



Infrared imaging of near-surface eddies generated by steep and by breaking surface waves.

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Water motion in close proximity to the surface tends to disturb the thermal boundary layer. A down-looking infrared camera is able to detect such disturbances and hence observe signatures of near-surface flows. In this ongoing work we observed chaotic turbulence, as well as persistent elongated vortices generated by steep monochromatic waves. Similar structures were observed on a shorter time scale in the immediate wake of a breaking wave. Our preliminary analysis suggests vortex stretching as the underlying physical mechanism. We also propose a relevant non-dimensional parameter that triggers the eddy generation by non-breaking waves.