



Pyramid Lake, Nevada



San Francisco Bay



Southwestern USA



Mt. Etna



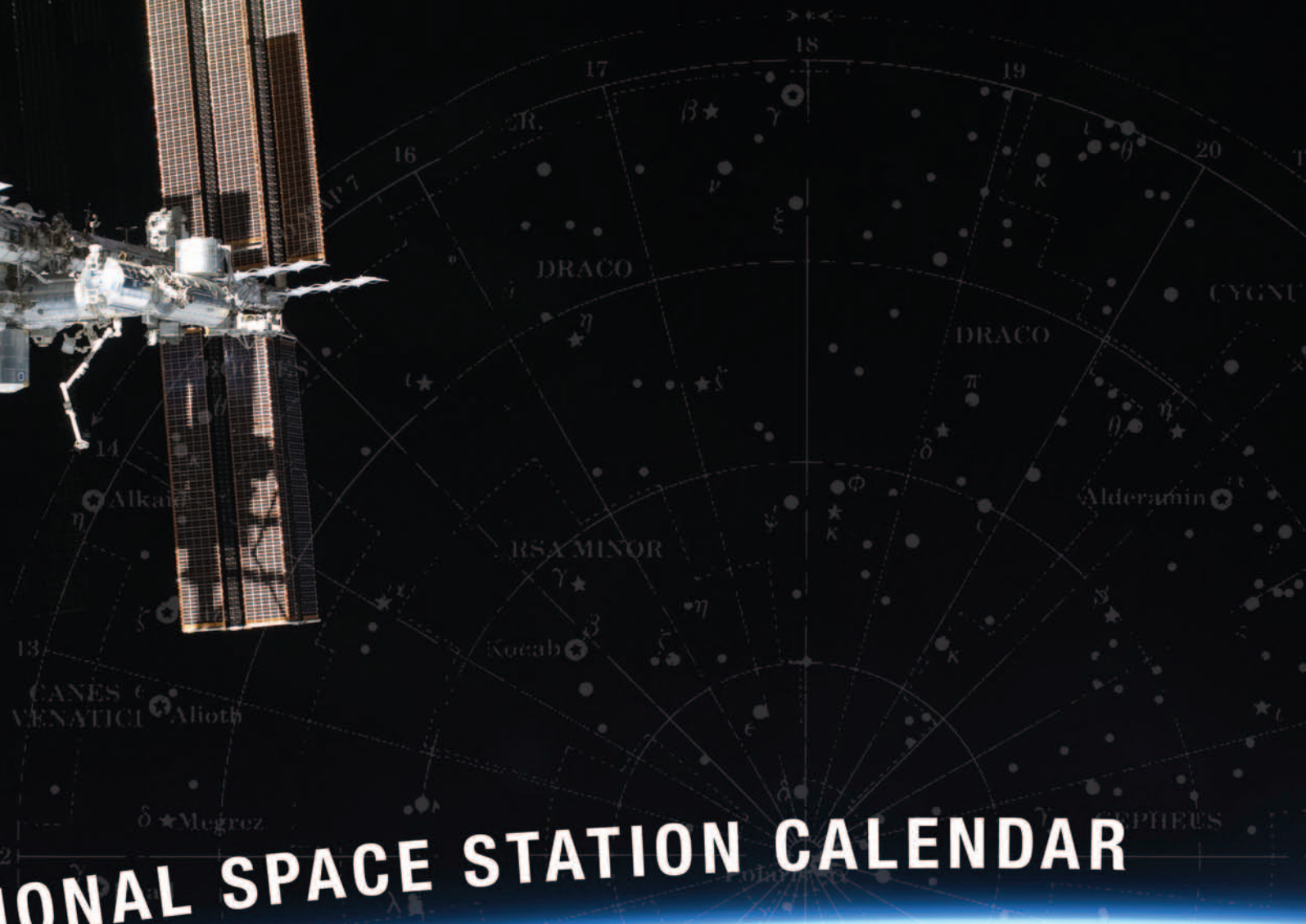
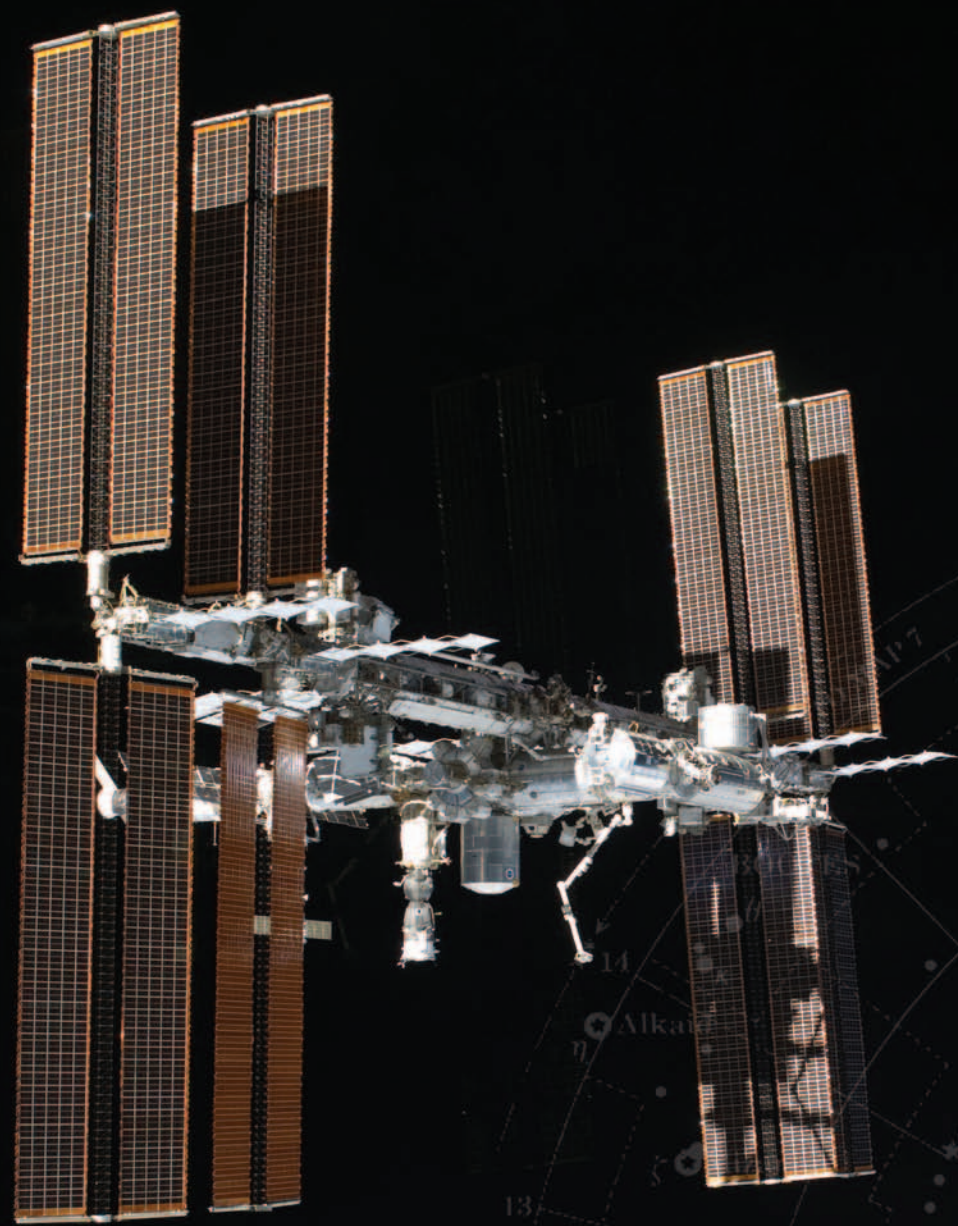
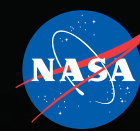
Cat Island, Bahamas



Southern Paramushir Island, Kuril Chain, Russia

For more information on the International Space Station, visit: [www.nasa.gov/station](http://www.nasa.gov/station)

National Aeronautics and Space Administration



# 2012 INTERNATIONAL SPACE STATION CALENDAR





**2012** | The assembly of the International Space Station (ISS) is an extraordinary achievement which began with the launch of the first component on November 20, 1998. The completion of space station assembly has strengthened the international partnership between five space agencies and its fifteen nations as we worked together to achieve one of the greatest technological, geopolitical, and engineering accomplishments in human history.

As we look forward, the space station will serve many roles taking us through 2020 and beyond. Our permanent human presence in space will serve as a foothold for long-term exploration, testing human endurance, equipment reliability, and life support systems essential for space exploration. The global partnership, which constructed the space station, will represent the foundation for the international technological collaboration needed to further humankind's reach into space.

As a national laboratory, the space station will provide opportunities to academia, commercial entities, and other government agencies to pursue research and development in support of a wide range of scientific inquiries including biology, human physiology, physics, materials, and Earth and space sciences. The space station will also be the first destination of commercial endeavors in low Earth orbit with the safe delivery of cargo and crew.

NASA harbors deep respect and appreciation for all of America's educators who demonstrate their commitment daily to motivate the next generation of young students to be future explorers and leaders. I hope you enjoy this calendar and are inspired by its displays of astounding imagery to pursue learning new and exciting aspects about NASA and the International Space Station.

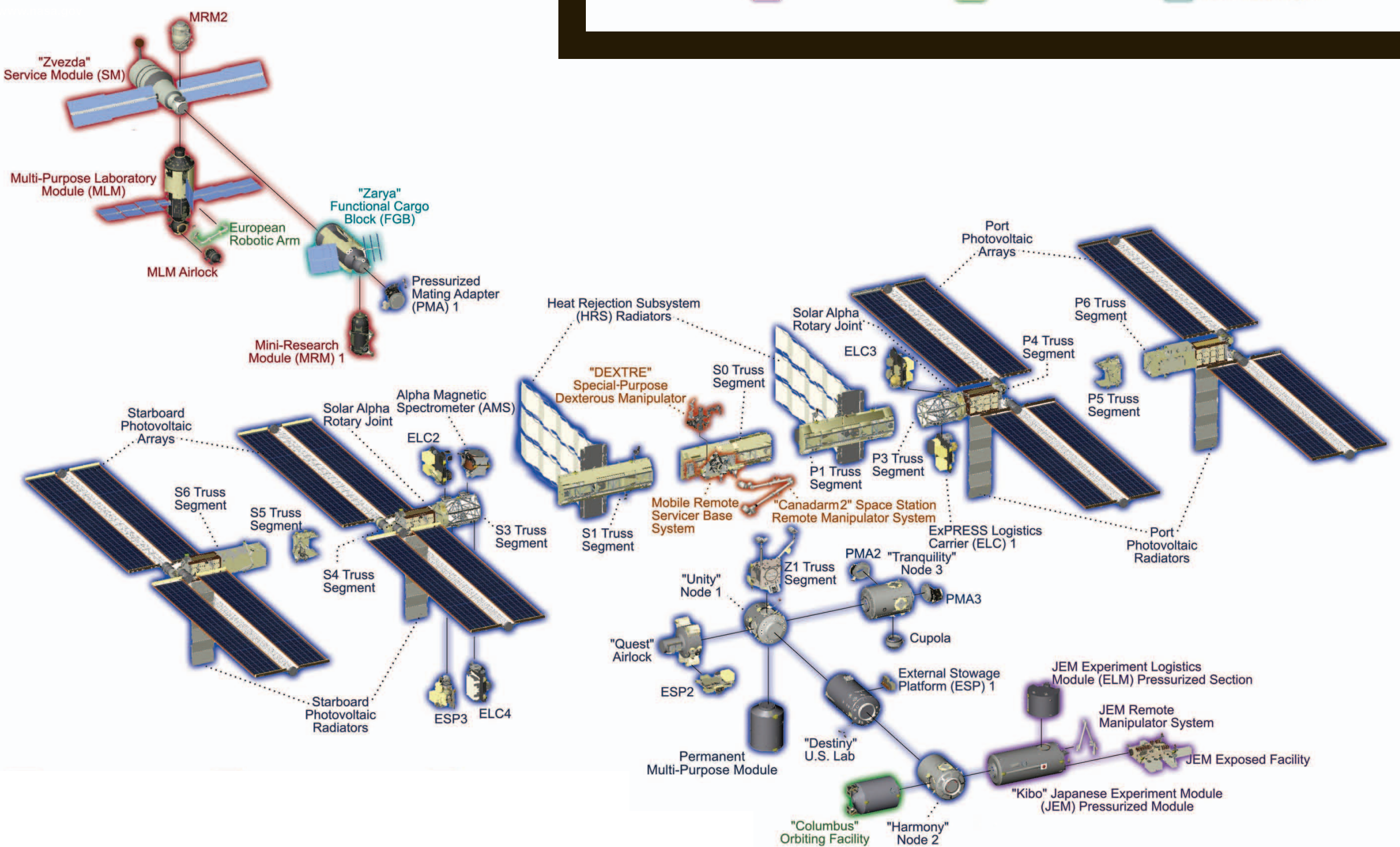


Regards,

MICHAEL J. SUFFREDINI

ISS Program Manager

**A MESSAGE FROM THE PROGRAM MANAGER**

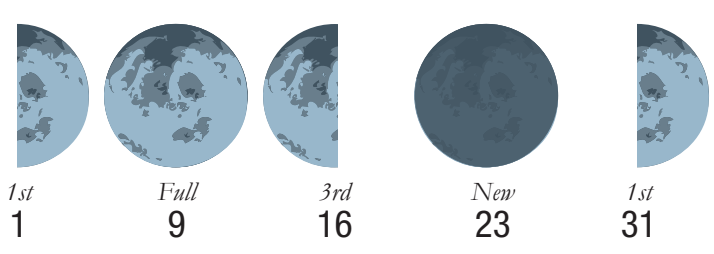






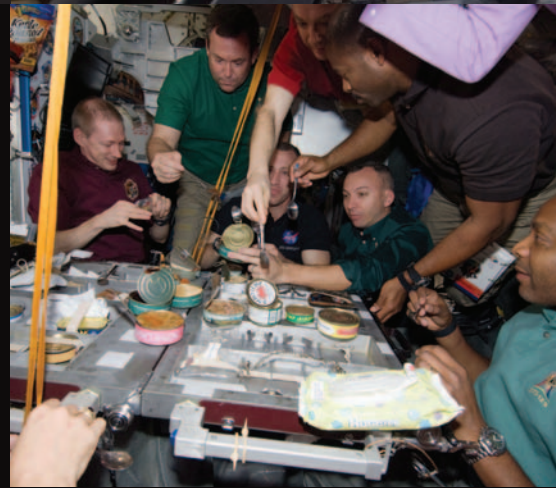
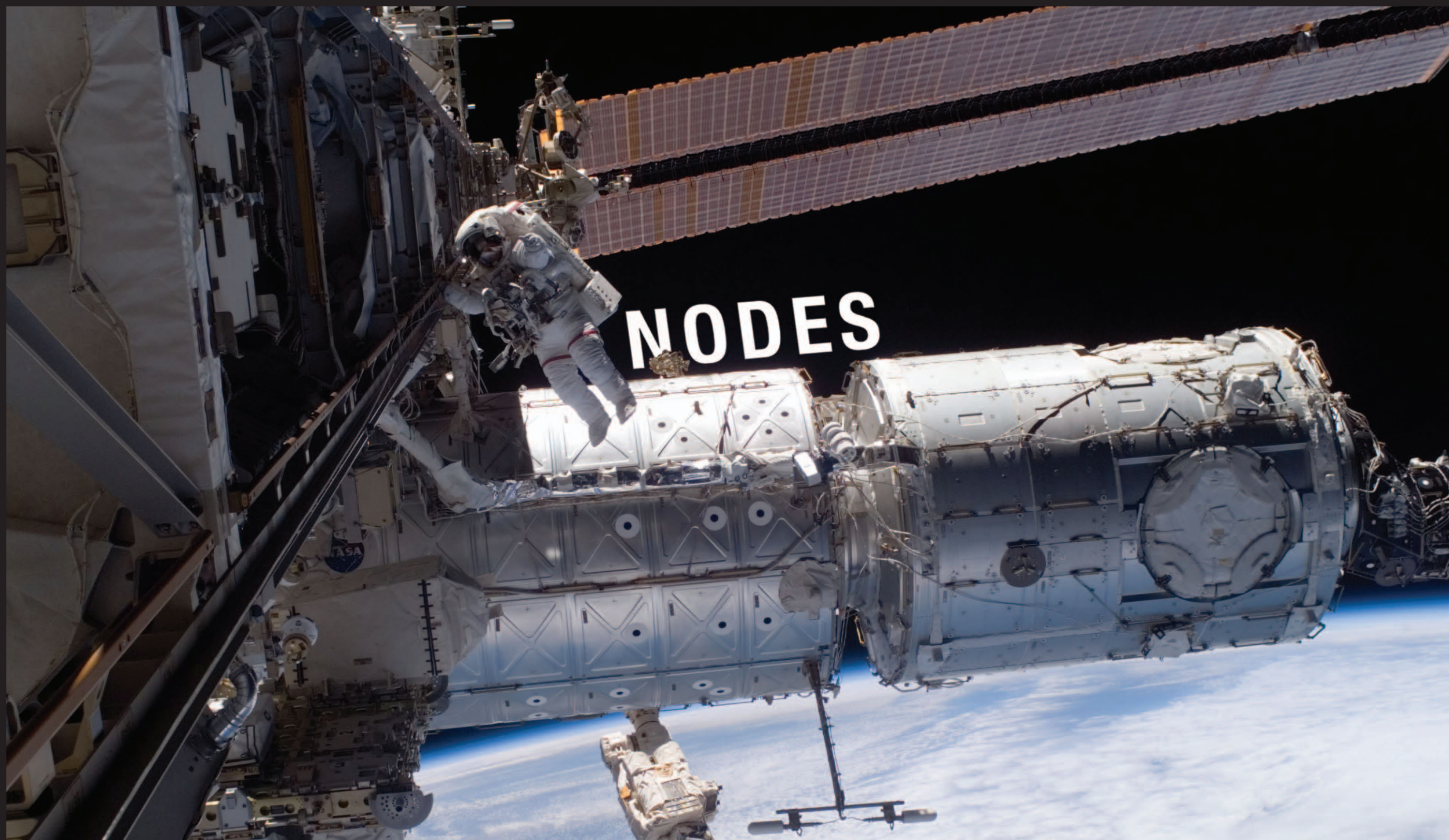
**JANUARY** | Built in Russia under a U.S. contract, the Functional Cargo Block (FCB) was the first launched element of the space station. During the early stages of assembly, the FCB was self-contained, providing power, communications, and altitude control functions. Now, the FCB module is used primarily for storage and propulsion.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
New Year's Day 1	2	3	4	5	6	7
8	1959 – Luna 1, first spacecraft to reach escape velocity and orbit the sun 9	2004 – Spirit lands on Mars 10	11	12	13	14
15	Martin Luther King, Jr. Day 2003 – STS-107, Inaugural Spacehab flight 16	17	18	1997 – STS-81, Shuttle - <i>Mir</i> 19	20	21
22	23	24	25	26	27	28
1998 – STS-89 Shuttle - <i>Mir</i> 29	30	1986 – Voyager 2, first spacecraft to observe Uranus 2004 – Opportunity lands on Mars 31	1984 – President Ronald Reagan announces U.S. plans to build a space station		1967 – Apollo 1 fire	1986 – STS-51L, Space Shuttle <i>Challenger</i> accident
1998 – Intergovernmental Agreement on Space Station Cooperation signed		1958 – Explorer 1, first U.S. satellite				



DECEMBER							FEBRUARY								
S	M	T	W	T	F	S	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					

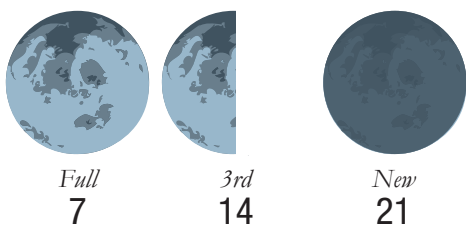




**FEBRUARY** | Nodes are U.S. modules connecting space station elements. The first U.S.-built element to be launched, Node 1 (Unity), connects U.S. and Russian segments. Node 2 (Harmony) and Node 3 (Tranquility) were European-built. Harmony, the space station's utility hub, connects the U.S., European, and Japanese laboratories and contains racks providing electrical power and data. Tranquility houses life support systems, exercise equipment, the crew bathroom and the Cupola, a windowed module for viewing outside operations and the Earth.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			1	2	3	4
			2003 – STS-107, Space Shuttle <i>Columbia</i> accident		1995 – STS-63, Eileen Collins first female space shuttle pilot	
5	6	7	8	9	10	11
		1984 – STS-41B, first untethered spacewalks 2001 – STS-98/5A, U.S.-Destiny Laboratory 2008 – STS-122/1E, ESA-Columbus	2010 – STS-130/20A, U.S.-Tranquility Connecting Module and ESA-Cupola			
12	13	14	15	16	17	18
						1977 – Space Shuttle <i>Enterprise</i> first flight test atop Boeing 747 Shuttle Carrier Aircraft
19	Presidents' Day	20	21	22	23	24
	1962 – <i>Friendship 7</i> , John Glenn first American to orbit Earth					2011 – STS-133/ULFS, ELC4, PMM
26	27	28	29			

1966 – Apollo/Saturn 201, first flight of the Saturn 1B launch vehicle with an Apollo command and service module attached

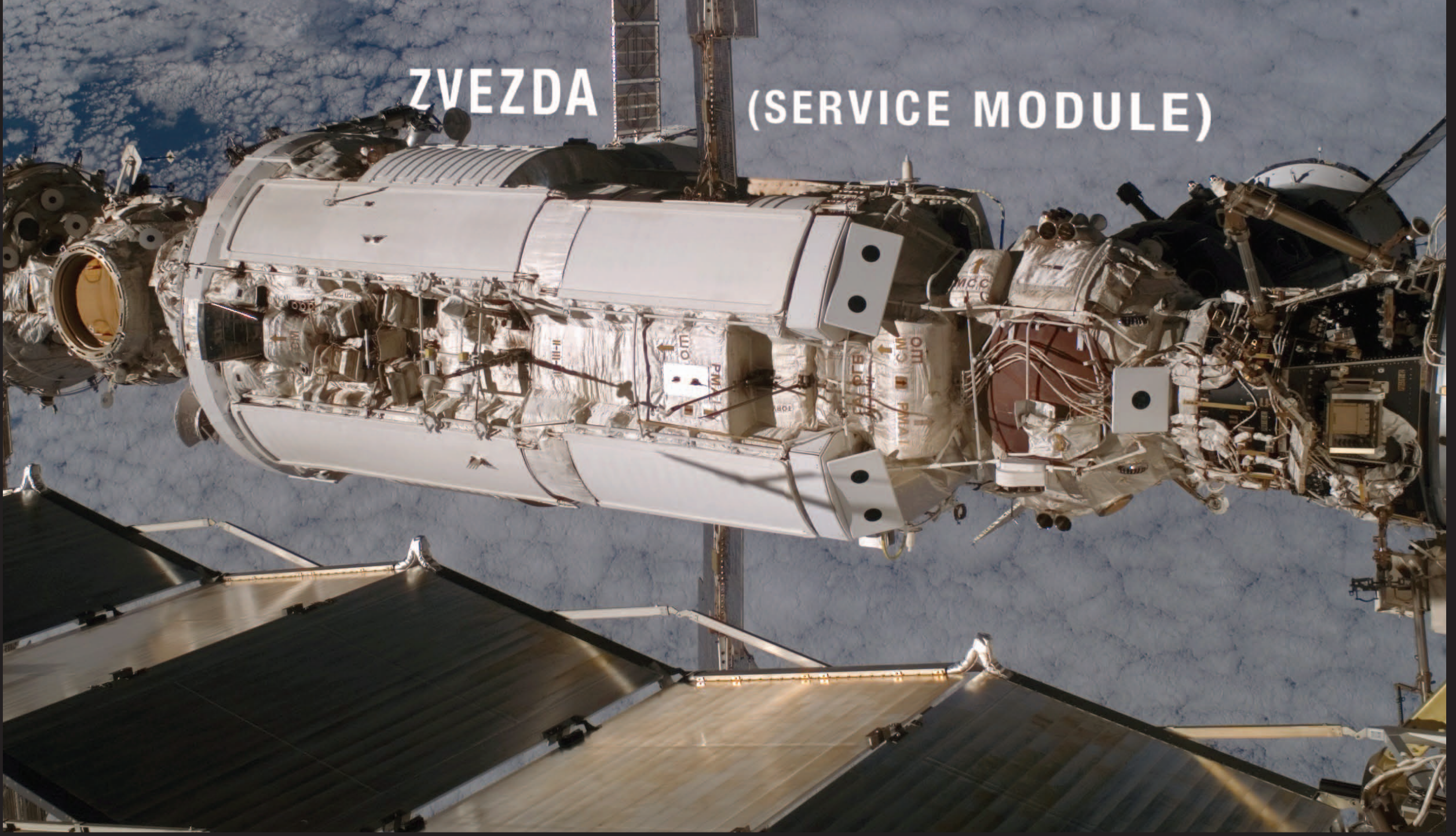


JANUARY							MARCH							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	
1	2	3	4	5	6	7						1	2	3
8	9	10	11	12	13	14	4	5	6	7	8	9	10	
15	16	17	18	19	20	21	11	12	13	14	15	16	17	
22	23	24	25	26	27	28	18	19	20	21	22	23	24	
29	30	31					25	26	27	28	29	30	31	

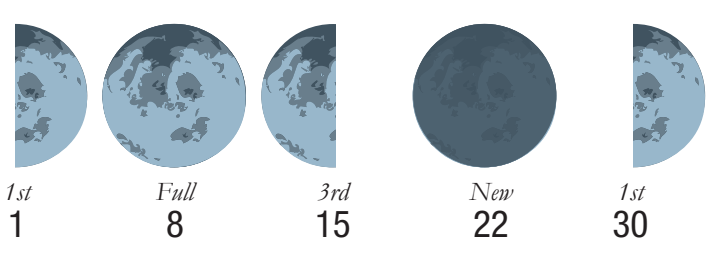




**MARCH** | The Service Module was the first fully Russian contribution, providing early living quarters, flight control, life support and propulsion systems, and electrical power distribution. Although some of these systems were subsequently supplemented by U.S. systems, the Service Module remains the structural and functional center of the Russian segment of the space station. The Service Module was intended primarily to support crew habitation but became the first multipurpose research laboratory.

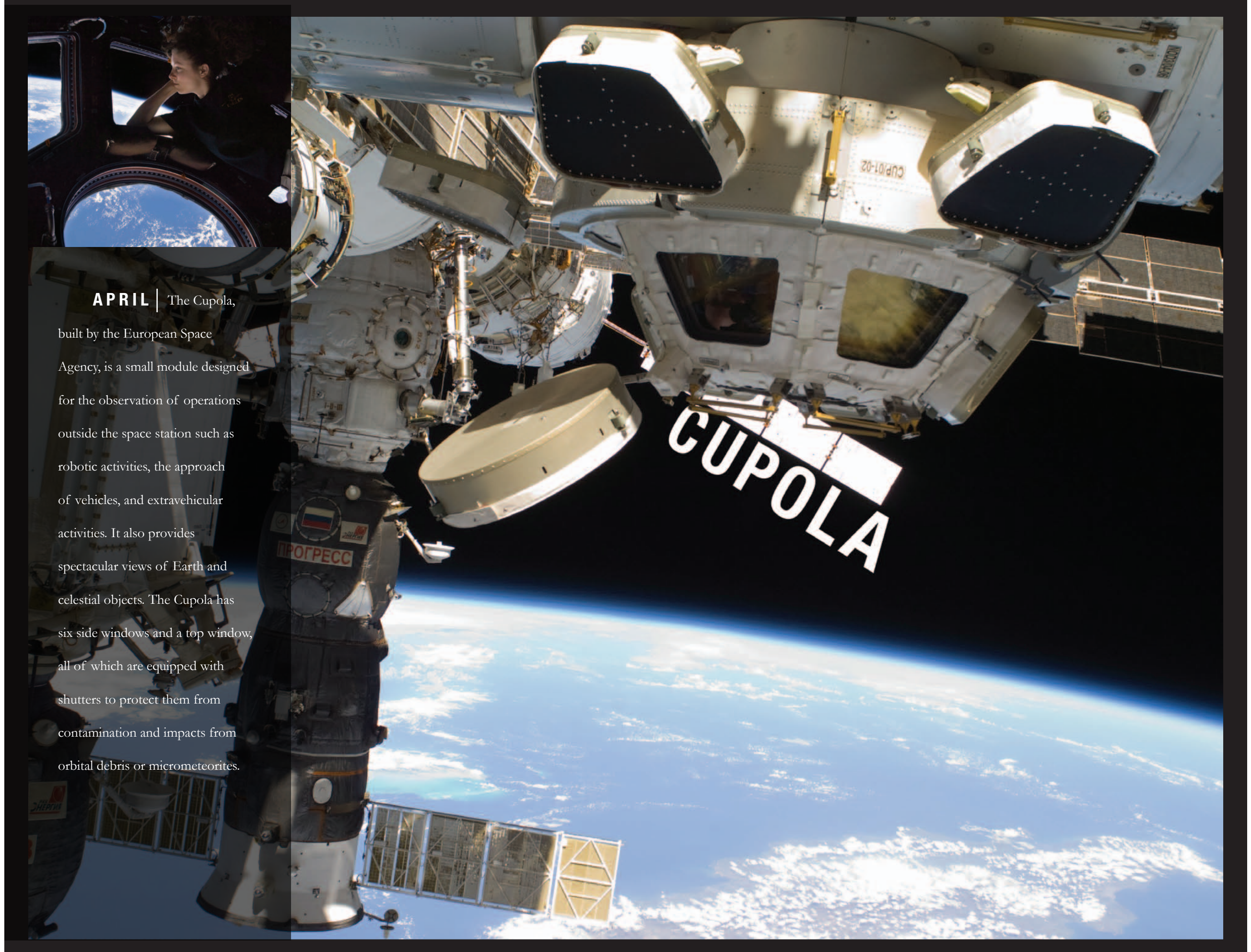


SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
				1	2	3
						1959 – Pioneer 4, first successful lunar mission by U.S. spacecraft 1969 – Apollo 9, first crewed flight of the command and service module along with the lunar module
4	5	6	7	8	9	10
				2001 – STS-102/5A.1, first MPLM flight and ESP-1; ISS Expedition 2, first crew rotation	2008 – First ESA Automated Transfer Vehicle	
11	12	13	14	15	16	17
2008 – STS-123/1JA, JAXA-ELM-PS				2009 – STS-119/15A, S6 truss and solar arrays	1926 – First liquid-fueled rocket 1966 – Gemini VIII, first docking of two spacecraft in orbit 2011 – ISS Expedition 27	
18	19	Spring Begins	20	21	22	24
1965 – Cosmonaut Alexei Leonov, first person to spacewalk 2010 – ISS Expedition 23						1965 – Gemini III, first crewed mission of Project Gemini
25	26	27	28	29	30	31
	2009 – ISS Expedition 19			2006 – ISS Expedition 13		



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



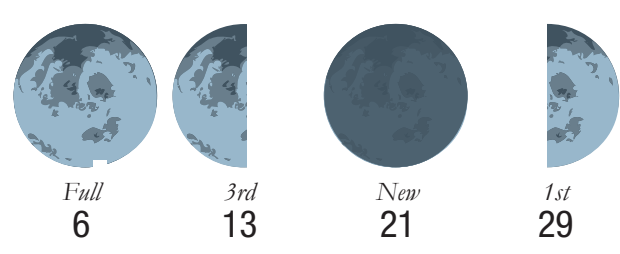


**APRIL** |

The Cupola,

built by the European Space Agency, is a small module designed for the observation of operations outside the space station such as robotic activities, the approach of vehicles, and extravehicular activities. It also provides spectacular views of Earth and celestial objects. The Cupola has six side windows and a top window, all of which are equipped with shutters to protect them from contamination and impacts from orbital debris or micrometeorites.

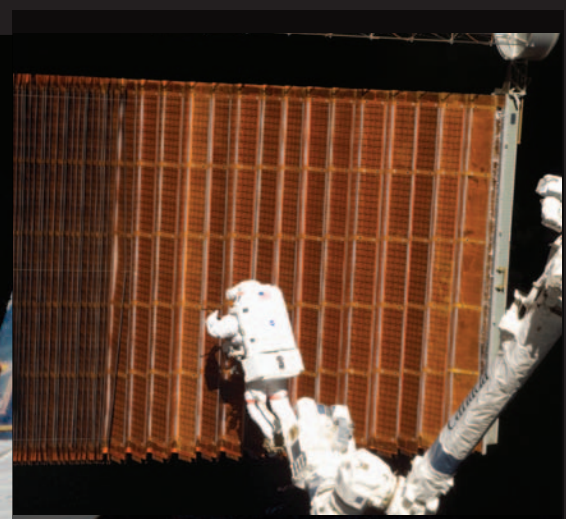
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1	2	3	4	5	6	7
				2010 – STS-131/19A, MPLM	1984 – STS-41C, first orbital satellite repair mission	2007 – ISS Expedition 15
8	9	10	11	12	13	14
1964 – Gemini 1 test flight 2002 – STS-110/8A, S0 truss 2008 – ISS Expedition 17	1959 – NASA announces the seven Mercury astronauts, NASA's first astronaut class			1961 – Cosmonaut Yuri Gagarin, first human in space 1981 – STS-1, first space shuttle (Columbia) mission		2005 – ISS Expedition 11
15	16	17	18	19	20	21
			2004 – ISS Expedition 9	2001 – STS-100/6A, CSA-Canadarm2 and MPLM		
22	23	24	25	26	27	28
		1967 – Soyuz 1 accident 1990 – STS-31, Hubble Space Telescope launched	2003 – ISS Expedition 7			
29	30					



MARCH							MAY						
S	M	T	W	T	F	S	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	31	27	28	29	30	31		



# TRUSS/SOLAR ARRAYS



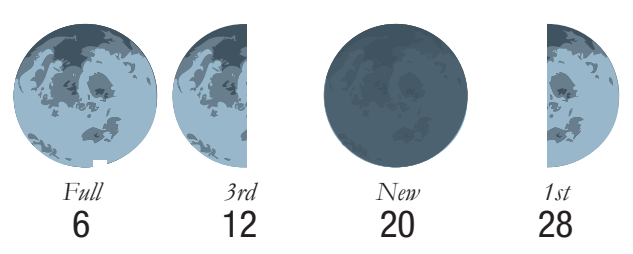
## MAY | The truss

assemblies provide attachment points for the solar arrays, thermal control radiators, and external payloads. Truss assemblies also contain electrical and cooling utility lines, as well as the mobile transporter rails. The length of the Integrated Truss Structure (ITS) is 356 feet, close to the length of a football field from end zone to end zone.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1	2	3	4	5
6	7	8	9	10	11	12 <small>1961 – Freedom 7, Alan Shepard Jr., first American in space</small>
13	14 <small>1973 – Skylab space station launched 2010 – STS-132/ULF4, MRM1</small>	15	16 <small>2011 – STS-134/ULF6</small>	17	18	19 <small>2000 – STS-101/2A.2a, Spacehab</small>
20	21	22	23 <small>2011 – Expedition 28</small>	24	25	26 <small>1973 – Skylab 2, first U.S. space station crew</small>
27	28 <small>Memorial Day</small>	29	30	31		

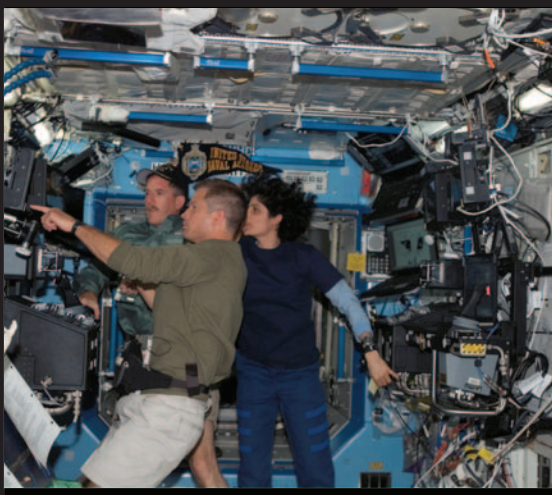
1999 – STS-96/2A-1, first space shuttle to dock with ISS  
2009 – ISS Expedition 20

2008 – STS-124/1JA, JAXA-JEM-PM, JEM-RMS



APRIL							JUNE							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	
1	2	3	4	5	6	7							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						24	25	26	27	28	29	30	

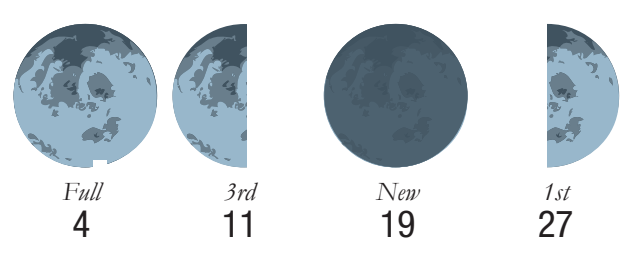




**JUNE** | The U.S. laboratory module, called “Destiny,” is the primary U.S. research laboratory supporting a wide range of experiments and studies contributing to the health, safety, and quality of life for people all over the world. Destiny provides internal interfaces to 24 equipment racks for the control of space station systems and scientific research.

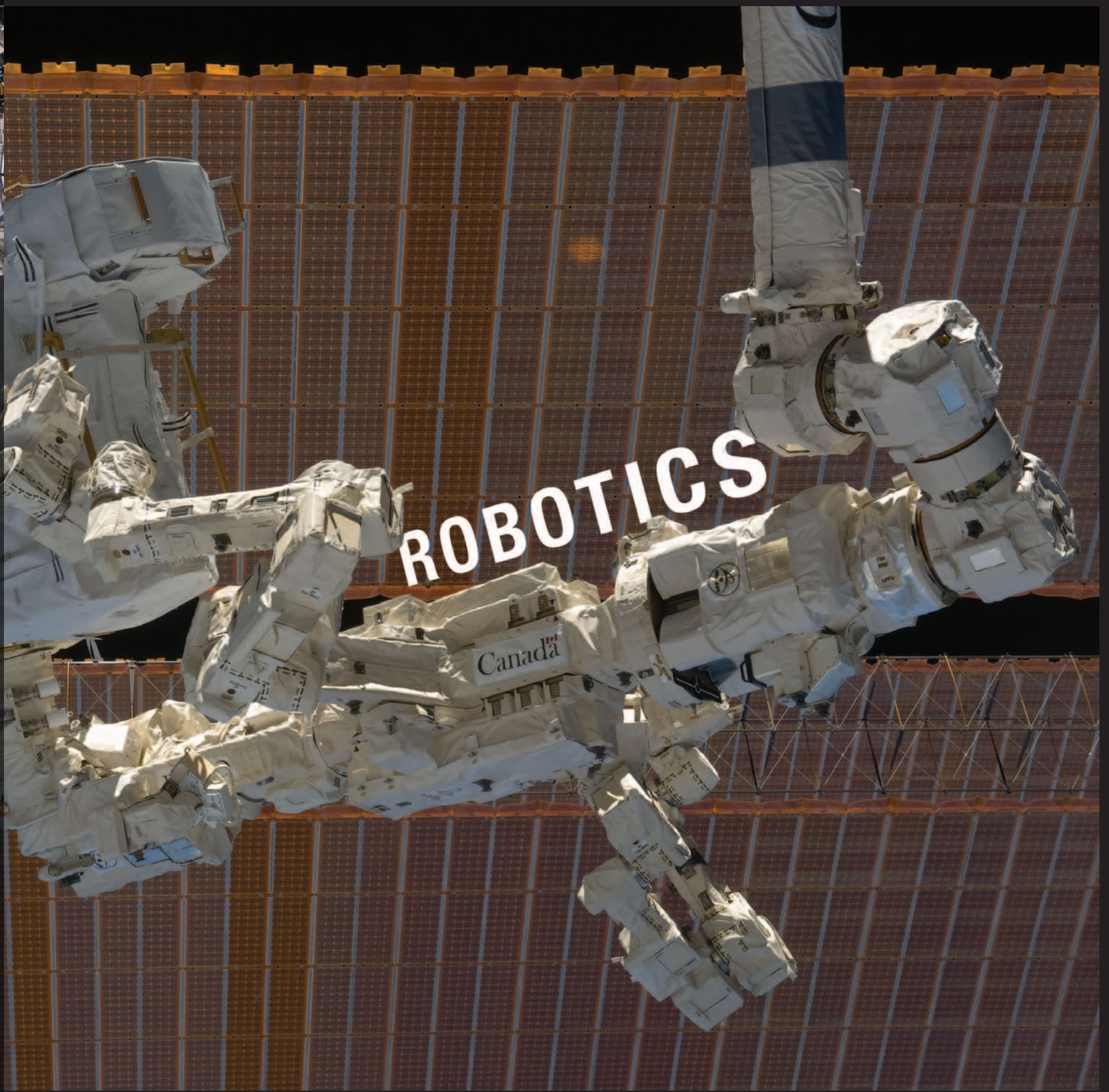


SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					1	2
					2010 – ISS Expedition 24	1966 – Surveyor I, first U.S. spacecraft to soft land on the moon
3	4	5	6	7	8	9
	2010 – SpaceX Falcon 9 Block 1, first successful flight	2002 – STS-111/UF-2, MBS (Mobile Base System) and MPLM: ISS Expedition 5			2007 – STS-117/13A, S3/S4 truss and solar arrays	
10	11	12	13	14	15	16
						1963 – Cosmonaut Valentina Tereshkova, first female in space
17	18	19	Summer Begins 20	21	22	23
	1983 – STS-7, Sally Ride, first U.S. female in space					
24	25	26	27	28	29	30
					1995 – STS-71 Atlantis, first shuttle to dock with Russian Mir space station	1971 – Soyuz 11 accident



MAY							JULY						
S	M	T	W	T	F	S	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	31			29	30	31				

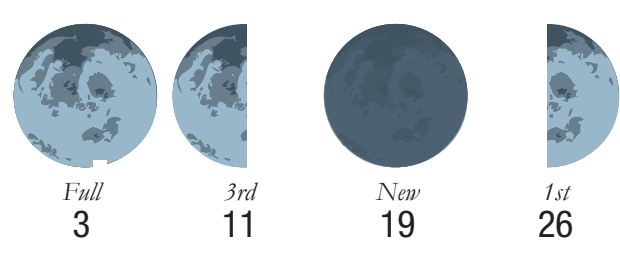




**JULY**

Robotics is integral to the space station. The Mobile Servicing System (MSS) is used for assembly and maintenance, moving equipment and supplies, supporting astronauts, and servicing instruments and exterior payloads. It consists of the Space Station Remote Manipulator System (Canadarm2), the Mobile Base System (MBS) and the Special Purpose Dexterous Manipulator (Dextre). Robonaut 2 (R2), space station's first humanoid resident, will assist crew members and demonstrate dexterous robotic capabilities in space.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1	2	3	Independence Day 4	5	6	7
1962 – Cape Canaveral, Fla., established as NASA Launch Operations Center			1997 – Pathfinder lands on Mars 2006 – STS-121/ULF1-1, MPLM			
8	9	10	11	12	13	14
2011 – STS-135/ULF7, final shuttle mission		1962 – Telstar-1, first commercial communications satellite	1979 – Skylab reenters Earth's atmosphere	2001 – STS-104/7A, U.S.-Quest Airlock 2000 – Proton/1R, Russia-Zvezda Service Module		1965 – Mariner 4 takes first close-up pictures of Mars
15	16	17	18	19	20	21
1975 – Apollo-Soyuz, first joint Russia-U.S./Soyuz spaceflight 2009 – STS-127/2JA, JAXA-JEM-EF and ELM-ES					1969 – Apollo 11, first crewed lunar landing 1976 – Viking 1, first U.S. spacecraft to land on Mars	
22	23	24	25	26	27	28
	1999 – STS-93, Eileen Collins, first female space shuttle commander			1963 – Syncom 2, world's first geosynchronous communications satellite 2005 – STS-114, first shuttle flight following the Space Shuttle Columbia accident		1973 – Skylab 3
29	30	31				
1958 – President Eisenhower signed the National Aeronautics and Space Act						

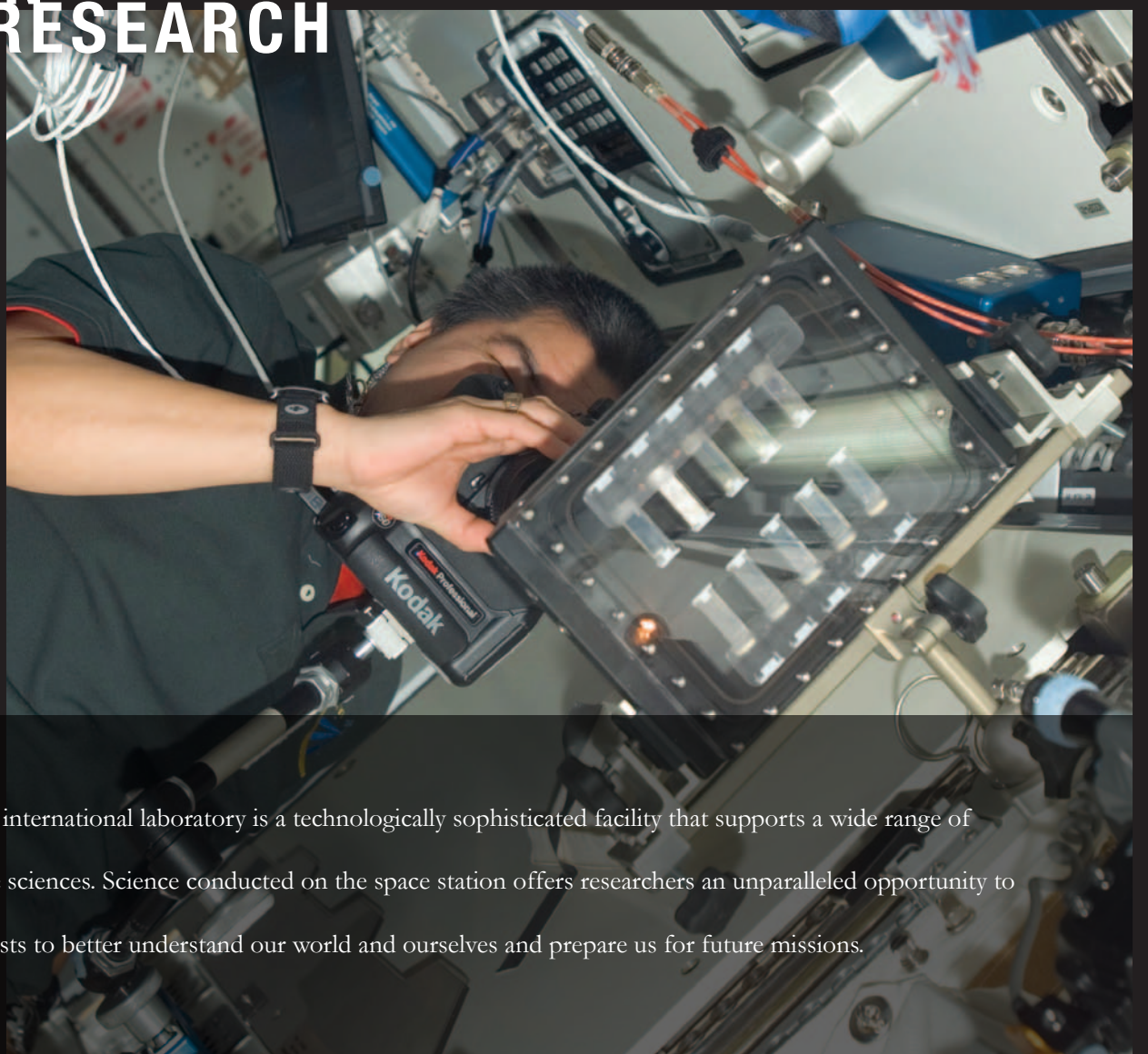


JUNE							AUGUST						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
					1	2				1	2	3	4
3	4	5	6	7	8	9	5	6	7	8	9	10	11
10	11	12	13	14	15	16	12	13	14	15	16	17	18
17	18	19	20	21	22	23	19	20	21	22	23	24	25
24	25	26	27	28	29	30	26	27	28	29	30	31	





# SPACE STATION RESEARCH



**AUGUST** | This orbiting international laboratory is a technologically sophisticated facility that supports a wide range of scientific inquiry in biology, human physiology, physical and material sciences, and Earth and space sciences. Science conducted on the space station offers researchers an unparalleled opportunity to test physical processes in the absence of gravity. The results of these experiments will allow scientists to better understand our world and ourselves and prepare us for future missions.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			1	2	3	4
5	6	7	8	9	10	11
			1978 – Pioneer 13-Venus, first U.S. spacecraft to study Venus in detail 2007 – STS-118/13A.1, S5 truss, Spacehab and ESP-3		2001 – STS-105/7A.1, MPLM; ISS Expedition 3	
12	13	14	15	16	17	18
1977 – Space Shuttle <i>Enterprise</i> , first free-flight test						
19	20	21	22	23	24	25
						1989 – Voyager 2 reaches closest approach to Neptune
26	27	28	29	30	31	
		2009 – STS-128/17A, MPLM				



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

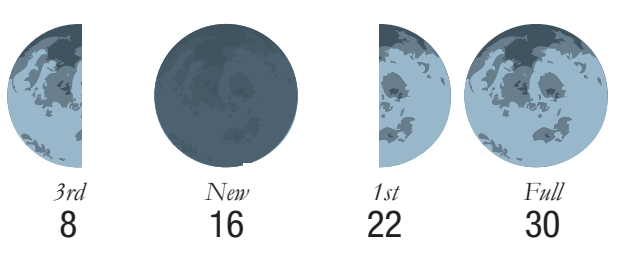




**SEPTEMBER**

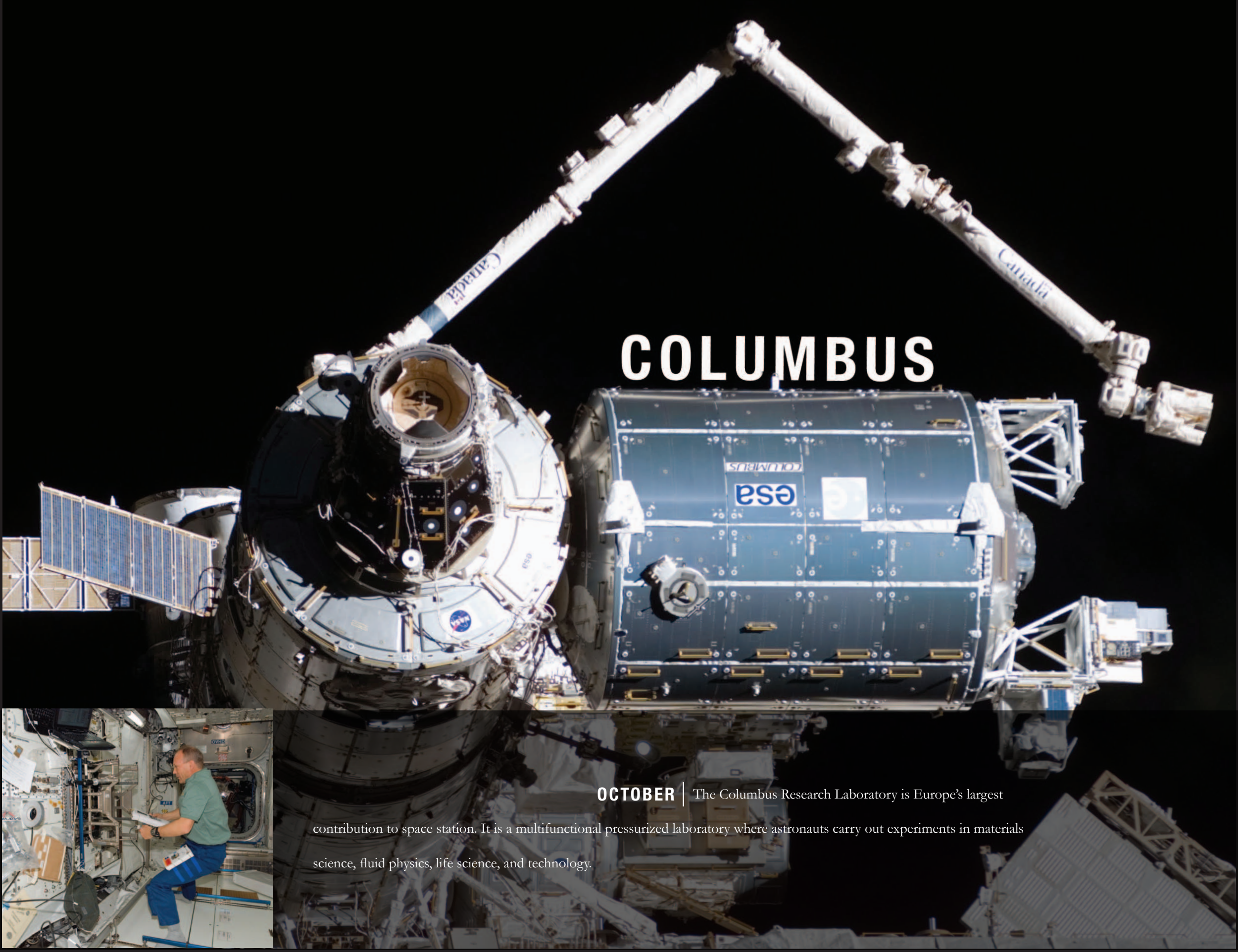
The Quest airlock provides the capability for extravehicular activity (EVA) using the U.S. Extravehicular Mobility Unit (EMU). The airlock consists of two compartments: the Equipment Lock, which provides the systems and volume for suit maintenance and refurbishment, and the Crew Lock, which is depressurized providing an exit for crewmembers to conduct EVAs.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						1
2	Labor Day	3	4	5	6	7
9	10	11	12	13	14	15
1975 – Viking 2 launched, first spacecraft to successfully land on Mars 2006 – STS-115/12A, P3/P4 truss	2009 – First JAXA HII-Transfer Vehicle		1977 – Voyager 1, first spacecraft to return a photo of Earth and moon		2001 – Soyuz/4R, Pirs docking compartment	2000 – STS-106/2A.2b, Spacehab 2011 – Expedition 29
16	17	18	19	20	21	22
		2006 – ISS Expedition 14			2003 – Galileo, first spacecraft to enter Jupiter's atmosphere	Autumn Begins
23	24	25	26	27	28	29
30						1988 – STS-26, first shuttle flight following the Space Shuttle Challenger accident
2005 – ISS Expedition 12						



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



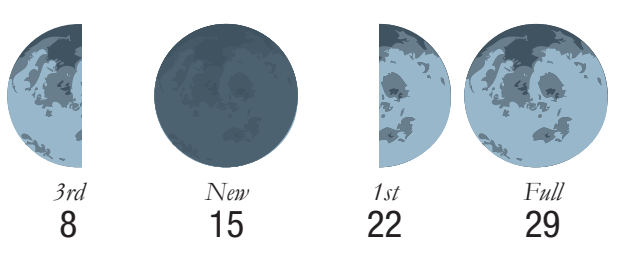


# COLUMBUS



**OCTOBER** | The Columbus Research Laboratory is Europe's largest contribution to space station. It is a multifunctional pressurized laboratory where astronauts carry out experiments in materials science, fluid physics, life science, and technology.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1	2	3	4	5	6
	1958 – NASA officially begins operations			1957 – Sputnik 1 (U.S.S.R.), first satellite		
7	Columbus Day	8	9	10	11	12
2002 – STS-112/9A, S1 truss 2010 – ISS Expedition 25			2007 – ISS Expedition 16, Peggy Whitson, first female ISS commander	1958 – Pioneer 1, first NASA launch 1968 – Apollo 7, first crewed Apollo mission 2000 – STS-92/3A, Z1 truss 2009 – ISS Expedition 21	1964 – Voskhod 1 (U.S.S.R.), first flight with multiple crew members 2008 – ISS Expedition 18	13
14	15	16	17	18	19	20
				2003 – ISS Expedition 8		
21	22	23	24	25	26	27
		2007 – STS-120/10A, ESA-Harmony Connecting Module				
28	29	30	31			
2009 – Ares-1X launch			2000 – Expedition 1 launched			



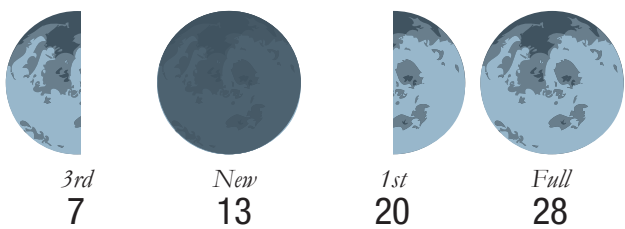
SEPTEMBER							NOVEMBER							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	
						1						1	2	3
2	3	4	5	6	7	8	4	5	6	7	8	9	10	
9	10	11	12	13	14	15	11	12	13	14	15	16	17	
16	17	18	19	20	21	22	18	19	20	21	22	23	24	
23	24	25	26	27	28	29	25	26	27	28	29	30		





**NOVEMBER** | The Japanese Experiment Module (JEM) known as “Kibo,” which means “hope” in Japanese, is Japan’s first human space facility. Kibo has two research facilities, the Pressurized Module (PM) for conducting experiments inside the space station and the Exposed Facility (EF) located outside for exposing experiments to the space environment. Crew members exchange experiment hardware from the Pressurized Module through a scientific airlock and support operations on the outside of Kibo by using two robotic arms that make up the module’s Remote Manipulator System (RMS).

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
				1	2	3
					2000 – Expedition 1 arrives at ISS; continuous human occupation of ISS begins	1973 – Mariner 10, first spacecraft to explore Mercury
4	5	6	7	8	9	10
Veterans Day	11	12	13	14	15	16
1982 – STS-5, first space shuttle operational mission		1971 – Mariner 9-Mars, first spacecraft to orbit another planet	2008 – STS-126/ULF2, MPLM		1973 – Skylab 4 2009 – STS-129/ULF3, ELC1 and ELC2	17
18	19	20	21	Thanksgiving Day	22	23
		1998 – Proton – Russia, Zarya Control Module, ISS first element launch		2011 – Expedition 30		2002 – STS-113/11A, P1 truss; ISS Expedition 6
25	26	27	28	29	30	
2010 – ISS Expedition 26			1983 – STS-9, first international agency participates in U.S. mission		2000 – STS-97/4A, P6 truss, first set of solar arrays 2009 – ISS Expedition 22	

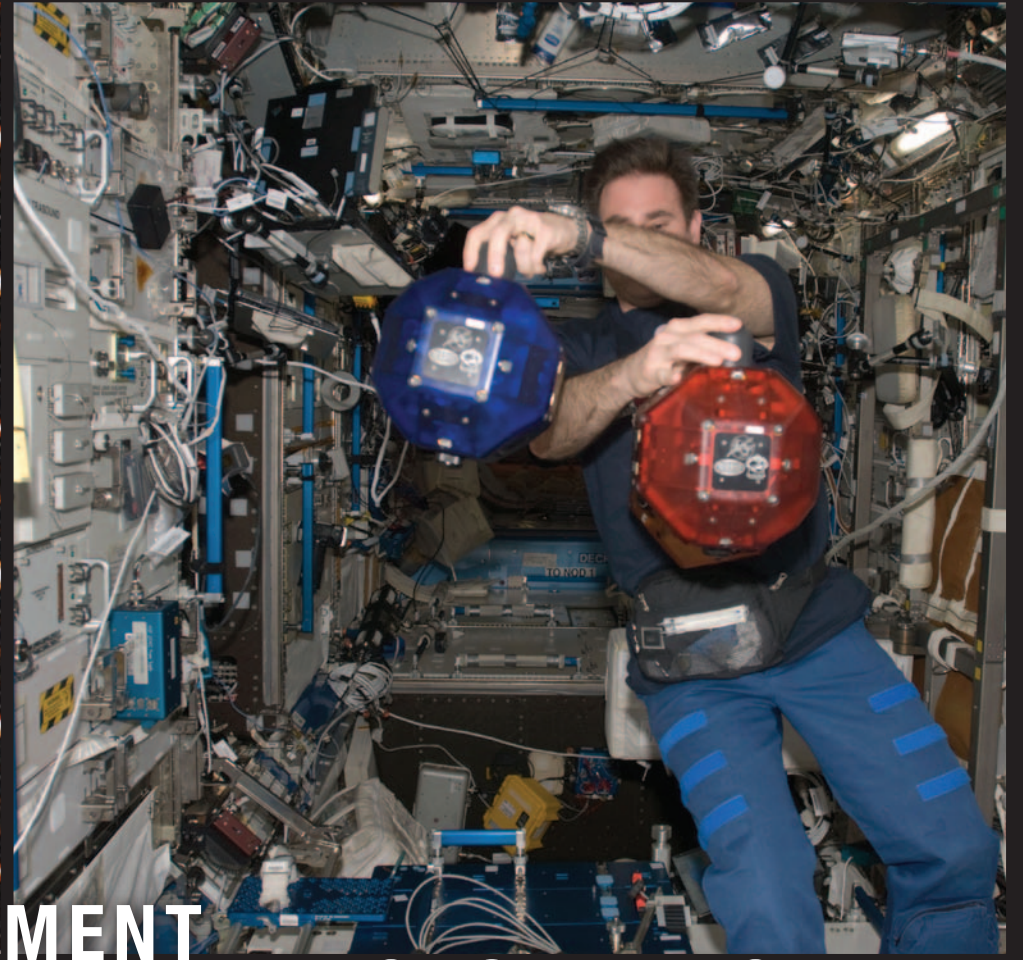


OCTOBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
	1	2	3	4	5	6							1
7	8	9	10	11	12	13	2	3	4	5	6	7	8
14	15	16	17	18	19	20	9	10	11	12	13	14	15
21	22	23	24	25	26	27	16	17	18	19	20	21	22
28	29	30	31				23 <sup>23</sup> / <sub>30</sub>	24 <sup>24</sup> / <sub>31</sub>	25	26	27	28	29

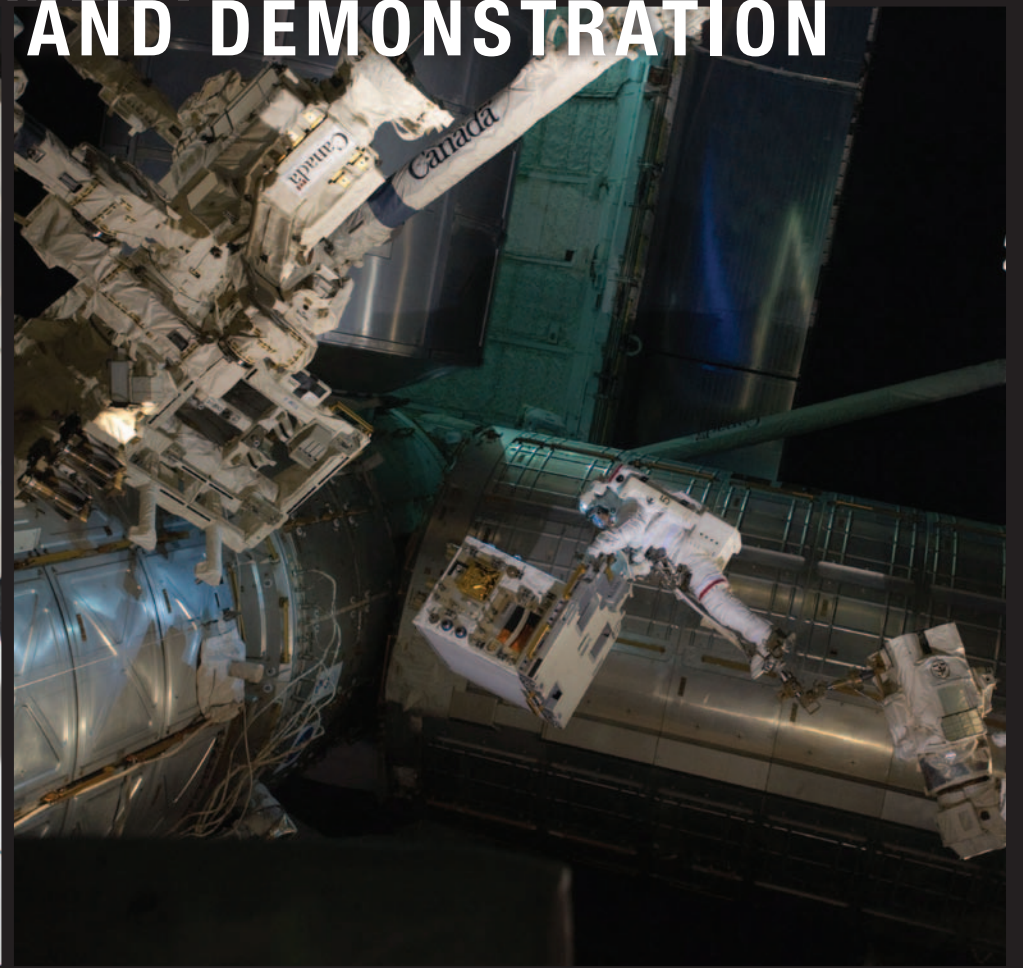


**DECEMBER** | Space

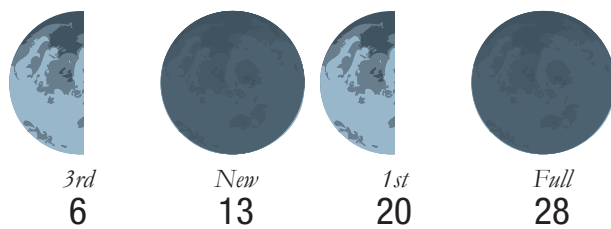
exploration profoundly impacts the way we view ourselves, our world and the way we live. A human presence on the space station provides a learning platform for how the body tolerates the extreme environment of space. In addition, the astronauts conduct research enabling the development of technology that can be adapted for present day benefits here on Earth as well as for future exploration.



**TECHNOLOGY DEVELOPMENT AND DEMONSTRATION**



SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						1
2	3	4	5	6	7	8
	1973 – Pioneer 10, first flyby of outer planet (Jupiter)	1998 – STS-88/2A, Unity Connecting Module, first U.S. component	2001 – STS-108/UF-1, MPLM; ISS Expedition 4		1972 – Apollo 17, final Apollo mission	
9	10	11	12	13	14	15
2006 – STS-116/12A.1, Spacehab and P5 truss					1962 – Mariner 2, first flyby of Venus	1965 – Gemini VI-A and VII, first crewed rendezvous between two spacecrafts 1970 – Venera 7 (U.S.S.R.), first human-made spacecraft to successfully land on another planet (Venus) and to transmit data from there back to Earth
16	17	18	19	20	Winter Begins	21
23	24	Christmas Day	25	26	27	28
30	31	1968 – Apollo 8, first crewed mission to orbit the moon				29



NOVEMBER							JANUARY							
S	M	T	W	T	F	S	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	31			