

News Archive Space 2010

Inauguration of the first DLR ground station in Canada

10 August 2010



DLR receiving station in Inuvik, Canada

On 10 August 2010, the German Aerospace Center (Deutsches Zentrum für Luft- und Raumfahrt; DLR) inaugurated its first satellite data receiving station in Inuvik, Canada. DLR will use the new ground station particularly to receive data for the German TanDEM-X satellite mission. Using the large, 13-metre antenna, partner countries Germany and Canada as well as scientists from around the world and other external users will be able to access important satellite data, process and evaluate them. The development of new technologies for Earth observation is an important joint objective.

Cooperation between DLR, the Canadian Space Agency (CSA) and the Canada Centre for Remote Sensing (CCRS) has existed for many years and will be taken a step further with this new receiving station. "The commissioning of the first DLR ground station in Canada opens a new chapter in German-Canadian cooperation in space. For the first time, facilities of both countries will use their competencies together to receive Earth observation data at a joint location," said Prof. Johann-Dietrich Wörner, Chairman of the DLR Board.

Reliable and close to the pole

Located in the western Arctic, Inuvik is the northernmost settlement in Canada that is accessible by road throughout the year. The new DLR ground station is located inside the Arctic Circle. This guarantees that the antenna can achieve long duration, multiple daily contacts with all Earth observation satellites in polar orbits and ensures seamless data reception. This is an important condition for TanDEM-X to carry out 3D observations of Earth's surface – the mission was launched on 21 June 2010. During this mission, a data volume of up to 350 gigabytes will be read from the onboard memory of the high-resolution radar satellites TerraSAR-X and TanDEM-X, daily, and transferred to the ground. This enormous amount of data requires multiple line-of-sight contacts with a connection time of over two and a half hours per day.

Panorama of the DLR ground station in Canada

DLR has operated a near-polar receiving station at the O'Higgins base on the Antarctic Peninsula for several years, and has pioneered the construction and operation of ground stations in the Antarctic. In addition, DLR also has receiving facilities available at Kiruna in northern Sweden, with its partner, the

Swedish Space Corporation. The new Canadian facility completes DLR's global network of receiving stations that are operated by DLR's German Remote Sensing Data Center (Deutsches Fernerkundungsdatenzentrum; DFD) in Oberpfaffenhofen.

Cooperation Agreement between Germany and Canada

The starting signal for the commissioning of the new DLR ground station was given in February 2010. DLR signed a bilateral Cooperation Agreement with CCRS for receiving satellite data in Canada. CCRS makes land available in the context of this contract. The commercial partner, PioraNet Canada (PNC) – a joint venture between the Canadian company Iunctus Geomatics and the Swedish Space Corporation – is responsible for the maintenance and development of the site. As a next step, PNC will build another, identical base station on the site in Inuvik, to mainly serve the Earth observation missions of the French space agency, CNES. A Canadian Government meteorological station is already located at the site. DLR plans to extend this successful cooperation in the future and to create a ground station centre in Inuvik with international cooperation.

Related Contacts

Corporate Communications

Tel: +49 2203 601-2116

Fax: +49 2203 601-3249

E-Mail: kommunikation@dlr.de

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