

**New Mexico NASA EPSCoR and  
New Mexico Space Grant Consortium (NMSGC)  
Research Enhancement Program  
Call for Proposals**

The New Mexico NASA EPSCoR Program and the New Mexico Space Grant Consortium (NMSGC) Research Program are designed to provide seed funding to faculty who are striving to conduct research that directly aligns with NASA Mission Directorates and NASA Field Centers. The purpose of this program is to build the core strength needed to develop competitive research and technology development methods and activities for the solution of scientific and technical problems of importance to NASA. **Researchers should focus on projects that can contribute to building future research and innovative activities in New Mexico. Projects must develop collaborative activities with NASA Field Centers and Mission Directorates and have the potential for non-EPSCoR follow-on funding. The proposal must indicate where follow-up funding will come from, from existing programs or upcoming agency announcements.**

**Researchers must perform scientific research and/or technology development in areas that support the strategic research and technology development priorities of one or more of NASA's four Mission Directorates and/or one or more of the ten NASA Field Centers. An emphasis should be placed on developing a core expertise capable of successfully competing for funds from NASA and non-NASA sources outside of the EPSCoR and Space Grant programs.** Researchers must move progressively toward gaining support from sources outside the NASA EPSCoR program by aggressively pursuing additional funding opportunities offered by NASA, industry, other federal agencies, and other sources.

This funding is not appropriate for augmentation of existing funded research projects. Participation by minorities, women, and persons with disabilities is strongly encouraged.

**Important Dates:**

|                             |                             |   |
|-----------------------------|-----------------------------|---|
| <b>Notice of Intent Due</b> | 5:00 p.m. October 3, 2011   | email to <a href="mailto:awisner@nmsu.edu">awisner@nmsu.edu</a> |
| <b>Proposal Due</b>         | 5:00 p.m. November 11, 2011 | email to <a href="mailto:awisner@nmsu.edu">awisner@nmsu.edu</a> |

**Submit proposal:** [awisner@nmsu.edu](mailto:awisner@nmsu.edu)

**Mail original proposal with signatures to:**

New Mexico Space Grant Consortium  
3050 Knox Street  
MSC SG, Box 30001  
Las Cruces, NM 88003-0001

More information about NASA Mission Directorates can be found at:

Aeronautics Research Mission Directorate: <http://www.aerospace.nasa.gov>  
Science Mission Directorate: <http://science.hq.nasa.gov>  
Exploration Systems Mission Directorate: <http://exploration.nasa.gov>  
Space Operations Mission Directorate: <http://www.hq.nasa.gov/osf/>

More information about NASA Field Centers and Facilities can be found at:

|  |   |
|--|---|
| NASA Headquarters, Washington, DC:       | <a href="http://www.nasa.gov/centers/hq/home/index.html">http://www.nasa.gov/centers/hq/home/index.html</a>             |
| Ames Research Center, CA:                | <a href="http://www.nasa.gov/centers/ames/home/index.html">http://www.nasa.gov/centers/ames/home/index.html</a>         |
| Dryden Flight Research Center, CA:       | <a href="http://www.nasa.gov/centers/dryden/home/index.html">http://www.nasa.gov/centers/dryden/home/index.html</a>     |
| Glenn Research Center, OH:               | <a href="http://www.nasa.gov/centers/glenn/home/index.html">http://www.nasa.gov/centers/glenn/home/index.html</a>       |
| Goddard Space Flight Center, MD:         | <a href="http://www.nasa.gov/centers/goddard/home/index.html">http://www.nasa.gov/centers/goddard/home/index.html</a>   |
| Jet Propulsion Laboratory, CA:           | <a href="http://www.nasa.gov/centers/jpl/home/index.html">http://www.nasa.gov/centers/jpl/home/index.html</a>           |
| Johnson Space Center, TX:                | <a href="http://www.nasa.gov/centers/johnson/home/index.html">http://www.nasa.gov/centers/johnson/home/index.html</a>   |
| Kennedy Space Center, FL:                | <a href="http://www.nasa.gov/centers/kennedy/home/index.html">http://www.nasa.gov/centers/kennedy/home/index.html</a>   |
| Langley Research Center, VA:             | <a href="http://www.nasa.gov/centers/langley/home/index.html">http://www.nasa.gov/centers/langley/home/index.html</a>   |
| Marshall Space Flight Center, AL:        | <a href="http://www.nasa.gov/centers/marshall/home/index.html">http://www.nasa.gov/centers/marshall/home/index.html</a> |
| Stennis Space Center, MS:                | <a href="http://www.nasa.gov/centers/stennis/home/index.html">http://www.nasa.gov/centers/stennis/home/index.html</a>   |
| NASA IV&V Facility, WV:                  | <a href="http://www.nasa.gov/centers/ivv/home/index.html">http://www.nasa.gov/centers/ivv/home/index.html</a>           |
| Goddard Institute for Space Science, NY: | <a href="http://www.giss.nasa.gov/">http://www.giss.nasa.gov/</a>   |
| Wallops Flight Facility, VA              | <a href="http://www.nasa.gov/centers/wallops/home/index.html">http://www.nasa.gov/centers/wallops/home/index.html</a>   |
| White Sands Test Facility, NM:           | <a href="http://www.wstf.nasa.gov/">http://www.wstf.nasa.gov/</a>   |

## A. GOALS AND OBJECTIVES

The goal of the program is to develop an academic research enterprise directed toward long-term, self-sustaining, nationally-competitive capabilities in aerospace and aerospace-related research. This capability will, in turn, contribute to New Mexico's economic viability and expand the nation's base for aerospace research and development.

The objectives of the program are:

- Contribute to and promote the development of research infrastructure in New Mexico in areas of strategic importance to the NASA mission while assessing and leveraging existing core capabilities relative to NASA in the state.
- Improve the capability of New Mexico to gain support from sources outside the NASA EPSCoR program in space and aerospace related research and technology.
- Develop partnerships between NASA research assets, academic institutions, federal laboratories, and industry.
- Contribute to the overall research infrastructure, science and technology capabilities, higher education, and/or economic development of New Mexico.
- Work in close coordination with the New Mexico Space Grant Consortium (NMSGC) to improve the environment for science, mathematics, engineering, and technology education in New Mexico.

## B. ELIGIBILITY

All faculty at universities, colleges, and community colleges who are members of the New Mexico Space Grant Consortium are eligible to apply. The following list comprises all current NMSGC higher education member institutions:

- New Mexico State University
- University of New Mexico
- New Mexico Institute of Mining and Technology
- Dona Ana Community College
- San Juan College
- Eastern New Mexico University
- Western New Mexico University
- New Mexico Highlands University

All faculty and students who receive support under these programs must be U.S. citizens. Faculty who are not U.S. citizens may apply for support for students who are U.S. citizens. Faculty who have questions about this are encouraged to contact the program office at 575-646-6414 or [jmcshann@nmsu.edu](mailto:jmcshann@nmsu.edu)

#### C. DURATION, AND AMOUNTS OF AWARDS

It is expected 5-10 awards will be made for up to \$25,000. Researchers receiving funding from NASA EPSCoR should expect funding for one year, pending successful award of this contract. Significant progress must be made toward research goals and all deadlines must be met. No extensions or renewals will be considered. Projects are eligible for one time funding only.

#### D. NASA COLLABORATION

**All researchers requesting NASA EPSCoR research funding must submit a letter of support from a NASA Field Center or Mission Directorate with their proposal submission.** This letter must state how the proposed research program is a priority for NASA and how the Field Center or Mission Directorate will interact with and support the proposed research project. If researchers are not able to get a letter of support in time to submit with your proposal, please give us the name and contact information of the NASA personnel you are speaking with. Researchers who need help finding a NASA collaborator are encouraged to contact the Space Grant office for help at 575-646-6414 or [jmcshann@nmsu.edu](mailto:jmcshann@nmsu.edu) and your campus research office.

Researchers are strongly encouraged to submit proposals that develop partnerships or cooperative arrangements among academia, other government agencies, and business and industry within the New Mexico. Letters of support regarding these collaborations are encouraged. Researchers should be aware they will be required to report on how these collaborations have evolved as part of their annual report.

Services provided by NASA installations or JPL should be identified as NASA responsibilities in the proposal. Researchers submitting proposals should contact, in advance, NASA installations from which services will be requested in order to ascertain the availability and anticipated costs of such services. All costs incurred by JPL and costs incurred at NASA installations by the EPSCoR program for the use of facilities and contracted technical work should be identified in the funding request. Civil service personnel salaries and travel as well as other in-house research

provided by NASA installations cannot count as part of the required match. These costs must be identified as “Federal Match” in a separate section of the budget.

**E. LETTER OF INTENT**

A Letter of Intent is encouraged for all proposals. Letters of intent are not preliminary proposals. Letters of Intent should include the title of your proposed research program and a short summary description of the work involved. The purpose is to help gauge the size and range of the competition in order to facilitate selection and management of reviewers. Principal Investigators should not expect feedback on their Letters of Intent beyond the acknowledgement of their receipt. Please email your Letter of Intent to [awisner@nmsu.edu](mailto:awisner@nmsu.edu) by October 3, 2011.

**F. ASSESSMENT OF APPLICATIONS**

Proposals will be selected in a merit-based, peer-reviewed competition for scientific, technical, and management merit. Researchers must provide sufficient information to allow reviewers to make an informed judgment. Failure to supply the appropriate information will lead to lower scores and possible non-funding of the project. Proposals will be evaluated using the following criteria:

| Review Criteria  | Possible Points |
|--|-----------------|
| 1) The degree to which this proposal can contribute to the overall research infrastructure, science and/or technical capability, higher education, and/or economic development of New Mexico.  | 20              |
| 2) The degree to which the proposal is competitive and builds core strength needed by NASA for the solution of scientific and technical problems as defined by one or more of NASA’s four Mission Directorates or ten Field Centers. | 15              |
| 3) Scientific and technical merit of the proposed project.   | 15              |
| 4) Probability the project will support researcher’s ability to develop follow-on funding for proposed research.   | 20              |
| 5) Probability the project will support researcher’s ability to develop collaborations with NASA, NMSGC, and space and aerospace related industry in New Mexico or with members of the Space Grant network including students.       | 10              |
| 6) Probability the project will result in published research.  | 5               |
| 7) Competency of the project personnel to carry out the research plan and achieve their stated goals.  | 5               |
| 8) Overall utility and relevance to goals and objectives.  | 5               |
| 9) Adequacy and appropriateness of the budget to carry out the project, including institutional contributions or other matching funds.   | 5               |
| Total  | 100             |

## G. FINAL SELECTION

After the recommendations from reviewers, the NASA EPSCoR/NMSGC Director will make the final decision on funding proposals.

## H. BUDGET

### 1. Allowable Expenses:

- Salaries: Faculty release time and summer support, support for undergraduate and graduate students, and hourly wages for staff and student employees is allowed. All faculty and students who receive support must be U.S. citizens
- Travel: Must include name of person who is traveling, purpose for travel, destination, per diem, and how the travel supports your research goal. State and Federal government travel regulations apply to all travel. All travel supported by the project must be in the continental U.S.
- Supplies and materials: Include a description of how these funds will be used. If research supplies or software will be purchased, list items, describe the need for the item and how it supports the program research goals.

### 2. Non-allowable expenses:

- Purchase of equipment is not allowed.
- Foreign travel is not allowed.
- Civil service personnel and travel is not allowed.
- Indirect Costs (IDC) or F & A (Financial and Administration) costs are not allowed.

### 3. Cost Sharing:

**Institutions must provide 120% non-federal matching funds for this program.** All matching funds will run through a cost share account, your campus research office will do this automatically. Although the method of match is flexible, NASA encourages researchers to consider methods that add value to New Mexico's existing research capabilities.

In-kind cost share is allowed. In-kind cost share is non-cash cost share. There are several ways researchers can find in-kind cost share:

- a. Since NASA does not allow F&A (Financial and Administration) to be applied to this work, all F&A which would normally be applied to a proposal is eligible to serve as cost share.
- b. Faculty salary can be used as cost share, either release time during the academic year or summer salary can be used as an in-kind cost share. No cash will change hands.
- c. Researchers needing help identifying sources of cost share are encouraged to contact the Space Grant office at 575-646-6414 or [jmcshann@nmsu.edu](mailto:jmcshann@nmsu.edu) and your campus research office.

## I. REPORTING REQUIREMENT

**Faculty will report to NMSGC the improvement in the development of their research area resulting from this funding for a minimum of three years.** In the event a researcher requires a no-cost extension, they will be required to submit a progress report verifying significant progress with their NASA collaborator. Reports should document program activities over the period of performance of the grant, and overall progress towards project objectives, including (but not limited to):

- Extent to which collaborations with New Mexico agencies, industry, research and academic institutions, the Space Grant network, and with NASA have evolved.
- Evidence of how research activities have furthered NASA priorities.
- Discussion of interaction between and cooperation with New Mexico Space Grant Consortium affiliates.
- Demographic (ethnicity/race and gender) information on participants including faculty, post-doctoral, graduate, and undergraduate students; including names and institutions.
- Students receiving \$5,000 or more in support must agree to be tracked through first employment.
- Research success as measured by:
  - Follow-on grant proposals submitted/funded including funding amounts and funding entities, all funded researchers will be awarded non-EPSCoR research funding within three years.
  - Articles submitted to or published in refereed journals, all funded researchers will publish in refereed journals within three years.
  - Talks, presentations or abstracts at professional meetings, all funded researchers will publish at professional meetings within two years
  - Number and quality of collaborations with academic institutions and NASA, space related industry, and state and federal agencies, all funded researchers will develop at least one NASA collaboration within the first year.
  - Interactions between researchers and New Mexico Space Grant Consortium, all funded researchers will interact with Space Grant within the first year.
  - Patents/patent applications.

## J. SPECIFIC PROPOSAL REQUIREMENTS AND FORMAT

1) Cover Page - Please use the Cover Page Form in the Appendix

2) Table of Contents

3) Project Summary - Use Project Summary Form in the Appendix

The project summary (also called abstract) must be 250 words or less, the form provided in the Appendix must be used. It should concisely describe the proposed project, giving the objectives, key features, and proposed outcomes, and provide a timetable for project implementation. The

subprogram must be indicated underneath the title. Summaries are to be written in general terms, understandable by a non-expert in the field.

Remember, the reviewers cannot be expert in all sub-fields. Avoid technical "jargon" as much as possible and write at a level for the average scientist/engineer.

#### 4) Project Narrative

The project narrative must be limited to five (5) single-spaced or ten (10) double-spaced pages. Typical subsections of the narrative should include in the order listed, the following:

##### 4-a) Introduction

Indicate the technical or scientific problem to be addressed. Discuss the degree to which the proposal builds core strength needed by NASA for the solution of scientific and technical problems as defined by one or more of NASA's four Mission Directorates or ten Field Centers. Discuss the degree to which this research contributes to the overall research infrastructure, science and/or technical capability, and/or economic development of New Mexico.

##### 4-b) Objectives of the Project

Scientific, technical objectives and human resources development objectives should be concisely delineated.

##### 4-c) Collaborations

Discuss collaborations with NASA Mission Directorates and NASA Field Centers, the space and aerospace related industry in New Mexico, and members of New Space Grant Consortium. Faculty must have a letter of support from a NASA collaborator.

##### 4-d) Implementation Strategy or Scientific Method and Timetable

The scientific and technical methodology used in the work and the methodology for the analysis of the results should be succinctly described. Strategies germane to the successful implementation of the project should be discussed. A concise timetable, preferably in a tabular form, should be provided. Key steps or milestones toward the successful completion and possible continuation and expansion of the project should be shown in this table.

##### 4-e) Long Term Benefits

Describe the expected long-range benefits from the project to NASA's Aeronautics Research Mission, Science Mission, Exploration Systems Mission, and Space Operations Mission Directorate, to the infrastructure at the institution, as well as to the project personnel.

**Comment on plans or prospects for submitting a follow-up proposal to NASA, other federal agencies, or non-public sources. Indicate where follow-up funding will come from, from which existing programs or upcoming agency announcements.**

Describe your plans to publish your research results. Discuss in which journals and conferences you plan to publish your research results.

#### 4-f) Key Personnel

Identify the key personnel and succinctly describe their qualifications and experiences as they relate to the successful execution, continuation, and expansion of the project. Attach a one page Vitae for each Principal Investigator (These vitae are not included in page totals listed above.)

#### 5) Budget and Budget Explanations

Provide the project budget on the Budget Form in the Appendix. No F & A (Financial or Administration), equipment, or food is allowed to be charged to NMSGC funds. (Unrecovered F & A may be included as an institutional contribution; you will be required to document the institutional contributions in your financial reports.) Budget explanations, provided on a separate page, should be succinct but provide sufficient information for a reviewer to judge the need for and importance of the items requested.

APPENDIX  
FORMS FOR  
NEW MEXICO NASA EPSCoR  
and  
NEW MEXICO SPACE GRANT CONSORTIUM  
RESEARCH PROPOSALS

(Duplicate as needed)

Form 1: Cover Page

Form 2: Project Summary

Form 3: Budget

NEW MEXICO NASA EPSCoR  
NEW MEXICO SPACE GRANT CONSORTIUM  
COVER PAGE

1. Title of Proposed Project: \_\_\_\_\_

2. Principal Investigator(s): (Name) (Highest Degree Earned)  
\_\_\_\_\_  
(Department) \_\_\_\_\_

3. All Other Investigators: (Name) (Highest Degree Earned)  
\_\_\_\_\_  
(Department) \_\_\_\_\_

4. Institution of Higher Education: \_\_\_\_\_

5. PI Address:  
\_\_\_\_\_  
(Street Address/P.O. Box Number)  
\_\_\_\_\_  
(City, State) (Zip Code)

6. Telephone: \_\_\_\_\_ Email: \_\_\_\_\_

7. Total Funds Requested: \$ \_\_\_\_\_

\*\*\*\*\*

By signing and submitting this proposal, the signatures are certifying that the institution and the proposed project are in compliance with all applicable Federal and State laws and regulations (including, but not limited to, the required certifications set forth in: (1) Grants for Research and Education in Science and Engineering, NSF 90-77; and (2) Appendix C, 45 CFR 620, Subpart F (Requirements for a Drug-Free Workplace) and funding of this project does not supplant other forms of direct state support for the project.

8. Signature(s) of All Investigators: \_\_\_\_\_

9. Signature of Dean: \_\_\_\_\_

10. Signature of Authorized Fiscal Agent: \_\_\_\_\_

11. Signature of Campus Head or  
Authorized Institutional Representative: \_\_\_\_\_

NEW MEXICO NASA EPSCoR  
NEW MEXICO SPACE GRANT CONSORTIUM  
PROJECT SUMMARY

NAME OF INSTITUTION (INCLUDE BRANCH/CAMPUS AND SCHOOL OR DIVISION)

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ADDRESS (INCLUDE DEPARTMENT)

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PRINCIPAL INVESTIGATOR(S)

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TITLE OF PROJECT

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ABSTRACT (DO NOT EXCEED 250 WORDS)

NEW MEXICO NASA EPSCoR  
 NEW MEXICO SPACE GRANT CONSORTIUM  
 BUDGET

Title of Proposed Research: \_\_\_\_\_

Principal Investigator(s): \_\_\_\_\_

Institution(s): \_\_\_\_\_

| PROPOSED BUDGET              |                    |                            |
|------------------------------|--------------------|----------------------------|
|                              | NMSGC Funds        | Institutional Contribution |
| A. Salaries:                 |                    |                            |
| 1. Research                  | \$                 | \$                         |
| 2. Clerical                  | \$                 | \$                         |
| 3. Subtotal                  | \$                 | \$                         |
| 4. Fringe Benefits (____%)   | \$                 | \$                         |
| 5. Graduate Assistants       | \$                 | \$                         |
| 6. Undergraduate Students    |                    |                            |
| 7. Student(s) hourly         | \$                 | \$                         |
| 8. Subtotal - Salaries       | \$                 | \$                         |
| B. Supportive Expenses:      |                    |                            |
| 1. Travel                    | \$                 | \$                         |
| 2. Supplies                  | \$                 | \$                         |
| 3. Other Expenses (identify) |                    |                            |
| A. _____                     | \$                 | \$                         |
| B. _____                     | \$                 | \$                         |
| 4. Subtotal of Expenses      | \$                 | \$                         |
| C. Indirect Costs (F&A)      | XXXXXXXXXXXXXXXXXX | \$                         |
| D. Total Project Costs       | \$                 | \$                         |

**Note: No indirect costs (F&A), equipment, food, foreign travel, or civil service personnel are allowed charged.**

Please attach budget explanations.

## **New Mexico Space Grant Consortium (NMSGC) and New Mexico NASA EPSCoR Frequently Asked Questions**

### **Do faculty have to be U.S. citizens to apply?**

All faculty and students who receive support under these programs must be U.S. citizens. Faculty who are not U.S. citizens may apply for support for students who are U.S. citizens. Faculty who have questions about this are encouraged to contact the program office at 575-646-6414 or [jmcshann@nmsu.edu](mailto:jmcshann@nmsu.edu)

### **How do I find a NASA person to write a letter for support?**

All researchers requesting research funding must submit a letter of support from a NASA Field Center or Mission Directorate with their proposal submission. This letter must state how the proposed research program is a priority for NASA and how the Field Center or Mission Directorate will interact with and support the proposed research project. If researchers are not able to get a letter of support in time to submit with your proposal, please give us the name and contact information of the NASA personnel you are speaking with. Researchers who need help finding a NASA collaborator are encouraged to contact the Space Grant office for help at 575-646-6414 or [jmcshann@nmsu.edu](mailto:jmcshann@nmsu.edu) and your campus research office.

### **How do I find matching funds?**

Institutions must provide 120% non-federal matching funds for this program. All matching funds must run through a cost share account, your research office will do this automatically. Although the method of match is flexible, NASA encourages researchers to consider methods that add value to New Mexico's existing research capabilities.

In-kind cost share is allowed. In-kind cost share is non-cash cost share. There are several ways researchers can find in-kind cost share:

1. Since NASA does not allow F&A (Financial and Administration) to be applied to this work, all F&A which would normally be applied to a proposal is eligible to serve as cost share.
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3. Researchers needing help identifying sources of cost share are encouraged to contact the Space Grant at 575-646-6414 or [jmcshann@nmsu.edu](mailto:jmcshann@nmsu.edu) and your campus research office.

### **Where do I submit the proposal?**

Proposals are due by 5:00 p.m. November 11, 2011.

Submit your proposal: Email to [awisner@nmsu.edu](mailto:awisner@nmsu.edu)

Mail original proposal with signatures to:

New Mexico Space Grant Consortium  
3050 Knox Street  
MSC SG, Box 30001  
Las Cruces, NM 88003-0001

### **Where do I submit my Letter of Intent?**

A Letter of Intent is encouraged for all proposals. Letters of intent are not preliminary proposals. Letters of Intent should include the title of your proposed research program and a short summary description of the work involved. The purpose is to help gauge the size and range of the competition in order to facilitate selection and management of reviewers. PIs should not expect feedback on their Letters of Intent beyond the acknowledgement of their receipt. Please email your Letter of Intent to [awisner@nmsu.edu](mailto:awisner@nmsu.edu) by October 3, 2011.