Abstract Submitted
for the DAMOP19 Meeting of
The American Physical Society

Properties of alkali atoms in solid parahydrogen[1] UGNE DARGYTE, SUNIL UPADHYAY, JONATHAN WEINSTEIN, University of Nevada, Reno — Alkali atoms trapped in solid parahydrogen exhibit excellent spin coherence properties at high electron spin densities. We have studied potassium, rubidium, and cesium atoms implanted in parahydrogen. Different species exhibit order-of-magnitude differences in optical pumping and readout. Similarly, different alkali atoms have dramatically varying ensemble transverse relaxation times. These properties and other measurements in parahydrogen will be presented.

[1]This material is based upon work supported by The National Science Foundation under Grant PHY 1607072.

Jonathan Weinstein
University of Nevada, Reno

Date submitted: 31 Jan 2019 Electronic form version 1.4