



TROPICAL UPDATE



3:30 PM EDT

Friday, July 23, 2021

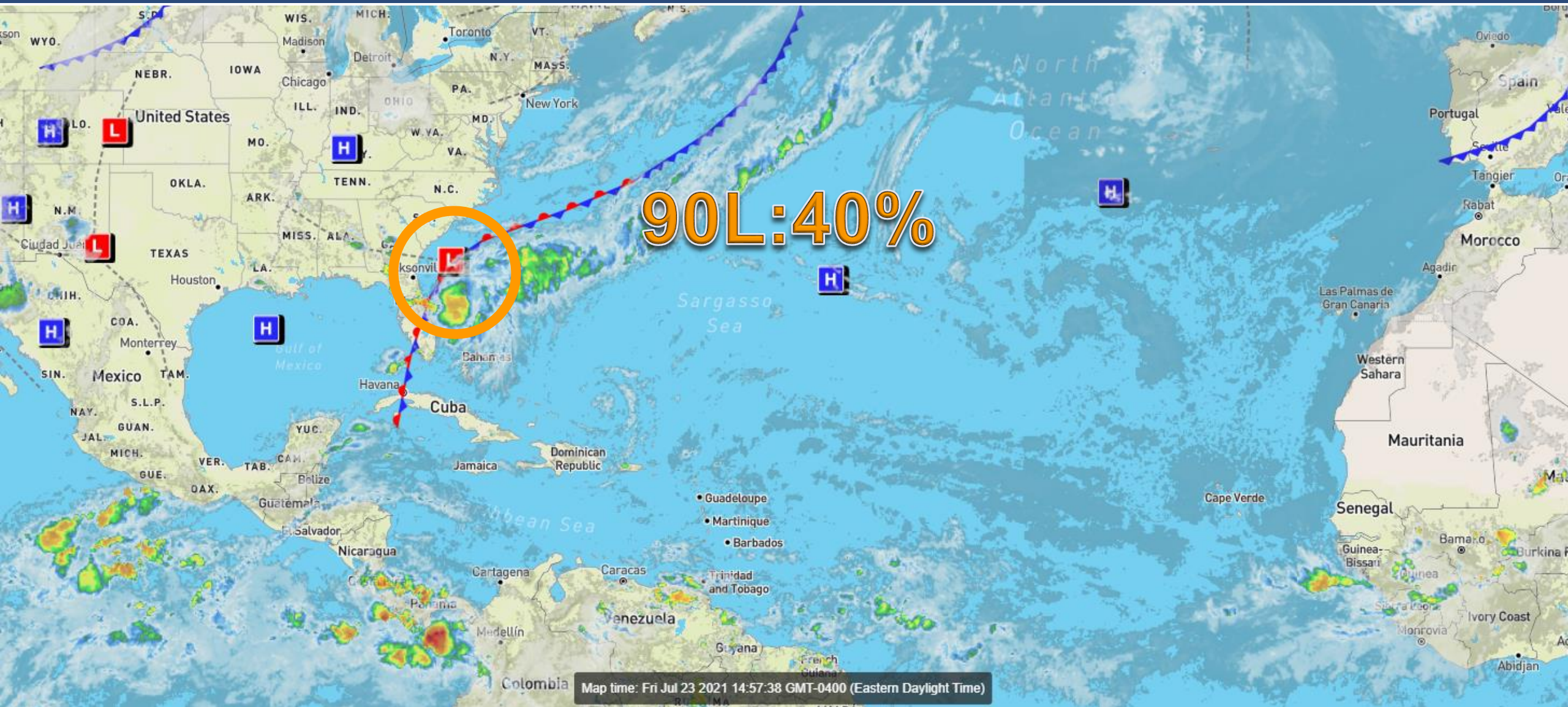
Invest 90L (40%) – Southeast US Coast

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

Possible Area of Development During the Next 5 Days ([LINK](#)) – Invest 90L



Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



www.hurricanes.gov

Disturbance 1

1
(40%)

2:00 pm EDT
Fri Jul 23 2021

Current Disturbances and Five-Day Cyclone Formation Chance: < 40% 40-60% > 60%
Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane
 Post-Tropical Cyclone or Remnants

An area of low pressure located off of the southeastern United States coastline continues to produce a large region of disorganized showers and thunderstorms. Environmental conditions appear marginally conducive for additional development and a tropical depression could form over the next couple of days as the system meander over the Gulf Stream, just offshore of the Southeastern United States.

***Formation chance through 48 hrs...medium...40%**

***Formation chance through 5 days...medium...40%**

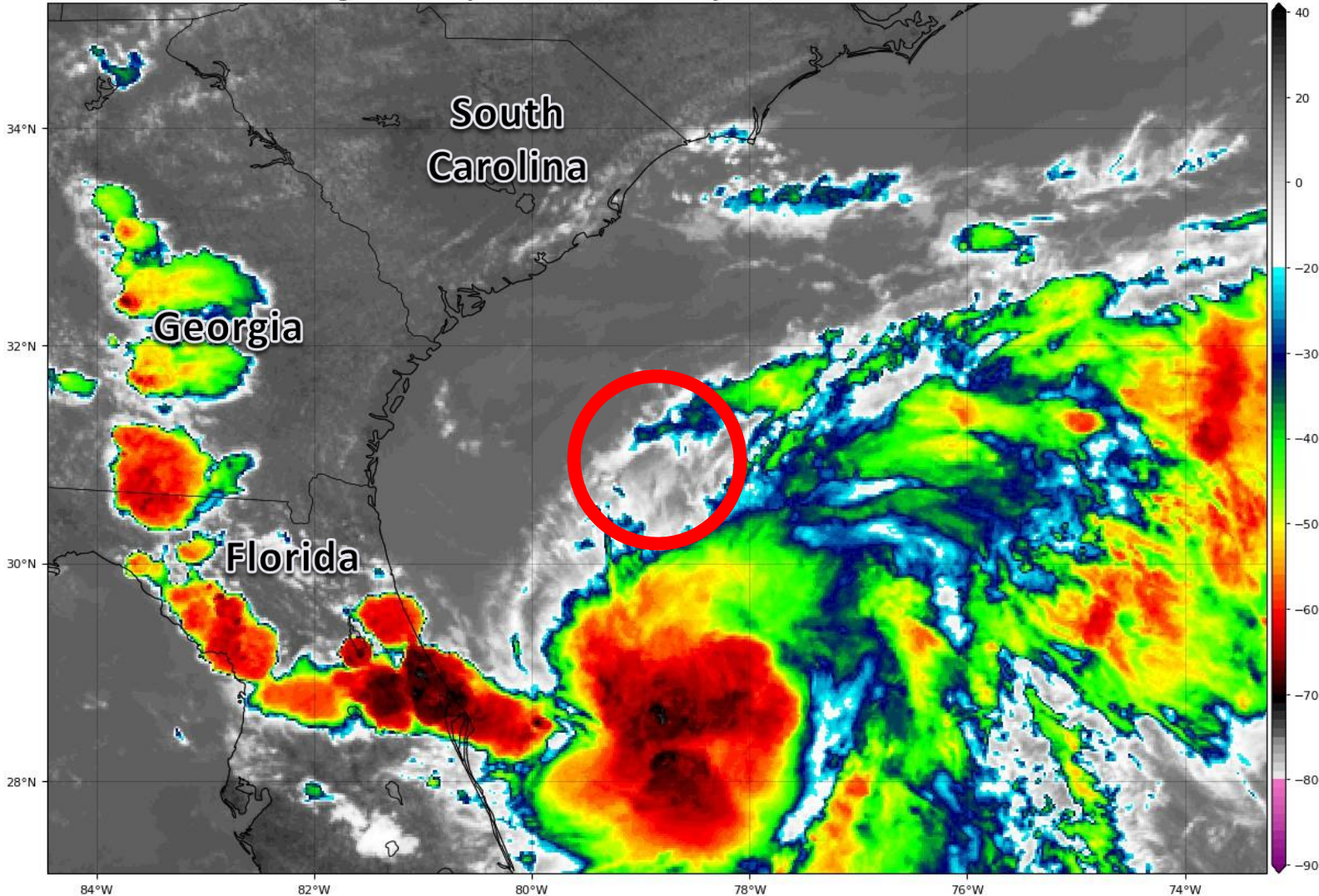


Satellite Imagery

Invest 90L – Southeast US

GOES-16 Channel 13 (IR) Brightness Temperature (°C) at 18:27Z Jul 23, 2021

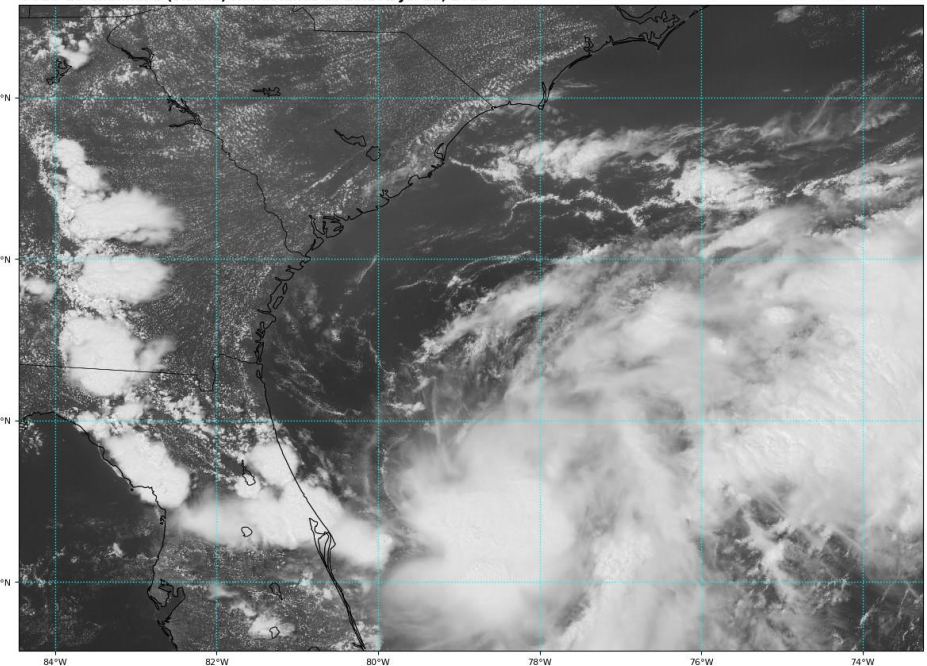
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Invest 90L remains disorganized as it battles wind shear and is still attached to a cold front. Only slow organization is possible as conditions remain marginally conducive.

GOES-16 Channel 2 (visible) Reflectance at 18:27Z Jul 23, 2021

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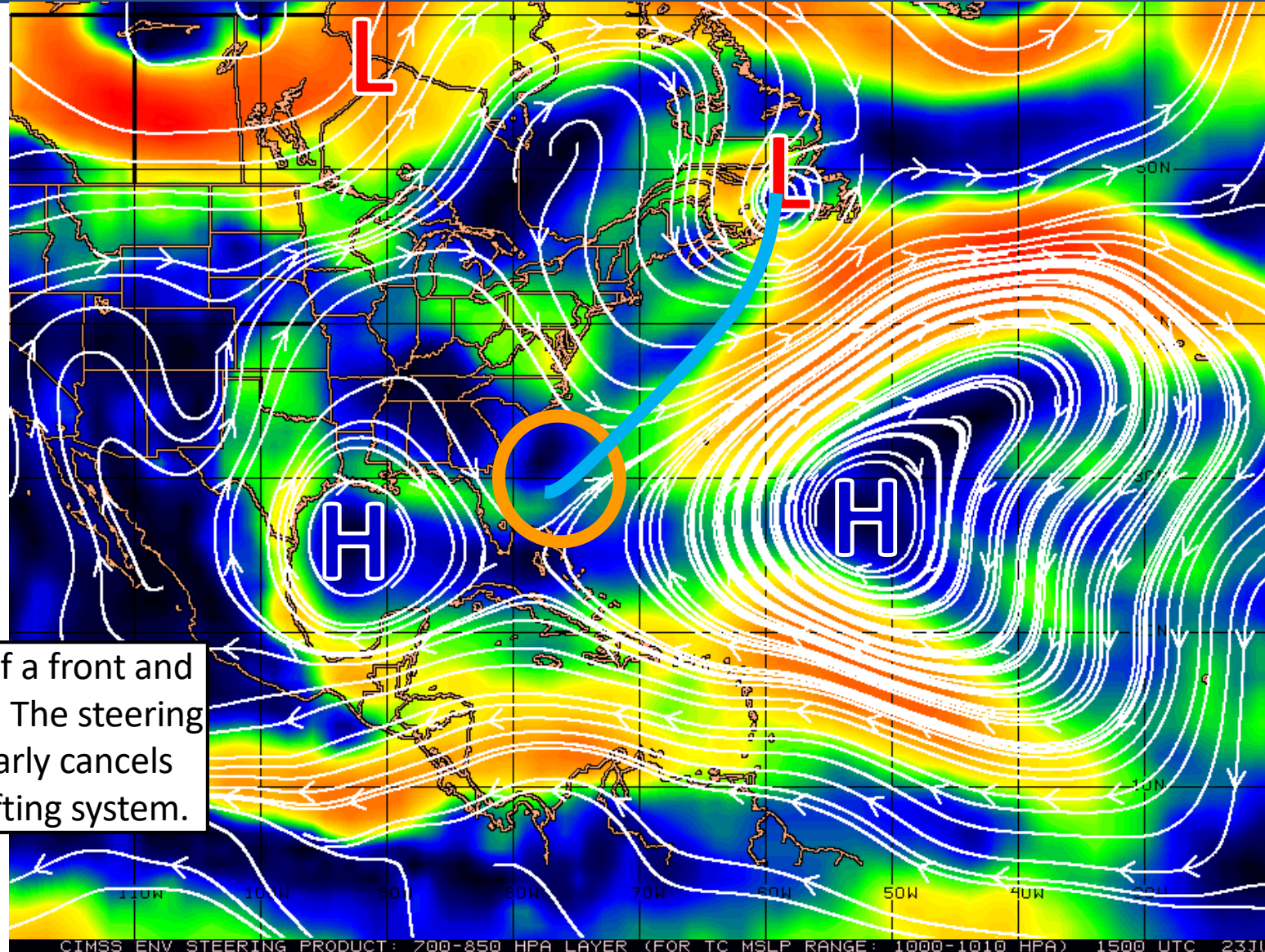




Steering Currents

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.



Fast Moving Storm

Fast Moving Storm

Typical Moving Storm

Slow Moving Storm

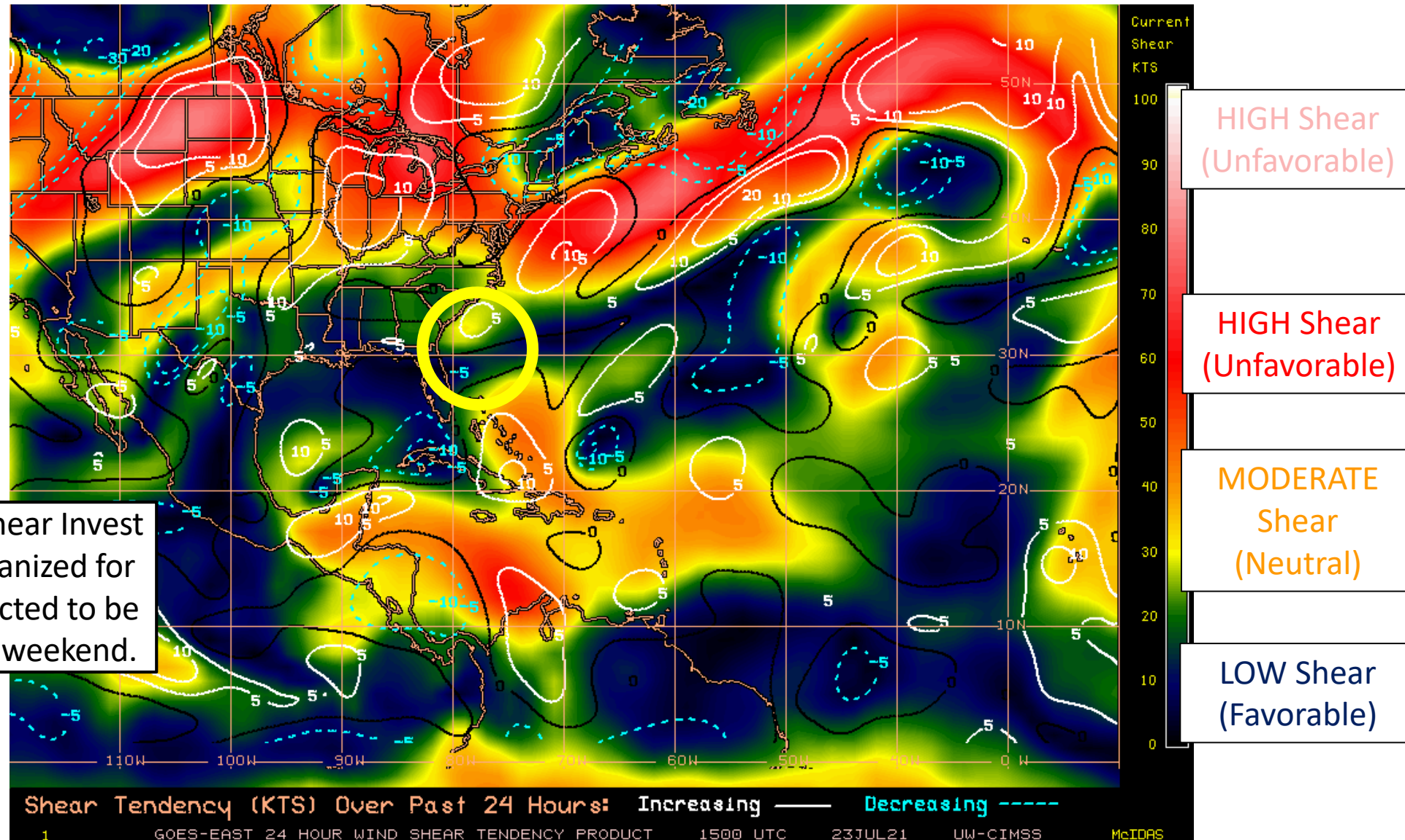
Invest 90L is at the tail end of a front and is caught between two highs. The steering flow between the highs nearly cancels out, resulting in a slowly drifting system.



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).



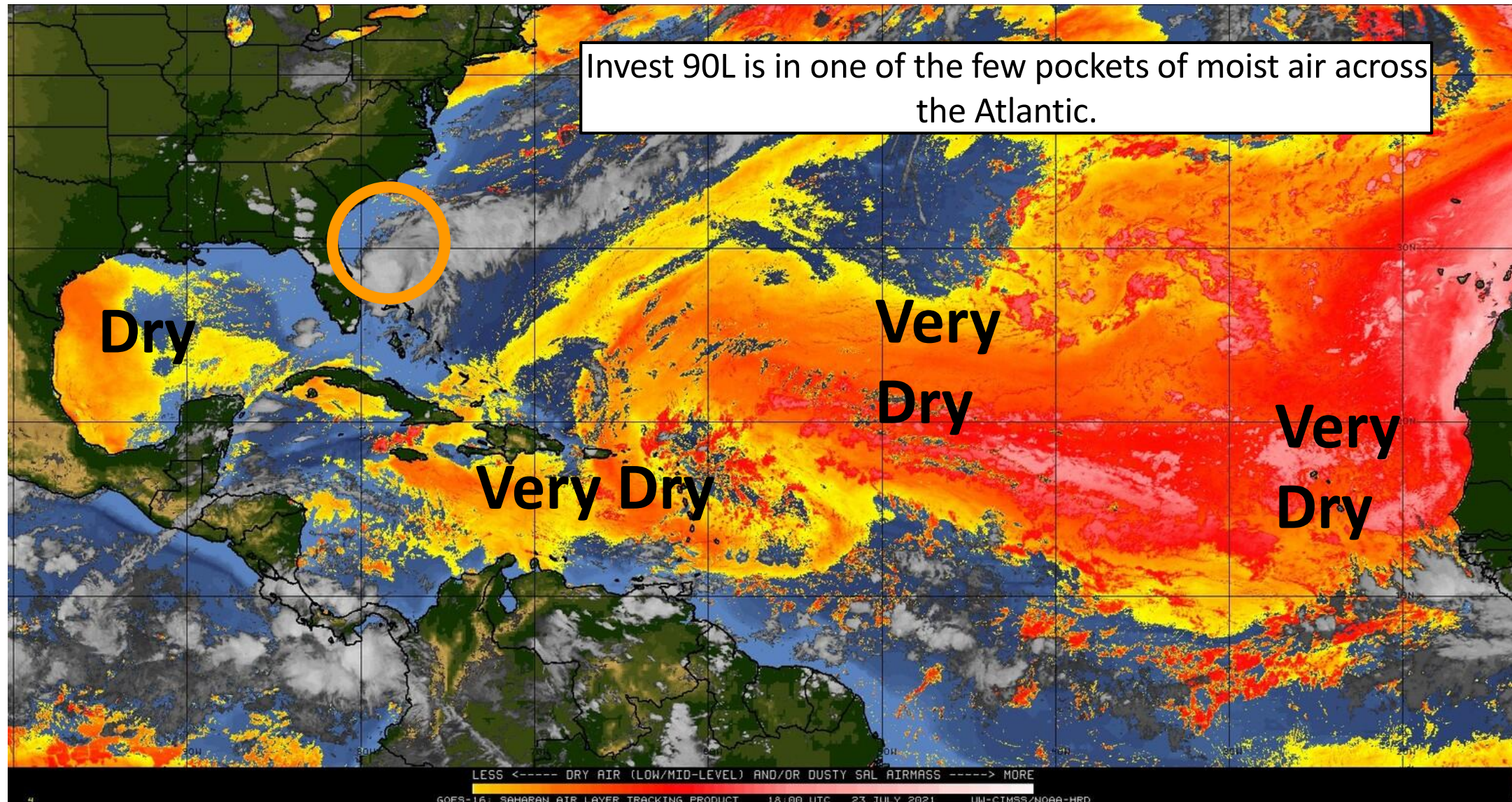
Wind shear remains elevated near Invest 90L, which is keeping it disorganized for now. Conditions are only expected to be marginally better through the weekend.



Dry Air & Saharan Dust

Is the environment favorable for the system?

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





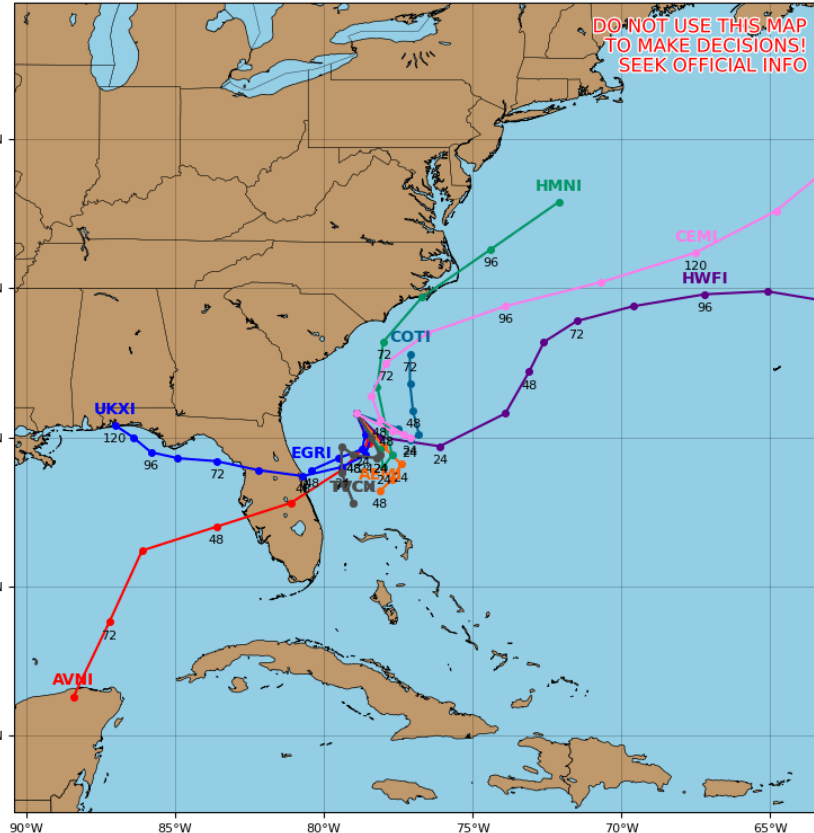
Model Forecast Tracks

Ensemble, Dynamical, and Statistical Models

Invest 90L Model Track Guidance

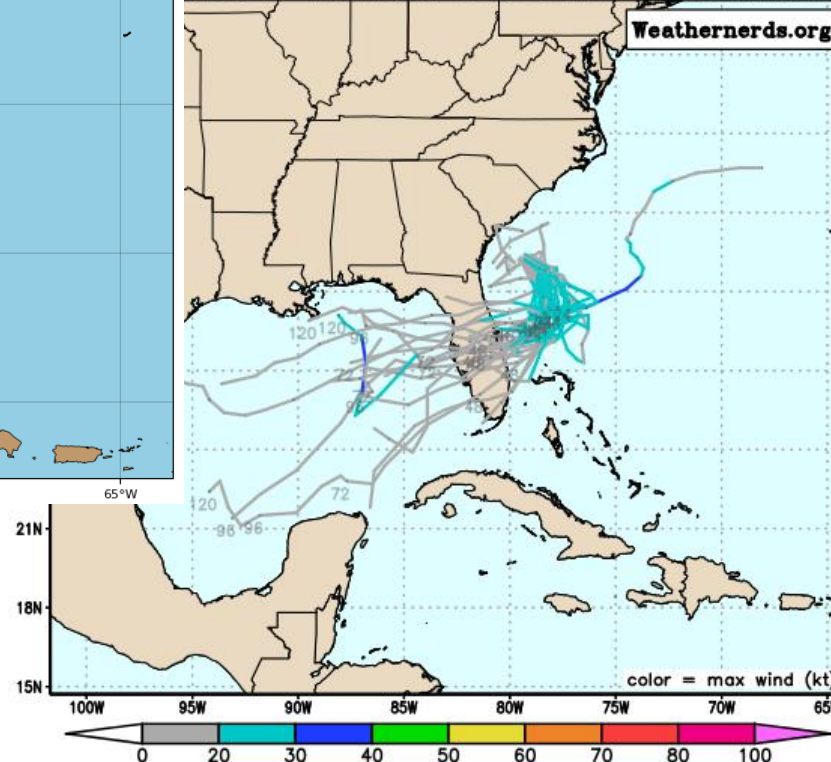
Initialized at 18z Jul 23 2021

Levi Cowan - tropicaltidbits.com



ensemble (0-120 h only), init: 2021072312, AL90 Invest

Weathernerds.org

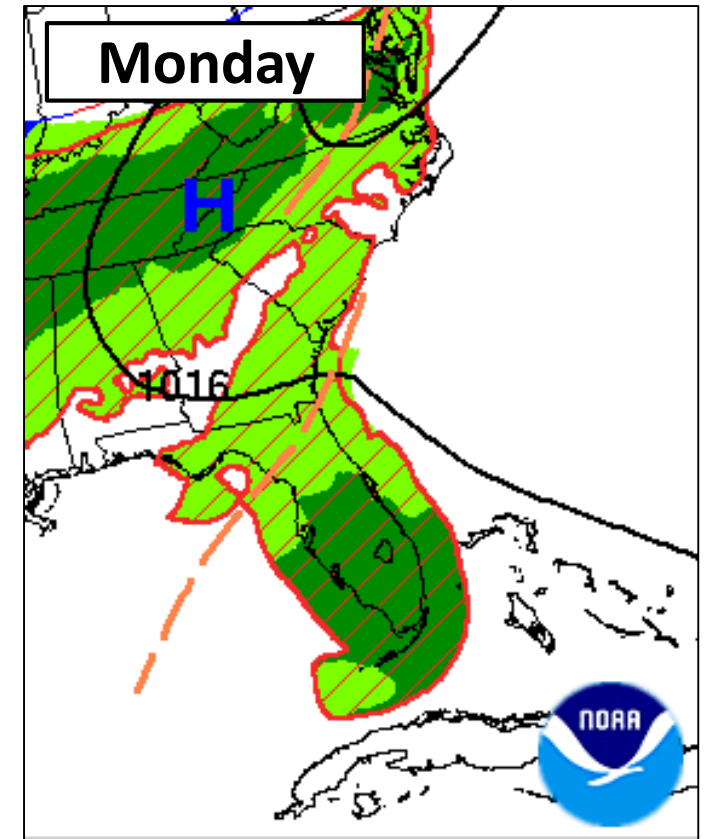
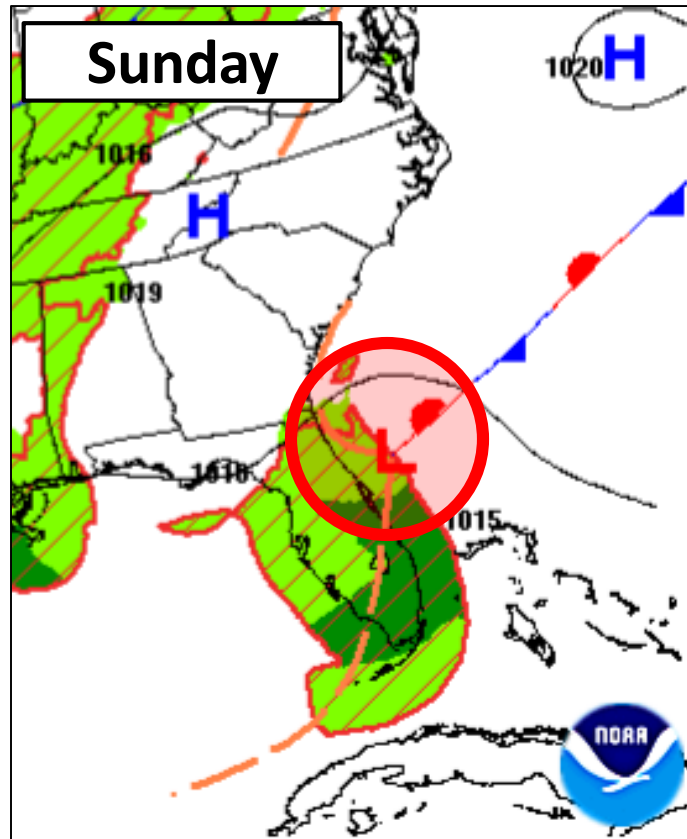
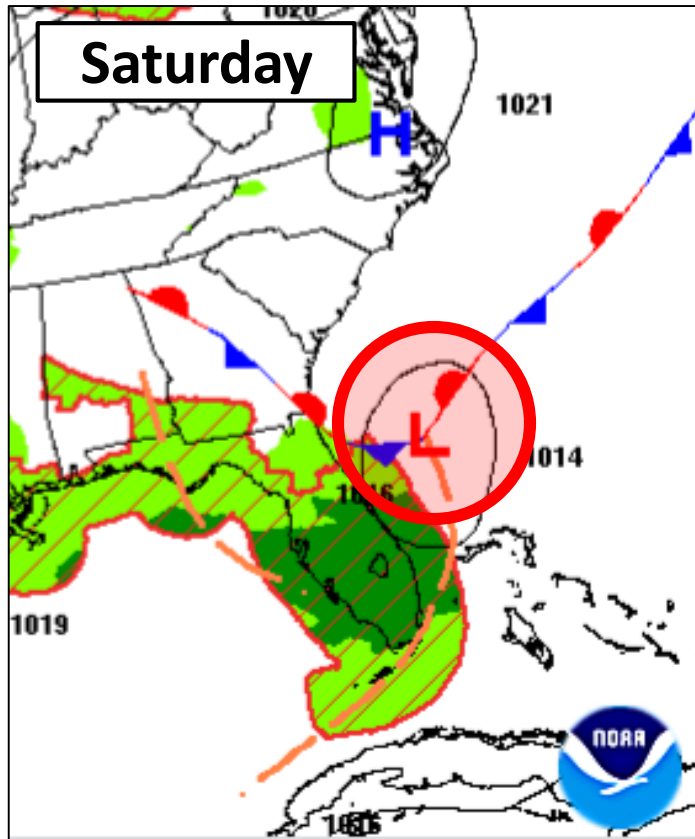


Without a well-defined circulation, weak system, and little to no steering flow, 90L is expected to meander over the far western Atlantic over the next few days. It is possible that 90L (or part of it) may drift over the Peninsula later this weekend.

Regardless of track, the system is likely to remain weak through its lifetime.



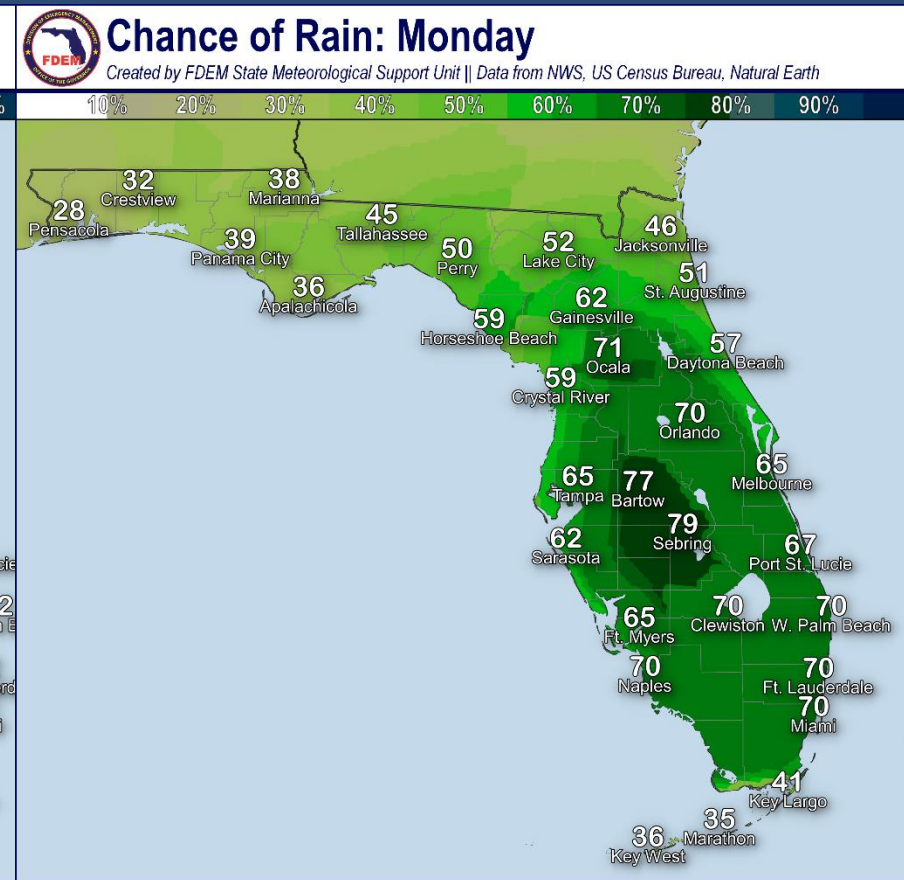
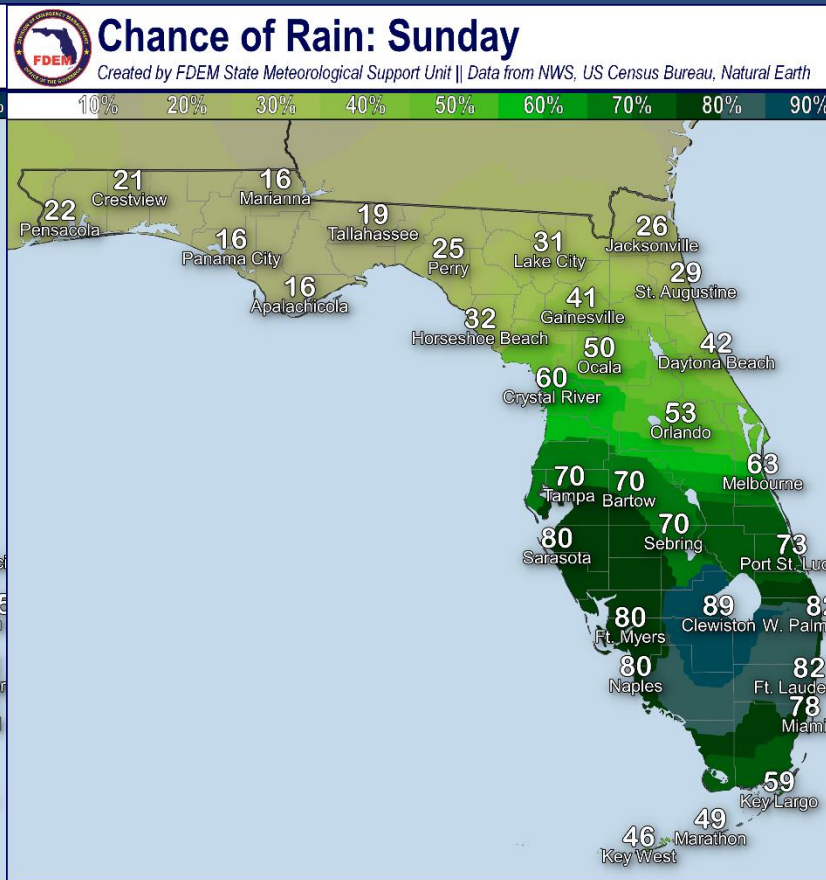
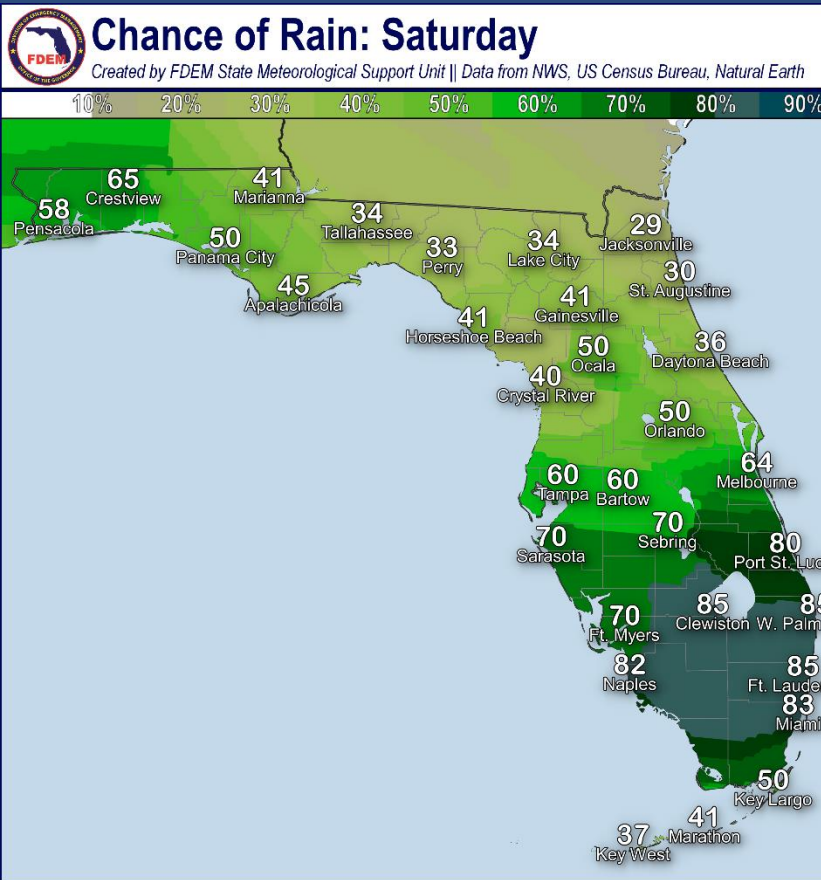
Forecast This Weekend



Invest 90L will drift offshore of the Southeast US coast, which will bring additional moisture to parts of the Peninsula this weekend. However, it will remain weak and disorganized.



Forecast Rain Chances Next 3 Days



Rain chances will increase across South Florida over the weekend and remain high into early next week. Heavy rainfall will be the primary threats with the storms, but dangerous lightning and gusty winds will be possible in the stronger storms.



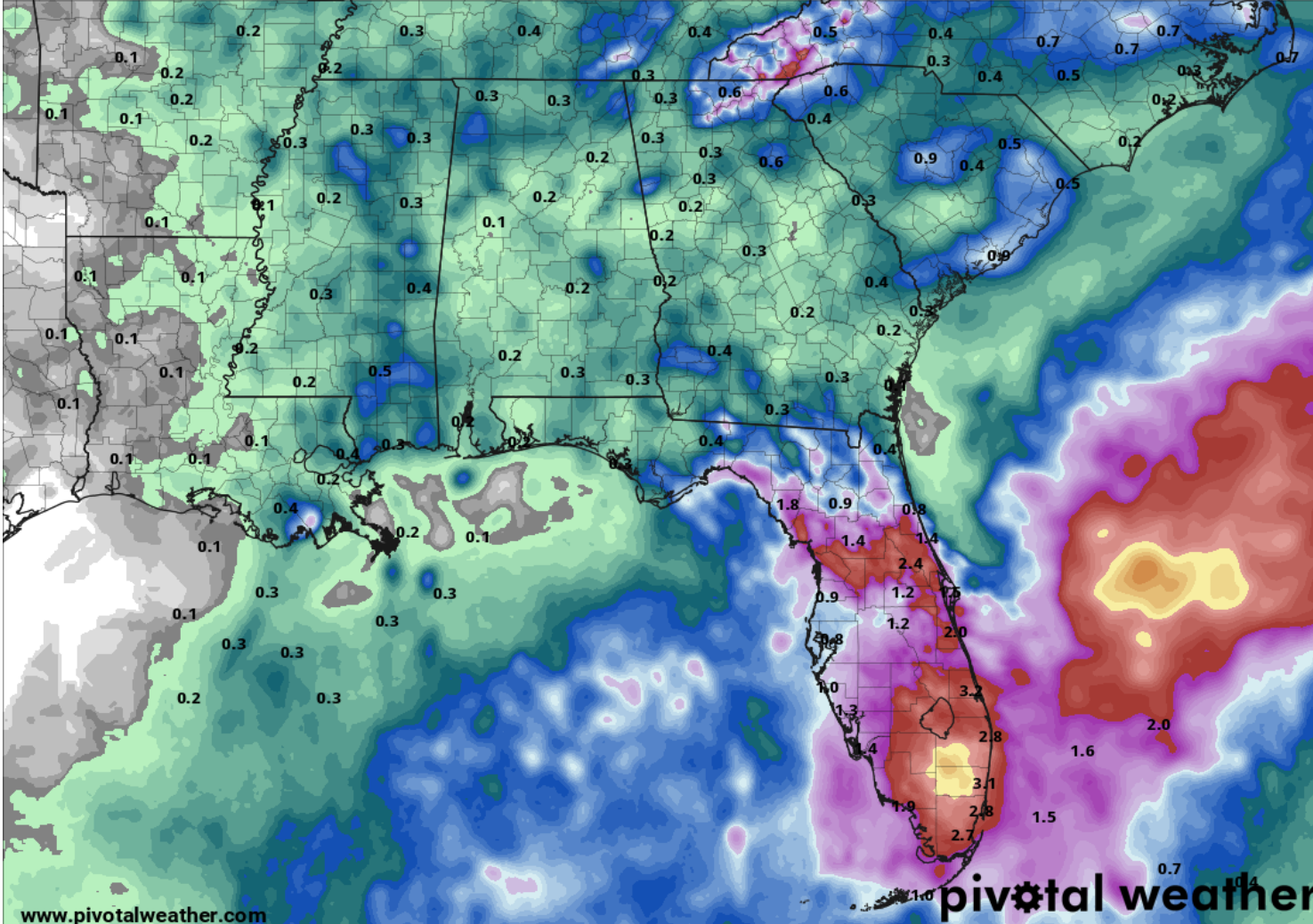
Rainfall Totals Next 5 Days

Ending 8 AM ET Wednesday

120-Hour Precipitation (in)

Ending Wednesday, Jul. 28, 2021 at 8 a.m. EDT

Init: Fri 2021-07-23 12z WPC



www.pivotalweather.com

0.01 0.05 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1 1.2 1.4 1.6 1.8 2 2.5 3 3.5 4 5 6 8 10 15

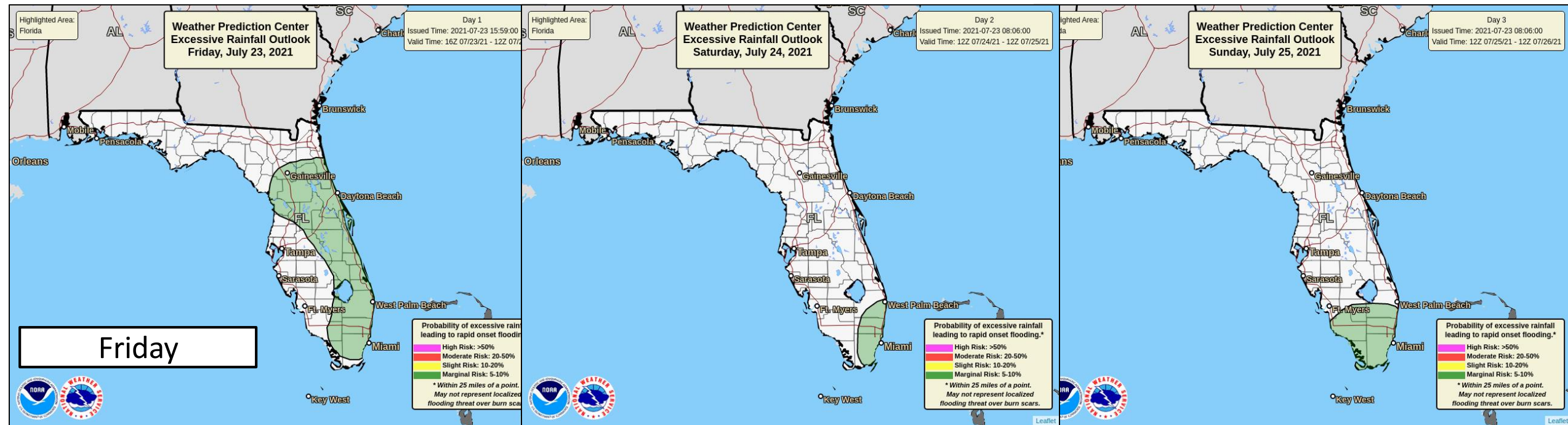
Over the next 5 days, rainfall totals will be widespread 1-3" across the Peninsula with localized totals near 4-5" possible.

Localized flash flooding cannot be ruled out.



Flash Flood Outlooks

From the Weather Prediction Center



Risk of rainfall exceeding flash flood guidance within 25 miles of a point to the right of a line

HIGH: > 50%

SLGT: 10%-20%

MDT: 20%-50%

MRGL: 5%-10%

With wet to saturated soils across the Peninsula, localized flash flooding cannot be ruled out, should heavy rainfall occur.



Overall Summary

Invest 90L – Near Southeast US Coast

- A non-tropical area of low pressure has developed along a cold front offshore of the Southeast US.
- As this system meanders this weekend, it may gradually become organized, but conditions are only marginally favorable for any development.
- It is possible that 90L could drift over the Florida Peninsula later this weekend. However, regardless of track, the system will likely remain weak.
- This system has a 40% (medium) chance of development in the next 48 hours.

Florida Outlook:

- Increased rain chances are the only impact to Florida expected at this time.
- Locally heavy rainfall will be the primary threat with storms, but gusty winds and frequent lightning will be possible in the stronger storms.

The next briefing packet will be issued Saturday. For the latest information on the tropics, please visit the National Hurricane Center website at www.hurricanes.gov.



TROPICAL UPDATE



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State Meteorological Support Unit

Florida Division of Emergency Management

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