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Horizontal Coherence of Temperature Microstructure

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ABSTRACT

Temperature gradient records from vertical lowerings of an array of four thermometers are used to trace microstructure features horizontally over a distance of 46 cm. Identifiable features are found to have a slope and a vertical velocity or curvature with a statistical distribution similar to that expected from an internal wave field superimposed on horizontally-layered microstructure. The horizontal extent of microstructure with a vertical scale greater than 5 cm is at least an order of magnitude greater than its vertical scale.

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