

National Aeronautics and
Space Administration



EXPLORE HUMANS *in* SPACE
ON THE INTERNATIONAL SPACE STATION

2023 CALENDAR



A message from the Program Manager for the International Space Station



Joel Montalbano is pictured holding a Primetime Emmy Award for Outstanding Interactive Program for Felix & Paul Studios' virtual reality (VR) film series, "Space Explorers: An ISS Experience." Felix & Paul Studios worked with NASA for more than two-and-a-half years to capture space station VR footage for the Emmy-winning four-part cinematic series.

Greetings,

From the first crew turning on the lights of a small outpost on the edge of space, to a highly capable microgravity laboratory — the groundwork that was laid over two decades ago has propelled us to extend our efforts on the International Space Station to 2030.

We aren't slowing down anytime soon. We have a regular cadence of missions transporting crew and science to and from the orbiting laboratory, which deliver tons of research and new hardware, state-of-the-art vehicles from our commercial partner space fleet preparing to visit, as well as new visitors — private astronauts.

Everything we do aboard the International Space Station not only benefits those on Earth — but also supports both NASA's low-Earth orbit commercialization initiatives and the agency's long-term deep space exploration goals to the Moon and on to Mars. The space station serves as the springboard to both, and you can read more on that in the next few pages.

With more than 22 years of continuous human presence in space and the exponential growth in science, research, and technology aboard the International Space Station, we reflect on accomplishments that have helped pave this road on the heels of commercial and deep space exploration and continue to build a future that benefits humanity each and every day. I invite you to take a look at some of the hundreds of benefits to humanity that have resulted from the past two decades aboard the space station at www.nasa.gov/stationbenefits.

As we look forward to what's to come not only in 2023 but through 2030, the best way to keep up to date with station activities is by

following us on nasa.gov/station and our social media accounts listed on the back of this calendar.

I wish everyone an inspiring year in 2023 and look forward to the wonders these next years on the International Space Station will continue to bring to humanity.

Best wishes,

JOEL R. MONTALBANO

International Space Station Program Manager



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 International Space Station 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 International Space Station Mission Management Team (IMMT), 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.



Dina Contella

International Space Station Program Operations Integration Manager

Dina Contella is presently serving as the International Space Station Program Operations Integration Manager. In this role, she is responsible for the overall management and integration of International Space Station Program operational elements, with the primary focus on supporting the performance of real-time and near real-time missions. As chair of the IMMT, Contella is responsible for all aspects of the execution of on-orbit program activities for the integrated space station.



Melissa Gard

International Space Station Program Chief of Staff

Melissa (Missy) Gard presently serves as the International Space Station program chief of staff. In this role, Gard supports senior program management by optimizing their schedules and working with the program management team to prioritize actions and issues requiring approval. She is responsible for handling the day-to-day administrative functions of the office and manages the program's contracting officer representatives. Additionally, she is the cooperative agreement technical officer for the International Space Station National Laboratory.

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. In 2020 he became ESA's ISS Program Manager and heads the LEO Exploration Group in the Directorate of Human and Robotic Exploration.



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).*



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.

NASA ISS Program Management



William Spetch
Manager



Mary Lawrence
Deputy Manager



Courtenay McMillan
Manager



Hugh Jamison
Deputy Manager



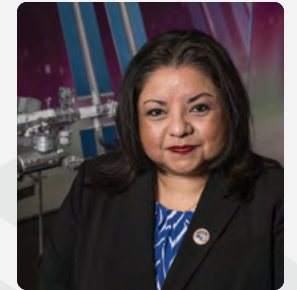
Mark Martin
Manager



David Korth
Deputy Manager



Scott Seyl
Manager



Ana Lopez
Deputy Manager

Vehicle Office

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

NASA's Johnson Space Center, Houston, TX

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.

NASA's Johnson Space Center, Houston, TX

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.

NASA's Johnson Space Center, Houston, TX

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.

NASA's Johnson Space Center, Houston, TX



William Cleek
Manager



Gregory Tobeck
Deputy Manager



Jeff Arend
Manager



Kim Hambuchen
Acting Deputy Manager



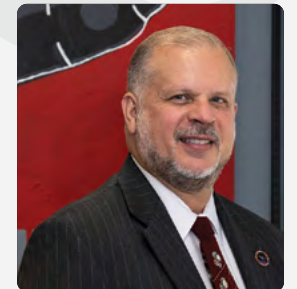
Phil Dempsey
Manager



Kristi Duplichen
Deputy Manager



Greg Dorth
Manager



Ralph Grau
Deputy Manager

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.

NASA's Johnson Space Center, Houston, TX

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.

NASA's Johnson Space Center, Houston, TX

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.

NASA's Johnson Space Center, Houston, TX

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.

NASA's Johnson Space Center, Houston, TX

NASA ISS Program Management



Ryan Prouty
Manager



Steve McGrath
Deputy Manager



Kirt Costello
Deputy Manager
ISS Program Chief Scientist



Randy Robinson
Manager



Gaurang Patel
Deputy Manager



Whitney Maples
Manager



Dr. Dwight Mosby
Manager



George Norris
Deputy Manager

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.

NASA's Johnson Space Center, Houston, TX

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.

NASA's Johnson Space Center, Houston, TX

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.

NASA's Johnson Space Center, Houston, TX

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.

NASA's Marshall Space Flight Center, Huntsville, AL



Mark Thiessen
Manager



Barbara Brown
Manager



Curt Horanic
Deputy Manager

Human Space Flight Programs – Russia

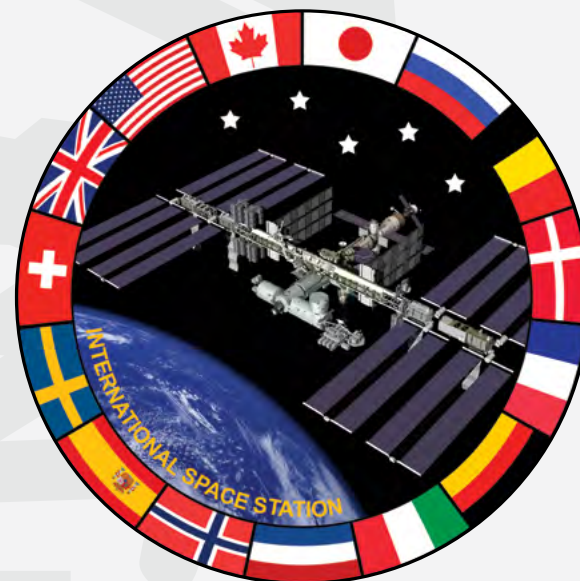
The Human Space Flight Programs – Russia, based in Moscow, is the liaison between the ISS Program's colleagues in the U.S. and Russia. It is also responsible for all of NASA's coordination in Russia and leading operations in Kazakhstan for Russian Soyuz launch and landing operations.

Moscow, Russia

Exploration Research and Technology Programs

The Exploration Research and Technology Programs Office is responsible for ground processing, logistics, transportation, and launchsite services that are key to sustaining the ISS and enabling utilization for research customers.

NASA's Kennedy Space Center, FL



A Laboratory Like No Other



The International Space Station is pictured from the SpaceX Crew Dragon Endeavour during a fly-around of the orbiting lab that took place following its undocking from the Harmony module's space-facing port with the Crew-2 astronauts.



Growing plants in microgravity is crucial for keeping astronauts healthy on long-duration missions to the Moon and beyond. Fresh chile peppers are pictured growing inside the Advanced Plant Habitat shortly before being harvested.



The SpaceX Dragon Endeavour crew ship carrying four Axiom Mission 1 astronauts approaches the International Space Station. Boeing's CST-100 Starliner crew ship is pictured docked to the Harmony module's forward port on the International Space Station.



Roughly 250 miles (400 kilometers) above our heads, the International Space Station is flying through space at 17,500 mph, orbiting the Earth every 90 minutes.

This one-of-a-kind orbiting laboratory provides researchers with features unique to low-Earth orbit, such as long-duration microgravity, exposure to space, and vast perspectives of our planet.

These attributes enable scientists to conduct innovative experiments that cannot be done anywhere else

Last year, Congress passed the NASA Authorization Act of 2022 – extending U.S. participation in the International Space Station to 2030. Extending operations through 2030 will continue another productive decade of research advancement and enable a seamless transition of capabilities in low-Earth orbit to one or more commercially owned and operated destinations in the late 2020s. Extending to 2030 will also add to the ongoing research and technology testing that are key to enabling future human exploration of the Moon and Mars.

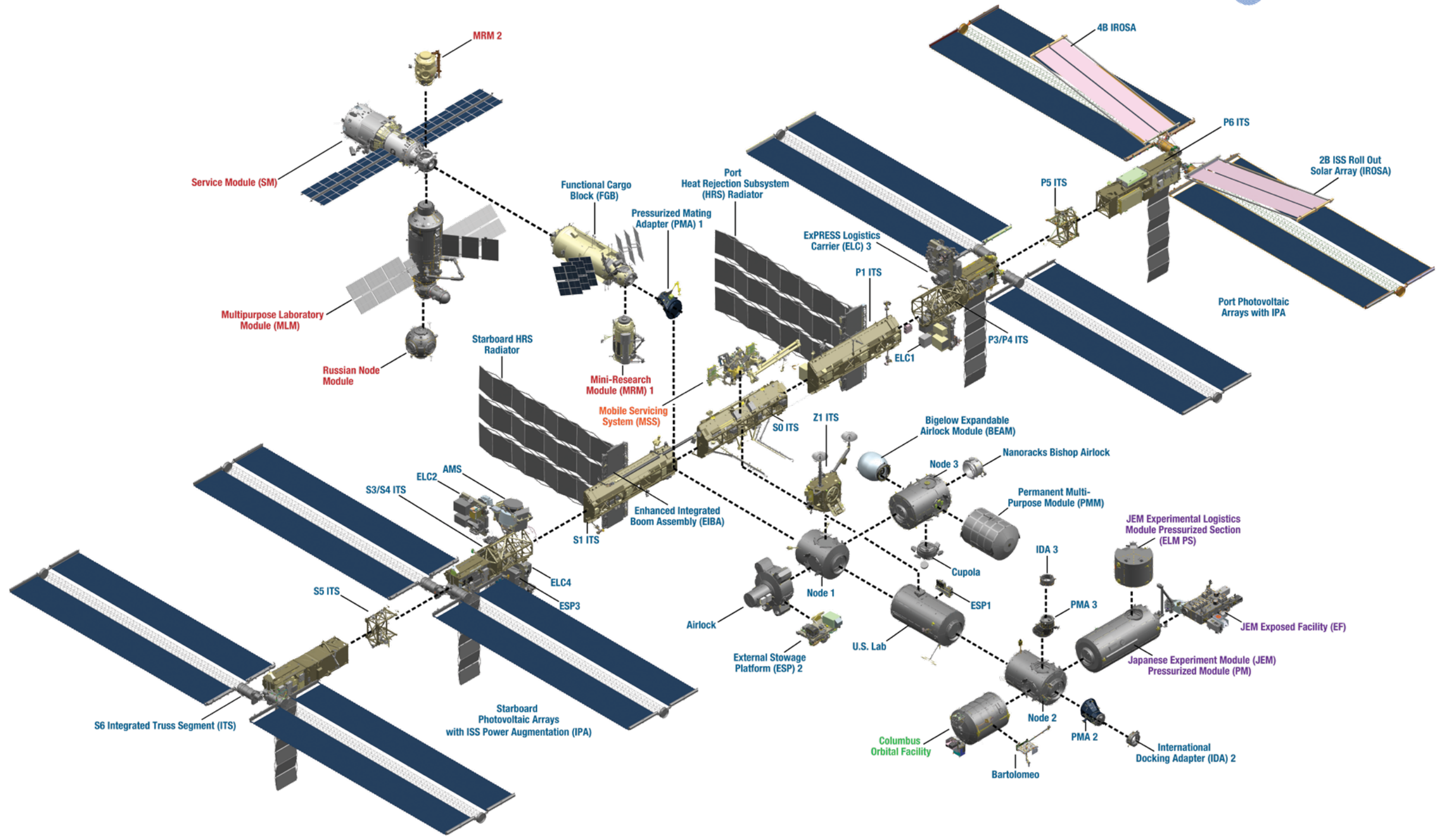
The International Space Station serves as a springboard to NASA's commercial low-Earth Orbit commercialization initiatives, as well as the agency's long-term deep space exploration goals to the Moon and on to Mars – all while advancing the quality of life for humankind in nearly every way.

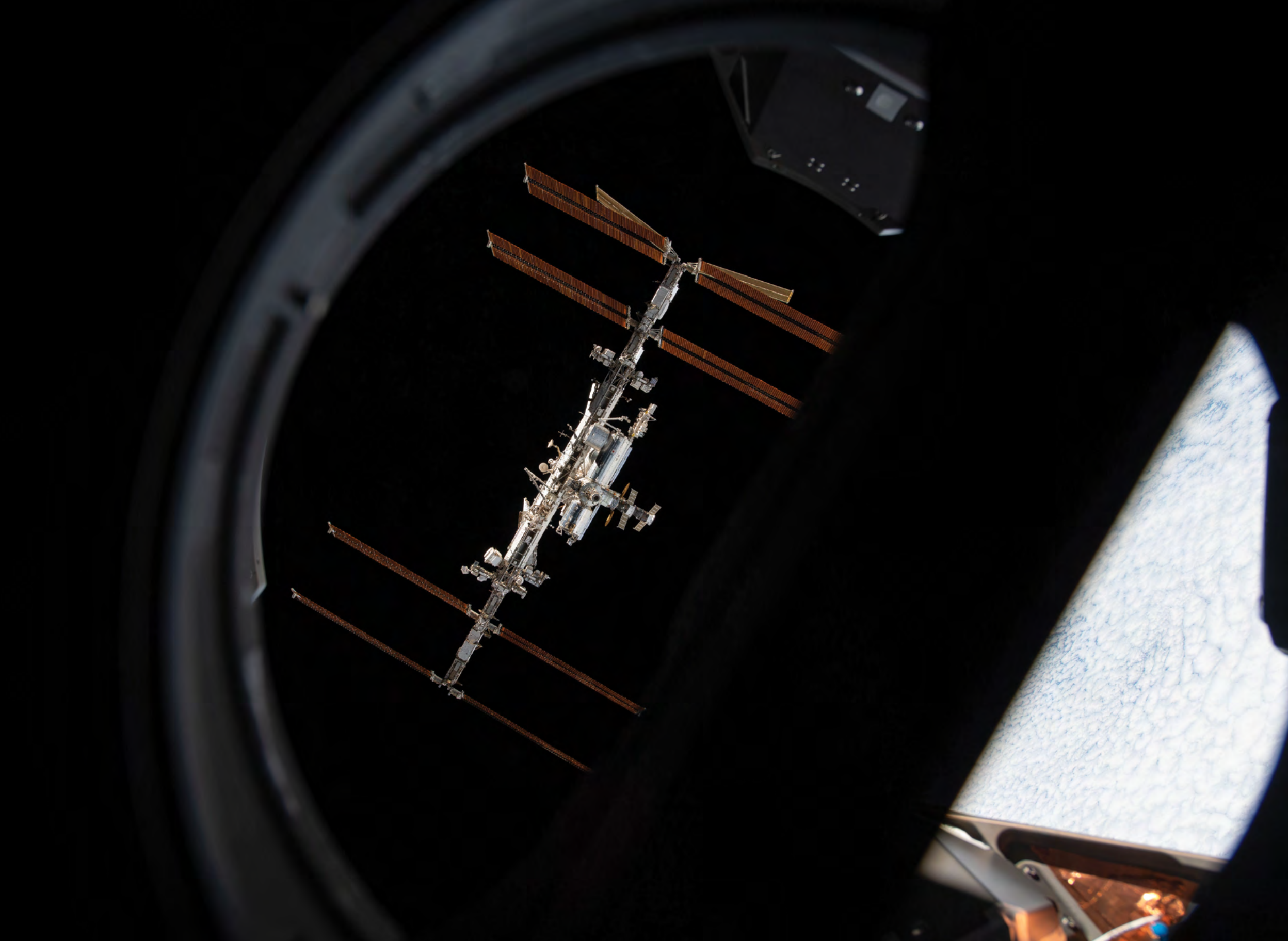
On the commercial front, last year the International Space Station hosted NASA's first private astronaut mission – Axiom Mission 1. During the 17-day mission, the Axiom crew performed over 150 hours of research. Commercial space fleet partner Boeing also had a successful launch, docking, and landing of the company's CST-100 Starliner crew ship to the space station, which will carry crew on a regular cadence to the orbiting laboratory.

The International Space Station is a steppingstone for NASA's Artemis program that will land the first woman and first person of color on the Moon. As the only place for conducting long-duration research on how living in microgravity affects living organisms, especially humans, as well as testing technologies to allow humans to work at the Moon, the space station serves as a unique asset in the effort to establish a sustainable presence there.

In addition to supporting further exploration of the universe, the research conducted and technology developed on the station has produced direct benefits to humanity that we see on Earth. These benefits include advances in development of pharmaceuticals, better disaster-response capabilities, improved materials for manufacturing, progression in robotics, and even the bioprinting of human tissue.

As the station heads toward 2030, it builds on its successful global partnership it has enabled to verify exploration and human research technologies to support NASA's deep space exploration initiatives and lay the groundwork for a commercial future in low-Earth orbit.





JANUARY 2023

Dragon's Eye View | The International Space Station is pictured from inside a window aboard the SpaceX Crew Dragon Endeavour during a fly-around of the orbiting lab that took place following its undocking from the Harmony module's space-facing port.



📍 272 miles (438 kilometers) above the Atlantic Ocean southwest of Cape Town, South Africa, NASA astronaut Jessica Watkins enjoys the view of the Earth below from inside the station's seven-windowed cupola.



📍 264 miles (425 kilometers) above Western Australia on the coast of Shark Bay, the sun's rays burst above Earth's horizon.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p><i>Moon phases</i> <i>U.S. Central Time Zone</i></p>						
1 New Year's Day (NASA, CSA, ESA: Col-CC, JAXA)	2	3	4	5	6	7
8	9 Coming-of-Age Day (JAXA)	10	11	12	13	
15	16 Martin Luther King Jr. Day (NASA)	17	18	19	20	
22	23	24	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 1998: 15 countries met to sign an agreement to establish the framework for cooperation among the partners on the design, development, operation, and utilization of the space station	30	31				



Rad Detector

EXIT

MONITOR DISPLAYING DATA

CREW FIVE

MKC 68

FEBRUARY 2023

The Crew on Station | Eleven Expedition 68 crew members aboard the International Space Station pose for a portrait prior to Crew-4's departure. In the front row, from left, are cosmonauts Anna Kikina, Sergey Prokopyev, and Dmitri Petelin. In the next row are astronauts Samantha Cristoforetti of ESA (European Space Agency) and Koichi Wakata of the Japan Aerospace Exploration Agency (JAXA). In the back are NASA astronauts Jessica Watkins, Kjell Lindgren, Bob Hines, Frank Rubio, Josh Cassada, and Nicole Mann. A symbolic key, representing the traditional change-of-command ceremony that Cristoforetti earlier handed over to Prokopyev, floats in the center of the frame as he begins his spaceflight as Expedition 68 commander.



Support teams with the recovery ship Megan work around the SpaceX Crew Dragon Freedom spacecraft shortly after it splashed down with NASA astronauts Kjell Lindgren, Bob Hines, Jessica Watkins, and ESA astronaut Samantha Cristoforetti aboard in the Atlantic Ocean off the coast of Jacksonville, Florida.



263 miles (423 kilometers) above Asia, the space station was orbiting into a sunset when this photograph of the Soyuz MS-22 crew ship ascending into space was captured by NASA astronaut Bob Hines on station.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p><i>Moon phases</i> <i>U.S. Central Time Zone</i></p>						
			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				

1 **2003:** Space shuttle Columbia accident

7 **2001:** The U.S. Destiny Laboratory launches to the space station on STS-98;
2008: ESA's Columbus module launches to the space station on STS-122

8 **2010:** Tranquility and Cupola launches to the space station on STS-130

11 **National Foundation Day (JAXA)**

12 **2001:** First major laboratory module, the U.S. Destiny Laboratory, added to the space station

19 **1986:** The Russian Space Station Mir's first module launches from Baikonur

20 **Presidents Day (NASA)**

23 **Emperor's Birthday (JAXA)**

26 **2004:** Expedition 8 crew Michael Foale and Alexander Kaleri space-walk without a human crew member inside



MARCH 2023

Record-Setting NASA Astronaut | Mark Vande Hei peers at the Earth below from inside the seven-windowed cupola, the International Space Station's window to the world. Just outside the cupola is the Soyuz MS-19 crew ship docked to the Rassvet module. In March 2022, Vande Hei wrapped up a 355-day mission spanning 5,680 orbits of Earth and more than 150 million miles. During the long-duration mission, Vande Hei broke the record for longest single spaceflight by an American astronaut, previously held at 340 days.



The Soyuz MS-19 crew ship, carrying three Expedition 66 crew members, backs away from the International Space Station after undocking from the Rassvet module.



Just over four hours later from undocking, the Soyuz MS-19 crew ship parachutes to a landing in Kazakhstan with NASA astronaut Mark Vande Hei and Roscosmos cosmonauts Anton Shkaplerov and Pyotr Dubrov.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p><i>Moon phases</i> <i>U.S. Central Time Zone</i></p>				<p>2013: SpaceX Dragon cargo spacecraft is the first commercial vehicle to carry externally mounted cargo to the space station</p>	<p>2016: NASA astronaut Scott Kelly and Russian cosmonaut Mikhail Kornienko return to Earth after their one-year mission; 2019: NASA's SpaceX Demo-1 launches to the space station</p>	
5	6			8	9	<p>2008: The Canadian Space Agency's robotic system Dextre launches on STS-123</p>
			<p>2022: NASA astronaut Mark Vande Hei breaks the record for the most consecutive days in space by an American explorer. He holds the record for 355 days</p>	15	16	17
12	13					
19	20		<p>Vernal Equinox Day (JAXA)</p>	22	23	24
26	27	28	29	30	31	



APRIL 2023


NASA's First Private Astronaut Mission | The SpaceX Dragon Endeavour, carrying four Axiom Mission 1 astronauts, approaches the International Space Station less than a day after launching from NASA's Kennedy Space Center in Florida. The SpaceX Crew Dragon Endeavour spacecraft also transported NASA's SpaceX Crew-2 mission to and from the space station. Pictured above Earth's horizon is the first quarter Moon.



The SpaceX Dragon Endeavour crew ship, which carried the Axiom Mission 1 crew, is pictured docked to the Harmony module's space-facing international docking adapter.



The 11-person crew aboard the station comprises (clockwise from bottom right) Expedition 67 Commander Tom Marshburn with Flight Engineers Oleg Artemyev, Denis Matveev, Sergey Korsakov, Raja Chari, Kayla Barron, and Matthias Maurer; and Axiom Mission 1 astronauts (center row from left) Mark Pathy, Eytan Stibbe, Larry Connor, and Michael López-Alegría.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p><i>Moon phases</i> <i>U.S. Central Time Zone</i></p>						
						1
2	3	4	5 			<p>2010: The joining of the space station and STS-131 crews marks the first time four women are in space at the same time</p> <p>2016: A Bigelow inflatable Expandable Activity Module becomes the first commercially designed, manufactured, and owned space station structure in orbit; 2022: NASA's first private astronaut mission to the space station, Axiom Mission 1 launches</p>
					6 	
9	10 Easter Monday (CSA, ESA: HQ, ESTEC, Col-CC, EAC)	11	12 1961: Cosmonaut Yuri Gagarin becomes the first human in orbit; 1981: First mission of the Space Shuttle Program, STS-1, launches		13	14
			19 1971: Salyut 1 launches from Baikonur; 2001: Canadarm2 Space Station Remote Manipulator System launches to the space station on STS-100			
16	17	18		20	21	22 <small>Earth Day</small>
					27 	
23/30 2021: NASA's SpaceX Crew-2 launches to the space station (April 23)	24 1990: NASA's Hubble Space Telescope launches	25	26	27 2022: NASA's SpaceX Crew-4 launches to the space station	28	29 Shōwa Day (JAXA)



MAY 2023

Starliner at Station | Boeing's CST-100 Starliner crew ship approaches the International Space Station on the company's Orbital Flight Test-2 (OFT-2) mission before automatically docking to the Harmony module's forward port. The orbiting lab was flying 268 miles (431 kilometers) above the South Pacific at the time of this photograph.



Expedition 67 Flight Engineers (clockwise from bottom) Samantha Cristoforetti, Bob Hines, Kjell Lindgren, and Jessica Watkins smile for a portrait from inside the Boeing CST-100 crew ship. The quartet is looking through the Harmony module's forward international docking adapter, to which Starliner is docked, and into the International Space Station.



A United Launch Alliance Atlas V rocket lifts off on May 19, 2022, from Space Launch Complex-41 at Cape Canaveral Space Force Station in Florida for NASA's Boeing uncrewed OFT-2 mission.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p><i>Moon phases</i> <i>U.S. Central Time Zone</i></p> 	1	2	3 Constitution Memorial Day (JAXA)	4 Greenery Day (JAXA)	<p>Children's Day (JAXA)</p> <p>1961: Alan Shepard Jr. becomes the first American in space</p> 	6
7	8	9	10	11	12	13
14 1973: Skylab 1 space station launches aboard the Saturn V rocket	15	16	17	18 Ascension Day (ESA: HQ, ESTEC, Col-CC, EAC)	<p>2022: NASA's Boeing OFT-2 launches to the space station</p> 	20
21	<p>2012: First SpaceX Dragon cargo craft launches to the space station</p> <p>Victoria Day (CSA)</p>	23	24	25	26	
28	<p>2009: The first time a space station hosts a long-term crew of six crew members</p> <p>Memorial Day (NASA)</p> <p>Whit Monday (ESA: HQ, ESTEC, Col-CC, EAC)</p>	30 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 2023

Cargo Carriers | Northrop Grumman's Cygnus (left), SpaceX's Cargo Dragon (top right), and Roscosmos' Progress spacecraft (bottom right, seen approaching the station from a distance) deliver thousands of pounds of research experiments, hardware, and food to the crew of the space station. Cygnus is launched on a Northrop Grumman Antares rocket from the Mid-Atlantic Regional Spaceport at NASA's Wallops Flight Facility in Virginia; Cargo Dragon is launched on a SpaceX Falcon 9 rocket from NASA's Kennedy Space Center in Florida; and the Progress cargo vehicle is launched from Kazakhstan on a Soyuz rocket.



A bright white trail is in view after the SpaceX Falcon 9 rocket carrying the Dragon capsule lifts off from Launch Complex 39A at NASA's Kennedy Space Center in Florida on the company's 25th Commercial Resupply Services mission for the agency to the International Space Station.



📍 272 miles (438 kilometers) above the South Pacific, off the coast of New Zealand. Northrop Grumman's Cygnus space freighter is pictured approaching the space station.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p><i>Moon phases</i> <i>U.S. Central Time Zone</i></p> 				1	2	<p>3</p> <p>1965: First U.S. space-walk by Edward White on Gemini IV</p> 
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
<p>1983: Sally Ride becomes the first U.S. female in space</p>	<p>Juneteenth Independence Day (NASA)</p> 	<p>1944: V-2 missile V-177 becomes the first human-made object to reach the boundary of space</p>	<p>1995: STS-71 Space shuttle Atlantis launches, first Shuttle-Mir docking</p>			<p>Saint-Jean-Baptiste Day (CSA, Quebec only)</p>
25	26	27	28	29	30	



JULY 2023

From Low-Earth Orbit to the Moon and Beyond | The waning gibbous Moon is pictured above Earth's horizon as the International Space Station orbits 272 miles (438 kilometers) above the Atlantic Ocean, in between the tips of South America and South Africa. The International Space Station is a steppingstone for NASA's Artemis program that will land the first woman and the first person of color on the Moon. As the only place for conducting long-duration research on how living in microgravity affects living organisms, especially humans, as well as testing technologies to allow humans to work at the Moon, the space station serves as a unique asset in the effort to establish a sustainable presence there.



The space station tests deep space exploration technologies every day for missions to the Moon and beyond. Seen here is NASA's Space Launch System Moon rocket with the Orion spacecraft atop at launch pad 39B at NASA's Kennedy Space Center.



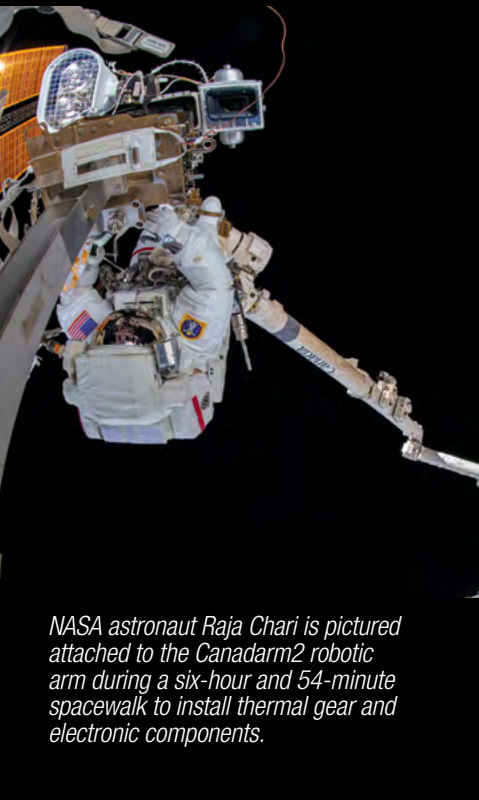
NASA astronaut Frank Rubio has fun with fluid physics as he observes the behavior of a free-flying water bubble inside the International Space Station's Kibo laboratory module.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p><i>Moon phases</i> <i>U.S. Central Time Zone</i></p>						1 Canada Day (CSA)
2	3	4 Independence Day (NASA)	5	6	7	8
9	10	11	12 2000: Russian Zvezda service module launches to the space station 2001: U.S. Quest Joint Airlock launches to the space station on STS-104	13	14	15
16 1969: Apollo 11 mission launches to land first humans on the Moon	17 Marine Day (JAXA)	18	19	20 1969: Apollo 11 mission lands first humans on the Moon	21	22
23/30	24/31	25	26	27	28	29 2021: Russia's Multipurpose Laboratory Module (MLM) docks to the space station



AUGUST 2023


This view from NASA spacewalker Tom Marshburn's camera points toward his U.S. spacesuit legs, downward from the Canadarm2 robotic arm that he is attached to, and toward the International Space Station below him. The station's prominent features include (from left) the Kibo laboratory module's external pallet, the truss structure, its radiators, and the orbiting lab's Russian segment.

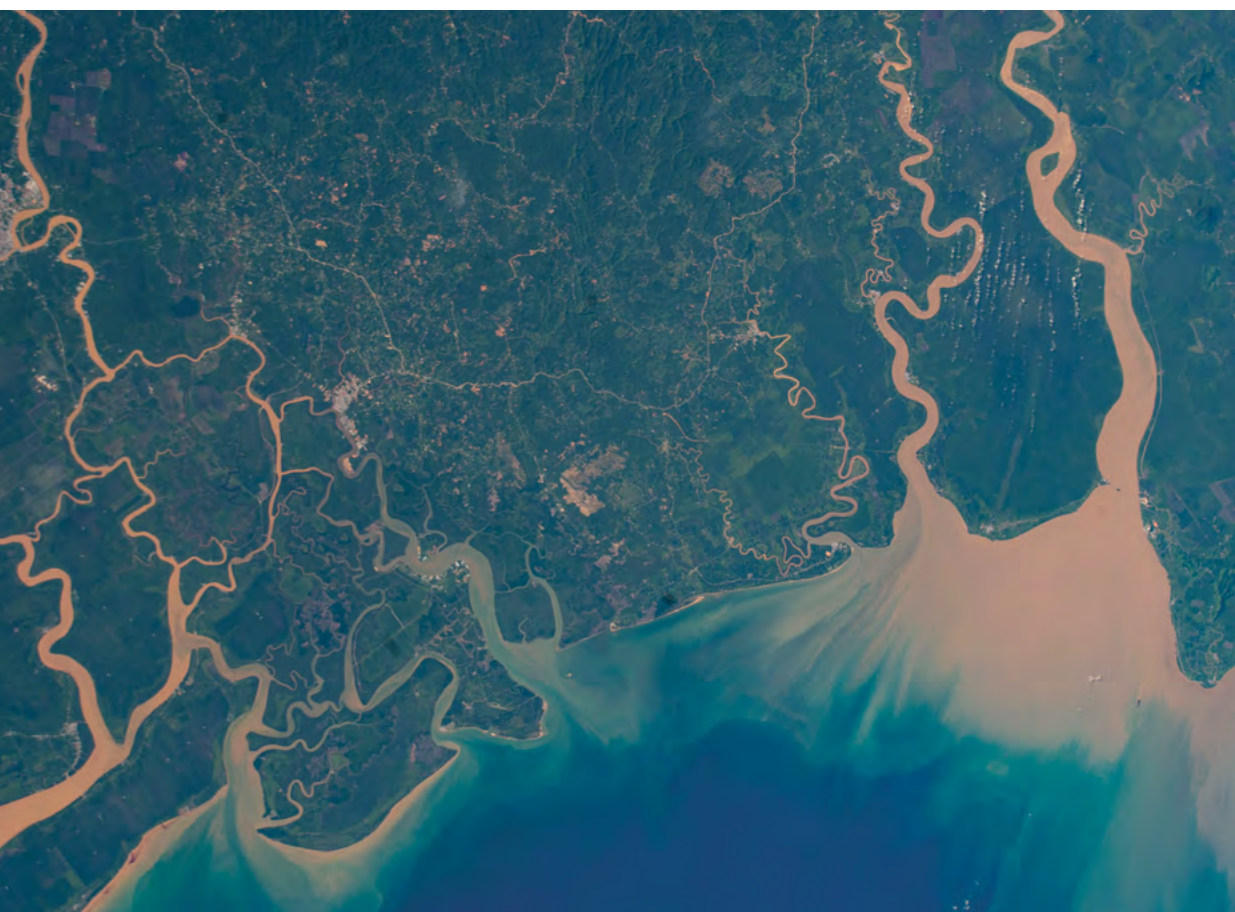
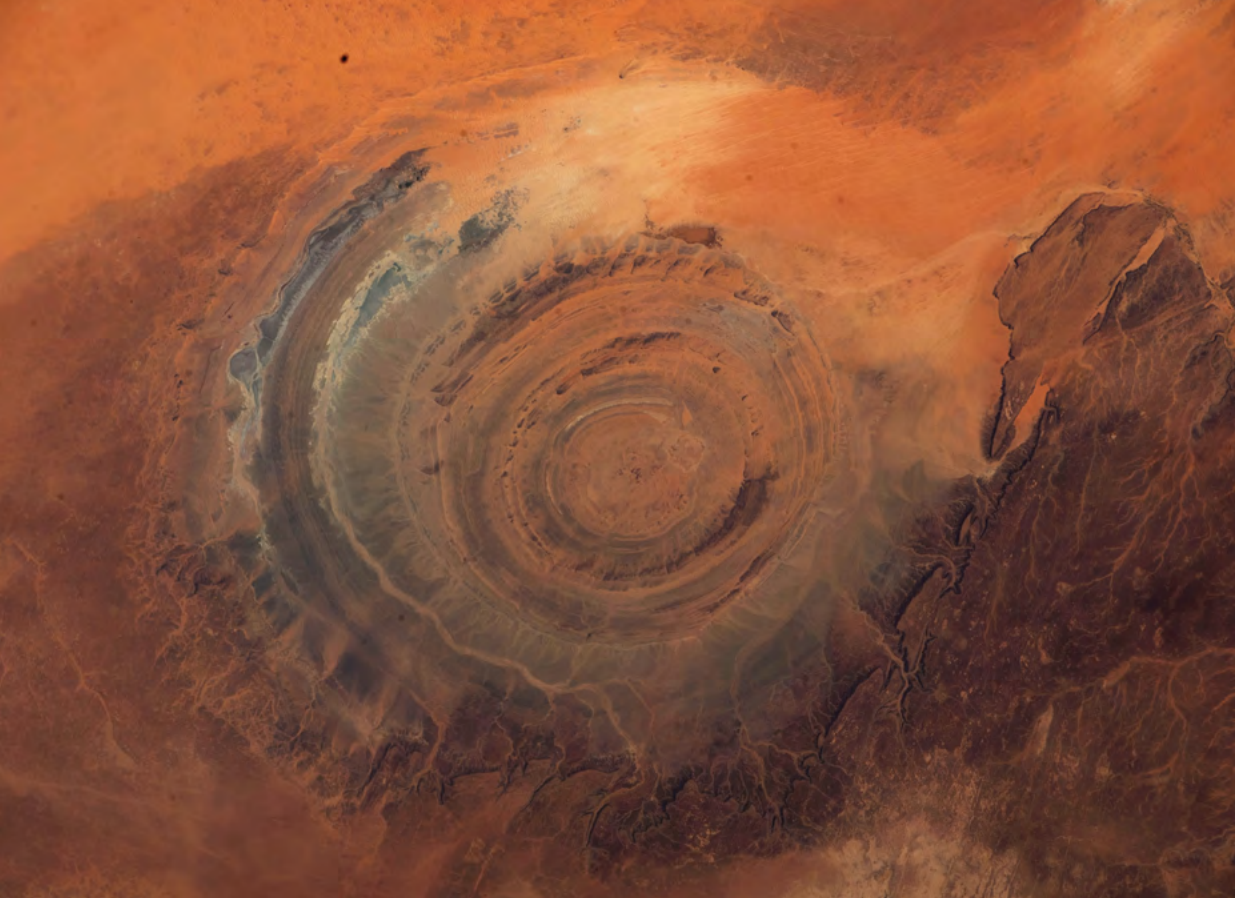


NASA astronaut Raja Chari is pictured attached to the Canadarm2 robotic arm during a six-hour and 54-minute spacewalk to install thermal gear and electronic components.



NASA astronaut Kayla Barron is pictured inside the U.S. Quest airlock, suited up in preparation for a six-hour and 54-minute spacewalk to set up the space station for its next roll-out solar array.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<i>Moon phases</i> <i>U.S. Central Time Zone</i>						
		1	2	3	4	5
						
6	7 <i>Civic Holiday (CSA)</i>	8	9	10	11 <i>Mountain Day (JAXA)</i>	12
						
13	14	15 <i>Assumption of Mary (ESA: HQ, ESTEC, Col-CC)</i>	16	17	18	19
						
20	21	22	23	24	25	26
						
27	28	29 <i>2016: First DNA sequencing in space performed by astronaut Kate Rubins aboard the space station</i>	30	31		



SEPTEMBER 2023





Earth Observations | TOP LEFT: The Richat Structure, also known as the "Eye of the Sahara," an eroded geological dome in the nation of Mauritania, is pictured from station as it orbits 256 miles (412 kilometers) above northwestern Africa. BOTTOM LEFT: Maludam National Park in East Malaysia is comprised of low-lying forests and several rivers that empty into the South China Sea. Station was orbiting 261 miles (420 kilometers) above the Maludam Peninsula when this photograph was taken. TOP RIGHT: The Parínacota and Pomerape stratovolcanoes (top to bottom) are pictured from station as it orbits 263 miles (423 kilometers) above the South American nation of Chile. BOTTOM RIGHT: Rio De Janeiro, Brazil's second-most populous city, is pictured during an orbital night pass from station as it orbits 261 miles (420 kilometers) above.



📍 Houston, Texas, at an altitude of 257 miles (414 kilometers) is pictured from the International Space Station. The bodies of water (from top to bottom) are the Gulf of Mexico, Galveston Bay, Lake Houston, Lake Conroe, and Lake Livingston.



Space station's view of Earth helps farmers water crops, supports disaster response, monitors climate, and more. Seen here is the suite of Earth-observing payloads attached to the Japanese Experiment Module.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p><i>Moon phases</i> <i>U.S. Central Time Zone</i></p>					1	2
3	4 Labor Day (NASA, CSA)	5	6 	7	8	9
10 2009: First JAXA H-II Transfer Vehicle (HTV) launches to the space station	11	12	13	14 	15	16
17	18 2013: First Northrop Grumman Cygnus space freighter launches to the space station Respect for the Aged Day (JAXA)	19	20	21	22 	23 Autumnal Equinox Day (JAXA)
24	25	26	27	28	29 	30 National Day for Truth and Reconciliation (CSA)

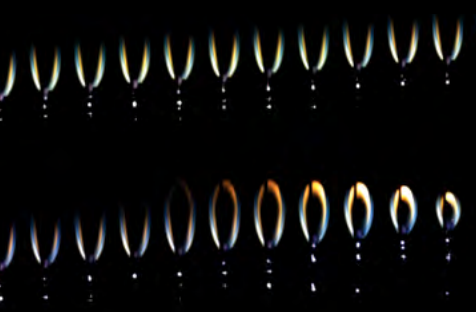


OCTOBER 2023

Liftoff | LEFT: A SpaceX Falcon 9 rocket carrying the company's Crew Dragon spacecraft launches on NASA's SpaceX Crew-3 mission to the International Space Station with NASA astronauts Raja Chari, Tom Marshburn, Kayla Barron, and ESA (European Space Agency) astronaut Matthias Maurer aboard from NASA's Kennedy Space Center in Florida. RIGHT: A United Launch Alliance Atlas V rocket lifts off from Cape Canaveral Space Force Station in Florida for NASA's Boeing uncrewed Orbital Flight Test-2 (OFT-2) for the agency's Commercial Crew Program.



Official NASA portrait of astronaut Tom Marshburn wearing the Extravehicular Mobility Unit spacesuit.



These flames were formed as a part of the Confined Combustion experiment aboard the space station. Understanding how fire spreads and behaves in space is crucial for the safety of future astronauts and for understanding and controlling fire on Earth.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p><i>Moon phases</i> <i>U.S. Central Time Zone</i></p>						
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 2022: NASA's SpaceX Crew-5 launches to the space station	6	7
8	9 Columbus Day (NASA); Health-Sports Day (JAXA); Thanksgiving Day (CSA, Canada)	10 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	
22	23 2007: U.S. Node 2/ Harmony module launches to the space station on STS-120	24 1946: First motion pictures taken of Earth from space by a U.S.-launched V-2 rocket	25	26	27	28
29	30	31				







NOVEMBER 2023

Station's Window to the World from the Inside Out | LEFT: NASA astronauts Bob Hines and Jessica Watkins look out from a window of the cupola. The astronauts use the seven-windowed cupola to monitor the arrival of spaceships at the orbiting lab and view the Earth below. RIGHT: Hines and Watkins are pictured inside the cupola after monitoring the successful rendezvous and docking of the SpaceX Cargo Dragon spacecraft on its 25th Commercial Resupply Services mission.



The Canadian Space Agency's Special Purpose Dexterous Manipulator, also known as Dextre, is pictured attached to the International Space Station's Canadarm2 robotic arm. Dextre is the orbiting lab's fine-tuned robotic hand, designed for precise handling abilities and routine maintenance tasks such as replacing batteries and cameras in the harsh environment of space.

📍 267 miles (430 kilometers) above the South Pacific, an orbital sunset is pictured from the International Space Station.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p><i>Moon phases</i> <i>U.S. Central Time Zone</i></p>						
			1 All Saints' Day (ESA: HQ, Col-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 2021: NASA's SpaceX Crew-3 launches to the space station	11 Veterans Day (NASA); Remembrance Day (CSA)
						
12	13	14	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); Thanksgiving Day (NASA)	24	25
						
26	27	28	29	30		



DECEMBER 2023





📍 270 miles (435 kilometers) above the Indian Ocean, southeast of the African continent, an aurora crowns the Earth beneath a starry sky in this nighttime photograph from the International Space Station.



A trio of CubeSats (TUMnanoSAT, FUTABA, and HSU-SAT1) designed for education and research programs are pictured moments after their deployment.



NASA astronaut Victor Glover poses for a portrait in front of the U.S. Destiny laboratory module's Microgravity Science Glovebox. Managed by NASA's Marshall Space Flight Center in Huntsville, Alabama, the unique lab, which has been aboard the station for more than 20 years, is designed to closely simulate working conditions on the ground.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p><i>Moon phases</i> <i>U.S. Central Time Zone</i></p>						
					1	2
	 <p>1998: Launch of STS-88, the first crew to visit the space station, includes delivery of the first U.S. element of station, Node 1, the Unity connecting module</p>					
3	4	5	6	7	8	9
						
10	11	12	13	14	15	16
						
17	18	19	20	21	22	23
						
24/31	<p>2021: The James Webb Space Telescope launches on an Ariane 5 launch vehicle</p> <p>Christmas Day (NASA, CSA, ESA)</p>	<p>Boxing Day (CSA, ESA: HQ, ESTEC, Col-CC, EAC)</p>	27	28	29	30

International Space Station

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Space Station Research and Technology Overview

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Spot the Station Soaring Over the Sky Near You

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Find these International Space Station resources and more here:



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.



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