

ATOMIC Briefing Summary

1/23/2020

Summary

- Our main sources are:

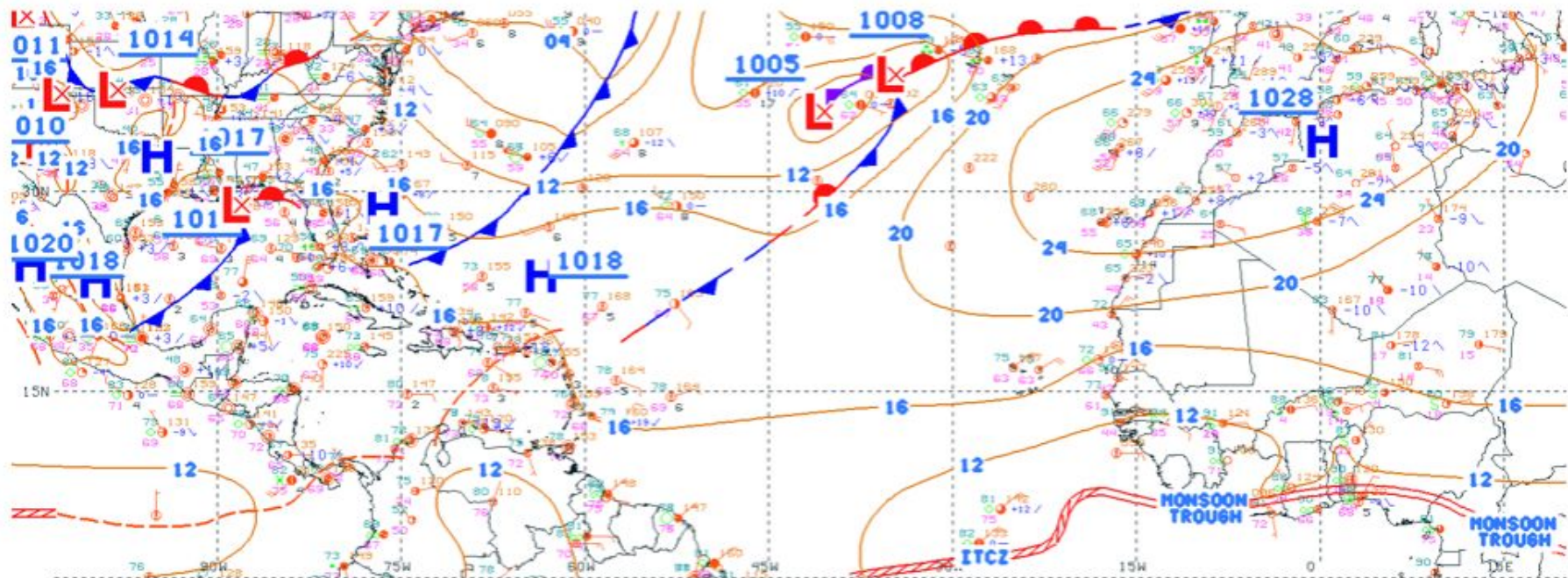
<https://www.esrl.noaa.gov/psd/atomic/briefing/>

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

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

http://eurec4a.uk/forecast_testbed/

-

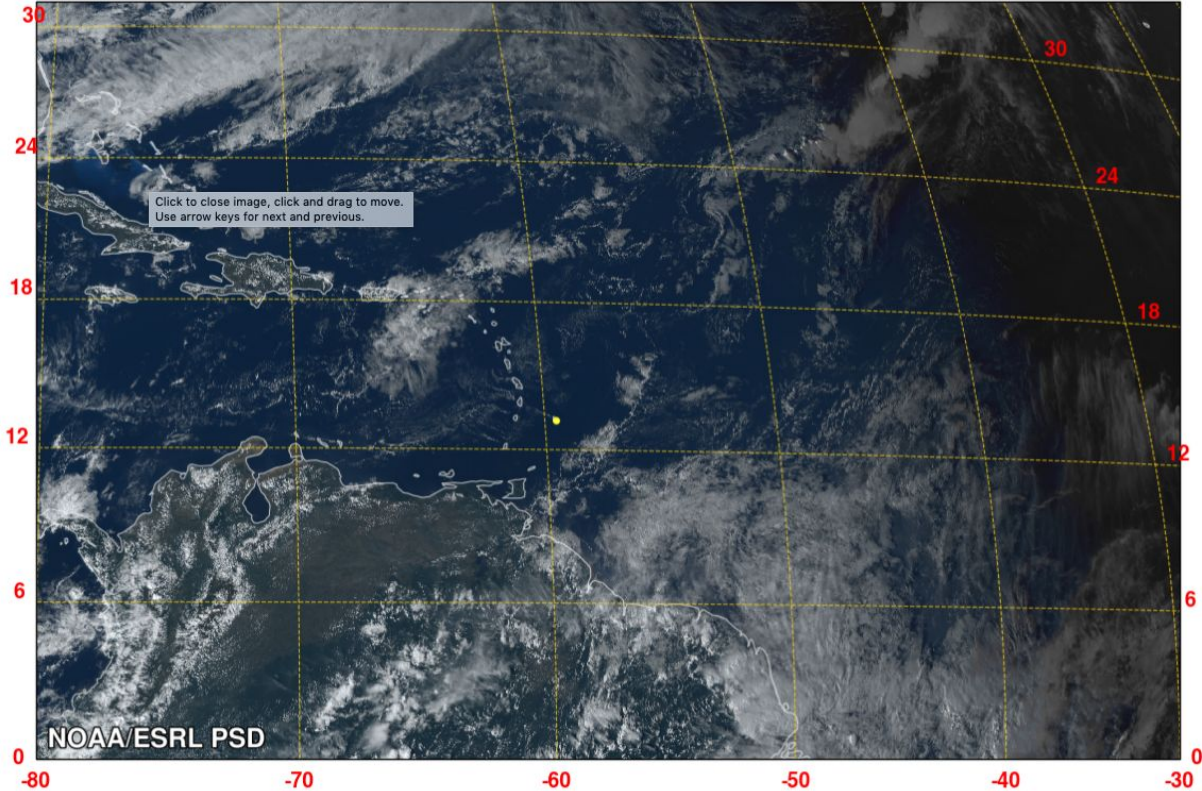


12 UTC JANUARY 27 2020 - NATIONAL WEATHER SERVICE

Today's GOES-16

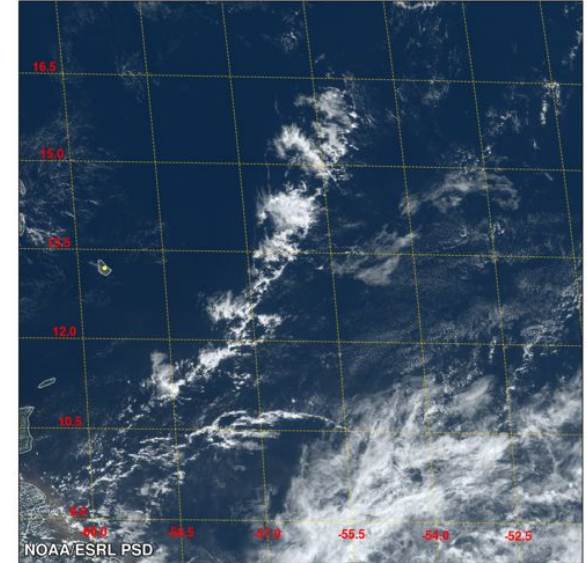
GOES-16 True Color + IR (ATOMIC regional)

27 January 2020 20:00 UTC



GOES-16 True Color + IR (ATOMIC mesoscale)

27 January 2020 15:30 UTC



GFS analysis

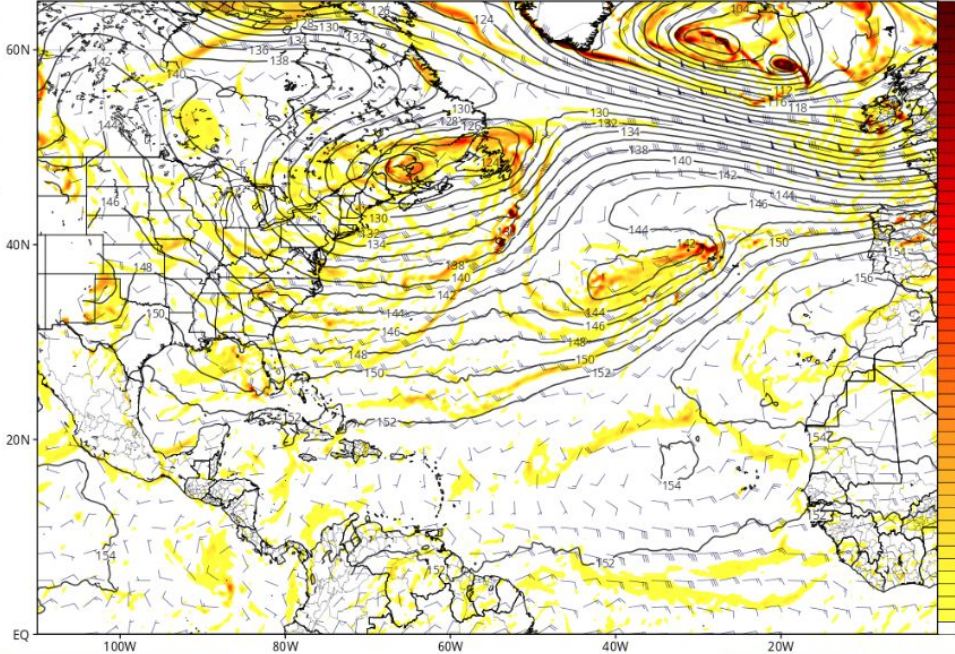
GFS Global Ensemble Hurricane Mesoscale Climate

← ▶ → - + ⚙️ 📱 12z Monday, Jan 27

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

Init: 12z Jan 27 2020 Forecast Hour: [6] valid at 18z Mon, Jan 27 2020

TROPICALTIDBITS.COM



Forecast Hour: 6

-72	-66	-60	-54
-48	-42	-36	-30
-24	-18	-12	-06
000	006	012	018
024	030	036	042
048	054	060	066
072	078	084	090
096	102	108	114
120	126	132	138
144	150	156	162
168	174	180	186
192	198	204	210
216	222	228	234
240	246	252	258
264	270	276	282
288	294	300	306
312	318	324	330

REGIONS Prev. Run ← Next Run → FORECAST GIF TREND GIF

GFS analysis

GFS

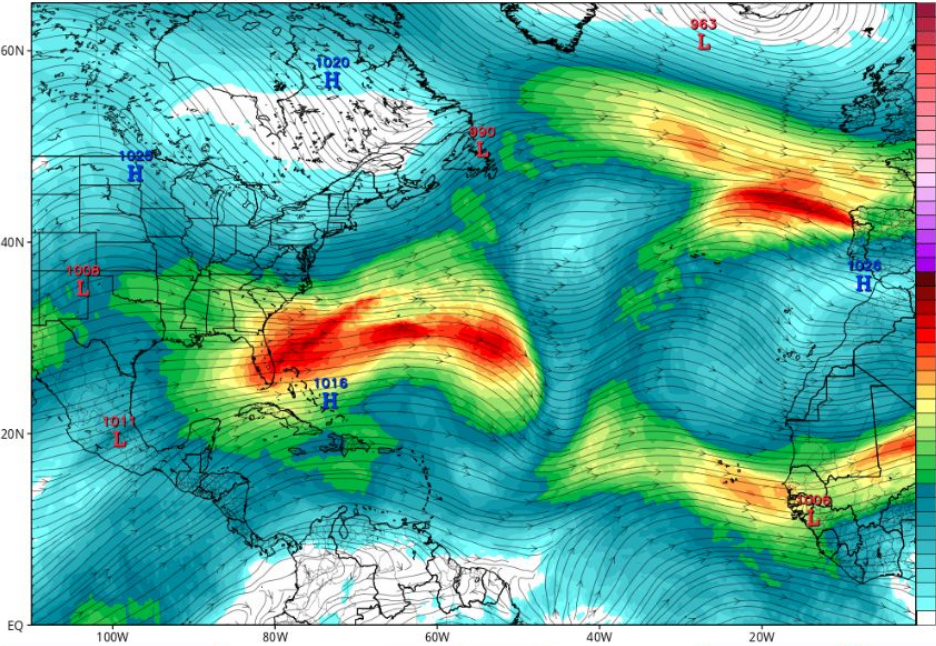
- Global
- Ensemble
- Hurricane
- Mesoscale
- Climate

Navigation controls: back, forward, zoom in (+), zoom out (-), settings (gear), and a dropdown menu showing "12z Monday, Jan 27".

GFS 200mb Wind Speed/Streamlines (kt) & MSLP Extrema (mb)

Init: 12z Jan 27 2020 Forecast Hour: [6] valid at 18z Mon, Jan 27 2020

TROPICALTIDBITS.COM



Forecast Hour: 6

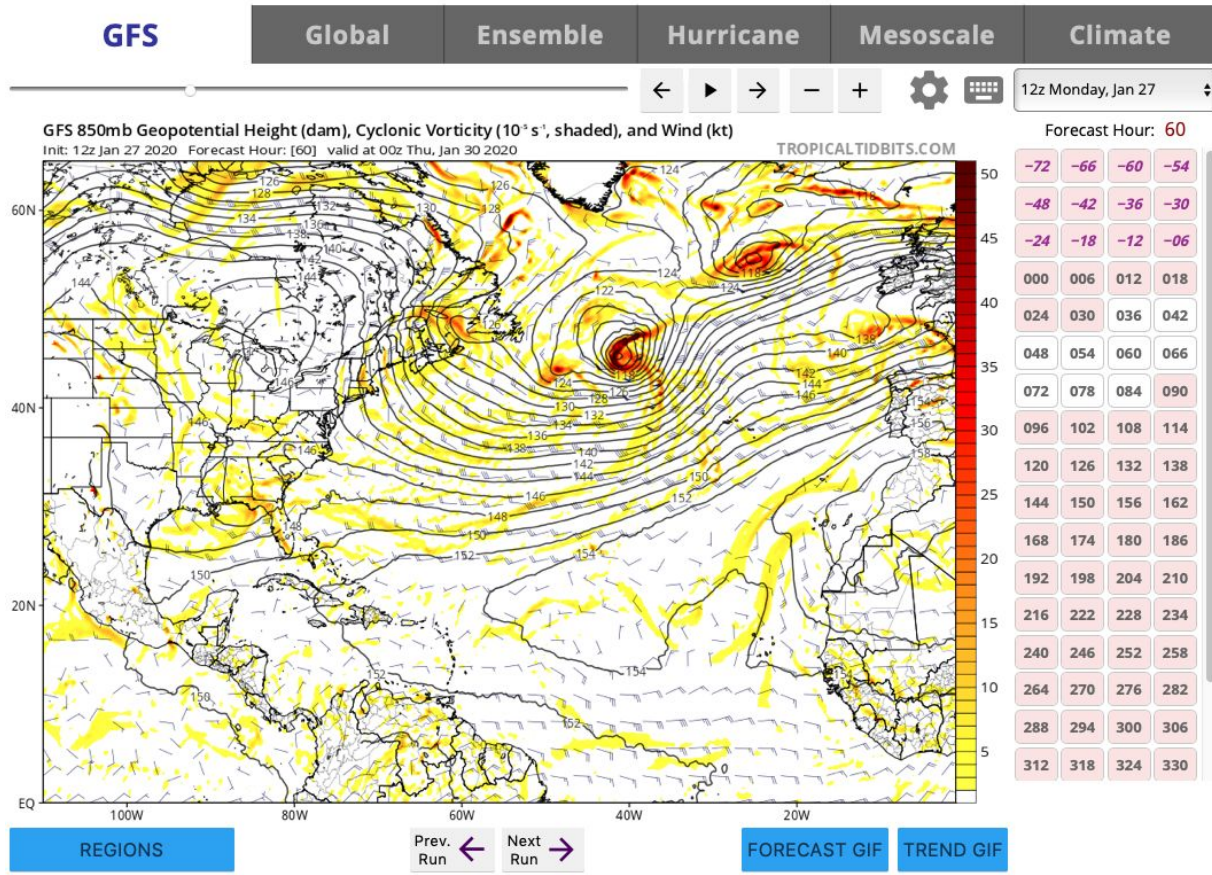
-72	-66	-60	-54
-48	-42	-36	-30
-24	-18	-12	-06
000	006	012	018
024	030	036	042
048	054	060	066
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REGIONS

Prev. Run ← Next Run →

FORECAST GIF TREND GIF

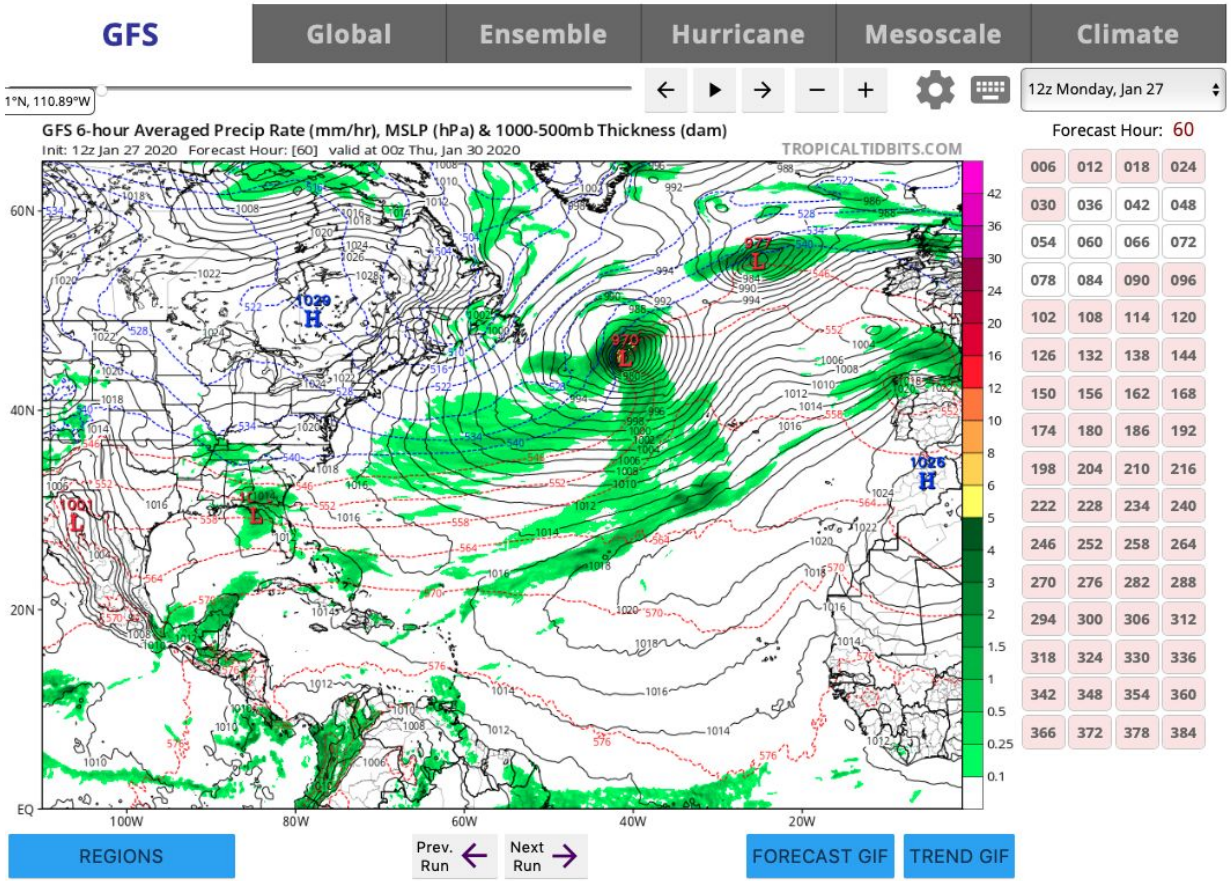
GFS 60hr forecast (valid on 6/30 ->next P3 flight)



Forecast Hour: 60

-72	-66	-60	-54
-48	-42	-36	-30
-24	-18	-12	-06
000	006	012	018
024	030	036	042
048	054	060	066
072	078	084	090
096	102	108	114
120	126	132	138
144	150	156	162
168	174	180	186
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GFS 60hr forecast (valid on 6/30 ->next P3 flight)



Forecast Hour: 60

006	012	018	024
030	036	042	048
054	060	066	072
078	084	090	096
102	108	114	120
126	132	138	144
150	156	162	168
174	180	186	192
198	204	210	216
222	228	234	240
246	252	258	264
270	276	282	288
294	300	306	312
318	324	330	336
342	348	354	360
366	372	378	384

GFS 60hr forecast (valid on 6/30 ->next P3 flight)

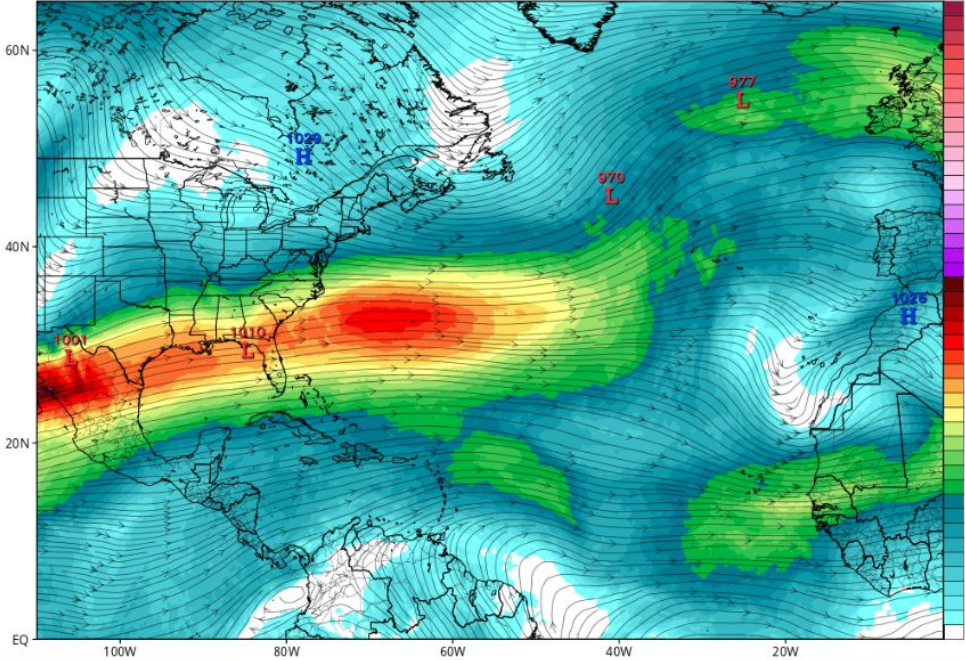
GFS Global Ensemble Hurricane Mesoscale Climate

12z Monday, Jan 27

GFS 200mb Wind Speed/Streamlines (kt) & MSLP Extrema (mb)
 Init: 12z Jan 27 2020 Forecast Hour: [60] valid at 00z Thu, Jan 30 2020

TROPICALTIDBITS.COM

Forecast Hour: 60



250	-72	-66	-60	-54
230	-48	-42	-36	-30
210	-24	-18	-12	-06
200	000	006	012	018
190	024	030	036	042
180	048	054	060	066
170	072	078	084	090
160	096	102	108	114
150	120	126	132	138
140	144	150	156	162
130	168	174	180	186
120	192	198	204	210
110	216	222	228	234
100	240	246	252	258
90	264	270	276	282
80	288	294	300	306
70	312	318	324	330

REGIONS Prev. Run Next Run FORECAST GIF TREND GIF

Larger differences when flying through clouds!

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

Soundings with GFS Model Comparisons

Selected Platform:

NOAA P3

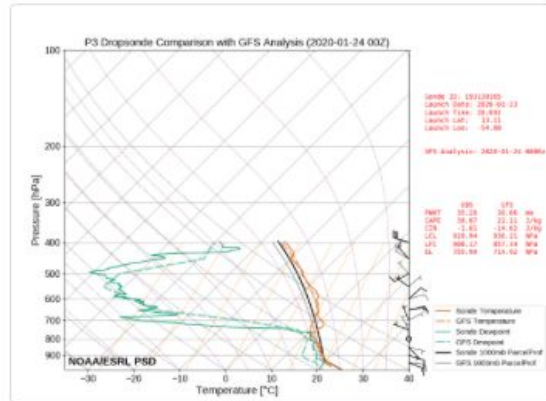
Selected Sonde:

2020-01-23 20:09 UTC

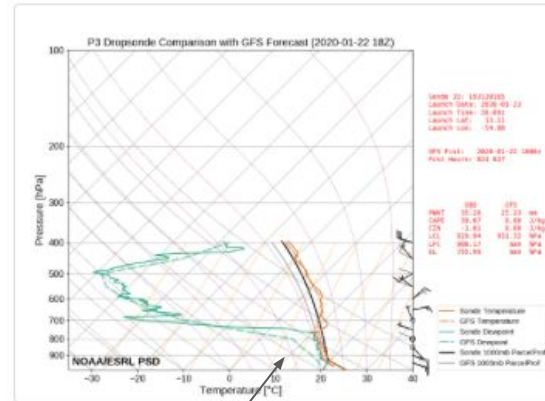
< Prev

Next >

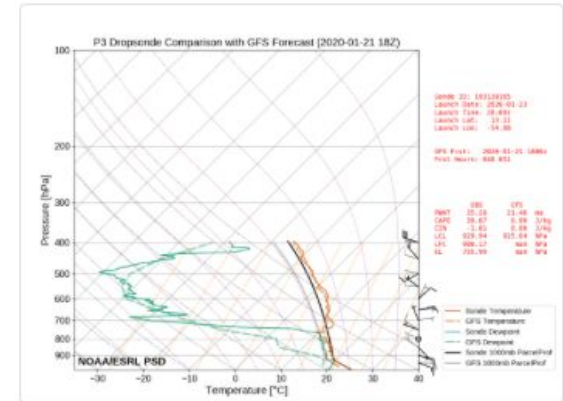
Analysis



~24 Hour Forecast



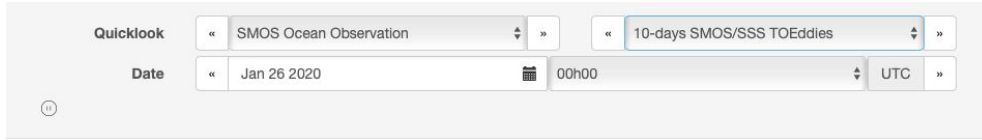
~48 Hour Forecast



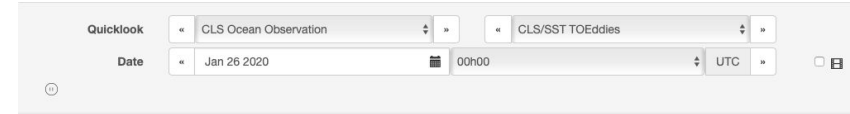
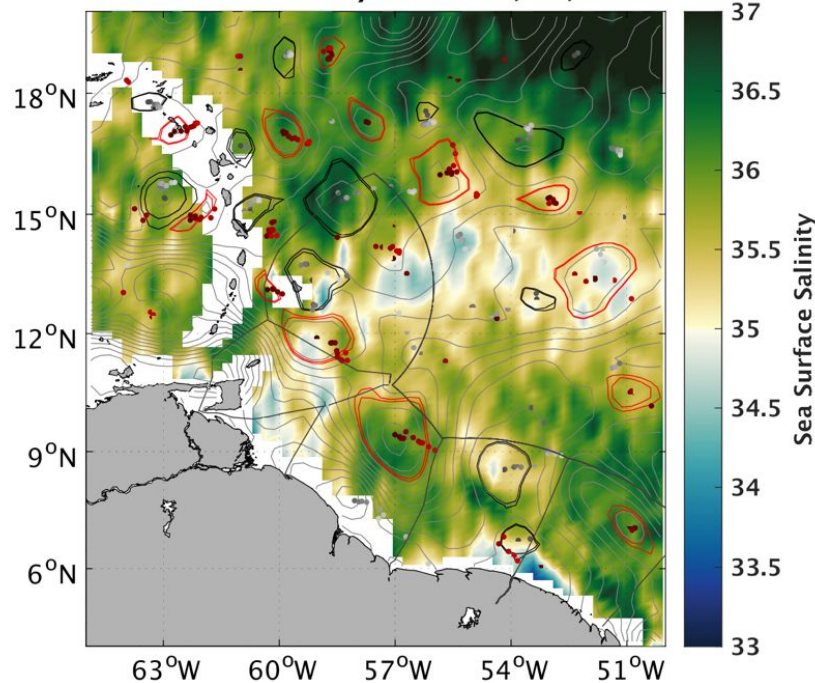
The GFS analysis field is from the closest run time to the sounding time; the 24 & 48 hour forecast data are interpolated from the nearest times to the sounding time (see plot for exact times used). GFS vertical spacing is every 50 hPa.

Lower levels are drier in the GFS forecasts

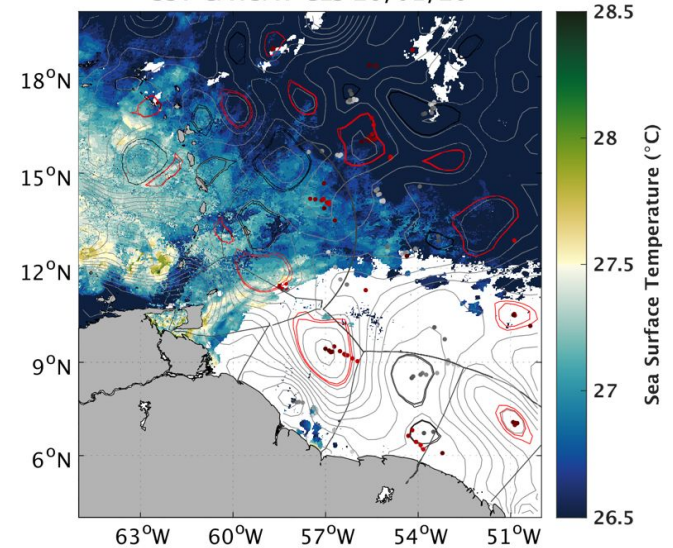
Latest ocean observations: SST/SSS & TOEddies



SSS SMOS 10days until 26/01/20



SST CATSAT CLS 26/01/20



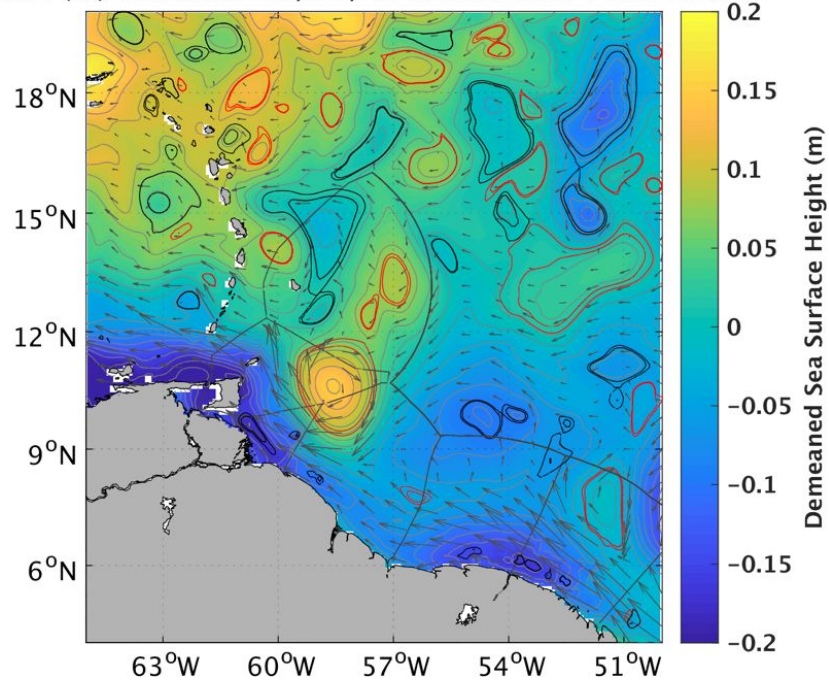
Ocean Forecasts

Quicklook « Mercator Forecast Maps » « Sea Surface Height - TOEddies »

Date « Jan 27 2020 » 00h00 UTC »

Forecast date « 2020-02-01 00:00 » All Forecasts »

SSH (m) Mercator 27/01/20 Forecast at +120 hours



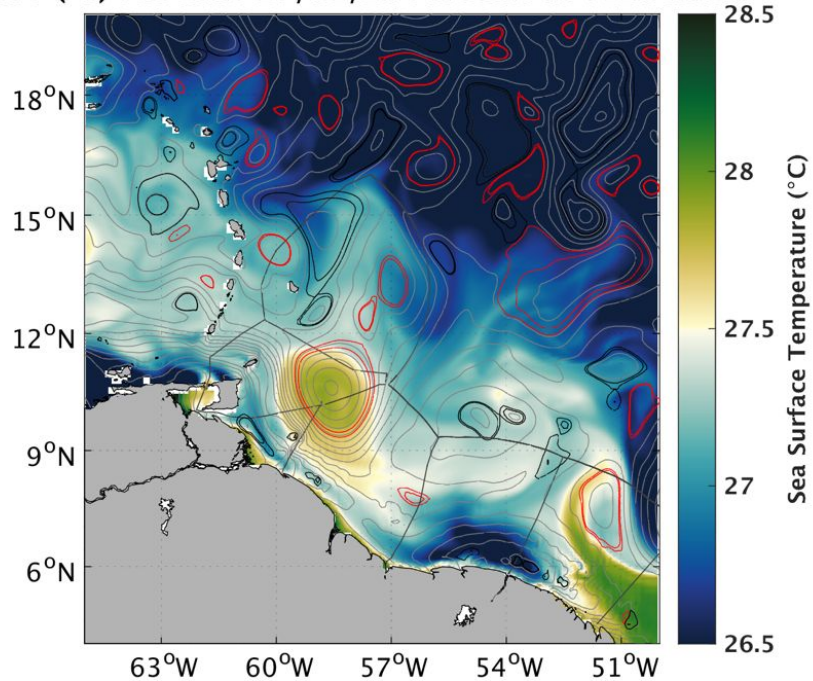
Ocean Forecasts

Quicklook « Mercator Forecast Maps » « Sea Surface Temperature - TOEddies »

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SST (°C) Mercator 27/01/20 Forecast at +120 hours



Ocean Forecasts

