



## Abstract View

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# Description of Wind and of Upper Ocean Current and Temperature Variations on the Continental Shelf off Northwest Africa during March and April 1974

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### ABSTRACT

Measurements of winds and of near-surface temperatures and currents made during March and April 1974 on the continental shelf off northwest Africa were extremely time-dependent. Alternating land and sea breezes were well-developed and produced temperature and current fluctuations in the uppermost 15 m.

Time-averaged speed of the surface current ( $28 \text{ m s}^{-1}$ ) was much larger than the geostrophic current computed from the density field over the shelf. Approximately 60% of the variance of the current measurements occurred at frequencies less than the inertial period. Inertial and tidal period currents were large. Water stratification was very weak and tidal internal gravity wave motions were not detected. During a coastal upwelling event the Ekman transport, the offshore transport and the onshore transport were nearly equivalent, and the vertical eddy viscosity coefficient over the upper 10 m was about  $125 \text{ cm}^2 \text{ s}^{-1}$ .

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