

GREAT spectrometer readied for flight on SOFIA

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The German Receiver for Astronomy at Terahertz Frequencies, or GREAT, spectrometer was installed on SOFIA's telescope on March 18, 2011. Credit: DLR/GREAT

(PhysOrg.com) -- Scientists recently completed a series of nighttime, ground-based testing of the German Receiver for Astronomy at Terahertz Frequencies, or GREAT, spectrometer in preparation for a series of astronomical science flights on the Stratospheric Observatory for Infrared Astronomy in April. With the SOFIA 747SP aircraft positioned on the ramp outside NASA's Dryden Aircraft Operations Facility, the upper door covering the telescope was opened and GREAT's interaction with the telescope was evaluated.

The GREAT instrument is a receiver for spectroscopic observations at far-infrared frequencies between 1.2 and 5 terahertz (wavelengths

between 60 and 250 microns). Those wavelengths are not accessible from ground-based telescopes because of atmospheric water vapor absorption.

GREAT is one of two first-generation instruments built for SOFIA by a consortium of German research institutes, including the Max Planck Institute for Radio Astronomy, the University of Cologne, the German Aerospace Center and the Max Planck Society. The Max Planck Society and German Research Society financed the development of the instrument.

SOFIA is a joint venture of [NASA](https://www.nasa.gov/) and the German Aerospace Center DLR. NASA supplied the aircraft and the telescope was built in Germany. NASA's Dryden Flight Research Center manages the SOFIA program. NASA's Ames Research Center at Moffett Field, Calif., manages SOFIA's scientific mission. The Universities Space Research Association, in Columbia, Md., and the German SOFIA Institute in Stuttgart, Germany, operate SOFIA's scientific mission operations respectively for NASA and the DLR.

Provided by JPL/NASA

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