

EXPORTS NE Pacific Context Situational Awareness

Date: Wednesday- Aug 8, 2018 - JD 220

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Weather Forecast Summary:

Rain this evening 0.2-.04," total. Tomorrow (Thurs 8/9) will be cloudy (maybe some sun meteoBlue says 5 hrs. GFS shows two 3hr intervals with sun) humid, cool (13°C), The winds are forecast to be 13kts from the NW They stay in the 10-15 kt range from the NW for Friday and turn from the west saturday. Today's SWHs ~1.2m from W. SWH will stay in that 1.5-2m range and increase Sun and Mon to 4m. .

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.

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 ~13.9C, 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 ~ 80m. 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 NE to SW. Although at PAPA itself, SST gradients are quite weak. There are stronger gradients located to the NW and SE of PAPA (again in these regions, the gradients are from NW-SE, but the high gradient bands run from SW-NE). A transect at 50N shows a linear decrease across the 5deg box. The 14deg isotherm runs N-S nearly through PAPA. 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, ~5.1 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 ~5.1km/d to the NE; PAPA sits on the western edge of the anti-cyclone. Mercator products show surface currents 6.7km/d to the ENE at PAPA. At 95m Mercator is showing 7.7km/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
Thu 8/09	14NW	13	2W	66	--	aug 9 forecast URL	high
Fri 8/10	10WNW	13	1.7SSW	20	--	aug10 forecast URL	high
Sat 8/11	10W	14	2.0SSW	46	--	aug11 forecast URL	very low
Sun 8/12	15SW	14	2SE	66	--	aug 12 forecast URL	low
Mon 8/13	18SSW	14	4W	100	--	aug 13 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 59 2018-08-08 15:24-20:57 utc

Start 50.01N 145.18W

End 50.05N 145.19W

- [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 2 days of profiles -

- [Locations](#)
- [chlor a](#)
- [fraction of surface PAR](#)
- [fraction of saturdated 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 2017-08-08](#)
EXPORTS NRT Platform positions in [graphic](#) and [tex](#) format.