

# Second European Physical Society Conference on Gravitation: measuring gravity



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## Measuring Gravity in the Solar System

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Gravity measurements are a crucial tool to peek through the surface of planetary bodies and reveal their interior structure. As a consequence of the equivalence principle, every gravity measurement in space must be a differential one, therefore requiring two test masses. Microwave links provide the observable quantities needed to follow the free fall of a probe mass (the spacecraft) in the gravity field of a planet or a satellite from a vantage point (the Earth). This talk will present the state of the art in deep space tracking systems (such as those used by the Juno and BepiColombo spacecraft) and provide examples of recent advancements in planetary science attained by means of precision spacecraft tracking.

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