



Further Plans for the GRACE Mission

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The twin satellites of the Gravity Recovery and Climate Experiment (GRACE), which were launched on March 17, 2002, operated for more than 15 years. The mission objectives are to sense the spatial and temporal variations of the Earth's mass through its effects on the gravity field at the GRACE satellite altitude. The 15-year record of GRACE measurements recorded the seasonal cycle of mass transport between the oceans, land, cryosphere and atmosphere; its inter-annual variability; and the climate driven secular, or long period, mass transport signals. The global perspective and the accuracy of the measurements provided paradigm shifting insight into the Earth system interactions. Following a loss of battery capability, the nominal mission ended on October 10, 2018, when efforts to return to the science operations mode on exiting from the latest solar occultation period were unsuccessful. The last data collected was for the month of June, 2017. This early mission end will dictate a break of approximately one year between the GRACE and GRACE FO Missions. This presentation will review the events leading to the mission end, describe the issues that influence the operations philosophy during the late mission years and the issues related to establishing continuity with the GRACE FO mission and summarize some of the significant science accomplishments. Finally, the plans and time line for the final mission data analysis will be describe.