



Gravity Recovery and Climate Experiment (GRACE) Education and Public Outreach

M. Baguio, S. Bettadpur, J. Ries, D. Chambers

(1) The University of Texas at Austin Center for Space Research, Texas, USA, Texas Space Grant Consortium, Texas, USA (baguio@csr.utexas.edu / Fax: 512-471-3585 / Phone: 512-471-6922)

If Earth were a smooth sphere composed of similar elements or ingredients, there would be no need for a mission to study gravity; the assumption made in most introductory physics courses that the acceleration due to Earth's gravitational field has a constant value would indeed be correct – end of story. However, previous observations have clearly demonstrated that our Earth isn't smooth and homogeneous and it really isn't even a sphere. The reality is that the gravity field is continually changing, mostly due to variations in water content as it cycles between the atmosphere, oceans, continents, glaciers, and polar ice caps. A partnership between NASA, The University of Texas at Austin, Texas Space Grant Consortium, and educators from throughout the United States provided the opportunity for students to learn about the Gravity Recovery and Climate Experiment (GRACE) mission. The experiences provided during educator workshops, developed classroom lesson plans, and on-line activities will be shared in the hopes that others may increase their understanding of gravity and be able to incorporate these lessons into their regular teaching activities.