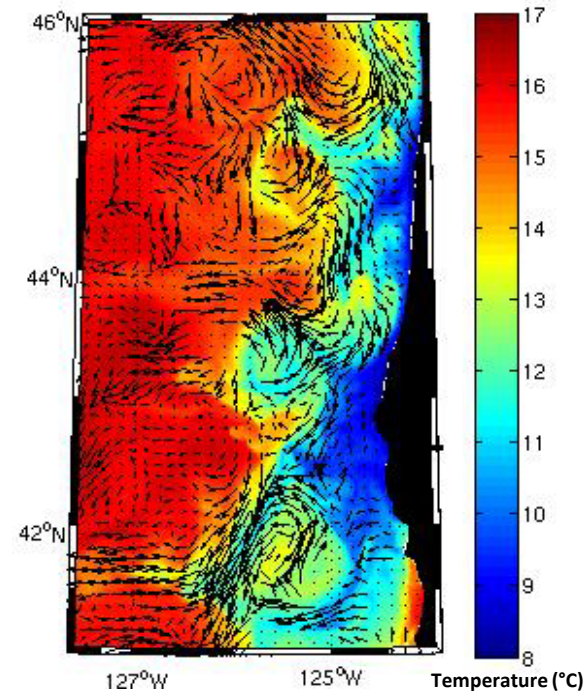


Ocean Surface Currents



From Geostationary Satellite SST

- We are implementing and evaluating a feature tracking approach to estimate ocean surface currents.
- This approach allows us to estimate the surface current vectors from the displacement of small regions of pixels, using sequential images from the same region.
- We are testing several methods that use this approach on model-derived SST fields (see figure); the next step will apply the methods to GOES SST fields, in preparation for the use of improved SST fields from GOES-R.



Ocean surface currents (vectors) derived from SST (background) modeled fields along the west coast of U.S (Oregon-Washington)

- GOES satellites provide more images per day than POES; GOES-R will improve the quality of the SST data.
- Image analysis and feature tracking can be quickly implemented anywhere in the global ocean where images are available. Uses include search and rescue, monitoring trajectories of hazardous spills and Harmful Algal Blooms, improved navigation for reducing fuel use, and coastal and marine spatial planning.

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