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Observations of the Coastal Upwelling Region near 34°30'N of California: Spring 1981

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ABSTRACT

Coordinated meteorological and oceanographic (CTD) measurements were made near Point Conception, California, during March–April 1981. The goal of the observations was to study coastal upwelling and the local characteristics of the assumed wind driving. Results showed substantial topographically-induced spatial structure in the near-surface winds, with weaker winds generally occurring within the Santa Barbara Channel. The 1981 “spring transition” event was monitored by means of hydrographic and sea level measurements. The details of the event suggest that it was not entirely driven by lead wind stress. The mean sea surface temperature pattern suggests the existence of an upwelling center between Points Arguello and Conception. The individual sea surface temperature charts are all dominated by patchiness on a scale of 5–15 km. The nature of these structures is not well understood, but on the one occasion when a patch was isolated by a CTD survey, its structure penetrated to at least 50 db.

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