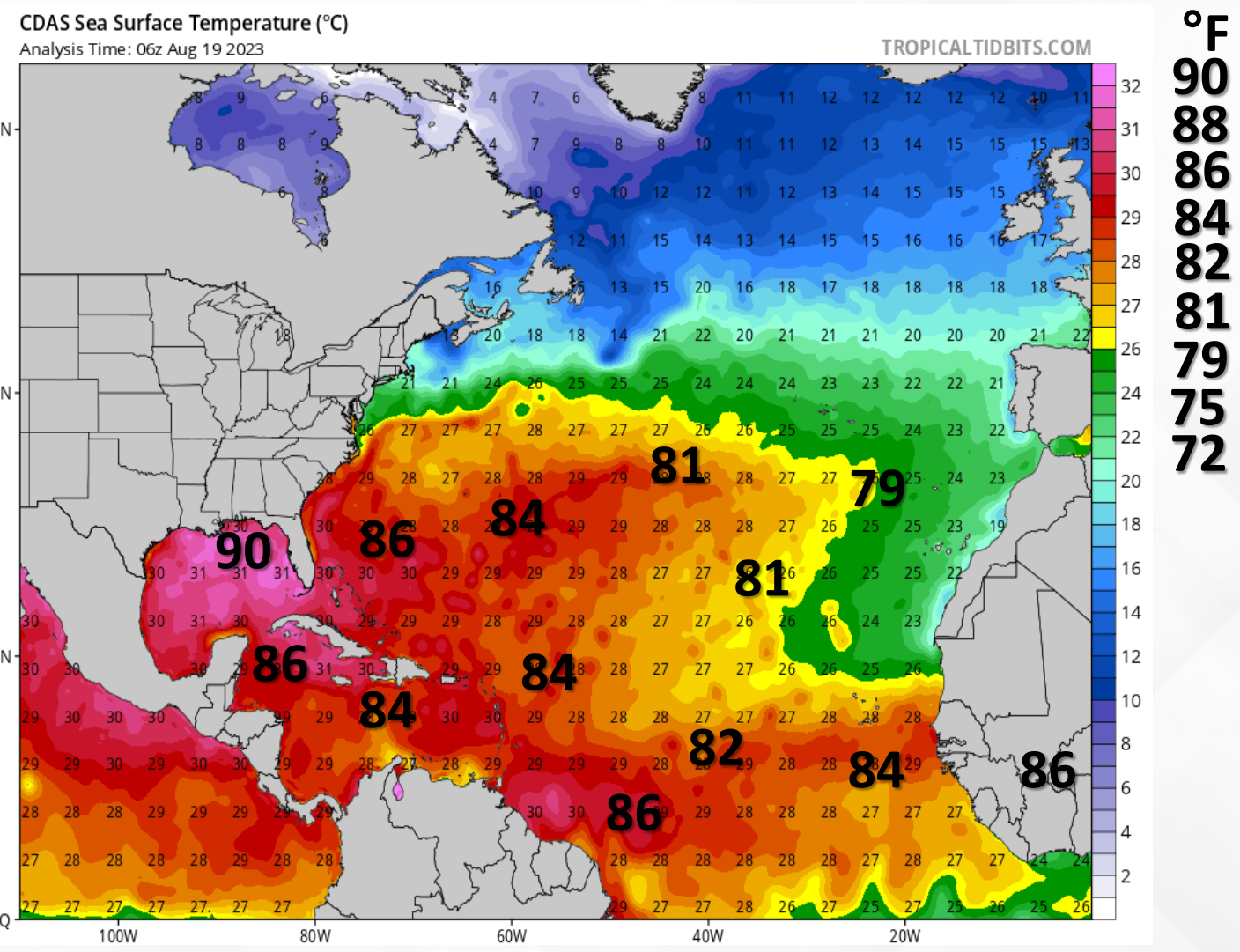
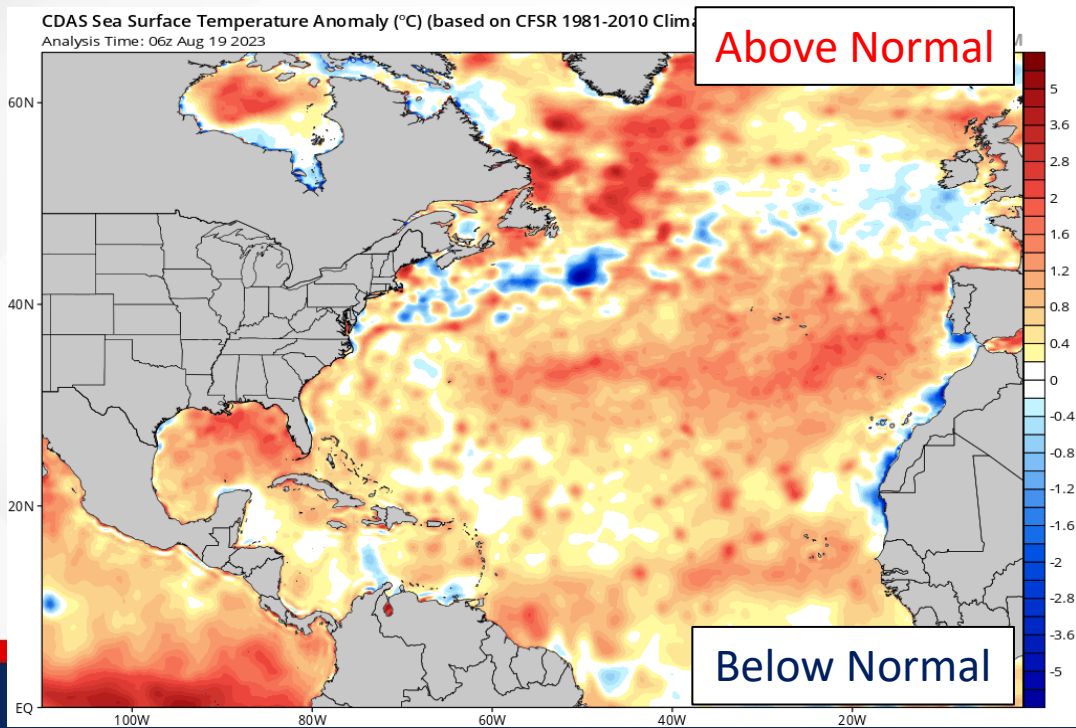




Sea Surface Temperatures & Anomalies

Is the ocean favorable for the system?

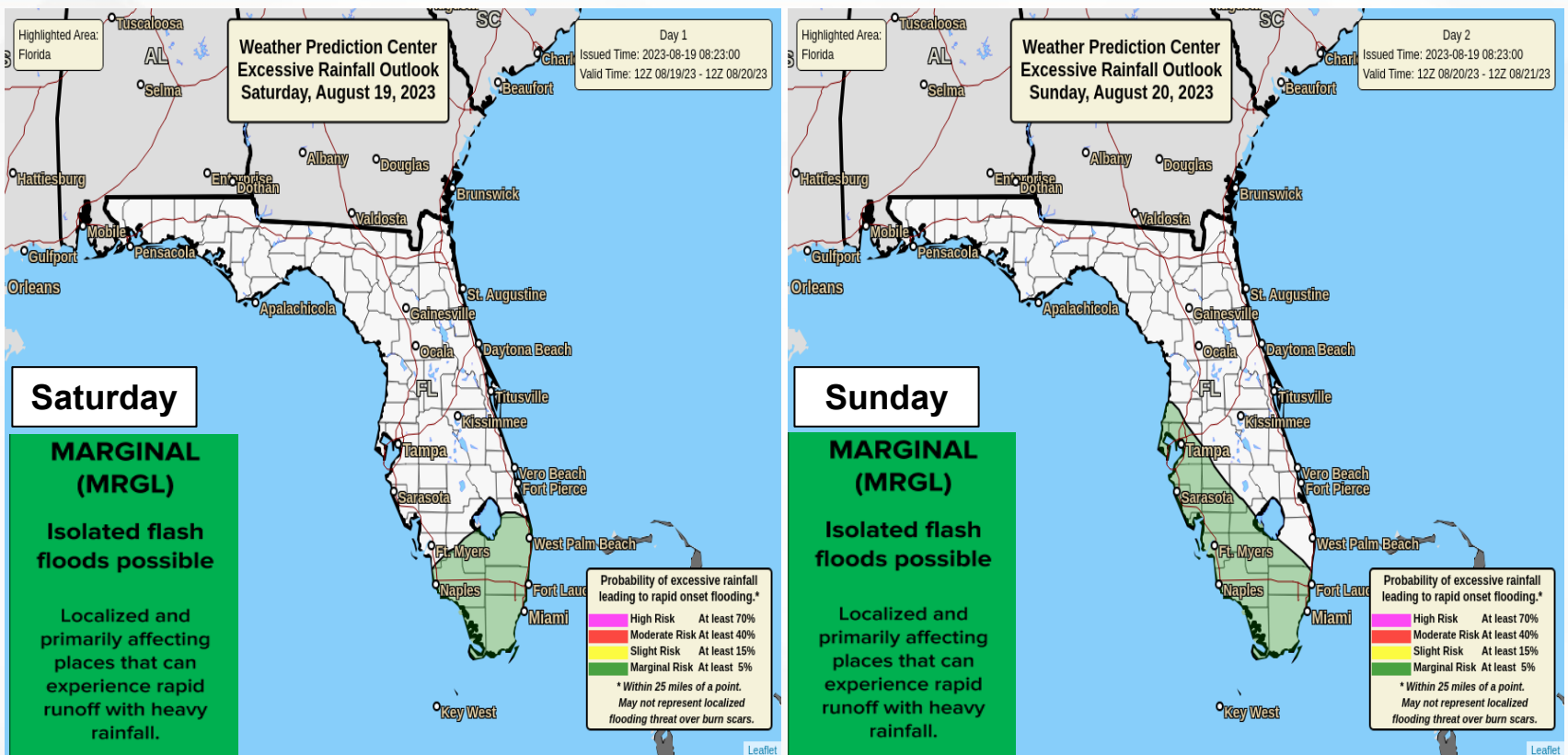
Temperatures across the Atlantic Basin are very supportive of tropical cyclone development. Waters across the tropical Atlantic are running 0.5-1.5 degrees above normal, with temperatures in the Gulf of Mexico have reached 1-2 degrees above normal for this time of year.





Flash Flood Outlook – Next 3 Days

From the Weather Prediction Center

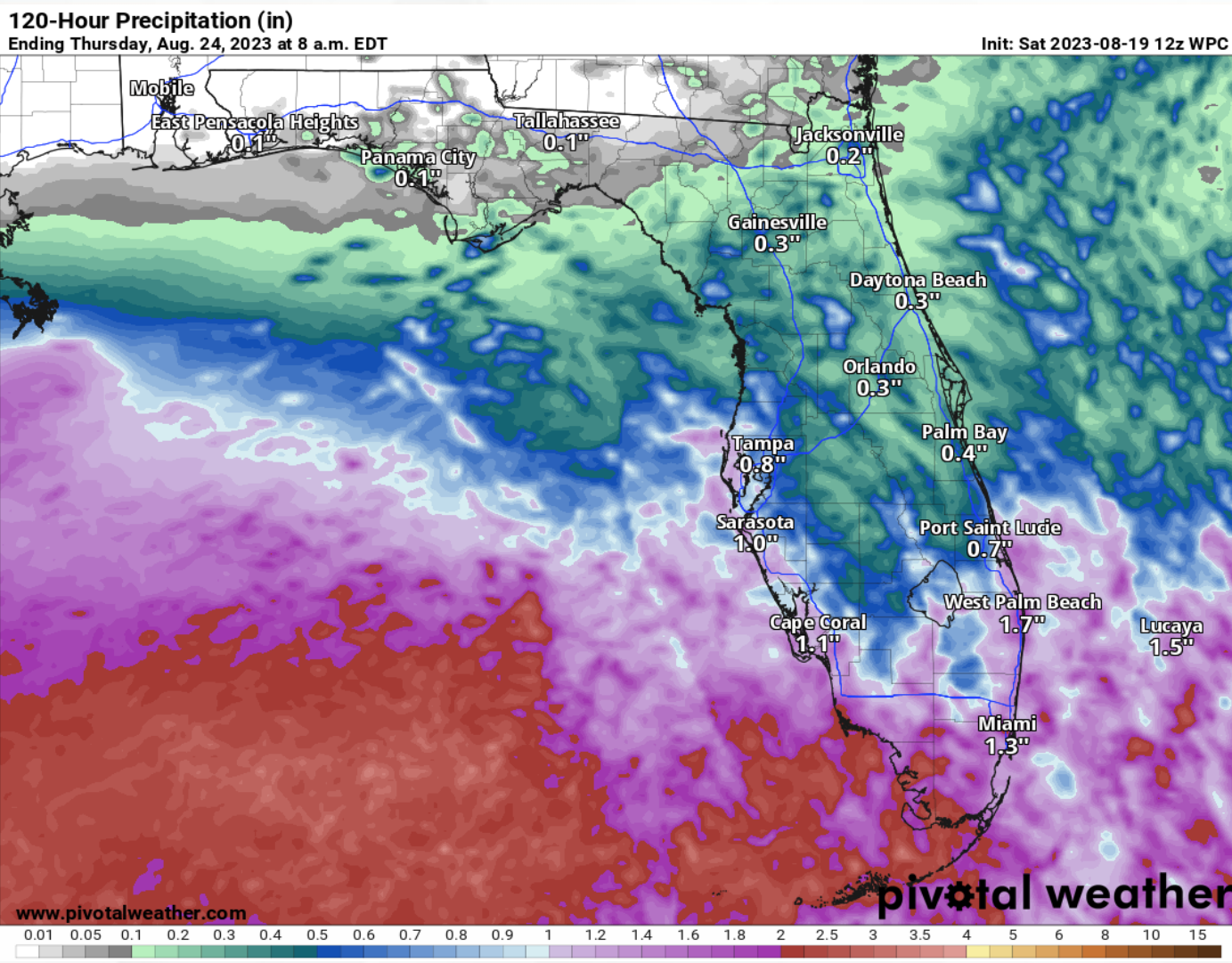


There is a **Marginal Risk for Flash Flooding (level 1 of 4)** across the portions of the Florida Peninsula through the weekend as abundant tropical moisture will allow for any shower or thunderstorm to produce very heavy rainfall rates. The threat for **localized flooding** will be elevated over low-lying and poor drainage areas, and especially through the Peninsula's urbanized corridors. Given the recent wet pattern, a few Peninsula locations are already sensitive to heavy rainfall and additional rainfall totals will be occurring over already saturated ground leading to a quicker onset of ponding water and flooding.



5-Day Forecast Rainfall

From the National Weather Service & Weather Prediction Center



Increased moisture will continue over the Florida Peninsula through the weekend as a tropical wave advances through the Florida Keys and southern Florida Peninsula. The very moist airmass will allow for any shower and thunderstorm activity to produce heavy rainfall rates (2-3"/hour) across areas along and south of the I-4 corridor. **Widespread 1-3" of rainfall can be expected, with locally higher amounts of 4-7" possible.** Locally higher rainfall totals will be more likely over locations that experience multiple rounds of heavy shower and thunderstorm activity.



Elevated Rip Current Risk

Panhandle & East Coast Beaches



Wave heights have begun to gradually increase statewide as the southwestern Atlantic tropical wave approaches Florida, creating breezy coastal conditions. Wave heights will continue to increase as the wave passes South Florida and moves through the Gulf. These increased wave heights will create an **elevated rip current risk** over the next few days, with a **high risk of rip currents** possible along the South Florida and Key beaches. A **moderate to high risk** can also be expected for Panhandle beaches through the weekend and early next week as well.



Summary

Invest 98L:

- Shower and thunderstorm activity associated with a broad area of low pressure located several hundred miles west of the Cabo Verde Islands continues.
- Environmental conditions appear generally favorable for additional development of this system, and a tropical depression is likely to form this weekend while it moves toward the west-northwest or northwest at about 10 mph across the eastern tropical Atlantic. By early next week, upper-level winds over the system are forecast to increase, and further development is not expected.
- The National Hurricane Center is outlooking a **high (70%) chance of development** over the next 48 hours and 7 days. *Invest 98L poses no threat to Florida.*

Invest 99L:

- An area of low pressure, located roughly halfway between the Cabo Verde Islands and the Lesser Antilles, is producing some disorganized showers and thunderstorms to the east of its center.
- Environmental conditions are forecast to become increasingly unfavorable for further development over the next few days while it moves west-northwestward at 10 to 15 mph across the central tropical Atlantic.
- Thereafter, upper-level winds are forecast to become unfavorable for any further development. The National Hurricane Center is outlooking a **low (30%) chance of development** over the next 48 hours and 7 days.
- *Invest 99L poses no threat to Florida.*

Invest 90L:

- A tropical wave located just east of the Windward Islands is producing disorganized showers and thunderstorms.
- Some gradual development is possible, and a tropical depression could form early to mid-week as it moves generally west-northwestward at 10 to 15 mph across the Lesser Antilles and into the northeastern Caribbean Sea.
- There is a **low (20%) chance of development** over the next 48 hours, and a **medium (40%) chance of development** over the next 7 days.
- *This system poses no direct threat to Florida over the next 5-7 days, at least.*

Southwest Atlantic Tropical Wave:

- An area of disturbed weather, located near the northwestern and central Bahamas, is forecast to move into the Gulf of Mexico by early next week, where a broad area of low pressure could form.
- Some slow development of this system is possible thereafter as it moves westward and approaches the western Gulf of Mexico coastline by the middle of next week.
- There is a **low (near 0%) chance of development** over the next 48 hours, and a **medium (50%) chance of development** over the next 7 days.
- *This system will bring an increased risk for heavy rainfall and flooding to the Florida Peninsula (mainly along and south of the I-4 corridor) through the weekend in addition to breezy coastal conditions, increased wave heights, and enhanced rip current risks.*

Florida Outlook:

- Abundant tropical moisture will continue to move over the Florida Peninsula this weekend, yielding scattered to numerous showers and thunderstorms each day.
- Any shower or thunderstorm that develops will be capable of producing very heavy rainfall rates, and a **Marginal Risk for Flash Flooding (level 1 of 4)** is maintained over the Peninsula for the next 2 days.
- Widespread rainfall totals of 1-3" can be expected, with locally higher amounts of 4-7" possible – especially for locations that experience multiple rounds of tropical rain and thunderstorm activity.
- Localized flooding will be possible over low-lying and poor drainage areas, as well as along the Peninsula's urban corridors and already saturated areas.
- As the tropical wave advances over the Florida Peninsula today and Sunday, breezy onshore winds will develop (15-25 mph) with locally higher wind gusts possible within thunderstorms.
- The next name on this list is Emily.

The next briefing package will be issued on Sunday. For the latest information, please visit the [National Hurricane Center website](#).



Tropical Update



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State Meteorological Support Unit

Florida Division of Emergency Management

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