



AMETEK Advanced Measurement Technology
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SUNPOWER CRYOCOOLERS DELIVERED TO INTERNATIONAL SPACE STATION

April 25, 2014

ATHENS OH – Two CryoTel® CT-F cryocoolers designed and manufactured by Sunpower Inc., Athens, OH, were delivered to the International Space Station (ISS) as part of a SpaceX mission, which docked with the space station on April 20, 2014. The unmanned SpaceX mission, dubbed CRS-3, delivered 5,000 pounds of science experiments, a pair of high-tech legs for Robonaut 2, a high-definition Earth-observing camera suite, a laser communications experiment, spare parts, food, clothing and other supplies.

The Sunpower CryoTel CT-F cryocoolers were incorporated into the General Laboratory Active Cryogenic International Space Station Experiment Refrigerator (GLACIER) from the University of Alabama's (UAB) Birmingham Center for Biophysical Sciences and Engineering. The cryogenic refrigerator is used aboard the ISS to conduct scientific experiments. The current experiment involves protein crystal growth in zero gravity.

The GLACIER refrigerator was developed to provide cryogenic preservation of samples aboard the ISS and to transport cryogenic samples to and from space station. The refrigerator is able to achieve temperatures from 4°C (39°F) to -185°C (-301°F). Measuring less than two feet on all sides, the refrigerator fits within the station's mid-deck size constraints and is able to support up to 22 pounds of research samples. The GLACIER's sophisticated telemetry capabilities allow NASA's Huntsville Operations Support Center, the Johnson Space Center in Houston and UAB to continually monitor its status aboard the ISS.

Each of the GLACIER's Sunpower CryoTel® CT-F cryocoolers has been qualified for 10 launch missions by UAB without any maintenance or requalification needed, enabling NASA to make many return trips with scientific payloads. UAB has successfully launched 16 CryoTel CT-F units to the ISS to date.

Sunpower's high-reliability cryocoolers are suitable for use anywhere liquid nitrogen is used. They provide cryogenic cooling for such applications as radioisotope detection, materials research, high-temperature superconductivity, cryogenic preservation, laser cooling and medical devices.

Sunpower is a unit within AMETEK Advanced Measurement Technologies (AMT), which is a division of AMETEK, Inc, a leading global manufacturer of electronic instruments and electromechanical devices with annual sales of \$3.6 billion. More information is available at www.sunpower.com

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[Click here for a hi-res image of the Sunpower CryoTel CT-F cryocooler \(bottom\)
and the GLACIER cryogenic refrigerator](#)