Abstract View

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Steric Contribution to the Seasonal Oscillation of Sea Level off Oregon

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ABSTRACT

Thermal, haline and total steric departures of sea level were calculated in a zone up to 165 n mi off Newport, Ore. The thermal and haline components were about equal in magnitudes and in phase, giving low steric sea levels nearshore and high sea levels offshore in summer and the reverse pattern in winter. These results are produced by local oceanographic conditions and reflect seasonal changes in upwelling and the position of the Columbia River plume.

In the region close to shore the combined effects of steric and atmospheric-pressure-caused departures do not fully account for the observed variations of sea level. Wind stress variations are likely to be the most important cause but other factors may well contribute.