

Fluid Dynamics Seminar

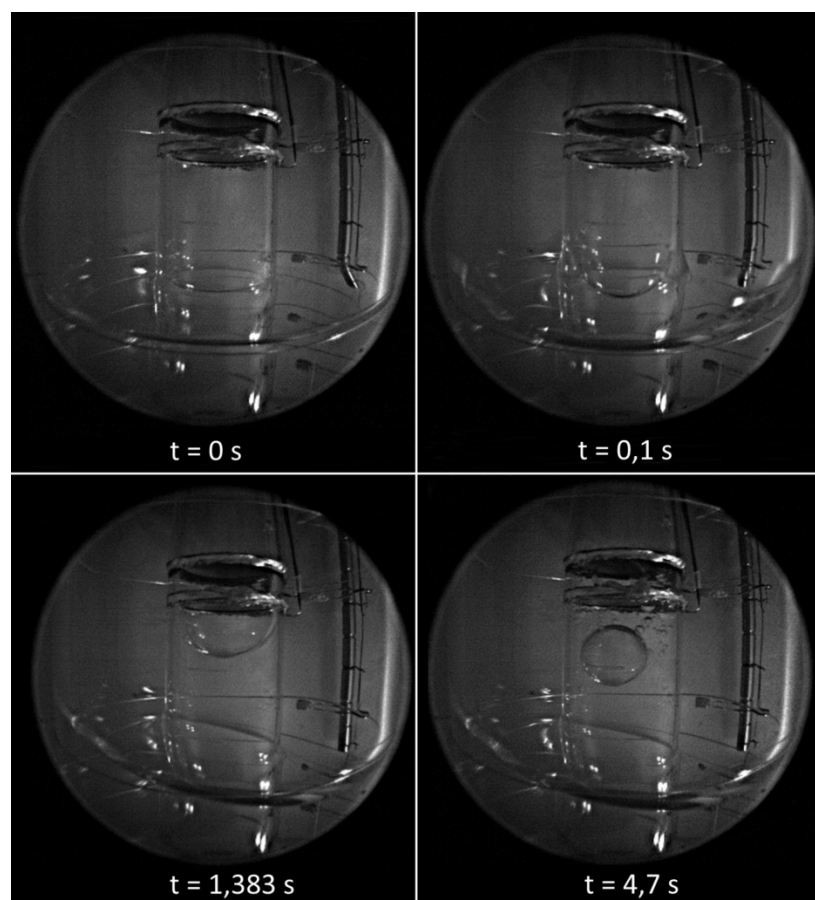
Date: Wednesday, June 28, 2017 at 13:00

Location: ZARM, Room 1730

Phase Separation of Hydrogen

André Pingel

University of Bremen, ZARM, Multiphase-Flow



The phase separation of hydrogen is a current research theme in the field of space technology which is of special interest concerning two different applications in future cryogenic propulsion systems: The gas or vapor free delivery of the liquid propellant to the combustion chamber on one side and the liquid free venting to condition the propellant on the other side. Phase separation can be realised using the retention capability of a screen or double screen as shown by ground experiments. In case of microgravity however the phase separation of hydrogen using a double screen has not been investigated yet. In this project an experimental campaign has been conducted to investigate the physical effects which are related to the retention capability of a double screen against liquid hydrogen in a hydrogen vapor environment during ground and microgravity tests.