

Abstract Submitted
for the DAMOP10 Meeting of
The American Physical Society

Electromagnetically Induced Transparency in a Λ -type Molecular System¹ ANGELOS LAZOUKIS, Temple University, LI LI, Tsinghua University, TEODORA KIROVA, Temple University, JIANBING QI, Pennsylvania State Berks, ERGIN AHMED, MARJATTA LYYRA, Temple University — We present an experimental study of EIT in a Λ -type molecular Lithium System. Co-propagating beam geometry is utilized in order to minimize the residual Doppler width. Single channel fluorescence was detected by using phase sensitive detection in our experiments. A coupling laser power dependent study of the EIT feature was carried out. Our findings have been complemented by theoretical studies of open systems that trace the presence of EIT starting from the density matrix equations. Numerical simulations have been performed and are in excellent agreement with the experimental results.

¹Supported by NSF PHY 0855502, PHY 0555608 and PHY 024531.

Marjatta Lyyra
Temple University

Date submitted: 26 Jan 2010

Electronic form version 1.4