

Experimental investigation of the Rayleigh-Taylor instability using magnetoreological fluids

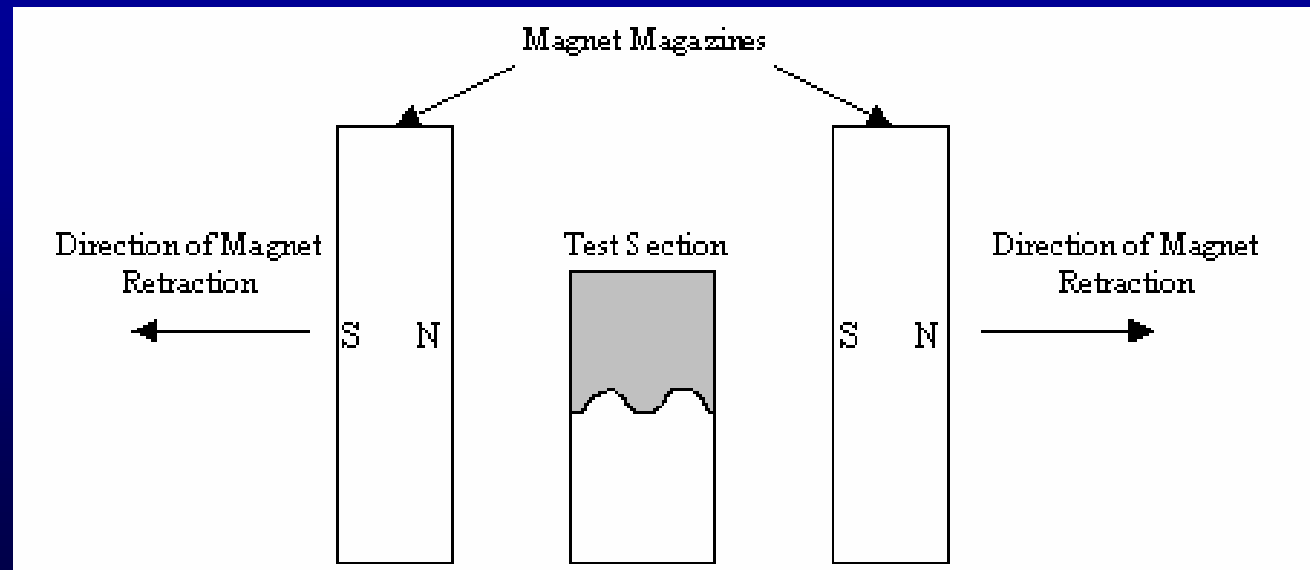
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MR property of “freezing” under a magnetic field allows preparation of well known IC

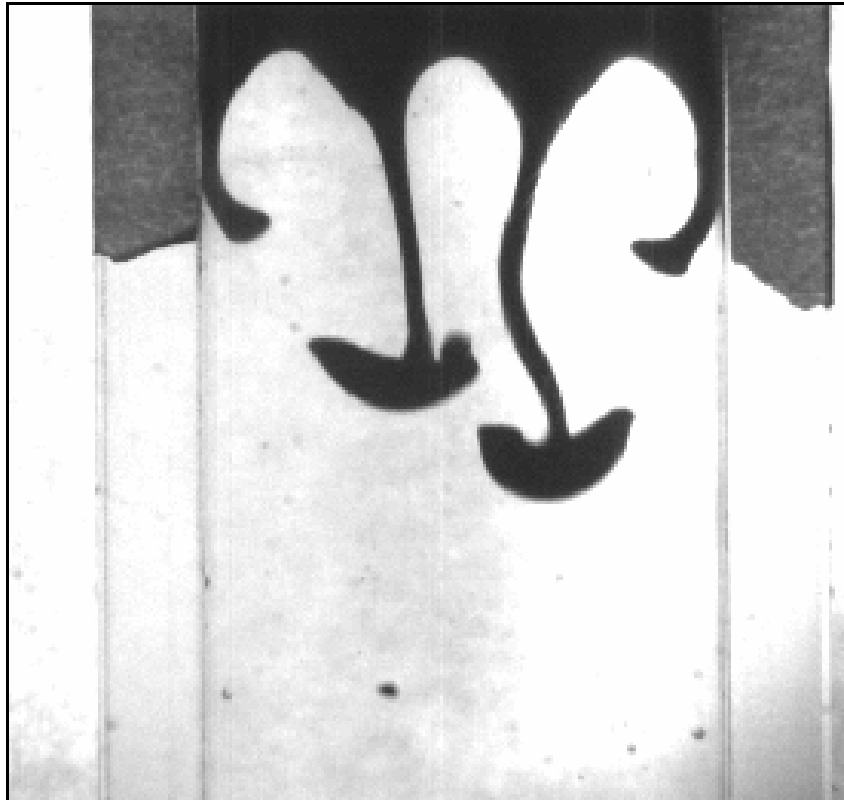
Flow driven by gravitational acceleration



Single mode initial condition

$$\eta_b = (0.3175\text{cm}) \cos\left(\frac{2\pi}{\lambda} x\right)$$

where $\lambda = 2.12$ cm



Single Mode 20 CIP.avi

Two - mode initial condition

$$\eta_b = (0.3175\text{cm}) \cos\left(\frac{2\pi}{\lambda} x\right) + (0.1905\text{cm}) \cos\left(\frac{2\pi}{\lambda_b} x\right)$$

where $\lambda = 2.12$ cm and $\lambda_b = 1.27$ cm



Multimode 20 CIP.avi