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New findings on the minimum flow rate in Flow Focusing BENJAMIN BLUTH, Emory University, ALFONSO M. GANAN-CALVO, ESI, Universidad de Sevilla — Recently published works on spatial-temporal instability analyses have dealt with flow-focused micro-jets. Those works have revealed that the minimum rate of fluid that can be focused is, in many cases, linked to an absolute/convective instability transition of the focused fluid micro-jet. Further to this, a series of very recent experiments indicate that the minimum flow rate may result very plausibly from the breakdown of a stability “chain”, a link of it –and possibly not the weakest one– being the micro jet. The dripping-jetting transition curves in the Reynolds-Weber parametrical space show a conspicuous, consistent and interesting turning point. Whether this behaviour reflects a possible cross-over between the instability of the jet and that of the cusp-like meniscus is here discussed. Indeed, these new results are now set in perspective along with those recently published ones.

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