

Space Experiment Module 6 Payload Bay

Overview

Ten passive experiments will fly on STS-101 as part of NASA's Space Experiment Module program, which is managed by the Goddard Space Flight Center's Wallops Flight Facility in Wallops Island, Va. The SEM program is an educational initiative to increase access to space for students in kindergarten through the university level. Since its first flight in 1995, SEM has allowed tens of thousands of students in the United States and other countries to fly their experiments in space. SEM-06 is a mixture of experiments from the United States and Argentina.

Idaho Tubers in Space: Shoshone-Bannock High School, Fort Hall, Idaho Students will study the effect of space on Idaho tubers. The "Spuds in Space" experiment was developed by students from the Fort Hall Indian Reservation.

Seeds/CREPLD II: Purdue University, West Lafayette, Indiana This experiment will study the effects of the space environment on seeds and on programmable logic devices.

Effects of Microgravity on Samples/GADGET: Glenbrook High School, Northbrook, Illinois

Students will determine the effects of the space environment on different types and colors of paint. Secondary experiment samples from other Illinois schools consist of dried shrimp, sand, hair, and feathers.

Yeast in Space: Brock Bridge Elementary, Laurel, Maryland Students will study the effects of microgravity and temperature on yeast.

Effects of Cosmic Radiation: Benfield Elementary, Severna Park, Maryland Students will study the effects of the space environment (cosmic radiation and microgravity) on various items, such as film, seeds, bulbs, yeast, beans, and popcorn.

Effects of Space on Fluids and Seeds: Technical School No. 469, Rosario, Argentina

Students will investigate the effects of the space environment on seeds and liquids such as colored fluids, oil, and water.

GERMINAR-2: National University of Patagonia, Argentina This experiment will study the effects of the space environment on bee glue and various seeds.

Seeds and Sea Monkeys in Space: Rosario National University, Argentina This experiment will study the effects of the space environment on Patagonic seeds (trees), humus, and Artemias Salina (sea monkeys).

Electronics and Magnetic Recording Devices: Rosario National University/St. Hilda's School, Argentina

Students will study the effects of the space environment on electronics and magnetic chips such as those used in diskettes, CD ROMs, PC boards, and phone cards.

Cosmic Ray Detectors: Buenos Aires National School/Rosario National University, Argentina

This experiment will use thermoluminiscent detectors to study the effect of cosmic rays.

History/Background

SEM-06 uses a standard 5-cubic-foot Getaway Special (GAS) canister, mounted on an SSP/JSC-provided adapter beam in bay 13, port side, forward position in the orbiter payload bay. SEM-06 is passive: no batteries or power utilities are supplied by the orbiter.



NASA began the Space Experiment Module (SEM) program in 1995 as an offshoot of the Getaway Special program, managed by the Shuttle Small Payloads Project at Goddard Space Flight Center in Greenbelt, Md., and the Wallops Flight Facility, Wallops Island, Va. Since 1982, GAS canisters have flown on the shuttle, offering economic access to space to a broader array of experimenters, particularly students. But participation was still somewhat limited by the high-level engineering skills required to design GAS experiments.

In 1995, the program directors started SEM to relieve students of the engineering burden and let them concentrate on creating their experiments. Since the module is equipped with electrical power, there is no need to engineer and build battery boxes, etc. Students of all ages can create, design, and build experiments with a little help from teachers or mentors. The experiments--which can be simple or complicated, active or passive--are placed in half-moon-shaped SEMs, ten of which are then stacked in a GAS canister.

This is the fourth flight of SEM.

More information about the Space Experiment Module program can be found at http://www.wff.nasa.gov/~sspp/sem.html.

Benefits

Economical and simplified access for space experimenters, especially students.

Interests young students in science and math.



Editorial/Technical Comments: ShuttlePresskit