

Inside Wallops

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GeneSat-1 Ready to Launch from Wallops

NASA's GeneSat-1 is set to launch into orbit on an Air Force rocket on Dec. 11 from NASA's Wallops Flight Facility, Wallops Island, Va. The launch window extends from 7 a.m. to 10 a.m. EST.

GeneSat-1 is a 10-pound satellite that will carry bacteria inside a miniature laboratory to study how the microbes may respond in spaceflight. It is a secondary payload on an Air Force four-stage Minotaur 1 rocket delivering the Air Force TacSat 2 satellite to orbit.

"The Small Satellite Office at NASA's Ames Research Center teamed up with industry and local universities to develop the fully automated, miniature GeneSat spaceflight system that provides life support for small living things," said S. Pete Worden, director of NASA's Ames Research Center, Moffett Field, Calif. GeneSat-1 was designed and built at Ames, and the mission will be managed from the center.

"During this mission, we are exposing bacteria to the space environment to see how they are affected," said John Hines, GeneSat-1 project manager at Ames. "It is the first of many small satellites that will give scientists the opportunity to inexpensively investigate fundamental biological questions such as the weakening of the immune systems and the effects of drug therapies during spaceflight."

GeneSat-1's onboard micro-laboratory includes sensors and optical systems that can detect proteins that are the products of specific genetic activity. The GeneSat-1 ground control station at Ames will receive data radioed from the micro-laboratory after it has completed its observations and tests of the bacteria inside.

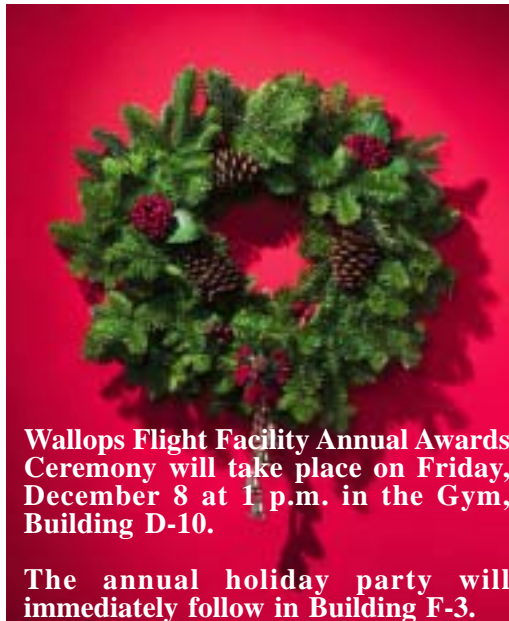
The biological test will last only 96 hours, but the GeneSat-1 team will evaluate the stability of the orbiting payload's systems for four months to a year. Air pressure,

temperature and humidity are controlled aboard GeneSat-1. Light emitting diodes illuminate analytical sensors that help scientists detect genetic activity by measuring proteins that glow.

The knowledge gained from GeneSat-1 will help scientists understand how spaceflight affects the human body; specifically, the intestinal bacteria that help human beings digest food. NASA's Exploration Systems Mission Directorate provided funding for the payload's initial development.

Students from several universities are making major contributions to the mission. California Polytechnic State University, San Luis Obispo, developed a launch "pod" that will protect and eject the satellite once it is flown into space. Stanford University, Calif., developed the satellite's data collection and transmission equipment and its solar power generator.

Students from Santa Clara University, Calif., will control the spacecraft in orbit from the Ames mission operations center. They also developed software that will send commands to the satellite, analyze spacecraft health and calibrate biological data sent to Earth.



Wallops Flight Facility Annual Awards Ceremony will take place on Friday, December 8 at 1 p.m. in the Gym, Building D-10.

The annual holiday party will immediately follow in Building F-3.



James Mason-Foley Photo

TacSat-2 is ready for launch.

Wallops Shorts.....

Launch

A NASA Terrier-Black Brant sounding rocket was launched from White Sands Missile Range, N.M., on November 21. The mission was to obtain the first soft x-ray spectrum of the entire Cygnus Loop. Good data was obtained, and the payload was recovered. Dr. Webster Cash, University of Colorado, was the principal investigator. Bruce Scott, NASA Sounding Rocket Operations Contract (NSROC), was the mission manager.

In the News

Eastern Shore News, "Wallops Looking to Grow – Spaceflight Facility Already is Huge Economic Boost"

Baltimore Sun, "Sky-High Hopes for Future of Wallops, Va., Md. Officials Foresee Busy Niche for Launch Facility"

Space News, "Back in the Orbital Launch Game"

Baltimore Sun, "Into the Wild Green Yonder"

Virginia Pilot, "Rocket Will Carry Buzz to Develop East Coast Hub"

We are a Diverse Community

by Mike Ryschkewitsch, Deputy Director

As the holiday season draws near, I want to take time to reiterate what it means to be inclusive and respectful of the differences that each of us brings to the workplace.

NASA and GSFC have engaged in a continuing effort to build an inclusive organizational climate in which each of us is respected, appreciated, valued, and given an opportunity to make the most of our talents and skills, regardless of our beliefs, culture, and lifestyle. We come together to get the job done and achieve great things.

Our success depends on having people who are creative, who feel able to put forth different perspectives, and who feel safe in bringing their diverse viewpoints to meet NASA's challenges.

We should remind ourselves of our Workplace Vision in which Goddard employees respect, appreciate, and value individual differences so that we can capitalize on the strengths of a diverse workforce to better perform our mission through teamwork and innovation.

Working together does not mean that we have to change our own beliefs. It does mean that we should respect and not disparage the beliefs of others. We should not need to hide our differences, but we should be mindful of making others uncomfortable. Respectful dialogue to increase understanding is always in order. We are all entitled to work in a non-threatening environment where we are valued for what we can contribute.

There are several ways that you can contribute personally toward making GSFC a more inclusive environment. One is in being mindful of providing

opportunities to those who we might not normally consider because they have yet to prove themselves as the "go-to" people. Another is having a zero tolerance for discriminatory and harassing behaviors. To better understand the Agency's position on maintaining a non-threatening workplace environment, I would encourage you to revisit the NASA Policy Statement on Non-Harassment at <http://internal.gsfc.nasa.gov/>, under Employee Services.

Another way is recognizing that certain dates and events carry special significance to our employees. Please be mindful that not everyone shares your heritage and will be comfortable sharing your celebrations. Also remember that someone else's celebration isn't a belittlement of your beliefs. To aid you in identifying these events, I would encourage you to check out two calendars located on our internal websites.

A calendar of diversity events and dates for various national, international, religious, and other types of observances and holidays can be accessed at http://diversity.gsfc.nasa.gov/resources_web.cfm, under Diversity & Work Life Resource Center, and selecting Diversity Calendar. The Equal Employment Opportunity calendar can be accessed at <http://eeo.gsfc.nasa.gov>.

The GSFC diversity definition has been updated to be more inclusive by stating that "Diversity includes a number of important human characteristics that affect an individual's values and opportunities and perceptions of self and others at work. These characteristics include, but are not limited to age, ethnicity, gender, ability, race, sexual orientation, religion, and family status." This definition can be viewed at <http://diversity.gsfc.nasa.gov/diversity.cfm>.

Thanks for the Hospitality

"I would like to recognize Dawna Marr's (Computer Science Corporation) efforts today at NASA Wallops Flight Facility.

Dawna is currently working on renewing the NASA badges for our flight crew. In the interim, she has gone extra miles to make our life easier while we are out there. She has gone and picked up our lunch at the local deli twice. It is truly a hospitality that isn't expected and something that shouldn't go unacknowledged.

We are truly lucky to have her as our representative and I'm sure that she is as vital an asset to you..."

LT Matt LeWare
Naval Air Station Pax River SAR

Children's Christmas Party

For children ages 5-16

December 21

6 – 8:30 p.m. at the
Cropper Center

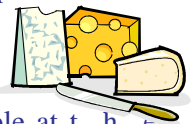


Children will be
registered on a first
come, first served basis.

Call Sandra Banks at x2526 or Rebecca Beach at x1625 by December 15 to register. Sponsored by the Wallops Black History Club.

Cheese Orders

The Wallops Exchange and Morale Association (WEMA) will be accepting cheese orders until December 7.



Order forms are available at the Exchange Store in Building E-2 or electronically from Karen.S.Thornes.1@gsfc.nasa.gov.

The completed form should be faxed to x2150 or turned it at the Exchange Store from 10 a.m. to 2 p.m.

For further information call George Brothers at x1528.

Physics – On-Line

The Eastern Shore Community College, Melfa, Va., is offering Physics as an on-line class this spring. Physics is offered infrequently, and this is the first time it is being offered as a Web-based class. If you plan on pursuing a degree in engineering, you will need this class.

For further information go to the college's web site at <http://www.es.vccs.edu> or call Nancy Collins at (757) 824-0763 or (757) 787-5590



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