

Abstract Submitted
for the DAMOP19 Meeting of
The American Physical Society

Applications of multipass cells in atomic magnetometers and co-magnetometers. BO CAI, CHUANPENG HAO, ZIPING XIE, DONG SHENG, University of Science and Technology of China — Multipass cells help to improve the magnetometer sensitivity while keeping the small size of the device. By combining anodic bonding and mechanical mold assisted positioning, we developed a way to produce standardized atomic vapor cells containing Herriott multipass cavities, which are used together with 3D printed platforms without the need of optical adjustments. We applied such cells in the Xe isotopes-Rb co-magnetometer system to improve the Rb magnetometer sensitivity. We further developed a three-mirror Herriott cell, and applied it in vector atomic magnetometers.

Dong Sheng
University of Science and Technology of China

Date submitted: 30 Jan 2019

Electronic form version 1.4