

Abstract Submitted
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The uncertain trajectory of a pilot-wave¹ ANDRE NACHBIN, IMPA/Brazil — Yves Couder (Paris 7) and coworkers reported on walking droplets on the surface of a vibrating bath. John Bush (MIT) and coworkers also produced laboratory experiments which were compared to theoretical predictions. Both groups discussed the pilot-wave properties previously thought to be peculiar to the microscopic, quantum realm. Of particular interest is the wavelike statistics for pilot-wave dynamics in a confined domain. We present a one dimensional water wave model for a droplet bouncing in a confined domain. The mathematical model makes use of conformal mapping which allows for the presence of submerged barriers. The computational simulations produce tunneling events.

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