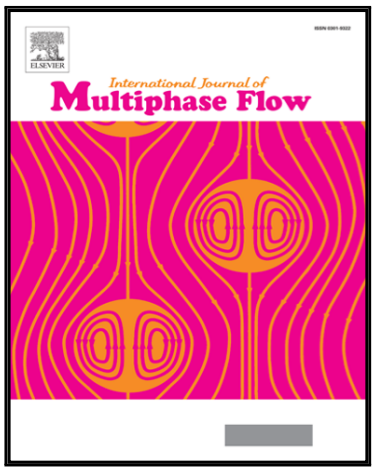

Characterisation of Gas-Liquid Two-Phase Flow in Minichannels with Co-Flowing Fluid Injection inside the Channel, Part I: Unified Mapping of Flow Regimes

S. Haase

PII: S0301-9322(16)30172-0
DOI: 10.1016/j.ijmultiphaseflow.2016.08.003
Reference: IJMF 2447

To appear in: *International Journal of Multiphase Flow*

Please cite this article as: S. Haase , Characterisation of Gas-Liquid Two-Phase Flow in Minichannels with Co-Flowing Fluid Injection inside the Channel, Part I: Unified Mapping of Flow Regimes, *International Journal of Multiphase Flow* (2016), doi: 10.1016/j.ijmultiphaseflow.2016.08.003

Highlights

- Gas–liquid downflow was studied experimentally at a pressure of 1 MPa.
- Capillary injectors of different diameters were used as gas-liquid feeding system.
- Homogeneous Taylor flows were created for a broad range of phase velocities and holdups.
- Three different bubble-forming mechanisms were found.
- Criteria for regime transition based on dimensionless numbers are provided.