



## Abstract View

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# Continental Shelf Waves in the Florida Straits

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### ABSTRACT

Current measurements from three stations along the east coast of Florida at about 300 m water depth with a maximum longshore separation of 180 km were used to analyze for the presence of propagating waves.

The analysis was done by solving the inverse problem of determining the most likely wave parameters from 36 independent auto spectra and cross spectra from four current meters. For the 10–13 day band a significant fit of the data by a wave cross-spectral function was found. The wavelength is 170 km and the phase propagation  $17 \text{ cm s}^{-1}$  toward the south. The current fluctuations are elliptically polarized with anti-cyclonic rotation and with an axis ratio of 0.30.

The mean current amplitude is  $14.3 \text{ cm s}^{-1}$ . A marginally significant fit with similar wave parameters resulted for the 7–10 day band. The results suggest that these waves are continental shelf waves, probably generated by atmospheric cold front passages.

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