

Capillary Flow Experiment (CCF) experiment installed on ISS

The Capillary Channel Flow Experiment (CCF) was installed in the Microgravity Science Glovebox (MSG) on December 27, 2010 and commissioning of CCF continued the remainder of the week. The commissioning involves a series of tests that ramp up the complexity of the ground commanding to CCF until full automated operation is demonstrated. A joint German-U.S. research team including Principal Investigator (PI), M. Dreyer (ZARM – German: Center of Applied Space Technology and Microgravity) and U.S. Co-PI, M. Weislogel were on site at NASA Marshall Space Flight Center to support the installation operations and to perform commissioning of the hardware.

CCF is a fluid physics experiment to investigate capillary flow in a flat plate channel (Test Unit #1) and corner channel (Test Unit #2) under pressure-driven conditions in the inertia flow regime. The U.S. Co-I portion of CCF is Test Unit #2 to investigate corner flow stability at high flow rates, and the ability of the corner flow geometry to passively perform two phase flow separation. The experiment will utilize the ISS Microgravity Glovebox (MSG) facility on the ISS. The U.S. portion of this work is funded by the ISS Research Project. (POC: RET/Robert D. Green, (216) 433-5402, MAH/Robert W. Hawersaat (216) 433-8157)