

Overview of Galileo Observations of Icy Satellites

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The Galileo spacecraft has been in orbit around Jupiter since December 7, 1995. During the course of its two year long prime mission, one of the mission's major objectives is the study of the physical state, chemical composition, and geological history of the major satellites. Understanding the interactions of the satellites with the magnetospheric environment is another major goal. The basic orbital "tour" of the jovian system includes ten close (typically within a thousand kilometers altitude) flybys of Europa, Ganymede and Callisto. There are also multiple opportunities to study all the satellites at greater range during each orbit, including four "non-targeted" encounters. The observation plans for the mission include a mixture of space physics, geophysics and remote sensing measurements which can be modified during the course of the mission to take account of new information and discoveries. After the prime mission ends in December 1997, a Galileo Europa Mission is planned if the spacecraft remains healthy which will include 7-8 more encounters with Europa followed by a final reduction in periapsis altitude to allow a close Io flyby in 1999.

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