

異分野基礎科学研究所 量子宇宙研究コアセミナー開催のお知らせ

“Atomic and Diamond Magnetometry
in the Lab, in the field and in the Sky”

日時： 2017年12月22日（金）14:00~15:30

会場： 理学部1号館 22講義室

講師： Professor Dmitry Budker

Johannes Gutenberg University, Mainz / University of California, Berkeley

【講演要旨】

A lot is going on in the magnetometry field, with new techniques sprouting that allow ever-improving sensitivity and spatial resolution. While atomic-vapor magnetometers are the champions of sensitivity, one of the raves since 2008 has been magnetometers based on color centers in diamond that consist of a substitutional nitrogen atom and a vacancy in a diamond lattice. This talk will cover some recent applications of magnetometers, including nuclear magnetic resonance without magnets (!) as well other magnetometer adventures including measuring magnetic fields in the mesosphere using sodium laser guide stars and searching for ultralight cosmic particles that may be part of the Dark Matter (one of the major embarrassments of modern science for its failure to determine what Dark Matter consists of after many years of consorted efforts). Details can be found at: <https://budker.uni-mainz.de/> and <http://budker.berkeley.edu/>.

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