

Johann Wunsch
Peter Schwintzer
Svetozar Petrović

**Comparison of two
different ocean tide models
especially with respect to the
GRACE satellite mission**

Scientific Technical Report STR05/08

Contents

1	Introduction: Goals of the GRACE gravity mission	3
2	Spatio-temporal aliasing	5
3	Gravity perturbations caused by ocean tides	8
4	Data sets used: ocean tide models CSR 4.0 and FES2004	9
5	Calculations of ocean tide effects	12
5.1	Monthly means of tidal elevation differences	12
5.2	Orbital simulations	12
6	Results and visualization	15
7	Conclusions	22
	Acknowledgements	23
	References	24
	Appendix A: Summation of the ocean tide height harmonics	28