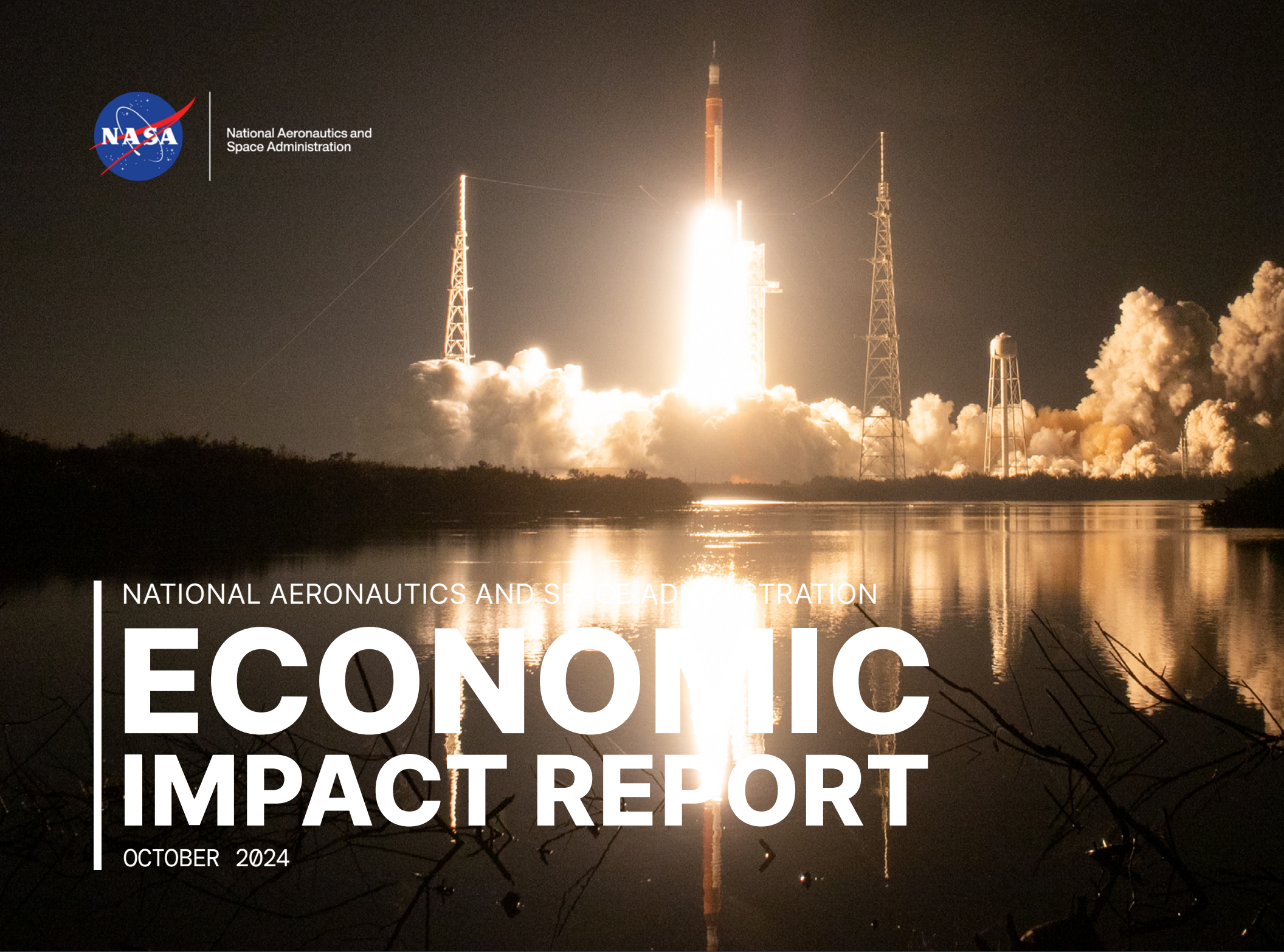
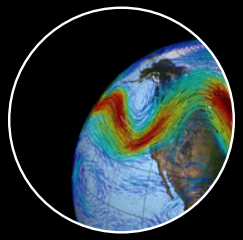
National Aeronautics and Space Administration

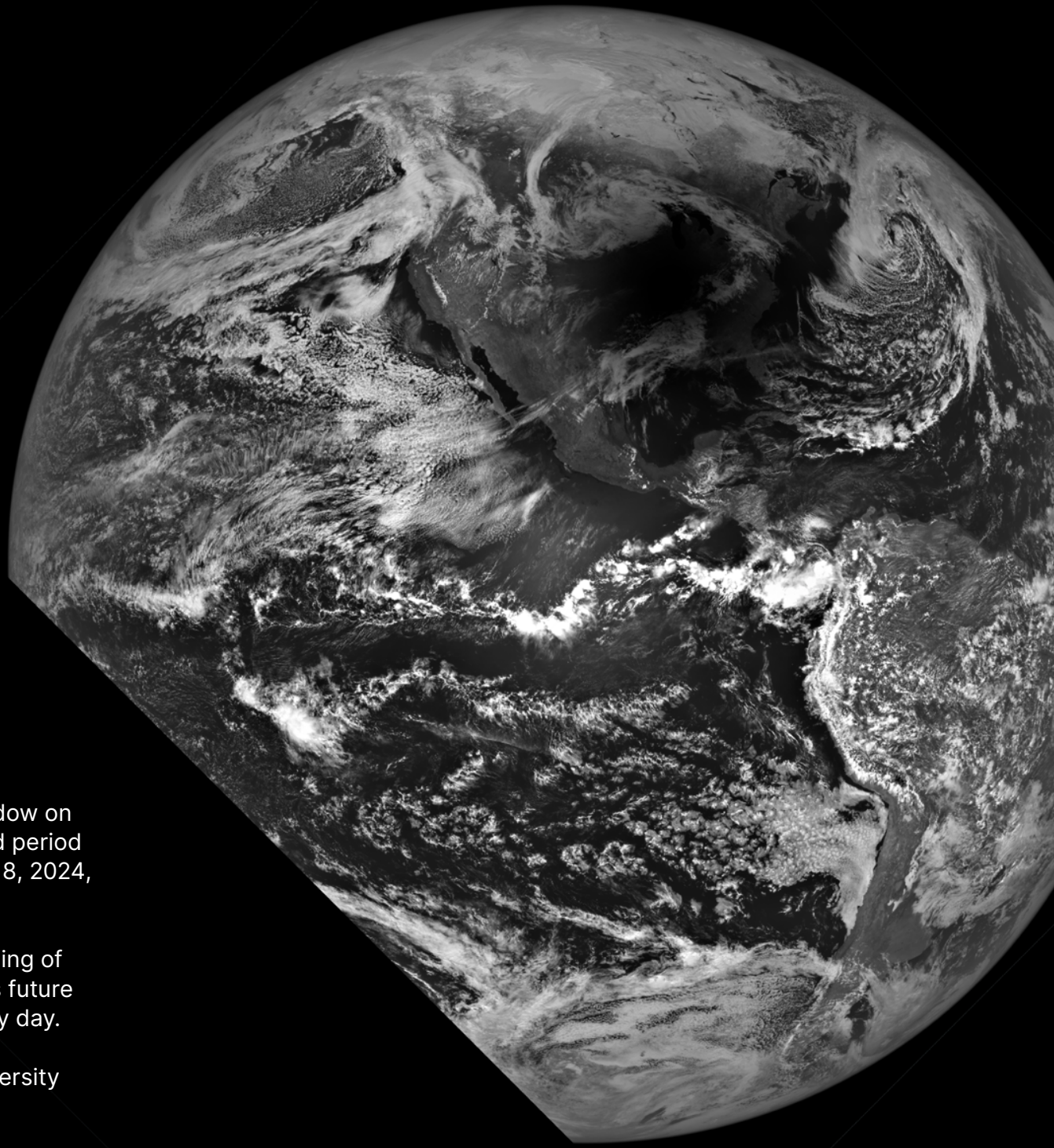
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

ECONOMIC IMPACT REPORT

OCTOBER 2024







Seeing the Solar Eclipse from 223,000 Miles Away

This spectacular image showing the Moon's shadow on Earth's surface was acquired during a 20-second period starting at 2:59 p.m. EDT (18:59:19 UTC) on April 8, 2024, by NASA's Lunar Reconnaissance Orbiter.

NASA's work doesn't just expand our understanding of the universe —it fuels economic growth, inspires future generations and improves our quality of life every day.

Image Credit: NASA/Goddard/Arizona State University

INTRODUCTION

To invest in NASA is to invest in American workers, American innovation, the American economy, and American economic competitiveness. As NASA's Economic Impact Report for fiscal year 2023 (FY23) shows, NASA's leadership on the future of space exploration, scientific discovery, cutting-edge technology, climate observation, the next generation of aeronautics, and so much more brings value to the American people day in and day out—from supporting quality, high-paying jobs to fueling industry growth.

This report showcases economic activity driven by our Moon-to-Mars campaign and investments in climate change research and technology. The report's brochure also highlights the International Space Station's groundbreaking research, NASA's wide-ranging international partnerships, NASA's innovations in aeronautics, NASA's leadership to develop a robust low Earth orbit economy, and our agency's technological advancements, among others. During FY23, using an investment of less than one-half of 1% of the federal budget, NASA's activities generated more than $75 billion in total economic output, supported more than 304,000 jobs nationwide, and made an economic impact in all 50 states and the District of Columbia.

In FY23, through the Artemis campaign, NASA's commitment to long-term exploration on the Moon and in space generated nearly $24 billion in economic output and supported more than 96,000 jobs. In addition, in FY23, NASA continued to work with a wide range of U.S. companies to advance our Moon-to-Mars efforts. From cutting-edge research on rocket propulsion to developing new technology for sustained presence on the lunar surface, NASA's work on the Moon-to-Mars campaign accrues important economic benefits to the American people—all as we prepare for human missions to the Red Planet.

NASA's economic impact also emerges from NASA's STEM investments, sustainable aviation technologies, and climate monitoring.

Our investments in research and technology related to climate change, for instance, continue to provide important benefits to the American people, supporting more than 32,000 jobs nationwide and generating nearly $8 billion in economic output in FY23. Through NASA's fleet of more than two dozen Earth-observing satellites and instruments—and more than six decades of Earth observations—NASA provides a unique and indispensable vantage point to study our changing planet. We share that data freely and fully with all of humanity to help the world understand climate change and take action.

NASA's work doesn't just expand our understanding of the universe—it fuels economic growth, inspires future generations, and improves our quality of life. As we embark on the next great chapter of exploration, we are proud to help power economic strength, job creation, scientific progress, and American leadership on Earth, in the skies, and in the stars.

Bill Nelson

Administrator
National Aeronautics and Space Administration


ARTEMIS II
FOR ALL HUMANITY


ARTEMIS II
FOR ALL HUMANITY

NASA's National Economic Impact

NASA's presence and influence stretch far beyond its field centers located across the nation. While the recent spotlight on the Artemis II mission and its crew selection highlights the agency's commitment to diversity and innovation, it also highlights the profound economic impact of NASA's initiatives on U.S. soil. It's not just the states with active NASA facilities that benefit from NASA's economic impact; all 50 states and the District of Columbia benefit economically from NASA's aerospace research and space exploration endeavors.

The ripple effect of NASA's research, development, and missions like Artemis II permeates the entire U.S. economy. These ventures strengthen high-tech sectors, fostering the creation and maintenance of tens of thousands of knowledge-intensive jobs that keep the nation at the forefront of innovation. Beyond the immediate impact, NASA continually channels investments into key technologies, ensuring the U.S. upholds its competitive edge on the global stage. These strategic outlays not only amplify U.S. businesses' productivity but also reinforce the nation's position as a global leader in aerospace and related industries.

FY 2023

FY23 NASA's Efforts

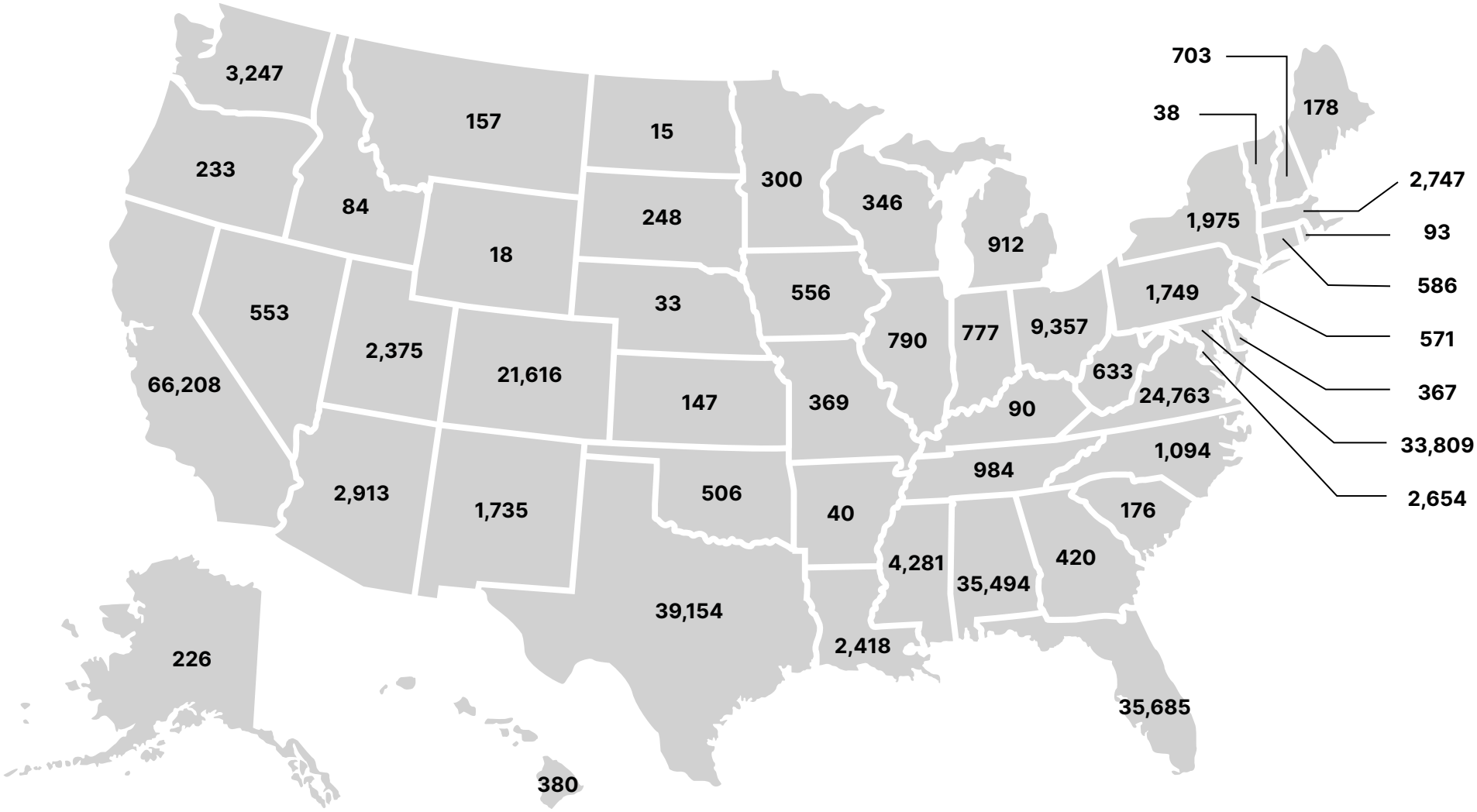
Impacted all 50 states and the District of Columbia.

$75.6B Generated a total economic output of more than $75.6 billion.

304,803 Supported an estimated 304,803 jobs.

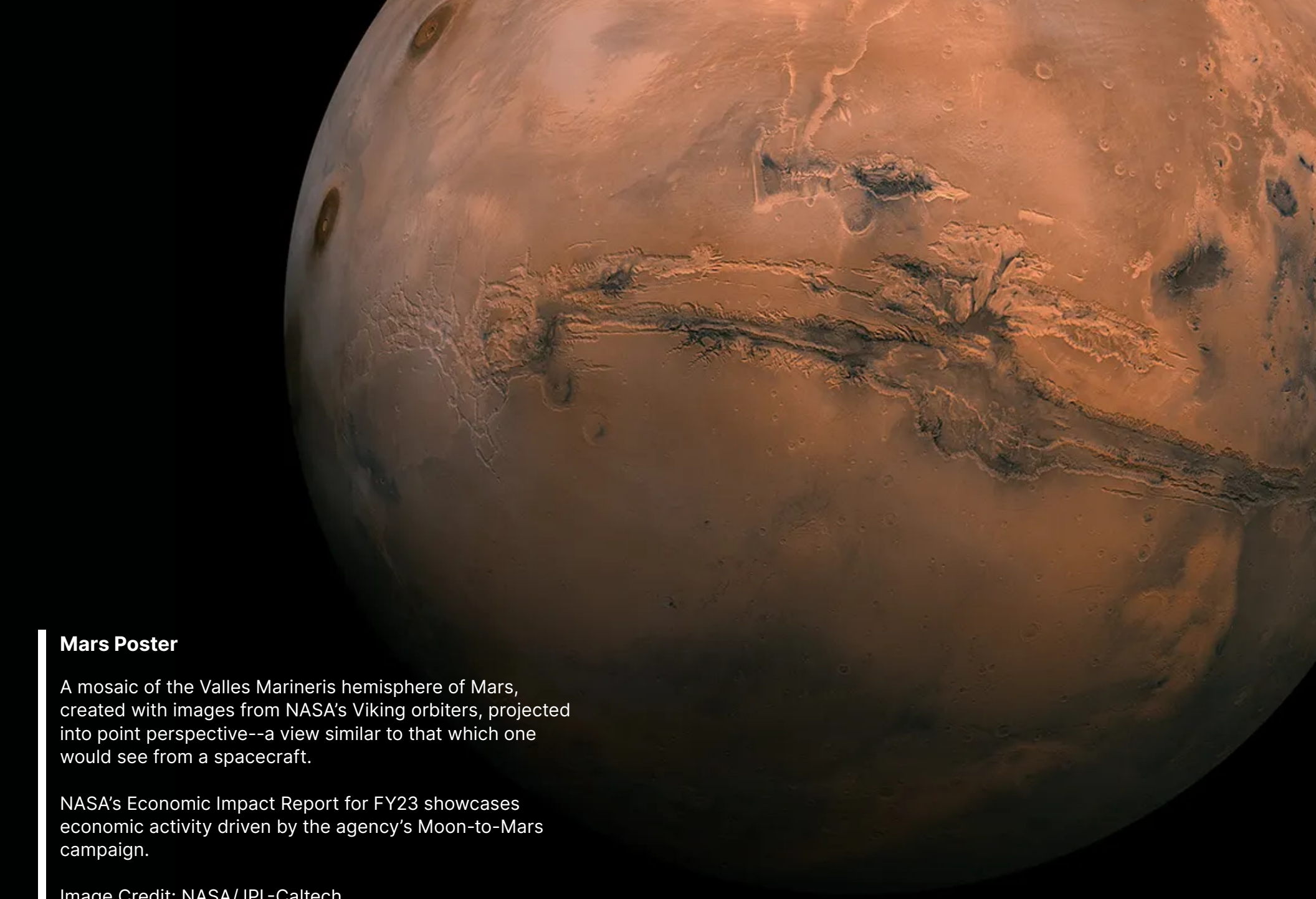
$9.5 B Resulted in more than $9.5 billion in federal state, and local tax revenues.

NASA Employment Impact by State



NASA Output Map Impact by State

Alabama	$8,072,329,000
Alaska	$47,913,000
Arizona	$649,920,000
Arkansas	$8,656,000
California	$18,593,591,000
Colorado	$5,104,580,000
Connecticut	$138,456,000
Delaware	$70,221,000
Florida	$8,297,298,000
Georgia	$100,744,000
Hawaii	$78,958,000
Idaho	$17,818,000
Illinois	$196,349,000
Indiana	$195,005,000
Iowa	$121,798,000
Kansas	$33,234,000
Kentucky	$21,288,000
Louisiana	$507,376,000
Maine	$39,977,000
Maryland	$8,266,465,000
Massachusetts	$718,366,000
Michigan	$204,269,000
Minnesota	$70,482,000
Mississippi	$854,438,000
Missouri	$83,271,000
Montana	$31,828,000
Nebraska	$7,403,000
Nevada	$105,606,000
New Hampshire	$162,026,000
New Jersey	$145,074,000
New Mexico	$362,404,000
New York	$517,343,000
North Carolina	$204,181,000
North Dakota	$3,239,000
Ohio	$2,412,465,000
Oklahoma	$109,423,000
Oregon	$53,974,000
Pennsylvania	$409,048,000
Rhode Island	$20,450,000
South Carolina	$40,392,000
South Dakota	$46,373,000
Tennessee	$224,263,000
Texas	$9,855,142,000
Utah	$486,640,000
Vermont	$9,159,000
Virginia	$6,106,081,000
Washington	$884,031,000
Washington, DC	$712,426,000
West Virginia	$140,873,000
Wisconsin	$75,221,000
Wyoming	$4,255,000



Mars Poster

A mosaic of the Valles Marineris hemisphere of Mars, created with images from NASA's Viking orbiters, projected into point perspective--a view similar to that which one would see from a spacecraft.

NASA's Economic Impact Report for FY23 showcases economic activity driven by the agency's Moon-to-Mars campaign.

Image Credit: NASA/JPL-Caltech

Moon to Mars (M2M) Campaign

NASA's advanced lunar exploration endeavors are spearheaded by the Artemis II mission, marking the inaugural journey of a crew aboard the SLS (Space Launch System) and the Orion spacecraft. This mission is instrumental in certifying that the spacecraft's systems function seamlessly in the deep-space environment. Paving the path for future lunar surface expeditions, Artemis II emphasizes diversity, planning for the first woman, first person of color, and first international person to step onto the lunar surface. These initiatives aim not only for short-term achievements but also for the establishment of long-term lunar research and exploration, igniting the passion of the upcoming Artemis Generation of explorers.

At the heart of this mission is Orion's European-built service module, designed to propel the spacecraft out of Earth's orbit and set a trajectory for the Moon. This significant trans-lunar injection burn will take astronauts on an approximately four-day outbound trip, guiding them around the Moon's far side and eventually forming a figure-eight trajectory that spans over 230,000 miles from Earth. Harnessing the natural gravitational interplay between Earth and the Moon, Orion's trajectory ensures a fuel-efficient return, without the need for additional propulsion.

U.S. companies play a pivotal role in advancing lunar exploration, starting with the delivery of cutting-edge scientific instruments and innovative technology to the Moon's surface. This effort is followed by the introduction of the "Gateway" spaceship, which orbits the Moon and acts as a nexus for both human and scientific endeavors. Human landers, another product of American ingenuity, will transport the four-person crew to the lunar terrain.

For more examples:

https://www.nasa.gov/MoonToMarsArchitecture/

FY 2023

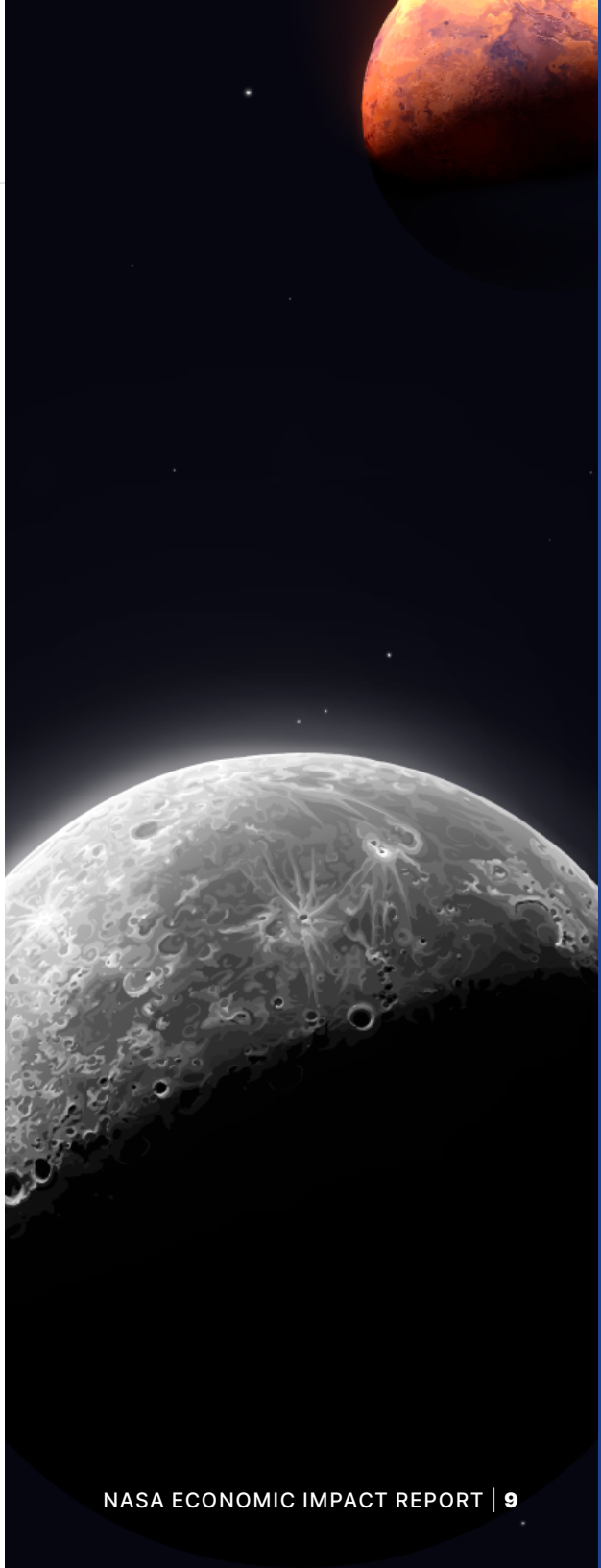
FY23 NASA's Efforts

Impacted all 50 states and the District of Columbia.

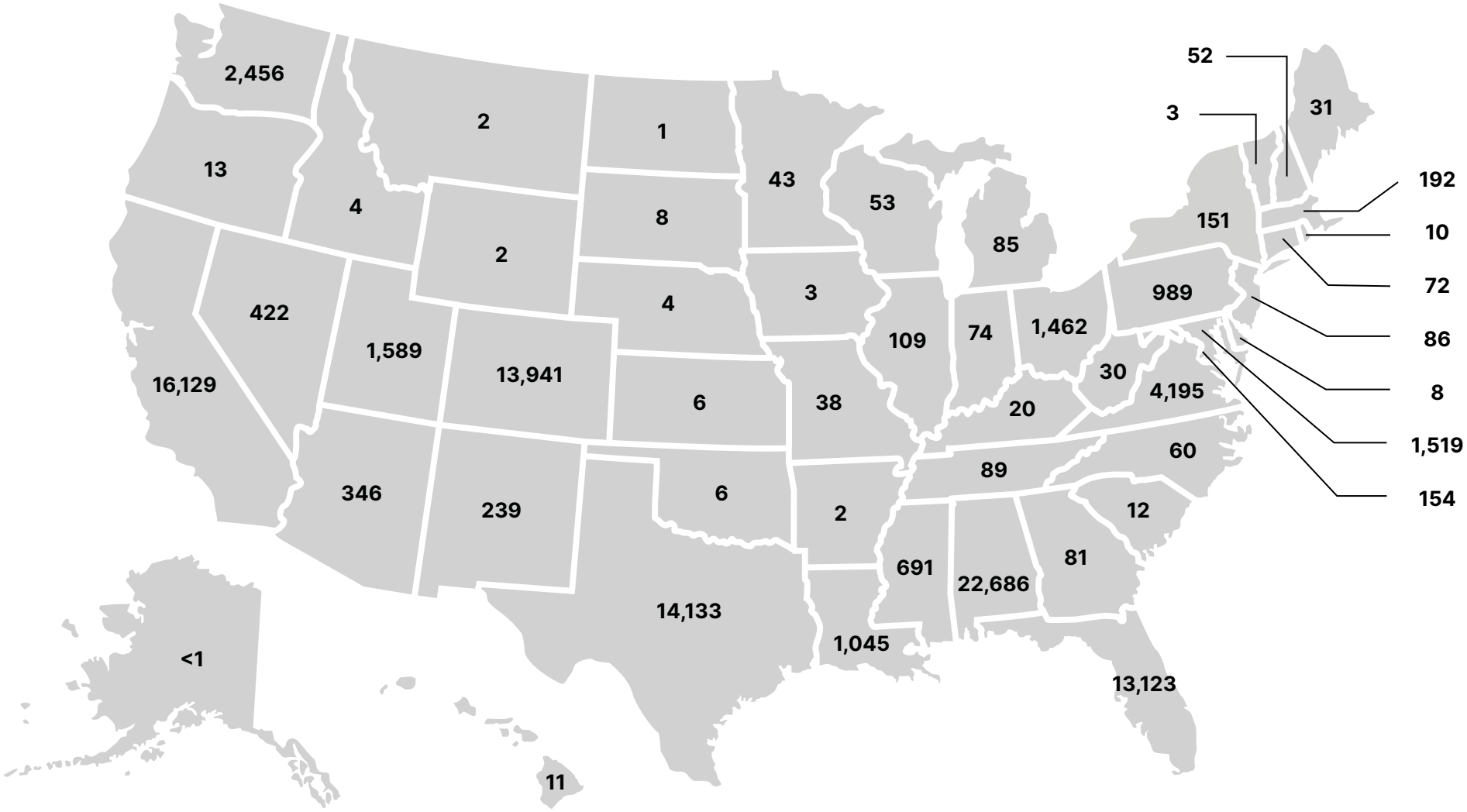
$23.8B Generated a total economic output of more than $23.8 billion.

96,479 Supported an estimated 96,479 jobs.

$2.9 B Resulted in more than $2.9 billion in federal state, and local tax revenues.

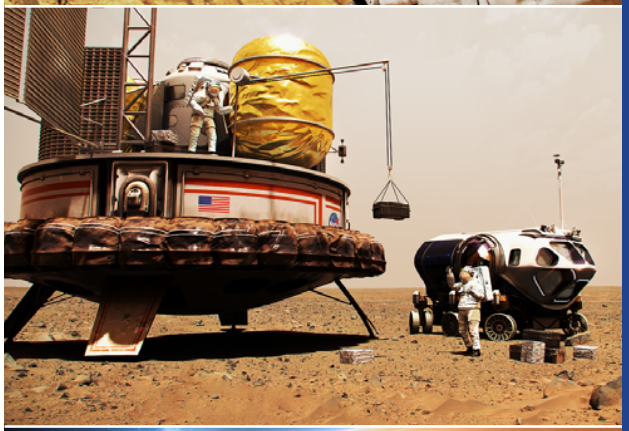


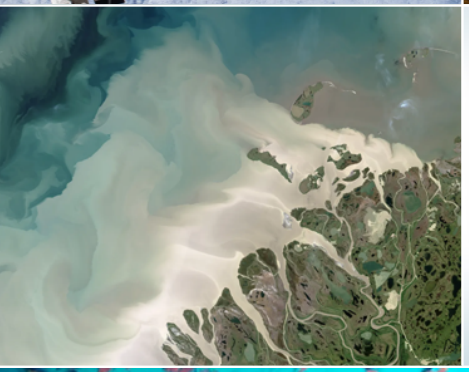
Moon to Mars Campaign Employment by State

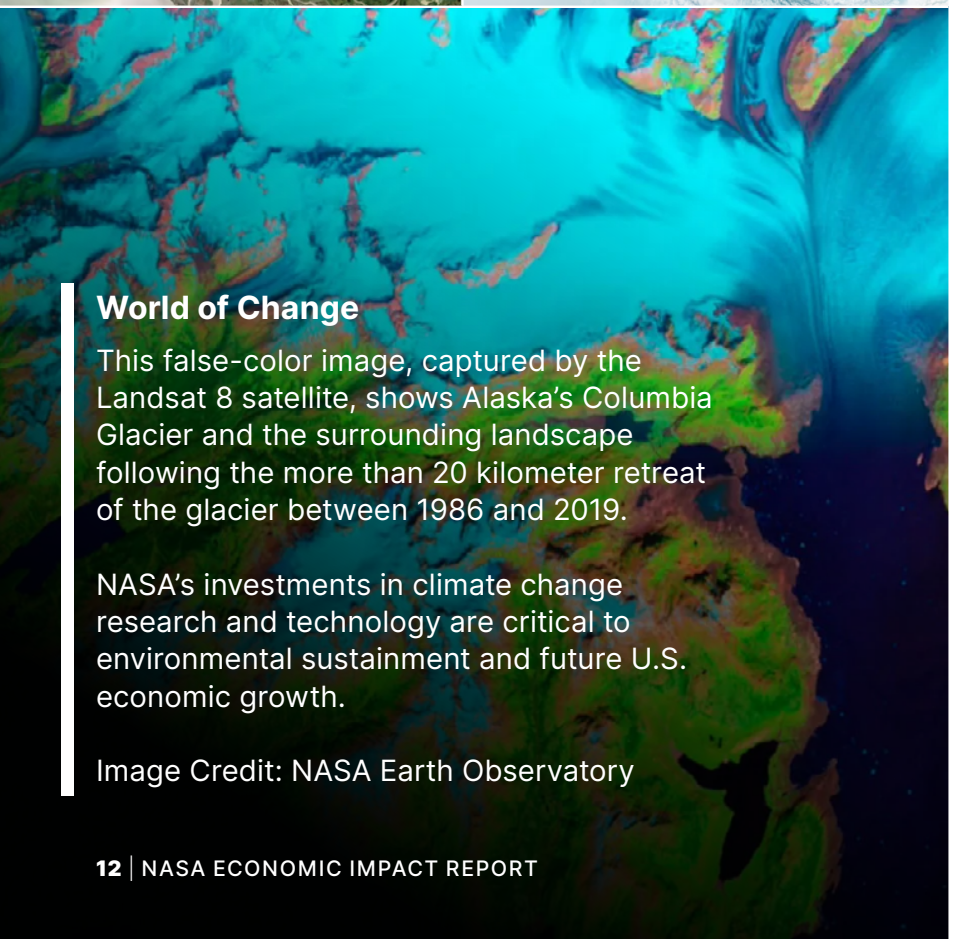


Moon to Mars Campaign Output by State

Alabama	$5,153,228,000
Alaska	$32,000
Arizona	$70,272,000
Arkansas	$370,000
California	$4,744,708,000
Colorado	$3,334,657,000
Connecticut	$18,683,000
Delaware	$2,158,000
Florida	$3,020,652,000
Georgia	$18,142,000
Hawaii	$2,191,000
Idaho	$814,000
Illinois	$24,338,000
Indiana	$17,706,000
Iowa	$516,000
Kansas	$1,329,000
Kentucky	$4,545,000
Louisiana	$218,206,000
Maine	$7,576,000
Maryland	$389,261,000
Massachusetts	$49,709,000
Michigan	$18,902,000
Minnesota	$11,030,000
Mississippi	$161,782,000
Missouri	$8,428,000
Montana	$399,000
Nebraska	$787,000
Nevada	$81,295,000
New Hampshire	$12,553,000
New Jersey	$20,853,000
New Mexico	$56,395,000
New York	$40,848,000
North Carolina	$11,547,000
North Dakota	$326,000
Ohio	$406,102,000
Oklahoma	$1,618,000
Oregon	$2,974,000
Pennsylvania	$228,928,000
Rhode Island	$2,176,000
South Carolina	$3,343,000
South Dakota	$1,755,000
Tennessee	$23,716,000
Texas	$3,580,685,000
Utah	$355,433,000
Vermont	$700,000
Virginia	$899,377,000
Washington	$724,386,000
Washington, DC	$45,617,000
West Virginia	$6,589,000
Wisconsin	$11,756,000
Wyoming	$630,000







World of Change

This false-color image, captured by the Landsat 8 satellite, shows Alaska's Columbia Glacier and the surrounding landscape following the more than 20 kilometer retreat of the glacier between 1986 and 2019.

NASA's investments in climate change research and technology are critical to environmental sustainment and future U.S. economic growth.

Image Credit: NASA Earth Observatory

NASA's Investments in Climate Change Research and Technology

NASA is a global leader in the study of Earth's evolving climate. The agency's observations from space, the air, and the ground help us unravel the complexities of Earth's systems – the geosphere, biosphere, cryosphere, hydrosphere, and atmosphere.

One of NASA's most important missions is our home planet, including how its climate changes. NASA's climate research delves deep into vital areas such as greenhouse gas emissions, temperature fluctuations, changes in sea and land ice, sea-level changes, cloud and precipitation patterns, and the complexities of air pollution. Moreover, NASA spearheads innovative technologies designed to help people adapt to or mitigate climate change, such as pioneering sustainable aviation methods.

The primary commitment of NASA goes beyond research; it's to provide invaluable data to the public, researchers, policymakers, and strategists, enabling informed decision-making. Beyond this, the research also aids NASA in comprehensively gauging climate change's bearing on its missions, ensuring the robustness and resilience of its infrastructure.

NASA's unparalleled expertise in studying Earth and its atmosphere remains vital. It equips us with the knowledge to discern the causes, effects, and vast implications of our shifting climate.

The following represents the variety of programs and projects included in NASA's investments in climate change research and technology:

- **Earth Science Activities**
  - Earth Science Research
  - Earth Systematic Mission
  - Earth System Science Pathfinder Applied Science (Pathways, including SERVIR)
  - Earth System Explorers
  - Earth Science Technology

- **Aeronautics Activities**
  - Advanced Air Transport Tech
  - Advanced Composites Project
  - Advanced Air Mobility
  - Air Traffic Management eXploration
  - Airspace Technology Demonstration
  - Convergent Aeronautics Solutions
  - Cross Program Operations
  - Environmentally Responsible Aviation
  - Hi-Rate Composite Aircraft Manufacturing
  - Hybrid Thermally Efficient Core
  - SMART-NAS Test Bed for Safe TBO
  - Transformational Tools and Technologies

- **Space Technology Activities**
  - Portions of Space Technology Research Grants; Technology Transfer; Small Business Technology Transfer
  - TDM Fission Surface Power
  - GCD Nuclear Systems
- **Portions of EPSCoR**
- **Construction and environmental compliance and remediation efforts at NASA facilities**

For more examples: https://www.nasa.gov/partnerships/

FY 2023

FY23 NASA's Efforts

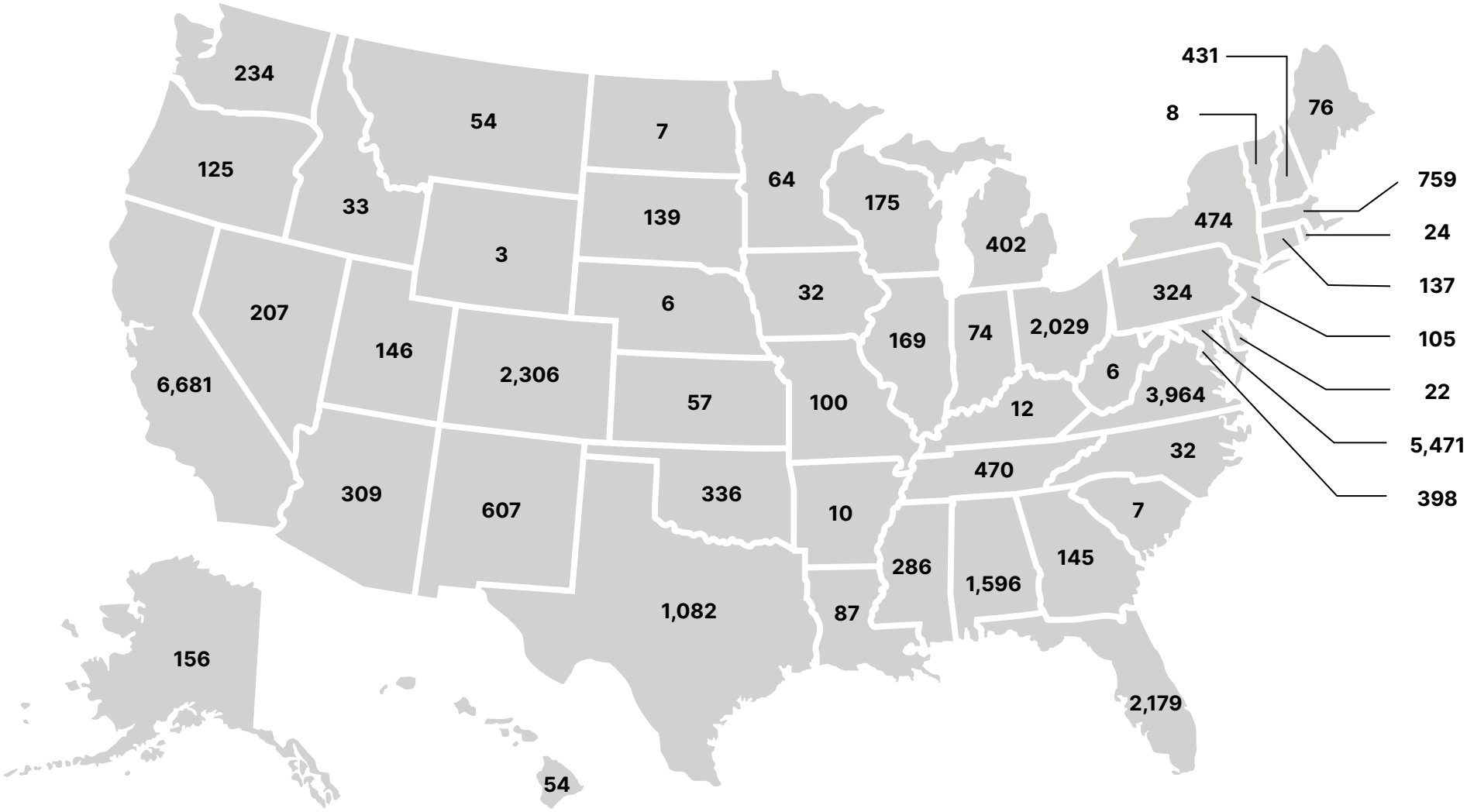
Impacted all 50 states and the District of Columbia.

$7.9B Generated a total economic output of more than $7.9 billion.

32,900 Supported an estimated 32,900 jobs.

$1 B Resulted in more than $1 billion in federal state, and local tax revenues.

NASA's Investments in Climate Change Research and Technology Activities Employment by State



NASA's Investments in Climate Change Research and Technology Activities Output Impact by State

Alabama	$327,556,000	**Louisiana**	$17,253,000	**Ohio**	$512,788,000
Alaska	$33,606,000	**Maine**	$16,195,000	**Oklahoma**	$70,956,000
Arizona	$64,687,000	**Maryland**	$1,349,723,000	**Oregon**	$28,858,000
Arkansas	$2,148,000	**Massachusetts**	$199,919,000	**Pennsylvania**	$75,804,000
California	$1,825,787,000	**Michigan**	$87,592,000	**Rhode Island**	$5,222,000
Colorado	$543,017,000	**Minnesota**	$14,378,000	**South Carolina**	$1,674,000
Connecticut	$34,012,000	**Mississippi**	$45,817,000	**South Dakota**	$25,201,000
Delaware	$4,911,000	**Missouri**	$21,855,000	**Tennessee**	$100,198,000
Florida	$458,899,000	**Montana**	$10,814,000	**Texas**	$265,166,000
Georgia	$31,536,000	**Nebraska**	$1,109,000	**Utah**	$29,450,000
Hawaii	$10,871,000	**Nevada**	$39,128,000	**Vermont**	$1,576,000
Idaho	$6,686,000	**New Hampshire**	$98,754,000	**Virginia**	$1,001,383,000
Illinois	$39,470,000	**New Jersey**	$25,565,000	**Washington**	$58,707,000
Indiana	$17,299,000	**New Mexico**	$95,369,000	**Washington, DC**	$103,380,000
Iowa	$6,695,000	**New York**	$123,788,000	**West Virginia**	$1,537,000
Kansas	$12,875,000	**North Carolina**	$58,699,000	**Wisconsin**	$37,800,000
Kentucky	$2,166,000	**North Dakota**	$1,496,000	**Wyoming**	$618,000

PRINCIPLES FOR A SAFE, PEACEFUL, AND PROSPEROUS FUTURE

Artemis Accords established 2020

Global Space Economy

NASA, from its inception with the National Aeronautics and Space Act of 1958, has a mandate to involve the international community in its mission of scientific discovery and space exploration.

Beyond direct partnerships with dozens of nations over its history, the expansion of humanity's influence into orbit and beyond has led to a booming space economy—satellites, launch vehicles, research and development, space tourism, and more.

Today, there are more than 54 nations and international organizations active in space, employing more than a million people and representing more than $125 billion in spending by world governments. The total value worldwide of this space economy has grown to more than $570 billion. There are 35 active and in development spaceports worldwide, with more proposed.

The number of patents awarded to space-related technologies has quadrupled over the past two decades.*

In 2032, it is projected that 11.4 million people will be employed in STEM fields in the U.S., showing growth of 11% from 2022.**

International Partnerships

NASA's most extensive international partnership orbits approximately 250 miles above the Earth's surface, circling the planet every hour and a half. The International Space Station, representing 15 nations and five space agencies (NASA, Roscosmos, the European Space Agency, Japanese Aerospace Exploration Agency, and the Canadian Space Agency) has been operating for more than 20 years, providing a unique orbital laboratory that has performed thousands of experiments during its operational lifetime. In addition to the ISS, NASA had more than 650 active international agreements for various scientific research and technology development activities in FY23, representing everything from ground-based research and development to scientific instruments that study other worlds.

The Artemis Accords

While NASA is leading the Artemis missions, international partnerships will play a key role in achieving a sustainable and robust presence on the Moon while preparing to conduct a historic human mission to Mars. With numerous countries conducting missions and operations in cislunar space, it is critical to establish a common set of principles to assure the safe and responsible exploration of outer space.

As of October 2024, forty-seven (47) countries have signed the accords.

* Data from Space Foundation's The Space Report 2024 Q2 global space economy analysis: https://www.spacefoundation.org/2024/07/30/the-space-report-2024-q2-shows-record-launch-pace-nasas-push-for-artemis-innovation-for-cleaner-rocket-fuels-new-tech-for-noaa-satellites/

** U.S. Bureau of Labor Statistics: https://www.bls.gov/emp/tables/stem-employment.htm

NASA's X-66A Plane

The X-66A is the X-plane specifically aimed at helping the United States achieve the goal of net-zero greenhouse gas emissions by 2050.

NASA's continued investment in climate change research and technology supported more than 32,000 jobs across the U.S. in FY23.

Image Credit: NASA

NASA Partnerships

Partnerships form an essential foundation in NASA's approach to driving positive economic impacts across the U.S. Drawing from more than 60 years of unmatched expertise, NASA offers its advanced engineering expertise, state-of-the-art research, technology innovations, and unique land resources to a diverse array of partners. These partners include commercial industries, esteemed academic institutions, U.S. Government agencies, and international collaborators.

As the global landscape evolves, so do NASA's partnerships. These collaborations are dynamic and diversifying in response to expanding capabilities. With our partners, NASA is at the forefront of groundbreaking advancements in exploration technology and science that are core to agency mission objectives. The essence of partnership becomes even more pronounced as NASA embarks on ambitious projects, such as establishing a lasting presence on the Moon through the Artemis program, to advancements in flight technology like NASA's X-59 quiet supersonic research aircraft.

FY23 NASA Non-Procurement Partnership highlights include:

- **2,628** active domestic and international partnership agreements
- **629** new domestic and **109** new international agreements
- Active partnerships with **587** different non-Federal partners across the U.S.
- Partnerships in **47** of **50** states

FY23 Innovative Non-Procurement Partnership Examples:

- Moon Exploration Tech: NASA selected 11 U.S. companies to develop technologies to support long-term exploration on the Moon and in space for the benefit of humanity. The technologies ranged from lunar surface power systems to tools for in-space 3D printing, which will expand industry capabilities for a sustained human presence on the Moon through Artemis, as well as other NASA, government, and commercial missions.

- Next Generation Experimental Aircraft: NASA's Sustainable Flight Demonstrator project (designated X-66A imaged on page 18) seeks to inform a potential new generation of more sustainable single-aisle aircraft. The selected design will build, test, and fly a full-scale demonstrator aircraft with extra-long, thin wings stabilized by diagonal struts, known as a Transonic Truss-Braced Wing concept. The X-66A is the first X-plane specifically focused on helping the United States achieve the goal of net-zero aviation greenhouse gas emissions, which was articulated in the U.S. Aviation Climate Action Plan.

For more examples: https://www.nasa.gov/partnerships/

Space To Learn

We're launching learning to new heights with STEM resources that connect educators, students, parents and caregivers to the inspiring work at NASA.

STEM Engagement Impacts

NASA and the nation need a diverse and skilled science, technology, engineering, and mathematics (STEM) workforce today and in the future. The Office of STEM Engagement (OSTEM) is committed to engaging, inspiring, and attracting future generations of explorers by building a diverse future STEM workforce through a broad set of programs, projects, internship opportunities, activities, and products that connect students to NASA. The agency's work in STEM Engagement is a collaborative endeavor, which encompasses efforts across OSTEM, Mission Directorates, and Field Centers .

In fiscal year 2023, through investments in the Minority University Research Project (MUREP), National Space Grant College and Fellowship Project (Space Grant), Established Program to Stimulate Competitive Research (EPSCoR), and the Next Generation STEM Project (Next Gen STEM), coupled with agency-wide STEM efforts, NASA engaged more than 768K students, 53K educators, and 4.5M other participants[1].

FY23 Awards:

- In FY23, Next Gen STEM, Space Grant, MUREP, and EPSCoR provided 521 awards and over $105M in funding to lead institutions across 50 states plus the District of Columbia, Guam, Puerto Rico, and the U.S. Virgin Islands. These grantee and awardee institutions reported 3,544 peer-reviewed publications, technical papers, and presentations with 61% being authored or coauthored by students.
- NASA provided 9,584 internships, fellowships, research opportunities, educator professional development, challenges, and other college/ pre-college STEM engagement opportunities to 8,999 student and educator participants representing K-12 institutions and higher education systems (e.g., 2-year, 4-year institutions and all Minority Serving Institution classifications). These awards provided more than $44M in direct financial support to participants.
- In these opportunities, ~15% of participants identified as racially underrepresented[2], 17% identified as ethnically underrepresented[3], and 43% of the Agency's higher education internships and fellowship opportunities were filled by women.

Through OSTEM, NASA provides an exciting array of STEM experiences and opportunities to immerse students in the agency's missions and projects.

To learn more, please visit:

https://www.nasa.gov/learning-resources/

[1] "Other Participants" represents uncategorized students of all ages, parents, educators, adults and general public participants reached through STEM Engagement Investments managed by OSTEM.

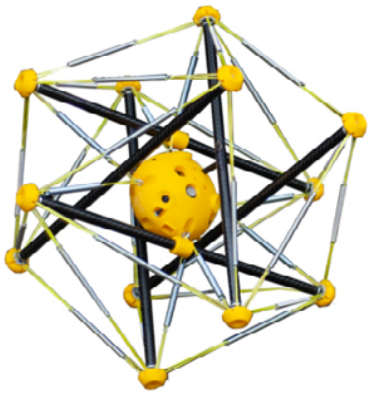
[2] Underrepresented racial categories (American Indian or Alaskan Native; Black or African American; and/or Native Hawaiian or Pacific Islander)

[3] Underrepresented ethnicity (Hispanic or Latino)

Spherical Robots to the Rescue

Squishy Robotics' tensegrity sensor robots help first responders determine their approach to a disaster scene. Pictured here during a subway attack scenario exercise at the 2021 Unmanned Tactical Application Conference, the robots can detect gas leaks and other hazards.

Image Credit: FLYMOTION LLC



NASA in Your Life

NASA continues to drive economic development and growth through technological innovation. NASA's advancements in space technology and groundbreaking scientific discoveries extend far beyond the agency's immediate mission, influencing and enhancing various aspects of life on Earth. Through the Agency's Technology Transfer Program and spinoff technologies, NASA's impact on humanity is immeasurable, extending beyond financial metrics.

Infusing NASA Technology into the American Economy

The NASA Technology Transfer Program plays a pivotal role in ensuring that innovations developed for space exploration are accessible to the public, thereby maximizing their benefits for the nation. The process of integrating NASA technology into daily life begins with New Technology Reports (NTRs). These reports document any invention, discovery, improvement, or innovation conceived or first implemented in the context of NASA's work. Each year, NASA personnel file numerous patent applications and facilitate access to NASA-developed software for research and business purposes. These spinoff technologies have found novel and beneficial applications across a wide array of sectors including healthcare, transportation, public safety, energy, and industrial production. For example, eco-friendly food alternatives, an alternative to meat and dairy products offering a sustainable solution to the world's growing food demands. Or virtual lesson plans that teach students how to write computer code using Moon rock data, inspiring the next generation of scientists and engineers. Through these diverse applications, NASA technology touches the daily lives of all humanity in countless ways.

Tech Transfer 2023:

- **1,564** New Technology Reports
- **40** new patent applications filed
- **69** patents issued
- **5,277** software usage agreements

Spherical Robots to the Rescue:

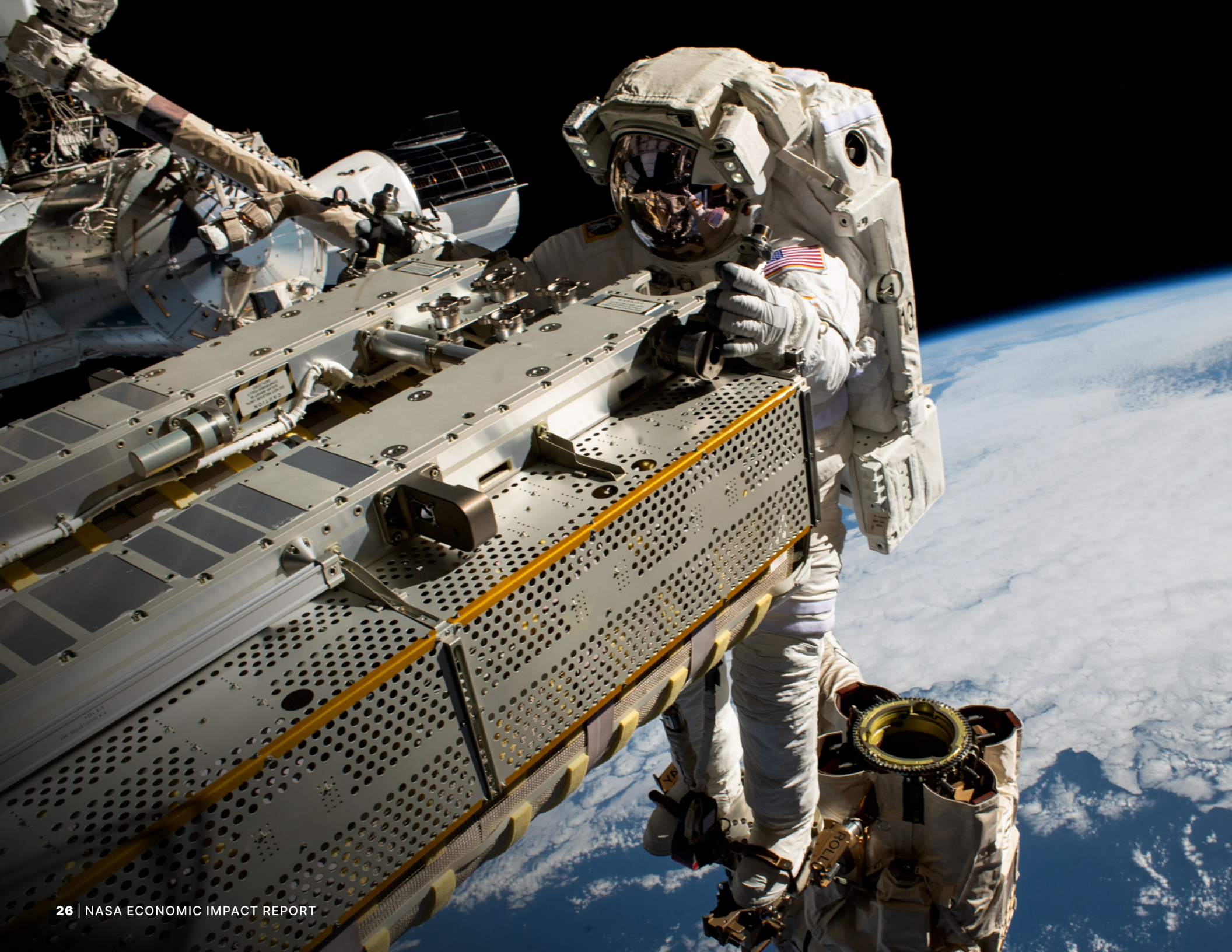
- Versatile Robotic Innovation: Academic research on spherical, skeletal robots for Mars or the Moon exploration has terrestrial applications, such as aiding first responders at disaster scenes by assessing dangers and planning approaches with fitted sensors.
- Impact-resistant Design: These robots, designed with a tension network of rods and cables, distribute impact force, making them ideal for high-impact landings. This design principle, known as tensegrity, allows the robots to be compacted for travel and unfurled for mission execution.
- From Space to Earth: NASA-funded technology is leveraged for public safety, military, and industrial uses, providing a durable, customizable solution for placing delicate instruments in hazardous or inaccessible locations on Earth and potentially other planets.

For more information on NASA Environmental Solutions, please visit: https://technology.nasa.gov/patents/

Summary: NASA Impact by State

	National Impact		Moon To Mars		Climate Research Investment	
	JOBS	OUTPUT	JOBS	OUTPUT	JOBS	OUTPUT
Alabama	35,494	$8,072,239,000	22,686	$5,153,228,000	1,596	$327,556,000
Alaska	226	$47,913,000	<1	$32,000	156	$33,606,000
Arizona	2913	$649,920,000	346	$70,272,000	309	$64,687,000
Arkansas	40	$8,656,000	2	$370,000	10	$2,148,000
California	66,208	$18,593,591,000	16,129	$4,744,708,000	6,681	$1,825,787,000
Colorado	21,616	$5,104,580,000	13,941	$3,334,657,000	2,306	$543,017,000
Connecticut	586	$138,456,000	72	$18,683,000	137	$34,012,000
Delaware	367	$70,221,000	8	$2,158,000	22	$4,911,000
Florida	35,685	$8,297,298,000	13,123	$3,020,652,000	2,179	$458,899,000
Georgia	420	$100,744,000	81	$18,142,000	145	$31,536,000
Hawaii	380	$78,958,000	11	$2,191,000	54	$10,871,000
Idaho	84	$17,818,000	4	$814,000	33	$6.686,000
Illinois	790	$196,349,000	109	$24,338,000	169	$39,470,000
Indiana	777	$195,005,000	74	$17,706,000	74	$17,299,000
Iowa	556	$121,798,000	3	$516,000	32	$6,695,000
Kansas	147	$33,234,000	6	$1,329,000	57	$12,875,000
Kentucky	90	$21,288,000	20	$4,545,000	12	$2,166,000
Louisiana	2,418	$507,376,000	1,045	$218,206,000	87	$17,253,000
Maine	178	$39,977,000	31	$7,576,000	76	$16,195,000
Maryland	33,809	$8,266,465,000	1,519	$389,261,000	5,471	$1,349,723,000
Massachusetts	2,747	$718,366,000	192	$49,709,000	759	$199,919,000
Michigan	912	$204,269,000	85	$18,902,000	402	$87,592,000
Minnesota	300	$70,482,000	43	$11,030,000	64	$14,378,000
Mississippi	4,281	$854,438,000	691	$161,782,000	286	$45,817,000
Missouri	369	$83,271,000	38	$8,428,000	100	$21,855,000

	National Impact		Moon To Mars		Climate Research Investment	
	JOBS	OUTPUT	JOBS	OUTPUT	JOBS	OUTPUT
Montana	157	$31,828,000	2	$399,000	54	$10,814,000
Nebraska	33	$7,403,000	4	$787,000	6	$1,109,000
Nevada	553	$105,606,000	422	$81,295,000	207	$39,128,000
New Hampshire	703	$162,026,000	52	$12,553,000	431	$98,754,000
New Jersey	571	$145,074,000	86	$20,853,000	105	$25,565,000
New Mexico	1,735	$362,404,000	239	$56,395,000	607	$95,369,000
New York	1,975	$517,343,000	151	$40,848,000	474	$123,788,000
North Carolina	1,094	$204,181,000	60	$11,547,000	322	$58,699,000
North Dakota	15	$3,239,000	1	$326,000	7	$1,496,000
Ohio	9,357	$2,412,465,000	1,462	$406,102,000	2,029	$512,788,000
Oklahoma	506	$109,423,000	6	$1,618,000	336	$70,956,000
Oregon	233	$53,974,000	13	$2,974,000	125	$28,858,000
Pennsylvania	1,749	$409,048,000	989	$228,928,000	324	$75,804,000
Rhode Island	93	$20,450,000	10	$2,176,000	24	$5,222,000
South Carolina	176	$40,392,000	12	$3,343,000	7	$1,674,000
South Dakota	248	$46,373,000	8	$1,755,000	139	$25,201,000
Tennessee	984	$224,263,000	89	$23,716,000	470	$100,198,000
Texas	39,154	$9,855,142,000	14,133	$3,580,685,000	1,082	$265,166,000
Utah	2,375	$486,640,000	1,589	$355,433,000	146	$29,450,000
Vermont	38	$9,159,000	3	$700,000	8	$1,576,000
Virginia	24,763	$6,106,081,000	4,195	$899,377,000	3,964	$1,001,383,000
Washington	3,247	$884,031,000	2,456	$724,386,000	234	$58,707,000
Washington, DC	2,654	$712,426,000	154	$45,617,000	398	$103,380,000
West Virginia	633	$140,873,000	30	$6,589,000	6	$1,537,000
Wisconsin	346	$75,221,000	53	$11,756,000	175	$37,800,000
Wyoming	18	$4,255,000	2	$630,000	3	$618,000



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National Aeronautics and Space Administration

Mary W. Jackson NASA Headquarters

300 E Street, SW Suite 5R30 Washington, DC 20546

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