



# TROPICAL UPDATE



5:30 PM EDT

Friday, July 2, 2021

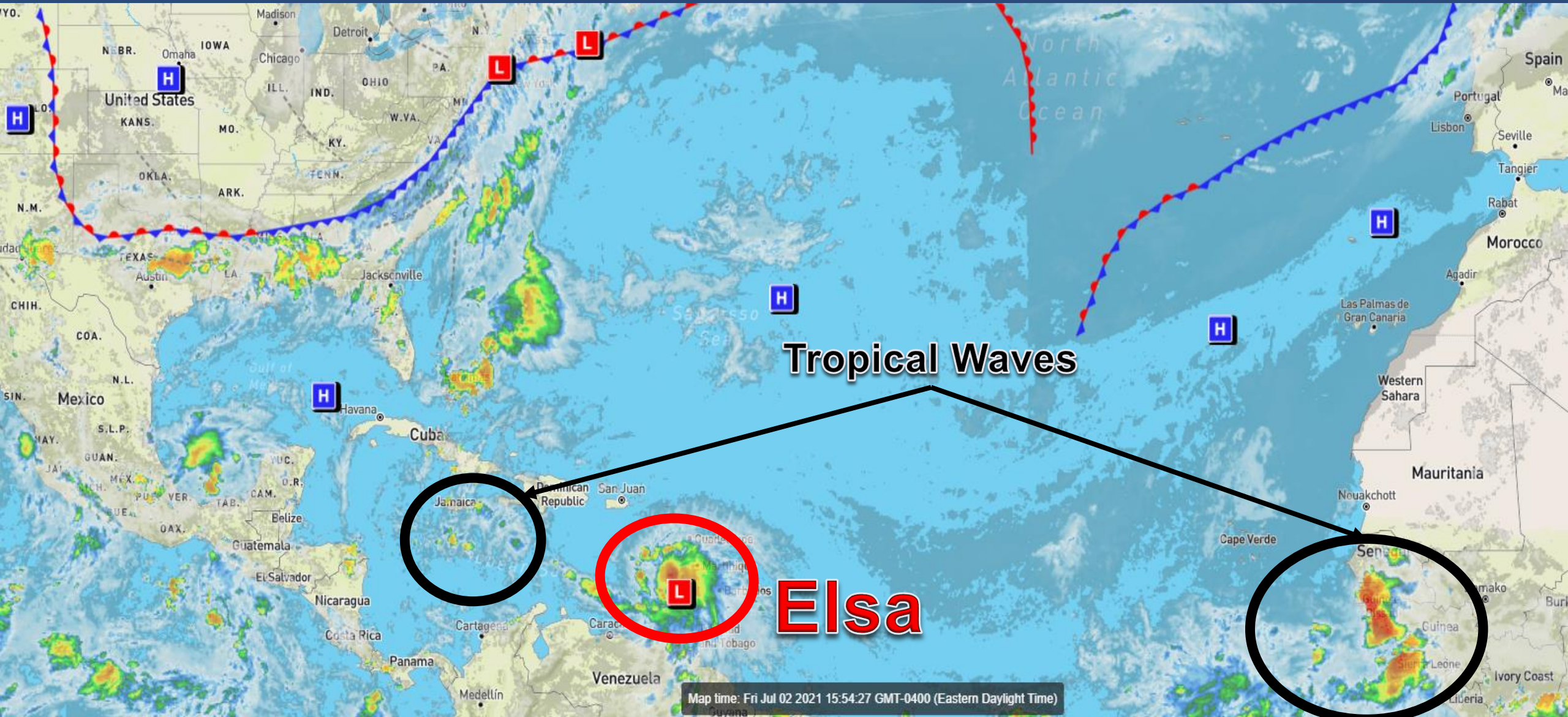
Hurricane Elsa

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

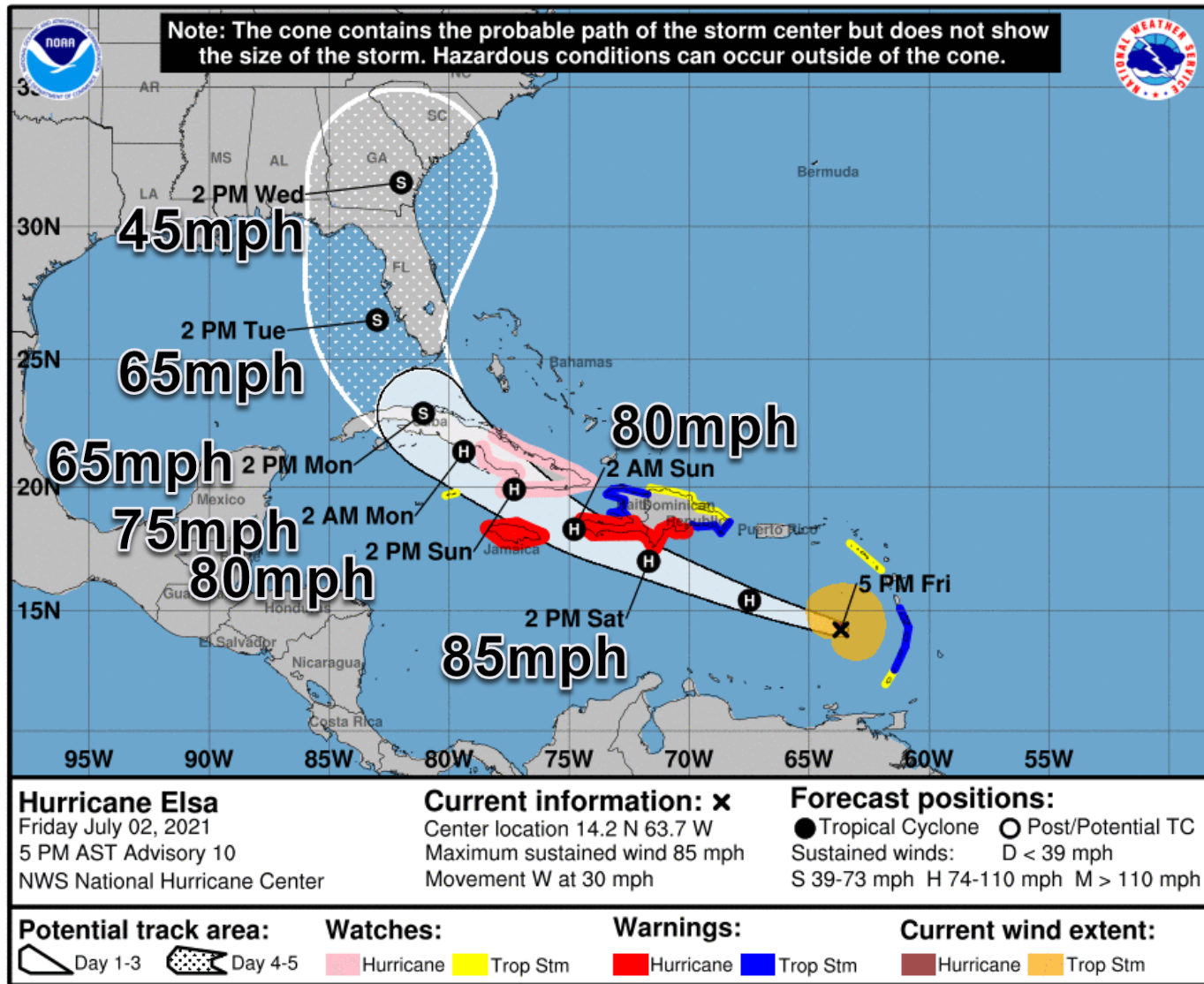






# Official Forecast Track – Hurricane Elsa

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



- At 5pm EDT Friday, Elsa is a category 1 hurricane with maximum sustained winds of 85 mph. Elsa will likely remain a hurricane as it impacts Hispaniola, Cuba, and Jamaica. Elsa is forecast to then weaken as it moves over Cuba into the Gulf of Mexico. However, Elsa could still be near hurricane strength in the eastern Gulf of Mexico.
- The center of Elsa is located about 180 miles west-northwest of St. Vincent or about 1,575 miles southeast of Miami.
- Elsa is moving quickly to the west-northwest at 30 mph. This motion will continue on Saturday, followed by a decrease in forward speed Saturday night and Sunday, then a turn toward the northwest or north Sunday night into Monday.
- There remains **SIGNIFICANT uncertainty in the track and intensity forecast.** This system should continue to be closely monitored for impacts to Florida, but interests are urged to **not focus on the exact forecast points.**



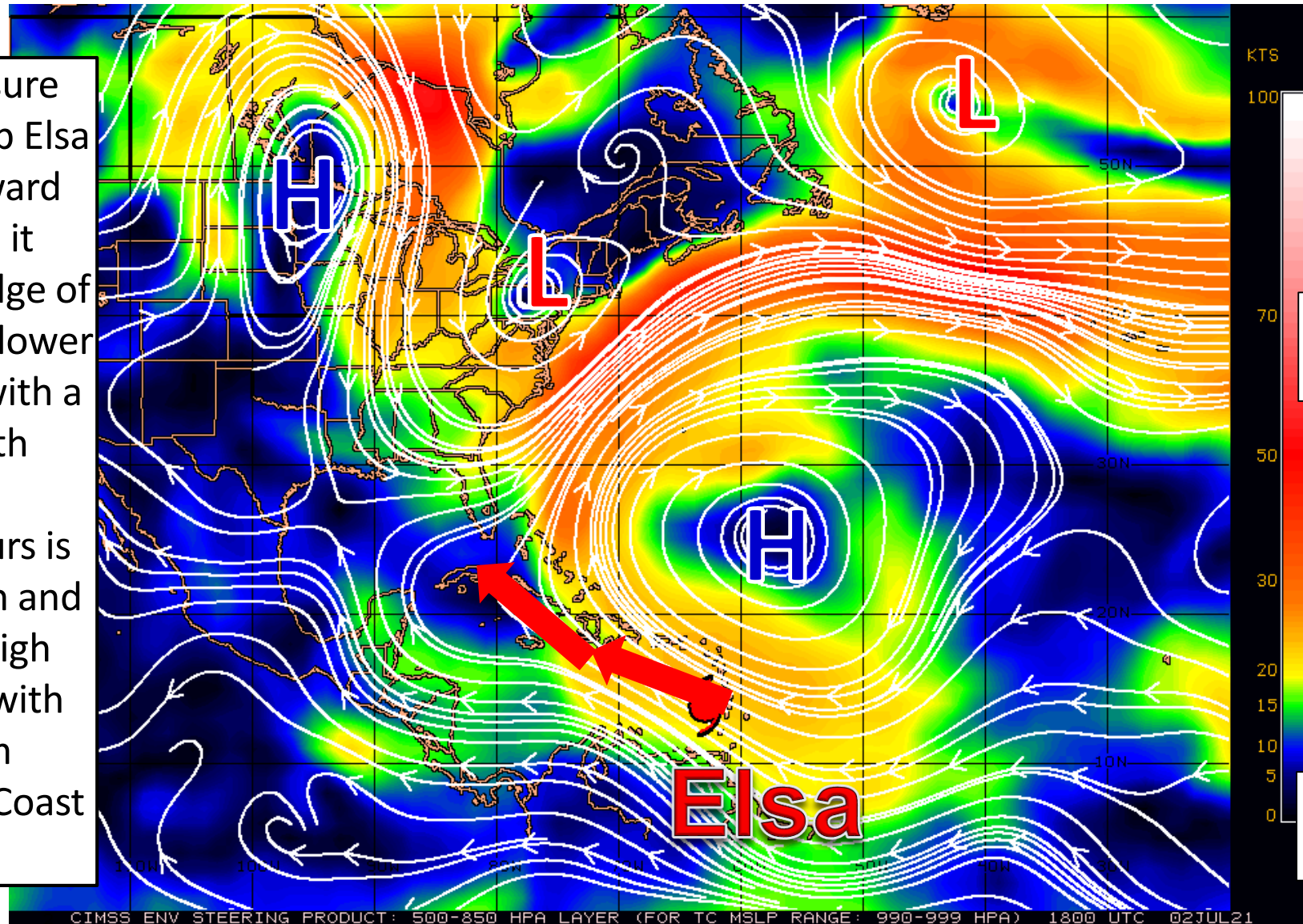
# Steering Currents

## 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 2 days. As it approaches the western edge of the high pressure ridge, a slower motion is forecast, along with a more northwest to north movement.

When the turn north occurs is dependent on the strength and location of the Atlantic high pressure area combined with the next frontal system approaching the U.S. East Coast later next week.



Fast Steering Flow

Slow Steering Flow





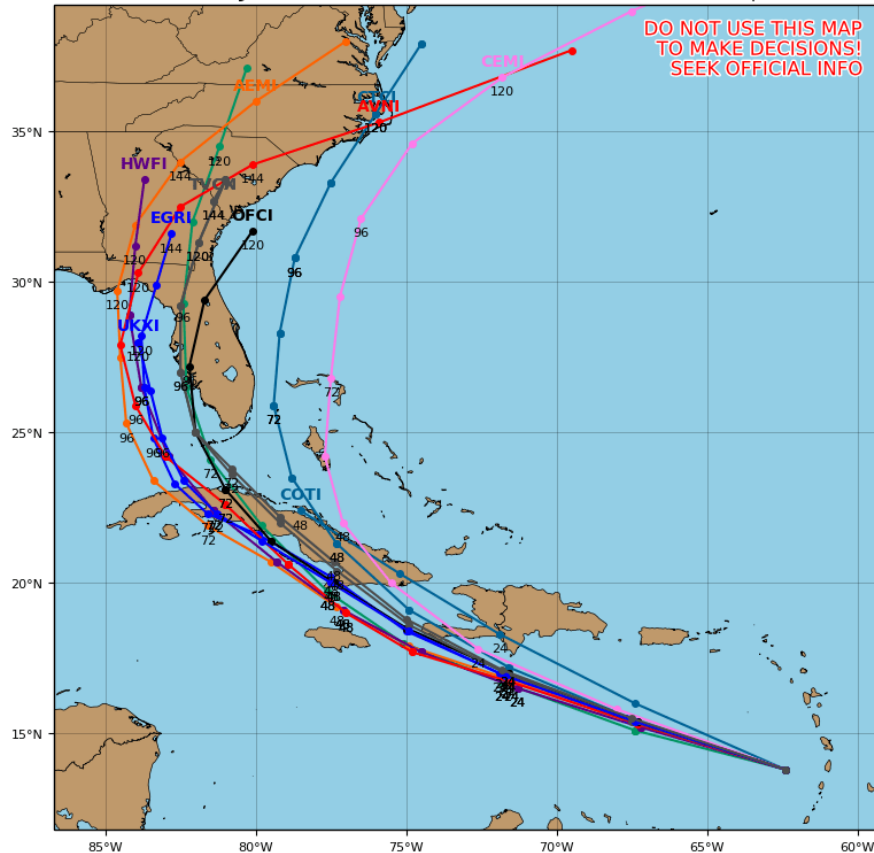
# Model Forecast Tracks Next 5 Days

## Ensemble and Dynamical Models – Hurricane Elsa

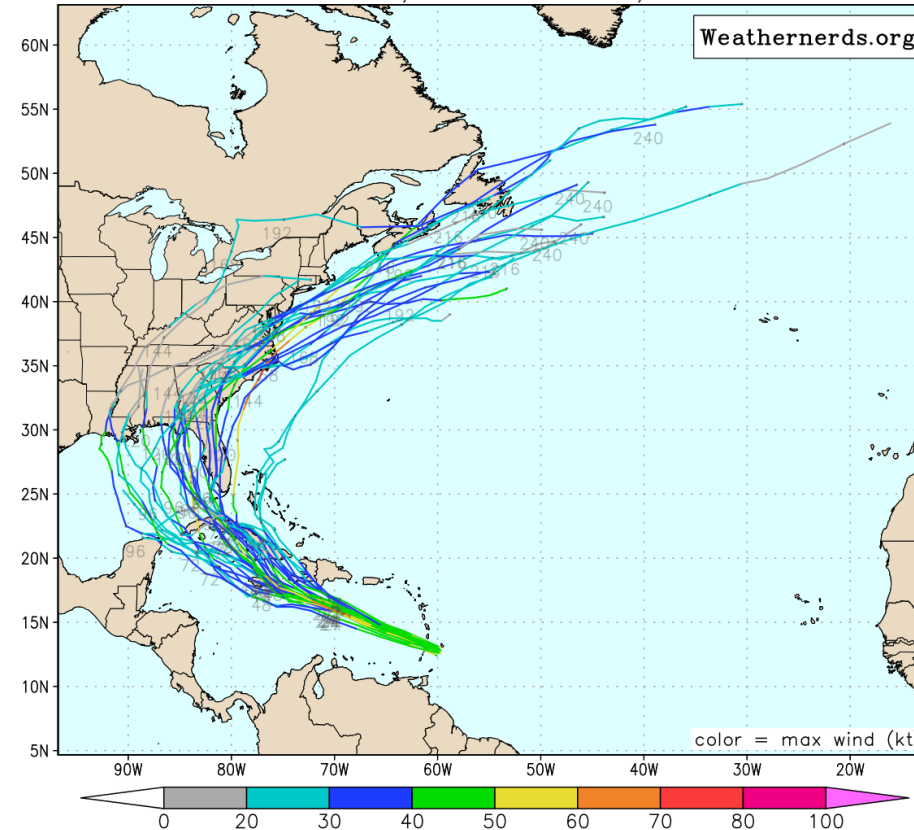
### Hurricane ELSA Model Track Guidance

Initialized at 18z Jul 02 2021

Levi Cowan - tropicaltidbits.com



GEFS Ensemble, init: 2021070212, AL05 Elsa



There is higher than normal uncertainty in the track forecast beyond 3 days. Models split considerably by the time Elsa makes it to central or western Cuba. Storm intensity would be guided by how much land interaction occurs. A more southern track in the Caribbean and western track in the Gulf of Mexico would favor a stronger system.

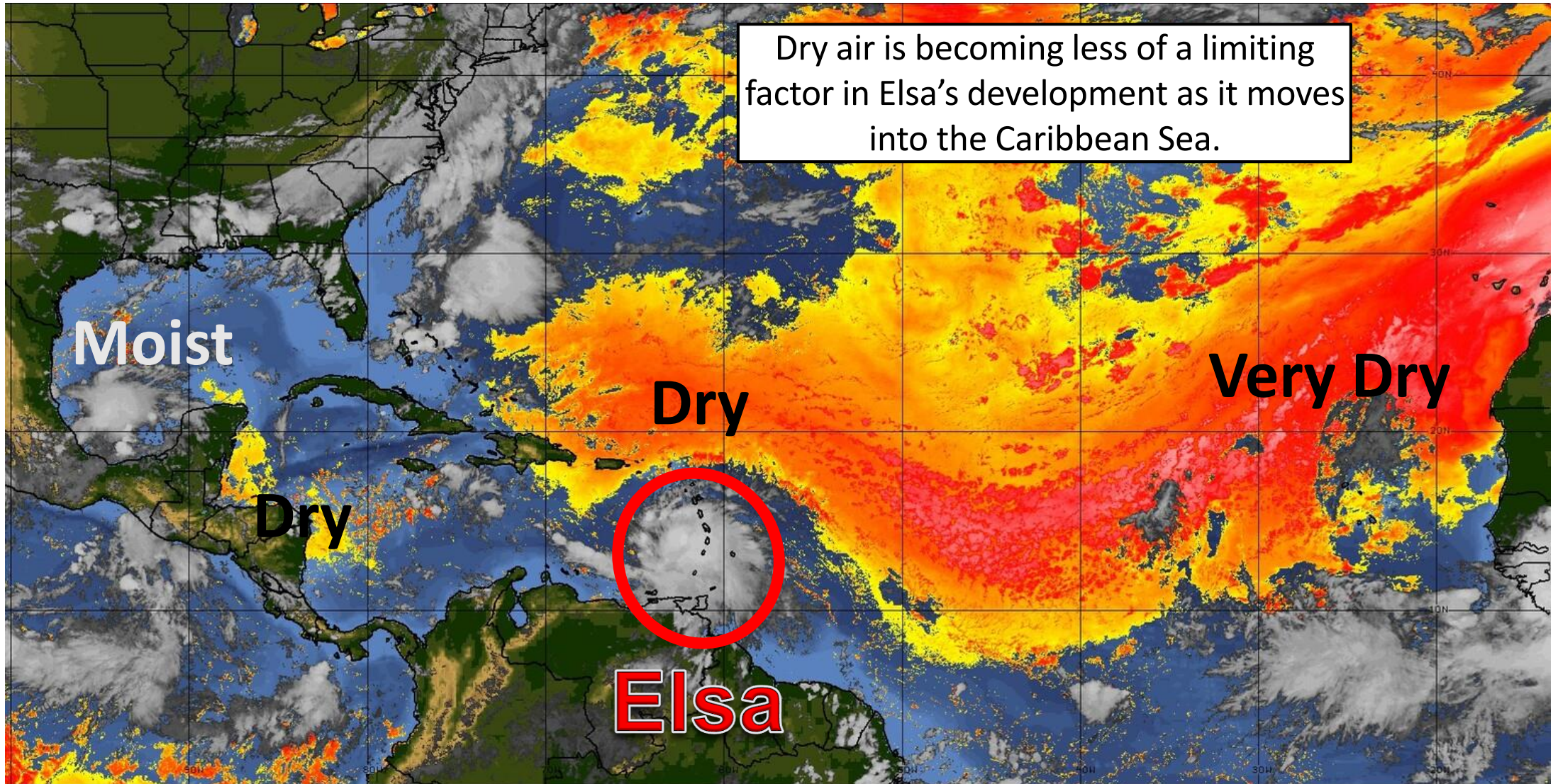




# Dry Air & Saharan Dust

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



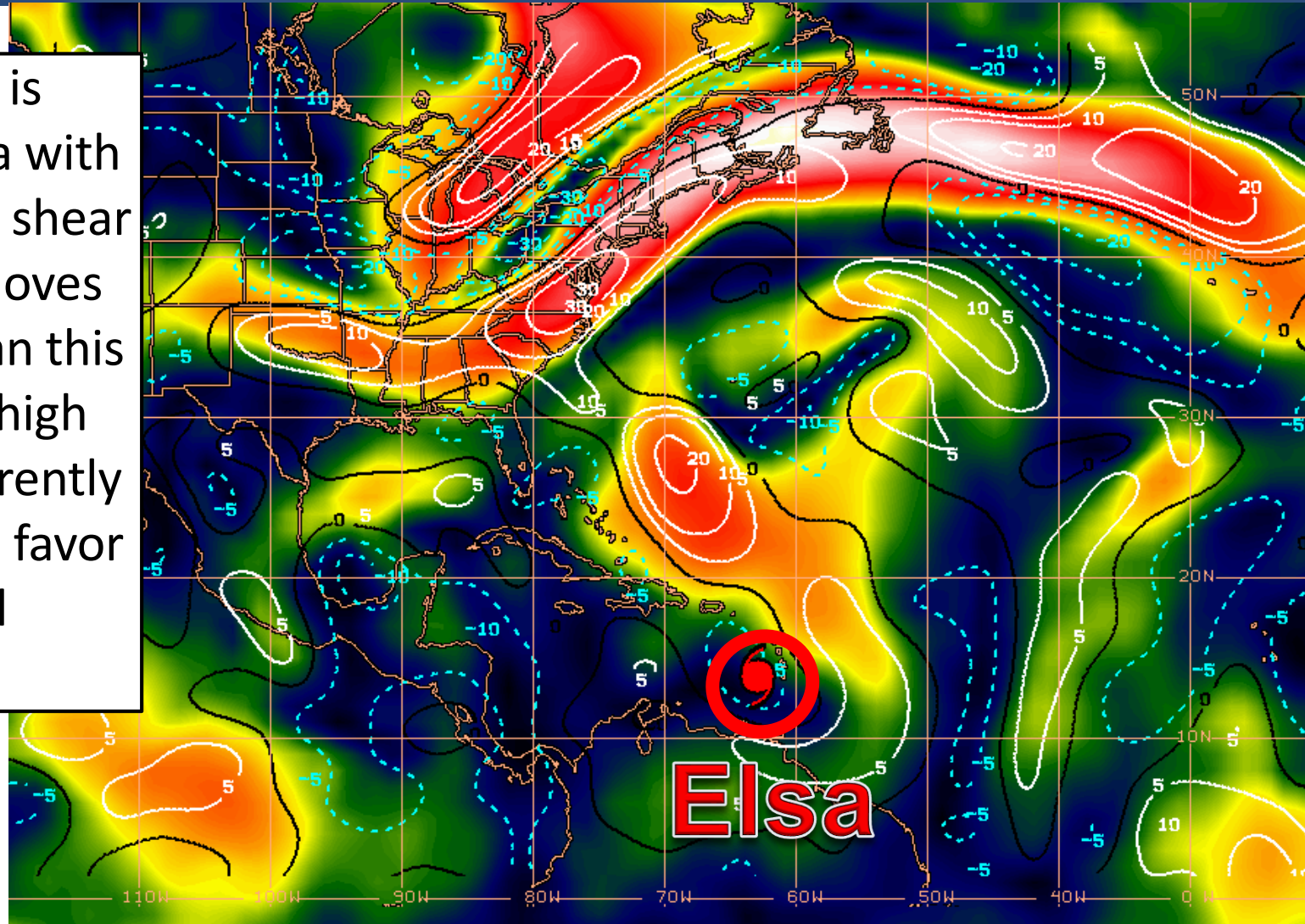


# Wind Shear

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 through the Caribbean this weekend, but very high wind shear is not currently forecast, which could favor some additional strengthening.



Current  
Shear  
KTS

HIGH Shear  
(Unfavorable)

HIGH Shear  
(Unfavorable)

MODERATE  
Shear  
(Neutral)

LOW Shear  
(Favorable)

Shear Tendency (KTS) Over Past 24 Hours: Increasing — Decreasing ----



# Sea Surface Temperatures & Anomalies

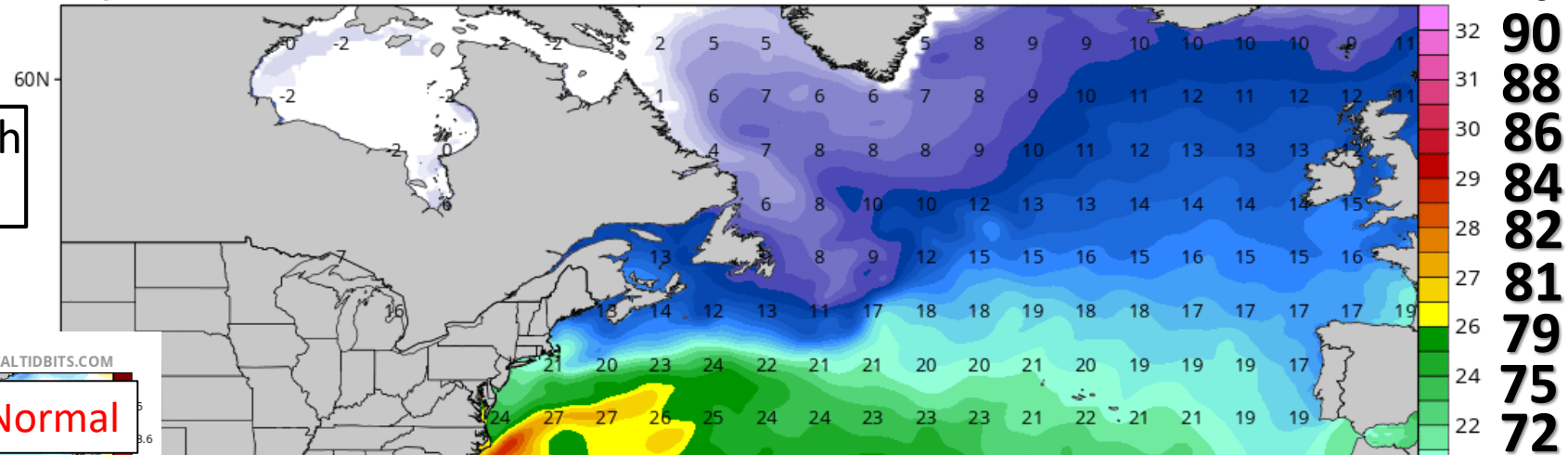
Is the ocean favorable for the system?

Water temperatures are warm enough to support a hurricane.

CDAS Sea Surface Temperature (°C)

Analysis Time: 00z Jul 02 2021

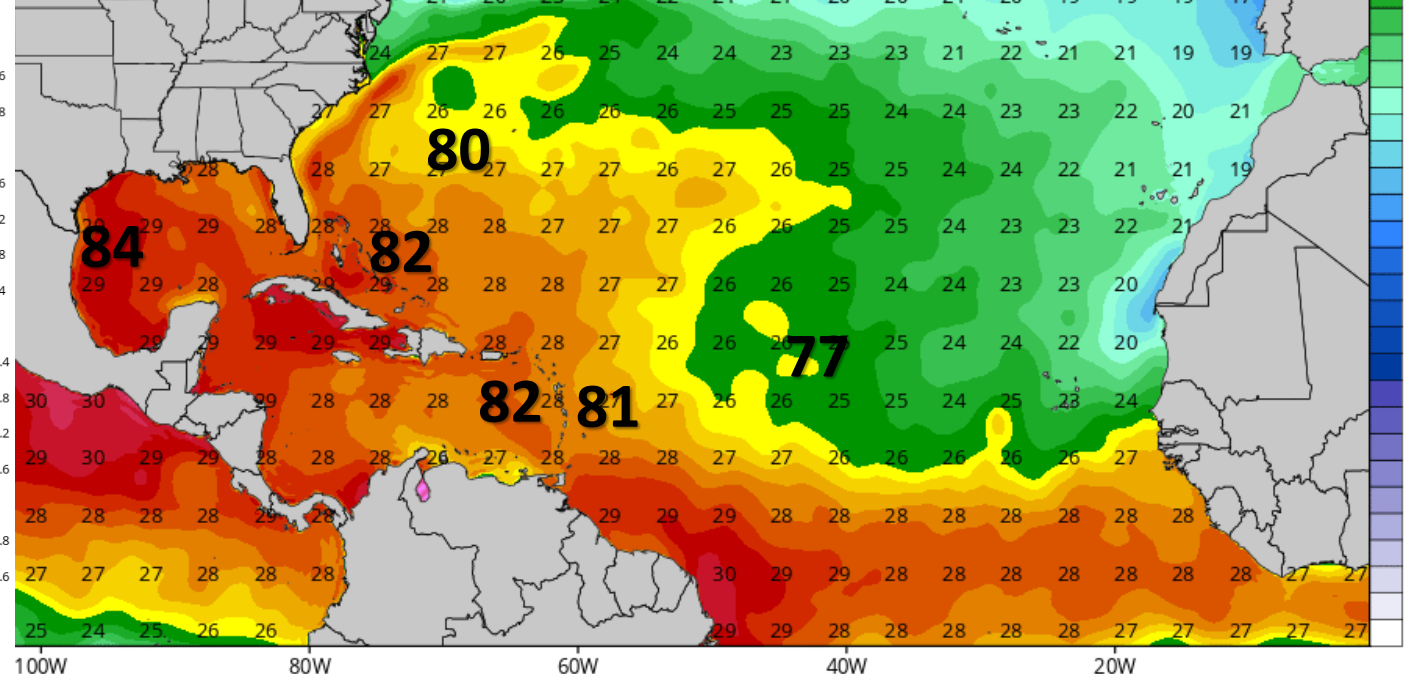
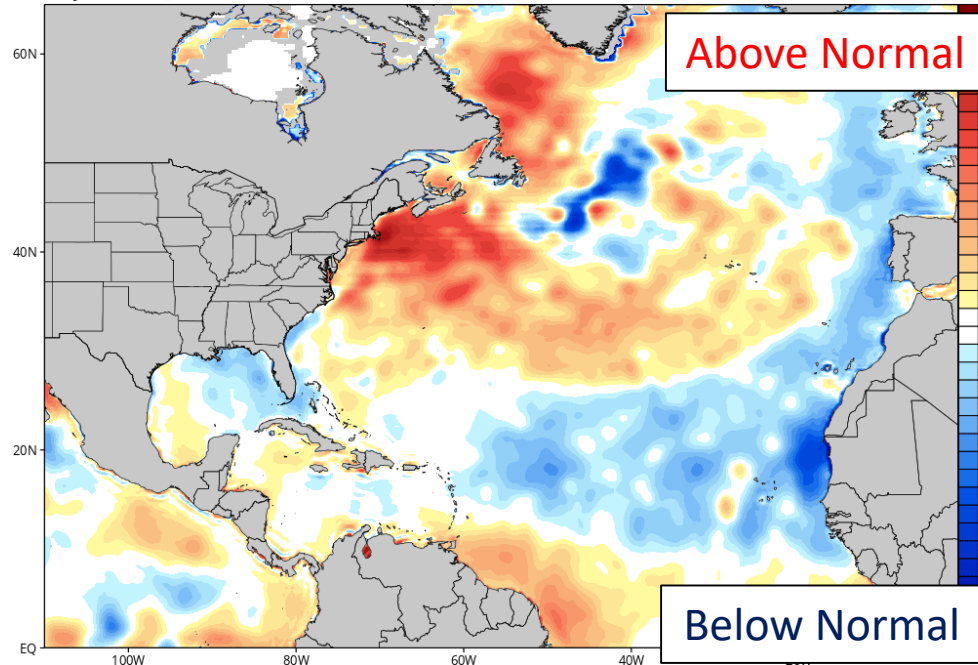
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CDAS Sea Surface Temperature Anomaly (°C) (based on CFSR 1981-2010 Climatology)

Analysis Time: 00z Jul 02 2021

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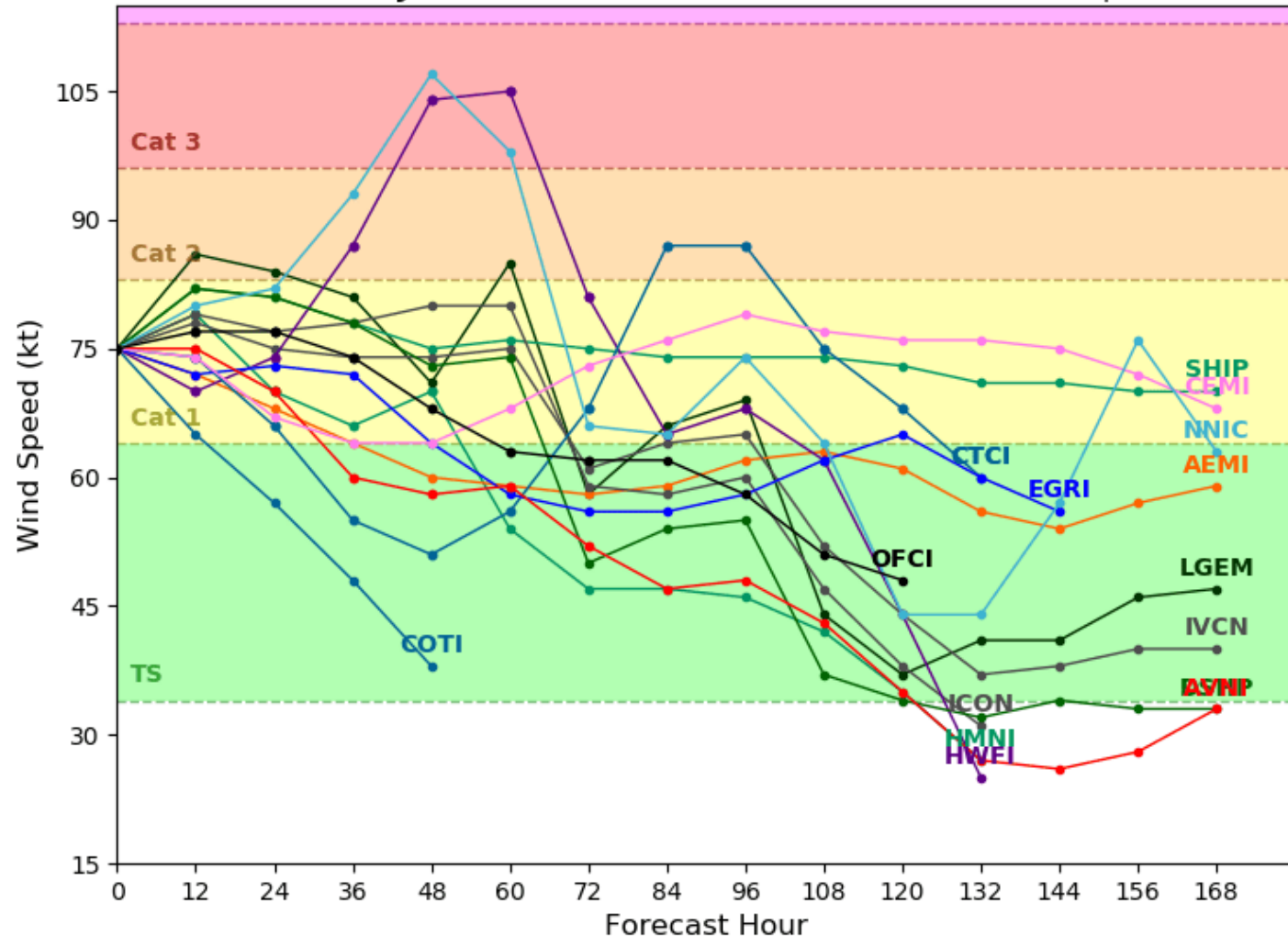
# Model Forecast Intensity

## Dynamical and Statistical Models – Tropical Storm Elsa

### Hurricane ELSA Model Intensity Guidance

Initialized at 18z Jul 02 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.

Most models show a general weakening trend heading over the next 5 days, but this can change with any shift in track.

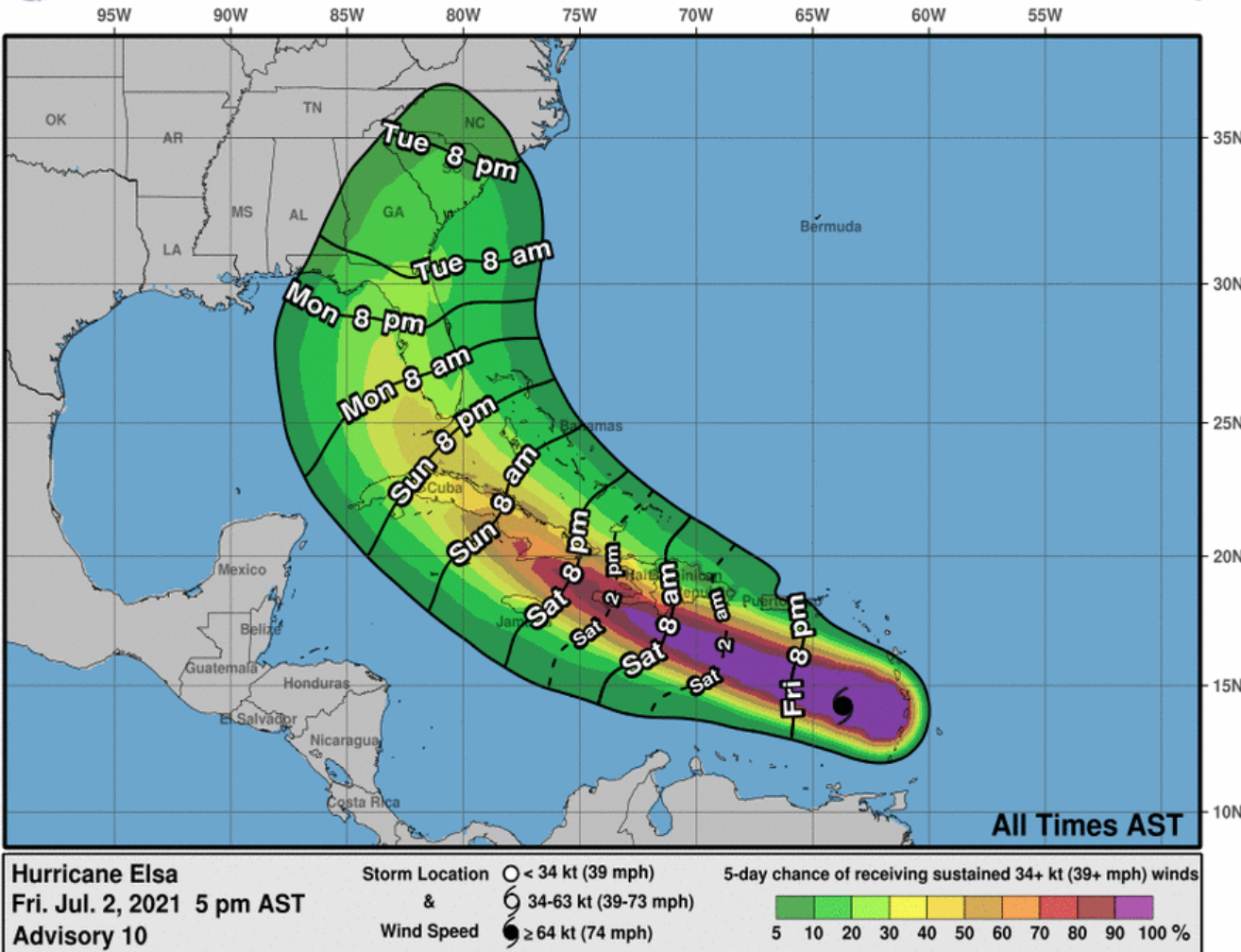


# Time of Arrival & Wind Speed Probabilities

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



### Earliest Reasonable Arrival Time of Tropical-Storm-Force Winds



City

Chance for  
TS Winds

Changes Since  
Last Packet

Key West

48%

+11%

Marathon

44%

+8%

Naples

38%

+5%

Miami

18%

+1%

Ft. Lauderdale

24%

+2%

West Palm Beach

20%

+/-0%

Ft. Myers

22%

+1%

Tampa

32%

+5%

Orlando

19%

+3%

Apalachicola

17%

+2%

Jacksonville

19%

+/-0%

The earliest timing for tropical storm wind impacts could be as early as Sunday night in South Florida and during the day Monday for the central and northern Peninsula.

On the current forecast track, the most likely timeframe for tropical storm force winds is Monday afternoon/evening across South Florida and late Monday night through Tuesday for areas north of Lake Okeechobee. Given the uncertainty in the forward speed, the “Earliest Reasonable Time of Arrival” graphic should be used for planning into the holiday weekend.





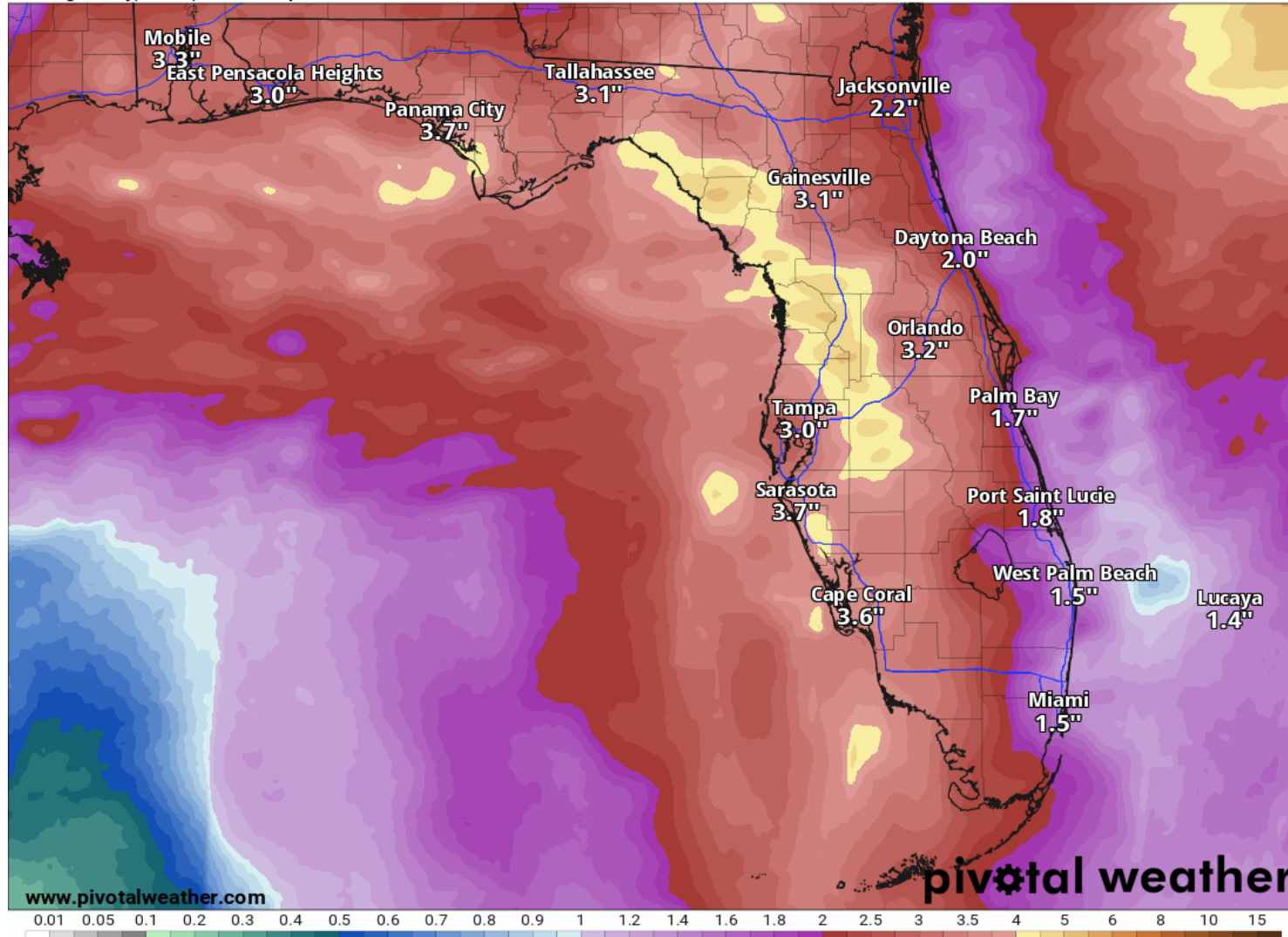
# Rainfall Totals Next 7 Days

Ending 8 PM ET Friday (7/9/21)

7-Day Precipitation (in)

Ending Friday, Jul. 9, 2021 at 8 p.m. EDT

Init: Sat 2021-07-03 00z WPC



Through Monday morning, most areas across the Peninsula will see about 0.5-1.5" from daily afternoon and evening thunderstorms.

From Monday and beyond, an additional 2-4" 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 North Florida and northern central Florida will make grounds more susceptible to flash flooding, should heavy rainfall occur. Drier soil across the southern half of the state will require heavier totals to pose a significant flood risk.

More info from NWS Miami:

<https://nwschat.weather.gov/p.php?pid=202107021919-KMFL-FGUS72-ESFMFL>



# Key Messages

From the National Hurricane Center



## Key Messages for Hurricane Elsa Advisory 10: 5:00 PM AST Fri Jul 02, 2021



1. Hurricane conditions and dangerous storm surge are expected within the Hurricane Warning areas in Haiti and the Dominican Republic beginning Saturday and in Jamaica beginning Sunday.

2. Heavy rainfall will gradually subside across the Windward and southern Leeward Islands tonight, including Barbados. Outer rain bands will impact Puerto Rico by late tonight, and affect southern Hispaniola and Jamaica Saturday into Sunday. Isolated to scattered flash flooding and mudslides are possible. By early next week, heavy rain will impact the Cayman Islands and Cuba. Significant flooding and mudslides are possible.

3. Hurricane conditions and dangerous storm surge are possible in portions of eastern Cuba beginning early Sunday where a Hurricane Watch is in effect. There is an increasing risk of wind, storm surge, and rainfall impacts elsewhere in Cuba Sunday and Monday.

4. There is an increasing risk of storm surge, wind, and rainfall impacts beginning Monday in the Florida Keys and spreading northward along the Florida Peninsula through Tuesday. However, the forecast uncertainty remains larger than usual due to Elsa's potential interaction with the islands of Hispaniola and Cuba this weekend. Interests throughout Florida should monitor Elsa's progress and updates to the forecast.



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





# Overall Summary

## Hurricane Elsa

- At 5pm EDT Friday, Elsa was a Category 1 hurricane with maximum sustained winds 85 mph.
- The center of Elsa is located about 185 miles west of Barbados or about 1,335 miles southeast of Miami.
- Elsa is moving quickly to the west-northwest at 28 mph, and this general motion through Saturday. Elsa is then forecast to slow down Saturday night into Sunday. A turn toward the northwest and north is expected by Sunday night or Monday.
- On this track, Elsa will pass near or just south of Hispaniola Saturday and Saturday night, then move over Cuba Sunday and Monday. Then Elsa will move near or over the Florida Peninsula or Big Bend Monday night through Wednesday morning.
- Elsa will remain a Category 1 hurricane until it makes landfall in Cuba. Elsa is forecast to weaken to a tropical storm as it crosses Cuba. However, Elsa could still be near hurricane strength as it moves near or over Florida.

## Florida Outlook:

- The entire Florida Peninsula, Florida Keys and eastern Florida Panhandle are included in the day 5 forecast error cone, but no impacts to Florida are expected through Sunday afternoon.
- There remains SIGNIFICANT uncertainty in the track and intensity forecast. This system should continue to be closely monitored for impacts to Florida starting late Sunday or Monday, but people are urged to not focus on the exact forecast points.
- There are currently no hurricane-related watches or warnings for Florida, but based on current trends, watches could be issued for portions of South Florida sometime on Saturday.
- The threats for storm surge, wind, rainfall, and tornadoes are increasing for the Florida Keys and the Peninsula Monday through Tuesday. The forecast uncertainty remains larger than normal, and the details on impacts remain uncertain.
- Flash flooding is possible in South Florida heading into next week due to wet to saturated soils. Flood Watches may be needed.

The next briefing 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).



# TROPICAL UPDATE



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State Meteorological Support Unit

Florida Division of Emergency Management

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