

Antenna glitch on historic space shuttle flight

April 5 2010

The US space shuttle Discovery blasted off Monday toward the International Space Station for a historic mission that put more women in orbit than ever.

NASA initially hailed a near-perfect launch but later said an antenna used to transmit television pictures back to Earth that is also an integral part of the radar docking system had failed to work when the shuttle reached orbit.

"Discovery can safely rendezvous and dock with the station and successfully complete all of its planned mission objectives without use of the Ku-Band antenna, if needed," a statement from the US space agency insisted.

The shuttle has other antennae that transmit voice and data information on different frequencies and the International Space Station has its own Ku-Band system for transmitting television images back to Earth, NASA said.

Discovery blasted off from the Kennedy Space Center in Cape Canaveral, Florida at 6:21 am (1021 GMT) as scheduled.

It was the first shuttle mission with three female crew members, who join four male astronauts on the groundbreaking flight.

Along with one woman already on the International Space Station, NASA astronaut Tracy Dyson, the mission marks a first in human space

travel: four women in orbit at the same time.

It also sees two Japanese astronauts in space simultaneously for the first time, with mission specialist Naoko Yamazaki joining Soichi Noguchi of the Japan Aerospace Exploration Agency, who arrived at the station in December.

After the two booster rockets peeled away as planned two minutes after liftoff and fell into the Atlantic Ocean, NASA expressed satisfaction at the absence of debris that might have risked damaging the shuttle.

"Things went extremely well during ascent. We saw maybe three little foam losses event all around four minutes or so. We think that is not problematic," said Bill Gerstenmaier, associate administrator for space operations.

Discovery reached Earth's orbit eight and a half minutes after launch, moving at five times the speed of sound to reach 16,155 miles (26,000 kilometers) per hour.

After reaching orbit some 140 miles above Earth, the space shuttle began its race toward the International Space Station with its arrival tentatively scheduled for Wednesday.

It is the fourth last mission for the shuttle program before all three remaining US manned orbiters are retired at the end of 2010, ending 30 years of service. The first shuttle flew in April 1981.

During the 13-day mission, Discovery will deliver nearly eight tonnes of cargo, including spare bunks for the occupants of the space station, a large tank of ammonia coolant and seven racks filled with science experiments.

Among the gear being hauled into space is a freezer to preserve samples of blood, urine, saliva, plants or microbes used in micro-gravity experiments for later analysis back on Earth.

Discovery is also carrying an exercise machine designed to study the effects of weightlessness on the body's musculoskeletal system. Muscles can atrophy during long sojourns in space so astronauts have to exercise regularly.

Two astronauts will conduct three space walks lasting six-and-a-half hours each on days five, seven and nine of the mission.

The International Space Station, a 100-billion-dollar project begun in 1998 with the participation of 16 countries, is financed mainly by the United States.

Once the shuttle program ends, the United States will depend on Russian Soyuz spacecraft to ferry their astronauts to the station until a new US launch vehicle is ready to take over around 2015.

The women astronauts joining Dyson are mission specialists Dottie Metcalf-Lindenburger, 34, a former high school science teacher; Stephanie Wilson, 43, a veteran of two shuttle missions; and Yamazaki, 39, an astronaut with the Japanese space agency since 1996.

Rounding out the Discovery crew are mission commander Alan Poindexter, 48; co-pilot Jim Dutton, 41; mission specialist and spacewalker Rick Mastracchio, 50; and fellow spacewalker Clay Anderson, 51.

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Citation: Antenna glitch on historic space shuttle flight (2010, April 5) retrieved 24 April 2024

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