



GRACE Mission: Assessments of Recent Developments and Future Plans

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By the time of this presentation, the joint NASA/DLR GRACE mission, originally planned for a five-year lifetime, will complete nine years of successful on-orbit operation. During this time, the time-variable and long-term mean gravity field data products from GRACE have revolutionized our ability to measure the global mass-transport and thus understand the underlying climate processes.

In order to ensure the longest possible climate data record from GRACE, the project team has recently implemented a new operations approach in response to the declining on-board battery conditioning. This new approach has implications on the quality of the science data, primarily in the vicinity of the orbital passage through the deepest Earth-shadowing periods. The most recent such episode impacts the data in late Fall 2010, and will continue to do so until early Spring 2011.

This presentation reports on the new operations approach, and provides details of the impact on the GRACE science data. Possible approaches for the mitigation of effects of data degradation are presented. Assessments of the impact on the GRACE time-variable gravity field data products will be discussed. The presentation will close with a discussion of the overall status and future prospects for the GRACE mission.