

Abstract Submitted
for the DAMOP15 Meeting of
The American Physical Society

Towards Photoassociation in 87Rb BEC with raman light-induced synthetic gauge fields DAVID BLASING, YONG CHEN, Purdue University — We present our experimental studies of photoassociation in 87Rb Bose-Einstein condensate (BEC) both without and with the presence of Raman light-induced gauge fields. These gauge fields couple the three bare m.f spins in the F=1 manifold of 87Rb, with the new eigenstates being superpositions of the bare m.f states. Some photoassociation channels are allowed or forbidden depending the m.f spin of the colliding atoms. We will report the progress in our measurements, with the goal of investigating the role of synthetic gauge fields on the photoassociation process.

David Blasing
Purdue University

Date submitted: 30 Jan 2015

Electronic form version 1.4