EXPORTS NE Pacific Context Situational Awareness

Date: **Saturday- July 28, 2018 - JD 209**
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Weather Forecast Summary:
Tomorrow (Sunday 7/29) will be cloudy, humid and cool (14°C). The three forecasts predicts winds ~13 kts from the S, decreasing to ~ 7 kts on Monday (7/30) and turning from the NW. Only scant precipitation is predicted and from only one of the forecasts. ECMWF forecasted SWHs are ~1.6m with swell from the SW, decreasing on Monday to 1.3 m and then increasing again to ~1.7 m on Tuesday.

Oceanography Summary:
Ocean Color: Last reasonable Chl image - July 3 - see below.
SST: Merged SST imagery provides higher resolution than microwave although the NRT thermal IR imagery appear suspect. The large-scale NW (cold) to SE (warm) gradient still dominates the pattern with a change of roughly 6 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 anticyclonic 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 anticyclonic 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 again driven by an anticyclonic feature ~50 km SSE of Station P.

Weather forecast details
ECMWF,GFS,NEMS summary Part1 and Part2
sea state summary (wavewatch3 22km) Part1 and Part2
sea state summary (ECMWF WAM 13km) Part1 and Part2

Date	Wind(kn)	Tair(°C)	SWH(m)	Clouds(%)	Precip(")	URL	predictability
Sun 7/29	14SSW	14	1.5SW	100	--	july29 forecast URL	very high
Mon 7/30	7NW	14	1.7SW	100	--	july30 forecast URL	very high
Tue 7/31	3NW	14	1.7SW	100	--	july31 forecast URL	high
Wed 8/01	9NW->W	14	1.5SW	80	--	aug1 forecast URL	high
Thu 8/02	10WSW	14	1.3SW	80	--	aug2 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 2017-07-28

EXPORTS NRT Platform positions in graphic and tex format.