

Abstract Submitted  
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**Optical dipole trapping of short-lived radioactive  $^{82}\text{Rb}$**  DAVID FELDBAUM, HAIYAN WANG, Los Alamos National Lab, JONATHAN WEINSTEIN, University of Nevada - Reno, DAVID VIEIRA, XINXIN ZHAO, Los Alamos National Lab, LOS ALAMOS NUCLEAR CHEMISTRY ATOM TRAPPING TEAM — The application of the techniques of laser cooling and trapping of radioactive atoms holds a great promise for fundamental measurements. To date only a few radioactive isotopes have been trapped in MOTs and/or in magnetic traps. All-optical trapping of radioactive atoms has not, until now, been demonstrated. Optical dipole trapping may be the most desirable method, as it introduces less systematic problems in certain cases. We have experimentally demonstrated the trapping of short-lived  $^{82}\text{Rb}$  in an optical lattice, and we plan to study the optical pumping of these atoms into a stretched state for polarization studies. Our latest results will be presented.

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