



SRTM Hardware--the Antenna

Payload Bay

Overview

The Outboard Antenna Structure

The outboard antenna structure is connected to the end of the mast. It contains a C-band and an X-band antenna, two global positioning system antennas, light emitting diode targets, and a corner-cube reflector. The two outboard antennas can only receive radar signals. Transmitting of radar signals will be done only by the main antenna.

The C-band and X-band antennas on the outboard antenna structure receive radar signals reflected from the ground. The signals are passed down cables to the Shuttle for recording along with the signals from the main antennas.

Global Positioning System antennas will be used to gather accurate information on the position of the Space Shuttle. Meanwhile, light emitting diode (LED) targets will be used by a target tracker on the Attitude and Orbit Determination Avionics (AODA), mounted on the main antenna, to measure the position of the outboard antenna relative to the main antenna. A corner-cube reflector will be used by the electronic distance measurement unit on AODA to measure the length of the mast to within three millimeters (1/8 inch).

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