



GRACE sensor performance and oceanic mass variations

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The GRACE gravity field solutions obtained so far do not yet fully meet the expected accuracy. Improvements are expected e.g. from optimization of data processing and due to the decrease of the satellite orbit height. Temporal mass variations in the oceans have relatively small amplitudes. For their detection in the GRACE signal, it is important to know the actual accuracy limit that can be expected. We present new estimates of the gravity field accuracy to be expected based on a performance analysis of the GRACE ranging system and accelerometers. The results are compared to signal amplitudes of oceanic bottom pressure variations on monthly and other time scales which are estimated from ocean models.