



# **TROPICAL UPDATE**

**11 AM EDT**

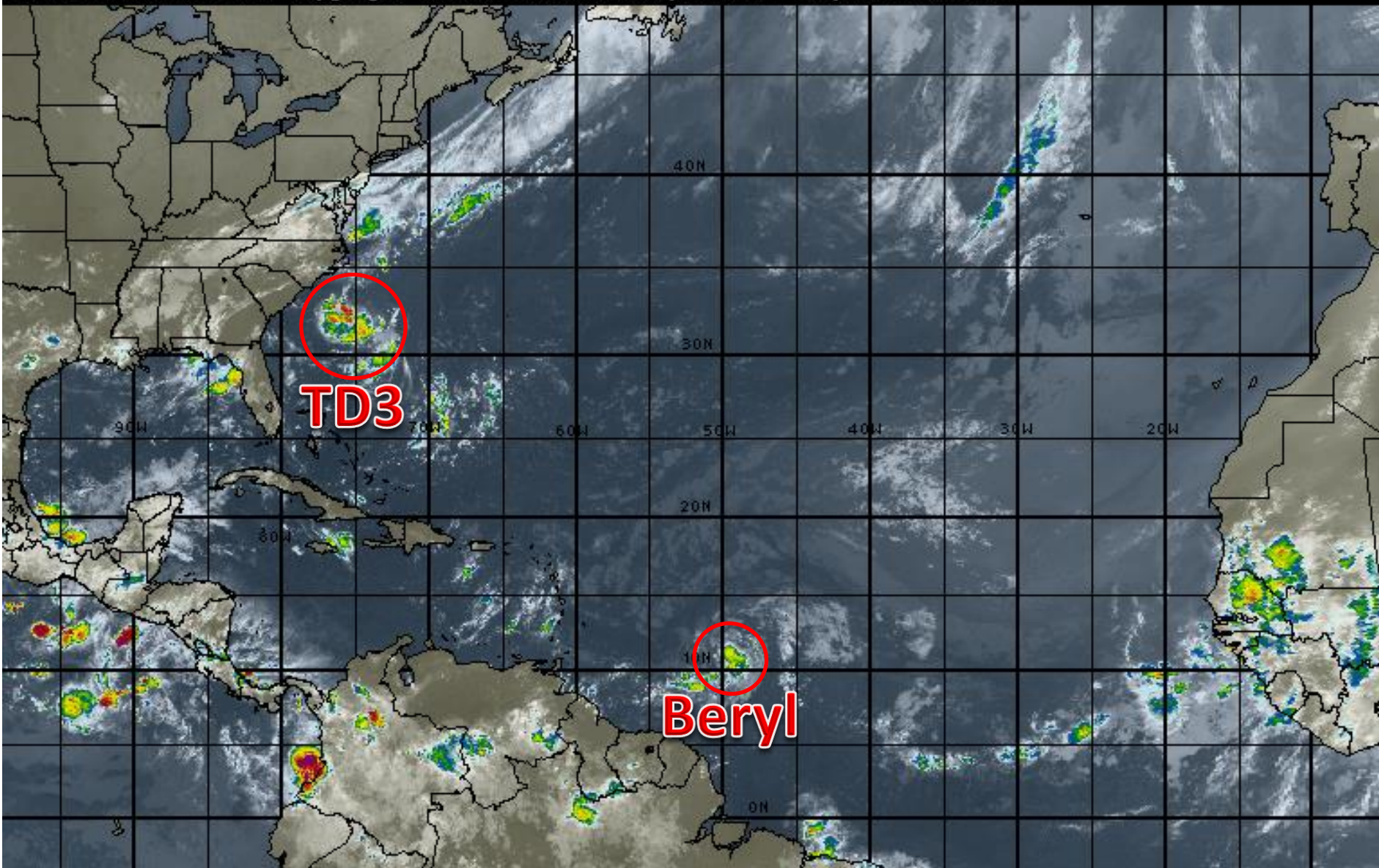
**Saturday, July 7, 2018**

**Tropical Storm Beryl, Tropical Depression  
Three**

**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).**

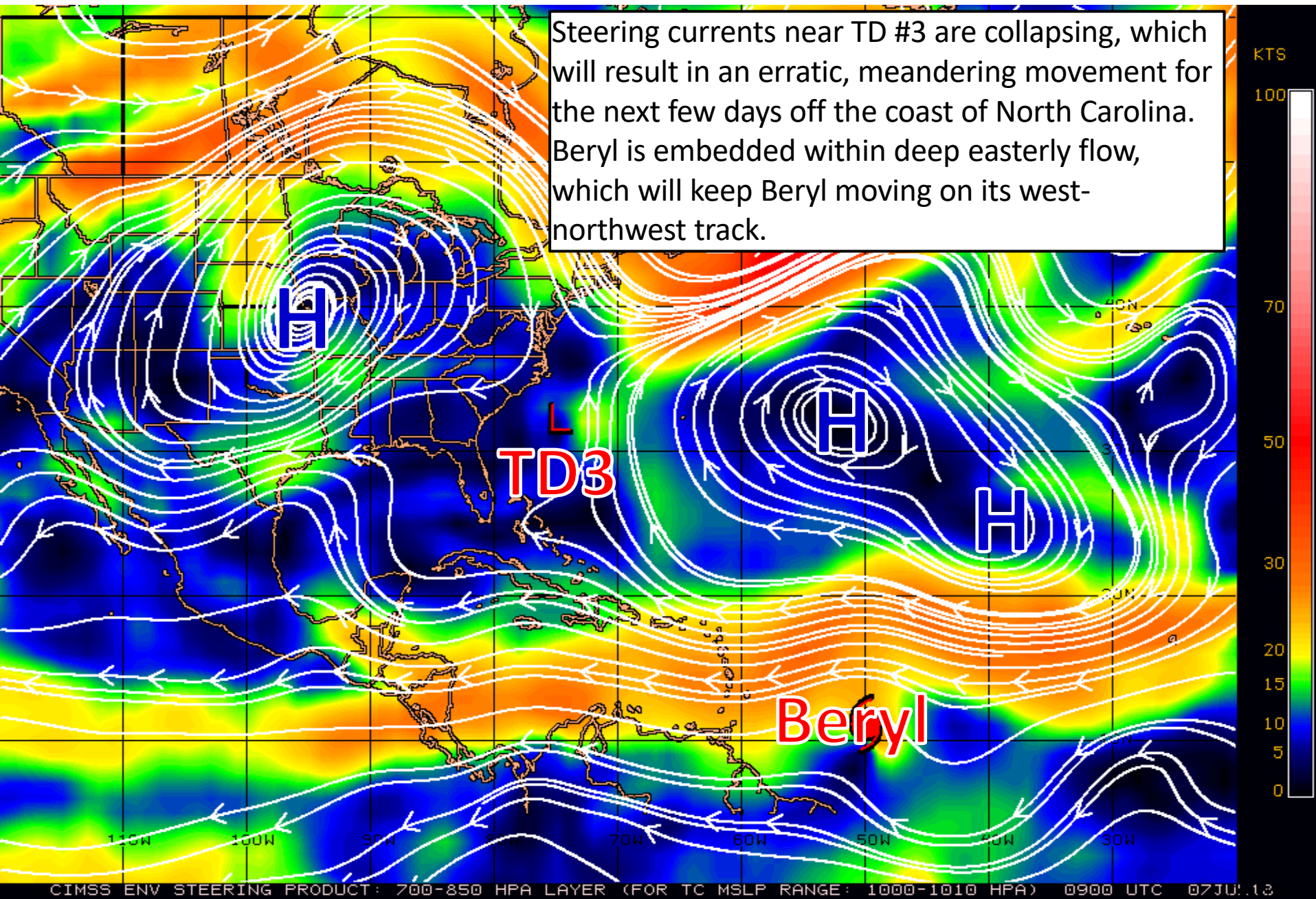
# Atlantic Basin Satellite Image

09:00 07-JUL-2018 GMT Copyright © 1998-2018 WSI Corporation <http://www.wsi.com>



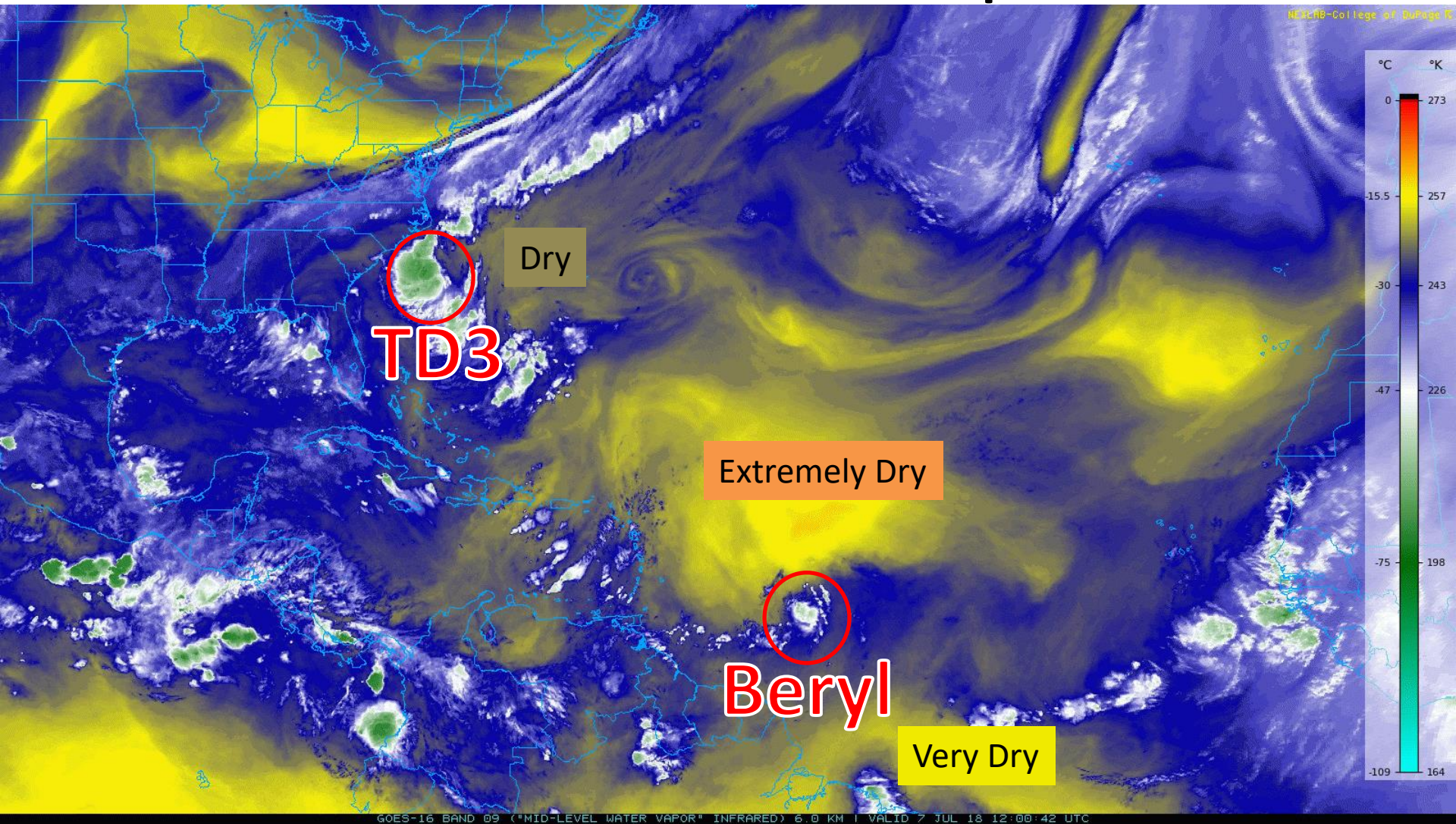


# Steering Currents





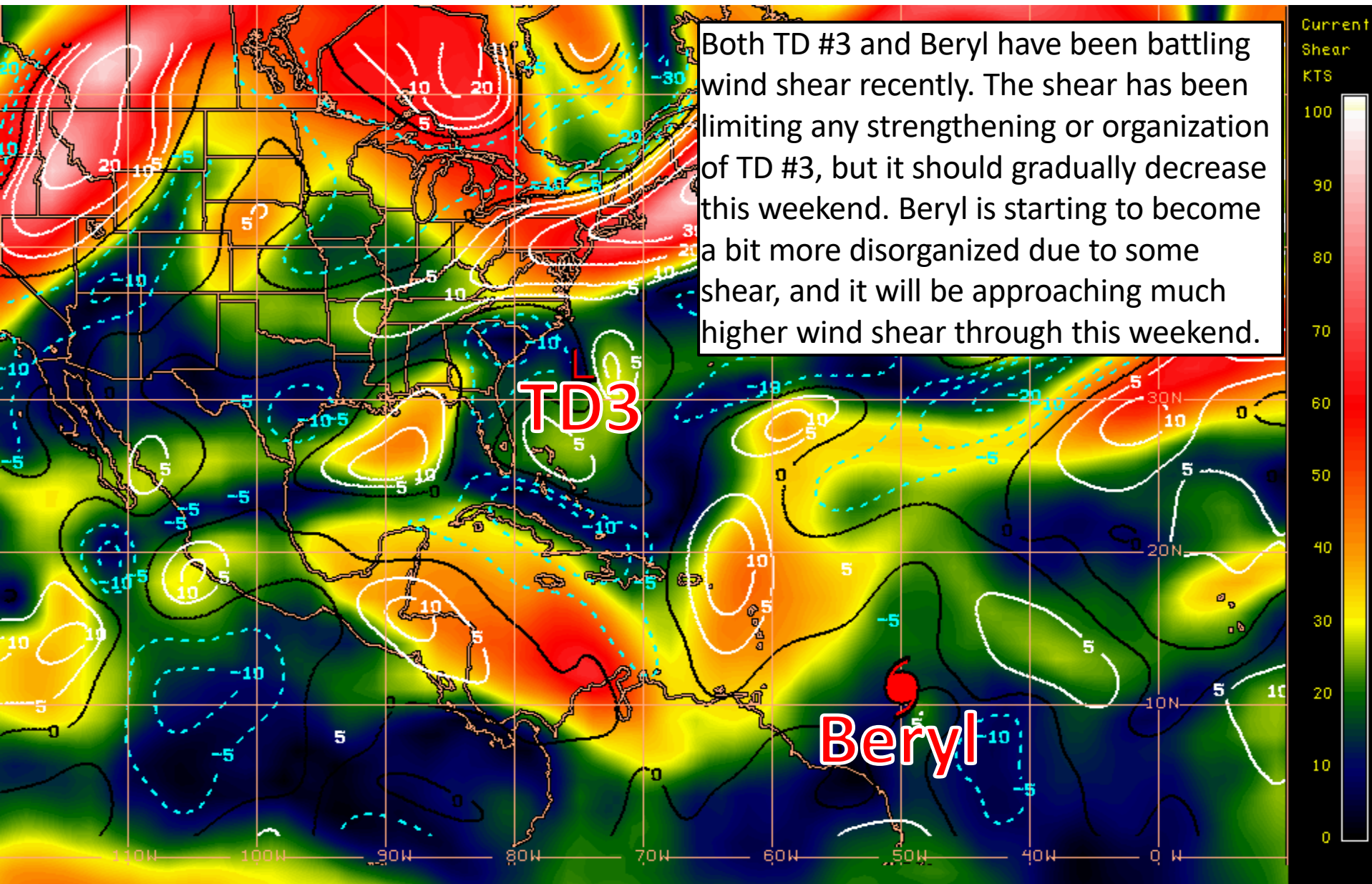
# Current Water Vapor



TD #3 has some dry air just to its east, which has helped limit development thus far. Beryl is approaching some very dry air, which will help limit any strengthening today.



# Current Wind Shear (shaded) and Shear Tendency (lines)

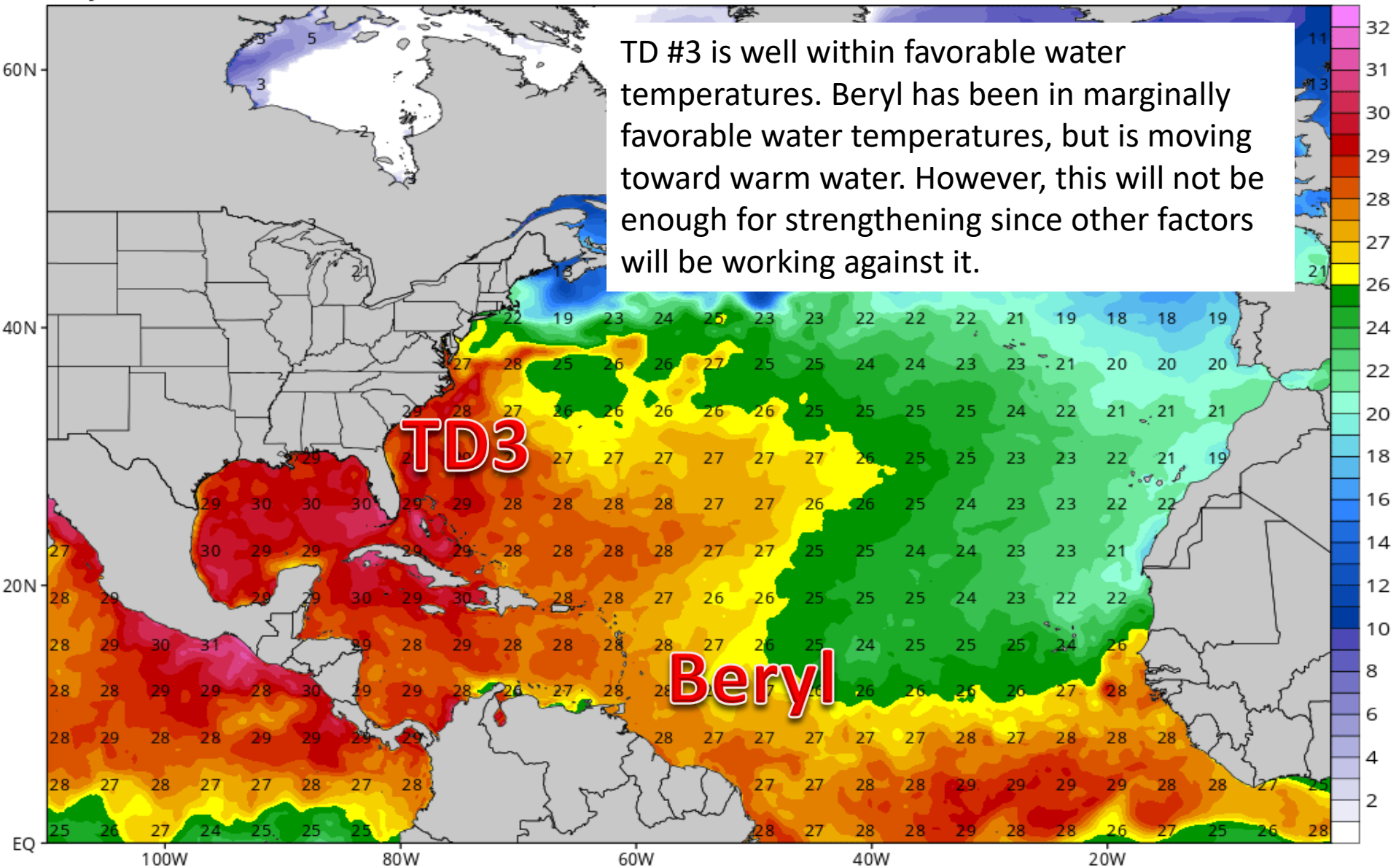


# Water Temperatures

CDAS Sea Surface Temperature (°C)

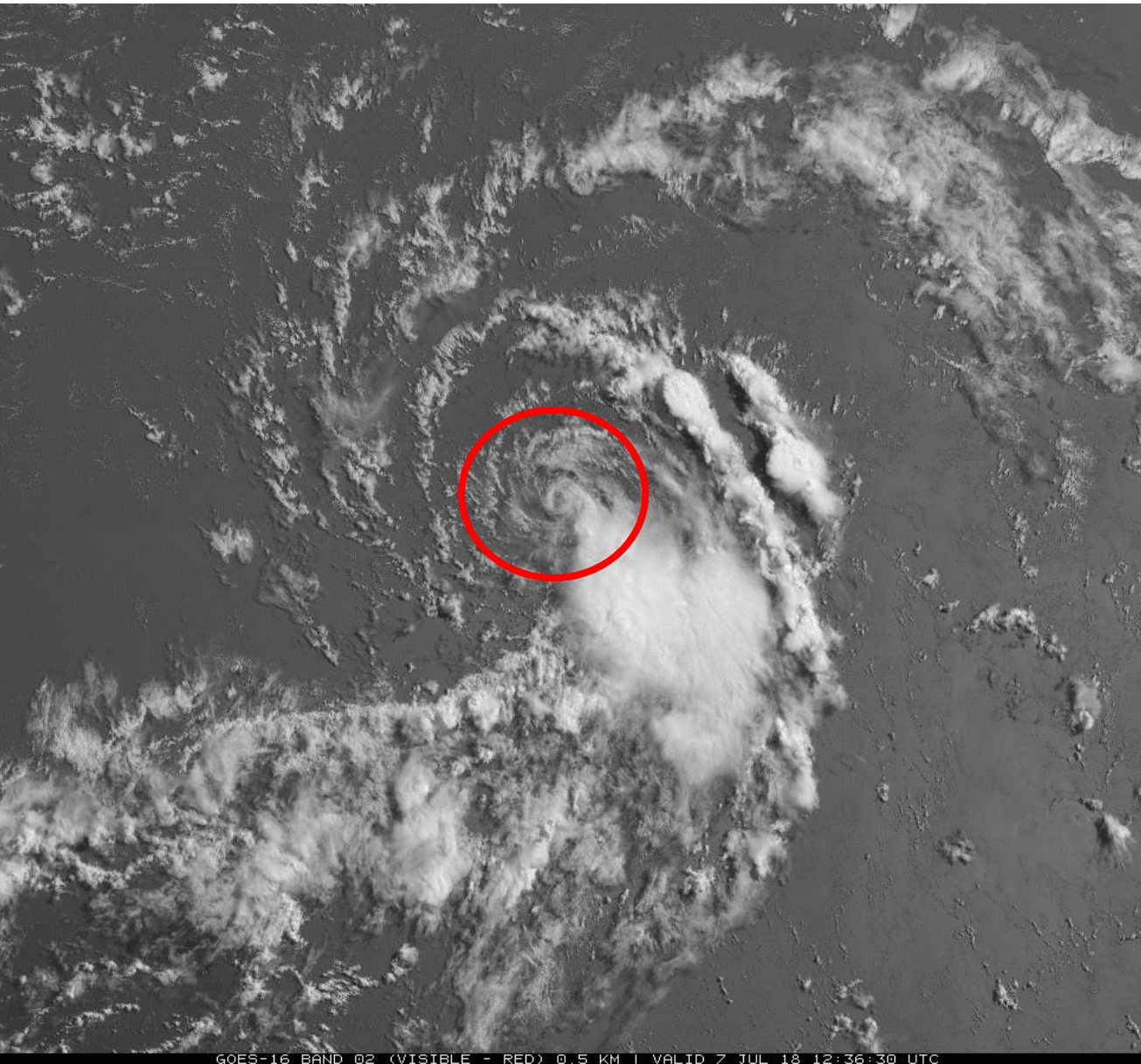
Analysis Time: 00z Jul 07 2018

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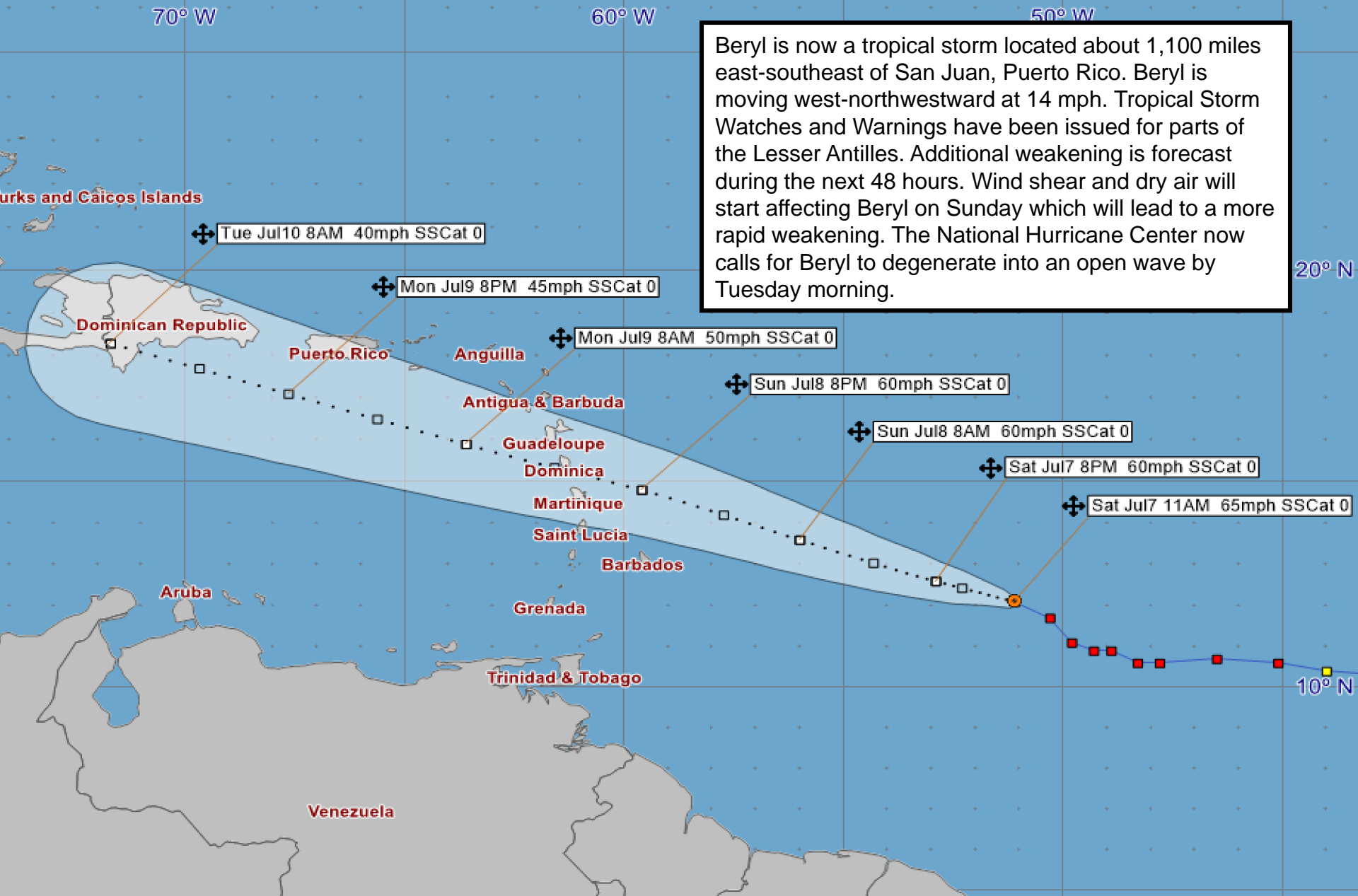




# Current Satellite – Tropical Storm Beryl

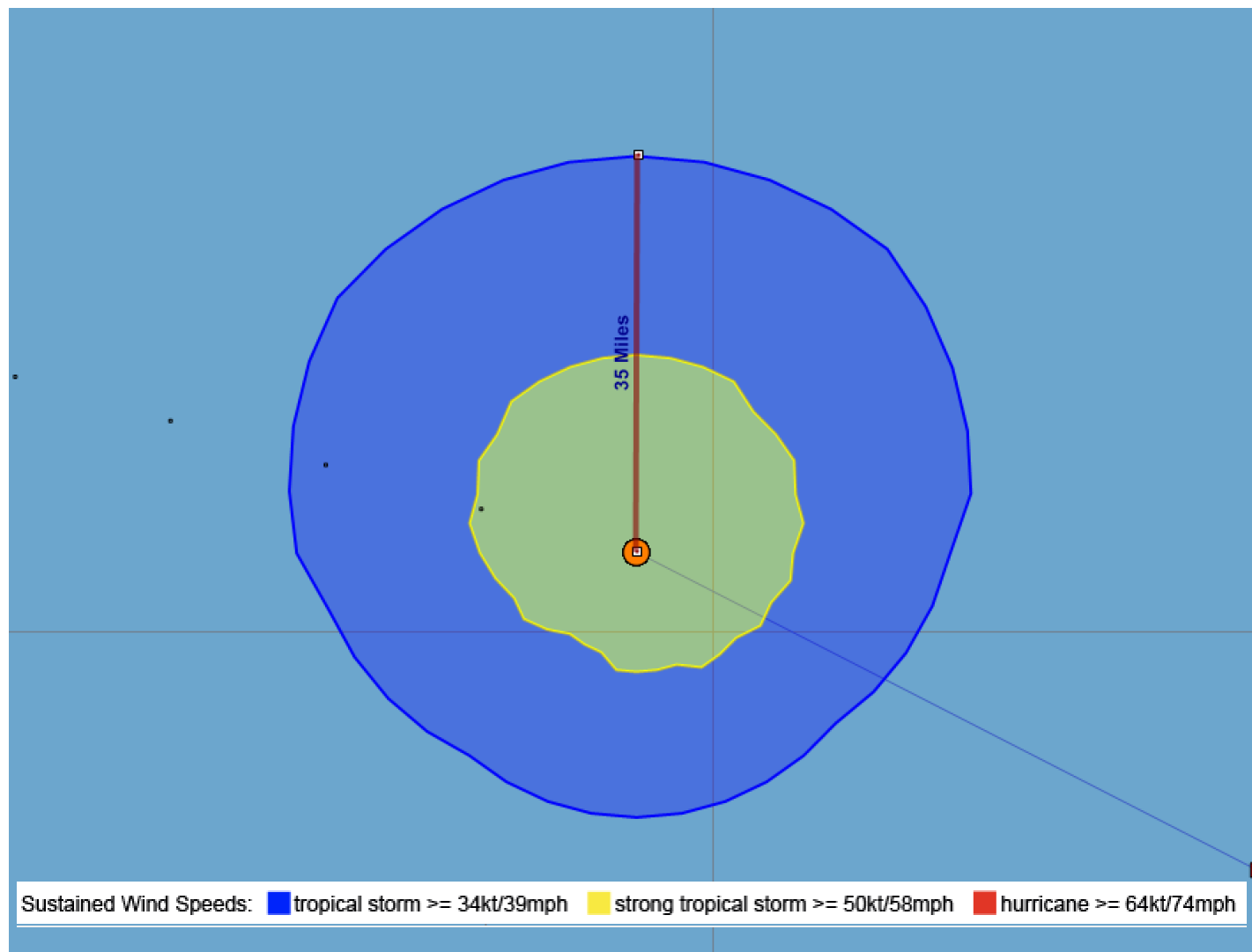


Beryl has been experiencing some shear over the past several hours, and its center is now exposed. Most of the thunderstorms are now displaced to the southeast. This has result in some weakening, with winds down to 75 mph. Little change in strength, maybe even some weakening, is forecast during the next 24-36 hours, with further weakening expected afterward.



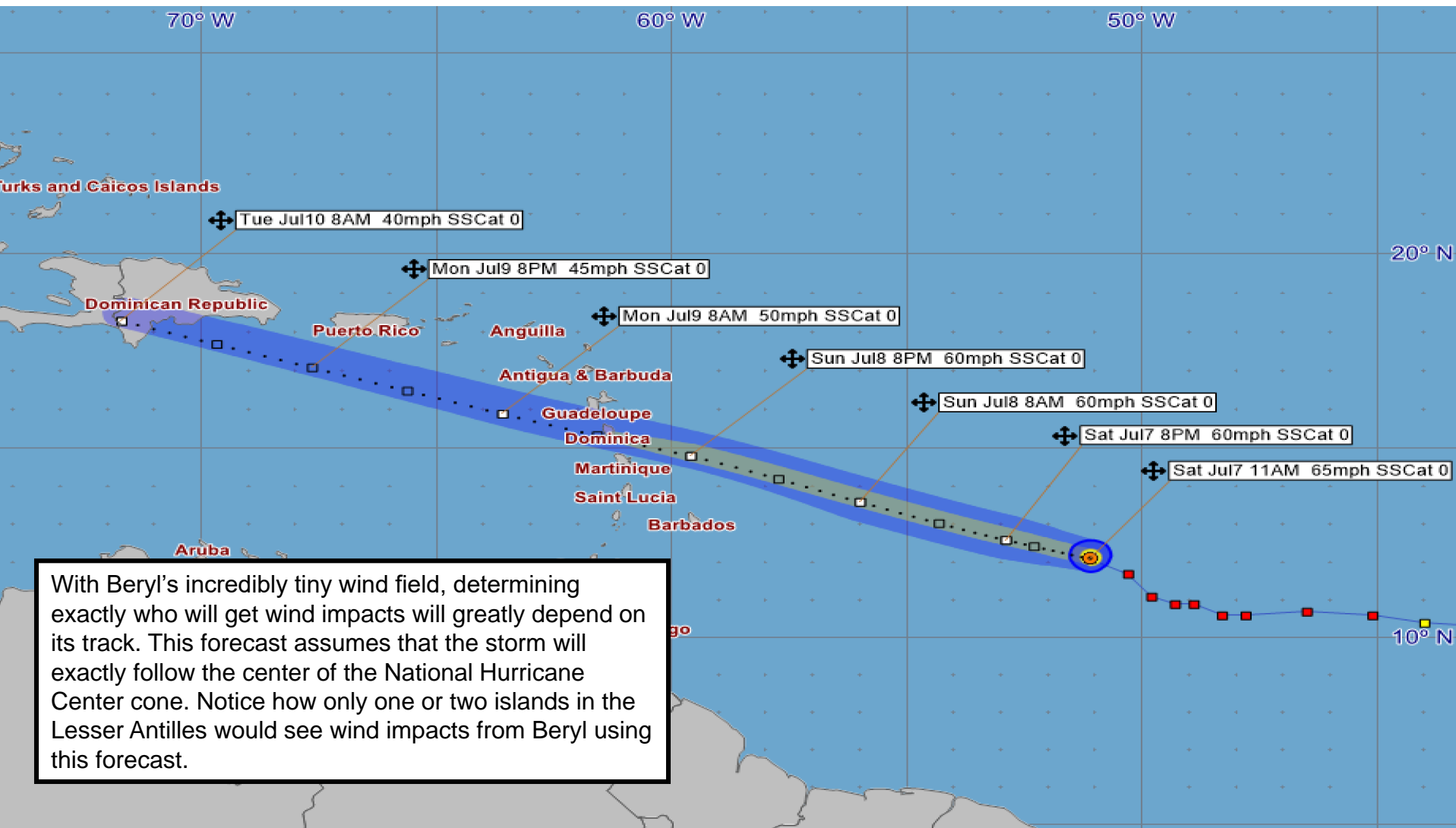
Beryl is now a tropical storm located about 1,100 miles east-southeast of San Juan, Puerto Rico. Beryl is moving west-northwestward at 14 mph. Tropical Storm Watches and Warnings have been issued for parts of the Lesser Antilles. Additional weakening is forecast during the next 48 hours. Wind shear and dry air will start affecting Beryl on Sunday which will lead to a more rapid weakening. The National Hurricane Center now calls for Beryl to degenerate into an open wave by Tuesday morning.





Beryl is a very compact tropical storm. Tropical storm force winds (39+ mph) only extend outward up to about 35 miles from the center. Thus, determining exactly what islands get impacts is incredibly difficult to predict since it has a tiny wind field, and it will be highly dependent on its eventual track.

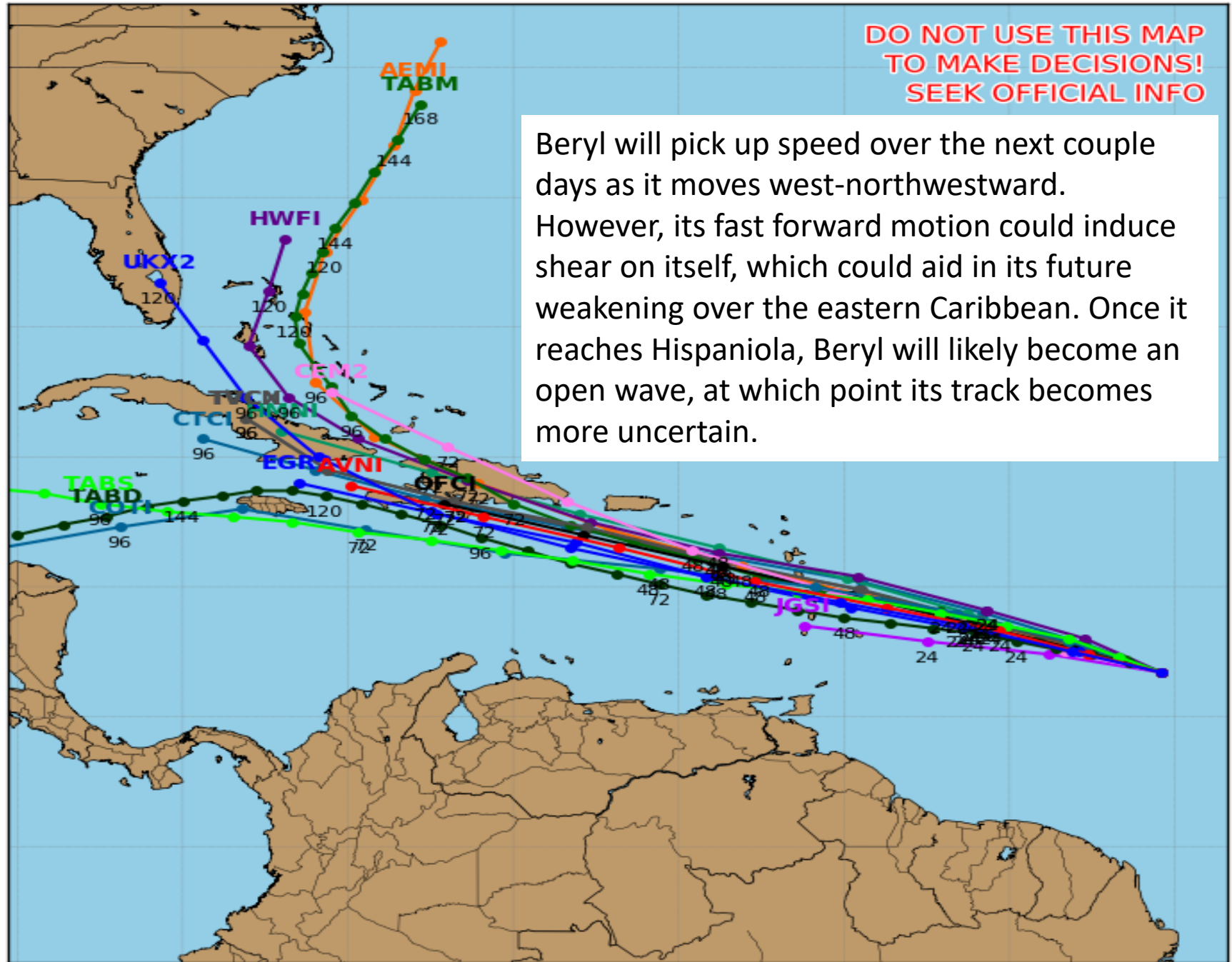
# Forecast Wind Field – Tropical Storm Beryl





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

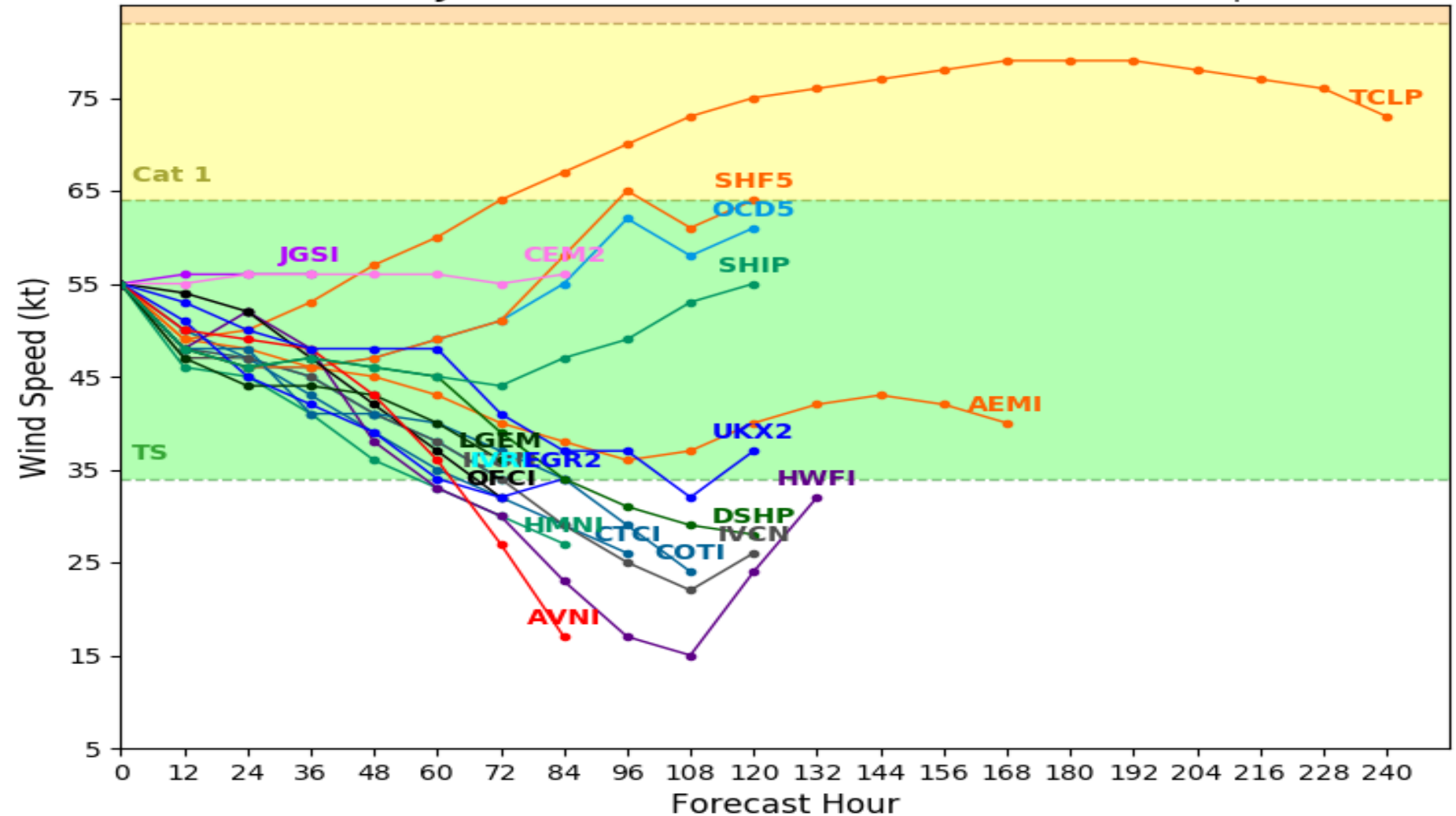
Beryl will pick up speed over the next couple days as it moves west-northwestward. However, its fast forward motion could induce shear on itself, which could aid in its future weakening over the eastern Caribbean. Once it reaches Hispaniola, Beryl will likely become an open wave, at which point its track becomes more uncertain.



# Tropical Storm BERYL Model Intensity Guidance

Initialized at 12z Jul 07 2018

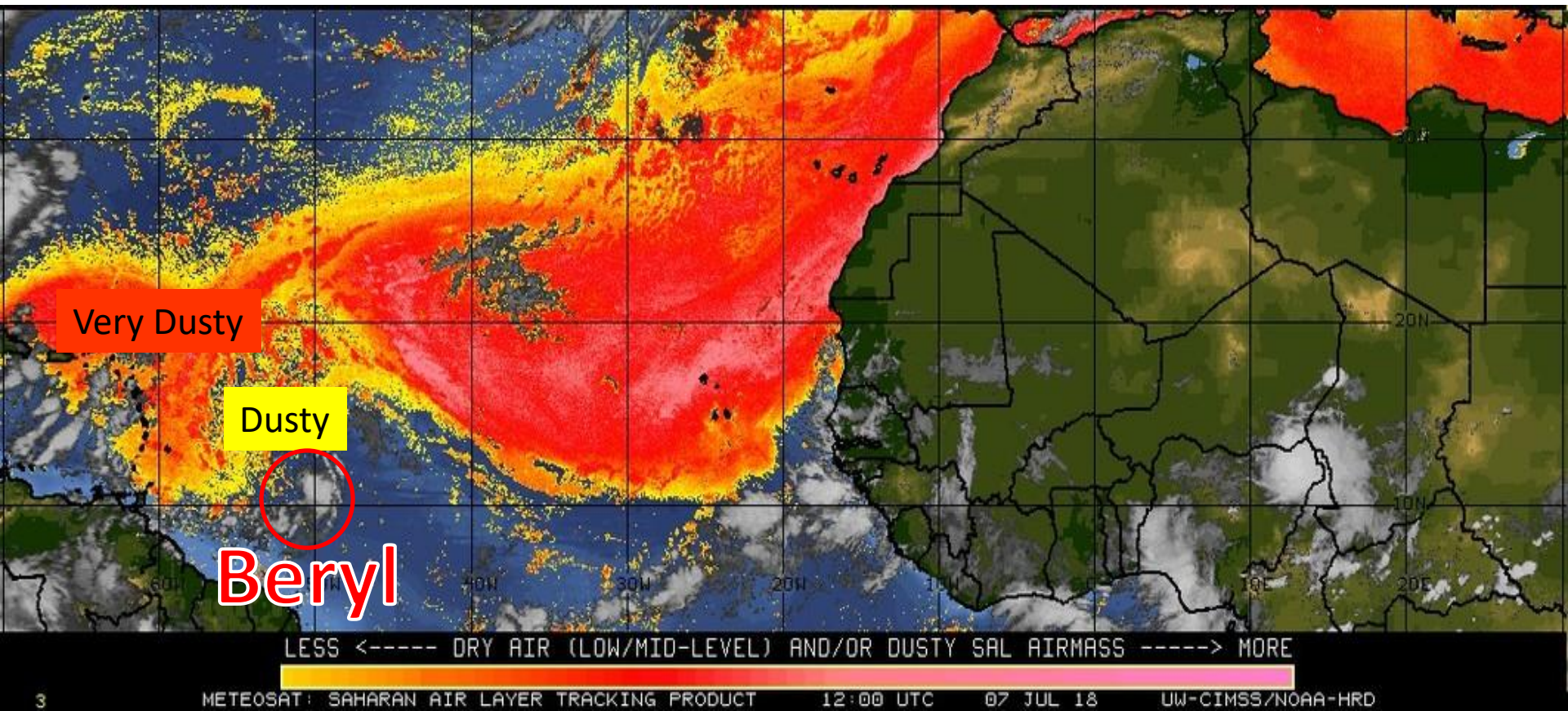
Levi Cowan - [tropicaltidbits.com](http://tropicaltidbits.com)



Most models are picking up on the weakening through the weekend into early next week. Statistical models (which don't account for atmospheric conditions) are the only ones to maintain or intensify Beryl. However, the dynamical models (which do account for atmospheric conditions) show the weakening trend and is more realistic.



# Saharan Air Layer



Some of the Saharan dust is getting close to Beryl's circulation. If Beryl ingests any of this dry, dusty air, it will aid in its weakening.



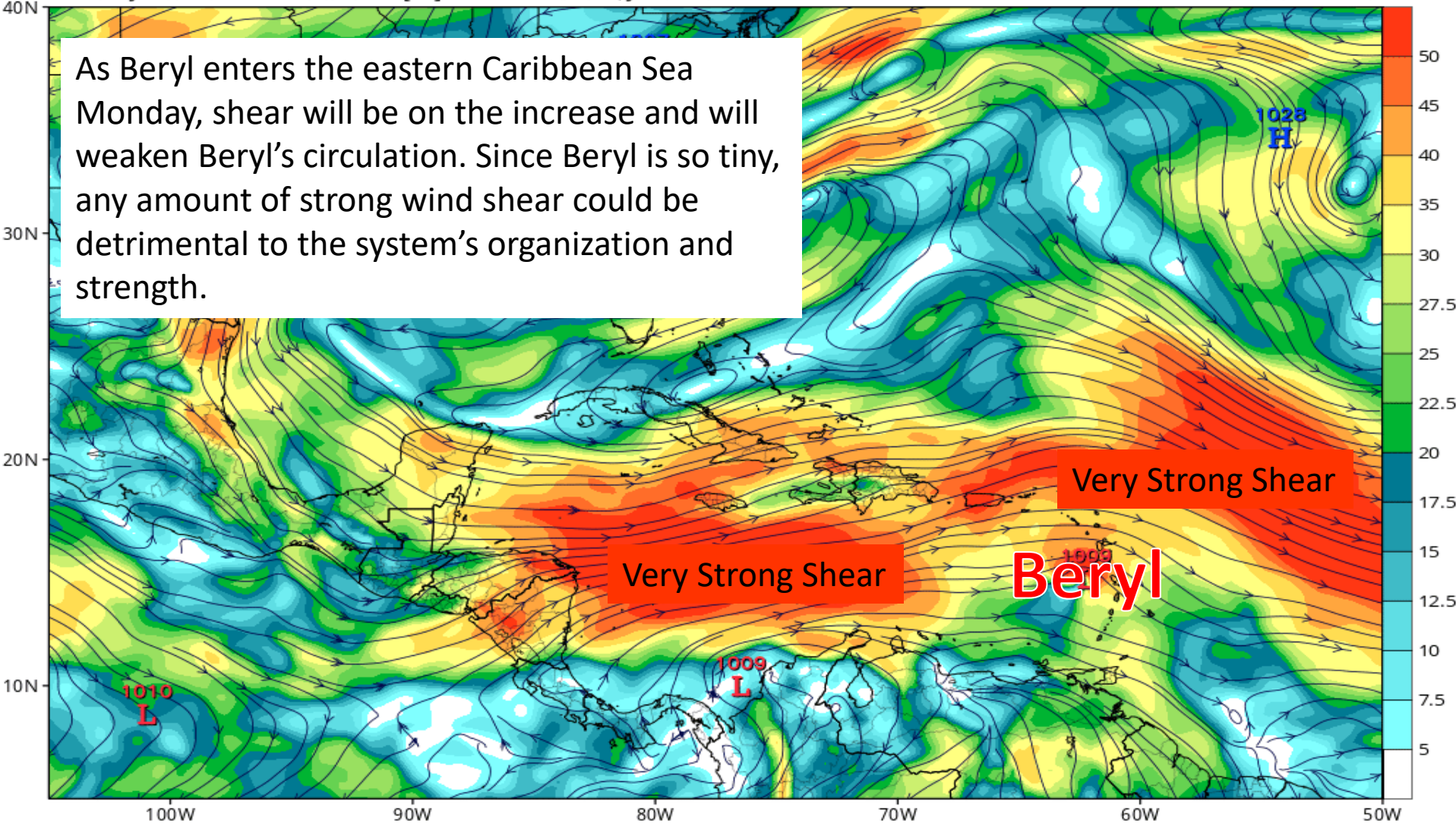
# Wind Shear Forecast – Monday AM

GFS 200mb-850mb Wind Shear (knots) & Low Centers (mb)

Init: 06z Jul 07 2018 Forecast Hour: [54] valid at 12z Mon, Jul 09 2018

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As Beryl enters the eastern Caribbean Sea Monday, shear will be on the increase and will weaken Beryl's circulation. Since Beryl is so tiny, any amount of strong wind shear could be detrimental to the system's organization and strength.



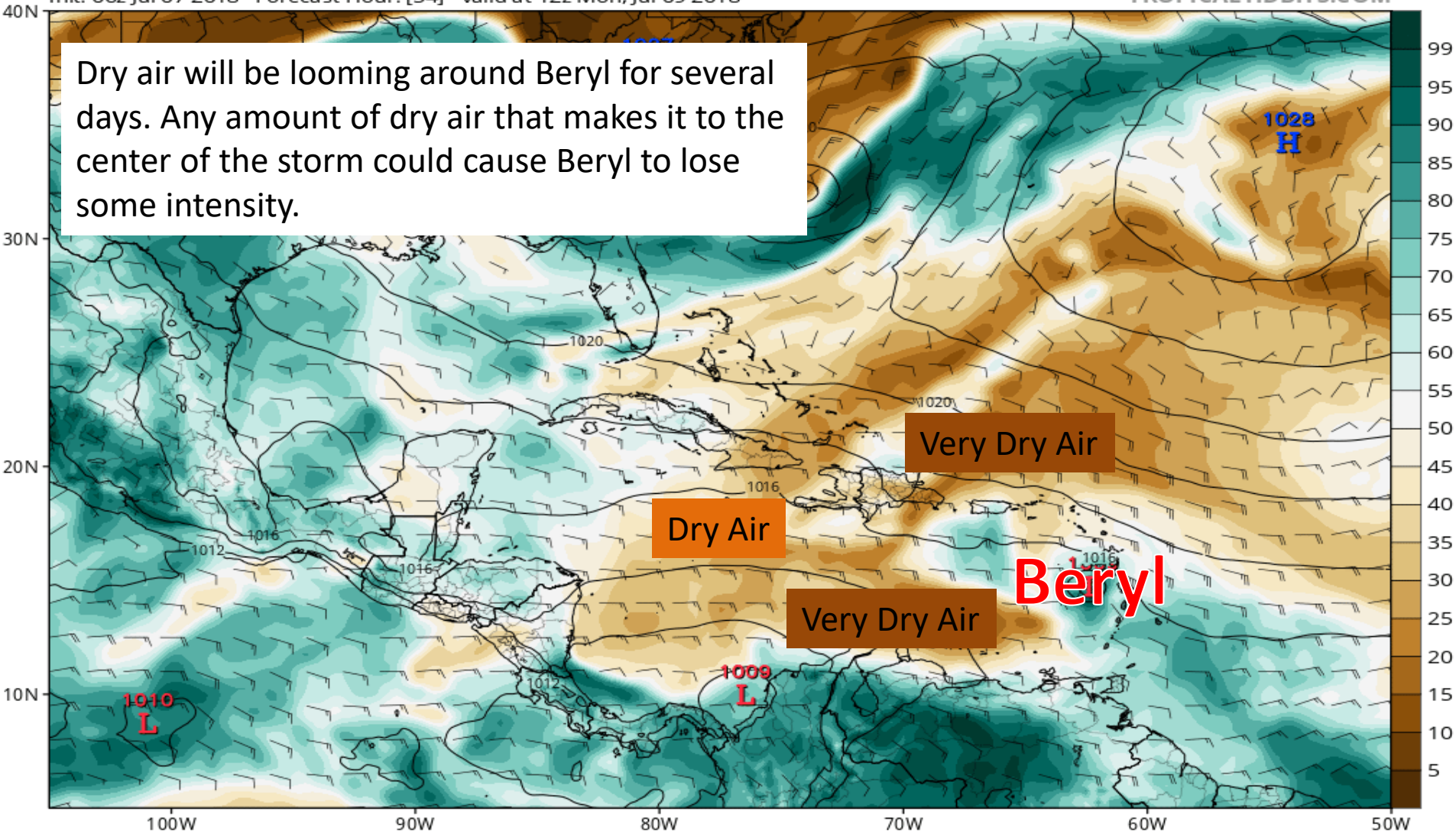


# Mid-Level Moisture Forecast – Mon. AM

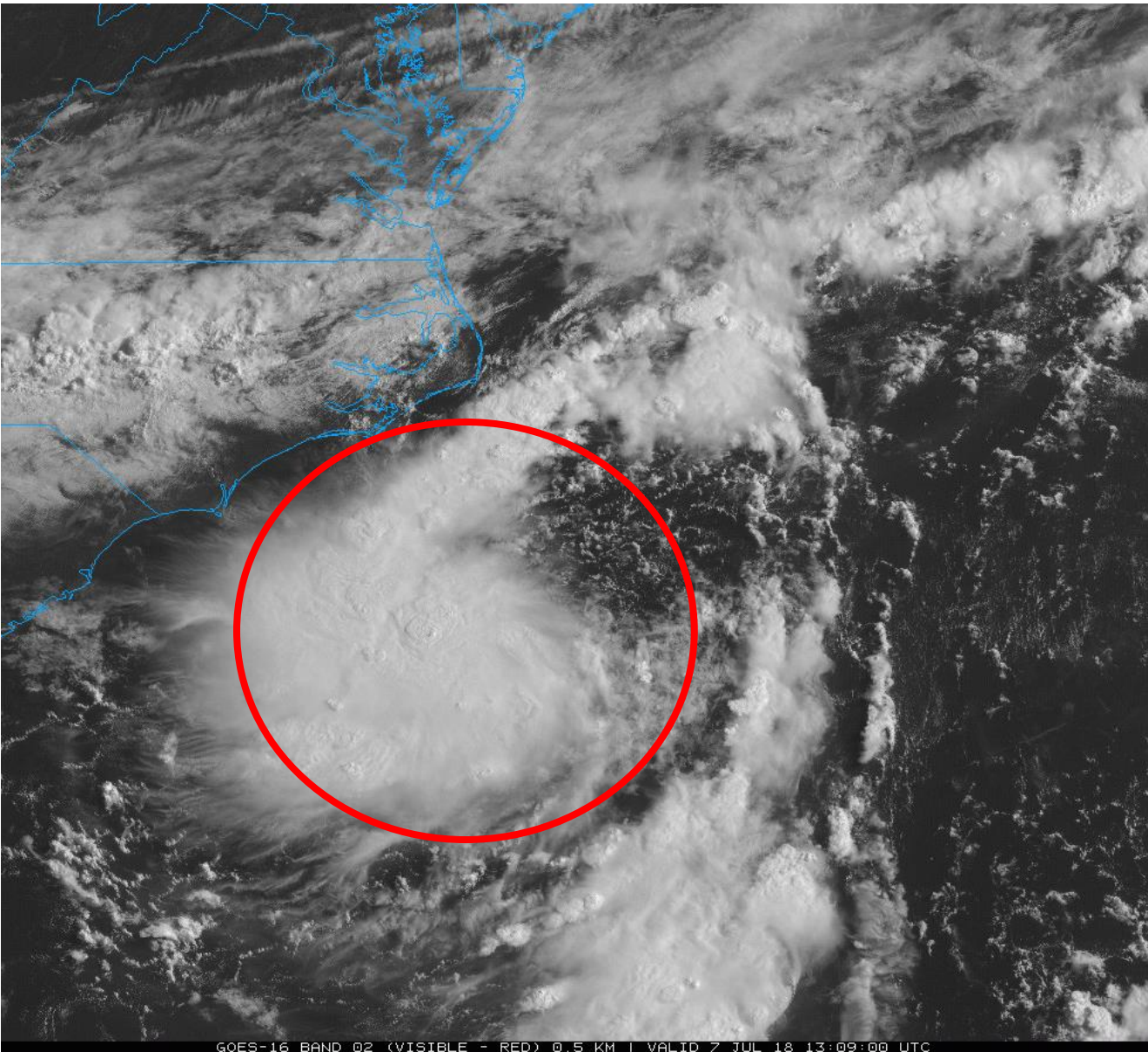
GFS MSLP (mb), 700-400 hPa Relative Humidity (%), and 700-400 hPa Wind (kt)

Init: 06z Jul 07 2018 Forecast Hour: [54] valid at 12z Mon, Jul 09 2018

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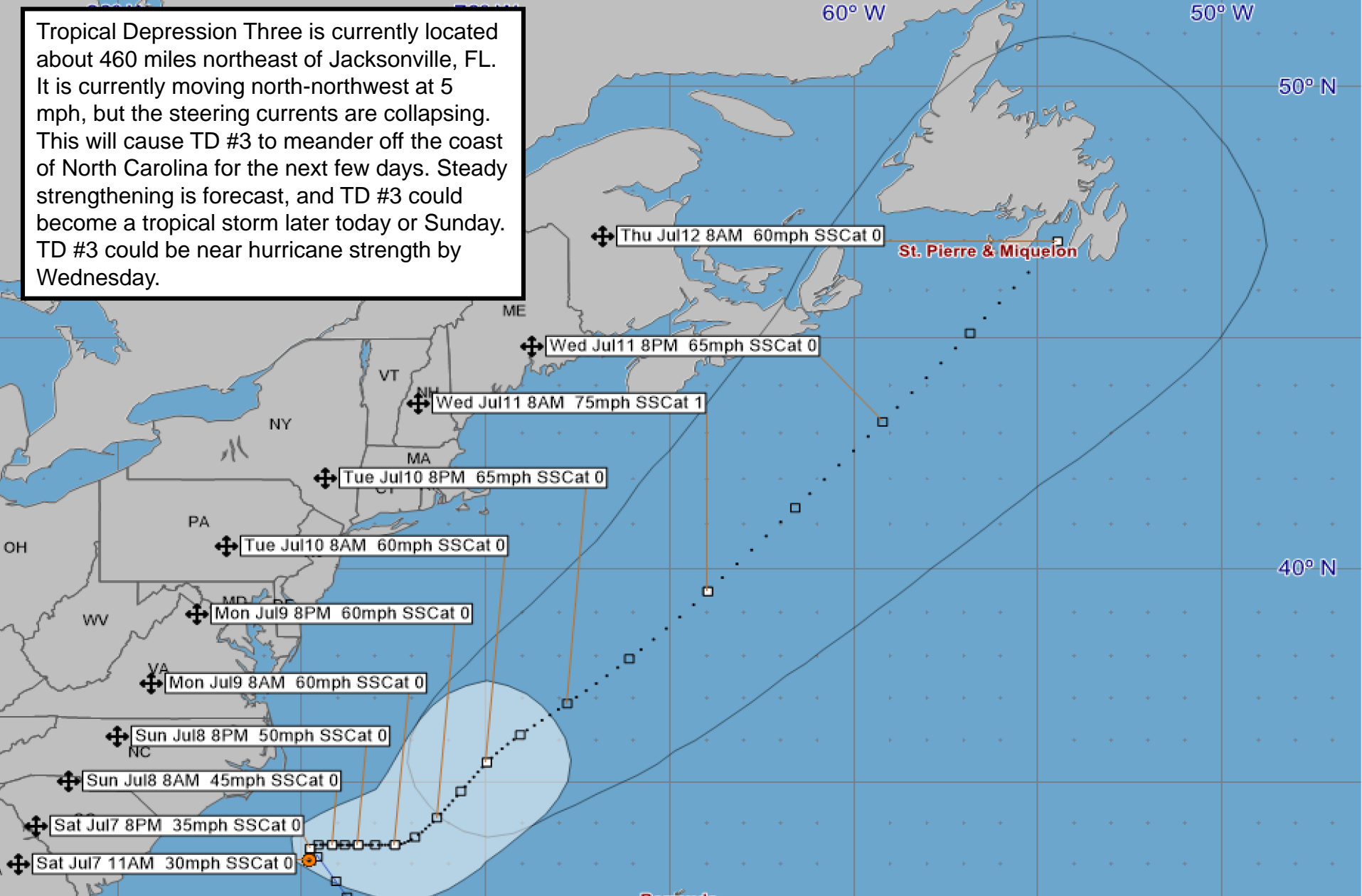
# Current Satellite – Tropical Depression Three



Tropical Depression Three is slowly starting to gain some organization, and that could mean that some strengthening could be starting or will be soon. Right now, much of the activity is on the south and west sides of the center. However, some thunderstorms have recently fired over the center, a sign of organization.



Tropical Depression Three is currently located about 460 miles northeast of Jacksonville, FL. It is currently moving north-northwest at 5 mph, but the steering currents are collapsing. This will cause TD #3 to meander off the coast of North Carolina for the next few days. Steady strengthening is forecast, and TD #3 could become a tropical storm later today or Sunday. TD #3 could be near hurricane strength by Wednesday.



#### Tropical Depression Three - Saturday, July 7, 2018 11 AM EDT Advisory #4

Center Location: 33.1 N 74.8 W Maximum Sustained Winds: 30 mph Movement: 2 mph N

□ forecast positions

Potential Track Area: day 1-3

day 4-5

Surface Wind Field: at current location

Sustained Wind Speeds: tropical storm  $\geq 34\text{kt}/39\text{mph}$  strong tropical storm  $\geq 50\text{kt}/58\text{mph}$  hurricane  $\geq 64\text{kt}/74\text{mph}$

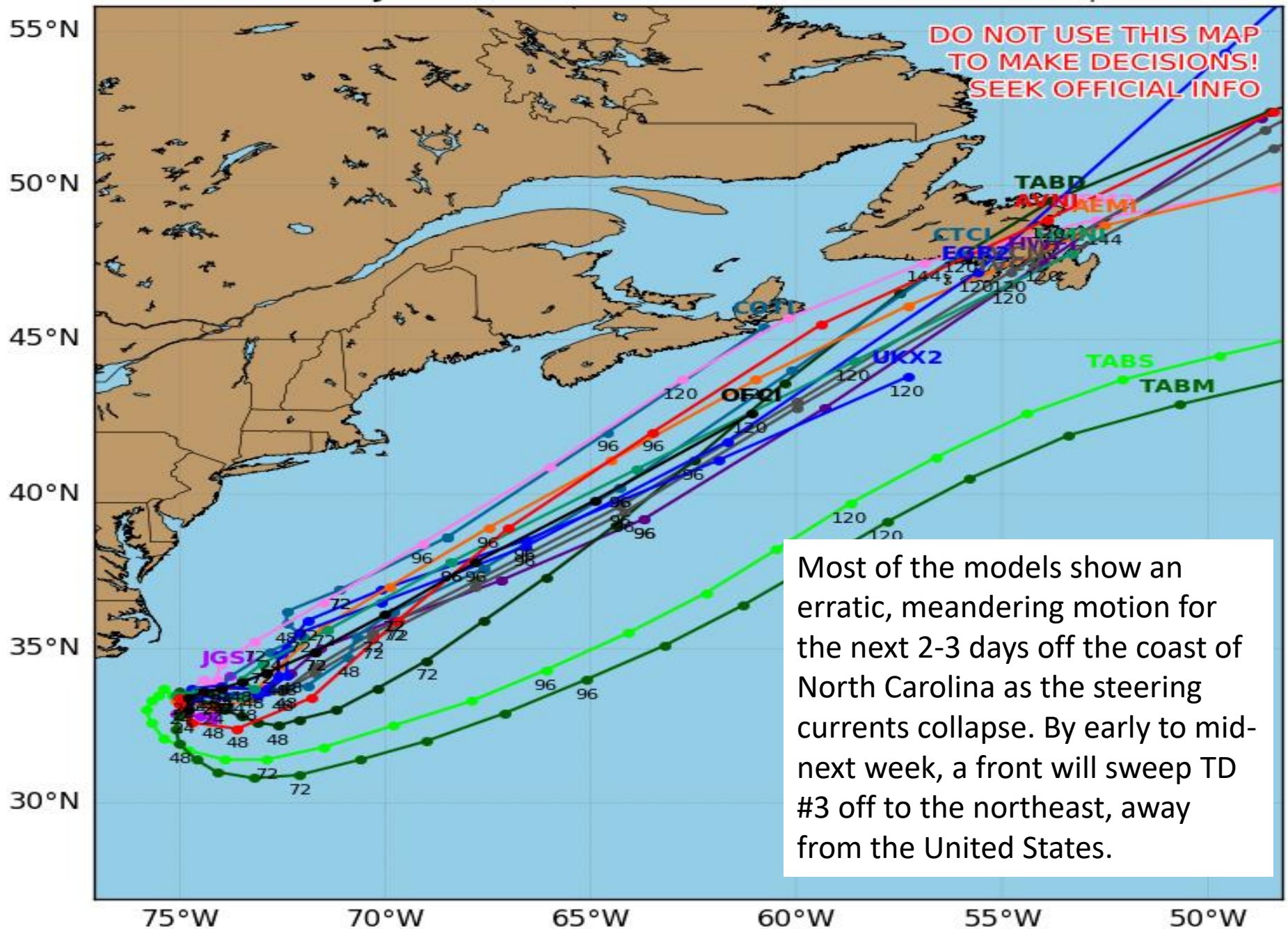


# Tropical Depression 03L Model Track Guidance

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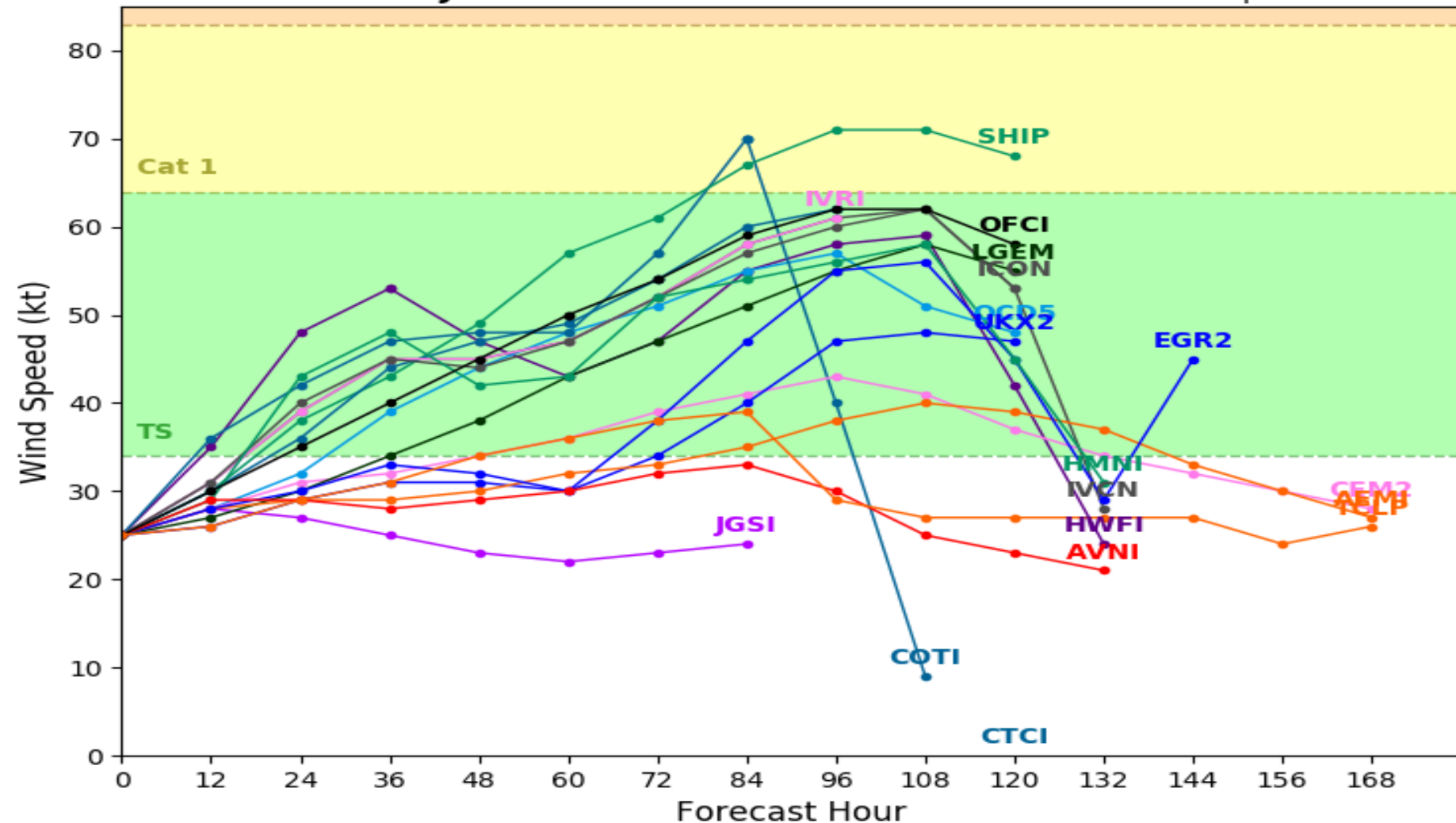
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# Tropical Depression 03L Model Intensity Guidance

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Most of the models have Tropical Depression #3 reaching tropical storm strength within the next 24 hours. Additionally, most models bring the intensity up to a strong tropical storm, though most of the models have now dropped the idea of a hurricane. The forecast intensity remains uncertain as TD #3 will be battling shear and dry air.

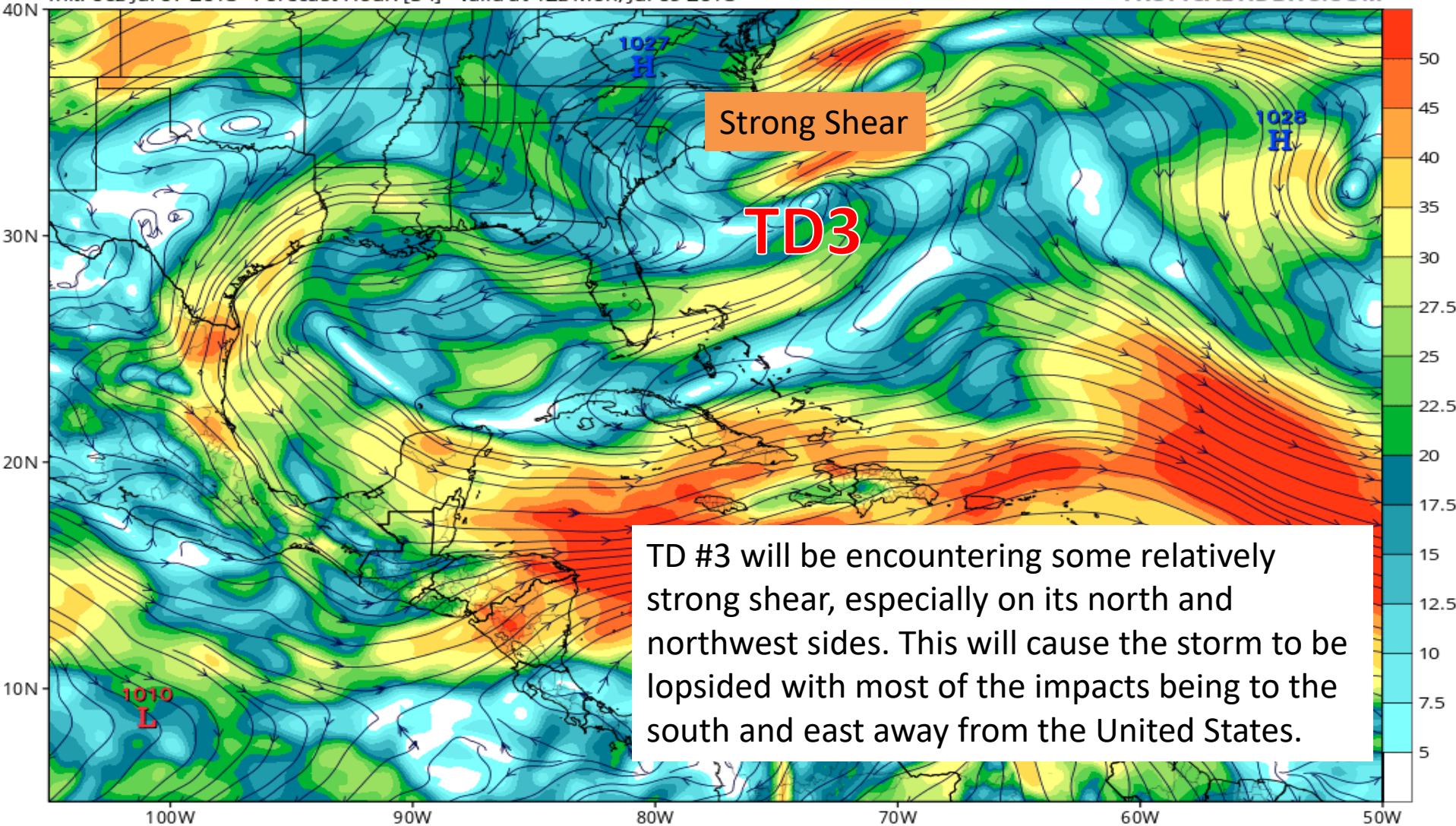


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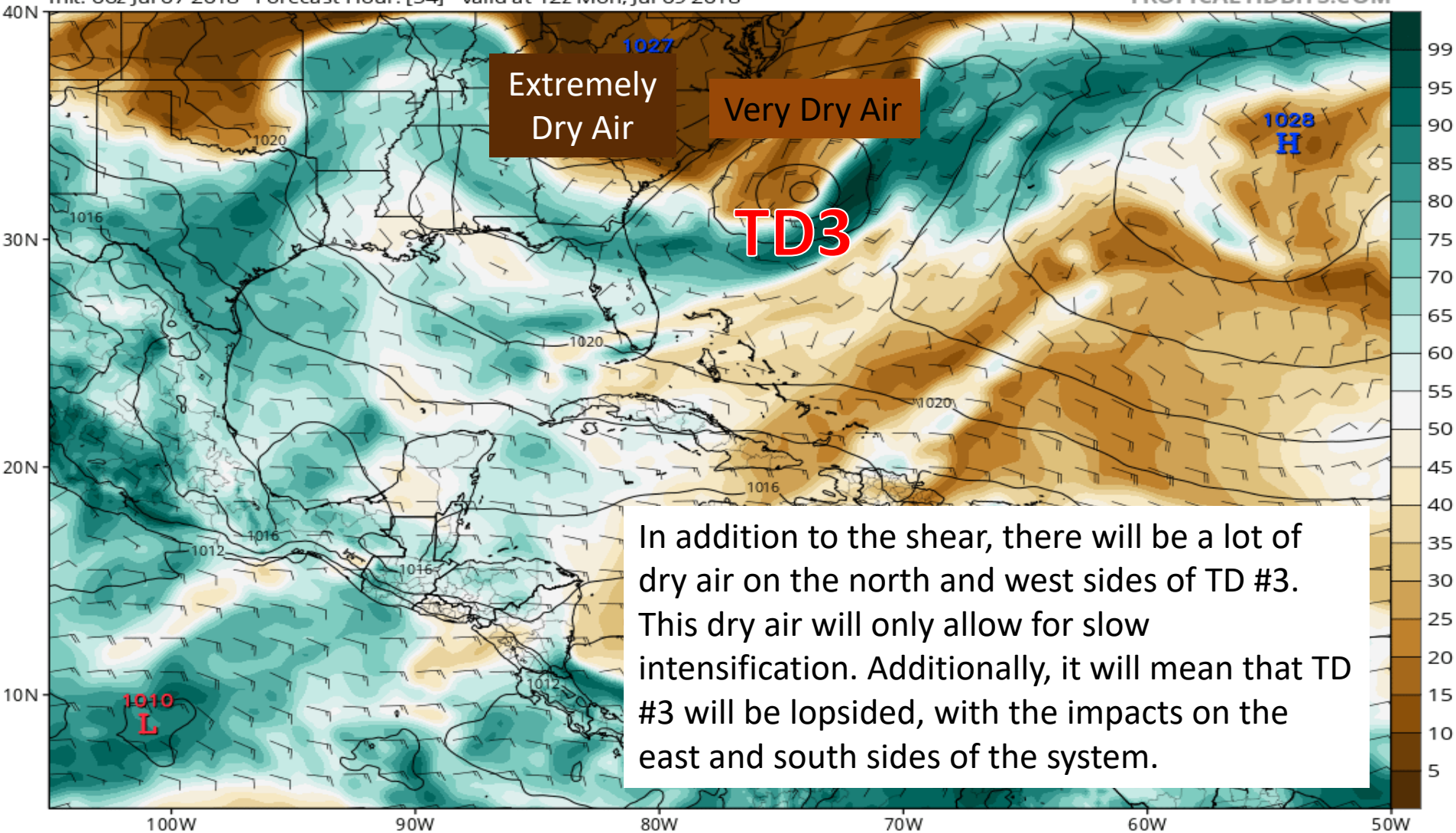


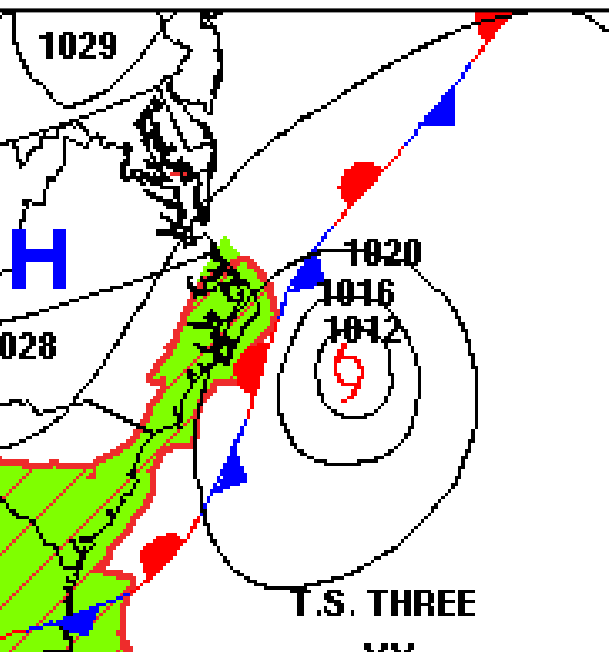
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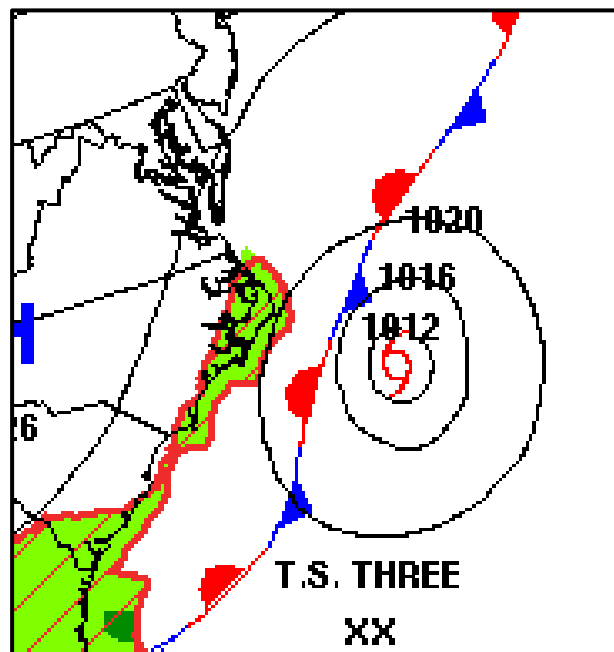
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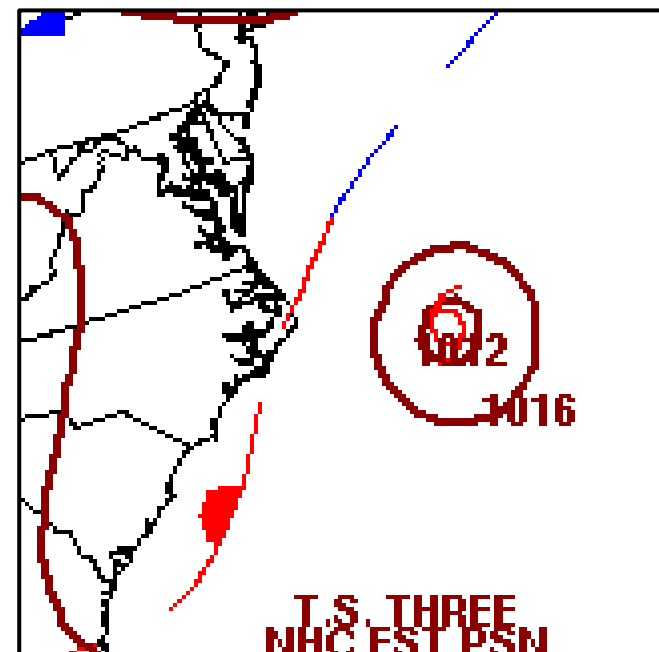




Sunday AM



Monday AM



Tuesday AM

The reason for all the shear and dry air is because TD #3 will be interacting with a front over the next few days. There will be a lot of wind shear associated with the front, and dry air behind the front may try to funnel into the circulation. With the presence of the front, TD #3 will have most of its impacts on the eastern half of the system.

# Summary

- Tropical Storm Beryl is located about 1,100 miles east-southeast of San Juan, Puerto Rico, moving west-northwest at 14 mph. A general west-northwestward motion is expected for the next several days.
- Beryl's maximum sustained winds have decreased to 65 mph.
- Beryl is currently battling some wind shear, and it is slowly becoming more disorganized. Additional weakening is forecast during the next 48 hours, with more rapid weakening expected into early next week once Beryl enters the hostile Caribbean.
- Beryl could bring tropical storm conditions to some of the Lesser Antilles. Tropical Storm Watches and Warnings have been posted for parts of the Lesser Antilles.
- The National Hurricane Center's forecast has Beryl degenerating into an open wave by Tuesday near Hispaniola.
- Beryl is a tiny tropical storm, with tropical storm force winds extending only 35 miles away from the center.
- Heavy rains and gusty winds are possible for parts of the Lesser Antilles on Sunday and for parts of Puerto Rico and Hispaniola Monday and Tuesday. However, exactly how much rain and wind greatly depend on track and future intensity.
- Tropical Depression Three appears to be getting better organized this morning. Hurricane Hunters are currently investigating the system
- TD #3 is meandering off the coast of North Carolina, and it will continue do so for the next few days.
- Some steady strengthening is forecast through the next 5 days, and TD #3 could become a tropical storm later today.
- Further strengthening is expected as a cold front picks up TD #3 early to mid-next week, it could be near hurricane intensity on Wednesday, though the intensity forecast is a little uncertain as most models do not forecast it reaching hurricane strength
- Shear and dry air will cause TD #3 to be a lopsided storm with most of the impacts on the eastern half of the system.

## **Florida Outlook:**

- Some moisture from Beryl may make it to South Florida by Thursday or Friday next week, slightly enhancing the afternoon showers and thunderstorms. This scenario remains highly uncertain, however.
- No impacts from Tropical Depression Three are expected for Florida at this time.

Another briefing packet will be issued this afternoon with the next update from the National Hurricane Center. For the latest information on the tropics, please visit the National Hurricane Center website at [www.hurricanes.gov](http://www.hurricanes.gov)





# TROPICAL UPDATE

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State Meteorological Support Unit

Florida Division of Emergency  
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