

Abstract Submitted
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Dynamics of a drop trapped inside a circular hydraulic jump LUC
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LAURENT LIMAT, Université Paris 7 / CNRS — We investigate the dynamics
of a drop trapped inside a circular hydraulic jump : in our experiment, a circular
hydraulic jump is formed by a viscous jet impacting a horizontal glass disk. A
drop of the same liquid, deposited in the jump does not coalesce, and remains
trapped at its periphery, because of the air entrainment linked to the high drop
rotation speed. Depending on the flow rate, the drop can exhibit complex dynamics,
from regular rotation along the jump to “chaotic” behaviour. We also studied in
detail hydrodynamics of the liquid drop and its interaction with the jump. Our
investigations show that hydrodynamics of the jump is still not fixed.

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