



News from the Savannah River National Laboratory

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Energy Department Honors Laboratory for Satellite Work

Aiken, S.C. – Robert E. Waldron, National Nuclear Security Administration Assistant Deputy Administrator for Nonproliferation Research and Engineering, this week honored the Savannah River Technology Center, the Savannah River Site's applied research and development laboratory, for its work on the Multispectral Thermal Imager satellite, a key NNSA research satellite project.

SRTC Vice President and Director Susan Wood accepted the award from Waldron on behalf of the lab's Multispectral Thermal Imager satellite team.

The Multispectral Thermal Imager satellite, a research and development project involving a number of government, industry and university laboratories, was launched approximately a year ago and will gather images for about three years, using highly advanced imaging technologies. SRTC's role in the project is to develop, deploy and use a variety of sensors to gather "ground truth" data, measuring surface properties. SRTC and other research organizations will compare the satellite data with the ground truth data to develop engineering, processing and analytical techniques. SRTC's "understanding of what these measurements mean" is a major contribution to the program, according to Waldron.

In a visit to SRTC, Waldron commended the SRS lab for their technical contributions to the project, along with the teamwork that is making the satellite possible. "That is one of the most significant achievements," Waldron said. "Three labs – SRTC, Sandia National Laboratory and Los Alamos National Laboratory – got together and were able to feed on each other's strengths."

Sandia National Laboratory led the development of the satellite, which carries an advanced ground-imaging system that very accurately measures the "brightness" of various features in 15 visible and infrared spectral bands. (Only three bands are visible to the human eye.)

These techniques could be used in future satellite systems to address national needs including military and treaty monitoring, hazardous waste site characterization and climate research.

For the first three months of its mission, the satellite underwent complex checkout and calibration procedures, before beginning its research and development work. During its three-month checkout, MTI collected images of a number of sites. These images may be viewed at www.sandia.gov/media/NewsRel/NR2000/mti.htm

MTI is a jointly funded project. The National Nuclear Security Administration is the primary funding agency, responsible for development of the satellite and ground components, on-orbit operations and treaty monitoring R&D. The Department of Defense funded the launch through the Air Force Space Test Program, and additional ongoing R&D funding is being provided to individual researchers by their respective agencies.

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Major project participants include the three DOE laboratories, the Air Force Research Laboratory, Ball Aerospace, Raytheon, TRW and Utah State University's Space Dynamics Laboratory.

The satellite also carries a High-energy X-Ray Spectrometer (HXRS) sponsored by the National Oceanic and Atmospheric Administration's Space Environment Center and the Czech Republic's Astronomical Institute of the Academy of Sciences, and developed by Space Devices, Ltd. of the Czech Republic. This research and development instrument will monitor the sun to collect data needed to better understand a rare species of solar flare known to be associated with high-energy particle storms that can endanger astronauts and damage space equipment.

(Note: In addition to the downloadable photos available online, photos of the award presentation are available from the media contact above.)

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