

ATOMIC Briefing Summary

2/6/2020

- Our main sources are:

<https://www.esrl.noaa.gov/psd/atomic/briefing/>

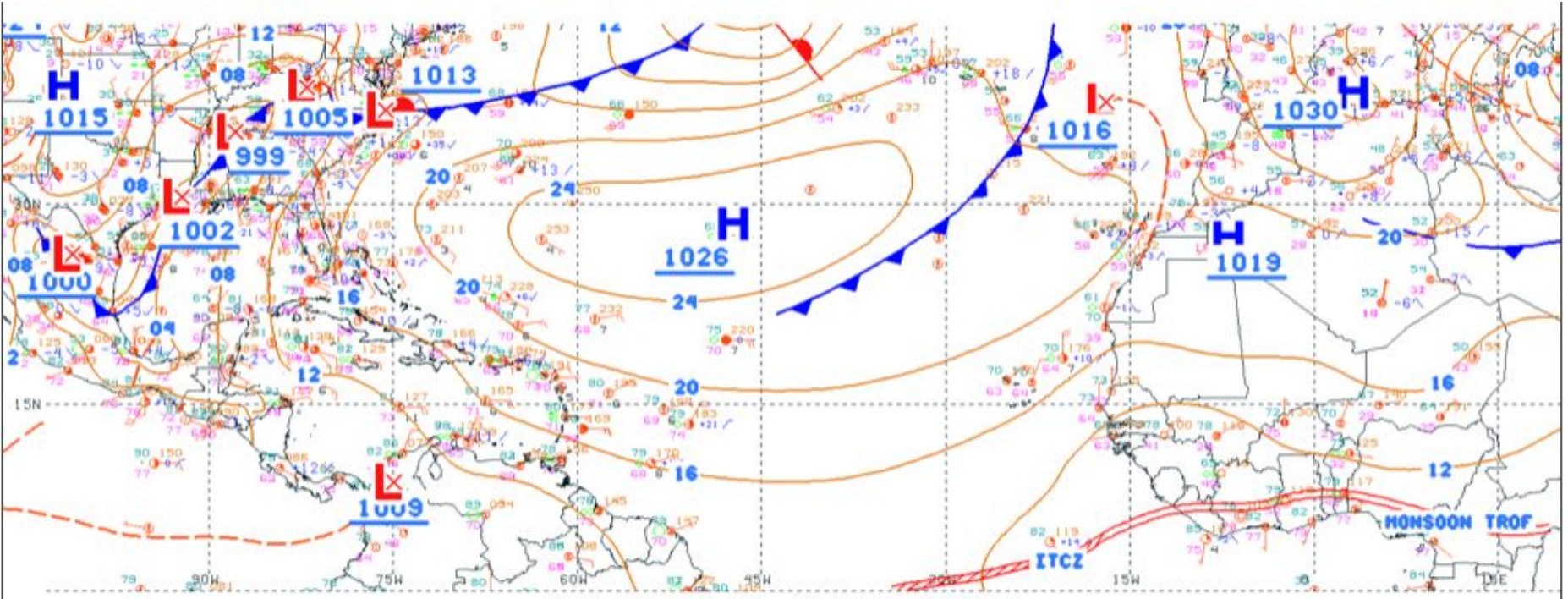
<https://observations.ipsl.fr/aeris/eurec4a/#/>

- Latest ATOMIC weather briefing from Caribbean forecasters can be found here:

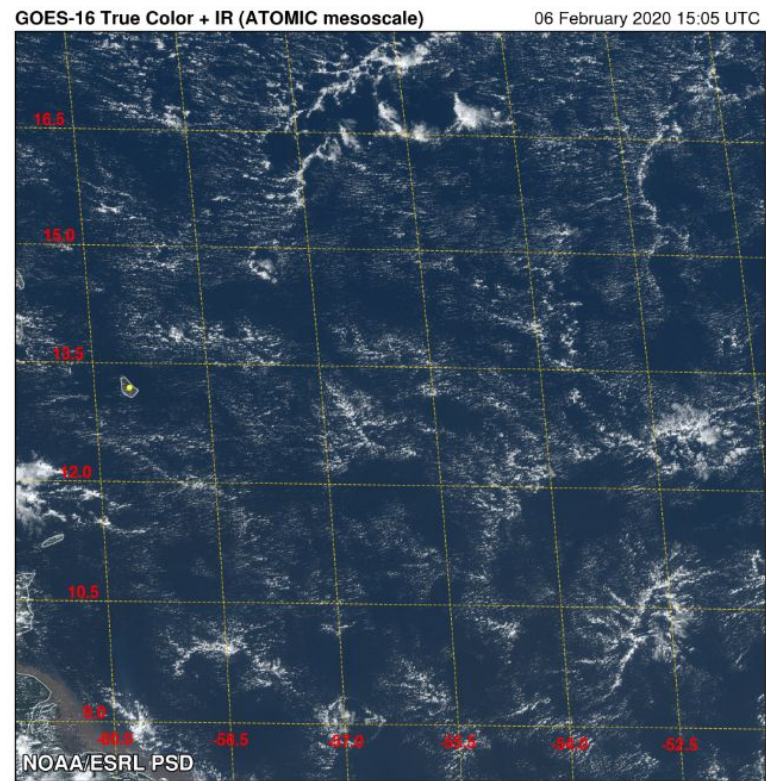
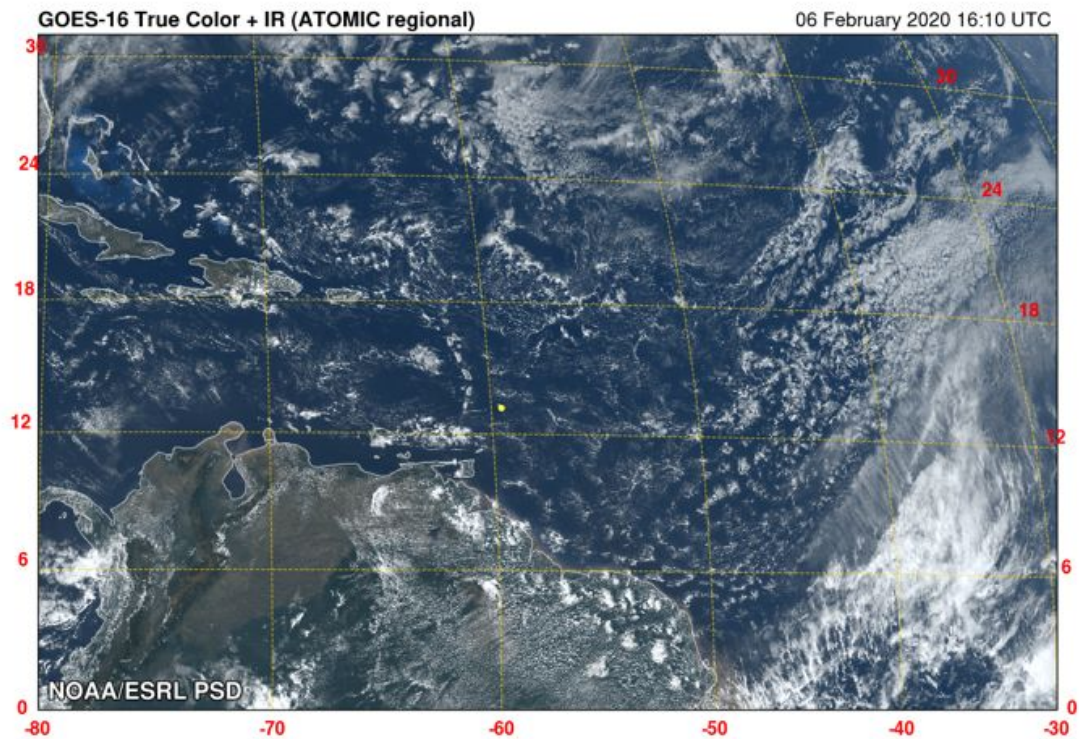
http://eurec4a.uk/forecast_testbed/

- Flight planning WX briefing here:

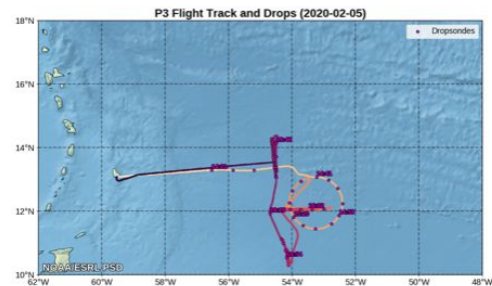
<https://observations.ipsl.fr/aeris/eurec4a-data/REPORTS/Wx/2020/20200206/Wx-0206.pdf>



00 UTC FEBRUARY 06 2020 - NATIONAL WEATHER SERVICE



Note from Don Murray: the increased moisture that was talked about earlier in the week seems to have allowed for more patterned cloud development.



Soundings with GFS Model Comparisons

Selected Platform:

NOAA P3

Sonde Time:

2020-02-05 14:17 UTC

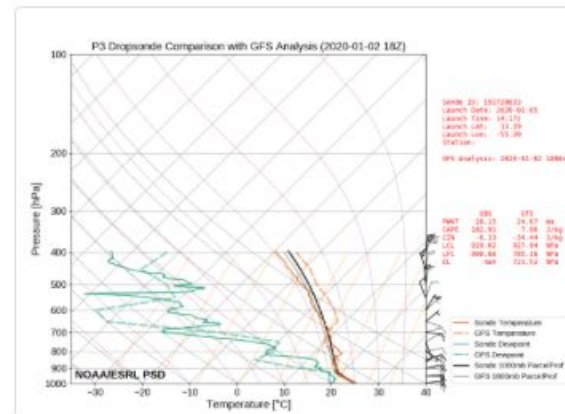
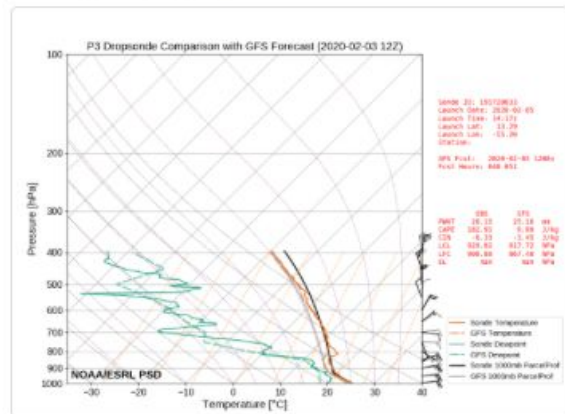
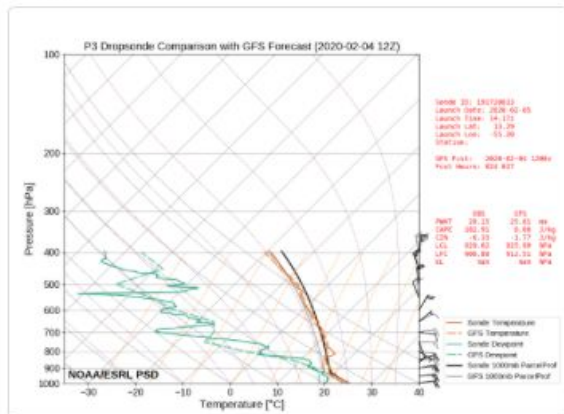
< Prev

Next >

Analysis

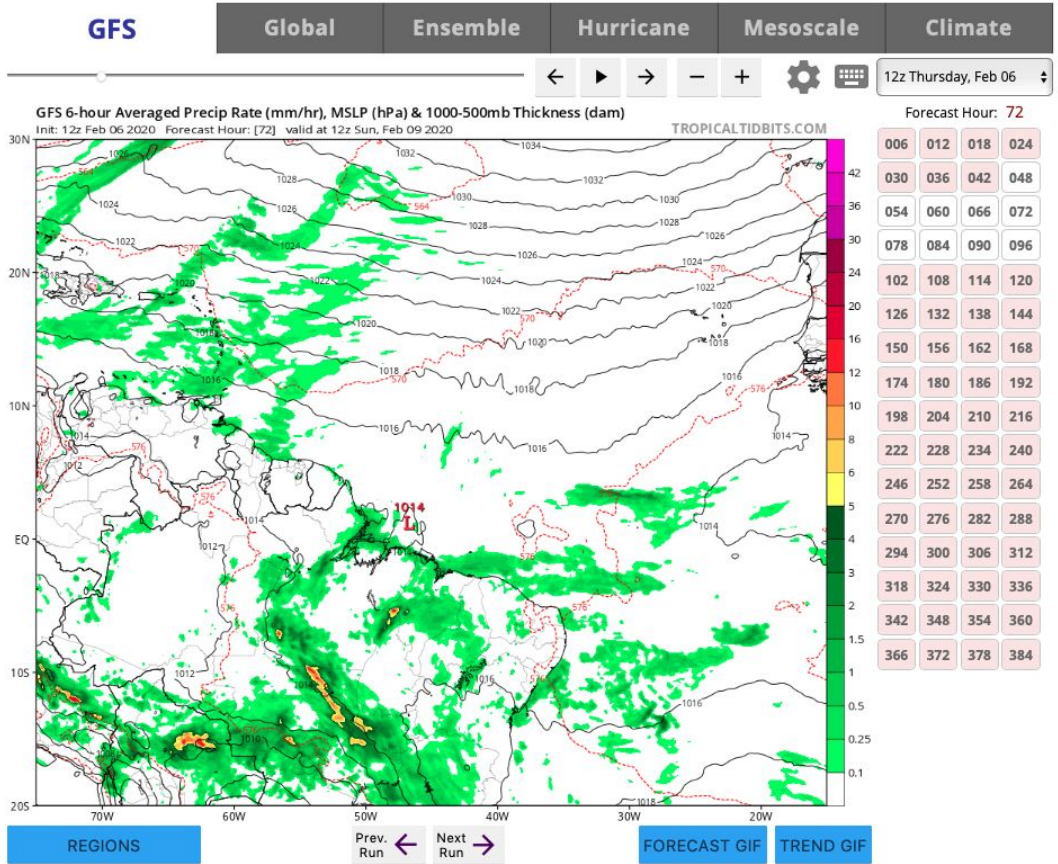
~24 Hour Forecast

~48 Hour Forecast

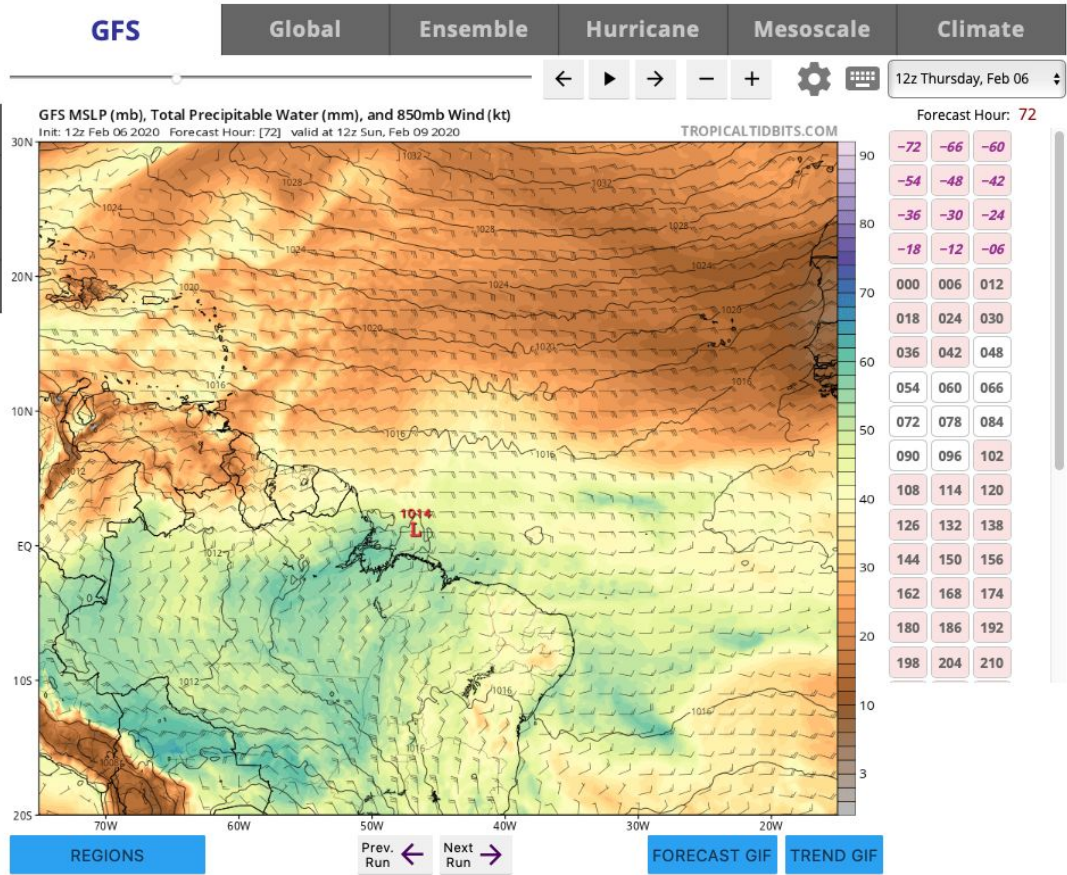


The GFS analysis field is from the closest run time to the sounding time; the 24 & 48 hour forecast data are interpolated from the nearest times to the sounding time (see plot for exact times used). GFS vertical spacing is every 50 hPa.

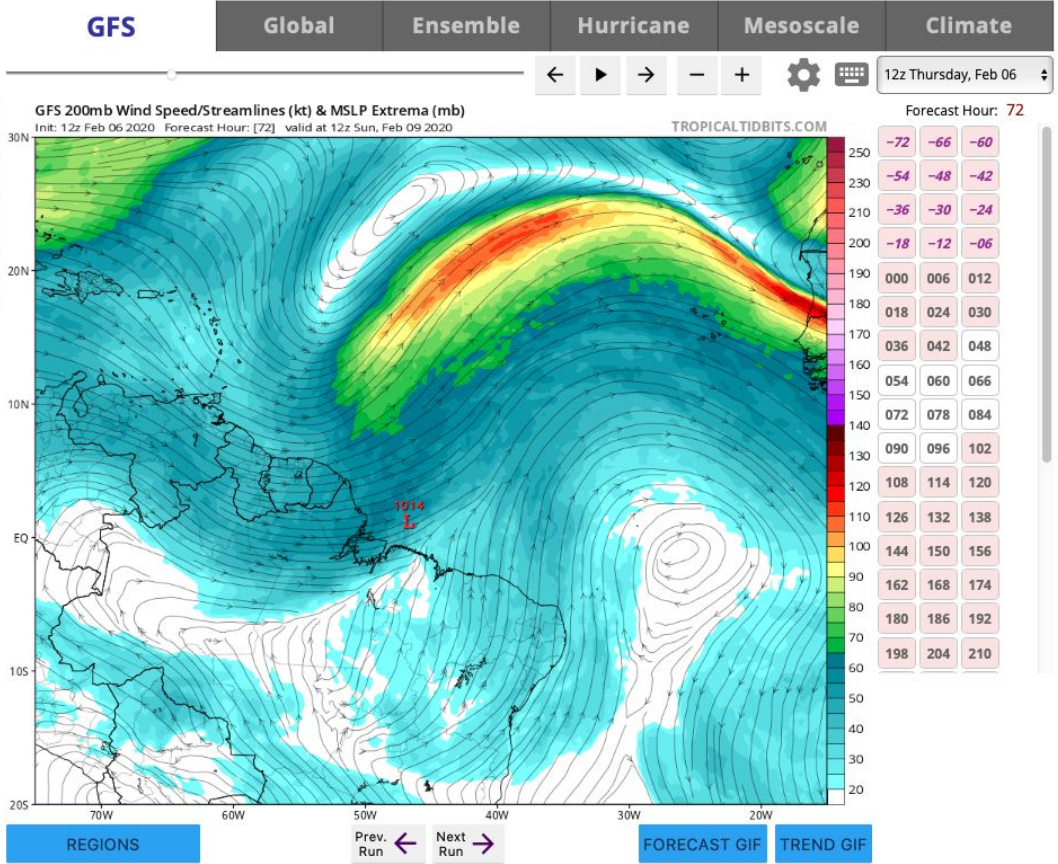
GFS 3 day outlook



GFS 3 day outlook



GFS 3 day outlook



Summary (from Rochelle Worsnop)

- Building surface- to mid-level Atlantic ridge dominant in region
 - Tightening pressure gradient → stronger winds
 - <https://www.tropicaltidbits.com/analysis/models/?model=gfs®ion=ATOMIC&pkg=mslpa&runtime=2020020518&fh=0>
 - Winds veer NE to easterly as ridge moves eastward
 - https://www.tropicaltidbits.com/analysis/models/?model=gfs®ion=ATOMIC&pkg=mslp_wind&runtime=2020020612&fh=
- Entrainment of dry air at mid levels from the NE, pockets of moisture
 - limits mid-level cloud development
 - <https://www.esrl.noaa.gov/psd/atomic/briefing/>
- Fair conditions with some shallow clouds & scattered showers
 - https://www.tropicaltidbits.com/analysis/models/?model=gfs®ion=ATOMIC&pkg=mslp_pcpn&runtime=2020020518&fh=24
 - Slight lifting mechanism available from wind speed confluence
 - https://www.fnmoc.navy.mil/wxmap.cgi/cgi-bin/wxmap_single.cgi?area=nvg_troplant&dtg=2020020606&prod=sfc10m&tau=000&set=Tropical
 - shallow moist neutral layer capped by stable layer above
 - https://www.tropicaltidbits.com/analysis/models/?model=gfs®ion=ATOMIC&pkg=mslp_pcpn&runtime=2020020518&fh=24

Summary (from Rochelle Worsnop)

Region of high SSH & salinity continuing to move towards Barbados

Mercator SSH & eddies: <https://observations.ipsl.fr/aeris/eurec4a/#/>

Mercator Salinity & eddies: <https://observations.ipsl.fr/aeris/eurec4a/#/>

Swell and waves

Swells upwards of 2 m from ECMWF WAM

Waves upwards of 3 m from ECMWF WAM on Friday

<https://www.windy.com/-Show---add-more-layers/overlays?waves,2020-02-10-18,14.732,-48.779,4,m:dW3aeu2>

Summary (from Rochelle Worsnop)

Dust

- Pretty much clearing out Thursday evening/Friday morning
 - <https://www.windy.com/-Rain-thunder-rain?rain,12.243,-58.678,6,m:d0ZaevS>