

Experimental Investigations of Capillary Wave Decay

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Compared to larger gravity waves, capillary waves decay over much shorter distances, increasingly so as they decrease in size. Beyond pure fluid dynamical interest, the consequence of this behaviour affects biological systems concerning the communication of water surface dwelling life. In our study, we investigated the decay rate of pure capillary waves (~150 Hz) under a variety of conditions. We report trends in observed decay rate when subject to changes in frequencies, forcing amplitude, and wavefront shape using shadowgraph techniques and discuss the possible physical interpretations of our results.