

MEASURING INTERANNUAL CHANGES IN OCEAN BOTTOM PRESSURE with
GRACE

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ABSTRACT

The GRACE mission (<http://ftp.csr.utexas.edu/grace>) has the unusual potential to measure ocean bottom pressure averaged over 1 month and a few hundred km, monthly for five years, with an accuracy of order 1 mm. The mere potential of such measurement has already had useful consequences, among them a reevaluation of the role of ocean bottom pressure, a relatively neglected variable, which measures the mixing of vorticity (C. Hughes, 1999). Another consequence has been the realization of the energy level in short period (order days) ocean bottom pressure variability, and the need to model and remove such signals from altimetric sea level, lest they introduce significant aliasing into monthly and longer retrieved signals. One issue that has not received much attention yet are the expected signals in bottom pressure over interannual time scales. Here we present estimates based on the analysis of 18 years of ocean bottom pressure from the JPL/ECCO model setup, together with spot checks based on BPR and other in-situ data.