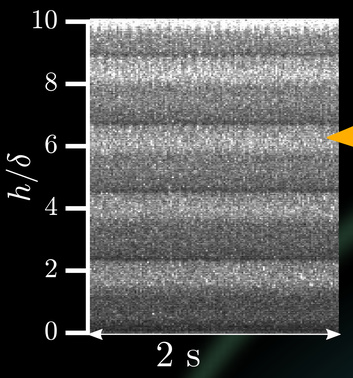
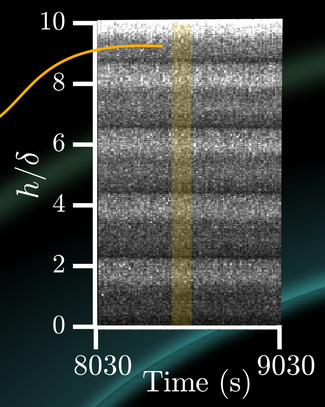
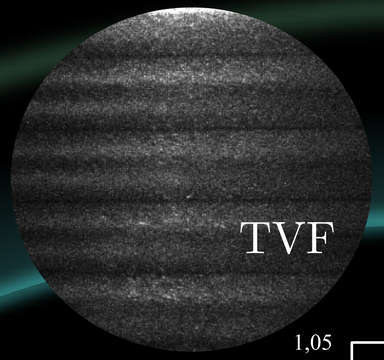
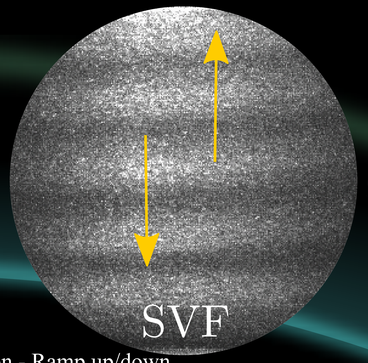
Nature de bifurcation dans une suspension complexe pour un écoulement de Taylor-Couette en géométrie confiné

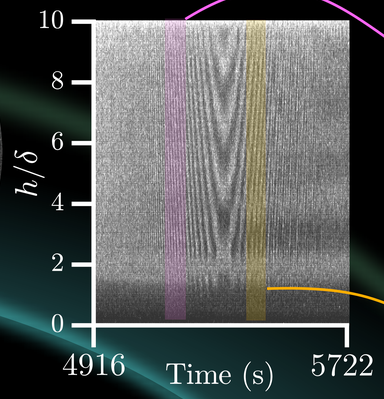
Masoud MOAZZEN, Tom LACASSAGNE, Vincent THOMY, S. Amir BAHRANI

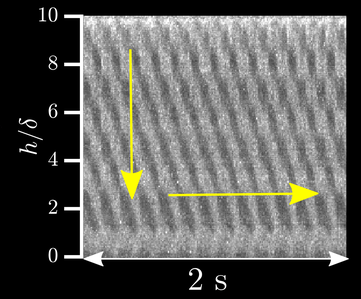


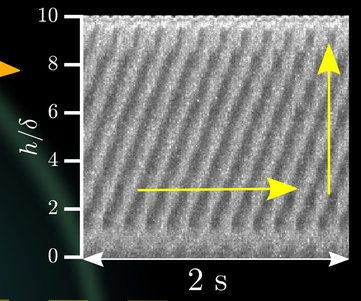












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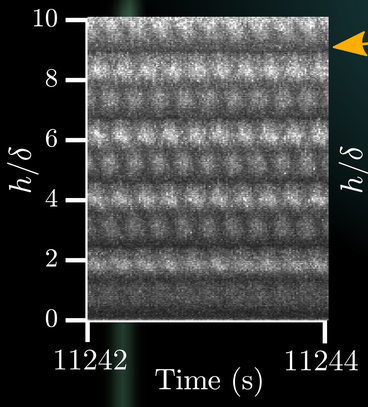
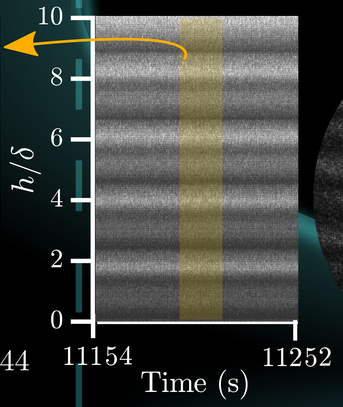
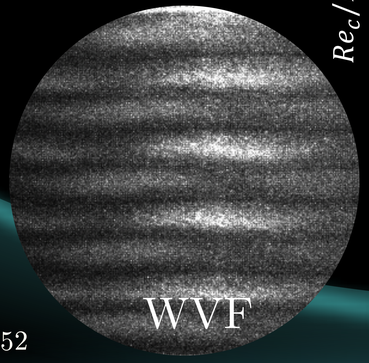
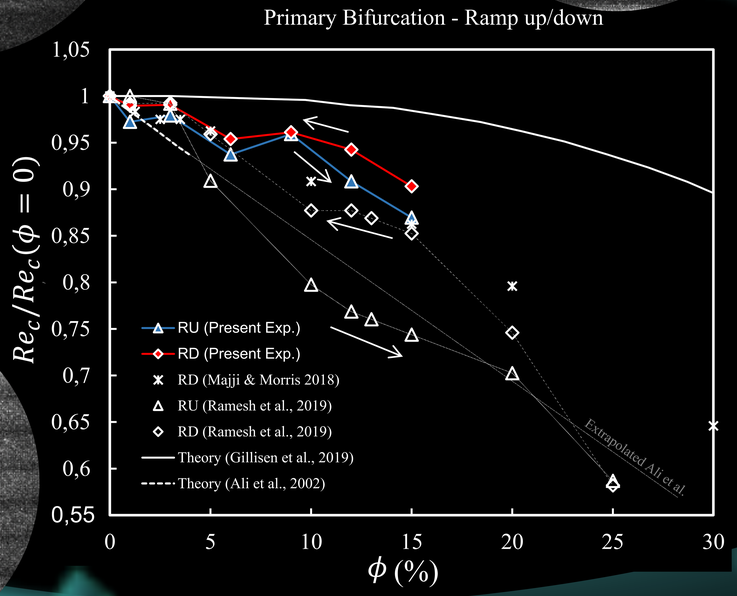
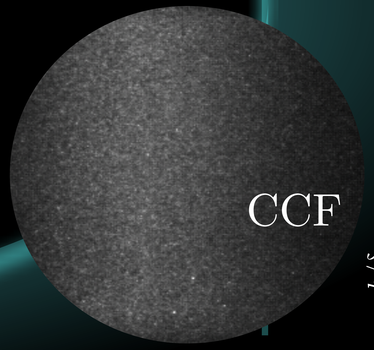


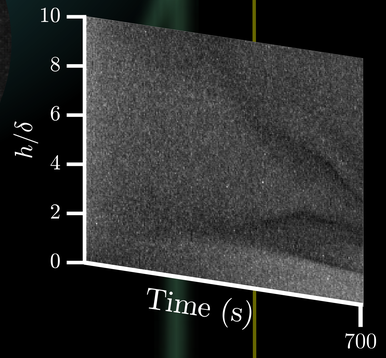






Re-increasing





H

Différentes Natures de bifurcation ont été identifiées dans les suspensions complexes.

$\Downarrow Re_c$ avec $\Uparrow \phi$

Une "Hystérésis" lors d'accélération-décélération a été observé.

Une bifurcation super-critique est mise en évidence

CCF: Circular Couette flow
SVF: Spiral Vortex Flow
TVF: Taylor Vortex Flow
WVF: Wavy Vortex Flow

Différents modes d'instabilités ont été observés:

- $0 < \phi < 6\%$: CCF<TVF<WVF
- $\phi \geq 6\%$: Régime SVF aparait avant transition vers TVF

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