

Electrostatic accelerometer with bias rejection for deep space gravitation tests

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The trajectory of an interplanetary spacecraft can be used to test gravitation in the Solar System. Its determination relies on radio tracking and is limited by the uncertainty on the spacecraft non-gravitational acceleration. The addition of an accelerometer on board provides another observable which measures the departure of the probe from geodesic motion. Such a concept has been proposed for the OSS mission which embarks the Gravity Advanced Package. This instrument, which is the focus of this article, is designed to make unbiased acceleration measurements.

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