

## **PROJECT GALILEO: SURVIVING IO, MEETING CASSINI**

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Galileo has completed the long awaited Io flybys of the Galileo Europa Mission and the Galileo Millennium Mission, and is now pumping up its apojove in each succeeding orbit in preparation for the chance to perform a dual spacecraft observation of the Jupiter System. Making up for the missed opportunity at the beginning of Galileo's primary mission, a total of three close passes by Io have given us an up close and personal look at this highly volcanic body. The results presented include new and exciting information about Io's interactions with Jupiter's magnetosphere, its interior structure, and amazing volcanoes. Galileo Millennium Mission results from a magnetic field study of Europa, and its likely impact on the question of a European ocean are provided.

In addition the engineering challenges of operating the spacecraft during the past year are explored, as well as a brief examination of future challenges. The spacecraft has now experienced more than three times the radiation dose it was designed to, and this exposure is contributing to a number of spacecraft problems and concerns. The engineering data being generated by these continuing radiation-induced anomalies, and the ability of the spacecraft to survive these doses, will prove invaluable to designers of future spacecraft to Jupiter and its satellites.