

EXPORTS NE Pacific Context Situational Awareness

Date: Friday- Aug 10, 2018 - JD 222

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Weather Forecast Summary:

Tomorrow (Sat 8/11) will be cloudy, humid, cool (14°C), The winds are forecast to be ~10kts from the W turning SW Sun and picking up to 20kts from the SSW on Mon. The flow is from a High to the SW that will move Eastward, that it will be S of PAPA on Mon. Today's SWHs ~1.5m from NW. SWH will stay in that 1.5-2m range and increase Mon to a peak of 4m and decreasing throughout tuesday back 2m. Rain late Mon , and wee hours of Tues morning

Oceanography Summary:

Ocean Color: Last good Chl image - July 3 - see below. Some patchy images from Viirs, Terra, and Aqua from Sunday show no notable features around PAPA. Blooms are not happening near PAPA. Speckles of ocean between clouds, seen since don't seem to show any bloomage.

Upper Ocean Profiles: Please note that all NRT SeaGlider data are largely unprocessed and only notionally calibrated. SeaGlider 219 CTD observations show SST values of ~13.8C, MLDs are pretty stable between 25 and 30 m. There is an indication of a shallower stratification on some dives (diurnal?). There is another pycnostad between 60 and 100m below the strong seasonal thermocline (roughly 25 m to 60m). Salinity values show a relatively uniform salinity profile to about 80 m. 1% light level was at ~ 70m. A strong (~ 1 mg/m³) and thick (~25 m) chlorophyll max is seen centered at ~60 m.

SST: From the passive microwave SST , SST contours around PAPA are largely aligned from the SW to the NE, such that large-scale gradients go from NW to SE. Although at PAPA itself, SST gradients are quite weak. . A transect at 50N shows a linear decrease across the 5deg box. Mercator sst shows a slight warmer (14.5°C) anti-cyclone sitting over PAPA.

Sea Level: Both absolute dynamic topography and sea level anomaly show PAPA sitting on the western edge of a coherent mesoscale anti-cyclone. The geostrophic velocity associated with this feature is still fairly weak, ~4.6 km/d to the NE but amongst the strongest velocities in the region. A cyclonic feature is located to the NE of PAPA and another cyclonic feature is located to the SSE of PAPA. There is a signature of an anticyclonic eddy immediate south of PAPA in the Mercator products.

Currents: According to altimetry surface currents at Station P are ~4.6km/d to the NE; PAPA sits on the western edge of the anti-cyclone. Mercator products show surface currents 2.9km/d to the E at PAPA. At 95m Mercator is showing 6.8km/d to the NE.

Weather forecast details

[ECMWF,GFS,NEMS summary](#)

[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
Sat 8/11	9W	14	1.5SW	100	--	aug11 forecast URL	very high
Sun 8/12	12SW	13	2SE	100	--	aug 12 forecast URL	very high
Mon 8/13	20SSW	14	2->4WSW	100	--	aug 13 forecast URL	medium
Tue 8/14	13NNW	14	4->2WSW	100	0.4-0.8	aug 14 forecast URL	medium
Wed 8/15	10NW->5W	13	2W	66	--	aug15 forecast URL	high

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

Glider219- Real time depth profiles

Dive 67 2018-08-10 12:48-17:29 utc

Start 50.14N 145.12W

End 50.13N 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 58-67, 2018 Aug 8 09:30 - Aug 10 17:29 utc

- [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:

Last good Chl image: July 3 - JD 184 - Aqua - [URL](#) corresponding [sst](#)

Sunday's Chl image: Aug 5 JD 217- Aqua- [URL](#), corresponding [sst](#) and [Rrs555](#)
" " NPP-S [URL](#) corresponding [Rrs551](#)
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 2017-08-10](#)
EXPORTS NRT Platform positions in [graphic](#) and [tex](#) format.