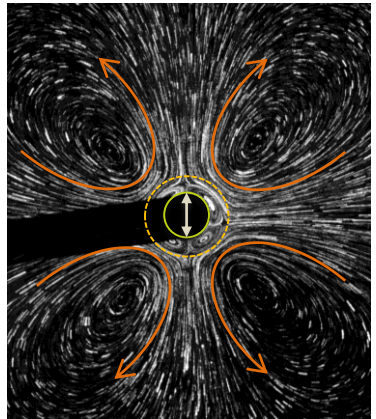


# Effet de viscosité élongationnelle de l'écoulement Streaming généré par un cylindre vibrant

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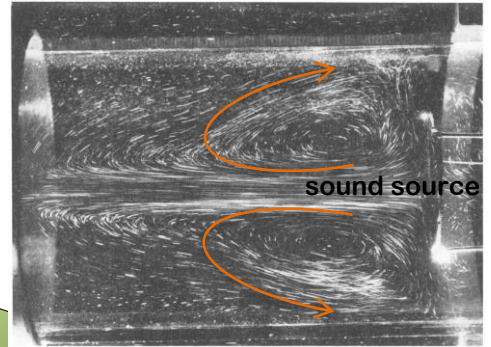
## Écoulement Streaming

○ Rayleigh-Schlichting streaming

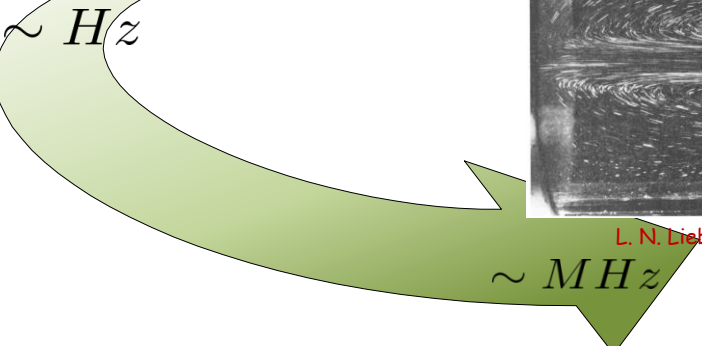


Bahrani et al., *Phys. Rev. Fluids* (Preprint 2019)

○ Eckart streaming

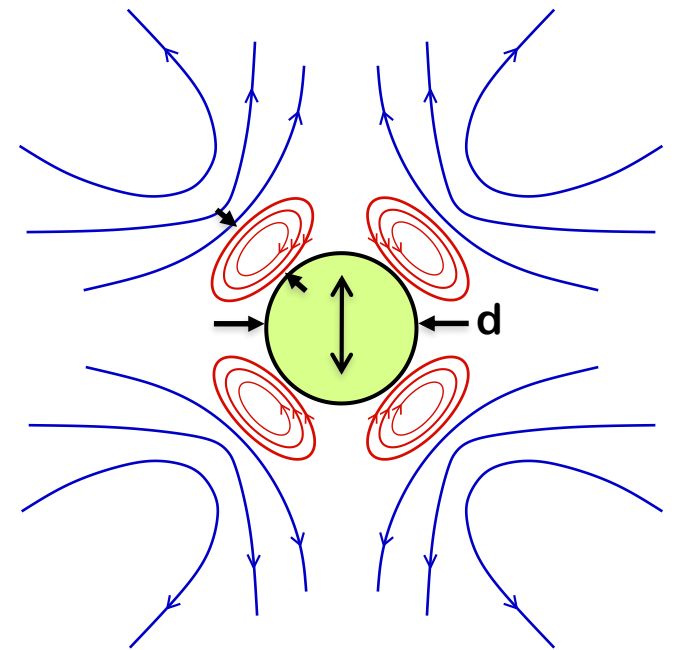


L. N. Liebermann, *Phys. Rev.* (1949)



Dans les deux cas l'écoulement streaming est du à la dissipation visqueuse

## Origine physique



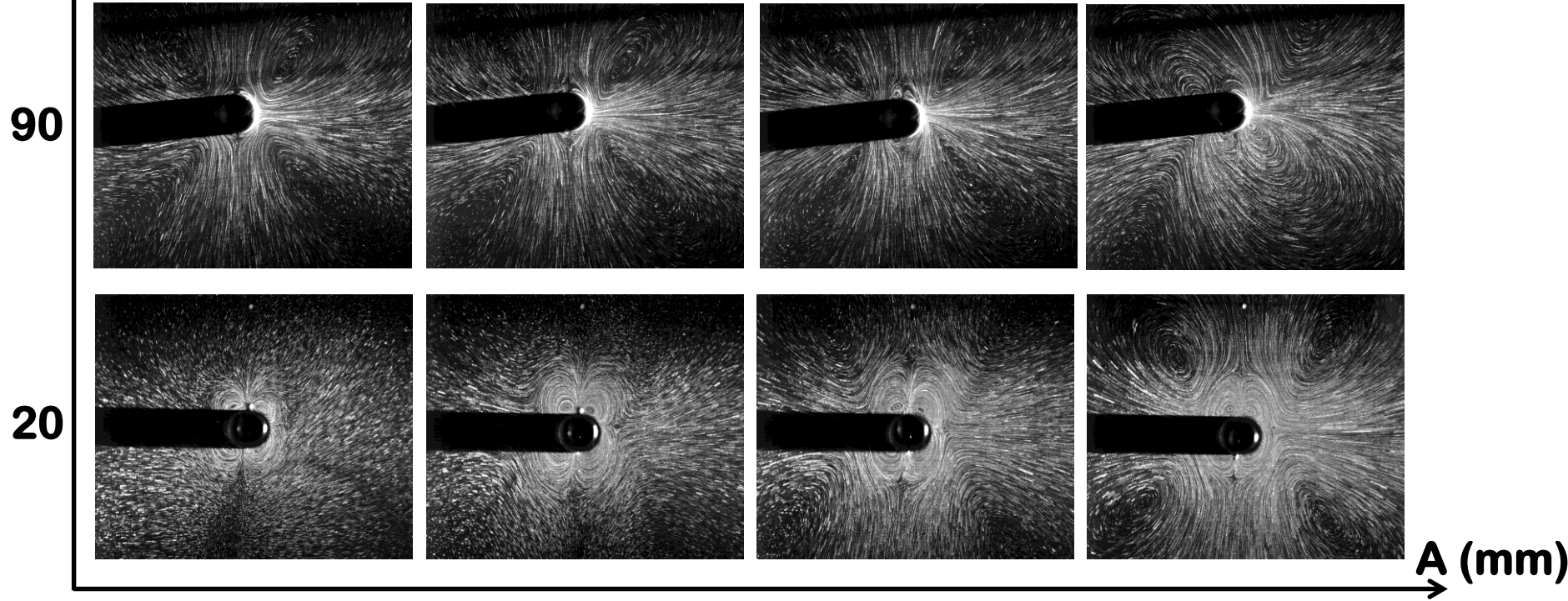
$$\rho \left( \frac{\partial \mathbf{v}}{\partial t} + (\mathbf{v} \cdot \nabla) \mathbf{v} \right) = -\nabla P + \mu \nabla^2 \mathbf{v}$$

$$\mathcal{R} = \frac{\text{Convective}}{\text{Diffusive}}$$

# Results et discussion

PEO,  $M_v = 4 \times 10^6$ ,  $c = 2300$  ppm

f (Hz)



De  
 $\eta_E$

