



Kentucky Space Grant Consortium

NASA Space Grant Colleges in
Kentucky

2009-A

Announcement of an additional Opportunity and Request for Proposals
for Space-Related Research and Education in AY **2009/2010** at KSGC
Member Institutions

- Augmentations
 - Research with Students
 - Graduate Fellowships
 - Undergraduate Scholarships
 - Workshops for Teachers

Application Deadline: July 31, 2009 at 4pm CT

Please Note: In this additional call for proposals, funding levels have increased and matching requirements have changed. Please read the proposal guidelines carefully. As before, the emphasis for faculty research proposals is the inclusion of students in research. All projects require interaction at some level with NASA. Research projects, fellowships, and scholarships require a visit with a NASA researcher. Please read the RFP carefully to prepare in advance for the deadline.

Kentucky Space Grant Consortium

NASA Space Grant Colleges in Kentucky

The Kentucky Space Grant Consortium (KSGC) is an affiliation of Kentucky colleges, universities, and industries with the goal of enhancing research and educational opportunities in space-related fields. Funding for the KSGC is provided by NASA National Space Grant College and Fellowship Program, Designated Space Grant. **Funding recipients in KSGC programs must be faculty or students at Consortium institutions. Current Consortium membership and Campus Directors are listed below, and other institutions are welcome to apply to join. Equipment cannot be purchased using federal KSGC funds but may be used as matching if purchased for the project during its term. The KSGC is an equal-opportunity, affirmative-action consortium. Women and members of other underrepresented groups are strongly encouraged to apply for funding.** Awards are contingent on NASA funding and available resources.

KSGC Director
KSGC Program Coordinator

*Michael Carini
Emilee England*

Member Institutions / Campus Directors

Bellarmine University
Centre College
Eastern Kentucky University
Kentucky Center for Space Enterprise
Kentucky State University
Morehead State University
Murray State University
Northern Kentucky University
Thomas More College
Transylvania University
Tribo Flow Separations
University of Kentucky
University of Louisville
Western Kentucky University

*Thomas Bennett
Philip Lockett
Barbara Ramey
Kris Kimel
Robert Mania
Ben Malphrus
Jamie Rogers
Charles Hawkins
Wes Ryle
James Day
John Stencel
Charles Knapp
John Kielkopf
Roger Scott*

Support for Research Involving Students

KSGC invites proposals for support of space-related research projects by faculty involving students at Consortium member institutions.

Diversity Needs: NASA and KSGC are committed to **increasing diversity** of participation in space-related research and education. **KSGC strongly encourages proposals for Research opportunities conducted by, or strongly involving, women, members of underrepresented groups, and persons with disabilities.** KSGC is very interested in receiving well-qualified proposals that would increase the diversity of participation in our programs.

Awards of up to \$25,000 requiring a 30% match are available. The PI must be a member of a Consortium institution, and the proposal must demonstrate the faculty member has adequate time to complete the project, either via direct buy out or cost sharing. Indirect costs are not allowed, but may be used as cost sharing.

Goals of funding for research projects include:

- 1. Inclusion of one or more students as researchers in the project**
- 2. Travel to take the student(s) on a visit to a NASA Center or research installation**
- 3. Interaction with NASA researchers for collaboration and enhanced competitiveness for grants**

KSGC faculty and student researchers may collaborate with any researcher or facility in the project. However, a requirement of the NASA-derived funding is to interact in some way with NASA researchers to establish a present and future relationship. Evidence of such an intended relationship should be provided by including a support letter from a NASA researcher in the proposal, and including plans for a visit to interact with the NASA researcher. Assistance with finding and gaining introduction to a NASA researcher in the field is available through the University Affairs Officer (UAO) at each NASA Center. A list of UAOs and their contact information is given later in this document and with the KSGC RFP on the KSGC website at <http://www.wku.edu/ksgc/>.

Equipment cannot be purchased with federal KSGC funds, but may be used as cost sharing. For cases in which a small item of equipment (no more than a few thousand dollars) is essential to the project and cannot be fully purchased by the institution, a separate (attached) proposal may be submitted. It must strongly justify the need for the equipment and its impact on the proposed research, and must be matched 1:1, preferably by contribution to the equipment purchase by the institution. Computers and items of general office utility will not normally be allowed, although there could be very special instances of integral need, requiring very special justification.

Longitudinal Tracking: NASA now requires recipients to keep track of the success of students supported by grants. The PI will be responsible for following and annually reporting students' subsequent progress in graduating, receiving

advanced degrees, and eventually being employed.

It is the intent that research funding will provide an intensive research experience for the student(s) and will also enhance the investigator's competitiveness for future funding. Eligibility for renewal will be contingent upon indication of student benefits and project output in publications/presentations and proposals. Preference is given to projects that include student stipends in the budget. Investigators are strongly encouraged to develop projects related to NASA' interests, to collaborate with NASA Centers or missions, or to utilize NASA data.

Graduate Fellowships and Undergraduate Scholarships

KSGC invites applications for Graduate Fellowships and Undergraduate Scholarships based on mentored research in space-related fields at Consortium member institutions.

Diversity Needs: NASA and KSGC are committed to **increasing diversity** of participation in space-related research and education. **KSGC strongly encourages mentors to seek women, members of underrepresented groups, and persons with disabilities to propose for Fellowship and Scholarship opportunities.** KSGC is very interested in receiving proposals involving well-qualified persons who would increase the diversity of participation in our programs.

Special Opportunities with the Kentucky Space (KySpace) Project: A statewide project is underway to design and launch an earth-orbiting satellite. Broad participation is sought among affiliate institutions. If you wish to propose for a mentored student project supporting KySpace (<http://www.kentuckyspace.com>), please contact the KySpace project coordinator, Kris Kimel (kkimel@kstc.com, 859-233-3502 ext. 223), for information about possible avenues of involvement on which to base your proposal.

Longitudinal Tracking: NASA now requires recipients to keep track of the success of students supported by grants. The mentor will be responsible for following and annually reporting students' subsequent progress in graduating, receiving advanced degrees, and eventually being employed.

Graduate Fellowship awards, based on mentored research projects, are in amounts up to \$27,000 total -- including up to \$25,000 stipend and up to \$2,000 additional for required travel to visit a NASA researcher, and other travel and supplies to facilitate the project. The amounts must be strongly justified in the application. Matching of at least 30% is required, and should insure that the faculty mentor has adequate time committed to the project. *Indirect costs can neither be charged nor used as match for fellowship awards.*

Undergraduate Scholarship awards, based on mentored research projects, are in amounts up to \$7,500 total -- including up to \$7,000 stipend and up to \$500 additional for required travel to visit a NASA researcher, and other travel and supplies to facilitate the project. Matching of at least 30% is required, and should insure that the faculty mentor has adequate time committed to the project. *Indirect costs can neither be charged nor used as match for scholarship awards.*

Fellows and Scholars must be U.S. citizens and must be accepted for admission to a program at the Consortium institution leading to a graduate or baccalaureate degree in a space-related field or teaching specialization. We encourage applications from women and underrepresented minorities, and from students involved in NASA projects, programs, and NASA EPSCoR.

The application must be submitted by the faculty mentor with the concurrence of the Department Chair and the Campus Director. The faculty mentor must show evidence of publication, suitable resources, and adequate assignment time to support the student's mentored research project, such as time committed as match. As PI, the mentor will administer the award and guide the study.

Assistance with introductions and arrangements for visits with NASA researchers is available by working with the University Affairs Officers, whose contact information is given later in this document and with the current KSGC RFP on the KSGC website at <http://www.wku.edu/ksgc/>

The student must provide as part of the application an essay describing space-related interests and career goals. A student is eligible for renewal in competition with first-time applicants, with priority given to renewals. Renewal is contingent upon the quality of the student's research and satisfactory performance in the program of study, as evidenced by grades, presentation of research results, and evaluation of the student's progress by the mentor. Selection is based on the following criteria:

- (1) academic qualifications of the applicant
- (2) quality of the proposed research program and relevance to space-related science/technology
- (3) applicant's motivation for a space-related career expressed in an essay on interests and goals
- (4) written and oral presentations of research accomplishments (for renewal).

Support for Teacher Workshops

KSGC invites proposals for up to \$25,000 per workshop for curriculum development or enhancing the capabilities of college or precollege teachers in the teaching of space-related subjects.

Diversity Needs: NASA and KSGC are committed to **increasing diversity** of participation in space-related education. **KSGC strongly encourages proposals for Workshop opportunities conducted by, or strongly serving, women, members of underrepresented groups, and persons with disabilities.** KSGC is very interested in receiving well-qualified proposals that would increase the diversity of participation in our programs.

The PI must be employed at a member institution. Funding should be concentrated on maximum benefit to participants. The purpose of KSGC-sponsored workshops is to enable teachers to utilize the excitement of space-related science, technology, engineering, and mathematics (STEM) to inspire students from an early age to consider and prepare for a STEM career path.

The proposal must demonstrate how the workshop will incorporate materials and results from NASA programs or missions, and how the content addresses the Kentucky Core Content for Assessment for precollege education. Proposers are encouraged to develop workshops for college faculty who teach Kentucky's future science and mathematics teachers, providing space-related content and inspirational hands-on learning activities to enrich their students' preparation for teaching. Proposals may also be submitted for substantial development of higher-education curriculum based on space-related science and engineering.

Cost sharing commitment is not required but the proposal must demonstrate that faculty will have the time to facilitate development and delivery of a substantial training experience.

Equipment and indirect costs may not be covered with KSGC funds.

Augmentations to Current 2009 Awards

KSGC invites proposals for augmentations to existing KSGC awards in all of the above categories. The augmentation request should include the cover sheet, a maximum 2 page summary of the project including a discussion of how the additional funds will enhance the project goals, a budget on the KSGC budget form and detailed budget justification. There is no limit to the amount of augmentation funds that can be requested, but the amount must be clearly justified. No matching is required on augmentation funds.

Proposal Instructions

Cover Sheet (and supporting documents): The cover sheet (a KSGC form) should include all requested information and signatures. Supporting documents for fellowship and scholarship applications are itemized in a checklist on the cover sheet. **Projects should not end after March 31, 2010;** we prefer project end dates to be no later than March 15, 2010 to insure time for adequate compilation of final reporting materials. Submissions must be printed single-sided, unbound, with all parts secured by staple in the upper left-hand corner.

Budget: A single-page budget sheet (a KSGC form) should separately show costs to be covered by the grant and cost sharing provided by the host institution. Explicitly detail time commitments (who, when, amount of time & units used, cost). The budget narrative section of the proposal should also detail time commitments and costs, as well as specific justification and description of supplies, travel, and any other direct costs (specify).

No equipment may be purchased with federal KSGC funds; however, equipment purchased for the project by the institution during the period of the grant may contribute to cost sharing. A separate proposal (with independent budget) may be submitted justifying absolutely essential equipment in amounts up to a few thousand dollars, with 1:1 matching, preferably by institutional contribution to the equipment.

Indirect charges may not be associated with fellowships or scholarships. For research grants, indirect may not be charged to the grant but may be contributed as cost sharing. The budget page and budget narrative should contain detail of the indirect calculations (rate and basis). The *budget form* is available as an active Excel spreadsheet from our website <http://www.wku.edu/ksgc/ksgcbudget.xls>.

Abstract: A single-page abstract (500 words or less, written for public access) should summarize the objectives of the proposed project, the plan for achieving them, and the relevance to space-related science, technology, or education.

Project Description: A thorough description of the proposed project should be given, including discussion of the relevance to the goals of the Consortium and NASA. Interaction with NASA at some level is required, and must be acknowledged by an involved NASA researcher. The proposal narrative should be concise, not exceeding the equivalent of 6 single-spaced pages, including budget justification.

Brief Vitae for Personnel: The relevant qualifications and credentials of PIs, mentors, or workshop instructors should be described in the form of one-page vitae.

Current and Pending Support: Describe current and pending PI support and time commitments.

Supporting materials:

Undergraduate fellowships: The proposal should also include a letter of support from the mentor, the Department Head/Chair, and one additional faculty member familiar with the student. Also copies of transcripts, ACT/SAT scores, proof of program admission, and an essay from the student on their interests and goals.

Graduate fellowships: The proposal should also include a letter of support from the mentor, the Department Head/Chair, and one additional faculty member familiar with the student. Also copies of transcripts, GRE scores, proof of program admission, and an essay from the student on their interests and goals.

Research Proposals: The proposal should also include a letter of support from a NASA researcher.

Submission of Proposals: Proposals should be received by the deadline date given below. For further assistance, or information about other KSGC opportunities, contact your Campus Director or the KSGC Program Office at the e-mail, address, or telephone below.

Acknowledgement: Appropriate acknowledgement of the sponsorship of the Kentucky Space Grant Consortium and the National Aeronautics and Space Administration should be included in printed materials, publications, and presentations related to the project.

Reports: Project information will be collected upon request for the KSGC annual report to NASA. A final project report must be submitted by the PI within 60 days following the end of the term of support, concisely describing the project, telling how the goals were met, and listing results such as publications and follow-on grant applications and awards. One copy each should be sent to the KSGC Center Office and to the KSGC Campus Director at the PI institution. The final financial report and invoice are also due from the institution within 60 days following the ending date.

Application Deadline: Friday, July 31, 2009, at 4pm CT

Please submit original and 20 proposal copies to:

Michael Carini, Director
Kentucky Space Grant Consortium
Department of Physics and Astronomy, TCCW 246
Western Kentucky University
1906 College Heights Boulevard, #11077
Bowling Green, KY 42101-1077
Phone: (270) 745-4156

E-mail inquiries to: NASA@wku.edu

BUDGET FORM:

The current budget form is downloadable separately as an Excel file. The Excel file is formulated to total all columns, do not change the formulas unless rows are added. See <http://www.wku.edu/ksgc/ksgcbudget.xls> and click on KSGC Funding Opportunities.

COVER SHEET:

The current cover sheet is downloadable separately as a Word file. See <http://www.wku.edu/ksgc/ksgccoversheet.doc> and click on KSGC Funding Opportunities.

NASA University Affairs Officers

Brenda Collins, University Affairs Specialist
NASA Ames Research Center, Mail Stop 204-14, Moffett Field, CA 94035
Phone: 650-604-3540 Fax: 650-604-0978
Email: bcollins@mail.arc.nasa.gov

Linda Rodgers, University Programs Administrator
Mail Stop 180-109, **NASA Jet Propulsion Laboratory**, Pasadena, CA 91109-8099
Phone: 818-354-3274 Fax: 818-393-4977
Email: linda.rodgers@jpl.nasa.gov

Dr. Miriam Rodón-Naveira, Education Director
NASA Dryden Flight Research Center
P.O. Box 273, Mail Stop D2701, Edwards, CA 93523-0273
Phone: (661) 276-3647 or (661) 276-2106 (Palmdale Office)
Fax: (661) 276-2800 or (661) 265-9548 (Palmdale Office)
Email: Miriam.M.Rodon@nasa.gov

Dr. M. David Kankam
Mail Stop 49-5, **NASA Glenn Research Center**, Cleveland, OH 44135
Phone: (216) 433-6143 FAX: (216) 433-3687
Email: Mark.D.Kankam@nasa.gov

Dr. Vigdor (Vic) Teplitz, University Affairs Officer
Code 160, **NASA Goddard Space Flight Center**, Greenbelt, MD 20771-0001
Phone: (301) 286-2362 Fax: (301) 286-1610
Email: Vigdor.L.Teplitz@nasa.gov

Robert Musgrove, Manager
Higher Education and Student Programs
Lyndon B. Johnson Space Center, Mail Stop AE2, Houston, TX 77058
Phone: (281) 483-3065 FAX: (281) 483-4876
Email: Robert.P.Musgrove@nasa.gov

Hortense Burt, Education Projects Manager
John F. Kennedy Space Center, Kennedy Space Center, FL 32899
Phone: 321-861-9083 FAX: 321-867-2097
Email: Hortense.B.Burt@nasa.gov

Lloyd B. Evans, University Affairs Officer
Mail Stop 400, **Langley Research Center**, Hampton, VA 23681-2199
Phone: (757) 864-5209 FAX: (757) 864-8835
Email: l.b.evans@larc.nasa.gov

Dr. Frank Six, University Affairs Officer
Mail Code HS30, **Marshall Space Flight Center**, MSFC, AL 35812-0001
Phone: (256) 961-0678 FAX: (256) 961-1521
Email: Frank.Six@nasa.gov

Dr. Nathan A. Sovik, University Affairs Officer
John C. Stennis Space Center, Code IA20, Building 1100, Stennis Space Center, MS 39529
Phone: (228) 688- 7355 FAX: (228) 688-1094
Email: Nathan.A.Sovik@nasa.gov