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Observation of odd and even two-dimensional standing solitary waves in water JEAN RAJCHENBACH, ALPHONSE LEROUX, Universite de Nice- CNRS UMR 6622 — By means of the parametric excitation of water waves in a Hele- Shaw cell, we report the existence of two new types of highly localized, standing solitary water waves. They are respectively of odd and even symmetries. Both patterns oscillate subharmonically with the forcing frequency. The even pattern resembles the oscillon originally recognized at the surface of a vertically vibrated layer of brass beads [1]. The odd pattern has apparently never been observed before in any media.

[1] P. B. Umbanhowar, F. Melo, F. and H. Swinney, Nature (London) 382, 793 (1996)

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