

Students Send Microbe Experiment on Space Shuttle Atlantis

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(PhysOrg.com) -- An experiment by college students that will study how microbes grow in microgravity is heading to orbit aboard space shuttle Atlantis.

Undergraduate and graduate students at Texas Southern University in Houston developed the experiment that will fly as part of the STS-129 mission. The mission is scheduled to launch at 2:28 p.m. EST on Nov. 16 from NASA's Kennedy Space Center in Florida.

"I'm thrilled that giving students the chance to design and research an experiment to fly in space is one of the tools we have at [NASA](#) to engage them in science, technology, engineering and mathematics," NASA Deputy Administrator Lori B. Garver said. "These young people are our future, and providing an opportunity to inspire them is a major part of our mission at NASA."

NASA's Office of Education selected Texas Southern University as a 2008 University Research Center. Texas Southern established a Center for Bio-nanotechnology and Environmental Research. Students at the center developed the Microbial-1 experiment to evaluate the morphological and molecular changes in *E. coli* and *B. subtilis* bacteria.

"The University Research Center Project is designed to enhance the research infrastructure and capacity at minority institutions," said Katrina Emery, NASA's University Research Center project manager at the agency's Dryden Flight Research Center in Edwards, Calif. "By

engaging in participatory learning opportunities like this experiment, students can see themselves as researchers, now and in the future."

This space shuttle flight experiment is a proof-of-concept model for the URC project to give students hands-on experience. The experiment provides the university students the opportunity to design, monitor and execute the study in laboratories, as well as near real-time on the [space shuttle](#). Each component of the experiment is designed for easy reproduction in the classroom, providing a valuable experience to students.

"This is an amazing opportunity for our students, and it reflects the growing quality of our research programs at Texas Southern," said John M. Rudley, president of Texas Southern University. "We are excited our students have the opportunity to participate in such relevant research. We are also pleased that with our partnerships with area school districts, we are able to take these projects beyond the university to the school classrooms to encourage more students to study science, math, and technology."

The unique experimental data will be used to develop grade-appropriate microbiology modules for students in kindergarten through twelfth grade. Data downloaded from NASA's Payload Operations and Control Center will be available on the research center's Web site. In addition, educators will receive a teacher's guidebook featuring background information, lesson plans and student activities for conducting this project in their classrooms. BioServe Space Technologies at the University of Colorado is providing management support and hardware for the experiment.

Texas Southern University is one of 13 universities to receive grant funding from NASA's University Research Center project. The project is designed to enhance the research capabilities of minority-serving

institutions and increase the production of underrepresented and underserved students majoring in science, technology, engineering and mathematics disciplines.

Provided by JPL/NASA ([news](#) : [web](#))

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