MOVIE CAPTIONS

Movie 1

Plan view of a walker's wave field as it passes through a single slit of width $L = 3.1\lambda_F$ and breadth $b = 6$ mm. Fluid depth over the barriers is $h_1 = 0.42$ mm, drop diameter $D = 0.76 \pm 0.02$ mm, free speed $u_0 = 10.9 \pm 0.2$ mm/s. The lid was removed in order to visualize the wave field.

Movie 2

Tracking of two successive trajectories of a droplet passing through a single-slit for fixed impact parameter. The droplet launcher (white) directs the walker perpendicular to the slit. After passing through the slit, the walker follows a straight trajectory. Subsequently, the walker follows the outer boundary, reenters the launcher, and the process is repeated. The similar form of the two trajectories demonstrates the reproducibility of the experiment. Slit width $L = 3.1\lambda_F$, breadth $b = 6$ mm, fluid depth over the barriers $h_1 = 0.42$ mm, drop diameter $D = 0.67$ mm, free speed $u_0 = 6.7$ mm/s, $\gamma/\gamma_F = 0.985$. The video is sped up by a factor of three.

Movie 3

Plan view of a walker's wave field as it passes through a double slit at the highest memory considered, γ/γ_F=0.998. We note that, while the wave field effectively fills the entire bath, the outer boundary does not alter the drop motion until it approaches within 2-3 λ_F. Slit width $L = 3.1\lambda_F$, distance between their centerlines $d = 4.21\lambda_F$, slit breadth $b = 6$ mm. Fluid depth over the barriers $h_1 = 0.42$ mm, drop diameter $D = 0.78 \pm 0.02$ mm, free speed $u_0 = 11.9 \pm 0.2$ mm/s. The lid was removed in order to visualize the wave field.