

Abstract Submitted
for the DAMOP10 Meeting of
The American Physical Society

Microwave field modification of Feshbach resonances in collisions of ultra cold polar molecules SERGEY ALYABYSHEV, ROMAN KREMS, University of British Columbia, UNIVERSITY OF BRITISH COLUMBIA TEAM — We present a detailed analysis of Feshbach resonances in ultracold collisions of NH molecules and He atoms in the presence of superimposed magnetic and microwave laser fields. We use dressed-state formalism to describe the effects of radiation field on collision complex. We show that microwave field couplings may shift the position and significantly modify the width of magnetic Feshbach resonances, thereby making the microwave field control of ultracold molecular collisions possible.

Sergey Alyabyshev
University of British Columbia

Date submitted: 21 Jan 2010

Electronic form version 1.4