Abstract Submitted for the DAMOP06 Meeting of The American Physical Society

Towards a Dual Species BEC in NaRb M. BHATTACHARYA, S. MUNIZ, D. NAIK, C. RAMAN, Georgia Institute of Technology — Multi-species mixtures of ultracold atoms are currently being studied intensively. The areas of formula delicities are supported by the state of the s

cus include, but are not limited to condensed matter and quantum statistical effects, interaction-tuning by photo- and magneto-association, production of (degenerate) ultracold molecules, and so on. In the specific case of NaRb, predictions exist regarding Feshbach resonances [1], miscibility [2] and macroscopic quantum transitions [3]. We describe progress towards integrating Rb into our existing Na BEC set-up, including the design and implementation of a dual species oven.

- 1. M. Bhattacharya et al., Eur.Phys.J.D. **31**, 301(2004).
- 2. S.B.Weiss et al, Phys.Rev. A,68,042708(2003).
- 3. H.Pu et al, Phys.Rev.Lett 80,1134 (1998).

M. Bhattacharya Georgia Institute of Technology

Date submitted: 01 Feb 2006 Electronic form version 1.4