



December



November



October



September



August



July



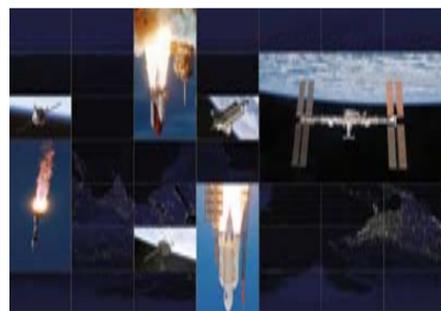
June



May



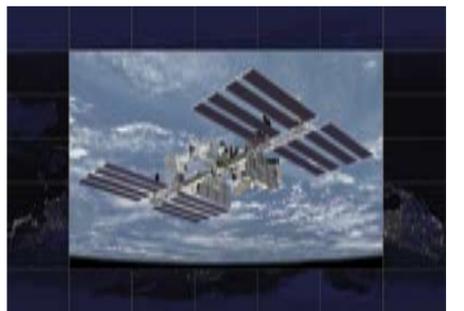
April



March



February



January

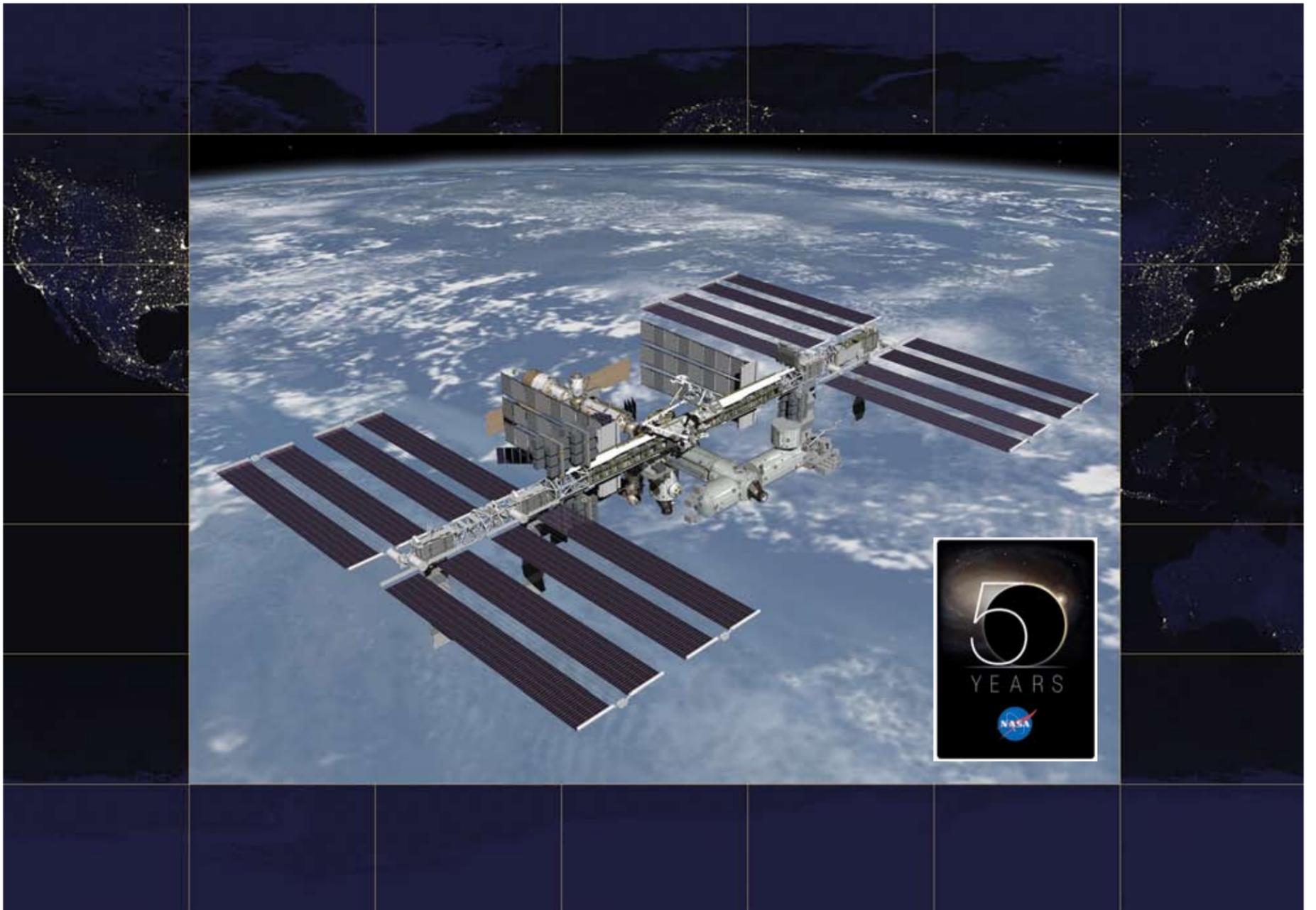
National Aeronautics and Space Administration



International Space Station

2008 Calendar





The International Space Station (ISS) is the largest and most complicated spacecraft ever built. It is allowing NASA to conduct scientific research to improve life on Earth and to prepare for long-duration space flights to the moon and other destinations.

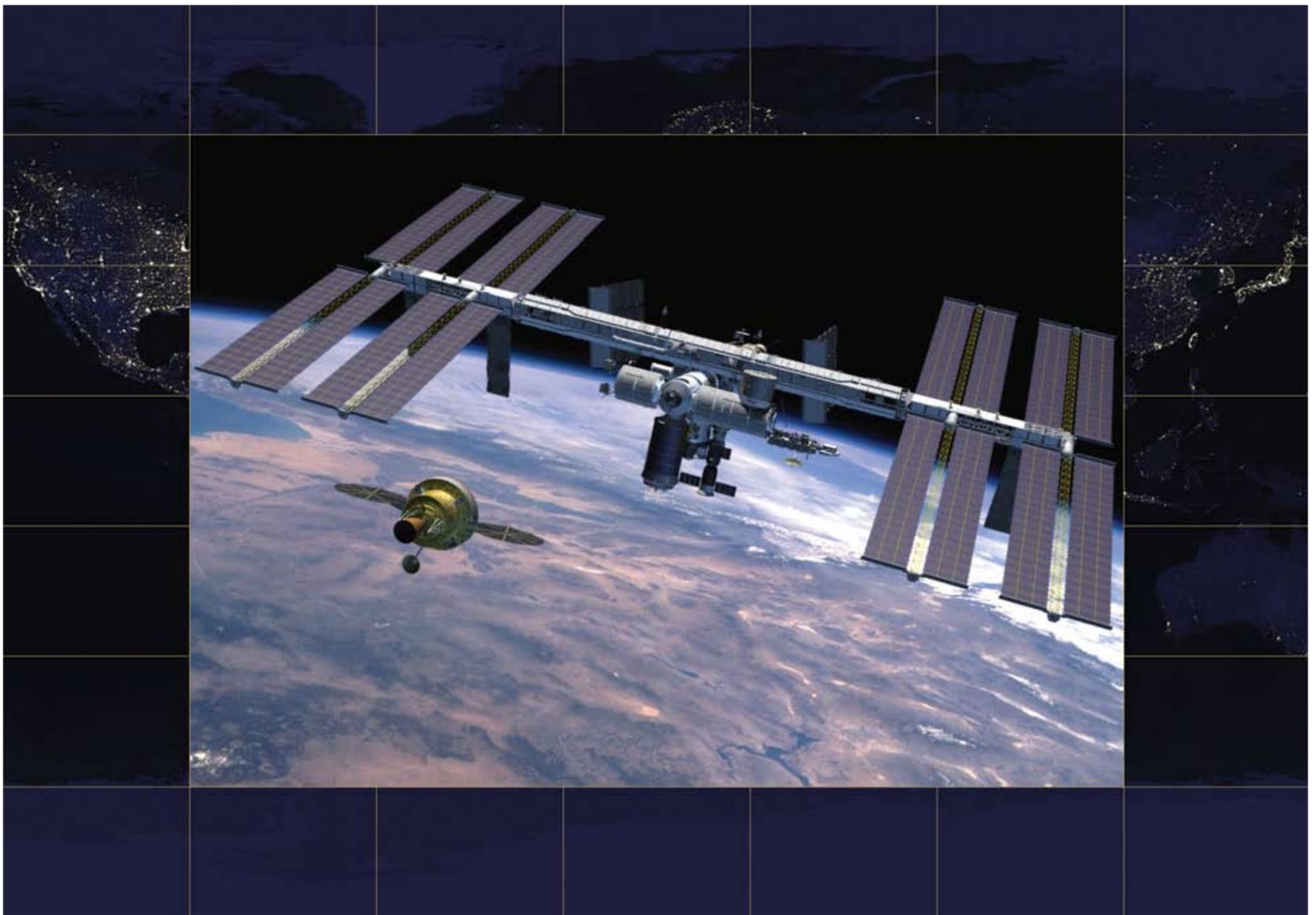
December 2008

S	M	T	W	T	F	S
	1	2 1988 – STS-27 launch 1990 – STS-35 launch 1992 – STS-53 launch 1993 – STS-61 (Hubble Space Telescope servicing) launch	3 1973 – Pioneer 10 flyby of Jupiter. First flyby of outer planet	4 1965 – Gemini VII launch 1998 – STS-88 (ISS, Unity Connecting Module) launch. First U.S. ISS segment	5 2001 – STS-108 (ISS, Expedition 4) launch	6
7 1972 – Apollo 17 launch. Final Apollo mission	8	9 2006 – STS-116 (ISS, P5 truss) launch	10	11	12	13
14	15 1965 – Gemini VI-A launch. Gemini VI-A and VII successfully rendezvous 1970 – Venera 7 (U.S.S.R.) first spacecraft to land on another planet (Venus)	16	17 1903 – Wright brothers first flight	18	19 1999 – STS-103 (Hubble Space Telescope servicing) launch	20
21 Winter Solstice – Winter begins 1968 – Apollo 8 launch	22	23	24 1968 – Apollo 8 becomes first crewed mission to orbit the moon	25 Christmas	26	27
28	29	30	31			

Orion Statistics:
 Crew size 6 (ISS missions) 4 (moon missions)
 Diameter 16.5 feet 5 meters
 Pressurized volume 692 cubic feet 20 cubic meters

For more information about the Constellation Program, please visit:
http://www.nasa.gov/mission_pages/constellation/main/index.html





NASA's Constellation Program is currently building the next-generation vehicle that will visit the International Space Station (ISS). The Orion crew exploration vehicle will ferry crew members to and from Earth and the ISS beginning in the next decade. Orion will

be launched atop the Ares I rocket. The Orion will also be used to send astronauts to the moon. In addition to Orion and Ares I, Constellation is also developing a heavy cargo launch vehicle, Ares V.

January 2008

S M T W T F S

		1 <i>New Year's Day</i>	2 1959 – Luna 1 becomes first spacecraft to reach escape velocity and orbit the sun	3 2004 – Spirit rover lands on Mars	4	5
6	7 1968 – Surveyor (moon) launch 1998 – Lunar Prospector launch	8	9 1990 – STS-32 (SYNCOM IV-F5) launch	10	11 1996 – STS-72 (TSS-1R; USMP-3) launch	12 1986 – STS-61C (SATCOM KU-1) launch 1997 – STS-81 (Shuttle-Mir) launch
13 1993 – STS-54 (TDRS-F; DXS) launch	14	15	16 2003 – STS-107 (Spacehab) launch	17	18	19 1965 – Gemini II launch
20	21 <i>Martin Luther King, Jr. Day</i>	22 1968 – Apollo 5 launch 1992 – STS-42 (IML-1) launch 1998 – STS-89 (Shuttle-Mir) launch	23	24 1985 – STS-51C (DOD) launch 1986 – Voyager 2 Uranus flyby 2004 – Opportunity rover lands on Mars	25 1984 – President Ronald Reagan announces U.S. plans to build a space station	26
27 1967 – Apollo 1 fire	28 1986 – STS-51L launch. Space Shuttle <i>Challenger</i> accident	29 1998 – Intergovernmental Agreement on Space Station Cooperation signed	30	31 1958 – Explorer 1 launch. First U.S. satellite 1961 – Mercury 2 launch 1971 – Apollo 14 launch		

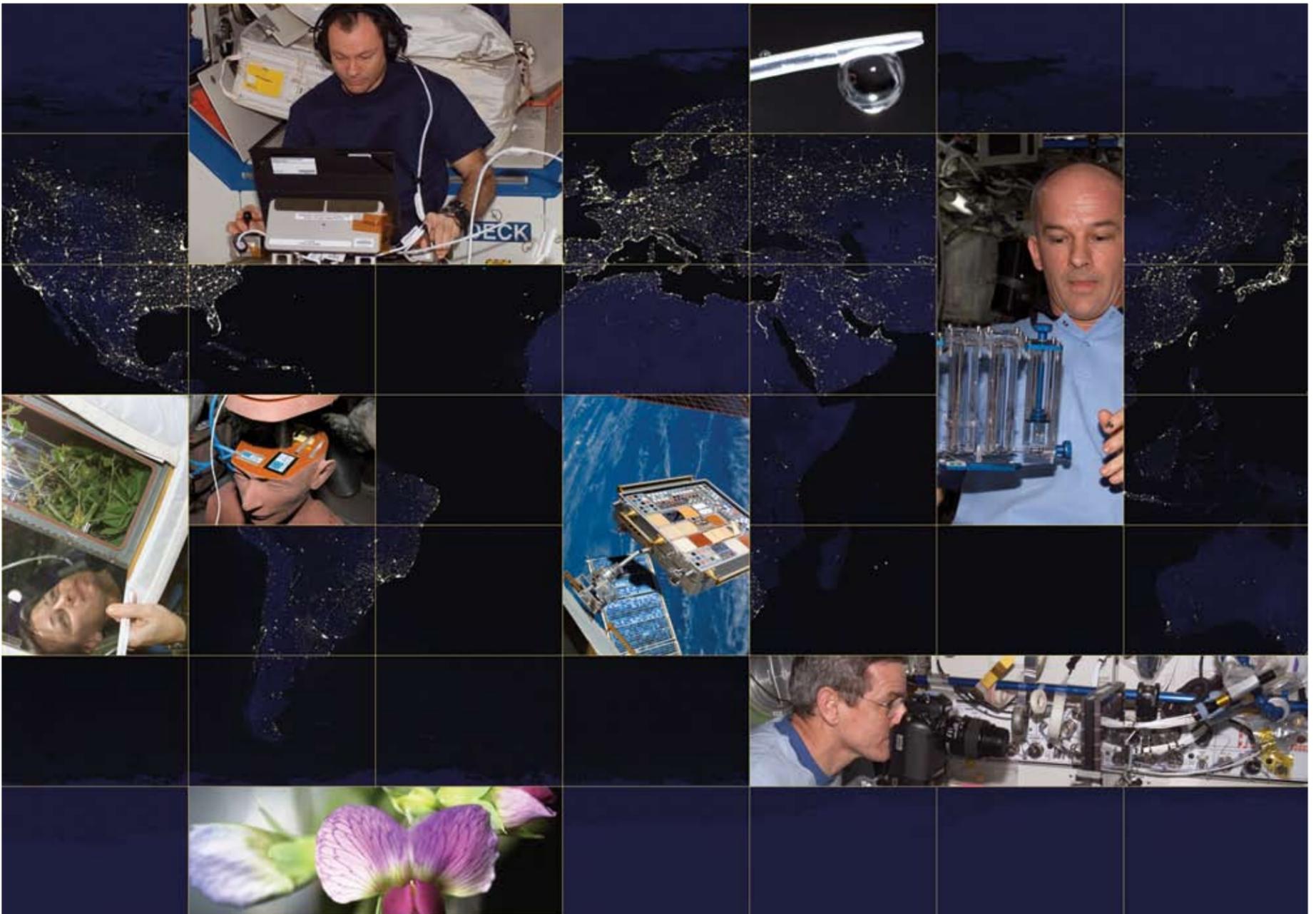
When the ISS is complete:

- Its solar arrays will span 243 feet (74 meters), which is longer than that of a Boeing 777 200/300 model
- It will measure 356 feet (108.5 meters) or equivalent to a football field

- It will have 32,300 cubic feet (915 cubic meters) or equal to that of a Boeing 747
- It will have 52 computers to control its systems

For more information about the ISS, please visit: www.nasa.gov





Science on the International Space Station (ISS) focuses on human research and technology development to pave the way for future exploration of the solar system and to improve life on Earth.

November 2008

S M T W T F S

						1
2 <i>Daylight-Saving Time ends</i> 2000 - Expedition 1 arrives at ISS. Continuous human occupation of ISS begins	3 1973 - Mariner 10 launch. First spacecraft to explore Mercury 1994 - STS-66 (ATLAS-3; CRISTA-SPAS) launch	4	5	6	7 1996 - Mars Global Surveyor launch	8 1984 - STS-51A (3 satellites) launch
9 1967 - Apollo 4 launch	10	11 <i>Veterans Day</i> 1966 - Gemini XII launch 1982 - STS-5 launch. First space shuttle operational mission	12 1995 - STS-74 (Shuttle-Mir) launch	13 1971 - Mariner 9 (Mars) first spacecraft to orbit another planet	14 1969 - Apollo 12 launch	15 1990 - STS-38 (DOD) launch
16 1973 - Skylab 4 launch	17	18	19 1996 - STS-80 (ORFEUS-SPAS II WSF-3) launch 1997 - STS-87 (U.S. Microgravity-4) launch	20 1998 - Zarya Control Module launch. ISS construction begins	21	22 1989 - STS-33 (DOD) launch
23 2002 - STS-113 (ISS, P1 truss, Expedition 6) launch	24 1991 - STS-44 (DOD) launch	25	26 1985 - STS-61B (3 satellites) launch	27 <i>Thanksgiving</i>	28 1964 - Mariner 4 (Mars) launch 1983 - STS-9 launch. First non-American participates in U.S. mission	29
30 2000 - STS-97 (ISS, P6 truss) launch. First set of ISS solar arrays						

For more information on living in space, please visit:
<http://spaceflight.nasa.gov/living/index.html>
<http://www.nasa.gov/vision/space/livinginspace/index.html>





Expedition 1 began the permanent habitation of the International Space Station (ISS) on Nov. 2, 2000. Since then, crews have been working, eating, sleeping, exercising and performing other functions of everyday life on the orbital outpost. The Expedition crews living

on the station are helping NASA develop techniques for future explorers to better overcome the challenges of space flight life. To help make life on the ISS more like life on Earth, crews are also learning how to celebrate holidays, such as Thanksgiving, in space.

February 2008

					1 2003 – STS-107 (Space Shuttle <i>Columbia</i>) accident	2
3 1984 – STS-41B launch 1994 – STS-60 launch 1995 – STS-63 launch First female shuttle pilot	4	5	6	7 1984 – STS-41B astronauts conduct first untethered spacewalks 2001 – STS-98 (ISS, <i>Destiny Laboratory</i>) launch	8	9
10	11 1997 – STS-82 (Hubble Space Telescope servicing) launch 1999 – STS-99 (SRTM) launch	12	13	14	15	16
17 1965 – Ranger 8 (moon) launch	18 <i>Presidents' Day</i> 1977 – Space Shuttle <i>Enterprise</i> first flight test	19	20 1962 – Mercury-Atlas 6 (Friendship 7). John Glenn first American to orbit Earth	21	22 1996 – STS-75 (TSS-1R; USMP-3) launch	23
24	25	26 1966 – Apollo/Saturn 201 launch	27	28 1990 – STS-36 (DOD) launch	29	

For more information about ISS science, please visit:
www.nasa.gov/mission_pages/station/science/index.html
http://www.nasa.gov/mission_pages/station/science/payload_ops.html





More than 80 flights are scheduled during construction of the International Space Station. These missions deliver equipment, modules, supplies and crew members to the station. The international fleet of vehicles includes the space shuttle (U.S.), Soyuz (Russia),

Progress (Russia), H-II Transfer Vehicle (Japan), and Automated Transfer Vehicle (Europe). The space shuttle, Soyuz and Progress spacecraft are featured above.

October 2008

S		M		T		W		T		F		S	
								1 1958 – NASA officially begins operations		2		3 1962 – Mercury-Atlas 8 (Sigma 7) launch 1985 – STS-51J (DOD). Space Shuttle <i>Atlantis</i> ' first flight	
5 1984 – STS-41G (Earth Radiation Budget Satellite) launch		6 1990 – STS-41 (Ulysses) launch		7 2002 – STS-112 (ISS, S1 truss) launch		8		9		10 2007 – ISS Expedition 16 launch. Peggy Whitson first female ISS commander		11 1958 – Pioneer 1 launch. First NASA launch 1968 – Apollo 7 launch. First crewed Apollo mission 2000 – STS-92 (ISS, Z1 truss) launch	
12 1964 – Voskhod 1 (U.S.S.R.) launch. First flight with multiple crew members		13 <i>Columbus Day</i>		14 2004 – ISS Expedition 10 launch		15		16		17		18 1989 – STS-34 (Galileo) launch 1993 – STS-58 (Spacelab Life Sciences-2) launch 2003 – ISS Expedition 8 launch	
19 1967 – Mariner 5 Venus flyby		20 1995 – STS-73 (U.S. Microgravity Laboratory) launch		21		22 1992 – STS-52 (USMP-1; LAGEOS II) launch		23 2007 – STS-120 (ISS, Harmony connecting module) launch		24		25 1961 – Mississippi Test Facility (Stennis Space Center) established	
26 1977 – Last free-flight test for Space Shuttle <i>Enterprise</i>		27		28		29 1998 – STS-95 (SPACEHAB) launch. John Glenn returned to space		30 1985 – STS-61A (D-1 Spacelab Mission) launch		31 2000 – ISS Expedition 1 launch. First ISS crew			

For more information about ISS and other NASA spinoffs, please visit:
<http://www.sti.nasa.gov/tto/ISSspin.html>
http://www.nasa.gov/mission_pages/station/science/index.html
<http://www.sti.nasa.gov/tto/>





The Crew Earth Observations (CEO) experiment: The International Space Station (ISS) provides a unique opportunity for its crew members to observe and photograph natural and human-made changes on Earth. The photographs also record events such as storms,

floods, fires and volcanic eruptions. CEO provides researchers with vital, continuous images to better understand the planet.

September 2008

1 <i>Labor Day</i>	2	3 1976 – Viking 2 lands on Mars	4	5 1977 – Voyager 1 launch	6
7 1995 – STS-69 (Spartan 201-03, WSF-2) launch	8 1960 – Marshall Space Flight Center dedicated 1967 – Surveyor 5 (moon) launch 2000 – STS-106 (ISS, supply) launch	9 1975 – Viking 2 launch 1994 – STS-64 launch 2006 – STS-115 (ISS, P3/P4 truss) launch	10	11 1997 – Mars Global Surveyor enters Martian orbit	12 1966 – Gemini XI launch 1991 – STS-48 launch 1992 – STS-47 launch 1993 – STS-51 launch
14 2001 – Pirs docking compartment launch	15	16 1996 – STS-79 (Shuttle-Mir) launch	17	18 2007 – ISS Expedition 14 launch	19 1961 – Houston, Texas, announced as site of NASA's Manned Space Flight Center (Johnson Space Center)
21 2003 – Galileo first spacecraft to enter Jupiter's atmosphere	22 <i>Autumnal Equinox – Autumn begins</i>	23	24	25 1992 – Mars Observer launch 1997 – STS-86 (Shuttle-Mir) launch	26
28	29 1988 – STS-26 (TDRS-C) launch. First shuttle flight following the Space Shuttle Challenger accident	30 1994 – STS-68 launch 2005 – ISS Expedition 12 launch			

NASA ISS Education program Web sites:
 NASA Education – <http://education.nasa.gov/>
 EarthKAM – <http://www.earthkam.ucsd.edu/>
 NASA Explorer Schools – <http://explorerschools.nasa.gov>
 NASA Digital Learning Network – <http://education.nasa.gov/dln>

NASA Central Operation of Resources for Educators (CORE) – <http://education.nasa.gov/core>
 NASA Educator Resource Center Networks (ERCN) – <http://education.nasa.gov/ercn>
 Engineering Design Challenge – <http://www.nasa.gov/education/plantchallenge>
 Amateur Radio International Space Station – <http://spaceflight.nasa.gov/station/reference/radio/>





The International Space Station (ISS) is an orbital classroom for students around the world who have been treated to on-orbit demonstrations from the ISS Expedition crews. Students can also participate in interactive education programs such as EarthKAM or

compare plants grown on Earth to plants grown on the station. NASA has numerous resources available to help students learn about space and all of the professions necessary to carry out NASA's programs.

April 2008

S M T W T F S

		1	2	3	4 1968 – Apollo 6 launch 1983 – STS-6 (TDRS-1) launch. Space Shuttle Challenger first flight 1997 – STS-83 (MSL-1) launch	5 1973 – Pioneer 11 launch 1991 – STS-37 (Gamma Ray Observatory) launch
6 1984 – STS-41C launch. First orbital satellite repair mission	7 2007 – ISS Expedition 15 launch	8 1964 – Gemini I test flight 1993 – STS-56 (ATLAS-2; SPARTAN-201) launch 2002 – STS-110 (ISS, SO truss) launch	9 1959 – NASA announced Mercury 7. NASA's first astronaut class 1994 – STS-59 (SRL-1) launch	10	11 1970 – Apollo 13 launch	12 1961 – Cosmonaut Yuri Gagarin becomes first human in space 1981 – STS-1 launch. First space shuttle (Columbia) mission
13	14	15	16 1972 – Apollo 16 launch	17 1998 – STS-90 (NeuroLab) launch	18 2004 – ISS Expedition 9 launch	19 2001 – STS-100 (ISS, Canadarm2) launch
20	21	22	23	24 1967 – Soyuz 1 accident. First human to die during mission 1990 – STS-31 (Hubble Space Telescope deploy) launch	25 2003 – ISS Expedition 7 launch	26 1993 – STS-55 (D-2 Spacelab) launch
27	28 1991 – STS-39 (DOD) launch	29 1985 – STS-51B (Spacelab-3) launch	30			

CEO also allows the crew to share their view of the Earth with the public. CEO imagery is available at: <http://eol.jsc.nasa.gov/>





Not only is the International Space Station (ISS) the most complex scientific and technological endeavor ever undertaken, it is a shining example of international cooperation. The

ISS is a partnership of five space agencies—NASA, Roskosmos (Russia), the European Space Agency, Japan Aerospace Exploration Agency and the Canadian Space Agency.

August 2008

					1	2 1991 – STS-43 (TDRS-E) launch
3	4 2007 – Phoenix Mars Lander launch	5	6	7 1997 – STS-85 (CRISTA-SPAS-02) launch	8 1978 – Pioneer 13 (Venus) launch 1989 – STS-28 launch 2007 – STS-118 (ISS, S5 truss) launch	9
10 2001 – STS-105 (ISS, Expedition 3) launch	11	12 1977 – Space Shuttle Enterprise first free-flight test 2005 – Mars Reconnaissance Orbiter launch	13	14	15	16
17	18	19	20 1975 – Viking 1 (Mars) launch 1977 – Voyager 2 launch	21 1975 – Gemini V launch	22	23
24	25 1966 – Apollo/Saturn 202 launch 1981 – Voyager 2 Saturn flyby 1989 – Voyager 2 Neptune flyby	26	27 1985 – STS-511 launch	28	29	30 1983 – STS-8 launch. Guion Bluford, Jr. first African-American in space 1984 – STS-41D launch. Space Shuttle Discovery's first flight
31						

It is easy to track the orbit of the ISS or to learn when it is visible to humans on the ground. For more information, please visit: <http://spaceflight.nasa.gov/realdata/index.html>
For more information about the ISS, please visit: www.nasa.gov





With a permanent human presence aboard the International Space Station (ISS), flight control teams at the Mission Control Center in Houston and the Mission Control Center in Moscow are on duty 7 days a week, 24 hours a day, 365 days a year. Flight controllers

keep a constant watch on the crew's activities and monitor spacecraft systems, crew health and safety as they check every system to ensure operations proceed as planned.

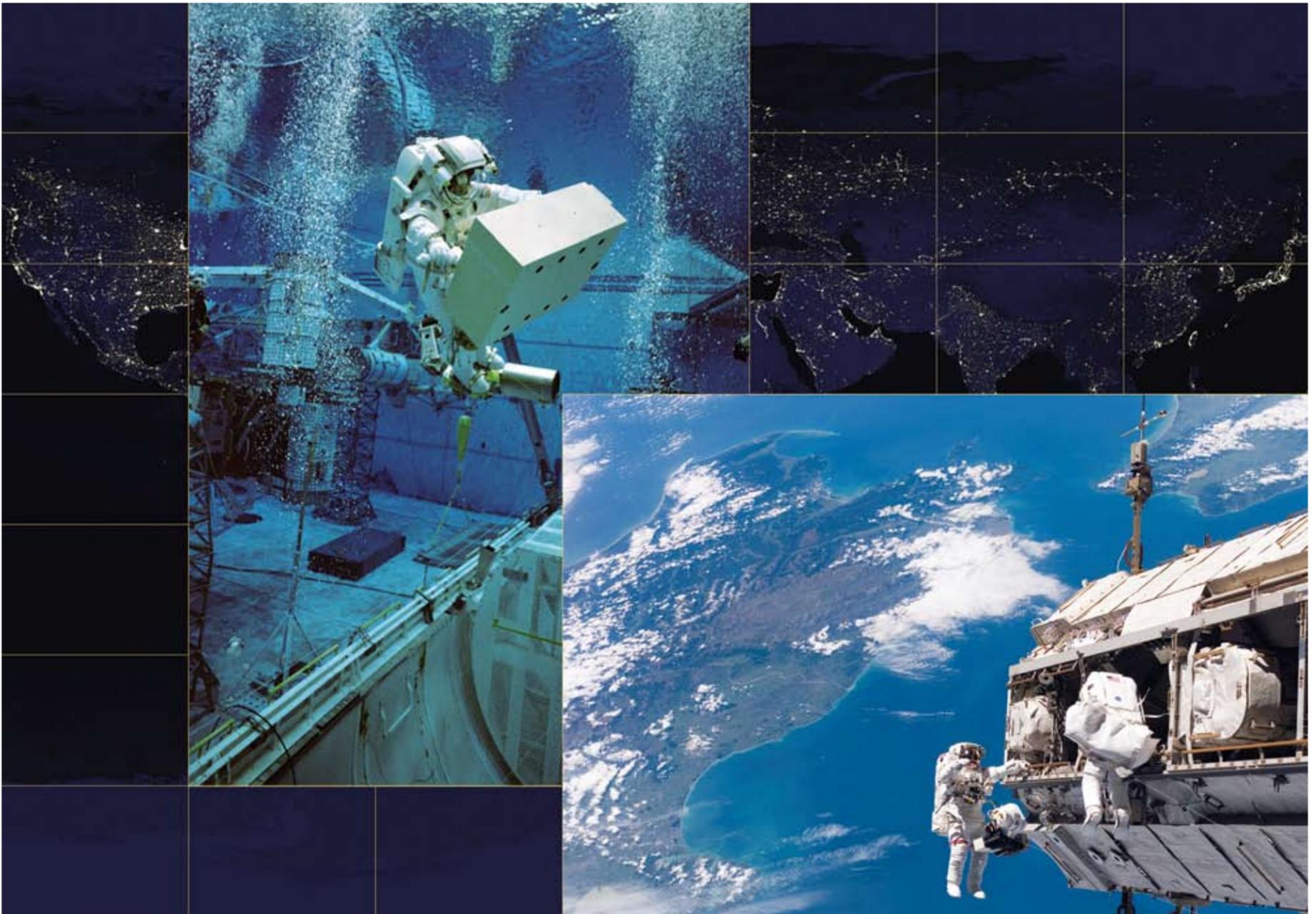
May 2008

4 1989 – STS-30 (Magellan) launch	5 1961 – Mercury-Redstone 3 (Freedom 7) launch. First U.S. human (Alan Shepard Jr.) space flight	6	7 1992 – STS-49 (Intelsat VI Repair) launch. Space Shuttle <i>Endeavour's</i> first flight. First 3-person spacewalk	8	9	10
11	12	13	14 1973 – Skylab space station launch	15 1963 – Mercury-Atlas 9 (Faith 7) launch. Final Mercury flight 1997 – STS-84 (Shuttle-Mir) launch	16	17
18 1969 – Apollo 10 launch	19 1996 – STS-77 (SPACEHAB; SPARTAN) launch 2000 – STS-101 (ISS, supply) launch	20	21	22	23	24 1962 – Mercury-Atlas 7 (Aurora 7) launch
25 1973 – Skylab 2 launch. First U.S. space station crew	26 Memorial Day	27 1999 – STS-96 (ISS) launch. First space shuttle to dock with ISS	28	29	30 1966 – Surveyor I (moon) launch 1971 – Mariner 9 (Mars) launch	31

Once complete, the ISS will include contributions from 15 countries: the United States, Canada, Japan, Russia, Belgium, Denmark, France, Germany, Italy, the Netherlands, Norway, Spain, Sweden, Switzerland and the United Kingdom.

For more information about the ISS partners, please visit: http://www.nasa.gov/mission_pages/station/science/partners.html





Building and maintaining the International Space Station (ISS) requires crew members to conduct extravehicular activities (spacewalks). More than 130 spacewalks are scheduled

to take place during the ISS assembly. To prepare for the spacewalks, crew members train in a 6.2-million-gallon pool at the Neutral Buoyancy Laboratory (NBL) in Houston, Texas.

July 2008

		1 1962 – Cape Canaveral, Fla. established as launch operations center 1997 – STS-94 (MSL 1 reflight) launch	2	3	4 Independence Day 1997 – Mars Pathfinder lands on red planet 2006 – STS-121 (ISS, supply) launch	5 1966 – Apollo/Saturn 203 launch
6	7 2003 – Mars Exploration Rover (Opportunity) launch	8 1994 – STS-65 (International Microgravity Laboratory) launch	9	10 1962 – Launch of Telstar-1, first commercial communications satellite	11 1979 – Skylab reentered Earth's atmosphere	12 2000 – ISS Zvezda Service Module launch 2001 – STS-104 (ISS, Quest Airlock) launch
13 1995 – STS-70 (TDRS-G satellite) launch	14 1965 – Mariner 4 takes first close-up pictures of Mars 1967 – Surveyor 4 (moon) launch	15 1975 – Apollo-Soyuz Test Project launch	16 1969 – Apollo 11 launch	17	18 1966 – Gemini 10 launch	19
20 1969 – Apollo 11 lands on moon. Neil Armstrong and Buzz Aldrin first humans to walk on moon 1976 – Viking 1 first U.S. mission to land on Mars	21 1961 – Mercury-Redstone 4 (Liberty-Bell 7) launch	22	23 1999 – STS-93 (Chandra X-ray Telescope) launch. Eileen Collins first female space shuttle commander	24	25	26 1963 – Syncom 2 launch 1971 – Apollo 15 launch 2005 – STS-114 (ISS) launch. Space shuttle return to flight mission
27	28 1964 – Ranger 7 (moon) launch 1973 – Skylab 3 crew launch	29 1958 – NASA created 1960 – Mercury-Atlas 1 launch 1985 – STS-51F (Spacelab-2) launch	30	31 1992 – STS-46 (EURECA, TSS-1) launch		

For more information about the first moon landings, please visit:
<http://spaceflight.nasa.gov/history/apollo/index.html>

For more information about NASA's long-duration spaceflight research, please visit:
http://www.nasa.gov/mission_pages/station/science/experiments/Human_Research.html
<http://www.nasa.gov/vision/space/livinginspace/>





Humankind's greatest achievement in space occurred at 10:56 p.m. EDT, July 20, 1969, when Astronaut Neil Armstrong became the first human to walk on the moon. The United States is working to return astronauts to the moon and to explore other destinations. The

International Space Station is playing a vital role in that preparation as a testbed for long-duration space flight.

June 2008

1	2 1966 – Surveyor I becomes first U.S. spacecraft to soft land on moon 1998 – STS-91 (Shuttle-Mir) launch	3 1965 – Gemini IV launch. Ed White conducts first U.S. spacewalk 1966 – Gemini IX-A launch	4	5 1991 – STS-40 (Spacelab Life Sciences-1) launch 2002 – STS-111 (ISS, Expedition 5) launch	6	7
8 2007 – STS-117 (ISS, S3/S4 truss) launch	10 2003 – Mars Exploration Rover (Spirit) launch	11	12	13 1983 – Pioneer 10 first spacecraft to leave solar system	14	
15	16 1963 – Cosmonaut Valentina Tereshkova becomes first female in space	17 1985 – STS-51G launch	18 1983 – STS-7 launch. Sally Ride first U.S. female in space	19	20 Summer Solstice-Summer begins 1996 – STS-78 (LMS) launch	21 1993 – STS-57 (SPACEHAB) launch
22	23	24	25 1992 – STS-50 (USML-1) launch	26	27 1982 – STS-4 (DOD) launch 1995 – STS-71 launch. First Shuttle-Mir docking	28
29 1995 – Space Shuttle Atlantis becomes first shuttle to dock with Russian Mir space station	30 1971 – Soyuz 11 accident					

ISS-based spacewalkers can begin their EVAs out of the Quest Airlock (U.S.) or Pirs Docking Compartment (Russia). Spacewalks can also be based from a visiting space shuttle.

For more information about ISS construction activities, please visit: http://www.nasa.gov/mission_pages/station/main/index.html

NBL Pool Dimensions: 202 feet long, 102 feet wide and 40 feet deep.





The International Space Station (ISS) is one of the greatest international, technological, political, and engineering achievements in human history. The research and science that is performed on ISS today will help us obtain the experience and develop the procedures and hardware that will enable us to return to the moon and beyond as we continue humankind's quest of exploration.

This calendar is designed to inspire the next generation of explorers and to provide knowledge and information to educators, students, and anyone who is interested in space. I hope you will enjoy it and that you will learn something new about NASA and the ISS through out the year.

Regards,
 Michael T. Suffredini
 ISS Program Manager

