



Top 100 NASA Contractors 2023

and Top 10 Programs



Top 100 NASA Contractors

Currently, NASA is pursuing several key goals encompassing diverse areas like lunar exploration, scientific discovery, and technological advancements.

NASA is setting its sights on the Moon and beyond, aiming for groundbreaking achievements in exploration, science, and technology. This decade will mark a

pivotal moment for the Artemis program, as the agency strives to land astronauts on the lunar surface once again. This ambitious endeavor involves launching the Space Launch System (SLS), Orion spacecraft and the Human Landing System (HLS).

Beyond the Moon, NASA's scientific endeavors reach for Jupiter's intriguing moon, Europa. The Europa Clipper mission takes flight, embarking on a journey to unravel the mysteries of this icy world suspected to harbor a vast ocean beneath its surface. Closer to home, Earth-observing satellites are in service or under construction, providing invaluable data on climate change, ocean health, and global water resources.

Research and development efforts are also underway at the agency including testing of the X-59 Quiet Supersonic Technology (QueSST) aircraft, which aims to revolutionize air travel by achieving supersonic speeds without the disruptive sonic boom. Additionally, the agency continues to push the boundaries of robotic capabilities, developing and demonstrating advanced technologies for future lunar/Mars rovers and sample return missions.

Finally, NASA remains committed to maintaining the International Space Station to 2030, a crucial platform for scientific research and international collaboration.

Fulfilling these goals will be a myriad of contractors, many of which are detailed in the list below along with our take on the Top Ten NASA programs.

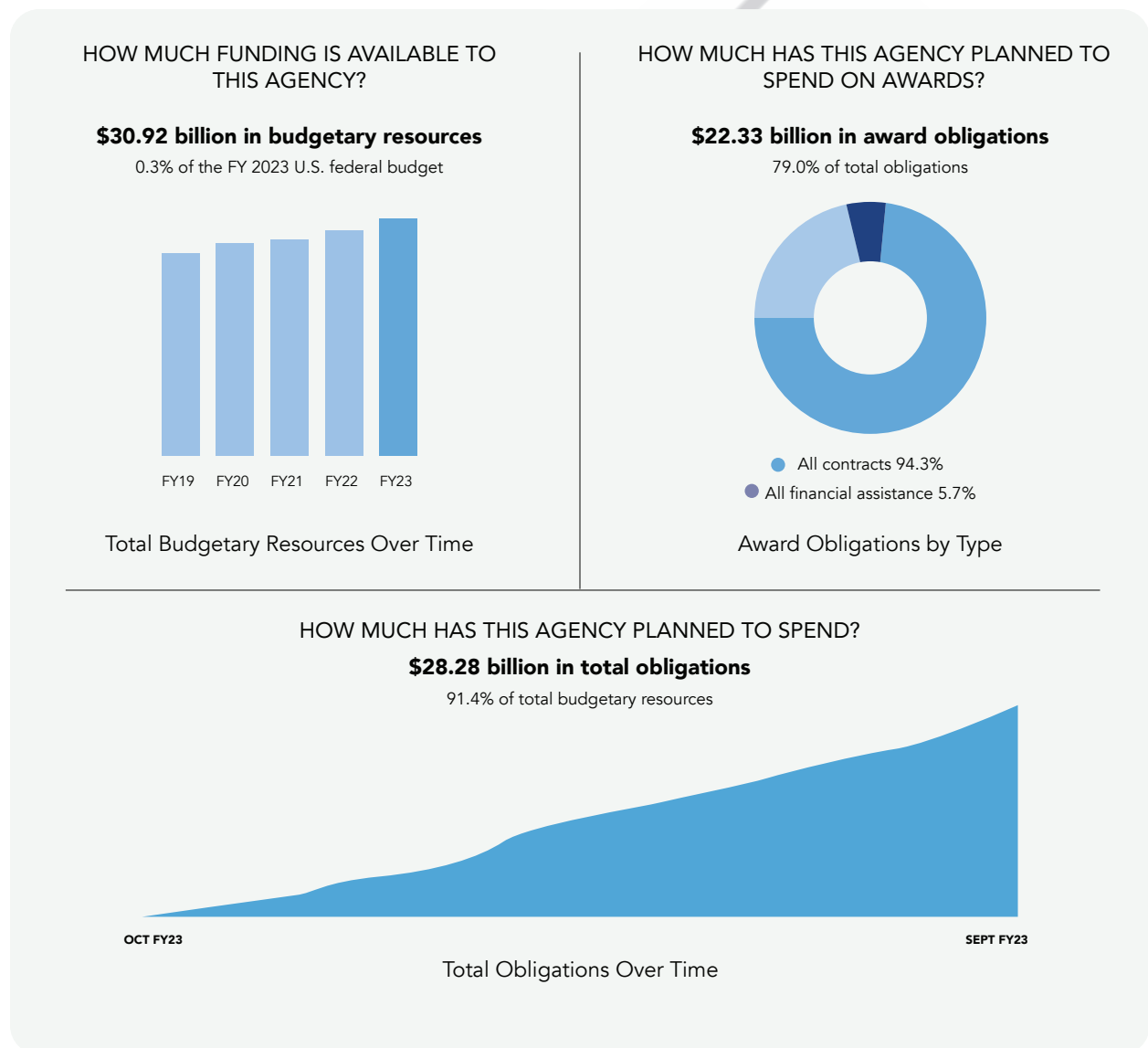




The following data was sourced from USASpending.gov and compiled and processed by Forecast International.

The Top 100 NASA contractors list is ranked by total contract funds awarded. According to USASpending.gov, NASA had contract award obligations of \$22.3 billion in FY23, up almost 5 percent from \$21.3 billion in FY22. The top 100 FY23 contractors accounted for \$19.0 billion (85 percent) of the obligated dollars.

In FY23, NASA's share of available funding was \$30.9 billion, or 0.3 percent of the FY23 U.S. federal budget. This is unchanged as compared to NASA's share of the U.S. federal budget for FY22 of \$29.2 billion, or 0.3 percent.





Current and historical top 100 federal lists are irregularly published on the U.S. General Services Administration’s System for Award Management (SAM) [Top 100 Contractors Report page](#).

PRIME CONTRACTOR	\$ MILLIONS	% TOTAL DOLLARS
1. CALIFORNIA INSTITUTE OF TECHNOLOGY	2,925	13.9%
2. SPACEX	2,252	10.7%
3. THE BOEING COMPANY	1,568	7.5%
4. NORTHROP GRUMMAN CORP	1,255	6.0%
5. LOCKHEED MARTIN CORP	1,222	5.8%
6. JACOBS SOLUTIONS INC	947	4.5%
7. KBR INC	725	3.4%
8. L3HARRIS TECHNOLOGIES INC	607	2.1%
9. THE JOHNS HOPKINS UNIVERSITY	449	2.1%
10. BLUE ORIGIN	441	2.1%
11. SCIENCE APPLICATIONS INTERNATIONAL CORP	426	2.0%
12. LEIDOS INC	356	1.7%
13. PERATON INC	337	1.6%
14. BECHTEL NATIONAL INC	309	1.5%
15. RTX CORP	297	1.4%
16. SCIENCE SYSTEMS AND APPLICATIONS INC	241	1.1%
17. ASRC - ARCTIC SLOP REGIONAL	198	0.9%
18. ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	196	0.9%
19. MAXAR SPACE LLC	183	0.9%
20. AIR PRODUCTS & CHEMICALS INC	172	0.8%
21. SYNCOM SPACE SERVICES LLC	146	0.7%
22. BOOZ ALLEN HAMILTON	143	0.7%
23. AERODYNE-SGT ENGINEERING SERVICES LLC	136	0.6%
24. BALL AEROSPACE & TECHNOLOGIES CORP	130	0.6%
25. ANALYTICAL MECHANICS ASSOCIATES INC	129	0.6%
26. THE AEROSPACE CORP	109	0.5%
27. AMENTUM SPACEPORT LLC	97	0.5%
28. CHENEGA CORPORATION	96	0.5%
29. FIREFLY AEROSPACE INC	95	0.5%
30. MITCHELL VANTAGE SYSTEMS LLC	95	0.5%
31. TELEDYNE BROWN ENGINEERING INC	90	0.4%



PRIME CONTRACTOR	\$ MILLIONS	% TOTAL DOLLARS
32. BARRIOS TECHNOLOGY LTD	82	0.4%
33. ASTROBOTIC TECHNOLOGY INC	75	0.4%
34. ALCYON TECHNICAL SERVICES (ATS) JV LLC	73	0.3%
35. SIERRA LOBO INC	72	0.3%
36. ADNET SYSTEMS INC	70	0.3%
37. RSI-QUANTITECH JV LLC	68	0.3%
38. THE REGENTS OF THE UNIVERSITY OF COLORADO	68	0.3%
39. SMITHSONIAN INSTITUTION	65	0.3%
40. SOUTHWEST RESEARCH INSTITUTE	62	0.3%
41. HX5 LLC	62	0.3%
42. PAE APPLIED TECHNOLOGIES LLC	60	0.3%
43. THE REGENTS OF THE UNIVERSITY OF CALIFORNIA	57	0.3%
44. AMENTUM SERVICES INC	57	0.3%
45. GENERAL ELECTRIC COMPANY	55	0.3%
46. UNIVERSITY SYSTEM OF NEW HAMPSHIRE	55	0.3%
47. BASTION TECHNOLOGIES INC	53	0.3%
48. YULISTA SOLUTIONS LLC	51	0.2%
49. HX5 SIERRA LLC	51	0.2%
50. INUTEQ LLC	50	0.2%
51. INTUITIVE MACHINES LLC	49	0.2%
52. AI SOLUTIONS INC	49	0.2%
53. DYNETICS INC	49	0.2%
54. SIERRA NEVADA CORP	48	0.2%
55. MANUFACTURING TECHNICAL SOLUTIONS LLC	46	0.2%
56. GUARDIANS OF HONOR LLC	43	0.2%
57. TRAX INTERNATIONAL CORP	42	0.2%
58. GENERAL DYNAMICS CORP	42	0.2%
59. HEALTHEON INC	41	0.2%
60. AGILE DECISION SCIENCES LLC	40	0.2%
61. HONEYBEE ROBOTICS LLC	39	0.2%
62. CACI INTERNATIONAL INC	38	0.2%
63. ENGINEERING RESEARCH AND CONSULTING INC	36	0.2%
64. METIS FLIGHT RESEARCH ASSOCIATES LLC	35	0.2%
65. MINBURN TECHNOLOGY GROUP LLC	35	0.2%
66. AXIENT LLC	34	0.2%



PRIME CONTRACTOR	\$ MILLIONS	% TOTAL DOLLARS
67. THUNDERCAT TECHNOLOGY LLC	33	0.2%
68. MORI ASSOCIATES INC	33	0.2%
69. UNIVERSITY OF ARIZONA	33	0.2%
70. OPR LLC	31	0.1%
71. FOUR POINTS TECHNOLOGY LLC	31	0.1%
72. MILLENNIUM ENGINEERING AND INTEGRATION SERVICES LLC	31	0.1%
73. HALVIK CORP	31	0.1%
74. UNIVERSITIES SPACE RESEARCH ASSOCIATION	31	0.1%
75. AXIOM SPACE INC	28	0.1%
76. HSG LLC	27	0.1%
77. MAGNIX USA INC	26	0.1%
78. OAK RIDGE ASSOCIATED UNIVERSITIES INC	25	0.1%
79. JP DONOVAN CONSTRUCTION INC	25	0.1%
80. SP KOROLEV ROCKET AND SPACE PUBLIC CORP ENERGIA	24	0.1%
81. UNIVERSITY OF OKLAHOMA	24	0.1%
82. AECOM	24	0.1%
83. BQMI-PEERLESS JOINT VENTURE LLC	23	0.1%
84. MESSER LLC	23	0.1%
85. MM TECHNOLOGIES LLC	22	0.1%
86. TECHTRANS INTERNATIONAL INC	22	0.1%
87. ALEUT BUILDING COMPANY	22	0.1%
88. STELLAR SOLUTIONS INC	21	0.1%
89. ASTROTECH SPACE OPERATIONS LLC	21	0.1%
90. ZIN TECHNOLOGIES INC	21	0.1%
91. AKIMA SUPPORT OPERATIONS LLC	19	0.1%
92. MACLEAN ENGINEERING & APPLIED TECHNOLOGIES LLC	19	0.1%
93. LEAD BUILDERS INC	19	0.1%
94. SPACE NETWORK SOLUTIONS LLC	19	0.1%
95. NEW HORIZONS AERONAUTICS LLC	19	0.1%
96. ERIE AFFILIATES INC	19	0.1%
97. PLANET LABS PBC	19	0.1%
98. ALUTIIQ FUSION JOINT VENTURE	18	0.1%
99. CBF PARTNERS JV LLC	18	0.1%
100. HONEYBEE ROBOTICS LTD	17	0.1%



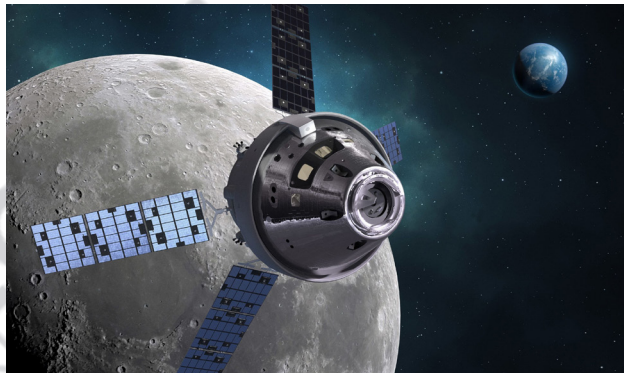
Top 10 NASA Programs

This list compiled from Forecast International's [Space Systems Market Intelligence Services](#) explores ten of the most prominent NASA space programs, offering a glimpse into humankind's ongoing quest to unravel the mysteries of the universe. From venturing to the Moon and Mars to delving into the depths of our planet and beyond, these programs encompass a vast array of endeavors. The list's programs include deep space exploration systems designed to transport astronauts beyond Earth's orbit, lunar programs establishing a foothold on the Moon, and the International Space Station, a beacon of international collaboration. Also detailed are exploration programs dedicated to studying Earth, our neighboring planets and celestial objects, and the Sun's influence on our solar system.

Deep Space Exploration Systems

1. ORION PROGRAM

Orion, formerly known as the Crew Exploration Vehicle (CEV), is a spacecraft designed for crew transport during deep space missions. It consists of four main parts: the Launch Abort System (LAS) for escape during launch, the Crew Module (CM) for astronauts and cargo, the European Service Module (ESM) for supplies and propulsion, and the Spacecraft Adapter for connection to the launch vehicle. This modular design allows for flexibility and upgrades as Orion takes on new missions.



The Crew Module (CM) is the pressurized living space for astronauts onboard Orion. The CM features a "glass cockpit" digital control system similar to modern airplanes, allowing the crew to take manual control if necessary.

The Launch Abort System (LAS) is a critical safety system designed to pull the Crew Module away from a malfunctioning launch vehicle in case of an emergency during launch or ascent. The LAS is designed to activate within milliseconds and propel the CM to a safe distance from the launch vehicle, ensuring crew safety.

The European Service Module (ESM), provided by the European Space Agency (ESA), is the source of power for Orion. This module supplies propellant for the main engine and thrusters, generates electrical power through solar panels, and stores water and oxygen for the crew.

Orion, the main spacecraft in Artemis III (The first Artemis mission to land Astronauts on the lunar surface), will transport astronauts to lunar orbit and serve as their living quarters during the journey. While two astronauts explore the lunar surface using a separate Human Landing System (HLS), the other two will stay in Orion. After lunar activities, the crew will reunite in Orion for the return trip to Earth.



2. SPACE LAUNCH SYSTEM (SLS)

The Space Launch System (SLS) is a rocket designed to propel crew and cargo beyond the confines of low-Earth orbit. This super heavy-lift launch vehicle serves as the backbone of NASA's Artemis program. The initial version leverages components from the Space Shuttle program, as SLS consists of a core stage equipped with four RS-25 engines, an upper stage, and side-mounted boosters. Future iterations plan to incorporate even more powerful boosters, potentially increasing this capacity to 130 metric tons.

The development of SLS has been a lengthy process marked by several delays. Initially slated for a 2018 launch, the first uncrewed mission, Artemis I, encountered numerous hurdles that pushed its launch date to November 2022. Despite these setbacks, the successful launch of Artemis I marked a significant milestone in NASA's deep space exploration endeavors and served as a critical test flight for the Orion spacecraft.

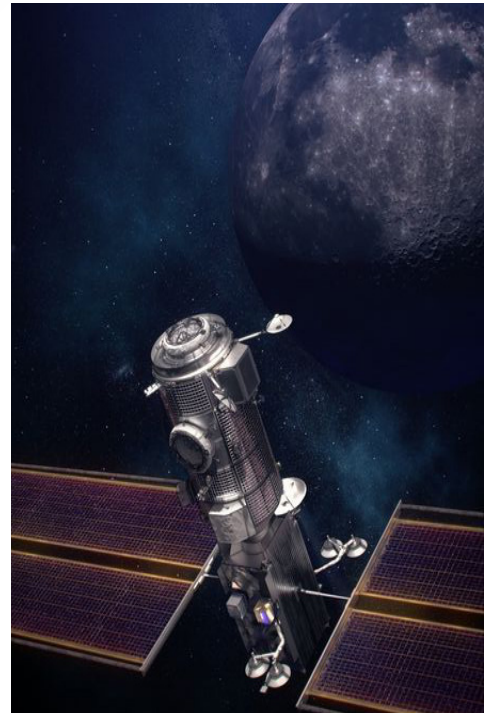
While SLS is primarily focused on supporting Artemis missions and returning humans to the Moon, its capabilities extend far beyond. This powerful launch vehicle can also be used for deep space exploration missions venturing farther into Space.

Lunar Systems

3. GATEWAY

The Lunar Gateway, a planned space station, will orbit the Moon as part of NASA's Artemis program. This lunar outpost will serve several purposes: it will be a staging point for astronauts landing on the Moon, conduct scientific experiments, and support deep space exploration missions. Similar to the International Space Station, the Gateway will consist of multiple modules that can be added to over time.

The initial configuration of the Lunar Gateway is planned to include four modules with two initially. The Power and Propulsion Element (PPE) will provide electricity and maneuvering capability for the station. The Habitation and Logistics Outpost (HALO) will serve as the crew's living quarters, offering essential systems for command, life support, and communication.





Future additions to the Gateway include the European System Providing Refueling, Infrastructure and Telecommunications (ESPRIT) Module, which will supply extra propellant and communication equipment. An International Habitation Module is also planned to provide more living space for astronauts. In addition to these modules, the Gateway will be equipped with Canadarm3, a robotic arm similar to the one used on the International Space Station. This robotic arm will be crucial for conducting experiments and performing maintenance on the Gateway. Gateway is much smaller than the International Space Station and will first be utilized on Artemis IV and following missions.



4. HUMAN LANDING SYSTEM

NASA's Artemis program aims to return humans to the Moon. As part of this initiative, the Human Landing System (HLS) will ferry astronauts between lunar orbit and the surface. This spacecraft is being designed to dock with the Gateway space station or Orion (on Artemis III), accommodate larger crews, and deliver more equipment to the lunar surface compared to previous landers.

To achieve these goals, NASA is partnering with American companies to develop the HLS. Currently, SpaceX is the primary contractor, and their Starship HLS is slated to deliver the first astronauts to the Moon on Artemis III. This Starship is a reusable launch vehicle and spacecraft combination that will be the most powerful rocket ever built when fully operational. It will be capable of carrying astronauts beyond Earth's orbit to destinations like the Moon and Mars.

Space Operations

5. ISS

The International Space Station (ISS) has been a collaborative effort between several space agencies, including NASA, the Russian Space Agency (RSA), the European Space Agency (ESA), and JAXA (Japan). Construction of the ISS involved three phases, culminating in a fully functional space station in low-Earth orbit.

The ISS is comprised of numerous components from various space agencies. The ESA contributes to the Columbus Orbital Facility (COF), a pressurized research laboratory. Japan's JEM is a multi-part module that includes a pressurized laboratory, an experiment logistics module, and an exposed facility. Canada's major contribution is the Mobile Servicing System (MSS), a robotic arm system that can be used for various tasks.



6. SPACE TRANSPORTATION

Space Transportation manages the vehicles and missions that deliver astronauts and cargo to the International Space Station (ISS). This includes the Commercial Crew Program (CCP) and the Crew and Cargo Program.

The CCP partners with private companies to develop spacecraft for crew transportation. NASA awarded contracts to Boeing and SpaceX (for their Starliner and Crew Dragon capsules respectively) to ensure safe and reliable crew transport to the ISS. These capsules are designed to ferry astronauts to and from the space station, reducing reliance on Russian Soyuz spacecraft. The Starliner capsule has yet to complete a successful crew mission as of April 10, 2024, while the Crew Dragon has performed multiple successful crewed missions, solidifying its place as a key vehicle in NASA's astronaut transportation strategy.

The Crew and Cargo Program contracts with companies for cargo transportation to the ISS. These include Northrop Grumman's Cygnus, Sierra Space's Dream Chaser (still under development), and SpaceX's Dragon capsule.



Science

7. EARTH SCIENCE

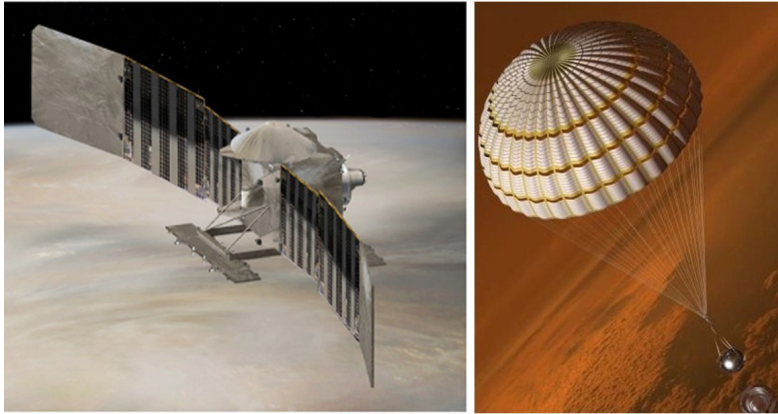
Earth science satellites collect data on a wide range of Earth's systems, including land, ocean, and atmosphere. These satellites provide information that is used to monitor climate change, weather patterns, and natural hazards.

Earth science satellites include the GPM Core Observatory, which measures global precipitation, SMAP, which measures soil moisture, and ICESat-2, which measures ice sheet thickness. These satellites and others like them provide a wealth of data that is used to improve



our understanding of Earth and how it works. Newer programs like PACE (launched in early 2024) will study interactions between the ocean and the atmosphere, specifically focusing on plankton, aerosols, clouds, and the ocean ecosystem. The NASA-ISRO SAR mission (launch in 2024) is a joint US-India mission designed to study land surface changes and natural hazards using synthetic aperture radar.

The GRACE-Follow On (GRACE-FO) mission, launched in 2018, is a continuation of the earlier GRACE mission that measures Earth's gravity field and will be followed by the GRACE-C mission (2028). By monitoring tiny fluctuations in gravity, scientists can infer changes in the mass distribution of water, ice, and land. These missions, along with the ongoing operations of older satellites, demonstrate continued international cooperation and commitment to comprehensive Earth observation.



8. PLANETARY SCIENCE

Planetary science missions are robotic spacecraft designed to explore planets, moons, asteroids, comets and other objects in our solar system. These missions provide us with valuable data about the composition, atmosphere, geology and history of these celestial bodies.

More recent missions include InSight, which is studying the interior of Mars, and Lucy, which is on its way to study several Trojan asteroids that share Jupiter's orbit. The Psyche mission is studying a metallic asteroid that may be the core of a planet. Future missions include DAVINCI+ (2026), which will dive into the atmosphere of Venus, and VERITAS (2031), which will orbit Venus and map its surface using radar. The NEO Surveyor mission will identify and characterize near-Earth asteroids that could potentially impact Earth.

The Europa Clipper mission will explore Jupiter's moon Europa, which is thought to have a vast ocean beneath its icy surface. The Dragonfly mission will explore Titan, Saturn's largest moon, which has a thick atmosphere and lakes of liquid methane. These missions and others are helping us to understand our place in the solar system and the possibility of life beyond Earth.

9. ASTROPHYSICS

NASA's Astrophysics missions use telescopes and spacecraft to study a wide range of celestial objects, from nearby planets to distant galaxies. These missions allow scientists to peer deep into space and time, to understand the origins and evolution of the universe, and to search for exoplanets that might harbor life.



One of the most famous telescopes is the Hubble Space Telescope, launched in 1990. Hubble has revolutionized our understanding of the cosmos, providing stunning images of galaxies, nebulae, and star clusters. It has also helped to measure the expansion rate of the universe, a key factor in our understanding of its age and ultimate fate. The Nancy Grace Roman Space Telescope, currently planned for launch in 2027, will build on Hubble's legacy by conducting wide-field surveys of the universe to map the distribution of dark matter, explore exoplanets, and study the evolution of galaxies.

Another major mission is the James Webb Space Telescope (JWST), launched in December 2021. JWST is the most powerful space telescope ever built, and it is designed to study the universe in the infrared spectrum. This will allow JWST to see further back in time than Hubble, to observe the formation of the first stars and galaxies, and to peer through the dust clouds that shroud the birthplaces of stars and planets. The SPHEREx mission, planned for launch in 2025, will take a more holistic approach, creating the first all-sky survey in the near-infrared and mid-infrared wavelengths. This data will shed light on the formation of stars and planets, the evolution of galaxies, and the composition of asteroids and comets.

10. HELIOPHYSICS

NASA's Heliophysics missions focus on understanding the Sun and its influence on Earth and the wider solar system. This includes studying the Sun's atmosphere, the flow of charged particles known as the solar wind, and the Sun's magnetic field. Understanding these phenomena is crucial for protecting satellites and astronauts in space, as well as for predicting and mitigating the effects of solar storms on Earth's power grids and communication systems.



Future missions include the Multi-Slit Solar Explorer (MSE), planned for launch in roughly 2026. MSE will use a new type of telescope to image the Sun's atmosphere in unprecedented detail, providing insights into the processes that drive solar flares and eruptions. The Helioswarm mission, also planned for launch in 2028, will take a different approach, studying the Sun and the solar wind from a unique vantage point farther out in space. By combining data from these and other Heliophysics missions, scientists are working to create a more comprehensive understanding of the Sun's influence on our solar system and its impact on Earth.

ABOUT FORECAST INTERNATIONAL

Accurate and reliable market forecasts are more critical than ever to achieving success. For over 50 years, Forecast International has been setting the industry standard for defense and aerospace research and analysis. Our unmatched expertise has served our clients well when markets change rapidly in response to dramatic global events. FI remains steadfast in its mission of delivering actionable intelligence that reduces uncertainties and makes the future as predictable as it can be. Visit forecastinternational.com to learn more.

SERVICES AND CONTRIBUTORS

Space Systems Forecast

Authored by Carter Palmer, this library includes two Space Systems Market Intelligence Services, one covering launch vehicles and the other, satellites and spacecraft. The Launch Vehicles product features programs on reusable and expendable launch vehicles and human spaceflight vehicles. The Satellites & Spacecraft service covers systems ranging from microsatellites to large COMSATS. Both volumes provide global coverage of the major players and market trends and contain individual reports with 10- or 15-year production or funding forecasts. Completing the books are Market Segment Analyses on Orbital Launch Vehicles (Launch Vehicles service) and Military Satellites, Civil & Commercial Remote Sensing Satellites, and Commercial Communications Satellites (Satellites & Spacecraft service).

Defense & Aerospace Companies

The Volume I North America companies service, authored by Richard Pettibone, includes coverage of over 100 key U.S. and Canadian primes and their subsidiaries. Each of the 39 reports contains data on recent programs, mergers, and joint ventures. Among the notable corporations covered are OEMs such as Boeing, Lockheed Martin, RTX, and General Dynamics. Also featured are Tier I and Tier II contractors such as Pratt & Whitney, Honeywell, Parker Hannifin, and Spirit AeroSystems.

The Volume II International Companies service includes coverage of over 90 top companies and subsidiaries outside North America, with a focus on key players in Europe and Asia. Each of the volume's 50+ reports contains data on recent programs, mergers, and joint ventures. Among the notable corporations covered are OEMs such as Airbus, Aviation Industry Corporation of China (AVIC), BAE Systems, and Embraer. Also featured are Tier I and Tier II contractors such as Rolls-Royce, Hanwha, Rafael, RUAG, and IHI Corporation.



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