



GOCE gravity field models – signal and error assessment

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In October 2013 the GOCE successfully completed its mission and delivered a unique data set of gravitational gradients of the Earth gravity field. During the final mission phase the satellite orbit was lowered in several steps by all together 30 km with respect to the operational orbit. By being closer to the attracting masses the sensitivity of the satellite to the Earth gravity field could be increased significantly. ESA's high level processing facility delivered in July 2014 the 5th and ultimate release of the GOCE gravity field models, which is based on the complete mission data set. Based on these GOCE models various combinations with other data sets like GRACE or terrestrial data were performed in order to further enhance their long wavelength quality or their spatial resolution. The paper provides an overview about the characteristics of the GOCE based gravity field models and makes an attempt to derive absolute quality parameters in order to proof that the mission goals have been achieved.