ACSPSO VIIRS L3U SST assimilation in the US West Coast Ocean Forecast System (WCOFS)

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WCOFS:

- Under development at NOAA (jointly NOS, NESDIS, JCSDA), 2-km horizontal res.

- Will provide short-term (3-7 day) forecasts of oceanic T, S, currents, sea level (for navigation, oil spill response, fisheries, etc.)

- Initial assimilation tests: use JPSS VIIRS L3U, in the Central CA subdomain
Assimilation methodology, 4DVAR:

(a) Over a given time interval (here, 3 days) use available observations and adjoint model to correct initial conditions for the forecast

(b) Run the model forecast using improved initial conditions

Example of SST coverage: JPSS L3U, in central CA, Jun 1-3 2014

DA: **Dynamically based time-space interpolator** fills between gaps, facilitates accurate forecasts
The effect of SST assimilation on model SST:

06/02/16, 00:00:00 UTC

Model before assimilation / after assimilation

Preliminary analyses are encouraging and more analyses are underway

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Assimilation of VIIRS in WCOFS