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S. Stanic, E. Kennedy, and R. Ray

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Naval Oceanographic and Atmospheric Research Laboratory
Ocean Science and Ocean Acoustics and Technology Directorate
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Continuous wave (cw) signals at frequencies between 20 and 180 kHz were backscattered from a shallow-water ocean bottom. Even though the source and receiver were mounted on a stable platform, the short-range (50-300 ft) bottom backscattering envelopes exhibited significant amplitude variations that increased as the grazing angles became smaller. Evidence suggests that the oceanic fine structure caused frequency-dependent shifts in the location of the insonified bottom area. These small shifts resulted in changes in the bottom scattered ping-to-ping envelope structure.

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