

Abstract Submitted
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Atom loss in a two-component Fermi gas near a Feshbach resonance GYU-BOONG JO, JAE H. CHOI, CALEB A. CHRISTENSEN, YE-RYOUNG LEE, TOUT WANG, TONY H. KIM, WOLFGANG KETTERLE, DAVID E. PRITCHARD, MIT-HARVARD CENTER FOR ULTRACOLD ATOMS TEAM — We present our recent progress on the study of the inelastic atom loss in a two-component ${}^6\text{Li}$ atoms near a Feshbach resonance at 834G. A degenerate ${}^6\text{Li}$ atoms in the lowest two hyperfine states are prepared in an optical dipole trap after sympathetic cooling with bosonic ${}^{23}\text{Na}$ atoms. The magnetic field is rapidly ramped up to a Feshbach resonance, and the inelastic atom loss is monitored. The rapid ramp-up of the magnetic fields offers the opportunity to study the non-equilibrium situation and the time-dependence of atom-atom correlations. We have tried to map out the atom loss in a cold Lithium gas as a function of magnetic field and the temperature. We present current experiments revealing the non-monotonic behavior which has been observed in preliminary experiments.

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