URE OMSS 2003 Messenger Project

URE OMSS Researcher - James Smith, Jr.
Messenger Mentors - Walter Mitnick and Lisa Segal

Research Project
Operating the Messenger and Stereo database system and implementing upgrades to the systems using Visual Basic. Beginning Perl/TK upgrades to the APL Epoch MOC.

THE MESSENGER PROJECT
A student intern program with mission engineers sponsored by NASA/Minority University Research and Education Division and The John Hopkins University/Applied Physics Laboratory MESSENGER, a NASA discovery mission, is a Mercury Surface, Space Environment, Geochemistry, and Ranging mission to orbit Mercury following two flybys of the planet. Understanding Mercury, and the forces that have shaped it, is fundamental to understanding terrestrial planets and their evolution. Scheduled to launch in 2004, MESSENGER will investigate key scientific questions regarding Mercury’s characteristics and environment using flyby data during a year-long orbit. View the Messenger web site here.

WELCOME LETTER
Dr. Linda Hayden
Center of Excellence in Remote Sensing Education and Research
Elizabeth City State University
Elizabeth City, North Carolina 27909

Dear Dr. Hayden:
The Minority University-Space Interdisciplinary Network (MU-SPIN) Program is proud to communicate its participation in your proposal entitled Space Science Research for Mathematics, Science and Education Majors within the MU-SPIN and ADMI Consortium of Minority Institutions. This activity will serve a vital role in making sure that the minority education community plays a role in supporting NASA’s ability launch some of the most challenging engineering and science feats known to mankind. Traditionally, the minority community has to learn what others have done, but with this activity we can be more proud because we participated in the creation of the spacecraft, its orbit, its communication back to earth and the science results. This activity is truly visionary and MU-SPIN is very pleased to play an important role.

Thank you for your invitation to be a part of this exciting education effort. Good luck with your proposal!

Sincerely yours,
James Harrington
MU-SPIN Project Manager

MESSENGER INTERNS
The MU-SPIN Messenger Program aids interns by:
• Providing internship placements within the MESSENGER Education Program Office.
• Providing internships in Astrophysics at SCSU
• Providing internships within the Applied Physics Lab related to MESSENGER
• Coupling interns with a NASA OSS mentor for 8 weeks each summer.

The MESSENGER project is needed to answer the science questions that include those below. MU-SPIN Interns are actively involved in assisting scientists to answer these questions.
• What planetary formational processes led to the high metal/silicate ratio in Mercury?
• What is the geological history of Mercury?
• What are the nature and origin of Mercury's magnetic field?
• What are the structure and state of Mercury's core?
• What are the radar-reflective materials at Mercury's poles?
• What are the important volatile species and their sources and sinks on and near Mercury?