



# Tropical Update



11:30 AM EDT

Monday, July 1, 2024

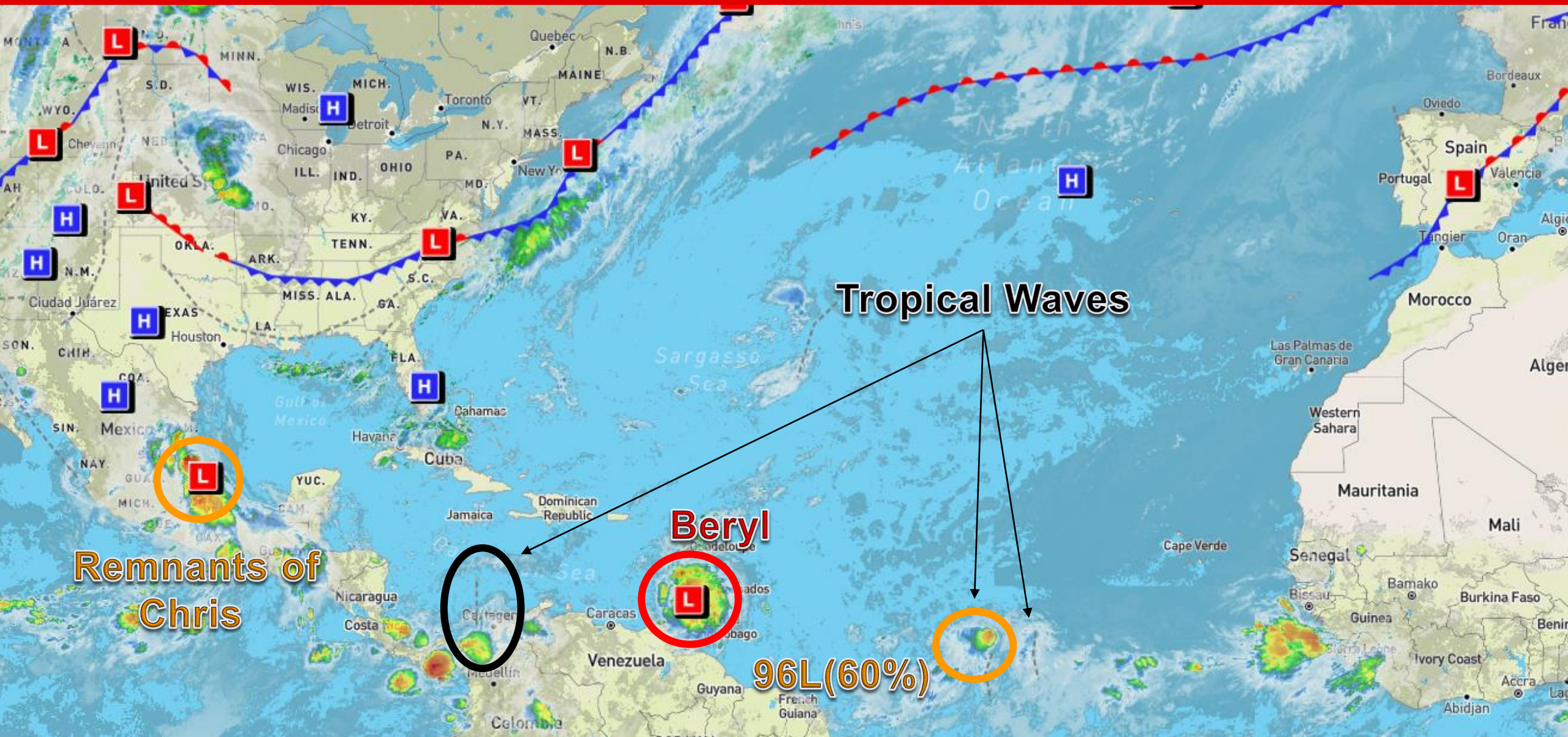
**Major Hurricane Beryl Making Landfall Along Windward Islands As Dangerous Category 4 Hurricane; Tropical Depression Chris Dissipates Over Rugged Terrain of Eastern Mexico; Invest 96L Continues to Produce Showers and Thunderstorms Over Central Atlantic (60%)**

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



Tropical Waves

Remnants of Chris

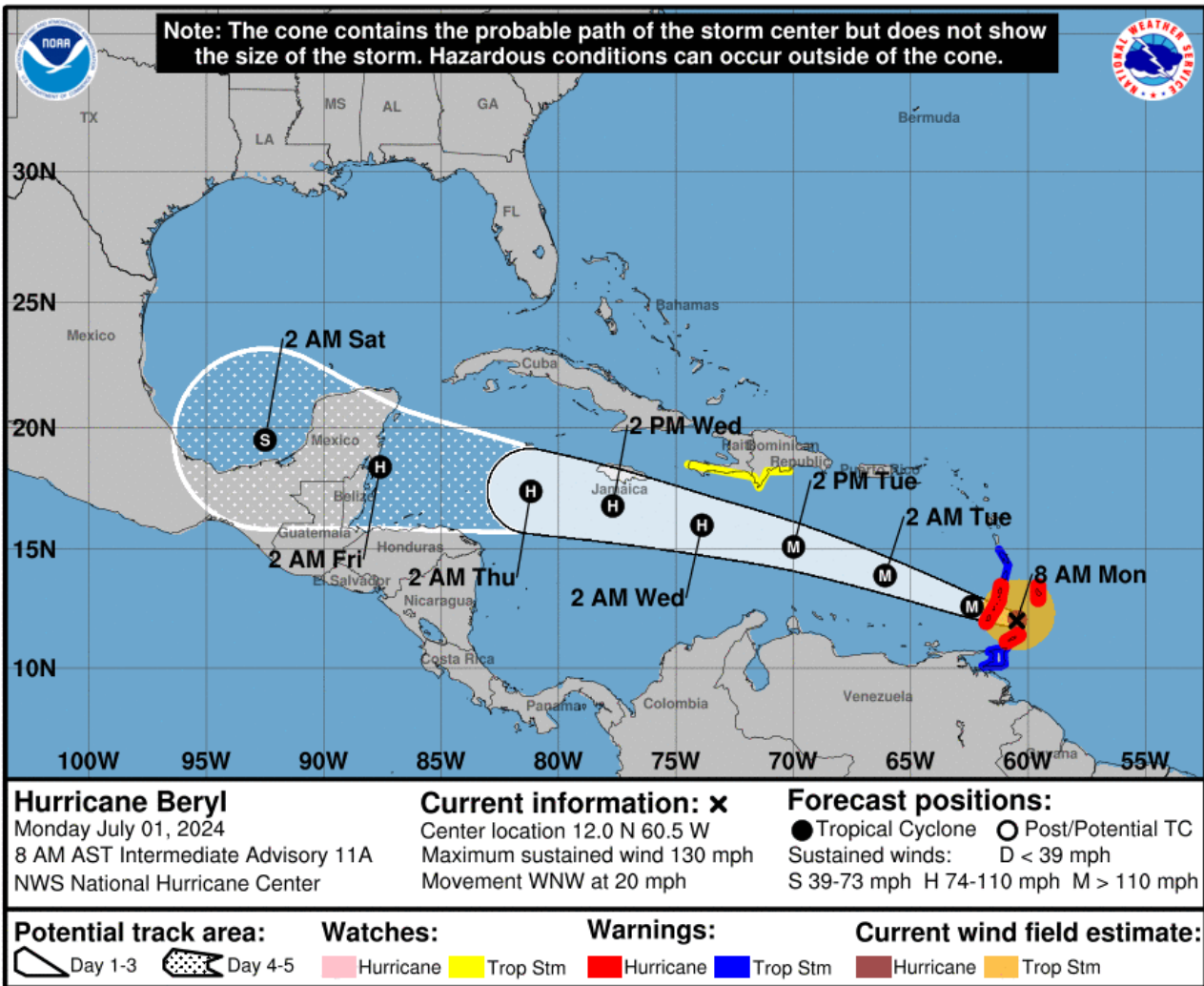
Beryl

96L (60%)



# Major Hurricane Beryl

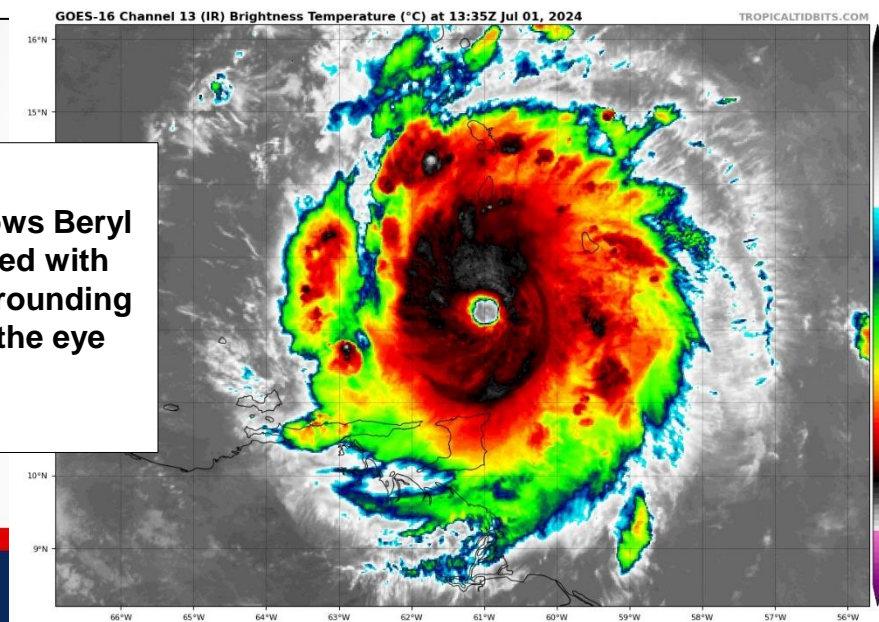
From the National Hurricane Center (NHC)



- **Location:** 35 miles northeast of Grenada; 15 miles east-southeast of Carriacou Islands
- **Maximum Sustained Winds:** 140 mph (Category 4)
- **Current Movement:** WNW at 20 mph
- **FL Watches & Warnings:** None

The eyewall of Beryl is moving across the southern Windward Islands. Beryl is expected to move quickly westward to west-northwestward during the next few days. On the forecast track, the center of Beryl is currently moving across the southern Windward Islands and will move across the southeastern and central Caribbean Sea late today though Wednesday. Fluctuations in strength are likely during the next day or so, but Beryl is expected to remain an extremely dangerous major hurricane as its core moves through the Windward Islands into the eastern Caribbean. Some weakening is expected in the central Caribbean by midweek, though Beryl is forecast to remain a hurricane.

Satellite imagery shows Beryl is very well organized with deep convection surrounding the eye and within the eye wall.





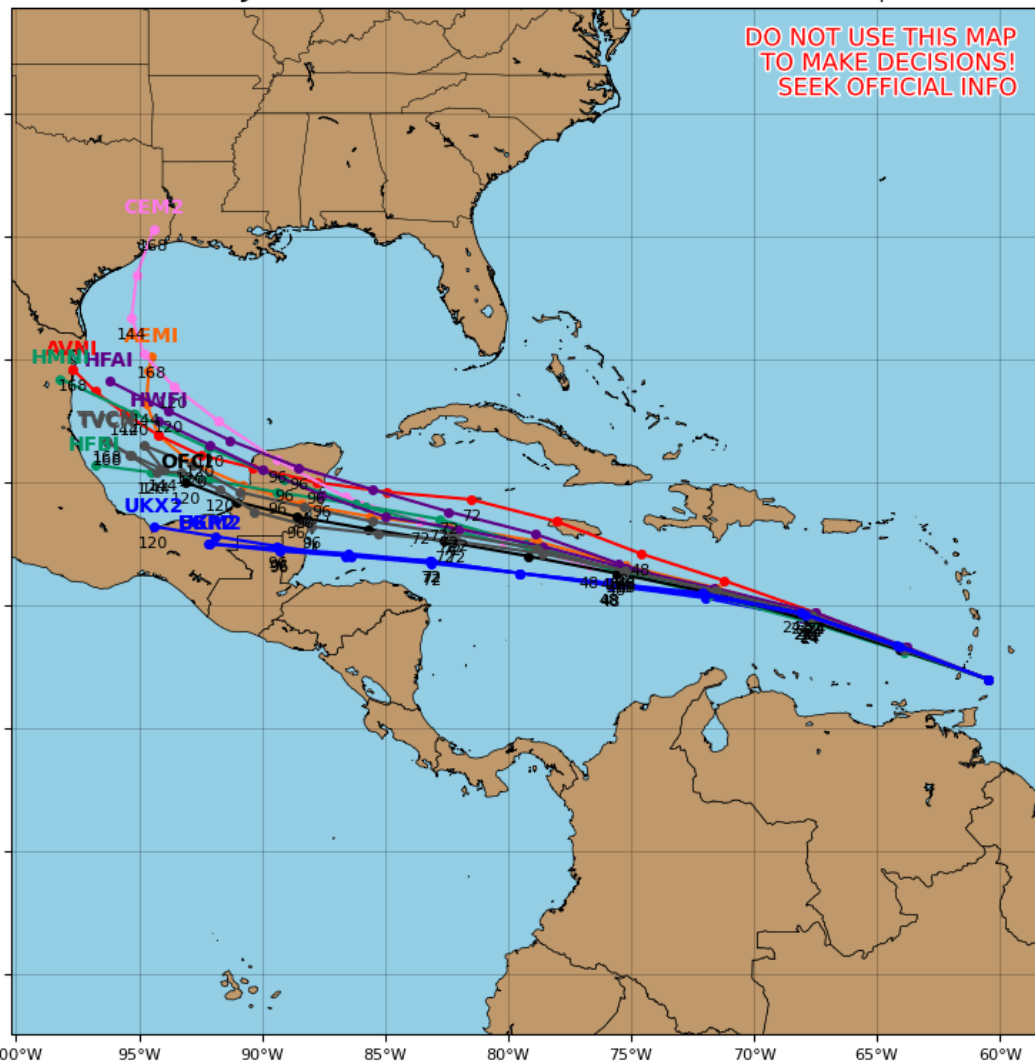
# Model Forecasts – Next 5 Days

## Major Hurricane Beryl

### Hurricane BERYL Model Track Guidance

Initialized at 12z Jul 01 2024

Levi Cowan - tropicaltidbits.com



Computer model guidance continues to show good agreement that Beryl will continue to generally move westward to west-northwestward over the next couple of day across the central and eastern Caribbean Sea. Beryl will continue to move along the southern periphery of a large area of high pressure over the central tropical Atlantic through the next couple of days. Latest computer model guidance is indicating another area of high pressure over the Gulf of Mexico developing mid-to-late this week, which could keep Beryl on a more southerly track towards the Yucatan Peninsula and Central America; however, model consensus keeps the system moving westward to west-northwestward across the Caribbean Sea through midweek. It is too soon to discuss what could happen with the system if it were to make its way into the Gulf of Mexico.

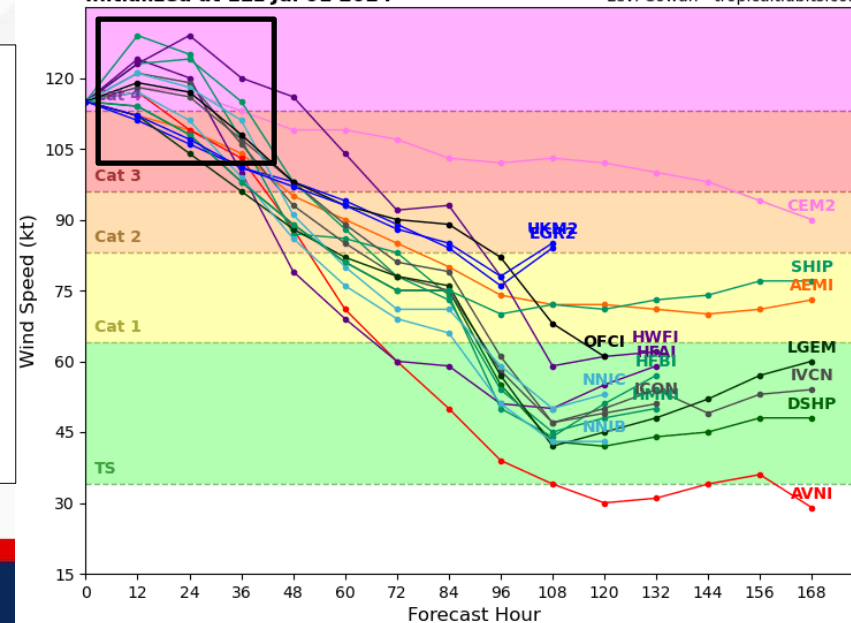
Computer model guidance remains within good agreement that Beryl could undergo some additional strengthening as it approaches the Windward Islands this morning. Fluctuations within Beryl's strength is likely through the next 24-48 hours as it moves into the eastern Caribbean Sea. As Beryl moves into the central Caribbean Sea, weakening is forecast as the system will interact with stronger upper-level winds. Beryl will continue to remain a hurricane as it moves over the central Caribbean Sea midweek, but computer model guidance shows disagreement on how much it will weaken.

**Computer model guidance continues to be within very good agreement keeping Beryl as a dangerous hurricane throughout the next couple of days. Beryl is likely to reach its peak intensity within the next 24-48 hours.**

### Hurricane BERYL Model Intensity Guidance

Initialized at 12z Jul 01 2024

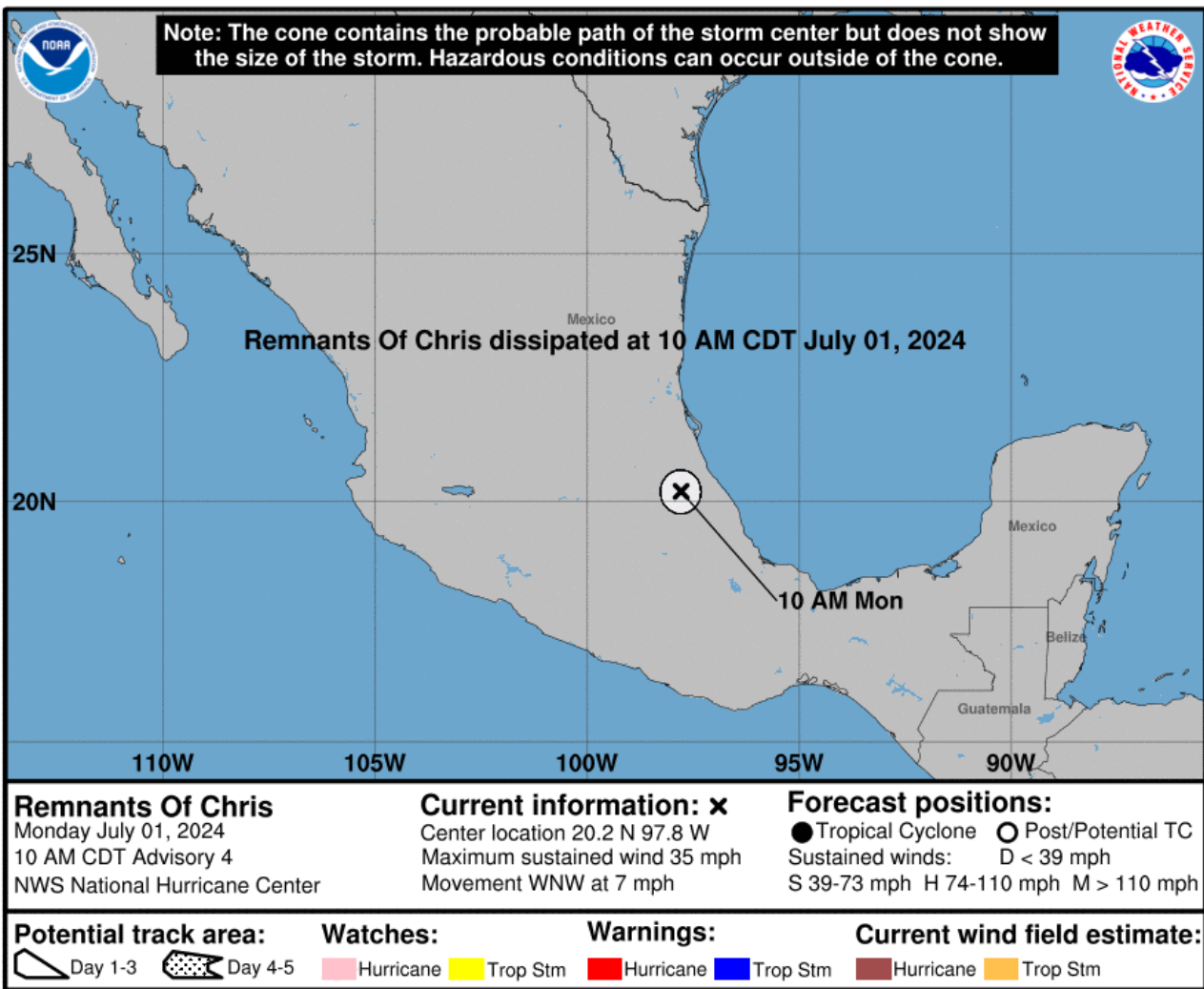
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# Remnants of Tropical Depression Chris

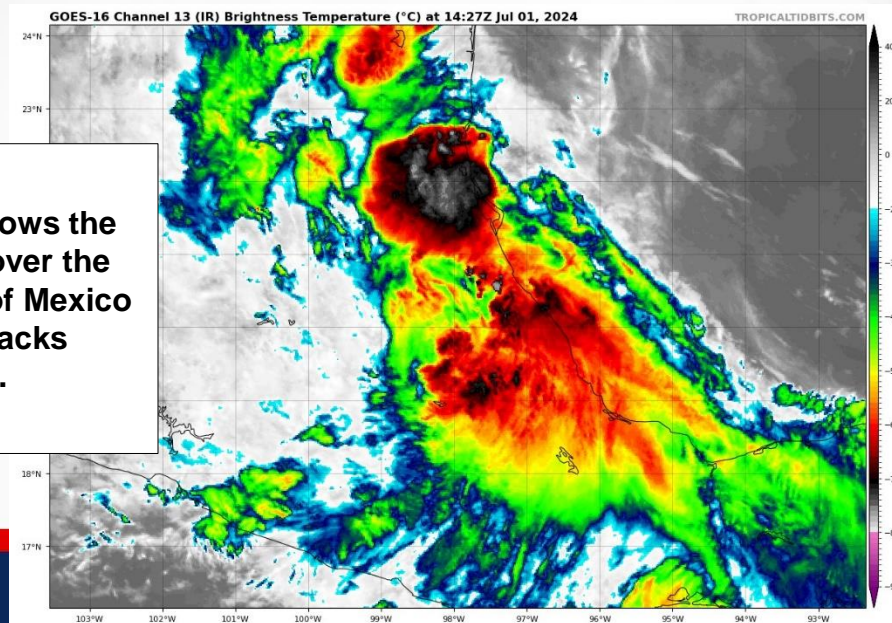
## From the National Hurricane Center (NHC)



- **Location:** 60 miles south-southwest of Tuxpan, Mexico
- **Maximum Sustained Winds:** 35 mph
- **Current Movement:** WNW at 7 mph
- **FL Watches & Warnings:** None

The remnants of Tropical Depression Chris continue to dissipate over the rugged terrain of eastern Mexico. The remnants are moving towards the west-northwest near 7 mph. Maximum sustained winds are near 35 mph with higher gusts. *This is the last public advisory issued by the National Hurricane Center (NHC) for this system.*

Satellite imagery shows the remnants of Chris over the southeastern coast of Mexico and the system lacks organization.



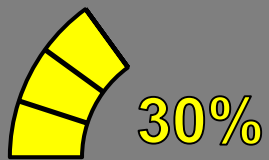
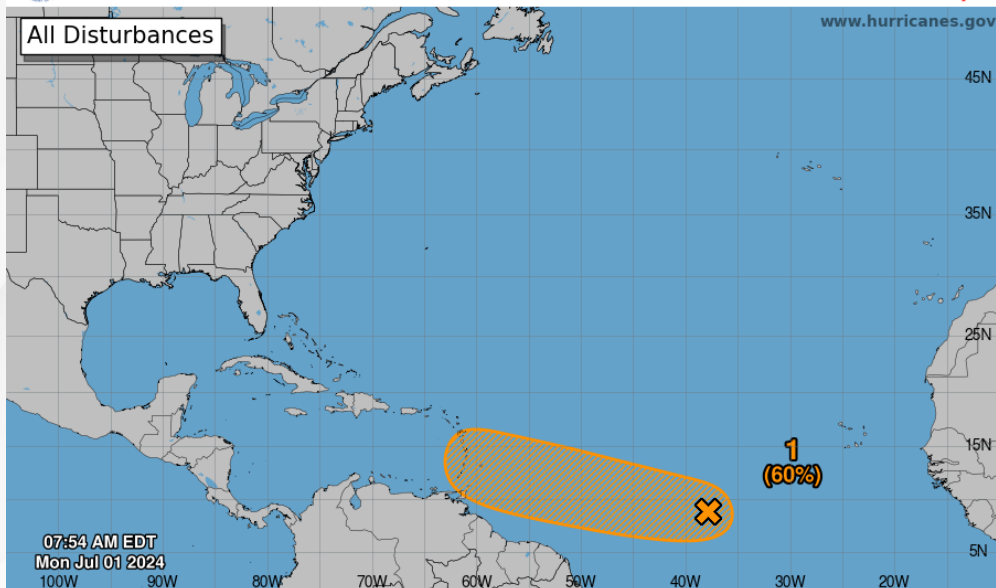


# Tropical Weather Outlook

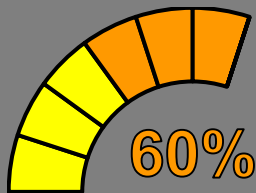
## Disturbance 1 – Invest 96L ([LINK](#))



Seven-Day Graphical Tropical Weather Outlook  
National Hurricane Center Miami, Florida



48 Hour Formation



7 Day Formation

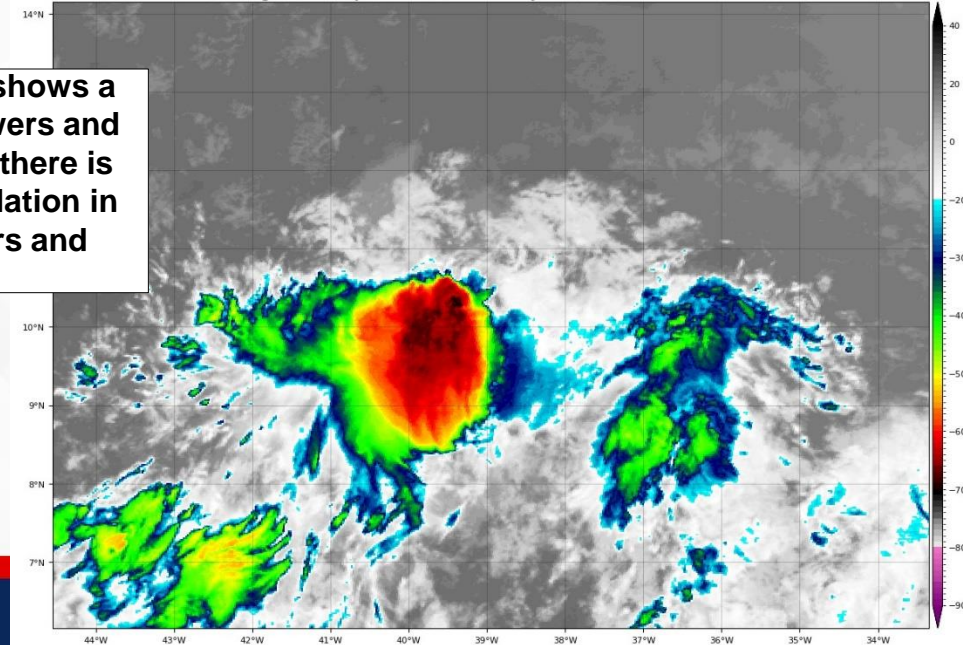
Showers and thunderstorms continue in association with an area of low pressure over 1000 miles east-southeast of the Windward Islands. Environmental conditions appear marginally conducive for additional development of this system. A tropical depression could form by the middle part of this week while it generally moves westward at 15-20 mph across the central and western tropical Atlantic. *This system poses no direct threat to Florida over the next 7-10 days but continues to be monitored.*

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

\* Formation chance through 7 days...**medium...60%**.

Current satellite imagery shows a concentrated area of showers and thunderstorms; however, there is no defined center of circulation in association with showers and thunderstorms.

GOES-16 Channel 13 (IR) Brightness Temperature (°C) at 14:25Z Jul 01, 2024





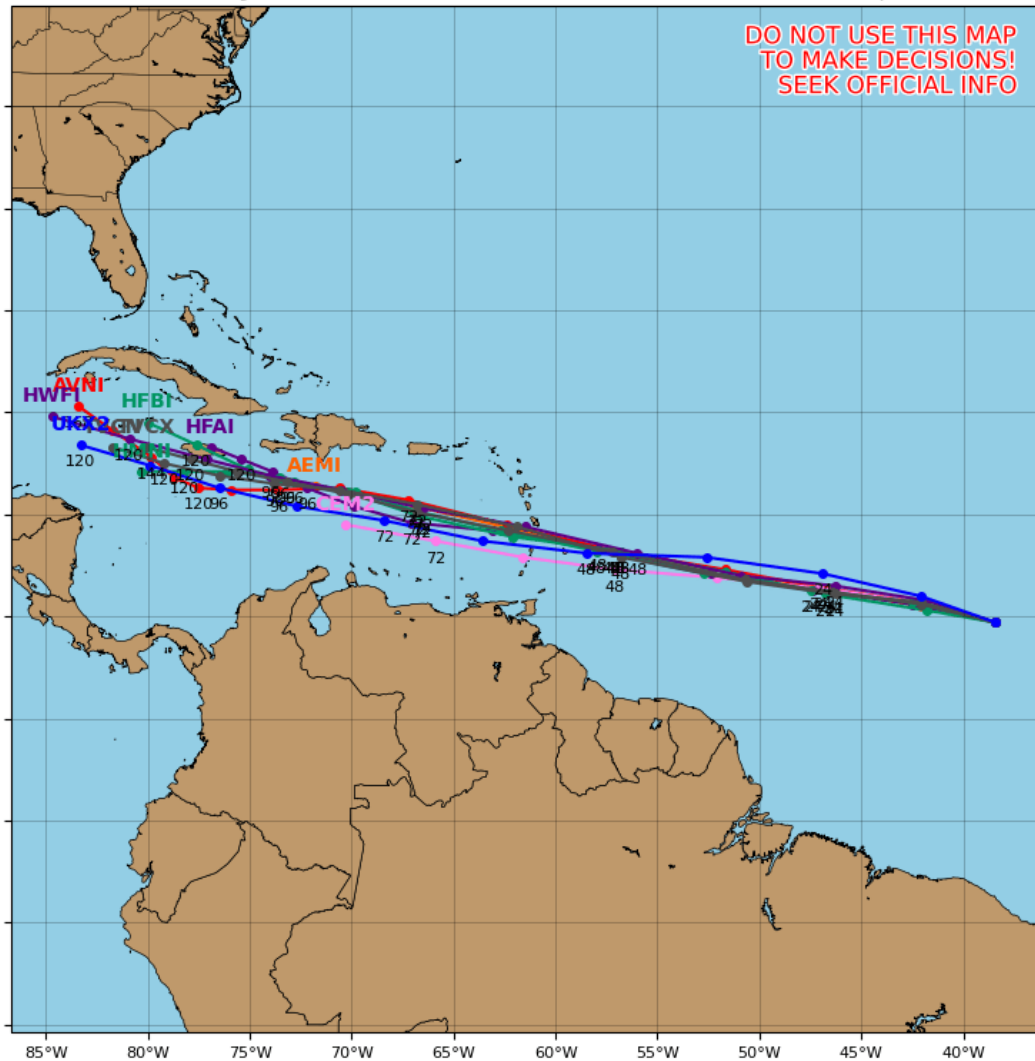
# Model Forecasts – Next 5 Days

## Major Hurricane Beryl

### Invest 96L Model Track Guidance

Initialized at 12z Jul 01 2024

Levi Cowan - tropicaltidbits.com



Computer model guidance is within decent agreement that Invest 96L will continue to generally move westward quickly across the central and western tropical Atlantic over the next 24-48 hours then approach the Windward Islands. Invest 96L looks to take a similar path to Major Hurricane Beryl as the system is forecast to move across the Windward Islands, then enter the eastern Caribbean Sea by midweek. Beyond that, computer model guidance shows a larger spread/range as the system enters the central Caribbean Sea later this week where it could interact with stronger upper-level winds. Overall, there remains greater forecast uncertainty as this system does not have a well-defined center of circulation.

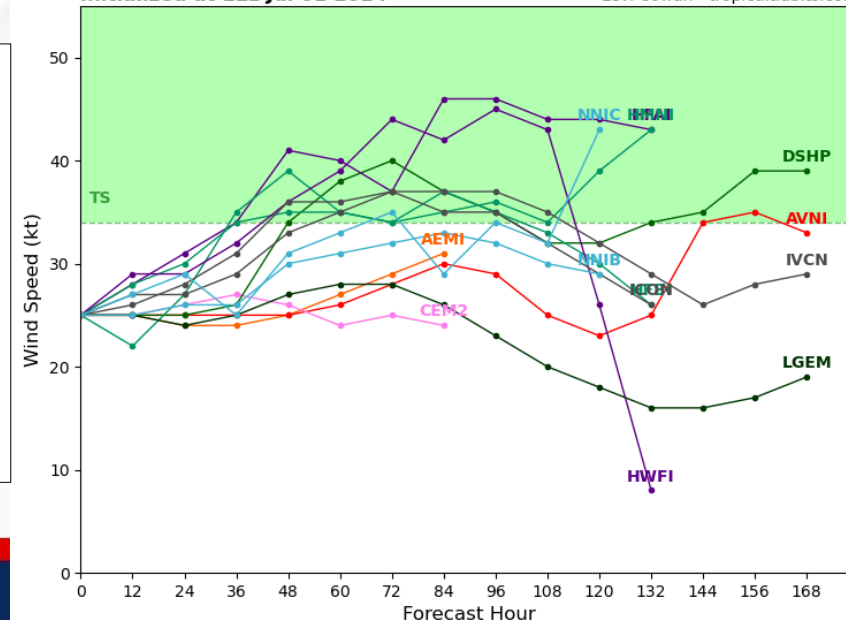
Computer models are within decent agreement that Invest 96L could see further development over the next 24-48 hours as it moves westward across the central and western tropical Atlantic. Beyond that, there remains higher forecast uncertainty regarding the system as it does not have a well-defined center of circulation.

**Computer model guidance continues to be within very good agreement keeping Beryl as a dangerous hurricane throughout the next couple of days. Beryl is likely to reach its peak intensity within the next 24-48 hours.**

### Invest 96L Model Intensity Guidance

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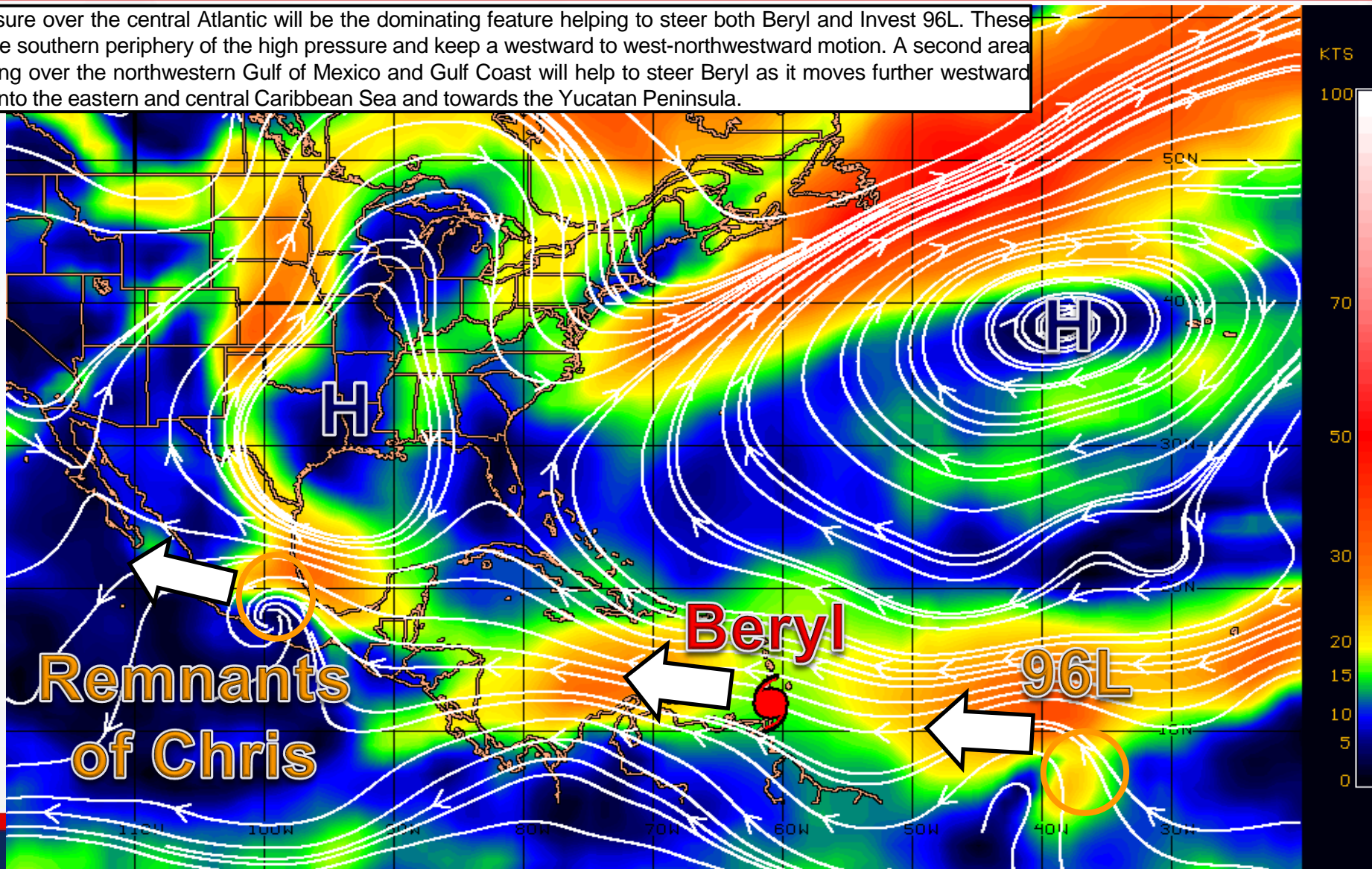


# Steering Currents

## 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.

A large area of high pressure over the central Atlantic will be the dominating feature helping to steer both Beryl and Invest 96L. These systems will move along the southern periphery of the high pressure and keep a westward to west-northwestward motion. A second area of high pressure developing over the northwestern Gulf of Mexico and Gulf Coast will help to steer Beryl as it moves further westward and west-northwestward into the eastern and central Caribbean Sea and towards the Yucatan Peninsula.



- Fast Moving Storm
- Fast Moving Storm
- Typical Moving Storm
- Slow Moving Storm



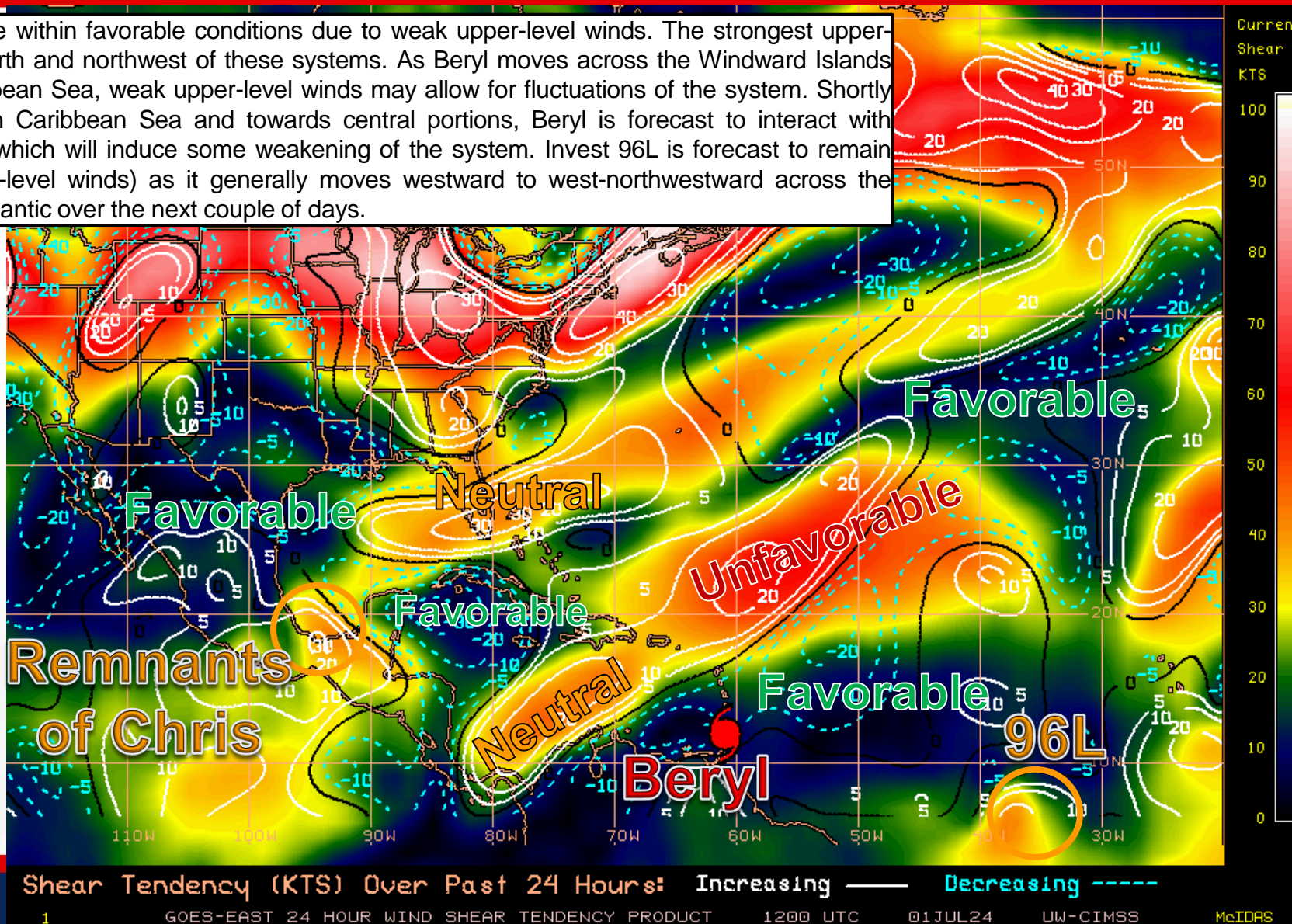


# Wind Shear

## 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).

Both Beryl and Invest 96L are within favorable conditions due to weak upper-level winds. The strongest upper-level winds remain to the north and northwest of these systems. As Beryl moves across the Windward Islands and enters the eastern Caribbean Sea, weak upper-level winds may allow for fluctuations of the system. Shortly after moving into the eastern Caribbean Sea and towards central portions, Beryl is forecast to interact with moderate upper-level winds, which will induce some weakening of the system. Invest 96L is forecast to remain within favorable (weak upper-level winds) as it generally moves westward to west-northwestward across the central and eastern tropical Atlantic over the next couple of days.



HIGH Shear (Unfavorable)

HIGH Shear (Unfavorable)

MODERATE Shear (Neutral)

LOW Shear (Favorable)

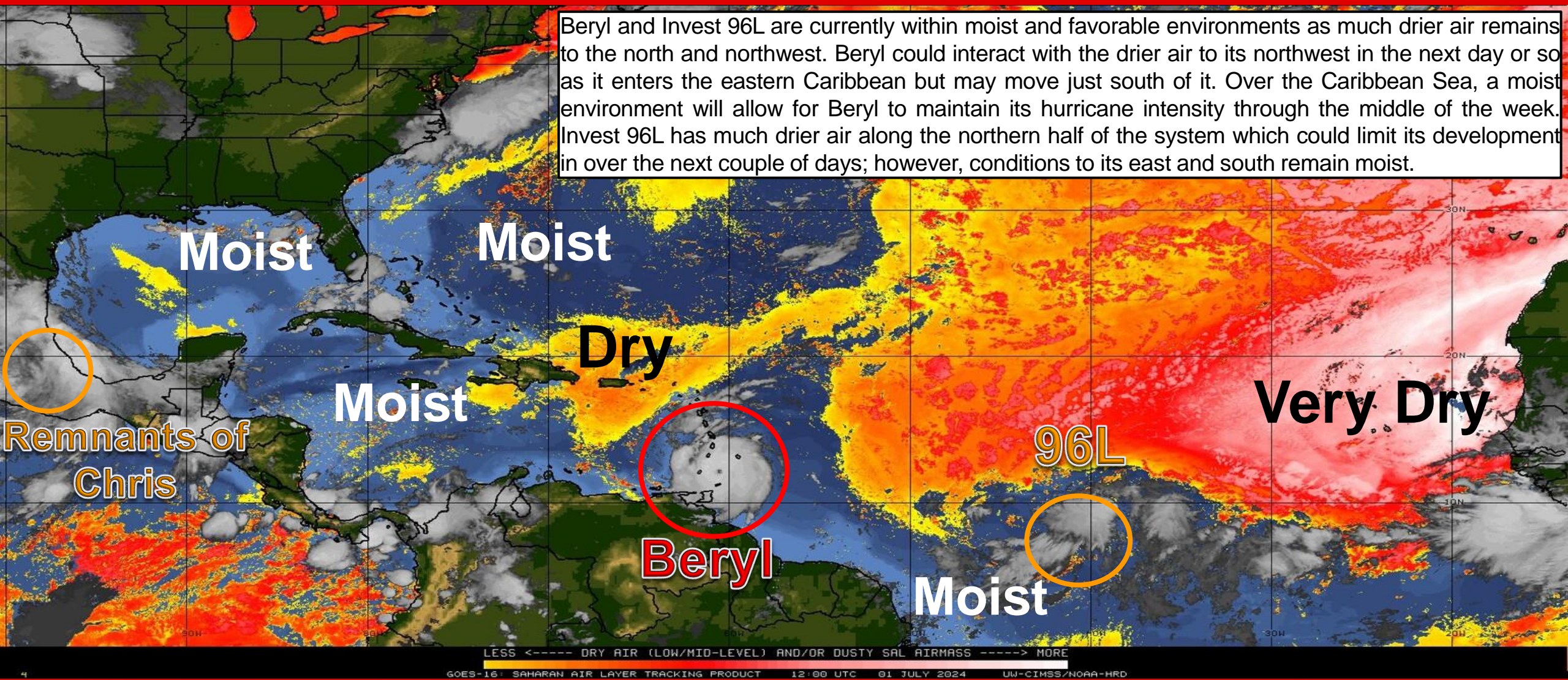


# Dry Air & Saharan Dust

Is the environment favorable for the system?

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

Beryl and Invest 96L are currently within moist and favorable environments as much drier air remains to the north and northwest. Beryl could interact with the drier air to its northwest in the next day or so as it enters the eastern Caribbean but may move just south of it. Over the Caribbean Sea, a moist environment will allow for Beryl to maintain its hurricane intensity through the middle of the week. Invest 96L has much drier air along the northern half of the system which could limit its development in over the next couple of days; however, conditions to its east and south remain moist.

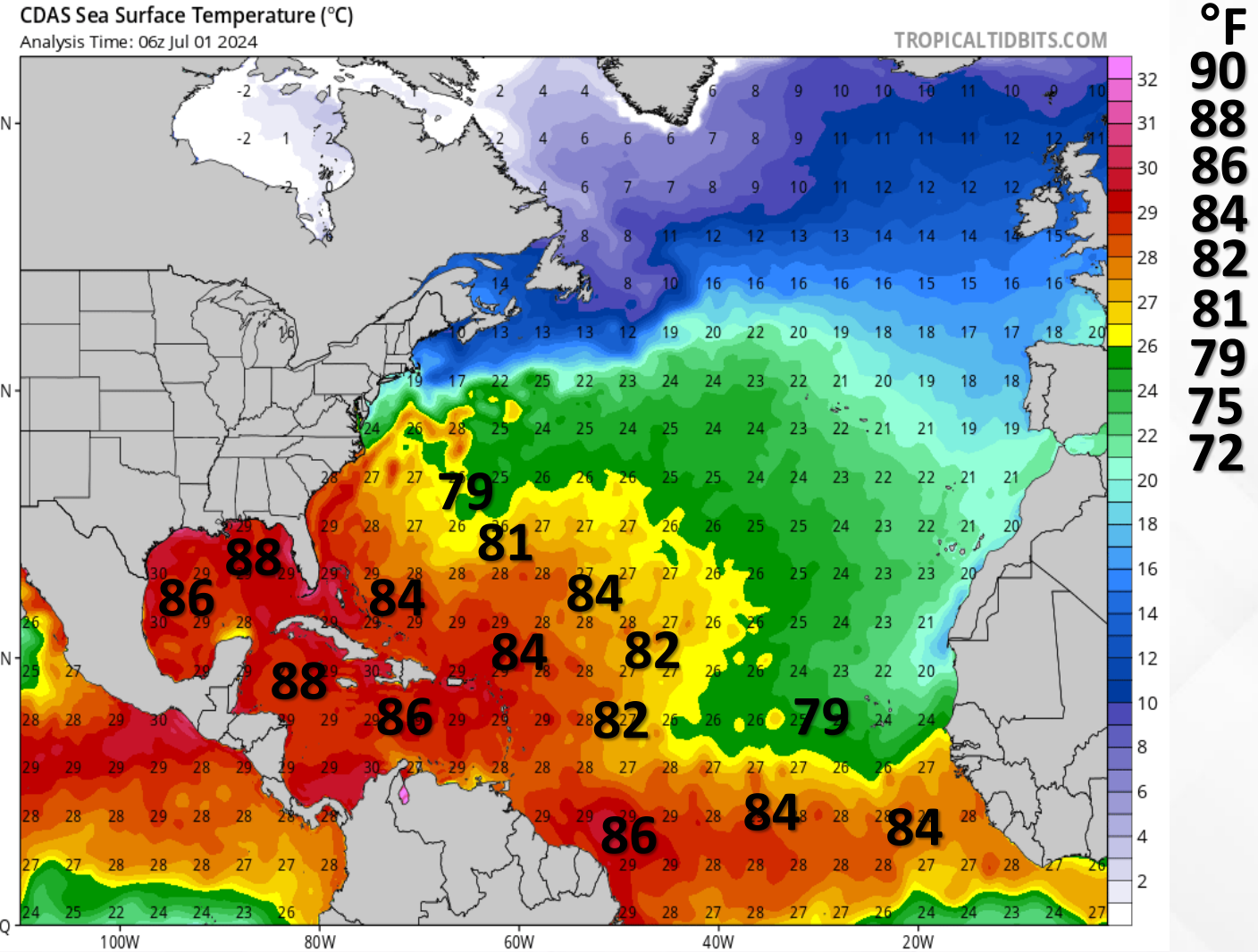
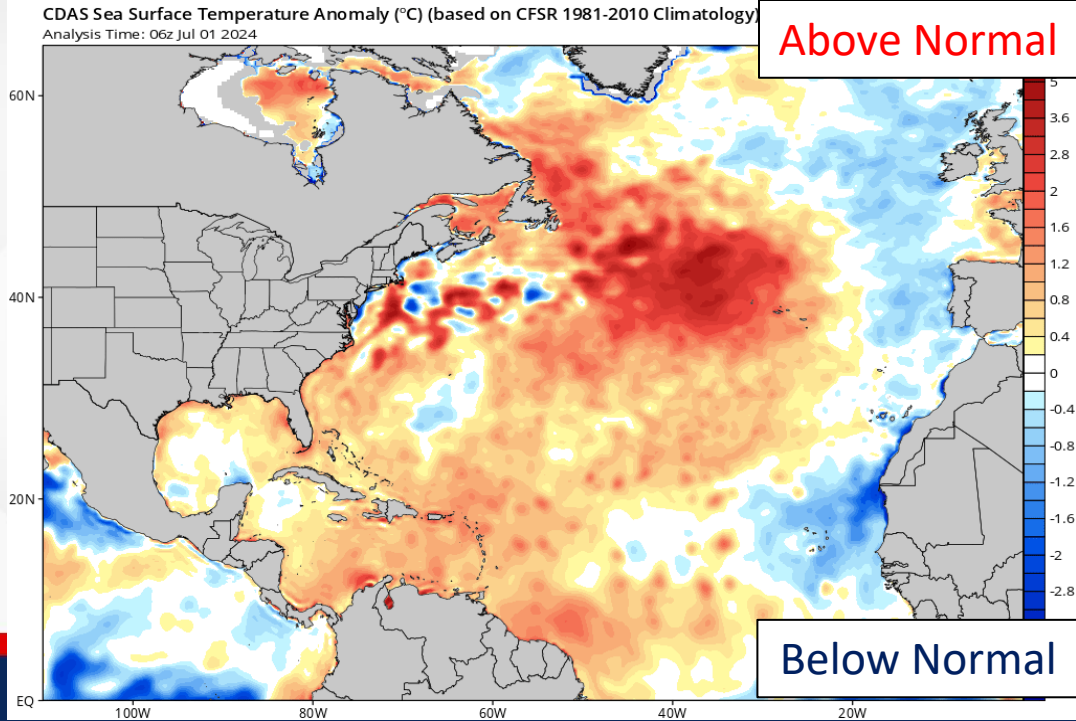




# Sea Surface Temperatures & Anomalies

Is the ocean favorable for the system?

Temperatures across the Atlantic Basin are supportive of tropical cyclone development. Waters across the deep tropical Atlantic and Gulf of Mexico 0.5 to 1.5-degrees above normal for this time of year.





# Summary

## Major Hurricane Beryl:

- As of 11:00 AM EDT, Major Hurricane Beryl was located about 35 miles northeast of Grenada and 15 miles east-southeast of Carriacou Island and moving west-northwestward at 20 mph.
- The eyewall of Beryl is moving across the southern Windward Islands and is expected to quickly move westward to west-northwestward during the next few days.
- On the forecast track, the center of Beryl is currently moving across the southern Windward Islands and will move across the southeastern and central Caribbean Sea late today through Wednesday.
- Maximum sustained winds are near 140 mph with higher gusts making Beryl an extremely dangerous category 4 hurricane.
- Fluctuations in strength are likely during the next day or so, but Beryl is expected to remain an extremely dangerous hurricane as its core moves through the Windward Islands and into the eastern Caribbean.
- Some weakening is expected in the central Caribbean by midweek, though Beryl is forecast to remain a hurricane.
- *Beryl poses no threat to Florida over the next 5-7 days, but this system will be monitored this weekend into next week.*

## Remnants of Chris:

- As of 11:00 AM EDT, Tropical Depression Chris has dissipated over the rugged terrain of eastern Mexico.
- The remnants of the system are moving towards the west-northwest near 7 mph.
- Maximum sustained winds are near 35 mph with higher gusts, and this is the last public advisory issued by the National Hurricane Center (NHC) for this system.
- *This system poses no direct threat to Florida but will bring elevated ocean swells and a high risk for rip currents along Panhandle beaches today and through early this week..*

## Invest 96L – Central Tropical Atlantic:

- Showers and thunderstorms continue in association with an area of low pressure located over 1000 miles east-southeast of the Windward Islands.
- Environmental conditions appear marginally conducive for additional development of this system.
- A tropical depression could form by the middle part of this week while it moves generally westward at 15-20 mph across the central and western tropical Atlantic.
- The National Hurricane Center is outlooking a **low (30%) chance of development** over the next 48 hours, and a **medium (60%) chance of development** over the next 7 days.
- *This system poses no threat to Florida over the next 7-10 days but will continue to be monitored*

## Florida Outlook:

- An upper-level disturbance will increase shower and thunderstorm activity along the I-10 corridor and throughout North Florida with the help of tropical moisture.
- Isolated strong to severe thunderstorms will be possible this afternoon and evening along the I-10 corridor, and will be capable of producing frequent lightning, damaging wind gusts (50-60 mph), small hail and torrential downpours – Marginal Risk (level 1 of 5) for Severe Weather.
- Abundant tropical moisture across North Florida will provide showers and thunderstorms with fuel for heavy and torrential downpours that could lead to localized flooding across urban and low-lying/poor drainage areas.
- A Flood Watch is in effect through late this evening across portions of the Big Bend where recent heavy rainfall has led saturated grounds and soils, and additional heavy rainfall could bring localized flooding through today.
- Heat Advisories will go into effect around midday across the Panhandle and western Big Bend where heat index values of 110-111 are expected this afternoon and will create dangerously hot and humid conditions.
- Scattered to numerous showers and thunderstorms will develop along the sea breeze this afternoon and evening throughout the Peninsula, some of which could be locally strong to severe at times.
- Heat index values across the rest of the state will reach well into the upper 90s and low 100s creating warm and muggy conditions.
- The next name on the list is Debby (DEH-bee).

The next briefing packet will be issued Monday Evening. 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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