

MICROGRAVITY SCIENCES AND PROCESSES SYMPOSIUM (A2)
Microgravity Sciences onboard the International Space Station and Beyond (6)

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RECENT SCIENCE ACCOMPLISHMENT ON THE INTERNATIONAL SPACE STATION WITHIN
THE UNITED STATES ORBITAL SEGMENT

Abstract

November 20, 2008, marked a significant milestone in the annals of human endeavour in space since it was the tenth anniversary of one of the most challenging and complex construction project ever attempted by human away from our planet: The construction of the International Space Stations, ISS. On November 20, 1998, the Zarya Control Module was launched. With this simple, almost unnoticed launch, the construction of a continuously manned science platform in Low Earth Orbit began.

This paper discusses the science that has been accomplished by many occupants of this science platform during the year marking its tenth anniversary and briefly previews the next two years science complements that are currently in the planning cycle. The main objectives of this paper are four-fold: (1) to discuss the integrated manner in which science planning/replanning and prioritization during the execution phase of an increment is carried out across the United States Orbital Segment since that segment is made of four independent space agencies; (2) to discuss and summarize the science performed during last year. The discussion will focus primarily on the main objectives of each investigation and associated hypotheses that were investigated. Whenever available and approved, preliminary science results will be discussed for each of the investigations performed; (3) to compare the planned science complements versus what was actually accomplished during the execution phase in order to describe the challenges associated with planning and performing science in a space laboratory located about 300 miles away from the ground support team; (4) to preview the science complements for the next two increments as the station begins its next 10 years in Low Earth Orbit.