

EXPORTS NE Pacific Context Situational Awareness

Date: Saturday- Aug 4, 2018 - JD 216
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Weather Forecast Summary:

Tomorrow (Sun 8/5) will be cloudy, humid, cool (14°C), with around 18kt winds from the NE and are forecasted to decrease after Tues. A strong low is to the SE of PAPA, so winds will continue to be from the NE. Today's SWHs exceeded 5m at times. SWH forecasts for tomorrow are 3m from the WNW and will stay in that range for a few days eventually decreasing to ~2m 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 ~13.3C, shallow MLDs (~21m), 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 ~ 66m. 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 km/d to the North 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 ~5.5 km/d to the NNE; 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 9.5km/d to the SE at PAPA with flows to the SE seen throughout the 5 degree domain centered on PAPA. At 95m Mercator is showing 9.8km/d to the NE and more highly variable.

Weather forecast details

[ECMWF,GFS,NEMS summary](#)
[sea state summary \(wavewatch3 22km\)](#)

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

Date	Wind(kn)	Tair(°C)	SWH(m)	Clouds(%)	Precip(“)	URL	predictability
Sun 8/05	17NNE	14	3.5WNW	100	--	aug 5 forecast URL	high
Mon 8/06	18ENE	15	3WNW	100	--	aug 6 forecast URL	high
Tue 8/07	10ENE	15	2.5WNW	100	--	aug 7 forecast URL	very high
Wed 8/08	7SW	15	2S	50	--	aug 8 forecast URL	high
Thu 8/09	17NW	14	2S	80	--	aug 9 forecast URL	medium

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

Glider219- Real time depth profiles

Dive 42 2018-08-04 14:39 to 20:13utc

Start 50.05N 144.90W

End 50.08N 144.90W

- [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](#) (sorry the colorbar label is hosed, it will be fixed).

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 2017-08-04](#)

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