

Abstract Submitted  
for the DAMOP07 Meeting of  
The American Physical Society

**Electromagnetically Induced Transparency with Broadband Laser Pulses** DENIZ YAVUZ, University of Wisconsin — We suggest a scheme to slow and stop broadband laser pulses inside an atomic medium using Electromagnetically Induced Transparency. Extending the suggestion of Harris and colleagues, the key idea is to use matched Fourier components for the probe and coupling laser beams. Using our scheme, one can obtain time-delay-bandwidth products exceeding 1000 with current experimental parameters. Numerical simulations in Rubidium (Rb) vapor demonstrate 100 microseconds time delay for 100 MHz wide probe laser pulses.

Deniz Yavuz  
University of Wisconsin

Date submitted: 01 Feb 2007

Electronic form version 1.4