EXPORTS NE Pacific Context Situational Awareness
Date: **Saturday- Aug 11, 2018 - JD 223**
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Weather Forecast Summary:
Tomorrow (Sun 8/11) will be cloudy (GFS says clear skies), humid, cool (14°C), The winds are forecast to be ~10kts from the W turning SW later Sun and picking up to 20kts from the SW on Mon. The flow is from a High to the SW that will move Eastward and be S of PAPA on Mon. A low gets sheared/smeared between two highs and the winds direction from different models are not in agreement at all tues and after., but they are in the 10-15kt range.

Today's SWHs ~1.3m from SW. SWH will stay in that 1.5-2m range and increase Mon to a peak of 4m and decreasing throughout tuesday back 2m. Rain possibilities tues through the end of the forecast Period. Heaviest on wed.

Oceanography Summary:
Ocean Color: Last good Chl image - July 3 - see below. Some patchy images from Viirs, Terra, and Aqua from Sunday show some variability but no notable features around PAPA. No surprise, there are lots of clouds…

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 ~14.1C, MLDs are pretty stable between 25 and 30 m. There is an indication of a shallower stratification on some dives (diurnal?). There is another pycnocline 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 ~ 70m.

After dive 69 there is a noticeable increase in near-surface Chl and Optical backscateer values then after. On dive 72 (the last one available), surface Chl values were ~0.4 mg/m3 while the chl max reached 1.6 mg/m^3 at 70 m. Similar increases Chl and optical backscatter are seen in the OOI Glider data. There is also an layer of increased scattering around the chl max. These dives are ESE from the center of the bow-tie pattern ~10km North of PAPA and to ENE.

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 NW to SE. Although at PAPA itself, SST gradients are quite weak. . A transect at 50N shows a linear decrease across the 5deg box. 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 still sitting on the western edge of a coherent mesoscale anti-cyclone. The geostrophic velocity associated with this feature is still fairly weak, ~5km/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 ~3.8km/d to the NE; PAPA sits on the western edge of the anti-cyclone. Mercator products show surface currents 4.8km/d to the E at PAPA. At 95m Mercator is showing 6.4km/d to the NE.

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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
Sun 8/12	10WSW	14	2SE	100	--	aug 12 forecast URL	high
Mon 8/13	22SW	14	2->4WSW	100	--	aug 13 forecast URL	high
Tue 8/14	~10 W->S->E	14	4->2WSW	100	.4-.8	aug 14 forecast URL	medium
Wed 8/15	10-15 (dir??)	14	2SW	100	>.8	aug15 forecast URL	low
Thu 8/16	10NNW	14	1.5W	80	.1-.2	aug16 forecast URL	low

Comparison of weather forecasts at Station P of 7 different model runs - 6 day forecast model comparison

Glider219- Real time depth profiles

Dive 72 2018-08-11 16:31-21:16 utc

Start 50.04N 144.96W

End 50.02N 144.92W

- 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 10 profiles dives 63-72, 2018 Aug 9 14:27z Aug 11 21:16z

- Locations
- chlor_a
- fraction of surface PAR
- fraction of saturated 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, ||grad(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 2017-08-11**
EXPORTS NRT Platform positions in graphic and tex format.