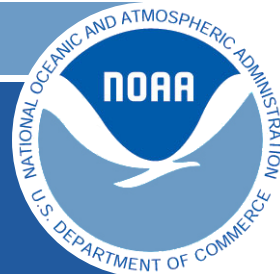




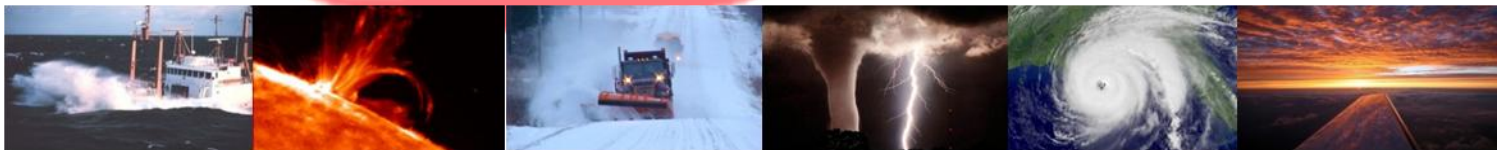
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

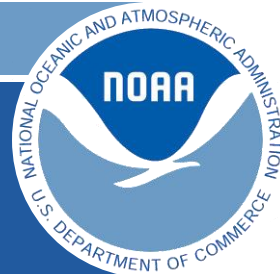


Monday, 8 July 2013

AOC Atlantic Tropical Weather Briefing

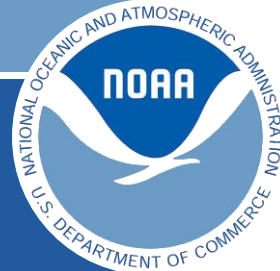
Jonathan Belles
FSU Grad Student



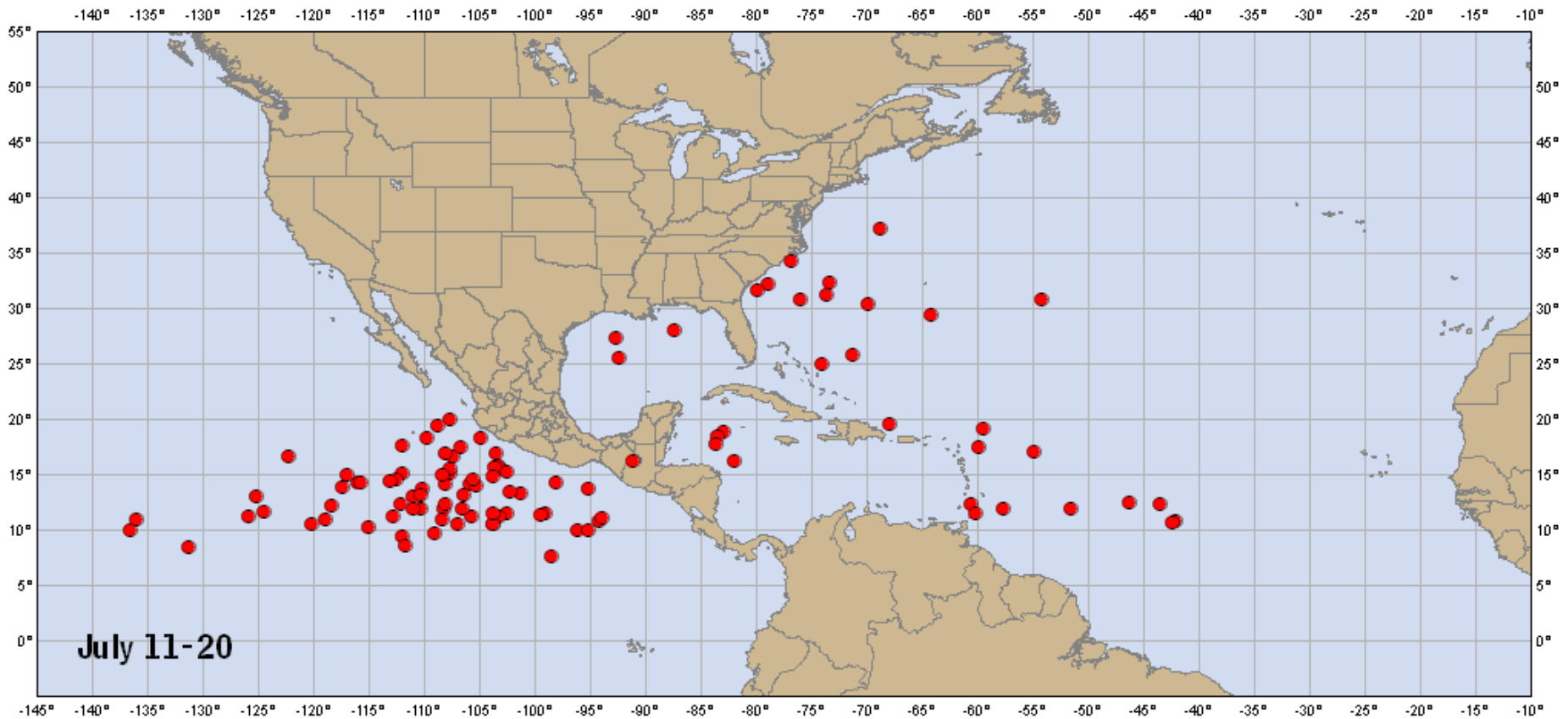


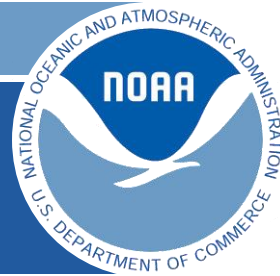
Outline

- Climatology for the Mid July
- Overview of the Tropics:
 - TUTT Low
 - Chantal
 - African Wave Train
- The Upcoming Week
 - Climate Signals
 - My forecast



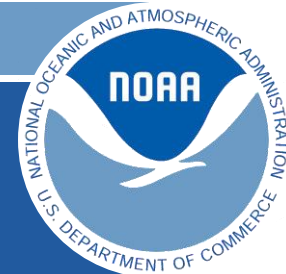
Climatology





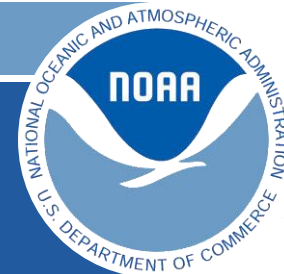
Overview of the Tropics

- Satellite (Vis/WV)
- Upper Level Shear
- Sea Surface Temperatures/Ocean Heat Content

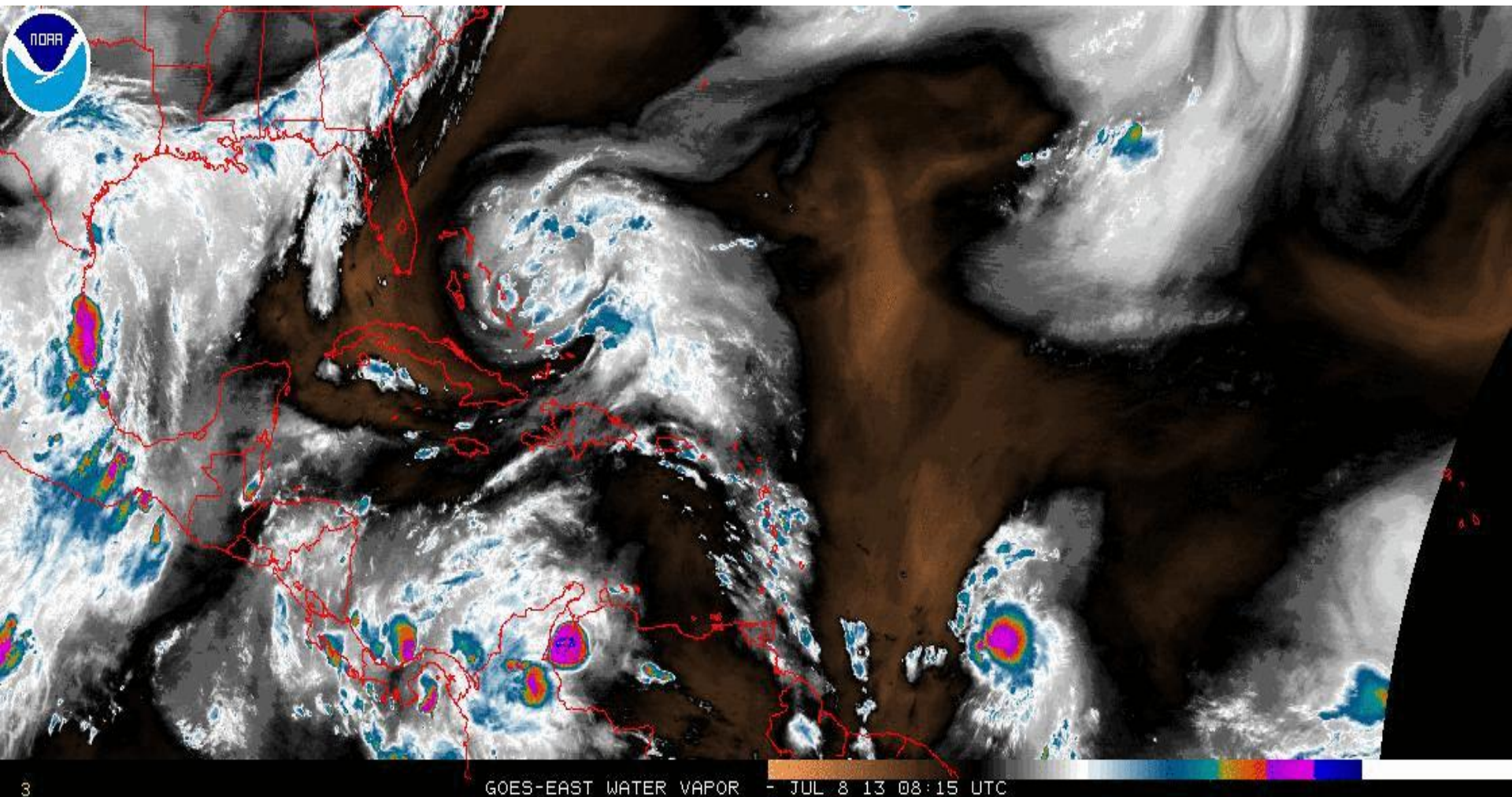


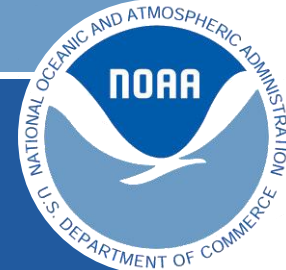
Basin Satellite





Basin Satellite



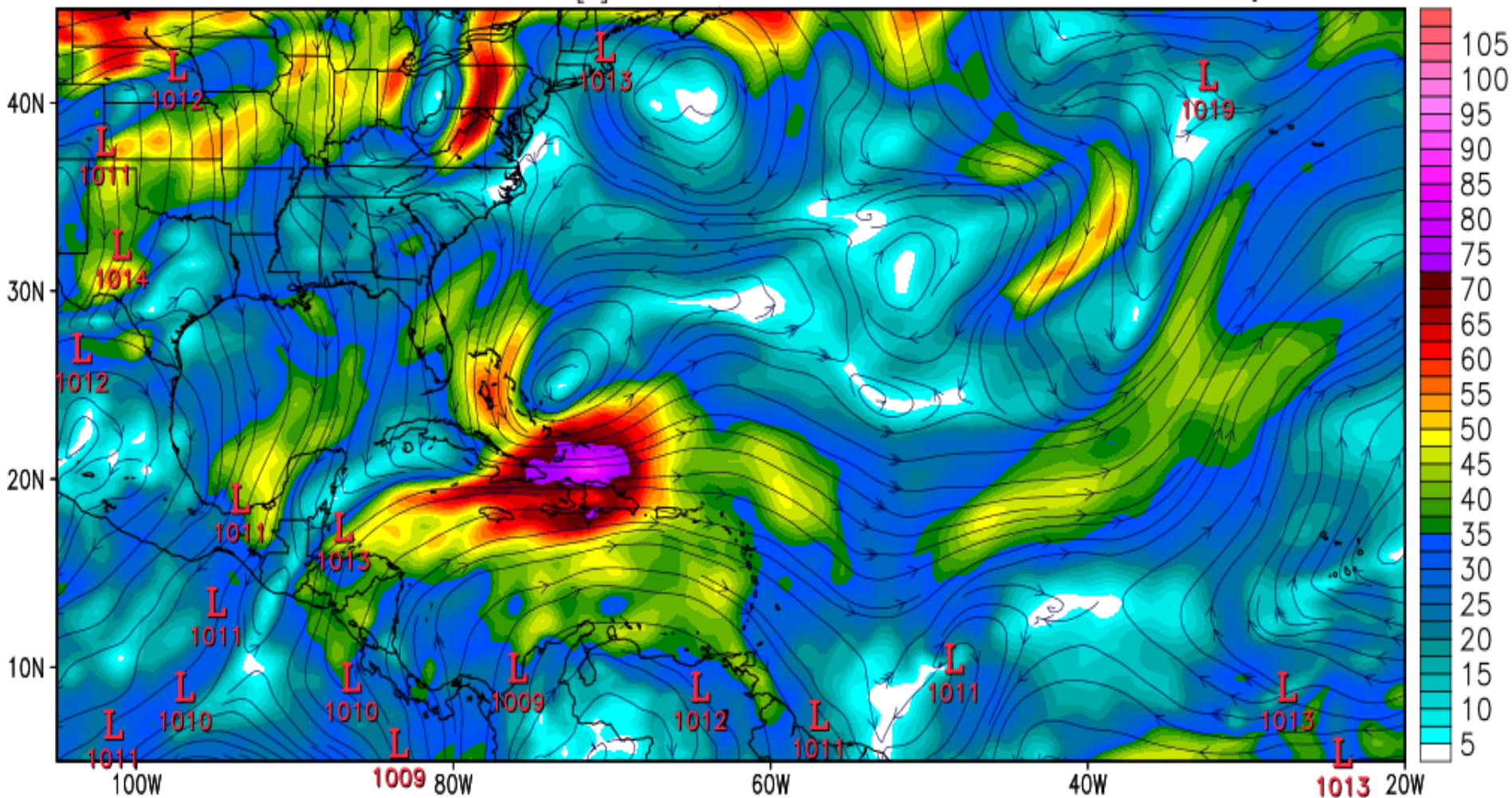


Shear

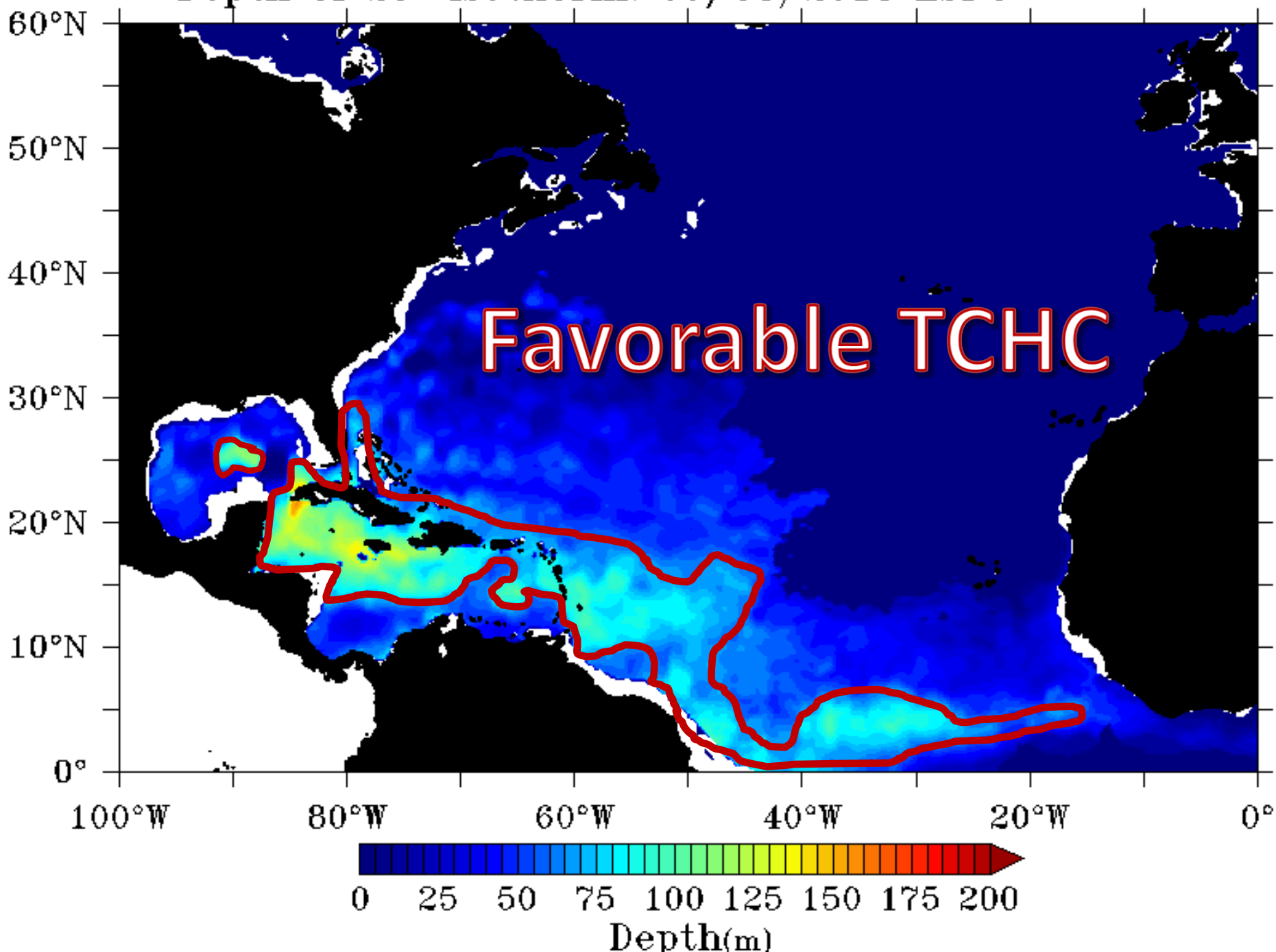
GFS 200mb–850mb Wind Shear (knots) & Low Centers (mb)

Initial Time: 06z Jul 08 2013 Forecast Hour: [0] valid at 06z Jul 08 2013

Levi Cowan - tropicaltidbits.com

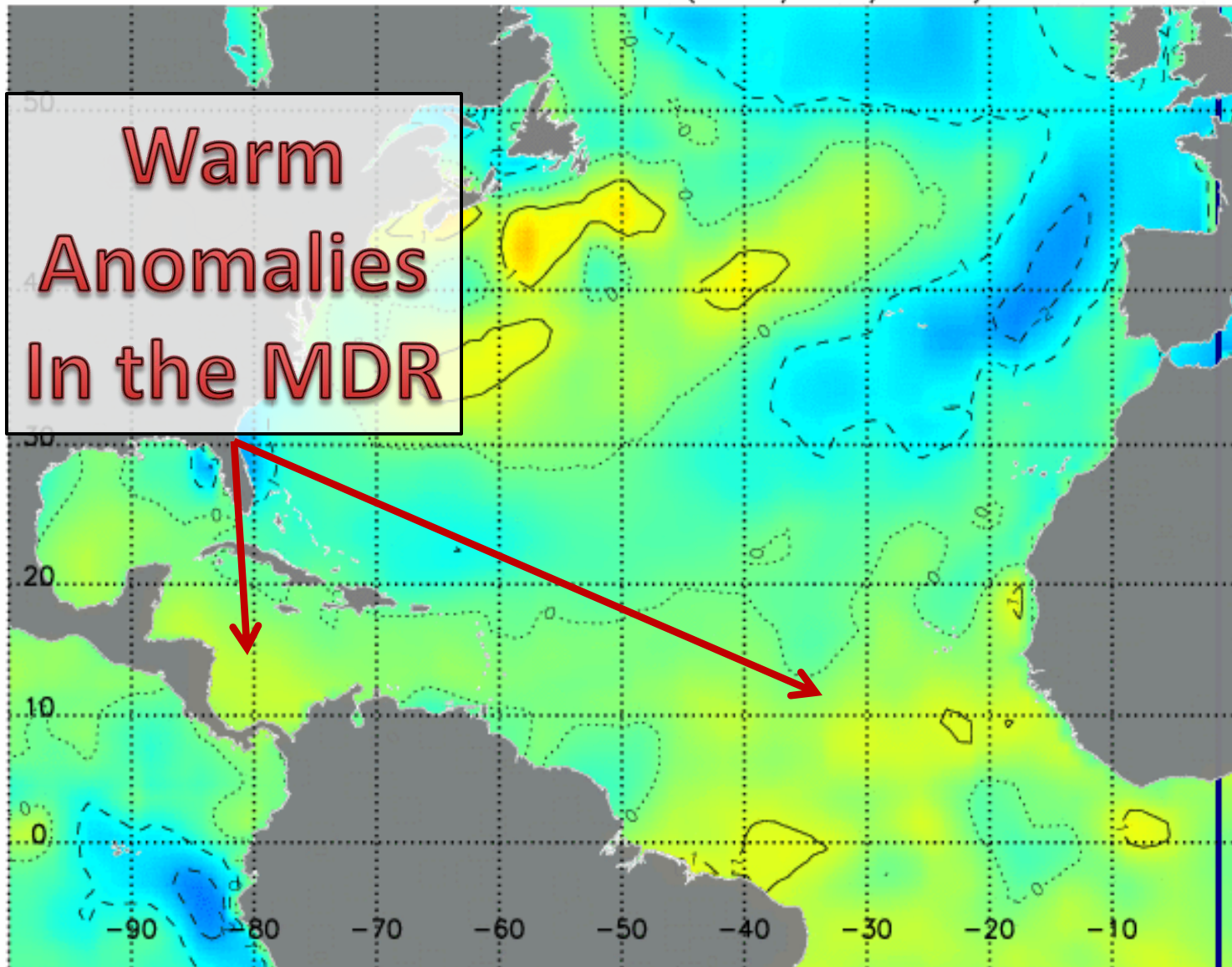


Depth of 26° Isotherm: 07/08/2013 ESPC

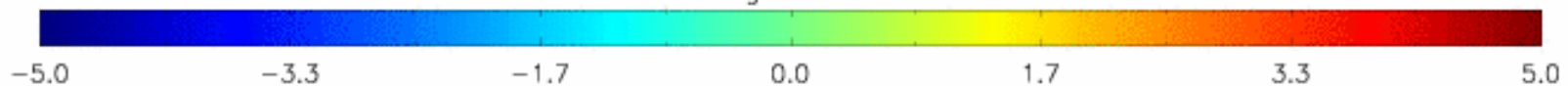


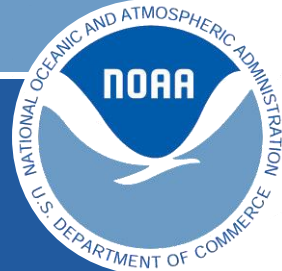


Warm Anomalies In the MDR

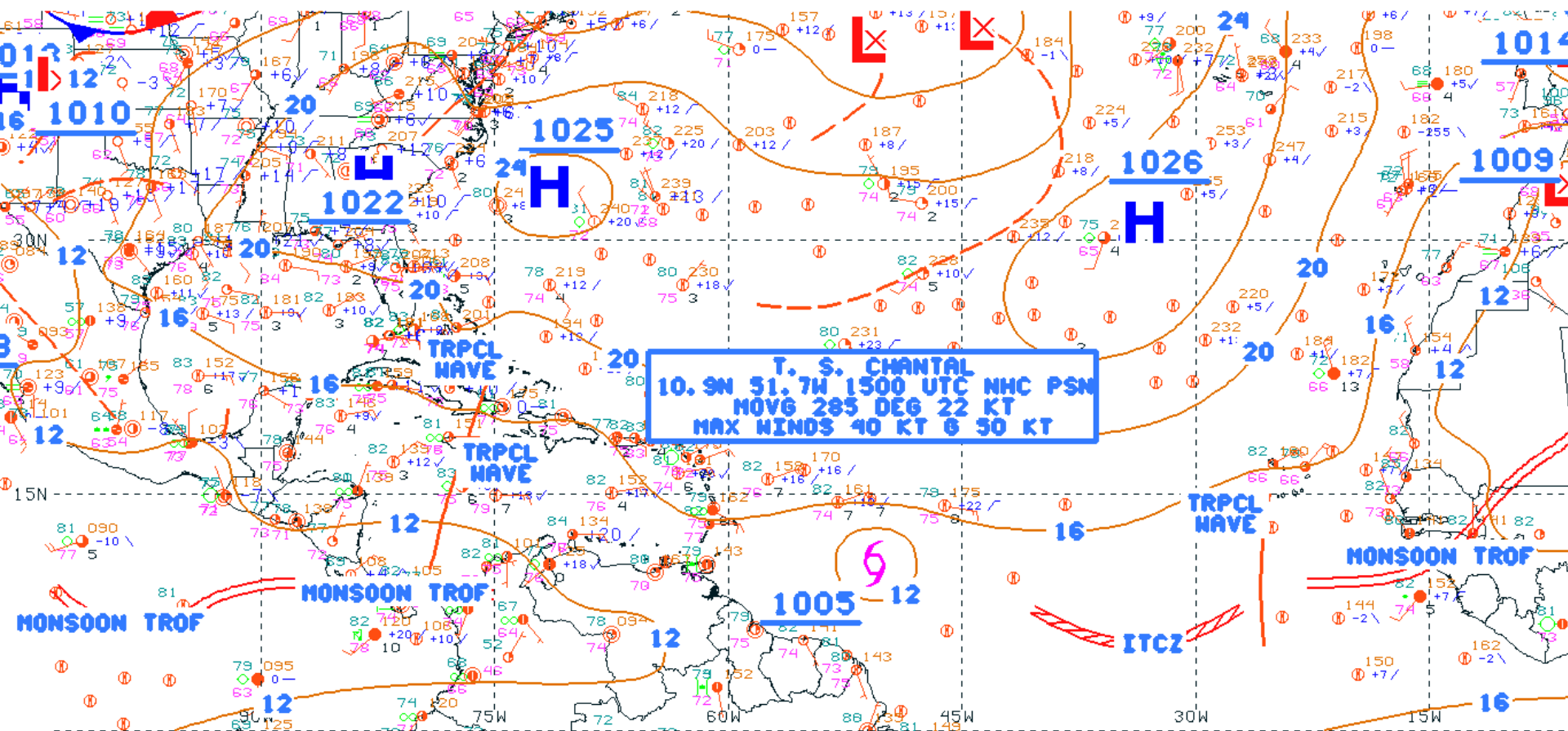


Reynolds SST Anomaly (-) below average and (+) above average. (06-JUL-2013)
degrees °C

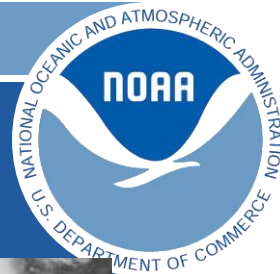




Surface Map



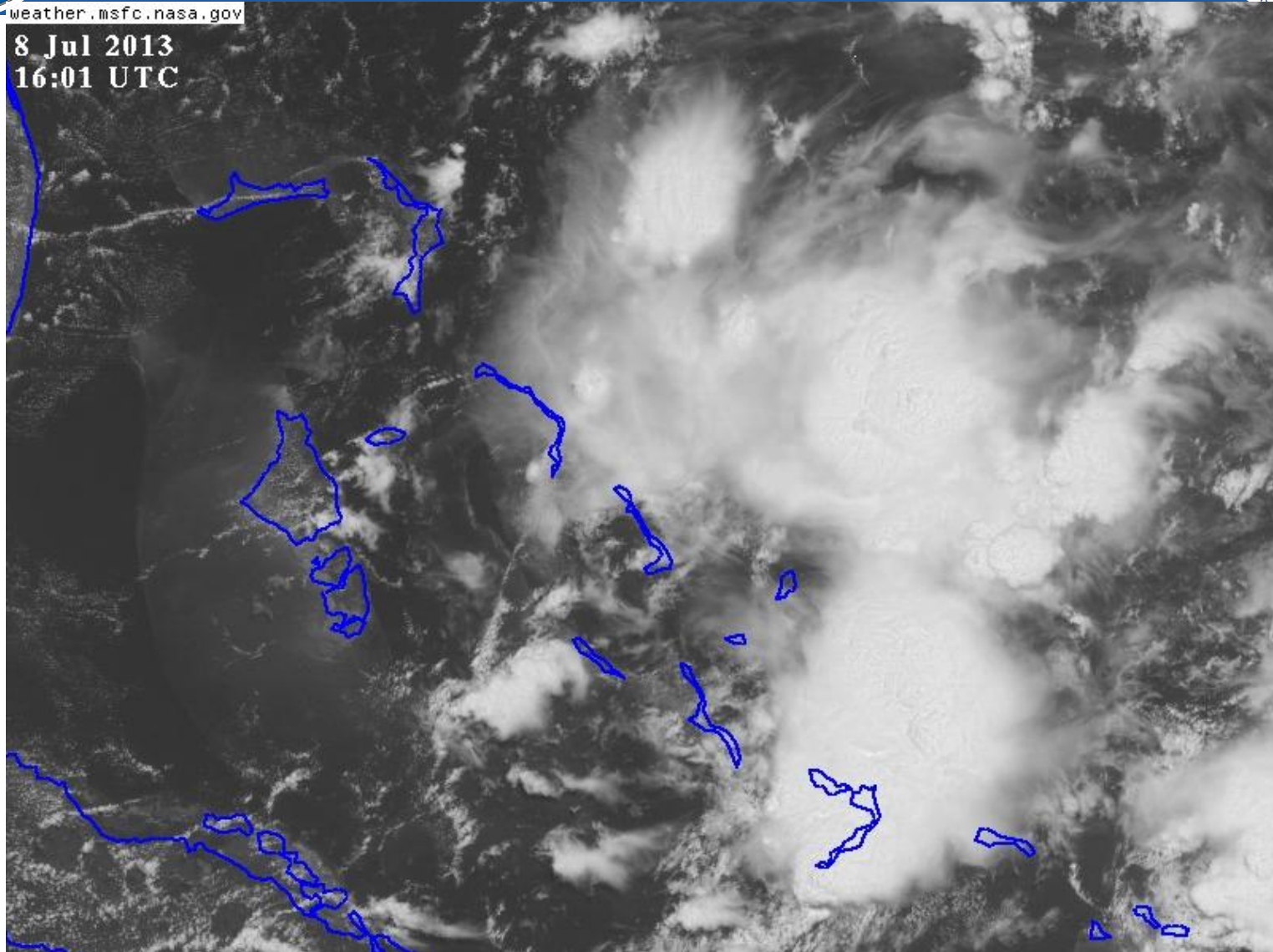
12 UTC JULY 08 2013 - NATIONAL WEATHER SERVICE

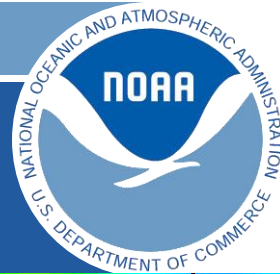


TUTT

weather.msfc.nasa.gov

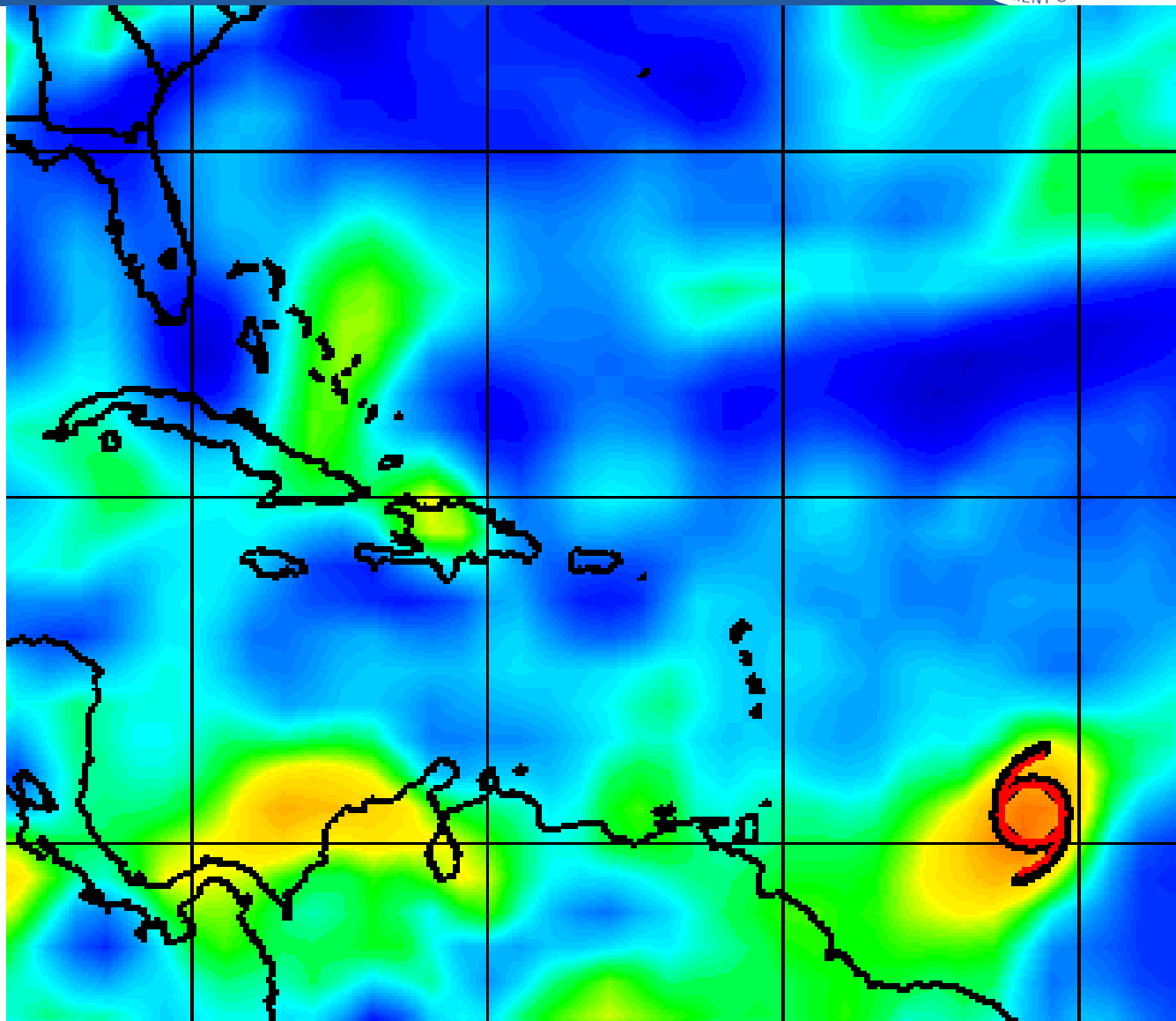
8 Jul 2013
16:01 UTC





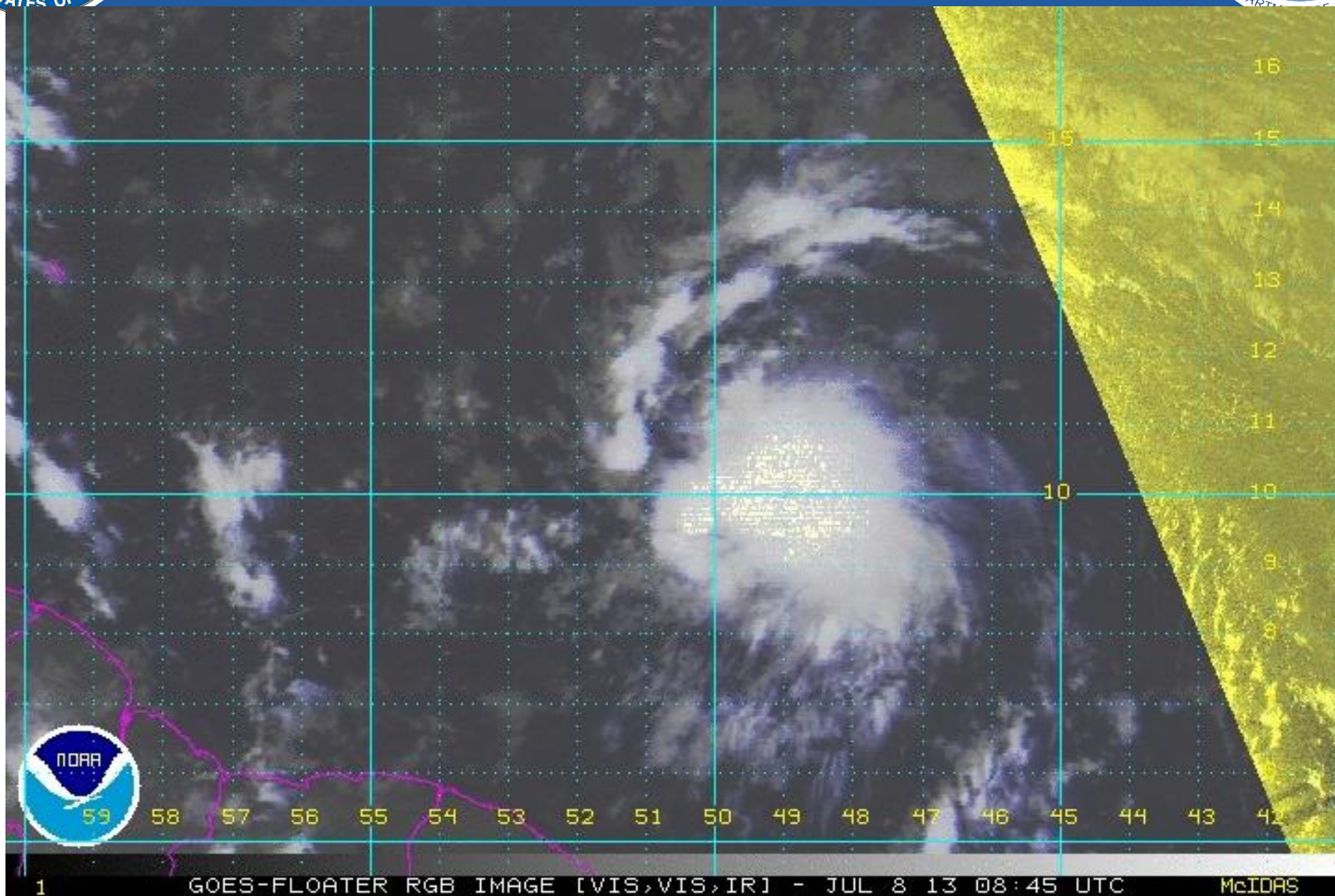
850 mb Vorticity

Likely
Rainmaker
For Florida



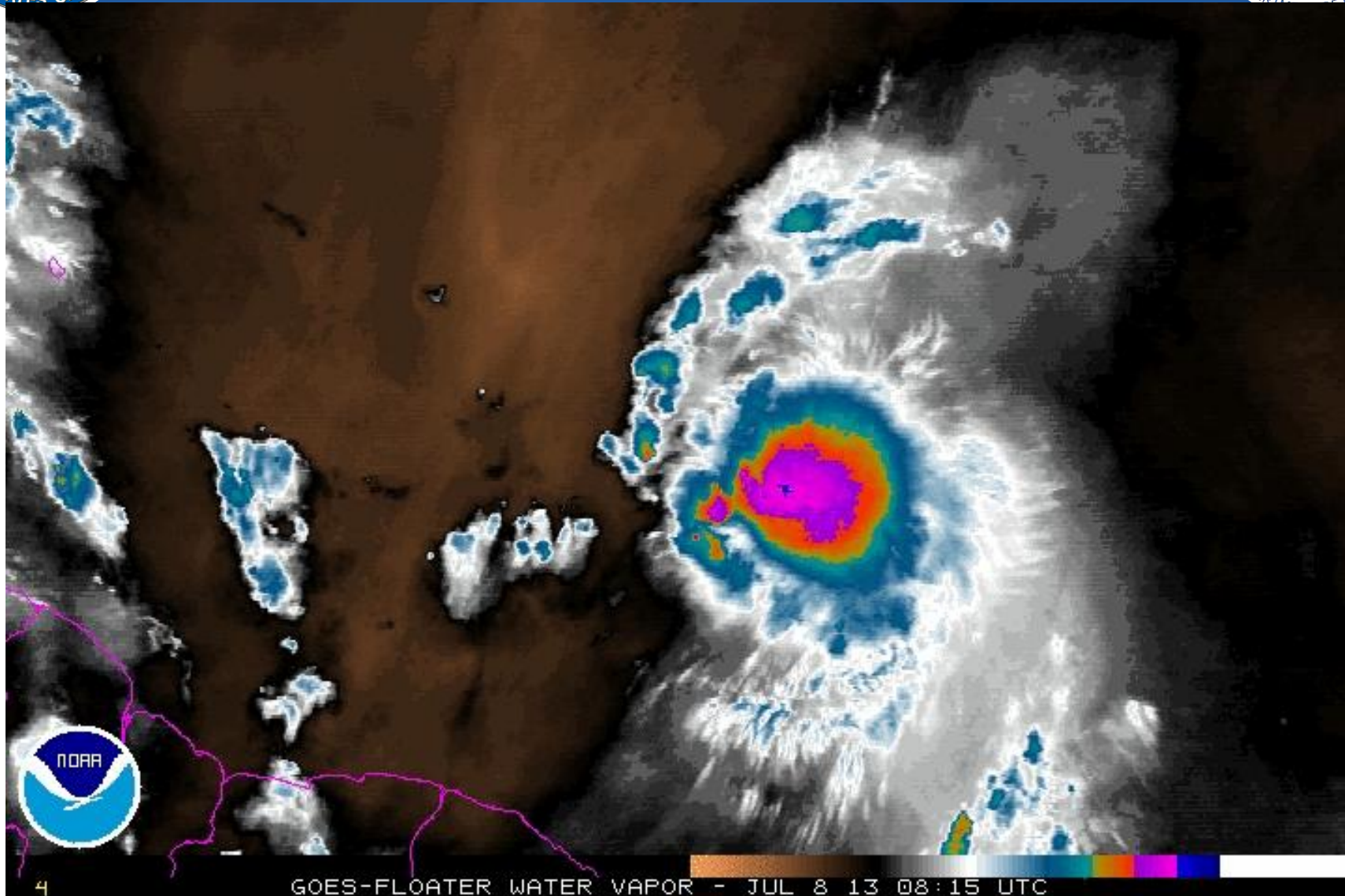


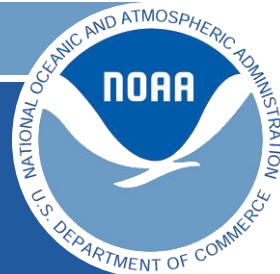
Chantal



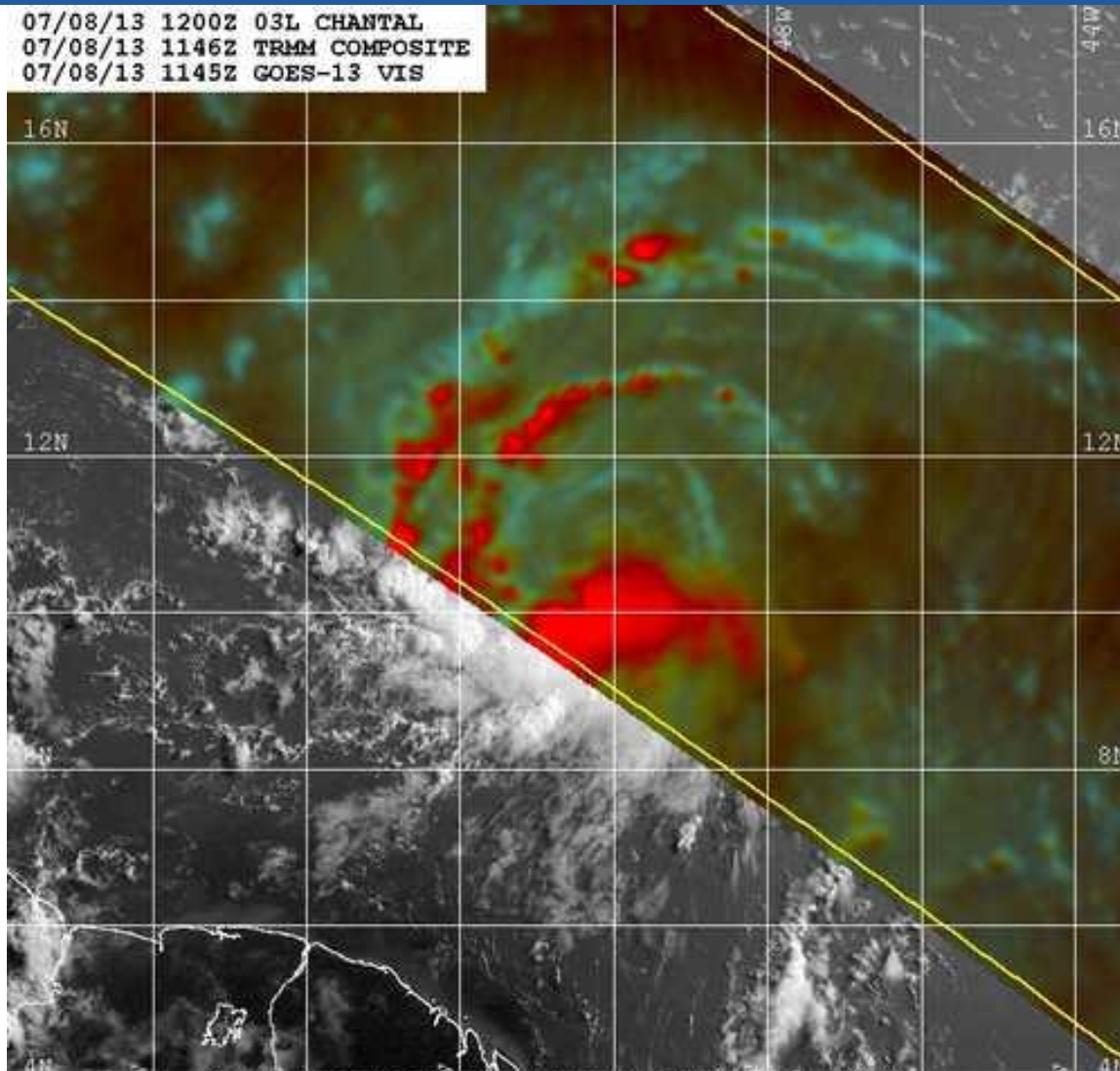


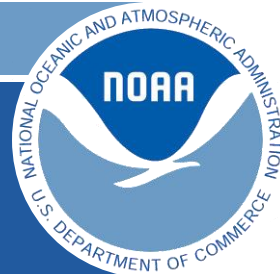
Chantal



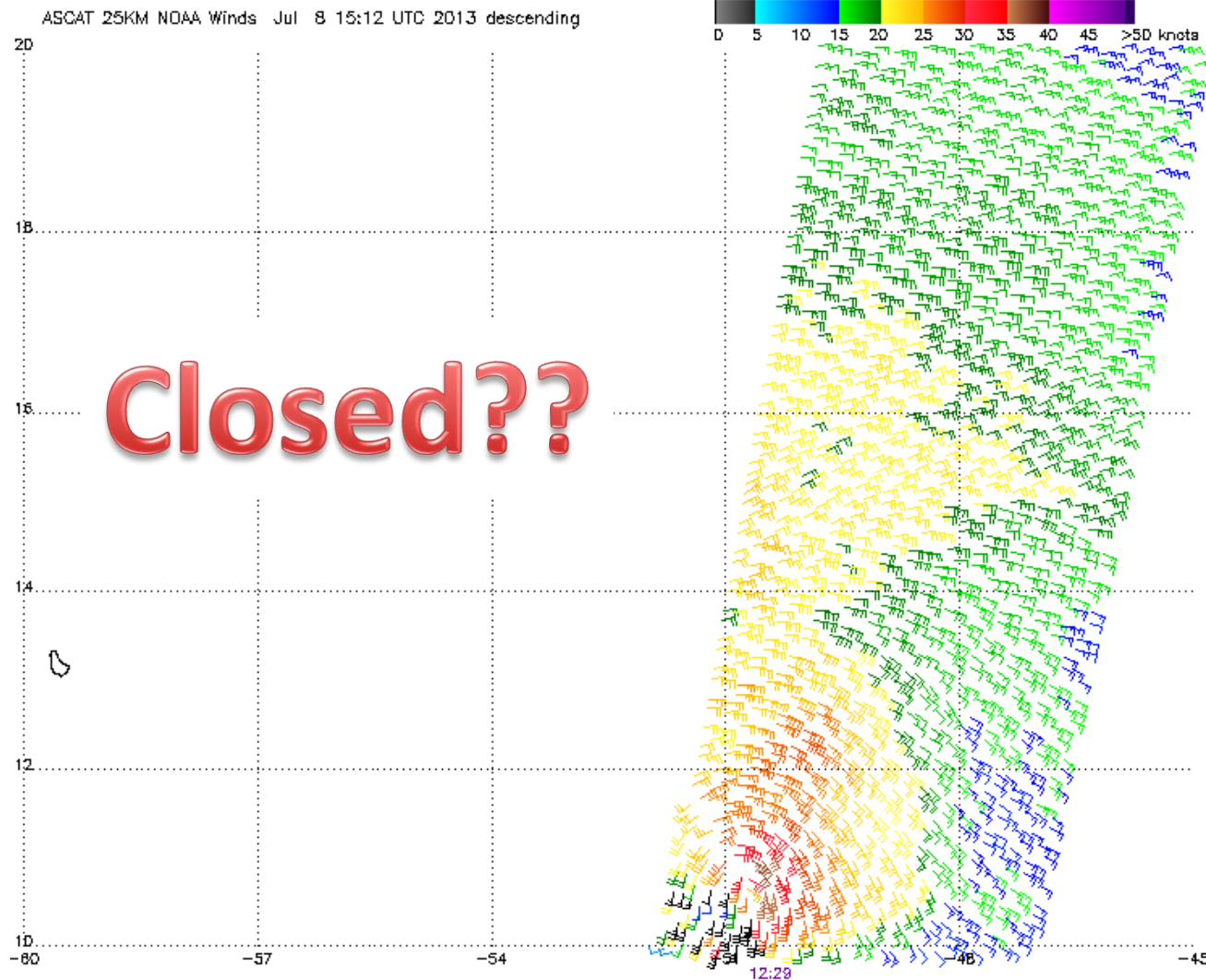


Chantal MW



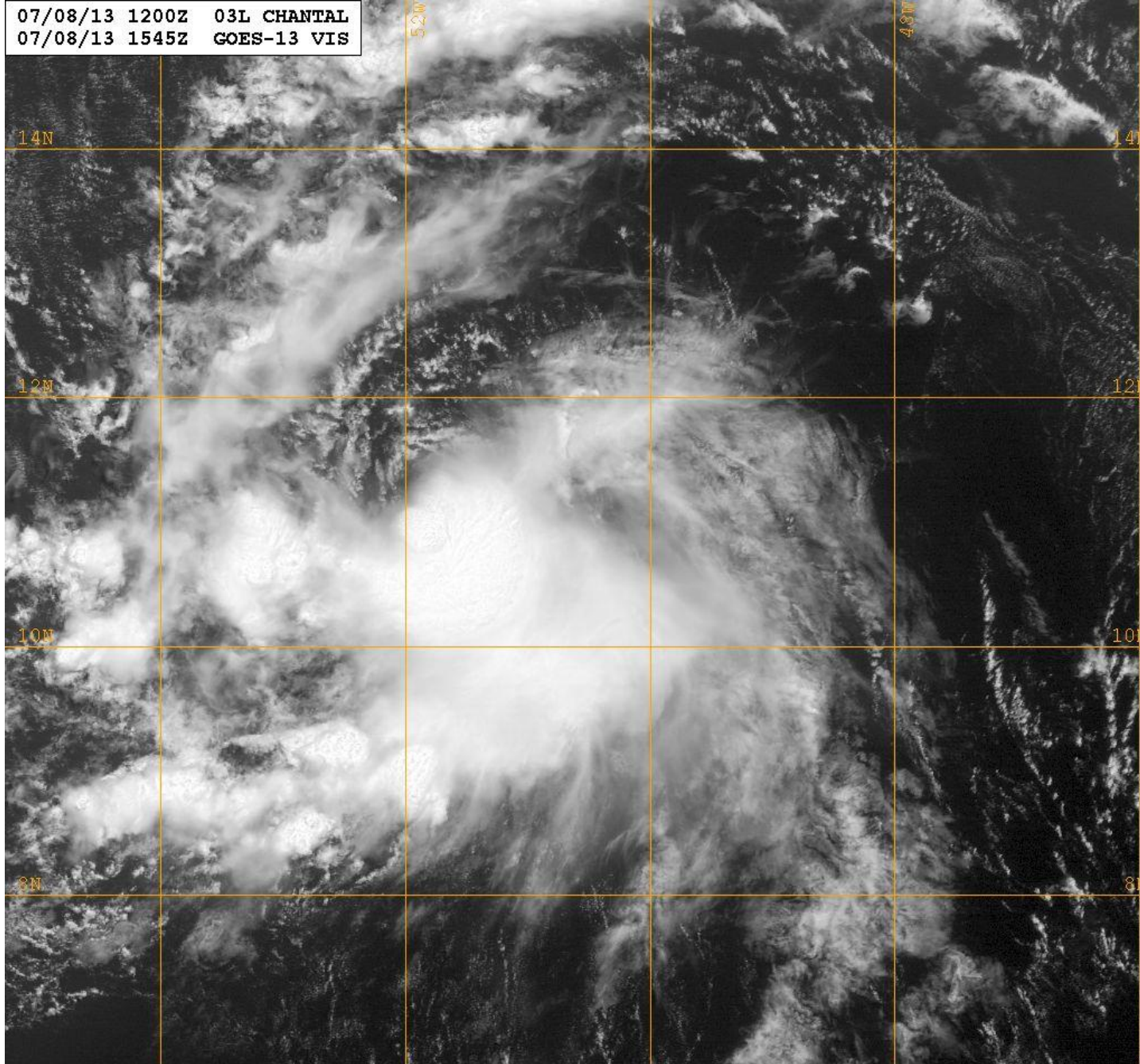


ASCAT



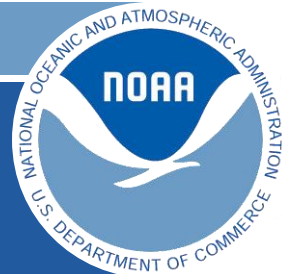
Note: 1) Times are GMT 2) Times along bottom correspond to measurement at 15N
3) Data buffer is 22 hrs from Jul 8 15:12 UTC 2013 4) Black circles indicate possible contamination
NOAA/NESDIS/Office of Research and Applications

07/08/13 1200Z 03L CHANTAL
07/08/13 1545Z GOES-13 VIS

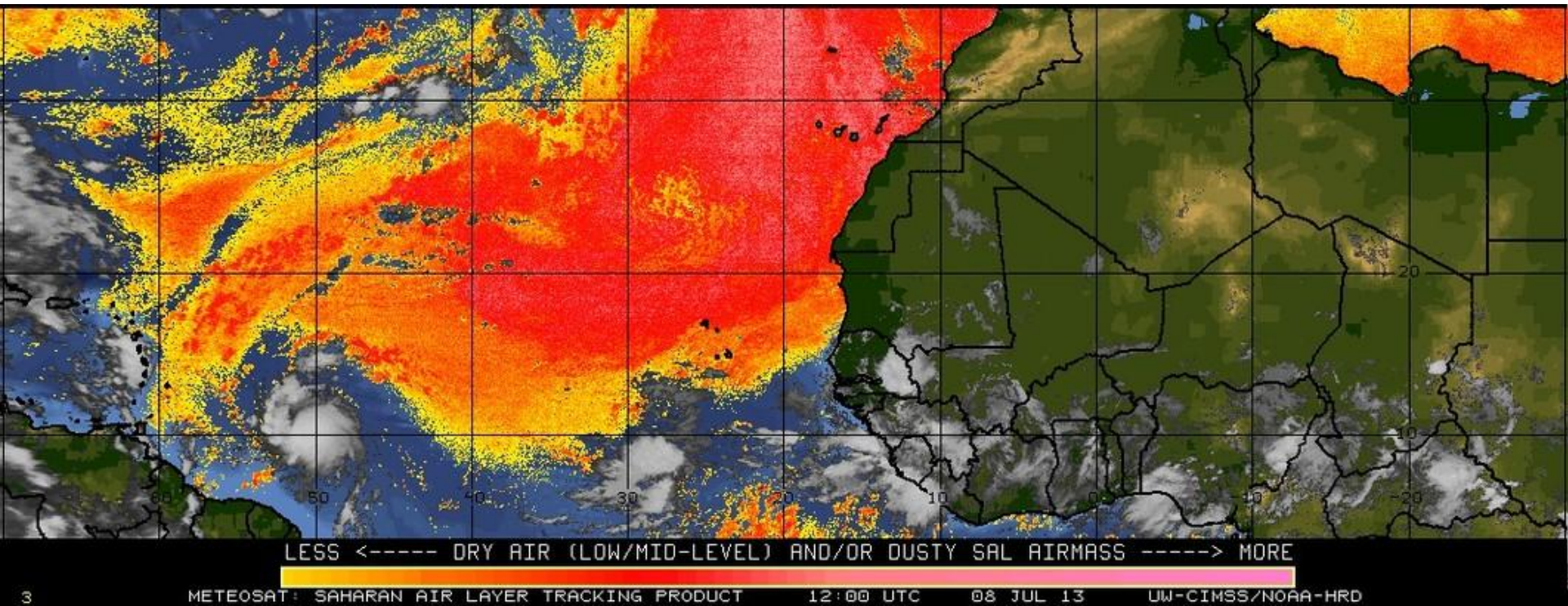


Dvorak Rating
T2.0/2.5

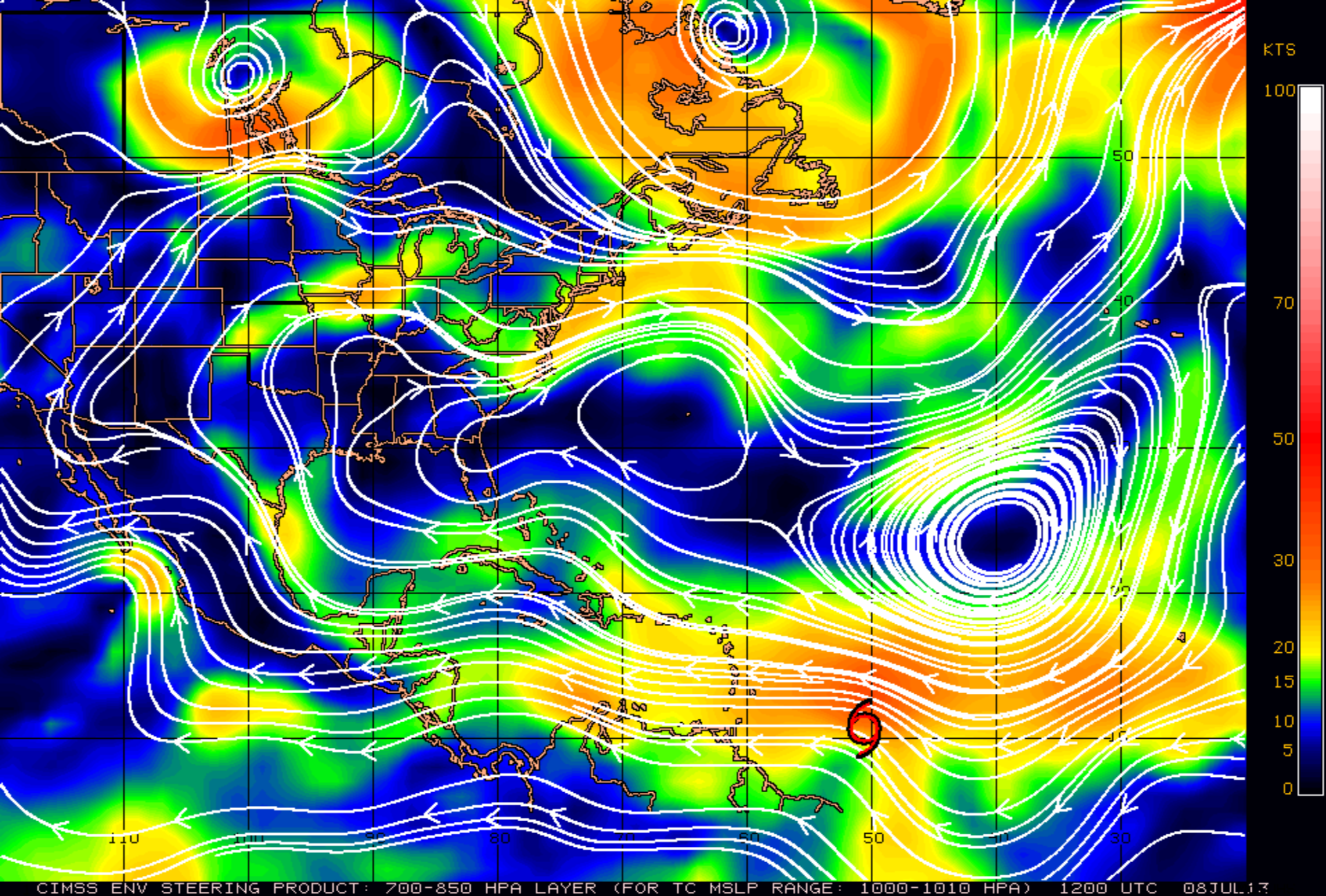
Naval Research Lab http://www.nrlmry.navy.mil/sat_products.html
<-- Visible (Sun elevation at center is 76 degrees) -->



SAL



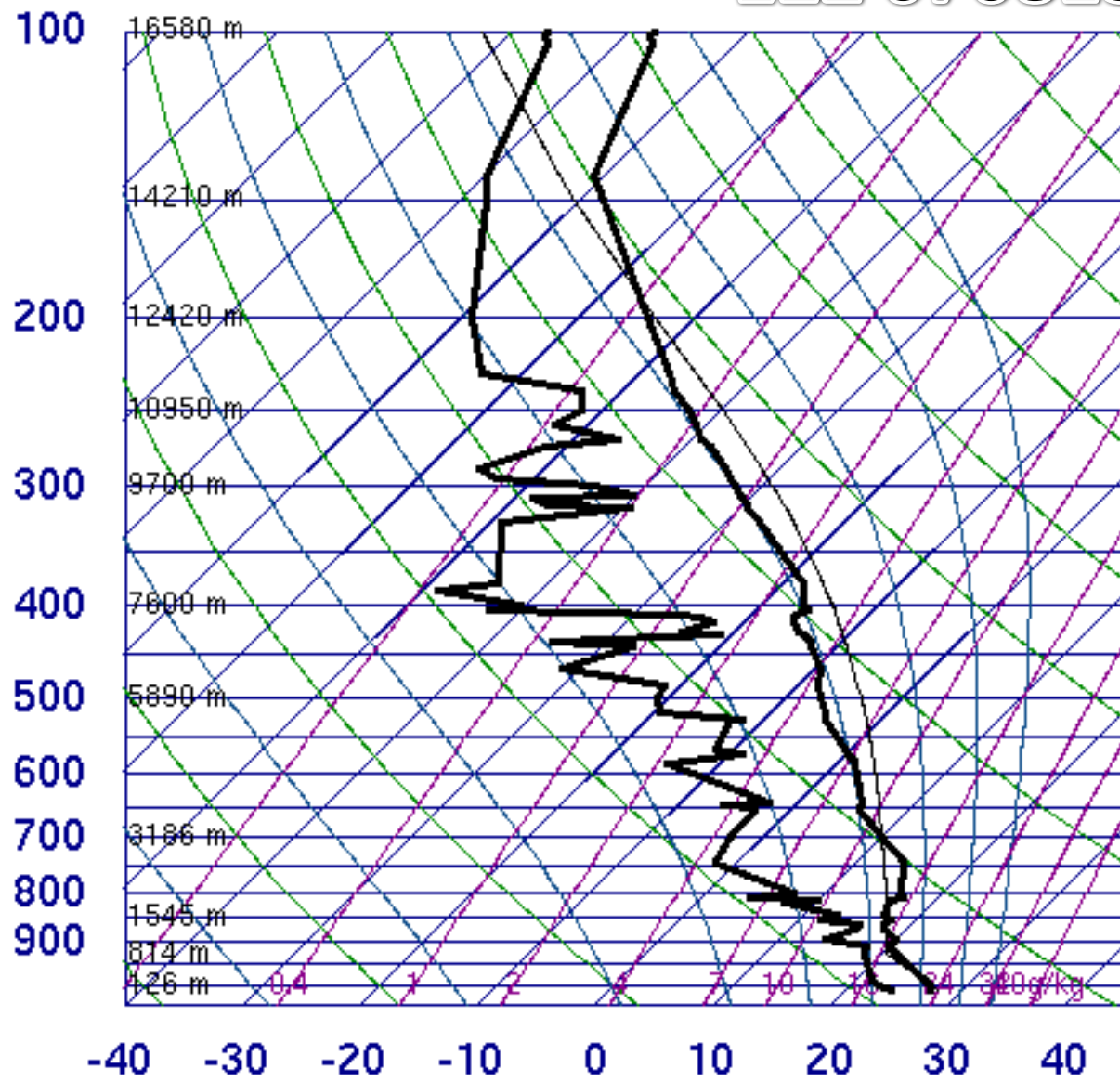
SAL Remains Away from Chantal



Strong Easterlies through 48 hours

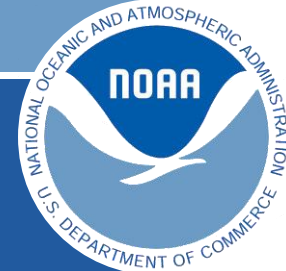
78954 TBPB Grantley Adams

12Z 070813



	SLAT	13.06
	SLOE	-59.48
	SELE	47.00
	SHOW	1.38
	LIFT	-3.44
	LFTV	-4.18
	SWET	224.7
	KINX	23.70
	CTOT	19.30
	VTOT	24.30
	TOTL	43.60
	CAPE	906.1
	CAPV	1079.
	CINS	-13.0
	CINV	-3.88
	EQLV	189.5
	EQTV	188.4
	LFCT	875.1
	LFCV	912.2
	BRCH	453.7
	BRCV	540.6
	CLT	293.4
	ICLP	924.2
	MLTH	300.1
	MLMR	16.59
	THCK	5764.
	PWAT	41.99

Easterly Winds as opposed to ESE



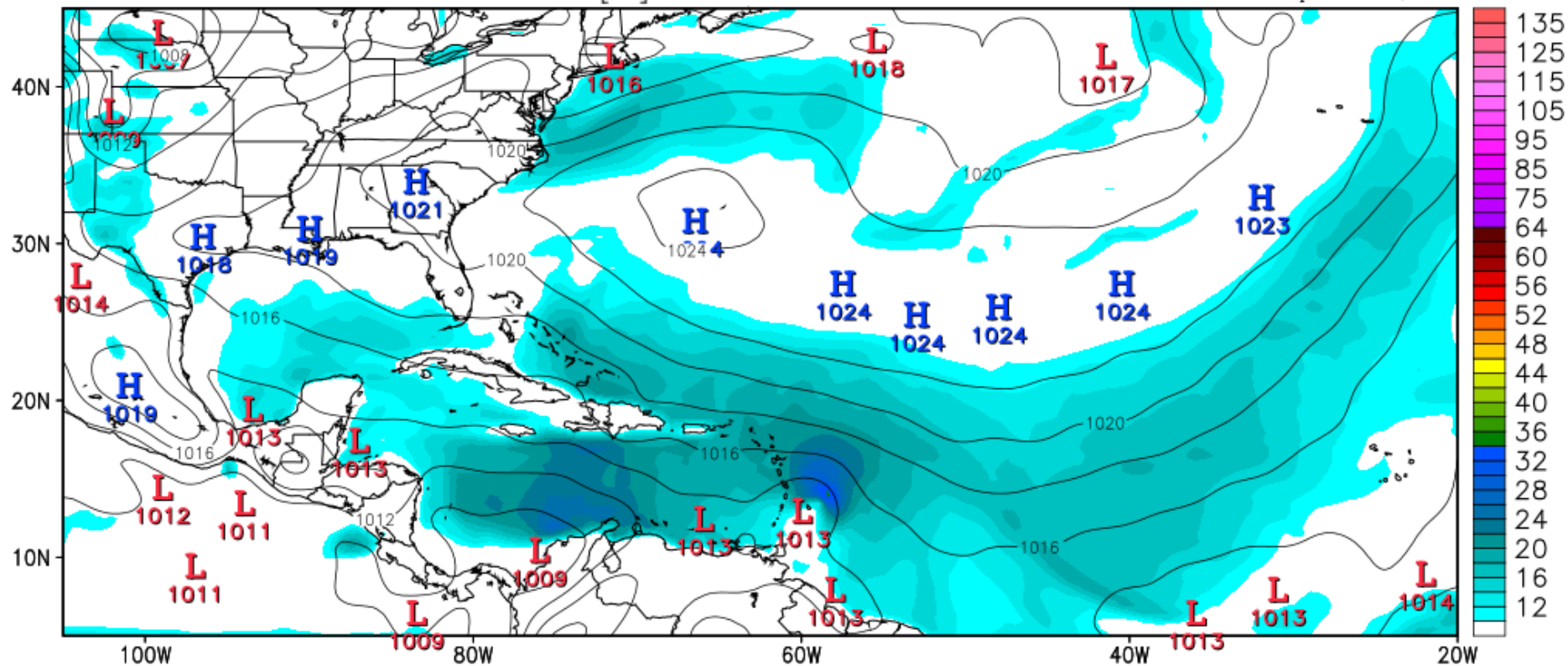
GFS + 27 hours

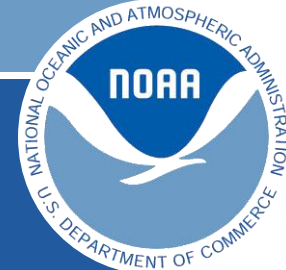
Near Barbados

GFS MSLP (mb) & 10m Wind Speed (kt)

Initial Time: 06z Jul 08 2013 Forecast Hour: [27] valid at 09z Jul 09 2013

Levi Cowan - tropicaltidbits.com





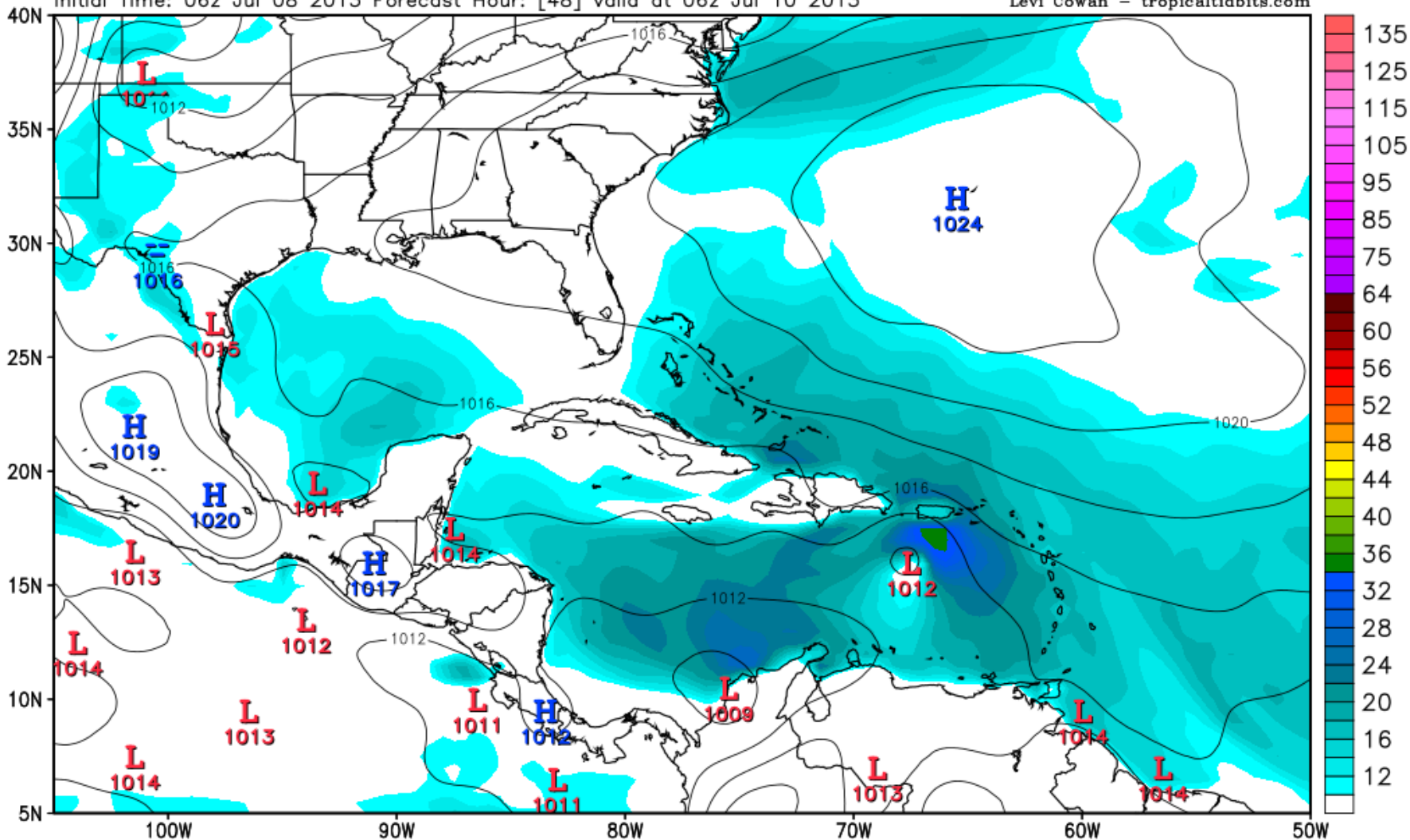
GFS + 48 hours

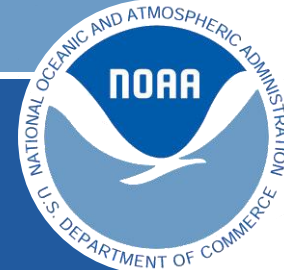
Likely Near Peak Intensity – GFS not handling Intensity Well

GFS MSLP (mb) & 10m Wind Speed (kt)

Initial Time: 06z Jul 08 2013 Forecast Hour: [48] valid at 06z Jul 10 2013

Levi Cowan – tropicaltidbits.com





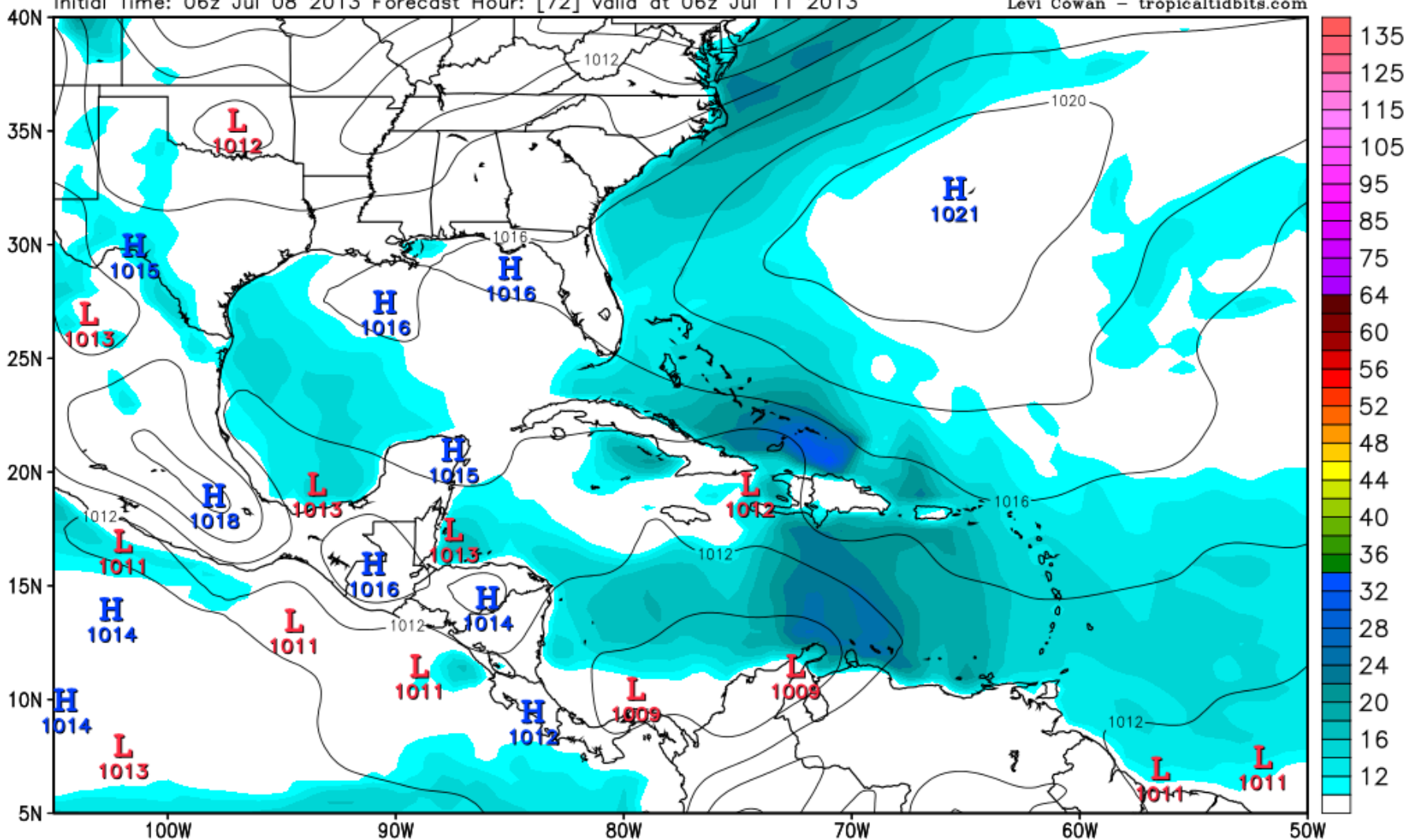
GFS + 72 hours

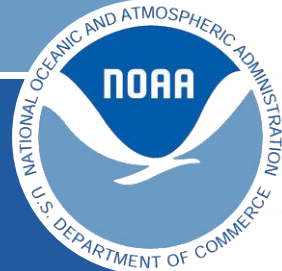
Main problem: Terrain Synoptics: Weakness Begins to Open

GFS MSLP (mb) & 10m Wind Speed (kt)

Initial Time: 06z Jul 08 2013 Forecast Hour: [72] valid at 06z Jul 11 2013

Levi Cowan - tropicaltidbits.com



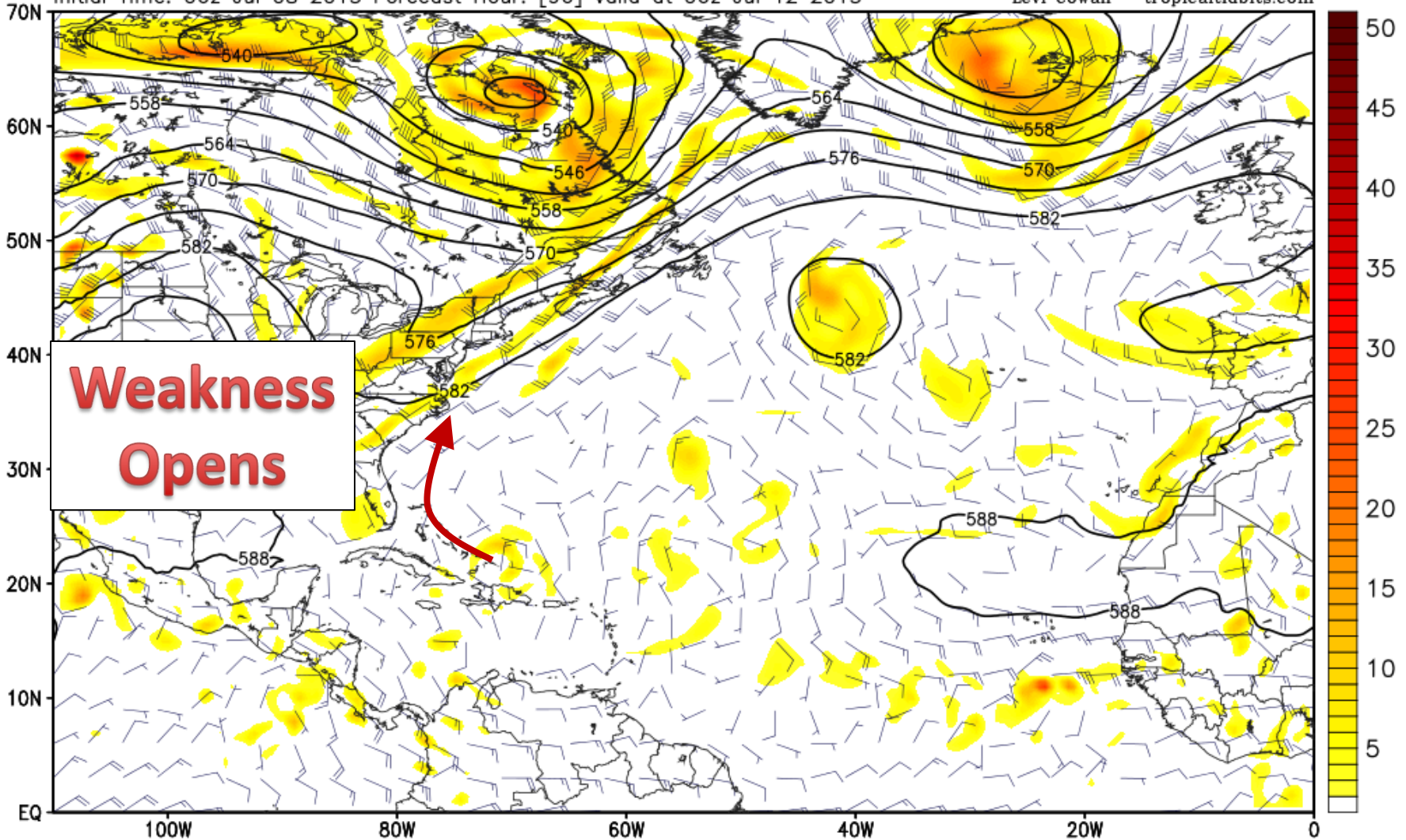


GFS + 96 hours

GFS 500mb Geopotential Height (dam), Cyclonic Vorticity ($s^{-1} \cdot 10^{-8}$, shaded), and Wind (kt)

Initial Time: 06z Jul 08 2013 Forecast Hour: [96] valid at 06z Jul 12 2013

Levi Cowan - tropicaltidbits.com

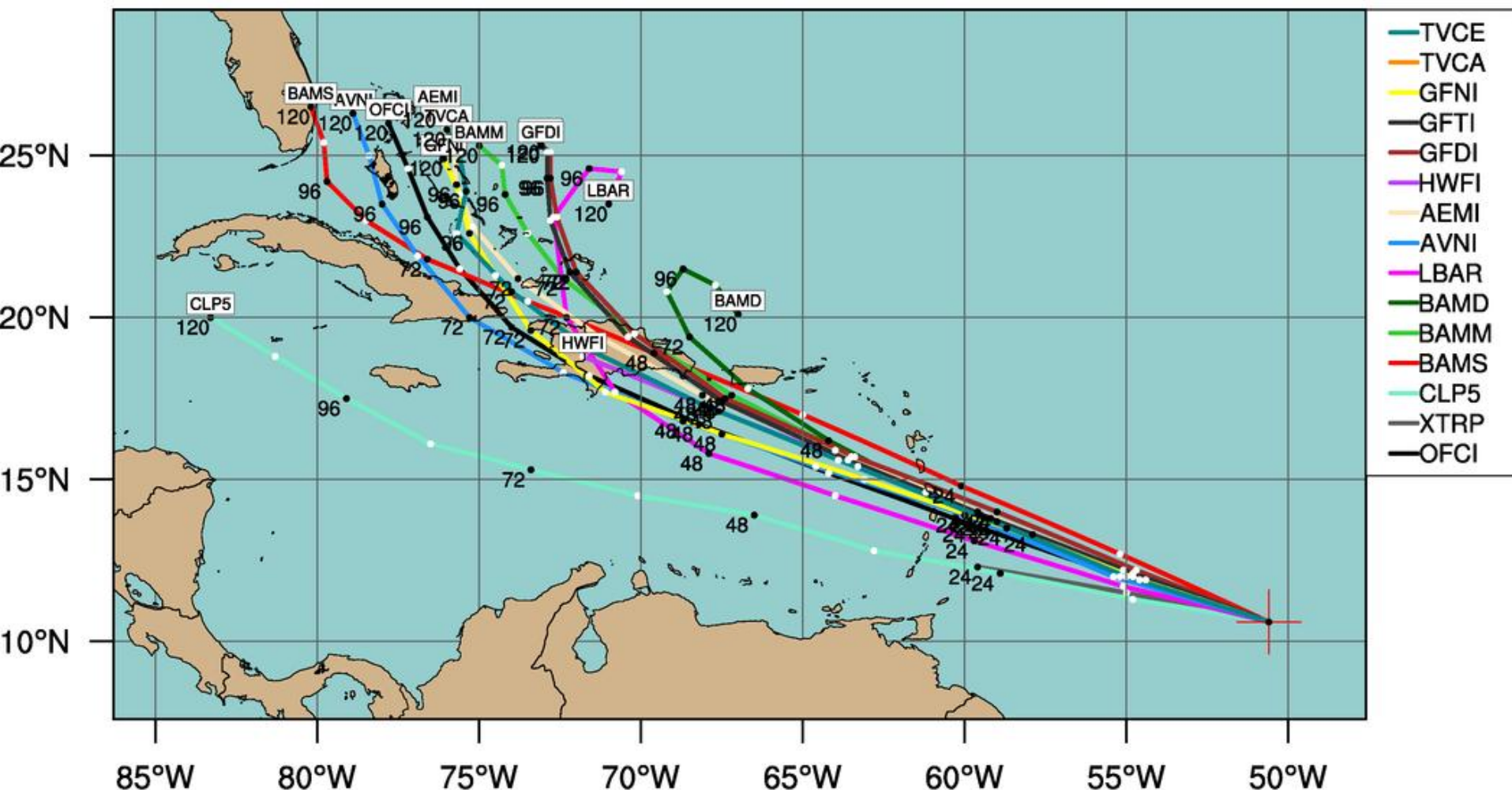


TROPICAL STORM CHANTAL (AL03)

Early-cycle track guidance initialized at 1200 UTC, 08 July 2013

Current Intensity: 40 kt

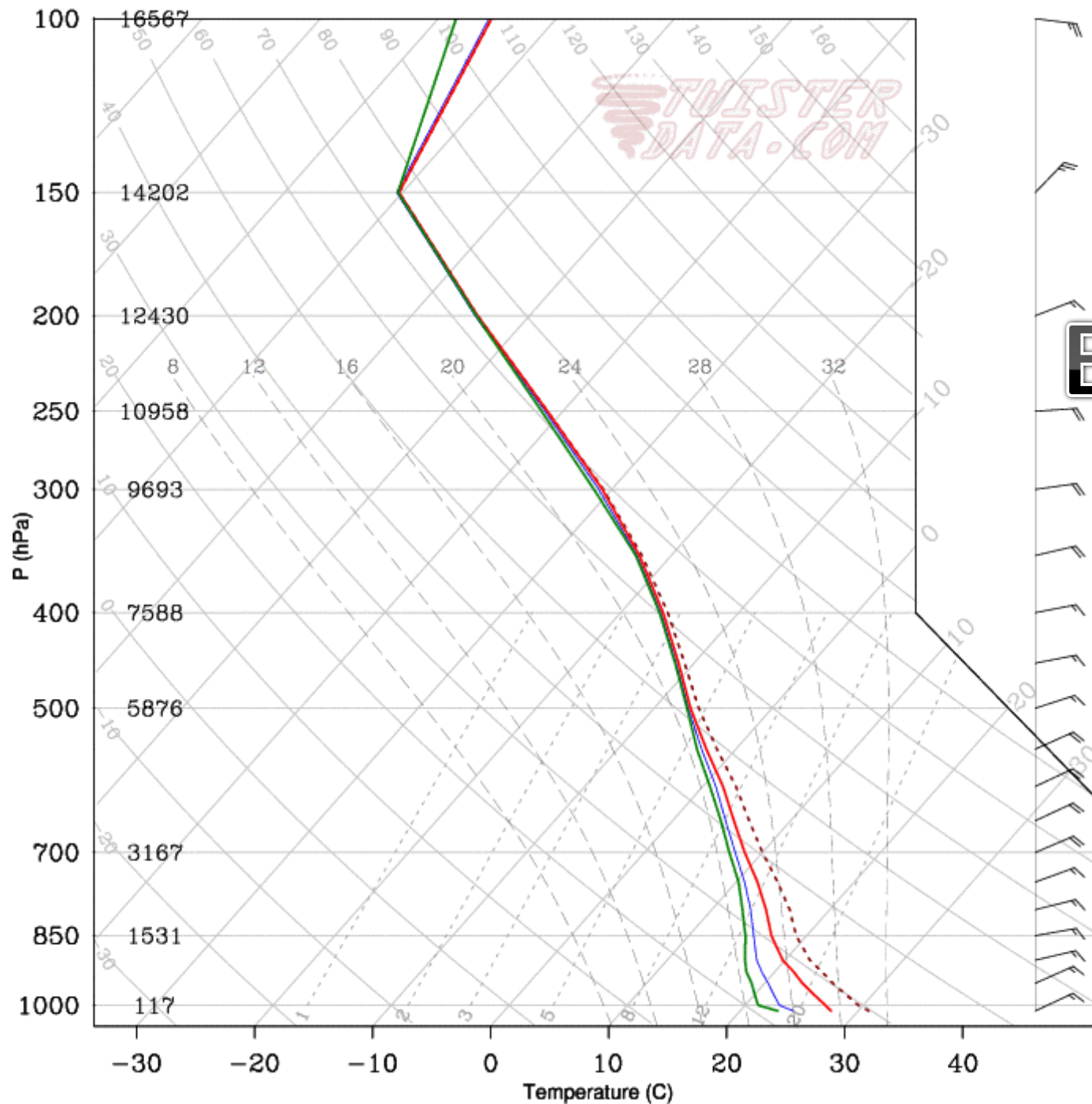
Current Basin: North Atlantic



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which can be accessed at: <http://www2.ucar.edu/terms-of-use>

Plot generated at 1349 UTC 08 July 2013





Site:
Barbados

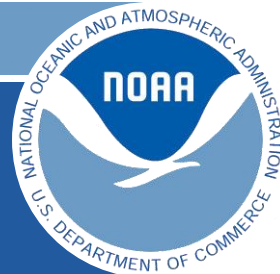
* ATLANTIC SHIPS INTENSITY FORECAST *

* GOES AVAILABLE, OHC AVAILABLE *

* CHANTAL AL032013 07/08/13 12 UTC *

TIME (HR)	0	6	12	18	24	36	48	60	72	84	96	108	120
V (KT) NO LAND	40	43	46	49	52	59	61	63	62	61	57	60	60
V (KT) LAND	40	43	46	49	52	59	61	61	57	50	46	48	48
V (KT) LGE mod	40	43	46	48	51	56	60	53	57	49	47	47	48
Storm Type	TROP	TROP	TROP	TROP	TROP	TROP	TROP	TROP	TROP	TROP	TROP	TROP	TROP
SHEAR (KT)	12	9	10	17	19	17	26	25	31	28	28	18	18
SHEAR ADJ (KT)	6	4	2	0	1	0	0	4	1	3	0	0	0
SHEAR DIR	318	327	292	300	312	284	275	268	283	271	291	286	300
SST (C)	27.7	27.6	27.7	27.8	28.0	28.2	28.2	28.2	28.7	28.4	28.2	28.2	27.9
POT. INT. (KT)	137	136	137	139	141	144	143	142	148	142	139	138	133
ADJ. POT. INT.	149	147	149	151	152	151	146	140	141	131	126	121	115
200 MB T (C)	-54.6	-54.3	-54.2	-54.4	-54.4	-54.2	-54.4	-54.1	-54.4	-53.7	-54.0	-53.9	-54.5
TH_E DEV (C)	9	10	10	10	10	12	11	12	11	10	10	9	9
700-500 MB RH	60	59	60	58	56	53	56	55	58	60	60	63	62
GFS VTEX (KT)	9	8	8	9	9	9	9	8	6	6	3	4	3
850 MB ENV VOR	42	45	40	28	22	15	-7	-4	-35	-56	-103	-71	-55
200 MB DIV	-11	8	17	16	18	43	31	73	69	31	21	30	52
700-850 TADV	-5	-5	1	6	2	6	19	3	8	3	2	0	-3
LAND (KM)	651	629	612	442	337	345	157	2	47	22	200	313	259
LAT (DEG N)	10.6	11.3	11.9	12.8	13.6	15.3	16.7	18.1	19.6	21.3	23.3	24.8	25.8
LONG (DEG W)	50.6	52.9	55.1	57.5	59.8	64.3	68.5	71.9	74.5	76.0	76.5	77.1	77.6
STM SPEED (KT)	23	23	24	24	24	22	19	16	13	10	9	7	5
HEAT CONTENT	39	18	30	31	33	25	21	16	33	15	20	25	24

Shear SST/HC ML RH Land Outflow

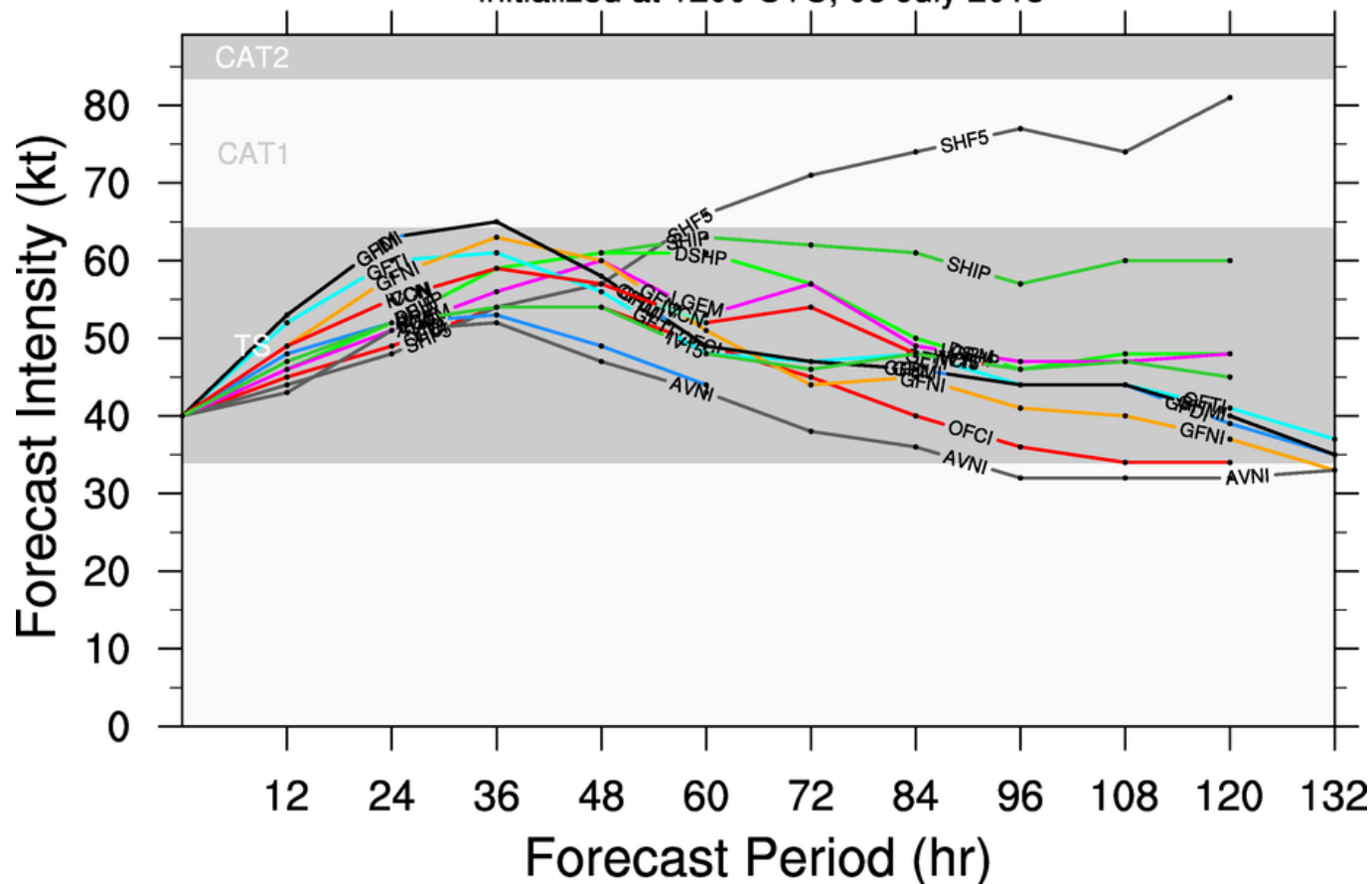


Intensity Models

TROPICAL STORM CHANTAL (AL03)

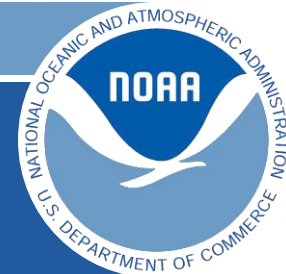
Early-cycle intensity guidance

initialized at 1200 UTC, 08 July 2013

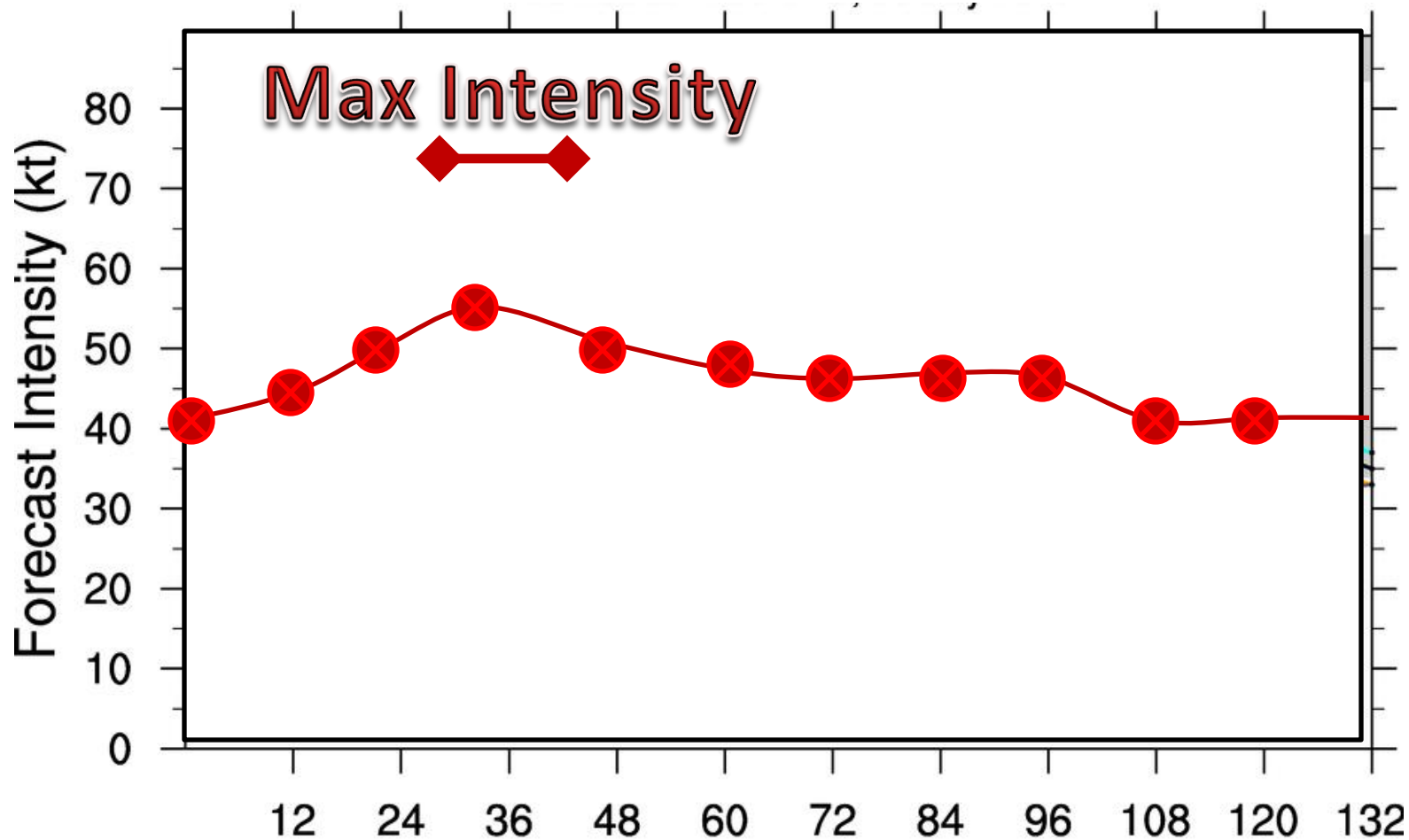


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which can be accessed at: <http://www2.ucar.edu/terms-of-use>

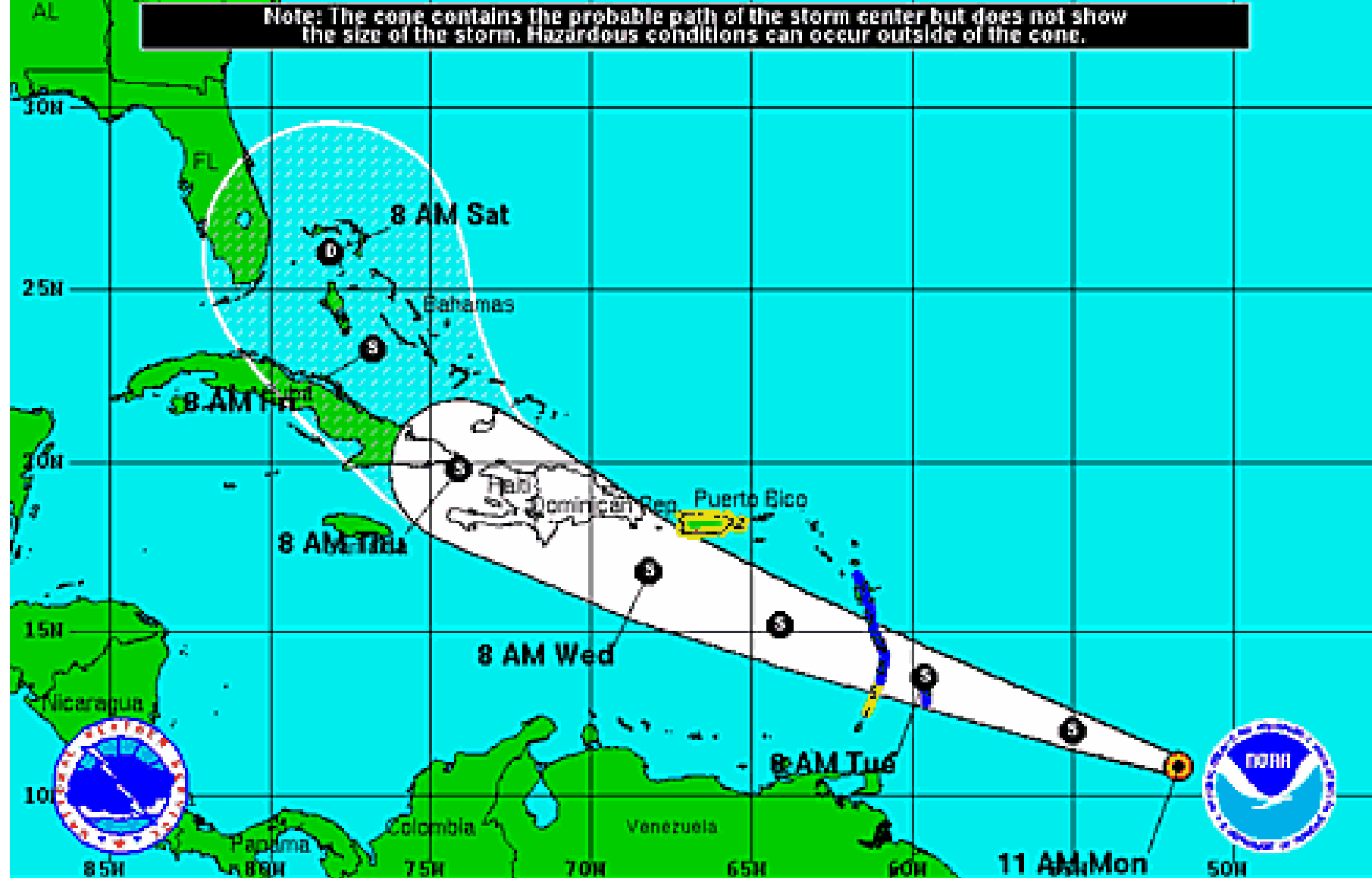
Plot generated at 1349 UTC 08 July 2013



My Forecast



Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.



Tropical Storm Chantal

Monday July 8, 2013

11 AM EDT Advisory 3

NWS National Hurricane Center

Current Information:

Center Location 10.9 N 51.7 W

Max Sustained Wind 45 mph

Movement WNW at 25 mph

Forecast Positions:

● Tropical Cyclone ○ Post-Tropical

Sustained Winds: D < 30 mph

S 30-73 mph H 74-110 mph M > 110mph

Potential Track Area:

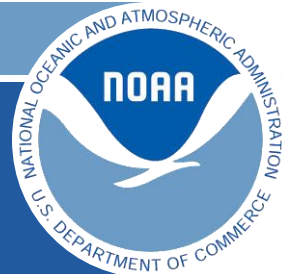
Day 1-3 Day 4-5

Watches:

Hurricane Trop.Storm

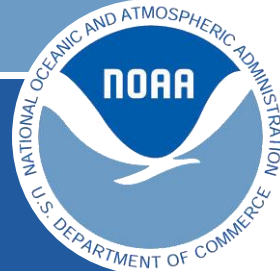
Warnings:

Hurricane Trop.Storm

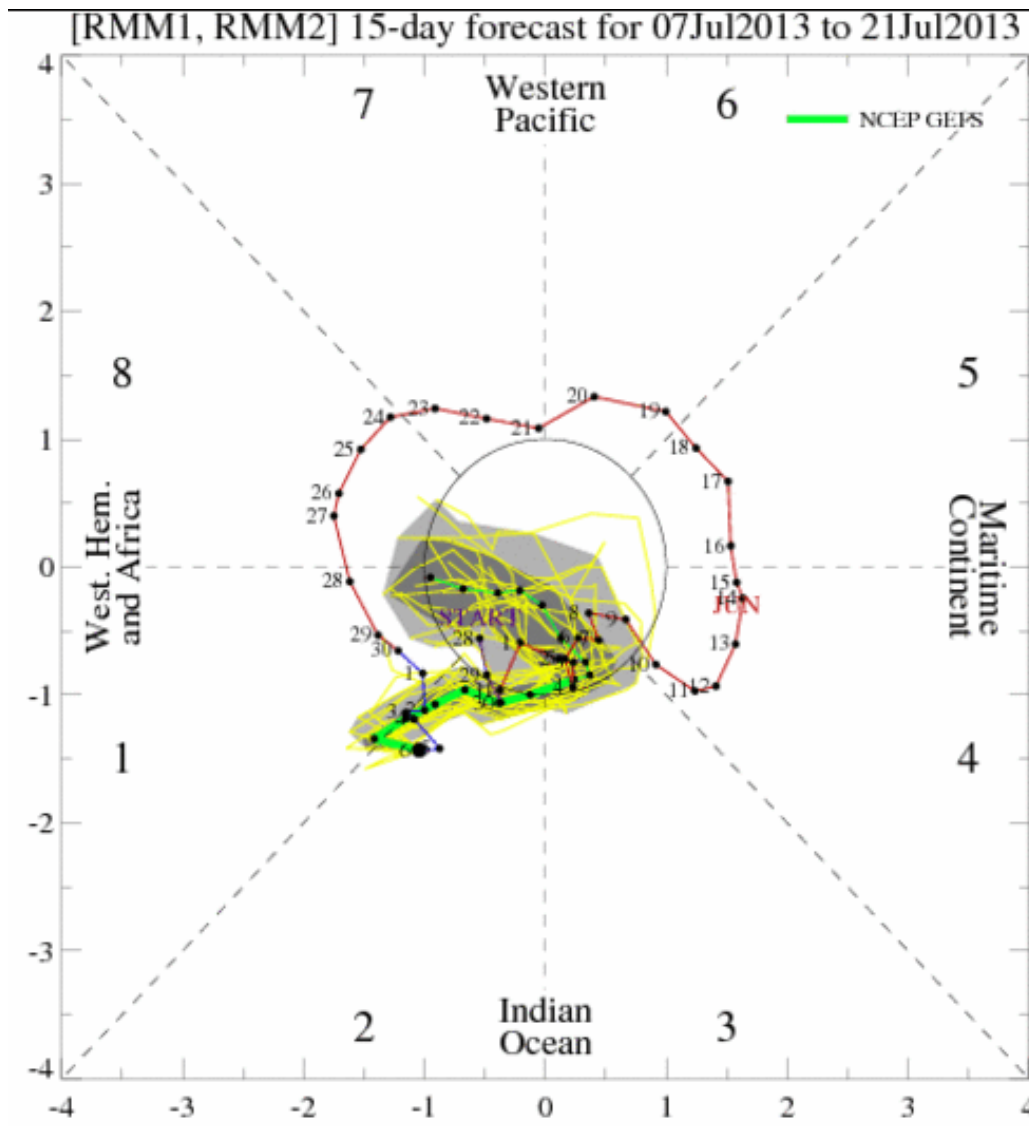


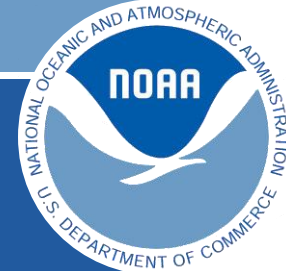
A Look into the Future

- Climate Signals (MJO)
- Forecast for the Upcoming Week



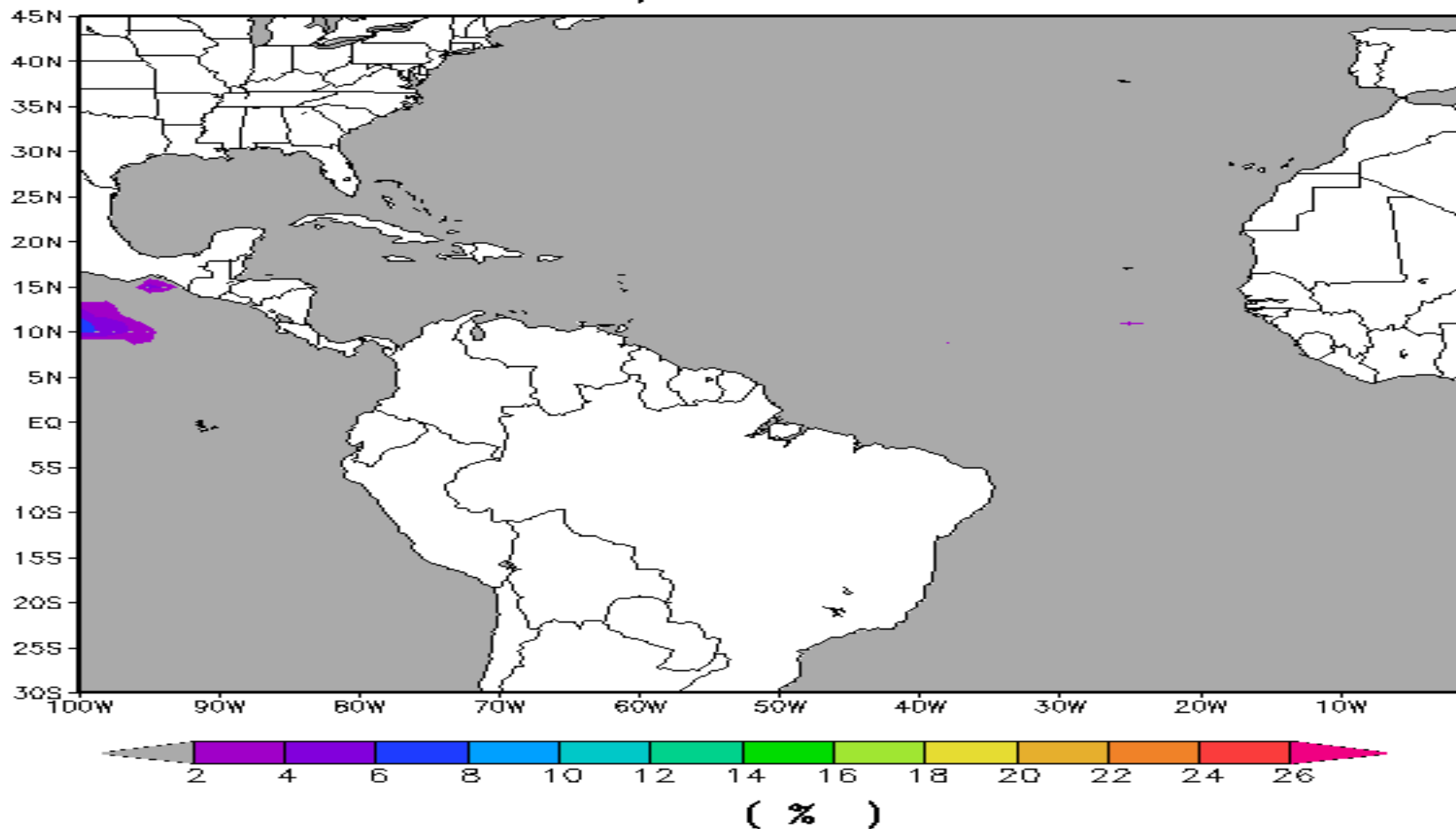
MJO





Tropical Cyclone Formation Probability

07 JUL 2013 18Z, 0 to 48 hr CURR TCFP



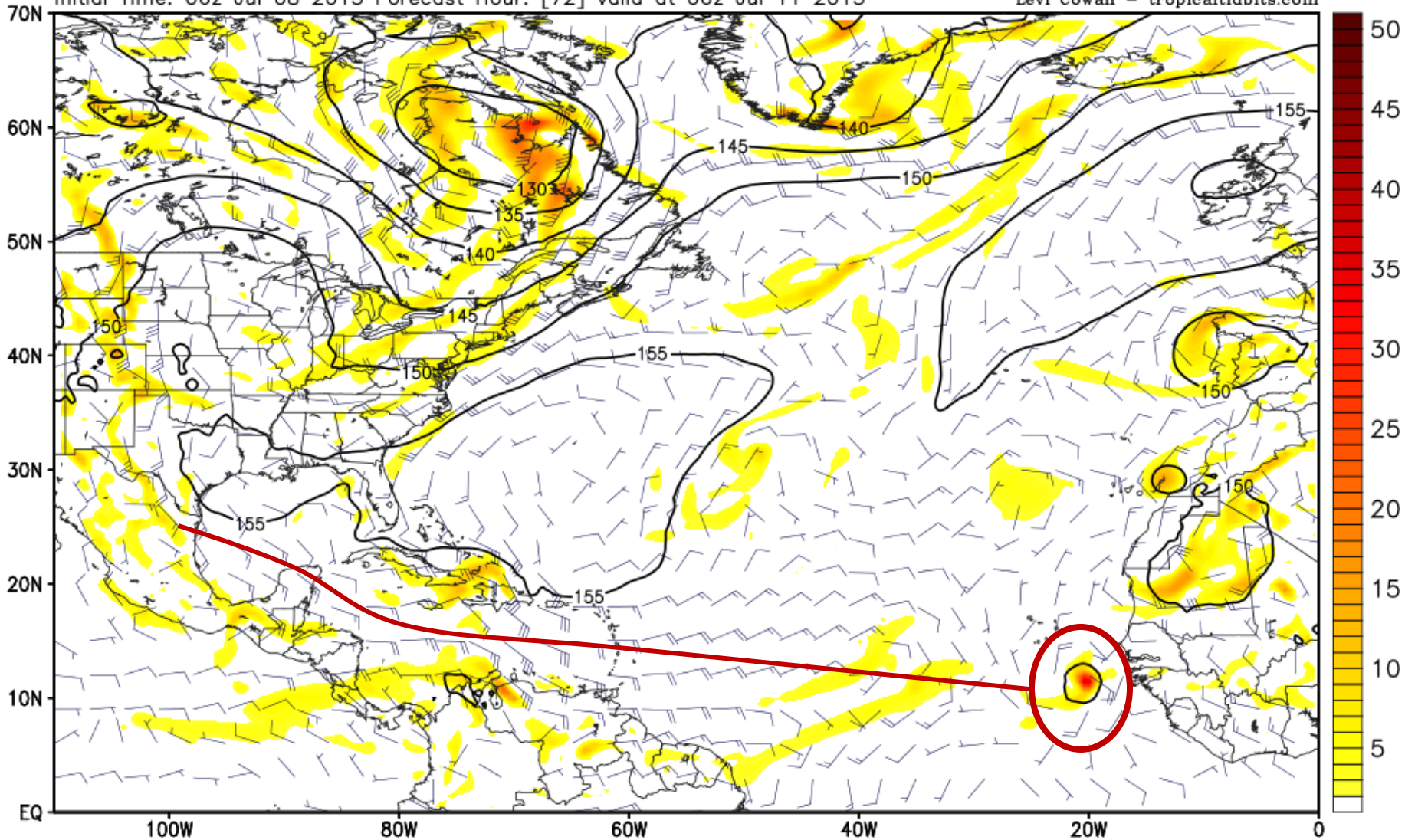


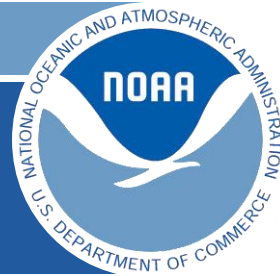
TW

GFS 850mb Geopotential Height (dam), Cyclonic Vorticity ($s^{-1} \times 10^{-6}$, shaded), and Wind (kt)

Initial Time: 06z Jul 08 2013 Forecast Hour: [72] valid at 06z Jul 11 2013

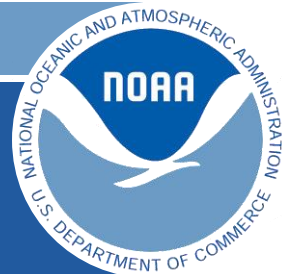
Levi Cowan - tropicaltidbits.com





The Week Ahead

- Chantal Moves Across the Greater Antilles as a strong Tropical Storm
- (Possibly phantom) storm moves off the coast of Africa
- Chantal Hits the Gulf Stream as a Weak Tropical Storm



Thank
You!