



DLR to be first user of Earth sensing platform MUSES on ISS

02 October 2013

DLR and Teledyne sign memorandum of agreement

On 1 October 2013, Teledyne Brown Engineering, Inc., subsidiary of Teledyne Technologies Incorporated, and the German Aerospace Center (Deutsches Zentrum für Luft- und Raumfahrt; DLR) signed a memorandum of agreement to develop an instrument for the Multi-User System for Earth Sensing (MUSES), which will be mounted on the International Space Station (ISS).

"Aerospace has no greater task than to observe Earth and its ecosystems from space. It is effective to use existing platforms, such as the ISS, as carriers of Earth observation instruments," explained Professor Johann-Dietrich Wörner, Chairman of the DLR Executive Board. "We are delighted at the formation of this partnership between science and industry, which through its very existence will be a catalyst in the ongoing development of new Earth observation systems."

A flexible view of Earth

MUSES, the first commercial Earth-sensing platform on the ISS, will further increase the Space Station's research capabilities. The instruments installed on the platform – including high-resolution digital cameras – are oriented towards Earth. The platform can host up to four Earth observation instruments and offers the ability to change, upgrade, and robotically service those instruments.

DLR will develop and deliver a Visual/Near-Infrared Imaging Spectrometer to be integrated with Teledyne's MUSES platform, currently being developed under a cooperative agreement with NASA. In future and among many other tasks, the spectrometer will provide valuable information on the atmospheres over oceans and their bio-geophysical composition. The instrument will occupy one of the four Earth-looking instrument sites on MUSES.

Using the collected data

The data collected from space can be used in scientific, commercial, educational and humanitarian fields. Its high spectral quality allows for the detection of changes in land surfaces, oceans and the atmosphere, and hence the development of measures to protect the environment and climate.

Operating in the wavelength range from visible through the near infrared, the instrument will enable precise data acquisition from Earth's surface for applications including fire-detection, change detection, maritime domain awareness, and atmospheric research. Teledyne will be responsible for integrating and operating the instrument, and will collaborate with DLR in several areas, including basic and applied research for use of data. Teledyne Brown will finalise the design and construct, integrate and test the platform before delivering it to NASA by the end of 2014. The Earth observation instrument is expected to be operational on MUSES by late 2015.

Background

Teledyne Technologies is a leading provider of sophisticated instrumentation, digital imaging products and software, aerospace and defence electronics, and engineered systems. Teledyne Technologies' operations are primarily located in the United States, Canada, the United Kingdom and Mexico. In 2012, Teledyne Brown Engineering, Inc., in Huntsville, Alabama was

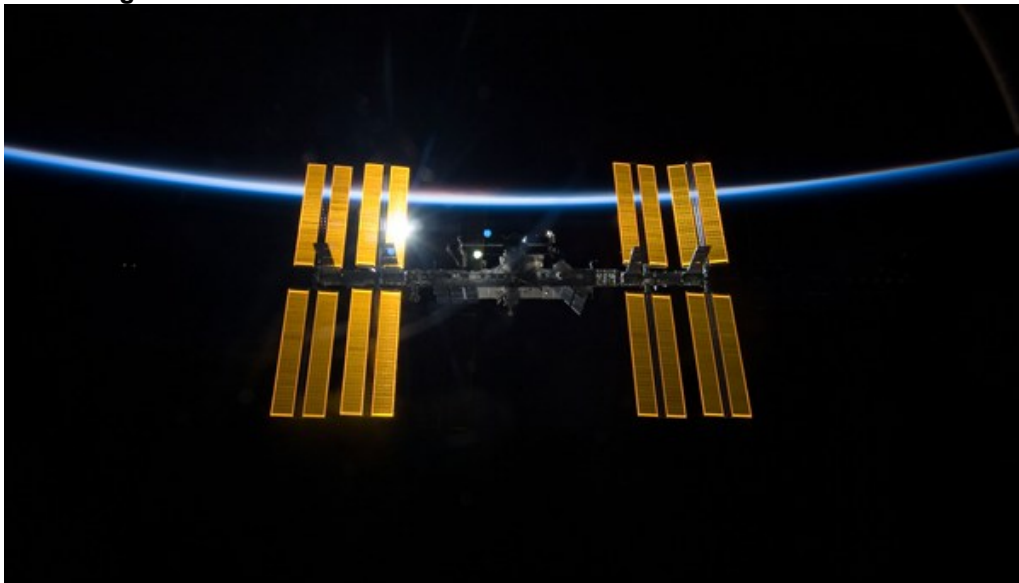
awarded a Cooperative Agreement by the National Aeronautics and Space Administration (NASA) to foster the commercial use of the ISS.

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Observing Earth from the ISS



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Credit: NASA.

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