



# TROPICAL UPDATE



5:00 PM EDT

Thursday, July 1, 2021

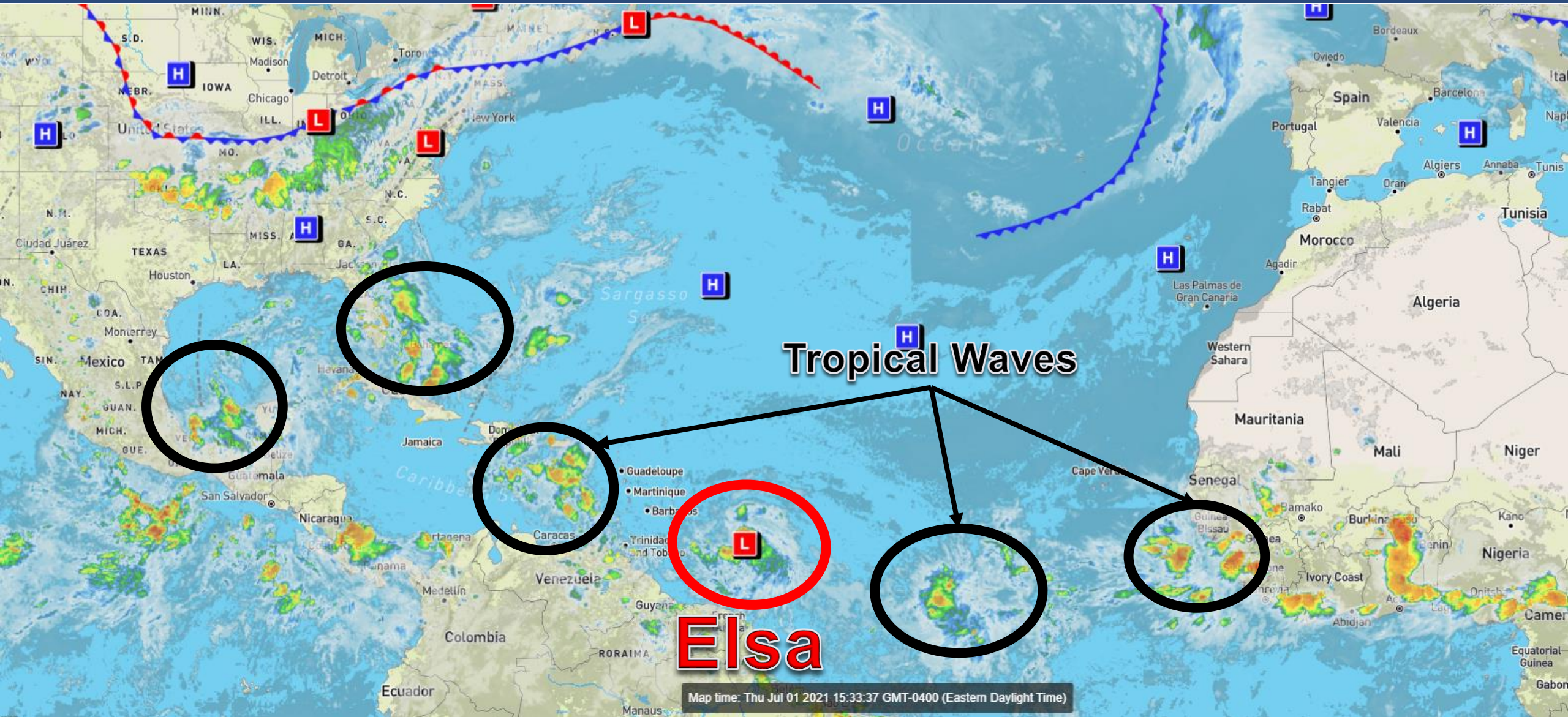
Tropical Storm Elsa

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

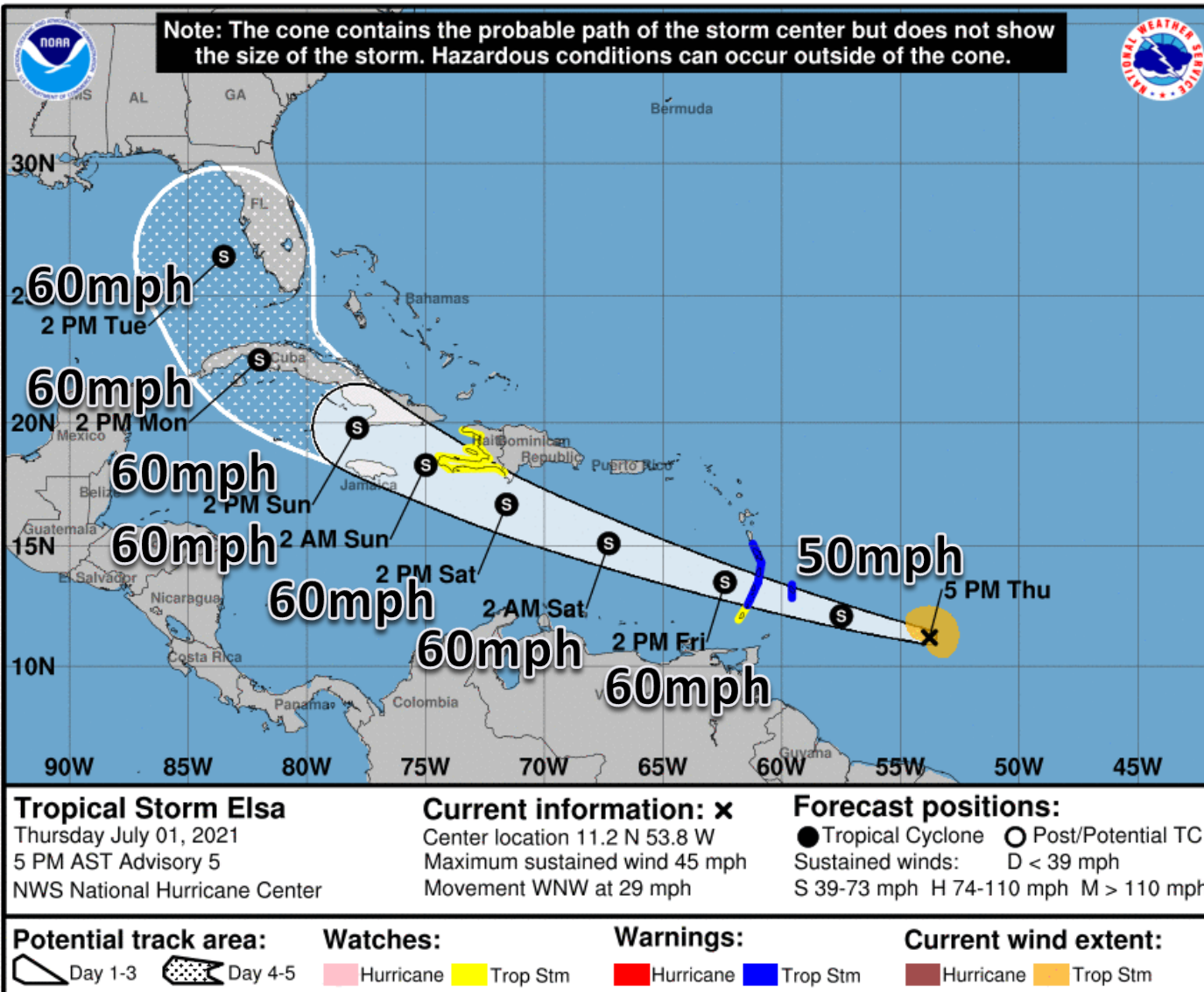






# Official Forecast Track – TS Elsa

From the National Hurricane Center – ([LINK](#))

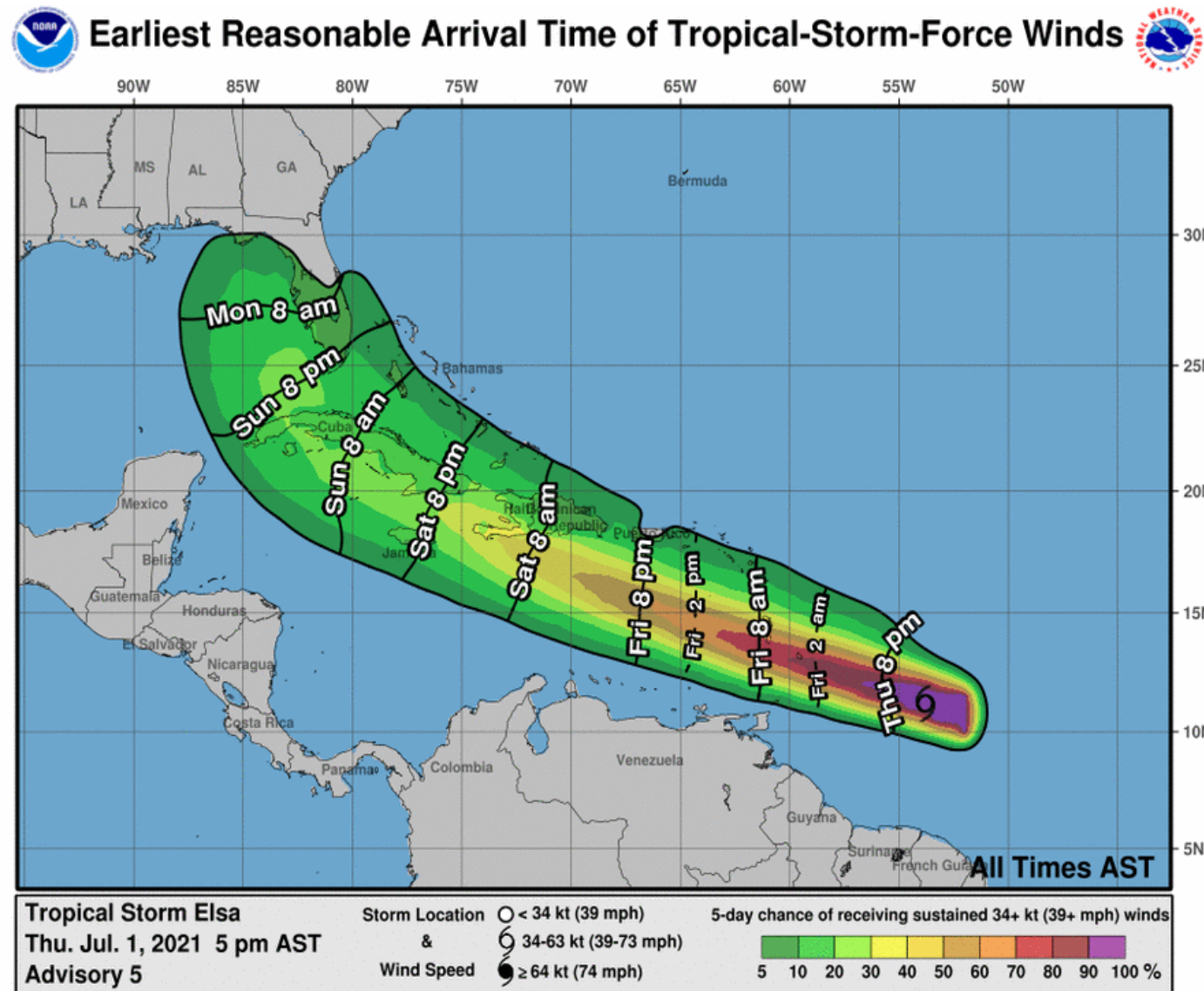


- The center of Elsa is located about 410 miles east-southeast of Barbados or about 2,000 miles southeast of Miami.
- Elsa is moving to the west-northwest at 29 mph, and this general motion is expected over the next several days. A turn toward the northwest and possibly north is expected early next week.
- Maximum sustained winds are near 45 mph and gradual strengthening is forecast. The system could be near hurricane strength in the Caribbean, especially if it remains south of Hispaniola and Cuba.
- There is **SIGNIFICANT** uncertainty in the track forecast beyond 3 days. Models split considerably by the time Elsa makes it to Hispaniola. However, this system should continue to be closely monitored for impacts to Florida.



# Time of Arrival & Wind Speed Probabilities

**EARLIEST REASONABLE** Time of Arrival of Tropical Storm Force Winds (>39 mph)



City	Chance for TS Winds	Changes Since Last Packet
Key West	23%	+/-0%
Marathon	18%	-3%
Naples	16%	+1%
Miami	6%	-2%
Ft. Lauderdale	9%	-3%
West Palm Beach	8%	-2%
Ft. Myers	8%	+/-0%
Tampa	13%	+5%

There is uncertainty in the forward speed, so as the system gets closer to Florida, the “Earliest Reasonable Time of Arrival” graphic should be used for planning into the holiday weekend.





# Key Messages

## From the National Hurricane Center



### Key Messages for Tropical Storm Elsa Advisory 5: 5:00 PM AST Thu Jul 01, 2021



1. Tropical storm conditions are expected beginning early Friday in portions of the Windward and southern Leeward Islands, and are possible over portions of southern Hispaniola on Saturday.
2. Heavy rainfall from Elsa will move quickly across the Windward and southern Leeward Islands, including Barbados, on Friday. Outer rain bands will impact Puerto Rico on Friday and southern Hispaniola by early Saturday. Flooding and mudslides are possible.
3. There is a risk of wind and rainfall impacts in portions of Cuba, Jamaica, the Turks and Caicos, and the Bahamas through early next week. Interests in these areas should monitor Elsa's progress and updates to the forecast.
4. There is a risk of storm surge, wind, and rainfall impacts in the Florida Keys and portions of the Florida Peninsula early next week. However, the forecast uncertainty remains larger than usual due to Elsa's potential interaction with the Greater Antilles this weekend. Interests in Florida should monitor Elsa's progress and updates to the forecast.



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

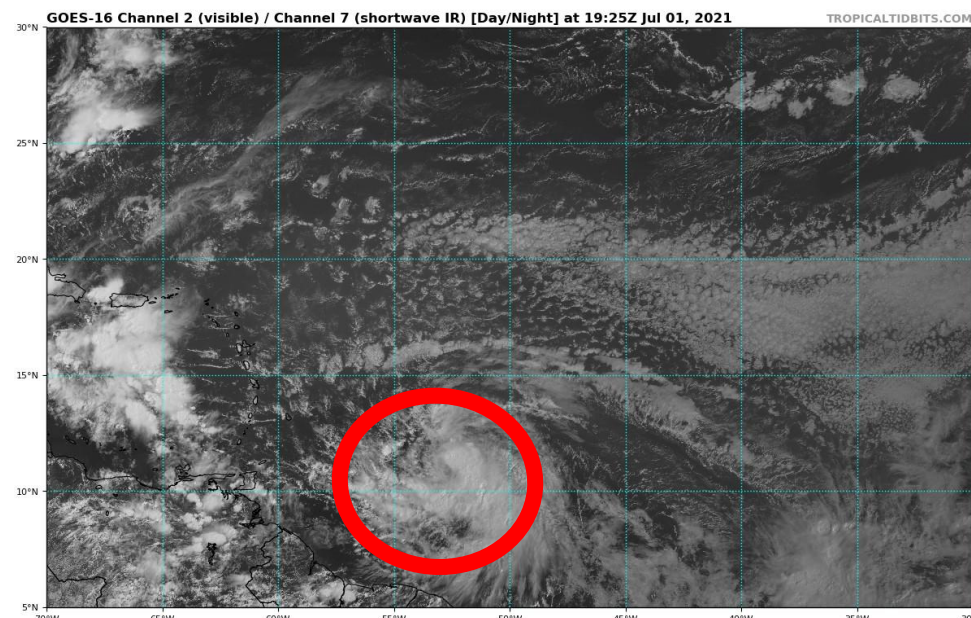
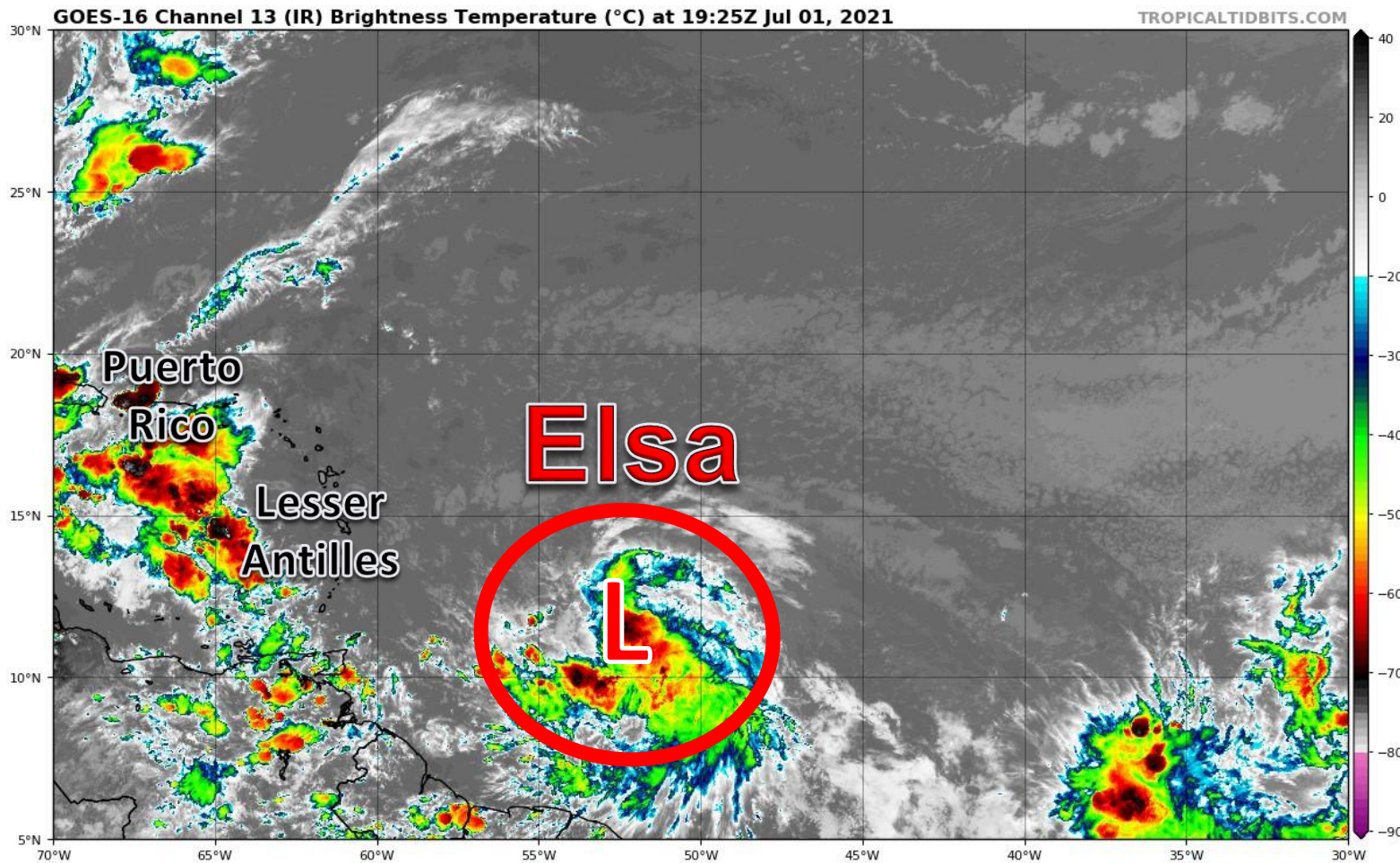




# Satellite Imagery

## Central Atlantic – Tropical Storm Elsa

Elsa has been starting to battle dry air over the last 12 hours or so. Elsa's fast motion may also start inducing some shear on itself. Thus, strengthening has been rather limited today.





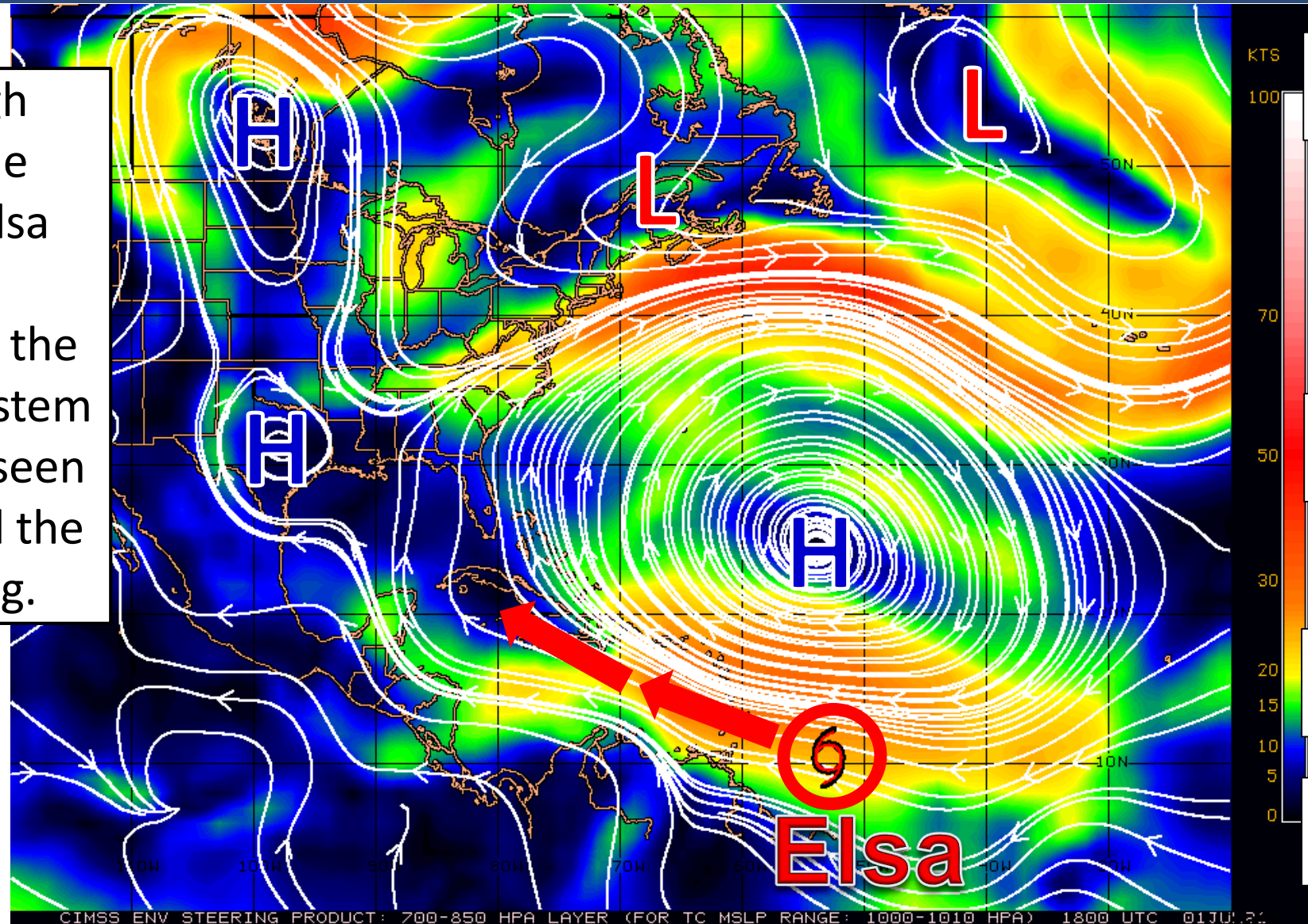


# Steering Currents

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 across the Atlantic will keep Elsa moving west-northwestward over the next 3-4 days. The system is quickly moving as seen by the tight lines and the orange/red shading.



KTS

100

70

50

30

20

15

10

5

0

Fast Moving Storm

Fast Moving Storm

Typical Moving Storm

Slow Moving Storm

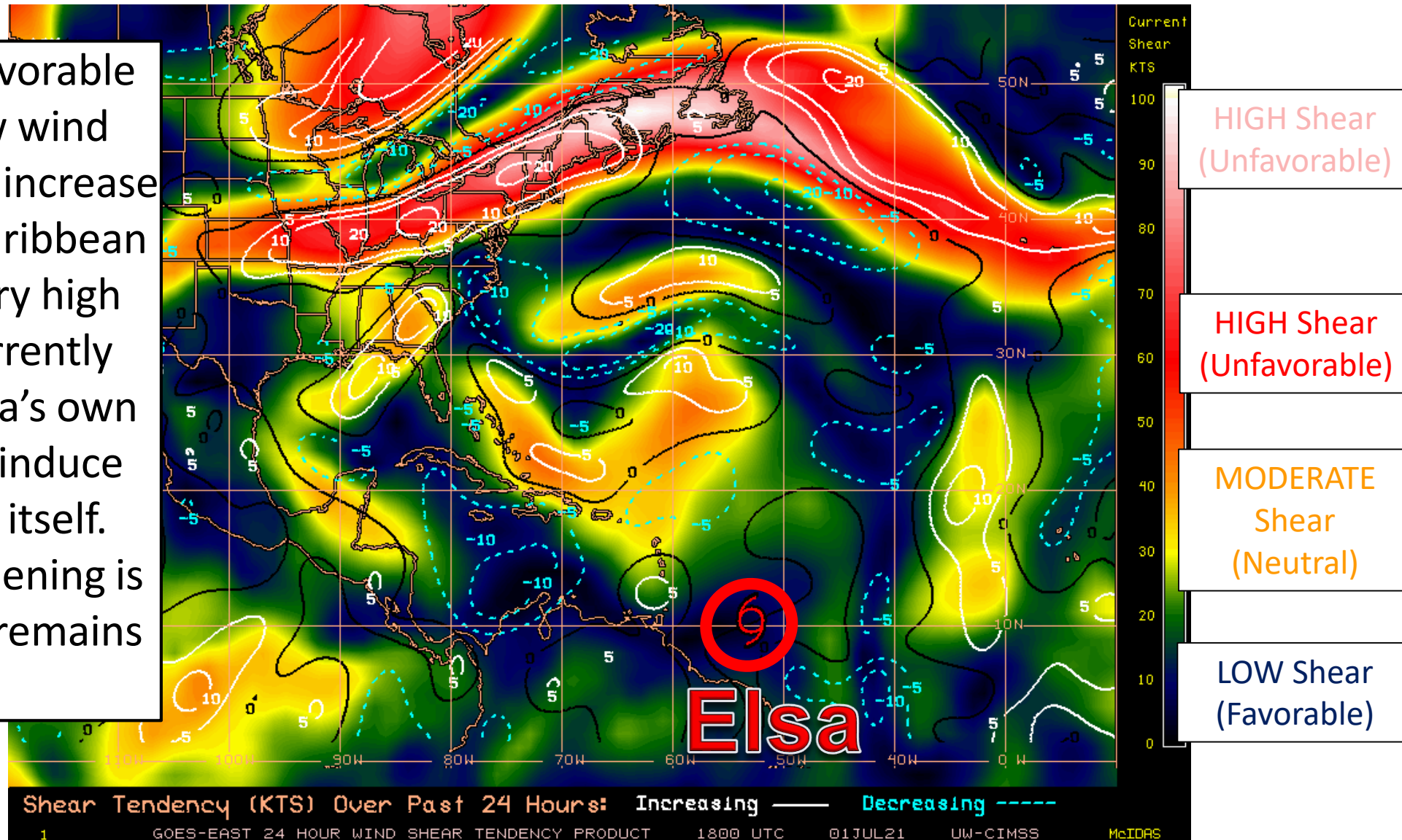


# Wind Shear

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).

The environment is favorable around Elsa with low wind shear. Wind shear may increase as it moves into the Caribbean this weekend, but very high wind shear is not currently forecast. However, Elsa's own forward speed could induce some wind shear on itself. Thus, gradual strengthening is forecast if the system remains over water.



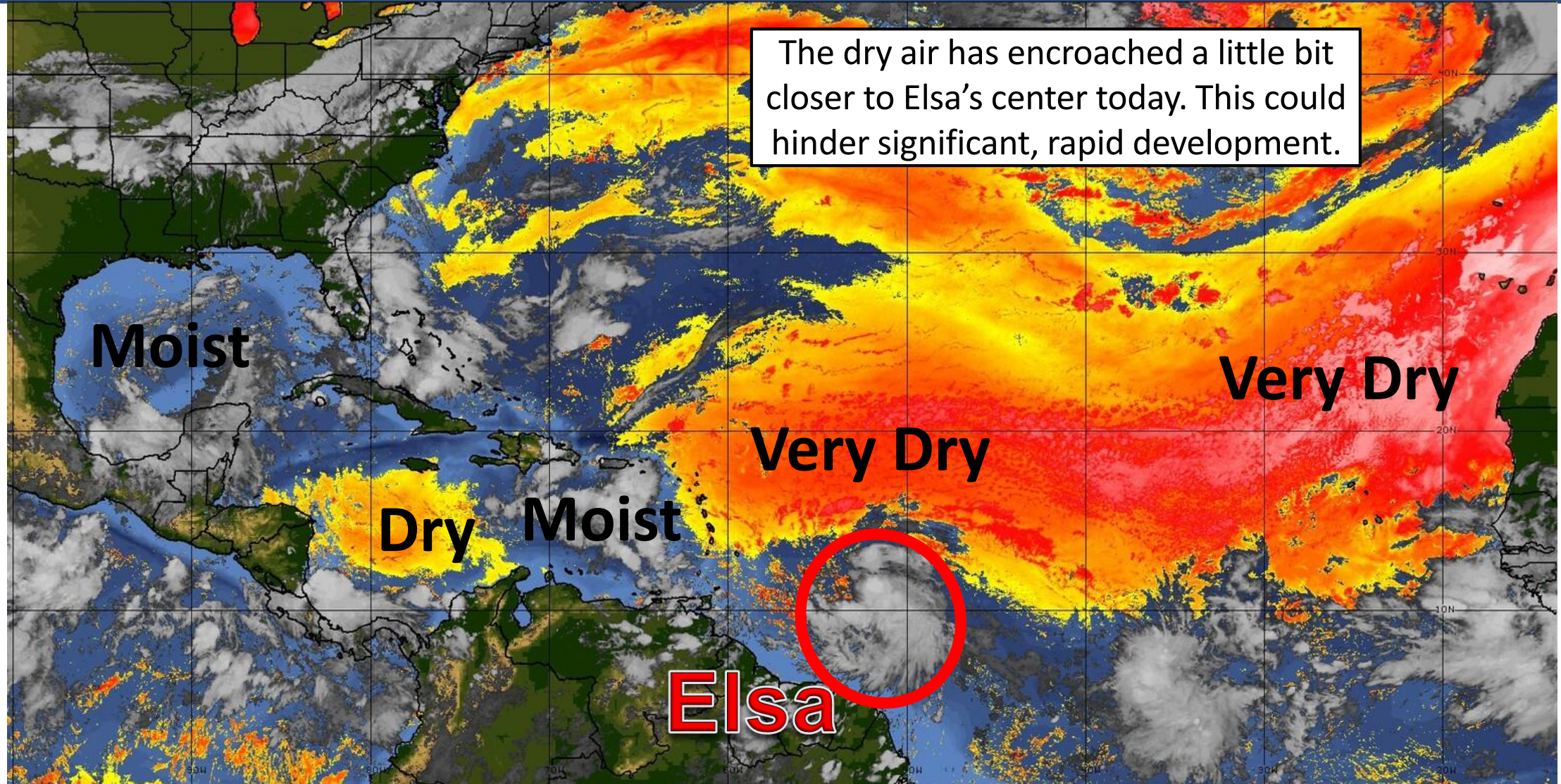




# Dry Air & Saharan Dust

Is the environment favorable for the system?

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



LESS <---- DRY AIR (LOW/MID-LEVEL) AND/OR DUSTY SAL AIRMASS ----> MORE

GOES-16: SAHARAN AIR LAYER TRACKING PRODUCT 18:00 UTC 01 JULY 2021 UH-CIMSS/NOAA-HRD





# Sea Surface Temperatures & Anomalies

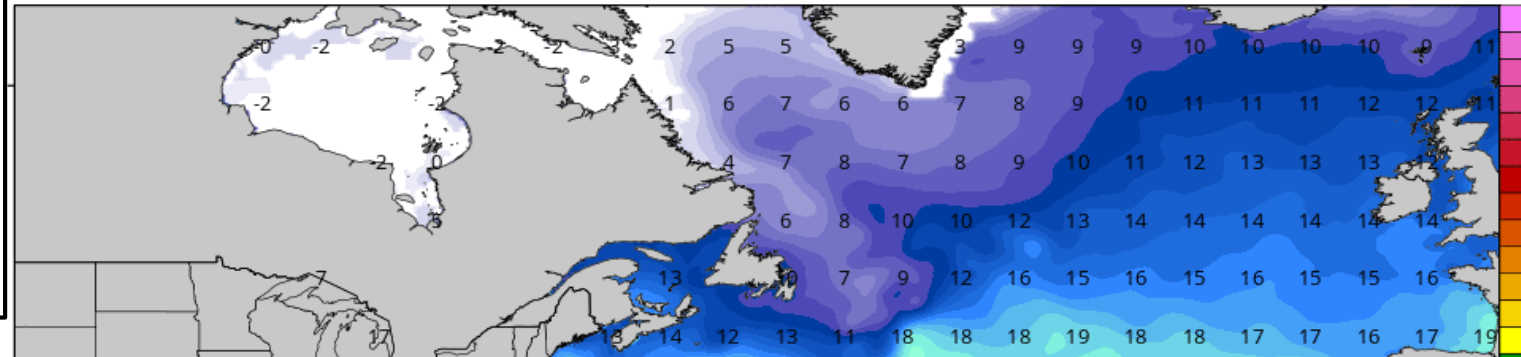
Is the ocean favorable for the system?

Water temperatures will gradually warm and become more favorable for development as the system moves west. Water temperatures would support a hurricane.

CDAS Sea Surface Temperature (°C)

Analysis Time: 12z Jul 01 2021

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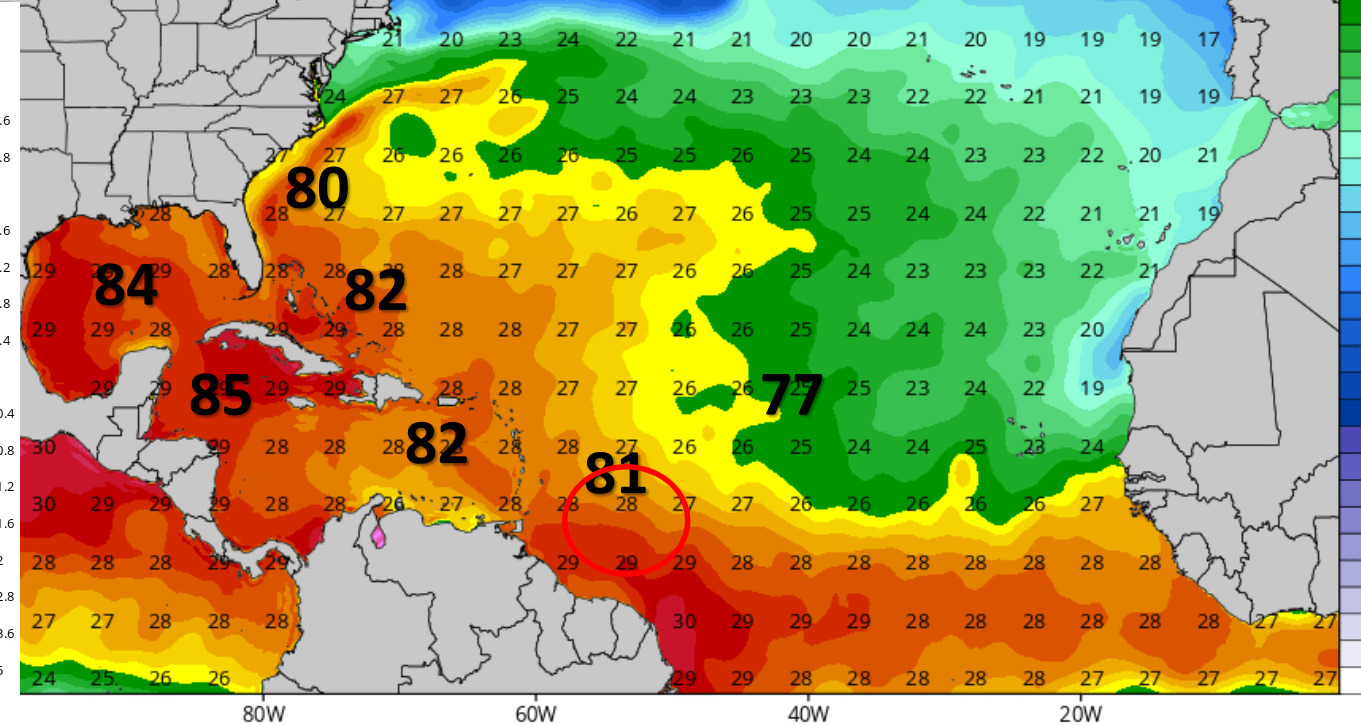
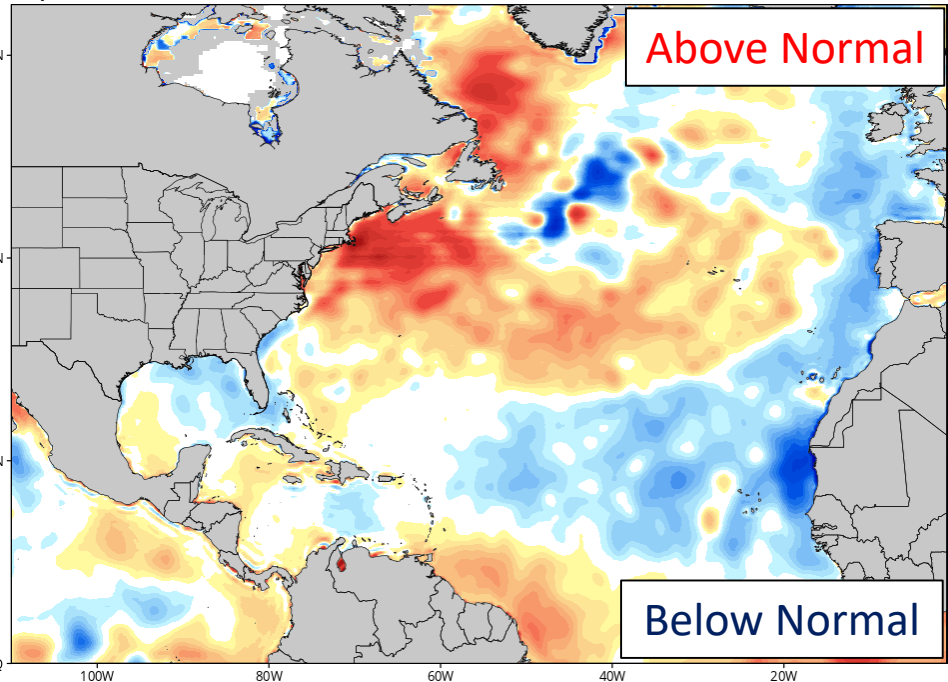


°F  
90  
88  
86  
84  
82  
81  
79  
75  
72

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

Analysis Time: 12z Jul 01 2021

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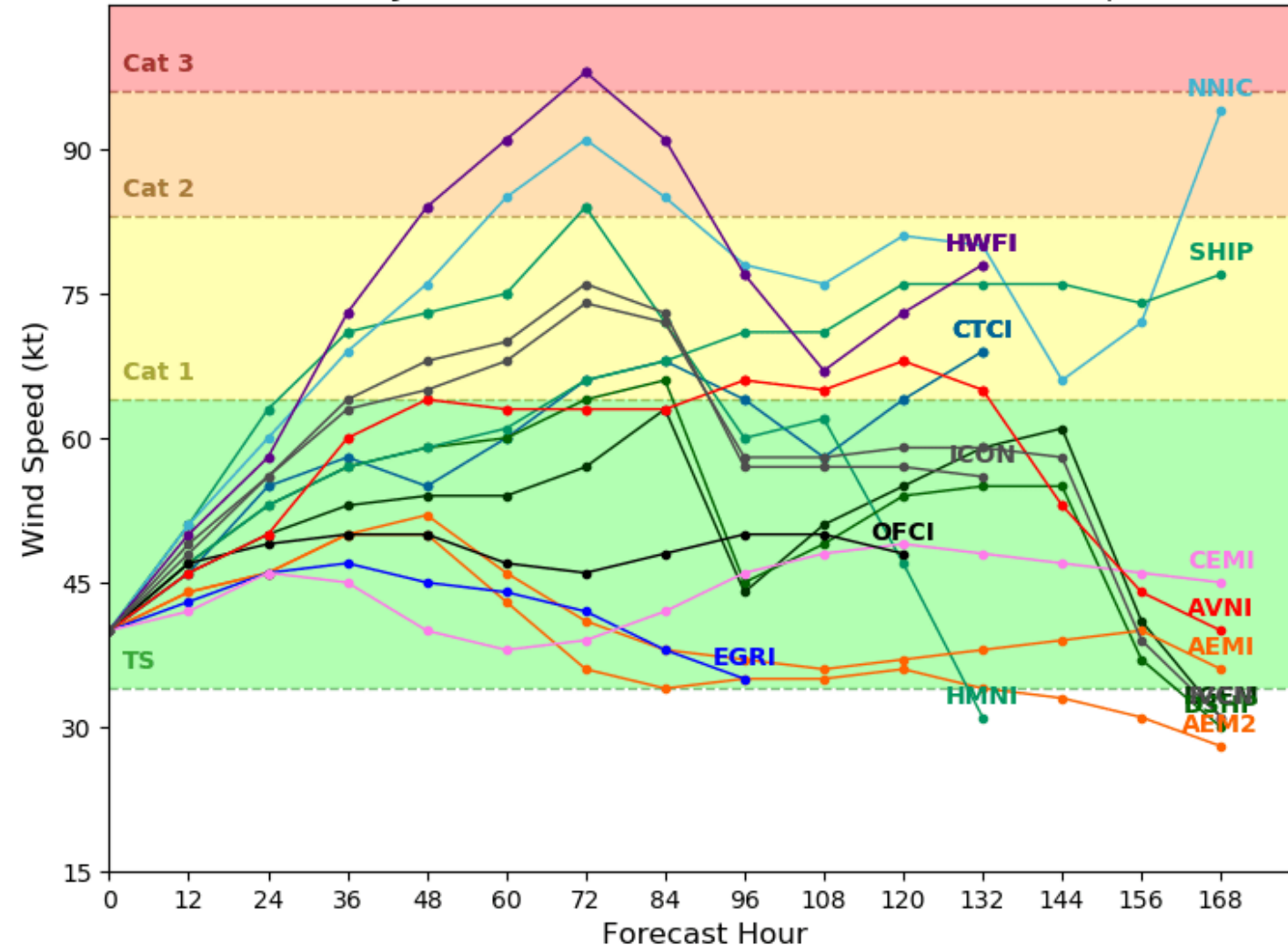
# Model Forecast Intensity

## Dynamical and Statistical Models – Tropical Storm Elsa

### Tropical Storm ELSA Model Intensity Guidance

Initialized at 18z Jul 01 2021

Levi Cowan - tropicaltidbits.com



There is wide variability among the intensity guidance. This is due to uncertain interactions with any lingering dry air, wind shear, or land.



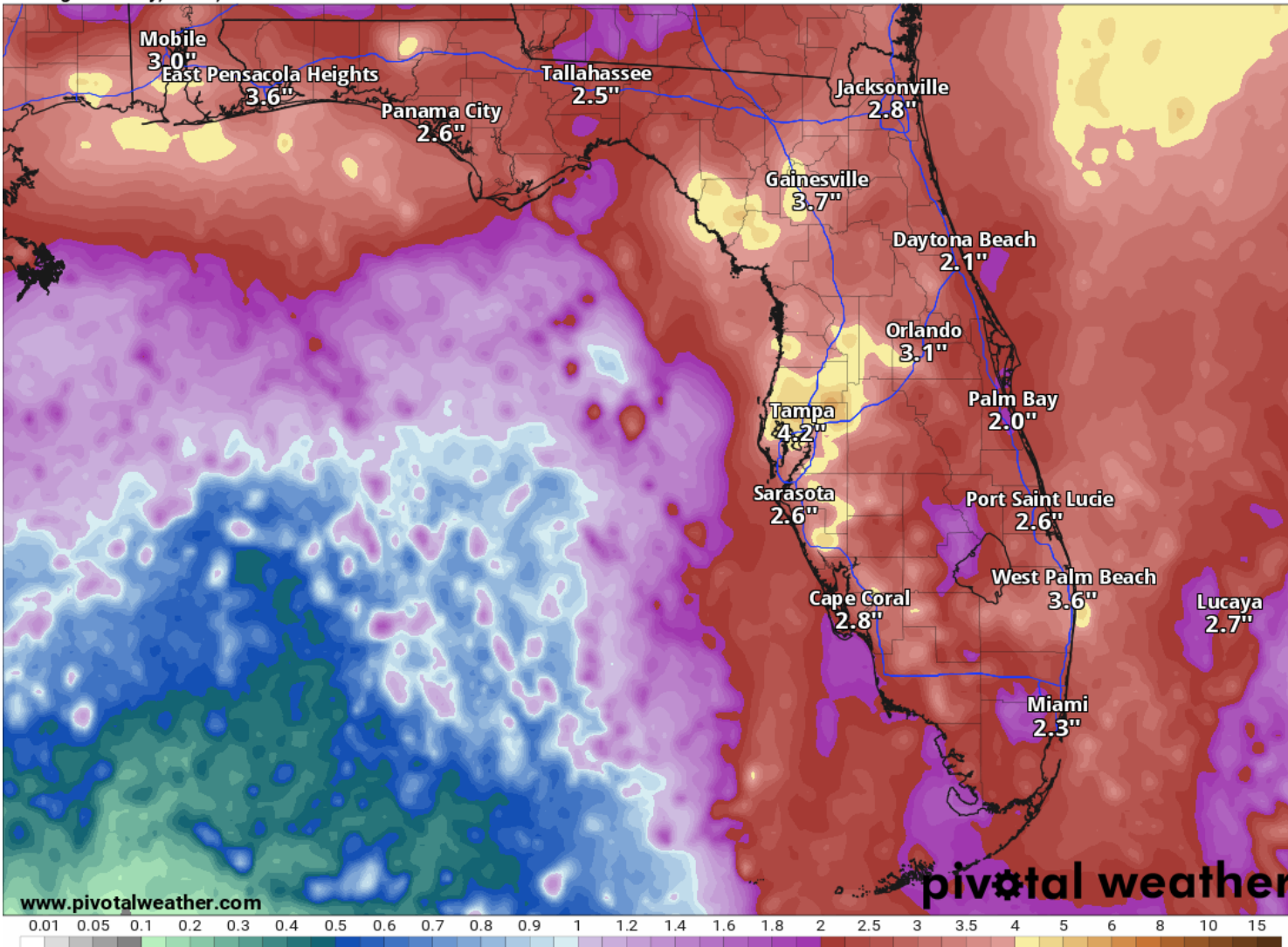
# Rainfall Totals Next 7 Days

Ending 8 AM ET Wednesday

7-Day Precipitation (in)

Ending Thursday, Jul. 8, 2021 at 8 a.m. EDT

Init: Thu 2021-07-01 12z WPC



Through Sunday morning, most areas across the Peninsula will see about 0.5-1.5" from daily afternoon and evening thunderstorms. 1-2" of rain is expected across North Florida as a cold front stalls.

From Sunday and beyond, an additional 2-3" of rain is expected across the Peninsula with about 1" across North Florida. These totals are highly dependent on the track and intensity of Elsa.

However, recent heavy rain across the Peninsula will make grounds more susceptible to flash flooding, should heavy rainfall occur.





# Overall Summary

## Tropical Storm Elsa

- The center of Elsa is located about 410 miles east-southeast of the Barbados, or about 2,000 miles southeast of Miami, FL.
- Elsa is moving to the west-northwest at 29 mph, and this quick forward speed will continue over the next few days. A northward turn is expected at some point early next week, but it remains too uncertain where this turn will occur.
- Maximum sustained winds are near 45 mph and gradual strengthening is forecast, depending on the forecast track.

## Florida Outlook:

- No impacts to Florida are expected through Saturday evening. However, the Florida Keys and the southern half of the Peninsula are included in the day 5 forecast error cone.
- The largest factor in intensity of the system early next week will depend on the track and interaction with the mountainous terrain of Hispaniola and Cuba. However, this system needs to be closely monitored.
- *By Day 4 (early Monday morning), the system will be starting a turn towards the north. The details on when this turn will occur will determine some of the impacts to Florida, and remains unclear at this time.*
- It is too early to determine exact impacts to Florida, but the system will be near the state early next week.
- If tropical storm force winds occur, the earliest they would occur is Sunday night, but most likely would begin Monday.
- Locally heavy rainfall and consequent flash flooding would be possible in South Florida given recent heavy rainfall, depending on the track.
- It is possible that there could be some storm surge impacts as well in South Florida, but details are not available.

The next briefing packet will be issued Friday 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



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State Meteorological Support Unit

Florida Division of Emergency Management

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