

# GOCE begins its journey to launch site

July 29 2008

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In orbit, the same side of the GOCE satellite remains facing the Sun. The spacecraft is equipped with four body-mounted and two wing-mounted solar panels. Due to the configuration in orbit, the solar panels will experience extreme temperature variations so it has been necessary to use materials that will tolerate temperatures as high as 160°C and as low as -170°C. Credits: ESA - AOES Medialab

(PhysOrg.com) -- GOCE, the first of a series of Earth Explorer satellites to be launched into orbit, has taken off aboard an Antonov-124 cargo aircraft for its flight to the Arkhangelsk Airport in Russia, en route to Russia's Plesetsk Cosmodrome, about 800 km north of Moscow.

Preparations for the transport of the spacecraft began on 23 July when it was packed in its own nitrogen-pressurised container inside the GOCE clean room at ESA's European Space Research and Technology Centre (ESTEC) in Noordwijk, the Netherlands.

The container was transported on Tuesday 29 July by truck to Schiphol Airport in Amsterdam, where it was loaded into the Antonov aircraft.

The spacecraft is not travelling alone – 11 other containers carrying a host of vital support gear, including electrical and mechanical ground support equipment, are accompanying it.

Four ESA and five Thales Alenia Space (Italy) GOCE Launch Campaign team members are on the plane to monitor the spacecraft and perform all the operations needed until it reaches its final destination.

The flight is scheduled to land in Arkhangelsk on Tuesday at 20:00 local time and undergo custom clearance overnight. Once cleared, the Spacecraft Transport Container and the other containers will be transported by trucks to the local train station where they will be loaded onto goods wagons.

From here, the containers will travel by a special train with escort personnel for the remainder of their 200-km journey southward to Plesetsk Cosmodrome, where they are due to arrive on 31 July. Upon arrival, expected at about 16:00 local time, the spacecraft and other containers will be unloaded into the launch base.

After the satellite is unpacked, a final check will be carried out before being mounted onto its Rockot launch vehicle 13 days prior to launch.

Due to the large number of supplies travelling with GOCE, the cargo was split in two parts to reduce transportation costs. One part, containing ground support equipment, was packed in advance in order to be transported by sea rather than by plane.

On 17 July, nine containers with non-critical material were taken to Antwerp, Belgium, to prepare for travel by boat. The ship departed on

24 July and is scheduled to arrive at Archangel between 31 July and 1 August.

Once in the port of Arkhangelsk and after custom clearance, the cargo will be transferred with a special train to Plesetsk on 4 August, arriving the following day.

GOCE, designed to provide information for understanding critical Earth System variables by mapping our planet's gravity field in unprecedented detail, is scheduled for launch on 10 September 2008.

Provided by ESA

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