

Capillary Flow Experiment (CFE) Interior Corner Flow-2 unit operates two times on ISS.

Increment 25 astronaut Scott Kelly operated the CFE-2 Interior Corner Flow 2 (ICF-2) module on the ISS on Friday, October 29, 2010. Due to a slip in the launch of STS-133, a second opportunity became available on Tuesday, November 2, 2010. A total of seven test points were completed over the two separate operations' opportunities. This completes the "dry surface" and "pre-wetted surface" portions of the test matrix. Preliminary results indicate the time to reach the steady state equilibrium condition in the interior corner were slightly greater than predictions.

Scott performed the ISS operations for the CFE ICF-2 vessel with real-time video down linked to the CFE team in the Telescience Support Center (TSC) in Building 333. The Principal Investigator for CFE-2, Professor Mark Weislogel (Portland State University) and his team tied in by telecom.

The ICF-2 module consists of a tapered rectangular test chamber, emulating the cross-sectional geometry of the low angle interior corner of a capillary vane. The test fluid is two centistokes silicone oil. The tapered geometry of the chamber provides the capillary driving force for moving the liquid from the bottom to the top of the chamber. The experiment performed provides rare quantitative data of 3-D wicking in this particular capillary geometry. (POC: RET/Robert D. Green, (216) 433-5402, MAH/Robert Hawersaat, (216) 433-8157)