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Ice patterns formation in freezing drop impacts THOMAS SEON, Institut d'Alembert, CNRS - Sorbonne Universit, VIRGILE THIEVENAZ, Institut d'Alembert, Sorbonne Universit, CHRISTOPHE JOSSERAND, LadHyX, CNRS - Ecole Polytechnique — We investigate the different shapes taken by a water drop frozen during its impact on a cold surface. The capillary hydrodynamics of a water film dewetting on ice, coupled with its vertical solidification, is quantitatively characterized. This allows us to understand and predict the formation of the emerging patterns. Finally, we show that this experiment enables a measurement of the contact angle of water on ice, whose value is still debated.

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