

Abstract Submitted
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Simultaneous loading of ^{85}Rb and ^{87}Rb into a shallow FORT¹

MATHEW HAMILTON, Colorado State University, ANTHONY GORGES, JACOB ROBERTS — We have studied the effects of simultaneous loading of ^{85}Rb and ^{87}Rb into a shallow Far Off Resonance Trap (FORT). To fully characterize the loading parameters both homonuclear (β') and heteronuclear (β) loss rates were measured. Once this characterization was completed, we could compare our measured FORT loading performance to a model of the FORT loading process. Measurements of the simultaneous load led to the observation of unexpected interferences. The presence of one isotope significantly reduced the maximum number of atoms loaded beyond the reduction expected from light assisted collisions. These observations are consistent with a disruption of laser cooling efficiency during loading due to long-ranged induced dipole-dipole inter-species collisions.

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