Abstract Submitted
for the DAMOP07 Meeting of
The American Physical Society

A Simple Mean-Field Model of Steady-State Magnetoassociation of an Atomic BEC in a Feschbach Resonance ANDREW CARMICHAEL, JUHA JAVANAINEN, University of Connecticut — We investigate a simple mean-field model describing magnetoassociation of a single species atomic Bose-Einstein condensate in the presence of a Feschbach resonance. The Hamiltonian, which allows for the creation and destruction of Bose- condensed molecules, leads to Heisenberg equations of motion which are solved analytically in the steady state for the classical quantities of the occupancies of the atomic and molecular condensates and the anaomalous pairing ampitudes. Approximations include the elimination of non-condensed molecules.

Andrew Carmichael
University of Connecticut

Date submitted: 05 Feb 2007 Electronic form version 1.4