

MICROGRAVITY SCIENCES AND PROCESSES SYMPOSIUM (A2)
Microgravity Sciences Onboard the International Space Station and Beyond - Part 2 (7)

Author: Mr. Jason Dunn
Made In Space, Inc., United States, j@sondunn.com

3D PRINTING ON THE INTERNATIONAL SPACE STATION: A TECHNOLOGY
DEMONSTRATION PAVING THE WAY FOR SPACE MANUFACTURING

Abstract

A critical enabling technology for opening the frontier for space exploration is in-space manufacturing. Since 2010, Made In Space, Inc. has been focused on the mission of bringing manufacturing technology to space, with the first goal set towards installing 3D printers on the International Space Station (ISS). Working with NASA, during the Summer of 2014 the first of these 3D printers will be launched to ISS and then will begin building the first parts ever manufactured off Earth. Termed the 3D Printing In Zero-G Experiment ("3D Print"), the objective is to perform a scientific technology demonstration of additive manufacturing in the microgravity environment and to verify that the unique 3D printer designed by Made In Space functions as expected. This paper looks at results from the 3D Print experiment and will discuss how they compare to the expected outcomes. A discussion will be made on what this all means for the future of manufacturing in space.