

## Macroscopic pilot-wave dynamics in density-stratified fluids



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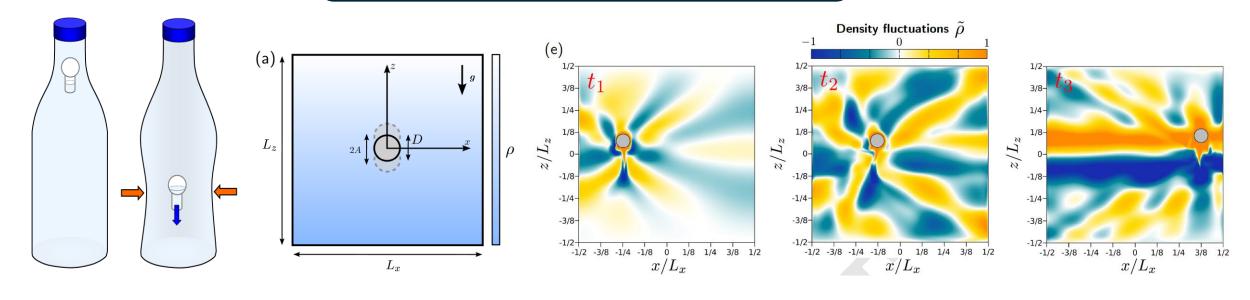
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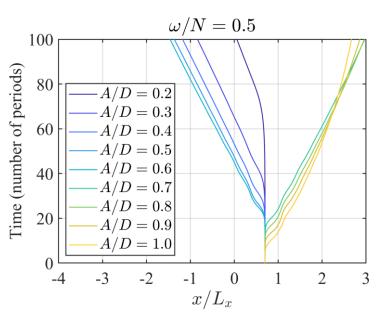


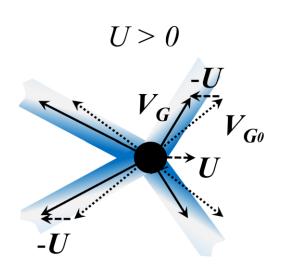
## 2D Numerical simulations

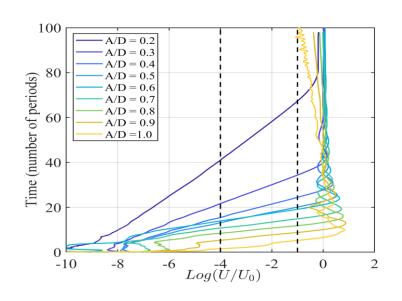
lattice Boltzmann method, coupled with an immersed boundary technique.



## Simulations in periodic domains: Doppler effect instability to self-propulstion







## Simulations in closed domains: wave réflexions generate a Casimir-like potential

