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Jet Formation in a Tube DEVARAJ VAN DER MEER, ERIK DE JONG, JEAN-BAPTISTE CHOIMET, RAYMOND BERGMANN, DETLEF LOHSE, University of Twente, The Netherlands — A vertical cylinder is partially immersed in a water-filled container and pressurized to lower the fluid level inside the tube. A sudden release of the pressure in the tube creates a singularity on top of the rising free surface: At the very beginning of the process a jet emerges at the center of the surface, the strength of which strongly depends on the initial shape of the meniscus. Here we study the jet formation process. The time-evolution of the complex shape of the free surface and the flow around the cylinder are analyzed using high-speed imaging, velocimetry and numerical simulations.

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