



## **The effect of variation in Baltic sea level on GRACE gravity field solutions**

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The monthly global gravity field solutions from GRACE are corrected for ocean variability. However, no correction is applied for the variability of the Baltic Sea. Variations in the Baltic level on time scales from hours to years result from internal mass redistribution and from mass exchange with the North Sea, both mostly wind/pressure-driven. We estimate the contribution of this variability to GRACE monthly solutions. We then discuss the implications for the determination of variation in terrestrial water storage and for the determination of postglacial rebound from GRACE.