

SPACE FLIGHT AWARENESS

National Aeronautics and
Space Administration



PROGRAM 2022

www.nasa.gov/sfa



Featured On Cover:

Artemis I Space Launch System (SLS) and Orion spacecraft awaiting rollout for the wet dress rehearsal.



SPACE FLIGHT AWARENESS PROGRAM 2022

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NASA's Artemis I Mission:

The Orion spacecraft, fully assembled with its launch abort system being lowered on top of the Space Launch System (SLS) rocket.

NASA'S VISION, MISSION, AND STRATEGIC GOALS

THE VISION

Exploring secrets of the universe for the benefit of humanity.

THE MISSION

NASA explores the unknown in air and space

- Exploring at the Moon and on to Mars
- Solving mysteries of our home planet, solar system, and beyond
- Revolutionizing air transportation

NASA innovates for the benefit of humanity

- Improving life on Earth through climate, medical, and technological innovations
- Developing sustainable aviation enabled by green technologies
- Increasing access to space and making our data and innovations accessible to all

NASA inspires the world through discovery

- Leading worldwide partnerships aligned with our values and vision
- Growing new commercial markets to serve NASA and all of America's interests
- Valuing diversity, equity, and inclusion for our current and future workforce

FOUR STRATEGIC THEMES

- Discover
- Explore
- Develop
- Enable



NASA Administrator Sen. Bill Nelson

STRATEGIC GOALS

1. Expand human knowledge through new scientific discoveries.
2. Extend human presence deeper into space and to the moon for sustainable long-term exploration and utilization.
3. Address national challenges and catalyze economic growth.
4. Optimize capabilities and operations.

HISTORY OF SPACE FLIGHT AWARENESS

NASA established the Space Flight Awareness (SFA) Motivation and Recognition Program in 1963 during the Mercury and Gemini period to infuse the space program with a renewed and strengthened consciousness of quality and flight safety. As NASA's human spaceflight programs continued and developed, the NASA centers increased the assistance they provided to the employees' motivation programs of their contractors and other government agencies. SFA soon became the watchword of the American space program.

The SFA Program played an integral and increasingly forceful safety role in the Saturn, Apollo Skylab and Apollo-Soyuz projects. By the time the space shuttle first flew, the program had expanded to include subcontractors providing critical hardware, software and services. As regular Space Shuttle missions grew in complexity and the International Space Station became a reality, the SFA Program evolved into one of the single most successful motivational initiatives within all federal and contractor departments and agencies.

The future of spaceflight brings new opportunities and challenges for the SFA Program. To continue to be effective, the program must keep pace with an ever-changing environment of people, systems and processes that design, build, fly and support human spaceflight.

For that reason, the SFA Working Group work diligently to ensure an effective and valuable program. SFA continues to focus on excellence in quality and safety – for the lives of the astronauts, for mission success and for the success of America's space program.



A MESSAGE FROM THE ASSOCIATE ADMINISTRATORS OF SPACE OPERATIONS & EXPLORATION SYSTEMS DEVELOPMENT

Last year was exceptional!! The human spaceflight accomplishments that NASA achieved in 2021 would not have been possible without the dedication and commitment of our NASA and contractor team. Here are a few notable ways our team led human spaceflight discovery and improved life on Earth in 2021 through continued successful operations and development in low-Earth orbit and with significant progress on our plans for the moon with Artemis – all while safely working under pandemic conditions.

2021 was the 21st continuous year of human presence aboard the International Space Station, and the busiest yet. NASA continued to send astronauts to the orbiting laboratory using commercial spacecraft launched from the agency's Kennedy Space Center in Florida, as well as Russian Soyuz capsules launched

from Kazakhstan. We consistently flew crew to the ISS, overcoming many technical challenges on station while still adding modules and upgrading systems.

NASA's SpaceX Crew-1 mission successfully completed its first expedition flight, carrying astronauts to and from the space station. The mission included the space port relocation of a Crew Dragon spacecraft. Five commercial cargo missions delivered more than 34,800 pounds of science investigations, tools, and critical supplies to the space station, and returned about 14,300 pounds of investigations and equipment to researchers on Earth.

NASA welcomed back to Earth the first two sets of commercial crew astronauts to complete expedition

THE ASSOCIATE ADMINISTRATORS OF SPACE OPERATIONS & EXPLORATION SYSTEMS DEVELOPMENT MESSAGE *(Cont.)*

missions aboard the International Space Station and launched Crew-3 to the orbiting laboratory. During the Crew-2 mission, astronauts spent a U.S. record-setting 199 days in orbit, surpassing the 168 days set by Crew-1 mission earlier this year. Ten new astronaut candidates were selected from more than 12,000 applicants.

Our work on station was rewarded in December 2021, when NASA received the commitment to extend International Space Station (ISS) operations through 2030. This allows us to continue to work with our international partners in Europe (ESA, European Space Agency), Japan (JAXA, Japan Aerospace Exploration Agency), Canada (CSA, Canadian Space Agency), and Russia (State Space Corporation Roscosmos) to enable continuation of the groundbreaking research being conducted in this unique orbiting laboratory through the rest of this decade to benefit people on Earth. The extension will also enhance innovation and competitiveness, as well as advance the research and technology necessary to send the first woman and first person of color to the Moon under NASA's Artemis program and pave the way for sending the first humans to Mars.

The agency advanced plans to explore more of the Moon through Artemis. To pave the way for future

lunar missions with crew, we completed stacking of the Space Launch System rocket, with its Orion spacecraft for the Artemis I mission launching in 2022. In addition, we selected SpaceX to continue the development and demonstration of the first commercial human lunar lander. The breathtaking Artemis I stacked vehicle, Gateway productions, a procurement for new EVA ISS and Exploration suits, an HLS award, multiple successful science payload mission launches, beginning our new optical communication demonstration, and moving out on agreements for both commercial communication capabilities and the development of Commercial LEO destinations were amazing accomplishments.

We want to thank every human spaceflight member for your contributions to our mission success. Your commitment is inspiring. Because of you, we have an expanding human presence in space beyond low Earth orbit in partnership with nations, companies and innovators. Let's continue to focus on the future and work together as we execute an even more exciting year in 2022.

Thank you to NASA and our industry partners in the Space Flight Awareness program for recognizing our amazing team members who make our successes possible.



Associate Administrator for
Space Operations Mission Directorate



Associate Administrator for
Exploration Systems Development
Mission Directorate

SPACE FLIGHT AWARENESS PROGRAM GOALS, OBJECTIVES, AND TEAMS

NASA established the Space Flight Awareness (SFA) program in 1963. It was established as a formal program during the Mercury and Gemini program, to infuse the space program with a renewed and strengthened consciousness of quality and flight safety. Since its inception, SFA's mission has been to ensure that all employees involved in human spaceflight are aware of the impact their actions can have on astronaut safety and mission success. During this time, thousands of individuals were recognized for their contributions to the safety and success of NASA's programs. The key to SFA's longevity is its two-pronged approach to meeting its goal – awareness and recognition.

2022 Space Flight Awareness Program Goals

1. Sponsor employee recognition and motivation events utilizing our astronaut corps and senior management.
2. Sponsor milestone events.
3. Promote current and future human spaceflight missions. Recognize significant accomplishments.
4. Promote awareness of future programs by developing awareness and safety products, and recognize significant program milestones.

Space Flight Awareness Objectives

1. Improve employee awareness on the importance of their role in promoting safety, quality, and mission success.
2. Conduct events that motivate and recognize the workforce and improve employee morale.
3. Function as an internal communications team to disseminate key program safety, quality, and mission messages.
4. Increase awareness of the spaceflight program with a focus on safety and mission success.
5. Maintain supplier motivational and recognition programs.

Space Flight Awareness Program Teams

Products: Produce products that highlight safety and awareness of human spaceflight programs.

Awareness: Increase awareness of the SFA Program. Develops key messages related to astronaut and mission success for human spaceflight.

Supplier: Promote awareness and provide recognition to critical suppliers who provide outstanding products and services in support of the human spaceflight programs and mission.



Crew-5 Mission Logo

SPACE FLIGHT AWARENESS ACTIVITIES, VISITS, AND PRODUCTS



SFA Activities

SFA activities include employee recognition, motivational visits and the development, display and distribution of awareness tools and educational materials.

SFA Visits

SFA works to arrange executive and astronaut visits to help remotely located employees feel that they are part of the human spaceflight team, and to give them an opportunity to get to know those who will use the products they design and build.

SFA Products

SFA uses a variety of products to focus on key aspects of human spaceflight requirements and mission activities:

- Printed products – safety, quality, reliability, mission, astronauts, significant milestones
- Decals – mission and program decals
- Lapel Pins – vehicle, mission, milestones
- Safety Day briefings

NASA astronaut Mark Vande Hei shares hand heart gesture after spending 365 days in space.

SPACE FLIGHT AWARENESS PROGRAM AWARDS

Silver Snoopy Award

This is the astronauts' personal award. To qualify for this award, eligible candidates will have made contributions toward enhancing the probability of mission success or improvements in design, administrative/technical/production techniques, business systems, flight and/or systems safety, or identification and correction or preventive actions for errors. This award is generally not intended for management. Only one Silver Snoopy award per individual is permitted.

Honoree Award

This award is one of the highest presented to NASA and industry and is for first-level management and below. This award is presented to employees for their dedication to quality work and flight safety. To qualify, the individual must have contributed beyond his or her normal work requirements to achieve significant impact on attaining a particular human spaceflight program goal; contributed to a major cost savings; been instrumental in developing modification to hardware, software, or materials that increase reliability, efficiency, or performance; assisted in operational improvements; or been a key player in developing a beneficial process improvement. An honoree may only receive this award once.

Flight Safety Award

This award recognizes significant, outstanding individual or team contributions related to the prevention of anything that could lead to a catastrophic mishap to the vehicle, crew or mission. The approval process for this award includes the SFA Working Group, the Flight Safety Panel, NASA's Chief of Safety and Mission Assurance, the NASA Associate Administrators for Exploration Systems Development and Space Operation Mission Directorates.

Team Award

This award is used to recognize groups of employees that have demonstrated exemplary teamwork while accomplishing a particular task or goal in support of the human spaceflight program.

Supplier Award

This annual award honors outstanding performance by hardware, software, or service suppliers who support NASA human spaceflight programs. Awardees are chosen based on their production of high-quality products, excellent technical and cost performance and adherence to schedules.

Management Award

This award is intended for recognition of proactive mid-level managers who consistently demonstrate loyalty, empowerment, accountability, diversity, excellence, respect, sharing, honesty, and integrity.

Trailblazer Award

This award is used to recognize employees who are in the early stages of their career. Awardees must demonstrate strong work ethic and creative, innovative thinking in support of human spaceflight.

Special Local Award

The SFA Special Local Award is presented to local employees for their dedication to quality work and flight safety and mission success. Awardees will have the opportunity to be recognized at an award program, participate in a special program milestone event, as appropriate, and meet with top NASA and industry officials. The SFA Special Local Award should not be used as recognition for an individual's longevity, retirement, or separation from service.

SPACE FLIGHT AWARENESS 2021 VIRTUAL AWARD CEREMONIES

Trailblazer Award: 2

Team Award: 22

Management Award: 1

Flight Safety Award: 1

ARTEMIS I FLIGHT TEST MAP

ARTEMIS I
The First Uncrewed Integrated Flight Test of NASA's Orion Spacecraft and Space Launch System Rocket

- 1 LAUNCH
SLS and Orion lift off from pad 39B at Kennedy Space Center.
- 2 PERIGEE RAISE MANEUVER
- 3 EARTH ORBIT
Systems check with solar panel adjustments.
- 4 TRANS LUNAR INJECTION (TLI) BURN
Maneuver lasts for approximately 20 minutes.
- 5 INTERIM CRYOGENIC PROPULSION STAGE (ICPS) SEPARATION AND DISPOSAL
ICPS commits Orion to moon at TLI.
- 6 OUTBOUND TRAJECTORY CORRECTION (OTC) BURNS
As necessary adjust trajectory for lunar flyby to Distant Retrograde Orbit (DRO).
- 7 OUTBOUND P FLYBY (OPF)
60 nmi from targets DRO
- 8 LUNAR ORBIT
Enter Distant Retrograde
- 9 DISTANT ORBIT
Perform 1st revolution, 38,000 nmi
- 10 DEPARTURE
Exit Distant Retrograde
- 11 REENTRY
Enter Earth's atmosphere
- 12 PARACHUTE DEPLOYMENT
Parachute deployment
- 13 LANDING
Landing within view of recovery ship.
- 14 RECOVERY
Recovery operations
- 15 RECOVERY
Recovery operations
- 16 RECOVERY
Recovery operations
- 17 RECOVERY
Recovery operations

10/7

Astronaut Jeanette Epps
Prepares for flight aboard the Boeing Starliner-1 mission.

AWARD METRICS

Fiscal Year	Silver Snoopy Awards	Honoree Awards	Flight Safety Awards	Team Awards	Total # of Team Members	Supplier Awards	Management Awards	Local Recognition	Trailblazer Awards	Astronaut Visits
2014	227	28	6	45	2731	0	19	28	0	28
2015	175	166	1	38	618	2	22	0	20	42
2016	190	109	8	44	1469	7	33	6	22	42
2017	157	130	1	39	631	5	23	0	29	37
2018	149	127	0	43	1709	3	35	12	36	18
2019	142	84	4	35	830	5	19	0	22	21
2020	10	46	0	36	912	5	6	0	10	11
2021	34	0	2	66	1872	0	30	0	37	14

FY 2021 METRICS

Silver Snoopy Awards

34

Headquarters	0
Armstrong Research Center	0
Glenn Research Center	0
Goddard Space Flight Center	5
Johnson Space Center	21
Kennedy Space Center	1
Langley Research Center	0
Marshall Space Flight Center	2
NESC	0
NSSC	0
Stennis Space Center	0
DCMA	0
Aerojet Rocketdyne	0
Boeing	5
Lockheed Martin	0
Northrop Grumman	0

Honoree Awards

0

Flight Safety Awards

2

Headquarters	1
Johnson Space Center	1

Team Awards

66

Headquarters	2
Glenn Research Center	0
Goddard Space Flight Center	2
Johnson Space Center	18
Kennedy Space Center	3
Langley Research Center	1
Marshall Space Flight Center	26
DCMA	1
Aerojet Rocketdyne	2
Boeing	11

Team Members Awarded

1872

Headquarters	21
Armstrong Research Center	0
Glenn Research Center	0
Goddard Space Flight Center	39
Johnson Space Center	314
Kennedy Space Center	32
Langley Research Center	36
Marshall Space Flight Center	726
DCMA	11
Aerojet Rocketdyne	30
Boeing	663

Supplier Awards

0

Management Awards

30

Kennedy Space Center	10
Marshall Space Flight Center	1
Aerojet Rocketdyne	1
Boeing	18

Local Recognition Awards

0

Trailblazer Awards

37

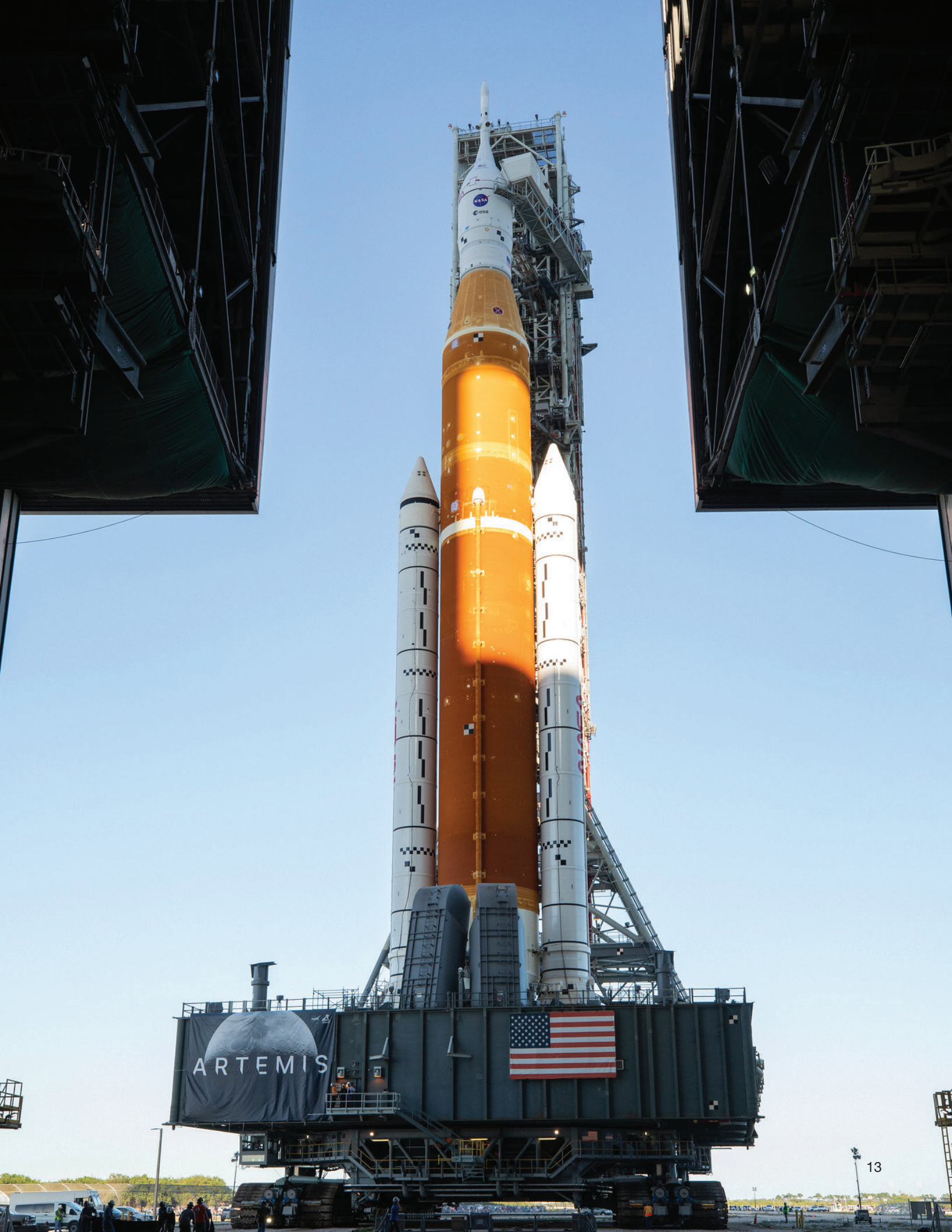
Glenn Research Center	4
Goddard Space Flight Center	2
Kennedy Space Center	16
Marshall Space Flight Center	11
Aerojet Rocketdyne	2
Boeing	2

Astronaut Visits

14

Johnson Space Center	5
Marshall Space Flight Center	2
Boeing	7

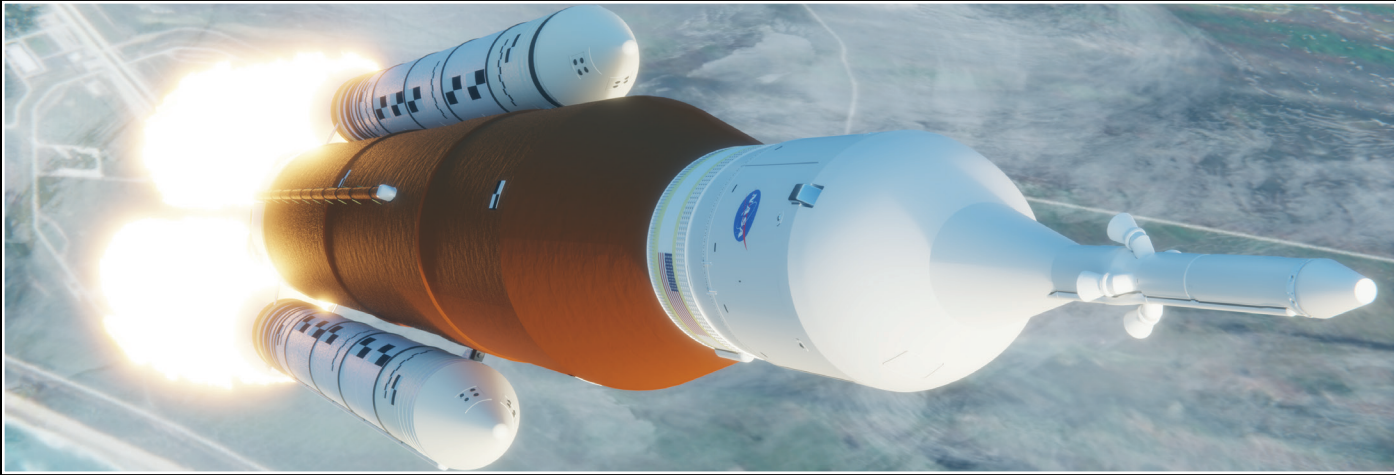
*Due to the pandemic there were no Honoree, Supplier or Local Recognition awards given.



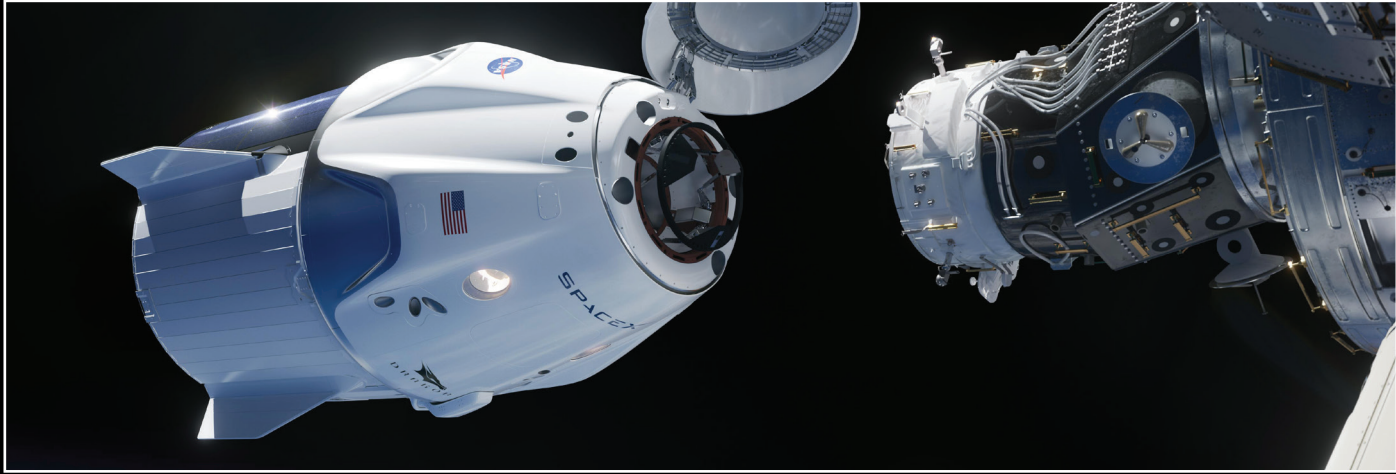
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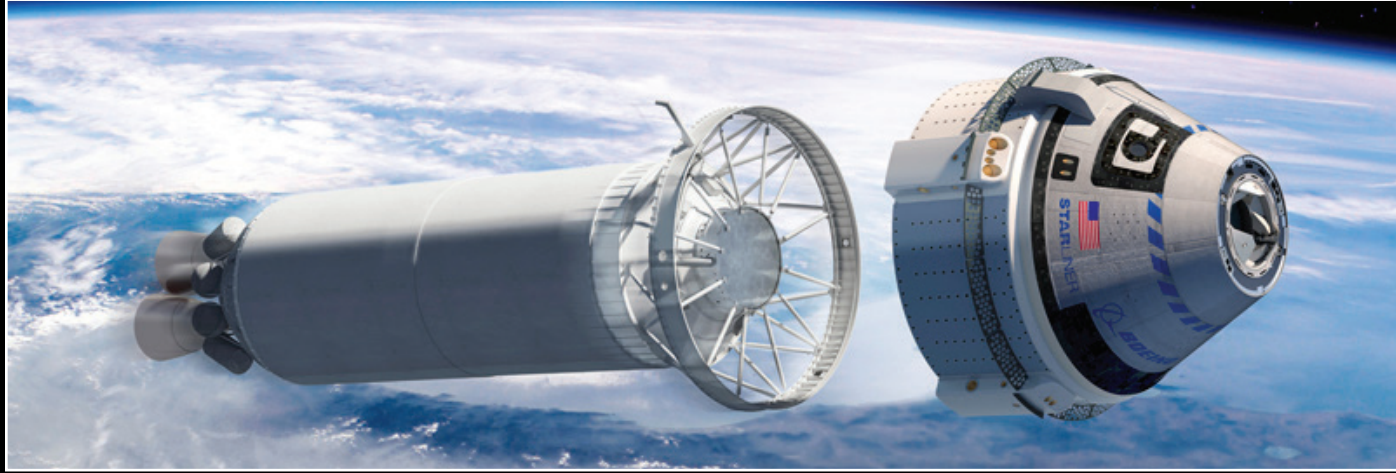
2022 HONOREE EVENTS



Artemis I
Kennedy Space Center, Florida



SpaceX V
Kennedy Space Center, Florida



Boeing Starliner Crewed Flight Test
Kennedy Space Center, Florida

SPACE FLIGHT AWARENESS WORKING GROUP MEMBERS

The SFA Working Group strives to ensure an effective program, one of value to the human spaceflight workforce. The focus of the program continues to be excellence in quality, safety and mission success.

Dr. Alotta Taylor
Office of Space Operations
NASA Headquarters, Program Manager

Shera McNeill*
NASA Headquarters

Susan Anderson
Jessica Cordero
NASA Johnson Space Center

Jane Mosconi
NASA Kennedy Space Center

Amanda Dobbs**
NASA Marshall Space Flight Center

Tessa Keating***
NASA Stennis Space Center

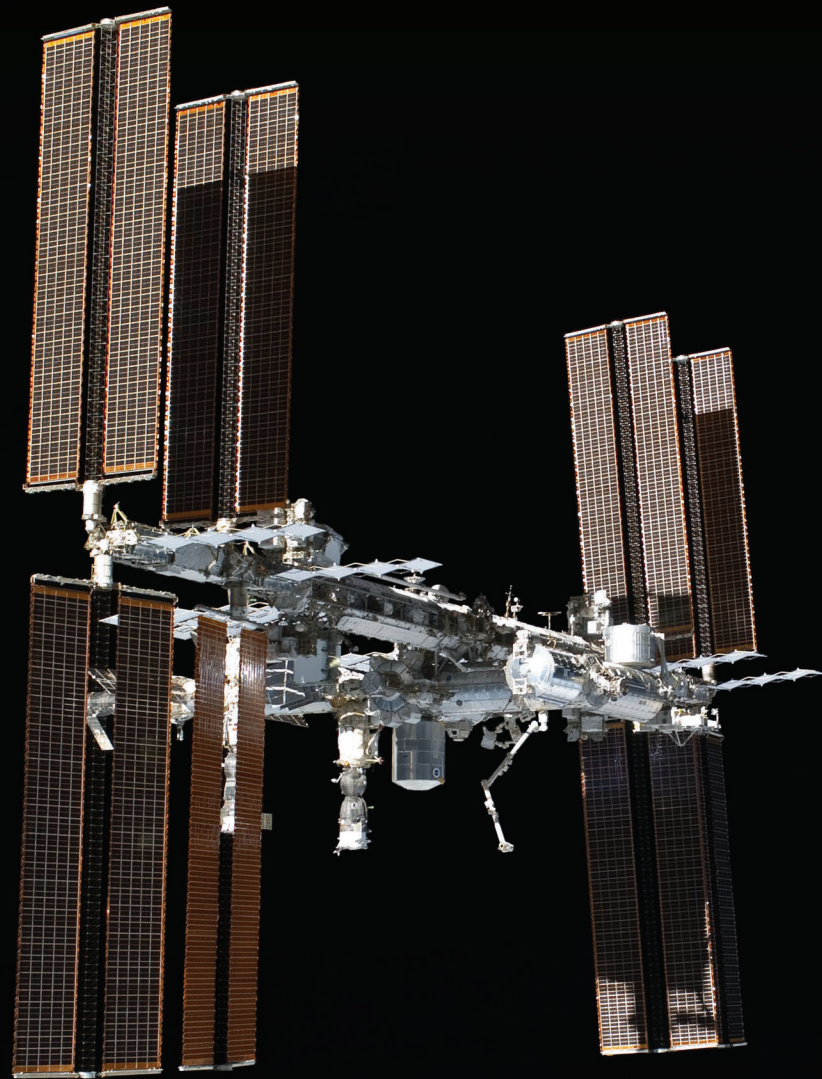
Briana Horton
NASA Goddard Space Flight Center

Julie Zingerman
Aerojet Rocketdyne

Megan Donaldson
The Boeing Company

Kara Denny
Lockheed Martin

Stephanie Williams
Northrop Grumman



* **SFA Working Group member also represents:**
Glenn Research Center, Langley Research Center, and NASA Engineering & Safety Center

** **SFA Working Group member also represents:** NASA Michoud Assembly Facility

*** **SFA Working Group member also represents:** Ames Research Center, Armstrong Flight Research Center, Defense Contract Management Agency, and NASA Shared Services



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