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GRACE Validation with Bottom Pressure Records in the Southern Ocean

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Time series of deep ocean bottom pressure records (BPRs) positioned in the ACC are compared with GRACE (Gravity Recovery And Climate Experiment) equivalent water heights for solutions from different data centers. An analysis of the correlation is performed for monthly averages and pressure differences between the locations expressed in terms of geostrophic transport. We find that smoothed GRACE solutions are strongly correlated with the BPR data with correlation coefficients up to 0.7-0.8. The measurements of the bottom pressure recorders are representable for large scale oceanic signals which are also detected by GRACE.