

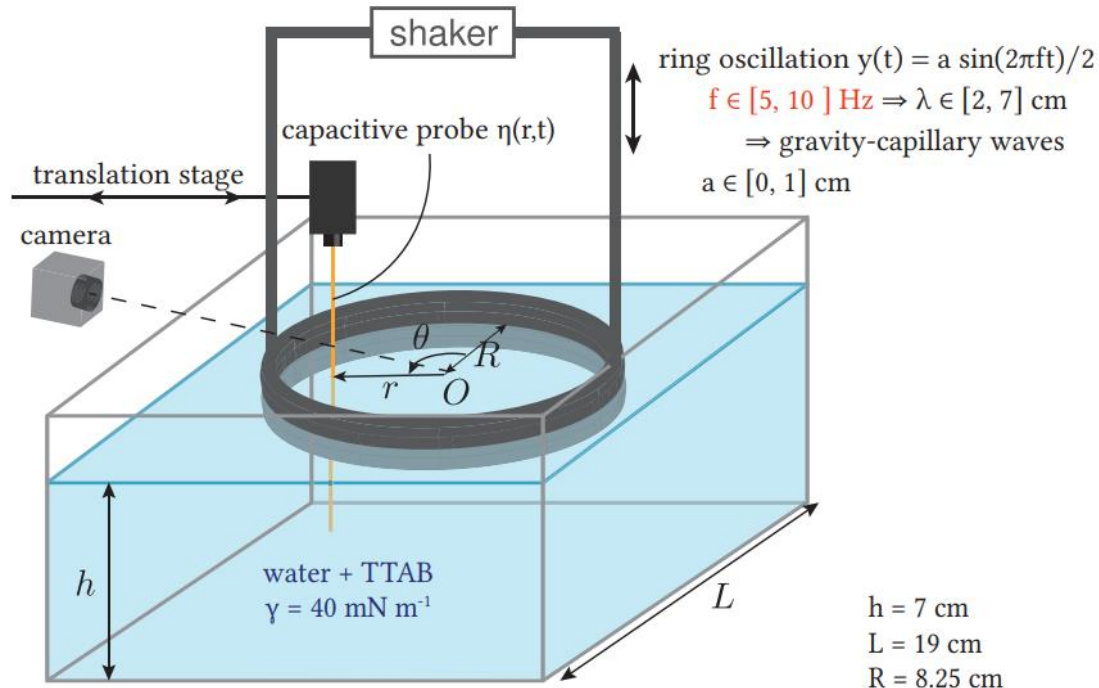
Focusing of axisymmetric waves on the surface of a fluid

^{1,2}Jules Fillette, ¹Stéphan Fauve and ²Eric Falcon

¹Ecole Normale Supérieure, Laboratoire de physique de l'ENS, UMR 8550, 75005 Paris & ²Université Paris Cité, Matière et Systèmes Complexes (MSC), UMR 7057, 75013 Paris

Wave focusing has not been much studied in hydrodynamics compared to optics or acoustics even if hydrodynamic systems have several advantages compared to optics or acoustics (macroscopic, slow dynamics, and direct space-and-time resolved wave-eld measurement).

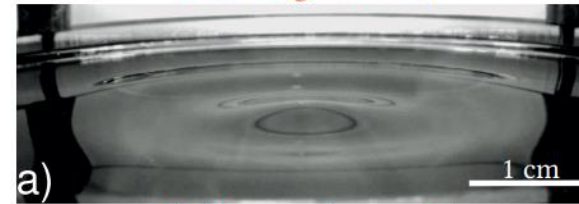
1 - Experimental setup



2 - Patterns

$\varepsilon = \text{wavesteeptness} = \text{nonlinear parameter}$

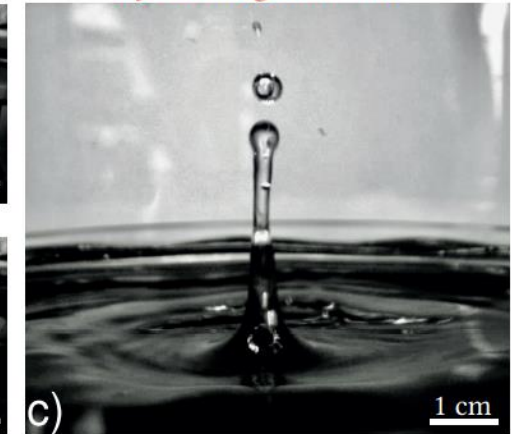
Linear regime $\varepsilon < 0.1$



Nonlinear regime $\varepsilon \approx 0.1$



Ejection regime $\varepsilon > 0.1$

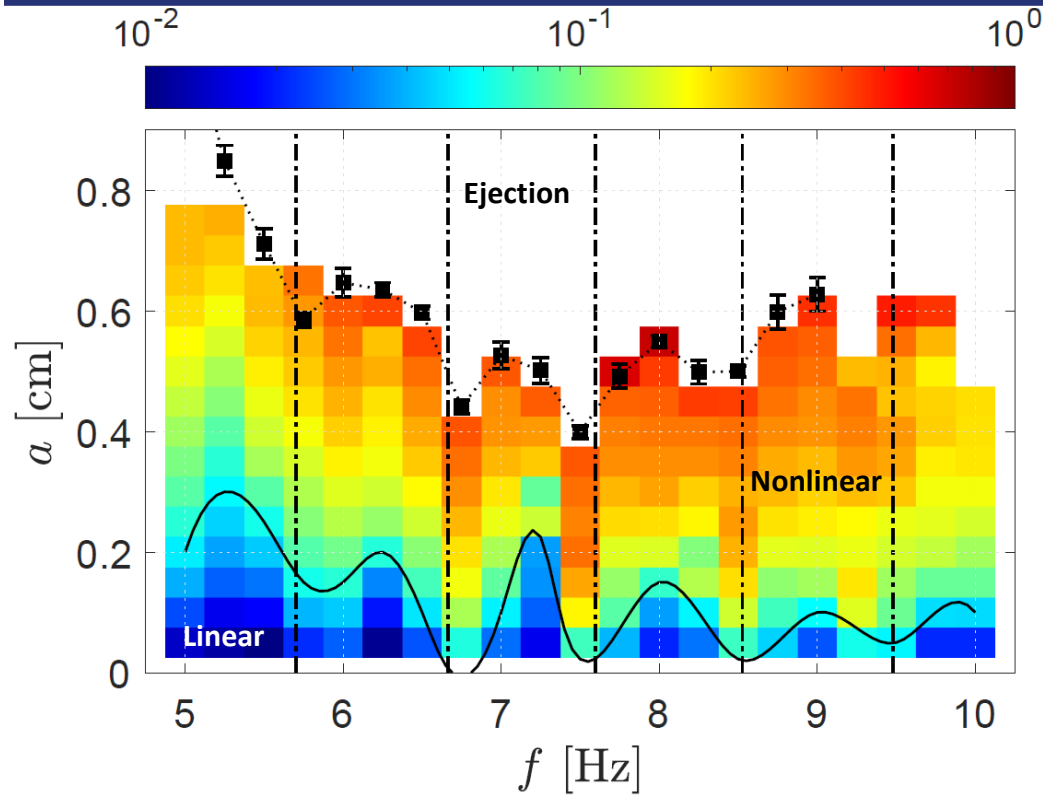


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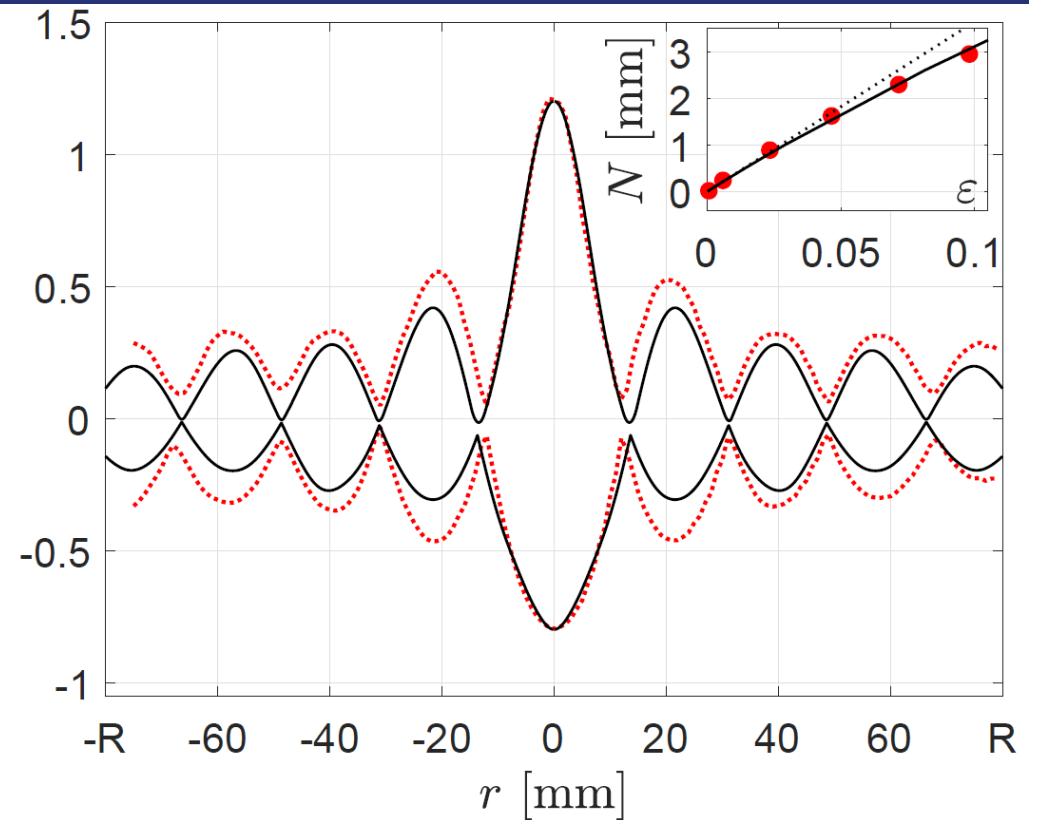
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3 - Phase diagram



4 - Stationary spatial profile



The three regimes of oscillation are successively studied. Among other results, the jet is shown to saturate.