

International  
Space Station

*calendar***2010**

[www.nasa.gov](http://www.nasa.gov)

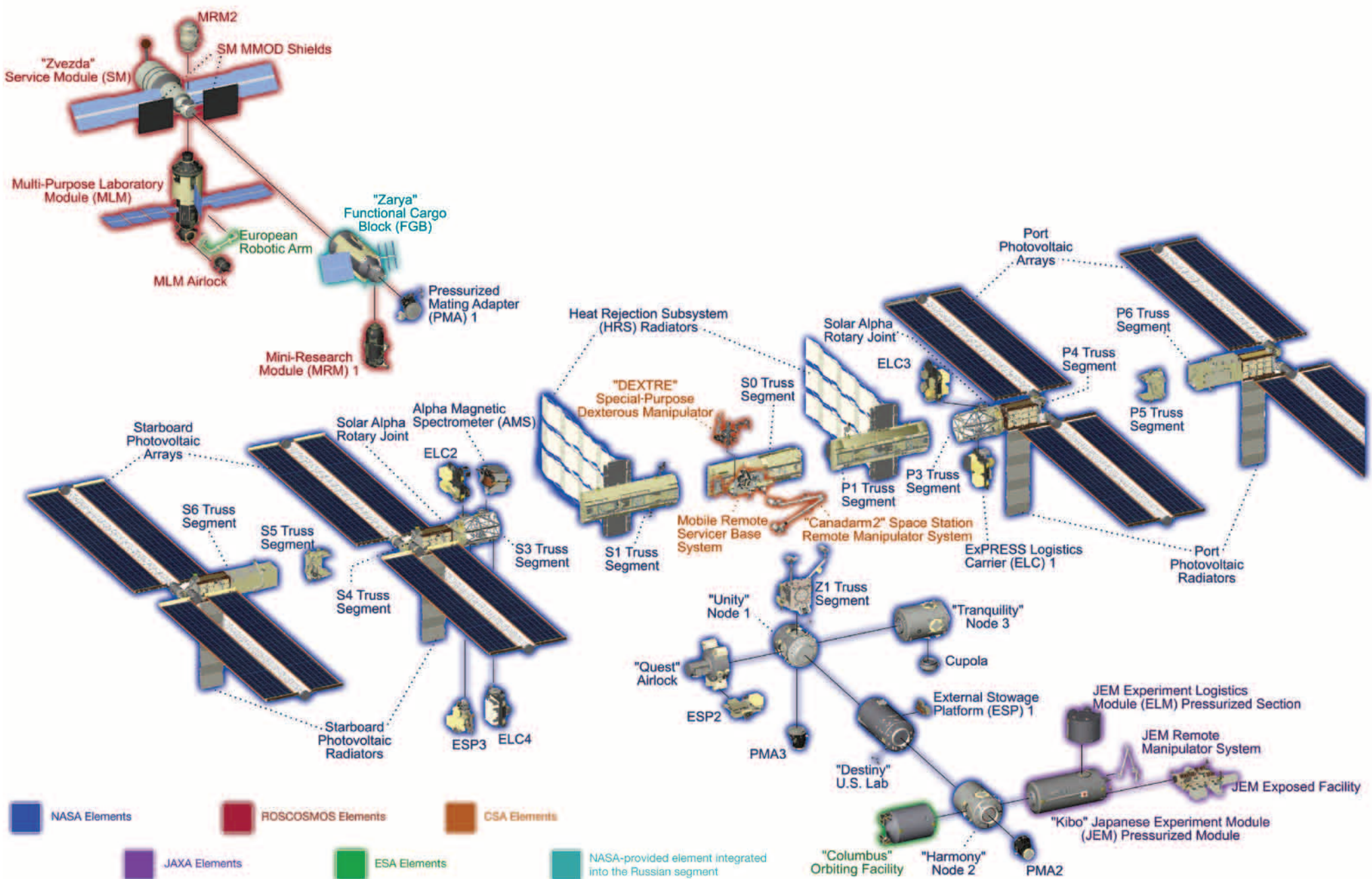
# Welcome to the International Space Station 2010 Calendar



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



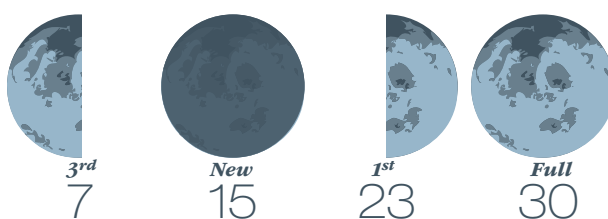


With the beginning of a new year, construction of the International Space Station is nearing completion. As the largest and most complicated spacecraft ever built, this orbiting outpost can support a crew of six, operating 24 hours a day, seven days a week, 365 days a year. It is a shining example of 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 New Year's Day	2  <b>1959</b> – Luna 1 becomes first spacecraft to reach escape velocity and orbit the sun
3  <b>2004</b> – Spirit rover lands on Mars	4	5  <b>1968</b> – Surveyor-moon <b>1998</b> – Lunar Prospector	6	7	8	9
10	11	12  <b>1997</b> – STS-81 Shuttle-Mir	13	14	15	16  <b>2003</b> – STS-107 Spacehab
17	18 Martin Luther King, Jr. Day	19  <b>1965</b> – Gemini II	20	21	22  <b>1968</b> – Apollo 5 <b>1998</b> – STS-89 Shuttle-Mir	23
24  <b>1986</b> – Voyager 2 Uranus flyby <b>2004</b> – Opportunity rover lands on Mars	25  <b>1984</b> – President Ronald Reagan announces U.S. plans to build a space station	26	27  <b>1967</b> – Apollo 1 fire	28  <b>1986</b> – STS-51L Space Shuttle Challenger accident	29  <b>1998</b> – Intergovernmental Agreement on Space Station Cooperation signed	30
31  <b>1958</b> – Explorer 1 First U.S. satellite <b>1961</b> – Mercury 2 <b>1971</b> – Apollo 14						



December 2009	S	M	T	W	T	F	S	January 2010	S	M	T	W	T	F	S
				1	2	3	4	5		1	2	3	4	5	6
6	7	8	9	10	11	12			7	8	9	10	11	12	13
13	14	15	16	17	18	19			14	15	16	17	18	19	20
20	21	22	23	24	25	26			21	22	23	24	25	26	27
27	28	29	30	31					28						



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

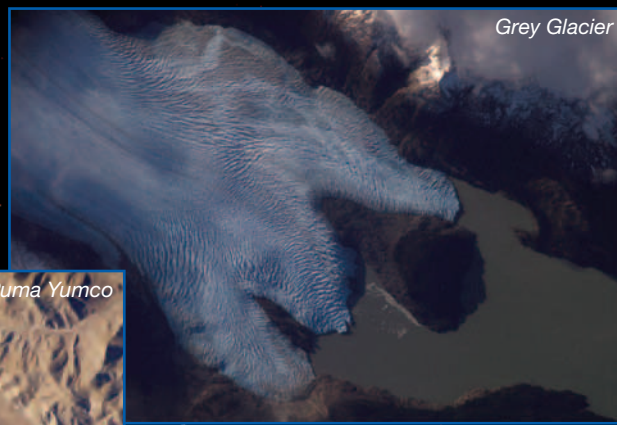
S	M	T	W	T	F	S
	1 <b>2003</b> – STS-107. Space Shuttle <i>Columbia</i> accident	2	3 <b>1995</b> – STS-63. Eileen Collins first female space shuttle pilot	4	5	6
7 <b>1984</b> – STS-41B. Astronauts conduct first untethered spacewalks <b>2001</b> – STS-98. <i>Destiny</i> Laboratory <b>2008</b> – STS-122.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



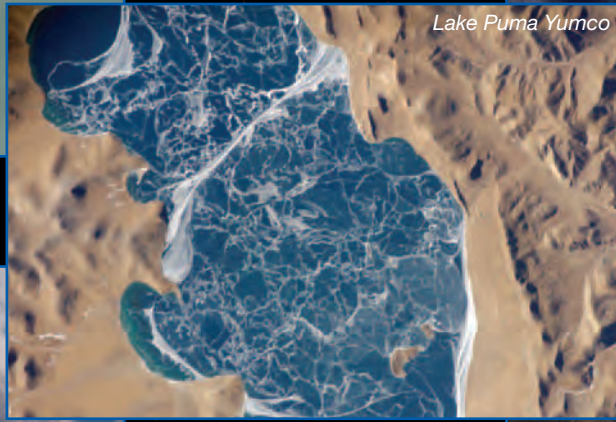
January 2010	S	M	T	W	T	F	S	March 2010	S	M	T	W	T	F	S
						1	2		1	2	3	4	5	6	
3	4	5	6	7	8	9		7	8	9	10	11	12	13	
10	11	12	13	14	15	16		14	15	16	17	18	19	20	
17	18	19	20	21	22	23		21	22	23	24	25	26	27	
24	25	26	27	28	29	30		28	29	30	31				



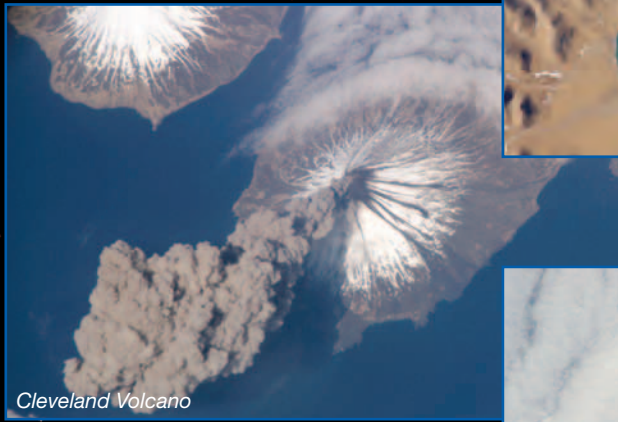
Viedma Glacier



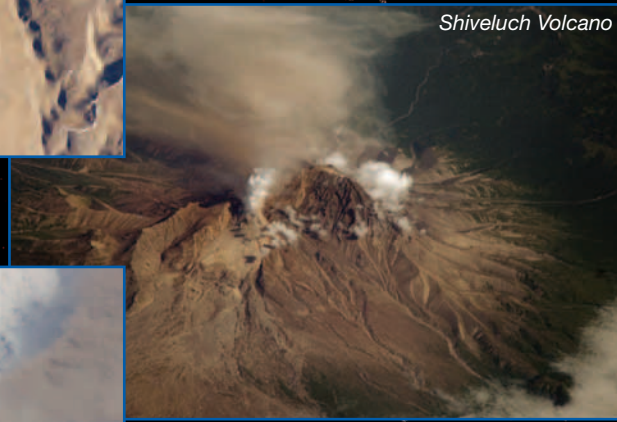
Grey Glacier



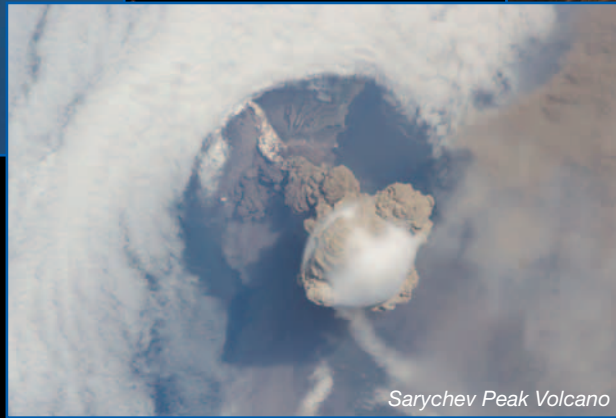
Lake Puma Yumco



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

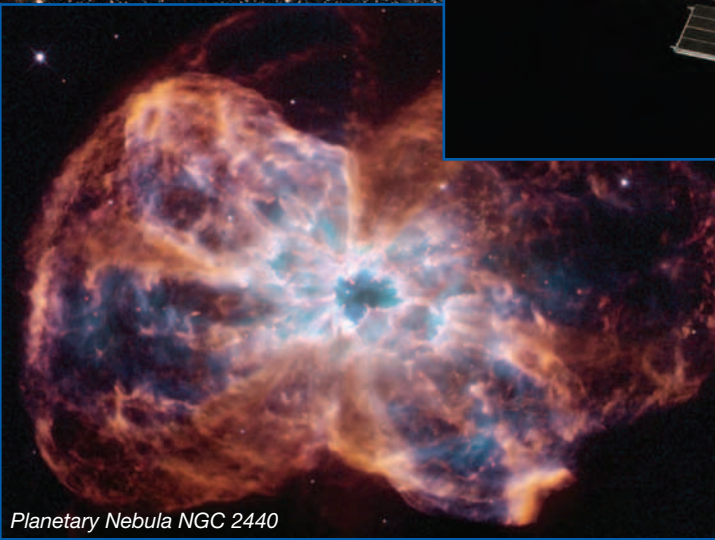
S	M	T	W	T	F	S
	1	2	3	4	5	6
		<b>1972</b> – Pioneer 10. First spacecraft to visit outer planet and leave solar system	<b>1959</b> – Pioneer 4. First successful lunar mission by U.S. spacecraft <b>1969</b> – Apollo 9			
7	8	9	10	11	12	13
	<b>2001</b> – STS-102 Expedition 2. First crew rotation. First multi-purpose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



	S	M	T	W	T	F	S	S	M	T	W	T	F	S
February 2010		1	2	3	4	5	6							
	7	8	9	10	11	12	13		1	2	3			
	14	15	16	17	18	19	20		4	5	6	7	8	9
	21	22	23	24	25	26	27		11	12	13	14	15	16
	28								18	19	20	21	22	23
									25	26	27	28	29	30

Abell S0740

Orion Nebula



Planetary Nebula NGC 2440



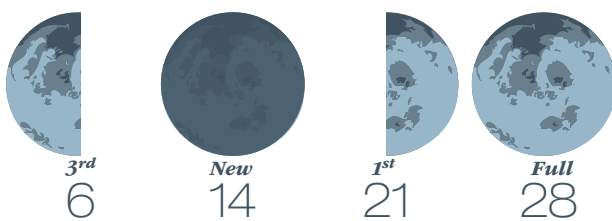
Giant Nebula NGC 3603

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	5	6	7	8	9	10
1968 - Apollo 6	1973 - Pioneer 11	1984 - STS-41C. First orbital satellite repair mission	2007 - ISS Expedition 15	1964 - Gemini I test flight 2002 - STS-110 S0 truss 2008 - Expedition 17	1959 - NASA announces Mercury 7. NASA's first astronaut class	
11	12	13	14	15	16	17
1970 - Apollo 13	1961 - Cosmonaut Yuri Gagarin becomes first human in space 1981 - STS-1. First space shuttle ( <i>Columbia</i> ) mission					
18	19	20	21	22	23	24
2004 - Expedition 9	2001 - STS-100 <i>Canadarm2</i>					1967 - Soyuz 1 accident 1990 - STS-31 Hubble Space Telescope
25	26	27	28	29	30	
2003 - Expedition 7						



3<sup>rd</sup>  
6

New  
14

1<sup>st</sup>  
21

Full  
28

March 2010	S	M	T	W	T	F	S	May 2010	S	M	T	W	T	F	S
		1	2	3	4	5	6								1
	7	8	9	10	11	12	13		2	3	4	5	6	7	8
	14	15	16	17	18	19	20		9	10	11	12	13	14	15
	21	22	23	24	25	26	27		16	17	18	19	20	21	22
	28	29	30	31					23	24	25	26	27	28	29



Space Shuttle



Automated Transfer Vehicle (ATV)



H-IIB Transfer Vehicle (HTV)



Progress



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.

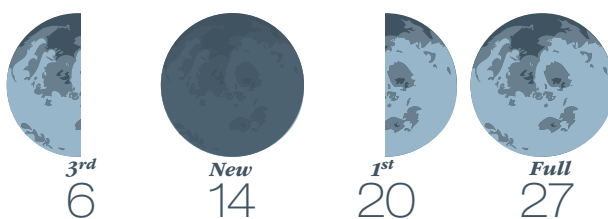
# Special Delivery

# May 2010

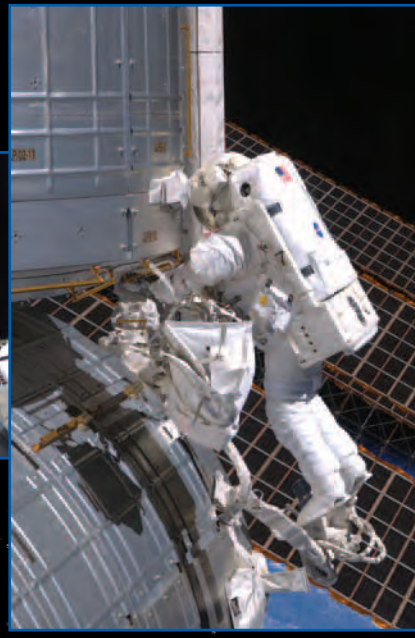
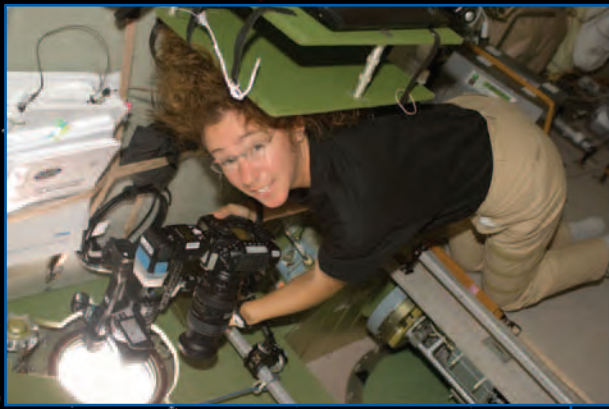
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
			1961 - Freedom 7. Alan Shepard, Jr. first American in space			
9	10	11	12	13	14	15
		2000 - STS-125. Hubble Space Telescope servicing			1973 - Skylab space station	1963 - Faith 7. Final Mercury flight
16	17	18	19	20	21	22
		1969 - Apollo 10	2000 - STS-101 Supply			
23	24	25	26	27	28	29
	1962 - Aurora 7	1973 - Skylab 2. First U.S. space station crew		1999 - STS-96 First space shuttle to dock with ISS 2009 - ISS Expedition 20		
30	31					
	Memorial Day					

1966 - Surveyor I-moon  
1971 - Mariner 9-Mars

2008 - STS-124 JAXA JPM



April 2010	S	M	T	W	T	F	S	June 2010	S	M	T	W	T	F	S	
					1	2	3					1	2	3	4	5
4	5	6	7	8	9	10		6	7	8	9	10	11	12		
11	12	13	14	15	16	17		13	14	15	16	17	18	19		
18	19	20	21	22	23	24		20	21	22	23	24	25	26		
25	26	27	28	29	30			27	28	29	30					

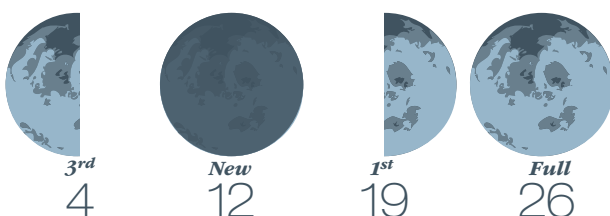


Spacewalks, global photography, scientific research, robotics – it's just another day at the office for space station crew members. Add to that the maintenance of a spaceship the size of a football field and it's easy to see how busy life on orbit can be for the space station's international crew.

# A Day at the Office

# June 2010

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

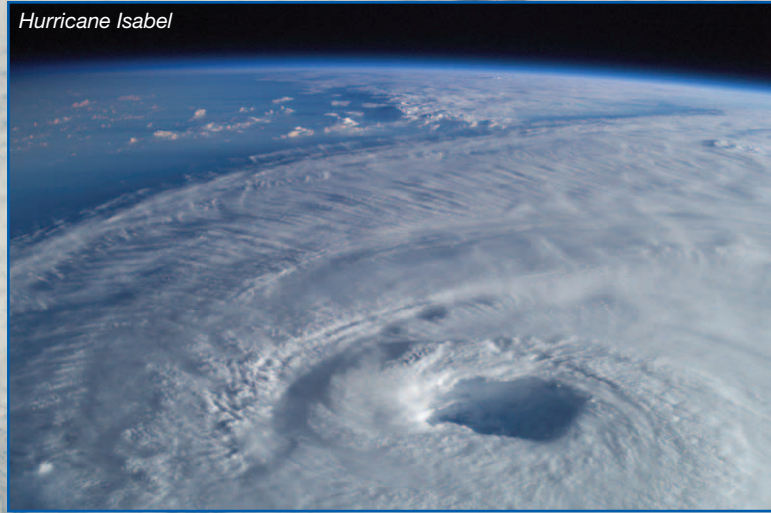


May 2010	S	M	T	W	T	F	S	July 2010	S	M	T	W	T	F	S	
							1							1	2	3
2	3	4	5	6	7	8		4	5	6	7	8	9	10		
9	10	11	12	13	14	15		11	12	13	14	15	16	17		
16	17	18	19	20	21	22		18	19	20	21	22	23	24		
23	24	25	26	27	28	29		25	26	27	28	29	30	31		





Nighttime Los Angeles



Hurricane Isabel



Palm Island Resort, Dubai



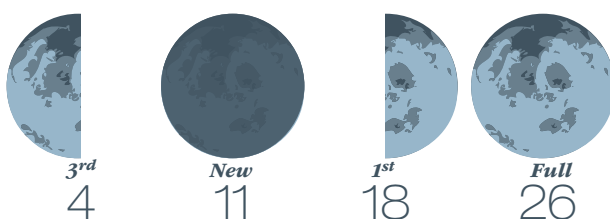
Aurora Australis

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	3
				1962 – Cape Canaveral, Fla. established as NASA Launch Operations Center		
4 Independence Day	5	6	7	8	9	10
1997 – Mars Pathfinder lands on red planet 2006 – STS-121 Supply	1966 – Apollo/Saturn 203		2003 – Mars Exploration Rover-Opportunity			1962 – Telstar-1. First commercial communications satellite
11	12	13	14	15	16	17
1979 – Skylab reenters Earth's atmosphere	2001 – STS-104 Quest Airlock 2000 – Zvezda Service Module		1965 – Mariner 4 takes first close-up pictures of Mars 1967 – Surveyor 4-moon	1975 – Apollo-Soyuz Test Project 2009 – STS-127 JAXA EF and ELM-ES	1969 – Apollo 11	
18	19	20	21	22	23	24
1966 – Gemini 10		1969 – Apollo 11 lands on moon 1976 – Viking 1. First U.S. mission to land on Mars	1961 – Liberty Bell 7		1999 – STS-93. Eileen Collins first female space shuttle commander	
25	26	27	28	29	30	31
	1963 – Syncom 2 1971 – Apollo 15 2005 – STS-114. First shuttle flight following the Space Shuttle Columbia accident		1964 – Ranger 7-moon 1973 – Skylab 3 crew	1958 – NASA created 1960 – Mercury-Atlas 1		



June 2010	S	M	T	W	T	F	S	August 2010	S	M	T	W	T	F	S
				1	2	3	4	5	1	2	3	4	5	6	7
6	7	8	9	10	11	12		8	9	10	11	12	13	14	
13	14	15	16	17	18	19		15	16	17	18	19	20	21	
20	21	22	23	24	25	26		22	23	24	25	26	27	28	
27	28	29	30					29	30	31					



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.

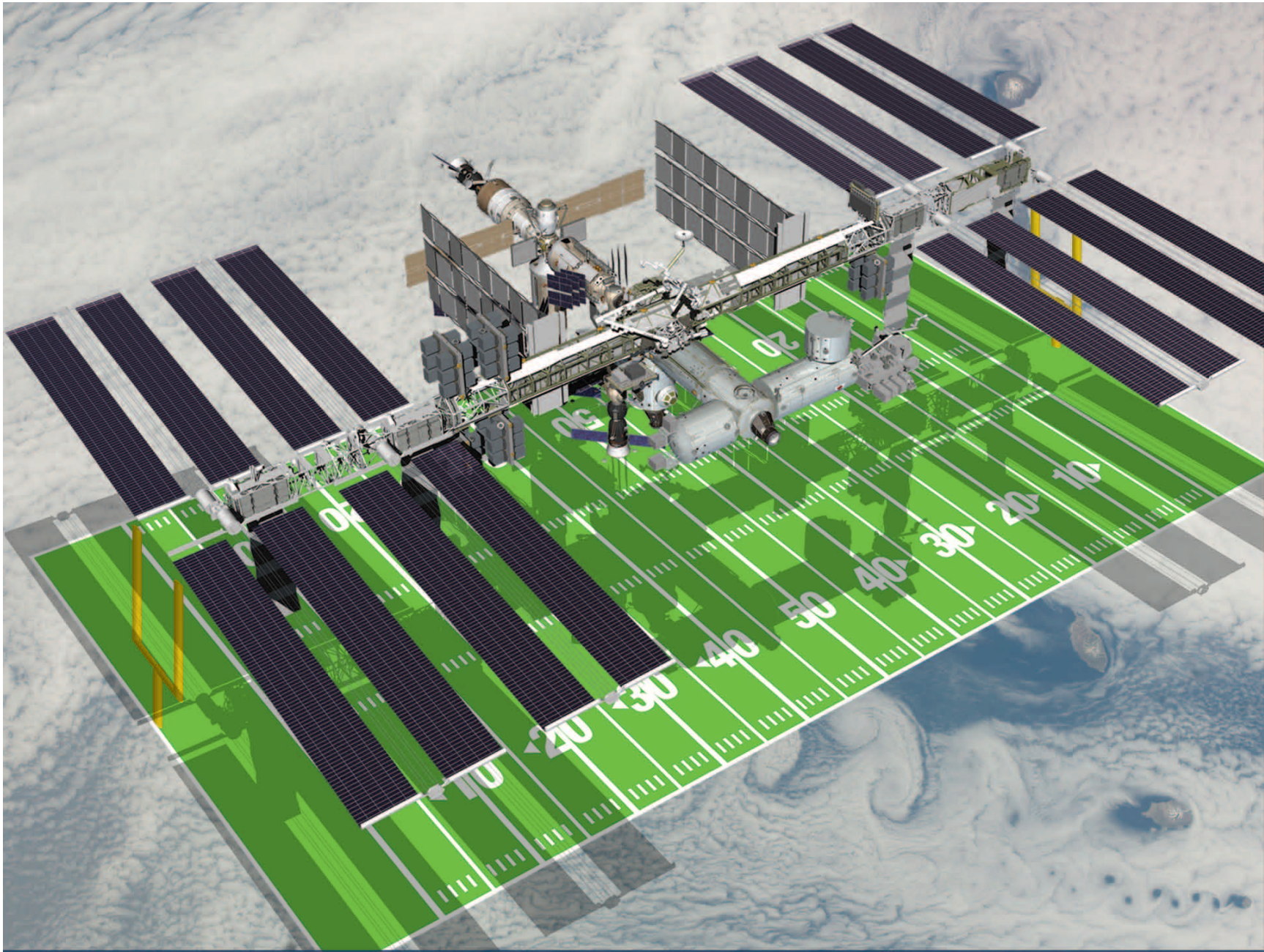
# Life in Space

# August 2010

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



July 2010	S	M	T	W	T	F	S	September 2010	S	M	T	W	T	F	S	
					1	2	3						1	2	3	4
4	5	6	7	8	9	10		5	6	7	8	9	10	11		
11	12	13	14	15	16	17		12	13	14	15	16	17	18		
18	19	20	21	22	23	24		19	20	21	22	23	24	25		
25	26	27	28	29	30	31		26	27	28	29	30				



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 <b>1976</b> – Viking 2 lands on Mars	4
5 <b>1977</b> – Voyager 1	6 Labor Day	7	8 <b>1967</b> – Surveyor 5–moon <b>2000</b> – STS-106 Supply	9 <b>1975</b> – Viking 2 <b>2006</b> – STS-115 P3/P4 truss	10 <b>2009</b> – First JAXA HTV	11 <b>1997</b> – Mars Global Surveyor enters Martian orbit
12 <b>1966</b> – Gemini 11	13 <b>1961</b> – Mercury-Atlas 4	14 <b>2001</b> – Pirs docking compartment	15	16	17	18 <b>2007</b> – Expedition 14
19	20 <b>1966</b> – Surveyor 2–moon	21 <b>2003</b> – Galileo. First spacecraft to enter Jupiter's atmosphere	22	23 Autumnal Equinox – Autumn begins	24	25 <b>1992</b> – Mars Observer
26	27	28	29 <b>1988</b> – STS-26. First shuttle flight following the Space Shuttle Challenger accident	30 <b>2005</b> – Expedition 12		



S	M	T	W	T	F	S	S	M	T	W	T	F	S		
August 2010	1	2	3	4	5	6	7	October 2010					1	2	
	8	9	10	11	12	13	14		3	4	5	6	7	8	9
	15	16	17	18	19	20	21		10	11	12	13	14	15	16
	22	23	24	25	26	27	28		17	18	19	20	21	22	23
	29	30	31						24	25	26	27	28	29	30



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 <b>1958</b> – NASA officially begins operations	2																																										
3 <b>1962</b> – Sigma 7	4 <b>1957</b> – First satellite, Sputnik 1 (U.S.S.R.)	5	6	7 <b>2002</b> – STS-112 S1 truss	8	9																																										
10 <b>2007</b> – Expedition 16 Peggy Whitson first female ISS commander	11 Columbus Day <b>1958</b> – Pioneer I. First NASA launch <b>1968</b> – Apollo 7. First crewed Apollo mission <b>2000</b> – STS-92 Z1 truss	12 <b>1964</b> – Voskhod 1 (U.S.S.R.). First flight with multiple crew members	13	14 <b>2004</b> – ISS Expedition 10 <b>2008</b> – ISS Expedition 18	15	16																																										
17	18 <b>2003</b> – Expedition 8	19 <b>1967</b> – Mariner 5–Venus flyby	20	21	22	23 <b>2007</b> – STS-120 Harmony Connecting Module																																										
24	25	26 <b>1977</b> – Last free-flight test–Space Shuttle Enterprise	27	28	29 <b>1998</b> – STS-95. John Glenn returns to space	30																																										
31 <b>2000</b> – Expedition 1 First ISS crew	<p>3<sup>rd</sup> 1      New 7      1<sup>st</sup> 14      Full 23      3<sup>rd</sup> 30</p>					<table border="1"> <thead> <tr> <th>S</th> <th>M</th> <th>T</th> <th>W</th> <th>T</th> <th>F</th> <th>S</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> <tr> <td>5</td> <td>6</td> <td>7</td> <td>8</td> <td>9</td> <td>10</td> <td>11</td> </tr> <tr> <td>12</td> <td>13</td> <td>14</td> <td>15</td> <td>16</td> <td>17</td> <td>18</td> </tr> <tr> <td>19</td> <td>20</td> <td>21</td> <td>22</td> <td>23</td> <td>24</td> <td>25</td> </tr> <tr> <td>26</td> <td>27</td> <td>28</td> <td>29</td> <td>30</td> <td></td> <td></td> </tr> </tbody> </table>	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		
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			1	2	3	4																																										
5	6	7	8	9	10	11																																										
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19	20	21	22	23	24	25																																										
26	27	28	29	30																																												



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



New  
6



1st  
13

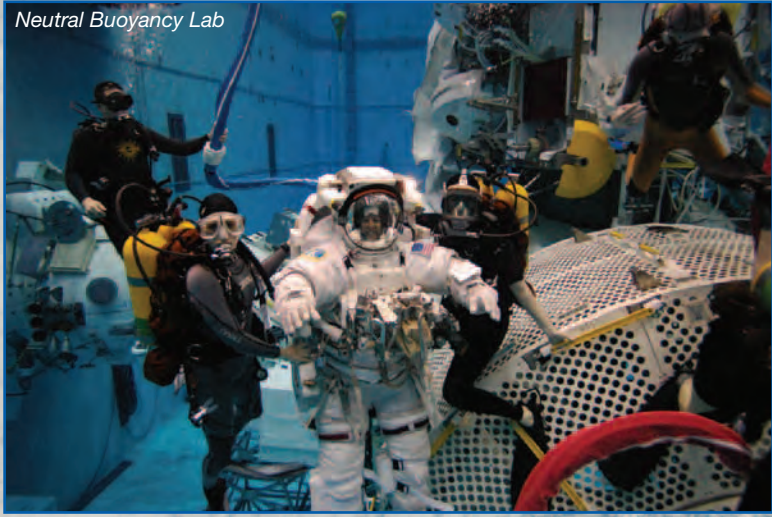


Full  
21



3rd  
28

October 2010	S	M	T	W	T	F	S	December 2010	S	M	T	W	T	F	S
						1	2								
3	4	5	6	7	8	9		5	6	7	8	9	10	11	
10	11	12	13	14	15	16		12	13	14	15	16	17	18	
17	18	19	20	21	22	23		19	20	21	22	23	24	25	
24	25	26	27	28	29	30		26	27	28	29	30	31		



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



November 2010	S	M	T	W	T	F	S	January 2011	S	M	T	W	T	F	S
	1	2	3	4	5	6									1
7	8	9	10	11	12	13		2	3	4	5	6	7	8	
14	15	16	17	18	19	20		9	10	11	12	13	14	15	
21	22	23	24	25	26	27		16	17	18	19	20	21	22	
28	29	30						23	24	25	26	27	28	29	

