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Air entrainment by a liquid jet ETIENNE REYSSAT, DAVID QUERE, PMMH, ESPCI, Paris — We describe experimental work on air entrainment by a liquid jet impacting a bath of the same viscous liquid. We show that the entrainment velocity is shifted due to the widening out of the jet before its impact. The apparent entrainment threshold is determined quantitatively. The thickness of the entrained air film is measured and described by a Landau and Levich model. We also study the impact of a fibre coated with oil on a bath of the same oil. This modified setup allows a simpler analysis of the results and is a good experimental support to the jet problem.

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