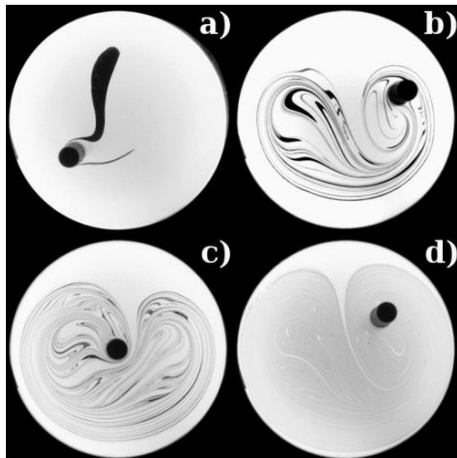


GRAIN DISPERSION IN GRANULAR FLOWS

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CLASSICAL MIXING IN FLUIDS

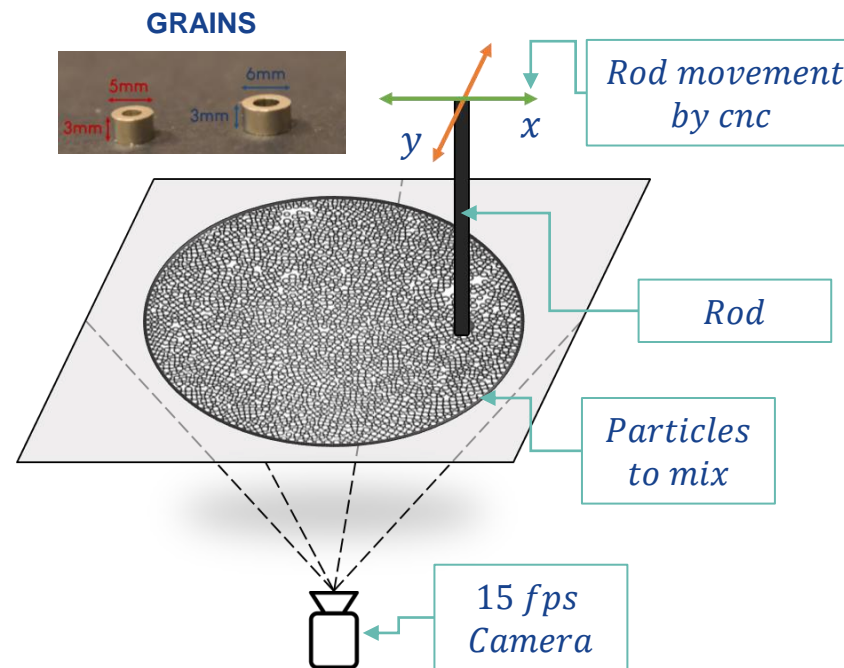


Gouillart, E et al. *Physical Review E*, 78(2), 026211.

GRAINS ≠ FLUIDS

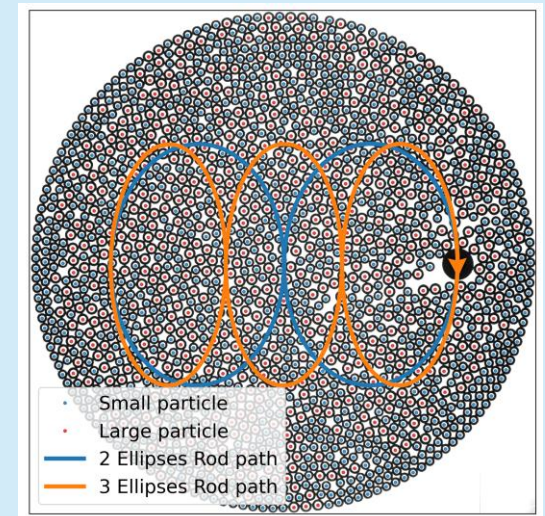
1. Discontinuous media
2. No molecular diffusion but $D \propto d^2 \dot{\gamma}$

SET-UP



EXPERIMENTS

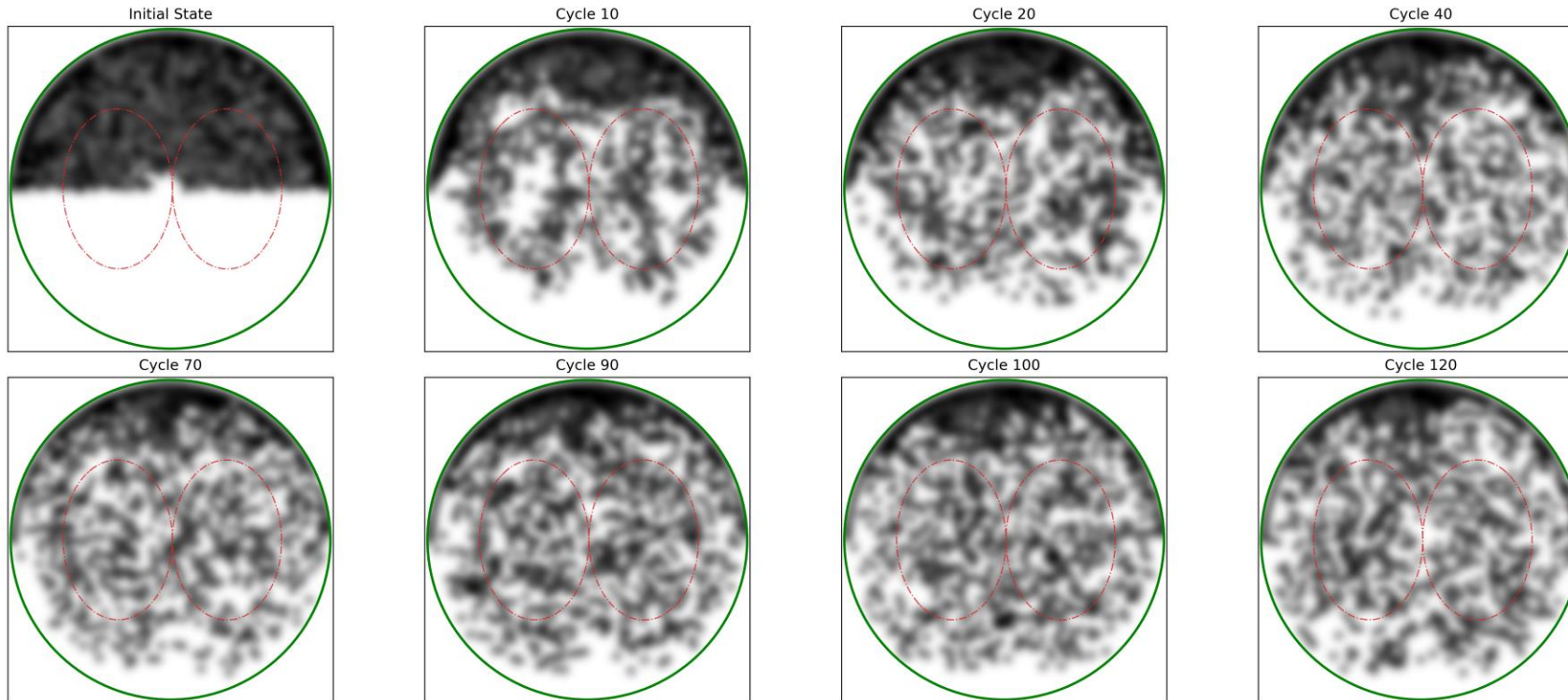
2 and 3 ellipses to generate chaotic flows



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INITIALLY TAGGED PARTICLES DISPERSION



Can we use the mixing in fluids tools to characterize dispersion in our system?

Can we characterize the separation of Lagrangian trajectories?

How does the variance in the concentration field decay?