GOCE L1b data processing

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In this paper, the processing steps carried out to transform the raw GOCE gradiometer measurements (L0) to the level of gravity gradients (L1b) are discussed. The processing can be divided into two major parts: calibration and nominal, here we focus on the nominal processing part. The nominal processing steps include the conversion of the measured control voltages to accelerations, the combination of gradiometer measurements and star tracker observation to form the angular rate to the derivation of the gravity gradients themselves. For each processing step the applied filters and algorithms are discussed and evaluated.