

EXPORTS North Atlantic Context Situational Awareness

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Weather Forecast Summary:

Tomorrow (Tuesday 18 May): Partly cloudy, periods of sun, only trace rain forecast. NW winds should stay below 20 knots, SWH down to near 2m, primarily W swell, with a smaller S swell component.

Outlook: The center of the storm is now confidently forecast to pass north of the study area Wednesday night, with the worst winds around 0000 hrs Thursday. Once again models strongly disagree after this point, with some models predicting bad weather through Friday, and some predicting a quick return to pre-storm conditions, depending on the exact track of the center. Wave forecasts are equally divergent, with the EUMETSAT forecast showing SWH near 6 m only for a brief period Thursday night / Friday morning, but Windy.com shows higher swells through Saturday. Another developing low pressure system near Bermuda may approach the area on the weekend.

Wednesday 19 May: Cloudy, rain up to 1/2" likely in the afternoon. W winds backing to SW in the evening and increasing to 30 knots with some gusts over 40 knots. Seas will build gradually to over 3 m by midnight.

Thursday 20 May: Mostly cloudy. Wind 30-40 knots, with possible 50 knot gusts. Chance of light rain, particularly in the afternoon. Seas falling from over 5 to 3 m.

Friday 21 May: Mostly cloudy, rain likely. NW Winds dropping gradually from 40-30 knots, seas remaining near 3m from Thursday's wind.

Saturday 22 May: Mostly cloudy, trace rain, winds dropping to 20 knots, seas decreasing 2 m.

Sunday 23 May: Increase in wind may occur again if the low now near Bermuda approaches the area.

Oceanography Summary: It will never be tropical at Station PAP. That stubborn 13 front is still sitting more or less on the same spot, with across area cooling in surface waters present (from microwave SST). Chlorophyll seems to be increasing, if it is to trust Globe Color, but daily image is too patchy to confirm that. Regardless, there is still a swirl-like structure in the area of A2, and chlorophyll features to the south of A2 match nicely SSH (sea surface height) data. Mooring information again confirms patchiness, with biomass (and oxygen) levels still not reaching the concentrations we saw before the big storm. Spikiness in backscattering is omnipresent, confirming the exports event ongoing. Note that the spikes from the BGC303, that is heading south on the chlorophyll highway, are present both in chlorophyll and backscattering, indicating a bit different composition of the sinking material than in the core of the eddy.

Eddy tracking: Eddy center product (EC_002) moved 7 km south as a result of ADCP and drifter data. Otherwise no major changes.

Weather Forecast Details:

Date	Wind (kn) / Dir	Tair (C)	SWH (m)	Clouds (%)	Precip (")	Confidence
Tu 18 May	10-20 W-NW	12	2	75	T	medium
W 19 May	10-30 W-SW	13	2-4	95	0.2-0.4"	medium
Th 20 May	45-40 SW-W	13	6-2.5	85	0.1-0.2"	low
F 21 May	40-30 NW	12	2-3	95	0.2-0.4"	low
Sa 22 May	30-20 NW	11	3-2	80	T	low

Satellite Imagery and other info:

EXPORTS NA Platform positions and data: <https://iop.apl.washington.edu/exports2021/>

Links to the imagery (if on Discovery or Cook pls use rsync): TBD

Eddy tracking image: /context_images/eddytracking/2021_05_17_gamma.png

Composite of past Chl: /context_images/chl/2021_05_16_globChl.png

Daily chl: /context_images/chl/2021_05_16_dailyChl.png

Daily rrs: /context_images/rrs/2021_05_16_rrs.png

SST (microwave): /context_images/sst/2021_05_17_mwSST.png

SST L2: /context_images/sst/2021_05_16_l2SST.png

Sea Level/Currents: /context_images/sla/2021_05_17_sla.png

Weather: /context_images/weather/2021_05_17_meteogram.png

Forecast Map: /context_images/weather/2021_05_17_96hrsfc.gif

Mooring: /context_images/PAP/2021_05_17_PAP.png

IOP APL links:

Eddy tracking image:

https://iop.apl.washington.edu/exports2021/context_images/eddytracking/2021_05_17_gamma.png

Composite of past Chl: https://iop.apl.washington.edu/exports2021/context_images/chl/2021_05_16_globChl.png

Daily chl (L2): https://iop.apl.washington.edu/exports2021/context_images/chl/2021_05_16_dailyChl.png

Daily rrs (L2): https://iop.apl.washington.edu/exports2021/context_images/rrs/2021_05_16_rrs.png

SST (microwave): https://iop.apl.washington.edu/exports2021/context_images/sst/2021_05_17_mwSST.png

SST L2: https://iop.apl.washington.edu/exports2021/context_images/sst/2021_05_16_l2SST.png

Sea Level/Currents: https://iop.apl.washington.edu/exports2021/context_images/sla/2021_05_17_sla.png

Weather: https://iop.apl.washington.edu/exports2021/context_images/weather/2021_05_17_meteogram.png

Forecast Map: https://iop.apl.washington.edu/exports2021/context_images/weather/2021_05_17_96hrsfc.gif

Mooring: https://iop.apl.washington.edu/exports2021/context_images/pap/2021_05_17_PAP.png