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Capillary retraction of liquid sheet[1] GILLES AGBAGLAH, CHRISTOPHE JOSSERAND, STÉPHANE ZALESKI, Institut D'Alembert, Paris. CNRS & UPMC — During the atomization, drops may be formed by several distinct mechanisms. A general understanding of these processes is still lacking and is at the heart of many fundamental studies on atomization. In particular, the destabilization of a liquid sheet is known to detach small droplets. In this work, retracting liquid sheet is numerically studied in 2D and 3D. We present an asymptotic expansion of the film profile in 2D and we develop the long wave approximation dynamics of a planar 3D sheets. The role played by the ambient gas and new instabilities for the retracting liquid sheet is also discussed.

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