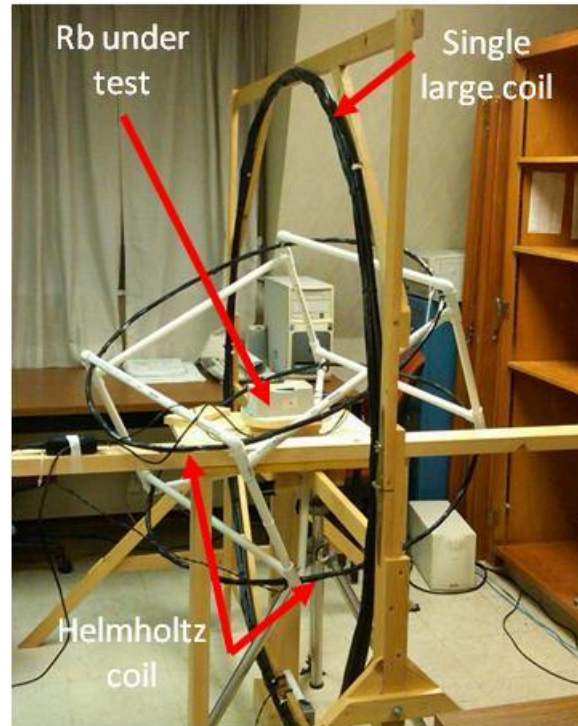


# Rubidium Frequency Performance under Different Environmental Conditions

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**Sponsor:** Federal Aviation Administration



The performance of Rubidium (Rb) frequency standards is well-documented for stationary operation. In dynamic environments that include changes in orientation, acceleration, temperature, pressure and magnetic field, the performance of frequency references for PVT applications is not well characterized in the literature. This project includes both laboratory and flight testing of a variety of Rubidium frequency standards to characterize oscillator performance under varying environmental conditions.

## [Further Reading:](#)

Van Graas, F., S. Craig and W. Pelgrum, Laboratory and Flight-Test Analysis of Rubidium Frequency Reference Performance Under Dynamics, Proceedings of the 24th International Technical Meeting of The Satellite Division of the Institute of Navigation (ION GNSS 2011), Portland, OR, September 2011, pp. 2950-.