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Hydraulic oscillator LUC LEBON, MSC, Universit Paris 7, CHRISTOPHE PIRAT, University of Twente, Holland, JEAN-SEBASTIEN ROCHE, LAURENT LIMAT, MSC, Universit Paris 7 — When a liquid jet impacts an horizontal surface, it induces a radial flow in a thin film with formation of an hydraulic jump. Drops can levitate on this jump, separated from the liquid film by a thin layer of air. If we incline slightly the surface, and therefore the hydraulic jump, we can observe that a drop trapped on the jump does not stay static, but oscillates along the inner side of the jump. This oscillation appears to be self-sustained ; we investigated its caracteristics as a fonction of the liquid properties, the inclination and the jet flow rate.

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