The Planetary Geology and Geophysics tasks under this grant have concentrated on the development and testing of tools for remote compositional analyses for the Moon and other airless bodies (especially asteroids). The grant has supported the PI and her students. Detailed analyses of space-weathering analogs were undertaken. Lunar research included development of models for regolith evolution and redistribution of materials across the Moon, with particular emphasis on the interior of South Pole-Aitken Basin. Lunar compositional analyses identified general rock types using Clementine data and mapped their distribution globally and locally based on the type of mafic mineralogy present (or lack thereof). Progress in these areas has been extensively discussed in the literature and in proposals submitted to the PGG program in 2003 and 2004. A summary of scientific publications resulting directly from the research supported by NAG5-10401 is presented below. Copies of any of these will be happily provided on request.


Ueda, Y., T. Hiroi, C. M. Pieters, and M. Miyamoto, Expanding the modified Gaussian model to include the space weathering effects: estimation of the weathering degrees of pulse-laser treated olivine samples, *Lunar Planet. Sci. XXXIII*, LPI, Houston, TX, CD-ROM, #1950, 2002.