



## GOCE Science Data Processing System – Status and Plans

R. Rummel, Th. Gruber, and the European GOCE Gravity Consortium Team

Technische Universität München, Institut für Astronomische und Physikalische Geodäsie, München, Germany  
(rummel@bv.tum.de, 49 89 28923178)

The launch of the GOCE mission is foreseen for spring this year. Its objective is the measurement of the Earth's gravity field and geoid with high precision and spatial resolution. One of its primary goals is the determination of the global surface ocean circulation, in conjunction with more than 15 years of satellite altimetry data. Ocean circulation and derived from it ocean transport and sea level change are key parameters in climate modelling. GOCE will also contribute to solid Earth physics, geodesy and surveying.

GOCE is unique in several ways. It carries the first satellite gravity gradiometer. This very delicate instrument consists of three orthogonal pairs of high precision accelerometers. The measurement principle is differential accelerometry. Its orbit altitude is less than 270 km. It is kept in this low orbit free by active drag compensation in flight-direction. Attitude control is done by magnetic torquers. Stiff carbon sandwich material and temperature stabilization prevent gravitational noise from the spacecraft.

The presentation will inform about the status of the mission in terms of science data processing and will present the plans for GOCE gravity field product generation.