TROPICAL UPDATE

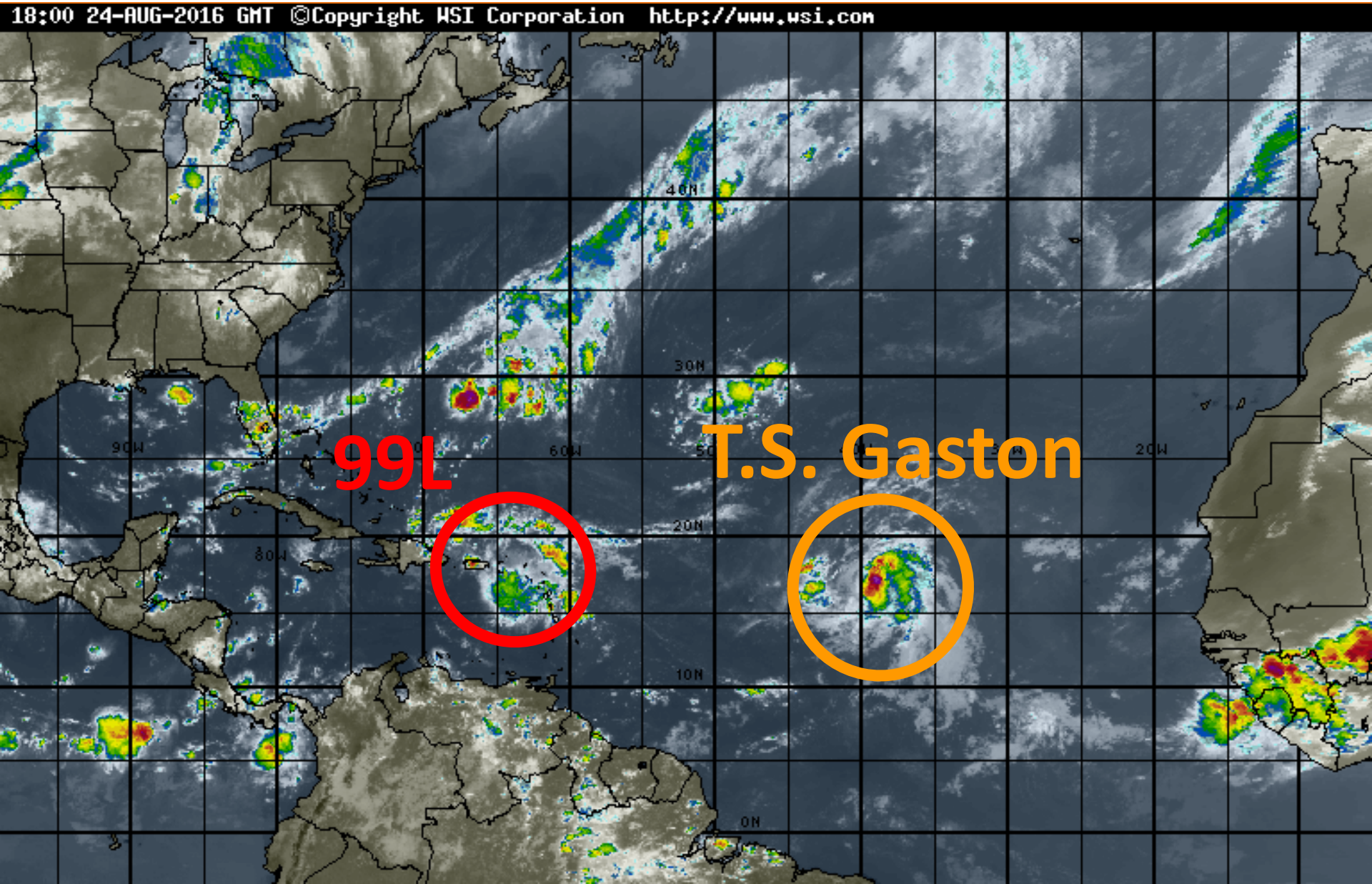
5 PM EDT

Wednesday, August 24, 2016

Invest 99L (80%) & T.S. Gaston

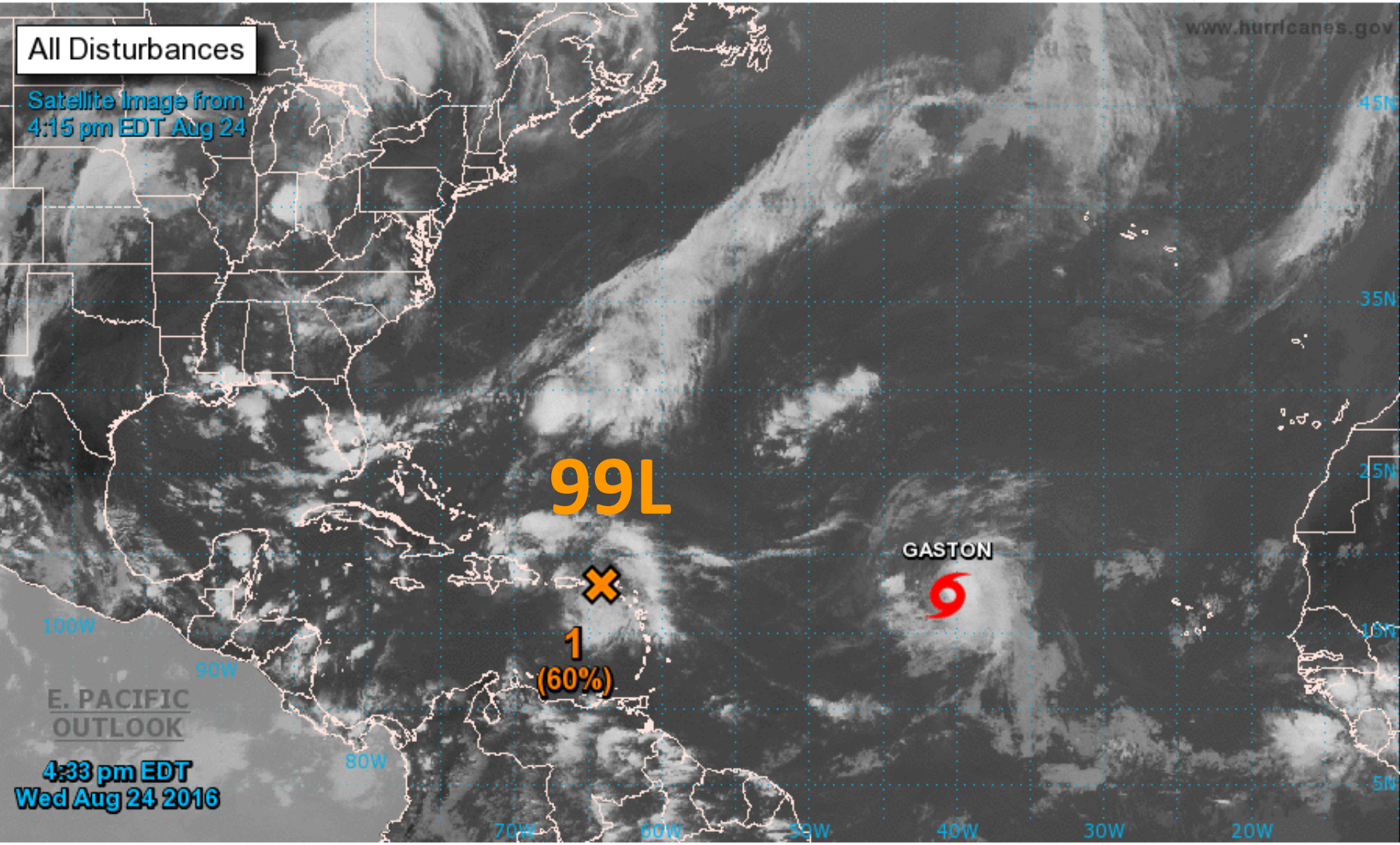
This update is intended for government and emergency response officials, and is provided for informational and situational awareness purposes only. Forecast conditions are subject to change based on a variety of environmental factors. For additional information, or for any life safety concerns with an 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



Two-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



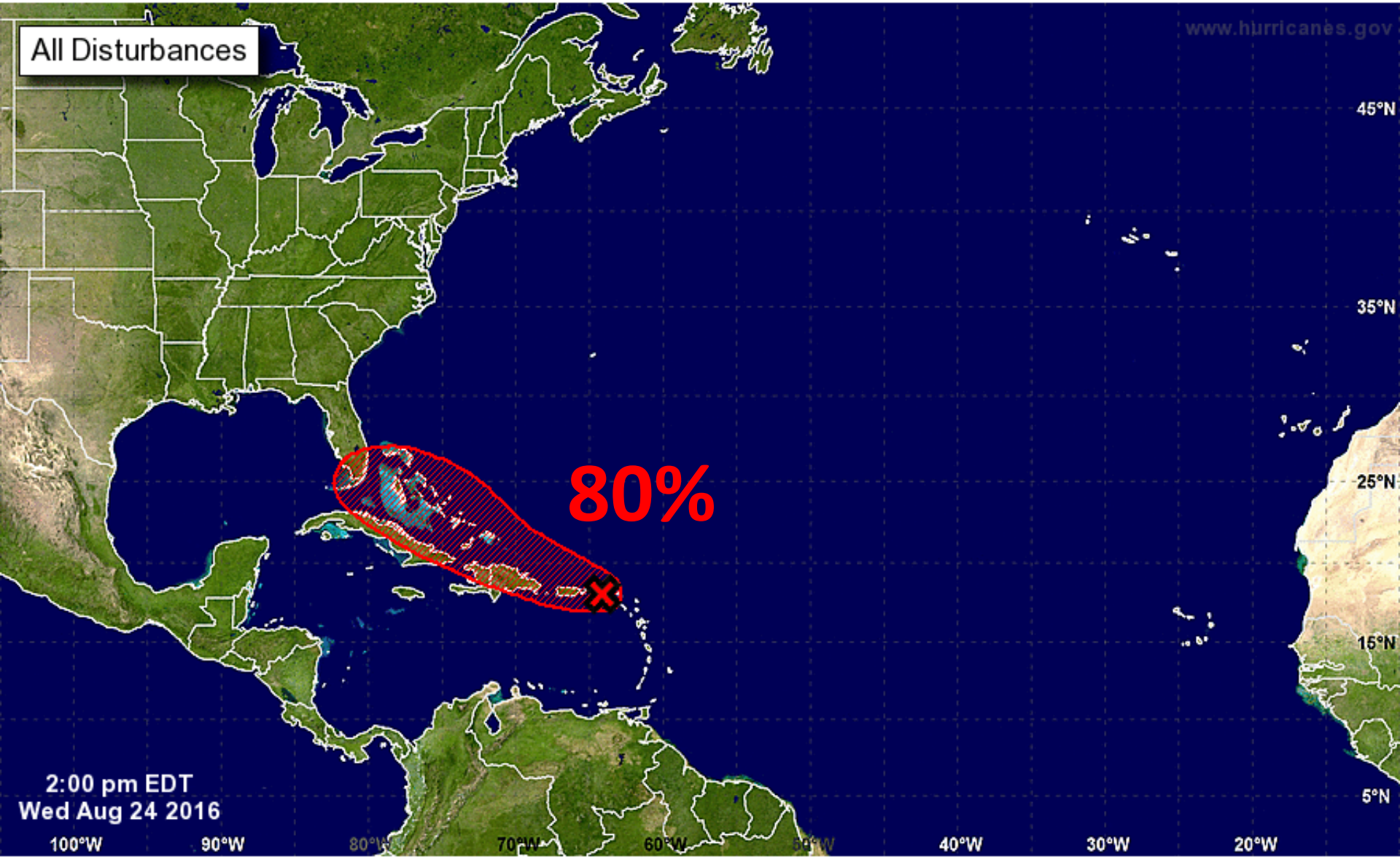
Current Disturbances and Two-Day Cyclone Formation Chance: < 40% 40-60% > 60%

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

Post-Tropical Cyclone Remnants

Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



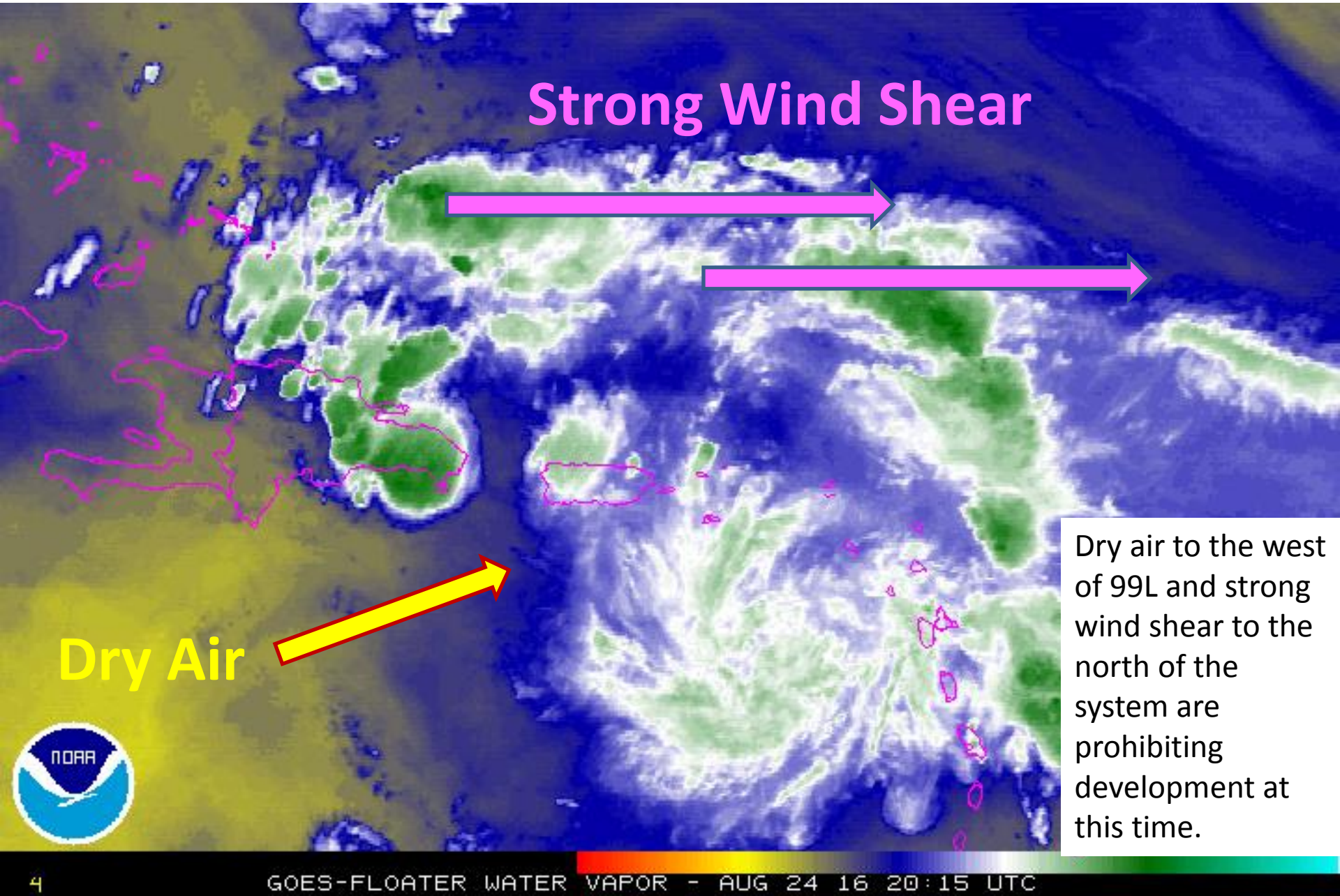
Tropical Cyclone Formation Potential for the Five-Day Period Ending at 2:00 pm EDT Mon Aug 29 2016

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

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

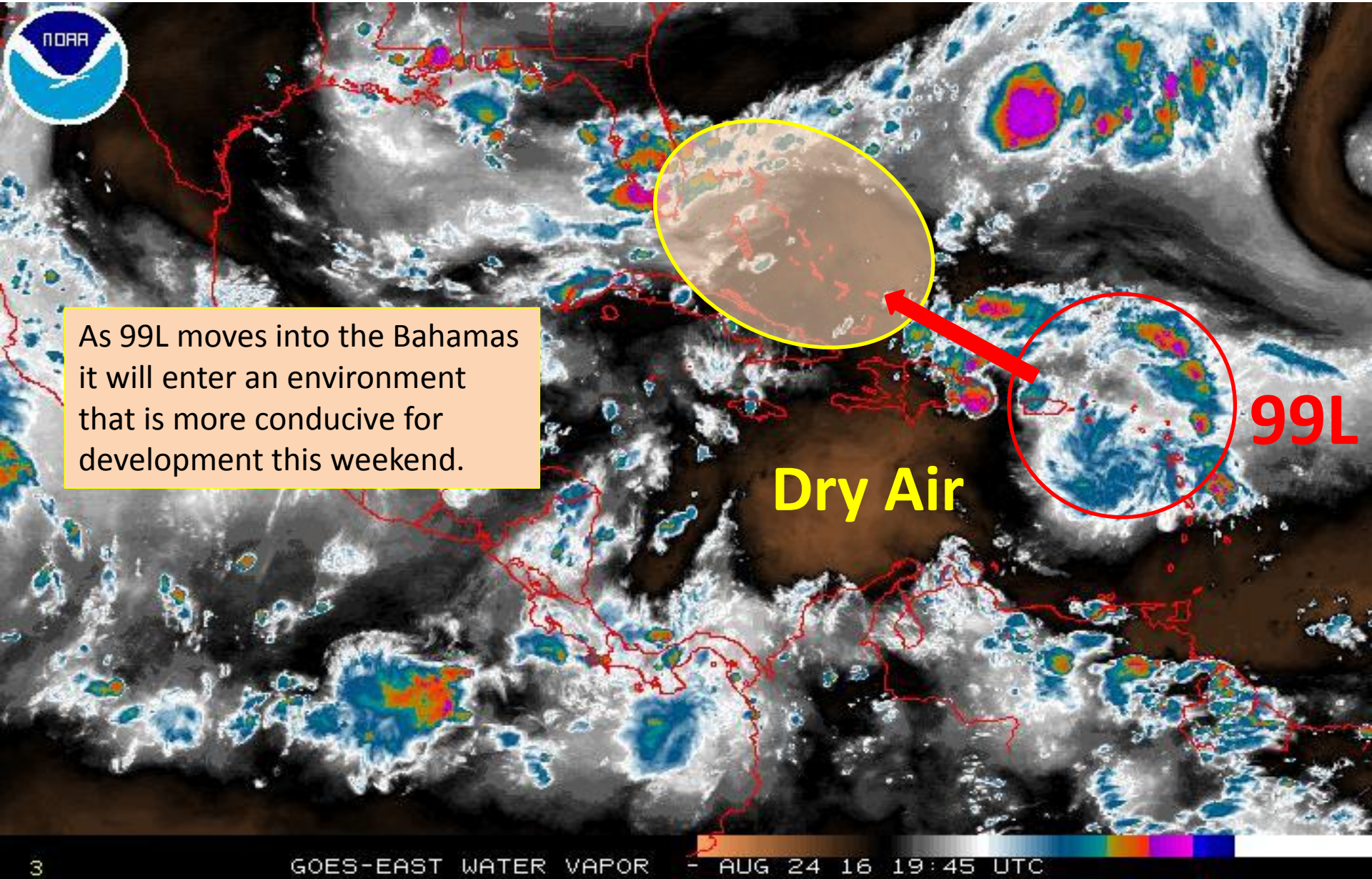

Invest 99L
2 PM Wed Aug 24 2016
Position 18.7 65.4 W
Maximum Winds 45 mph
Movement WNW at 21 mph
Blue Marble basemap imagery courtesy NASA
Satellite 8:29 PM UTC
8:29 PM GMT
wunderground.com

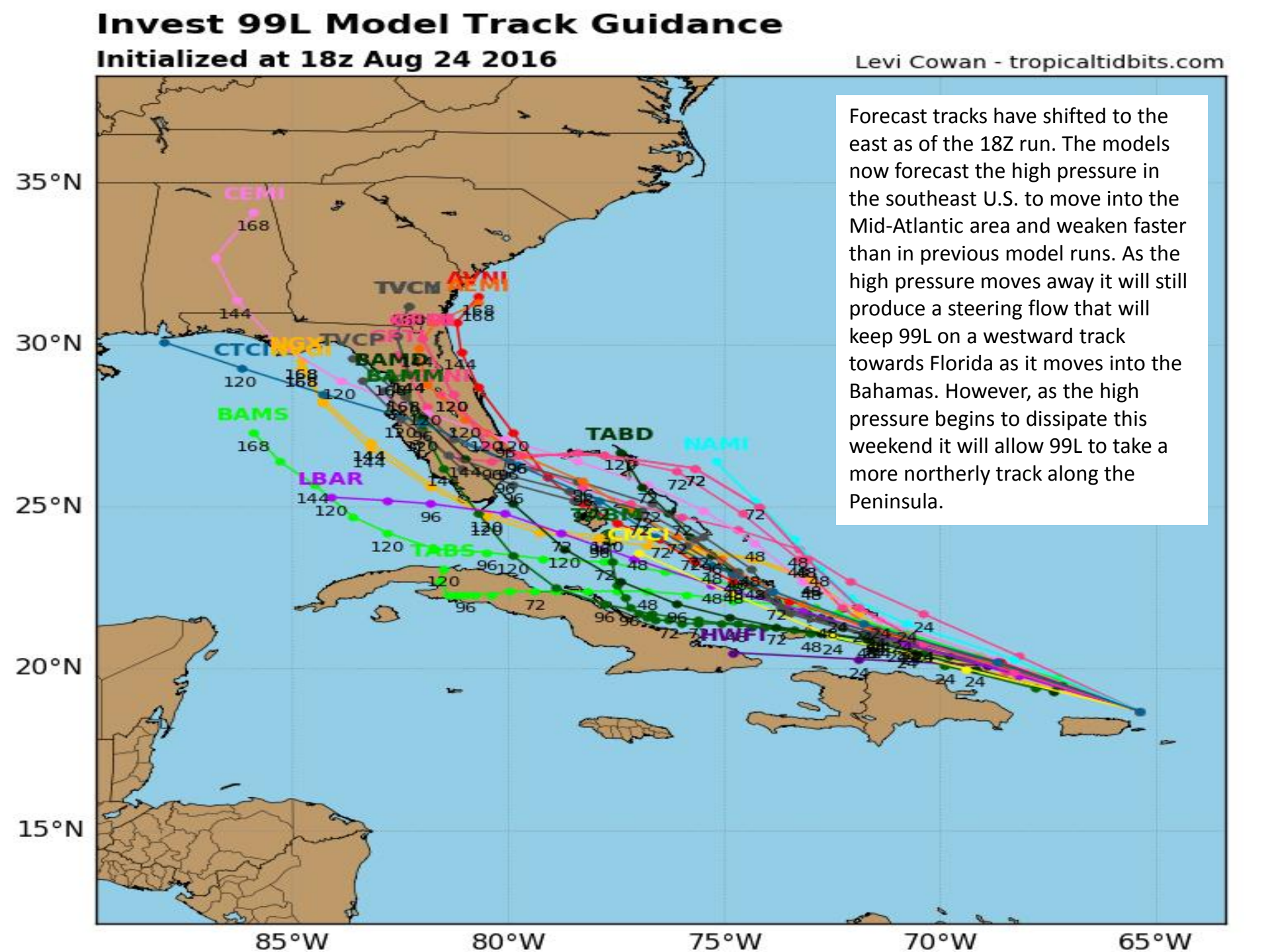
Invest 99L Water Vapor Image

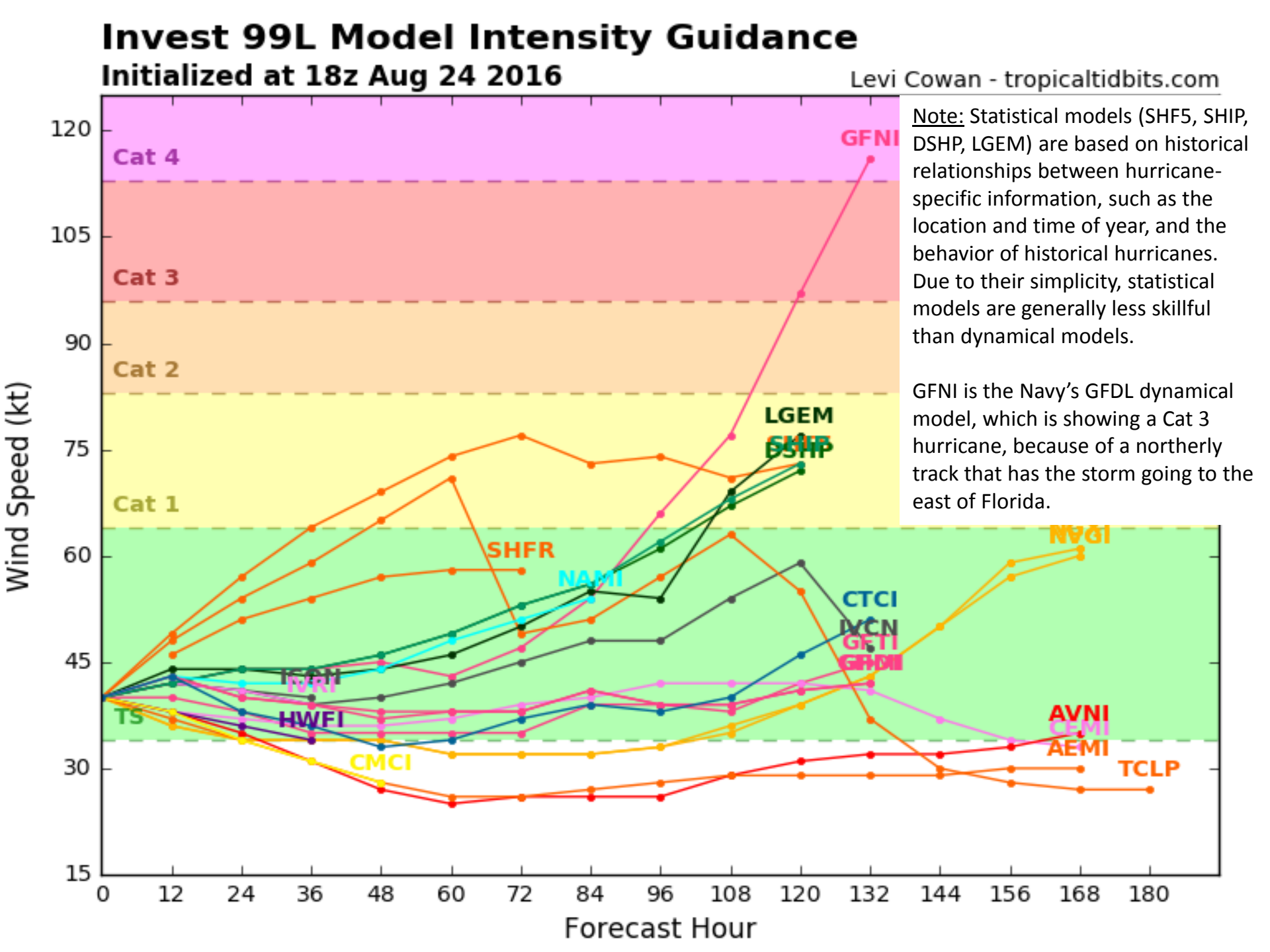


Dry air to the west of 99L and strong wind shear to the north of the system are prohibiting development at this time.

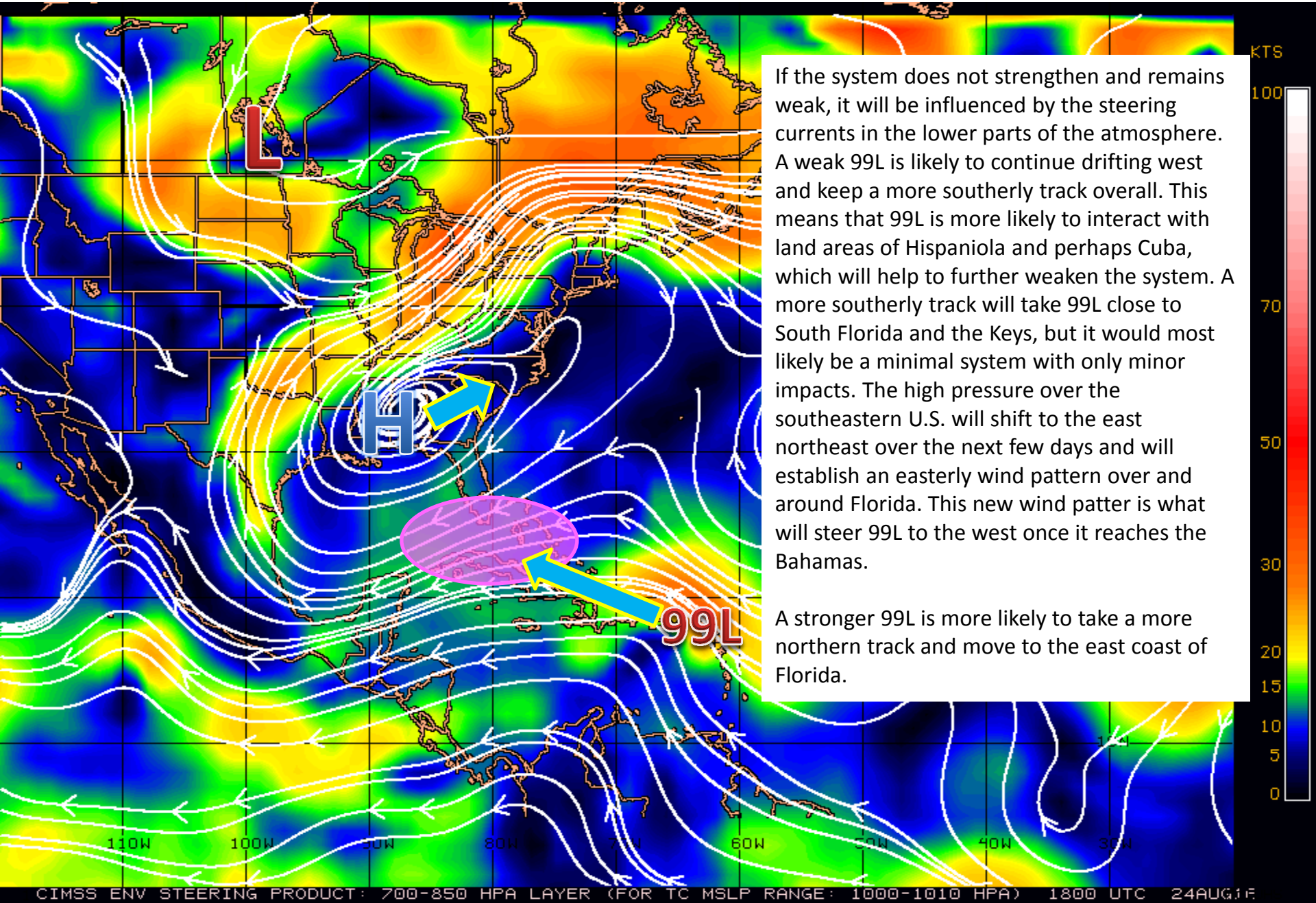
Looking Ahead:
Water Vapor Satellite Image




Invest 99L Model Track Guidance
Initialized at 18z Aug 24 2016
Levi Cowan - tropicaltidbits.com
Forecast tracks have shifted to the east as of the 18Z run. The models now forecast the high pressure in the southeast U.S. to move into the Mid-Atlantic area and weaken faster than in previous model runs. As the high pressure moves away it will still produce a steering flow that will keep 99L on a westward track towards Florida as it moves into the Bahamas. However, as the high pressure begins to dissipate this weekend it will allow 99L to take a more northerly track along the Peninsula.
35°N
30°N
25°N
20°N
15°N
85°W
80°W
75°W
70°W
65°W
CEMI
TVCM
AEMI
TVCP
CTCI
BAMD
BAMM
BAMS
LBAR
TABD
NAMI
TABS
HWFI


Invest 99L Model Intensity Guidance
Initialized at 18z Aug 24 2016
Levi Cowan - tropicaltidbits.com
Note: Statistical models (SHF5, SHIP, DSHP, LGEM) are based on historical relationships between hurricane-specific information, such as the location and time of year, and the behavior of historical hurricanes. Due to their simplicity, statistical models are generally less skillful than dynamical models.
GFNI is the Navy's GFDL dynamical model, which is showing a Cat 3 hurricane, because of a northerly track that has the storm going to the east of Florida.
Cat 4
Cat 3
Cat 2
Cat 1
TS
GFNI
LGEM
DSHP
SHFR
NAMI
CTCI
IVCN
HWFI
CMCI
AVNI
CEMI
AEMI
TCLP
Wind Speed (kt)
Forecast Hour
120
105
90
75
60
45
30
15
0
12
24
36
48
60
72
84
96
108
120
132
144
156
168
180

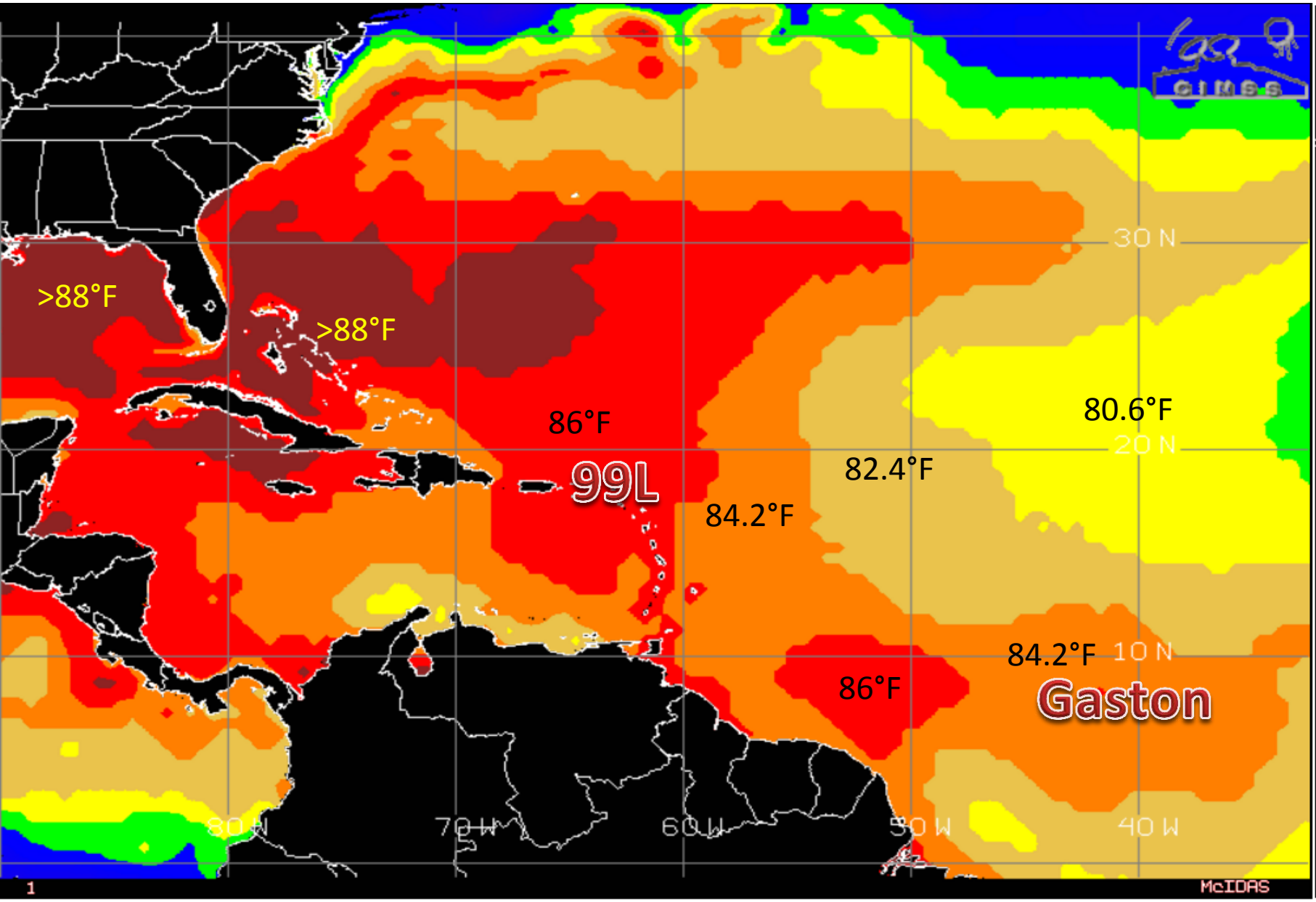
Steering Currents



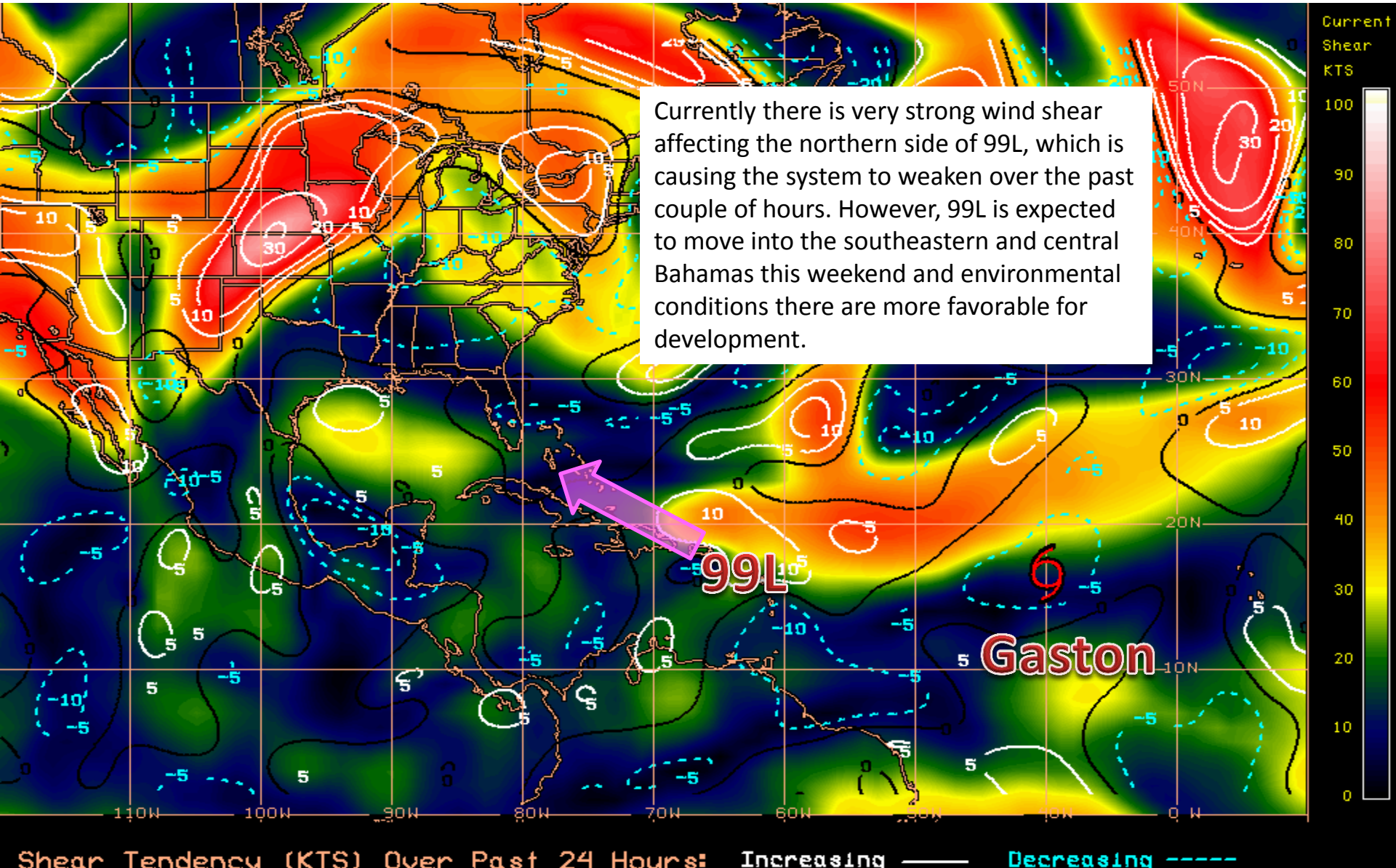
If the system does not strengthen and remains weak, it will be influenced by the steering currents in the lower parts of the atmosphere. A weak 99L is likely to continue drifting west and keep a more southerly track overall. This means that 99L is more likely to interact with land areas of Hispaniola and perhaps Cuba, which will help to further weaken the system. A more southerly track will take 99L close to South Florida and the Keys, but it would most likely be a minimal system with only minor impacts. The high pressure over the southeastern U.S. will shift to the east northeast over the next few days and will establish an easterly wind pattern over and around Florida. This new wind patter is what will steer 99L to the west once it reaches the Bahamas.

A stronger 99L is more likely to take a more northern track and move to the east coast of Florida.

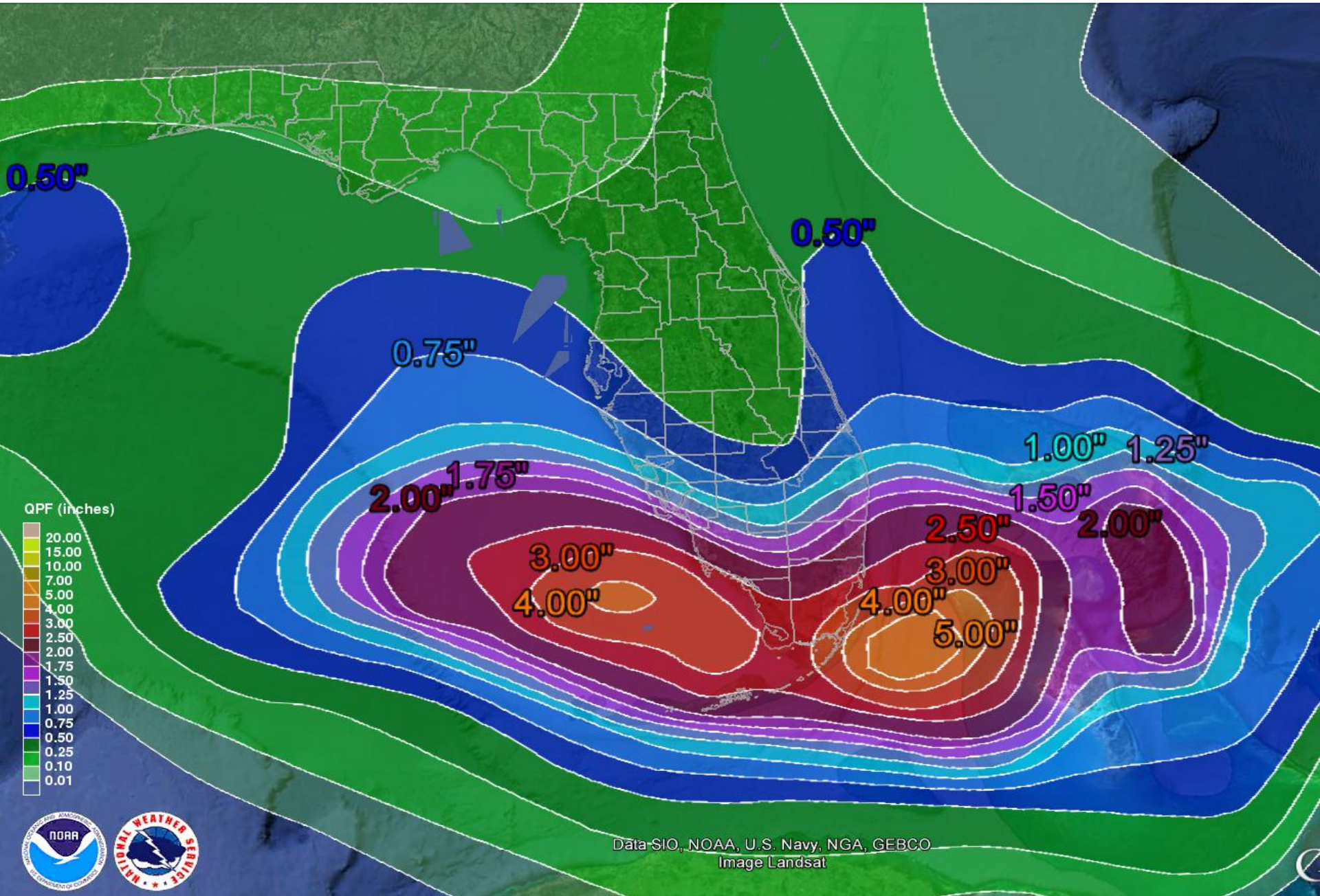
Sea Surface Temperatures Near 99L



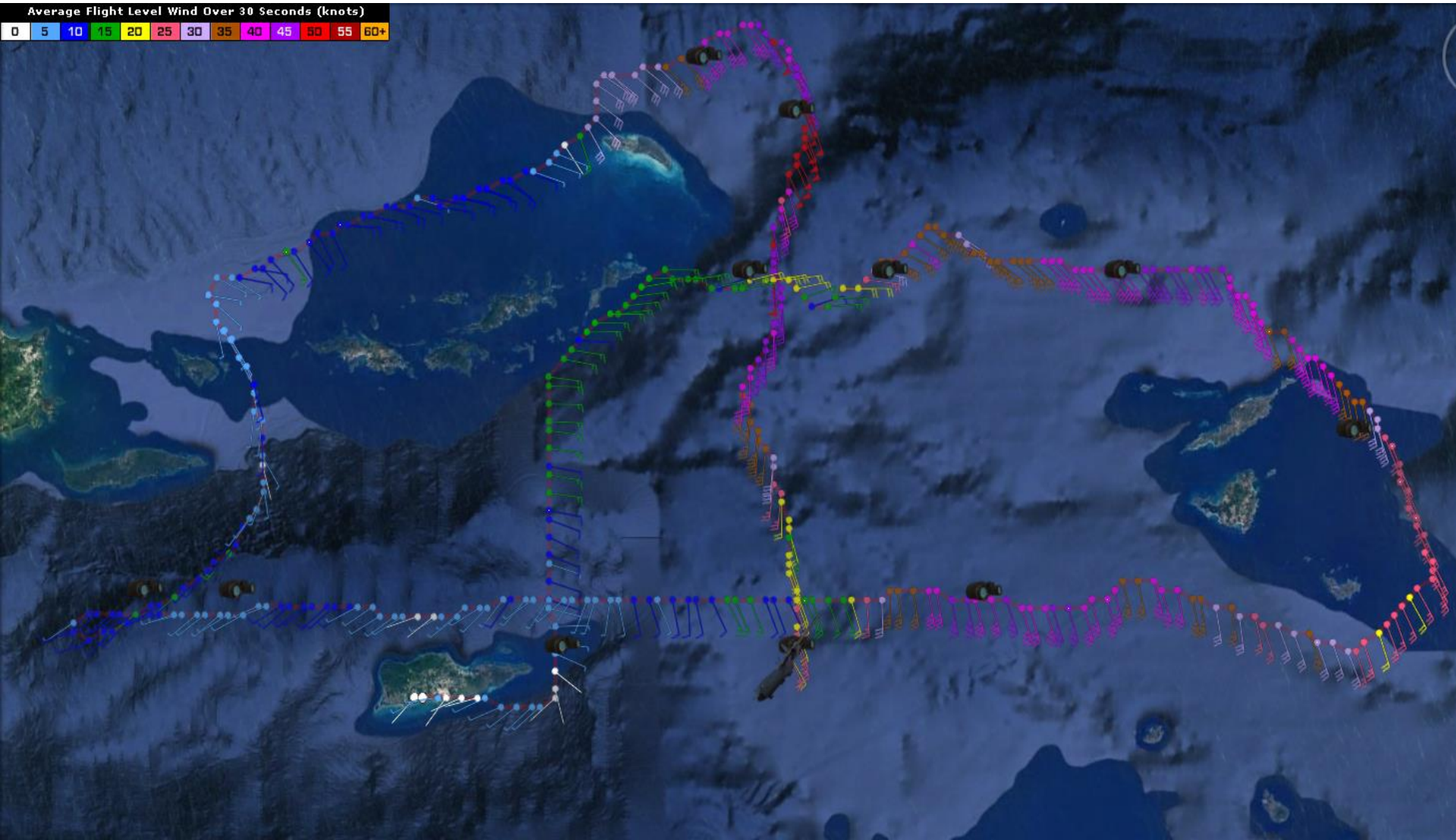
Current Wind Shear (shaded) and Shear Tendency (contours)

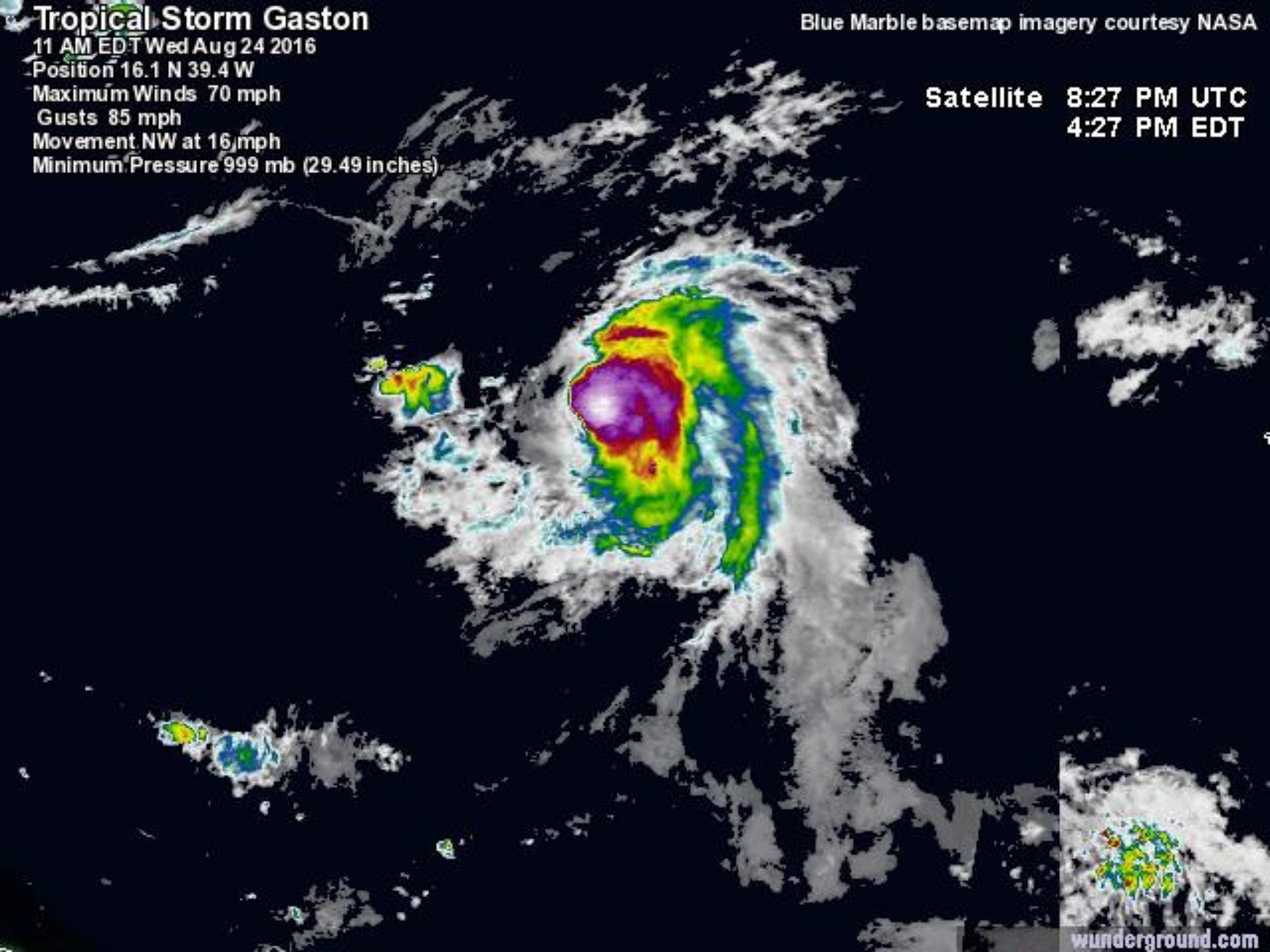


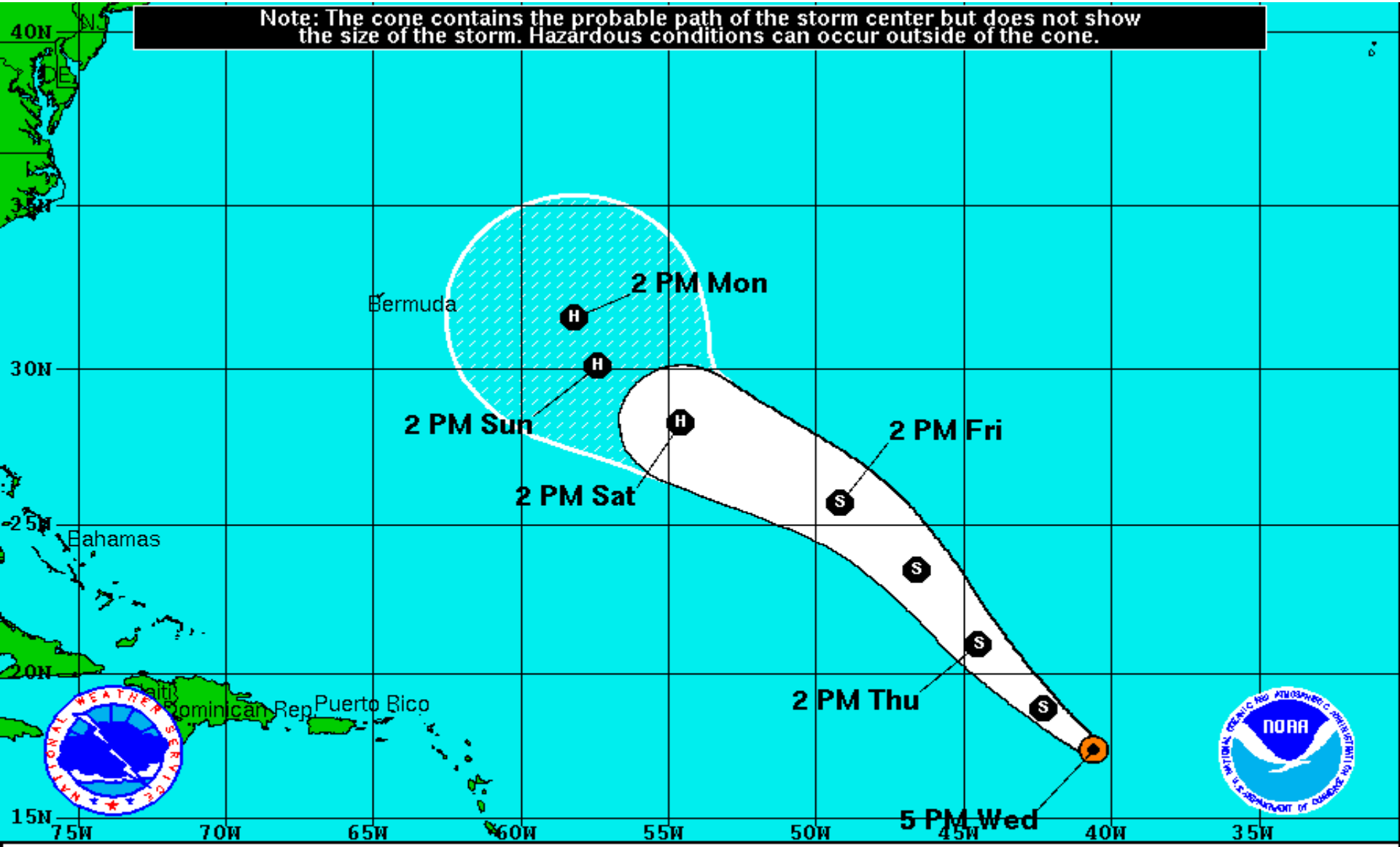
Forecast Rainfall Total For Sun-Mon



The Hurricane Hunter Reconnaissance flight did not find a closed surface circulation. Another plane is currently enroute to conduct an overnight investigation on Invest 99L. More information will be available Thursday morning.




Tropical Storm Gaston
11 AM EDT Wed Aug 24 2016
Position 16.1 N 39.4 W
Maximum Winds 70 mph
Gusts 85 mph
Movement NW at 16 mph
Minimum Pressure 999 mb (29.49 inches)
Blue Marble basemap imagery courtesy NASA
Satellite 8:27 PM UTC
4:27 PM EDT
wunderground.com



Tropical Storm Gaston
Wednesday August 24, 2016
5 PM EDT Advisory 9
NWS National Hurricane Center

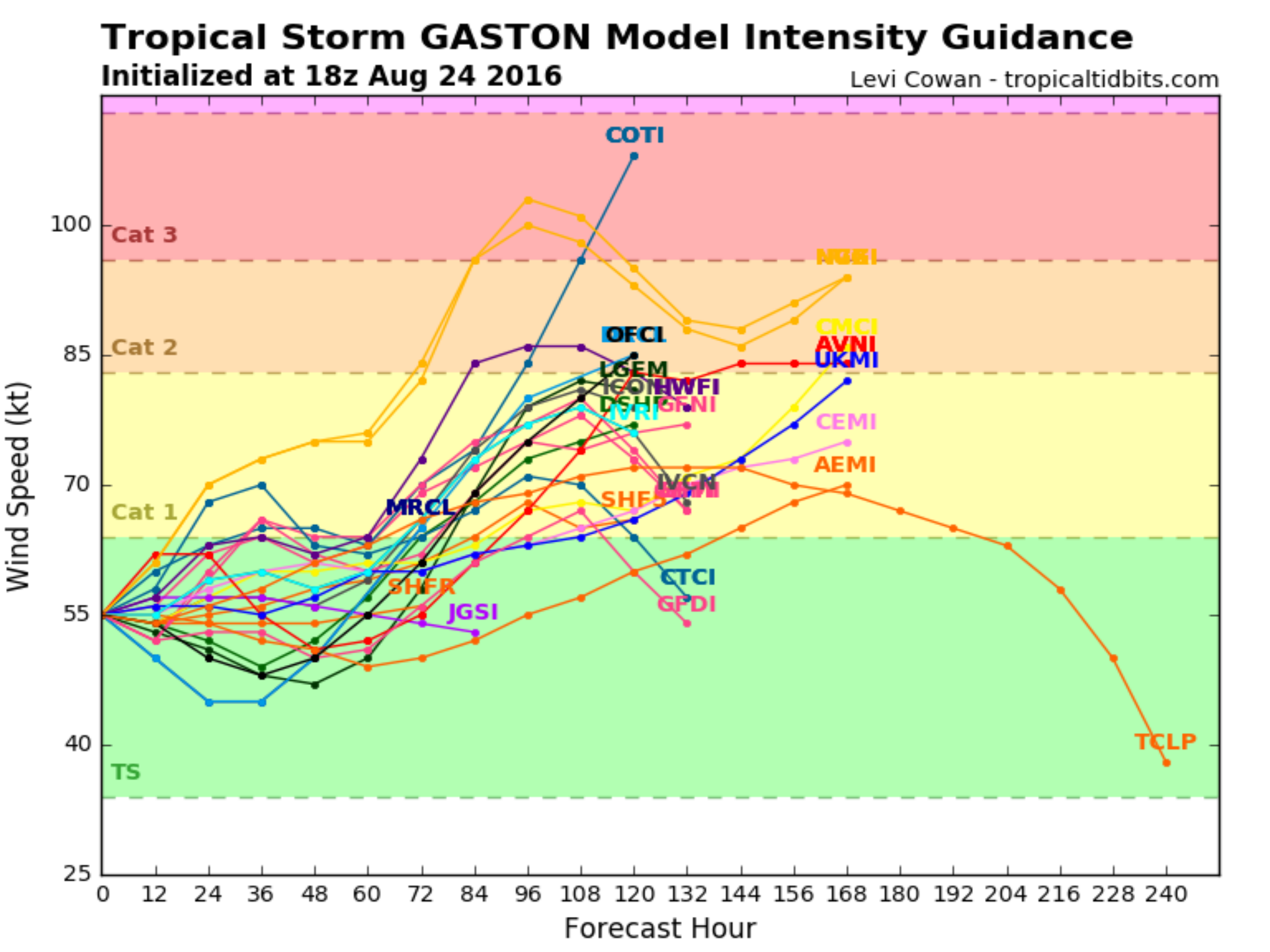
Current Information:
Center Location 17.4 N 40.6 W
Max Sustained Wind 70 mph
Movement NW at 16 mph

Forecast Positions:
Tropical Cyclone Post-Tropical
Sustained Winds: D < 39 mph
S 39-73 mph H 74-110 mph M > 110mph

Potential Track Area:
Day 1-3 Day 4-5

Watches:
Hurricane Trop.Storm

Warnings:
Hurricane Trop.Storm


Tropical Storm GASTON Model Intensity Guidance
Initialized at 18z Aug 24 2016
Levi Cowan - tropicaltidbits.com
Cat 3
Cat 2
Cat 1
TS
COTI
NGEI
OFCL
CMCI
AVNI
UKMI
LGEM
HWFI
DSHP
GFNI
CEMI
AEMI
IVCN
SHFR
MRCL
CTCI
GFDI
JGSI
TCLP
Wind Speed (kt)
Forecast Hour
25
40
55
70
85
100
0
12
24
36
48
60
72
84
96
108
120
132
144
156
168
180
192
204
216
228
240

Invest 99L:

- A strong tropical wave located near Puerto Rico is producing a large area of disorganized showers and thunderstorms as it moves to the west northwest at 15-20 mph.
- Dry air to the west of the system and strong wind shear to the north of it is currently preventing any development from taking place.
- The system has a 60% (medium) chance of development within 48 hours, and a 80% (high) chance of development through the next five days.
- A tropical depression or storm may develop at any time over the next few days as it moves toward the Bahamas. If that occurs, an official forecast track cone will become available, and details on any possible impacts to Florida will begin to be estimated.
- An Air Force Reserve Hurricane Hunter aircraft investigated the system this morning and did not find a closed surface circulation. A second reconnaissance flight is currently enroute for an overnight flight.
- Computer track models are in better agreement this afternoon on the possible track of Invest 99L. Models forecast 99L to move into the southeastern and central Bahamas in the next 36-48 hours, where environmental conditions are forecast to be more conducive for development.
- The system is expected to slow down over the Bahamas for around 48 hours this weekend before a high pressure over the Southeastern U.S. forces the system towards the west on Sunday towards Florida, though some models have this occurring as early as Saturday. Recent runs have also shown a more northerly track once the system reaches Florida, and a possible track parallel to the state is possible.
- Also, there is A LOT of disagreement in the computer models regarding the possible intensity of Invest 99L, which is common with weak and developing systems.
- Some statistical models are predicting 99L to become a hurricane, however at this time there is too much uncertainty in regards to the system's interaction with dry air and landmasses in the Caribbean to know for sure if attaining hurricane strength is possible.
- Regardless of tropical development, periods of heavy rain are possible across Central and South Florida at the beginning of next week.

- We will continue to monitor the progress of this system for the possibility of tropical development. We will have a better idea of where this system is headed and how strong it might be once it passes through the Caribbean into the southeastern Bahamas in 36-48 hours.
- At this current time, Invest 99L poses a *possible threat* to Florida.
- Note: Statistical models are based on historical relationships between hurricane-specific information, such as the location and time of year, and the behavior of historical hurricanes. Due to their simplicity, statistical models are generally less skillful than dynamical models.
- No further areas of tropical cyclone development are expected in the Atlantic basin within the next five days.

Tropical Storm Gaston:

- Tropical Storm Gaston is currently located 1100 miles west of the Cabo Verde Islands with maximum sustained winds at 70 mph. Gaston is moving west northwest at 16 mph.
- Computer models are in good agreement that Gaston will continue moving towards the west, then turn towards the northwest and continue moving into the central Atlantic away from any land areas.
- Models are also in agreement that Gaston is likely to intensify into a hurricane later today or tomorrow due to favorable environmental conditions over the central Atlantic Ocean.

Florida Outlook:

- At this point it is too early to tell what impacts 99L will have on Florida or the U.S. There are many factors that make this a very complicated forecast, and conditions are in flux and likely to change going forward.
- T.S. Gaston does not pose a threat to Florida or the U.S.

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

TROPICAL UPDATE

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