# 2023 ANNUAL REPORT

CE FOUNDATION

SPACE FOUNDATION

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### A LETTER FROM SPACE FOUNDATION'S CEO

As I step into the role of CEO, the space community is moving faster than ever, expanding with many new players and achieving exciting milestones in science and technical achievements, which inspire us to believe that anything is possible.

Thanks to its 40-year record of leadership, Space Foundation has become the indispensable linchpin in the space community. With that success in mind, I plan to build a future where Space Foundation delivers an even greater impact on the world, and space continues to be a source of innovation, inspiration, and opportunity for the planet.

This past year has truly shown what we're capable of. Our impactful programs, unwavering advocacy for space exploration, dedicated STEM education efforts, and support for emerging space professionals have all seen significant growth. Space Symposium stands out as the exemplar of our ability to unite the global space community and lead the future of space science, technology, and workforce development to meet the challenges of tomorrow.

Looking forward, our strategic vision is clear:

**ELEVATE STEM EDUCATION**: We will address the workforce shortage and innovation gap with a space-inspired education strategy focused on accessible e-learning, hands-on STEM experiences, and engage a diverse generation on the impact of space technologies in our lives.

**FORGE GLOBAL PARTNERSHIPS**: We will expand our networks and increase collaboration with international partners to connect more people across academia, governments, and industry.

**REINVIGORATE ADVOCACY AND ENGAGEMENT**: We will adopt new strategies to champion the benefits of space capabilities, while serving as the trusted, impartial source of data for policy-makers and decision-makers.

**EMPOWER THE SPACE ECONOMY:** We will support innovation and economic growth in the space sector by creating opportunities for adjacent industries, emerging space nations, space practitioners and all those affected by space technologies.

With your continued support, we're set to shape the future of space exploration and development. Together, we will inspire future generations, unlock new opportunities for innovation, and ensure the space community remains a hub of progress and possibility.

Thank you for your trust, passion, and support. I'm excited for what we will achieve together in this next chapter of our journey!



**Heather Pringle**CEO, Space Foundation

# CONVENING THE GLOBAL SPACE COMMUNITY

Space Foundation hosted the 38th Space Symposium as the premier assembly of the global space community bringing more than 10,000+ space professionals, business leaders and decision makers together to inform, engage and connect. As a global commons, Space Symposium brings together space community stakeholders from more than 40 countries, including 15 space agency leaders, 260 speakers and more than 230 exhibits showcasing innovations bringing benefits to space and life on Earth.





### **Awarding Excellence in Space**

Each year, Space Foundation presents awards to people and organizations advancing space use and exploration and delivering benefits to Earth. In 2023, Space Foundation was proud to award:

- <u>LIFETIME SPACE ACHIEVEMENT</u> Daniel S. Goldin, former NASA Administrator and space industry pioneer in the intelligence/national security arena
- SWIGERT AWARD FOR SPACE EXPLORATION James Webb Space Telescope team
- MORROW PUBLIC AWARENESS AWARD U.S. Postal Service for stamps commemorating 100 years of astronomy and space exploration
- SPACE ACHIEVEMENT AWARD NASA's Double Asteroid Redirection Test (DART) team
- ATHENA EDUCATION AWARD Northrop Grumman, for long term support and investment in space education and professional development

### **Space Technology Hall of Fame**

The Space Technology Hall of Fame® recognizes technologies originally developed for space that are commercialized to improve life on Earth. The 2023 inductees include:

**SYNCOM** – The Snycom platform for geostationary (GEO) satellites, funded by NASA and first launched in the 1960s. More than 180 GEO satellites based on the original Syncom platform are in use today.

NATURE'S FYND – Fy, a protein–rich microbe that can be grown in microgravity, is used as commercial meat and dairy substitutes on Earth.



NASGRO – NASA and the Southwest Research Institute expanded a software tool for analyzing fractures in mechanical systems for commercial use in the aerospace industry and beyond.

# Engagement and Insights Year-Round on Symposium 365 Platform

To help the space community keep up with the rapid pace of innovation and growth, Space Foundation offers Symposium 365 to deliver insights and information yearround, featuring leading space policy influencers, innovators and newsmakers with a host of articles, analysis and expert discussions.



#### **2023 SYMPOSIUM 365 FEATURES:**

**SPACE MATTERS** convenes policy influencers for monthly discussions on topics and trends in the global space ecosystem.

**SPACE INVESTMENT ANALYSIS** leverages investment and industry expertise to highlight quarterly investment activity and forecast the business and government trends shaping the global space economy.

**START HERE FOR SPACE** explores the people, organizations and trends in the global space community, featuring discussions and speeches with some of the most forward-looking space experts and leaders.

## THE AUTHORITATIVE GUIDE TO GLOBAL SPACE ACTIVITY

The global space economy continues its steady march, and in 2023, The Space Report delivered more newsmaking research and analysis on the missions, data and investments that are driving worldwide space activities.

In the Q2 2023 issue, The Space Report shared that the global space economy grew 41% over five years.. With 91 nations operating in space, the pace of missions is increasing, and analysis by The Space Report conservatively projects by 2027, a global space economy of \$772 billion.

Meanwhile, world governments are stepping up space spending. In 2022, government space investments totaled \$119 billion, growing 51% over the past five years. Preliminary budget data for 2023 shows a 16% increase in government space spending.

For 2023, data from The Space Report indicates There were 212 successful launches in 2023, which is on average, one every 39 hours, an 18% year over year increase. Looking ahead, launch services will continue to be in high demand, as the U.S. Federal Communications Commission licensed nearly 21,000 satellites for future launch as of December 2023. In July of 2024, the Q2 report of The Space Report will provide a full global economy report for 2023 results.

The Space Report is your authoritative guide to global space activity. Quarterly releases of The Space Report help you keep up with space trends and developments as they happen, and online access delivers regularly updated and expanded resources and datasets for use.







### The Space Economy Scorecard

**AS OF JANUARY 30, 2024** 

No. of Nations Operating in Space (2024)	<u>91</u>	
Size of the Global Space Economy (2022)	\$546 BILLION	
Commercial Space Revenue (2022)	\$427.6 BILLION	<b>↑</b> 7.9% YOY
Global Government Space Program Spending (2022)	\$ 118.6 BILLION	<b>↑</b> 8.1% YOY
Global Space Investment (since 2014) (Source: Space Capital)	\$298 BILLION	
U.S. Space Employment (2022)	201,009	<b>↑</b> 1% YOY
No. of Successful Launches Worldwide (2023)	212	<b>↑</b> 18.4% YOY
Average Number of Payloads per Launch (2023)	13.6	<b>↑</b> 7% YOY
Humans Who Have Crossed the Kármán Line (2023)	644	<b>↑</b> 2.4% YOY

## DISCOVERING A PASSION FOR SPACE AND STEM

Space Foundation Discovery Center is a hands-on, interactive space and science center in Colorado Springs, Colorado. With a world-class collection of space artifacts and science, technology, engineering, arts and mathematics (STEAM) activities, Discovery Center is helping to educate and prepare the next generation of explorers and innovators.

#### SINCE ITS OPENING, DISCOVERY CENTER HAS:



HOSTED MORE THAN 300,000 STUDENTS, PARENTS AND TEACHERS



TRIPS AND MORE THAN
1,000 SPECIAL WORKSHOPS



SHARED MORE THAN 1,800 ARTIFACTS AND 20 EXHIBITS TO INSPIRE





### **Transformation at Discovery Center**

In 2023, we began a \$3.5 million renovation and expansion of Discovery Center. To be completed in 2024, the Discovery Center transformation will allow us to serve even more people with expanded activities, new innovative exhibits and community engagement both in-person and digitally around the world with improved connectivity.

Thanks to our generous donors supporting the Discovery Center expansion:

- ANSCHUTZ FAMILY FOUNDATION
- EL POMAR FOUNDATION
- LOCKHEED MARTIN
- NORTHROP GRUMMAN & NORTHROP GRUMMAN FOUNDATION
- BOEING











## Leading the Nation During World Space Week

Every year in October, the UN-declared World Space Week is celebrated internationally by museums, schools, companies, nonprofits, students and teachers, and many others. In 2023, Space Foundation was selected as the World Space Week national coordinator for the United States, offering programming and events to the space community nationwide.

# AT SPACE FOUNDATION DISCOVERY CENTER, STUDENTS AND FAMILIES TOOK PART IN WORLD SPACE WEEK EVENTS DESIGNED AROUND THE THEME "SPACE AND ENTREPRENEURSHIP."

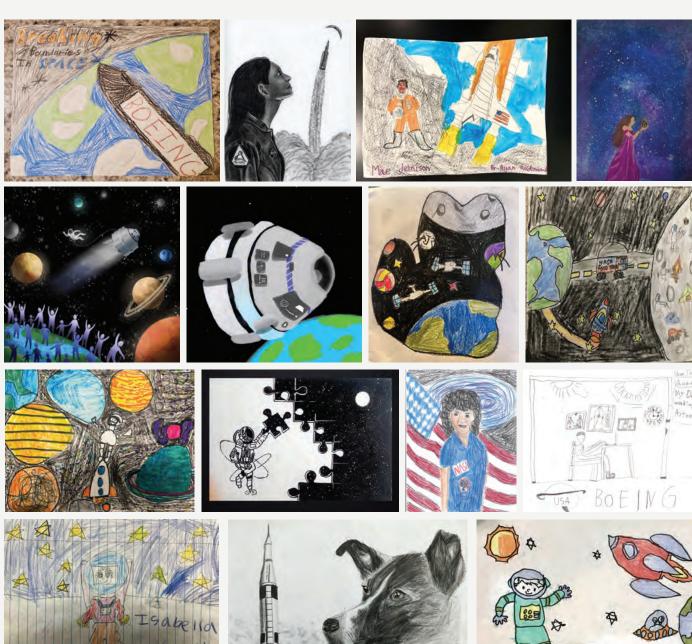
- SMALL STEPS, GIANT LEAP A creative storytelling event series, students heard an interactive reading of the children's book, Moon's First Friends, held in the Discovery Center Science On a Sphere® theater.
- HOMESCHOOL DAYS The program supports students and families with STEAM laboratory and classroom lessons offered at Discovery Center, and the World Space Week workshops explored how to create a space business.
- LIGHTS OUT: EXPERIENCING A SOLAR

  ECLIPSE On October 4, 2023, families gathered at the Discovery Center to observe (using solar glasses) the annual eclipse and joined a DUI solar viewer workshop.

### Space Foundation & Boeing Partner for Art Showcase



Space unites and inspires people which is why Space Foundation partnered with Boeing for an "Art in the Stars" Showcase inviting young people from around the world to share their talent and imagination. Participants were asked to submit original artwork (digitally) in response to the question, "Which historical space pioneer inspires you?" More than 3,400 pieces of art from 66 countries and 35 US states were submitted to Space Foundation to be digitally rendered for inclusion on an upcoming Boeing spaceflight.



FIRST ROW: Adam, USA; Brandon, USA; Ryan, USA; Harshitha, India — SECOND ROW: Rebecca, USA; Dylan. UK; Eva, USA; Selvalakshmi, USA — THIRD ROW: Anna, USA; Umme, Bangladesh; Gemma, USA; Jillian, USA — FOURTH ROW: Isabella, USA; Luka, UK; Mohammad, Abu Dhabi

# REACHING TOMORROW'S SPACE LEADERS, TODAY

To inspire and educate the next generation of innovators and leaders in the global space ecosystem, Space Foundation offers Leadership Academy programs tailored to elementary, middle and high school students. With engaging activities, lessons and group workshops, Space Foundation is empowering young people to prepare and find their place in the space community.





- **GUIDING TOMORROW'S SPACE LEADERS ACROSS THEIR EDUCATION JOURNEY** To inspire and educate the next generation of innovators and leaders in the global space ecosystem, Space Foundation offers Leadership Academy programs tailored to elementary, middle and high school students. The activities, lessons and workshops in each program build upon each other, keeping students engaged with space from their start in 3rd grade through high school and beyond.
- **DISTANCE LEARNING CAPABILITIES** With a worldwide reach, Space Foundation connects classrooms to space, science and technologies that are shaping todays and tomorrow's opportunities.

Thanks to our generous donors supporting Space Foundation Leadership Academy:

U.S. DEPARTMENT OF DEFENSE STEM

**L3HARRIS** 

### **Empowering Educators with Space**

Space Foundation offers professional development programming for educators, equipping them with the resources, materials and insights to use space as a way to engage and inspire their students.

**SPACE ACROSS THE CURRICULUM –** Professional development workshops help teachers integrate STEM into daily curriculum. Courses are half– or full–day sessions attended at Discovery Center, online or at participant schools. In addition to our national impacts in Colorado, Nebraska, Connecticut and Maryland, the program went global as Space Foundation partnered with the Sheikh Saud bin Saqr Al Qasimi Foundation for Policy Research to launch Space Across the Curriculum courses for educators in the United Arab Emirates.

**TRAIN-THE-TRAINER WORKSHOPS** – A week-long project-based educator professional development workshop provides tools, resources and materials educators can use in their classrooms. In 2023, Space Foundation offered courses on developing the first lunar outpost, as well as advocating for innovation to improve life on Earth, helping teachers to lead the next generation of talent that will transform life for the better on Earth and space.



### Space Foundation's International Teacher Liaisons

Space Foundation offers the International Teacher Liaison program to support educators globally, so they can in turn inspire and empower new generations of space professionals. With hands-on learning activities in a collaborative setting with top educators and space industry experts, Teacher Liaisons bridge the gap between the space community and the classroom. They access the knowledge, lesson plans and materials to share with their peers as they use space as a vehicle for exciting students.

In 2023, Space Foundation welcomed 22 new Teacher Liaisons from Australia, Portugal, Curaçao, Vietnam, and Romania. Thanks to the generous support of Lockheed Martin and the Miller-Wood Foundation, we have more than 350 Teacher Liaisons in 21 countries and 40 U.S. states.

# CONNECTING SPACE ACCESS AND OPPORTUNITY WORLDWIDE

Space Foundation collaborates with government organizations, businesses and nonprofits worldwide to advocate for the global space community and propel the space economy. Our Center for Innovation and Education brings together business, government, education and community stakeholders to serve the space workforce lifecycle.

As a part of this, Space Foundation's Space Commerce Institute works with university students, entrepreneurs, businesses and established professionals to learn from space leaders and experts about how to access and navigate the global space ecosystem.



### A year of new partnerships with Space Commerce Institute and...

- The Netherlands Ministry of Foreign Affairs, to support and promote the Dutch space sector in the U.S. market.
- The Italian Trade Agency of Houston (ITA) and Italian Space Agency (ASI), to launch SPACE IT UP, a pioneering all-Italian Aerospace Acceleration Program.
- The Embassy of Italy and ITA to launch Spazio, a monthly series highlighting Italy's role in the space ecosystem.
- The Alan B. Levan | NSU Broward Center of Innovation, for LEVL5: SPACE DOCK at NSU™ Space Medicine Roundtable and Ideate and Incubate cohorts.

### THE ENGINES THAT MAKE OUR **IMPACT POSSIBLE**

As a 501c3 nonprofit organization, Space Foundation relies on philanthropic giving to fund our missions. The charitable heroes who contribute to help make our activities and impact possible are vital for our growth and success as a non-profit organization. Here's what some of our donors say about supporting Space Foundation's mission:







"I am a beneficiary of the brave space exploration that has resulted in Earth Observation capabilities that are astounding."

- MICHAEL RIORDAN

"This is part of a legacy I wish to leave for my children's future and for yours."

- BRIAN RUSSELL

"Paying it forward to causes that can educate us in priceless ways is very important to me to continue to educate and teach young (or old) minds."

- ANGELA LAVENDER

### **Endowed Giving**

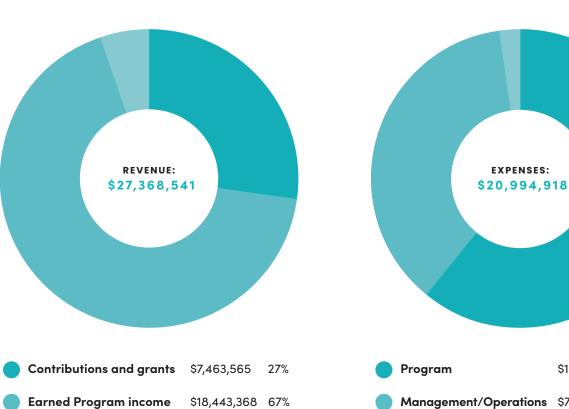
Named endowment giving at Space Foundation allows donors and supporters to leave an indelible mark on the universe by supporting scientific discovery and education of our future explorers. Endowments at Space Foundation and the Discovery Center are available to showcase your commitment to space exploration and STEM education. Let your name shine among the stars with an endowed gift.

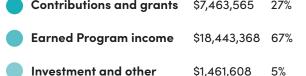
### **Legacy Giving**

Space Foundation is fortunate to have dedicated benefactors supporting its mission, including many who have chosen to secure its future through planned gifts. These generous donors have turned their passion for space and education into action by remembering Space Foundation in their estate plan. Members of this special group share the common bond of philanthropy and understanding the need to provide for future generations. We invite you to join other thoughtful philanthropists who share your dreams.

### **2023 FINANCIALS AT A GLANCE**

Since our inception in 1983, Space Foundation preserves a sustainable balance between earned program income, contributions and grants, and other investments. We operate from a strong balance sheet that does not reflect any debt. Our annual expenses are focused on our mission to be the preeminent advocate and gateway for trusted information, lifelong education and seamless collaboration for all people and organizations engaging in space exploration and space-inspired industries that define the global space ecosystem.







**SPACE FOUNDATION ANNUAL REPORT 2023** SPACE FOUNDATION ANNUAL REPORT 2023



## SPACE FOUNDATION HEADQUARTERS & DISCOVERY CENTER

4425 Arrowswest Drive Colorado Springs, CO 80907, USA 719.576.8000 | 800.691.4000

## SPACE FOUNDATION WASHINGTON, D.C. OFFICE

1700 North Moore Street, Ste. 1105 Arlington, VA 22209, USA 202.618.3060 | 800.691.4000