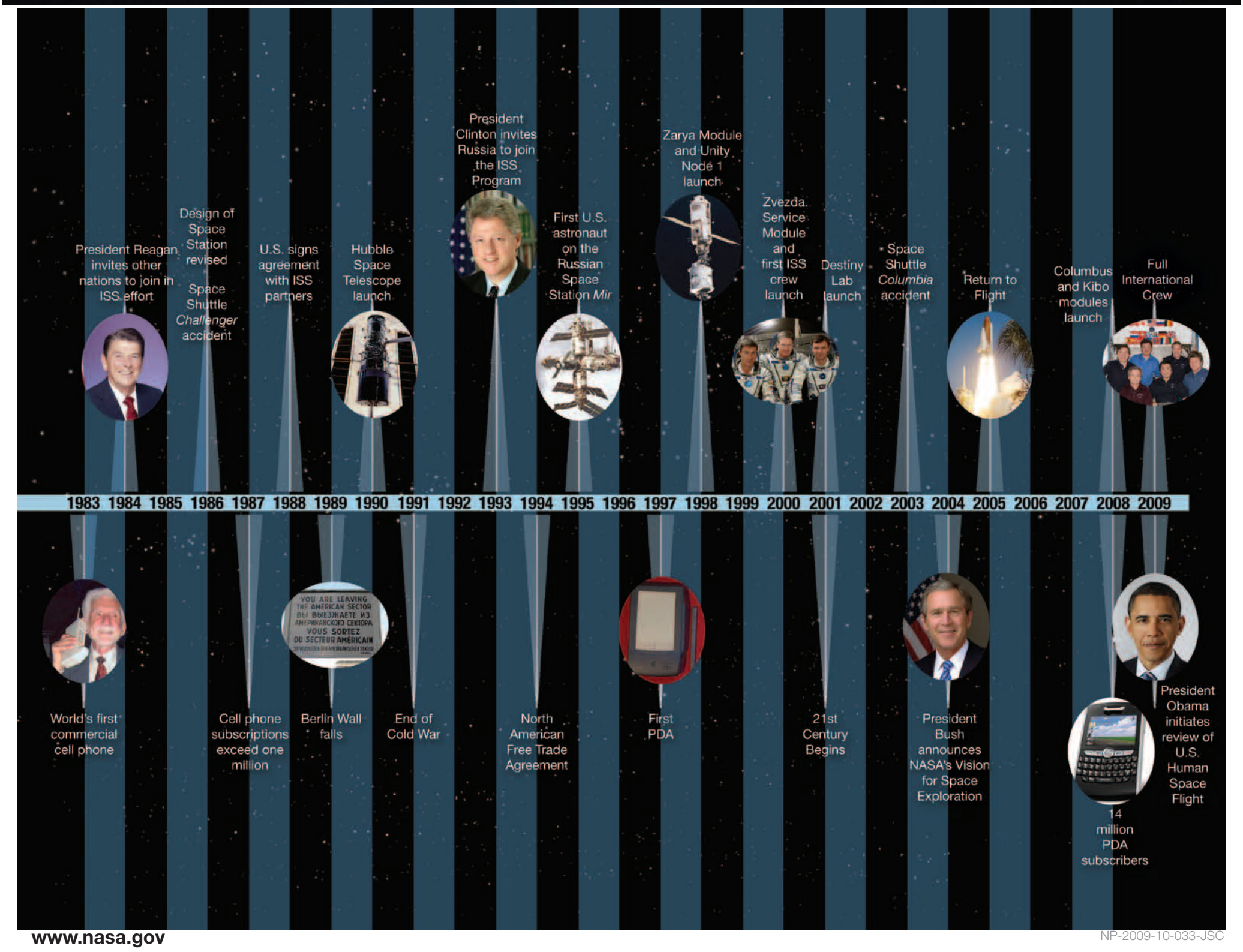
calendar2010

International Space Station

National Aeronautics and Space Administration



www.nasa.gov

NP-2009-10-033-JSC

With the beginning of a new year, construction of the International Space Station is nearing completion. As the largest and most complicated spacecraft ever built, this orbiting outpost can support a crew of six, operating 24 hours a day, seven days a week, 365 days a year. It is a shining example of international cooperation for the United States and its space exploration partners.

A New Year of Exploration

January 2010

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

New 5 — *1st* 13 — *Full* 21 — *3rd* 28

November 2010

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January 2011

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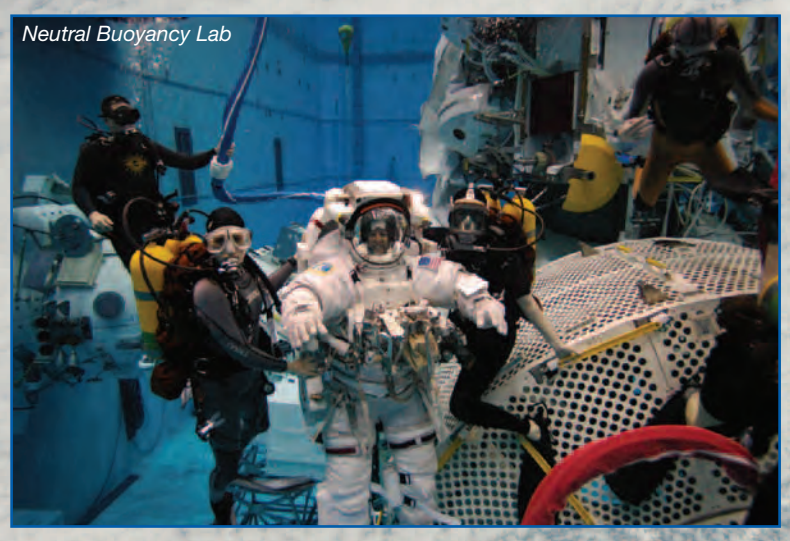
For more information about the International Space Station please visit www.nasa.gov


Neutral Buoyancy Lab


Ascent Training


Virtual Reality Lab

Food Tasting Lab

Ground support for the International Space Station involves more than 100,000 people in space agencies, at 500 contractor facilities and in 37 U.S. states. Crew trainers, food technicians and scuba divers are only a few examples of the diverse workforce necessary to keep the space station operational.

From the Ground Up

December 2010

S	M	T	W	T	F	S
					1 New Year's Day	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18 Martin Luther King, Jr. Day	19	20	21	22	23
24	25	26	27	28	29	30
31						

1959 – Luna 1 becomes first spacecraft to reach escape velocity and orbit the sun

2004 – Spirit rover lands on Mars

1968 – Surveyor–moon
1998 – Lunar Prospector

1997 – STS-81 Shuttle-*Mir*

2003 – STS-107 Spacehab

1965 – Gemini II

1968 – Apollo 5
1998 – STS-89 Shuttle-*Mir*

1986 – Voyager 2 Uranus flyby
2004 – Opportunity rover lands on Mars

1984 – President Ronald Reagan announces U.S. plans to build a space station

1967 – Apollo 1 fire

1986 – STS-51L Space Shuttle *Challenger* accident

1998 – Intergovernmental Agreement on Space Station Cooperation signed

1958 – Explorer 1 First U.S. satellite
1961 – Mercury 2
1971 – Apollo 14

3rd	New	1st	Full
7	15	23	30

December 2009

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February 2010

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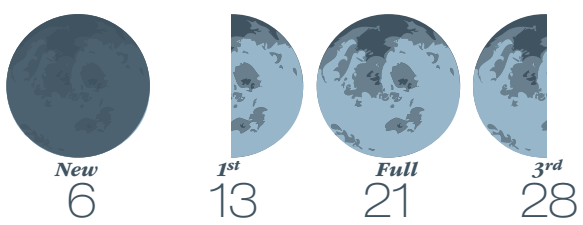
For more information about the International Space Station please visit www.nasa.gov

The 2005 NASA Authorization Act designated the U.S. segment of the space station as a national laboratory, making it available for research by other federal entities and the private sector. The research conducted on this one-of-a-kind orbiting lab helps improve life on Earth and teaches us valuable lessons needed to tackle the challenges of long-duration space flight.

Out of this World Science

February 2010

S	M	T	W	T	F	S
	1	2	3	4	5	6
		2000 – Expedition 1 arrives at ISS. Continuous human occupation of ISS begins	***1973*** – Mariner 10. First spacecraft to explore Mercury			
7	8	9	10	11 Veterans Day	12	13
1996 – Mars Global Surveyor		***1967*** – Apollo 4		***1966*** – Gemini XII ***1982*** – STS-5. First space shuttle operational mission		***1971*** – Mariner 9–Mars. First spacecraft to orbit another planet
14	15	16	17	18	19	20
1969 – Apollo 12 ***2008*** – STS-126 Supply		***1973*** – Skylab 4				***1998*** – Zarya Control Module. ISS construction begins
21	22	23	24	25 Thanksgiving Day	26	27
		2002 – STS-113 P1 truss, Expedition 6				
28	29	30				
1964 – Mariner 4–Mars ***1983*** – STS-9. First non-American participates in U.S. mission		***2000*** – STS-97 P6 truss. First set of ISS solar arrays				



October 2010

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December 2010

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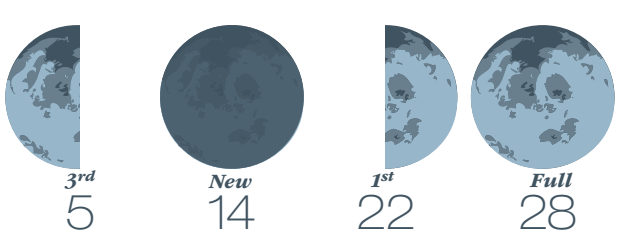
For more information about the International Space Station please visit www.nasa.gov

Since the arrival of the Expedition 1 crew on November 2, 2000, there has been a continuous human presence on the International Space Station. During that decade, the space station has been home for crew members and visitors from around the world. Represented here are flags of the international partners and crew patches for each expedition.

A Decade in Space

November 2010

S	M	T	W	T	F	S
	1 ***2003*** – STS-107. Space Shuttle *Columbia* accident	2	3 ***1995*** – STS-63. Eileen Collins first female space shuttle pilot	4	5	6
7 ***1984*** – STS-41B. Astronauts conduct first untethered spacewalks ***2001*** – STS-98. Destiny Laboratory ***2008*** – STS-122. ESA Columbus	8	9	10	11	12	13
14	15 Presidents' Day	16	17 ***1965*** – Ranger 8–moon	18 ***1977*** – Space Shuttle *Enterprise* first flight test	19	20 ***1962*** – *Friendship 7*. John Glenn first American to orbit Earth
21	22	23	24	25	26 ***1966*** – Apollo/Saturn 201	27
28						



January 2010

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March 2010

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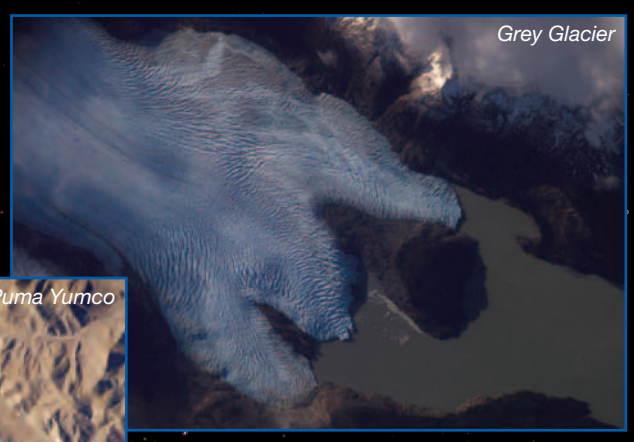
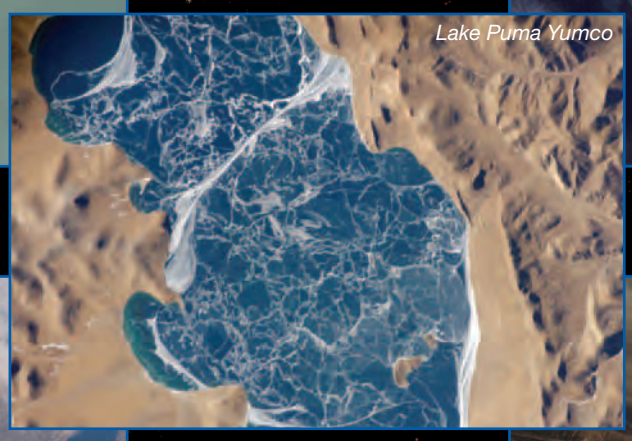
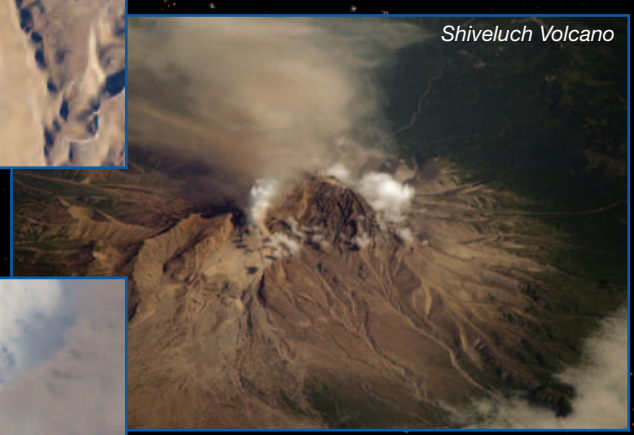
Viedma Glacier


Grey Glacier


Lake Puma Yumco


Cleveland Volcano


Shiveluch Volcano


Sarychev Peak Volcano

For nearly a decade, crew members on board the space station have taken thousands of photos of the Earth below. From fiery volcanoes spewing smoke and lava to icy lakes and glaciers in the coldest environments of our planet, crews have given humankind views of these natural phenomena from one of the most unusual perspectives available.

Fire and Ice

March 2010

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31						

1958 – NASA officially begins operations

1962 – *Sigma 7*

1957 – First satellite, Sputnik 1 (U.S.S.R.)

2002 – STS-112 S1 truss

2007 – Expedition 16 Peggy Whitson first female ISS commander

Columbus Day

1958 – Pioneer I. First NASA launch

1968 – Apollo 7. First crewed Apollo mission

2000 – STS-92 Z1 truss

1964 – Voskhod 1 (U.S.S.R.). First flight with multiple crew members

2004 – ISS Expedition 10

2008 – ISS Expedition 18

2003 – Expedition 8

1967 – Mariner 5–Venus flyby

2007 – STS-120 Harmony Connecting Module

1977 – Last free-flight test–Space Shuttle *Enterprise*

1998 – STS-95. John Glenn returns to space

2000 – Expedition 1 First ISS crew

3rd 1 · New 7 · 1st 14 · Full 23 · 3rd 30

September 2010

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November 2010

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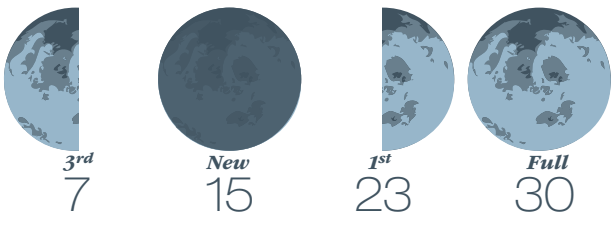
For more information about the International Space Station please visit www.nasa.gov

Long-duration space flight requires the invention of new technologies that often have life-improving applications back on Earth. Enhanced surgical robotics, more accurate automobile safety testing, improved air purification and plant growth using less water and no pesticides are just a few of the technological spinoffs from the International Space Station that improve our daily lives.

Improving Life on Earth

October 2010

S	M	T	W	T	F	S
	1	2	3	4	5	6
		1972 – Pioneer 10. First spacecraft to visit outer planet and leave solar system	***1959*** – Pioneer 4. First successful lunar mission by U.S. spacecraft ***1969*** – Apollo 9			
7	8	9	10	11	12	13
	2001 – STS-102 Expedition 2. First crew rotation. First multi-purpose logistics module flight	***2008*** – First ESA ATV		***2008*** – STS-123 JAXA ELM-PS		
14	15	16	17	18	19	20 ***Spring Equinox — Spring begins***
	2009 – STS-119 S6 truss	***1926*** – First liquid-fueled rocket ***1966*** – Gemini VIII. First successful docking of two spacecraft		***1965*** – Cosmonaut Alexei Leonov becomes the first person to spacewalk		
21	22	23	24	25	26	27
		1965 – Gemini III. First crewed mission of Gemini Project			***2009*** – ISS Expedition 19	
28	29	30	31			
	2006 – ISS Expedition 13					



February 2010

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April 2010

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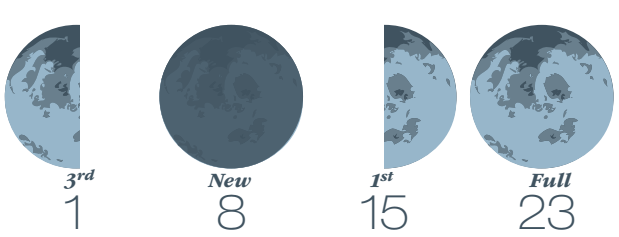
On April 24, 1990, the Hubble Space Telescope was launched aboard Space Shuttle *Discovery* and placed on orbit approximately 347 miles (559 km) above the Earth. Five servicing missions have kept Hubble's vision crystal clear as it continues to capture thousands of stunning images of faraway galaxies, helping us uncover the mysteries of our universe.

Hubble Turns 20

April 2010

S	M	T	W	T	F	S
			1	2	3	4
					1976 – Viking 2 lands on Mars	
5	6 Labor Day	7	8	9	10	11
1977 – Voyager 1			***1967*** – Surveyor 5–moon ***2000*** – STS-106 Supply	***1975*** – Viking 2 ***2006*** – STS-115 P3/P4 truss	2009 – First JAXA HTV	***1997*** – Mars Global Surveyor enters Martian orbit
12	13	14	15	16	17	18
1966 – Gemini 11	***1961*** – Mercury-Atlas 4	***2001*** – Pirs docking compartment				***2007*** – Expedition 14
19	20	21	22	23 *Autumnal Equinox—Autumn begins*	24	25
	1966 – Surveyor 2–moon	***2003*** – Galileo. First spacecraft to enter Jupiter's atmosphere				***1992*** – Mars Observer
26	27	28	29	30		
			1988 – STS-26. First shuttle flight following the Space Shuttle *Challenger* accident	***2005*** – Expedition 12		



August 2010

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October 2010

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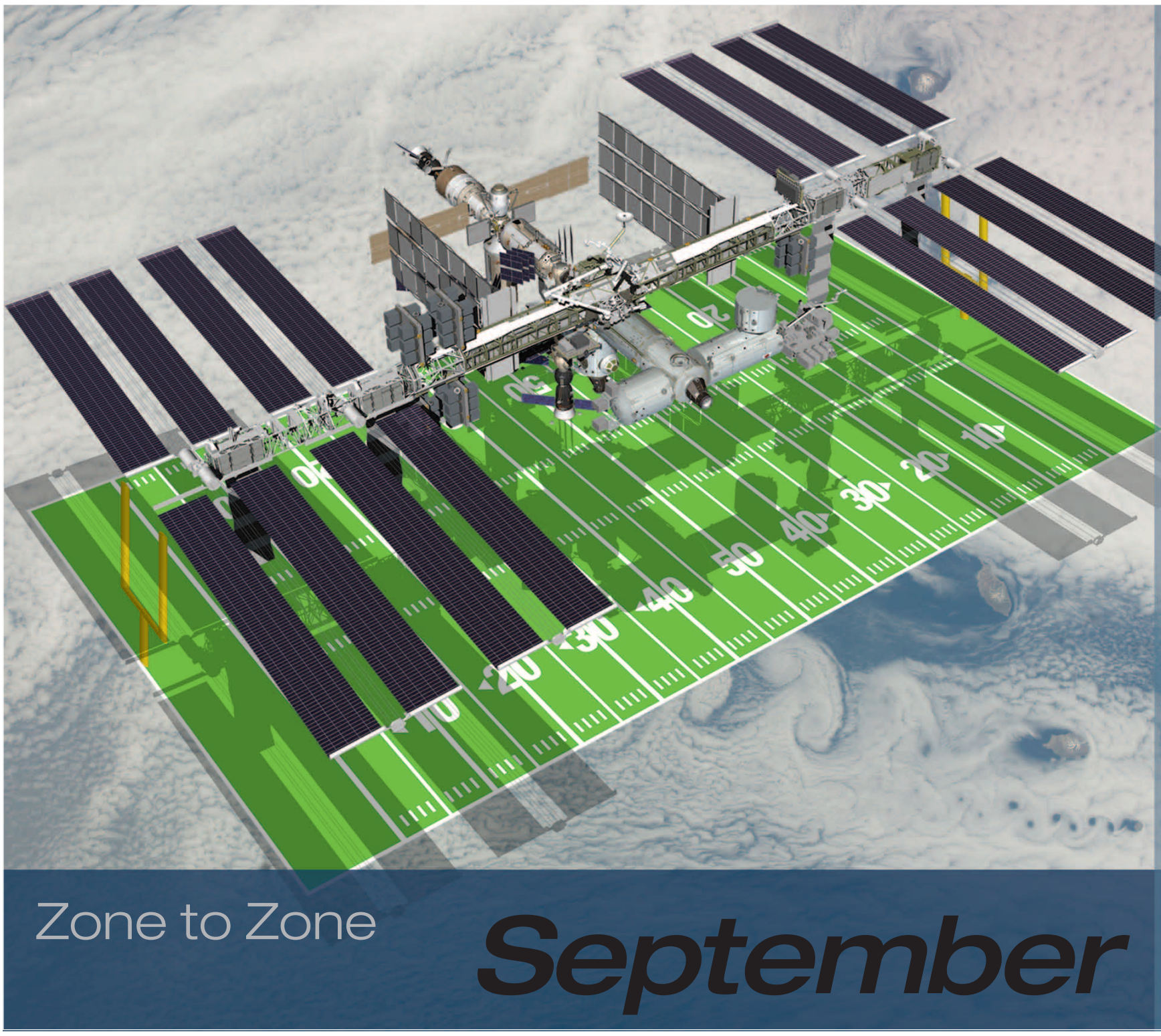
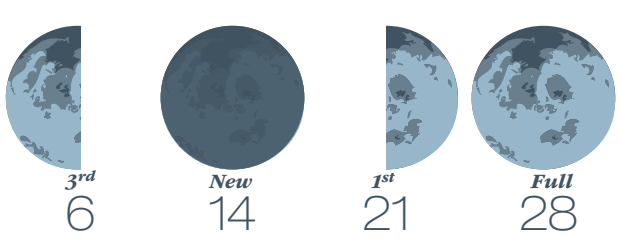


With the installation of its last solar arrays, the International Space Station is equal to the length of a football field, including both end zones. Once complete, it will weigh almost a million pounds (453,592 kg) and have living space nearly equal to the room inside one and a half Boeing 747 jetliners. Currently, the space station travels an equivalent distance to the moon and back in about a day.

Zone to Zone

September 2010

S	M	T	W	T	F	S
				1	2	3
4 ***1968*** – Apollo 6	5 ***1973*** – Pioneer 11	6 ***1984*** – STS-41C. First orbital satellite repair mission	7 ***2007*** – ISS Expedition 15	8 ***1964*** – Gemini I test flight ***2002*** – STS-110 S0 truss ***2008*** – Expedition 17	9 ***1959*** – NASA announces Mercury 7. NASA's first astronaut class	10
11 ***1970*** – Apollo 13	12 ***1961*** – Cosmonaut Yuri Gagarin becomes first human in space ***1981*** – STS-1. First space shuttle (*Columbia*) mission	13	14	15	16	17
18 ***2004*** – Expedition 9	19 ***2001*** – STS-100 Canadarm2	20	21	22	23	24 ***1967*** – Soyuz 1 accident ***1990*** – STS-31 Hubble Space Telescope
25 ***2003*** – Expedition 7	26	27	28	29	30	



March 2010

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May 2010

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For more information about the International Space Station please visit www.nasa.gov


Space Shuttle


Automated Transfer Vehicle (ATV)


Progress

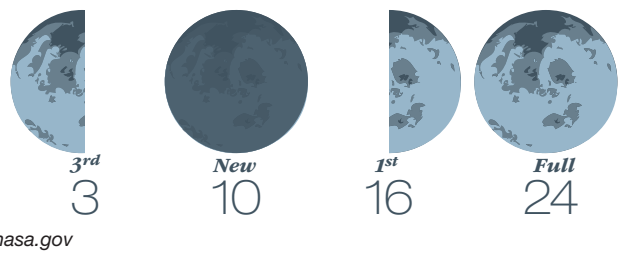

H-IIB Transfer Vehicle (HTV)

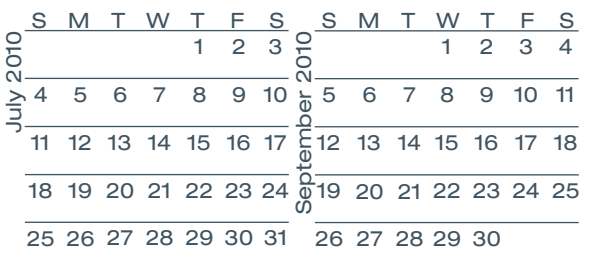
Orbiting 240 statute miles (386.24 km) above the Earth at 17,500 mph (32,410 km/h) creates a challenge when it comes to making a trip to the grocery store. Crew members rely on an international collection of space "shopping carts" to make regular deliveries to the space station. Pictured is the United States' space shuttle, a Russian Progress, the European Space Agency ATV and the Japanese Aerospace Exploration Agency HTV.

Special Delivery

May 2010

S	M	T	W	T	F	S
1	2	3	4	5	6	7
			2007 – Phoenix Mars Lander			
8	9	10	11	12	13	14
1978 – Pioneer 13–Venus ***2007*** – STS-118 S5 truss		***2001*** – STS-105 Expedition 3		***1977*** – Space Shuttle *Enterprise* first free-flight test ***2005*** – Mars Reconnaissance Orbiter		
15	16	17	18	19	20	21
					1975 – Viking 1–Mars ***1977*** – Voyager 2	***1975*** – Gemini V
22	23	24	25	26	27	28
		1966 – Apollo/Saturn 202 ***1981*** – Voyager 2. Saturn flyby ***1989*** – Voyager 2. Neptune flyby				***2009*** – STS-128 Supply
29	30	31				





For more information about the International Space Station please visit www.nasa.gov

Sleeping, eating and exercising are just as critical in space as they are on Earth. On the space station, microgravity requires a unique approach to accomplishing all of these. Crews literally have to strap in to take a jog, enjoy a meal or get a good night's rest.

Life in Space

August 2010

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30	31 Memorial Day					

5 — ***1961*** – *Freedom 7*. Alan Shepard, Jr. first American in space

11 — ***2000*** – STS-125. Hubble Space Telescope servicing

14 — ***1973*** – Skylab space station

15 — ***1963*** – *Faith 7*. Final Mercury flight

18 — ***1969*** – Apollo 10

19 — ***2000*** – STS-101 Supply

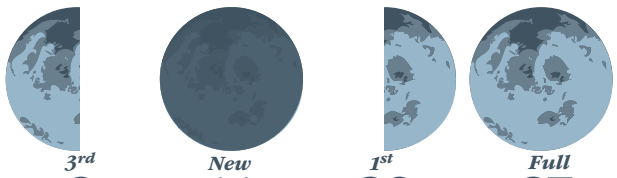
24 — ***1962*** – *Aurora 7*

25 — ***1973*** – Skylab 2. First U.S. space station crew

27 — ***1999*** – STS-96 First space shuttle to dock with ISS
2009 – ISS Expedition 20

30 — ***1966*** – Surveyor I–moon
1971 – Mariner 9–Mars

31 — ***2008*** – STS-124 JAXA JPM



April 2010

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June 2010

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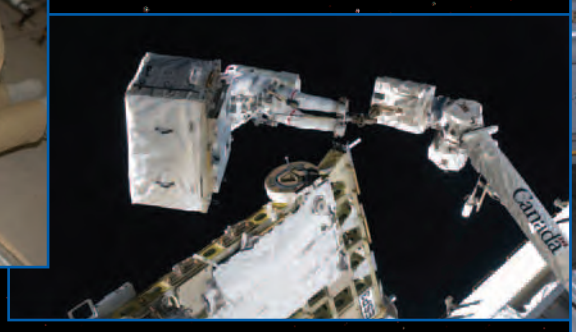

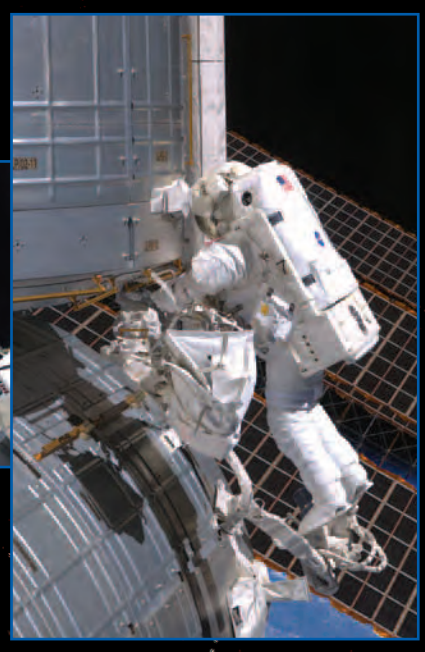

Spacewalks, global photography, scientific research, robotics – it's just another day at the office for space station crew members. Add to that the maintenance of a spaceship the size of a football field and it's easy to see how busy life on orbit can be for the space station's international crew.

A Day at the Office

June 2010

S	M	T	W	T	F	S
				1 ***1962*** – Cape Canaveral, Fla. established as NASA Launch Operations Center	2	3
4 Independence Day ***1997*** – Mars Pathfinder lands on red planet ***2006*** – STS-121 Supply	5 ***1966*** – Apollo/Saturn 203	6	7 ***2003*** – Mars Exploration Rover–Opportunity	8	9	10 ***1962*** – Telstar-1. First commercial communications satellite
11 ***1979*** – Skylab reenters Earth's atmosphere	12 ***2001*** – STS-104 Quest Airlock ***2000*** – Zvezda Service Module	13	14 ***1965*** – Mariner 4 takes first close-up pictures of Mars ***1967*** – Surveyor 4–moon	15 ***1975*** – Apollo-Soyuz Test Project ***2009*** – STS-127 JAXA EF and ELM-ES	16 ***1969*** – Apollo 11	17
18 ***1966*** – Gemini 10	19	20 ***1969*** – Apollo 11 lands on moon ***1976*** – Viking 1. First U.S. mission to land on Mars	21 ***1961*** – *Liberty Bell 7*	22	23 ***1999*** – STS-93. Eileen Collins first female space shuttle commander	24
25	26 ***1963*** – Syncom 2 ***1971*** – Apollo 15 ***2005*** – STS-114. First shuttle flight following the Space Shuttle *Columbia* accident	27	28 ***1964*** – Ranger 7–moon ***1973*** – Skylab 3 crew	29 ***1958*** – NASA created ***1960*** – Mercury-Atlas 1	30	31

3rd 4 · New 11 · 1st 18 · Full 26

June 2010

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August 2010

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29	30	31				

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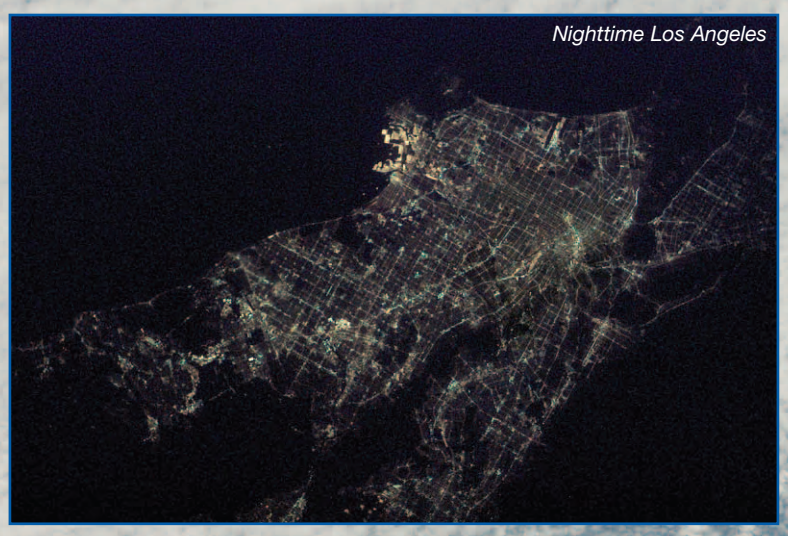
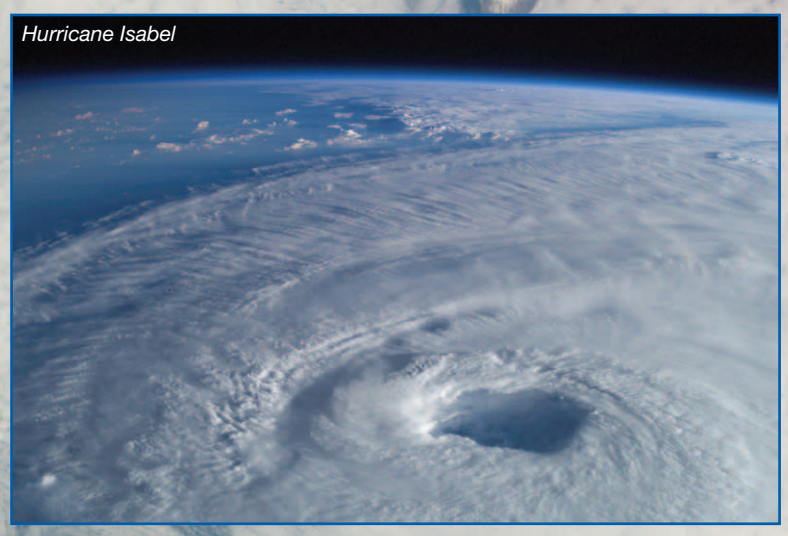
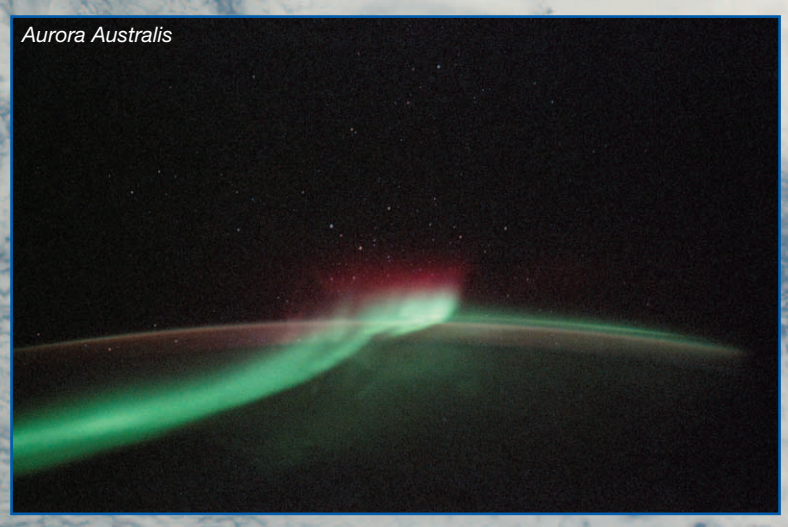

Nighttime Los Angeles


Hurricane Isabel


Palm Island Resort, Dubai


Aurora Australis

Wonders of our world, both natural and human-made, have been viewed and photographed by crew members living on board the space station for almost a decade. The amazing images captured by the crews continue to inspire and inform and help us better understand our world and our impact on it.

Wonders of Our World

July 2010

S	M	T	W	T	F	S
		1	2 ***1966*** – Surveyor I becomes first U.S. spacecraft to soft land on moon	3 ***1965*** – Gemini IV ***1966*** – Gemini IX-A	4	5 ***2002*** – STS-111 Expedition 5
6	7	8 ***2007*** – STS-117 S3/S4 truss	9	10 ***2003*** – Mars Exploration Rover–Spirit	11	12
13	14	15	16 ***1963*** – Cosmonaut Valentina Tereshkova becomes first female in space	17	18 ***1983*** – STS-7. Sally Ride first U.S. female in space	19
20	21 ***Summer Solstice – Summer begins***	22	23	24	25	26
27	28	29 ***1995*** – STS-71. *Atlantis* becomes first shuttle to dock with Russian *Mir* space station	30 ***1971*** – Soyuz 11 accident			

3rd 4 · New 12 · 1st 19 · Full 26

May 2010

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23 30	24 31	25	26	27	28	29

July 2010

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

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As we enter into our tenth year of human presence on board the International Space Station (ISS), we celebrate the fact and acknowledge the success of the ISS as one of the greatest technological, political and engineering accomplishments in human history. As we near the completion of the ISS on-orbit assembly, along with the successful expansion of the nominal crew size from three to a history-making six people, we turn our focus to the multifaceted purpose of the ISS. The ISS is the first step in exploration, from research and discovery, to international cooperation, to technology development, to living and working permanently in low-Earth orbit. With the unique capabilities of the ISS, we as a species can unravel the mysteries of life to better understand our home planet and continue our innate mandate to explore the beyond.

This calendar is designed to show all facets of the ISS using displays of astounding imagery and providing significant historical events with the hope of inspiring the next generation. NASA is grateful for the hard work and commitment that America's teachers demonstrate each and every day as they educate and shape the young students who will be tomorrow's leaders and explorers. I hope you enjoy the calendar and are inspired to learn something new and exciting about NASA and the ISS throughout the year.

Regards,
Michael T. Suffredini
ISS Program Manager

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