



TROPICAL UPDATE

12 PM EDT

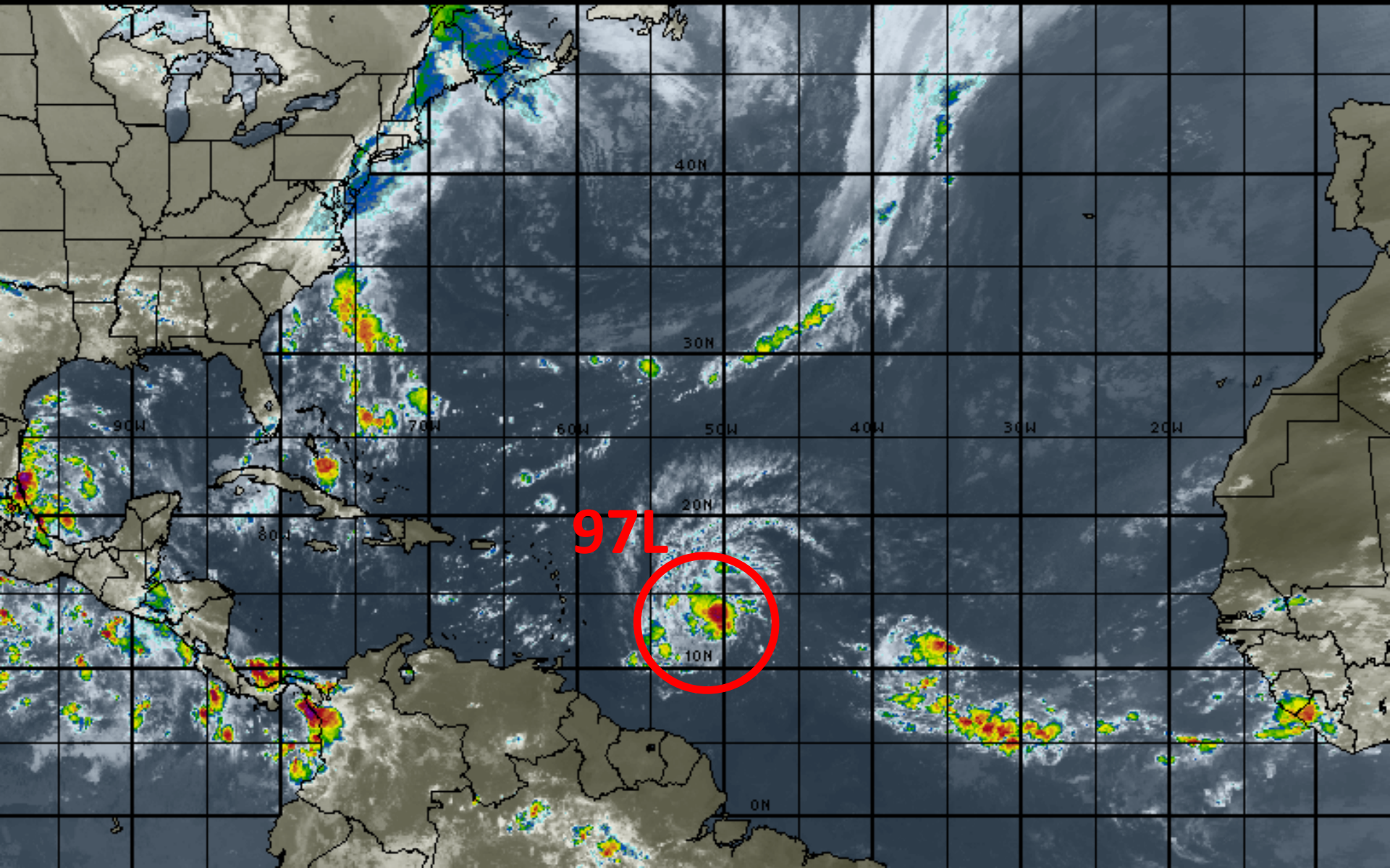
Tuesday, September 27, 2016

Invest 97L (90%)

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.

Atlantic Basin Satellite Image

12:00 27-SEP-2016 GMT ©Copyright WSI Corporation <http://www.wsi.com>





Two-Day Graphical Tropical Weather Outlook

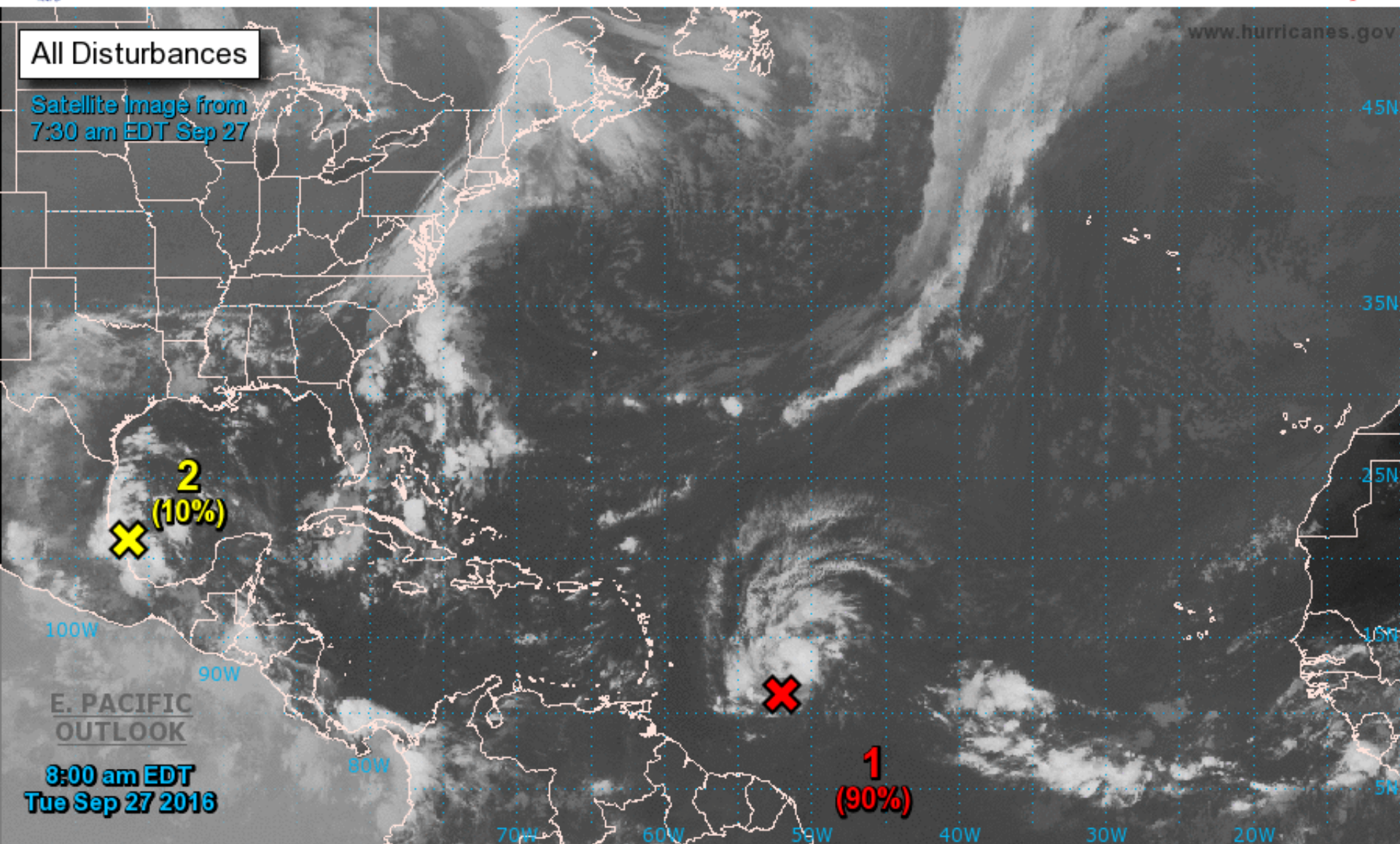
National Hurricane Center Miami, Florida



All Disturbances

Satellite Image from
7:30 am EDT Sep 27

www.hurricanes.gov



8:00 am EDT
Tue Sep 27 2016

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

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

Post-Tropical Cyclone Remnants



Five-Day Graphical Tropical Weather Outlook

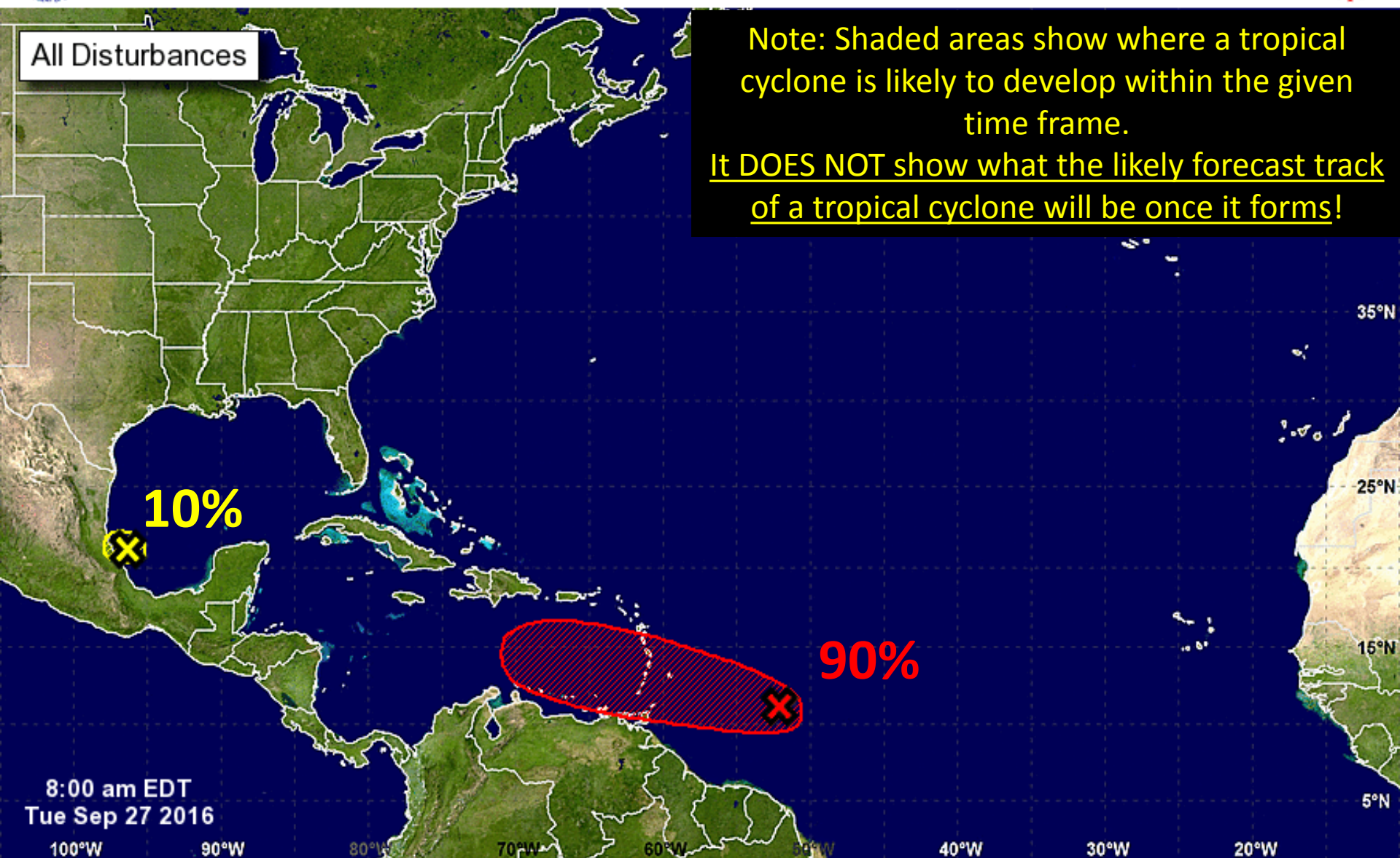
National Hurricane Center Miami, Florida



All Disturbances

Note: Shaded areas show where a tropical cyclone is likely to develop within the given time frame.

It DOES NOT show what the likely forecast track of a tropical cyclone will be once it forms!



Tropical Cyclone Formation Potential for the Five-Day Period Ending at 8:00 am EDT Sun Oct 2 2016

Chance of Cyclone Formation in Five Days: ■ Low < 40% ■ Medium 40-60% ■ High > 60%

X indicates current disturbance location; shading indicates potential formation area.

Invest 97L

8 AM Tue Sep 27 2016

Position 11.3°N 52.5°W

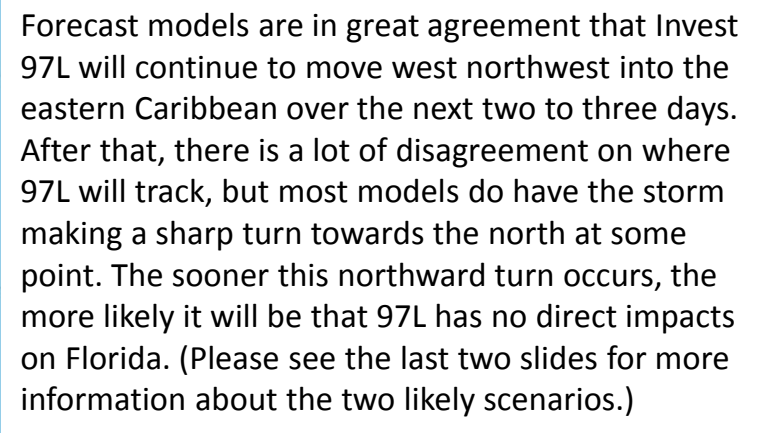
Maximum Winds 35 mph

Movement WNW at 18 mph

Blue Marble basemap imagery courtesy NASA

Satellite 2:26 PM UTC
2:26 PM GMT



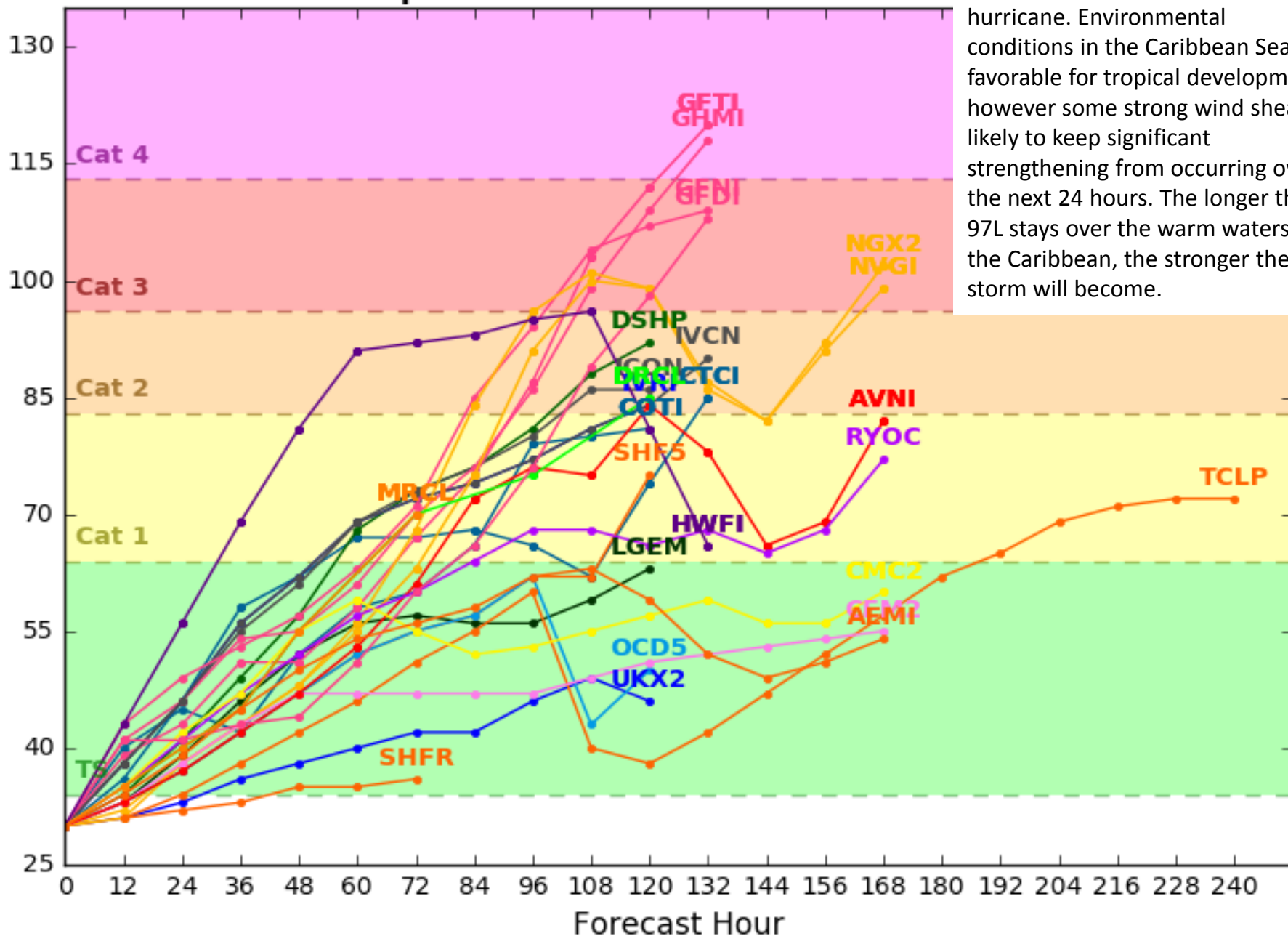
Levi Cowan - tropicaltidbits.com

Invest 97L Model Intensity Guidance

Initialized at 12z Sep 27 2016

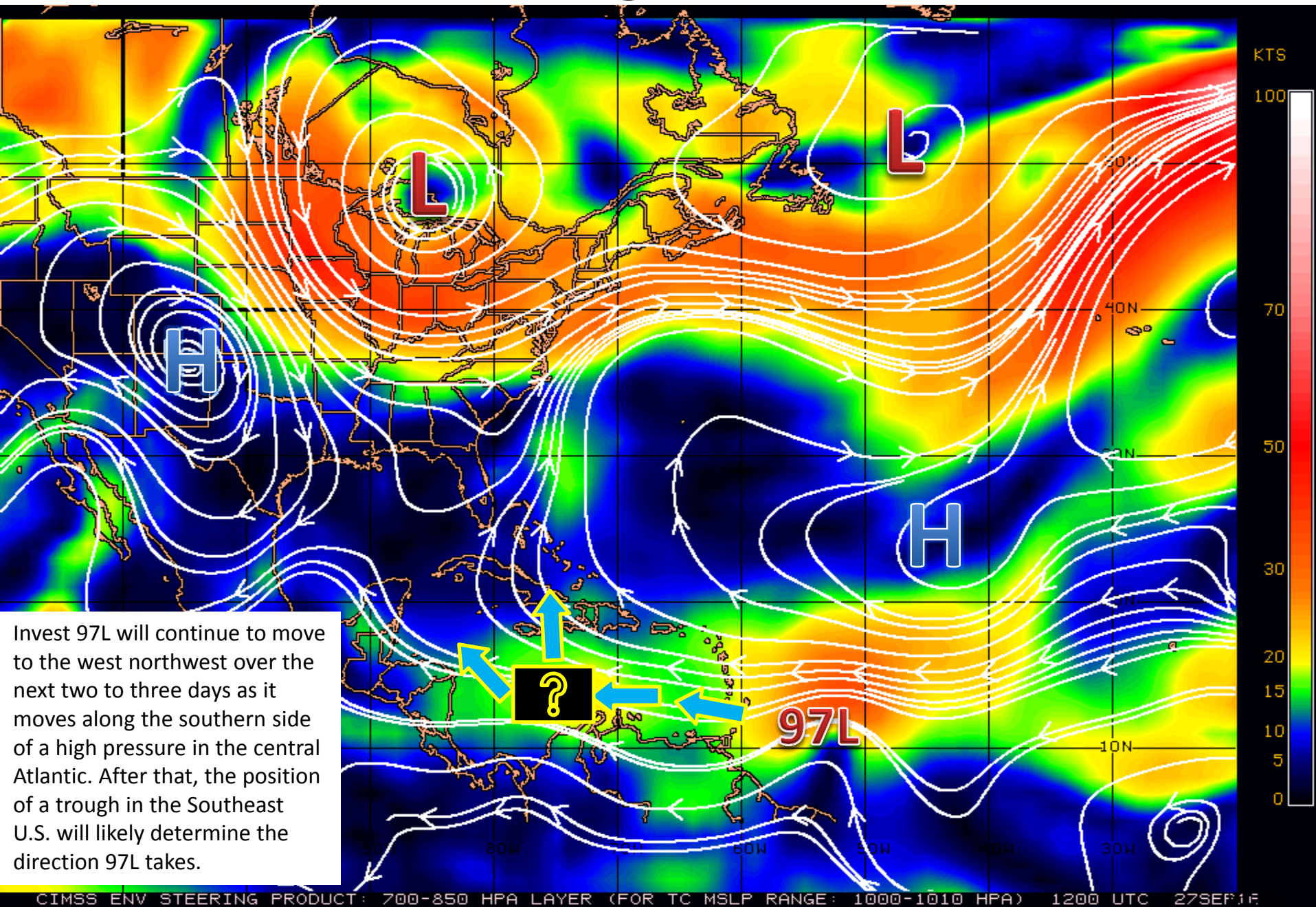
Levi (

Wind Speed (kt)



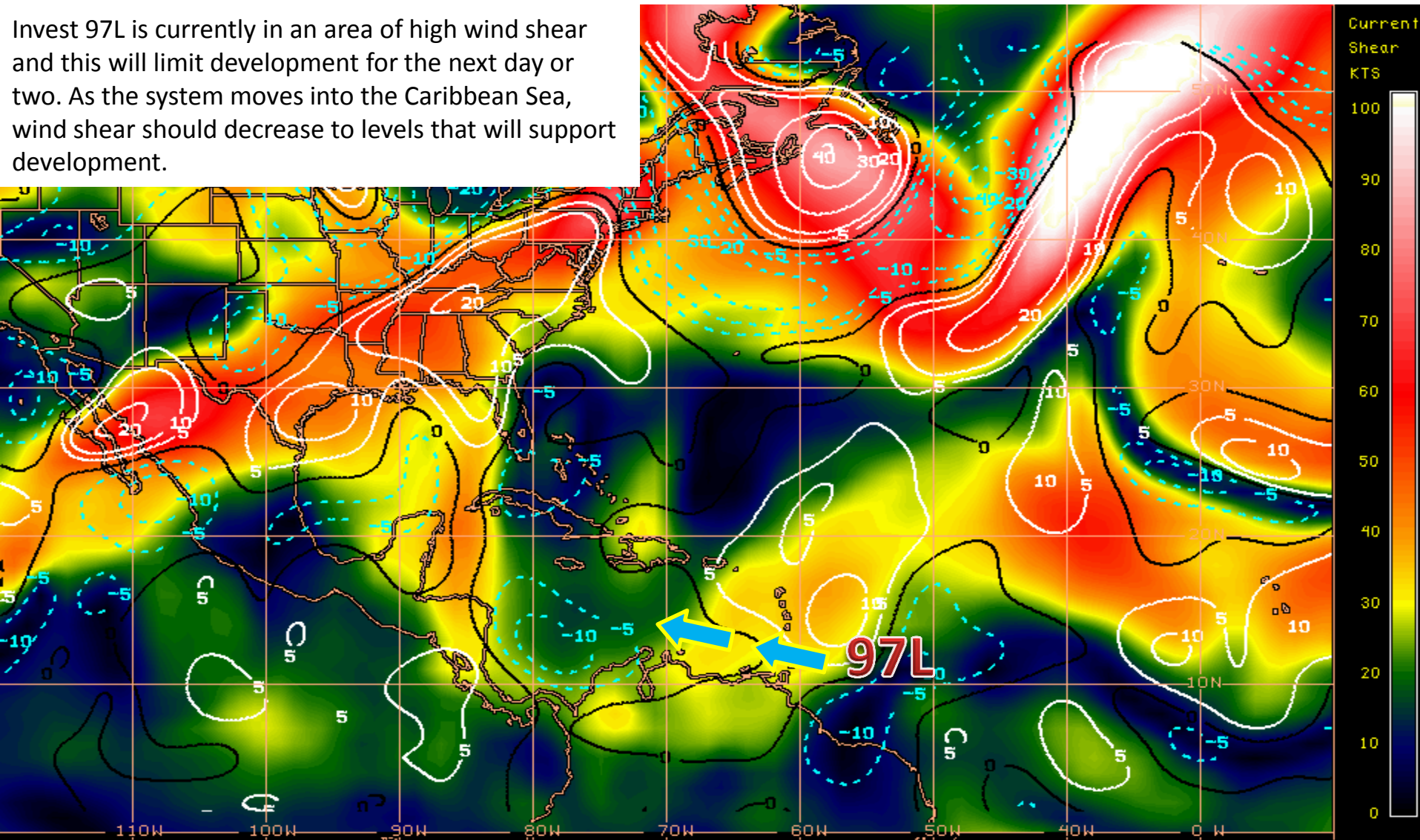
Models are in agreement that 97L will strengthen into a tropical storm, and possibly even a hurricane. Environmental conditions in the Caribbean Sea are favorable for tropical development, however some strong wind shear is likely to keep significant strengthening from occurring over the next 24 hours. The longer that 97L stays over the warm waters of the Caribbean, the stronger the storm will become.

Steering Currents



Current Wind Shear (shaded) and Shear Tendency (contours)

Invest 97L is currently in an area of high wind shear and this will limit development for the next day or two. As the system moves into the Caribbean Sea, wind shear should decrease to levels that will support development.



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

GOES-EAST 24 HOUR WIND SHEAR TENDENCY PRODUCT

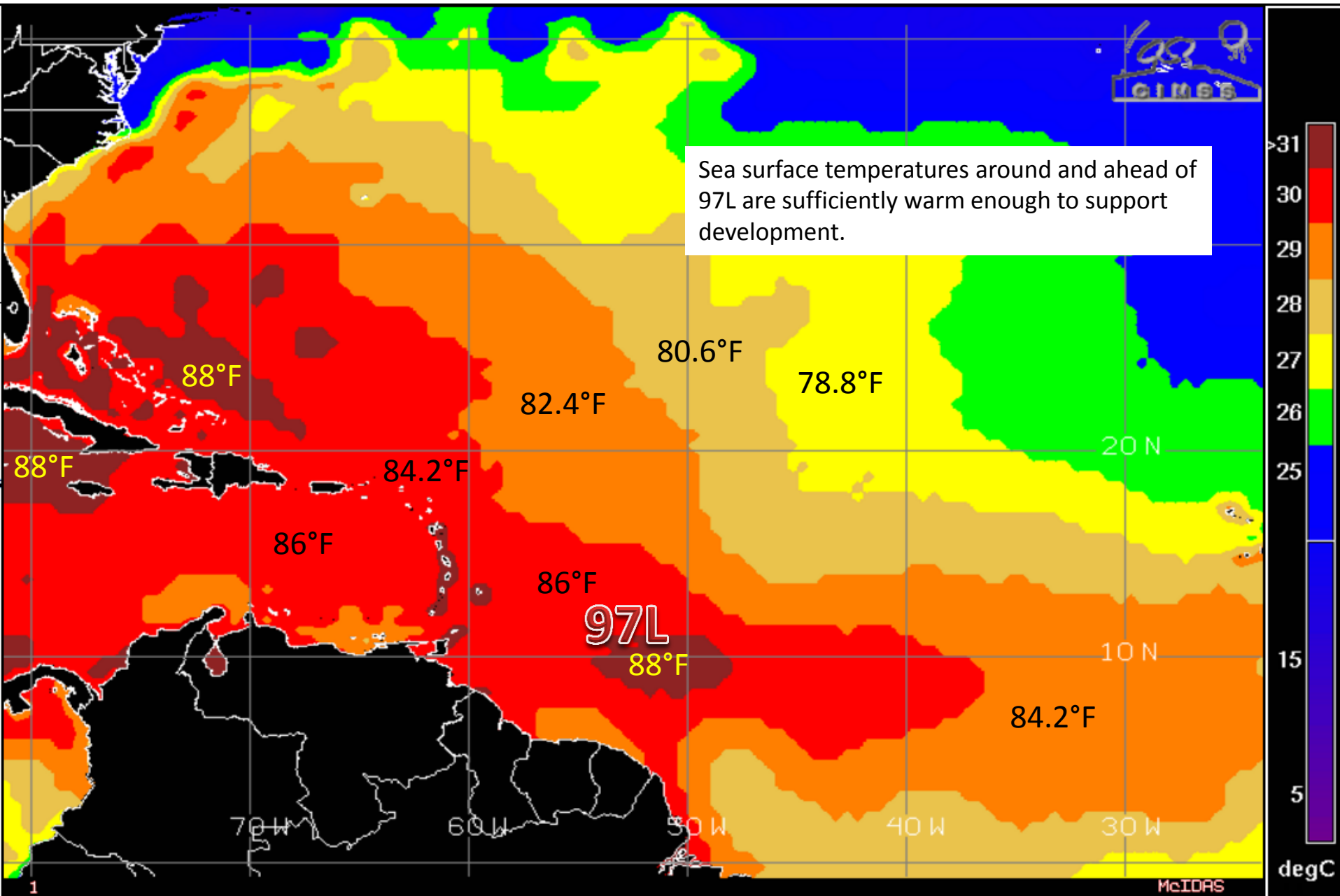
1200 UTC

27SEP16

UW-CIMSS

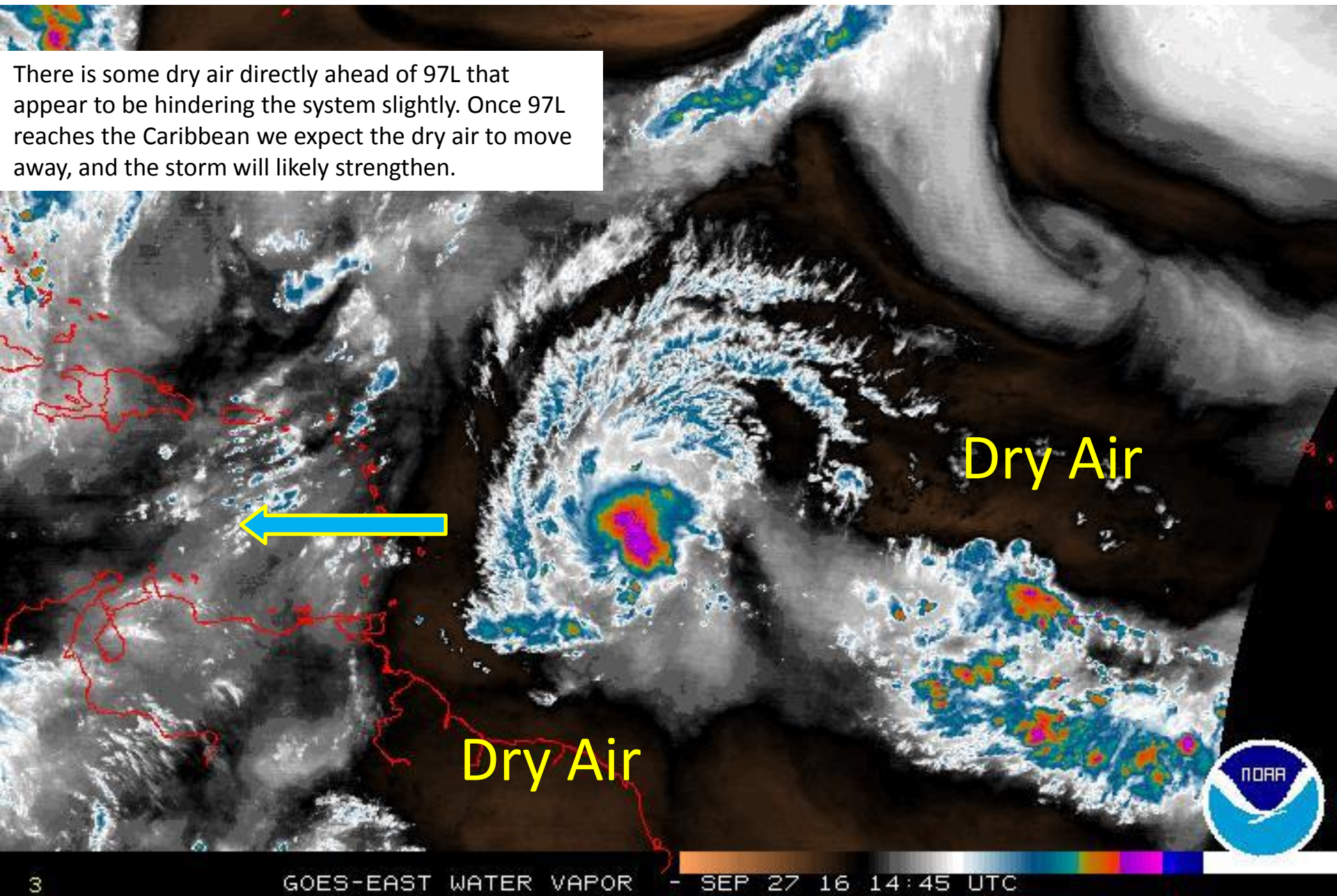
McIDAS

Sea Surface Temperatures Near 97L



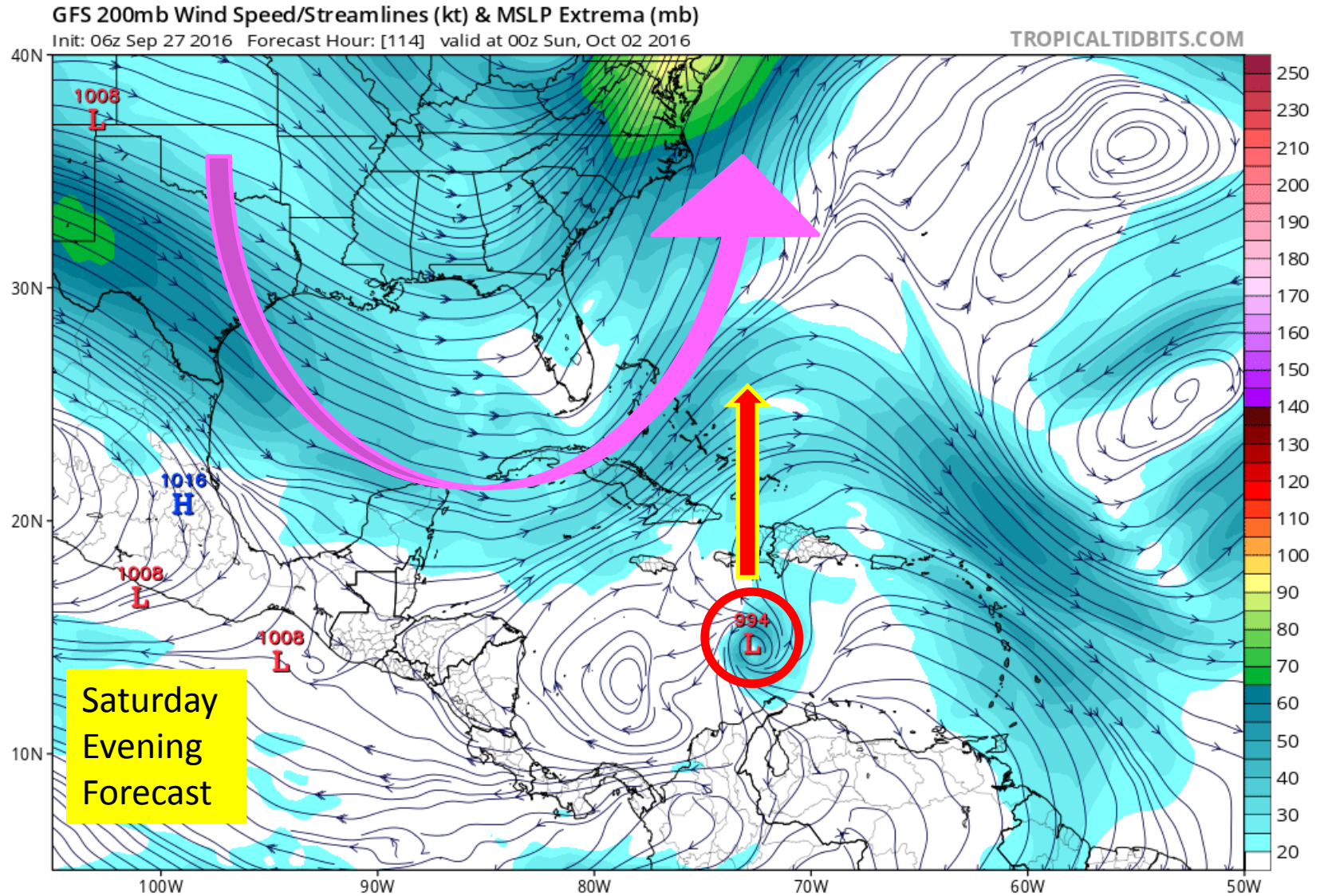
Water Vapor Imagery of 97L

There is some dry air directly ahead of 97L that appear to be hindering the system slightly. Once 97L reaches the Caribbean we expect the dry air to move away, and the storm will likely strengthen.



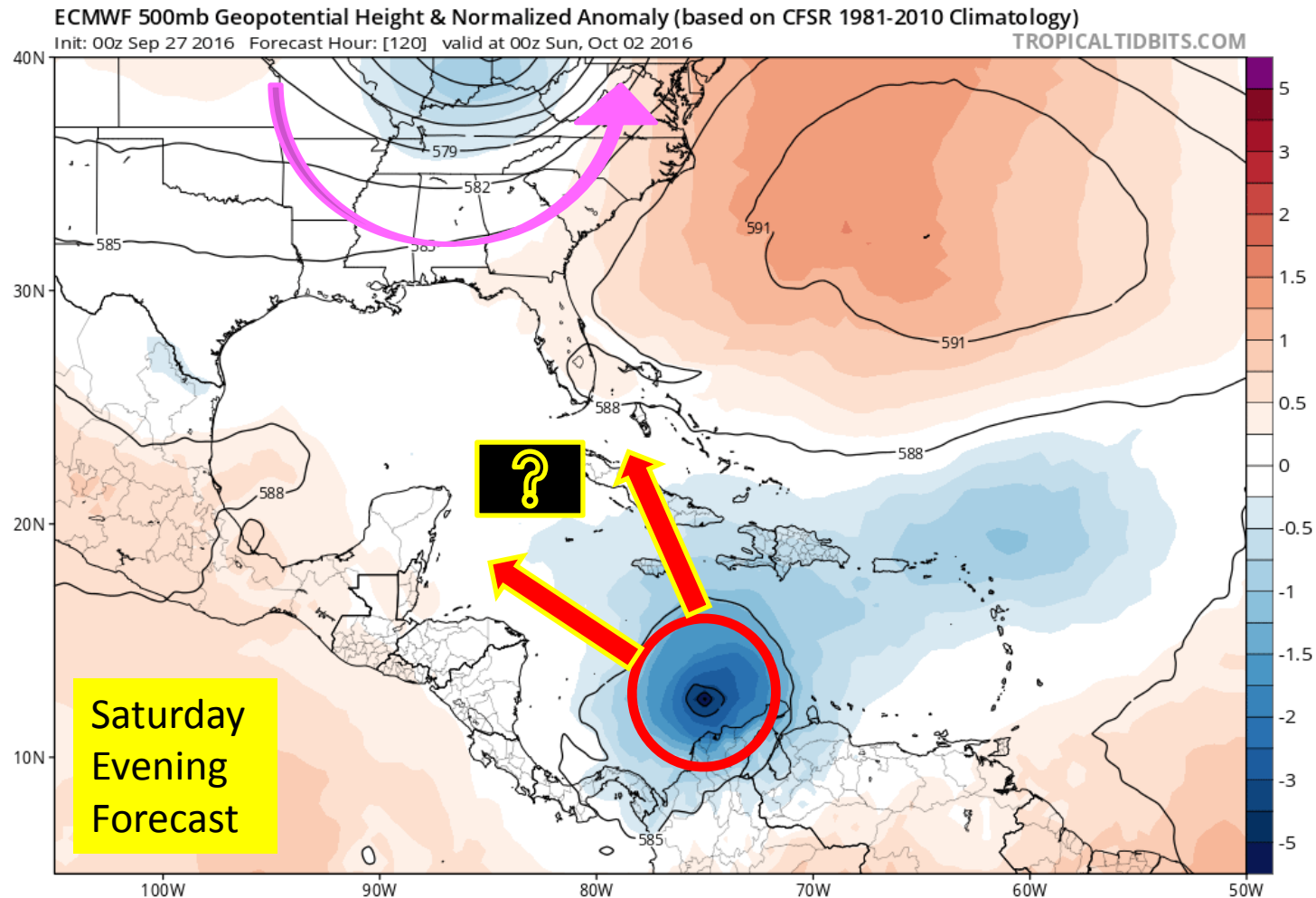
Scenario 1: GFS Forecast

The GFS models suggests that a strong trough will make its way into the Northeast Caribbean and will grab 97L (or would be Matthew) and take the storm to the north. This is the best case scenario as it keeps the system away from Florida. Many of the other guidance models are suggesting this sharp northward turn occurs, but it is still no guarantee at this point.



Scenario 2: European (ECMWF) Forecast

The European model has the trough is too weak to progress into the Caribbean Sea and affect 97L/Matthew. So, the European suggest that by the time the trough clears Florida and the Southeast U.S., 97L/Matthew will be somewhere in the south central Caribbean Sea. After that, the storm will have a clear path to move either towards the west or northwest and could impact Florida. Another difference between the GFS and European models is that the European does not strengthen 97L/Matthew until later in the forecast – currently 97L is experiencing very strong wind shear and dry air, which are likely to keep the system weak, but that is yet to be determined.



Tropical Summary:

- Showers and thunderstorms continue in association with Invest 97L, a well-organized tropical wave, is located about 475 miles east-southeast of Barbados.
- However, the low appears to lack a closed circulation at this time. Environmental conditions are favorable for continued development, and a tropical depression or tropical storm could form later today or tonight while the system moves westward to west-northwestward at 15 to 20 mph.
- Interests in the eastern and central Caribbean Sea, including the northern coast of South America, should monitor the progress of this disturbance, since warnings and watches could be required at any time.
- Regardless of whether the system is a tropical wave or tropical cyclone, heavy rains and wind gusts to tropical storm force are expected to spread over the Windward Islands and portions of the southern Lesser Antilles, beginning tonight and continuing into Wednesday.
- An Air Force Reserve reconnaissance aircraft is scheduled to investigate the disturbance this afternoon.
- The system has a 90% (high) chance of development over the next 48 hours, and a 90% (high) chance of development through the next five days.
- Forecast models are in disagreement as to where 97L will track after four to five days. Some models have a strong trough moving into the Caribbean Sea and forcing 97L to turn northward and move away from Florida.
- Other models, however suggest the trough will be too weak to affect 97L, in which case the storm will have the opportunity to move northwest and impact Florida.
- Intensity models are in agreement that 97L will become a tropical storm in the next two to three days.
- Matthew is the next name on the 2016 Atlantic storm list.
- Elsewhere, Disorganized showers and thunderstorms over the southwestern Gulf of Mexico are associated with a trough of low pressure that is drifting westward. Upper-level winds are not expected to be conducive for significant development before this system moves inland over Mexico during the next day or so.
- The system has a 10% (low) chance of development over the next 48 hours, and a 10% (low) chance of development through the next five days.

Florida Outlook:

- At this time it is too early to say what, if any, impacts Invest 97L will have on Florida.
- Any impacts, if they occur, are 8-12 days away.

Another briefing packet will be issued on Wednesday morning. For more information on this system, please visit the NHC website at www.nhc.noaa.gov



TROPICAL UPDATE

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State Meteorological Support Unit

Florida Division of Emergency
Management