



STS-113 (112)

[Endeavour](#) (19)
[Pad 39-A](#) (75)
112th Shuttle Mission
Night Launch (28)
KSC Landing (61)

[NOTE: Click Here for Countdown Homepage](#)

Crew:

[James D. Wetherbee](#) (6), Commander
[Paul S. Lockhart](#) (2), Pilot
[Michael E. Lopez-Alegria](#) (3), Mission Specialist
[John B. Herrington](#) (1), Mission Specialist

[Kenneth D. Bowersox](#) (5), ISS Up
[Nikolai M. Budarin](#) (3) (RSC), ISS Up
[Donald R. Pettit](#) (1), ISS UP
[Valeri G. Korzun](#) (2) (RSA), ISS Down
[Peggy A. Whitson](#) (1), ISS Down
[Sergei Y. Treschev](#) (RSC), ISS Down

Milestones:

[OPF](#) -- 6/29/02 ([Reference KSC Shuttle Status 7/02/2002](#))
[VAB](#) -- 9/30/02 ([Reference KSC Shuttle Status 9/30/2002](#))
[PAD](#) -- 10/12/02 ([Reference KSC Shuttle Status 10/12/2002](#))

Payload:

[International Space Station Flight 11A](#) (ITS P1, CETA), [MEMS](#)

Mission Objectives:

[Click here for Additional Info on STS-113](#)

[International Space Station](#) Assembly Mission 11A Integrated Truss Assembly P1. This mission delivers the Integrated Truss Assembly P1 (Port Side Thermal Radiator Truss) to the Space Station. The P1 Truss is 13.7 meters (45 ft) long , 4.6 meters (15 ft) wide and 4 meters (13 ft) high. It weighs 27,506 pounds. The P1 truss will be attached to the S0 truss, launched April 8, 2002 onboard STS-110, and will flow 637 pounds of anhydrous ammonia through three heat rejection radiators. The P1 Truss is nearly identical to the Starboard Side S1 Truss which was launched October 7, 2002 onboard STS-112 . The P1 truss provides structural support for the Space Station radiators. Mounted to the P1 truss is a second Crew and Equipment Translation Aid (CETA) cart that can be manually operated along the Mobile Transporter (MT) rail line.

Also carried aboard STS-113 is the Micro-Electromechanical System ([MEMS](#)) Based Pico Satellite Inspector. This payload will deploy two small satellites which will be connected via a 50ft tether.

Launch:

November 23, 2002 7:49:47 pm EST

On Saturday, November 23, 2002, a nominal countdown concluded in an on time launch from the [Kennedy Space Center](#).

On Friday, November 22, 2002, the launch was scrubbed before coming out of the T-9 minute hold because of weather problems at the [TAL](#) landing sites.

On Wednesday, November 20, 2002, mission managers cleared [Endeavour](#) of the two major technical issues that were under analysis since the launch attempt on 11/10/02. Engineering testing of the robotic arm that was bumped by a work platform being installed in the payload bay, showed the damage is not a concern for the arm's during the mission. Both the gaseous oxygen and nitrogen flex hoses in the Environmental Control and Life Support System have been replaced, and managers concluded no further work is required prior to flight. Also, the STS-113 flight crew arrived at the [Shuttle Landing Facility](#). (*[Reference KSC Shuttle Status 11/21/2002](#)*)

On Friday, November 15, 2002, a decision has been made to target the STS-113 launch for Friday, November 22, 2002 at 8:07 p.m. EST. The launch was previously scheduled for Monday, November 18.

At 9:50 p.m., Sunday, November 10, 2002, the countdown was scrubbed due to a oxygen leak in the [crew compartment](#). The length of the scrub will be determined after further analysis Monday morning.

On Saturday, November 9, 2002, countdown activities continued on schedule for the launch of Space Shuttle [Endeavour](#) to the International Space Station. Mission managers met Friday afternoon and are working no technical issues at this time that would prevent an on time launch of [Endeavour](#). At the Pad, filling of the on-board Power Reactant and Storage Distribution tanks with the needed liquid hydrogen and liquid oxygen to support the mission was completed this morning, with final Space Shuttle Main Engine checks beginning this afternoon. Tomorrow afternoon, managers will meet again to give the go ahead to begin filling the [External Tank](#) with more than 500,000 gallons of liquid [propellant](#). ([Reference KSC Shuttle Status 11/09/2002](#))

Orbit:

Altitude: 122nm

Inclination: 51.6

Orbits:

Duration: 13 days, 18 hours, 48 minutes, 38 seconds.

Distance: 5.7 million miles

Hardware:

[SRB](#):

[SRM](#):

[ET](#) :

[MLP](#) :

[SSME](#)-1: SN-

[SSME](#)-2: SN-

[SSME](#)-3: SN-

Landing:

KSC December 7, 2002 2:37:12 p.m. EST KSC Runway 33.

Main Gear Touchdown: 14:37:12 EST (MET: 13 days 18 hours 47 min 25 sec)

Nose Gear Touchdown: 14:37:23 EST (MET: 13 days 18 hours 47 min 36 sec)

Wheel Stop: 14:38:25 EST (MET: 13 days 18 hours 48 min 38 sec)

A go for the [deorbit](#) burn was given on time for a return to Kennedy Space Center on the first landing attempt at 2:41 EST. At 14:30 EST, 21 miles in altitude, 131 miles from KSC, the [orbiter](#) was picked up on infrared cameras at KSC as it crossed the coast of [Florida](#) near Sarasota. Dual Sonic booms heard at 14:35 EST, 2.5 minutes from touchdown. Touchdown on Runway 33 at 14:37:12 EST.

Low cloud ceilings and precipitation at [Kennedy Space Center](#). Fla., forced mission managers to wave off Space Shuttle [Endeavour](#)'s second and final landing attempt for

Friday. It was the third consecutive day that poor weather has prohibited the STS-113 and Expedition Five crews from coming home.

Two landing opportunities were available to STS-113 at Kennedy Space Center, FL on December 5. Both were waived off due to weather factors at KSC. The first is at 3:48 p.m. EST (2048 GMT), with the deorbit burn occurring at 2:41 p.m. EST (1941 GMT). The second would begin with a [deorbit](#) burn at 4:20 p.m. EST (2120 GMT) and end with a landing at 5:26 p.m. EST (2226 GMT).

Mission Highlights:

[KSC Home](#)[Mission Index](#)[Last Mission STS-112](#)[Next Mission STS-107](#)

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