



Assessment of force models in the context of gravity field recovery at IfE

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Dynamic precise orbit determination using variational equations allows utilizing precise K-Band range rate measurements of the Gravity Recovery And Climate Experiment (GRACE) mission. These precise measurements are used to estimate the Earth's gravity field in terms of spherical harmonic coefficients.

This approach was successfully implemented at Institut für Erdmessung (IfE), Hannover and makes possible to derive monthly gravity field solutions that agree well with monthly solutions of official analysis centers. Force modeling can be regarded as one of the crucial parts of gravity field recovery using the variational equations approach. In this contribution, force models are assessed in the framework of gravity field recovery at IfE.