

EXPORTS NE Pacific Context Situational Awareness

Date: Sunday- Aug 5, 2018 - JD 217

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Weather Forecast Summary:

Tomorrow (Mon 8/6) will be cloudy, humid, cool (14°C), light rain in possible in the early morning, with around 18kt winds from the NE and are forecasted to decreasing to light and variable Tues. A low is the SSE of PAPA. Today's SWHs ~2.5m WNW. SWH forecasts for tomorrow are ~2m from the E and will swap around to be from the W tues. It will stay in that SWH range for a few days decreasing to ~1.5m by Wed.

Oceanography Summary:

Ocean Color: Last good Chl image - July 3 - see below.

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 ~13.5C, shallow MLDs (~24m), strong seasonal thermocline from roughly 10 m to 60m, while the salinity values show a relatively uniform salinity profile to about 80 m. 1% light level was at ~ 73m. A strong (> 1 mg/m³) and thick (~25 m) chlorophyll max is seen centered at ~60 m.

SST: Merged SST imagery available. Strong SST gradients persist to the east and south of PAPA; these have strengthened over the past few days. The large-scale NW (cold) to SE (warm) gradient are breaking up with a warm filament extending to the west and north of PAPA. PAPA is now located near the center of a low SST anomaly. This is a large feature, at least a couple hundred km's across, perhaps too large to be a single mesoscale eddy. The Mercator SST does show warmer water moving to the north to the west of PAPA, but PAPA is not located in the center of the temperature minimum.

Sea Level: Both absolute dynamic topography and sea level anomaly show PAPA sitting on the western edge of a large, coherent mesoscale anti-cyclone. The geostrophic velocity associated with this feature is still fairly weak, ~5.8 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 SE of PAPA. Both features are over 100 km away and unlikely to affect the area immediately around 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 ~5.8 km/d to the NE; PAPA sits on the western edge of the anti-cyclone. Altimetric and Mercator products are show dissimilar patterns - due in part to satellite altimetry does not account for wind-driven flow. Mercator products show surface currents 1.0km/d to the NNW at PAPA. At 95m Mercator is showing 9.1km/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
Mon 8/06	18NE	14	3E	100	--	aug 6 forecast URL	high
Tue 8/07	10E	14	2.5E->1.5W	100	--	aug 7 forecast URL	very high
Wed 8/08	5WSW	14	1.5W	100	--	aug 8 forecast URL	very high
Thu 8/09	10NW	14	2W	50	--	aug 9 forecast URL	medium
Fri 8/10	6NW	14	2W	20	--	aug10 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 46 2018-08-05 13:09-18:20 utc

Start 50.17N 144.89W

End 50.18N 144.91W

- [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

PMEL mooring

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

Note - air pressure seems too high...

Satellite Imagery:

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

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 2017-08-05](#)

EXPORTS NRT Platform positions in [graphic](#) and [tex](#) format.