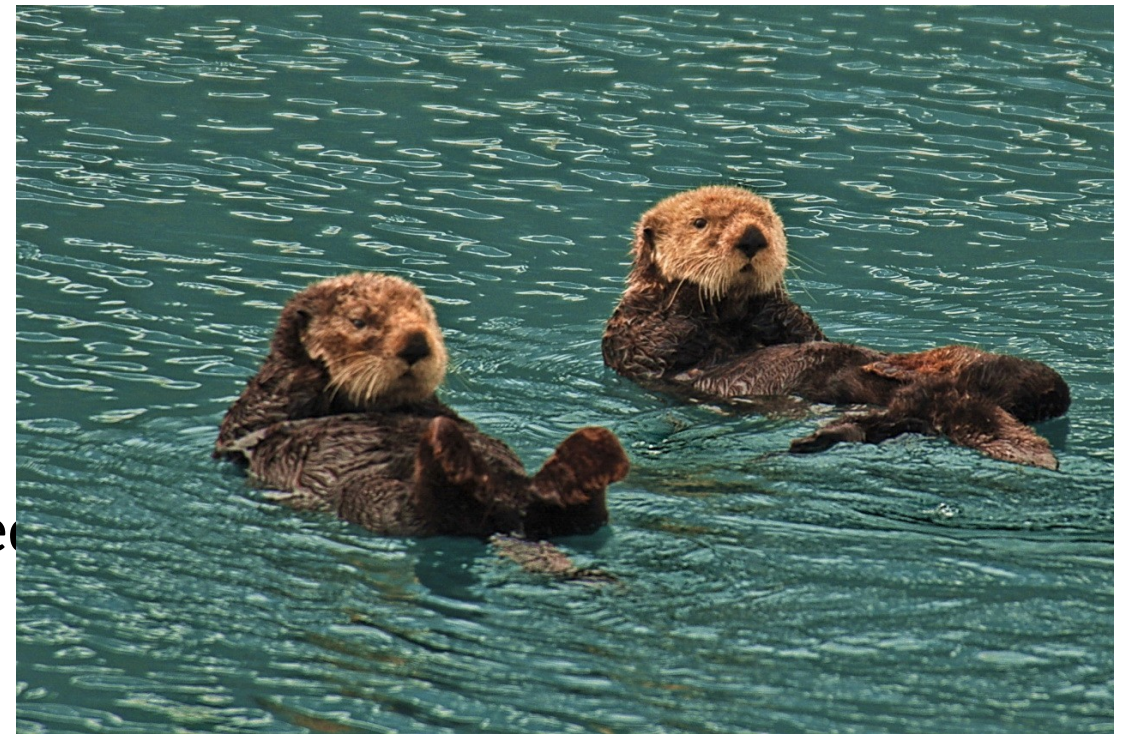


EUREC⁴A ad hoc briefing

8 Feb 2020

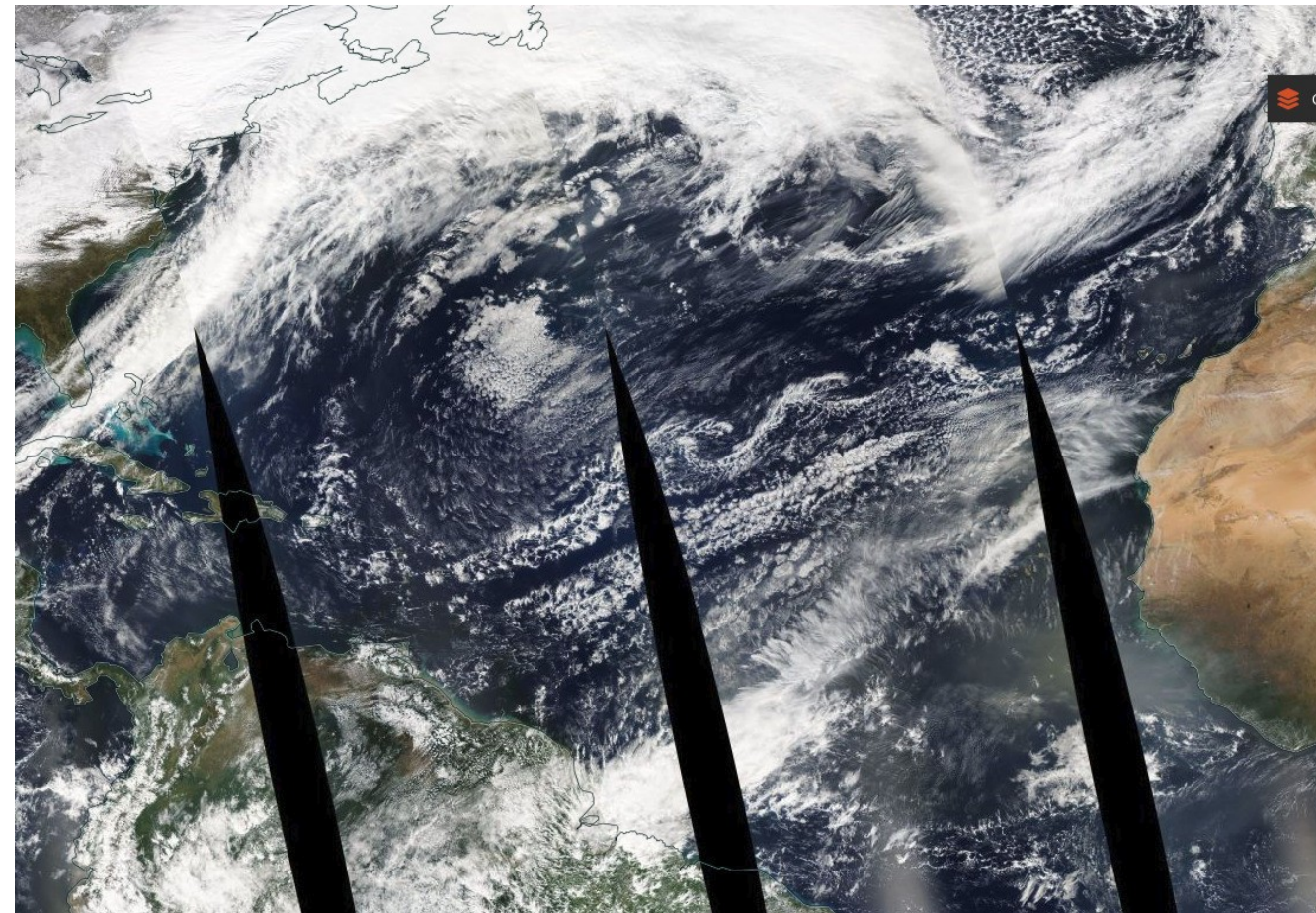
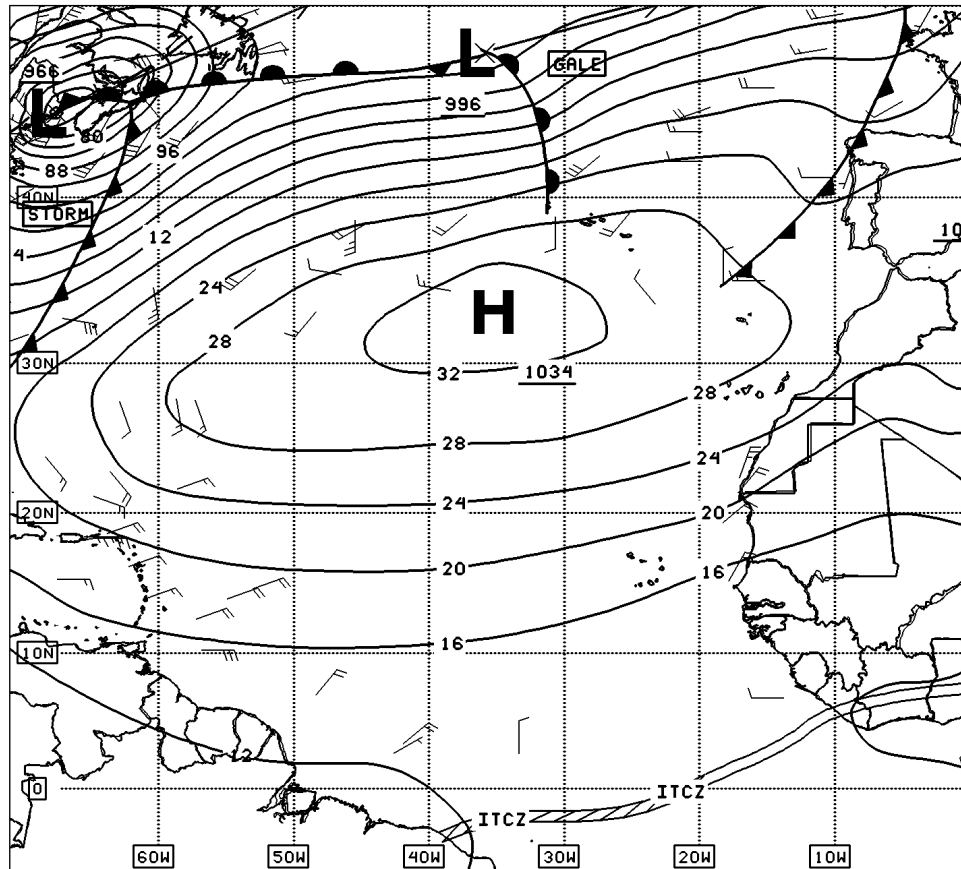
CC-BY-SA 2.0 Wikipedia



NOAA Synoptic analysis, 0 Z and Aqua 07/02

Synoptic features: surface high in central Atlantic, driving strong winds

Gale force warning active, 35 knot gusts



00Z EASTERN TRPCL SFC ANALYSIS
ISSUED: Sat Feb 8 02:24:03 UTC 2020

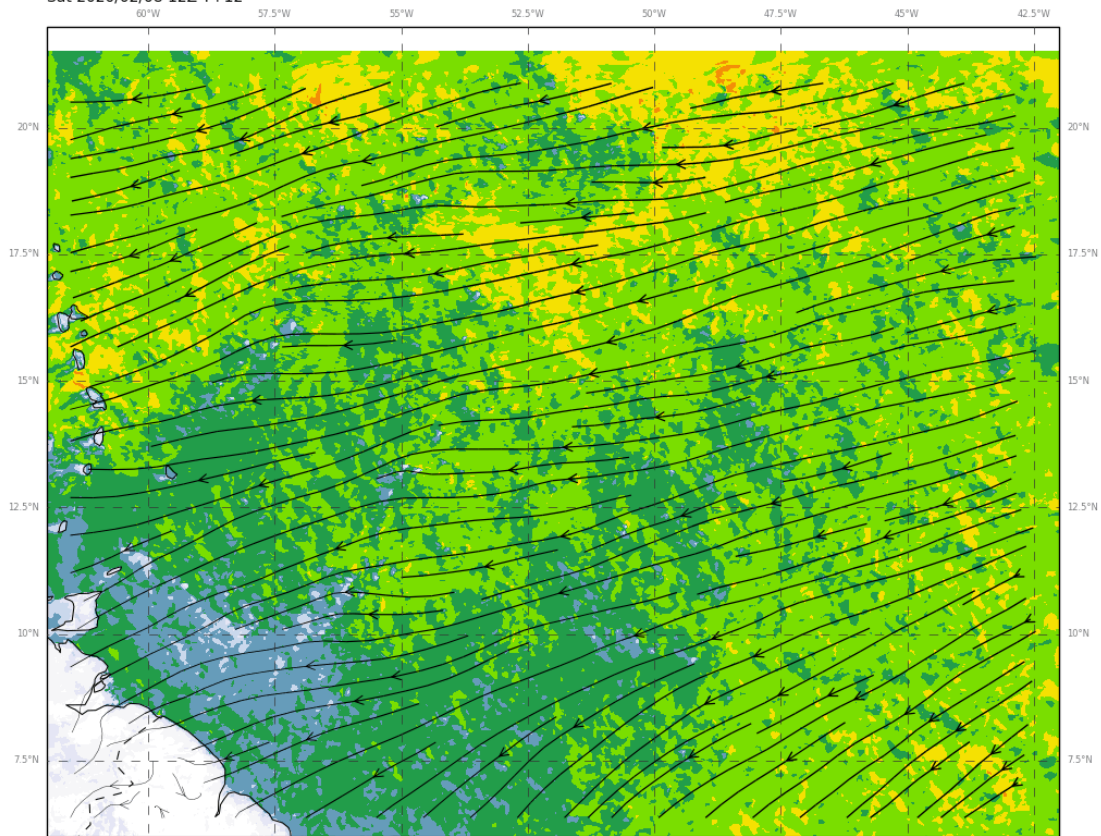


NHC/TROPICAL ANALYSIS AND FORECAST BRANCH
MIAMI, FLORIDA

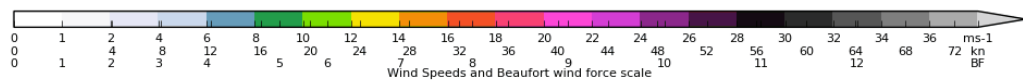
BY TAFB ANALYST TORRES
COLLABORATING CENTERS: NHC OPC WPC

UM surface and 950 hPa wind (12Z)

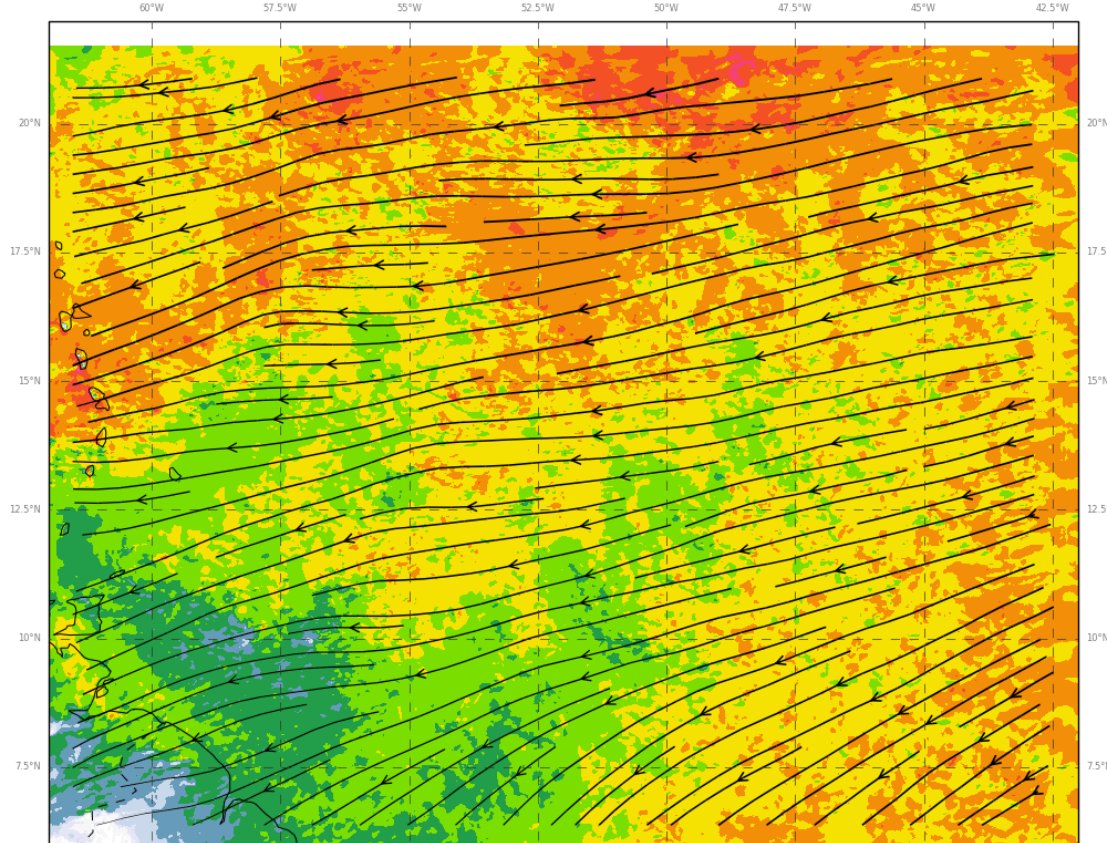
Wind speed and direction at 10 m
Met Office EUREC4A 2km from 2020/02/08 00Z
Sat 2020/02/08 12Z T+12



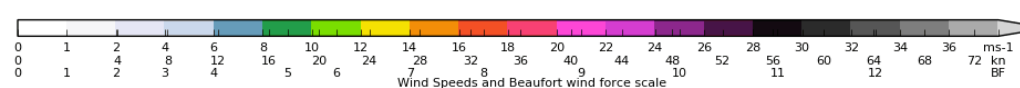
MIN=0.000, MAX=16.004, MEAN=10.053, SD=2.208, RMS=10.292



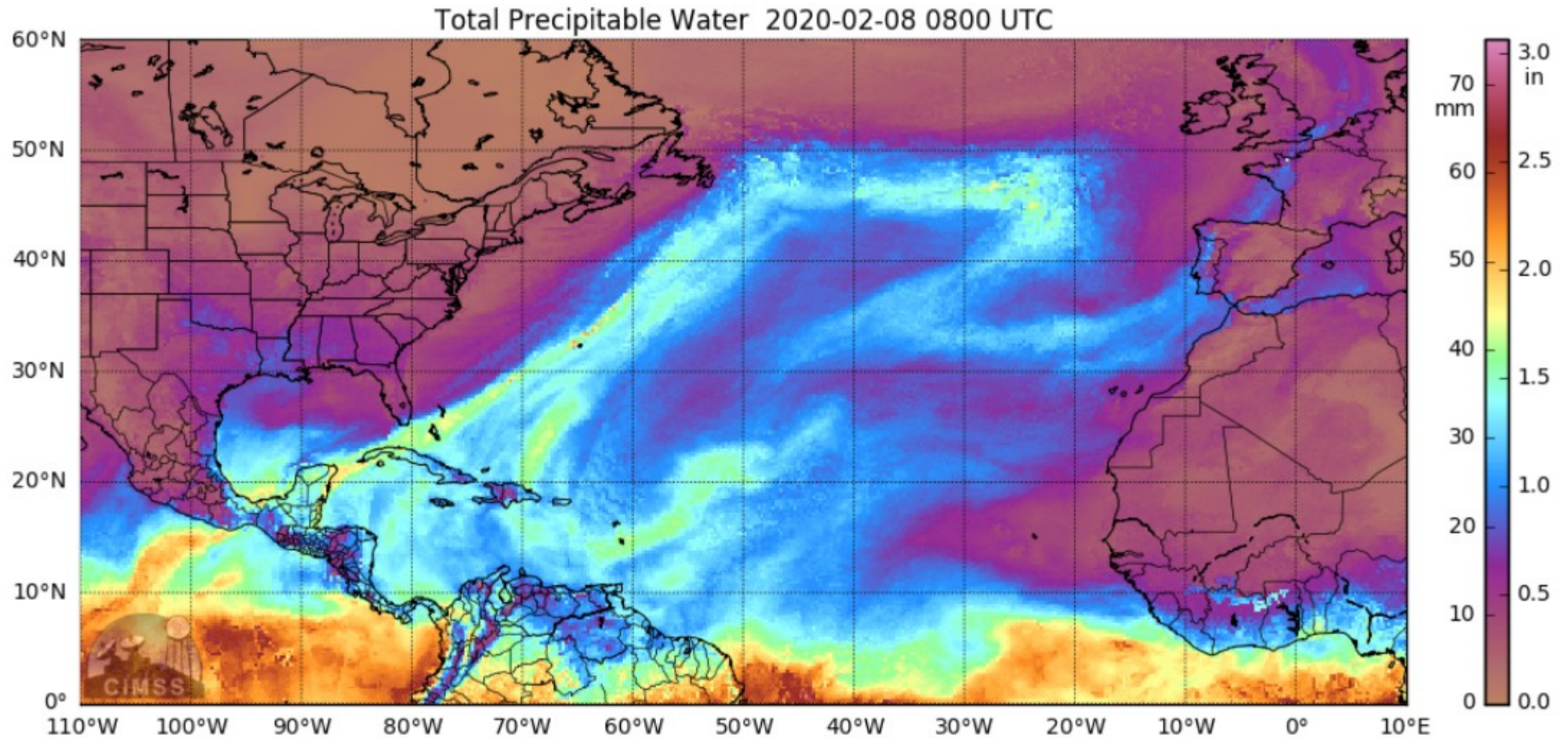
Wind speed and direction at 950 hPa
Met Office EUREC4A 2km from 2020/02/08 00Z
Sat 2020/02/08 12Z T+12



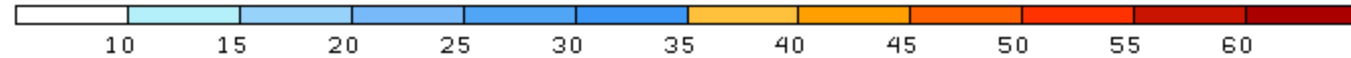
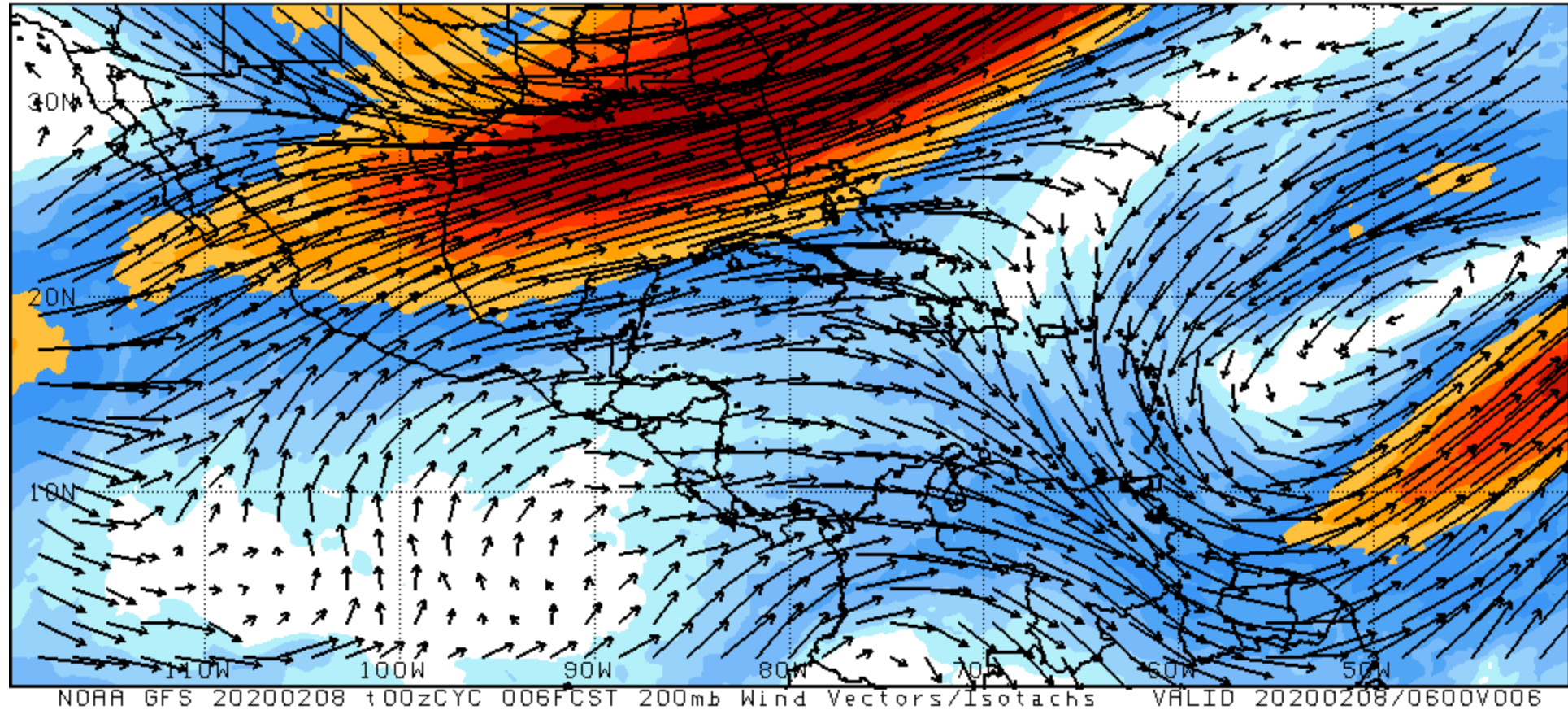
MIN=0.000, MAX=20.567, MEAN=12.787, SD=1.991, RMS=12.941



MIMIC TWVP

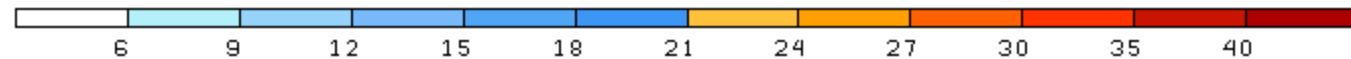
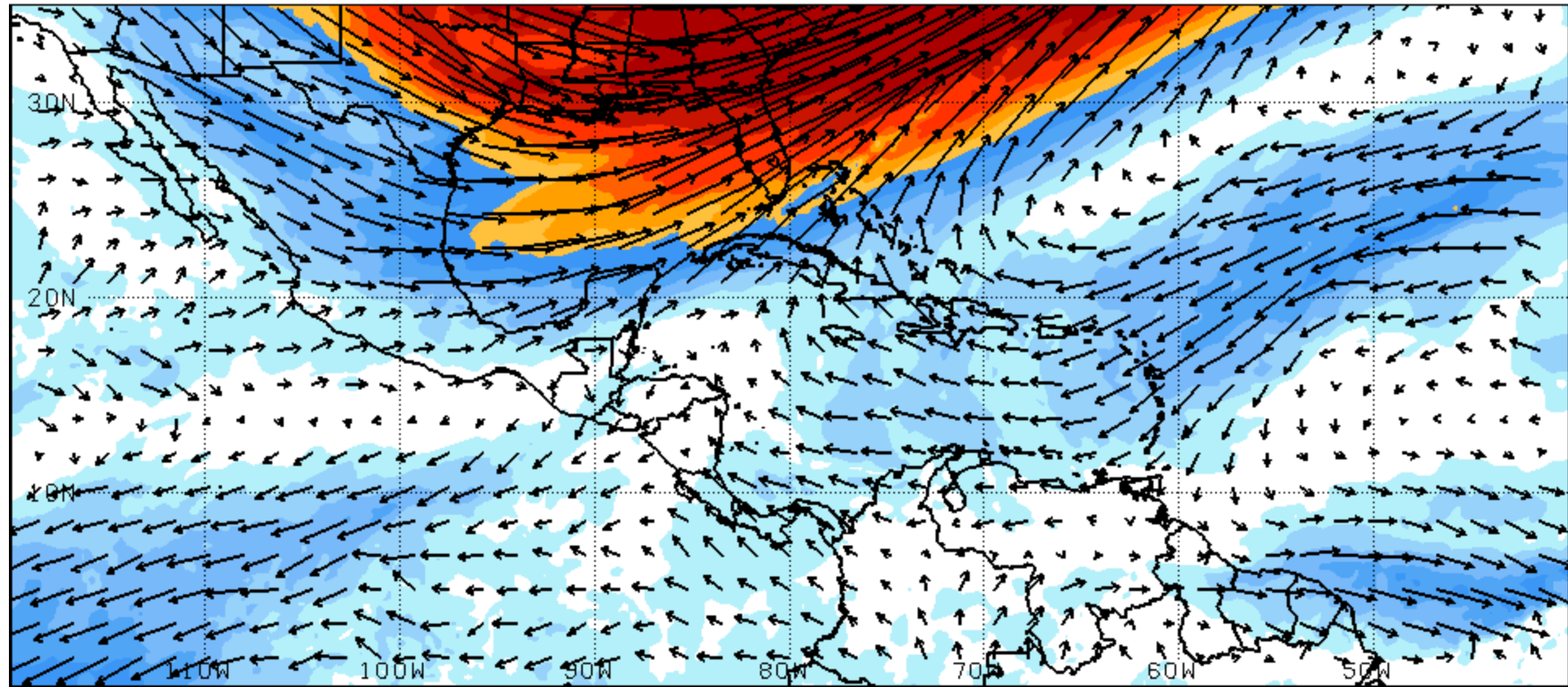


NCEP 200 hPa winds (6Z)



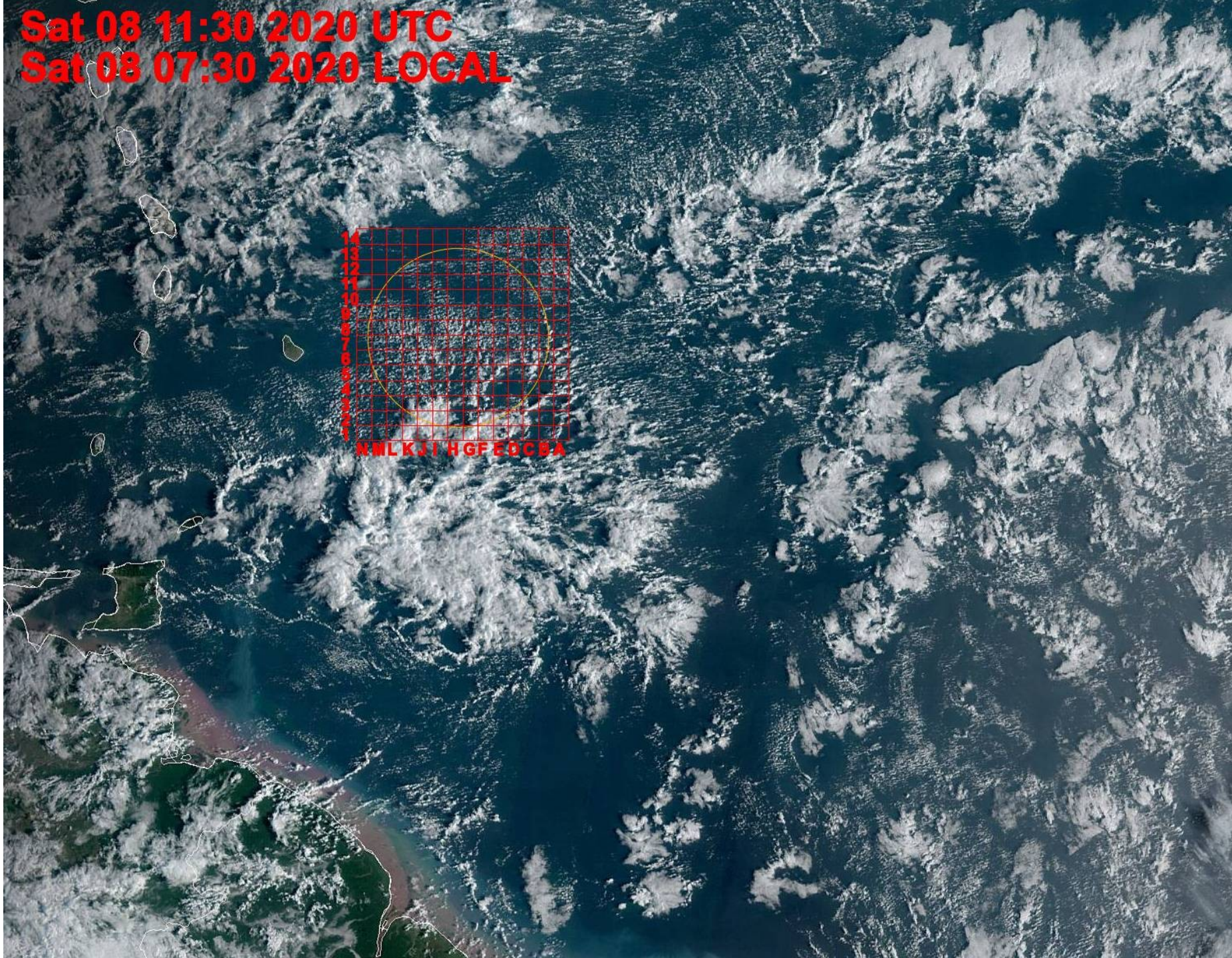
10 m/s →

NCEP 500 hPa winds (6Z)

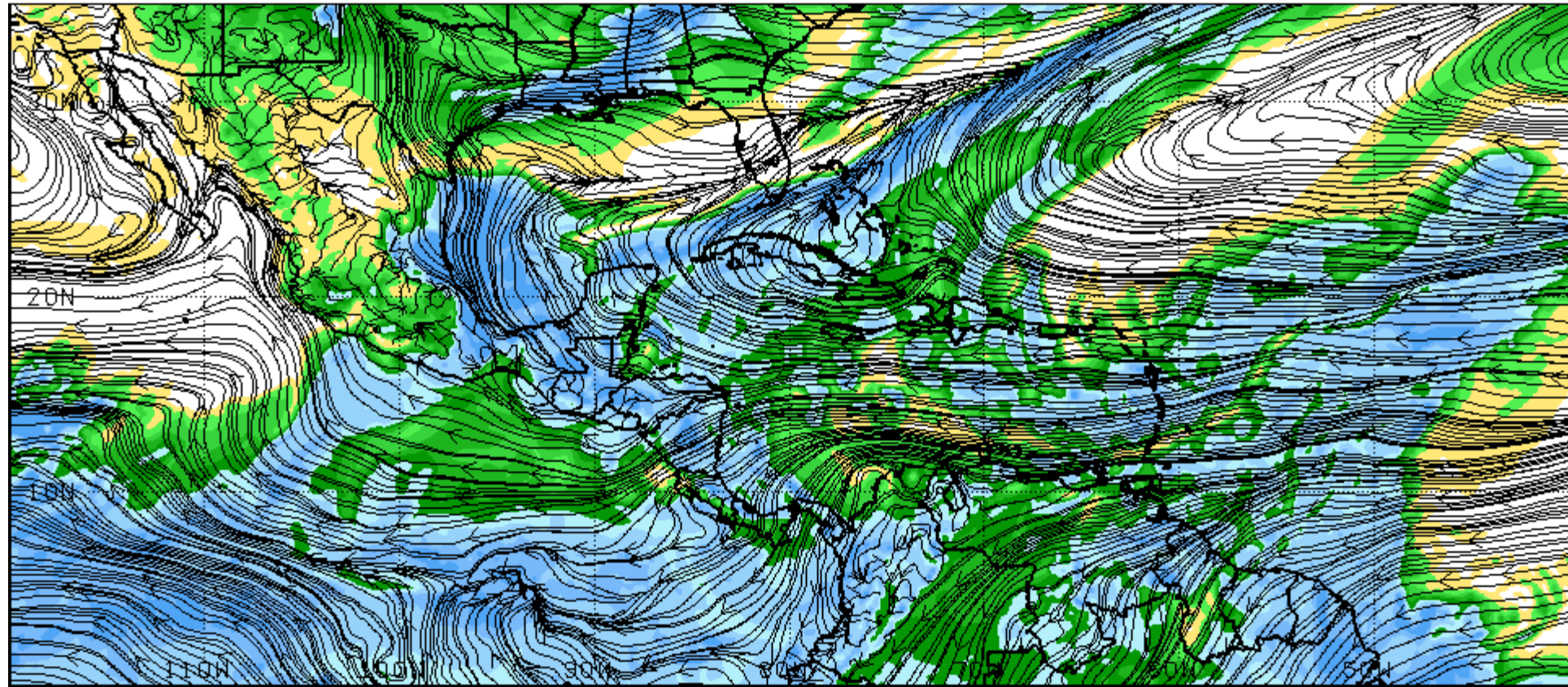


10 m/s →

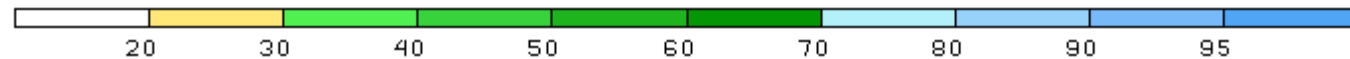
Satellite picture
(NASA/GOES 16)



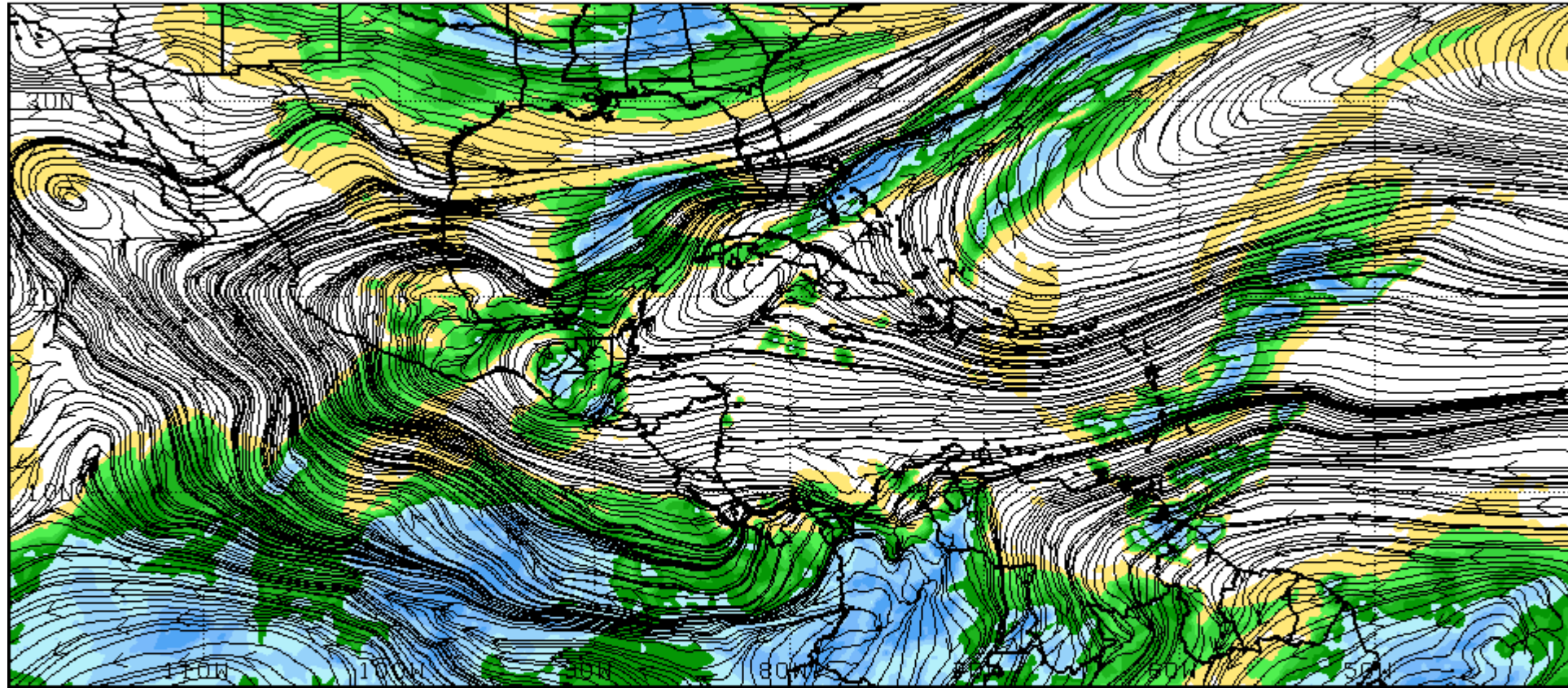
850 hPa winds and moisture (12Z)



NOAA GFS 20200208 1200Z CYC FCST 850mb RH (in%) and Streamlines VALID 20200208/1200V012



700 hPa winds and moisture (12Z)



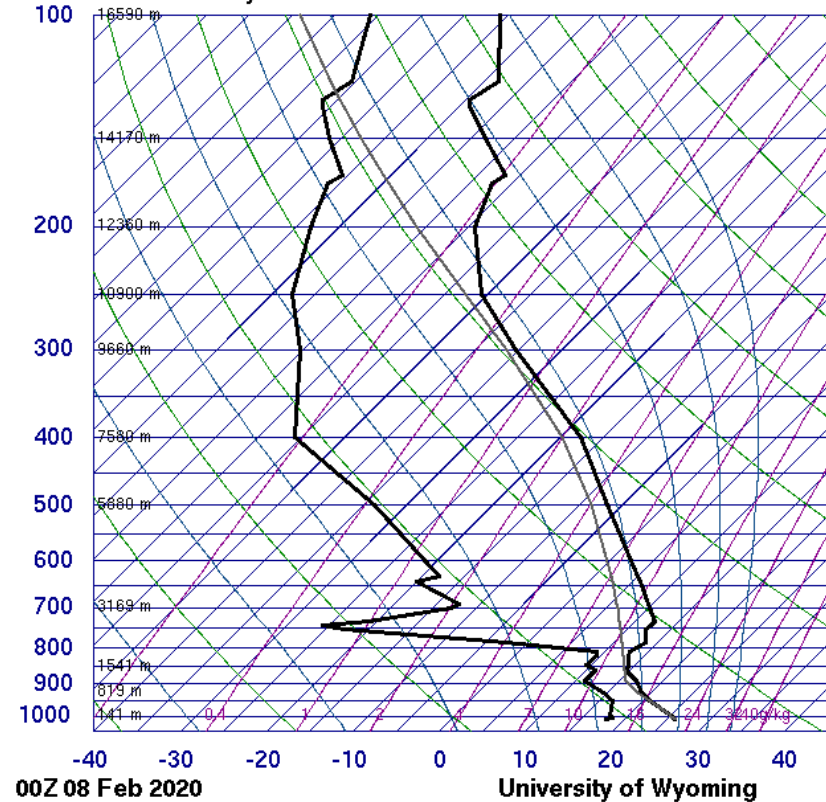
NOAA GFS 20200208 100zCYC FCST 700mb RH (in%) and Streamlines VALID 20200208/1200V012



Soundings for Barbados

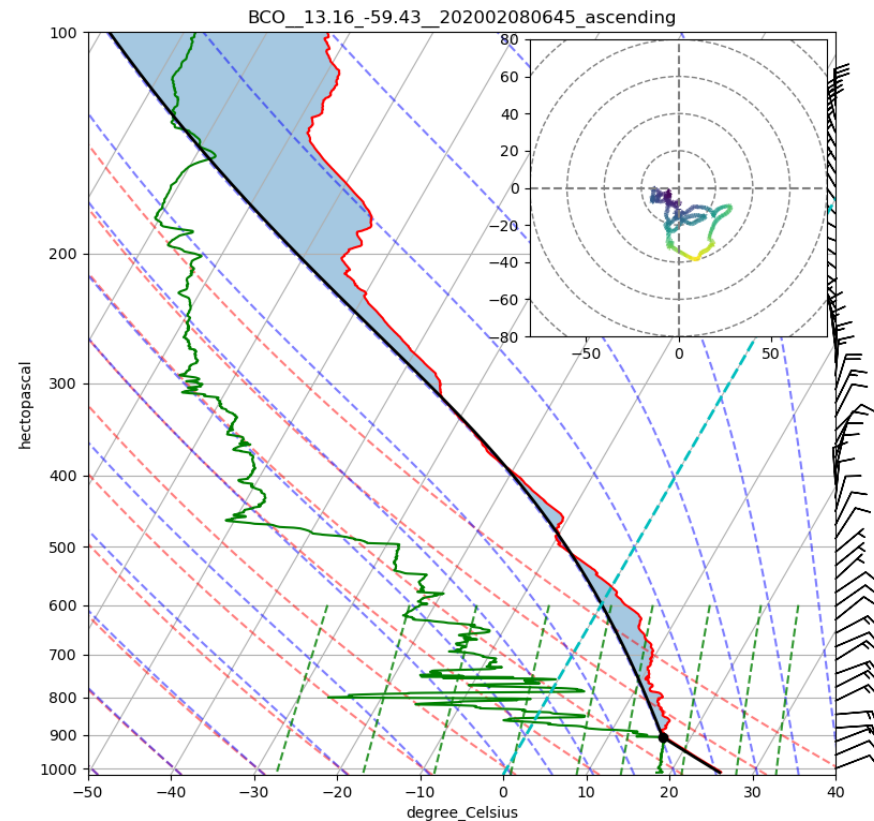
0000Z 08 Feb 2020

78954 TBPB Grantley Adams

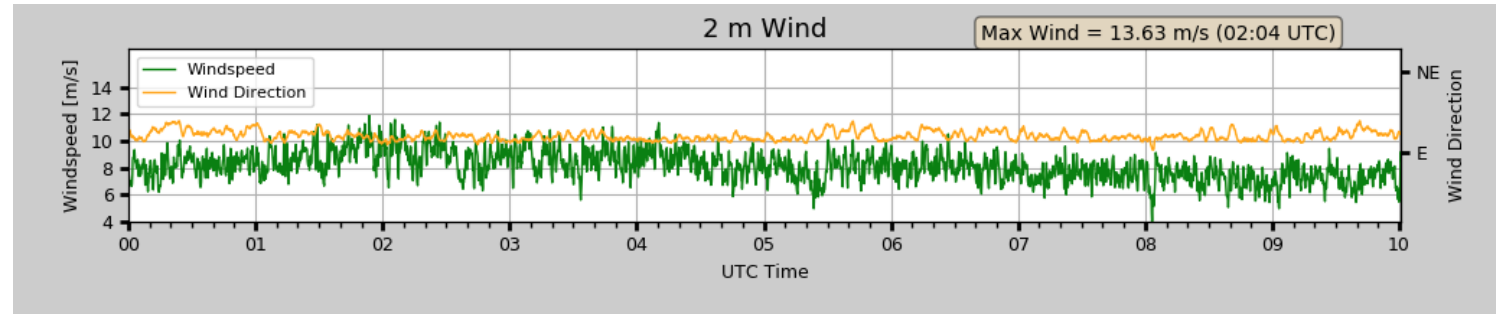


SLAT	13.07
SLON	-59.50
SELV	57.00
SHOW	5.53
LIFT	1.79
LFTV	1.21
SWET	189.5
KINX	7.90
CTOT	16.50
VTOT	21.10
TOTL	37.60
CAPE	0.00
CAPV	1.00
CINS	0.00
CINV	-8.48
EQLV	-9999
EQTV	846.8
LFCT	-9999
LCV	869.6
BRCH	0.00
BRCV	3.66
LCLT	289.2
LCLP	898.5
MLTH	298.2
MLMR	13.00
THCK	5739
PWAT	28.29

0645Z 08 Feb 2020, BCO

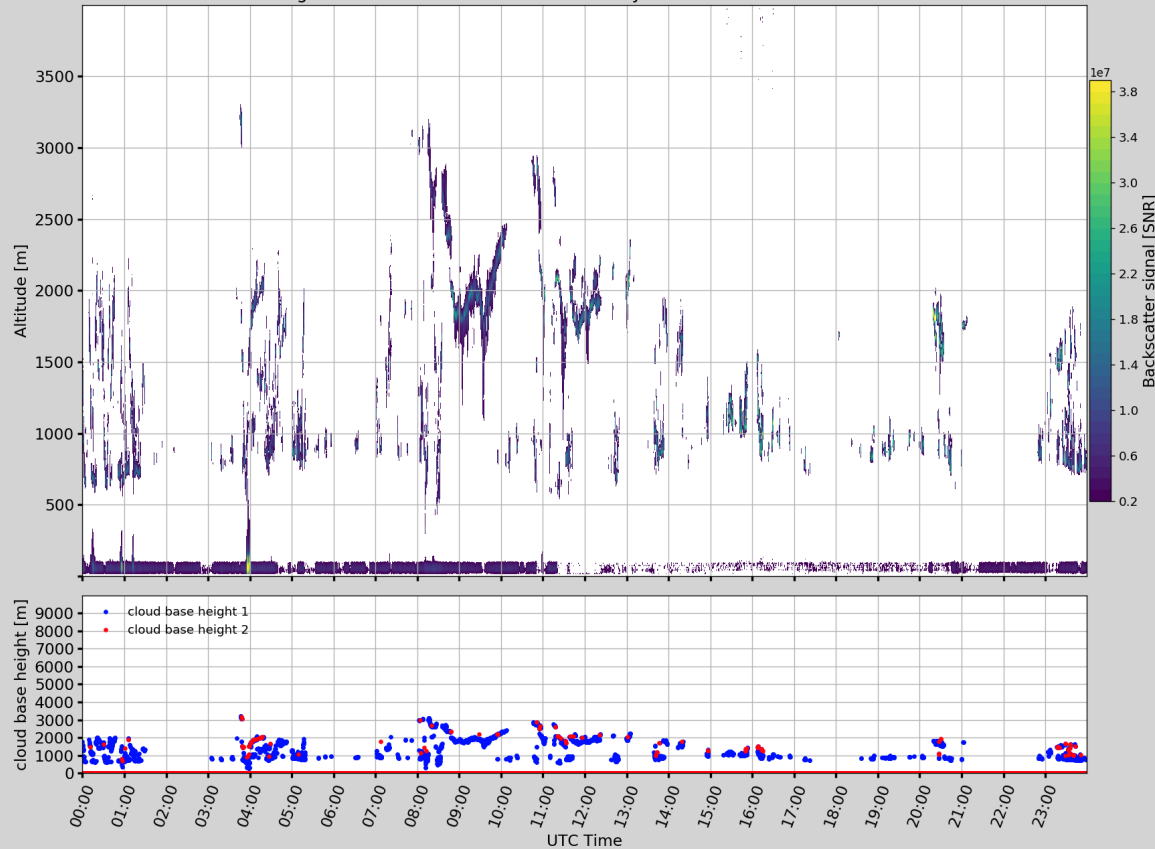


BCO ceilometer and winds



Ceilometer, BCO, Barbados, 07.02.2020

background subtracted and normalised by laser shot number and stddev



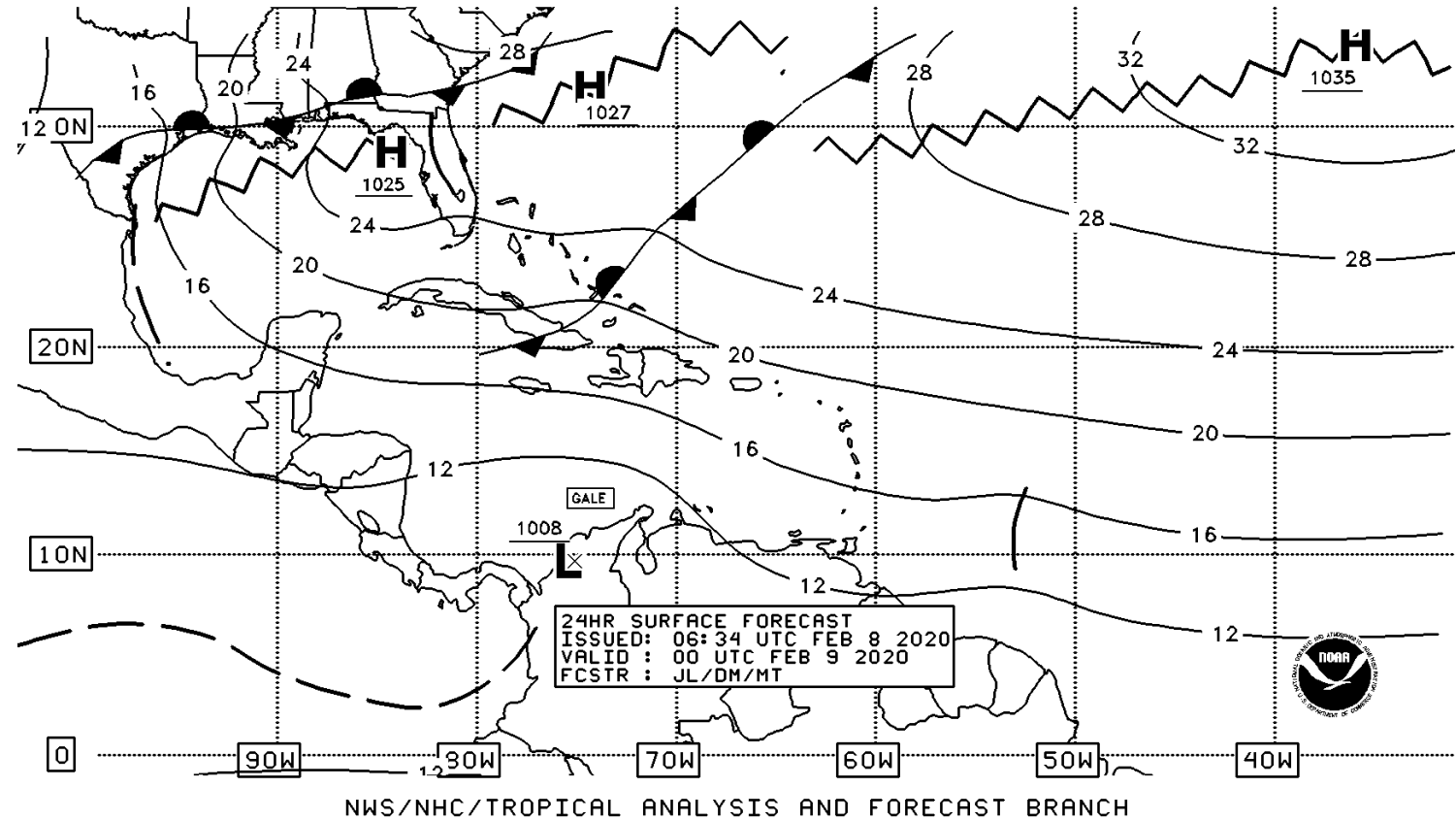
Ceilometer, BCO, Barbados, 08.02.2020

background subtracted and normalised by laser shot number and stddev



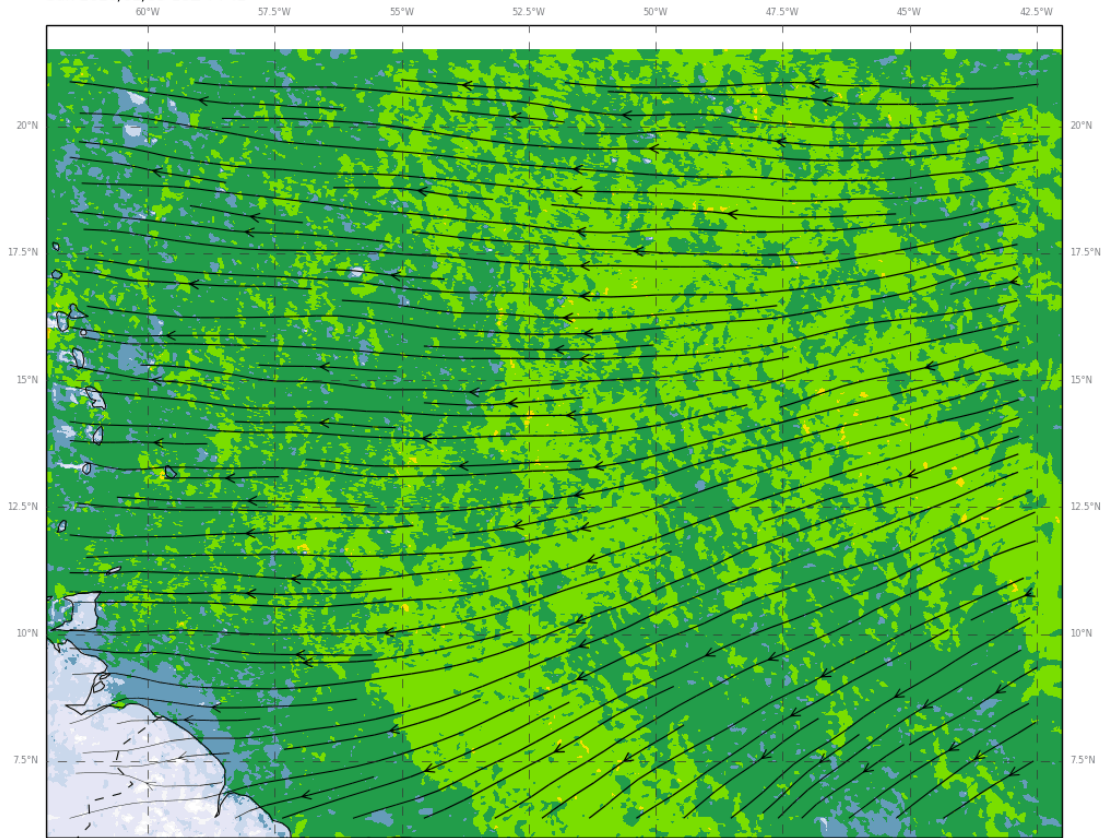
Synoptic forecast chart 0000 UTC, D+1

- Sfc. ridge and through
- Strong winds continue over next days

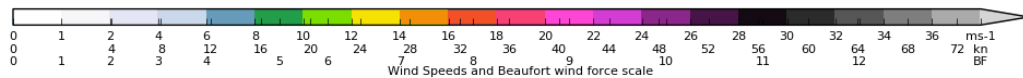


Sfce and 950 hPa wind (18Z, D+1)

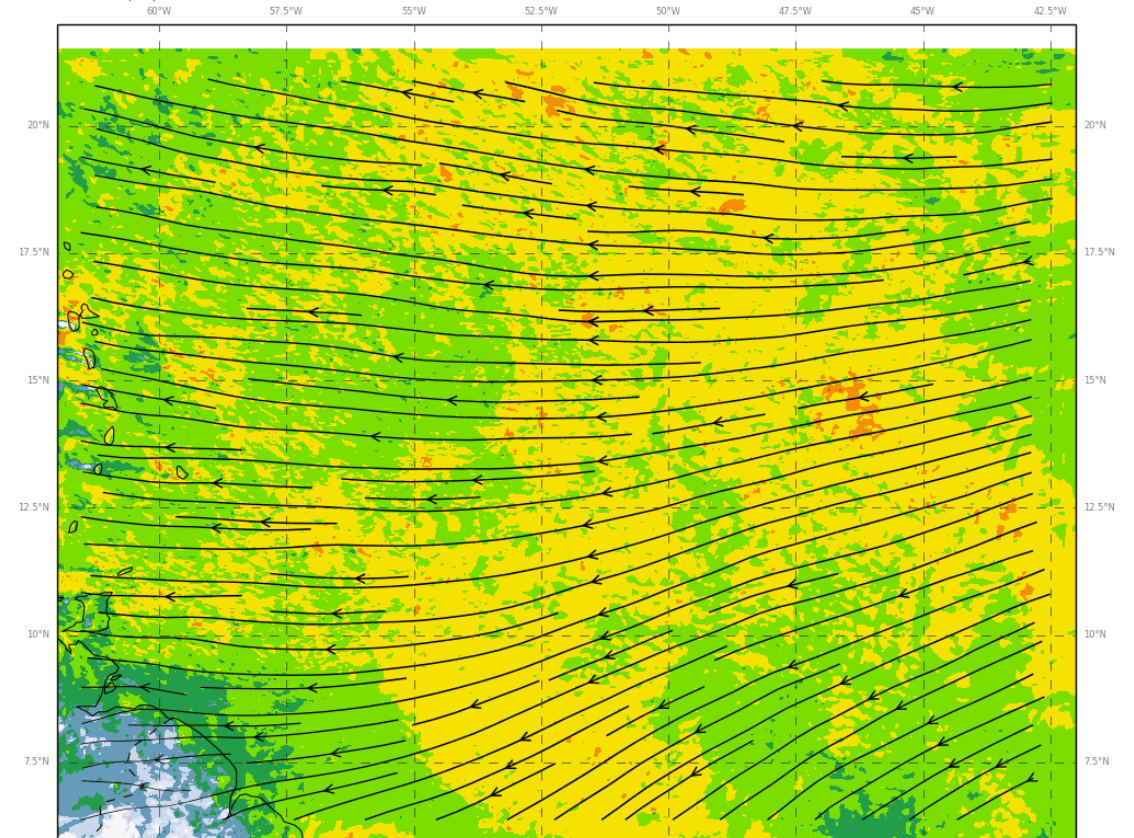
Wind speed and direction at 10 m
 Met Office EUREC4A 2km from 2020/02/08 00Z
 Sun 2020/02/09 18Z T+42



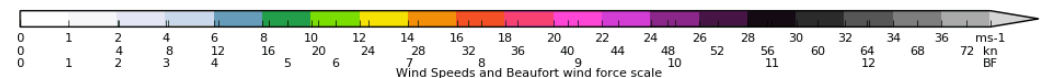
MIN=0.000, MAX=15.649, MEAN=9.420, SD=1.475, RMS=9.534



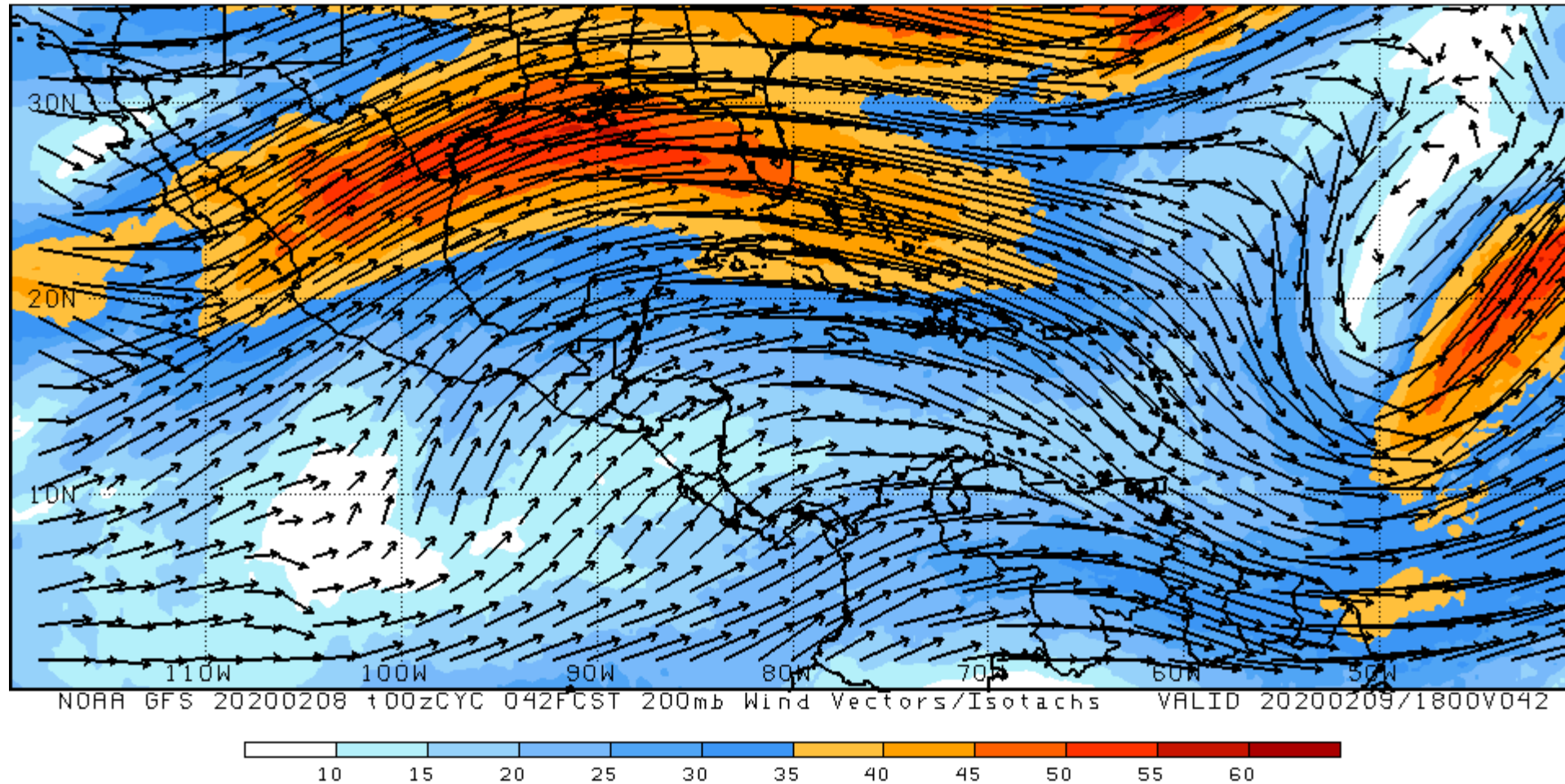
Wind speed and direction at 950 hPa
 Met Office EUREC4A 2km from 2020/02/08 00Z
 Sun 2020/02/09 18Z T+42



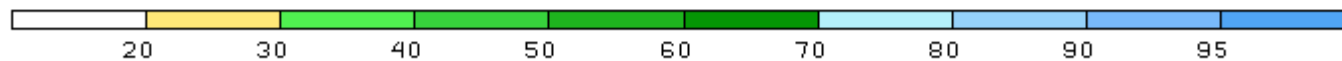
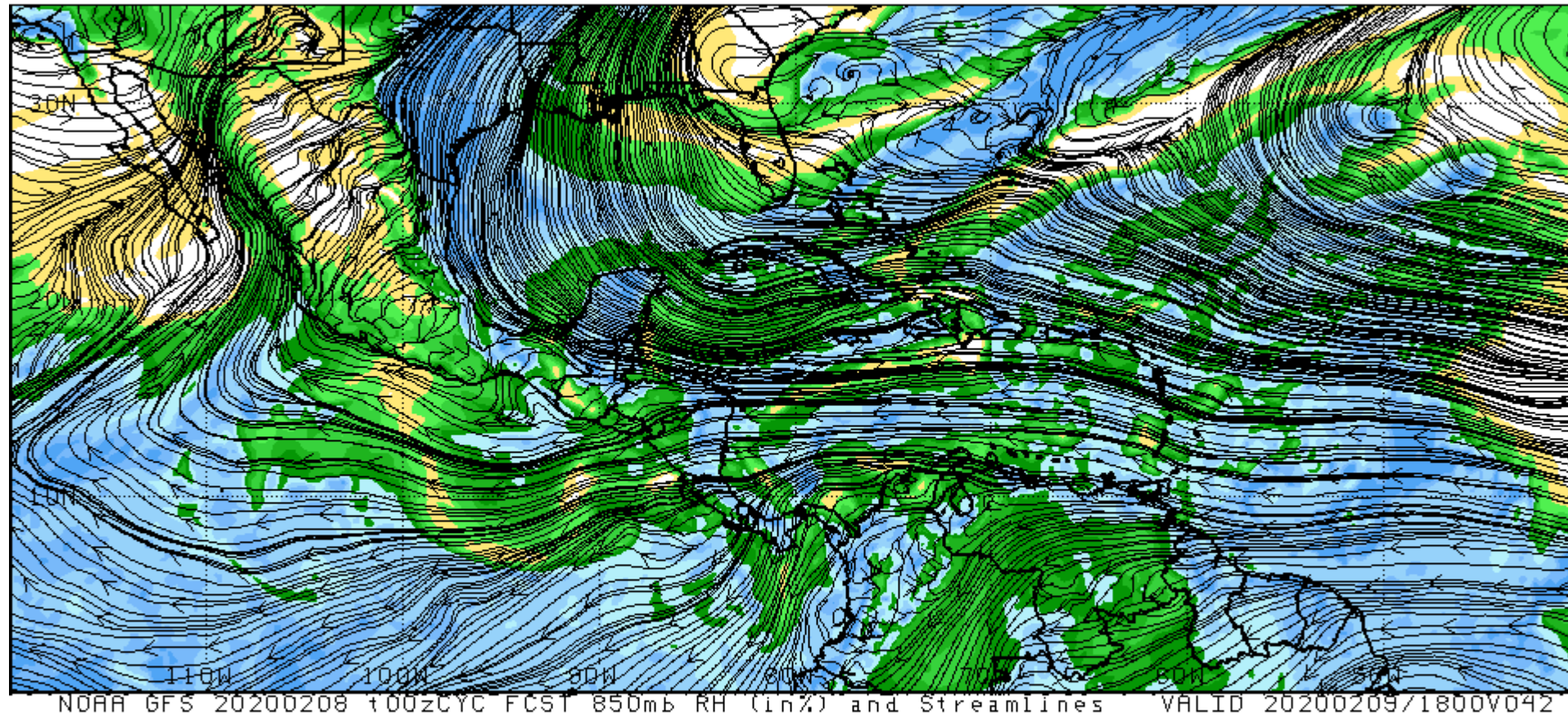
MIN=0.125, MAX=16.974, MEAN=11.789, SD=1.331, RMS=11.864



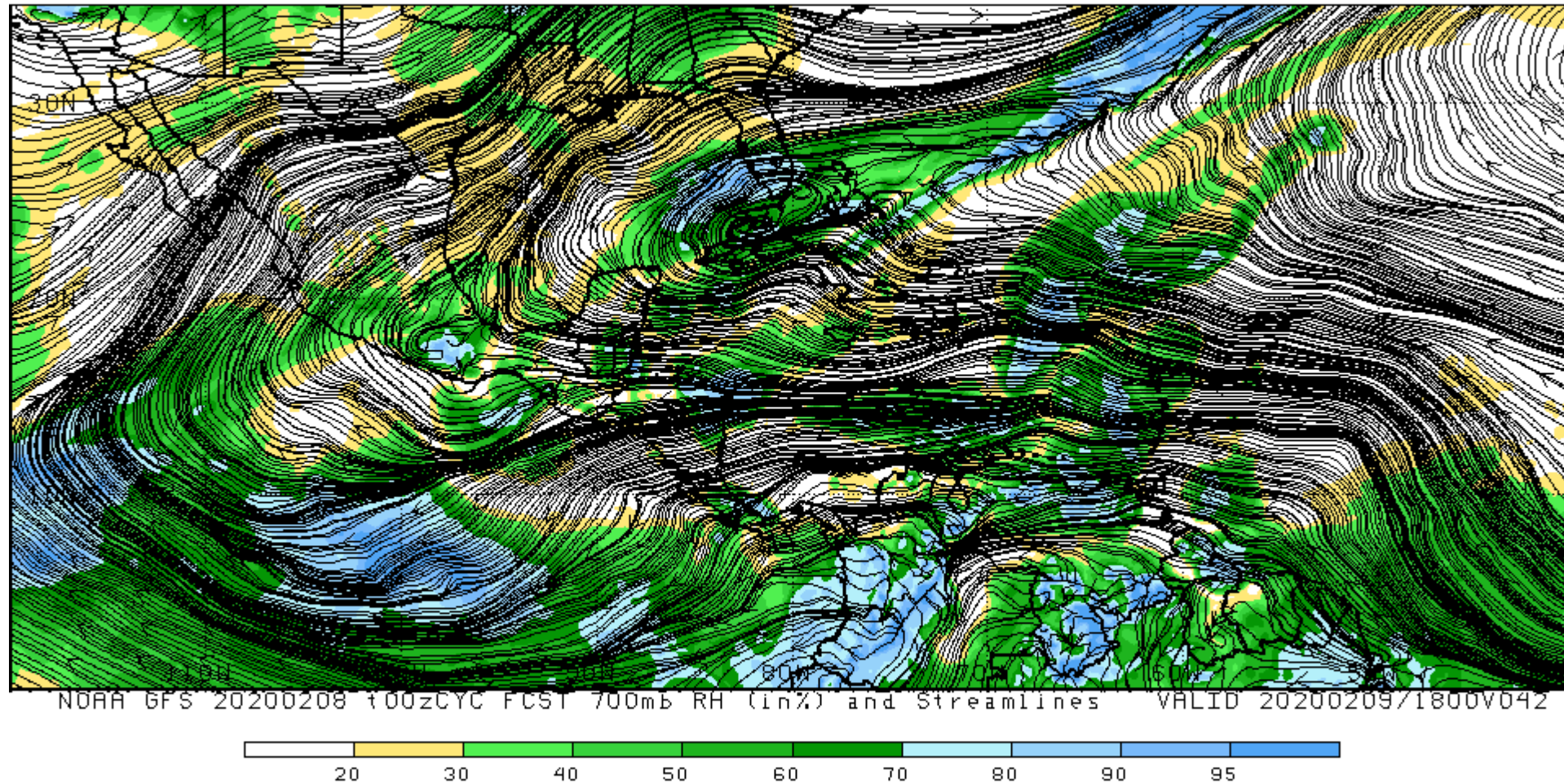
200 hPa winds (D+1)



850 hPa winds and moisture (D+1)

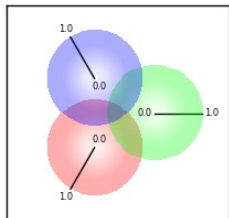
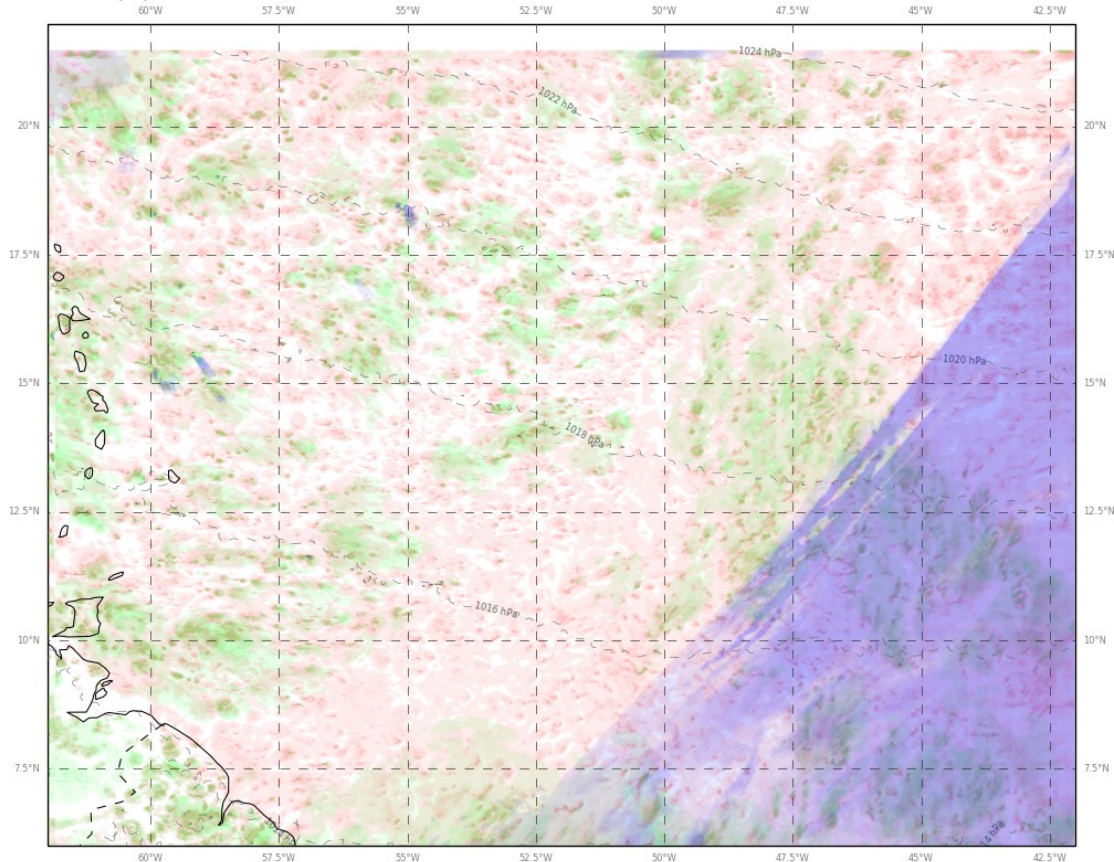


700 hPa winds and moisture (D+1)



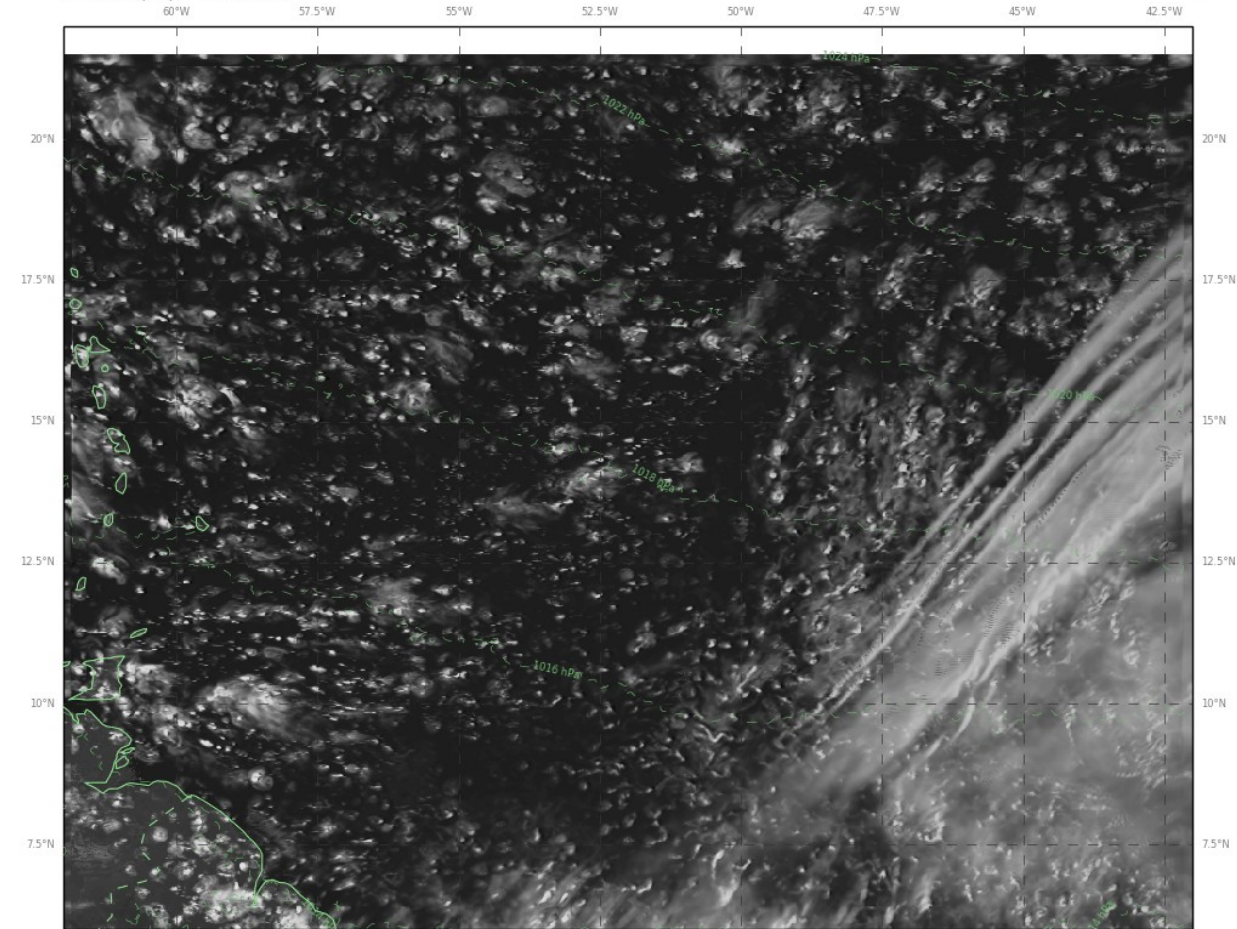
Clouds D+1 (18Z)

Cloud: Low, Medium, High
 Met Office EUREC4A 2km from 2020/02/08 00Z
 Sun 2020/02/09 18Z T+42

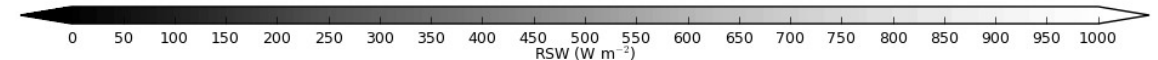


High cloud (~18000ft to ~45000ft) is blue,
 mid-level cloud (~6000ft to ~18000ft) is green,
 low cloud (surface to ~6000ft) is red
 and the cloud types are combined as shown.

Reflected Shortwave Radiation at TOA
 Met Office EUREC4A 2km from 2020/02/08 00Z
 Sun 2020/02/09 18Z T+42



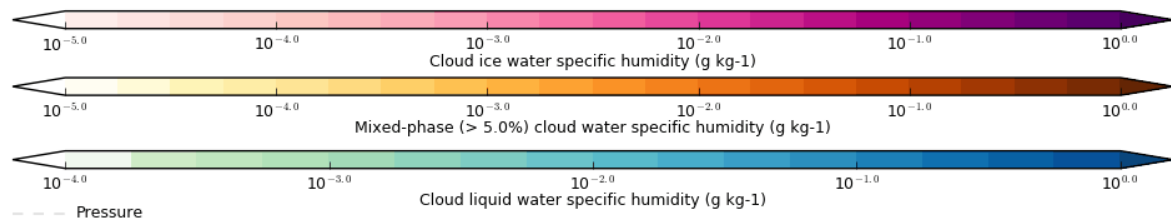
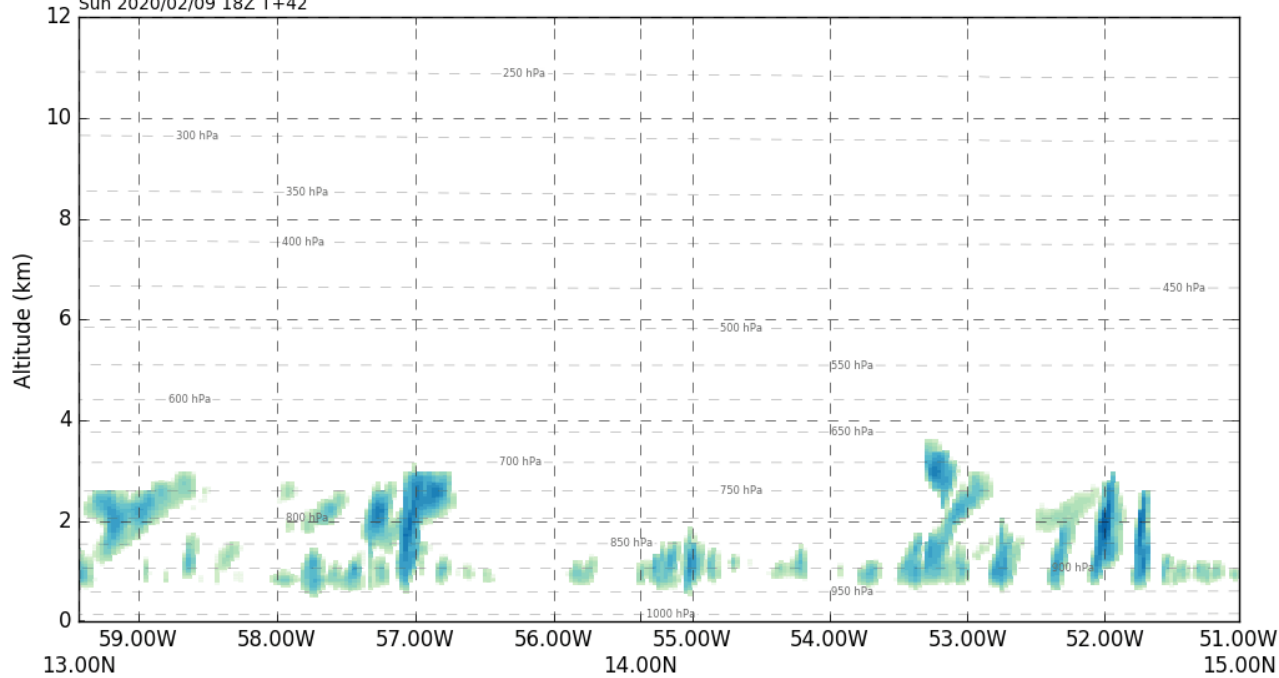
MIN=30.125, MAX=823.641, MEAN=208.784, SD=138.106, RMS=250.327



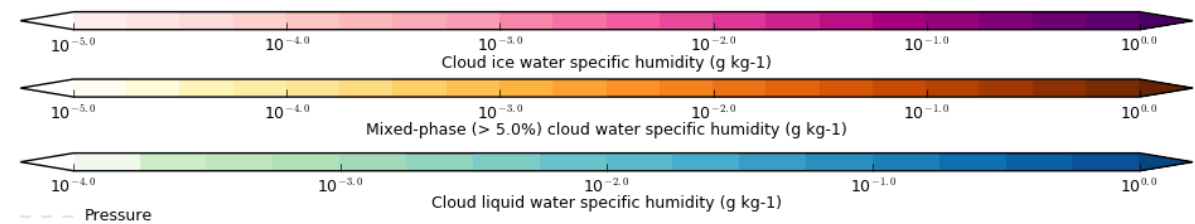
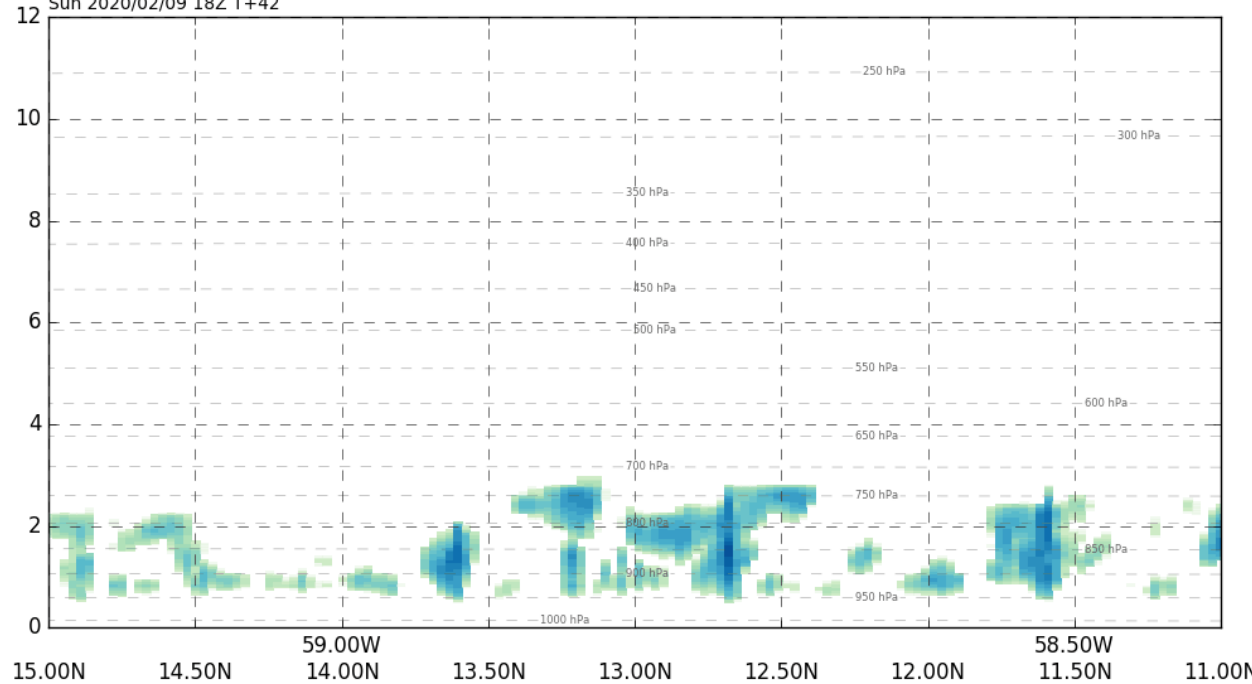
--- Pressure (mean sea level)

Clouds D+1 (18Z)

Cloud liquid and ice water specific humidity
 Met Office EUREC4A 2km from 2020/02/08 00Z
 EUREC1 (59.43W,13.16N to 51.02W,14.82N, 0 to 12km)
 Sun 2020/02/09 18Z T+42

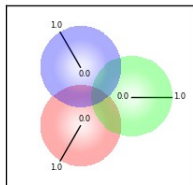
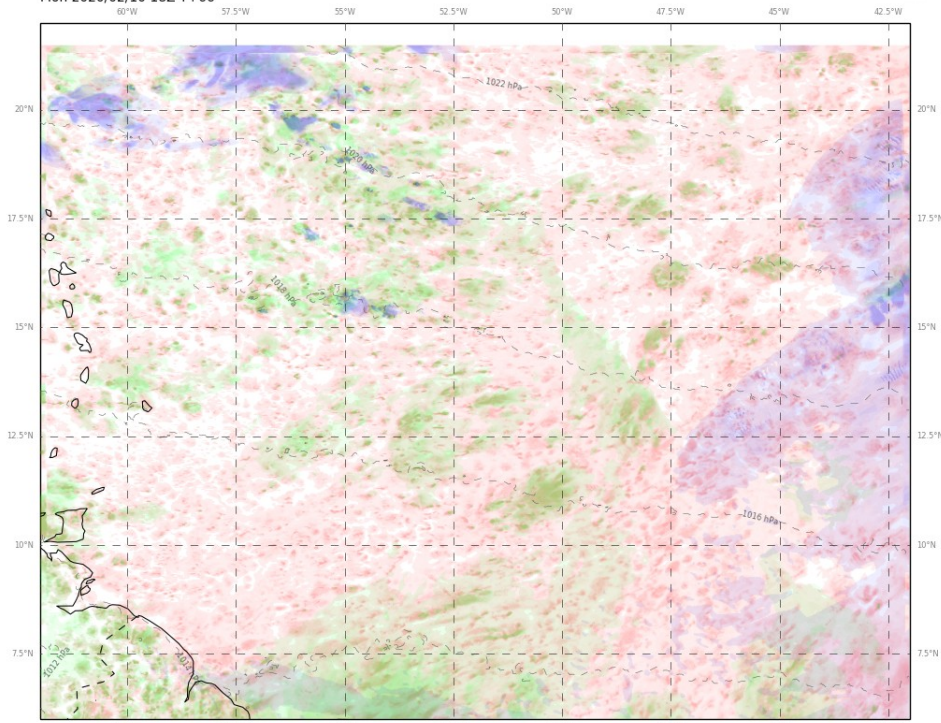


Cloud liquid and ice water specific humidity
 Met Office EUREC4A 2km from 2020/02/08 00Z
 EUREC2 (59.2W,15.0N to 58.4W,11.0N, 0 to 12km)
 Sun 2020/02/09 18Z T+42



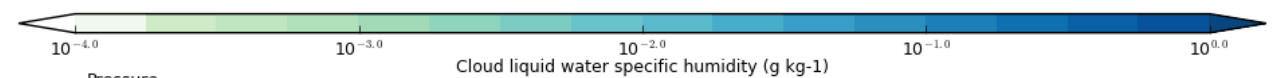
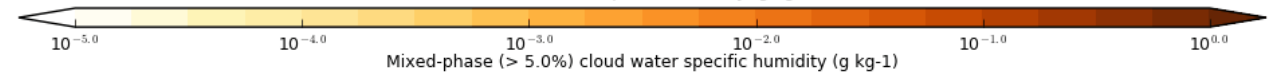
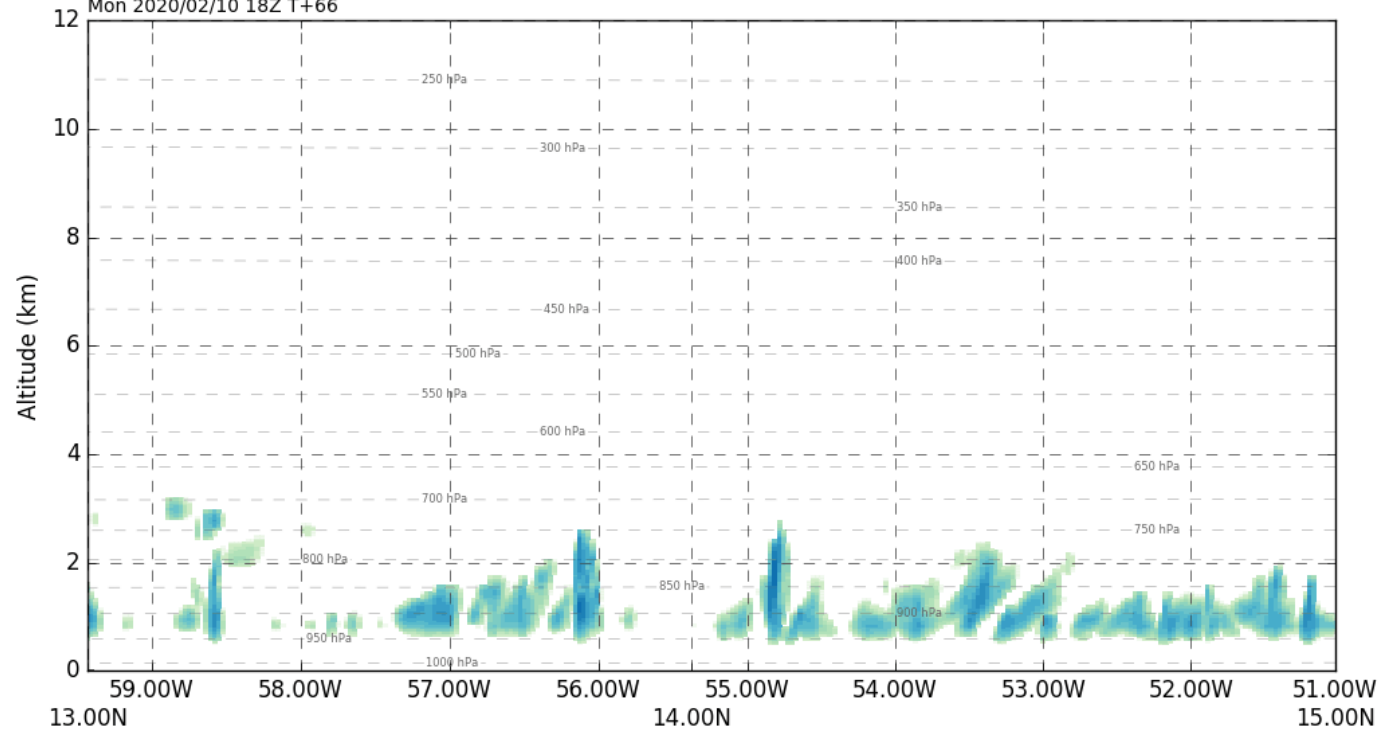
Cloud (D+2)

Cloud: Low, Medium, High
 Met Office EUREC4A 2km from 2020/02/08 00Z
 Mon 2020/02/10 18Z T+66



High cloud (~18000ft to ~45000ft) is blue,
 mid-level cloud (~6000ft to ~18000ft) is green,
 low cloud (surface to ~6000ft) is red
 and the cloud types are combined as shown.

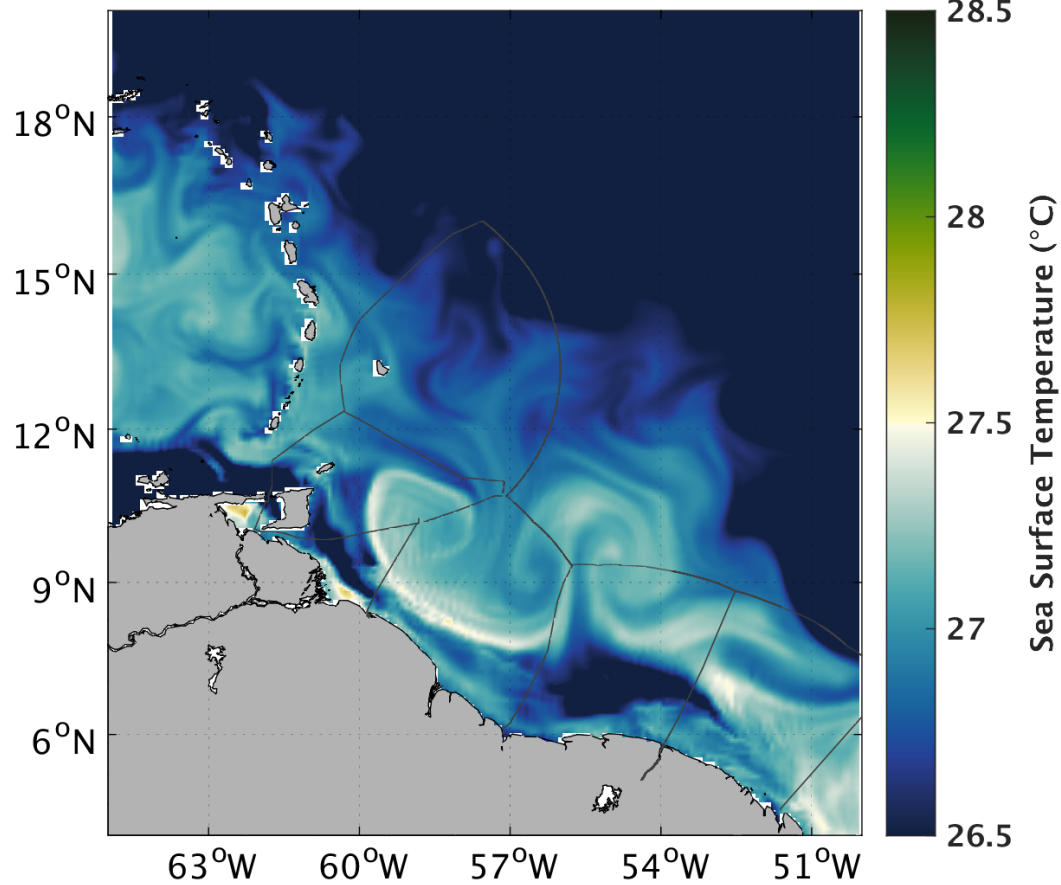
Cloud liquid and ice water specific humidity
 Met Office EUREC4A 2km from 2020/02/08 00Z
 EUREC1 (59.43W,13.16N to 51.02W,14.82N, 0 to 12km)
 Mon 2020/02/10 18Z T+66



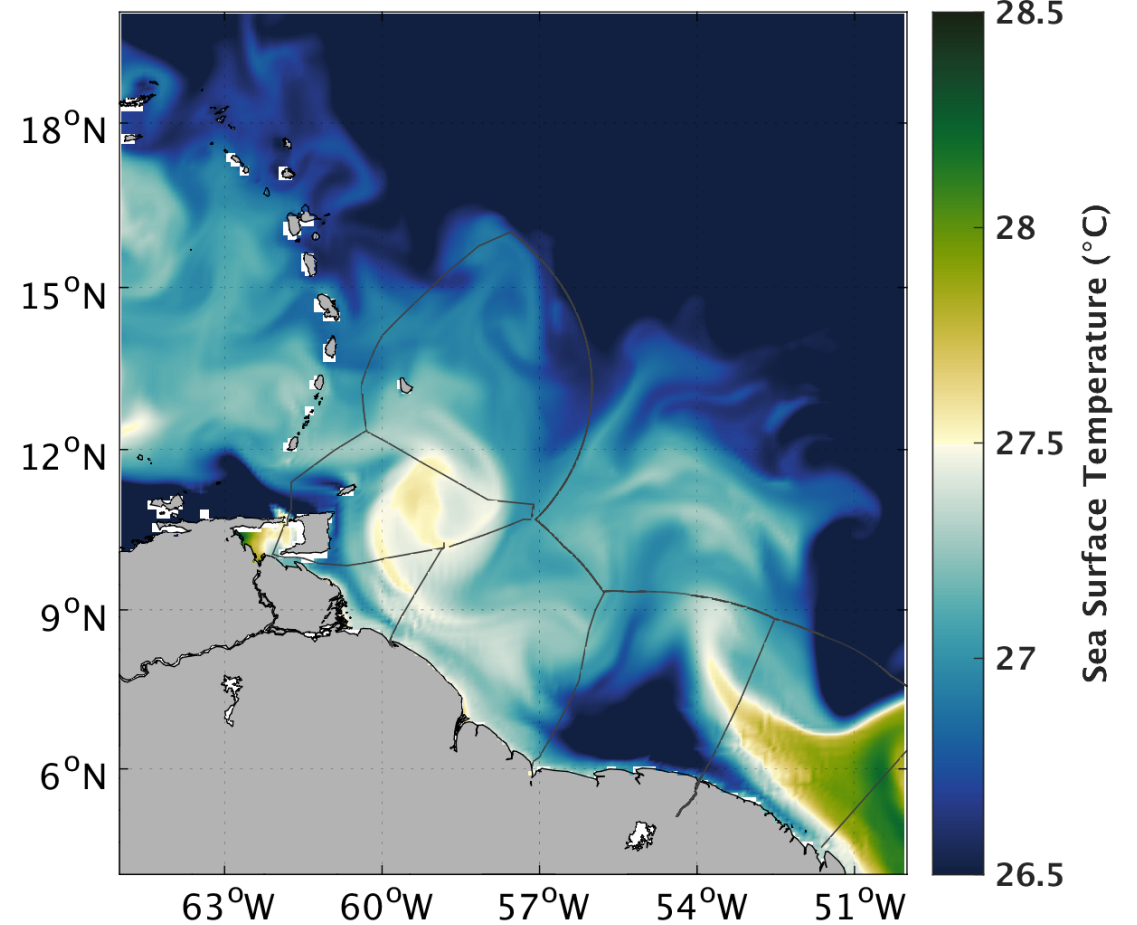
--- Pressure

Ocean T

SST (°C) Hycom 08/02/20 Forecast at +24 hours



SST (°C) Mercator 08/02/20 Forecast at +24 hours



Summary

Synoptics: High over central Atlantic dominates.

Tomorrow: possibly some active cells with cold pools, most cloud tops around 2km but some may reach about 3km.