Quantum-based gyroscope for space navigation

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Abstract

Nuclear magnetic resonance (NMR) is a promising technology for future high-precision gyroscopes. Such quantum-based gyroscopes (QYROs) have the potential to be a middle-ground between the small form-factor of MEMS and the performance of fiber-optics gyroscopes, making them extremely attractive for an application on small-to-medium space platforms.
This poster describes the QYRO mission, a BMBF project which aims to develop and launch a NMR- based gyroscope in a CubeSat satellite to be in-depth validated its performance in space.