Fluids and Space Engineering Seminar

Date: Wednesday, May 2, 2018 at 13:00
Location: ZARM, Room 1730

The Bremen Drop Tower at a glance and the Gravi Tower Bremen project

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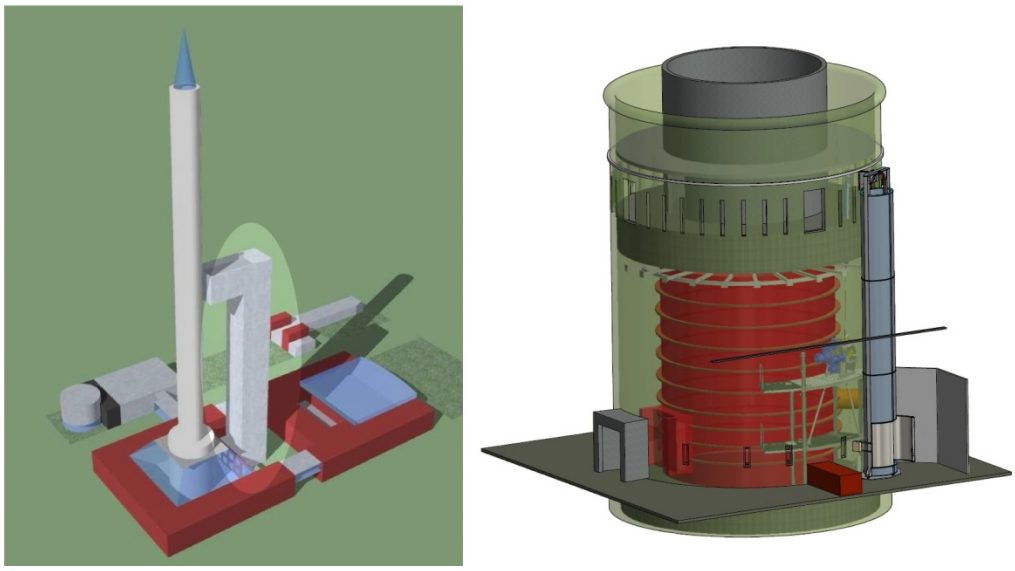

The Bremen Drop Tower with Gravi Tower Bremen (GTB) and the GTB-PRO

The Center of Applied Space Technology and Microgravity (ZARM) founded in 1985 is mainly concentrated on fundamental investigations of gravitational and space-related phenomena under conditions of weightlessness as well as questions and developments related to technologies for space and their applications on Earth. With a height of 146 m the Bremen Drop Tower is the predominant facility of ZARM and also the only drop tower of its kind in Europe.

ZARM's ground-based laboratory offers the opportunity for daily short-term experiments under conditions of high-quality weightlessness at a level of 1 0 -6 g - microgravity for 4.74 s (drop) or even 9.3 s using the catapult system.
The Bremen Drop Tower and ZARM are embedded in one of Europe´s largest Aerospace Locations - Bremen, with companies like OHB and Airbus. ZARM offers an independent Test Center for aerospace qualification testing to the aerospace industry.
Also several education programs for pupils and students are hosted by ZARM like DroPS, DropTes, Drop your Thesis! and REXUS / BEXUS and will be presented in this talk.

The GraviTower Bremen (GTB) and its prototype (GTB-PRO) represent a novel class of drop tower system. With the GTB-PRO technology based on an actively driven rope system this new drop tower facility will be capable to perform over 100 microgravity experiments per day. In its first developmental stage the prototype will offer 2.5 s for short-term experiments in weightlessness. It is expected that an extension of the microgravity duration up to approx. 8 s will be feasible in the further planned facility - GraviTower Bremen.