

EXPORTS NE Pacific Context Situational Awareness

Date: Friday- July 27, 2018 - JD 208

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Weather Summary:

Tomorrow (7/28) will be cloudy, humid and cool (14°C). According to GFS22 there will be sunshine Saturday. However ECMWF also shows sunny skies for a much shorter duration. The three forecasts predicts winds ~13 kts to the NNE. Wind speeds are predicted to decrease to ~ 8 kts through Monday and turn to east. No precipitation is predicted. ECMWF SWHs are ~1.8m with swell from the SW and are predicted to decrease entering the week.

Oceanography Summary:

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

SST: Merged SST imagery provides higher resolution than microwave. The large-scale NW (cold) to SE (warm) gradient still dominates the pattern with a change of roughly 7 degrees over the 10° domain. The SST gradient at PAPA is predominantly oriented NW to SE with a magnitude of 1°C/100 km. The Mercator SST shows a warmer SSTs being advected to Station P from the SW due to an anti-cyclonic flow just to the S of Station P.

Sea Level: Altimetry shows that SSH gradients are mostly aligned zonally at PAPA consistent with a northward flow of ~4km/d. The current is stronger to the west of PAPA with two weak anti-cyclones located to the NE and SE of PAPA. These features remain relatively weak, but establish a region of larger lateral shear to the E of PAPA. There is a signature of an anti-cyclonic eddy to the SE in the Mercator products.

Currents: Surface currents at Station P are ~4 km/d to the N according to altimetry with hints of anticyclonic features NE and SE of Station P. Mercator products show a narrow current (~12 km/d) to the NE sitting over PAPA.

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
Sat 7/28	16S	14	1.6SW	93	--	july28 forecast URL	high
Sun 7/29	12SW	14	1.4SSW	100	--	july29 forecast URL	very high
Mon 7/30	10WSW	14	1.4SW	100	--	july30 forecast URL	high
Tue 7/31	5NW->W	14	1.6SW	73	--	july31 forecast URL	high
Wed 8/01	9WSW	14	1.6SW	93	--	aug1 forecast URL	high

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

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](#)

Microwave+IR SST: [URL 10 deg](#) & [URL 5 deg](#)

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](#)

Link to Situational Awareness data stockpiled for today on the google drive [sitAware for 2017-07-27](#)

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