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- Rev #: 21
- OCA file #: Active
- Work type: RES
- Document: GRANT
- Contract entity: GTRC
- CFDA: 43.002
- PE #: N/A

### Project Details

- **Project unit:** AERO ENGR
- **Project director(s):** ARMANIOS E A
- **Unit code:** 02.010.110
- **Contract entity:** GTRC
- **CFDA:** 43.002
- **PE:** N/A

### Sponsor Information

- **Sponsor/division names:** NASA
- **Sponsor/division codes:** 105

### Award Period

- **Award period:** 890901 to 980131 (performance) 980228 (reports)

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<td>Cost sharing amount</td>
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### Does subcontracting plan apply?: N

### Title

**ESTABLISHMENT OF GEORGIA TECH AS A NATIONAL SPACE GRANT COLLEGE**

### Project Administration Data

- **OCA contact:** Anita D. Rowland 894-4820
- **Sponsor technical contact:** MS LYNNE KEFFER, CODE: FEH (202)358-1525
- **Sponsor issuing office:** ADRIENE WOODIN, CONTRACTING OFFICER (202)358-0510

### NASA Headquarters

- **EDUCATIONAL AFFAIRS DIVISION**
- **WASHINGTON DC 20546**

### Security class (U,C,S,TS): U

- **ONR resident rep. is ACO (Y/N): N**
- **Defense priority rating:** N/A
- **Equipment title vests with:** Sponsor
- **Purchasing of equipment of GFM are prohibited.**

### Administrative Comments

- **SUPP. 7 AWARDS YEAR 2 OF THE PROGRAM. BUDGETED INTO SUB E-16-M97 TO TRACK THE CAPPED O/H RATE. **CONTINUATION**
FIRST ANNUAL STATUS REPORT

NASA SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM

For period covering 1 September 1989 to 15 August 1990

GEORGIA INSTITUTE OF TECHNOLOGY SPACE GRANT CONSORTIUM

CLARK ATLANTA UNIVERSITY
GEORGIA INSTITUTE OF TECHNOLOGY
GEORGIA STATE UNIVERSITY
TUSKEGEE UNIVERSITY

By

David A. Peters
Principal Investigator
School of Aerospace Engineering
Georgia Institute of Technology
Atlanta, GA 30332-0150

15 August 1990
BACKGROUND

This is the first annual report of the Georgia Tech Space Grant Consortium sponsored by NASA. The purpose of the Georgia Tech Space Grant Consortium is to encourage and support participation of underrepresented groups in aerospace fields by offering fellowships and support through a wide range of programs. The first five months of the grant involved only Georgia Institute of Technology. During that time, we were engaged in three tasks. First, we searched for a full-time administrator. The position was filled by Ms. Wanda Jeter, a graduate of Howard University, on January 2, 1990. Second, we began the process of setting up a visible Space Grant Office on the Georgia Tech Campus. Third, we did administrative planning in preparation for the complete funding of all consortium members which began on February 2, 1990.

Since February 2, 1990, we have been engaged in many activities. First, we completed negotiations with the Georgia Tech Administration and located 650 square feet of space for the office. This space is located in a key location on campus directly next to the President’s Office and Administration Building. We have renovated the space by construction of a wall, installation of carpet and office furnishings, and design of a comfortable area where students may come, ask questions, and browse through literature on Space and Aeronautics. We have also administered fellowships and initiated or supported many programs at every place along the student "pipeline" as outlined below.

FELLOWSHIPS

The Space Grant Budget includes $100,000 of fellowship money. During the first meeting of the Georgia Tech Space Grant Consortium, members present decided that Georgia State University, Clark Atlanta University, and Tuskegee University would each receive $30,000; Georgia Tech would receive the remaining $10,000. This distribution was based on the fact that Georgia Tech receives a majority of the non-fellowship funds and that Georgia Tech has other sources of student funding. Furthermore, it was decided by the committee that Georgia Tech’s $10,000 would be exclusively earmarked for underrepresented graduate students conducting aerospace related research, because the other institutions in the consortium will concentrate on undergraduate students. Thus, to keep the program balanced, Georgia Tech will concentrate on graduate students, who would not otherwise be funded by
Georgia Tech's program. Exhibit 1 offers a complete breakdown of fellowships awarded by the Georgia Tech Space Grant Consortium. The availability of fellowships was announced in campus newspapers (Exhibit 2).

Dr. Peters, and Wanda Jeter have been working with the Georgia Tech Office of Corporate Relations to obtain matching funds for the consortium fellowships. Wanda Jeter is also working with NCEA (National Consortium for Education Access). This organization is located on Georgia Tech’s campus and directed by Dr. Leroy Ervin. The purpose of the organization is to increase the number of minority students enrolled in Ph.D. programs in engineering, and to increase minority faculty representation by offering financial assistance in the form of fellowships, stipends, and tuition waivers. The consortium and NCEA will, in some instances, share the cost of student aid, or refer students to each other.

PROGRAMS

Field Trips

The first field trip sponsored by the Georgia Tech Space Grant Consortium was to Marshall Space Flight Center in Huntsville Alabama. Twenty-one outstanding juniors and seniors from high schools throughout the Atlanta metropolitan area were chosen by science teachers to participate on this field trip. All arrangements for the field trip were made by the consortium. The goal of the trip was to send a group of outstanding students to Huntsville to spark their interest in space related fields. The response to the field trip has been positive and the outcome is measured by survey forms (Exhibit 3) and continued follow-up.

Tuskegee University sponsored a field trip with 212 students to Marshall Space Flight Center for motivation. These students were part of the MITE (Minority Introduction to Engineering), RADHS (Research Apprenticeship of Disadvantaged High Schoolers, and FASTREC (Freshman Accelerated Start-Up and Training and Retention in the Engineering Curricula) groups. Space grant funds paid totally for these trips and supported some students with stipends.

Space Camps

The first Space camp sponsored by the consortium was a combined effort with the Office of Civic Affairs at Georgia Tech. The Space Camp was held jointly at the Walden School in Atlanta and the Georgia Tech
Eighty-seven junior high students from inner-city Atlanta schools participated in the camp which lasted for one week. A schedule of the weeklong activities is attached (Exhibit 4). The goal of this particular activity was to expose inner-city youngsters to science through an enjoyable activity such as a space camp. The outcome of this activity was also measured by surveys.

The Office of Civic Affairs and the Georgia Tech Consortium, which is the major source of funding, are already conducting planning meetings for the 1991 Space Camp which will be held for two weeks and include an overnight stay at Marshall Space Flight Center.

Georgia State University sponsored two space camps for middle school students. The first camp was held in Marietta, Georgia, with 59 students attending. The second camp was held in Walker County, Georgia, with 30 students attending. Students participating in the space camps were fully supported by funds from the Georgia Tech Space Grant Consortium.

Clark Atlanta University also sponsored one space camp in conjunction with Georgia State University and the Ron McNair Foundation. This space camp was held on the Clark Atlanta campus, and 27 inner-city, middle school students participated. Tuition for space camp was paid by Clark Atlanta University. Dr. Kofi Bota, Vice President of Sponsored Programs and Chemistry Professor, has initiated discussions with the McNair Foundation regarding follow-up activities during the academic year, as well as dealing with the general issue of space-related science and engineering for elementary and secondary school students.

Dr. Ted Colton, Georgia State University Science Education Professor, was instrumental in each space camp sponsored by the consortium. Dr. Colton was responsible for training all school teachers involved in space camps and the total coordination of space camps at Clark Atlanta, Southern Tech, and Walker County.

**Summerscape**

Summerscape is a two week activity designed to motivate junior high school students. This activity was held on the Georgia Tech Campus and planned by the Office of Academic Affairs in conjunction with the consortium (Exhibit 5). The consortium provided scholarships for six students of underrepresented groups. The consortium was also responsible for an afternoon of aerospace related activities which included a lecture by a graduate student and paper airplane contest. Other activities designed to motivate the youngsters and arouse their interest in math and science included rocket building, bridge building, tours of
at Georgia Tech, environmental awareness demonstrations, etc. A survey was also used to measure the effectiveness of this program. (Exhibit 6).

**Summer Workshop for Pre-College Teachers**

A summer workshop for pre-college teachers was conducted during the period from June 18 - 23 under the auspices of Clark Atlanta University and the Science and Technology Museum of Atlanta (SCITREK). This workshop will be followed by a field trip on August 14, 1990 to Marshall Space Flight Center, Huntsville, Alabama.

During the 1990-91 academic year, three physics graduate students who worked with the summer workshop will provide assistance to the participant teachers to design classroom experiments incorporating the principles learned in the workshop. Periodic meetings will be conducted among science and computer science faculty of Clark Atlanta University; the science resource persons of SCITREK; the science coordinator of the Atlanta Public Schools; and the teacher participants to review the space science instructional activities being implemented by each teacher. Of particular interest will be comparisons among the same grade levels within the three clusters.

**Speakers**

Dr. Lakshmi Sankar, Georgia Tech Aerospace Engineering Associate Professor, was the first speaker scheduled by the consortium. Dr. Sankar spoke to a group of students on the subject of Aerodynamics. The students at the high school have requested that Dr. Sankar and other aerospace engineering professors speak at their school during the 1991-1992 school year.

Captain Bryan Fortson was scheduled as a speaker for the Georgia Tech Space Camp. Captain Fortson is a Black Ph.D. candidate in aerospace engineering at Georgia Tech and also a member of the United States Air Force.

Both speakers, Dr. Sankar and Captain Fortson have been added to the consortium's list of speakers for future activities.

Tuskegee University sent speakers to four schools in rural Alabama to assist them in hydroponics studies and/or in setting up hydroponics experiments. NASA's Florida Teacher-in-Space, Susan Forte has spoken at several events sponsored by Tuskegee.
Tours

Georgia Tech routinely sponsors tours of its facilities for pre-college students. The consortium was responsible for conducting eight tours through the School of Aerospace Engineering (Exhibit 7). During these tours, the role of the Georgia Tech Space Grant Consortium within the School of Aerospace Engineering was emphasized. All students were also encouraged to visit the Space Grant Office on Georgia Tech’s Campus for additional information. The consortium has maintained a list of students and will keep them updated on fellowship information, and various pre-college engineering programs.

The School of Agriculture and Home Economics at Tuskegee University was host to over 500 precollege students. These students toured the Tuskegee University NASA/CELSS sweet potato research facility. Students were chosen from 11 schools in Alabama and 2 schools in rural Georgia. As part of Tuskegee’s education efforts, demonstrations of hydroponic experiments with tomatoes, cucumbers, potatoes and sugar beets have recently been set up for visiting groups.

Banquets

The consortium in conjunction with the Minority Alumni Affairs Office and Undergraduate Recruiting will sponsor two banquets for high school seniors. The purpose of these banquets is to encourage minority students to attend college, particularly in math and science related fields. The particular program the consortium is involved with is “Twenty - Four Hours At Tech,” which is an intensive program involving activities such as pairing students with mentors, viewing recruitment films, attending lectures, fun-filled activities such as going to a Georgia Tech football game, and closing ceremonies which will include a formal banquet.

Community Interaction

The Boys and Girls Club of South Atlanta has expressed great interest in working with the Georgia Tech Space Grant Consortium. During the fall, the consortium will plan several science and math activities at the Boys and Girls Club.

Atlanta’s only science museum, Sci-Trek, has offered its assistance in future programs that the Space Grant Consortium plans. Presently, we are interested in working on a mobile space science exhibit with the
museum in order to reach the rural areas of Georgia. Actual work on the project will begin in 1991.

Dr. Peters and Wanda Jeter will participate in the Warner Robins Air Logistics Open House, Warner Robins, Georgia, on October 6 and 7. The Open House will give the Dr. Peters and Ms. Jeter the opportunity to speak to the citizens of south Georgia and share information about the Space Grant Consortium.

Wanda Jeter has recently joined NAMEPA (National Association of Minority Program Administrators), and the Fulton County Women's Chamber of Commerce. Through these two organizations, Ms. Jeter, will be able to plan additional activities for members of underrepresented groups.

Publicity

In an effort to inform the public of the establishment of the Georgia Tech Space Grant Consortium, press releases were mailed to the Atlanta-Journal and Constitution, Black Issues in Higher Education, The Black Collegian, and campus-based newspapers (Exhibit 8). The Georgia Tech Research Institute has interviewed Dr. David Peters for an article in their research journal. The Research Institute Journal has statewide circulation and limited national circulation.

The consortium will take advantage of future publicity opportunities and in its association with various organizations such as the Boys and Girls Club of America and the Women's Chamber of Commerce, such opportunities do exist. Another opportunity to take advantage of public reactions will be our Open House scheduled for October 1990.

Open House

An open house will be sponsored by the consortium during the month of October. This open house will be an opportunity to share information with the public. Students, fellowship recipients, teachers, professors, school administrators, NASA representatives, and corporate representatives will be invited to the open house. The open house will be held at the Space Grant Consortium main office which is located on the Georgia Tech Campus.
Travel

Dr. David A. Peters, Wanda Jeter, and Dr. Phil Loretan, Tuskegee University, attended the first annual meeting of the NASA Space Grant Colleges/Consortia in Baltimore, Maryland. Dr. Peters will travel to Dallas, Texas in September for the second meeting of the consortia directors.

Dr. Peters also attended the American Society for Engineering Education Conference (ASEE) in Toronto, Canada, this past June. Dr. Peters attended numerous sessions, particularly those sessions with topics that were in line with the goals of the Georgia Tech Consortium.

Visitors

The Space Grant office is located in a very visible location on campus and the office was designed to have an inviting atmosphere. In addition to subscribing to more than 10 publications relating to aerospace, the consortium is maintaining a large source of reference material on other areas of interest to students such as fellowships, NASA employment opportunities, and college catalogues. On the walls of the Space Grant office, the NASA Space Grant Award Plaque is prominently displayed, along with other pictures and photographs. The office will soon house a large collection of aerospace models and other items of interest to aerospace enthusiasts.

Visits to the consortium office are encouraged. A record of all visitors and phone calls is maintained in a daily logbook. Visitors are given information on the consortium and often taken on a tour of the School of Aerospace Engineering.

PROJECTED PROGRAM

Clark-Atlanta will implement a Saturday Science Academy for middle school students beginning October 1, 1990. Georgia Tech will sponsor exhibits at various schools throughout Georgia, and continue to provide speakers. Also, the consortium will become involved in higher education recruitment of underrepresented groups, and work with schools to strengthen dual degree programs. This fall, Dr. Ted Colton, Georgia State, and Wanda Jeter, Georgia Tech, will begin work on a statewide Aerospace Newsletter.

Revisions have only been made to the Georgia Tech budget for 1991-1992 (Exhibit 9). After the first project year, which has been very
successful thus far, Dr. Peters, and Ms. Jeter decided to give more financial support to those activities that have the greatest impact on students and the community. An additional $10,000 will be added to the Georgia Tech fellowship pool because of the quality of students and significant research that the 1990 GRA recipients have been involved in. The support given through the fellowship program, has encouraged underrepresented students to continue their education; and the total funding of the Georgia Tech Consortium by NASA has encouraged many others to pursue science and engineering.
## Georgia Institute of Technology Space Grant College/Consortium Fellowship Awards

### Ethnic Codes
- **I** - American Indian
- **B** - Black
- **H** - Hispanic
- **A** - Pacific Islander
- **W** - White

### Other Codes
- **HC** - Handicapped

### Georgia Tech

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<td>Katherine DeYoung</td>
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### CLARK ATLANTA UNIVERSITY

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Assistantships Now Available In Space Related Fields

The Georgia Institute of Technology Space Grant College/Consortium, located in the School of Aerospace Engineering, is offering limited graduate research assistantships to qualified female students and/or students in any underrepresented group.

Students applying for these assistantships must pursue space-related coursework in their home discipline, e.g., in aerospace engineering, chemical engineering, textile engineering, geophysical sciences, information and computer science, mechanical engineering, physics, chemistry, electrical engineering, materials engineering, or applied biology.

For more information, call Wanda Jeter at 3-0055.
EXHIBIT 3

GEORGIA INSTITUTE OF TECHNOLOGY SPACE GRANT CONSORTIUM

Activity Sponsored: 

Date: 

Participated as (circle one) student teacher volunteer parent

Age (student only) ___

1. How would you rate the total activity? Excellent Good Fair Poor? (circle one) Comments: 

2. What did you learn from the activity?

3. Would you like to participate in future activities sponsored by the Georgia Tech Consortium? Yes No (circle one)

4. What type of activity would you like to see the Georgia Tech Space Grant Consortium sponsor in the future? 

5. Please make any additional comments below 


GEORGIA TECH-WALDEN MIDDLE SCHOOL
SCIENCE/SPACE CAMP

DAILY SCHEDULE

MONDAY, JUNE 18

8:00 - 8:30 AM  Drop off campers at Walden Middle School

8:00 - 9:00 AM  REGISTRATION/Crew assignments
(Campers will be assigned to crews with 10 campers and
two middle school teachers each.)

9:00 AM  Welcome

9:15 AM  Video: Climate and Weather in space

9:45 AM  Break

10:00 AM  Team building exercises with crews
           Staff, YMCA of Metro Atlanta

12:00 NOON  Lunch
           **BRING A SACK LUNCH FROM HOME**
           **DRINKS WILL BE PROVIDED**

1:00 PM  Climatology, Meteorology and Space
         Meteorologist Ed Anderson (also 96 Rock personality and
         founder of The World of Wonderment)

2:00 PM  Aerospace Principles
         (Hands-on activities illustrating Bernoulli's principles in
         preparation for rocket building)

3:30 PM  Building your own model space station
         Francis Reddy, science teacher/writer for Odyssey
         Magazine, Sci Trek and Rand McNally

5:00 - 5:30 PM  Pick up campers at Walden School
## TUESDAY, JUNE 19

<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>8:00 - 8:30 AM</td>
<td>Drop off campers at Walden Middle School</td>
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<tr>
<td>8:30 AM</td>
<td>Crew meetings</td>
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<tr>
<td>8:45 AM</td>
<td>Introduction to Fiber and Material Engineering</td>
</tr>
<tr>
<td></td>
<td>&quot;What are Molecules, Anyway?&quot;</td>
</tr>
<tr>
<td></td>
<td>Dr. John Lundberg, Callaway Professor at Georgia Tech</td>
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<tr>
<td>9:00 AM</td>
<td>Demonstrations on fibers and materials used in space</td>
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<tr>
<td></td>
<td>Georgia Tech faculty</td>
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<tr>
<td></td>
<td>(Students will move from demonstration to demonstration)</td>
</tr>
<tr>
<td>10:00 AM</td>
<td>Board buses for Atlanta/Hartsfield International Airport</td>
</tr>
<tr>
<td>10:30 AM</td>
<td>Atlanta/Hartsfield International Airport</td>
</tr>
<tr>
<td></td>
<td>* Tour airport</td>
</tr>
<tr>
<td></td>
<td>* Meet Airport Commissioner Calvin Carter and members of the airport team</td>
</tr>
<tr>
<td>12:00 NOON</td>
<td>Picnic at park near airport</td>
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<td></td>
<td><strong>BRING A SACK LUNCH FROM HOME DRINKS WILL BE PROVIDED</strong></td>
</tr>
<tr>
<td>1:00 PM</td>
<td>Board buses for return to Walden School</td>
</tr>
<tr>
<td>1:30 PM</td>
<td>Model rocket building</td>
</tr>
<tr>
<td>3:30 PM</td>
<td>Space games and videos</td>
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<td></td>
<td>* &quot;Black Stars in Orbit&quot;</td>
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<tr>
<td>5:00 - 5:30 PM</td>
<td>Pick up campers at Walden School</td>
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**WEDNESDAY, JUNE 20**

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<tr>
<td>8:00 - 8:30 AM</td>
<td>Drop off campers at Walden School</td>
</tr>
<tr>
<td>8:00 AM</td>
<td>Hot air balloon demonstration: Warren Bruno of Charley's Restaurant</td>
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<td></td>
<td>Bob Wilbanks, Aeronautical Enterprises, Inc.</td>
</tr>
<tr>
<td>8:45 AM</td>
<td>Crew meetings</td>
</tr>
<tr>
<td>9:30 AM</td>
<td>Finish building model rockets</td>
</tr>
<tr>
<td>10:30 AM</td>
<td>Board buses for Zoo Atlanta</td>
</tr>
<tr>
<td>11:00 AM</td>
<td>Zoo Atlanta</td>
</tr>
<tr>
<td></td>
<td>Special Presentation: Animal Avionics</td>
</tr>
<tr>
<td></td>
<td>Birds of Prey Show</td>
</tr>
<tr>
<td>12:00 NOON</td>
<td>Lunch at the zoo with mystery guests</td>
</tr>
<tr>
<td></td>
<td>(Dr. Terry Maple with zoo staff and animals)</td>
</tr>
<tr>
<td></td>
<td><strong>LUNCH WILL BE PROVIDED AT THE ZOO</strong></td>
</tr>
<tr>
<td></td>
<td><strong>DO NOT BRING A SACK LUNCH FROM HOME</strong></td>
</tr>
<tr>
<td>1:00 PM</td>
<td>Special zoo tour</td>
</tr>
<tr>
<td></td>
<td>* Ford African Rain Forest</td>
</tr>
<tr>
<td>3:00 PM</td>
<td>Board buses for return to Walden School</td>
</tr>
<tr>
<td>3:30 PM</td>
<td>Launch model rockets</td>
</tr>
<tr>
<td>5:00 - 5:30 PM</td>
<td>Pick up campers at Walden School</td>
</tr>
</tbody>
</table>
THURSDAY, JUNE 21

8:00 AM  Drop off campers at Walden School
          MAKE SURE YOU ARRIVE AT WALDEN BY 8:00!

8:15 AM  Buses depart Walden School for Huntsville, Alabama
          (Eastern Daylight Time)
          Play space quiz games enroute

11:00 AM Arrive at NASA Space Center, Huntsville, Alabama
          (Central Daylight Time)

11:30 AM Lunch at NASA Space Center
          BRING A SACK LUNCH FROM HOME

12:30 PM Tour NASA Museum and Exhibit Hall
          (Involvement with hands-on exhibits)

4:00 PM  Buses depart NASA Space Center
          (Central Daylight Time)
          PIT STOP FOR CAMPERS TO BUY SUPPER
          REMEMBER TO BRING SOME MONEY

9:00 PM  Arrive at Walden School - Campers return home
          (Eastern Daylight Time)
FRIDAY, JUNE 22

8:00 - 8:30 AM  Drop off campers at Walden School
8:30 AM  Crew meetings
8:45 AM  Board buses for Fernbank Science Center
9:15 AM  Planetarium Show: "In Search of ET"
10:30 AM  Tour Fernbank Science Center
11:00 AM  Board buses for Georgia Tech
11:30 AM  Picnic lunch: Georgia Tech Wardlaw Center Terrace
          (Captain Bryan Fortson, U.S. Air Force and PhD student in aerospace engineering at Georgia Tech)
          **DO NOT BRING A LUNCH FROM HOME**
1:30 PM  Crews rotate among campus demonstrations, including:
          * Aerospace engineering: wind tunnel, tail assembly
          * Mechanical engineering: robotics
          * Artificial Intelligence: helicopter routes, baseball
          * Land/Sat computer applications, flight simulation
          * Olympic computer/video presentation
4:00 PM  Closing ceremonies with Buzz
          Georgia Tech Student Center Auditorium
4:30 PM  Board buses for return to Walden School
5:00 - 5:30 PM  Pick up campers at Walden School
Ninety-four rising sixth through ninth graders received certificates for their participation in the Georgia Tech-Walden Middle School Science/Space Camp on June 22 after a week of fun and learning. The camp's activities featured hands-on activities such as building and launching model rockets. The group also toured space-related research facilities at Tech and took various field trips throughout the Atlanta area and to the NASA Space Center in Huntsville, Ala.

SUMMERSCAPE Ready For Second Season

After an enormously successful debut last summer, Tech is preparing to launch an expanded second season of SUMMERSCAPE, a mathematics and science enrichment program for middle school students. Rising seventh and eighth graders are invited to submit applications for this two-week nonresidential program.

The program will be offered in two, two-week sessions: July 9-20 and July 30-Aug. 10. Students will be selected on the basis of their application and the recommendations of their teachers. Space is limited to 40 seventh graders and 40 eighth graders per session.

The cost is $265 and includes all materials, supplies, lunch each day in the Student Center, a SUMMERSCAPE T-shirt, and transportation and admission fees for field trip excursions. Limited financial assistance is available to students who otherwise could not attend this program.

All courses are taught by award-winning high school teachers. Courses offered in the first session will cover photography as a tool of science, energy, the environment and insects. Students in the second session will learn about electrochemistry, optics and physics. Students will also enjoy computer workshops, field trips, and supervised recreation.

Applications are available in the Administration Building, Room 306 and are due on April 6. For further information, contact Myrna Goldberg in the Office of Academic Research and Support at 4-8994 or at mail code 0330.
SUMMERSCAPE 1990 STUDENT EVALUATION
SESSION I

Name __________________________________________________________
Grade as of 9/90 _____
School __________________________________________________________
County _______________________

Check the appropriate boxes
☐ Asian ☐ Male
☐ Black ☐ Female
☐ White
☐ Hispanic

1. How would you rate the overall program?
   a. excellent
   b. good
   c. fair
   d. poor

2. What did you think of the courses? Check the appropriate box.

   Very interesting Somewhat interesting Boring
   Photography ☐ ☐ ☐
   Environmental Awareness ☐ ☐ ☐
   Energy ☐ ☐ ☐
   Insects ☐ ☐ ☐
   Computer ☐ ☐ ☐

3. How would you rate the teachers and student assistants? Check the appropriate box.

   Excellent Good Fair Poor
   Ms. Neal ☐ ☐ ☐ ☐
   Mr. Cramer ☐ ☐ ☐ ☐
   Ms. Krejcarek ☐ ☐ ☐ ☐
   Ms. Carter ☐ ☐ ☐ ☐
   Ms. Bailey ☐ ☐ ☐ ☐
   Ms. Ehrhart ☐ ☐ ☐ ☐
   Allison ☐ ☐ ☐ ☐
   Walt ☐ ☐ ☐ ☐
   C.T. ☐ ☐ ☐ ☐
   Leigh Anne ☐ ☐ ☐ ☐

4. What did you like best about the classes?

5. What did you like least?

6. How much computer experience did you have before SUMMERSCAPE?
   a. a lot
   b. a little
   c. not very much
   d. none

7. Do you have a computer at home?
   Yes ☐ No ☐
GEORGIA TECH SPACE GRANT CONSORTIUM

TOURS OF AEROSPACE ENGINEERING

SPACE CAMP
c/o Tom Hamall
Civic Affairs
June 21, 1990
1:30 p.m. - 2:00 p.m.

CASE
(Career Awareness in Science and Engineering)
c/o Keith Oden
Dean's Office
June 27, 1990
9:30 a.m. - 10:15 a.m.

MITE
(Minority Introduction to Engineering)
c/o Cynthia Warner
Dean's Office
July 10, 1990
6:00 - 6:40 p.m.

MITE
(Minority Introduction to Engineering)
c/o Cynthia Warner
Dean's Office
July 11, 1990
6:00 - 6:40 p.m.

FEW
(Freshman Engineering Workshop)
c/o Keith Oden
Dean's Office
July 12, 1990
9:00 a.m. - 10:45 a.m. (2 Groups)

MITE
(Minority Introduction to Engineering)
c/o Cynthia Warner
Dean's Office
July 24, 1990
6:00 - 6:40 p.m.

MITE
(Minority Introduction to Engineering)
c/o Cynthia Warner
Dean's Office
July 25, 1990
6:00 - 6:40 p.m.
TOURS OF AEROSPACE ENGINEERING

FEW
(Freshman Engineering Workshop)
c/o Keith Oden
Dean's Office
July 26, 1990
9:00 a.m. - 10:45 a.m. (2 Groups)
Tech Gets NASA Space Grant

NASA has selected Georgia Tech as one of 21 National Space Grant Colleges/Consortia.

Other members of the consortium are Clark-Atlanta University, Georgia State University and Tuskegee University.

Each consortia will receive up to $225,000 per year for at least five years, and are expected to obtain matching non-federal funds.

The consortia also will receive $100,000 from NASA to support undergraduate and graduate fellowships.

Objectives of the Georgia Institute of Technology Space Grant Consortium are to strengthen aerospace activities and promote awareness of aerospace career opportunities, particularly among women and under-represented minorities.

The consortium will accomplish these objectives through sponsorship of a wide variety of activities and programs throughout the year.

The Space Grant Office, located in the Savant Building on the Georgia Tech campus, is headed by Dr. David Peters, professor of aerospace engineering.
# BUDGET FOR NASA SPACE GRANT CONSORTIUM

**FEBRUARY 1, 1991 - January 31, 1992**

<table>
<thead>
<tr>
<th>ITEM</th>
<th>TOTAL</th>
<th>NASA GRANT</th>
<th>COST SHARING</th>
</tr>
</thead>
<tbody>
<tr>
<td>PI (25%)</td>
<td>26,796</td>
<td>13,398</td>
<td>13,398</td>
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<tr>
<td>Staff Asst. (100%)</td>
<td>26,256</td>
<td>13,128</td>
<td>13,128</td>
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<tr>
<td>Faculty for Short Course</td>
<td>4,000</td>
<td>3,000</td>
<td>1,000</td>
</tr>
<tr>
<td>Fringe Benefits (26.3%)</td>
<td>15,005</td>
<td>7,502</td>
<td>7,503</td>
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<tr>
<td>Travel</td>
<td>6,000</td>
<td>5,000</td>
<td>1,000</td>
</tr>
<tr>
<td>Advertising and Supplies</td>
<td>3,000</td>
<td>3,000</td>
<td>0</td>
</tr>
<tr>
<td>Space Camp</td>
<td>19,143</td>
<td>9,572</td>
<td>9,571</td>
</tr>
<tr>
<td>School Activities</td>
<td>1,500</td>
<td>750</td>
<td>750</td>
</tr>
<tr>
<td>24 hours at Tech</td>
<td>5,300</td>
<td>2,650</td>
<td>2,650</td>
</tr>
<tr>
<td>Additional Fellowships</td>
<td>10,000</td>
<td>4,500</td>
<td>5,500</td>
</tr>
<tr>
<td>Furnishings and computer equipment</td>
<td>8,000</td>
<td>0</td>
<td>8,000</td>
</tr>
<tr>
<td>TOTAL GT</td>
<td>125,000</td>
<td>62,500</td>
<td>62,500</td>
</tr>
</tbody>
</table>

## SUBCONTRACTS

<table>
<thead>
<tr>
<th>Subcontract</th>
<th>TOTAL</th>
<th>NASA GRANT</th>
<th>COST SHARING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clark Atlanta</td>
<td>50,000</td>
<td>25,000</td>
<td>25,000</td>
</tr>
<tr>
<td>Georgia State</td>
<td>50,000</td>
<td>25,000</td>
<td>25,000</td>
</tr>
<tr>
<td>Tuskegee</td>
<td>50,000</td>
<td>25,000</td>
<td>25,000</td>
</tr>
<tr>
<td><strong>Sub-Total</strong></td>
<td>275,000</td>
<td>137,500</td>
<td>137,500</td>
</tr>
<tr>
<td>Overhead (62.5%)</td>
<td>125,000</td>
<td>62,500</td>
<td>62,500</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>400,000</td>
<td>200,000</td>
<td>200,000</td>
</tr>
<tr>
<td>Fellowships</td>
<td>100,000</td>
<td>100,000</td>
<td>0</td>
</tr>
<tr>
<td><strong>GRAND TOTAL</strong></td>
<td>500,000</td>
<td>300,000</td>
<td>200,000</td>
</tr>
</tbody>
</table>
SPACE CAMP AWARD WINNER FOR BEST ACHIEVEMENTS

STUDENTS GOING TO MARSHALL SPACE FLIGHT CENTER, HUNTSVILLE, AL

MARSHALL SPACE FLIGHT CENTER, HUNTSVILLE, AL
AWARDS CEREMONY - SPACE CAMP
(Left to Right)
James Langley, VP of Development,
Georgia Tech
Tom Hamall, Director, Civic Affairs,
Georgia Tech
Russ Studevan, Principal, Walden
Middle School
Buzz, Georgia Tech Mascot

Vice President of Georgia Tech
Development, James Langley, gives
congratulations to participants
in Georgia Tech Space Camp

Space Camp Participants showing
off their awards
TO: Space Grant Program Directors  
FROM: XEU/Richard Devon  
SUBJECT: Space Grant Annual Reports

The due date for the annual report is December 15th. This year we will be using an entirely different method of reporting. Last year, we found that, despite the guidelines that were issued, there was a great deal of variation in the form and content of the reports - much more than that due to the substantive differences between the programs themselves. Further, when we had to compile national statistics for the Space Grant program, it was both arduous and inaccurate. So, we have decided to do it electronically.

We are having a data acquisition program written in Clipper, which is a high-level language that is particularly apt for producing on-screen forms. The result will be that a report, in the usual sense, will no longer be produced. Rather, information about the program will be entered directly into the computer. Where more than quantitative and discrete entries may be needed, there will be pop-up windows in which as much textual commentary as desired may be added. When completed, the resultant database will be sent back to us, either on a disk through the mail, or over the networks. When all the reports are in, we will have a database that can be swiftly analyzed for purposes of evaluation and for compiling national statistics. After a little editing, this national database will be shared with all the programs so that they have access to comprehensive information about all the other programs. So, for example, anyone interested in creating an interdisciplinary "gateway" course could immediately find the names, addresses, etc., even mailing labels, of those who had already done this in other programs.

A corollary of this change is that we will no longer ask the program directors to categorize their activities in terms of the five major program goals. This system produced too much cross-referencing. Rather, discrete information describing each activity will be entered. In our database analysis, we will do the "mapping" between program activities and the five goals. So, for example, for underrepresented groups we
Dear Colleagues:


There are three main goals for these reports and the database constructed for their use: to facilitate the gathering, reduction and dissemination of useful program information to all participants; to enable quick retrieval of national program statistics, in response to requests from the agency, other institutions, Congress, and the public; and, to provide the data which will help in evaluation of the national program as well as individual programs. Two additional databases are planned: a standardized tracking system for Space Grant Fellows; and a standardized budget reporting system.

The usefulness of this approach depends greatly on your feedback as to how the system can be improved.

Thank you for you careful reporting of the data we are requesting and for your improvement suggestions.

Sincerely,

Julius Dasch
Program Manager
National Space Grant College and Fellowship Program

Enclosures
MEMORANDUM

DATE: March 18, 1992

TO: SPACE GRANT PROGRAM DIRECTORS

FROM: RICHARD DEVON, NASA HQ

RE: ANNUAL REPORT

I am assuming that the annual report software is now functioning well enough for you to complete the annual report. We do not know how long it will take you to complete the report, but we should have a deadline. So let's say the end of the month. We really do need to get the data in and to create the national database. This database will be very helpful to all of us.

I do apologize for the software problems which set us back 6 weeks. I feel a little like a ringmaster in a circus who calls in the elephants only to discover that someone had fed them several hundred pounds of apricots a few hours earlier.

There are only two, small, residual problems with the software known to me.

1. In the management section under Consortium Management Expenses there are two columns of figures which add automatically. One entry, that for the affiliate director(s) costs, is not included in the summation for either column. Ignore this, we will correct the summation process here.

2. In the documentation, the Database User Guide, there is an error on page 23. On the first line of the last entry (Money Spent), delete the words "Space Grant."

FOOTNOTE
There have been several requests for a way to produce a hard copy of the report other than using a few hundred "Print Screen" commands. Much as we love, and fear for, the forests of the world we are looking at ways of doing this.
1992 DATA COLLECTION
COMMUNICATIONS

REPORTING PERIOD: January 1, 1992 to December 31, 1992

Name of Consortium:

Name of Institution:

SG Institution: Y or N (Circle One)

Type: Four-year college

Four-year university
Community college
State/local government
Industry
Non-profit organization
Other (Please Identify) (Circle One)

Name of Contact: ERIAN ARMANIOS

Department: AEROSPACE

School/College: ENGINEERING

Street 1: 

City: ATLANTA
State: GA
Zip: 30332-0150

Telephone: (404) 894-8202 Phone: (404) 894-9313
E-Mail: erian.armarios@aerospace.gatech.edu

Research Interest 1: Composites

Research Interest 2: Structures

Regional Affiliation: (New England, Mid-Atlantic, South Eastern, Mid-Western, Western, None) (Circle One)

Other Contact Name: Wanda Pierson-Jeter

Name: Wanda Pierson-Jeter

Space Grant Title: Program Coordinator

Department: Aerospace

School/College: Engineering

Street 1: 

City: Atlanta
State: GA
Zip: 30332-0150

Telephone: (404) 853-0055 Fax: (404) 894-9313
E-Mail: wanda.piersonjeter@aerospace.gatech.edu

Research Interest 1: Retention/Recruitment

Research Interest 2: Structures
1992 DATA COLLECTION

COMMUNICATIONS

NASA

REPORTING PERIOD: January 1, 1992 to December 31, 1992

Name of Consortium: GEORGIA

Name of Institution: SPELMAN COLLEGE

SG Institution: Y or N (Circle One)

Type: Four-year college

Four-year university
Community college
State/local government
Industry
Non-profit organization
Other (Please Identify) (Circle One)

Name of Contact: MAEREA EVANS

Space Grant Title: CAMPUS DIRECTOR

Department: OFFICE OF SCIENCE, ENGINEERING AND TECHNICAL CAREERS

School/College: 

Street 1: 350 SPELMAN LANE

City: ATLANTA

State: GA

Zip: 30314

Telephone: (404) 215-7719

Fax: (404) 223-1449

E-Mail: 

Research Interest 1: OPPORTUNITIES IN SCIENCE ENGINEERING AND TECHNICAL CAREERS FOR AFRICAN AMERICAN WOMEN

Regional Affiliation: (New England, Mid-Atlantic, South Eastern, Western, None) (Circle One)

Other Contact Name:

Name: 

Space Grant Title: 

Department: 

School/College: 

Street 1: 

Street 2: 

City: 

State: 

Zip: 

Telephone: 

Fax: 

E-Mail: 

Research Interest 1: 

Research Interest 2: 
1992 DATA COLLECTION
COMMUNICATIONS

NASA

REPORTING PERIOD: January 1, 1992 to December 31, 1992

Name of Consortium: GEORGIA
Name of Institution: TUSKEGEE
SG Institution: Y or N (Circle One)
Type: Four-year university

Phase: - Phase I
- Program Grant
- Capability Enhancement Grant
(Circle One)

Lead: Y or N (Circle One)
Attributes: Historically Black Colleges or Universities
Other Minority Colleges and Universities
Women's Colleges
Academic Institutions for persons with disabilities
Minority focused organizations
None
(Circle One)

Name of Contact: PHIL LORETAN
Department: AGRICULTURAL EXPERIMENT STATION
School/College: AGRICULTURE AND HOME ECONOMICS
Street 1: Street 2:
City: TUSKEGEE State: ALABAMA Zip: 36088
Telephone: (205) 727-8458 Fax: (205) 727-8333 E-Mail:
Research Interest 1: Hydroponics Environmental
Research Interest 2: Materials and Structures
Regional Affiliation: (New England, Mid-Atlantic, South Eastern, Mid-Western, Western, None)
(Circle One)

Other Contact Name: CARLTON MORRIS
Name: Space Grant Title: CAMPUS CO-DIRECTOR
Department: AGRICULTURE School/College: AGRICULTURE AND HOME ECONOMICS
Street 1: Street 2:
City: TUSKEGEE State: ALABAMA Zip: 36088
Telephone: (205) 727-8458 Fax: (205) 727-8333 E-Mail:
Research Interest 1: HYDROPONICS Research Interest 2:
1992 DATA COLLECTION COMMUNICATIONS

NASA

REPORTING PERIOD: January 1, 1992 to December 31, 1992

Name of Consortium: GEORGIA
Name of Institution: CLARK ATLANTA

SG Institution: Y or N (Circle One)
Type: Four-year college

Phase: • Phase I
• Program Grant
• Capability Enhancement Grant
(Circle One)

Lead: Y or N (Circle One)
Attributes: Historically Black Colleges or Universities
Other Minority Colleges and Universities
Women's Colleges
Academic Institutions for persons with disabilities
Minority focused organizations
None
(Circle One)

Name of Contact: DR. KOFI BOTA
Department: VICE PRESIDENT OF RESEARCH AND SPONSORED PROGRAMS
Street 1: JAMES P. BRAWLEY AT FAIR STREET
City: ATLANTA State: GA Zip: 30314
Telephone (404) 880-8595 Fax: (404) 880-8522 E-Mail:

Research Interest 1: STRUCTURES/COMPOSITES MATERIALS
Research Interest 2: ENVIRONMENTAL SCIENCE

Regional Affiliation: (New England, Mid-Atlantic, South Eastern, Mid-Western, Western, None)
(Circle One)

Other Contact Name:

Name: Space Grant Title:
Department: School/College:
Street 1:
City: State: Zip:
Telephone: Fax: E-Mail:
Research Interest 1: Research Interest 2:
1992 DATA COLLECTION
COMMUNICATIONS

NASA

REPORTING PERIOD: January 1, 1992 to December 31, 1992
Phase: Phase I

Name of Consortium: GEORGIA
Name of Institution: GEORGIA STATE
SG Institution: Y or N (Circle One)
Lead: Y or N (Circle One)

Type: Four-year university
Attributes: Historically Black Colleges or Universities
State/local government
Other Minority Colleges and Universities
Industry
Women's Colleges
Non-profit organization
Academic Institutions for persons with disabilities
Other (Please Identify)
Minority focused organizations
(Circle One)

Name of Contact: DR. CLEON ARRINGTON
Department: VICE PRESIDENT OF RESEARCH
School/College:
Street 1: UNIVERSITY PLAZA
City: ATLANTA
State: GA
Zip: 30303
Telephone: (404) 651-3157
Fax: (404) 651-4436
E-Mail:

Research Interest 1: ASTRONOMY
Research Interest 2: EDUCATION

Regional Affiliation: (New England, Mid-Atlantic, South Eastern, Mid-Western, Western, None) (Circle One)

Other Contact Name:

Name:
Space Grant Title:
Department:
School/College:
Street 1:
Street 2:
City:
State:
Zip:
Telephone:
Fax:
E-Mail:

Research Interest 1: 
Research Interest 2:
# 1992 DATA COLLECTION

## STATEMENT OF INCOME AND EXPENDITURES

**NASA**

**REPORTING PERIOD:** January 1, 1992 to December 31, 1992

**NAME OF CONSORTIUM:** GEORGIA

### INCOME:

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<thead>
<tr>
<th>Source</th>
<th>Cash</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>NASA Space Grant Funds</td>
<td>$77,400</td>
<td>$0</td>
<td>$77,400</td>
</tr>
<tr>
<td>Other Federal Funds</td>
<td>75,000</td>
<td>$0</td>
<td>75,000</td>
</tr>
<tr>
<td>Carryover Funds</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>SUB-TOTAL</strong></td>
<td>$152,400</td>
<td>0</td>
<td>152,400</td>
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### NON-FEDERAL/MATCHING FUNDS:

<table>
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<th>Source</th>
<th>Cash</th>
<th>Other</th>
<th>Total</th>
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<tr>
<td>Lead Institution</td>
<td>0</td>
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<td>0</td>
</tr>
<tr>
<td>Academic Affiliates</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>State/Local Government</td>
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<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Industry</td>
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<tr>
<td>Non-Profit Organizations</td>
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<tr>
<td>Other (Please Identify)</td>
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<tr>
<td><strong>TOTAL NON-FEDERAL FUNDS</strong></td>
<td>$152,400</td>
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### TOTAL INCOME

**TOTAL:** $472,400

### EXPENSES

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<tbody>
<tr>
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<td>Travel</td>
<td>17,848</td>
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<tr>
<td>Supplies/Services</td>
<td>161,505</td>
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<tr>
<td>Other Direct Costs</td>
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<tr>
<td>Other Student Support</td>
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<td>Indirect Costs</td>
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<td>Fellowships/Scholarships</td>
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</tr>
<tr>
<td>Sub-Contracts</td>
<td>0</td>
</tr>
<tr>
<td><strong>TOTAL EXPENSES</strong></td>
<td>$472,400</td>
</tr>
</tbody>
</table>

### BALANCE/DIFFERENCE

**BALANCE/DIFFERENCE:** $0
1992 DATA COLLECTION
EXPENDITURE BREAKDOWN BY PROGRAM

**NASA**

**REPORTING PERIOD:** January 1, 1992 to December 31, 1992

**NAME OF CONSORTIUM:** GEORGIA SPACE GRANT

**EXPENSES:**

<table>
<thead>
<tr>
<th>Category</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Infrastructure</td>
<td>$18,000</td>
</tr>
<tr>
<td>Higher Education</td>
<td>$55,591</td>
</tr>
<tr>
<td>K - 12</td>
<td>$67,473</td>
</tr>
<tr>
<td>General Public</td>
<td>$ 7,662</td>
</tr>
<tr>
<td>External Relations</td>
<td>$ 8,000</td>
</tr>
<tr>
<td>Consortium Administrative Costs</td>
<td>152,871</td>
</tr>
<tr>
<td>Indirect Costs</td>
<td>$62,803</td>
</tr>
<tr>
<td>Fellowships/Scholarships</td>
<td>$100,000</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>472,400</td>
</tr>
</tbody>
</table>
1992 DATA COLLECTION
MANAGEMENT

NASA

REPORTING PERIOD: January 1, 1992 to December 31, 1992

PLANNING:

Consortium description, mission, objectives, major accomplishments and future direction.

Development of strategic plan.

Any proposed changes in current operations. Yes

Has a strategic plan been developed for the program? Y/N Yes

Number of affiliates represented in consortium planning and decision making. 4

Number of non-affiliate organizations represented in consortium planning and decision making. 1

Major disappointment in 1992. Collaboration among consortium members throughout the year should have been much stronger.

BOARD OF DIRECTORS/ADVISORY GROUP:

Description of composition, role and activities. Role of advisory committee/group with respect to technical evaluations of program activities.

Number of persons in advisory committee/group. 4

Number of meetings per year. 2

AFFILIATES:

Current strategy and procedure for recruiting affiliates.

Objectives of cooperation between lead and affiliate institutions, and mutual benefits to be realized.

Factors affecting the gain or loss of affiliates.

Number of affiliates gained during the current reporting period. 1

Number of affiliates lost during the current reporting period. 0

Number of organizations which participated or sponsored Space Grant activities, but are not consortium members. 4
List members of consortium which are:

- Land Grant Universities
- Sea Grant Universities

OFFICE FACILITIES:

Description of Space Grant Program office facilities.

Staffing:

Please list the staffing for the consortium management. For each, show whether they are at the lead or an affiliate, what their total SG FTE is and what their management FTE is. Only list those, who in title or function, have at least some administrative duties. Those who have other Space Grant duties than management will have a total FTE larger than their managerial FTE, otherwise the figures will be the same.

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>Total FTE</th>
<th>MNGT FTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director</td>
<td>1</td>
<td>15%</td>
<td>10%</td>
</tr>
<tr>
<td>Assoc. Directors (Lead)</td>
<td>-0-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assoc. Directors (Affils)</td>
<td>3</td>
<td>3-5%</td>
<td>2%</td>
</tr>
<tr>
<td>Other Mngt. (Lead)</td>
<td>2</td>
<td>50% (20 hrs)</td>
<td>50% (20 hrs)</td>
</tr>
<tr>
<td>Other Mngt (Affils)</td>
<td>1</td>
<td>15% ½ time</td>
<td>10%</td>
</tr>
<tr>
<td>Supervisory/techn (Lead)</td>
<td>1</td>
<td>50% (20 hrs)</td>
<td></td>
</tr>
<tr>
<td>Supervisory/techn (Affils)</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clerical (Lead)</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clerical (Affils)</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please list any new faculty or staff that you have helped procure using the Space Grant Program.

- Carlton E. Morris - Tuskegee (researcher - Space agriculture)
- Dr. Ashraf Badir - Georgia Tech (research on Clark Atlanta/Georgia Tech joint programs)
- David Heusinger - Georgia Consortium (development/public relations)
Number disseminated during the current reporting period:

<table>
<thead>
<tr>
<th>Brochures:</th>
<th>250 - 400</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newsletters:</td>
<td>x250xxx</td>
</tr>
<tr>
<td>Posters:</td>
<td>100</td>
</tr>
<tr>
<td>Flyers:</td>
<td>5000</td>
</tr>
<tr>
<td>Other (please specify):</td>
<td>12,000 - Space Agriculture brochures and Applications for summer programs</td>
</tr>
</tbody>
</table>

Description of plans to increase the visibility of the Program and generate inquiries.

Other publicity (specify).

OTHER

Please note any other development accomplishments.

We have several outstanding proposals to

The Southern Regional Education Board
The National Science Foundation
SPACE GRANT LEVERAGING ACTIVITIES

Space Grant is a seed money program. Please list additional money that you gained (A) in 1992 (for the present and future) over and above your budget submitted for 1992. Also, list funds that were budgeted but did not materialize (B).

<table>
<thead>
<tr>
<th>Source</th>
<th>A) Gained</th>
<th>B) Lost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affiliate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>State/Local</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Profit Organizations</td>
<td>251,275 (materials only)</td>
<td></td>
</tr>
<tr>
<td>Other Federal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please note if the losses drove you below the required match.

Give a brief account of the most significant gains and losses.

Contribution by Rolls Royce Inc of a Metal Matrix Shell for Space Grant fellows' research.

Pharmaceutical companies and Westinghouse.

PUBLICITY:

Space grant events reported in the media during the current reporting period:

<table>
<thead>
<tr>
<th></th>
<th>Newspapers</th>
<th>Radio</th>
<th>Television</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus media</td>
<td>2</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Local media</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>State</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>National</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>International</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>
Fellowships and Scholarships

NASA Space Grant Fellowship funds are to be used for students only. They may be awarded to graduate students, in which case they are termed fellowships, or to undergraduate students, termed scholarships. The criteria (recruitment and selection), duration, purposes, activities, and amount are at the discretion of the consortium, and should be within defined objectives.

REPORTING PERIOD: January 1, 1992 to December 31, 1992

The following information is requested for both fellowship and scholarship program in the consortium. Fellowship and scholarship data should be provided as separate programs.

Name of fellowship or scholarship program: NASA Space Grant Fellowship – Tuskegee

Contact person: Phil Loretan

Space Grant Institution(s) distributing awards: Tuskegee

Sponsor(s) (if other than affiliate):

Level: Graduate ✘ Undergraduate

If graduate, number of doctoral students: none

Number of students applied: 13

Number of fellowship or scholarship awards:

Number of awards less than $800:

Number of awards greater than $800: 3

Typical amount of award: $6500 (one year tuition)

Duration: 9 Months

Briefly state recruitment strategies: On campus flyers and flyers sent to other HBCUs.

Briefly state selection procedures: Space Grant Coordinator, Deans of Schools of Agriculture and Home Economics and School of Engineering and Architecture make the determinations.

Briefly state award criteria: U.S. Citizens, financial need, academic achievement, interest in Tuskegee University's NASA research.

Describe the use of role models and mentors for underrepresented minority students.

As an HBCU we utilize our outstanding students to mentor younger African-American students.

Participant representation of awardees:

<table>
<thead>
<tr>
<th>Number of Persons</th>
<th>Male</th>
<th>Female</th>
<th>Persons w/ Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native American</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pacific Islander</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Other Recipients</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Provide a bibliography for any publications, articles, etc., written by fellowship/scholarship recipients.

List research topics of fellowship/scholarship recipients.

Please indicate the purpose(s) for the fellowship award:

- Target underrepresented groups
- Reward excellence
- Attract student to science/engineering
- Attract student to research
- Attract student to design
- Attract student to teaching
- Support interdisciplinarity
- Critical economic need
- Other (please specify)

*Interdisciplinarity is characteristic of those research projects (or areas of study) in which there exists an innovative and/or non-traditional combination of theory and practice involving two or more disciplines.

Indicate expected fellowship activities:

- Travel
- Independent Study
- Teaching
- Research
- Design Project
- Internship with Industry/Government
- Social Service
  - Mentoring (K-12 or college students)
  - Other (please specify)
- Other Activities (please specify)
NASA

$19,444.50 - undergraduate
$16,492.40 - graduate

Total money awarded: $

Break down the total money awarded as follows:

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>NASA Space Grant</td>
<td>$30,000</td>
</tr>
<tr>
<td>Lead Institution</td>
<td>$</td>
</tr>
<tr>
<td>Academic Affiliates</td>
<td>$</td>
</tr>
<tr>
<td>State Government</td>
<td>$</td>
</tr>
<tr>
<td>Other</td>
<td>$</td>
</tr>
<tr>
<td>Industry</td>
<td>$5,936.90</td>
</tr>
<tr>
<td>Non-Profit Organizations</td>
<td>$</td>
</tr>
<tr>
<td>Participants</td>
<td>$</td>
</tr>
<tr>
<td>Non-Federal</td>
<td>$</td>
</tr>
<tr>
<td>Other Federal</td>
<td>$</td>
</tr>
</tbody>
</table>

Additional comments:
1992 Data Collection
Fellowships and Scholarships

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Name of fellowship or scholarship program: NASA Space Grant Fellowship - Tuskegee

Contact person: Phil Loretan

Space Grant Institution(s) distributing awards: Tuskegee

Sponsor(s) (if other than affiliate): 

Level: □ Graduate  □ Undergraduate
If graduate, number of doctoral students: none

Number of students applied: 10

Number of fellowship or scholarship awards:
- Number of awards less than $800: 0
- Number of awards greater than $800: 2

Typical amount of award: $6500 (one year tuition)

Duration: 9 Months

Briefly state recruitment strategies: On-campus flyers and flyers sent to other HBCUs.

Briefly state selection procedures: Space Grant Coordinator, Deans of Schools of Agriculture and Home Economics and School of Engineering and Architecture make the determinations.

Briefly state award criteria: U.S. Citizens, financial need, academic achievement, interest in Tuskegee University's NASA research.

Describe the use of role models and mentors for underrepresented minority students.

As an HBCU we utilize our outstanding students to mentor younger African-American students.

Participant representation of awardees:

<table>
<thead>
<tr>
<th></th>
<th>Number of</th>
<th>Number of</th>
<th>Number of Persons w/ Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native American</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pacific Islander</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Other Recipients</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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List research topics of fellowship/scholarship recipients.

Please indicate the purpose(s) for the fellowship award:

- Target underrepresented groups
- Reward excellence
- Attract student to science/engineering
- Attract student to research
- Attract student to design
- Attract student to teaching
- "Support interdisciplinarity"
- Critical economic need
- Other (please specify)

*Interdisciplinarity is characteristic of those research projects (or areas of study) in which there exists an innovative and/or non-traditional combination of theory and practice involving two or more disciplines.*

Indicate expected fellowship activities:

- Travel
- Independent Study
- Teaching
- Research
- Design Project
- Internship with Industry/Government
- Social Service
  - Mentoring (K-12 or college students)
  - Other (please specify)
- Other Activities (please specify)
<table>
<thead>
<tr>
<th>Source</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>NASA Space Grant</td>
<td>$30,000</td>
</tr>
<tr>
<td>Lead Institution</td>
<td></td>
</tr>
<tr>
<td>Academic Affiliates</td>
<td></td>
</tr>
<tr>
<td>State Government</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Industry</td>
<td>$5,936.90</td>
</tr>
<tr>
<td>Non-Profit Organizations</td>
<td></td>
</tr>
<tr>
<td>Participants</td>
<td></td>
</tr>
<tr>
<td>Non-Federal</td>
<td></td>
</tr>
<tr>
<td>Other Federal</td>
<td></td>
</tr>
</tbody>
</table>

Total money awarded: $19,444.50 - undergraduate
$16,492.40 - graduate

Additional comments:
1992 Data Collection
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REPORTING PERIOD: January 1, 1992 to December 31, 1992

The following information is requested for both fellowship and scholarship program in the consortium. Fellowship and scholarship data should be provided as separate programs.

Name of fellowship or scholarship program: GEORGIA SPACE GRANT

Contact person: Cleon Arrington

Space Grant Institution(s) distributing awards: Georgia State University

Sponsor(s) (if other than affiliate):

Level: _Graduate _Undergraduate
If graduate, number of doctoral students: 4

Number of students applied:

Number of fellowship or scholarship awards:
Number of awards less than $800: 
Number of awards greater than $800: 4

Typical amount of award: $8000 per year

Duration: _12 Months

Briefly state recruitment strategies: Notified eligible department chairs of availability and participant requirements.

Briefly state selection procedures: Reviewed applicant data supplied by department chairs. Selection procedures are the same as university requirements for state funding

Briefly state award criteria: American citizens, areas of research, grade point average; career goals.

Describe the use of role models and mentors for underrepresented minority students. All students are from underrepresented groups and are in a number of support groups such as the National Assoc of Black Chemists and Chemical Engineers and the American Assn of University Women, etc.

Participant representation of awardees:

<p>| Number of Persons w/ Disabilities |
|-------------------|-----------------|-----------------|-----------------|</p>
<table>
<thead>
<tr>
<th>Male</th>
<th>Female</th>
<th>All Other Recipients</th>
</tr>
</thead>
<tbody>
<tr>
<td>African - American</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Native American</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Pacific Islander</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>All Other Recipients</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>
Provide a bibliography for any publications, articles, etc., written by fellowship/scholarship recipients.

NONE

List research topics of fellowship/scholarship recipients.

Research topics: Physical Studies of MethylPhophonate, Phosphorothioate and 2'-0-methyl analogs of Ribo- and Deoxyribonucleic acids.

Purification and structural characterization of manoprotein and galactoxylomannan of cryptococcus neoformans.

Synthesis and characterization of nitrogen containing heterocycles with potential antiviral activity.
Total money awarded: $30,000

Break down the total money awarded as follows:

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>NASA Space Grant</td>
<td>$30,000</td>
</tr>
<tr>
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</tr>
<tr>
<td>State Government</td>
<td>$</td>
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<td>Other</td>
<td>$</td>
</tr>
<tr>
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<td>$</td>
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<td>$</td>
</tr>
<tr>
<td>Participants</td>
<td>$</td>
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<tr>
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<td>$</td>
</tr>
<tr>
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<td>$</td>
</tr>
</tbody>
</table>

Additional comments: The funding overlaps from year to year, and all students do not start at the same time. It would be easier to break this down by individual student and tell the time frame that they would be funded for.
1992 Data Collection
Fellowships and Scholarships

NASA Space Grant Fellowship funds are to be used for students only. They may be awarded to graduate students, in which case they are termed fellowships, or to undergraduate students, termed scholarships. The criteria (recruitment and selection), duration, purposes, activities, and amount are at the discretion of the consortium, and should be within defined objectives.

REPORTING PERIOD: January 1, 1992 to December 31, 1992

The following information is requested for both fellowship and scholarship program in the consortium. Fellowship and scholarship data should be provided as separate programs.

Name of fellowship or scholarship program: GEORGIA SPACE GRANT

Contact person: Erian Armanios

Space Grant Institution(s) distributing awards: Georgia Tech

Sponsor(s) (if other than affiliate):

Level: x Graduate _Undergraduate

If graduate, number of doctoral students:

Number of students applied: 32

Number of fellowship or scholarship awards:
Number of awards less than $800: 0
Number of awards greater than $800: 10

Typical amount of award: 6600 per year

Duration: __ Months until completion of Ph.D.

Briefly state recruitment strategies: We advertise through the Black Graduate Student Assn, Nat'l Society of Black Engineers, Fraternities, Sororities, Graduate Office, Publications, and open houses.

Briefly state selection procedures: We require 3 academic references and we select students based on the criteria below. The consortium selects all students.

Briefly state award criteria: U.S. Citizen; area of research; target degree; career goals; grade point average; financial need.

Describe the use of role models and mentors for underrepresented minority students. All of our fellowship students are used as role models and mentors because they are underrepresented minority students who have succeeded because they had role models and mentors.

Participant representation of awardees:

<table>
<thead>
<tr>
<th></th>
<th>Number of Male</th>
<th>Number of Female</th>
<th>Number of Persons w/ Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>African - American</td>
<td>6</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Native American</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
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<td>0</td>
<td>0</td>
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</tr>
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Provide a bibliography for any publications, articles, etc., written by fellowship/scholarship recipients.

List research topics of fellowship/scholarship recipients.

Please indicate the purpose(s) for the fellowship award:

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- Reward excellence
- Attract student to science/engineering
- Attract student to research
- Attract student to design
- Attract student to teaching
- Support interdisciplinarity
- Critical economic need
- Other (please specify)

* Interdisciplinarity is characteristic of those research projects (or areas of study) in which there exists an innovative and/or non-traditional combination of theory and practice involving two or more disciplines.

Indicate expected fellowship activities:

- Travel
- Independent Study
- Teaching
- Research
- Design Project
- Internship with Industry/Government
- Social Service
  - Mentoring (K-12 or college students)
  - Other (please specify)
- Other Activities (please specify)
NASA

Total money awarded: $10,000

Break down the total money awarded as follows:

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>NASA Space Grant</td>
<td>$10,000</td>
</tr>
<tr>
<td>Lead Institution</td>
<td>$10,500</td>
</tr>
<tr>
<td>Academic Affiliates</td>
<td></td>
</tr>
<tr>
<td>State Government</td>
<td></td>
</tr>
<tr>
<td>Other</td>
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<tr>
<td>Industry</td>
<td></td>
</tr>
<tr>
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1992 Data Collection
Fellowships and Scholarships

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REPORTING PERIOD:    January 1, 1992 to December 31, 1992

The following information is requested for both fellowship and scholarship program in the consortium. Fellowship and scholarship data should be provided as separate programs.

Name of fellowship or scholarship program:   GEORGIA SPACE GRANT

Contact person:    Kofi Bota

Space Grant Institution(s) distributing awards: Clark Atlanta

Sponsor(s) [if other than affiliate]:

Level: __Graduate   __Undergraduate

If graduate, number of doctoral students:

Number of students applied:    15

Number of fellowship or scholarship awards:
   Number of awards less than $800:
   Number of awards greater than $800:    nine

Typical amount of award:    4,000

Duration:    1 yr   Months

Briefly state recruitment strategies: Advertising in the different schools and colleges in the Atlanta University Center (which has 4 other HBCUs) and area high schools

Briefly state selection procedures: Referred by department heads or counselors to Dr. Bota.

Briefly state award criteria: U.S. Citizens, area of study, GPA, career goals, financial need.

Describe the use of role models and mentors for underrepresented minority students. We are an HBCU that is strongly in favor of providing mentors for our students as they matriculate through the university. We find that students who have mentors have higher retention rates.

Participant representation of awardees:

<table>
<thead>
<tr>
<th></th>
<th>Number of Male</th>
<th>Number of Female</th>
<th>Number of Persons w/ Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
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<tr>
<td>Native American</td>
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<td></td>
<td></td>
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<tr>
<td>Pacific Islander</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Other Recipients</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**NONE**

List research topics of fellowship/scholarship recipients.

Please indicate the purpose(s) for the fellowship award:
- [X] Target underrepresented groups
- [ ] Reward excellence
- [X] Attract student to science/engineering
- [X] Attract student to research
- [ ] Attract student to design
- [X] Attract student to teaching
- [ ] Support interdisciplinary
- [X] Critical economic need
- [ ] Other (please specify)

*Interdisciplinarity is characteristic of those research projects (or areas of study) in which there exists an innovative and/or non-traditional combination of theory and practice involving two or more disciplines.*

Indicate expected fellowship activities:
- [X] Travel
- [ ] Independent Study
- [X] Teaching
- [X] Research
- [ ] Design Project
- [ ] Internship with Industry/Government
- [X] Social Service
  - Mentoring (K-12 or college students)
  - Other (please specify)
- [ ] Other Activities (please specify)
Total money awarded: $30,000

Break down the total money awarded as follows:

NASA Space Grant: $30,000
Lead Institution: $industry: $
Academic Affiliates: $Non-Profit Organizations: $
State Government: $Participants: $
Other: $Non-Federal: $

Additional comments: The funding overlaps from year to year, and all students do not start at the same time. It would be easier to break this down by individual student and tell the time frame that they would be funded for.
For each Research Infrastructure program, please provide the following information.

REPORTING PERIOD: January 1, 1992 to December 31, 1992

Program name: GEORGIA SPACE GRANT

Contact person: ERIAN ARMANIOS

Space Grant Institution: GEORGIA TECH/MORRIS BROWN COLLEGE

Name of sponsor(s): (if other than affiliate)

Program status: _X Created by Space Grant

Supplemented by Space Grant

Taken over by Space Grant

Program stage: _X New program

Continuing support begun in year

Program activity objectives (briefly state): An administrator/professor from Morris Brown College (HBCU) and a professor from Georgia Tech have teamed to write proposals to obtain funding for a joint program between GT and Morris Brown.

Description of program (briefly state): If funding is awarded Morris Brown will enhance their faculty development, equipment enhancement and curriculum development and develop partnership with GT College of Computing.

Evaluation mechanisms in place: _Yes ___No

Description of methodology, outcomes, significant benefits, and conclusions: Benefits will be the increase in opportunities for African Americans in the areas of Computing and Information Sciences.

Collaborative efforts (check all that apply)

In Same Department

Other Department(s) in Same Institution

X Other Institution(s) of Higher Education

K-12 Institution(s)

Industry

NASA Center(s)

X Other Federal Government

Non-Profit Organization(s)

Other Space Grant Program(s)

Organization(s) Representing Women, Underrepresented Minorities, or Persons with Disabilities

How did these efforts expand the involvement of underrepresented minority persons?

Stated above
Using Appendix 1, please note:

Primary discipline:
If applicable:
Secondary discipline:
Tertiary discipline:

Total cost of program: $7,406
Amount paid to date: $3,900
Balance to be paid: $3,506

Break down the total cost of the program as follows:

NASA Space Grant: $3900
LEAD Institution: $3506
Academic Affiliate(s): $2096
State/Local Government: $
Other:

Target:
[Provide numbers] x Faculty
x Graduate student
x Other potential faculty

Activity:
[Provide numbers] 1 Seed money for research
2 Travel to attend conference or workshop
3 Proposal preparation
4 Student assistant
2 Develop information resources for research opportunities
1 Post-Doc
x Administrator

Output - papers
[Provide numbers] 1 Papers presented
1 Papers submitted to refereed journals
1 Papers published by refereed journals

Output - proposals
[Provide numbers] NASA
Other Federal
Industry
State/local Govt.
Non-profit
In-house

Output - patents, copyrights, other:
[Provide numbers and a brief description]
For each Research Infrastructure program, please provide the following information.

REPORTING PERIOD: January 1, 1992 to December 31, 1992

Program name: CO-OP GEORGIA TECH

Contact person: ERIAN ARMANIOS

Space Grant Institution: GEORGIA

Name of sponsor(s): (if other than affiliate)

Program status: 
- Created by Space Grant and ROLLS ROYCE [x]
- Supplemented by Space Grant
- Taken over by Space Grant

Program stage: 
- New program
- Continuing support begun in year

Program activity objectives (briefly state): To provide equipment for advanced student research.

Description of program (briefly state): Rolls Royce provided the consortium with a metal matrix shell for use in research for graduate students in the area of composites.

Evaluation mechanisms in place: 
- Yes [x]
- No

Description of methodology, outcomes, significant benefits, and conclusions:

Benefits - Exposure to materials used in industry and application of knowledge to problems.

Collaborative efforts [check all that apply]

- In Same Department
- Other Department(s) in Same Institution
- Other Institution(s) of Higher Education
- K-12 Institution(s)
- Industry [x]
- NASA Center(s)
- Other Federal Government
- Non-Profit Organization(s)
- Other Space Grant Program(s)
- Organization(s) Representing Women, Underrepresented Minorities, or Persons with Disabilities

How did these efforts expand the involvement of underrepresented minority persons?

The consortium is making an effort to attract underrepresented minorities to this area of research.
Using Appendix 1, please note:

Primary discipline:
If applicable:
   Secondary discipline:
   Tertiary discipline:

Total cost of program: $550 per quarter for each student
Amount paid to date: $3300
Balance to be paid: undetermined at this time

Break down the total cost of the program as follows:

NASA Space Grant: $0
LEAD Institution: $0
Academic Affiliate(s): $0
State/Local Government: $0
Other: $0

Industry: $3300
Non-Profit Organization: $0
Participants: $0
Other Federal: $0

Target:
[Provide numbers] Faculty
3 Graduate student
Other

Activity:
[Provide numbers] Seed money for research
Travel to present paper
Travel to attend conference or workshop
Establish research collaboration
Visiting scholar
Hold conference or workshop
Proposal preparation
Technical writing services
Student assistant
Computer services
Develop information resources for research opportunities

Output - papers
[Provide numbers] Papers presented
Papers submitted to refereed journals
Papers accepted by refereed journals
Papers published by refereed journals

Output - proposals
[Provide numbers] Submitted
Funded

Output - patents, copyrights, other:
[Provide numbers and a brief description]
DIRECTOR'S REPORT
ON RESEARCH INFRASTRUCTURE

NASA

This page need only be completed one time. It summarizes and encompasses all research infrastructure building activities.

This page assesses changes in climate for research at consortium institutions. Indicators of climate for research include more space, more equipment, more in-house funding, more release time, better sponsored programs office, better computer services, more rewards for research in promotion, research stressed more in recruitment.

Please check off any changes in the research climate of the consortium institutions funded:

☐ More space
☐ More equipment
☐ More in-house funding
☐ More release time
☐ Better sponsored program services
☐ Better computer services
☐ More rewards for research in promotion
☐ Research stressed more in recruitment

Please add your comments about the research infrastructure activities and results. How successful were they? What seems to work best? What did not work well? What changes will you make next year?
1992 Data Collection
Research Infrastructure

The term "research infrastructure" refers to all the organizational factors that promote the development and maintenance of research in an organization. These factors include seed money for research, release time for proposal writing, the use of facilities, the establishment of research collaborations, computer services, and equipment. Research infrastructure also encompasses graduate student research activity funded by other than Space Grant Fellowship funds.

NASA

For each Research Infrastructure program, please provide the following information.

REPORTING PERIOD: January 1, 1992 to December 31, 1992

Program name: GEORGIA SPACE GRANT

Contact person: ATEF GHOBRIAL

Space Grant Institution: GEORGIA STATE

Name of sponsor(s): (if other than affiliate)

Program status: 
- Created by Space Grant
- Supplemented by Space Grant
- Taken over by Space Grant

Program stage: 
- New program
- Continuing support begun in year

Program activity objectives (briefly state): Seed money to write proposals for research in aviation.

Description of program (briefly state): Dr. Ghobrial (GSU) and 5 Georgia Tech faculty members have teamed to write interdisciplinary proposals to examine such topics as human factors in aviation, aviation terrorism and safety.

Evaluation mechanisms in place: 
- Yes
- No

Description of methodology, outcomes, significant benefits, and conclusions:

Significant benefit would be funding for research which would supplement students and professors.

Collaborative efforts (check all that apply)

- In Same Department
- Other Department(s) in Same Institution
- K-12 Institution(s)
- Industry
- NASA Center(s)
- Other Federal Government
- Non-Profit Organization(s)
- Other Space Grant Program(s)
- Organization(s) Representing Women, Underrepresented Minorities, or Persons with Disabilities

How did these efforts expand the involvement of underrepresented minority persons?

Funding received from proposal writing will in part fund minority students.
NASA

Using Appendix 1, please note:

Primary discipline: Aerospace
If applicable:

Secondary discipline: Psychology
Tertiary discipline: 

Total cost of program: $6500
Amount paid to date: $2325
Balance to be paid: $4175

Break down the total cost of the program as follows:

<table>
<thead>
<tr>
<th>Source</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>NASA Space Grant</td>
<td>$3500</td>
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<tr>
<td>LEAD Institution</td>
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</tr>
<tr>
<td>Academic Affiliate(s)</td>
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</tr>
<tr>
<td>State/Local Government</td>
<td></td>
</tr>
<tr>
<td>Other</td>
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<tr>
<td>Industry</td>
<td></td>
</tr>
<tr>
<td>Non-Profit Organization</td>
<td></td>
</tr>
<tr>
<td>Participants</td>
<td></td>
</tr>
<tr>
<td>Other Federal</td>
<td></td>
</tr>
</tbody>
</table>

Target:

(Provide numbers)
- Faculty
- Graduate student
- Administrator
- Other undergraduate students

Activity:

(Provide numbers)
- Seed money for research
- Travel to attend conference or workshop
- Visiting scholar
- Proposal preparation
- Student assistant
- Develop information resources for research opportunities

Output - papers

(Provide numbers)
- Papers presented
- Papers accepted by refereed journals
- Papers submitted to refereed journals
- Papers published by refereed journals

Output - proposals

(Provide numbers)

<table>
<thead>
<tr>
<th>Source</th>
<th>Submitted</th>
<th>Funded</th>
</tr>
</thead>
<tbody>
<tr>
<td>NASA</td>
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<tr>
<td>Other Federal</td>
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<td>0</td>
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<td>Industry</td>
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<tr>
<td>State/local Govt.</td>
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<td></td>
</tr>
<tr>
<td>Non-profit</td>
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<td></td>
</tr>
<tr>
<td>In-house</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Output - patents, copyrights, other:

(Provide numbers and a brief description)
For each Research Infrastructure program, please provide the following information.

REPORTING PERIOD: January 1, 1992 to December 31, 1992

Program name: CLARK ATLANTA/GEORGIA TECH RESEARCH COLLABORATION: ARO

Contact person: KOFI BOTA

Space Grant Institution: Clark Atlanta/Georgia Tech

Name of sponsor(s): [if other than affiliate] Army Research Office (ARO)

Program status: 
- Created by Space Grant
- Supplemented by Space Grant
- Taken over by Space Grant

Program stage: 
- New program
- Continuing support begun in year

Program activity objectives (briefly state): Faculty exchange and student research opportunities.

Description of program (briefly state): Students from CAU, which is an HBCU, will come to Georgia Tech to gain a research opportunity in various areas of aerospace engineering.

Evaluation mechanisms in place: 
- Yes
- No

Description of methodology, outcomes, significant benefits, and conclusions:

Students gain research, and faculty have an opportunity to enhance and share their own research.

Collaborative efforts (check all that apply)
- In Same Department
- Other Department(s) in Same Institution
- Other Institution(s) of Higher Education
- K-12 Institution(s)
- Industry
- NASA Center(s)
- Other Federal Government
- Non-Profit Organization(s)
- Other Space Grant Program(s)
- Organization(s) Representing Women, Underrepresented Minorities, or Persons with Disabilities

How did these efforts expand the involvement of underrepresented minority persons?

Clark Atlanta is a Historically Black Institution and is the main contractor.
NASA

Using Appendix 1, please note:
Primary discipline:
If applicable:
Secondary discipline:
Tertiary discipline:

Total cost of program: $526,176 was awarded
Amount paid to date: $__0__ Balance to be paid: $526,176

Break down the total cost of the program as follows:
NASA Space Grant: $ Industry: $
LEAD Institution: $ Non-Profit Organization: $
Academic Affiliate(s): $ Participants: $
State/Local Government: $ Other Federal: $526,176
Other: $

Target:
(Provide numbers) x Faculty _ Post-Doc
x Graduate student x Administrator
x Other

Activity:
(Provide numbers) _Seed money for research x Travel to present paper
_Travel to attend conference or workshop x Establish research collaboration
_Visiting scholar _Hold conference or workshop
_Proposal preparation _Technical writing services
_Student assistant x Computer services
_Develop information resources for research opportunities

Output - papers
(Provide numbers) 0_Papers presented 0_Papers submitted to refereed journals
0_Papers accepted by refereed journals 0_Papers published by refereed journals

Output - proposals
(Provide numbers)

<table>
<thead>
<tr>
<th>Source</th>
<th>Submitted</th>
<th>Funded</th>
</tr>
</thead>
<tbody>
<tr>
<td>NASA</td>
<td>0</td>
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<tr>
<td>Other Federal</td>
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<tr>
<td>Industry</td>
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<td>0</td>
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<tr>
<td>State/local Govt.</td>
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<td>0</td>
</tr>
<tr>
<td>Non-profit</td>
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<td>0</td>
</tr>
<tr>
<td>In-house</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Output - patents, copyrights, other:
(Provide numbers and a brief description)
For each "higher education" program, please provide the following information.

REPORTING PERIOD: January 1, 1992 to December 31, 1992

Program name: BLACK GRADUATE STUDENT BANQUET
Contact person: WANDA PIERSON JETER
Space Grant Institution: GEORGIA TECH
Name of sponsor(s): OFFICE OF THE DEAN
Status: X Implemented

Program was: X Supplemented by Space Grant

Program activity objectives (briefly state): To recognize outstanding Black Graduate Students for achievement in academics
Evaluation mechanism in place: X Yes

Description of methodology, outcomes, significant benefits, and conclusions:
Students have complained that their efforts are ignored, we are attempting to remedy this problem

Collaborative efforts (check all that apply)
X Other Institution(s) in Same Institution

Organization(s) Representing Women, Underrepresented Minorities, or Persons with Disabilities
Total cost of program: $925.00
Amount paid to date $925.00  Balance to be paid $0

Break down the total cost of the program as follows:
- NASA Space Grant: $0
- LEAD Institution: $425.00
- Academic Affiliate(s): $0
- State/Local Government: $0
- Other: $500.00

Duration: ___ days
  ___ weeks
  ___ months
  ___ not applicable

Frequency:  ___ Annual Frequency
            ___ One Time Only
            ___ Not Applicable

Academic level of target audience (may be one or more):
  ___ Faculty
  ___ Undergraduate
  ___ Graduate
  ___ Other (specify)

Student development activities: (check all that apply)
  ___ Career guidance/recruitment/retention/mentoring
  ___ Coop/intern experience
  ___ Other Student Support (specify)
  ___ Conferences/Meeting
  ___ Other (specify) Recognition of accomplishments

Institutional development activities:
  ___ New major
  ___ New minor or emphasis
  ___ New center

Faculty development activities:
  (specify)
Course development activities:
   {specify upper or lower division}
   __For Credit
   __Seminar
   __Independent Study
   __Conference/Forum
   __Research Experience
   __Design Experience
   __Hands-on Experience
   __Multidisciplinary
   __Other (specify)

New curricular materials and activities:
   __Course Outline
   __Course Revision
   __Lab
   __Lecture
   __Software
   __Problem Sets
   __Demonstration/lab tour
   __Video
   __Book
   __Other (specify)

Other characteristics and products:

   __Publications (provide bibliography)
   __Poster Session
   __Exhibit

Plans for dissemination of above? __Yes x __No
If yes, please describe.

Total number of participants: __Graduate Students and Audience (not counted)
[Please provide estimates where possible.]

<table>
<thead>
<tr>
<th></th>
<th>Number of Males</th>
<th>Number of Persons with Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of male students served:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African-American</td>
<td></td>
<td></td>
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<tr>
<td>Hispanic</td>
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<tr>
<td>Pacific-Islander</td>
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<tr>
<td>Native American</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Other Persons</td>
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</tr>
<tr>
<td></td>
<td>87</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Number of Females</th>
<th>Number of Persons with Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of female students served:</strong></td>
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<td></td>
</tr>
<tr>
<td>African-American</td>
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<td>All Other Persons</td>
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<th>Number of Persons with Disabilities</th>
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<tbody>
<tr>
<td><strong>Number of male faculty served:</strong></td>
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<td></td>
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<tr>
<td>African-American</td>
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<tr>
<td>Native American</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Other Persons</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Number of Persons with Disabilities: n/a
Please describe any use of role models from underrepresented groups or curricular content which reflects the experiences, achievements and culture of underrepresented groups.

Using Appendix 1, please note:

- Primary discipline:
- If applicable:
  - Secondary discipline:
  - Tertiary discipline:

GARRY HARRIS, THE PRESIDENT OF THE ATLANTA CHAPTER OF THE NATIONAL TECHNICAL ASSOCIATION WAS THE BANQUET SPEAKER. GARRY IS AN AFRICAN AMERICAN ENGINEER WHO WORKS FOR THE NUCLEAR REGULATORY COMMISSION AND IS A WELL KNOWN COMMUNITY LEADER. GARRY ENCOURAGED THE BLACK GRADUATE STUDENTS AT TECH TO CONTINUE THEIR PURSUIT OF ADVANCED DEGREES.
1992 Data Collection
Higher Education Programs

Higher education programs are those taking place at the collegiate level and encompass those activities which serve students, faculty, and/or the institution. Activities include, but are not limited to, curriculum development, design and implementation of new major and minor areas of study, hands-on activities, conferences, other student support (exclusive of scholarships; including undergraduate, but not graduate level) research related activities, and workshops as well as the development and dissemination of software, problem sets, videos, publications, and labs. Higher education programs are excellent vehicles for Space Grant to promote the use of mentors and role models as well as establish interdisciplinary courses and centers.

For each "higher education" program, please provide the following information.

REPORTING PERIOD: January 1, 1992 to December 31, 1992

Program name: BLACK GRADUATE STUDENT MIXER

Contact person: WANDA PIERSON-JETER

Space Grant Institution: GEORGIA TECH

Name of sponsor(s): [if other than affiliate]

Status: ___ Developing  X ___ Implemented

Program was: ___ Created by Space Grant
X ___ Supplemented by Space Grant
___ Taken Over by Space Grant

Program activity objectives [briefly state]: To introduce Black Graduate Students to faculty, and administrators and provide network opportunities.

Evaluation mechanism in place: ___ Yes
X ___ No

Description of methodology, outcomes, significant benefits, and conclusions:

Students were able to form bonds and networks which we hope will aid in retention factor.

Collaborative efforts [check all that apply]

___ In Same Department
___ Other Department(s) in Same Institution
___ Other Institution(s) of Higher Education
___ K-12 Institution(s)
___ Industry
___ NASA Center(s)
___ Other Federal Government
___ Non-Profit Organization(s)
___ Other Space Grant Program(s)
X ___ Organization(s) Representing Women, Underrepresented Minorities, or Persons with Disabilities
NASA

Total cost of program: $185.00

Amount paid to date $185.00 Balance to be paid $0

Break down the total cost of the program as follows:

NASA Space Grant: $185.00 Industry: $

LEAD Institution: $ Non-Profit Organization: $

Academic Affiliate(s): $ Participants: $

State/Local Government: $ Other Federal: $

Other: $

Duration:

___ days
___ weeks
___ months
___ not applicable

Frequency:

___ Annual Frequency
___ One Time Only
___ Not Applicable

Academic level of target audience (may be one or more):

- Faculty
- Graduate
- Undergraduate
- Other (specify) administrators

Student development activities: (check all that apply)

- Career guidance/recruitment/retention/mentoring
- Coop/intern experience
- Other Student Support (specify)
- Conferences/Meeting
- Other (specify)

Institutional development activities:

- New major
- New minor or emphasis
- New center

Faculty development activities:

(specify)
Course development activities:
(specify upper or lower division)

- For Credit
- Seminar
- Independent Study
  - Conference/Forum
- Research Experience
- Design Experience
- Hands-on Experience
- Multidisciplinary
- Other (specify)

New curricular materials and activities:

- Course Outline
- Course Revision
- Lab
- Lecture
- Software
- Problem Sets
- Demonstration/lab tour
- Video
- Book

Other (specify) will be an annual event for the purpose of retention

Other characteristics and products:

- Publications (provide bibliography)
- Poster Session
- Exhibit

Plans for dissemination of above? _Yes  _No
If yes, please describe.

Total number of participants: _103_ graduate students and guests (# unknown)
[Please provide estimates where possible.]

<table>
<thead>
<tr>
<th>Number of male students served:</th>
<th>Number of</th>
<th>Number of</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Males</td>
<td>Persons with Disabilities</td>
</tr>
<tr>
<td>African-American</td>
<td>87</td>
<td></td>
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<tr>
<td>Native American</td>
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<tr>
<td>All Other Persons</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of female students served:</th>
<th>Females</th>
<th>Persons with Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td>16</td>
<td></td>
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<tr>
<td>Hispanic</td>
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<tr>
<td>Pacific-Islander</td>
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<td>All Other Persons</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of male faculty served:</th>
<th>Number of</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Males</td>
</tr>
<tr>
<td>African-American</td>
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<tr>
<td>Hispanic</td>
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<th>Number of</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>African-American</td>
<td></td>
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<tr>
<td>Hispanic</td>
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<tr>
<td>Pacific-Islander</td>
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<td></td>
</tr>
</tbody>
</table>
Please describe any use of role models from underrepresented groups or curricular content which reflects the experiences, achievements and culture of underrepresented groups.

Using Appendix 1, please note:
   Primary discipline:
   If applicable:
      Secondary discipline:
      Tertiary discipline:

ACTIVITY SPONSORED WAS FOR BLACK GRADUATE STUDENTS AS AN AID TO INCREASE RETENTION. ALL BLACK PROFESSORS AND ADMINISTRATORS FROM GEORGIA TECH ATTEND THESE EVENTS TO ENCOURAGE GRADUATE STUDENTS.
Higher education programs are those taking place at the collegiate level and encompass those activities which serve students, faculty, and/or the institution. Activities include, but are not limited to, curriculum development, design and implementation of new major and minor areas of study, hands-on activities, conferences, other student support (exclusive of scholarships; including undergraduate, but not graduate level) research related activities, and workshops as well as the development and dissemination of software, problem sets, videos, publications, and labs. Higher education programs are excellent vehicles for Space Grant to promote the use of mentors and role models as well as establish interdisciplinary courses and centers.

For each "higher education" program, please provide the following information.

REPORTING PERIOD: January 1, 1992 to December 31, 1992

Program name: GEORGIA SPACE GRANT

Contact person: CARLTON E. MORRIS

Space Grant Institution: TUSKEGEE UNIVERSITY

Name of sponsor(s): (if other than affiliate)

Status: x Developing  __Implemented

Program was:  _Created by Space Grant
               x Supplemented by Space Grant
               _Taken Over by Space Grant

Program activity objectives (briefly state): TO TRAIN STUDENT TEACHERS IN HYDROPONIC METHODS TO USE AS A MEANS FOR TRAINING CLASSES ABOUT GROWING FOOD FOR LONG-TERM SPACE MISSIONS.

Evaluation mechanism in place:  x Yes
               __No

Description of methodology, outcomes, significant benefits, and conclusions:

Students receive exposure to spinoffs of space research and learn about an exciting new field of study.

Collaborative efforts (check all that apply)

   _In Same Department
   x Other Department(s) in Same Institution
   _Other Institution(s) of Higher Education
   _K-12 Institution(s)
   ___Industry
   ___NASA Center(s)
   ___Other Federal Government
   __Non-Profit Organization(s)
   ___Other Space Grant Program(s)
   ___Organization(s) Representing Women, Underrepresented Minorities, or Persons with Disabilities
NASA

Total cost of program: $1,591
Amount paid to date: $1,591
Balance to be paid: $0

Break down the total cost of the program as follows:
- NASA Space Grant: $1,591
- LEAD Institution: $
- Academic Affiliate(s): $
- State/Local Government: $
- Other: $
- Industry: $
- Non-Profit Organization: $
- Participants: $
- Other Federal: $

Duration: ___ days
___ weeks
___ months
___ not applicable

Frequency: ___ Annual Frequency
___ One Time Only
___ Not Applicable

Academic level of target audience (may be one or more):
___ Faculty
___ Graduate
___ Undergraduate
___ Other (specify)

Student development activities: (check all that apply)
___ Career guidance/recruitment/retention/mentoring
___ Coop/intern experience
___ Other Student Support (specify)
___ Conferences/Meeting
___ Other (specify)

Institutional development activities:
___ New major
___ New minor or emphasis
___ New center

Faculty development activities:
(specify)
Course development activities:
   {specify upper or lower division}
   x For Credit
   ___Seminar
   ___Independent Study
   ___Conference/Forum
   ___Research Experience
   ___Design Experience
   x Hands-on Experience
   ___Multidisciplinary
   ___Other (specify)

New curricular materials and activities:
   ___Course Outline
   ___Course Revision
   ___Lab
   ___Lecture
   ___Software
   ___Problem Sets
   ___Demonstration/lab tour
   x Video
   ___Book
   x Other (specify) demonstration for use in the classroom

Other characteristics and products:

   ___Publications (provide bibliography)
   ___Poster Session
   ___Exhibit

Plans for dissemination of above? x Yes ___No
   If yes, please describe.

Total number of participants: ___2 students__ teachers during 1992 - but affects on each school population where they were doing student teaching.
(Please provide estimates where possible.)

Number of male students served: 2

<table>
<thead>
<tr>
<th>Students served: 100's of students</th>
<th>Number of Males</th>
<th>Number of Persons with Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td></td>
<td>approx. 50% of student body</td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pacific-Islander</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native American</td>
<td></td>
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</tr>
<tr>
<td>All Other Persons</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Number of male faculty served:

<table>
<thead>
<tr>
<th>Teachers served: 100's of teachers</th>
<th>Number of Males</th>
<th>Number of Persons with Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
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<td></td>
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<td>All Other Persons</td>
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<td></td>
</tr>
</tbody>
</table>

Number of female students served:

<table>
<thead>
<tr>
<th>Students served: 100's of students</th>
<th>Number of Females</th>
<th>Number of Persons with Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td></td>
<td>approx. 50% of student body</td>
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<td>Hispanic</td>
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</table>

Number of female faculty served:

<table>
<thead>
<tr>
<th>Faculty served:</th>
<th>Number of Females</th>
<th>Number of Persons with Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td></td>
<td></td>
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</tbody>
</table>
Please describe any use of role models from underrepresented groups or curricular content which reflects the experiences, achievements and culture of underrepresented groups.

Both student teachers were male African Americans. Using Appendix 1, please note:

Primary discipline: Vocational Education

If applicable:

Secondary discipline: Sciences - Chemistry, biology

Tertiary discipline:
REPORTING PERIOD: January 1, 1992 to December 31, 1992

Program name: NASA Space Grant

Contact person: Philip A. Loretan

Space Grant Institution(s): Tuskegee University

Name of sponsor(s): Atlanta Parks and Recreation Program

Status: X Implemented

Program was: X Created by Space Grant

Supplemented by Space Grant

Taken Over by Space Grant

Program activity objectives (briefly state): to orient the general public to the teams effort required in growing food for long-term space missions.

Evaluation X Yes

_ No

Description of methodology, outcomes, significant benefits, and conclusions. Use of demonstrations to show teamwork required for growing food for long-term space missions.

This program was designed to promote (check all that apply):

X Interaction between parents and children

Knowledge of community resources

X General interest in science and technology

The activity was:

X Issue driven

X Driven by a specific discipline area

Please briefly state the issue or discipline.

The Atlanta Flower Show was a horticulture display and growing food for long-term space missions fit directly into that theme. The show was well-attended and had extensive media coverage.
Total cost of program: $2,862
Amount paid to date: $2,862
Balance to be paid: __________

Break down the total cost of the program as follows:
- NASA Space Grant: $2,862
- LEAD Institution: $
- Academic Affiliate(s): $
- State/Local Government: $
- Other: $

Duration: ______days
- ______weeks
- ______months
- ______continuing activity

Frequency: ______Annual frequency
- ______One time only
- ______Not applicable

Note target audience(s) and the estimated number reached:
- ______Pre-K
- ______K-6
- ______7-12
- ______Other (specify)

Components: [check all which apply]
- Lecture
- Tour
- Hands-on
- Demonstration
- Videotape/film
- Radio
- Other (Specify)
- Field Trip
- NASA Select
- Exhibit
- Extension
- Television
- Poster
- Science fair
- Essay/article
Total number of participants: 40,000

Please estimate the number served (if possible):

<table>
<thead>
<tr>
<th></th>
<th>Number of Males</th>
<th>Number of Persons with Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td></td>
<td>18,000 (approximate only)</td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
<td></td>
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<tr>
<td>Pacific-Islander</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native American</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Other Persons</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Number of Females</th>
<th>Number of Persons with Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td>22,000 (approximate only)</td>
<td></td>
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<tr>
<td>Hispanic</td>
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<tr>
<td>Pacific-Islander</td>
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<tr>
<td>Native American</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Other Persons</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Did this activity utilize Land Grant extension agents? __Yes  x No
Please Describe

Did this activity utilize Sea Grant Marine Advisory personnel? __Yes  x No
Please Describe
For each K-12 program, please provide the following information.

REPORTING PERIOD: January 1, 1992 to December 31, 1992

Program name: ALPHA KAPPA ALPHA SORORITY HIGH SCHOOL BANQUET

Contact Person: WANDA PIERSON JETER

Space Grant Institution(s): GEORGIA TECH

Name of sponsor(s): (if other than affiliate)

Status: _Developing _Implemented

Program was: _Created by Space Grant _Supplemented by Space Grant _Taken Over by Space Grant

Program activity objectives (briefly state): To provide scholarships for young African-American female high school students.

Evaluation mechanism in place: _Yes _No

Description of methodology, outcomes, significant benefits, and conclusions.

African American females receive financial support that they may have not been able to obtain elsewhere.

Collaborative efforts (check all that apply)

_ In Same Department
_ Other Department(s) in Same Institution
_ Other Institution(s) of Higher Education
_ K-12 Institution(s)
_ Industry
_ NASA Center(s)
_ Other Federal Government
_ Non-Profit Organization(s)
_ Other Space Grant Program(s)
_ Organization(s) Representing Women, Underrepresented Minorities, or Persons with Disabilities
Total cost of program: $ 1200
Amount paid to date: $ 1200  Balance to be paid: $ 0

Break down the total cost of the program as follows:
- NASA Space Grant: $ 600
- LEAD Institution: $ 600
- Academic Affiliate(s): $
- State/Local Government: $
- Other: $

- Industry: $
- Non-Profit Organization: $
- Participants: $
- Other Federal: $

Duration:           ___ days
                   ___ weeks
                   ___ months

Frequency:          ___ Annual frequency:
                   ___ One time only:
                   ___ Not applicable:

Scheduling:         ___ School Year ___ Summer
                   ___ During School
                   ___ After School
                   ___ Weekend

Target audience:     ___ Students
                   ___ Students and Teachers
                   ___ Teachers
                   ___ Parents
                   ___ Administrators

Total number of participants: 200

<table>
<thead>
<tr>
<th>Grades</th>
<th>Number of Teachers</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grades 1-5</td>
<td>10</td>
<td>65</td>
</tr>
<tr>
<td>Grades 6-8</td>
<td></td>
<td></td>
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<tr>
<td>Grades 9-12</td>
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</tr>
</tbody>
</table>

Number of parents approximately 100
Number of administrators 10

Demographics of Participants:

<table>
<thead>
<tr>
<th>Males</th>
<th>Persons with Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
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<tr>
<td>All other persons</td>
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<table>
<thead>
<tr>
<th>Females</th>
<th>Persons with Disabilities</th>
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</thead>
<tbody>
<tr>
<td>African-American</td>
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<tr>
<td>All other persons</td>
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</tbody>
</table>

Activities: {Check all which apply}

- Conference
- Workshop
- Science Fair/Exhibit
- Academic Program
- Other (specify)

This program was designed to promote {check all that apply}:

Students:
- Increase awareness
- Expand knowledge/skills
- Career guidance

Teachers:
- Increase awareness
- Expand knowledge
- Improve teaching methods

Components:
- Hands On
- Mentors
- Course Revision
- Software
- Lab Tour
- Other (Specify)

Using Appendix 1, please note:

Primary discipline:
- Role Models
- Course Outline
- Lesson Plan
- Demonstration
- Book
- Role models for underrepresented groups

Secondary discipline:
- Research
- Field Trips
- Lab
- Problem Sets
- Video
- Scholarships

Tertiary discipline:
For each K-12 program, please provide the following information.

REPORTING PERIOD: January 1, 1992 to December 31, 1992

Program name: GEORGIA SPACE GRANT

Contact Person: PHIL LORETAN

Space Grant Institution(s): TUSKEGEE UNIVERSITY

Name of sponsor(s): (if other than affiliate) U.S. DEPT. OF ENERGY AND NAVY AS WELL AS INDUSTRY

Status: _Developing   x Implemented

Program was: _Created by Space Grant
              x Supplemented by Space Grant
              _Taken Over by Space Grant

Program activity objectives (briefly state): TO PREPARE HIGH SCHOOL STUDENTS FOR COLLEGE, WITH SPECIAL EMPHASIS ON SCIENCE, MATH AND PRE ENGINEERING, THROUGH A # OF PROGRAMS TAILORED TO STUDENTS' CLASSIFICATION

Evaluation mechanism in place: x Yes
                              _No

Description of methodology, outcomes, significant benefits, and conclusions. STUDENTS ARE OFFERED COURSES IN MATH SCIENCE AND ENGINEERING WITH SPACE GRANT ASSISTANCE FOR TRAVEL.

Collaborative efforts (check all that apply)

_ In Same Department
 x Other Department(s) in Same Institution
 _ Other Institution(s) of Higher Education
 _ K-12 Institution(s)
 x Industry
 x NASA Center(s)
 x Other Federal Government
 _ Non-Profit Organization(s)
 _ Other Space Grant Program(s)
 _ Organization(s) Representing Women, Underrepresented Minorities, or Persons with Disabilities
Total cost of program: $222,000

Amount paid to date: $______ Balance to be paid: $______

Break down the total cost of the program as follows:

- NASA Space Grant: $7000
- Industry: $90,000
- LEAD Institution: $ Non-Profit Organization: $25,000
- Academic Affiliate(s): $ Participants: $ Other Federal: $100,000
- State/Local Government: $ Other: $

Duration: $______ days
- 6-8 weeks
- ___ months

Frequency: $___Annual frequency:
- One time only:
- Not applicable:

Scheduling: ___ School Year $ __ Summer
- During School - Summer school
- After School
- Weekend

Target audience:
- Students
- Students and Teachers
- Teachers
- Parents
- Administrators

Total number of participants: over 200

<table>
<thead>
<tr>
<th>Grades</th>
<th>Number of Teachers</th>
<th>Number of Students</th>
</tr>
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<tbody>
<tr>
<td>Grades 1-5</td>
<td></td>
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<tr>
<td>Grades 6-8</td>
<td></td>
<td>200</td>
</tr>
<tr>
<td>Grades 9-12</td>
<td></td>
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</tbody>
</table>

Number of parents: $______
Number of administrators: 2

Demographics of Participants:

<table>
<thead>
<tr>
<th></th>
<th>Males</th>
<th>Persons with Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pacific-Islander</td>
<td></td>
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</tr>
</tbody>
</table>

Activities: [Check all which apply]

- Conference
- Science Fair/Exhibit
- Academic Program
- Workshop
- Other (specify)

This program was designed to promote (check all that apply):

Students:  
- Increase awareness
- Expand knowledge/skills
- Career guidance

Teachers:  
- Increase awareness
- Expand knowledge
- Improve teaching methods

Components:

- Hands On
- Mentors
- Course Revision
- Software
- Lab Tour
- Other (Specify)

Using Appendix 1, please note:

Primary discipline: Mathematics  
If applicable:  
Secondary discipline: Engineering  
Tertiary discipline: Chemistry and Biology

NASA Center Tour
1992 Data Collection

K-12 Programs

K-12 (or precollege) programs and activities enhance and broaden knowledge of both students and teachers, and include teacher preparation and enhancement, curriculum development, and student opportunities. Such activities generally occur in a formal education setting.

For each K-12 program, please provide the following information.

REPORTING PERIOD: January 1, 1992 to December 31, 1992

Program name: Advanced Science Space Camp

Contact Person: Cleon C. Arrington

Space Grant Institution(s): Georgia State University

Name of sponsor(s): (if other than affiliate)

Status:  _ Developing  _ Implemented

Program was:  _ Created by Space Grant  _ Supplemented by Space Grant  _ Taken Over by Space Grant

Program activity objectives (briefly state): Strengthening Student Interest in Mathematics, Science, and Technology

Evaluation mechanism in place:  _ Yes  _ No

Description of methodology, outcomes, significant benefits, and conclusions.

Program will be coordinated by graduate students in the School of Education.

Collaborative efforts (check all that apply):

_ In Same Department
_ Other Department(s) in Same Institution
_ Other Institution(s) of Higher Education
_ K-12 Institution(s)
_ Industry
_ NASA Center(s)
_ Other Federal Government
_ Non-Profit Organization(s)
_ Other Space Grant Program(s)
_ Organization(s) Representing Women, Underrepresented Minorities, or Persons with Disabilities
Total cost of program: $5,000
Amount paid to date: $5,000  Balance to be paid: $0

Break down the total cost of the program as follows:

NASA Space Grant: $5,000  Industry: $
LEAD Institution: $  Non-Profit Organization: 
Academic Affiliate(s): $  Participants: $ 
State/Local Government: $  Other Federal: $
Other: $

Duration: _6 days
         _weeks
         _months

Frequency: x Annual frequency:
         _One time only:
         _Not applicable:

Scheduling: _School Year
         _During School
         _After School
         _Summer
         __Weekend

Target audience:
         _Students
         x Students and Teachers
         _Teachers
         _Parents
         _Administrators

Total number of participants: _10
Number of Teachers  Number of Students
Grades 1-5
Grades 6-8
Grades 9-12

Number of parents

* Funds provided to the camp from Georgia State University.
** Individuals supported from Georgia State University,
Number of administrators

Demographics of Participants:

<table>
<thead>
<tr>
<th></th>
<th>Males</th>
<th>Persons with Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Native American</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All other persons</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Females</th>
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<td></td>
</tr>
<tr>
<td>Native American</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All other persons</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

Activities: (Check all which apply)

- [ ] Conference
- [x] Science Fair/Exhibit
- [ ] Other (specify)

- [x] Workshop
- [x] Academic Program

This program was designed to promote (check all that apply):

<table>
<thead>
<tr>
<th>Students:</th>
<th>Teachers:</th>
</tr>
</thead>
<tbody>
<tr>
<td>[x] Increase awareness</td>
<td>[x] Increase awareness</td>
</tr>
<tr>
<td>[x] Expand knowledge/skills</td>
<td>[x] Expand knowledge</td>
</tr>
<tr>
<td>[x] Career guidance</td>
<td>[x] Improve teaching methods</td>
</tr>
</tbody>
</table>

Components:

- [x] Hands On
- [x] Mentors
- [x] Course Revision
- [x] Software
- [x] Lab Tour
- [x] Other (Specify)

- [x] Research
- [x] Field Trips
- [x] Lab
- [x] Problem Sets
- [x] Video
- [x] Role models for underrepresented groups

Using Appendix 1, please note:

Primary discipline:

If applicable:

Secondary discipline:

Tertiary discipline:
1992 Data Collection

K-12 Programs

K-12 (or precollege) programs and activities enhance and broaden knowledge of both students and teachers, and include teacher preparation and enhancement, curriculum development, and student opportunities. Such activities generally occur in a formal education setting.

For each K-12 program, please provide the following information.

REPORTING PERIOD: January 1, 1992 to December 31, 1992

Program name: NASA Space Grant

Contact Person: Philip A. Loretan

Space Grant Institution(s): Tuskegee University

Name of sponsor(s): [If other than affiliate] Sometimes - Macon County Board of Education

Status: _Developing _ Implemented

Program was: _X Created by Space Grant
   _Supplemented by Space Grant
   _Taken Over by Space Grant

Program activity objectives (briefly state): To make students, teachers and parents more aware of team effort (science and engineering) involved with growing food for long-term space missions.

Evaluation mechanism in place: _X Yes Only verbal _ No

Description of methodology, outcomes, significant benefits, and conclusions. Tours of laboratories where visitors can see the experiments being carried out.

Collaborative efforts (check all that apply)
   _X In Same Department
   _X Other Department(s) in Same Institution
   _ Other Institution(s) of Higher Education
   _K-12 Institution(s)
   _Industry
   _NASA Center(s)
   _Other Federal Government
   _Non-Profit Organization(s)
   _Other Space Grant Program(s)
   _Organization(s) Representing Women, Underrepresented Minorities, or Persons with Disabilities
Total cost of program: $7,473
Amount paid to date: $7,473 Balance to be paid: $

Break down the total cost of the program as follows:
- NASA Space Grant: $7,473
- Industry: $
- LEAD Institution: $
- Non-Profit Organization: $
- Academic Affiliate(s): $
- Participants: $
- State/Local Government: $
- Other Federal: $
- Other: $

Duration: ___ days
___ weeks
___ months

Frequency: _x Annual frequency:
___ One time only:
___ Not applicable:

Scheduling: _x School Year _x Summer
___ During School
___ After School
___ Weekend

Target audience:
___ Students _x Students and Teachers
___ Teachers _x Parents
___ Administrators

Total number of participants:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Teachers</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grades 1-5</td>
<td>5</td>
<td>100</td>
</tr>
<tr>
<td>Grades 6-8</td>
<td>2</td>
<td>50</td>
</tr>
<tr>
<td>Grades 9-12</td>
<td>3</td>
<td>75</td>
</tr>
</tbody>
</table>

Number of parents: 30
Number of administrators: 1-part-time

Demographics of Participants:

<table>
<thead>
<tr>
<th></th>
<th>Males</th>
<th>Persons with Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pacific-Islander</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native American</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All other persons</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Females</th>
<th>Persons with Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pacific-Islander</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native American</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All other persons</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activities: [Check all which apply]

- Conference
- Workshop
- Science Fair/Exhibit
- Academic Program
- Other (specify) Tour

This program was designed to promote [check all that apply]:

Students:
- Increase awareness
- Expand knowledge/skills
- Career guidance

Teachers:
- Increase awareness
- Expand knowledge
- Improve teaching methods

Components:

- Hands On
- Mentors
- Course Revision
- Software
- Lab Tour
- Other (Specify)

- Research
- Field Trips
- Lab
- Problem Sets
- Video
- Role models for underrepresented groups
- Course Outline
- Lesson Plan
- Demonstration
- Book

Using Appendix 1, please note:

Primary discipline: Space Agriculture - Hydroponics
If applicable:

Secondary discipline: Plant physiology and chemistry
Tertiary discipline: Engineering
1992 Data Collection
K-12 Programs

K-12 (or precollege) programs and activities enhance and broaden knowledge of both students and teachers, and include teacher preparation and enhancement, curriculum development, and student opportunities. Such activities generally occur in a formal education setting.

For each K-12 program, please provide the following information.

REPORTING PERIOD: January 1, 1992 to December 31, 1992

Program name: "So What Makes This Thing Fly?"

Contact Person: Wanda Pierson-Jeter

Space Grant Institution(s): Georgia Space Grant Consortium

Name of sponsor(s): (if other than affiliate) Georgia Institute of Technology

Status: _Developing _x Implemented

Program was: _x Created by Space Grant
   _Supplemented by Space Grant
   _Taken Over by Space Grant

Program activity objectives (briefly state):
   To expose students to aerospace engineering.

Evaluation mechanism in place: _x Yes
   _No

Description of methodology, outcomes, significant benefits, and conclusions.
   This class was designed for students who are interested in aerospace engineering, but not sure of what an aerospace engineer does. This class serves that purpose.

Collaborative efforts (check all that apply)
   _In Same Department
   _x Other Department(s) in Same Institution
   _Other Institution(s) of Higher Education
   _x K-12 Institution(s)
   _Industry
   _NASA Center(s)
   _Other Federal Government
   _Non-Profit Organization(s)
   _Other Space Grant Program(s)
   _x Organization(s) Representing Women, Underrepresented Minorities, or Persons with Disabilities
Total cost of program: $1,000
Amount paid to date: $1,000  Balance to be paid: $

Break down the total cost of the program as follows:

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>NASA Space Grant</td>
<td>$</td>
</tr>
<tr>
<td>LEAD Institution: $1,000</td>
<td>$</td>
</tr>
<tr>
<td>Academic Affiliate(s): $</td>
<td>$</td>
</tr>
<tr>
<td>State/Local Government: $</td>
<td>$</td>
</tr>
<tr>
<td>Other: $</td>
<td>$</td>
</tr>
</tbody>
</table>

Duration: ___days
2 weeks
___months

Frequency: __Annual frequency:
One time only:
Not applicable:

Scheduling: ___School Year
_X Summer
_X During School
__After School
__Weekend

Target audience: 
_X Students
_Students and Teachers
__Teachers
__Parents
___Administrators

Total number of participants: ___17___

<table>
<thead>
<tr>
<th>Grades</th>
<th>Number of Teachers</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grades 1-5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grades 6-8</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>Grades 9-12</td>
<td>___</td>
<td>18</td>
</tr>
</tbody>
</table>

Number of parents ___0___
Number of administrators: 3

Demographics of Participants:

<table>
<thead>
<tr>
<th></th>
<th>Males</th>
<th>Persons with Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td>11</td>
<td>0</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Pacific-Islander</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Native American</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>All other persons</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Females</th>
<th>Persons with Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Pacific-Islander</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Native American</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>All other persons</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activities: {Check all which apply}

- Conference
- Science Fair/Exhibit
- Academic Program
- Workshop
- Other (specify)

This program was designed to promote {check all that apply}:

Students:
- Increase awareness
- Expand knowledge/skills
- Career guidance

Teachers:
- Increase awareness
- Expand knowledge
- Improve teaching methods

Components:
- Hands On
- Mentors
- Course Revision
- Software
- Lab Tour
- Other (specify)
  - Research
  - Field Trips
  - Lab
  - Problem Sets
  - Video
  - Demonstration
  - Course Outline
  - Lesson Plan
  - Book
  - Role models for underrepresented groups

Using Appendix 1, please note:
Primary discipline: Aerospace
If applicable:
Secondary discipline:
Tertiary discipline:
1992 Data Collection
K-12 Programs

For each K-12 program, please provide the following information.

REPORTING PERIOD: January 1, 1992 to December 31, 1992

Program name: "What Goes Up, Must Come Down"

Contact Person: Wanda Pierson-Jeter

Space Grant Institution(s): Georgia Space Grant Consortium

Name of sponsor(s): [if other than affiliate] Georgia Institute of Technology

Status: __ Developing    X Implemented

Program was:  

X Created by Space Grant

__Supplemented by Space Grant

__ Taken Over by Space Grant

Program activity objectives (briefly state):
To expose students to physics.

Evaluation mechanism in place:  X Yes  __ No

Description of methodology, outcomes, significant benefits, and conclusions. This class was designed for students interested in pursuing physics at the college level. This class gave students information that high school counselors were not able to provide.

Collaborative efforts (check all that apply)

X In Same Department

X Other Department(s) in Same Institution

__ Other Institution(s) of Higher Education

X K-12 Institution(s)

__ Industry

__ NASA Center(s)

__ Other Federal Government

__ Non-Profit Organization(s)

__ Other Space Grant Program(s)

X Organization(s) Representing Women, Underrepresented Minorities, or Persons with Disabilities
Total cost of program: $1,100.

Break down the total cost of the program as follows:

- NASA Space Grant: $1,100
- Industry: $
- LEAD Institution: $1,100
- Non-Profit Organization: $
- Academic Affiliate(s): $
- Participants: $
- State/Local Government: $
- Other Federal: $
- Other: $

Duration: ___ days

- 6 weeks
- ___ months

Frequency: ___ Annual frequency:

- One time only:
- Not applicable:

Scheduling: ___ School Year

- During School
- Summer
- After School
- Weekend

Target audience:

- Students [X]
- Students and Teachers
- Teachers
- Parents
- Administrators

Total number of participants: 14

- Number of Teachers
- Number of Students

Grades 1-5
Grades 6-8
Grades 9-12

Number of parents: 0
Number of administrators: 3

Demographics of Participants:

<table>
<thead>
<tr>
<th>Group</th>
<th>Males</th>
<th>Females</th>
<th>Persons with Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td>9</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pacific-Islander</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native American</td>
<td>5</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>All other persons</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activities: (Check all which apply)
- _Conference_
- _Science Fair/Exhibit_
- _Workshop_
- _Other (specify)_
- _Academic Program_
- _Other (Specify)_

This program was designed to promote (check all that apply):

Students:
- _Increase awareness_
- _Expand knowledge/skills_
- _Career guidance_

Teachers:
- _Increase awareness_
- _Expand knowledge_
- _Improve teaching methods_

Components:
- _Hands On_
- _Mentors_
- _Course Revision_
- _Software_
- _Lab Tour_
- _Other (Specify)_
- _Research_
- _Field Trips_
- _Course Outline_
- _Lesson Plan_
- _Problem Sets_
- _Demonstration_
- _Video_
- _Book_
- _Role models for underrepresented groups_

Using Appendix 1, please note:
- **Primary discipline: Physics**
- If applicable:
  - **Secondary discipline:**
  - **Tertiary discipline:**
1992 Data Collection

K-12 Programs

K-12 (or precollege) programs and activities enhance and broaden knowledge of both students and teachers, and include teacher preparation and enhancement, curriculum development, and student opportunities. Such activities generally occur in a formal education setting.

For each K-12 program, please provide the following information.

REPORTING PERIOD: January 1, 1992 to December 31, 1992

Program name: "If It Ain't Broke, Fix It Anyway"

Contact Person: Wanda Pierson-Jeter

Space Grant Institution(s): Georgia Space Grant Consortium

Name of sponsor(s): [if other than affiliate] Georgia Institute of Technology

Status: _Developing _x Implemented

Program was: _x Created by Space Grant
_Supplemented by Space Grant
_Taken Over by Space Grant

Program activity objectives [briefly state]:
To expose students to mechanical engineering.

Evaluation mechanism in place: _x Yes
_No

Description of methodology, outcomes, significant benefits, and conclusions.

Increase student interest in mechanical engineering, and give hands on experiences.

Collaborative efforts [check all that apply]

_In Same Department
_x Other Department(s) in Same Institution
_Other Institution(s) of Higher Education
_K-12 Institution(s)
_Industry
_NASA Center(s)
_Other Federal Government
_Non-Profit Organization(s)
_Other Space Grant Program(s)
_x Organization(s) Representing Women, Underrepresented Minorities, or Persons with Disabilities
Total cost of program: $1,650
Amount paid to date: $1,450   Balance to be paid: $100

Break down the total cost of the program as follows:
NASA Space Grant: $1,650
LEAD Institution: $1,650
Academic Affiliate(s): $1,650
State/Local Government: $1,650
Other:

Industry:
Non-Profit Organization:
Participants:
Other Federal:

Duration: ___ days
2 weeks
___ months

Frequency: 2 Annual frequency:
One time only:
Not applicable:

Scheduling: School Year
Summer
During School
After School
Weekend

Target audience:
Students
Teachers
Administrators

Total number of participants: 12

<table>
<thead>
<tr>
<th>Graduation Level</th>
<th>Number of Teachers</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grades 1-5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grades 6-8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grades 9-12</td>
<td></td>
<td>12</td>
</tr>
</tbody>
</table>

Number of parents: 0
Number of administrators: 3

Demographics of Participants:

<table>
<thead>
<tr>
<th>Category</th>
<th>Males</th>
<th>Persons with Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pacific-Islander</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native American</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All other persons</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Females</th>
<th>Persons with Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pacific-Islander</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native American</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All other persons</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activities: (Check all which apply)

- Conference
- Science Fair/Exhibit
- Academic Program
- Workshop
- Other (specify)

This program was designed to promote (check all that apply):

Students:  
- Increase awareness
- Expand knowledge/skills
- Career guidance

Teachers:
- Increase awareness
- Expand knowledge
- Improve teaching methods

Components:

- Hands On
- Mentors
- Course Revision
- Software
- Lab Tour
- Other (Specify)
- Research
- Field Trips
- Lab
- Problem Sets
- Video
- Role Models
- Course Outline
- Lesson Plan
- Demonstration
- Book
- Role models for underrepresented groups

Using Appendix 1, please note:

Primary discipline: Mechanical Eng.

If applicable:
- Secondary discipline:
- Tertiary discipline:
1992 Data Collection
K-12 Programs

K-12 (or precollege) programs and activities enhance and broaden knowledge of both students and teachers, and include teacher preparation and enhancement, curriculum development, and student opportunities. Such activities generally occur in a formal education setting.

For each K-12 program, please provide the following information.

REPORTING PERIOD: January 1, 1992 to December 31, 1992

Program name: Introduction to Aerospace

Contact Person: Wanda Pierson-Jeter

Space Grant Institution(s): Georgia Space Grant Consortium

Name of sponsor(s): [if other than affiliate] Georgia Institute of Technology

Status: x Developing _ Implemented

Program was: x Created by Space Grant _ Supplemented by Space Grant _ Taken Over by Space Grant

Program activity objectives (briefly state):
To train high school teachers to teach aerospace subjects.

Evaluation mechanism in place: x Yes _ No

Description of methodology, outcomes, significant benefits, and conclusions.
Clarifies the various disciplines within aerospace engineering, so that students can make
Collaborative efforts (check all that apply) informed choices.
  x In Same Department _ Other Department(s) in Same Institution
  _ Other Institution(s) of Higher Education
  x K-12 Institution(s) _ Industry
  _ NASA Center(s) _ Other Federal Government
  _ Non-Profit Organization(s) _ Other Space Grant Program(s)
  _ Organization(s) Representing Women, Underrepresented Minorities, or Persons with Disabilities
Total cost of program: $800
Amount paid to date: $800    Balance to be paid: $0

Break down the total cost of the program as follows:
NASA Space Grant: $800    Industry: $
LEAD Institution: $
Non-Profit Organization: $
Academic Affiliate(s): $
Participants: $
State/Local Government: $
Other Federal: $
Other: $

Duration: ___ days
1 week
___ months

Frequency:
1 Annual frequency:
One time only:
Not applicable:

Scheduling: _School Year  x Summer
_During School
_After School
_Weekend

Target audience:
_Students
_Students and Teachers
_x Teachers
_Parents
_Administrators

Total number of participants: _n/a_

<table>
<thead>
<tr>
<th>Number of Teachers</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grades 1-5</td>
<td>n/a</td>
</tr>
<tr>
<td>Grades 6-8</td>
<td>n/a</td>
</tr>
<tr>
<td>Grades 9-12</td>
<td></td>
</tr>
</tbody>
</table>

Number of parents _n/a_
NASA

Number of administrators 2

Demographics of Participants:

<table>
<thead>
<tr>
<th></th>
<th>Males</th>
<th>Persons with Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pacific-Islander</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native American</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All other persons</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td></td>
<td></td>
</tr>
<tr>
<td>African-American</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pacific-Islander</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native American</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All other persons</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activities: [Check all which apply]

- Conference
- Science Fair/Exhibit
- Other (specify)

x Workshop
x Academic Program

This program was designed to promote [check all that apply]:

Students:  
- Increase awareness
- Expand knowledge/skills
- Career guidance

Teachers:  
- Increase awareness
- Expand knowledge
- Improve teaching methods

Components:

- x Hands On
- x Mentors
- x Course Revision
- x Software
- x Lab Tour
- Other (Specify)

- x Research
- x Field Trips
- x Lab
- x Problem Sets
- x Video
- x Role Models
- x Course Outline
- x Lesson Plan
- x Demonstration
- x Book
- Role models for underrepresented groups

Using Appendix 1, please note:

Primary discipline: Aerospace

If applicable:

Secondary discipline:

Tertiary discipline:
For each K-12 program, please provide the following information.

REPORTING PERIOD: January 1, 1992 to December 31, 1992

Program name: Space Camps
Contact Person: Wanda Pierson-Jeter

Space Grant Institution(s): Georgia Space Grant Consortium

Name of sponsor(s): [if other than affiliate] Georgia Institute of Technology and Georgia Youth Science & Technology Center

Status: _Developing _x_ Implemented

Program was: _Created by Space Grant _x_ Supplemented by Space Grant _x_ Taken Over by Space Grant

Program activity objectives (briefly state):
To provide summer camp opportunities for rural Georgia students.

Evaluation mechanism in place: _x_ Yes _No

Description of methodology, outcomes, significant benefits, and conclusions.
Motivational program for rural students who are often not exposed to math and science programs.

Collaborative efforts (check all that apply)
_ In Same Department
_ Other Department(s) in Same Institution
_ Other Institution(s) of Higher Education
_ K-12 Institution(s)
_ Industry
_ NASA Center(s)
_ Other Federal Government
_ Non-Profit Organization(s)
_ Other Space Grant Program(s)
_ Organization(s) Representing Women, Underrepresented Minorities, or Persons with Disabilities
Total cost of program: $ 8,750
Amount paid to date: $8,750   Balance to be paid: $_____

Break down the total cost of the program as follows:
NASA Space Grant: $ Industry: $
LEAD Institution: $ 8,750 Non-Profit Organization: $
Academic Affiliate(s): $ Participants: $
State/Local Government: $ Other Federal: $
Other: $

Duration: ___ days
   1 weeks
   ___ months

Frequency: 3 Annual frequency:
   One time only:
   Not applicable:

Scheduling: _School Year      _Summer
   _During School
   _After School
   _Weekend

Target audience:
   _Students
   _Teachers
   _Administrators

   _Students and Teachers
   _Parents

Total number of participants: 60

<table>
<thead>
<tr>
<th>Number of Teachers</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grades 1-5</td>
<td>12</td>
</tr>
<tr>
<td>Grades 6-8</td>
<td>60</td>
</tr>
<tr>
<td>Grades 9-12</td>
<td></td>
</tr>
</tbody>
</table>

Number of parents 0
Number of administrators: 2

Demographics of Participants:

<table>
<thead>
<tr>
<th>Category</th>
<th>Males</th>
<th>Persons with Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pacific-Islander</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native American</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>All other persons</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Females</th>
<th>Persons with Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td>5</td>
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<tr>
<td>Hispanic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pacific-Islander</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native American</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All other persons</td>
<td>.27</td>
<td></td>
</tr>
</tbody>
</table>

Activities: [Check all which apply]

- Conference
- Science Fair/Exhibit

- Workshop
- Academic Program
- Camp
- Other (specify)

This program was designed to promote [check all that apply]:

Students:
- Increase awareness
- Expand knowledge/skills
- Career guidance

Teachers:
- Increase awareness
- Expand knowledge
- Improve teaching methods

Components:

- Hands On
- Mentors
- Course Revision
- Software
- Lab Tour
- Other (Specify)

- Research
- Field Trips
- Lab
- Problem Sets
- Video
- Role models for underrepresented groups

- Course Outline
- Lesson Plan
- Demonstration
- Book

Using Appendix 1, please note:

Primary discipline:
If applicable:

Secondary discipline:
Tertiary discipline:
1992 Data Collection
K-12 Programs

K-12 (or precollege) programs and activities enhance and broaden knowledge of both students and teachers, and include teacher preparation and enhancement, curriculum development, and student opportunities. Such activities generally occur in a formal education setting.

For each K-12 program, please provide the following information.

REPORTING PERIOD: January 1, 1992 to December 31, 1992

Program name: Science Applications International Corporation (SAIC)
Contact Person: Wanda Pierson-Jeter
Space Grant Institution(s): Georgia Space Grant
Name of sponsor(s): [if other than affiliate] SAIC
Status: _Developing _ Implemented
Program was: _Created by Space Grant _Supplemented by Space Grant _Taken Over by Space Grant

Program activity objectives (briefly state):
To give a student/teacher team an introduction to Mars Exploration.
Evaluation mechanism in place: _Yes _No

Description of methodology, outcomes, significant benefits, and conclusions.

Teacher and student motivation.

Collaborative efforts (check all that apply)
__In Same Department
__Other Department(s) in Same Institution
__Other Institution(s) of Higher Education
_x_K-12 Institution(s)
__Industry
__NASA Center(s)
__Other Federal Government
__Non-Profit Organization(s)
__Other Space Grant Program(s)
__Organization(s) Representing Women, Underrepresented Minorities, or Persons with Disabilities
Total cost of program: $770
Amount paid to date: $770   Balance to be paid: $0

Break down the total cost of the program as follows:
- NASA Space Grant: $770
- Industry: $
- LEAD Institution: $
- Non-Profit Organization: $
- Academic Affiliate(s): $
- Participants: $
- State/Local Government: $
- Other Federal: $
- Other: $

Duration: 5 days
   ___ weeks
   ___ months

Frequency: 1 Annual frequency:
   ___ One time only:
   ___ Not applicable:

Scheduling:  ___ School Year
   ___ During School
   ___ After School
   ___ Summer
   ___ Weekend

Target audience:
   ___ Students
   ___ Teachers
   ___ Administrators
   ___ Students and Teachers
   ___ Parents

Total number of participants: 2

<table>
<thead>
<tr>
<th>Grades</th>
<th>Number of Teachers</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-5</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>6-8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9-12</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Number of parents: 0
Number of administrators

Demographics of Participants:

<table>
<thead>
<tr>
<th>Gender</th>
<th>Males</th>
<th>Persons with Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pacific-Islander</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native American</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>All other persons</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th>Females</th>
<th>Persons with Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pacific-Islander</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native American</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All other persons</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activities: (Check all which apply)

- Conference
- Science Fair/Exhibit
- Other (specify)

- Workshop
- Academic Program

This program was designed to promote (check all that apply):

Students:

- Increase awareness
- Expand knowledge/skills
- Career guidance

Teachers:

- Increase awareness
- Expand knowledge
- Improve teaching methods

Components:

- Hands On
- Mentors
- Course Revision
- Software
- Lab Tour
- Other (Specify)

- Research
- Field Trips
- Course Outline
- Lab
- Problem Sets
- Video
- Book
- Role Models
- Lesson Plan
- Demonstration
- Role models for underrepresented groups

Using Appendix 1, please note:

Primary discipline:

If applicable:

Secondary discipline:

Tertiary discipline:
1992 Data Collection
K-12 Programs

K-12 (or precollege) programs and activities enhance and broaden knowledge of both students and teachers, and include teacher preparation and enhancement, curriculum development, and student opportunities. Such activities generally occur in a formal education setting.

For each K-12 program, please provide the following information.

REPORTING PERIOD: January 1, 1992 to December 31, 1992

Program name: Summer Teacher Institute
Contact Person: Guy Vickers
Space Grant Institution(s): Georgia Space Grant Consortium
Name of sponsor(s) [if other than affiliate]: Southeastern Consortium for Minorities in Engineering (SECME)
Status: _Developing _ Implemented
Program was: _ Created by Space Grant _ Supplemented by Space Grant _ Taken Over by Space Grant
Program activity objectives [briefly state]: Summer training institute.
Evaluation mechanism in place: _ Yes _ No

Description of methodology, outcomes, significant benefits, and conclusions.

Annual program that encourages teacher excellence.

Collaborative efforts [check all that apply]
_ In Same Department
_ Other Department(s) in Same Institution
_ Other Institution(s) of Higher Education
_ K-12 Institution(s)
_ Industry
_ NASA Center(s)
_ Other Federal Government
_ Non-Profit Organization(s)
_ Other Space Grant Program(s)
_ Organization(s) Representing Women, Underrepresented Minorities, or Persons with Disabilities
Total cost of program: $600
Amount paid to date: $600    Balance to be paid: $600

Three (3) teachers awarded scholarships, $200 each.

Break down the total cost of the program as follows:
- NASA Space Grant: $600
- LEAD Institution: $ 
- Academic Affiliate(s): $ 
- State/Local Government: $ 
- Other: $

Duration: 3 days
- weeks
- months

Frequency: x Annual frequency:
- One time only:
- Not applicable:

Scheduling: x School Year
- Summer
- During School
- After School
- Weekend

Target audience:
- Students
- Teachers
- Administrators
- Students and Teachers
- Parents

Total number of participants: 400

<table>
<thead>
<tr>
<th>Grades 1-5</th>
<th>Number of Teachers</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grades 6-8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grades 9-12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Number of parents not known
Number of administrators: n/a

Demographics of Participants:

<table>
<thead>
<tr>
<th>Males</th>
<th>Persons with Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
</tr>
<tr>
<td>Pacific-Islander</td>
<td></td>
</tr>
<tr>
<td>Native American</td>
<td></td>
</tr>
<tr>
<td>All other persons</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Females</th>
<th>Persons with Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td>3</td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
</tr>
<tr>
<td>Pacific-Islander</td>
<td></td>
</tr>
<tr>
<td>Native American</td>
<td></td>
</tr>
<tr>
<td>All other persons</td>
<td></td>
</tr>
</tbody>
</table>

Activities: (Check all which apply)

- Conference
- Science Fair/Exhibit
- Workshop
- Academic Program
- Other (specify)

This program was designed to promote (check all that apply):

Students:
- Increase awareness
- Expand knowledge/skills
- Career guidance

Teachers:
- Increase awareness
- Expand knowledge
- Improve teaching methods

Components:
- Hands On
- Mentors
- Course Revision
- Software
- Lab Tour
- Other (Specify)
- Research
- Field Trips
- Lab
- Problem Sets
- Video
- Role Models
- Course Outline
- Lesson Plan
- Demonstration
- Book
- Role models for underrepresented groups

Using Appendix 1, please note:

Primary discipline:
If applicable:

Secondary discipline:
Tertiary discipline:
1992 Data Collection
K-12 Programs

For each K-12 program, please provide the following information.

REPORTING PERIOD: January 1, 1992 to December 31, 1992

Program name: Mission to Mars
Contact Person: Doran Baker

Space Grant Institution(s): Georgia Space Grant Consortium

Name of sponsor(s): [if other than affiliate] Rocky Mountain Space Grant

Status: Developing x Implemented

Program was: x Created by Space Grant
__ Supplemented by Space Grant
__ Taken Over by Space Grant

Program activity objectives (briefly state):
To expose students to feasibility of Mars mission.

Evaluation mechanism in place: x Yes
__ No

Description of methodology, outcomes, significant benefits, and conclusions.
Heightened student awareness of possible Mars mission.

Collaborative efforts [check all that apply]
__ In Same Department
__ Other Department(s) in Same Institution
__ Other Institution(s) of Higher Education
x K-12 Institution(s)
__ Industry
__ NASA Center(s)
x Other Federal Government
__ Non-Profit Organization(s)
x Other Space Grant Program(s)
__ Organization(s) Representing Women, Underrepresented Minorities, or Persons with Disabilities
Total cost of program: $375
Amount paid to date: $375
Balance to be paid: $375

Break down the total cost of the program as follows:
- NASA Space Grant: $
- LEAD Institution: $375
- Academic Affiliate(s): $
- State/Local Government: $
- Other: $
- Industry: $
- Non-Profit Organization: $
- Participants: $
- Other Federal: $

Duration: ___ days
___ weeks
___ months

Frequency: _x Annual frequency:
___ One time only:
___ Not applicable:

Scheduling: ___ School Year
___ During School
___ After School
___ Weekend

Target audience:
- _x Students
- _x Students and Teachers
- _x Teachers
- _x Parents
- _x Administrators

Total number of participants: ___ from Georgia Institute of Technology

Grades 1-5
Grades 6-8
Grades 9-12

Number of parents ___ 6
Number of administrators: 0

Demographics of Participants:

<table>
<thead>
<tr>
<th>Males</th>
<th>Persons with Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Females</th>
<th>Persons with Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activities: (Check all which apply)

- Conference
- Science Fair/Exhibit
- Other (specify)

x  Workshop
x  Academic Program

This program was designed to promote (check all that apply):

Students:
- Increase awareness
- Expand knowledge/skills
- Career guidance

Teachers:
- Increase awareness
- Expand knowledge
- Improve teaching methods

Components:

- Hands On
- Mentors
- Course Revision
- Software
- Lab Tour
- Other (Specify)

x  Research
x  Field Trips
x  Lab
- Problem Sets
x  Video

x  Role Models
- Course Outline
- Lesson Plan
x  Demonstration
- Book

Role models for underrepresented groups

Using Appendix 1, please note:
Primary discipline:
If applicable:
Secondary discipline:
Tertiary discipline:
1992 Data Collection
K-12 Programs

K-12 (or precollege) programs and activities enhance and broaden knowledge of both students and teachers, and include teacher preparation and enhancement, curriculum development, and student opportunities. Such activities generally occur in a formal education setting.

For each K-12 program, please provide the following information.

REPORTING PERIOD: January 1, 1992 to December 31, 1992

Program name: Discover Aerospace

Contact Person: Wanda Pierson-Jeter

Space Grant Institution(s): Georgia Space Grant Consortium

Name of sponsor(s): (if other than affiliate)

Status: x Developing _ Implemented

Program was: x Created by Space Grant _ Supplemented by Space Grant _ Taken Over by Space Grant

Program activity objectives (briefly state):

To interest students in aerospace engineering.

Evaluation mechanism in place: _x Yes _ No

Description of methodology, outcomes, significant benefits, and conclusions.

Increased college enrollment in aerospace

Collaborative efforts (check all that apply)

_ In Same Department _x Other Department(s) in Same Institution

_ Other Institution(s) of Higher Education _x K-12 Institution(s)

_ Industry _ NASA Center(s)

_ Other Federal Government _ Non-Profit Organization(s)

_ Other Space Grant Program(s) _x Organization(s) Representing Women, Underrepresented Minorities, or Persons with Disabilities
Total cost of program: $200
Amount paid to date: $200  Balance to be paid: $200

Break down the total cost of the program as follows:

NASA Space Grant: $200  Industry: 
LEAD Institution: $  Non-Profit Organization: 
Academic Affiliate(s): $  Participants: 
State/Local Government: $  Other Federal: 
Other: 

Duration: 5 days  ___ weeks  ___ months

Frequency: 8 Annual frequency:
___ One time only:
___ Not applicable:

Scheduling: x School Year  ___ Summer
x During School
___ After School
___ Weekend

Target audience:
x Students  ___ Students and Teachers
___ Teachers  ___ Parents
___ Administrators

Total number of participants: 10 - 20 per visit

<table>
<thead>
<tr>
<th>Grade</th>
<th>Teachers</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-5</td>
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</tr>
<tr>
<td>6-8</td>
<td>1 per class</td>
<td>10 - 20</td>
</tr>
<tr>
<td>9-12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Number of parents: 0
Number of administrators: 2

Demographics of Participants:

<table>
<thead>
<tr>
<th></th>
<th>Males</th>
<th>Persons with Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pacific-Islander</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native American</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All other persons</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African-American</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pacific-Islander</td>
<td>varies by school</td>
<td></td>
</tr>
<tr>
<td>Native American</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All other persons</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activities: (Check all which apply)

- Conference
- Science Fair/Exhibit
- Academic Program
- Workshop
- Other (specify) lecture series

This program was designed to promote (check all that apply):

Students:
- Increase awareness
- Expand knowledge/skills
- Career guidance

Teachers:
- Increase awareness
- Expand knowledge
- Improve teaching methods

Components:
- Hands On
- Mentors
- Course Revision
- Software
- Lab Tour
- Other (Specify)
- Research
- Field Trips
- Lab
- Problem Sets
- Video
- Role Models
- Course Outline
- Lesson Plan
- Demonstration
- Book
- Role models for underrepresented groups

Using Appendix 1, please note:

Primary discipline: Aerospace Engineering
If applicable:
Secondary discipline:
Tertiary discipline:
1992 Data Collection
K-12 Programs

K-12 (or precollege) programs and activities enhance and broaden knowledge of both students and teachers, and include teacher preparation and enhancement, curriculum development, and student opportunities. Such activities generally occur in a formal education setting.

For each K-12 program, please provide the following information.

REPORTING PERIOD: January 1, 1992 to December 31, 1992

Program name: Frontiers of Space

Contact Person: Wanda Pierson-Jeter

Space Grant Institution(s): Georgia Space Grant Consortium

Name of sponsor(s): (if other than affiliate)

Status: _Developing   X Implemented

Program was:   X Created by Space Grant
                _Supplemented by Space Grant
                _Taken Over by Space Grant

Program activity objectives (briefly state):
Summer program for high school students.

Evaluation mechanism in place: _Yes   X No

Description of methodology, outcomes, significant benefits, and conclusions.
Heightened awareness of space.

Collaborative efforts (check all that apply)
   X In Same Department
   _ Other Department(s) in Same Institution
   _ Other Institution(s) of Higher Education
   X K-12 Institution(s)
   _ Industry
   _ NASA Center(s)
   _ Other Federal Government
   _ Non-Profit Organization(s)
   _ Other Space Grant Program(s)
   _ Organization(s) Representing Women, Underrepresented Minorities, or Persons with Disabilities
Total cost of program: $ 500
Amount paid to date: $ 500  Balance to be paid: $ 500

Break down the total cost of the program as follows:
- NASA Space Grant: $
- LEAD Institution: $ 500
- Academic Affiliate(s): $
- State/Local Government: $
- Other: $
- Industry: $
- Non-Profit Organization: $
- Participants: $
- Other Federal: $

Duration: 20 days
- weeks
- months

Frequency: Annual frequency:
- One time only:
- Not applicable:

Scheduling: School Year
- Summer
- During School
- After School
- Weekend

Target audience:
- Students
- Teachers
- Administrators
- Students and Teachers
- Parents

Total number of participants: 8
- Number of Teachers
- Number of Students

Grades 1-5
Grades 6-8
Grades 9-12

Number of parents 0
Number of administrators: 3

Demographics of Participants:

<table>
<thead>
<tr>
<th></th>
<th>Males</th>
<th>Persons with Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pacific-Islander</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native American</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>All other persons</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Females: Persons with Disabilities

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pacific-Islander</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native American</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All other persons</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

Activities: (Check all which apply)

- Conference
- Science Fair/Exhibit
- Academic Program
- Short course

This program was designed to promote (check all that apply):

Students:
- Increase awareness
- Expand knowledge/skills
- Career guidance

Teachers:
- Increase awareness
- Expand knowledge
- Improve teaching methods

Components:

- Hands On
- Mentors
- Course Revision
- Software
- Lab Tour
- Other (Specify)
- Research
- Field Trips
- Lab
- Problem Sets
- Video
- Role models for underrepresented groups

Using Appendix 1, please note:

Primary discipline: Aerospace Engineering

If applicable:

Secondary discipline:

Tertiary discipline:
1992 Data Collection
External Relations

External Programs refer to those programs that involve the name, personnel, and facilities of the university or college that is running the program that serve institutions not covered by K-12 and the General Public sections. Target institutions include industry, federal (non-NASA), state and local government, professional societies, international organizations, and non-profit organizations such as philanthropies. It is expected that the programs will involve the provision of expert advice and/or training. It does not include consulting, which is considered a private arrangement not formally involving the name of the university or the Space Grant program.

REPORTING PERIOD: January 1, 1992 to December 31, 1992

Program name: National Technical Association Mentoring Program

Contact Person: Garry Harris

Space Grant Institution(s): Georgia Space Grant Consortium

Name of sponsor(s): (if other than affiliate)

Status: ___ Developing ___ Implemented

Program was: ___ Created by Space Grant ___ Supplemented by Space Grant ___ Taken Over by Space Grant

Program activity objectives (briefly state):
Training African American scientists, engineers, and mathematicians to be mentors.

Description of program (briefly state): A program designed to encourage and train 25 to 30 mentors. Mentors are trained by sociologists/educators.

Evaluation mechanism in place: ___ Yes ___ No

Description of methodology, outcomes, significant benefits, and conclusions.
Increase in pool of African American mentors.

Indicate the type(s) of institution(s) reached:

GOVT./QUASI-GOVT.

___ Federal (non-NASA)
___ State government
___ Local government
___ International Organization(s)

FOR PROFIT

___ Industry
___ Small business
___ Agriculture

NON-PROFIT

___ Professional societies
___ Non-Profit organizations
Total cost of program: $2,500
Amount paid to date: $1,402
Balance to be Paid: $1,098

Break down the total cost of the program as follows:
- NASA: $?
- LEAD Institution: $1,098
- Academic Affiliate(s): $?
- State/Local Government: $?
- Other: $?

Industry: $?
Non-Profit Organization: $?
Participants: $?
Other Federal: $?

Duration: ___days
___weeks
___months

Frequency: ___Annual frequency
___One time only
___N/A

Describe Target Institution(s): K-12 school systems

Activities:
- Expert advise/analysis/data
- Research
- Design
- Training
- Workshop/conference
- Establishing communications/collaborations
- Loan of personnel

Was the university or college the provider or the recipient of the service?
- University/college was the provider
- University/college was the recipient
- Reciprocal arrangement
- None of the above. Explain: Students receive the benefits which in turn makes everyone recipients.

Using Appendix 1, please note:
Primary discipline:
If applicable
Secondary discipline:
Tertiary discipline:
Georgina Tech Research Corporation
Georgina Institute of Technology
Office of Contract Administration
Program initiation Division
Atlanta, Georgina 30332-0420
USA

Telex: 542507 GTRC OCA ATL
Fax: (404) 894-6956

Refer to: JG/02.105.002.97.012

28 October 1996

NASA Headquarters
Higher Education Branch
Mail Code FEH
Washington, DC 20546-0001

Attention: Ms. Lynn Keffer

Subject: Research Proposal Entitled "Georgia Space Grant Consortium" for the National Space Grant College and Fellowship Program

Reference: Grant No. NGT-40013

Dear Ms. Keffer:

The GEORGIA TECH RESEARCH CORPORATION desires to submit for your consideration the subject proposal prepared by Dr. Erian Armanios, School of Aerospace Engineering, Georgia Institute of Technology. Should additional information be desired, please do not hesitate to contact Dr. Armanios at 404/894-8202 regarding technical matters or the undersigned at 404/894-4817 for administrative concerns.

In the event of an award, we propose that the work be authorized by a supplement to the referenced grant. We appreciate the opportunity of submitting this proposal and look forward to working with you on this project.

Sincerely,

[Signature]

Janis L. Goddard
Contracting Officer

Addressee: Three copies
Enclosure: Proposal - Three copies
PROPOSAL

GEORGIA SPACE GRANT CONSORTIUM

Georgia Institute of Technology (lead Institution)
Clark Atlanta University
Spelman College
Southern Polytechnic State
Kennesaw State University,
Mercer University
Morehouse College
State University of West Georgia
Morris Brown College
Tuskegee University
Atlanta Chapter of the National Technical Association

Submitted to

The National Space Grant College and Fellowship Program
Office of Human Resources and Education
Education Division - Higher Education Branch
NASA HQ
Code FEH
Washington, DC 20546

(February 1, 1997 - January 1, 1998)

Erlin Armanios
Program Director
October 24, 1996
GEORGIA SPACE GRANT CONSORTIUM
Salaries, Wages, and Fringe Benefits
February 1, 1997- January 31, 1998

Georgia Tech
Erian Armanios, Director
1/4 time (10 hours per week) $15,964 includes 26.7% fringe benefits
Wanda Pierson-Jeter, Program Coordinator
full-time (40 hours per week) $35,476 includes 26.7% fringe benefits

Spelman
Faculty $2,937

Tuskegee
Carlton Morris, Associate Professor
1/5 time (8 hours per week) Summer, 50% (20 hours per week) $9,837 includes 16.5% fringe benefits

West Georgia
Ben De Mayo, Campus Director $7,500

Clark Atlanta
Management $12,783

TOTAL SALARY, WAGES AND FRINGES $84,498
### GEORGIA SPACE GRANT CONSORTIUM BUDGET

February 1997 - January 1998

<table>
<thead>
<tr>
<th>Category</th>
<th>TOTAL</th>
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<tr>
<td>(July thru Jan 25.7%)</td>
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<tr>
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<tr>
<td>*Mercer</td>
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<tr>
<td>West Georgia</td>
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<tr>
<td>Southern Tech</td>
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<tr>
<td>*Morris Brown</td>
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<td>*Kennesaw</td>
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<tr>
<td>*NTA</td>
<td>4,000</td>
<td>2,000</td>
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<td><strong>OH</strong></td>
<td>82,267</td>
<td>49,509</td>
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<td>(Feb thru June 49.5%)</td>
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<tr>
<td>(July thru Jan 49.1)</td>
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<tr>
<td>*subs with OH</td>
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<td><strong>GRAND TOTAL</strong></td>
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<td>*totals may vary slightly due to rounding</td>
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**GEORGIA SPACE GRANT CONSORTIUM**

*Estimated Travel Breakdown - February 1, 1997- January 31, 1998*

<table>
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<tr>
<th>Event Description</th>
<th>Cost</th>
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<tr>
<td><strong>Georgia Tech</strong></td>
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<tr>
<td>NSTA Conference - Houston, TX</td>
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<tr>
<td>2 @ $308 round trip</td>
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<tr>
<td>2 Hotel rooms @ $85 for 2 nights</td>
<td>$340</td>
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<tr>
<td>2 @ $35 per day per diem for 2 days</td>
<td>$140</td>
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<tr>
<td>Women in Engineering Conference - Wash, DC</td>
<td>$780</td>
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<tr>
<td>2 @ $390 round trip</td>
<td>$780</td>
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<tr>
<td>2 Hotel rooms @ $95 for 2 nights</td>
<td>$380</td>
</tr>
<tr>
<td>2 @ $35 per day per diem for 2 days</td>
<td>$140</td>
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<tr>
<td>Space Science Education Conference - Boulder, CO</td>
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<tr>
<td>1 @ $385 round trip</td>
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<td>1 @ $35 per day per diem for 2 days</td>
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<tr>
<td>1 @ $89 per night</td>
<td>$089</td>
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<tr>
<td>Regional Directors meeting - location unknown</td>
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<tr>
<td>Technology in Education Conference - Phoenix, AZ</td>
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<tr>
<td>1 @ $310 round trip</td>
<td>$310</td>
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<tr>
<td>2 Hotel rooms @ $78 for 3 nights</td>
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</tr>
<tr>
<td>1 @ $35 per day per diem</td>
<td>$105</td>
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<tr>
<td>Director's Meeting - location unknown</td>
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<tr>
<td>Young Astronauts Conference - Washington, DC</td>
<td>$780</td>
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<tr>
<td>2 @ $390 round trip</td>
<td>$780</td>
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<tr>
<td>2 Hotel rooms @ $95 for 2 nights</td>
<td>$380</td>
</tr>
<tr>
<td>2 @ $35 per day per diem for 2 days</td>
<td>$140</td>
</tr>
<tr>
<td><strong>Southern Tech</strong></td>
<td>$4249</td>
</tr>
<tr>
<td>NASA Headquarters - Washington, DC</td>
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</tr>
<tr>
<td>3 plane trips @$390</td>
<td>$1170</td>
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<tr>
<td>Kennedy Space Flight Center, Florida</td>
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<tr>
<td>3 plane trips @$258</td>
<td>$774</td>
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<tr>
<td>National Science Teacher's Assn Conference - Houston</td>
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<tr>
<td>1 plane and per diem time @ $650</td>
<td>$650</td>
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<tr>
<td>Stennis Flight Center, Mississippi</td>
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<tr>
<td>1 plane trip @ $426</td>
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<tr>
<td>Additional Conferences - hotel, per diem ($35), hotels</td>
<td>$1229</td>
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<tr>
<td><strong>Morehouse</strong></td>
<td>$3600</td>
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<tr>
<td>3 Speakers from Washington, DC</td>
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<tr>
<td>3 plane trips @$390</td>
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<tr>
<td>3 Hotel rooms @ $85 for 2 nights</td>
<td>$255</td>
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<tr>
<td>5 Students Conference Registration airfare @$390</td>
<td>$1950</td>
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<tr>
<td>Additional fees and per diem</td>
<td>$225</td>
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<tr>
<td>Institution</td>
<td>Total Cost</td>
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<tr>
<td>--------------------------</td>
<td>------------</td>
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<tr>
<td>Clark Atlanta University</td>
<td>$1354</td>
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<tr>
<td>Tuskegee University</td>
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<tr>
<td>Mercer</td>
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<tr>
<td>West Georgia</td>
<td>$2000</td>
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<tr>
<td>Spelman</td>
<td>$2100</td>
</tr>
</tbody>
</table>

Clark Atlanta University

- 10 Students Conference Registration @ $75 each $750
- Contribution to hotel and per diem for students $604

Tuskegee University

- Trip to Huntsville, AL
  - Rental Buses $3300
  - Lodging $1250
  - Tickets $1200
- 8 Students Conference Transportation @ $200 each $1600
- 8 Students Conference Registration @ $50 each $400
- Travel expenses for 8 students $730
- Travel to GSGC 3 times @ .25 mile/360 miles round trip $270

Mercer

- 3 Students Conference Registration @$250 each $750
- 3 Students travel expenses (per diem $38) and hotels $750

West Georgia

- Travel throughout State for manufacturing facilities
  - Avg - 1800 miles @ .25 per mile $450
- Air fare and per diem ($35) $710
- 2 Conferences @ $250 each $500
- Hotel @ $85 per night for 4 nights $340

Spelman

- 10 Students Conference Registration @ $50 each $500
- 10 Students Airfare @ $150 each $1500
- Per diem for students $100
## 1997-1998 Budget

**Georgia Space Grant Consortium**

**Kennesaw State University**

<table>
<thead>
<tr>
<th>NASA FUNDING</th>
<th>COST SHARING</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Student Stipends</strong></td>
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<tr>
<td>Student Research</td>
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<tr>
<td>Student Mentor</td>
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<tr>
<td>Student Travel</td>
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<tr>
<td><strong>Salaries</strong></td>
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<tr>
<td>Faculty Release Time</td>
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<tr>
<td>Clerical</td>
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<tr>
<td><strong>Equipment</strong></td>
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<tr>
<td>SUPPLIES</td>
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<td><strong>Evaluations</strong></td>
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<td><strong>Total</strong></td>
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## 1997-1998 BUDGET

**GEORGIA SPACE GRANT CONSORTIUM**

**CLARK ATLANTA UNIVERSITY**

<table>
<thead>
<tr>
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<th>NASA FUNDING</th>
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<tr>
<td><strong>SALARIES</strong></td>
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<td>Administrative</td>
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<tr>
<td><strong>LOCAL TRAVEL</strong></td>
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<tr>
<td><strong>SPACE CAMP</strong></td>
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<tr>
<td><strong>SATURDAY SCIENCE</strong></td>
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<tr>
<td><strong>AFTER SCHOOL SPACE SCI</strong></td>
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<td><strong>COMMUNICATIONS</strong></td>
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## 1997-1998 Budget

**Georgia Space Grant Consortium**

**State University of West Georgia**

<table>
<thead>
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<tr>
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<tr>
<td><strong>Salaries</strong></td>
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<td>Dr. Ben DeMayo</td>
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## 1997-1998 Budget
### Georgia Space Grant Consortium

### Tuskegee University

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<td><strong>Salaries</strong></td>
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<tr>
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<td><strong>Total</strong></td>
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## 1997-1998 Budget

**Georgia Space Grant Consortium**

**Spelman College**

<table>
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<td>Text Costs @ 72.5%</td>
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<td>English Mentor Hotline Letter</td>
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<td></td>
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$15,000                         $15,000
### 1997-1998 Budget

**Georgia Space Grant Consortium**

**Morris Brown College**

<table>
<thead>
<tr>
<th>Supplies and Materials</th>
<th>NASA Funding</th>
<th>Cost Sharing</th>
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<tr>
<td>(computer software, disks, lab</td>
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<td>$5,000</td>
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<tr>
<td>materials)</td>
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**Total**

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<th>$5,000</th>
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1997-1998 BUDGET  
GEORGIA SPACE GRANT CONSORTIUM  
SOUTHERN POLYTECHNIC STATE UNIVERSITY

<table>
<thead>
<tr>
<th>NASA FUNDING</th>
<th>COST SHARING</th>
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</thead>
<tbody>
<tr>
<td>AEROSPACE WORKSHOPS $ 7,000</td>
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<tr>
<td>SATURDAY SCIENCE PROGRAMS $ 5,000</td>
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<tr>
<td>COMMUNITY INVOLVEMENT $ 8,751</td>
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<td>SALARIES</td>
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<tr>
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**1997-1998 BUDGET**
**GEORGIA SPACE GRANT CONSORTIUM**

**MOREHOUSE COLLEGE**

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<td>COURSE DEVELOPMENT ASTRONOMY GRE COURSES</td>
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1997-1998 BUDGET
GEORGIA SPACE GRANT CONSORTIUM

MERCER UNIVERSITY

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</tr>
</tbody>
</table>
1997-1998 Georgia Space Grant Consortium Members

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Executive Summary

The focus of the Georgia Space Grant Consortium (GSGC) activities in the next budget period (February 1, 1997 - January 31, 1998) aims toward the continuing effort to support underrepresented minority and female students and encourage them to pursue careers in science, math, and engineering; expand collaboration between HBCUs and majority member institutions in the research area and dual degree programs; enhance student initiated and conducted pre-college outreach programs. These goals will be accomplished by capitalizing on the large number of HBCUs in the State, and working with 100% female institutions such as Agnes Scott College and Spelman College.

The GSGC will continue its efforts towards increasing its members and industrial affiliates. Valdosta State University and Columbus State University will join the consortium during 1997, which will allow us to maximize our efforts throughout Georgia.

Fellowships and Scholarships

The Consortium has had tremendous success in recruiting, and retaining women and students from underrepresented minorities. Continued efforts to attract the brightest students from underrepresented groups will continue. The GSGC continues the balance between undergraduate and graduate fellowships with the majority of fellowships at Georgia Tech allocated to graduate students, while the rest of the members allocate theirs to undergraduate students. As in the past, 100% of the fellowship recipients are from underrepresented groups. The ratio of applicants to awards is expected to double within the next five years based on the projected increase in student enrollment and the addition of new member institutions. The GSGC is will continue to with other organizations to provide joint fellowship/scholarship funding. Additional scholarship will be given to women and students from underrepresented minorities through groups such as the Georgia Tech Women’s Forum, a African American female sorority - Alpha Kappa Alpha, Inc., the National Technical Association, the Society of Hispanic Engineers and others.

Research Infrastructure/Higher Education

Research collaboration between member institutions for developing and enhancing research infrastructure will focus on joint interdisciplinary proposals to funding agencies; use of laboratory facilities; and joint faculty advisement for students working on research grants. Georgia Tech continues joint research projects with Clark Atlanta University in the area of Smart Structures and Advanced Materials funded by the Army Research Office; and with Morris Brown in the area of Computer Sciences funded by NSF. Joint proposal writing will be ongoing.

West Georgia College will continue working with local industry through the Advanced Test and Measurement Resource Facility in order to enable manufacturers to use the latest testing hardware and software to increase productivity. The funding for this program will be increased significantly to include student assistance and projects. Currently, the project involves only professors and members of industry in research efforts. Including students in this effort will enhance our research and higher education objectives.

Precollege

Presentations on the Mars Pathfinder will be expanded to not only students in classrooms, but this year will include pre-service and in-service workshops for teachers. During 1997, the presentations have been expanded to include the Mars Global Surveyor.
The "Discover Aerospace" Program will continue with members of industry and other non profit groups. The introduction of an interactive Aerospace CD that teaches the basic low speed aerodynamics was well received. More CDs are planned for 1998 and for mass distribution to other consortia.

Tuskegee University will continue its K-12 training and tour program at the University's National Historic Site and the NASA Center for Food Production, Processing and Waste Management for Controlled Ecological Life Support Systems.

Kennesaw State College continued their College/Community Operated Science Camp for underrepresented rural and suburban precollege students in Science, Engineering and Math. Kennesaw College will also expand their SAT preparation classes for high school students from underrepresented groups in an effort to increase scores.

The Georgia Youth Science and Technology Center at Southern Tech will continue the newly implemented Student Weekend laboratory courses for elementary and secondary participants in Chemistry, Physics, Astronomy and Computer Sciences. Teacher Enhancement programs will continue in aerospace science and Technology addressing career opportunities for underrepresented minorities in engineering. West Georgia College will continue the Aerospace Education Workshop for In-Service Teachers. The Workshop acquaints teachers with various aspects of NASA's Space Program and provides hands-on activities, speakers and field trips to Marshall and Kennedy Space Centers.

The collaboration between the GSGC and the Southeastern Consortium for Minorities in Engineering (SECME) for precollege programs has expanded. In previous years, the consortium has provided scholarships for teachers to attend the summer institute. The focus of the program is to increase the number of minority students who are qualified for, entering, and completing studies in engineering, mathematics and science. SECME works through teachers at the middle grade and high school level to enhance classroom instruction, inform students about available opportunities, motivate them, provide hands-on experiences in science and mathematics, and provide role models and other motivational and informative activities.

**General Public/External Relations**

The Georgia Space Grant will participate in the Warner Robins Air Force Base Open House, Technology Week, National Engineers Week, Technology Fest at Southern Tech, and the Georgia Science Teachers Conference in order to provide information to the general public. The GSGC will participate in each of these events with members of industry and/or non profit organizations.
1997-1998

GEORGIA SPACE GRANT CONSORTIUM AFFILIATES

The Georgia Youth Science and Technology Center at Southern Tech will continue the Student Weekend laboratory courses for elementary and secondary participants in Chemistry, Physics, Astronomy and Computer Sciences. Teacher Enhancement programs are planned to promote aerospace science and technology addressing career opportunities for underrepresented minorities in engineering. These programs will include seminars and assemblies. NASA's SSIP contests will continue to be administered through the office, with the assistance of Georgia Tech. The QEM/NASA sponsored SHARP Plus Program with consortium members will start its second year in conjunction with Georgia Tech, Clark Atlanta, Kennesaw, Morris Brown, The National Technical Association, Lockheed, and Spelman College.

Clark Atlanta University (HBCU) will continue to provide scholarships to undergraduate and graduate students in science, engineering, and other technical fields. CAU will conduct Saturday Science Academies for middle school students year around. Georgia Tech has joint research projects with Clark Atlanta University in the area of Smart Structures and Advanced Materials funded by the Army Research Office. This effort will be extended to include an undergraduate research component in order to attract them to graduate programs and provide a smooth transition to graduate school.

Georgia Institute of Technology. There will be continued funding of graduate students from underrepresented groups. Georgia Tech will also devote more funding to developing the network of universities in the consortium. Georgia Tech will be responsible for monitoring all program, as well as seeking new affiliate members. Programs from Georgia Tech will involve collaborative research and higher education programs.

Kennesaw College will continue the one month college/community camp to help minority, middle school students from rural and suburban areas develop skills to motivate them to do well in science, engineering, and math (SEM); to provide minority students with information on career opportunities in SEM; and to provide positive images of SEM related subjects and individuals. This will be accomplished through guest speakers, laboratory work, research projects, career explorations, field trips, and seminars. Tutoring and mentoring continues year around. Parents, college students, local scientists, teachers, and community based organizations will all have key roles in this program.

Morris Brown College (HBCU) will distribute their package of education aids for elementary and high school students. The package details the role that science, technology, and engineering play in today's society. Modules of the educational package address various branches of science and engineering, with the focus on information technology, communication technology, transportation, biotechnology space sciences, and manufacturing. The Distance Learning Center at Morris Brown will still be used to broadcast information to other schools in Georgia.

Spelman College (HBCU) continues with its network of mentors consisting of alumni and other individuals engaged in scientific careers. Fellowships will continue to be awarded to females through the Office of Science, Engineering, and Technical Careers. GRE preparation courses for Spelman seniors will continue to be taught by Georgia Tech's Space Grant Fellows, but this year Morehouse will be involved in the planning and administration. Support for travel to regional and national scientific meetings will increase. The Speaker's bureau will continue and the centralized collection of resource materials area will be updated; there will be more support for laboratory research; and further career development and professional enrichment counseling.
**Tuskegee University (HBCU)** will continue its K-12 training and tour program at the University's National Historic Site and the NASA Center for Food Production, Processing and Waste Management for Controlled Ecological Life Support Systems. The College of Engineering at Tuskegee will continue working with the College of Engineering at Georgia Tech to design a retention program for alumni of Tuskegee who go to Tech for graduate school. Fellowships for undergraduate and graduate students will continue.

**West Georgia College** will continue the Aerospace Education Workshop for In-Service Teachers. The Workshop acquaints teachers with various aspects of NASA's Space Program and provides hands-on activities, speakers and field trips to Marshall and Kennedy Space Centers. West Georgia College will also work with local industry through the Advanced Test and Measurement Resource Facility in order to enable manufacturers to use the latest testing hardware and software to increase productivity.

**Mercer University** will send engineers to rural Georgia to encourage interest in science and engineering as a career. Engineers and Scientists will provide demonstrations to motivate students and the general public. Mercer will also invite engineering, science and math majors having difficulty with Calculus to participate in a program based on the KUMON method for teaching mathematics. This effort will provide an alternative to the support provide through tutoring sessions and supplemental instructional efforts already under way. The KUMON method will stress individually paced learning based on drills and practice. Mercer will also support the research of one student in her research on Control Strategies for Large Segmented Mirrors and provide travel funds for her and/or the faculty principal investigator.

**Morehouse College** will start an astronomy class which will utilize instructors from other consortium members. Morehouse will provide funding for students to attend conferences and give paper presentations; work in conjunction with Spelman College to provide GRE preparation classes; and start a speakers bureau to invite scientists and engineers from industry, government and academia to the campus. Morehouse will also provide seed money for students to start research projects in the Atlanta University Center, which consists of 4 other Historically Black Colleges and Universities.
PROGRESS REPORT
February 1, 1996 - January 31, 1997

The Georgia Space Grant Consortium (GSGC) has 10 institutions including four Historically Black Colleges and Universities (HBCUs); and two non profit organizations, the Atlanta Chapter of the National Technical Association, and Options - Image of the Future; and Rolls Royce as an industrial affiliate. The progress of the Georgia Space Grant Consortium is highlighted under the objectives of the National Space Grant and Fellowship Program.

To establish a network of colleges and universities with interests and capabilities in aeronautics, space and related fields
New members for 1997 will include Valdosta State University and Columbus State University.

To encourage cooperative programs among universities, aerospace industry, and federal, state, and local government;
Cray Research will continue to participate in the "Discover Aerospace" series during 1997-97
The State of Georgia continues to provide cost sharing for Georgia Tech, Georgia State, and Kennesaw State University.

To encourage interdisciplinary training, research, and public service programs related to aerospace;
Clark Atlanta University's School of Physics and Georgia Tech's School of Aerospace Engineering continue to work on research projects. A proposal which includes Georgia Tech, Southern Tech, Columbus State University, Tuskegee University, State University of West Georgia, and Kennesaw State University was submitted to a federal agency for an interdisciplinary training grant.

To recruit and train professionals, especially underrepresented groups for careers in aerospace science, technology, and allied fields;
One hundred percent of all fellowships are awarded to women and or underrepresented groups. The first African American female to complete her Ph.D. in Mechanical Engineering at Georgia Tech is currently working at Lucent Technologies and continues to provide mentoring to female space grant fellows and others in the pipeline. Another African American Space Grant fellow is now an Assistant Professor at Tulane University and is continuing his research with Space Grant funding. The consortium will put together a directory of all fellowship recipients and show their progression through the last eight years.

To promote a strong science, mathematics and technology base from elementary through university levels.
Sponsored numerous K-12 programs including summer courses for high school students; science competitions; in-service training for teachers; field trips; internships; mentors; and provided aerospace materials and supplies for schools. During 1996, the Space Grant sponsored an exhibit of NASA spinoffs that impact daily life. This exhibit will circulate throughout public schools in the State of Georgia.
Proposal No.: 02.105.002.97.012

Principal Investigator: Dr. Erian Armanios

Title: Georgia Space Grant Consortium

Certification Regarding Debarment, Suspension, and Other Responsibility Matters--Primary Covered Transactions

(1) The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department of agency;

(b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and

(d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

(2) Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

Certified By:

Janis L. Goddard

(Date) 10/28/96

(Signature) (Typed Name)

Contracting Officer

(Title)

Georgia Tech Research Corporation

(Institution)
Certification Regarding Drug-Free Requirements

A. The grantee certifies that it will provide a drug-free workplace by:
   (a) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the grantee's workplace and specifying the actions that will be taken against employees for violation of such prohibition;
   (b) Establishing a drug-free awareness program to inform employees about --
      (1) The dangers of drug abuse in the workplace;
      (2) The grantee's policy of maintaining a drug-free workplace
      (3) Any available drug counseling, rehabilitation, and employee assistance programs; and
      (4) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;
   (c) Making it a requirement that each employee to be engaged in the performance of the grant be given a copy of the statement required by paragraph (a);
   (d) Notifying the employee in the statement required by paragraph (a) that, as a condition of employment under the grant, the employee will --
      (1) Abide by the terms of the statement and
      (2) Notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five days after such conviction.
   (e) Notifying the agency within ten days after receiving notice under subparagraph (d)(2) from an employee or otherwise receiving actual notice under subparagraph (d)(2), with respect to any employee who is so convicted--
      (f) Taking one of the following actions within 30 days of receiving notice under subparagraph (d)(2), with respect to any employee who is so convicted--
         (1) Taking appropriate personnel action against such an employee, up to and including termination; or
         (2) Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency;
   (g) Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs (a), (b), (c), (d), (e) and (f).

B. The grantee shall insert in the space provided below the site(s) for the performance of work done in connection with the specific grant:

Place of Performance (Street address, city, county, state, zip code)

Georgia Institute of Technology, Atlanta, Fulton County, Georgia 30332

Certified By:

/\(Signature)\/
/\(Date)\/

Janis L. Goddard
(Typed Name)

Contracting Officer
(Title)

Georgia Tech Research Corporation
(Institution)
CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements.

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000, and not more than $100,000 for each such failure.

Certified by:

Janis L. Goddard
Typed Name

Contracting Officer
Title

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Institution
1996-1997 Georgia Space Grant Consortium Members

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Georgia Space Grant Consortium Affiliates
1996-1997

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(912) 752-2332 - office
Executive Summary

The focus of the Georgia Space Grant Consortium (GSGC) activities in the next budget period (February 1, 1996 - January 31, 1997) aims toward the continuing effort to support underrepresented minority and female students and encourage them to pursue careers in science, math, and engineering; expand collaboration between HBCUs and majority member institutions in the research area and dual degree programs; enhance student initiated and conducted pre-college outreach programs; and take advantage of the 1996 Summer Olympics in Atlanta to illustrate NASA's leading role in the education of this nation's future scientist and engineers.

The GSGC will continue its efforts towards increasing its members and industrial affiliates. A continuing target will be the inclusion of all the state HBCUs. By the end of the program year, we expect to have included Savannah State College and Fort Valley State College which are HBCUs. In 1995, the GSGC added Morehouse College and Mercer University as members of the consortium.

Fellowships and Scholarships

Continued efforts to attract the brightest students from underrepresented groups will continue. The GSGC continues the balance between undergraduate and graduate fellowships with the majority of fellowships at Georgia Tech and Georgia State allocated to graduate students, while the rest of the members allocate theirs to undergraduate students. As in the past, 100% of the fellowship recipients are from underrepresented groups. The ratio of applicants to awards is expected to double within the next five years based on the projected increase in student enrollment and the addition of new member institutions. The GSGC is will continue to with other organizations to provide joint fellowship/scholarship funding. During 1995, the GSGC teamed with the Southeastern Consortium for Minorities in Engineering (SECME); Alpha Kappa Alpha Sorority; the Georgia Tech Women's Forum, and the National Technical Association (NTA) to provide scholarships to women and/or members of underrepresented groups.

Research Infrastructure/Higher Education

Research collaboration between member institutions for developing and enhancing research infrastructure will focus on joint interdisciplinary proposals to funding agencies; use of laboratory facilities; and joint faculty advisement for students working on research grants. Georgia Tech continues joint research projects with Clark Atlanta University in the area of Smart Structures and Advanced Materials funded by the Army Research Office; and with Morris Brown in the area of Computer Sciences funded by NSF. Joint proposal writing will be
ongoing. Georgia Tech and Clark Atlanta continued writing joint proposals in 1995 and funding is anticipated for 1996.

Collaboration with industry will be expanded. West Georgia College will continue working with local industry through the Advanced Test and Measurement Resource Facility in order to enable manufacturers to use the latest testing hardware and software to increase productivity. There are plans to increase the program due to the success of the program during 1995.

Mercer University will involve their school of Pharmacology in research programs during 1996.

Precollege

This year, the consortium was very involved in presentations on the Mars Pathfinder. JPL provided a 1/10th scale model of the Pathfinder to Assistant Professor Kurt Gramoll in the School of Aerospace Engineering. The grant was renewed for 1996 and the consortium will continue to set up the presentations in conjunction with their "Discover Aerospace" Program. This year the "Discover Aerospace" Program has been expanded to include members of industry. Cray Research will provide personnel to discuss how computers are used in the aerospace industry. In addition, "Discover Aerospace" will be enhanced by the addition of an interactive Aerospace CD that teaches the basic low speed aerodynamics. "Discover Aerospace" has also been the blueprint for other programs. The GSGC will start "Discover Atmospheric Sciences" and "Discover Physics" during 1996, once again using graduate students to present the lectures to high school students.

The GSGC in conjunction with the Atlanta Chapter of the National Technical Association; and Omega Psi Phi Fraternity will continue the third year of the Statewide African American Science Trivia Competitions for high school students. The GSCG provided winning teams with funding to participate in other science, engineering, or math competitions.

Tuskegee University will continue its K-12 training and tour program at the University's National Historic Site and the NASA Center for Food Production, Processing and Waste Management for Controlled Ecological Life Support Systems.

Kennesaw State College will expand their College/Community Operated Science Camp for underrepresented rural and suburban precollege students in Science, Engineering and Math. Kennesaw College will also begin SAT preparations classes for high school students from underrepresented groups in an effort to increase scores. Morris Brown College will distribute their package of educational aids, developed in 1995, for elementary and high school students that details the role that science, technology, and engineering.
The Georgia Youth Science and Technology Center at Southern Tech will continue the newly implemented Student Weekend laboratory courses for elementary and secondary participants in Chemistry, Physics, Astronomy and Computer Sciences. Teacher Enhancement programs will continue in aerospace science and Technology addressing career opportunities for underrepresented minorities in engineering. West Georgia College will continue the Aerospace Education Workshop for In-Service Teachers. The Workshop acquaints teachers with various aspects of NASA's Space Program and provides hands-on activities, speakers and field trips to Marshall and Kennedy Space Centers.

The close collaboration between the GSGC and the Southeastern Consortium for Minorities in Engineering (SECME) for precollege programs has expanded. In previous years, the consortium has provided scholarships for teachers to attend the summer institute. During 1996, the consortium will provide funding for the speakers, which always includes NASA personnel. The focus of the program is to increase the number of minority students who are qualified for, entering, and completing studies in engineering, mathematics and science. SECME works through teachers at the middle grade and high school level to enhance classroom instruction, inform students about available opportunities, motivate them, provide hands-on experiences in science and mathematics, and provide role models and other motivational and informative activities.

General Public/External Relations

During 1996 Olympics, the consortium will sponsor a major exhibition in the City of Atlanta to demonstrate how Spinoffs of NASA technology have enhanced sports. The exhibit will continue after the Olympics to show how NASA technology has benefited the State of Georgia.

The GSGC will continue to participate in the Warner Robbins Air Force Base Open House which attracts over 200,000 people per year.
GEORGIA SPACE GRANT CONSORTIUM AFFILIATES

The Georgia Youth Science and Technology Center at Southern Tech will continue the Student Weekend laboratory courses for elementary and secondary participants in Chemistry, Physics, Astronomy and Computer Sciences. Teacher Enhancement programs are planned to promote aerospace science and technology addressing career opportunities for underrepresented minorities in engineering. These programs will include seminars and assemblies. NASA's SSIP contests will continue to be administered through the office, with the assistance of Georgia Tech. The QEM/NASA sponsored SHARP Plus Program with consortium members will start its second year in conjunction with Georgia Tech, Clark Atlanta, Kennesaw, Morris Brown, The National Technical Association, Lockheed, and Spelman College.

Clark Atlanta University (HBCU) will continue to provide scholarships to undergraduate and graduate students in science, engineering, and other technical fields. CAU will conduct Saturday Science Academies for middle school students year around. Georgia Tech has joint research projects with Clark Atlanta University in the area of Smart Structures and Advanced Materials funded by the Army Research Office. This effort will be extended to include an undergraduate research component in order to attract them to graduate programs and provide a smooth transition to graduate school.

Georgia State University  Georgia State will continue to provide fellowships to graduate students from underrepresented groups. Ph.D. Students in the School of Education will design evaluations and conduct evaluations of Space Grant Programs.

Georgia Institute of Technology. The primary focus of Georgia Tech will be coordinating an exhibit during the 1996 Olympics in Atlanta which will show how NASA Spinoffs have enhances sports and sports medicine. Georgia Tech will further continue its research with Allison (Rolls-Royce) on High Temperature Materials. There will be continued funding of graduate students from underrepresented groups. Georgia Tech will also devote more funding to developing the network of universities in the consortium.

Kennesaw College will continue the one month college/community camp to help minority, middle school students from rural and suburban areas develop skills to motivate them to do well in science, engineering, and math (SEM); to provide minority students with information on career opportunities in SEM; and to provide positive images of SEM related subjects and individuals. This will be accomplished through guest speakers, laboratory work, research projects, career explorations, field trips, and seminars. Tutoring and mentoring continues year around. Parents, college students, local scientists, teachers, and community based organizations will all have key roles in this program.
Morris Brown College (HBCU) will distribute their package of education aids for elementary and high school students. The package details the role that science, technology, and engineering play in today's society. Modules of the educational package address various branches of science and engineering, with the focus on information technology, communication technology, transportation, biotechnology space sciences, and manufacturing.

The Distance Learning Center at Morris Brown will still be used to broadcast information to other schools in Georgia.

Spelman College (HBCU) continues with its network of mentors consisting of alumni and other individuals engaged in scientific careers. Fellowships will continue to be awarded to females through the Office of Science, Engineering, and Technical Careers. GRE preparation courses for Spelman seniors will continue to be taught by Georgia Tech's Space Grant Fellows, but this year Morehouse will be involved in the planning and administration. Support for travel to regional and national scientific meetings will increase. The Speaker's bureau will continue and the centralized collection of resource materials area will be updated; there will be more support for laboratory research; and further career development and professional enrichment counseling.

Tuskegee University (HBCU) will continue its K-12 training and tour program at the University’s National Historic Site and the NASA Center for Food Production, Processing and Waste Management for Controlled Ecological Life Support Systems. The College of Engineering at Tuskegee will continue working with the College of Engineering at Georgia Tech to design a retention program for alumni of Tuskegee who go to Tech for graduate school. Fellowships for undergraduate and graduate students will continue.

West Georgia College will continue the Aerospace Education Workshop for In-Service Teachers. The Workshop acquaints teachers with various aspects of NASA's Space Program and provides hands-on activities, speakers and field trips to Marshall and Kennedy Space Centers. West Georgia College will also work with local industry through the Advanced Test and Measurement Resource Facility in order to enable manufacturers to use the latest testing hardware and software to increase productivity. This effort will expand as the result of growth in 1995.

Mercer University will send engineers to rural Georgia to encourage interest in science and engineering as a career. Engineers and Scientists will provide demonstrations to motivate students and the general public. Mercer will also invite engineering, science and math majors having difficulty with Calculus to participate in a program based on the KUMON method for teaching mathematics. This effort will provide an alternative to the support provide through tutoring sessions and supplemental instructional efforts already under way. The KUMON method will stress individually paced learning based on drills and practice. Mercer will also
support the research of one student in her research on Control Strategies for Large Segmented Mirrors and provide travel funds for her and/or the faculty principal investigator.

Morehouse College will provide funding for students to attend conferences and give paper presentations; work in conjunction with Spelman College to provide GRE preparation classes; and start a speakers bureau to invite scientists and engineers from industry, government and academia to the campus. Morehouse will also provide seed money for students to start research projects in the Atlanta University Center, which consists of 4 other Historically Black Colleges and Universities.
## GEORGIA SPACE GRANT CONSORTIUM BUDGET
February 1996 - January 1997

<table>
<thead>
<tr>
<th>Category</th>
<th>Total</th>
<th>NASA</th>
<th>COST SHARING</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SALARIES</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Director (1/4 time)</td>
<td>19,000</td>
<td>12,600</td>
<td>6,400</td>
</tr>
<tr>
<td>Administrator</td>
<td>37,000</td>
<td>28,000</td>
<td>9,000</td>
</tr>
<tr>
<td>Additional Support</td>
<td>3,000</td>
<td>-0-</td>
<td>3,000</td>
</tr>
<tr>
<td>Fringe benefits 24.8</td>
<td>14,632</td>
<td>10,068</td>
<td>4,564</td>
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<tr>
<td><strong>TRAVEL</strong></td>
<td>6,871</td>
<td>5,750</td>
<td>1,121</td>
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<tr>
<td><strong>SUPPLIES</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Subscriptions</td>
<td>200</td>
<td>-0-</td>
<td>200</td>
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<tr>
<td>Memberships</td>
<td>500</td>
<td>-0-</td>
<td>500</td>
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<tr>
<td>Stationery</td>
<td>1,200</td>
<td>-0-</td>
<td>1,200</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>600</td>
<td>-0-</td>
<td>600</td>
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<tr>
<td><strong>PROGRAMS</strong></td>
<td></td>
<td></td>
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<tr>
<td>K-12 (SECME)</td>
<td>4,484</td>
<td>4,484</td>
<td>-0-</td>
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<tr>
<td>Higher Ed/Research</td>
<td>29,317</td>
<td>-0-</td>
<td>29,317</td>
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<tr>
<td>Seed money</td>
<td>0</td>
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<td>0</td>
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<tr>
<td><strong>EQUIPMENT</strong></td>
<td>5,000</td>
<td>-0-</td>
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<tr>
<td><strong>SUBTOTAL</strong></td>
<td>121,804</td>
<td>$60,902</td>
<td>$60,902</td>
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<tr>
<td><strong>FELLOWSHIPS</strong></td>
<td>100,000</td>
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<td><strong>SUBCONTRACTS</strong></td>
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<tr>
<td>Spelman</td>
<td>30,000</td>
<td>15,000</td>
<td>15,000</td>
</tr>
<tr>
<td>Tuskegee</td>
<td>50,000</td>
<td>25,000</td>
<td>25,000</td>
</tr>
<tr>
<td>Clark Atlanta</td>
<td>50,000</td>
<td>25,000</td>
<td>25,000</td>
</tr>
<tr>
<td>Georgia State</td>
<td>40,000</td>
<td>20,000</td>
<td>20,000</td>
</tr>
<tr>
<td>Southern Tech</td>
<td>46,000</td>
<td>23,000</td>
<td>23,000</td>
</tr>
<tr>
<td>*West Georgia</td>
<td>24,000</td>
<td>12,000</td>
<td>12,000</td>
</tr>
<tr>
<td>*Kennesaw</td>
<td>10,000</td>
<td>5,000</td>
<td>5,000</td>
</tr>
<tr>
<td>*Morris Brown</td>
<td>10,000</td>
<td>5,000</td>
<td>5,000</td>
</tr>
<tr>
<td>*Morehouse</td>
<td>20,000</td>
<td>10,000</td>
<td>10,000</td>
</tr>
<tr>
<td>*Mercer</td>
<td>20,000</td>
<td>10,000</td>
<td>10,000</td>
</tr>
<tr>
<td>*National Technical Assn</td>
<td>4,000</td>
<td>2,000</td>
<td>2,000</td>
</tr>
<tr>
<td><strong>SUBTOTAL</strong></td>
<td>304,000</td>
<td>152,000</td>
<td>152,000</td>
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<tr>
<td><strong>OVERHEAD</strong></td>
<td>82,046</td>
<td>42,098</td>
<td>39,948</td>
</tr>
<tr>
<td>*Subcontracts that have not fulfilled total overhead requirements.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Travel - $1000 - NASA REIMBURSEMENT FOR SPACE GRANT CONF 4/96</td>
<td>1,000</td>
<td>-0-</td>
<td></td>
</tr>
<tr>
<td><strong>GRAND TOTALS</strong></td>
<td>608,850</td>
<td>356,000</td>
<td>252,850</td>
</tr>
</tbody>
</table>
# GEORGIA SPACE GRANT CONSORTIUM

## Salaries, Wages, and Fringe Benefits

**February 1, 1996 - January 31, 1997**

**Georgia Tech**

<table>
<thead>
<tr>
<th>Position</th>
<th>Hours</th>
<th>Salary</th>
<th>Fringe Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erian Armanios, Director</td>
<td>1/4 time</td>
<td>$23,712</td>
<td>24.8% fringe benefits</td>
</tr>
<tr>
<td>Wanda Pierson-Jeter, Program Coordinator</td>
<td>full-time</td>
<td>$46,176</td>
<td>24.8% fringe benefits</td>
</tr>
</tbody>
</table>

**Spelman College**

<table>
<thead>
<tr>
<th>Position</th>
<th>Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty</td>
<td>$3,803</td>
</tr>
<tr>
<td>Fringe Benefits</td>
<td>$837</td>
</tr>
</tbody>
</table>

**Tuskegee University**

<table>
<thead>
<tr>
<th>Position</th>
<th>Hours</th>
<th>Salary</th>
<th>Fringe Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carlton Morris, Associate Professor</td>
<td>1/5 time</td>
<td>$6,337</td>
<td>16.5% fringe benefits</td>
</tr>
<tr>
<td>Summer, 50%</td>
<td>20 hours</td>
<td>$6,337</td>
<td>16.5% fringe benefits</td>
</tr>
</tbody>
</table>

**West Georgia College**

<table>
<thead>
<tr>
<th>Position</th>
<th>Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ben De Mayo, Campus Director</td>
<td>$4,000</td>
</tr>
</tbody>
</table>

**Kennesaw College**

<table>
<thead>
<tr>
<th>Position</th>
<th>Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Stipends</td>
<td>$3,000</td>
</tr>
<tr>
<td>($5.00 per hour - 12 students)</td>
<td></td>
</tr>
</tbody>
</table>

**Clark Atlanta University**

<table>
<thead>
<tr>
<th>Position</th>
<th>Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management</td>
<td>$12,783</td>
</tr>
</tbody>
</table>

**Mercer University**

<table>
<thead>
<tr>
<th>Position</th>
<th>Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty</td>
<td>$5,800</td>
</tr>
</tbody>
</table>

**TOTAL SALARY, WAGES AND FRINGES** $106,448 (Only Georgia Tech includes Cost Sharing)
**GEORGIA SPACE GRANT CONSORTIUM**

*Estimated Travel Breakdown -
February 1, 1996- January 31, 1997*

### Williamsburg, VA (Southern Tech, Georgia Tech, West Georgia travel)

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plane fare - $520 round-trip for 6 people</td>
<td>$3100</td>
</tr>
<tr>
<td>Per diem 4 days @ $35.00 for 5 people</td>
<td>$700</td>
</tr>
<tr>
<td>Rental car for 5 days @ $30.00 per day</td>
<td>$150</td>
</tr>
<tr>
<td>Hotel for 5 nights/5 people/$85 per day</td>
<td>$2125</td>
</tr>
<tr>
<td>Conference fees - $125 for 5 people</td>
<td>$625</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>$200</td>
</tr>
</tbody>
</table>

**TOTAL** $6900

**Purposes:**
- Fourth National Space Grant Conference
- Southeastern Space Grant Regional Director's Meetings.

### Warner Robbins Air Force Base (Georgia Tech travel)

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per diem 2 days @ $35.00 for 3 people</td>
<td>$210</td>
</tr>
<tr>
<td>Rental car for 2 days @ $25.00 per day</td>
<td>$50</td>
</tr>
<tr>
<td>Hotel for 1 nights/3 people/$60 per day</td>
<td>$180</td>
</tr>
<tr>
<td>Mileage @ 22 cents per mile - 140 miles</td>
<td>$31</td>
</tr>
</tbody>
</table>

**TOTAL** $471

**Purpose** - Annual Open house to increase awareness of aerospace industry and educational opportunities in the State of Georgia

### Marshall Space Flight Center - (Tuskegee travel)

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buses</td>
<td>$3300</td>
</tr>
<tr>
<td>Lodging</td>
<td>$1250 (25 rooms)</td>
</tr>
<tr>
<td>Tickets</td>
<td>$1200</td>
</tr>
<tr>
<td>Other</td>
<td>$3000</td>
</tr>
</tbody>
</table>

**TOTAL** $8750
Sci Trek
Atlanta, GA

Buses TOTAL $ 700

Spelman College

Travel for conferences $2100

Space Grant National/Regional Director's Meeting (Georgia Tech Travel)

No location - estimated annual costs $3000.

Augusta Georgia/Georgia Science Teachers Conference (Southern Tech Travel)

Rental Car for 2 days @ $25.00 per day $ 50
Hotel for 2 nights/2 people/$80.00 per day $ 160
Per Diem 2 days @ $35.00/2 people $ 140
Miscellaneous (tips, etc) $ 19
TOTAL $ 369

Travel to NASA Stennis (Southern Tech Travel)
Purpose: Space Grant Representative on panel

Plane Fare - $260 round trip $ 260
Hotel for 3 nights/$82.00 per day $ 246
Per Diem 3 days @ $35.00 $ 105
Miscellaneous (tips, etc) $ 19
TOTAL $ 630

Travel to Conference (Clark Atlanta University Travel)

Airfare $ 727
Registration $ 75
Hotel @ $235 per day $ 270
Car Rental $ 168
Per Diem @ $34 per day $ 102
Airport Parking $ 12

$1354

GRAND TOTAL $ 24,274