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## Space Shuttle

### Crew Participates in Countdown Test



The STS-100 flight crew is at Kennedy Space Center, Fla., to participate in the Terminal Countdown Demonstration Test. STS-100 is targeted to launch April 19 to begin a mission to deliver and install a robotic arm to the International Space Station.

## Press Releases

### STS-100 Preflight Briefings Set for April 9



The STS-100 preflight briefings are slated for April 9, beginning at 8 a.m. CDT (13:00 GMT) at NASA's Johnson Space Center, in Houston, Texas. One of the aspects to be discussed during the briefing is the new robot arm that will be delivered to the International Space Station by STS-100.

## WEBLAUNCHPAD

[International Space Station Report No. 01-8](#)

[Expedition One Briefing Set for March 30](#)

[STS-98 Astronauts Land at the West Wing](#)

[STS-100 Preflight Imagery](#)

[March Web Chat Schedule](#)

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## Space Station

### Expedition Two Crew Works aboard Station



The Expedition Two crewmembers continue to work onboard the International Space Station as they settle in on the orbital outpost.

### Expedition One Ship's Logs

Exp. One Cmdr. Bill Shepherd kept a record of activities during his stay onboard the space station. These logs are now available online.



## Today in Space

### Today's Spacefact



What will be a full crew size for the completed International Space Station?

Check [SkyWatch](#) for space station sighting opportunities in your city.



### Personal Space

Canada lends a hand (and an arm)...

# The Latest Space News . . .

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A compilation of press releases and background information for a given mission.

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Fact Sheet Library containing historical information, first flights, research and scientific facilities.

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Clockwise left to right: Space Shuttle landing; Neil Armstrong, Buzz Aldrin training; Crew of STS-85 during press conference; Eileen Collins being suited up; Crew of STS-95 including John Glenn at KSC press conference.

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NASA Television provides live coverage of all space missions, Earth observation, Mission Control Center activities, and daily press briefings.

Click on a link below to download the viewers



## [Landing Groundtracks](#)

What flight path will the shuttle take when it lands?

## [Orbital Tracking](#)

Realtime orbital positioning data for Station, Shuttle and Russian vehicles.  
REQUIRES JAVA.

## [Sighting Opportunities](#)

When can you see the shuttle or station from your back yard?

## [Orbital Elements](#)

If you're using a tracking application, we've got the coordinates. Station, Shuttle, Mir and more!

-180 -150 -120 -90 -60 -30 0 30 60 90 120 150 180



[Weather forecasts](#) for Space Shuttle launch site at the Kennedy Space Center in Florida and the landing sites across the United States.

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This broadcast is provided via Microsoft Net Show and requires the [Media Player](#) for proper viewing.



Click here ([28k](#) / [56k](#)) to start the NetShow Services presentation in the stand-alone player if your browser does not support the plugin.

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NASA TV is also available in Real Video format from [United Space Alliance](#).

What's happening next on NTV? Check the [NASA TV Schedule](#).

For those with satellite dishes NTV is available on GE-2, Transponder 9C at 85 degrees West longitude, vertical polarization, with a frequency of 3880 Mhz, and audio of 6.8 Mhz. This is a full transponder service and is operational 24 hours a day.

Many cable television companies throughout the United States provide a channel for such coverage during missions. If you are unable to find NTV on your cable television system, you may want to contact your service provider.

# Spacecraft Tracking .

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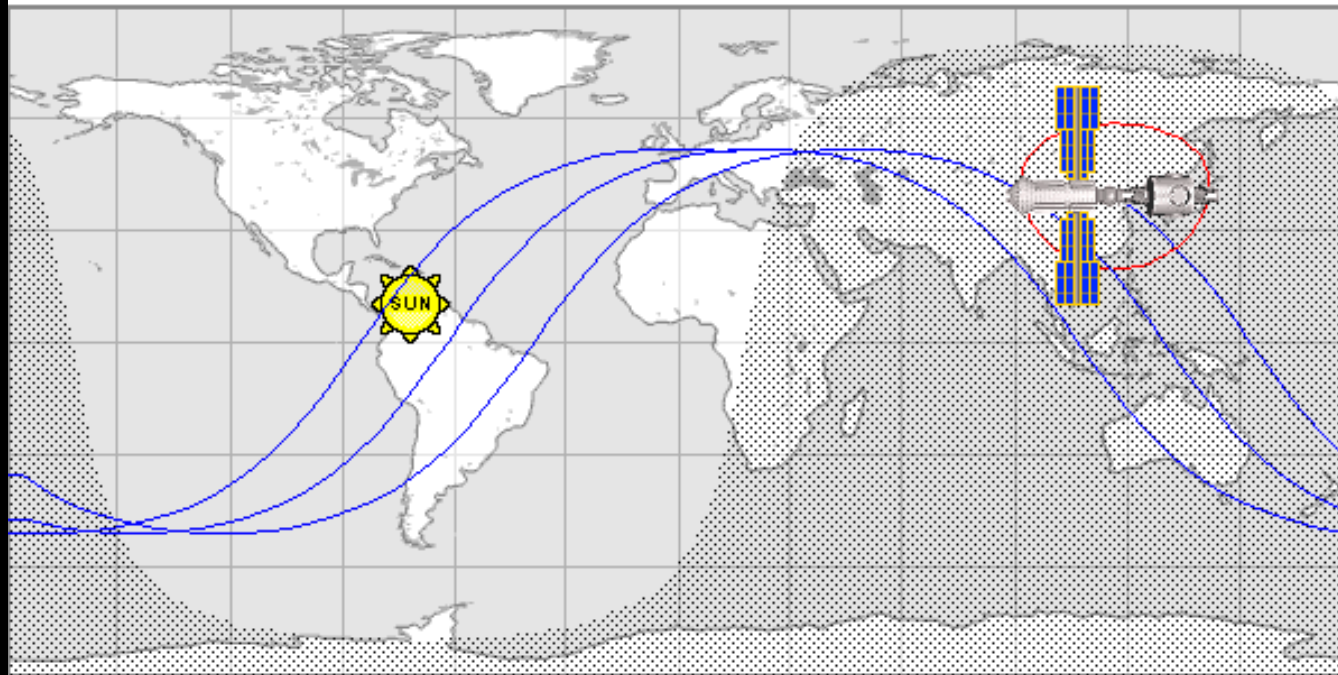
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INFO



LATITUDE: 38.8      LONGITUDE: 116.8      PHASE: On Orbit      SIGNAL: Propagate

ALTITUDE:	SM 240.22	NM 208.74	KM 386.60
	MPH	KPH	MPS
SPEED:	17165.93	27625.89	7673.86

See Spacecraft  
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**NASA SkyWatch** is a web-based Java application that provides sky watchers around the world with a visual picture of when and where the International Space Station, the space shuttle and other spacecraft can be seen with the unaided eye as they pass overhead.

Yes, you can still see the old, familiar text-based sighting opportunities lists!

[Shuttle](#) / [Station](#)

Another special feature of NASA SkyWatch is that it can accurately predict shuttle entry sightings. The application may be used to sight other satellites, such as the Hubble Space Telescope, by using readily available two-line element sets.



This "applet" uses up-to-the-minute data from Mission Control to project the path the spacecraft will make across the sky.

Please allow sufficient time for all files to download the first time you access NASA SkyWatch. You will be downloading approximately 300K of data, which can take 3 minutes or more on a 33.6 kbps modem connection. Significantly more time will be required (10 minutes +) with 14.4 kbps connections. Many files remain resident in the Internet cache on your hard drive and do not have to be downloaded again unless you clear the cache.

## SkyWatch Tips



Check out STARSHINE sighting opportunities (deployed June 5, 1999 on STS-96) before it re-enters the atmosphere early next year!

NASA Flight Dynamics Officer introduces SkyWatch (streamed video):

Media Player 28k / 56k

RealVideo 28k / 56k

For more information, check out our [Help](#) and [FAQ](#) sections.

# International Space Station . . .

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## Space Station Assembly

Select an individual menu to explore the International Space Station by flight, year, or by an element.

Select a Flight:

Select a Year:

Select an Element:

Video animation of Assembly Sequence Rev. D is available in MPEG format:

[Small Format](#)

MPEG

0.8 Mb

[Large Format](#)

MPEG

2.4 Mb

### [Latest Orbital Assembly Plan](#)

International partners recently agreed upon a revised sequence of assembly in orbit for the International Space Station. In the new plan, the next station assembly flight will be the launch of the Russian-provided Zvezda Service Module targeted for November, followed by the next Space Shuttle assembly flight, STS-101, targeted for December.

Please note: If a PDF file loads a blank page, you may need to click the Reload/Refresh button in your browser to load the file.

### [Chronological List of Flights](#)

[ISS Assembly Sequence](#) (PDF)

[ISS Component View](#) (PDF)

[ISS Graphical Overview](#)

# Spectacular Images . . .





# The Latest Shuttle News . . .

## STS-99 Overview

Mission:	<a href="#">Shuttle Radar Topography Mission</a>
Shuttle:	Endeavour
Launch Pad:	39-A
Launch:	TBD (no earlier than October 7)
Window:	TBD
Landing:	TBD
Duration:	11 days
Orbit Inclination:	57 degrees

## SRTM Patch



Official insignia of the Shuttle Radar Topography Mission.



The [Shuttle Radar Topography Mission](#) objective is to demonstrate the technology for obtaining high-resolution digital topographic mapping of the Earth. SRTM consists of a specially modified radar system that will fly onboard the space shuttle Endeavour during an 11-day mission in early October 1999.

## [Inspections Delay STS-99 Launch](#)

Workers must remove the radar mapping equipment from Endeavour's payload bay to inspect shuttle wiring for possible damage. The STS-99 mission is delayed until at least early October.

## [Crew Members Named for Earth-Mapping Mission](#)

The STS-99 shuttle mission astronauts will support an ambitious mission to map the Earth's surface when Endeavour

## STS-99 Crew Patch



## International Astronauts



Gerhard Thiele (pictured above) from the European Space Agency and Mamoru Mohri from NASDA represent Germany and Japan, respectively on STS-99.

## Related Sites & Links

[European Space Agency](#)  
[National Space Development Agency of Japan \(NASDA\)](#)  
[SRTM Home Page](#)

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*"NASA is deeply committed to spreading the unique knowledge that flows from its aeronautics and space research..."*

## Project Mercury

Initiated in 1958, completed in 1963, Project Mercury was the United States' first man-in-space program.

## Project Gemini

The second U.S. manned space program was announced in January 1962. Gemini involved 12 flights, including two unmanned flight tests of the equipment.

## Apollo-Soyuz

The mission started with the Russian Soyuz launch on July 15, 1975, followed by the U.S. Apollo launch on the same day. Docking in space of the two craft occurred on July 17, and joint operations were conducted for two full days. Both spacecraft landed safely and on schedule.



## Project Apollo

*"I believe this nation should commit itself to achieving the goal, before this decade is out, of landing a man on the Moon and returning him safely to Earth. No single space project in this period will be more impressive to mankind, or more important in the long-range exploration of space; and none will be so difficult or expensive to accomplish."*

- John F. Kennedy

Special Joint Session of Congress

May 25, 1961

## Pete Conrad Tribute

Pete Conrad's funeral was held Monday, July 19 at 11 am EDT at Fort Myers Chapel at Arlington National Cemetery.

## Skylab

Designed for long duration missions, Skylab program objectives were twofold: To prove that humans could live and work in space for extended periods, and to expand our knowledge of solar astronomy well beyond Earth-based observations.

## Shuttle-Mir

Phase 1 was a NASA program encompassing 11 space shuttle flights over a four-year period. It used existing assets - primarily U.S. shuttle orbiters and the Russian Space Station Mir - to build joint space experience and start joint scientific research.

## Space Shuttle

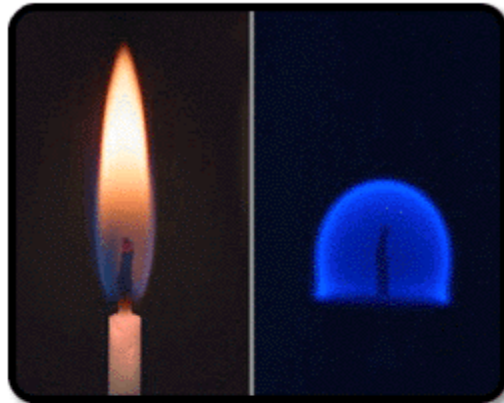
The Space Shuttle is a viable part of American History. Standing as one of NASA's foremost projects, the shuttle has accomplished many tasks that have enhanced the quality of life on Earth. View archives of the Shuttle program.

# Frequently Asked Questions and Answers...

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**Do flames burn the same in zero-gravity as on Earth?**



On Earth, a candle flame is subject to "buoyancy-induced flow," the movement of air around the flame. Gravity allows hotter air to be lighter and move upward in this way.

With the Candle Flame in Microgravity experiment, which took place on the Mir Space Station in 1996, scientists studied the ways in which combustion occurs and is sustained. The effects of gravity on burning rates, flame shape and spread, flame color, and the flickering of a pre-extinction flame were studied to better understand combustion in the microgravity environment.

The experiment found that candle flames take on a spherical shape in microgravity, rather than the elongated shape we see on Earth. On the ground, hotter, lighter gases rise, elongating the flame on a candle. In microgravity, the gases are not buoyant and, therefore, do not rise. They expand out from the flame equally, causing the spherical shape.

**SPACEFLIGHT HOME**

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