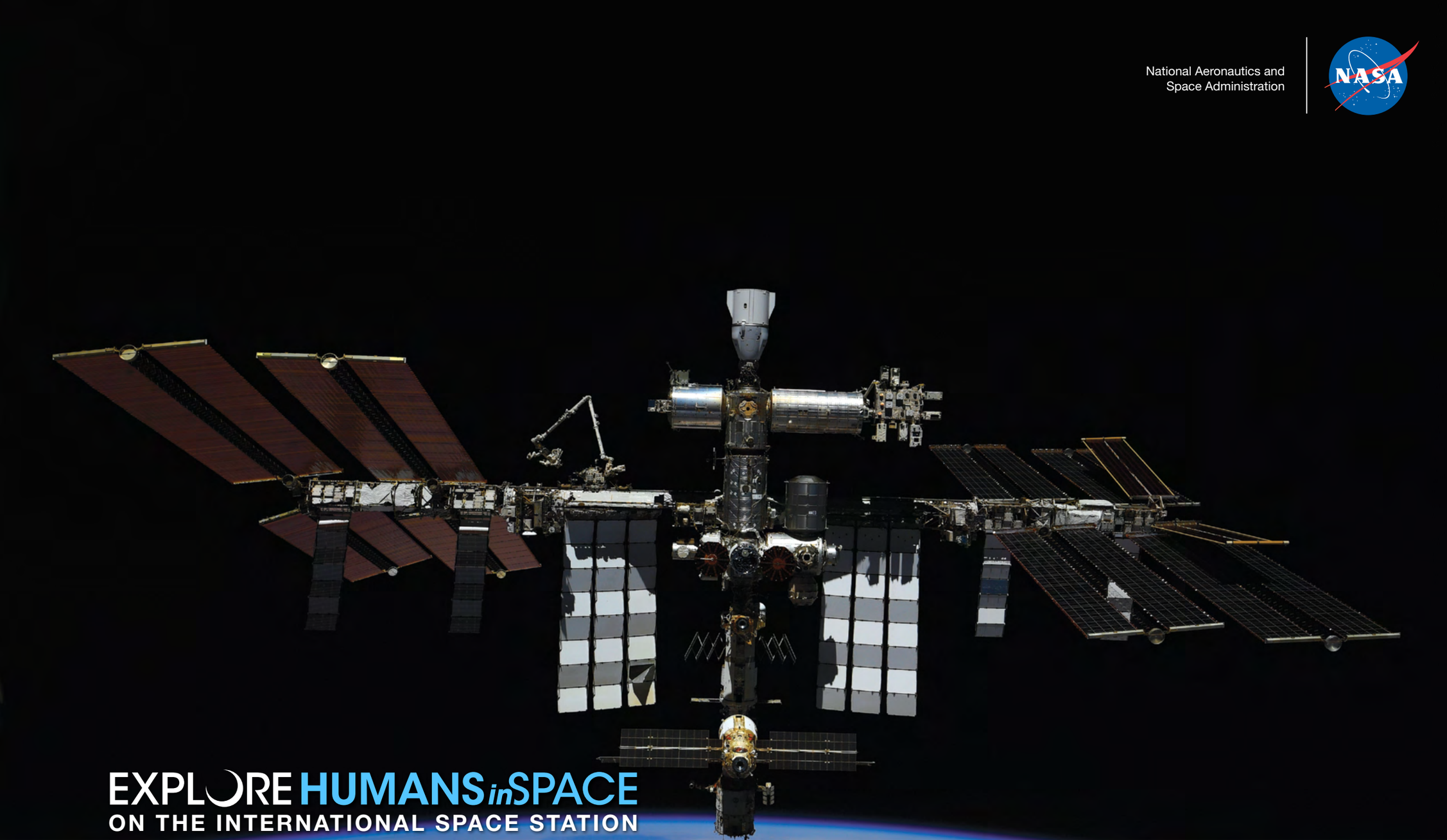
National Aeronautics and
Space Administration



EXPLORE HUMANS *in* SPACE
ON THE INTERNATIONAL SPACE STATION

2022 CALENDAR

A message from the Program Manager for the International Space Station

Cuba, the Bahamas, and southern Florida are visible in this composite photo captured as the International Space Station orbited 263 miles above the Caribbean Sea.

Dana Weigel
International Space Station Deputy Program Manager

Dana Weigel is presently serving as the International Space Station Deputy Program Manager. Weigel shares responsibility with the ISS Program Manager for the day-to-day management, development, integration, and operation of the International Space Station. Additionally, she is the acting Chair of the ISS Mission Management Team, responsible for all aspects of the execution of the flight program for the space station and managing the execution of the real-time and near real-time missions, including final authority for decisions that exceed the authority of the flight control team.

COVER: Full exterior image of the International Space Station taken from the Soyuz MS-18 spacecraft during a port relocation in September 2021. This marked the first time a spacecraft has been attached to the "Nauka" Multipurpose Laboratory Module and the 20th Soyuz port relocation in station history. The relocation freed the Rassvet port for the arrival of another Soyuz spacecraft, designated Soyuz MS-19. (Image Credit: Roscosmos)
BACK COVER: This view of a full Moon was photographed by one of the Expedition 7 crew members aboard the International Space Station. The view also includes Mars, which appears as a small dot.

Greetings,

Even after more than two decades, the International Space Station continues to make extraordinary contributions to science, research, and life here on Earth. The orbiting laboratory is a place where we collaborate with our partners in our unified goal to extend knowledge for the betterment of humanity.

Through challenging times in 2020 and 2021, we gained a new perspective on what it means to be a team. Whether near or far apart, we had a momentous year with countless achievements. Working remotely for over a year, we continued seamless operations.

I look forward to operating above and beyond all expectations in 2022. Continuing to work toward the complement of our commercial partner space fleet, we will have a regular cadence of missions transporting crew and science to and from the orbiting laboratory. Additionally, enhancements to the station, including the International Space Station Roll-Out Solar Arrays (iROSA) installation, will continue throughout 2022. While we operate continual traffic flow and enhancements to the orbiting laboratory, we will also welcome the first of many private astronaut missions to the International Space Station this year.

The ongoing success of the station drives home the importance of collaboration when challenges are presented. Teamwork has enabled the station to continue vital missions that foster research, strengthen economies, and enhance the quality of life here on Earth. Most of us do not realize how much of life is impacted by the orbiting laboratory. From developing improved vaccines to providing access to clean water, the space station impacts the way each and every one of us lives daily.

2021 was a year of overcoming challenges leading to many significant successes. 2022 is going to be a historic year, and you won't want to miss out. Learn more about station activities by following us on NASA.gov and our social media accounts listed on the back of this calendar.

I wish you all a prosperous year; I am excited to bring you along on this journey.

Best wishes,

JOEL R. MONTALBANO
International Space Station Program Manager

INTERNATIONAL PARTNER PROGRAM MANAGERS

Frank De Winne
European Space Agency (ESA)
ISS Program Manager
Frank De Winne became head of ESA's European Astronaut Center in Cologne, Germany, in August 2012. Since 2017, he has been in charge of ISS operations at ESA, and in 2020 he became ESA's ISS Program Manager.

Luc Dubé
Space Exploration Operations & Infrastructure
Luc Dubé is Director of Space Exploration Operations & Infrastructure at the Canadian Space Agency (CSA). In this role he serves as Program Manager for Canada's Space Station Program, and he leads the teams and activities relating to CSA's Space Exploration systems (including the Mobile Service System – Canadarm2, Dextre and the Mobile Base) and payloads.

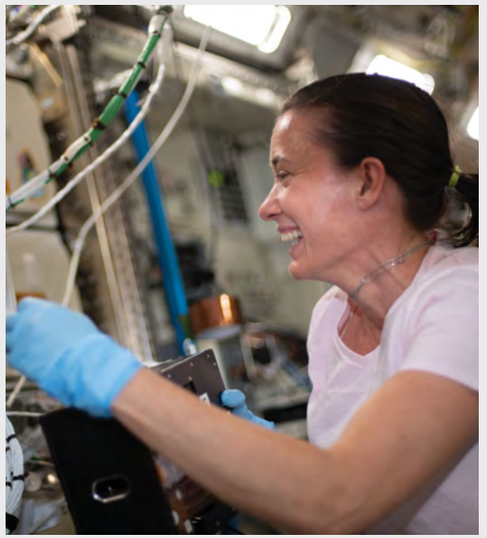
Sergei Krikalev
State Space Corporation "Roscosmos" (ROSCOSMOS) Executive Director for Human Space Flights
Sergei Krikalev is responsible for the implementation of the Russian Human Spaceflight program, particularly for the operation of the ISS Russian segment, the development and creation of new ISS Russian segment modules, and prospective manned transport systems. He coordinates interaction with international partners in the frame of the ISS program and oversees international cooperation in the field of human space exploration.

SAKAI Junichi
Japan Aerospace Exploration Agency (JAXA)
ISS Program Manager
The JAXA ISS Program Manager oversees all elements of the KIBO's operation, utilization, Japanese astronauts' activities, and cargo resupply by Japanese vehicles, as well as the study of low-Earth orbit activities looking ahead to post-ISS and the future. In addition, he is responsible for international coordination of ISS activities, he contributes to the creation and development of ISS achievements, and promotes public understanding of the ISS programs.

COOPERATION IS THE HALLMARK OF THE INTERNATIONAL SPACE STATION

The seven-member Expedition 64 crew poses for a portrait inside the International Space Station's Kibo laboratory module from JAXA. Glover and Hopkins are wearing white uniforms that commemorate the NASA human spaceflight programs.

NASA astronaut Mike Hopkins is helped out of the SpaceX Crew Dragon Resilience spacecraft onboard the SpaceX GO Navigator recovery ship after he, NASA astronauts Shannon Walker and Victor Glover, and JAXA astronaut Soichi Noguchi, landed in the Gulf of Mexico off the coast of Panama City, Florida.



NASA astronaut and Expedition 65 Flight Engineer Megan McArthur removes Kidney Cells-02 hardware inside the Space Automated Bioproduct Laboratory and swaps media inside the Microgravity Science Glovebox. The human research study seeks to improve treatments for kidney stones and osteoporosis.

No one can deny the challenges faced around the world as the coronavirus pandemic altered life as we know it. This year's calendar is dedicated to the devoted International Space Station teams across the globe for their adaptability and resilience. In this turbulent time, spaceflight had multiple shining moments, and we are thankful to the team that kept operations together while apart. Throughout this year's calendar, you will find highlights of these moments which reflect the collaborative nature of the orbiting laboratory and all that it enables when we work together. Human spaceflight cooperation continues to be a hallmark of the International Space Station.

Traffic on Earth may have lightened, but traffic at the International Space Station continued to flow. Northrop Grumman's Cygnus, SpaceX's Dragon, Russia's Soyuz and Progress, and JAXA's HTV vehicles all paid visits to the station, and with that came several port relocations to free up parking. Tons of research, supplies, even solar arrays, and a new Russian science module were delivered by these visiting vehicles. The Soyuz and Crew Dragon vehicles safely transported crew members to the orbiting laboratory bringing the total number of station inhabitants to 11 at one point in April 2021. And while many traded out suits for sweatpants, our astronauts continued to suit up, completing more than a dozen spacewalks that covered battery upgrades, preparation and installation of new solar arrays, cooling system and communications maintenance, and more.

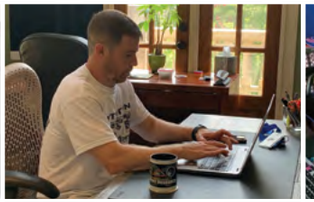
Our Commercial Crew Program partners helped the station launch forward into the next generation of human spaceflight and long-duration missions on station. For the first time in nine years, astronauts launched from American soil aboard NASA's SpaceX Demo-2, followed only a few months later by the launch of Crew-1. The teams around the world worked together to support four launches and landings in just four weeks. After more than 160 days on orbit working research, technology development for NASA's Artemis Program, and low-Earth orbit commercialization activities, Crew-1 safely splashed down, completing the first commercial crew long-duration mission aboard the station. That splashdown came just over one week after the launch of NASA's SpaceX Crew-2 mission, the second commercial crew long-duration mission. Additionally during this time, working with Roscosmos, space station teams supported the launch of the Soyuz MS-18 carrying Expedition 65 NASA astronaut Mark Vande Hei to the station and the return of NASA astronaut Kate Rubins to Earth via the Soyuz MS-17 spacecraft.

Science aboard the orbiting laboratory continued throughout our time working apart, with hundreds of ongoing experiments and new payload deliveries. One of those payload deliveries included the Elucidating the Ammonia Electrochemical Oxidation Mechanism via Electrochemical Techniques at the ISS investigation. Their team persevered through a hurricane, an earthquake, and a pandemic to get their science to space.

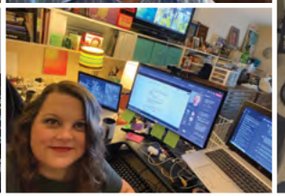
None of these spaceflights, science, or spacewalks would have been possible without the passion and dedication to the mission. We've continued to command the construction, upgrades, research, and day-to-day tasks aboard the station from 250 miles away. On the following introduction page, you will see members of the International Space Station team that work hard on the ground to keep our astronaut's home on station seamless – even from their homes. With the station teams across the globe, these great accomplishments will continue through our collaboration to ensure we keep exploring for all.

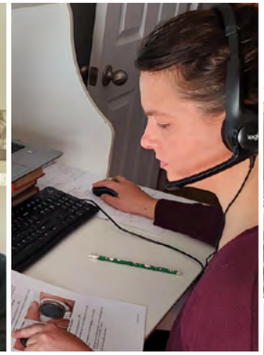
MAKING IT WORK

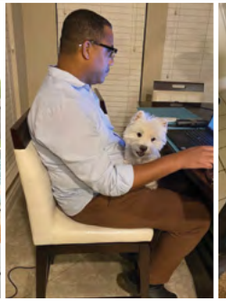
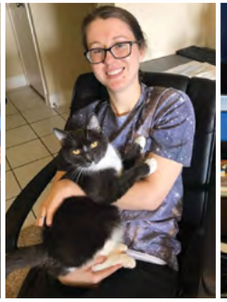






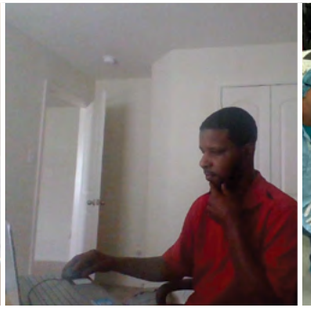





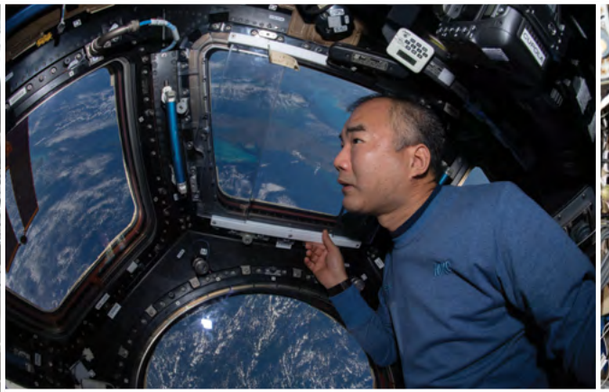








LIFE ON THE STATION





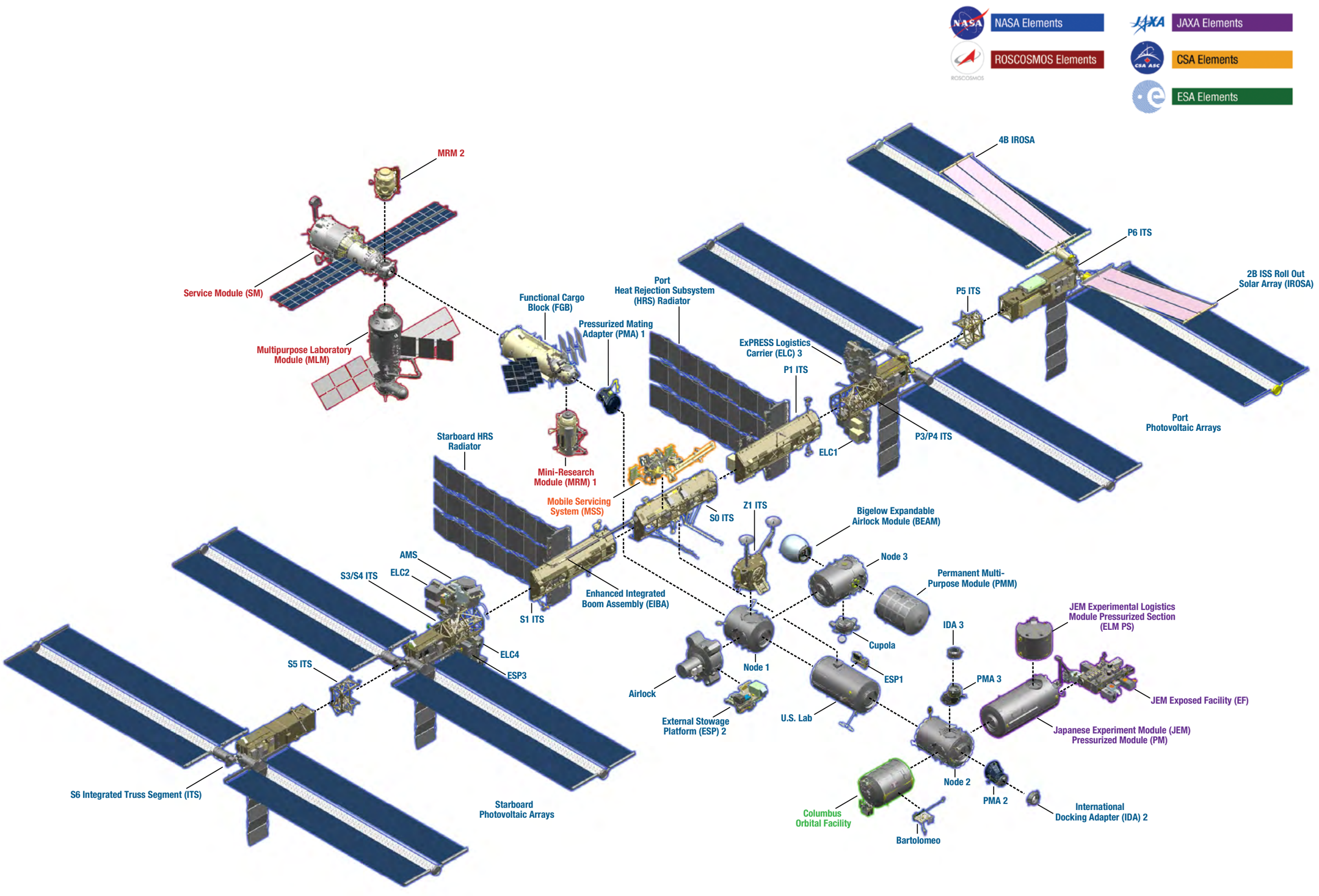








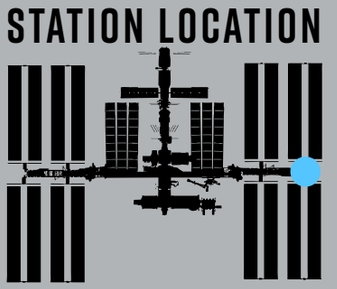



NASA Elements
JAXA Elements
ROSCOSMOS Elements
CSA Elements
ESA Elements
MRM 2
Service Module (SM)
Multipurpose Laboratory Module (MLM)
Functional Cargo Block (FGB)
Pressurized Mating Adapter (PMA) 1
Port Heat Rejection Subsystem (HRS) Radiator
Mini-Research Module (MRM) 1
Starboard HRS Radiator
Mobile Servicing System (MSS)
4B IROSA
P6 ITS
2B ISS Roll Out Solar Array (IROSA)
P5 ITS
ExPRESS Logistics Carrier (ELC) 3
P1 ITS
P3/P4 ITS
ELC1
Port Photovoltaic Arrays
S0 ITS
Z1 ITS
Bigelow Expandable Airlock Module (BEAM)
Node 3
Permanent Multi-Purpose Module (PMM)
Cupola
AMS
ELC2
S3/S4 ITS
Enhanced Integrated Boom Assembly (EIBA)
S1 ITS
ELC4
ESP3
S5 ITS
S6 Integrated Truss Segment (ITS)
Starboard Photovoltaic Arrays
Node 1
Airlock
External Stowage Platform (ESP) 2
U.S. Lab
ESP1
IDA 3
PMA 3
JEM Experimental Logistics Module Pressurized Section (ELM PS)
JEM Exposed Facility (EF)
Japanese Experiment Module (JEM) Pressurized Module (PM)
Node 2
PMA 2
International Docking Adapter (IDA) 2
Columbus Orbital Facility
Bartolomeo

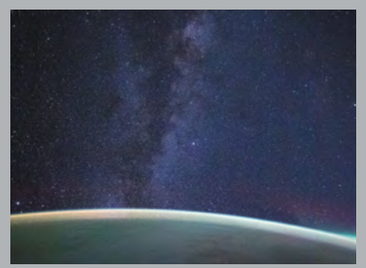

PGT

JANUARY 2022

View From Above | NASA spacewalker Shane Kimbrough works to complete the installation of the second iROSA solar array on the International Space Station's Port-6 truss structure. 🔎 Look closely in Shane's helmet visor for a glimpse of Earth's reflection, starring you. Did You Know? You can see the International Space Station! As the third brightest object in the sky, the space station is easy to spot if you know when to look up. Discover sighting opportunities in your area at spotthestation.nasa.gov.

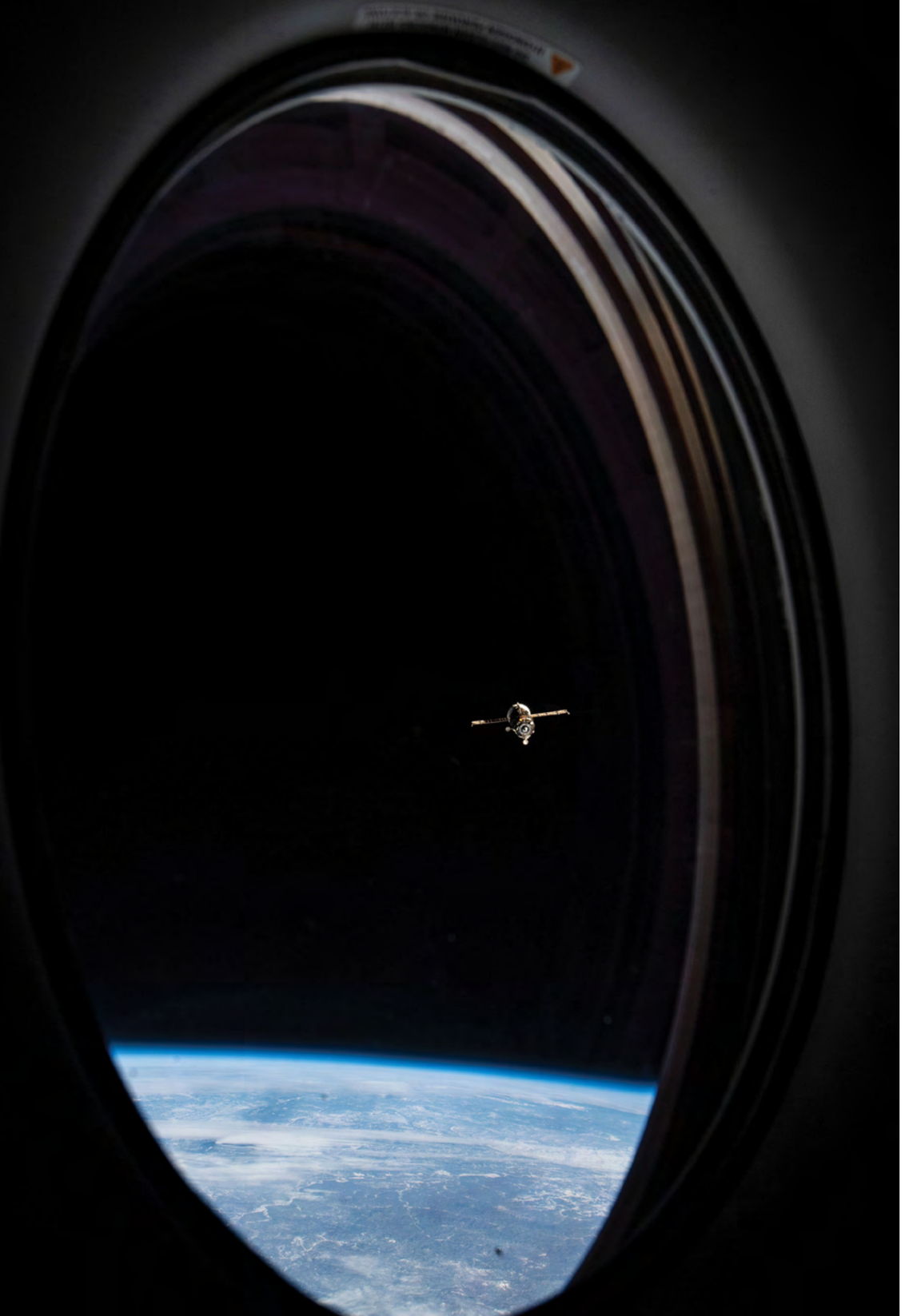


Courtenay McMillan
Mission Integration and Operations Office
The Mission Integration and Operations Office is responsible for keeping the station crew safely clothed, fed, and productive while in orbit. The team accomplishes this through management of the flight schedule, cargo manifest, as well as overall requirements and priorities.



The Milky Way extends above the airglow blanketing the Earth's horizon with an aurora near the bottom right of the frame. This long exposure photograph was taken during an orbital night period 271 miles above the Indian Ocean.

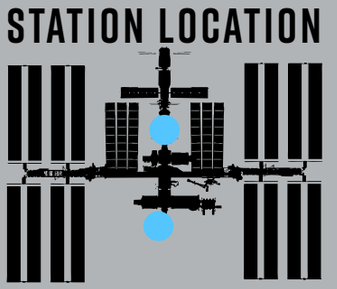
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
** Moon phases U.S. Central Time Zone*						1 **New Year's Day (NASA, CSA, ESA: Col-CC, JAXA)**
2	3	4	5	6	7	8
9	10 **Coming-of-Age Day (JAXA)**	11	12	13	14 **2005**: The Cassini spacecraft descends through Titan's (Saturn's moon) atmosphere and becomes the first probe to land on a planetary moon other than Earth's	15
16	17 **Martin Luther King, Jr. Day (NASA)**	18	19	20	21	22
23/30	24/31	25 **1984**: President Ronald Reagan directs NASA to build an international space station "within a decade" in his State of the Union address	26	27 **1967**: Apollo 1 fire	28 **1986**: Space shuttle Challenger accident	29




ПРОГРЕСС
Ю.А. ГАГАРИН

FEBRUARY 2022

Space Station Parking | LEFT: The departing Progress 76 cargo craft seen from a window on the SpaceX Crew Dragon "Resilience" docked to the station. RIGHT: Two spaceships are pictured docked to the station as it flies into an orbital sunset 260 miles above Nigeria. From left, are the Soyuz MS-18 crew ship and the Progress 77 cargo craft. 🔎 Look closely, there is a portion of the Northrop Grumman space freighter with one of its cymbal-shaped solar arrays on the left.



William Spetch
Vehicle Office
The Vehicle Office is responsible for keeping station systems and payload facilities sustained and safely operating for advancing these capabilities in order to support a continuous human presence, enhance research, test Mars-forward technologies, and foster the success of commercial partners.

The plasma trail of Russia's ISS Progress 77 resupply ship with the Pirs docking compartment attached is pictured as the spacecraft descend into Earth's atmosphere 270 miles above the southern Pacific Ocean.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
**** Moon phases U.S. Central Time Zone***		1 **2003**: Space shuttle Columbia accident	2	3	4	5
6	7 **2008**: Columbus module launches to the space station on STS-122; **2001**: The U.S. Destiny Laboratory launches to the space station on STS-98	8 **2010**: Tranquility and Cupola launched to the space station on STS-130	9	10	11 **National Foundation Day (JAXA)**	12 **2001**: First major laboratory module, the U.S. Destiny Laboratory, added to the space station
13	14	15	16	17	18 **2021**: NASA's Perseverance rover lands on Mars	19 **1986**: The Russian Space Station Mir launches by Proton Booster from Baikonur
20 **2002**: First U.S. spacewalk from the space station	21 **Presidents' Day (NASA)**	22	23 **Emperor's Birthday (JAXA)**	24	25	26 **2004**: Expedition 8 crew Michael Foale and Alexander Kaleri space-walk without a human crewmember inside
27	28					


Window 1
Window 2
Window 3
EMS
MDR
MON 1
MON 2
MON 3

MARCH2022

Out-Of-This-World Office Views | The Northrop Grumman Cygnus space freighter is pictured in the grip of the Canadarm2 robotic arm outside the cupola, the International Space Station's "window to the world." ? Trivia: How many windows does the cupola have? ! Answer: The small, dome-shaped module has seven windows, six around the sides and one on top, that can be shuttered when not in use to protect them from micrometeoroids and the harsh space environment.

STATION LOCATION

Dr. Dwight Mosby
Payload Mission Operations Division
The Payload Mission Operations Division is responsible for management of the space station science operations, which requires coordinating and synchronizing the execution of science across the international partners and researchers.

Signs are seen along the road as the Northrop Grumman Antares rocket is rolled out to Pad-0A at NASA's Wallops Flight Facility in Virginia ahead of the NG-13 commercial resupply services launch to station.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1 **2013**: SpaceX Dragon cargo spacecraft is the first commercial vehicle to carry externally mounted cargo to the space station. **2016:** NASA Astronaut Scott Kelly and Russian Cosmonaut Mikhail Kornienko return to Earth after their One-Year Mission	2 **2019**: NASA's SpaceX DM-1 launches to the space station	3 **1969:** Apollo 9 launches as the first test flight of a lunar module with a crew	4	5
6	7	8	9 **2008**: First European Automated Transfer Vehicle (ATV) launches to the space station	10	11	12
13	14	15	16 **1926**: Dr. Robert H. Goddard launches the first liquid-propelled rocket	17	18	19
20	21 **Vernal Equinox Day (JAXA)**	22	23	24	25	26
27 **2015**: The Kelly-Kornienko one-year mission crew launches to the space station	28	29	30	31		


SPACEX


ISS20
20 Years on the Internatio
DRAGON RIDER

APRIL2022

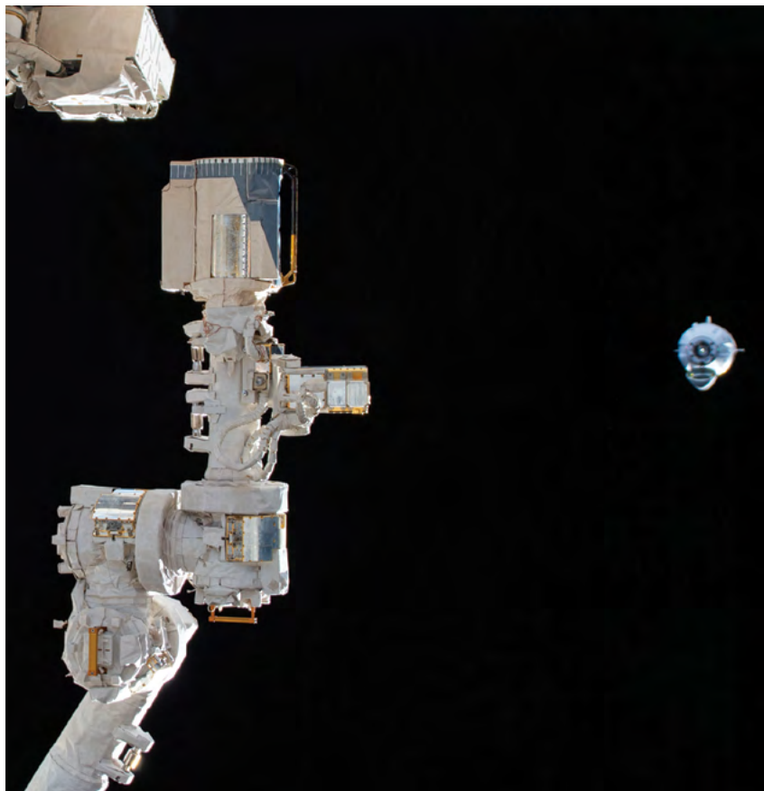
Station Population: 11 | NASA's SpaceX Crew-2 was the second station crew rotation mission via the SpaceX Crew Dragon spacecraft as part of the agency's Commercial Crew Program. TOP LEFT: The SpaceX Falcon 9 rocket with Crew Dragon spacecraft seen at sunrise at Launch Complex 39A. BOTTOM LEFT: SpaceX Crew Dragon "Endeavour" pictured during approach to station less than a day after launching from Kennedy Space Center on April 23, 2021. *(Image Credit: ESA)* RIGHT: The 11-member crew aboard station is actually a combination of three different crews *(Image Credit: ESA)*. ? Trivia: Can you name the combo of three crews that brought the station population to 11 in April, 2021? ! Answer: Crew-2 (back row), the three crew members who rode the Soyuz MS-18 crew ship to station (middle row), and Crew-1 (front row).

Jeff Arend
Systems Engineering and Integration Office
The Systems Engineering and Integration Office is responsible for implementing vehicle integrated performance enhancements/changes, developing and analyzing upcoming station missions for visiting vehicles, robotic and Japanese Experiment Module Airlock activities, and changes to the station's external and internal configuration.

A SpaceX Falcon 9 rocket carrying the company's Crew Dragon spacecraft is seen to the right of the U.S. Capitol Building in Washington D.C. as it launches NASA's SpaceX Crew-2 mission to the International Space Station.

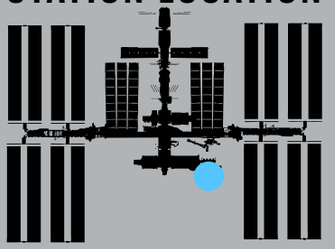
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					1	2
3	4	5	6	7 **2010**: The joining of the space station and STS-131 crews marks the first time four women are in space at the same time	8 **2016**: A Bigelow inflatable Expandable Activity Module becomes the first commercially designed, manufactured, and owned space station structure in orbit	9
10	11	12 **1961**: Cosmonaut Yuri Gagarin becomes the first human in orbit	13	14	15 **Good Friday (CSA, ESA: ESTEC, Col-CC, EAC)**	16
17	18 **Easter Monday (CSA, ESA: HQ, ESTEC, Col-CC, EAC)**	19 **1971**: Salyut 1 launches from Baikonur; **2001**: SSRMS/ Canadarm2 launches to the space station on STS-100	20	21	22 Earth Day	23 **2021**: NASA's SpaceX Crew-2 launches to the space station
24/31 **1990**: NASA's Hubble Space Telescope launches	25	26	27	28	29 **Shōwa Day (JAXA)**	30


NASA
NASA



MAY 2022

NASA's SpaceX Demo-2 Mission Launches into History | The successful NASA SpaceX Demo-2 was an end-to-end flight test of SpaceX's crew transportation system, which led to certification of the system for regular, crewed missions to the space station under the agency's Commercial Crew Program. LEFT: Doug Hurley (left) and Bob Behnken (right) participate in a dress rehearsal for the Demo-2 launch at Kennedy. TOP RIGHT: A SpaceX Falcon 9 rocket lifts off from historic Launch Complex 39A, carrying Bob Behnken and Doug Hurley to station in the Crew Dragon Endeavour spacecraft on May 30, 2020. BOTTOM RIGHT: SpaceX's Crew Dragon approaches station with Hurley and Behnken aboard. JAXA's robotic arm attached to Japan's Kibo laboratory module is pictured in the foreground.



Greg Dorth
External Integration Office
The External Integration Office is responsible for establishing and maintaining partnerships and collaborations with international and domestic government agencies, academia, and industry. The office develops and manages key messaging to inspire, inform, and educate the world about the global benefits and opportunities of the station.

The first time in human history that NASA astronauts have boarded the station from a commercially-constructed spacecraft. The crew of Expedition 63 welcomes Bob Behnken and Doug Hurley aboard the station during Demo-2.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1	2	3 **Constitution Memorial Day (JAXA)**	4 **Greenery Day (JAXA)**	5 **Children's Day (JAXA)** **1961**: Alan Shepard Jr. becomes the first American in space	6	7
8	9	10	11	12	13	14 **1973**: Skylab 1 space station launches aboard the Saturn V rocket
15	16	17	18 **1969**: Launch of Apollo 10, the second flight of humans around the Moon and final test of the complete Apollo system in preparation for the first Moon landing	19	20 **1927**: Charles Lindbergh makes the first solo nonstop flight across the Atlantic Ocean in the Spirit of St. Louis	21
22 **2012**: First SpaceX Dragon launches to the space station	23 **Victoria Day (CSA)**	24	25 **1961**: In a speech to Congress in Washington, D.C., President John F. Kennedy sets Apollo lunar landing and return goal within the decade	26 **Ascension Day (ESA, HQ, ESTEC, Col-CC, EAC)**	27	28
29 **2009**: The first time a space station hosts a long-term crew of six crew members	30 **Memorial Day (NASA)** **2020**: NASA's SpaceX Demo-2 launches to the space station	31 **2008**: The Japanese Kibo pressurized module launches to the space station on STS-124				

JUNE 2022

Powered By The Sun | LEFT: Thomas Pesquet of ESA works to remove new iROSA solar arrays from flight support equipment to begin installation work on the station's P-6 truss structure. RIGHT: Do you spy two astronauts? 🔎 Look closely. Dwarfed by the space station's solar arrays are spacewalkers Shane Kimbrough and Thomas Pesquet as they work to remove new iROSA solar arrays from flight support equipment on the P-6 truss structure. The installed iROSA solar arrays can be seen on the full exterior image of the International Space Station featured on this calendar's cover.

Christopher Hansen
Extravehicular Activity (EVA) Office
The EVA Office is responsible for the safe, effective, and affordable EVA capabilities to meet NASA's strategic goals that require spacewalks on ISS and Artemis programs.

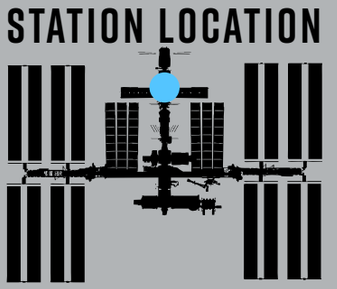
Whitney Maples
Flight Operations Support
Flight Operations Support is responsible for planning, training, and flying the flight controllers, instructors, and crew members to make the station safe and successful.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			1	2	3 **1965**: First U.S. space-walk by Edward White on Gemini IV	4
5	6 **Whit Monday (ESA, HQ, ESTEC, CoI-CC, EAC)**	7	8 **2001**: First Russian spacewalk on the space station	9	10	11
12	13	14	15	16 **Corpus Christi (ESA, CoI-CC, EAC)**	17	18 **1983**: Sally Ride becomes the first U.S. female in space
19	20 **Juneteenth Independence Day (NASA); 1944**: V-2 missile V-177 becomes the first humanmade object to reach the boundary of space	21	22	23	24 **Saint-Jean-Baptiste Day (CSA, Quebec only)**	25
26	27 **1995**: STS-71 space shuttle Atlantis launches, first Shuttle-Mir docking	28	29	30		


Ю.А. ГАГАРИН

JULY 2022

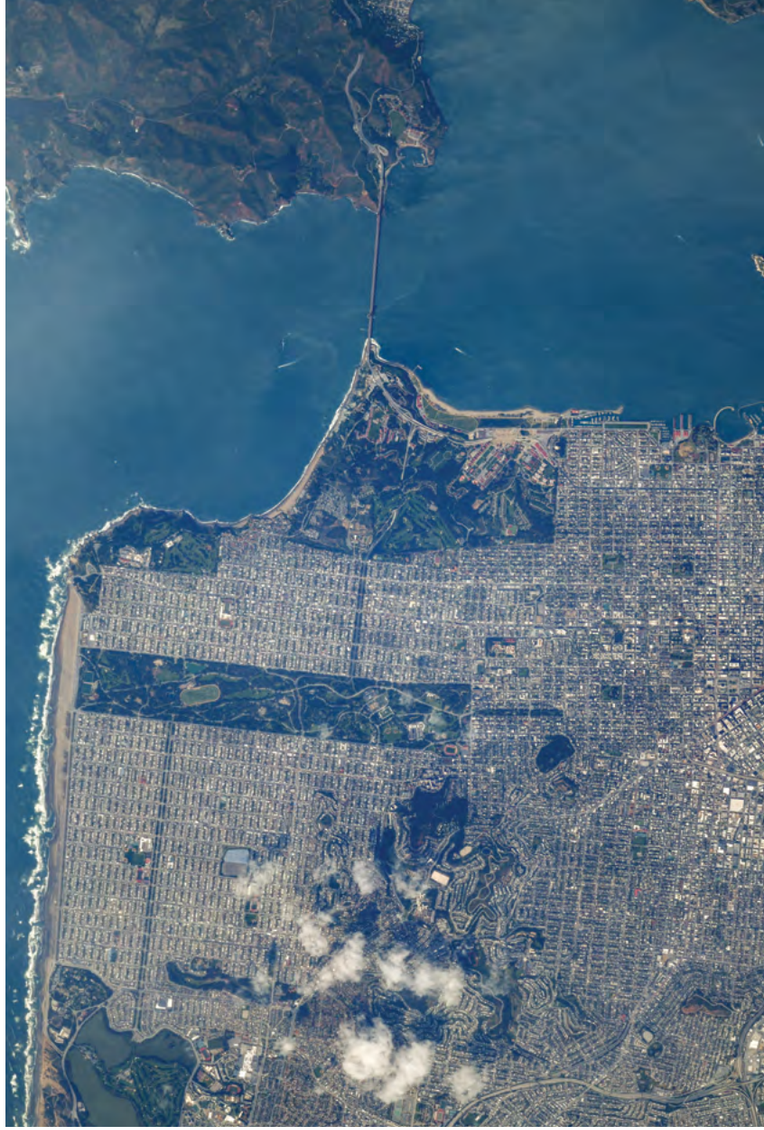
Welcome Aboard, Nauka | Russia's Nauka Multipurpose Laboratory Module is pictured shortly after docking to the International Space Station on July 29, 2021. Nauka, pictured here, is docked to the Zvezda service module's Earth-facing port on the space station with the Brazilian coast 263 miles below. In the foreground is the Soyuz MS-18 crew ship docked to the Rassvet module. ? Trivia: What does the Russian word "Nauka" translate to in English? ! Answer: "Nauka" is the Russian word for "science." Nauka will serve as a new science facility, docking port, and spacewalk airlock for future operations.



Tricia Mack
Human Space Flight Programs – Russia
The Human Space Flight Programs – Russia, based in Moscow, is the liaison between the ISS Program's colleagues in the U.S. and Russia. It is also responsible for all of NASA's coordination in Russia and leading operations in Kazakhstan for Russian Soyuz launch and landing operations.

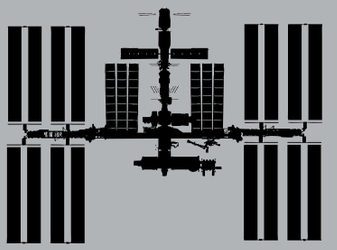
Expedition 64 NASA astronaut Kate Rubins is helped out of the Soyuz MS-17 spacecraft just minutes after she and Roscosmos cosmonauts Sergey Kud-Sverchkov and Sergey Ryzhikov landed in a remote area near the town of Zhezkazgan, Kazakhstan after 185 days in space on April 17, 2021.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					1 **Canada Day (CSA)**	2
3	**2016**: NASA's Juno spacecraft successfully begins orbiting Jupiter 4 **Independence Day (NASA)**	5	6	7	**2011**: STS-135 space shuttle Atlantis launches to the space station on the final mission of the Space Shuttle Program 8	9
10	11	**2000**: Russian Zvezda service module launches to the space station **2001**: U.S. Quest Joint Airlock launches to the space station on STS-104 12	13	**2015**: NASA's New Horizons spacecraft's closest approach to Pluto 14	15	**1969**: Apollo 11 mission launches to land first humans on the Moon 16
17	18 **Marine Day (JAXA)**	19	**1969**: Apollo 11 mission lands first humans on the Moon 20	21	22	23
24/31	25	26	27	28	**1958**: President Eisenhower signs the National Aeronautics and Space Act of 1958; **2021**: Russia's Multipurpose Laboratory Module (MLM) docks to the space station 29	30



AUGUST 2022

Earth Observations | TOP LEFT: The night lights of Italy are prominent above southern Europe during an orbital twilight. TOP RIGHT: The Golden Gate Bridge links San Francisco with the Golden Gate National Recreation Area in northern California. *(Image Credit: Roscosmos)* BOTTOM LEFT: Doha, Qatar, is pictured from station as it orbited 261 miles above the United Arab Emirates. *(Image Credit: Roscosmos)* BOTTOM RIGHT: The active volcano of Popocatépetl is seen from station in central Mexico. *(Image Credit: Roscosmos)*



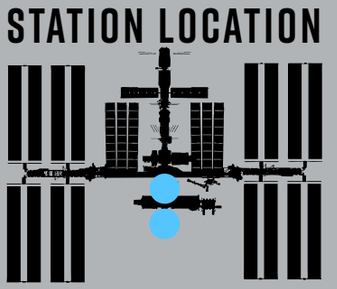
Ryan Prouty
ISS Research Integration Office
The Research Integration Office is responsible for bringing new customers to the orbiting laboratory, as well as managing the current customers' needs and expectations. The office performs the strategic and tactical planning and integration of research to ensure the maximum utilization of the space station.

This composite image made from six frames shows the International Space Station, with a crew of seven aboard, in silhouette as it transits the sun at roughly five miles per second, as seen from Nottingham, Maryland.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1 **Civic Holiday (CSA)**	2	3	4	5	6 **2012**: NASA's Curiosity rover lands on Mars
7	8	9	10 **2015**: Astronauts Scott Kelly, Kjell Lindgren, and Kimiya Yui harvest and eat lettuce grown on the space station	11 **Mountain Day (JAXA)**	12	13
14	15 **Assumption of Mary (ESA, HQ, ESTEC, CoI-CC)**	16	17 **1933**: The GIRD-9, first Russian liquid fueled rocket, successfully launches, reaching 1,200 feet	18	19	20
21	22	23	24	25	26	27
28	29 **2016**: First DNA sequencing in space performed by astronaut Kate Rubins on board the space station	30	31			

SEPTEMBER 2022

Not Your Average Grocery Run | TOP RIGHT: A SpaceX Falcon 9 rocket with Cargo Dragon lifts off from Kennedy Space Center on the company's 22nd commercial resupply mission to the station. LEFT: Cargo Dragon approaching station carrying over 7,300 pounds of new science, supplies, and solar arrays. BOTTOM RIGHT: Astronaut Megan McArthur with fresh produce delivered by Dragon.



Barbara Brown
ISS Ground Processing & Research Project Office
The ISS Ground Processing & Research Project Office is responsible for ground processing, logistics, transportation, and launch-site services that are key to sustaining the space station and enabling utilization for our research customers.

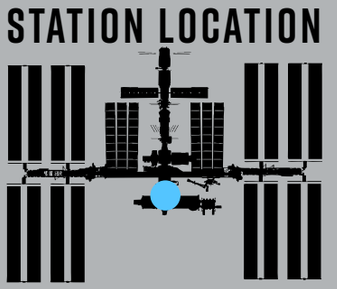
NASA and Boeing workers help position the first two of six ISS Roll-Out Solar Arrays (iROSA) onto flight support equipment inside the high bay of the Space Station Processing Facility at Kennedy Space Center. This pair was launched on CRS-22.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
				1	2	3
4	5 **Labor Day (NASA, CSA)**	6	7	8	9	10 **2009**: First JAXA H-II Transfer Vehicle (HTV) launch to the space station
11	12 **1962**: President John F. Kennedy delivers the "We choose to go to the Moon" address at Rice University in Houston, TX	13	14	15	16	17
18 **2013**: First Northrop Grumman Cygnus space freighter launches to the space station	19 **Respect for the Aged Day (JAXA)**	20	21 **2003**: NASA's Galileo becomes the first spacecraft to enter Jupiter's atmosphere	22	23 **Autumnal Equinox Day (JAXA)**	24
25	26	27	28	29	30 **National Day for Truth and Reconciliation (CSA)**	


HTV8

OCTOBER 2022

HTV-9, the Moon, and Dragon | Japan's cargo resupply ship, the H-II Transfer Vehicle-9 (HTV-9), is pictured attached to the space station's Harmony module, dwarfing the Moon behind it. Stowed inside the Japanese space freighter is the HTV-8 cargo pallet that was brought up to the station on a previous resupply mission. 🔎 Look closely, nearly hidden at the top center is the SpaceX Crew Dragon Endeavour vehicle that launched NASA's SpaceX Demo-2 mission.



Mark Martin
ISS Avionics and Software Office
The Avionics and Software Office is responsible for sustaining command and control system hardware and the software that operates all space station core systems.

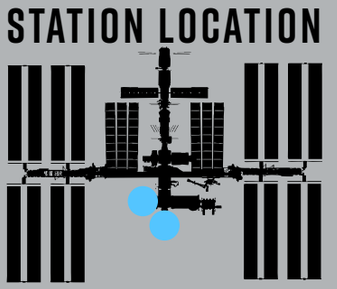
Phil Dempsey
ISS Transportation Integration Office
The Transportation Integration Office is responsible for integrating the fleet of U.S. and international spacecraft delivering crews, cargo, and critical science to the space station.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						1 **1958**: First day of NASA operations
2	3	4 **1957**: The world's first artificial satellite, Sputnik 1, launches from the Soviet Union	5	6	7	8
9	10 **Columbus Day (NASA); Health-Sports Day (JAXA); Thanksgiving Day (CSA, Canada)** **2007**: Peggy Whitson becomes the first female astronaut to command the space station	11	12	13	14 **1947**: Charles "Chuck" Yeager becomes the first human to attain supersonic flight	15
16	17	18	19	20	21	22
23/30 **2007**: U.S. Node-2/ Harmony module launches to the space station on STS-120	24/31 **1946**: First motion pictures taken of Earth from space by a U.S.-launched V-2 rocket; **2000**: First crew to live and work aboard the space station launched by Soyuz TM-31	25	26	27	28	29


COL02-11
13

NOVEMBER 2022

All For One, Crew-1 For All | Crew-1 was the first operational mission of the SpaceX Crew Dragon spacecraft to station. It launched to station on Nov. 15, 2020. BOTTOM RIGHT: NASA astronauts Shannon Walker, Victor Glover, Mike Hopkins, and JAXA astronaut Soichi Noguchi arrive at Kennedy Space Center ahead of Crew-1. TOP RIGHT: Crew-1's Dragon docked to station. LEFT: NASA Astronaut Hopkins attached to ESA's Columbus laboratory to install a science antenna and routing cables.



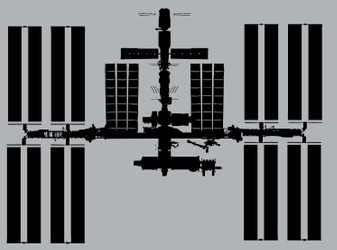
Scott Seyl
Safety and Mission Assurance/Program Risk Office
The Safety and Mission Assurance/Program Risk Office is responsible for the definition and implementation of plans and processes to assure that safety, reliability, maintainability, and quality assurance requirements are met.

Crew-1 NASA astronauts Mike Hopkins, Shannon Walker, and Victor Glover, and JAXA astronaut Soichi Noguchi safely splashed down on May 2, 2021. Pictured here are support teams working around the SpaceX Crew Dragon "Resilience" spacecraft shortly after landing in the Gulf of Mexico off the coast of Panama City, Florida.

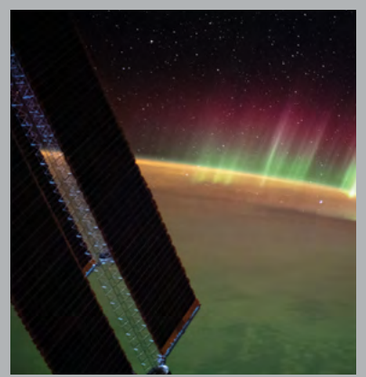
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1 **All Saints' Day (ESA, HQ, CoI-CC, EAC)**	2 **2000**: Expedition 1 arrives at the space station, beginning an era of continuous human presence in space that remains unbroken to this day	3 **Culture Day (JAXA)**	4	5
6	7	8	9	10	11 **Veterans Day (NASA); Remembrance Day (CSA)**	12
13 **1971**: NASA's Mariner 9 becomes the first spacecraft to orbit another planet – Mars.	14 **1969**: Launch of Apollo 12, second human mission to land on the Moon	15 **2020**: NASA's SpaceX Crew-1 launches to the space station	16	17	18	19
20 **1998**: Russia's Zarya module, the first component of the space station, launches from Baikonur on a Proton K	21	22	23 **Labor Thanksgiving Day (JAXA)**	24 **Thanksgiving Day (NASA)**	25	26
27	28	29	30			

DECEMBER 2022

This long-exposure photograph from station reveals the Milky Way glittering above an atmospheric glow blanketing the Earth's horizon. ? Trivia: How many sunrises and sunsets do astronauts on station experience every 24 hours? ! In 24 hours, the space station travels through 16 sunrises and sunsets!



William Cleek
Program Planning & Control (PP&C) Office
The PP&C Office is responsible for providing the program with configuration management, information technology, resources/budget management, independent cost estimating/ assessment, and procurement support.



The aurora australis seemingly crowns the Earth's horizon as the International Space Station orbited 272 miles above the southern Indian Ocean in between Asia and Antarctica.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
				1	2	3 **1958**: The Jet Propulsion Laboratory (JPL) in Pasadena, California, is transferred from the U.S. Army to NASA
4 **1998**: Launch of STS-88, the first crew to visit the space station, delivers the first U.S. element of station, Node 1, the Unity connecting module	5	6	7	8	9	10
11	12	13	14	15	16	17 **1903**: Wright Flyer makes the world's first heavier than-air flight at Kitty Hawk, North Carolina
18	19	20	21	22	23	24 **1968**: Apollo 8 becomes the first crewed mission to orbit the Moon
25 **Christmas Day (NASA, CSA, ESA)**	26 **Boxing Day (CSA, ESA: HQ, ESTEC, CoI-CC, EAC)**	27	28	29	30	31

This view of a full Moon was photographed by one of the Expedition 7 crew members aboard the International Space Station. The view also includes Mars, which appears as a small dot.

International Space Station
www.nasa.gov/station

Space Station Research and Technology Overview
www.nasa.gov/iss-science

Latest News About Space Station Research
www.nasa.gov/stationresearchnews

Space Station Research Benefits for Humanity
www.nasa.gov/stationbenefits

Space Station Opportunities for Researchers
www.nasa.gov/stationopportunities

Space Station Experiments/Facilities/Results
https://go.nasa.gov/researchexplorer

Space Station Results Resources Library
www.nasa.gov/stationresultsresourcelibrary

Space Station for Students and Educators
www.nasa.gov/stemonstation

Space Station Media Resources
www.nasa.gov/stationresearchresources

Commercial Crew Program
www.nasa.gov/exploration/commercial/crew

Commercial Low-Earth Orbit Economy News and Opportunities
www.nasa.gov/leo-economy

Launches and Landings Schedule
www.nasa.gov/launchschedule/

Spot the Station Soaring Over the Sky Near You
spotthestation.nasa.gov

The space station is a convergence of science, technology, and human innovation that demonstrates new technologies and enables research not possible on Earth. The space station serves as the springboard to NASA's human exploration of deep space, including future missions to the Moon and Mars.

Twitter
@Space_Station
@ISS_Research

Facebook
International Space Station

Flickr
NASA2Explore

Instagram
@iss

YouTube
NASAJohnson

NP-2021-06-005-JSC