Experimental observation of internal symmetric solitary waves in a two-layer fluid

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Received 19-APR-94
Received in revised form 10-JUN-94

Water tank experiments were conducted on the internal symmetric solitary waves generated by gravity flow intrusion at the horizontal interface of a two-layer fluid. Velocity distributions in the waves were first measured using an image processor. Flow visualization studies revealed some new features of the solitary waves, including a marked decrease in the phase velocities of two large-amplitude, oppositely propagating waves after their head-on collision.

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