EXPERIMENTAL SETUP FOR THE STUDY OF JET INTERACTIONS

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We present a new experimental setup for the study of bubble coalescence and bubble jet interactions in microgravity conditions [1]. Test section consists of a cavity full of liquid containing two bubble injectors whose separation distance and relative orientation angle can be controlled. Injection of bubbles is based on the generation of a slug flow in a capillary T-junction [2]. We have studied both individual and collective behavior of bubbles. On ground results on bubble trajectories, maximum distance reached, and the delimitation between turbulence and buoyancy regions are presented. The influence on these results of the inclination angle of an injector with respect to gravity has also been considered.

REFERENCES: