



S T E M **INSPIRE - ENGAGE - EDUCATE - EMPLOY**
The Next Generation of Explorers



**Minority University Research and Education Project
(MUREP)
Overview**

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Agency Vision & Mission for Public and STEM Engagement



Vision

We immerse the public in NASA's work,
enhance STEM literacy, and
inspire the next generation to explore.

Mission

We engage the nation in NASA's mission.

Focus Areas



Create **unique opportunities** for students and the public to contribute to NASA's work in exploration and discovery.



Build a **diverse future STEM workforce** by engaging students in authentic learning **experiences** with NASA's people, content and facilities.



Strengthen **public understanding** by enabling **powerful connections** to NASA's mission and work.

Agency Strategy for Public and STEM Engagement

STEM Engagement in the Context of NASA's Mission



NASA Vision	To discover and expand knowledge for the benefit of humanity.		
NASA Mission	Lead an innovative and sustainable program of exploration with commercial and international partners to enable human expansion across the solar system and bring new knowledge and opportunities back to Earth. Support growth of the Nation's economy in space and aeronautics, increase understanding of the universe and our place in it, work with industry to improve America's aerospace technologies, and advance American leadership.		
NASA Strategic Goal 3	Address national challenges and catalyze economic growth.		
NASA's Public and STEM Engagement Vision	Immerse the public in NASA's work, enhance STEM literacy, and inspire the next generation to explore.		
NASA's Public and STEM Engagement Mission	Engage the Nation in NASA's mission.		
NASA's Public and STEM Engagement Mission Focus Areas	Create unique opportunities for students and the public to contribute to NASA's work in exploration and discovery.	Build a diverse future STEM workforce by engaging students in authentic learning experiences with NASA's people, content and facilities.	Strengthen public understanding by enabling powerful connections to NASA's mission and work.

A New Architecture to Enable Relevant Student Opportunities and Contributions



NASA Mission Directorate Drivers & Requirements



Evidence-based strategies

Rigorous planning

Integrated operational model



Focus Areas

Creating unique opportunities for students to contribute to NASA's work

Building a diverse future STEM workforce by engaging students in authentic learning experiences.

Strengthening public understanding by enabling powerful connections to NASA's mission and work.

Strategic, balanced portfolio

NASA-unique learning experiences

Student contributions to NASA's work in action



Scalability to magnify NASA's reach and impact

Pre-K-Elementary

Middle School

High School

Undergraduate

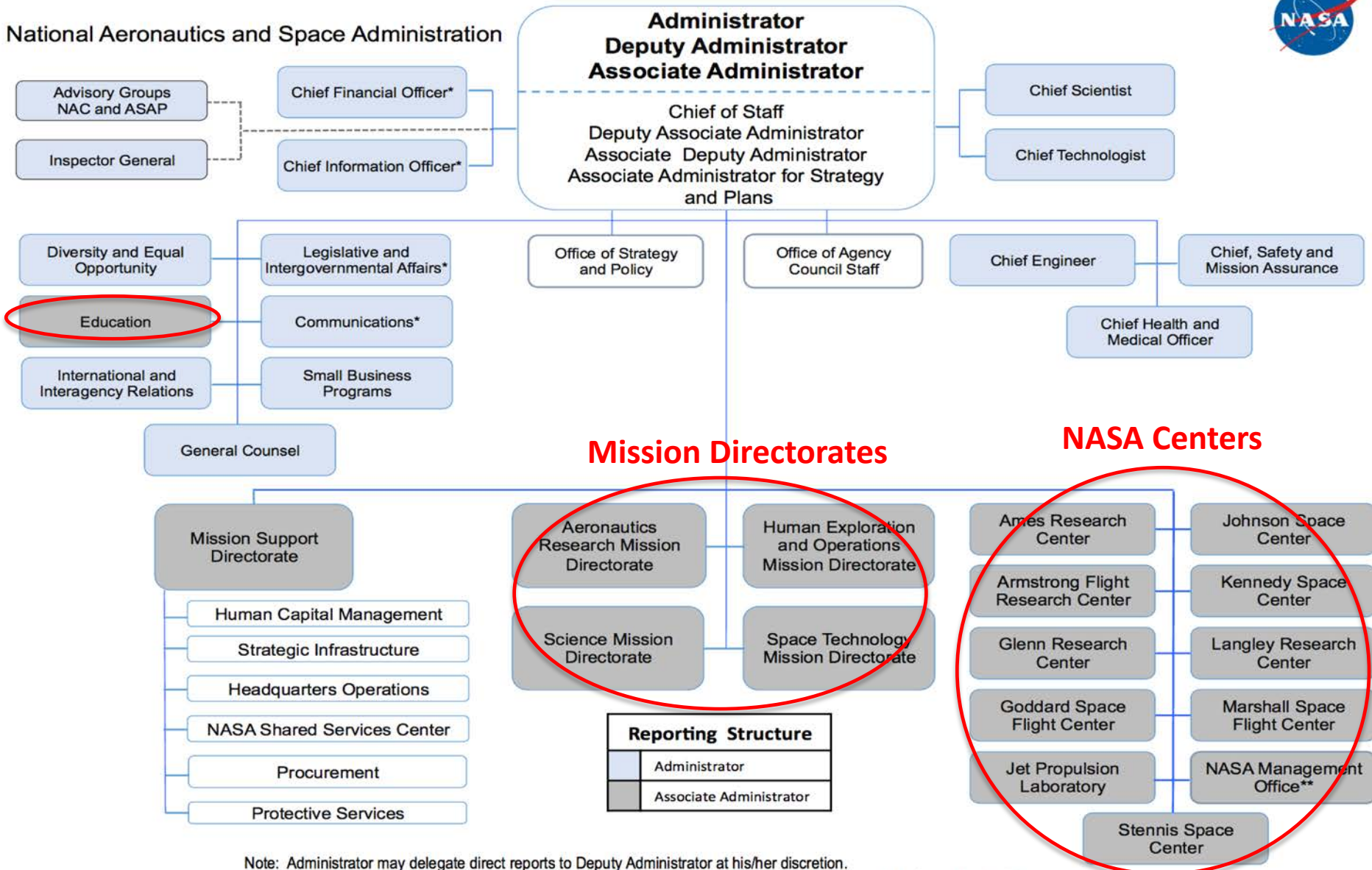
Graduate



Beneficiaries of NASA's STEM Engagement Portfolio



National Aeronautics and Space Administration



Mission Directorates

NASA Centers

Reporting Structure	
	Administrator
	Associate Administrator

Note: Administrator may delegate direct reports to Deputy Administrator at his/her discretion.
 * Center functional office directors report to Agency functional AA or Chief. Deputy and below report to Center leadership.
 ** NMO oversees the Jet Propulsion Laboratory and other Federally Funded Research and Development Center work

November 2015

NASA Office of Education Budget Structure Programs and Projects

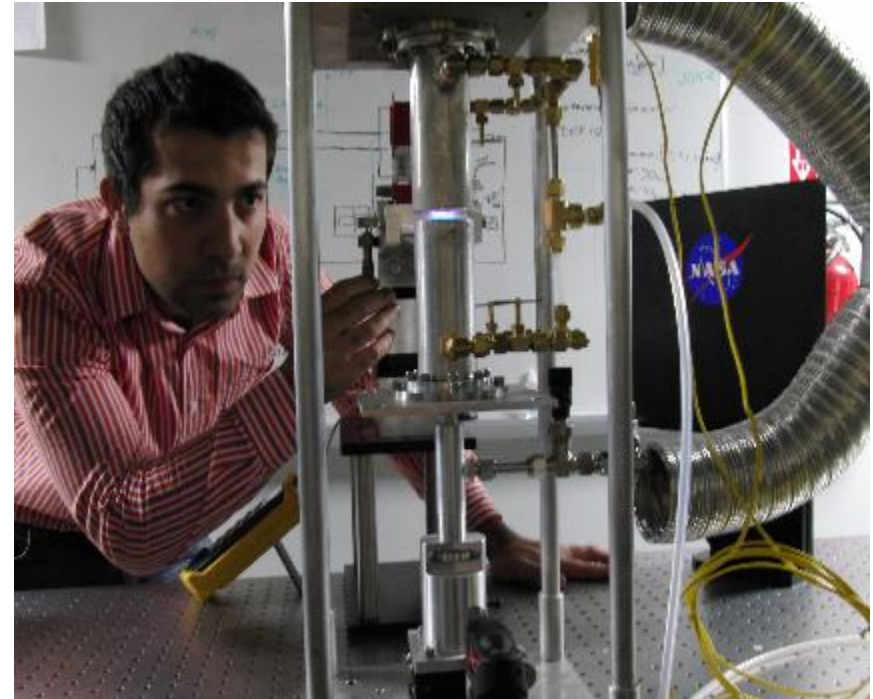


NASA's Office of Education consist of two programs and four projects:

Aerospace Research and Career Development (ARCD) Program	HQ Manager
National Space Grant College and Fellowship Program (Space Grant)	Joeletta Patrick
Experimental Program to Stimulate Competitive Research (EPSCoR)	Jeppie Compton
STEM Education and Accountability (SEA) Program	HQ Manager
STEM Education and Accountability Project (SEAP)	Diane DeTroye
Minority University Research and Education Project (MUREP)	Joeletta Patrick

Our Mission

To enhance the *research, academic and technology capabilities* of *Minority Serving Institutions* to provide authentic *learning experiences to students* related to *NASA missions* to contribute to a *diverse future STEM workforce*.



Why MUREP?



Agency's Response to Presidential Executive Orders for Minority Serving Institutions

MUREP was established to **increase NASA's responsiveness to federal mandates** related to Minority Serving Institutions (MSIs) and underrepresented and underserved communities, including women, girls, persons with disabilities and veterans.

- ❑ **EO 13779:** Historically Black Colleges and Universities (HBCUs)
- ❑ **EO 13592:** Tribal Colleges and Universities (TCUs)/American Indian and Alaskan Native Serving Institutions (AIANSI)
- ❑ **EO 13555:** Hispanic Serving Institutions (HSIs)
- ❑ **EO 13515:** Asian American and Native American Pacific Islander – Serving Institutions (AANAPISIs)
- ❑ **EO 13621:** Predominantly Black Institutions (PBIs)

Minority University Research and Education Project (MUREP) Engagement



NASA Mission Directorate Drivers & Requirements

At A Glance

- Limited to Minority-Serving Institutions
- Responsive to Presidential Executive Orders
- Portfolio includes 7 funded activities

Elements of the Approach

- Student Opportunities
- MSI Partnerships and Sustainability
- Mission Directorate Collaborations
- K-12 Engagement

Impact

- Contribute to solving Mission Directorate problems
- Increased STEM Awareness
- Increase retention of Underserved and Underrepresented groups in STEM
- Enhance MSI infrastructure
- Enable MSI sustainability

MUREP Portfolio



Element	Description	Provider Details
MIRO	MIRO is designed to establish significant, multi-disciplinary, scientific, engineering, and/or commercial research centers at the host MSI, that contribute substantially to the programs of one or more of the NASA Mission Directorates as described in the 2014 NASA Strategic Plan.	Lead Center: Armstrong Flight Research Center Activity Manager: David Berger
MUREP Aerospace Academy (MAA)	MAA educates students using a STEM curriculum that meets national math, science, and technology standards aligned to NASA's Mission Directorates.	Lead Center: Glenn Research Center Activity Manger: Priscilla Mobley
MUREP Funded NASA Community College Aerospace Scholars (NCAS)	MUREP leverages the Texas stated funded NCAS to provide an authentic learning experience for community college students and encourage them to finish a two-year degree and/or transfer to a four-year university to pursue a STEM field or career.	Lead Center: Johnson Space Center Activity Manager: Alicia Baturoni-Cortez
MUREP NASA Internship and Fellowship	MUREP provides historically underrepresented and underserved students in STEM fields at MSIs the opportunity to use NASA facilities and assets to provide work experiences, research and educational opportunities. These opportunities are designed to improve retention rates in STEM and diversify the future STEM workforce.	Lead Center: Johnson Space Center (Internship) Activity Manager: Veronica Seyl Lead Center: Ames Research Center (Fellowship) Activity Manager: Brenda Collins

MUREP Portfolio cont.



Element	Description	Provider Details
MUREP Innovations in Space Technology Curriculum (MIST-C)	MUREP in partnership with Space Technology Mission Directorate (STMD) seek collaboration with two-year/community college MSIs to strengthen STEM curricula and curricular pathways.	Lead Center: Jet Propulsion Lab Activity Manager: Roslyn Soto
MUREP Sustainability Initiative (MSI)	MSI seeks to increase the fiscal capacity of institutions by connecting capabilities with grants/cooperative agreements and contact opportunities supporting the Mission Directorates' needs.	Lead Center: Langley Research Center Activity Manger: Dan Cherry
Within MSI is the opportunity: MUREP University Sustainability and Innovation Collaborative (MUSIC)	MUSIC provides opportunities to enhance MSI capacity building by leveraging the talent from successful MSIs and non-profit agencies with MSI emphasis through access and engagement. MSIs will develop strong partnerships and collaborations among organizations in the STEM eco-system.	Lead Center: Langley Research Center Activity Manager: Clarence Bostic
MUREP Capstone (MCap) Initiative	MCap is designed to develop strategic partnerships with MSIs while encouraging innovation in problem-solving through student-faculty teams by providing opportunities that emphasize hands-on design, research, development, and manufacturing of technology that supports NASA's missions.	Lead Center: Marshall Space Flight Center Activity Manager: Tracey Washington

Education Opportunities in NASA STEM (EONS)



- All MUREP Funded Opportunities
- www.nasa.gov/education/murep “How to find MUREP Funding Opportunities”
- EONS Grants Forecasting

The screenshot shows the NASA Education website. At the top, there is a navigation bar with links for Topics, Missions, Galleries, NASA TV, Follow NASA, Downloads, About, and NASA Audiences. A search bar is located on the right. Below the navigation bar is a large banner image featuring four panels: a child wearing goggles, a woman looking at a computer screen, a person in a kart on a track, and a man working with a tool. To the right of the banner is a logo with four colored squares (purple, blue, orange, red) containing icons of a planet, a lightbulb, a person, and a rocket, with the text "INSPIRE - ENGAGE - EDUCATE - EMPLOY The Next Generation of Explorers".

Below the banner is a sidebar on the left with the heading "Follow" and social media icons for Facebook, Twitter, YouTube, and Pinterest. Below the icons is the text "Education Opportunities in NASA STEM" and a list of links: "MUREP Home", "About MUREP", "MUREP Opportunities", and "Annual Performance Reports".

The main content area has the heading "Education Opportunities in NASA STEM" and a sub-heading "How to find MUREP Funding Opportunities". The text below reads: "The NASA Research Announcement, entitled Education Opportunities in NASA STEM, or EONS, solicits education opportunities in support of NASA's Minority University Research and Education Project." It continues: "MUREP provides competitive funding opportunities to MSIs through an omnibus solicitation called EONS. EONS can be located at the NASA Solicitation and Proposal Integrated Review and Evaluation System, or NSPIRES website." The final paragraph states: "Students and faculty supported by MUREP are provided opportunities to engage in NASA-related research and mission-specific technology development. MUREP projects are also designed to address the national challenges of attracting and retaining underrepresented

On the right side of the main content area, there is a photograph of two young women, one wearing glasses, looking at a screen together.

Grants Forecasting



- Established Program to Stimulate Competitive Research (EPSCoR) & MUREP Institutional Research Opportunity (MIRO) Research Collaboration
- EPSCoR
 - <http://www.nasa.gov/education/epscor>
 - Improve the capabilities of the jurisdictions to gain support from sources outside the NASA EPSCoR program.
 - Comprised of 27 states and territories
 - Research Awards solicits topic-specific proposals addressing high-priority NASA research and technology development needs.
- MIRO
 - <https://www.nasa.gov/offices/education/programs/descriptions/MIRO.html>
 - Competitive Solicitation
 - Multi-year for up to ~\$1,000,000 a year
- Outcome
 - Strengthen the collaboration between MSIs and PWIs
 - Advancement of NASA research and technology
 - Improve sustainability of research
 - Request for Information – RFI – NASA seeks implementation ideas <https://nspires.nasaprs.com>

Contact: Gloria Murphy – EPSCoR - NASA/KSC 321-867-8934 gloria.a.murphy@nasa.gov

Dave Berger – MIRO – NASA/AFRC 661-276-5712 Dave.E.Berger@nasa.gov

Best Practices - University Partnership



- Example Opportunity: MIRO
 - Competitive Solicitation
 - Multi-year for up to ~\$1,000,000 a year
 - strengthen institutional infrastructure
 - expand research and educational programming
 - position institutions for partnerships to acquire additional funds

Best Practices include the following, but are not limited:

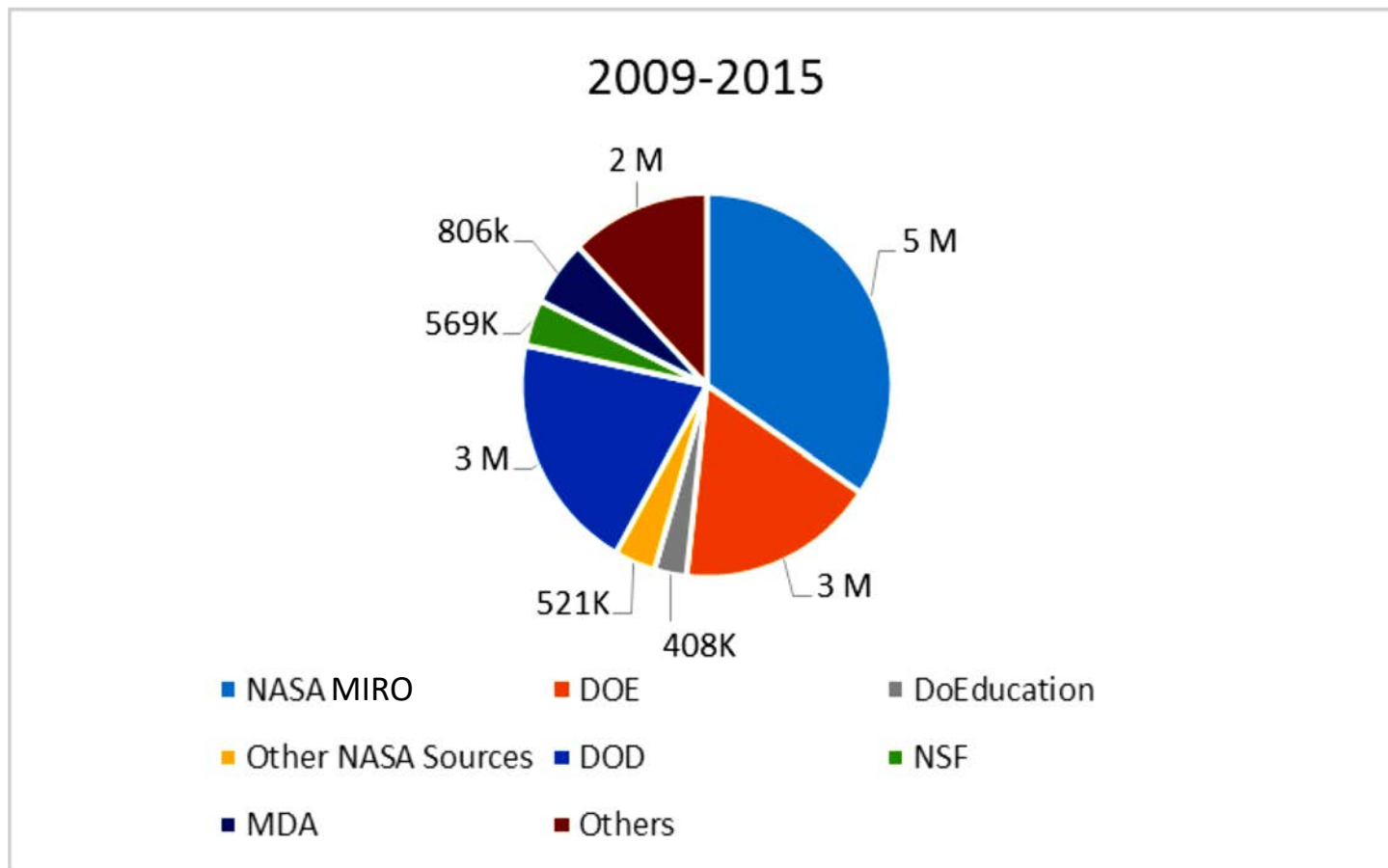
Note: Incorporation of suggestions does not guarantee selection.

- The award is a part of a strategic plan for the institution
 - Five or ten – year STEM strategic plan
 - Administration Support includes President/Chancellor, Sponsored Programs, and Dean
- Consider Cross Discipline Proposals
 - Include School of Business with STEM for entrepreneurial component
 - Include Computer Science with Mechanical Engineering for autonomous robots
- Multiple Funding Sources
 - Institutional funding
 - Federal funds from NASA, U.S. Department of Defense, U.S. Department of Energy, and other agencies
 - Contractor funding from industry, research institutes, and as a subcontractor for other higher education institutions

Best Practices - University Partnership Cont.



- Sample University Center of Excellence - Multiple Funding Sources
 - NASA is 33% of total funding



How to get started



- Register in NSPIRES
- Become a Reviewer – email tkross@nasaprs.com Ref: MUREP Reviewer



NSPIRES Home

- ▶ Solicitations

Getting Started

- ▶ NSPIRES Help
- ▶ Getting an Account

Help Desk

If you need help or have any questions regarding the NSPIRES website, please contact the NSPIRES Help Desk at (202) 479-9376 Mon-Fri, 8:00 AM to 6:00 PM EST/EDT, or by email at nspires-help@nasaprs.com.

NASA Web Sites
Click for Links

NASA Research Opportunities

Supporting research in science and technology is an important part of NASA's overall mission. NASA solicits this research through the release of various research announcements in a wide range of science and technology disciplines. NASA uses a peer review process to evaluate and select research proposals submitted in response to these research announcements. Researchers can help NASA achieve national research objectives by submitting research proposals and conducting awarded research. This site facilitates the search for NASA research opportunities.

NASA Research

- ▶ **Solicitations**
Search for and view open, closed, past, and future NASA research announcements. The full text of the [solicitation announcements](#) can be viewed and downloaded.
- ▶ **Getting Started**
To submit a research proposal to NASA, individuals and the organizations with which they are affiliated must be registered in NSPIRES. Individuals may register at any time.
Organizations are required to have a valid registration with the System for Award Management (SAM) before they can register in NSPIRES. See [Registration Information](#) for more details on user and organization registration.

Research.gov

Research.gov is a partnership of federal research-oriented grant making agencies. Research.gov is led by the National Science Foundation.

WARNING:
This is a U.S. Government computer. By accessing and using the computer system, you are consenting to the use of system monitoring. Unauthorized use of, or access to, this computer system may subject you to disciplinary action and criminal prosecution.

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Username:

Password:

[Login](#)

- ▶ [Forgot Your Password?](#)
- ▶ [Registration Information](#)

Site News

NASA Grants and Cooperative Agreements Regulations and Guidance
New regulations and guidance has been released.
▶ [Continue Reading](#)

NRA/CAN Proposer's Guidebook
Available online
▶ [Continue Reading](#)

Gmail and NSPIRES email
Your Gmail could be flagging NSPIRES emails as Spam.
▶ [Continue Reading](#)

Contact MUREP at HQ

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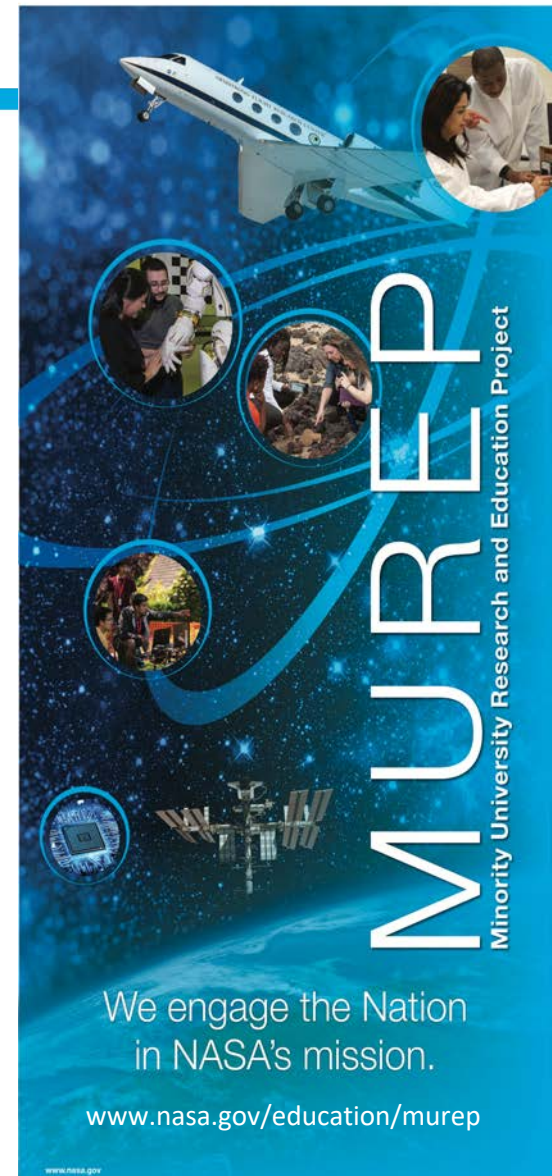
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MUREP
Minority University Research and Education Project

We engage the Nation
in NASA's mission.

www.nasa.gov/education/murep

www.nasa.gov