

Abstract Submitted
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Progress Towards a Dual BEC of Na Rb. GUSTAVO TELLES, MATTHEW GIBBS, ANDREW SELTZMAN, CHANDRA RAMAN, Georgia Tech — We report on the status of a dual species atomic Bose-Einstein condensate of ^{23}Na and ^{87}Rb . Our apparatus has been specially built to investigate the collisional dynamics and properties of this unique mixture of alkali metal atoms, including kilogauss magnetic field capability and high optical access. Our approach incorporates a Zeeman slower capable of delivering a large flux of both Na and Rb, magneto-optical trapping of both species, capturing and cooling of large ($\sim 10^{10}$) numbers of ^{23}Na atoms to sympathetically cool ^{87}Rb . We are also interested in probing the heteronuclear Feshbach resonances in the ultracold mixture. The eventual goal is to synthesize and manipulate heteronuclear ultracold dimer molecules. Future experiments and ideas will be discussed.

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