

Abstract Submitted  
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**Evaporative cooling of potassium atoms** SHIN INOUE, Univ. of Tokyo, JST, ERATO, TETSUO KISHIMOTO, Univ. of Tokyo, JUN KOBAYASHI, JST, ERATO, KIYOTAKA AIKAWA, KAI NODA, TAKUTO ARAE, Univ. of Tokyo, MASAHITO UEDA, Tokyo Inst. of Tech., JST, ERATO — Recent advances in manipulating interactions between ultracold atoms opened up various new possibilities. One of the major goal of the field is to produce ultracold polar molecules. By utilizing a magnetic field induced Feshbach resonance, it is possible to produce heteronuclear molecules from a degenerate gas mixture. We are setting up an experiment to produce a degenerate gas mixture of fermionic alkali atoms, lithium-6 and potassium-40. Fermionic atoms are good candidate for minimizing the expected inelastic loss at the Feshbach resonance. For keeping the system as simple as possible, we decided to use bosonic potassium (potassium-41) as a coolant, and sympathetically cool the fermionic species. We will present our experimental setup and initial results for evaporatively cooling bosonic potassium atoms.

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