NASA HBCU *Opportunities*

National Aeronautics and Space Administration

OSBP Learning Series Webinar

February 21, 2024 • 1:00 p.m. ET

Register today at www.nasa.gov/osbp/learning-series/

OSBP

Housekeeping

- If you have any questions during the presentation, please enter them into the Q&A Box.
  - **NOTE:** If possible, include the speaker whom your question is directed if multiple speakers are presenting.
- Other comments, like technical difficulties, please input them in the Chat Box.
- We will have a formal Q&A after the final presenter concludes, using questions from the Q&A Box.
- Please keep your computers on mute when not speaking.
- The presentation WILL be recorded. Attendees will receive an email once those materials are made available online.
- Please fill out the survey that will be available in the Q&A box during the presentation.

Do Your Homework!

- **Start** with a Small Business Specialist (SBS) at each NASA Center
  - Build relationships with the Center SBS and the Industry Small Business Liaison Office (SBLO)
- Learn about NASA 's various missions
  - Each NASA Center has different Missions
  - Varied mix of products and services
- Respond to Sources Sought Synopses / Request
- Use Small Business resources:
  - Agency Acquisition Forecast
  - Procurement Technical Assistance Center (PTAC)
  - Small Business Administration (SBA)
  - Trade associations
  - Outreach Events

EXAMPLE

OSBP OFFICE OF SMALL BUSINESS PROGRAMS ...where small business makes a BIG difference

17

Participants (322)

Search

Panelist: 22

Attendee: 300 (7 displayed)

Chat

Hi Truphelia -- will you please add Vikram from SpaceX to the panelist group? He's logged in as "V Kothari (SPACEX)"

To: All Attendees

Enter chat message here

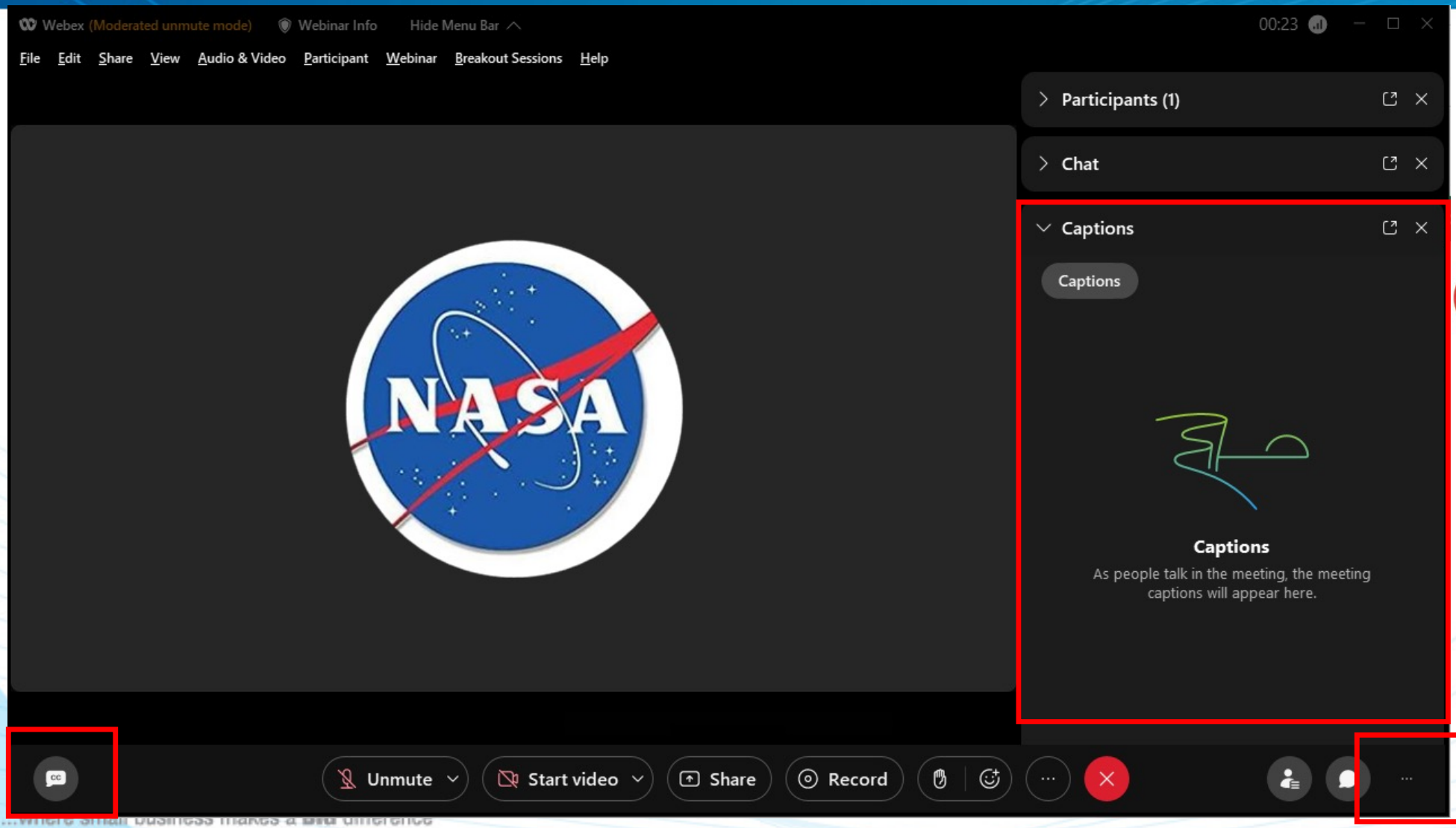
Q&A

Polling

Unmute | Start video | Share | ... | Participants | Chat | ...

3

Webex Closed Captioning is Available!



Select CC to enable

Select … to turn on the Captions panel to see speakers in sequence

Polling Questions

1. How did you learn about this webinar?

a. OSBP Website
b. Constant Contact
c. Social Media
d. Eventbrite email
e. Other

2. Is this the first webinar hosted by the NASA Office of Small Business Programs that you have attended?

a. YES
b. NO

Polling Questions Cont.

3. Which of the following classifications applies to your institution/organization/company?

a. Small Business (SB)
b. Small Disadvantage Business (SDB)
c. Large Business (LB)/Other than Small Business (OTS)
d. Women-Owned Small Business (WOSB)
e. Economically Disadvantaged Women-Owned Small Business (EDWOSB)
f. Veteran-Owned Small Business (VOSB)
g. Service-Disabled Veteran-Owned Small Business (SDVOSB)
h. Historically Underutilized Business Zone (HUBZone)
i. 8(a) Business Development Program Participant (8a)
j. Historically Black Colleges or Universities (HBCU)
k. Minority-Serving Institution (MSI)
l. Nonprofit or Community-based Organization
m. Federal Government Agency/Department
n. State or Local Government Agency/Department
o. Other

Polling Questions Cont.

4. Have you done business with NASA? (More than one answer can be applicable)

a. Prime Contractor
b. Subcontractor
c. NASA Mentor-Protégé Program
d. Space Act Agreement
e. Grant or Cooperative Agreement Recipient
f. I have not done business with or received funding from NASA

5. What are some of the barriers to entry when doing business with NASA?

About the NASA Office of Small Business Programs

- NASA's Office of Small Business Programs (OSBP) primary mission since its inception has been to increase the representation of small businesses in NASA's contracting efforts.

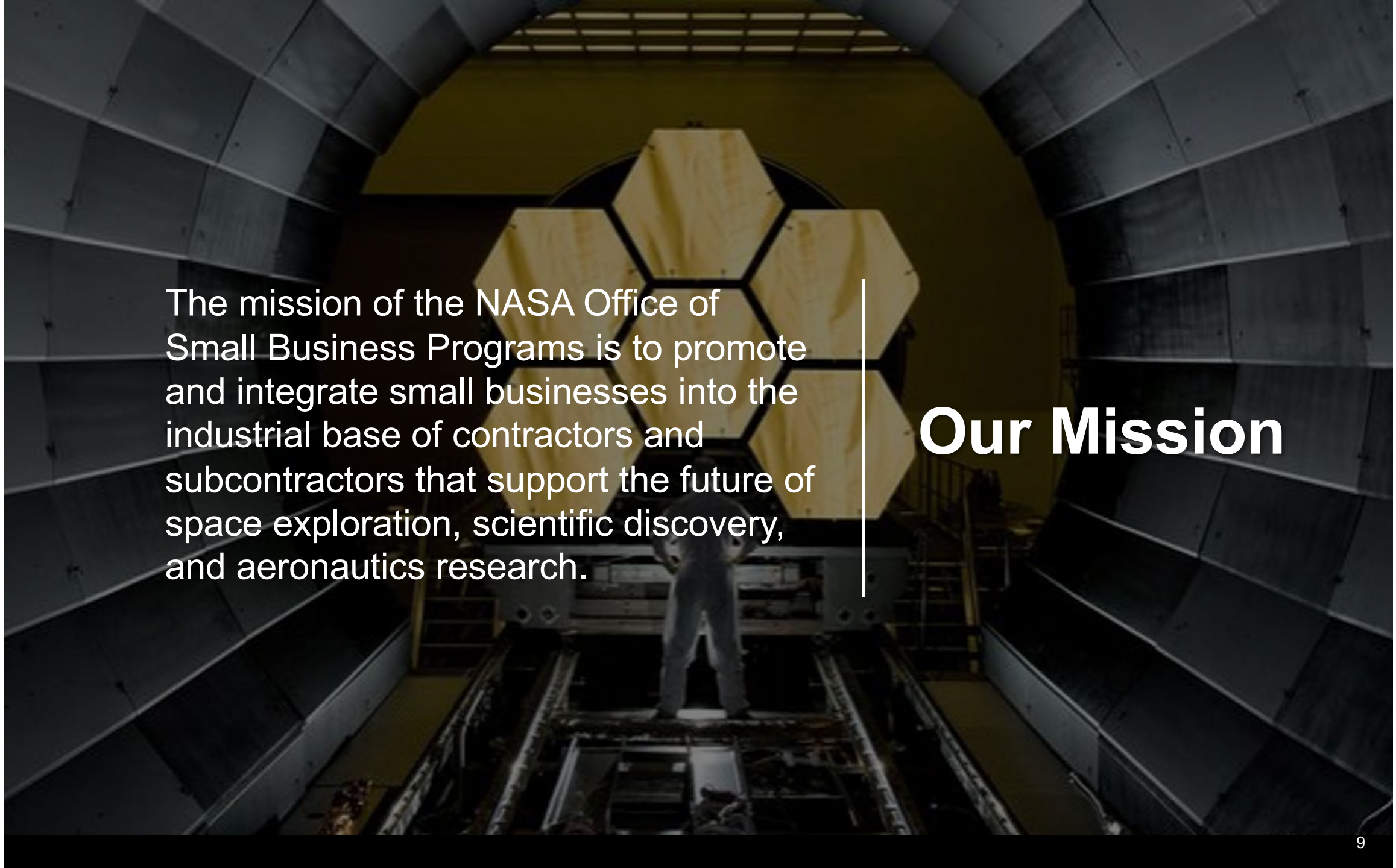
- Headquartered in Washington, D.C., OSBP is under the leadership of Assistant Administrator Dwight D. Deneal and Deputy Assistant Administrator Robert Medina.

  - **INCLUSION -** OSBP efforts encompass all federally recognized socio-economic small business categories and we work hard to make sure each type of business gets a fair chance to work with NASA.

  - **GROWTH -** Since 1979, OSBP has grown from only 4 civil servants and 3 contractors, to over 21 civil servants and over 6 support contractors -- all of which are small businesses.

  - **ADVOCACY -** OSBP continues to advocate for small businesses and amplify the important role they play in supporting NASA's mission to explore the universe.

  - **EDUCATION -** The NASA OSBP webinar series offers in-depth training relevant to small businesses; and provide the opportunity to ask questions directly to key points of contacts at the Agency.



Our Mission

The mission of the NASA Office of Small Business Programs is to promote and integrate small businesses into the industrial base of contractors and subcontractors that support the future of space exploration, scientific discovery, and aeronautics research.

Meet the Speaker

Mr. David E. Brock

Small Business Specialist
NASA Office of Small Business Programs
Marshall Space Flight Center

Brock currently serves as the Small Business Specialist (SBS) at the NASA Marshall Space Flight Center (MSFC) in Huntsville, Alabama. As lead SBS, he provides strategic guidance and direction in the planning, coordination, and implementation of the NASA Small Business Programs at MSFC. Brock entered the Federal sector in 1984, when he joined the NASA family as a Procurement Analyst assigned to the Office of Procurement. He has been actively involved in the NASA Small Business programs for 32 of his 34 years of service.

Brock was selected as the NASA Small Business Specialist of the year in 1992, 2002, 2007, and in 2010; New England Outreach Support Person of the Year in 2002; MSFC Procurement Support Person of the Year award in 2003; Director's Commendation award in 2005 and 2006; United Negro College Fund 2007 Advocate of the Year; Huntsville Association of Small Businesses in Advanced Technologies 2007 Small Business Excellence award; Alabama A&M 2009 Advocate of the Year award by the Collaborative University, Business Industry Consortium; Oakwood University 2010 Community Support Person of the year; and 2013 Huntsville National Space Club Community Support Person of the Year.

Brock is a native of Boaz, Alabama, has been married to his wife Shirley for 43 years, has one son, and three grandchildren. He received a Certificate of Business from the Gadsden Business College in 1973, Associate Degree in Science from Snead State Community College in Boaz in 1980, and Bachelor of Science degree in Business Administration from the University of Alabama in Birmingham in 1983.

National Aeronautics and Space Administration

HBCU OPPORTUNITIES AT NASA

David Brock,

MSFC Small Business Specialist

Feb. 21, 2024

OSBP

HBCU OPPORTUNITIES AT NASA

- Cooperative Agreement Notices.
- Small Business Technology Transfer Program.
- Subcontracting with NASA prime contractors.
- NASA / MSFC Hosted Outreach Events:
  - Marshall Small Business Alliance Meeting – March 21, 2024.
  - Marshall Space Flight Center (MSFC) Annual HBCU and MSI Partnership Meeting.
  - NASA HBCU/MSI Infusion Road Tours.

MSFC DUAL USE TECHNOLOGY DEVELOPMENT CAN PROCESS OVERVIEW

Purpose: Enhance MSFC's ability to partner with U.S. universities and industry to advance a technology development objective of the Partner as well as help meet specific NASA/MSFC mission needs.

MSFC contributions to the Partner range from $10K - $250K in value for each awarded project, up to 50% of the total project resources required**; likewise, the partner must contribute at least 50% of the total project resources.**

A Cooperative Agreement is not a Grant

STEP 1. Offerors submit summary-level Seven-page papers.

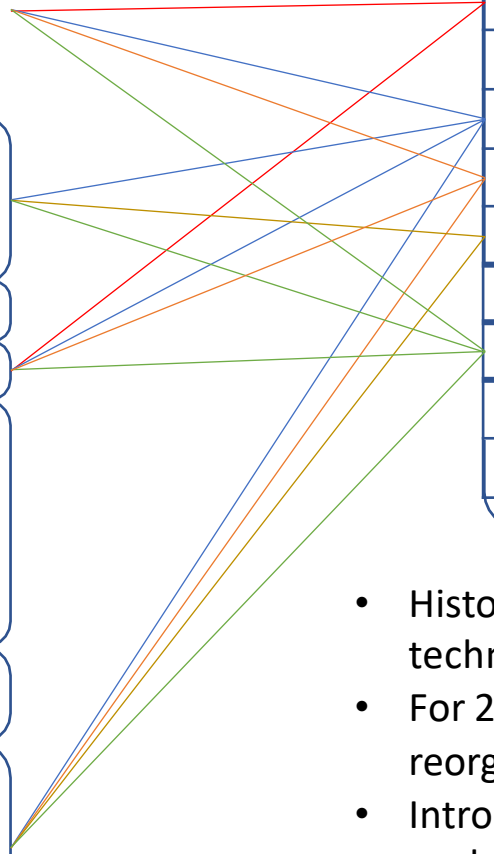
STEP 2. Selected Offerors are invited to submit a full Proposal. *Typically, it takes about 6 months from Step-1 White Paper submission to awarded Cooperative Agreement project start.*

AWARDS. Selected Step-2 Proposals are awarded a Cooperative Agreement

TECHNICAL FOCUS AREAS

1. **Advanced Space Transportation Systems**
   1. In-Space Transportation Systems
   2. In-Space Propulsion Systems
      1. Nuclear Thermal Propulsion (NTP)
      2. Propellant-less Propulsion Systems
2. **Habitation Systems**
   1. Environmental Control and Life-Support Systems (ECLSS)
   2. Habitat Elements, Systems & Outfitting
3. **In-Space & Surface Mission Operations**
4. **Lander Systems**
5. **Science**
   1. Astrophysics
   2. Data & Applications Science
   3. Earth Science
   4. Heliophysics

   A.5.4.5 Planetary Science
6. **Space Launch System / Exploration Production & Operations Contract (SLS / EPOC)**
7. **Surface Technologies & Systems**
   1. Extreme Environments
   2. In-Situ Resource Utilization (ISRU)
   3. In-Space Assembly & Manufacturing (ISAM)
   4. Surface Mobility



A.4.8 Cross-Cutting Technologies

- A.4.8.1 Advanced Chemical Propulsion
- A.4.8.2 Advanced Materials, Structures & Manufacturing (AMSM)
- A.4.8.3 Autonomous Systems & Robotics
- A.4.8.4 Cryogenic Fluid Management (CFM)
- A.4.8.5 Dust Mitigation
- A.4.8.6 Model Based Systems Engineering (MBSE)
- A.4.8.7 Power & Energy Systems
- A.4.8.8 Space Domain Awareness
- A.4.8.9 Testing, Modeling & Simulation

- Historically, the technical focus areas grew organically as technologists identified needs from their perspective
- For 2024 solicitation focus areas were streamlined and reorganized
- Introductory paragraphs identify the breadth and scope of each focus area and supported by short lists of example technologies or technologies of particular interest

Step-2 Proposal Assessment Criteria

- **Technical Merit and Feasibility (40%) -** Project merit, approach, deliverables / personnel & facilities / Technical Schedule & Milestones
- **Business Plan (20%) -** Commercial potential
  - Industry Partner's commercial objectives for the investment
  - University Partner's research priorities and vision for eventual application to commercial use
- **Cost Plan (40%)**
  - Cost Plan elements are clearly described and complete for the scope and tasks of the project
  - Total estimated resources needed for the project are adequate, the cash & in-kind resources contributions of MSFC & the CAN project partner are appropriate for each
- **Recommendation -** Is the Proposal recommended to select for a Cooperative Agreement project?

CAN PROGRAM HBCU AND MSI SUCCESS STORIES

- University of Nevada Las Vegas participated in two CAN projects:

  1. Designing ionic liquid-based adsorbent for treating dimethylsilanediol contaminated water in International Space Station.

  2. Screening, identification, and development of task specific acidic ionic liquids for the dissolution and recovery of metals and silica from Regolith.

- Florida A&M University participated in two CAN projects:

  1. Investigating the Performance Characteristics of Auxetic Foams in Neuropathy Treatment Applications.

  2. Viability Assessment of Printed Powerless Sensors Structures for Aerospace Environment.

CONTACT INFORMATION

For questions regarding the 2024 MSFC Dual Use Technology Development CAN opportunity, contact:

Daniel O'Neil, Ph.D.

daniel.a.oneil@nasa.gov

(256)544-5405

Quincy Bean

quincy.a.bean@nasa.gov

(256)544-3973

Working with the Engineering Directorate and the Partnerships Formulation Office, we'll find subject matter experts to discuss technology needs and potential project ideas.

SMALL BUSINESS TECHNOLOGY TRANSFER (STR) PROGRAM

- Highly competitive program that encourages domestic small businesses to engage in Federal Research/Research and Development (R/R&D) with the potential for commercialization.

- Established in the 1990s to facilitate cooperative R&D between small businesses and U.S. research institutions (RIs).

- Purpose to unlock the power and innovative thinking of the country's RIs.

- RI must be in the U.S. and be a nonprofit college or university, domestic nonprofit research organization, or a federally funded R&D Center (FFRDC).

- RI must partner with a Small Business Concern (SBC) with five hundred employees or less and legally established in the U.S.

- Up to $1 million for Phase I and $2 million for Phase II.

BENEFITS TO RIS

- For RIs:
  - A path to turn cutting-edge research from the lab to life-changing technology in the market.
  - The credibility that comes from working with NASA's researchers and experts.
  - A federal funding mechanism to advance research in your area of interest.

- For Professors:
  - Research data for potential publication in the future.
  - A way to expose students to exciting projects that could lead to employment.
  - An approach to foster entrepreneurship and innovation in students.
  - Can be a differentiator when marketing your institution to potential students.

- For Students:
  - The opportunity to work on pioneering research projects, and gain experience that could lead to employment.

WHAT RESOURCES DO I HAVE?

- **Resource Library**: sbir.nasa.gov/resource-library
  - Access video and print guidance for Phase 0, Phase 1, Phase 2, and beyond.
- **Success Stories**: sbir.nasa.gov/success-stories
  - Read how others have found success with NASA SBIR/STTR.
- **Blog**: sbir.nasa.gov/blog
  - Check out even more insights from the NASA SBIR/STTR community.
- **Local Assistance**: https://www.sbir.gov/local-assistance
  - Find small business support in your state through the SBA's website.
- And of course, don't hesitate to **Contact Us**: sbir.nasa.gov/contacts

WHERE DO YOU START?

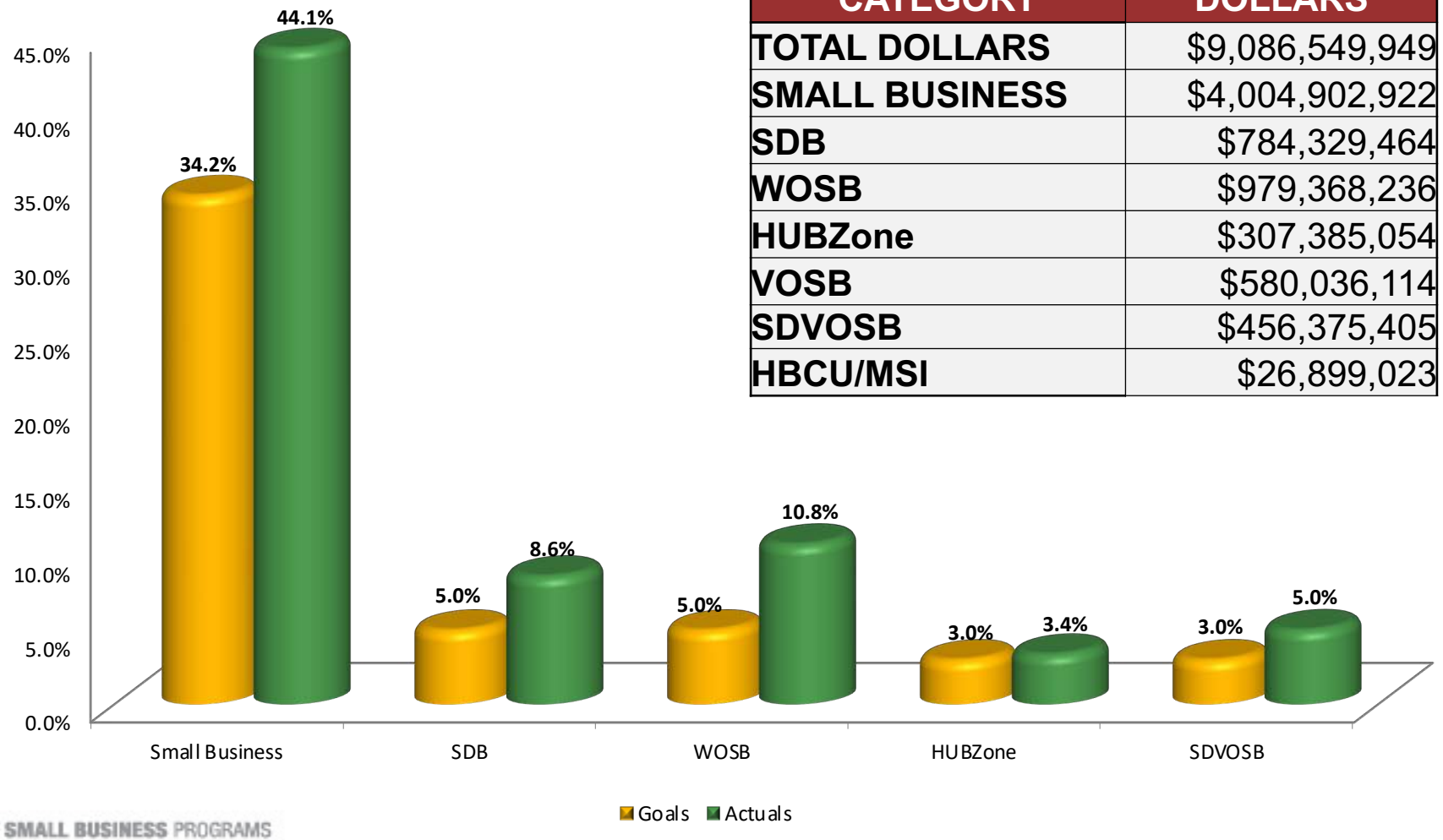
- Visit our website and **read the recent solicitations**, https://sbir.nasa.gov/solicitations, to understand NASA's technology focus areas. Get a feel for the types of challenges NASA is looking to solve and if you think you have a solution, NASA could be a fit for you!
- Determine your **topic(s)** of interest. If STTR, find a research institution partner.
- Sign up for our **newsletter** and other communications: sbir.nasa.gov/info
- Keep an eye out for opportunities to meet with **NASA experts**: https://sbir.nasa.gov/programevents
- Contact a Center Technology Transition Lead (**CTTL**): sbir.nasa.gov/contacts
- Watch our **Dissecting the Solicitations** webinar recording for advice you can use year-round to prepare for the next Phase I solicitations: https://youtu.be/Xqti9u_mgTM
- Find additional sources Watch our **Dissecting the Solicitations** webinar recording for advice you can use year-round to prepare for the next Phase I solicitations: https://youtu.be/Xqti9u_mgTM
- of **assistance**: sbir.nasa.gov/content/additional-sources-assistance

UPCOMING OPPORTUNITIES

2024 SBIR/STTR Phase I - Solicitation expected early 2024

2024 MPLAN – Expected Spring 2024

NASA FY 23 SUBCONTRACTING GOALS VS. ACTUAL PERCENTAGES DATA PULLED FEBRUARY 2, 2024 FROM ESRS



CATEGORY	DOLLARS
TOTAL DOLLARS	$9,086,549,949
SMALL BUSINESS	$4,004,902,922
SDB	$784,329,464
WOSB	$979,368,236
HUBZone	$307,385,054
VOSB	$580,036,114
SDVOSB	$456,375,405
HBCU/MSI	$26,899,023

FY23 TOP 20 NASA PRIME CONTRACTORS

VENDOR NAME	WEBSITE	TOTAL DOLLARS
California Institute of Technology (JPL)	https://acquisitions.jpl.nasa.gov	$2,922,677,243
Space Exploration Technologies Corp.	https://www.spacex.com/supplier/index.html	$2,250,758,731
The Boeing Company	http://www.boeingsuppliers.com/esd/getstart.html	$1,568,498,599
Northrop Grumman Systems Corp. (Includes Orbital Sciences and ATK)	https://www.northropgrumman.com/suppliers/	$1,251,623,011
Lockheed Martin Corporation	https://www.lockheedmartin.com/en-us/suppliers.html	$1,221,943,785
Jacobs Technologies, Inc.	https://www.jacobs.com/suppliers/	$946,316,790
KBR, Inc. (Incudes Wyle and SGT)	https://kbrsupplier.com/	$722,587,900
Johns Hopkins University Applied Physics Laboratory LLC	https://hopkinsmedicine.org/business/index.html	$449,100,521
Blue Origin LLC	https://www.blurorigin.com/fly-with-us/become-a-supplier	$440,849,404
Science Applications International Corporation	https://www.saic.com/who-we-are/suppliers-and-small-business	$426,436,260
Aerojet Rocketdyne of DE, Inc.	https://www.rocket.com/suppliernet	$418,618,993

FY23 TOP 20 NASA PRIME CONTRACTORS, CONT.

VENDOR NAME	WEBSITE	TOTAL DOLLARS
Leidos	https://www.leidos.com/suppliers	$359,353,430
Peraton, Inc.	https://www.peraton.com/suppliers/	$337,355,934
Bechtel National, Inc.	https://www.Bechtel.com/suppliers/	$308,679,000
L3Harris Technologies Inc. (includes Aerodyne-SGT Engineering Services LLC)	https://www.l3harris.com/supply-chain	$285,184,931
Science Systems and Applications, Inc.	https://www.ssaihq.com/contact-us	$241,109,133
Maxar Space, LLC	https://www.maxar.com/legal/suppliers	$178,315,215
Air Products and Chemicals, Inc.	https://www.airproducts.com/company/suppliers	$172,185,991
Syncom Space Services, LLC	http://syncomspaceservices.com/	$146,326,084
Ball Aerospace & Technologies Corp.	https://www.ball.com/aerospace/about-aerospace/suppliers-resources	$129,931,562
	Total:	$14,777,852,516

NASA / MSFC OUTREACH EVENT: THE MSFC MARSHALL SMALL BUSINESS ALLIANCE MEETING

- Meetings are held on a semiannual basis…thirty-six meetings to date…more than twenty thousand have attended.

- Outreach/communication tool developed to provide industry with maximum exposure to the NASA/MSFC Marketplace.

- Next meeting planned for March 21, 2024 – link to register at

- Note: Attendance typically averages between five and six hundred per session.
- Link to register: **https://37thMSBA.eventbrite.com**

NASA / MSFC OUTREACH EVENT: MSFC HBCU AND MSI PARTNERSHIP OUTREACH INITIATIVE

- Event targets NASA's immediate and future subcontracting opportunities for HBCUs and MSIs.
- Event affords HBCUs and MSIs opportunity to network with representatives from NASA and its prime contractors.
- Our 10th Annual HBCU/MSI Partnerships meeting is scheduled for June 11, 2024

NASA FY24-25 HBCU/MSI INFUSION ROAD TOUR SCHEDULE

- April 16-17, 2024
  - Clark Atlanta University – Atlanta, GA

- November 2024
  - TBD

- April 2025
  - TBD

NASA SMALL BUSINESS SPECIALISTS

Center Category	Center	Name	Phone	Email
RESEARCH CENTERS	Ames Research Center	Christine L. Munroe	650-604-4695	Arc-smallbusiness@mail.nasa.gov
	Armstrong Flight Research Center	Christine L. Munroe	650-604-4695	Arc-smallbusiness@mail.nasa.gov
	Glenn Research Center	Eunice J. Adams-Sipp	216-433-6644	Grc-smallbusiness@mail.nasa.gov
	Langley Research Center	Robert O. Betts	757-864-6074	Larc-smallbusiness@mail.nasa.gov
SPACE CENTERS	Johnson Space Center	Robert E. Watts	281-244-5811	Jsc-smallbusiness@mail.nasa.gov
	Kennedy Space Center	Natalie B. Colvin	321-867-4773	Ksc-smallbusiness@mail.nasa.gov
	Marshall Space Flight Center	David E. Brock	256-544-0267	Msfc-smallbusiness@mail.nasa.gov
	Stennis Space Center	Kay S. Doane	228-688-1720	Ssc-smallbusiness@mail.nasa.gov
SCIENCE CENTER	Goddard Space Flight Center	Jennifer D. Perez	301-286-4379	Gsfc-smallbusiness@mail.nasa.gov
FEDERALLY FUNDED R&D CENTER	Jet Propulsion Laboratory	Lynn M. Torres	818-354-1685	Lynn.m.torres@nasa.gov
AGENCY-WIDE RESOURCE CENTER	Information Technology Procurement Office	Robert O. Betts	757-864-6074	hq-itpo-smallbusiness@mail.nasa.gov
	NASA Shared Services Center	Troy E. Miller	228-813-6558	nssc-smallbusiness@mail.nasa.gov

Meet the Speaker

Ms. Sarah McGarvey
Grants Manager
NASA Offfice of Stem Engagement

Sarah McGarvey is NASA's Office of STEM Engagement's Grant Manager. In this role, she supports OSTEM's four projects as an advocate and liaison for the enterprise. She has 20 years grant experience with: the Federal Emergency Management Agency, Department of Treasury, Peace Corps, and NASA. Throughout her career, she has focused on 1) simplifying complex processes and 2) capacity building with: States, Territories, Tribal Nations, Colleges and Universities, local communities, non-profits, and collaborating with the private sector and other Federal partners.

Sarah is a certified Grants Manager and Contracting Officer Representative. She lives in Arlington, Virginia with her husband, 6 year old daughter, and 4 year old son.

Meet the Speaker

Mr. Rod Chappell

Lead – MUREP Partnerships and Sustainability (P&S)
Minority University R esearch and Education Project (MUREP)

Roderick "Rod" Chappell leads one of the three MUREP investment pillars designed to increase competitiveness at Minority Serving Institutions (MSIs). The P&S Pillar provides leadership, relationship management, best practices, research support and training that supports capacity building at MSIs engaged in S.T.E.M. program development. The Pillar also connects MUREP and the Office of STEM Engagement with NASA's Offices of Small Business Programs, Procurement, Technology Transfer, SBIR/STTR as well as its Mission Directorates.

Key NASA Activites Created:

MUREP Partnership Learning Annual Notification (MPLAN)
MUREP Sustainability Initiative
MSI Exchange Repository
MUREP Sustainability and Innovation Collaborative (MUSIC)
MUREP Innovation and Technology Transfer Idea Competition (MITTIC)
MUREP Small Business Technology Transfer Planning Grant (M-STTR)

Chappell is also a 20+ year entrepreneur in the marketing, promotions and communications arena. In 2001, he revolutionized the promotions marketplace by forming Grassroots Promotions (GP), a full-service marketing strategy firm specializing in targeted events and promotions. The first of its kind specializing in the African-American and Hispanic consumer marketplace, GP is designed to be the link between managers of corporations and grassroots-level marketing programs in the urban community.

National Aeronautics and Space Administration

Historically Black Colleges and Universities(HBCU) and Minority Serving Institutions (MSI) Opportunities

Sarah McGarvey
OSTEM Grants Manager

Rod Chappell
MUREP Partnerships and Sustainability Lead

2/21/2024

NASA STEM

Agenda

- **OSTEM Vision/Mission/Goals**
- Program Elements
- Solicitation Dates
- MUREP Vision
- ❑ How we Engage HBCUs and MSIs
- ❑ Partnerships and Sustainability
- Contracting Opportunities
- Student Opportunities
- Questions

NASA STEM Engagement Program Elements

NASA'S MISSION THEMATIC AREAS

NASA STEM ENGAGEMENT PROJECTS

SPACE GRANT

A national network of colleges and universities with over 1,000 affiliate institutions and organizations located in all 50 states, the District of Columbia, and Puerto Rico.

Purpose: Expands opportunities for students to participate in NASA's aeronautics and space projects.

EPSCoR

The Established Program to Stimulate Competitive Research (EPSCoR) funds partnerships with government, higher education, and industry in 28 eligible jurisdictions (25 states and three territories).

Purpose: Effects sustainable improvements in a state or region's research infrastructure, capacity, and competitiveness.

MUREP

The Minority University Research and Education Project (MUREP) supports minority-serving institutions (MSIs) to enhance research, academic, and technology capabilities.

Purpose: Increases retention of underserved and underrepresented groups in STEM.

NEXT GEN STEM

Next Generation STEM (Next Gen STEM) creates K-12 and informal education STEM engagement initiatives aligned to NASA mission priorities.

Purpose: Attracts and retains student interest in STEM careers, building a vibrant next-generation workforce.

ENABLING CROSS-CUTTING FUNCTIONS

EDUCATIONAL TOOLS AND PLATFORMS

Focus: Access and scalability

- **Suite of tools and platforms enabling student engagement and data collection**
  - **NASA STEM Gateway (Phase 1 operational in early FY21)**
  - **stem.nasa.gov**
  - **intern.nasa.gov**

PERFORMANCE MEASUREMENT AND EVALUATION

Focus: Outcomes and metrics

- **Learning agenda**
- **Targeted studies**

STRATEGIC PARTNERSHIPS

Focus: Scalability

- **Comprehensive approach to foster and stimulate strategic partnerships**
- **New strategy began in FY 2020**

INTERNSHIPS AND FELLOWSHIPS

Focus: Diversity and Inclusion

- **Enterprise model in collaboration with mission directorates and centers**

STEM ENGAGEMENT BENEFICIARIES


K-Elementary School


Middle School


High School


Undergraduate


Graduate

NASA STEM Engagement Strategic Direction

NASA Strategic Objective 4.3

Build the next generation of explorers.
Engage students to build a diverse future STEM workforce.

Coming Soon: Strategic Implementation Plan for the NASA Strategic Plan

NASA STEM Engagement Goals:

1. Create unique opportunities for a diverse set of students to contribute to NASA's work in exploration and discovery.
2. Build a diverse future STEM workforce by engaging students in authentic learning experiences with NASA's people, content, and facilities.
3. Attract diverse groups of students to STEM through learning opportunities that spark interest and provide connections to NASA's mission and work.

Focus Areas:

- **Expand NASA contributions in engaging K-12 students** in STEM pathways.
- **Broaden student participation** to increase diversity, equity, and inclusion in STEM through NASA opportunities and activities.
- **Build strategic partnerships and networks**, expanding NASA's STEM ecosystem to magnify reach and impact.

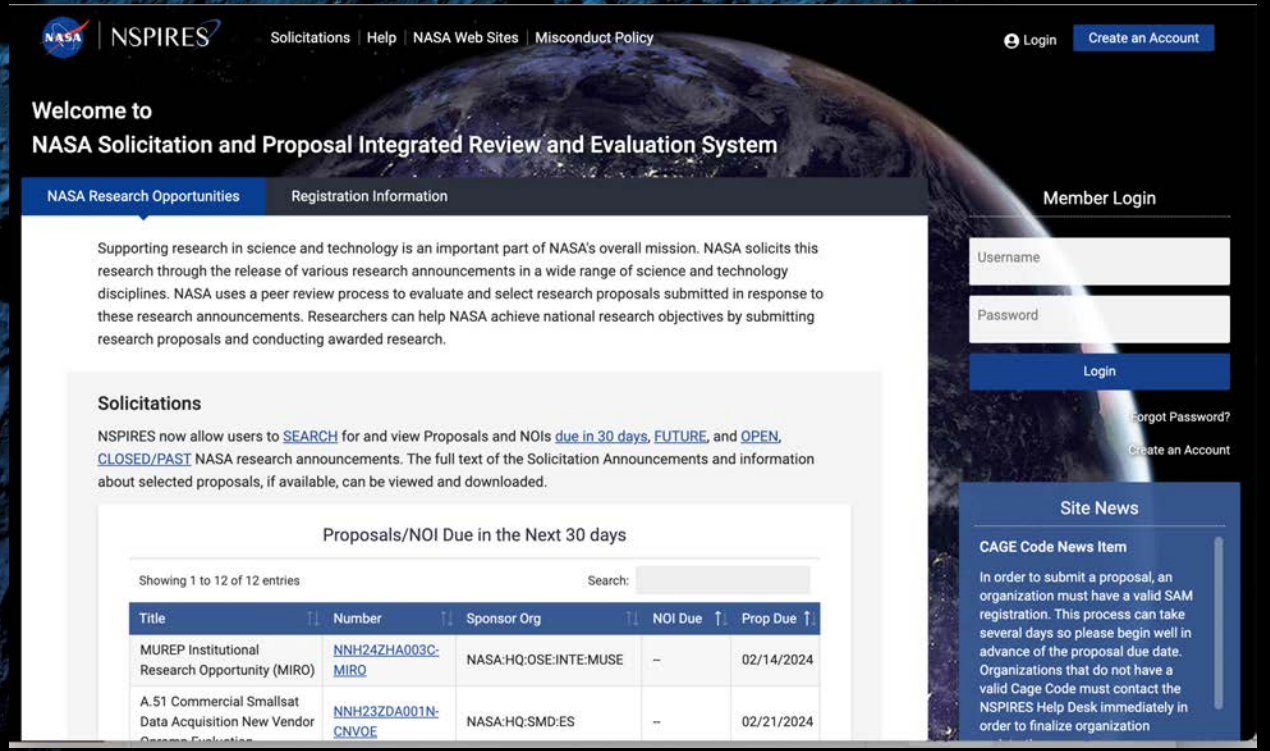
20

NASA EONS

Engagement Opportunities in NASA STEM

Omnibus announcement that includes a range of NASA STEM Engagement opportunities for basic and applied science and technology research and education. Specific opportunities with individual requirements and milestones will be issued periodically throughout the year as appendices to this solicitation as funds are made available for new awards.

EONS opportunities are announced via the NASA Solicitation and Proposal Integrated Review and Evaluation System (NSPIRES) website and grants.gov. Prospective proposers are required to be registered on NSPIRES.

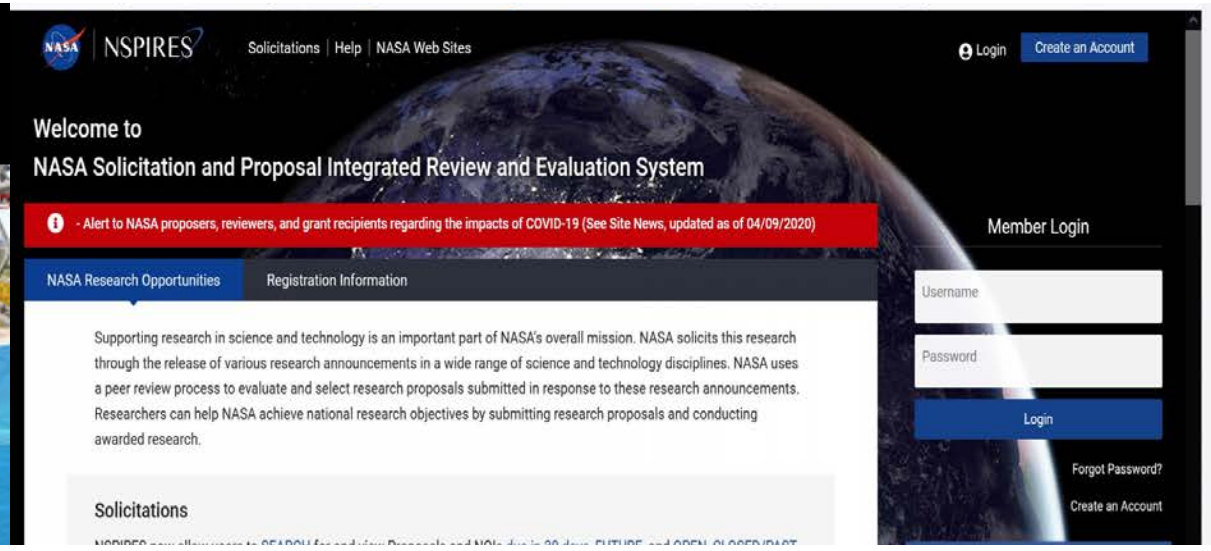


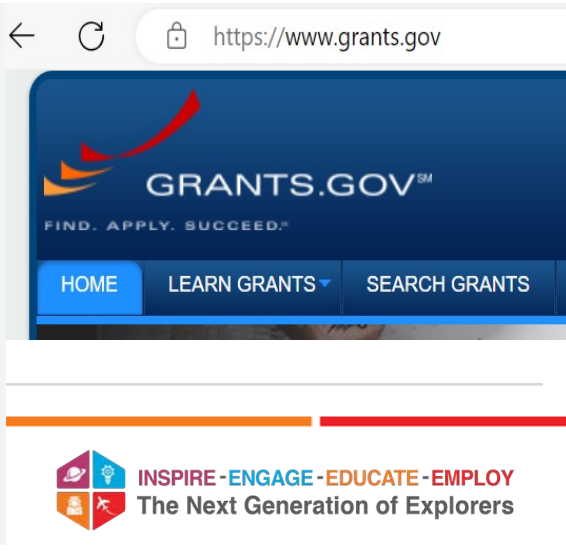
Funding Opportunities in NASA STEM

- MUREP MIRO: Opened: 11/15/2023 Closed 2/14/2024
- EPSCoR Rapid III: Opened 11/13/2023 Closed 2/16/2024
- EPSCOR ISS: Opened 1/10/2024 Closing 4/15/2024
- Space Grant: Opening 3/08/2024 Closing 8/19/2024

Anticipated this Spring and Summer:

- MUREP INCLUDES
- Teams Engaging Affiliated Museums and Informal Institutions (TEAM II)





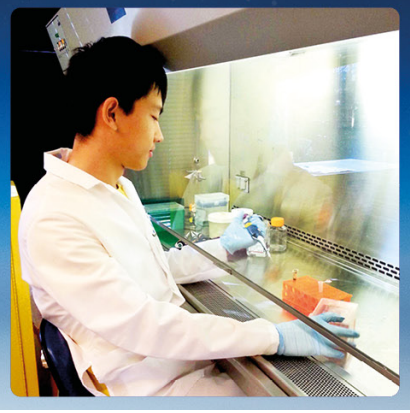
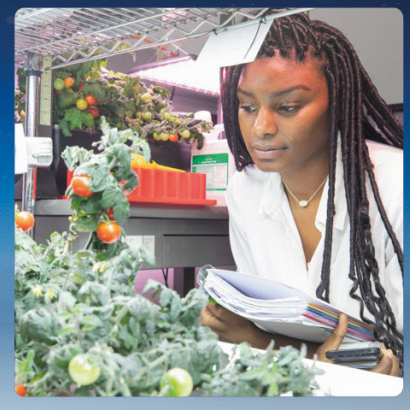
NASA MUREP

MINORITY UNIVERSITY RESEARCH and EDUCATION PROJECT

National Aeronautics and Space Administration





VISION

To enhance the **research**, **academic** and **technological capabilities** at MSIs by providing authentic **student learning experiences** related to **NASA missions** that contribute to a **diverse future STEM Workforce.**

MISSION

We engage Minority Serving Institutions in NASA's Missions.

How we Engage HBCUs and MSIs

MUREP INVESTMENTS

RESEARCH INFRASTRUCTURE & CAPACITY BUILDING

Mission Driven Research Efforts

STUDENT ENGAGEMENT

Pre-College & Higher Education STEM Learning Experiences

Challenges & Competitions

Awareness Events

PARTNERSHIPS & SUSTAINABILITY

Internal & External Collaboration

Planning Grants
Cultivating partnerships for response to NASA funding Opportunities and Mission Directorate priorities.

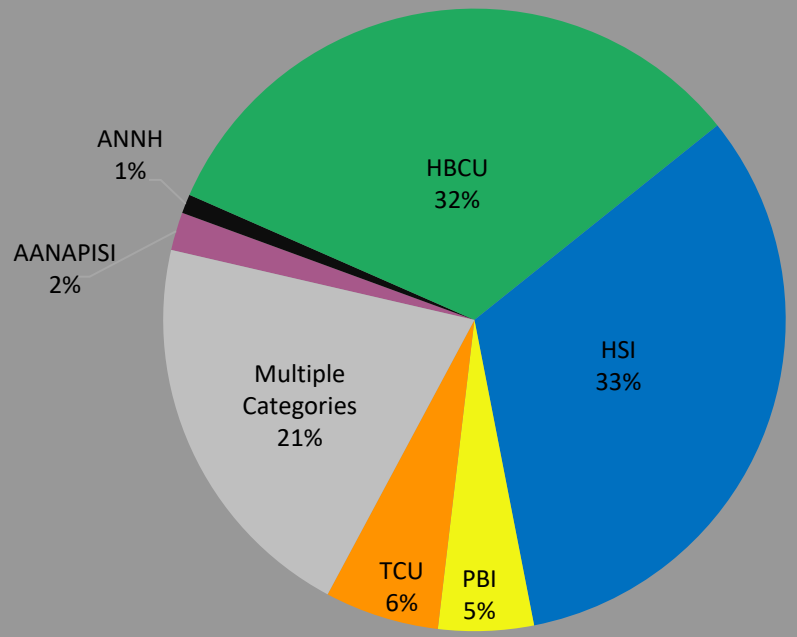
Leveraging Virtual Tools & Technology

TARGETED OUTCOMES

- **MISSION-CENTERED ALIGNMENT & APPROACH**
- **ENHANCED STEM CAPABILITIES AT MSIs**
- **BROADENING MSI PARTICIPATION**
- **STUDENT SUCCESS**

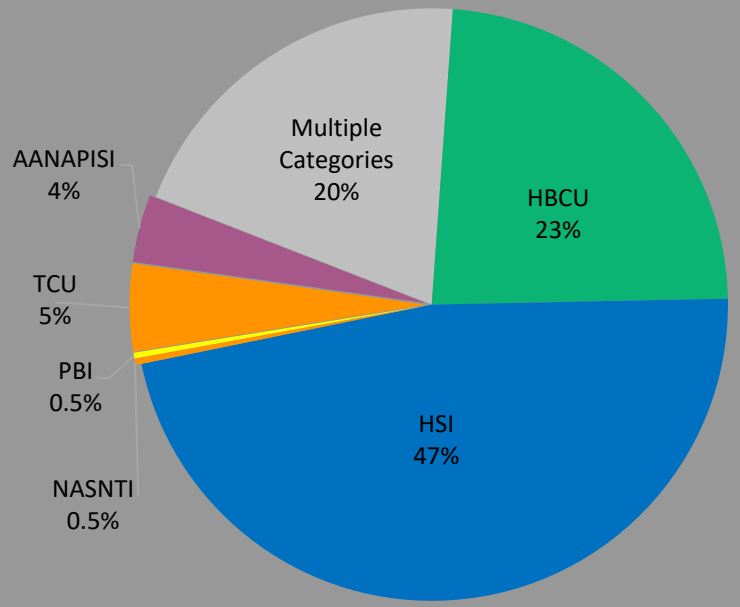
MUREP Award Summary

FY21 – FY23 Annual Funding by MSI Type



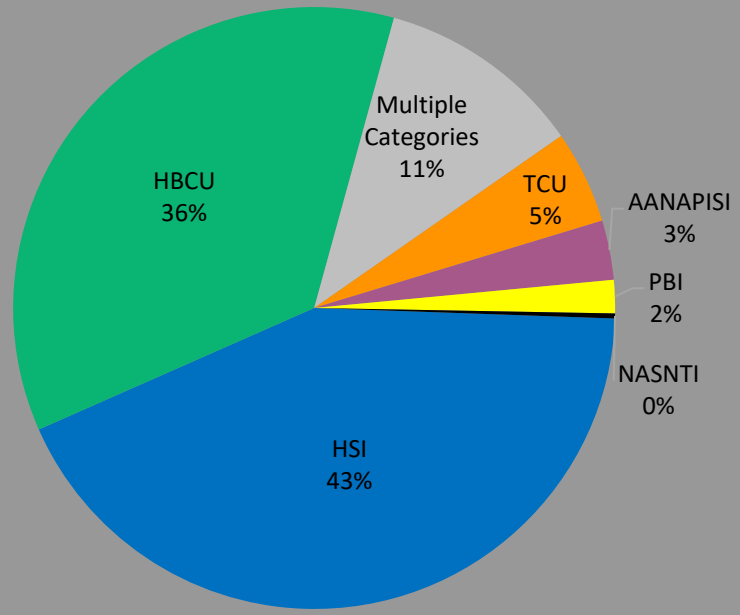
FY21

Total: $24M



FY22

Total: $21M



FY23

Total: $27M

MUREP Partnerships and Sustainability

NASA's FY24 Annual Plan to Increase Support and Opportunities for HBCUs

White House
Executive Order 14041

Goal 1: Increase the capacity of HBCUs to compete for and receive NASA funding and other financial resources.

Goal 2: Increase the amount of funds awarded to HBCUs through competitive grants, contracts, and cooperative agreements.

Goal 3: Increase the recruitment and applicant pool of HBCU students and graduates for STEM engagement and future workforce opportunities.

Goal 4: Increase the representation and selection of HBCU students in NASA sponsored programs.

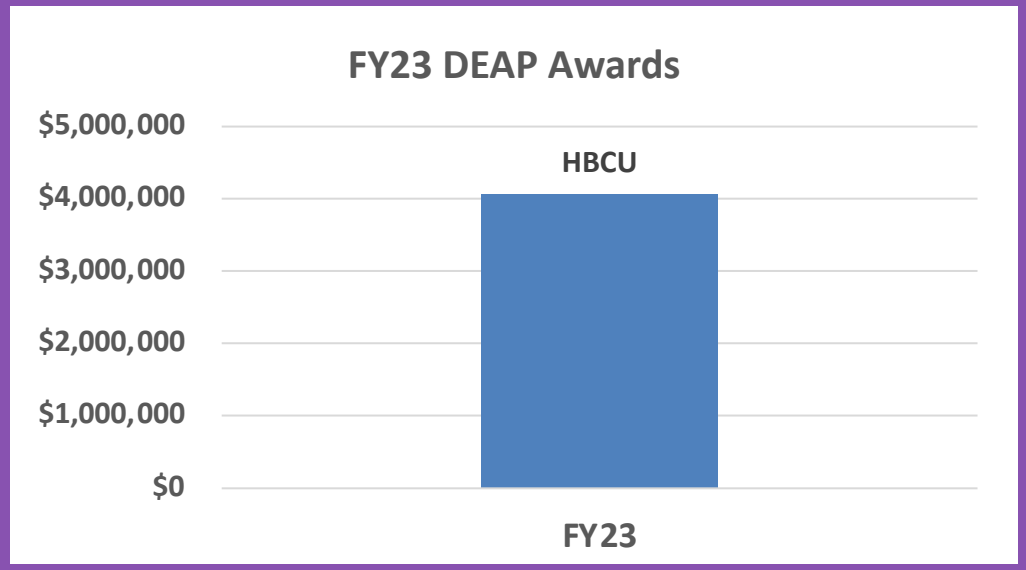
MUREP HBCU and PBI Current Awardees

MUREP investments are in support of White House Executive Orders 14041 and 14051 to advance educational equity, excellence, and economic opportunity for HBCUs and Black Americans.

MUREP DEAP

Data Science Equity, Access and Priority

Established to accelerate discovery in various NASA Science Mission Directorate (SMD) domains through collaborative, data intensive approaches and co-designed programs that implement NASA open science principles and architecture to address critical national challenges.



National Aeronautics and Space Administration

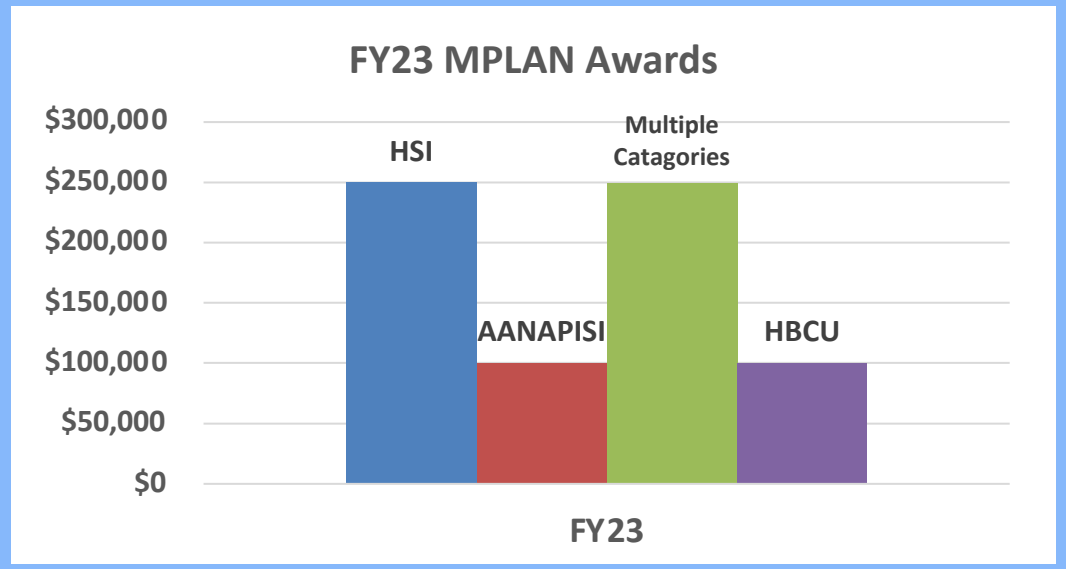
HBCUs in Action:

Fayetteville State University, DEAP Principal Investigator and Students visit DEAP mentor at NASA Jet Propulsion Laboratory - 2023

MPLAN

MUREP Partnership Learning Annual Notification

Established to connect Minority Serving Institutions (MSIs) with NASA Mission Directorates and promote research collaboration. Funding supports MSI teams to develop innovative ideas and action plans for commercialization.



OPEN APPLICATION PERIOD

Feb 13th – April 15th

National Aeronautics and Space Administration

New Initiative 2023 HBCU Awardees:

PVAMU

MUREP MSI Exchange

The MSI Exchange is a public website and searchable database, to present capabilities found at HBCUs / MSIs that are relevant to NASA's Mission. NASA, other federal agencies, industry and academia can search STEM profiles and capability statements to identify Institutions for partnership opportunities.

NASA Contracting Opportunities

NASA STEM
INSPIRE - ENGAGE - EDUCATE - EMPLOY
The Next Generation of Explorers

Historically Black Colleges and Universities (HBCU) Consortium for Acquisition Development (HCAD)

Overview: NASA Office of Procurement (OP) desires to significantly increase HBCU's/Minority Institution's (MI's) participation in contracts by boosting their acquisition business acumen and enhancing their awareness and overall ability to effectively compete on federal funding opportunities.

Actions:

- RFI posted on June 1, 2023, and closed on June 30, 2023.
  - Intent of RFI was to gain understanding of availability of capable vendors and their technical approach.
- RFI Rough Order of Magnitude (ROM) posted on November 15, 2023, and closed on December 15, 2023.
  - Intent of RFI ROM was to gain insight on the estimated costs and number of consortium participants given a sample two-year period of time.

Historically Black Colleges and Universities (HBCU) Consortium for Acquisition Development (HCAD)

Next Steps:

- Currently meeting with ROM respondents for clarification on responses and to tighten gaps in understanding of requirement.
- NASA anticipates solicitation release in Q3 2024.

In Partnership with the National Consortium of Graduate Degrees for Minorities in Engineering (GEM)

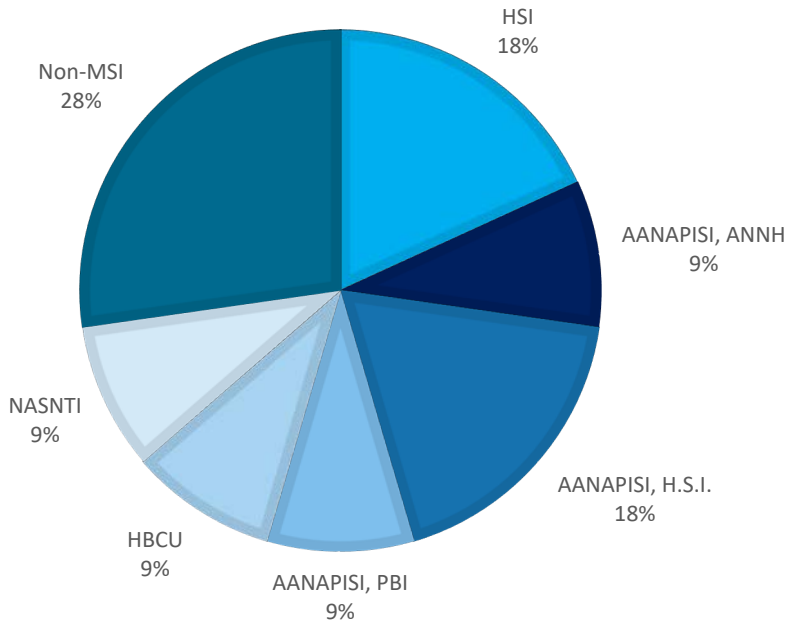
NASA FELLOWS

THE NATIONAL GEM CONSORTIUM

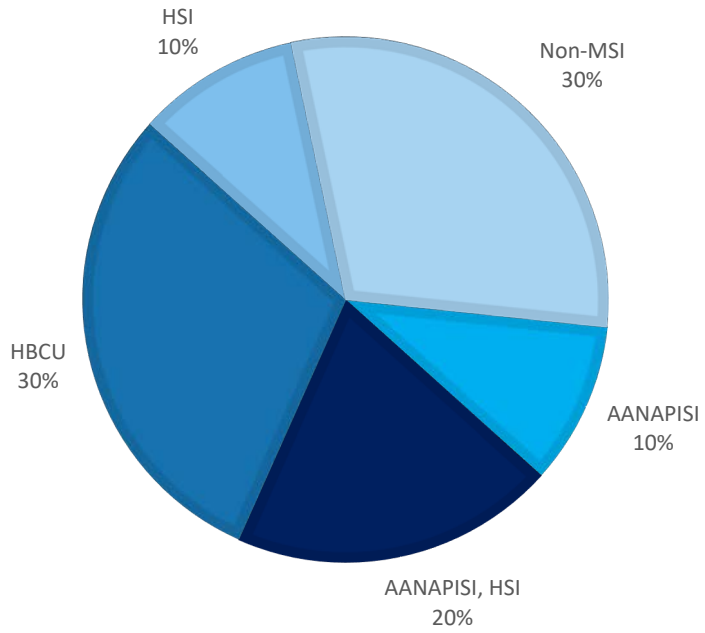
Summer / Fall Center-Based Research Experiences

Returning Fellows by MSI Category

FY21 (NASA Legacy)



FY22 – FY23 (NASA GEM)



NASA Internships Program

Spring, Summer, and Fall Sessions

Summer 2024 Session Application Rolling Decision – Feb 2nd

APPLY NOW: Open Application – Fall 2024

- Paid internships are offered across NASA facilities in fall, spring, and summer sessions.
- One application is viewed agencywide.
- OSTEM interns receive a stipend based on academic level and session length.
- Opportunities are available at the high school, undergraduate, graduate, and educator levels.

Applicants for NASA internships must:

- Be a U.S. citizen
- Be a full-time student
- Meet a minimum 3.0 GPA requirement
- Be over 16 years of age

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QUESTIONS?

Meet the Speaker

Mr. Liam Cheney

Mission Manager
NASA Launch Services Program

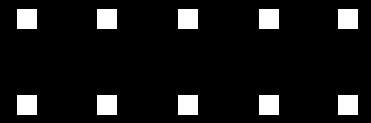
Liam J. Cheney is a mission manager in NASA's Launch Services Program (LSP) at NASA's John F. Kennedy Space Center in Florida. In this role, he manages launches for the program. A major portion of his responsibilities includes co-managing the agency's CubeSat Launch Initiative.

Cheney began his career at Kennedy in August 2018. He worked in LSP's Vandenberg Space Force Base Resident Office in California as a launch site integration manager supporting LSP missions launching from Vandenberg. Before joining NASA, he worked in the commercial space industry. He supported CubeSat missions that flew as secondary payloads on a variety of government and commercial launches, including the Mars Cube One and Artemis I missions.

Cheney earned a Bachelor of Science and Master of Science in aerospace engineering, both in 2014, from California Polytechnic State University in San Luis Obispo, where he participated in the Cal Poly CubeSat program.

He is the recipient of several awards, including a NASA Silver Group Achievement Award in 2022 for his work on the Venture Class Launch Services Demo-2 acquisition team, and an Acquisition Improvement Award in 2022 for his work on the Venture Class Acquisition of Dedicated and Rideshare Launch Services Acquisition Team.

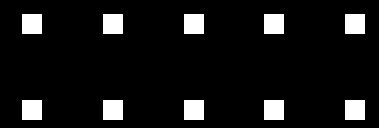
Cheney grew up along the coast in California and now resides in Kansas City with his wife, Catherine. They are expecting their first child in the summer of 2023.
A few of Cheney's hobbies include astronomy, photography/astrophotography, singing, swing dancing, and playing the cello.

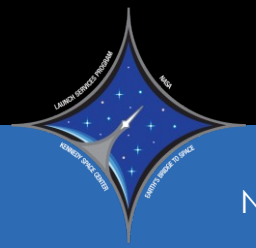


NASA's CubeSat Launch Initiative

…The Little Initiative that Could

Liam Cheney





Summary of Opportunities

- **CubeSat Launch Initiative (CSLI)**
  - NASA provides up to $300K of launch services for your mission
  - https://www.nasa.gov/kennedy/launch-services-program/cubesat-launch-initiative/
- **Mission Concepts Program (MCP)**
  - Prepares emerging teams for success in CSLI or the University Nanosatellite Program (UNP)
  - https://universitynanosat.org/solicitation/
- **Other opportunities exist, including…**
  - NASA Flight Opportunities Program
    - https://www.nasa.gov/stmd-flight-opportunities/
  - University Nanosatellite Program (UNP)
    - https://universitynanosat.org/

CubeSat Launch Initiative

Mission

Providing launch opportunities to U.S. CubeSat developers, thereby giving them a pathway to conduct research in the areas of science, exploration, technology development and education.

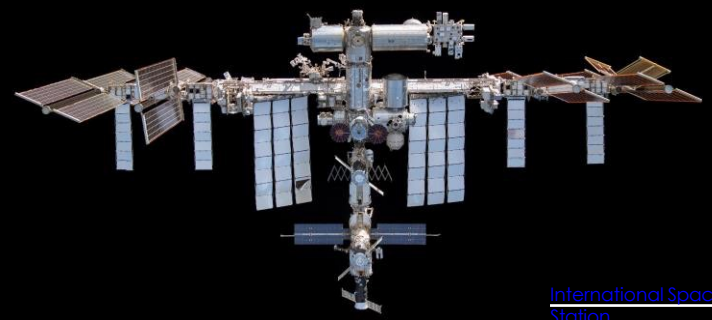
Accomplishments to Date

- 200+ CubeSat Projects selected from 100+ organizations from 40+ states, Washington DC and Puerto Rico
- 150+ CubeSats launched to date

Image: ELaNa 19 Launch, Credit: Rocket Lab/Trevor

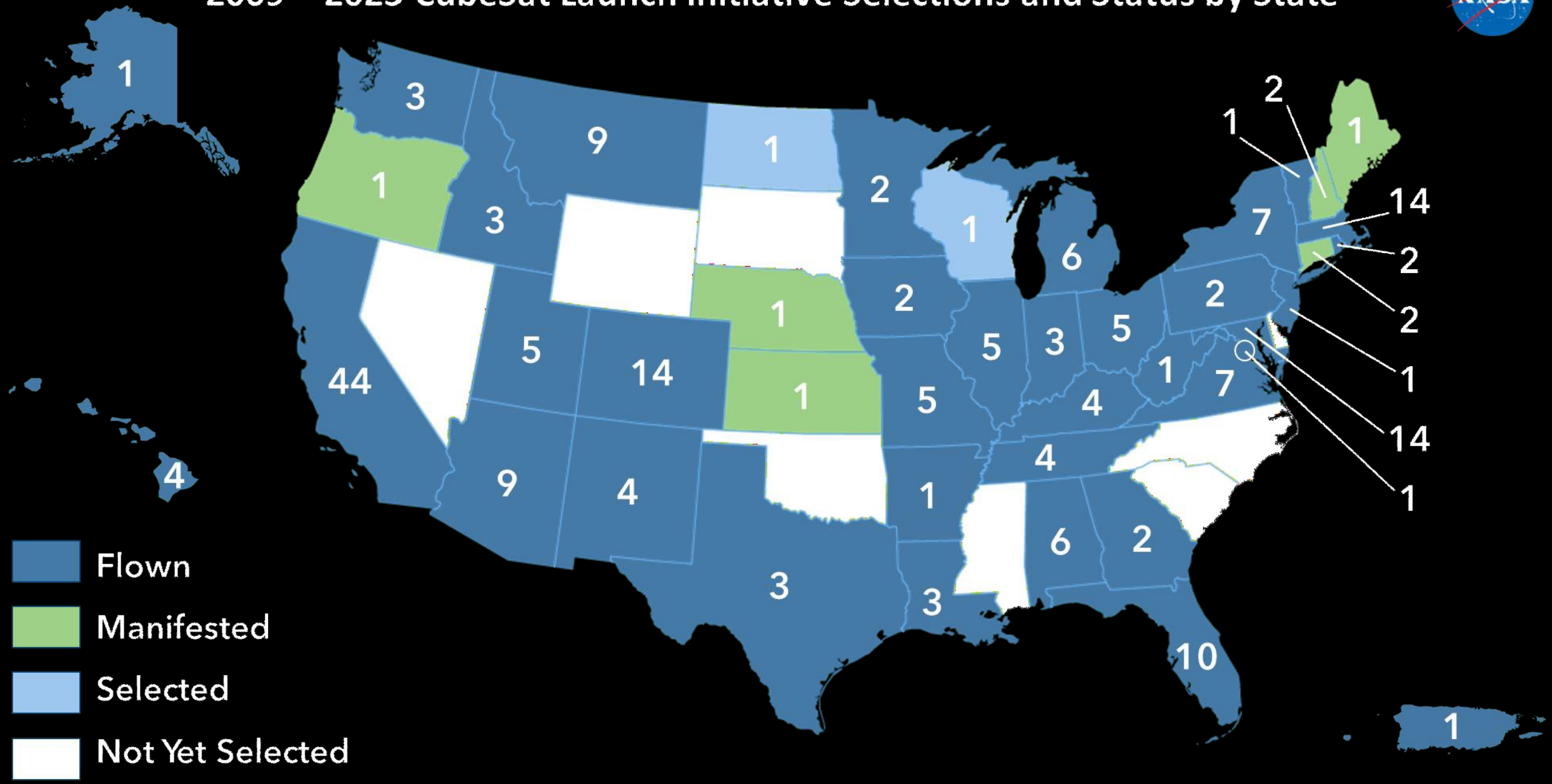
LightSail, Credit: The Planetary Society

CubeSat Deployers on ISS



International Space Station

2009 – 2023 CubeSat Launch Initiative Selections and Status by State

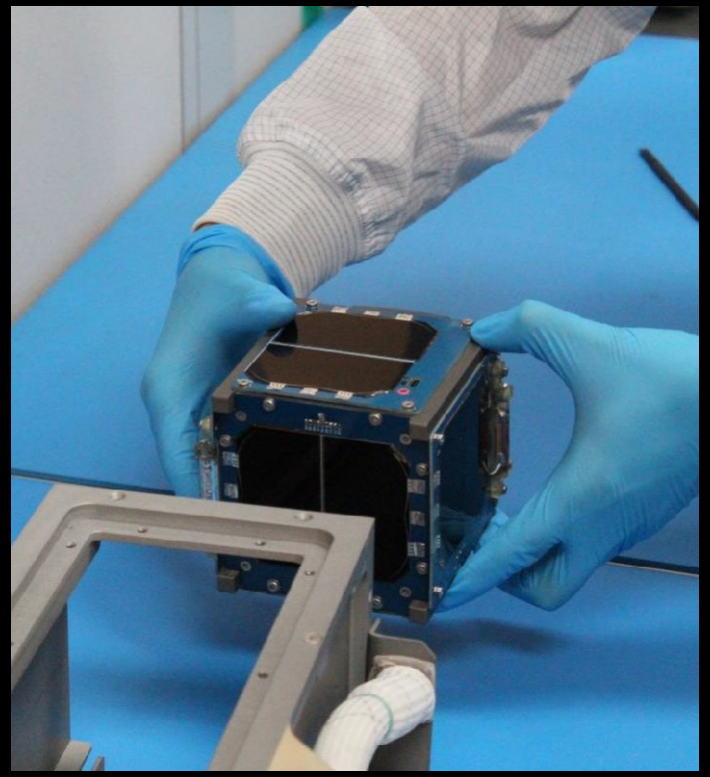


2023-03-21

What is a CubeSat?

- A CubeSat is a type of space research nano-satellite
- CubeSats are typically low-cost, high risk tolerant Spacecraft
- The base CubeSat dimensions are 10x10x11cm (one "Cube" or "1U"), or approximately 4 inches
- Typically, 1U, 2U, 3U, 6U, or 12U in Volume, typically weigh no more than ~2kg (about 4.4 lbs) per 1U Cube
- Contained and the ejected from standard dispensers
- CubeSats are generally deployed from the ISS and/or launch vehicles as rideshares

GPX2, Credit: NASA



LightCube integration
Credit: Nanoracks

How do CubeSats get to Space?

Photo Credit: U.S. Air Force/Jerry E. Clemens

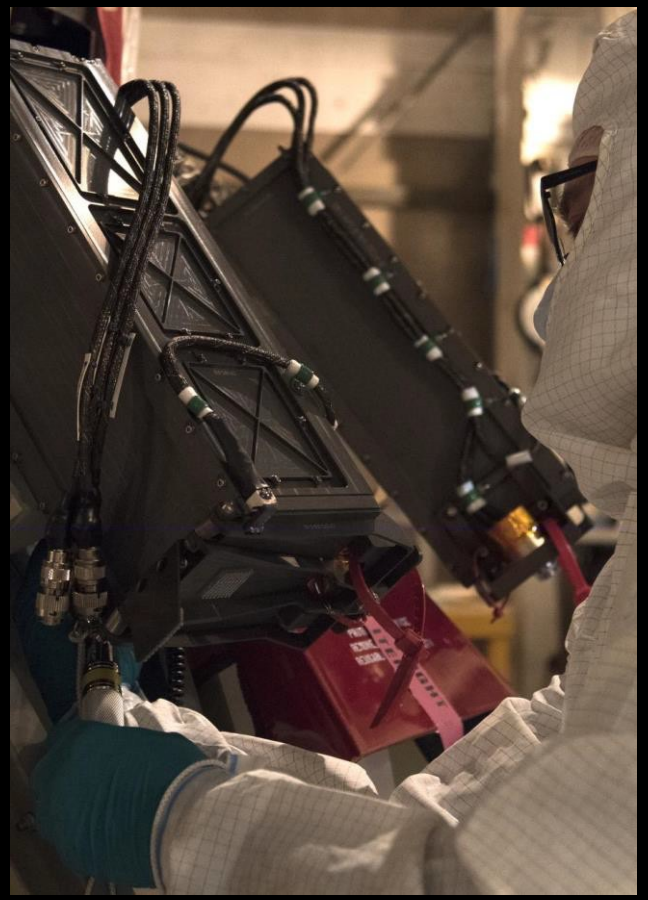
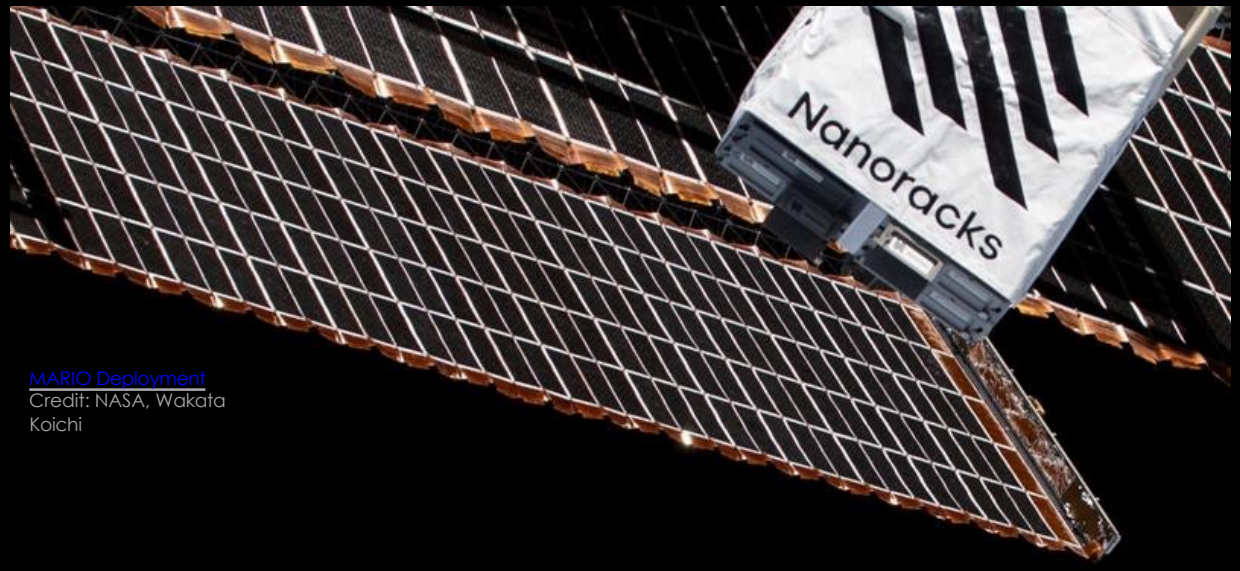


Photo Credit: NASA/USAF 30th Space Wing

Launch Photo Credit: Rocket Lab/Trevor Mahlmann



MARIO Deployment
Credit: NASA, Wakata Koichi

CubeSats in Orbit…

Benefits to Your Organization

CSLI provides up to $300K to cover launch and integration costs, thereby removing the financial barriers associated with launch.

Enables students, teachers and faculty to obtain hands-on flight hardware development and operational experience

Provides mechanism to conduct scientific research and develop technologies in outer space

CSLI Eligibility

A

Educational Institutions and Non-Profits

US public, private and charter schools that serve students K-12, and accredited higher education institutions such as museums and designated 501(c)(3) non-profits

B

Internal NASA Projects

Eligibility Limited to NASA Centers and/or JPL for the purpose of early career workforce development.

Follow us here

https://www.nasa.gov/kennedy/launch-services-program/cubesat-launch-initiative/

Announcement of Partnership Opportunity

1. Announcement Release Date: August each year (expected)
2. Proposals Due : November each year (expected)
3. Awardees are granted up to $300K worth of launch and integration services, applicant responsible for securing funding for all CubeSat development
4. NASA Space Operations Mission Directorate anticipates offering launch opportunities for a limited number of CubeSats on launches or deployments from the ISS

Follow us here

https://www.nasa.gov/kennedy/launch-services-program/cubesat-launch-initiative/

Mission Concept Program (MCP)

- Partnership Program between NASA CSLI, NASA Exploration Research & Technology (ER&T), and the DoD, directly addressing challenges limiting participation
- MCP is a residential Intern Program running May through August that provides support to developing CubeSat teams teaching systems engineering principles in CubeSat Design and launch
- MCP provides support and strengthens readiness of universities, teams and faculty in preparation to propose for CSLI and DOD University Nanosatellite Program
- MCP aims to alleviate the high barriers to entry
  - Full satellite development is daunting
  - CSLI has an aggressive schedule and student turnover is a certainty
  - Effort to improve university proposals and widen the breadth and depth of submissions from underserved communities
- ***Keep an eye out for next year's request for proposals!***
  - *2024 proposal cycle was open for 4 weeks in January – February 2024*

Learn more at: https://universitynanosat.org/solicitation/

Norman.L.Phelps@nasa.gov
Liam.J.Cheney@nasa.gov
Creg.O.Raffington@nasa.gov

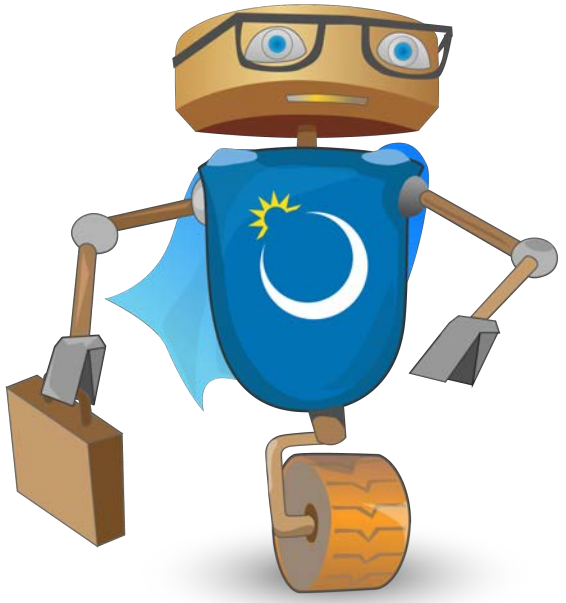
Follow us here → *https://www.nasa.gov/kennedy/launch-services-program/cubesat-launch-initiative/*

Questions?

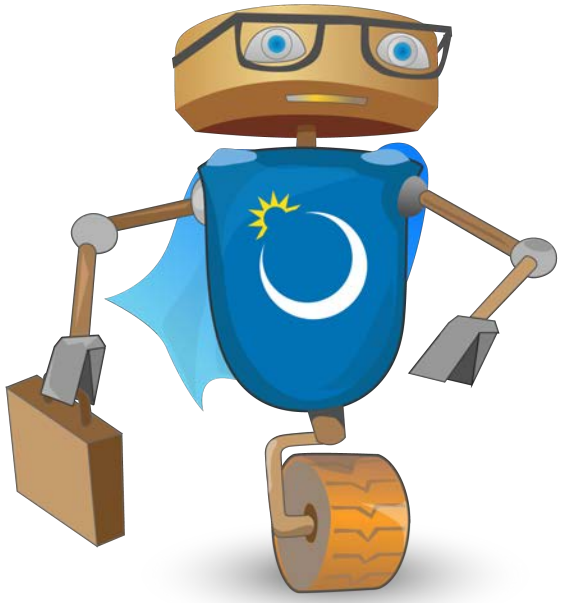
OSBP Learning Series

NASA HBCU *Opportunities*

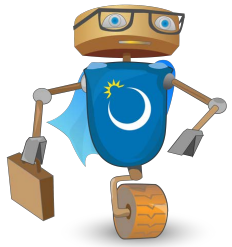
Ask and Answer Session



OSBP Updates



NASA Small Business Listening Session Series



NEW in FY24!!

The NASA Office of Small Business Programs (OSBP) Small Disadvantaged Business (SDB) listening session series is a collaborative platform aimed at promoting dialogue, understanding challenges, exploring opportunities, and strengthening support mechanisms to empower small disadvantaged businesses in their engagement with NASA's procurement activities.

- ENGAGEMENT AND COLLABORATION
- FEEDBACK COLLECTION
- IDENTIFYING CHALLENGES AND OPPORTUNITIES
- ENHANCING SUPPORT AND RESOURCES
- PROMOTING EQUITY AND INCLUSION
- BUILDING RELATIONSHIPS AND NETWORKS

For more information, visit: https://www.nasa.gov/osbp/osbp-outreach-events/

NASA HBCU Opportunities

OSBP Learning Series Webinar

Register Today!

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Scan this QR code to register for the NASA OSBP Learning Series or click the link below.

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OSBP Learning Series Webinar

Register Today!

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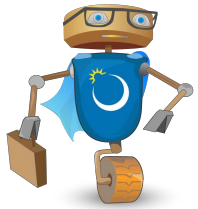

Upcoming OSBP Outreach Event & Webinars

Upcoming OSBP Learning Series Webinars

March 20, 2024

Women Changemakers and Small Business Success at NASA

April 17, 2024

OSBP Learning Series: How to Secure Federal Government Funding

Upcoming OSBP Outreach Events

April 5, 2024

NASA and Partners Small Business and HBCU Summit: Create, Connect & Collaborate (In-Person)
Howard University Washington, DC

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NASA HBCU Opportunities

OSBP Learning Series Webinar

The New NASA OSBP Mobile App

The OSBP Mobile app has been UPDATED!
The NASA OSBP Mobile is the NASA Office of Small Business Program's official mobile application. It is available for iOS and Android devices. OSBP Mobile is designed as a user-friendly tool to learn how to do business with NASA and have all the required resources right at your fingertips. Key features allow users to easily contact NASA Center Small Business Specialists, view Active Contract Listings, and find out when upcoming networking events are taking place.

The app is available for download at the iTunes App Store or Google Play.

Privacy Policy
NASA OSBP Mobile's Privacy Policy can be viewed at NASA OSBP Mobile Privacy Policy.

OSBP Mobile (iOS) and Android Update Available!!

A new update to the iOS and Android version of OSBP Mobile was recently released in the Apple App Store. It is version 3.0.

The new version has the following features:
- New dashboard layout for your OSBP Mobile experience
- New Small Business Specialist layout
- New presentation for Top Stories, Events, Contracts, and RFPs

Download at:
https://play.google.com/
https://apps.apple.com

OSBP Publications

OSBP provides many resourceful publications to the small business community.

The Small Business Guide to NASA
Small Business Industry Awards
NASA OSBP Spotlight
Other Publications

To view/download, visit:
https://www.nasa.gov/osbp/osbp-publications

The NEW NASA Vendor Database is Here!

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Scan this QR code to register for the new NASA Vendor Database or click the link below.

OSBP Gets Social! Follow us!!

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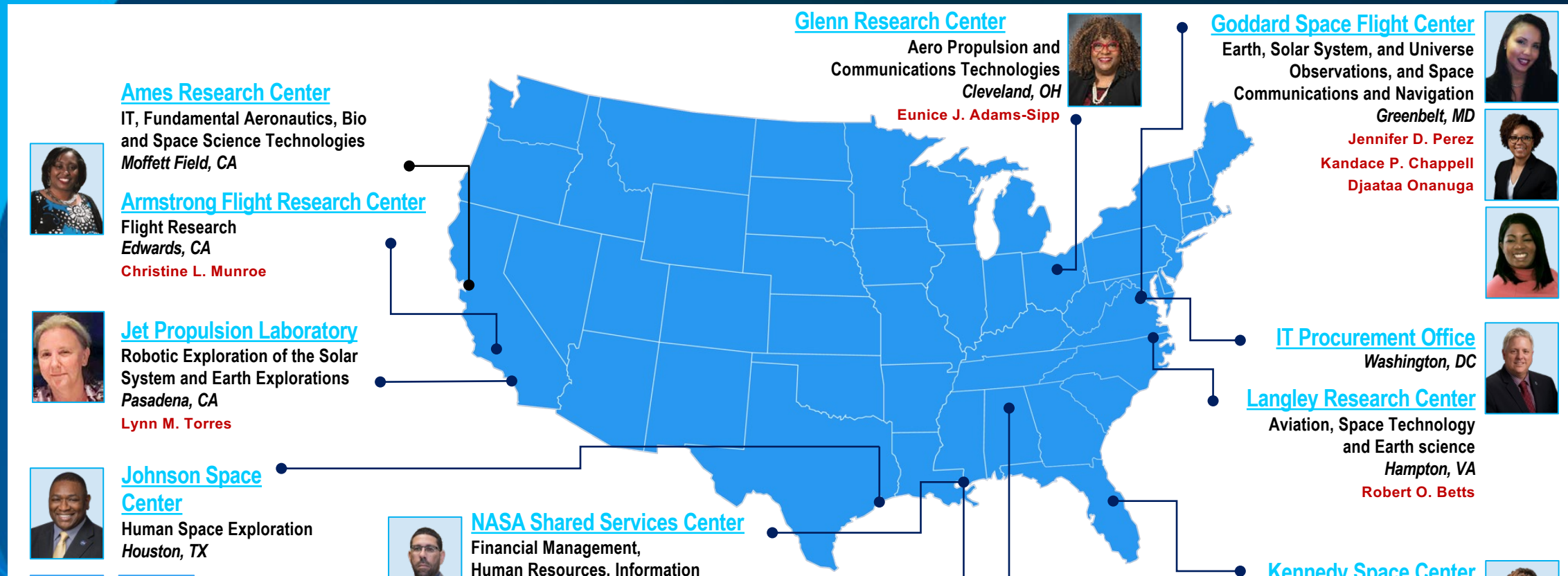
NASA Office of Small Business Programs- NASA OSBP

Check out NASA's LinkedIn page for OSBP updates!

NASA Small Business Specialists Around the Country



Glenn Research Center
Aero Propulsion and Communications Technologies
Cleveland, OH
Eunice J. Adams-Sipp

Goddard Space Flight Center
Earth, Solar System, and Universe Observations, and Space Communications and Navigation
Greenbelt, MD
Jennifer D. Perez
Kandace P. Chappell
Djaataa Onanuga

Ames Research Center
IT, Fundamental Aeronautics, Bio and Space Science Technologies
Moffett Field, CA

Armstrong Flight Research Center
Flight Research
Edwards, CA
Christine L. Munroe

Jet Propulsion Laboratory
Robotic Exploration of the Solar System and Earth Explorations
Pasadena, CA
Lynn M. Torres

IT Procurement Office
Washington, DC

Langley Research Center
Aviation, Space Technology and Earth science
Hampton, VA
Robert O. Betts

Johnson Space Center
Human Space Exploration
Houston, TX


Robert E. Watts
Monica F. Craft
Tumarrow Romain

NASA Shared Services Center
Financial Management, Human Resources, Information Technology, and Procurement
Bay St. Louis, MS
Troy E. Miller

Stennis Space Center
Rocket Propulsion Testing and Remote Sensing Technology
Bay St. Louis, MS
Kay S. Doane

Marshall Space Flight Center
Space Transportation and Propulsion Technologies
Huntsville, AL
David E. Brock

Kennedy Space Center
Prepare and launch missions around the Earth and beyond
Cape Canaveral, FL
Joyce C. McDowell
Natalie B. Colvin


NASA Small Business Specialists

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	Glenn Research Center	Eunice J. Adams-Sipp	216-433-6644	Grc-smallbusiness@mail.nasa.gov
	Langley Research Center	Robert O. Betts	757-864-6074	Larc-smallbusiness@mail.nasa.gov
SPACE CENTERS	Johnson Space Center	Robert E. Watts	281-244-5811	Jsc-smallbusiness@mail.nasa.gov
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SCIENCE CENTER	Goddard Space Flight Center	Jennifer D. Perez	301-286-4379	Gsfc-smallbusiness@mail.nasa.gov
FEDERALLY FUNDED R&D CENTER	Jet Propulsion Laboratory	Lynn M. Torres	818-354-1685	smallbusiness.programsoffice@jpl.nasa.gov
AGENCY-WIDE RESOURCE CENTER	Information Technology Procurement Office	Robert O. Betts	757-864-6074	hq-itpo-smallbusiness@mail.nasa.gov
	NASA Shared Services Center	Troy E. Miller	228-813-6558	nssc-smallbusiness@mail.nasa.gov

OSBP Learning Series: CALL FOR NEW TOPICS!!

NASA's Office of Small Business Programs is NOW ACCEPTING new topics ideas for our monthly OSBP Learning Series Webinars!

We would LOVE to hear from you!!

Please submit your topic ideas to smallbusiness@nasa.gov!

Learn more about NASA OSBP!

www.nasa.gov/osbp

Contact Information

Charles T. Williams

Program Manager

NASA Office of Small Business Programs

(202) 358-2088

smallbusiness@nasa.gov


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