

Atomic magnetometry with dense alkali-metal vapors

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I will review recent progress in the development of high sensitivity atomic magnetometers using dense alkali metal vapors. By using a large number of atoms one can realize both high bandwidth and sensitivity, allowing many practical and fundamental applications of atomic magnetometers. Our current work is focused on several practical challenges, such as realizing high sensitivity in the presence of ambient magnetic fields and taking advantage of non-linear relaxation properties of dense alkali-metal vapors.