

## **EXPORTS NE Pacific Context Situational Awareness**

**Date:** Tue- Aug 21, 2018 - JD 233

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### **Weather Forecast Summary:**

Tomorrow (Wed 8/22) will be cloudy (GFS says there will be some clear skies in the afternoon), wind ~12kt from the W, humid, and cool (13.5°C). The wind may pick up a little Thurs and Fri (according to GFS and NEMS) with winds of ~19kts. No precipitation forecasted.

Wavewatch3 l forecasts SWH of 2m decreasing to just less than 2 m tomorrow and staying 1.5-2m for the forecast period (next 5 days).

### **Oceanography Summary:**

Ocean Color: no recent images due to clouds.

Upper Ocean Profiles: Note that all NRT SeaGlider data are largely unprocessed and only notionally calibrated. SeaGlider 219 CTD observations show SST values of ~13.8C and MLDs of 28-31 m for the last available dive (115). Over the past ten dives, there is some variability in mixed layer depth between 25 and 35 m. Strong pycnoclines are seen just beneath the MLD, between 25 and 40 m and between 100 and 115m. Salinity values slowly increase with depth over the upper 90 m showing none of the strong gradient seen in temperature. There is a halocline between 100 and 115m.

The last dive upcast (115) showed a broad ChlMax ~1mg/m<sup>3</sup> centered at ~55 m. In the upcast two distinct peaks at 41m and 63m could be distinguished. It seems like scatter is increased at the 40m peak. The 1% PAR depth is 78m for dive 115. The glider has been North of PAPA lately.

SST: The SST distribution shows a large-scale temperature gradient that is aligned such that the temperature changes from NNW to SSE near PAPA (colder waters to the NW, warmer waters to the SE). Some mesoscale variations in microwave SST are seen in SST near PAPA.

Sea Level: Both absolute dynamic topography and sea level anomaly show that PAPA continues to sit between two coherent mesoscale eddies; an anti-cyclone (about 100-km in scale) to the east and a cyclone to the NW. The range in SLA values from the high in the anti-cyclone to the low in the cyclone is still small (~ 7 cm).

The absolute geostrophic velocity at PAPA from altimetry is ~6.9km/d to the NNE. Mercator products also show this anticyclone/cyclone circulation in the 95m figure but currents are much smaller and less spatially coherent.

Currents: Mercator products show -surface currents are 10.6km/d to the NE at PAPA with strong flows to the NE throughout the 5 degree domain. At 95m Mercator is showing 4.8 km/d to the NE with less organization than at 0m. Mercator product now shows PAPA at the boundary of a cyclonic and an anticyclonic circulation.

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### Weather forecast details

[ECMWF,GFS,NEMS summary](#) (note NEMS is offset 10hrs. This will be fixed. Utc vs local issue.

Windy.com is aware.)

[sea state summary \(wavewatch3 CDIP for UW wave rider mooring\)](#)

[sea state summary \(ECMWF WAM 13km\)](#)

Date	Wind(kn) "from the"	Tair(°C)	SWH(m) "from the"	Clouds(%)	Precip(")	URL	predictability
Wed 8/22	13W	14	2->1.5WSW	100	--	<a href="#">aug 22 forecast URL</a>	very high
Thu 8/23	17W	14	1.5->2SSW	100	--	<a href="#">aug 23 forecast URL</a>	very high
Fri 8/24	18W	14	2W	100	--	<a href="#">aug 24 forecast URL</a>	very high
Sat 8/ 25	17W	15	2W	86	--	<a href="#">aug25 forecast URL</a>	very high
Sun 8/26	20W	14	2W	73	--	<a href="#">aug26 forecast URL</a>	high

Comparison of weather forecasts at Station P of 7 different model runs - [6 day forecast model comparison](#)

### Glider219- Real time depth profiles

Dive 115 2018-08-21 06:14-11:49 utc-9

Start 50.39N 145.08W

End 50.37N 145.07W

- [locations/dates/times](#)
- [chlor a](#)
- [fraction of surface PAR](#)
- [fraction of saturated O2](#)
- [Temperature](#)
- [Salinity](#)
- [Sigma0](#)
- [Optical scatter](#)

Note: all NRT glider data are using manufacturers offsets / cal constants

Last 10 profiles dives 106-115 2018 Aug 19 03:58 utc-9 Aug 21 11:49 utc-9

- [Locations](#)
- [chlor a](#)
- [fraction of surface PAR](#)
- [fraction of saturated O2](#)
- [temperature](#)
- [Salinity](#)
- [Sigma0](#)
- [Blue scatter](#)
- [Red scatter](#)

**PMEL mooring**

Last week of hourly air temp, wind, current, sss, sst - [PMEL stack time series plot](#)

**Satellite Imagery:**

(Microwave SST: [URL 10 deg](#) & [URL 5 deg](#),  $||\text{grad}(\text{sst})||$  [5 deg URL](#))

**Merged Satellite Altimetry:**

Absolute Sea Level & Geostrophic Velocity - [10 degree box](#) & [5 degree box](#)

Sea level anom & anom currents - [10 degree box](#) & [5 degree box](#)

**Mercator Ocean Products:**

Surface currents, SST & SSH: [10 degree](#) & [5 degree](#)

95 m currents & salinity: [10 degree](#) & [5 degree](#)

Today's Situational Awareness data **on the google drive** [sitAware for 2017-08-21](#)  
**EXPORTS NRT Platform positions in [graphic](#) and [tex](#) format.**