

# **Lessons from the GP-B experience for future fundamental physics missions in space**

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Gravity Probe B launched in April 2004 and completed its science data collection in September 2005 with the objective of sub-milliarcsec measurement of two general relativistic effects on the spin axis orientation of orbiting gyroscopes. Much of the technology required by GP-B has potential application in future missions intended to make precision measurements. The philosophical approach and experiment design principles developed for GP-B are equally adaptable to these mission concepts. This talk will discuss GP-B's experimental approach and the technological and philosophical lessons learned that apply to future experiments in fundamental physics. Measurement of fundamental constants to high precision, probes of short-range forces, searches for equivalence principle violations, and detection of gravitational waves are examples of concepts and missions that will benefit from GP-B's experience.