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# Simple Method for Measuring Relative Humidity, Water and Air Temperatures Within a Few Millimeters of Wind-Generated Water Waves

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### ABSTRACT

A very short time-constant thermistor, mounted on a streamlined strut, was placed to alternately measure the water and air temperatures during the passage of wind-driven water waves in the laboratory. The results were preserved by using a high-speed recorder. A thin film of water was found to cling to the thermistor upon emerging from a wave and its evaporation recorded the wet-bulb temperature, followed immediately by the dry-bulb temperature when evaporation was complete. Thus, the relative humidity within a few millimeters of the wavy water surface was determined. Under the act of conditions used, it was found that molecular diffusion is important in the first few millimeters from the actual water surface before the transition to turbulent diffusion predominates.

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