



TROPICAL UPDATE



8:00 AM EDT

Sunday, October 4, 2020

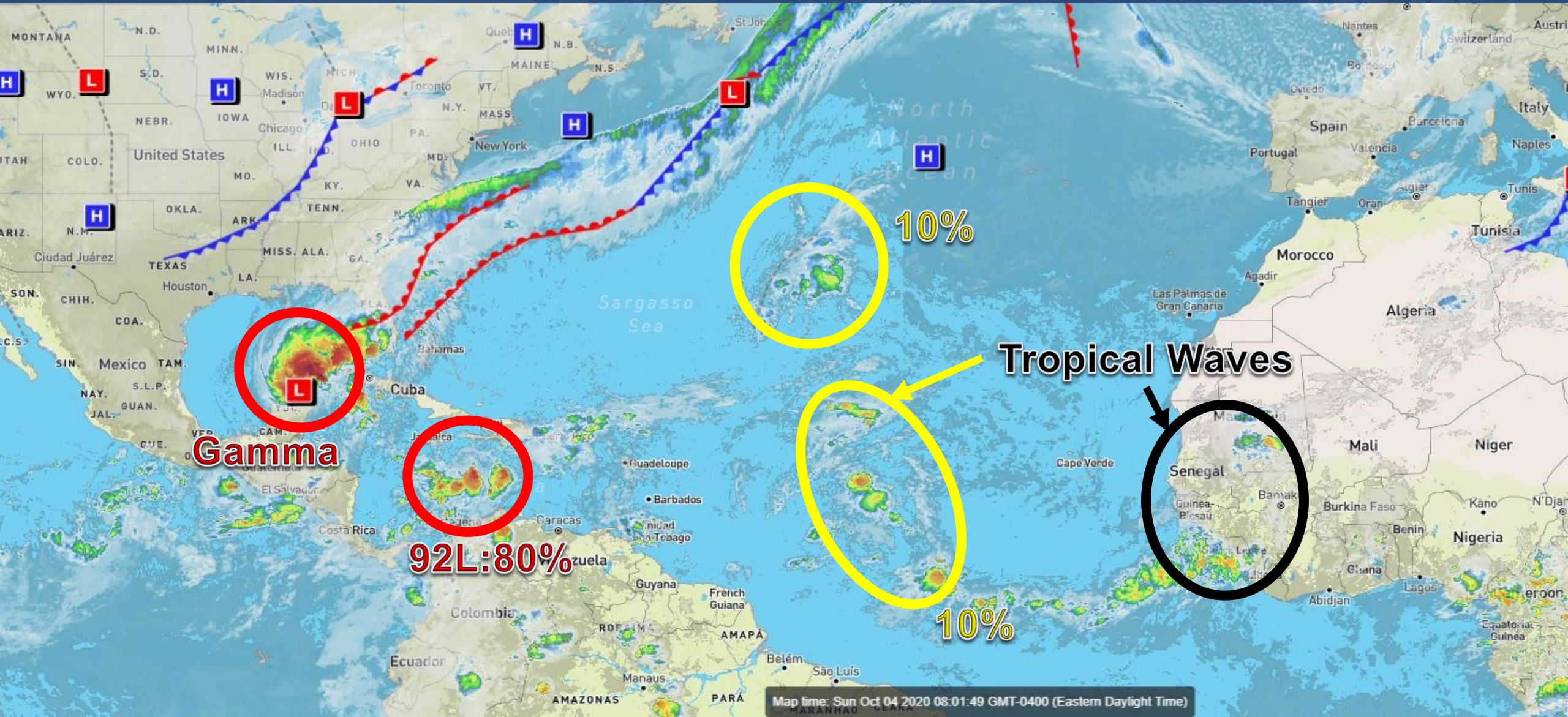
Tropical Storm Gamma, Invest 92L (80%), Central Tropical Atlantic Wave (10%), Central Atlantic Low (10%)

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



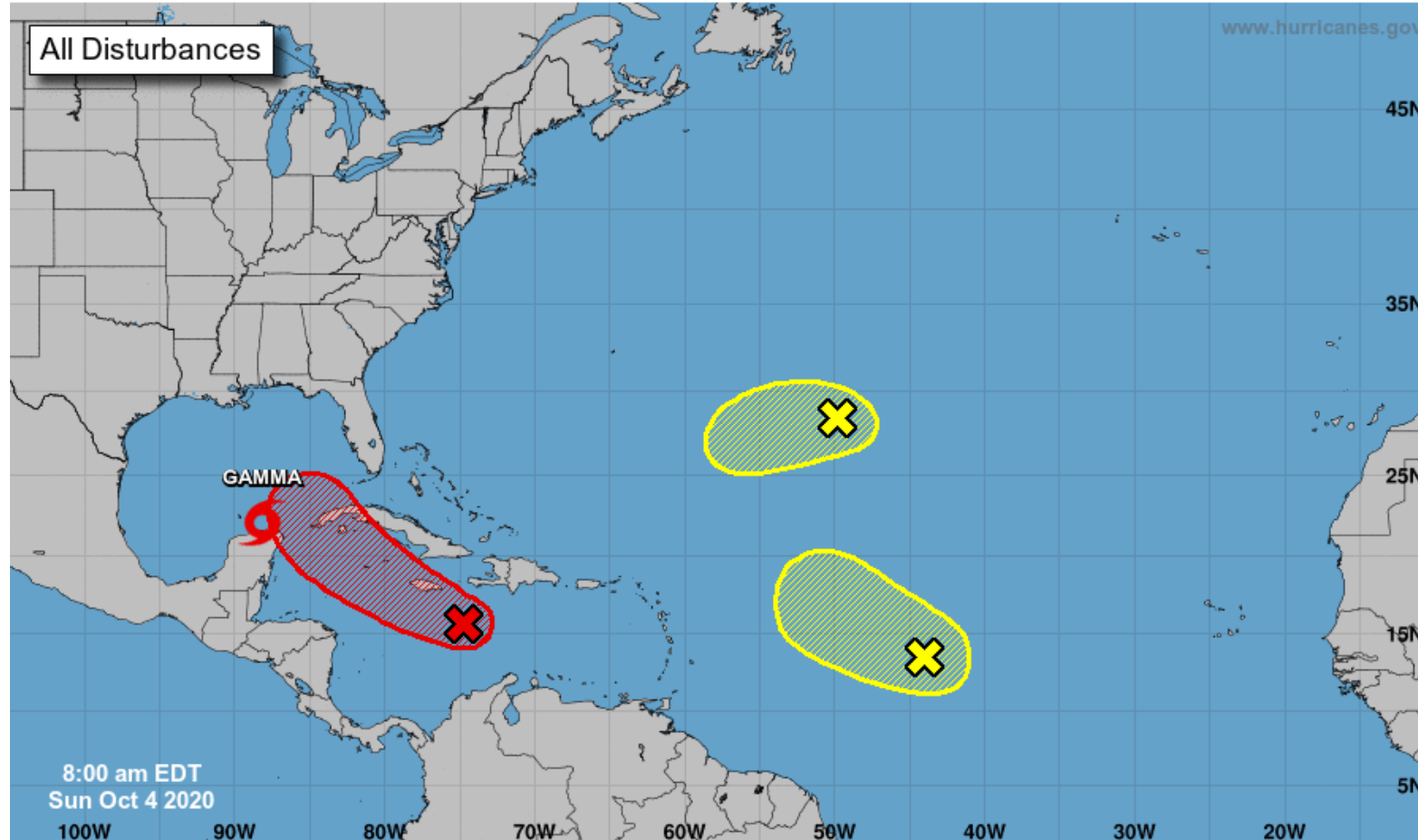


Tropical Weather Outlook

Possible Areas of Development During the Next 5 Days ([LINK](#))



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



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



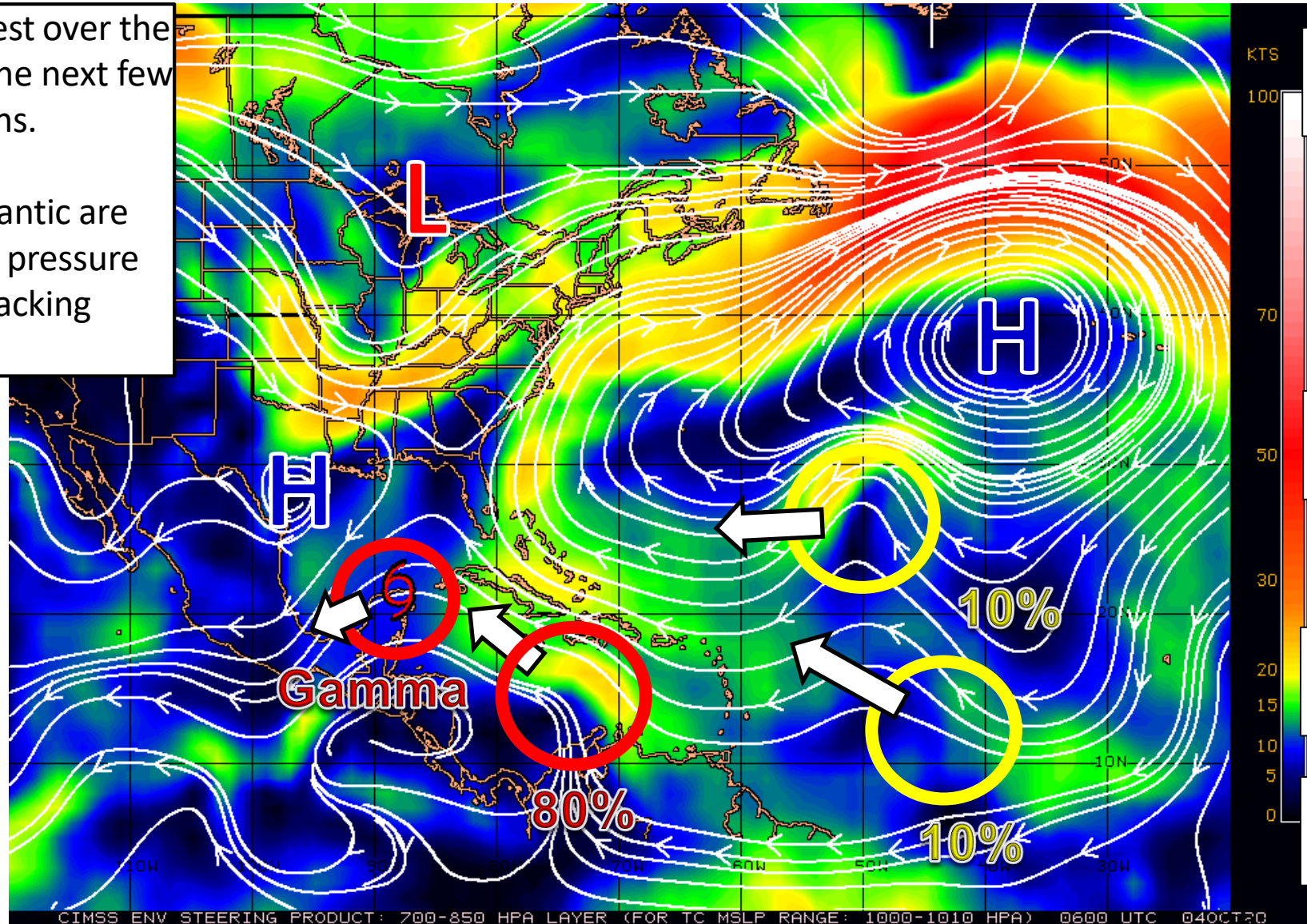
Steering Currents

What is Moving the Systems?

Color denotes the movement speed through the atmosphere and thin white lines denote direction. Tightly clustered white lines represent faster movement as well.

Gamma will drift west-southwest over the southern Gulf of Mexico over the next few days as it likely weakens.

The other systems in the Atlantic are being steered by a large high pressure system, with Invest 92L tracking northwest.



Fast Moving Storm

Fast Moving Storm

Typical Moving Storm

Slow Moving Storm



Wind Shear

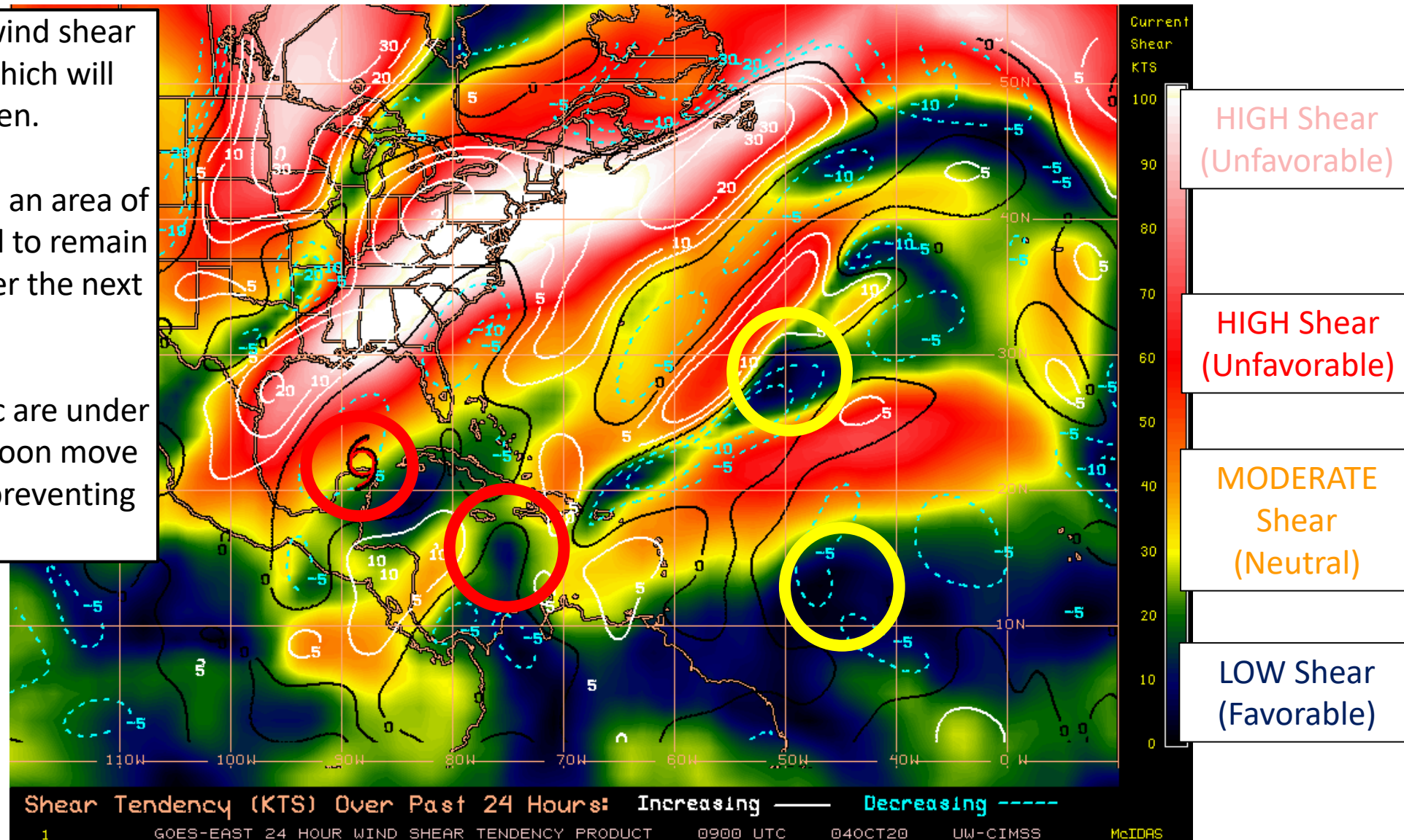
Is the environment favorable for the systems?

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).

Gamma is approaching high wind shear across the Gulf of Mexico, which will cause Gamma to weaken.

The Caribbean Wave (92L) is in an area of lighter shear, and it is expected to remain favorable for development over the next few days.

The two systems in the Atlantic are under low shear right now, but will soon move into higher wind shear likely preventing development.

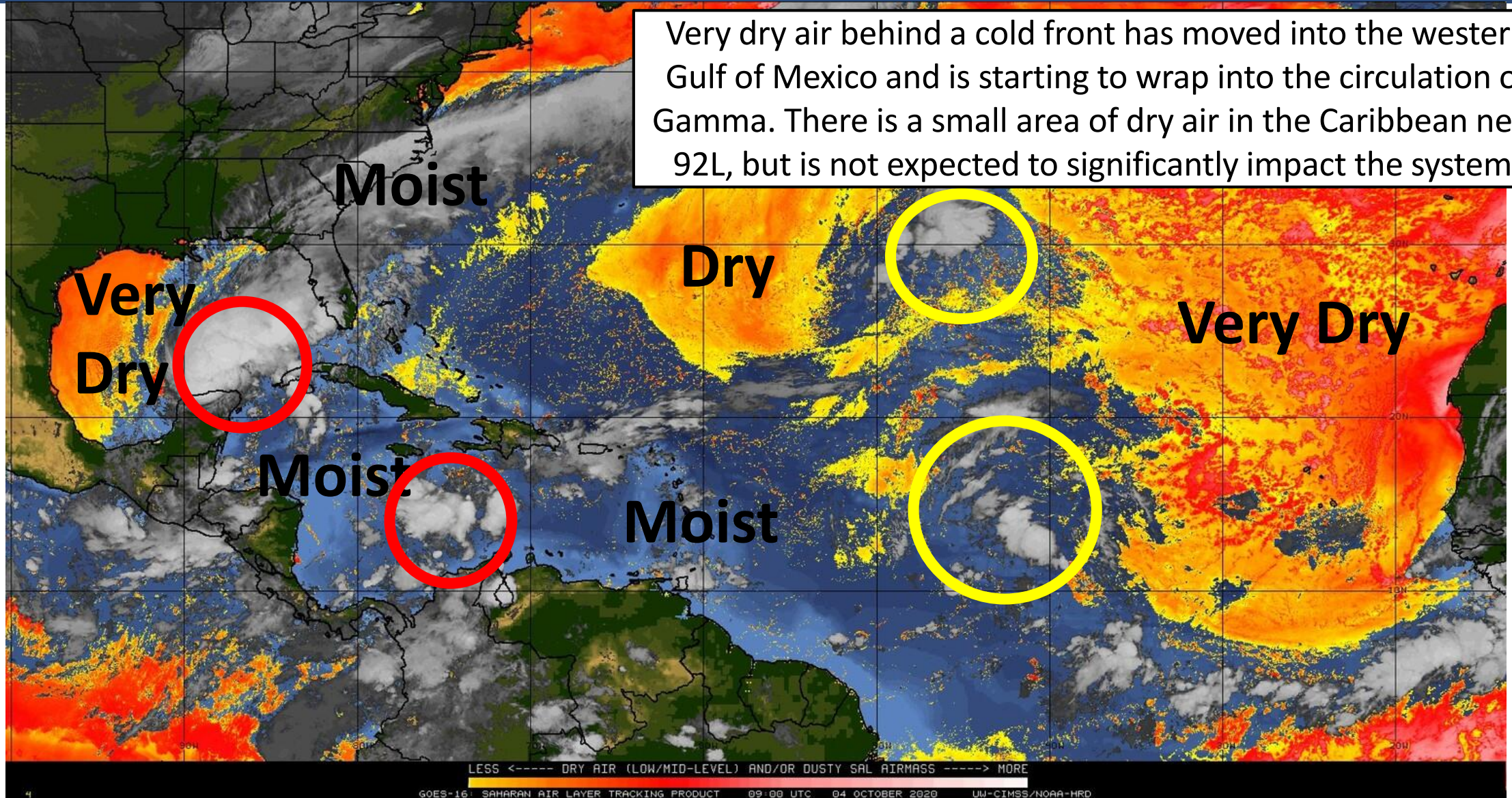




Dry Air & Saharan Dust

Is the environment favorable for the systems?

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





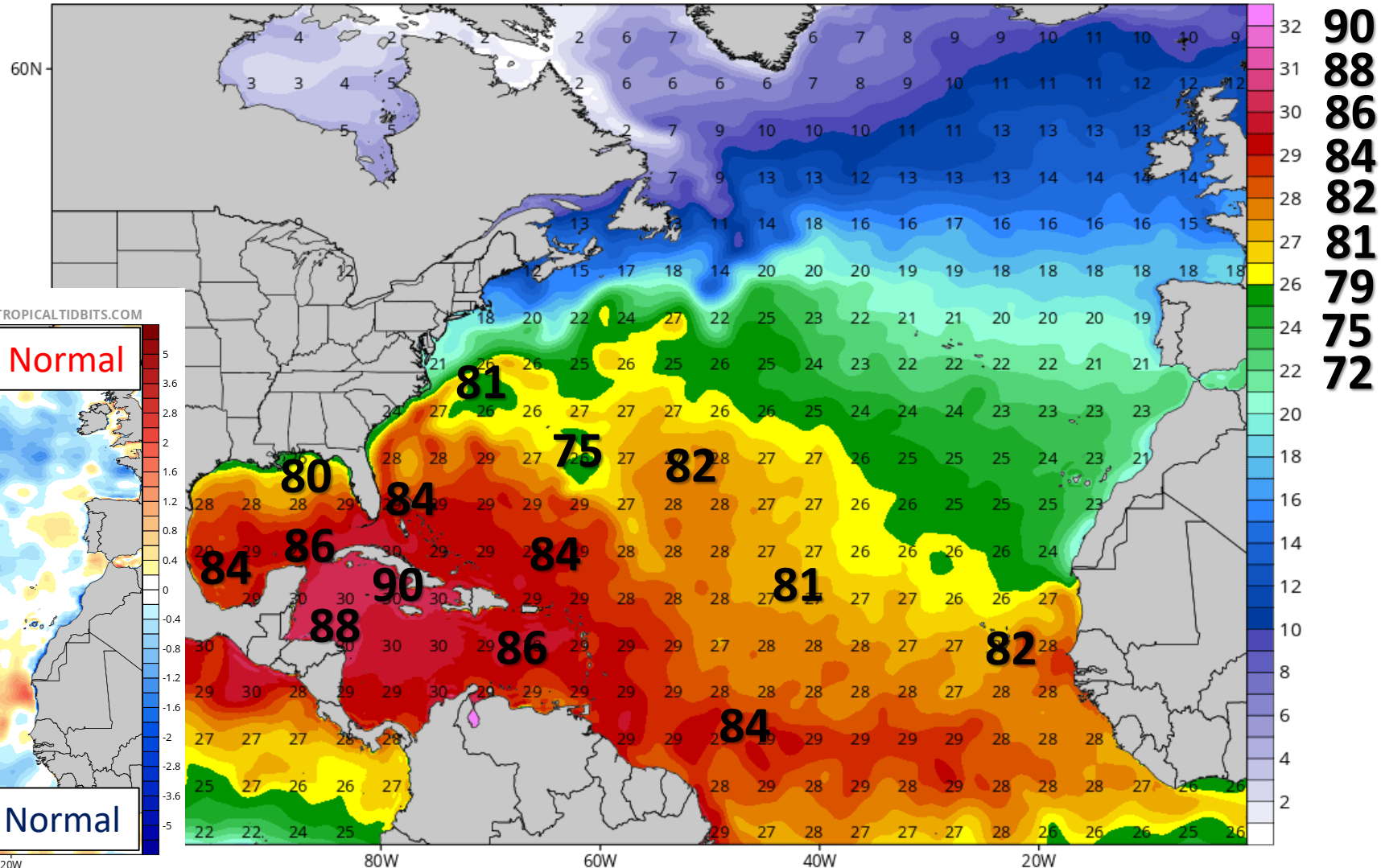
Sea Surface Temperatures & Anomalies

Is the ocean favorable for the system?

Water temperatures are supportive for tropical development across the entire Caribbean, with very warm, deep water. The recent stretch of storms and cold fronts has cooled waters in the northern Gulf of Mexico.

CDAS Sea Surface Temperature (°C)

Analysis Time: 00z Oct 04 2020



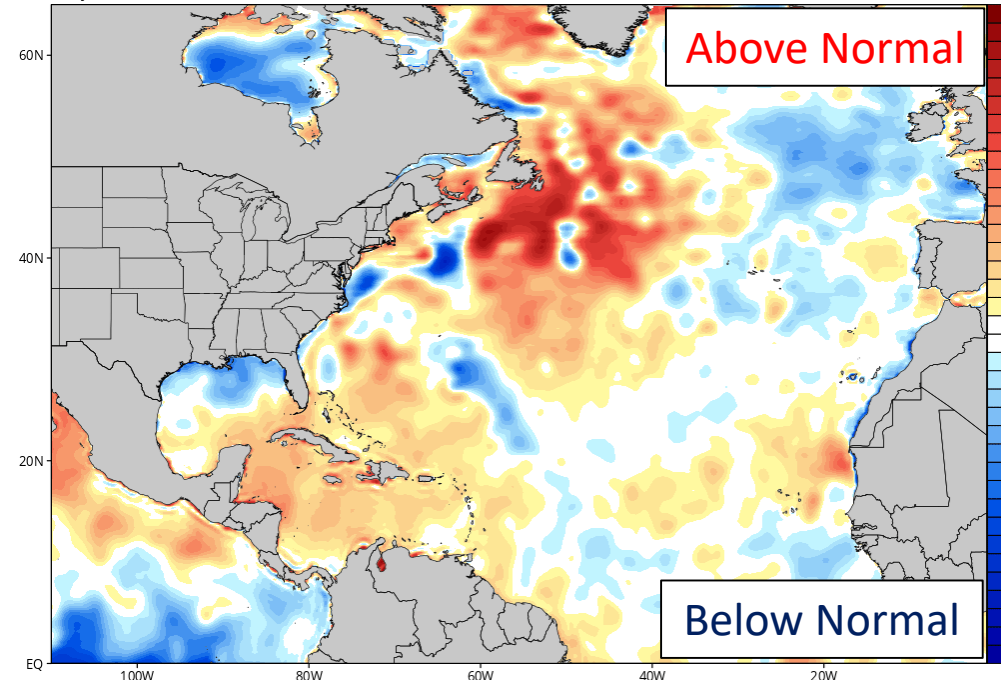
CDAS Sea Surface Temperature Anomaly (°C) (based on CFSR 1981-2010 Climatology)

Analysis Time: 00z Oct 04 2020

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Above Normal

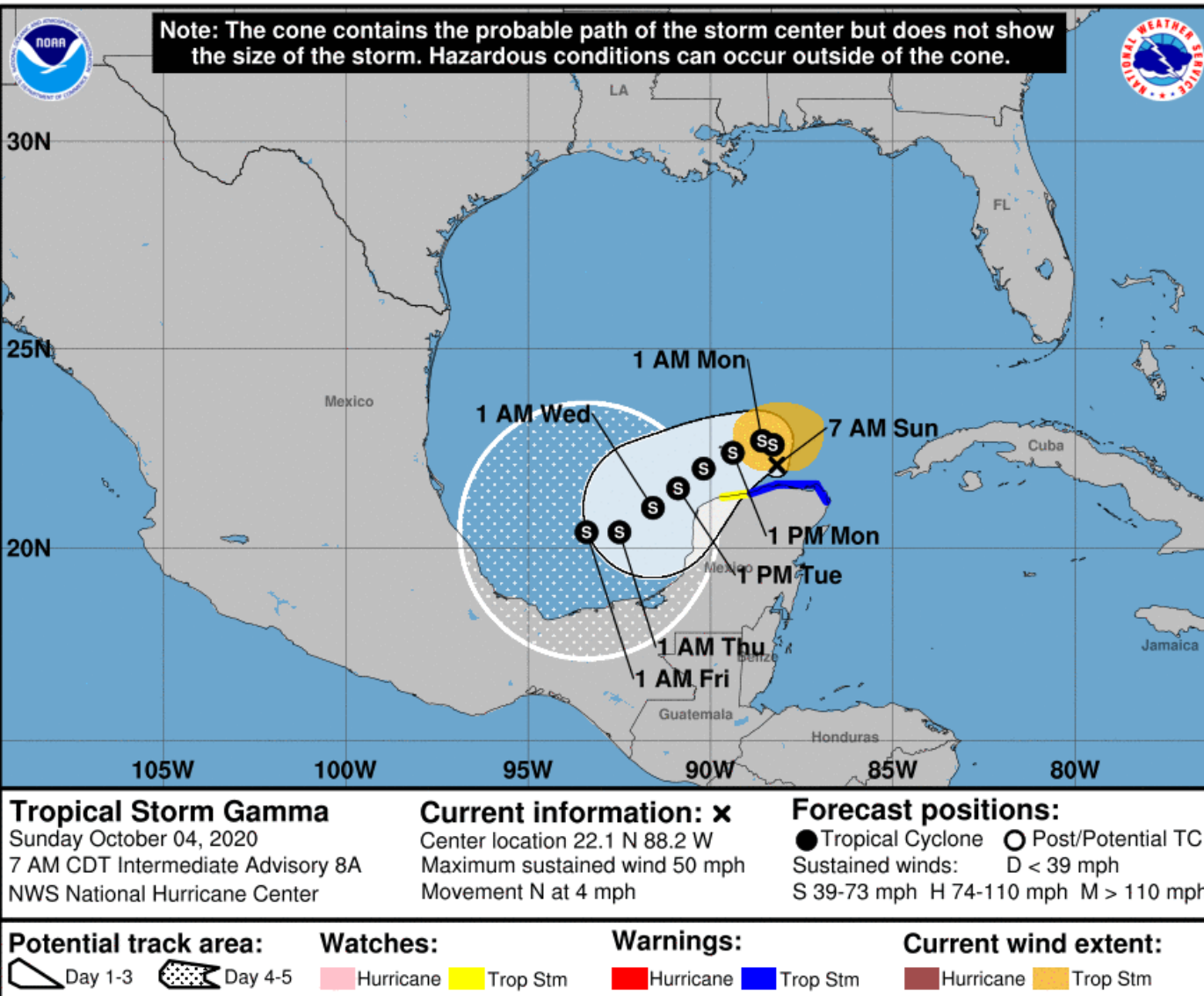
Below Normal





Official Forecast Track

From the National Hurricane Center – Tropical Storm Gamma



- The center of Tropical Storm Gamma is located about 35 miles north of the Yucatan Peninsula, or about 450 miles southwest of Key West, FL.
- Maximum sustained winds are near 50 mph, but Hurricane Hunters are investigating the system.
- Some re-strengthening is possible today, but increasing wind shear and dry air will **prevent significant changes in strength over the next few days as it drifts to the southwest.**
- Gamma is moving north at 4 mph. A gradual turn to the west and then southwest is expected over the next 24 hours.
- Gamma will then slowly move southwestward over the Bay of Campeche through the middle of the week.

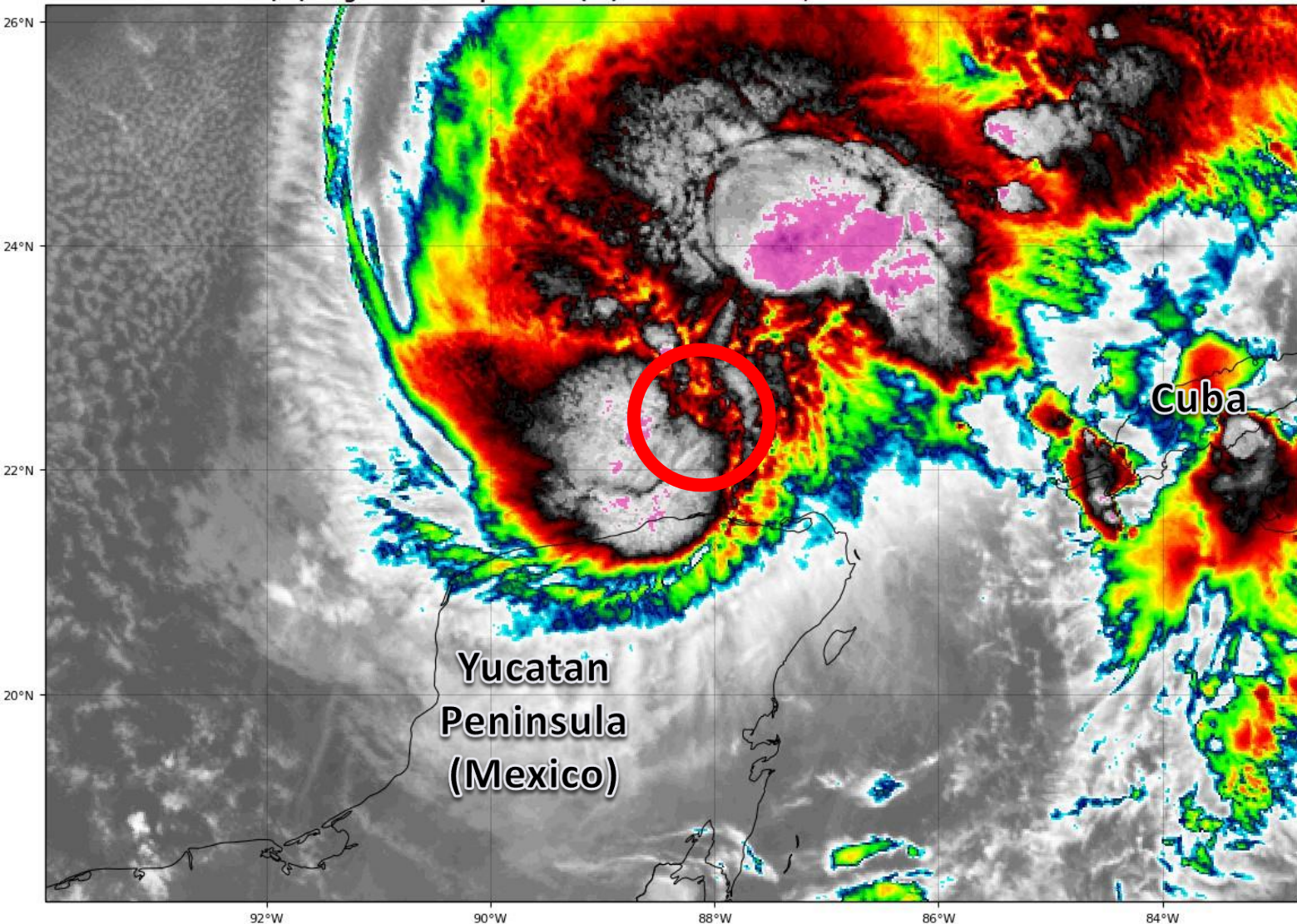


Satellite Imagery

Tropical Storm Gamma

GOES-16 Channel 13 (IR) Brightness Temperature (°C) at 12:07Z Oct 04, 2020

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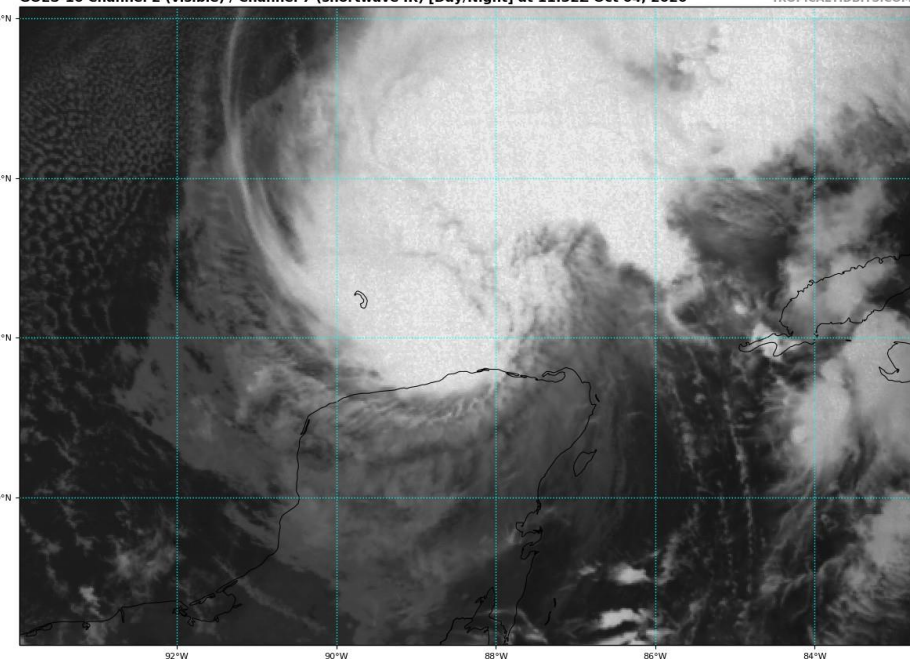


Gamma has moved across the Yucatan Peninsula and has emerged over the southern Gulf of Mexico.

Dry air is wrapping into the circulation, eroding away thunderstorms on the southern half of the storm.

GOES-16 Channel 2 (visible) / Channel 7 (shortwave IR) [Day/Night] at 11:32Z Oct 04, 2020

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Tropical Weather Outlook

Possible Area of Development During the Next 5 Days ([LINK](#))



Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



www.hurricanes.gov

Disturbance 1



8:00 am EDT
Sun Oct 4 2020

100W 90W 80W 70W 60W 50W 40W 30W 20W

Current Disturbances and Five-Day Cyclone Formation Chance:
 Tropical or Sub-Tropical Cyclone: ○ Depression ⚡ Storm 🌀 Hurricane
 ⊗ Post-Tropical Cyclone or Remnants

A tropical wave accompanied by a low pressure system is located over the central Caribbean Sea a couple of hundred miles southeast of Jamaica.

The associated shower and thunderstorm activity is beginning to show some signs of organization.

Environmental conditions are expected to be conducive for additional development, and **a tropical depression is likely to form within the next day or two.**

The system should move west-northwestward at 10 to 15 mph across the central and western Caribbean Sea today through Tuesday, and then **move into the southern or southeastern Gulf of Mexico on Tuesday night and Wednesday.**

This system should be monitored closely. Heavy rainfall could be possible in South Florida and the Keys mid-week.

***Formation chance through 48 hrs...high...70%**

***Formation chance through 5 days...high...80%**

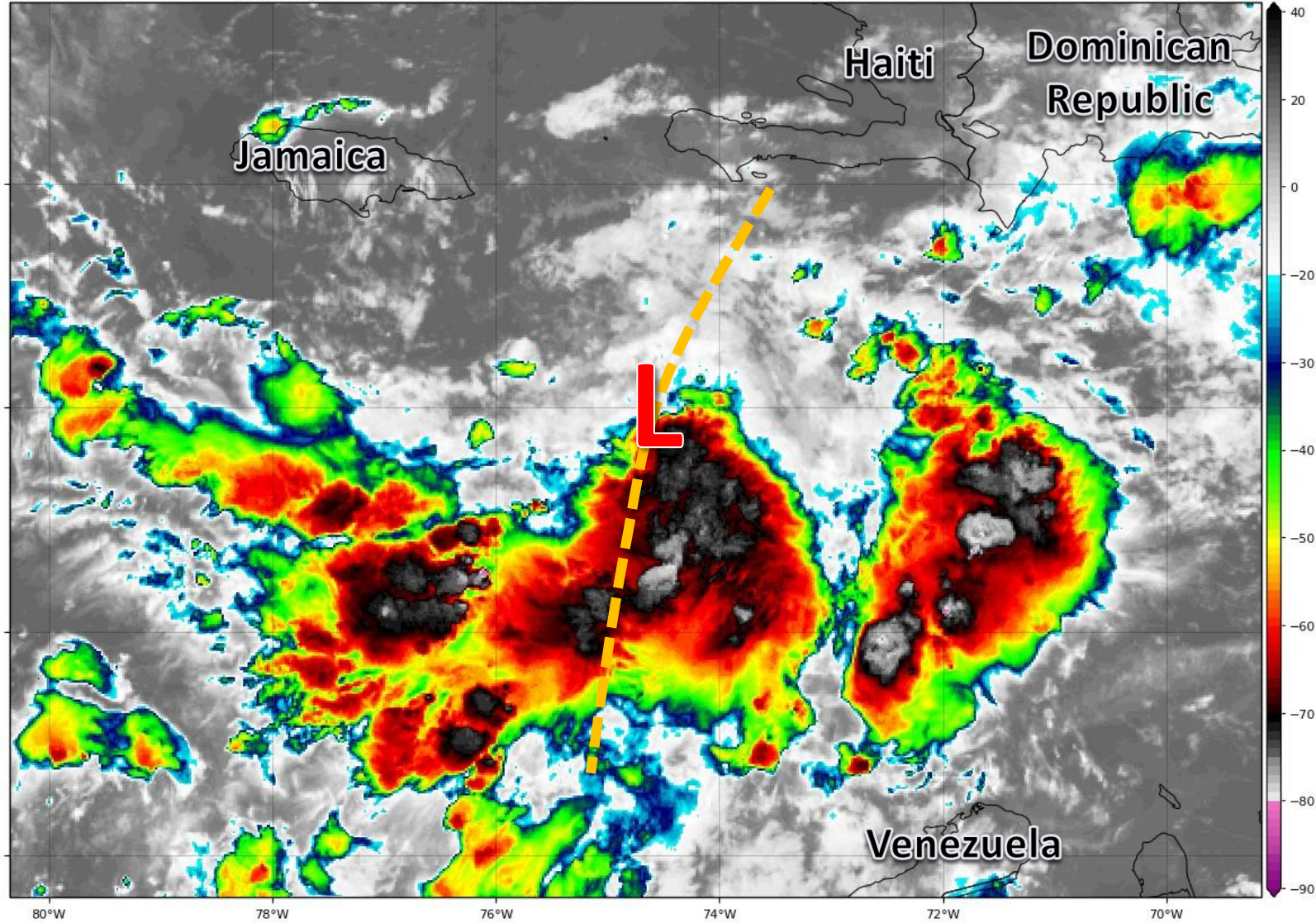


Satellite Imagery

Invest 92L – Central Caribbean

GOES-16 Channel 13 (IR) Brightness Temperature (°C) at 12:05Z Oct 04, 2020

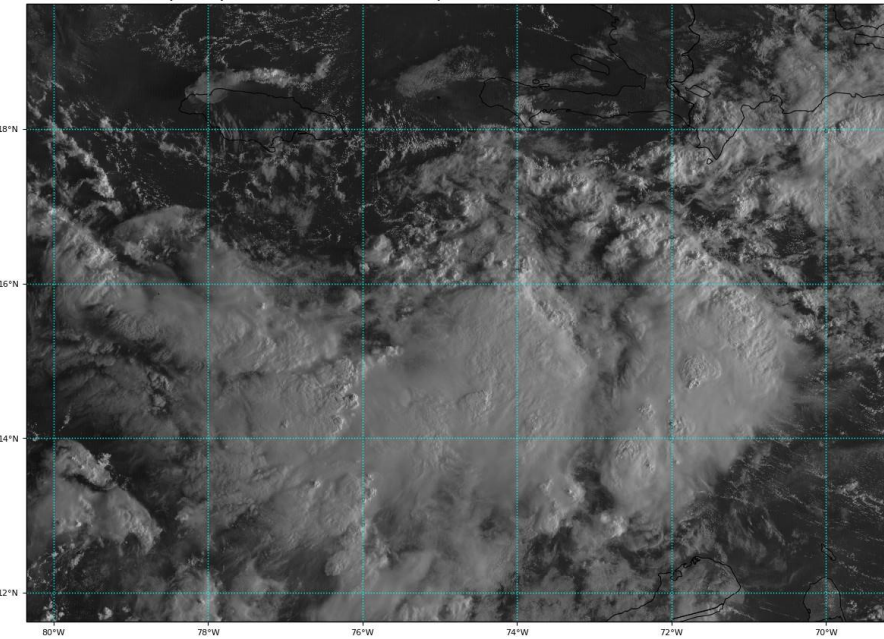
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The tropical wave in the Caribbean has organized overnight. A weak area of low pressure has formed along the wave axis (orange line) and thunderstorms have been persistent. The environment will continue to become more favorable for development as the system moves northwest towards Jamaica.

GOES-16 Channel 2 (visible) Reflectance at 12:05Z Oct 04, 2020

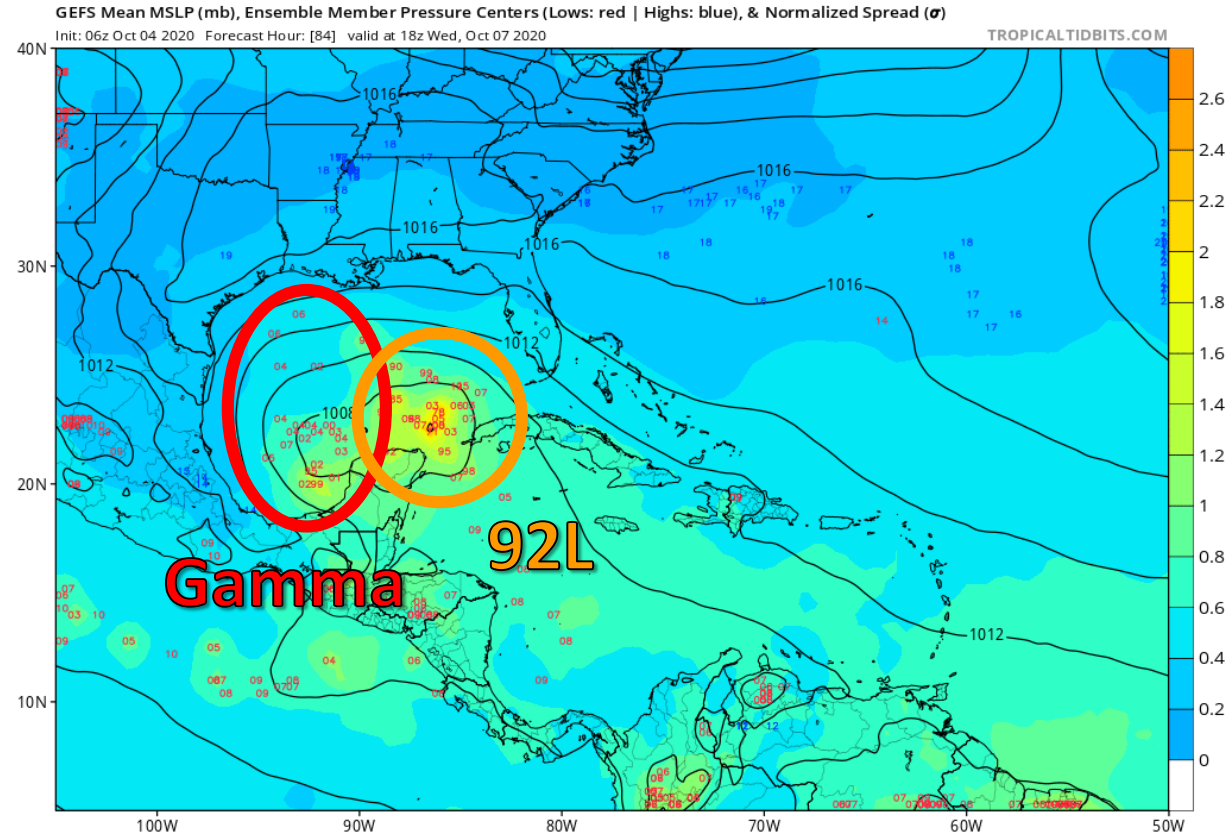
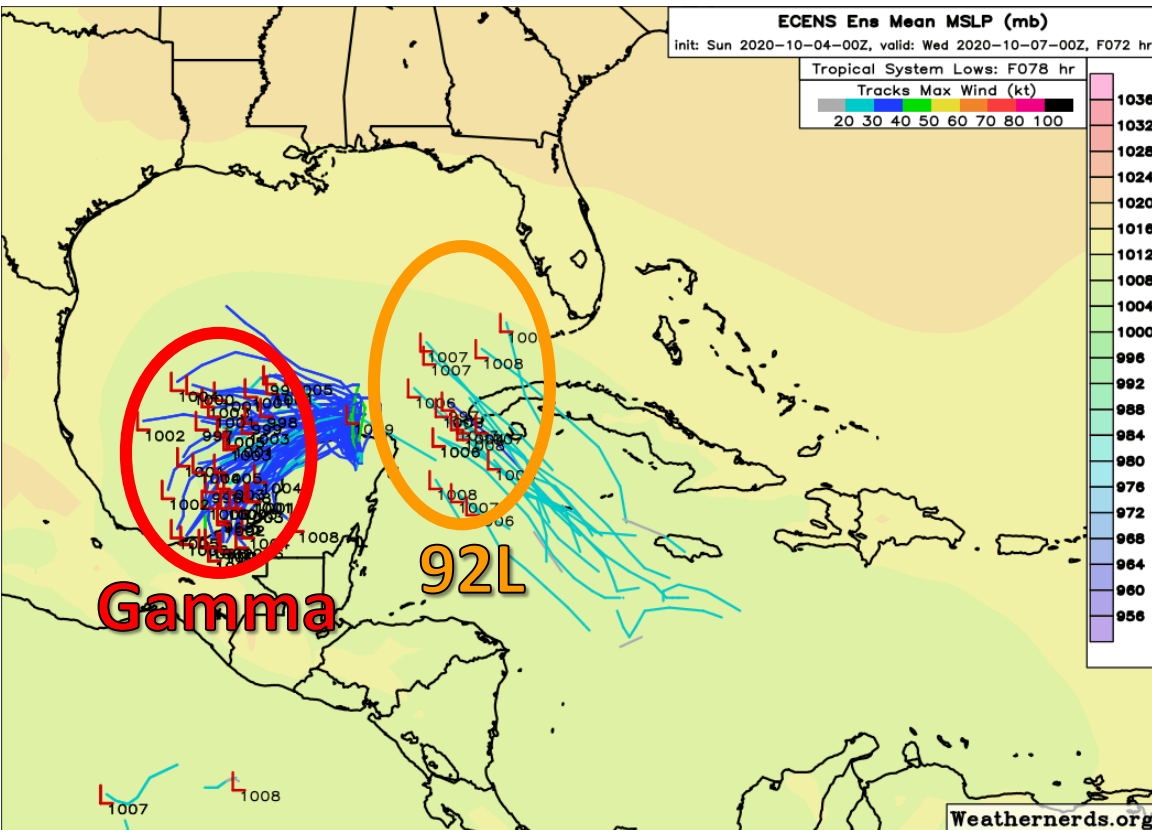
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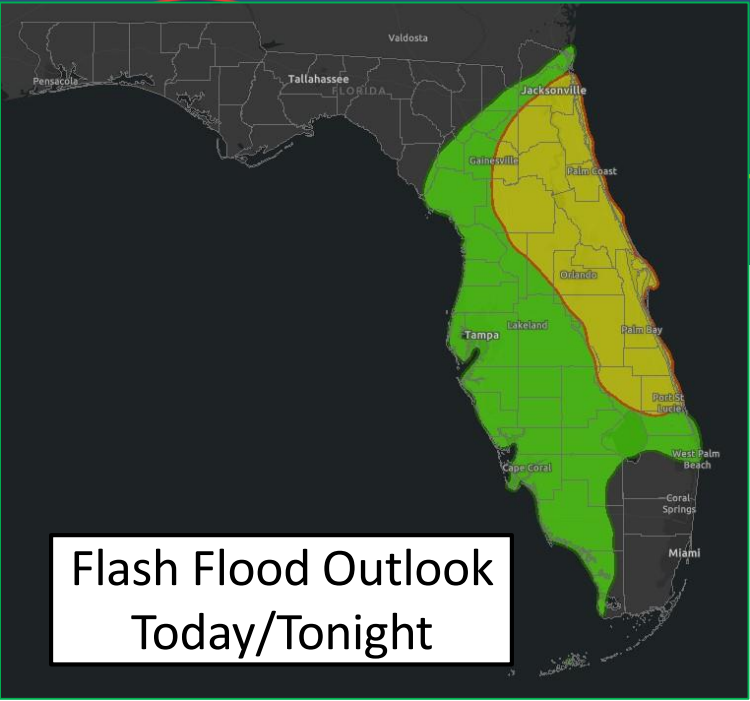
Model Forecast Positions

Ensemble Models – Wednesday Evening (10/7)

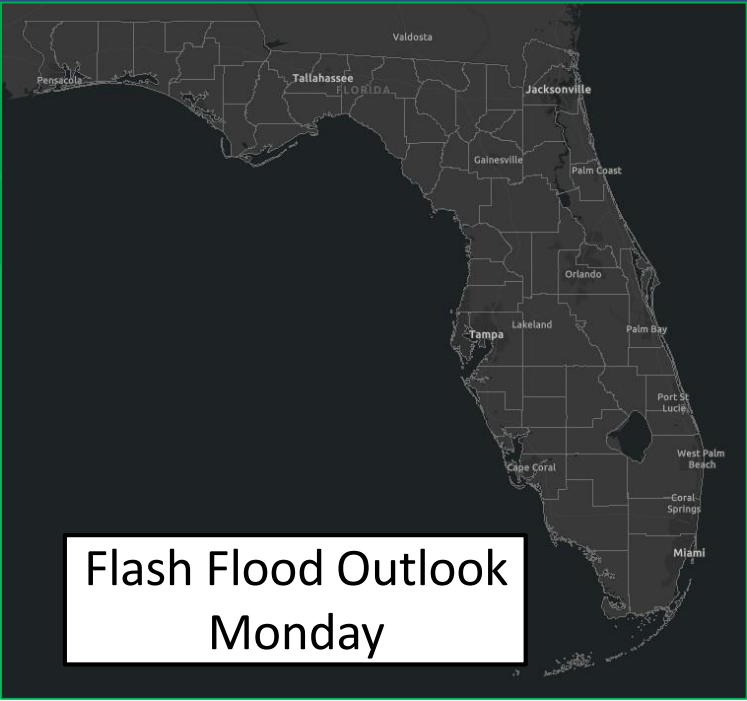


***With two systems so close together, there is significant uncertainty in the long-term tracks due to interactions between Gamma and 92L*. At this time, there are too many possible solutions to discuss but the entire Gulf Coast should monitor future forecasts.**

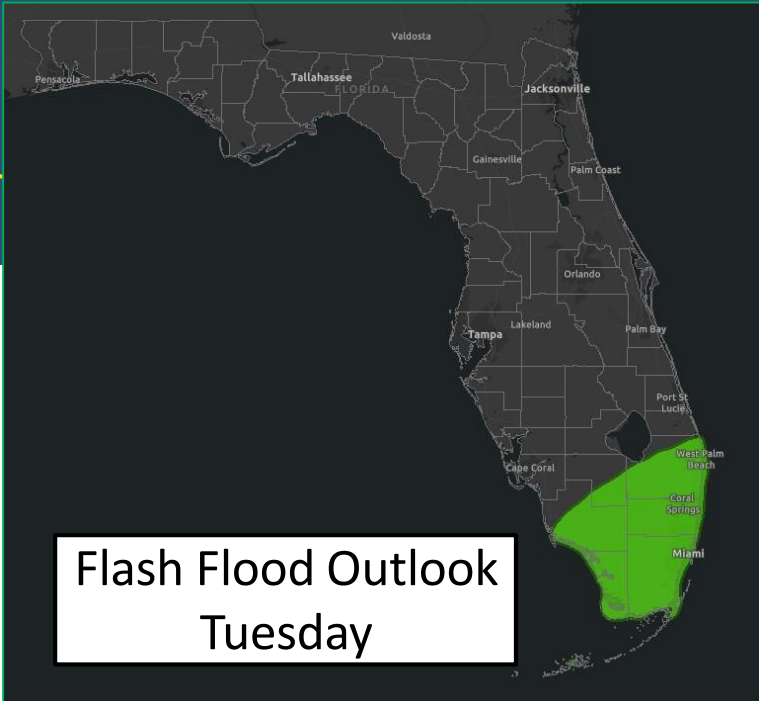
In general, 92L will continue to track northwest into the Gulf of Mexico by mid-week as Gamma drifts southwest. Regardless, 92L may bring additional heavy rainfall to the Keys and South Florida mid-week.



Flash Flood Outlook
Today/Tonight



Flash Flood Outlook
Monday



Flash Flood Outlook
Tuesday

Understanding WPC Excessive Rainfall Risk Categories

No Area/Label	MARGINAL (MRGL)	SLIGHT (SLGT)	MODERATE (MDT)	HIGH (HIGH)
Flash floods are generally not expected.	Isolated flash floods possible	Scattered flash floods possible	Numerous flash floods likely	Widespread flash floods expected
	Localized and primarily affecting places that can experience rapid runoff with heavy rainfall.	Mainly localized. Most vulnerable are urban areas, roads, small streams and washes. Isolated significant flash floods possible.	Numerous flash flooding events with significant events possible. Many streams may flood, potentially affecting larger rivers.	Severe, widespread flash flooding. Areas that don't normally experience flash flooding, could. Lives and property in greater danger.
Flash flooding near me?	Flash Flooding	Flash Flooding	Flash Flooding	Flash Flooding
	NO Flash Flooding	Flash Flooding	Flash Flooding	Flash Flooding
 WEATHER PREDICTION CENTER				

- Heavy rainfall is possible across the Peninsula today, particularly along the East Coast this afternoon and evening. Moisture from Gamma and a stalled front are combining to create high rain chances.
- The heavy rain threat returns to South Florida and the Keys on Tuesday as moisture associated with 92L moves into the region.



Flood Watch in Effect

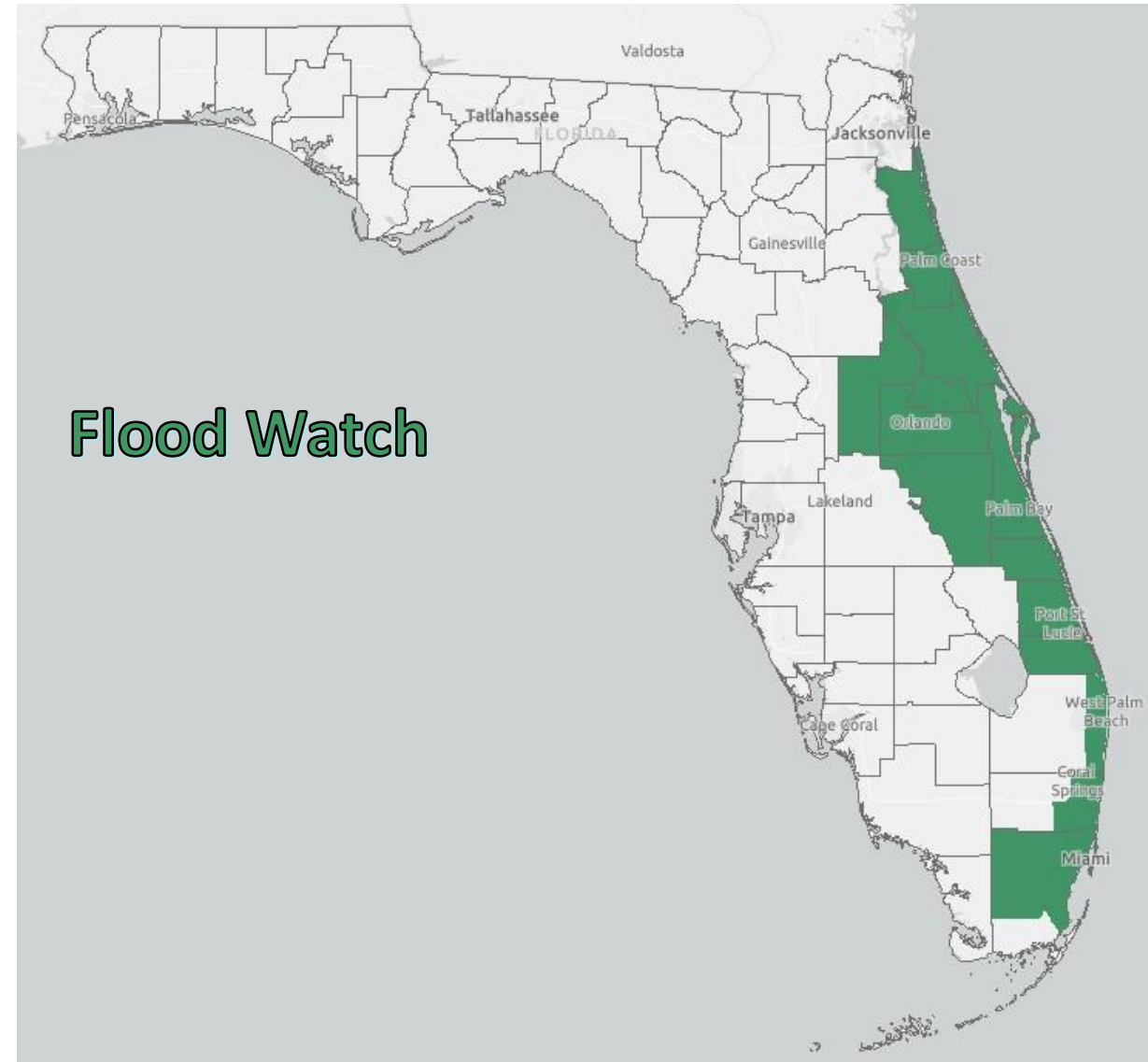
Counties: Flagler, St. Johns, All of Region 5, coastal/metro Palm Beach, coastal/metro Broward, coastal/metro/inland Miami-Dade

Through this evening in Northeast Florida
Through early Monday morning for Region 5
Through this evening for Palm Beach, Broward, and Miami-Dade Counties

An additional 1-3" of rain is expected with localized totals of 6-8" possible.

Click the links below for more information:

[NWS Melbourne](#) | [NWS Miami](#) | [NWS Jacksonville](#)





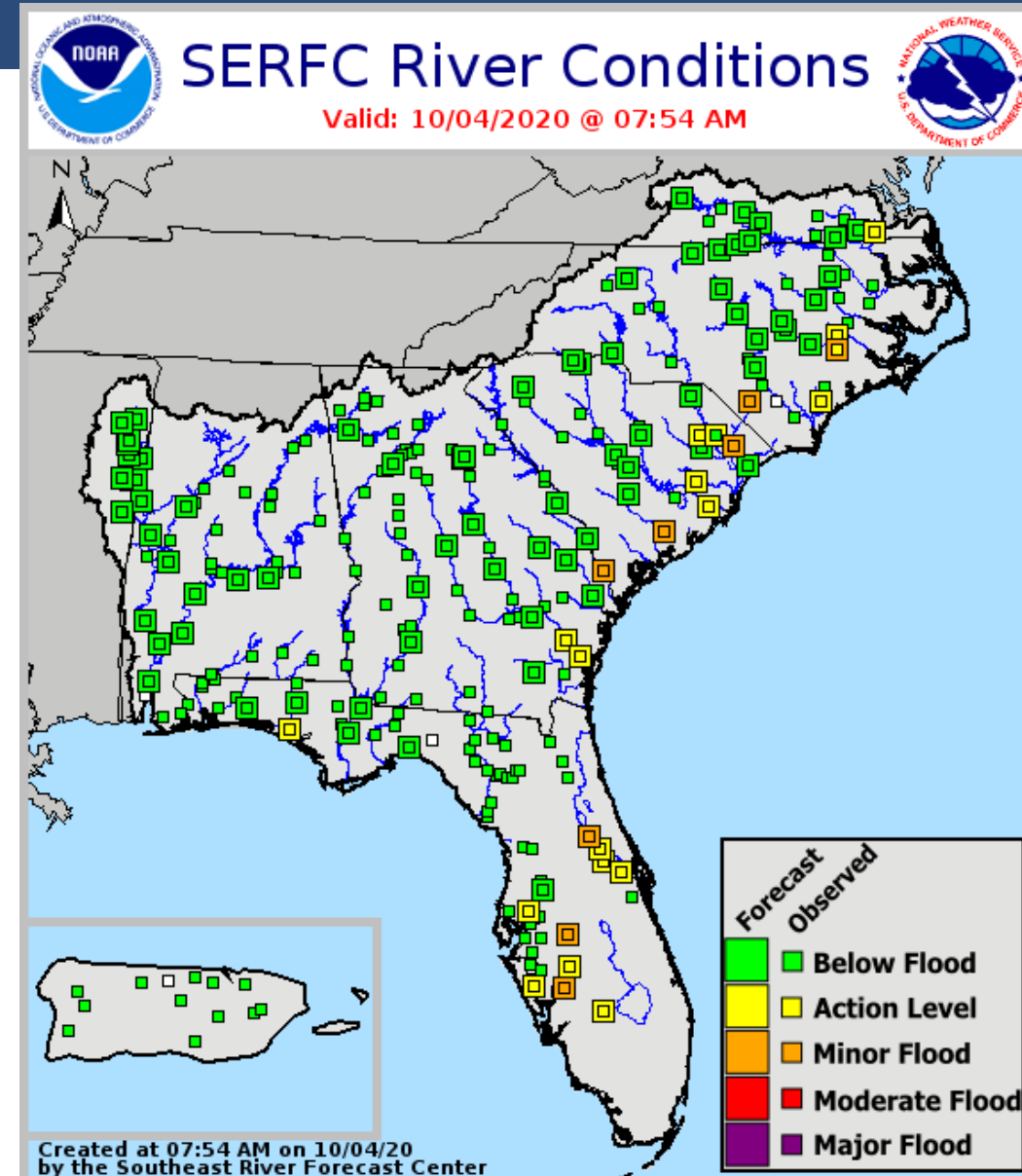
Current & Forecast River Flooding

Southeast River Forecast Center

Rivers Currently in or Forecast to Reach Flood Stage:

- [St. Johns River at Astor](#) – Minor
- [Peace River at Bartow](#)- Minor
- [Peace River at Arcadia](#)- Minor
- Minor coastal flooding at high tide in Northeast Florida
- Additional river flooding is not forecast over the next few days

More details on river levels available at the [Southeast River Forecast Center website](#).

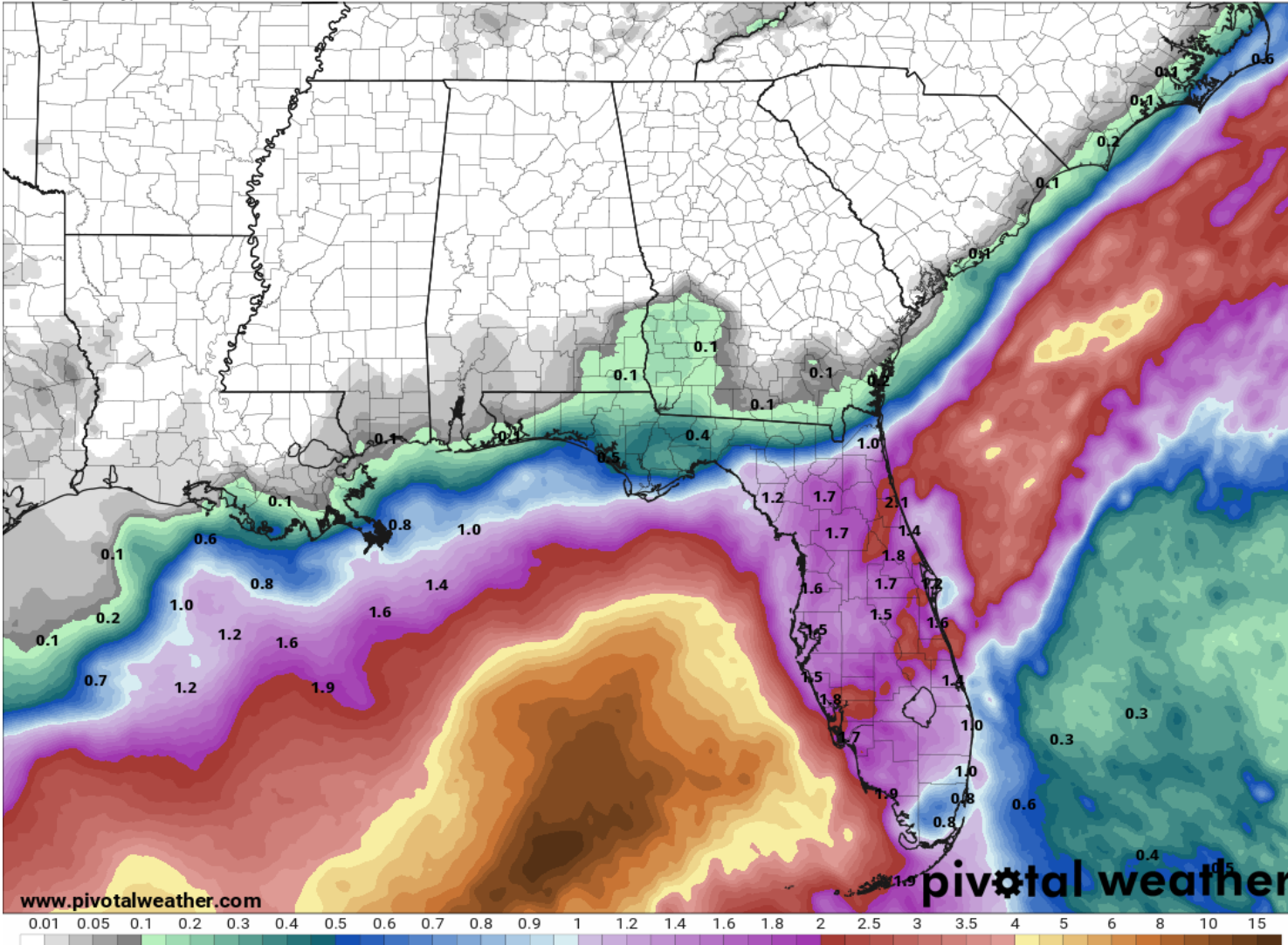




Rainfall Totals Next 5 Days

120-Hour Precipitation (in)
Ending Friday, Oct. 9, 2020 at 8 a.m. EDT

Init: Sun 2020-10-04 12z WPC



- Little to no rainfall across the Panhandle and western Big Bend through mid-week
- Heavy rainfall is expected in the Peninsula over the next 24 hours
- Scattered activity is expected Monday and Tuesday
- An additional round of heavy rainfall is possible in South Florida and the Keys mid-week.



Tropical Weather Outlook

Possible Area of Development During the Next 5 Days ([LINK](#))



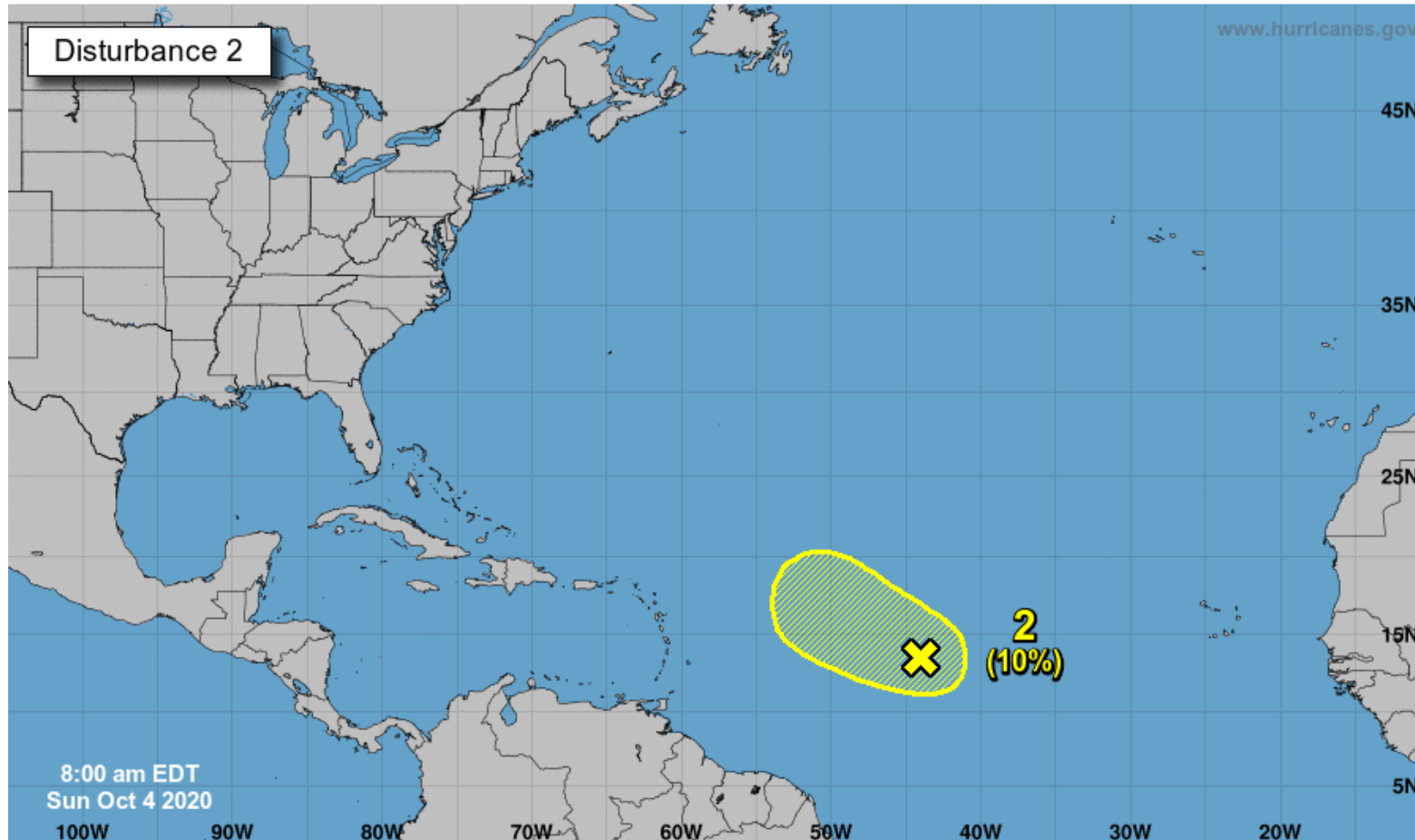
Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



www.hurricanes.gov

Disturbance 2



Disorganized showers and thunderstorms continue in association with a tropical wave located over the central tropical Atlantic.

This system has not become any better organized, and any development during the next day or so should be slow to occur while it moves west-northwestward or northwestward at 10 to 15 mph.

Significant development is not expected beyond that time due to the system moving into a region of strong upper-level winds.

This system does not need to be monitored for Florida impacts.

***Formation chance through 48 hrs...low...10%**

***Formation chance through 5 days...low...10%**

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



Tropical Weather Outlook

Possible Area of Development During the Next 5 Days ([LINK](#))



Five-Day Graphical Tropical Weather Outlook

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www.hurricanes.gov

Disturbance 3

3
(10%)

8:00 am EDT
Sun Oct 4 2020

100W 90W 80W 70W 60W 50W 40W 30W 20W

Current Disturbances and Five-Day Cyclone Formation Chance: X < 40% X 40-60% X > 60%

Tropical or Sub-Tropical Cyclone: ○ Depression ○ Storm ○ Hurricane

⊗ Post-Tropical Cyclone or Remnants

An area of disorganized showers and thunderstorms over the central Atlantic about 1000 miles east-southeast of Bermuda is associated with a surface trough of low pressure.

This system is expected to move toward the west-southwest at around 10 mph, and some slow development is possible during the next couple of days before it too encounters strong upper-level winds.

This system does not need to be monitored for Florida impacts.

*Formation chance through 48 hrs...low...10%

*Formation chance through 5 days...low...10%



Overall Summary

Tropical Storm Gamma

- Gamma has moved across the Yucatan Peninsula and has emerged over the southern Gulf of Mexico.
- The center of Tropical Storm Gamma is located about 35 miles north of the Yucatan Peninsula, moving north at 4 mph.
- Maximum sustained winds are near 50 mph. Gamma will continue to weaken over the next few days due to hostile wind shear and dry air.
- The weakened system will drift southwest into the Bay of Campeche over the next few days.

Invest 92L (Caribbean Sea)

- A tropical wave over the central Caribbean Sea will quickly move northwestward over the next few days towards the western tip of Cuba.
- The system has become better organized and a tropical depression is likely to form over the next day or two.
- This system has a 70% (high) chance of formation during the next 48 hours and an 80% (high) chance over the next 5 days.
- Nearby Tropical Storm Gamma makes the track forecast for 92L complicated, but it is forecast to be in the Gulf of Mexico by mid-week.

Central Tropical Atlantic Wave

- A tropical wave about midway between the Lesser Antilles and the Cabo Verde Islands has a limited window to develop before conditions become unfavorable. It has been unable to organize over the last day or so.
- This system has a 10% (low) chance of formation.

Central Atlantic Low

- A disorganized area of low pressure over the central Atlantic has another day or so to develop before it also encounters hostile conditions.
- This system has a 10% (low) chance of formation.



Florida Outlook

Florida Outlook:

- **Tropical Storm Gamma will not have direct impacts to the state.**
- A stalled cold front and the nearby tropical moisture from Gamma will create another day of high rain chances across the Florida Peninsula.
- Flood Watches are in effect for most of the East Coast until late tonight. An additional 1-3" of rainfall is forecast today with locally 6-8".
- The heavy rainfall and flood threat will decrease tomorrow with rainfall more scattered.
- Swells from Gamma could impact the Gulf Coast beaches this week, resulting in dangerous rip currents.
- **Invest 92L should be monitored closely.**
- While it's too early to determine if 92L will have direct impacts, moisture from the system could make its way into South Florida and the Keys starting on Tuesday. This could bring another round of heavy rainfall and flash flooding.
- Regardless, it's likely that 92L will move into the Gulf of Mexico mid-week, but its forecast beyond then remains highly uncertain due to possible influences from cold fronts and Tropical Storm Gamma.
- **The other two systems in the Atlantic do not pose a threat to Florida.**

The next briefing packet will be issued Sunday evening. 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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