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Breakup of a bubble into a convergent-divergent pipe flow
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neering, The University of Tokyo — We present the results of experiments study on
the dynamics a bubble into a convergent-divergent pipe flow. The amplitude of the
constriction and the magnitude of the flow may result in the breakup of the bubble.
The occurrence of a liquid high speed jet in the direction of the flow as an initial
step of the bubble breakup is reported for a large range of bubble initial sizes and
flow rates. The results are compared to an impulsion model. Further, the behaviour
of the bubble cloud in the slightly divergent pipe is described and the distribution
in sizes of the “daughter” bubbles is analysed.

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