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Goddard earns PaceSetter Award

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Ozone lost confirmed

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Success measured: Valerie Thomas

Spartan-204 and Hitchhiker fly on STS-63

Mission STS-63 began at 12:22 a.m. EST. on Friday, Feb. 3, when Space Shuttle Discovery took off from the Kennedy Space Center, Fla., carrying two Goddard-managed projects; Spartan-204 and Hitchhiker.

A major highlight of STS-63 occurred on Flight Day 4 with the historic rendezvous of the Space Shuttle Discovery and the Russian space station Mir.

Commanders of the two space vehicles talked about their missions and the historic rendezvous later in the day during a special ship-to-ship conversation from Discovery and Mir. STS-63 Commander Jim Wetherbee and Mir Commander Alexander Viktorenko spoke through an interpreter in Houston's Mission Control Center. The conversation focused on the missions of the two crews and the success of their rendezvous.

Wetherbee said he especially enjoyed the point in the joint operations when Mir maneuvered to a new attitude while Discovery was circling it. "It was like dancing in the cosmos," Wetherbee said. "It was great." The commanders also said they were looking forward to meeting each other on Earth and exchanged compliments about the two space vehicles and the teams that designed them. "Together our programs will be even better," Wetherbee said.

Spartan-204 obtained data in the far ultraviolet region of the spectrum from diffuse sources of light. Two observations of surface glow on the tail were made by Spartan-204's FUVIS instrument. Observations of thruster firings were made during both day and night portions of the orbit, after which the spacecraft was powered down.

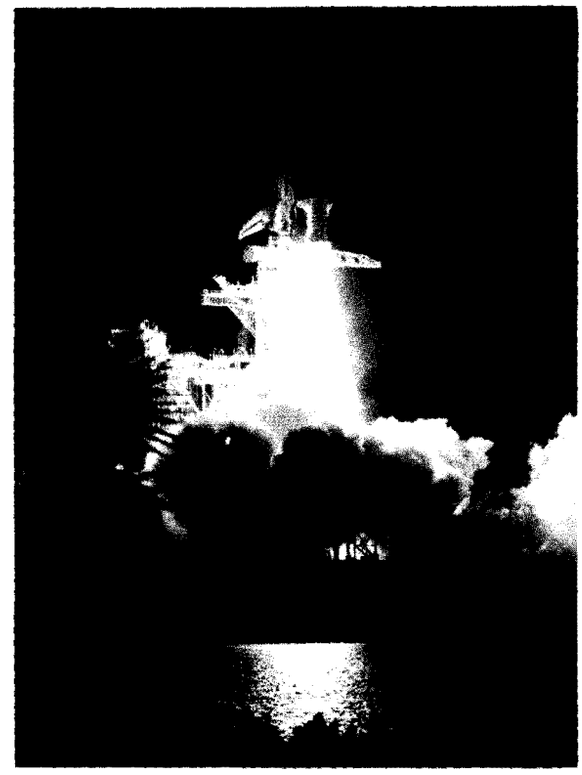

photo by: NASA

Space Shuttle Discovery lights up the Florida sky as Mission STS-63 gets underway.

Hitchhiker

The Hitchhiker system provides power, data or command services to operate these experiments. Typically, payloads receive their power and data handling through the Hitchhiker avionics which provides standardized electrical, telemetry, and command interfaces between the Orbiter and the experiments. During mission operations, experimenters receive real-time communications between themselves and their payloads at the Payload Operations Control Center (POCC) located at GSFC.

Spartan-204

Spartan-204's mission occured in two distinct phases. The first phase on Flight Day 2, saw the Shuttle crew grapple Spartan with the Shuttle's robot arm and unberth it from its support structure. The crew then conducted scientific observations for 4.5 hours by pointing Spartan at the Shuttle's tail to observe surface glow. The second phase of Spartan-204 operations began on Flight Day 5, when free-flight operations took place. The crew again grappled Spartan with the robot arm and unberthing it from its support structure. Spartan then was released from the robot arm, and the Orbiter backed away from the free-flying spacecraft.

Spartan operated autonomously in free-flight for approximately 48 hours following a pre-programmed science mission, providing its own battery power, pointing system and recorder for capturing data. The scientific observations were recorded on film onboard Spartan-204 and will be analyzed by scientists and engineers after it is returned from space.

After its free-flying mission ended on Flight Day 7, the Orbiter flew back to the Spartan-204 spacecraft, retrieved it with the robot arm, and powered it off.

The Spartan program was conceived in the mid-1970s and developed by Goddard's Special Payloads

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