

Abstract Submitted  
for the DAMOP18 Meeting of  
The American Physical Society

**EIT Amplitude Noise Spectroscopy: Experimental Results**<sup>1</sup> ANDREW FUNK, EMMA HUNT, BENJAMIN WHITENACK, Lewis Clark Coll, MICHAEL CRESCIMANNO, Youngstown State University — We present the results of recent experimental tests of the hypothesis that the electromagnetically induced transparency (EIT) noise spectra in a Rb vapor illuminated by a free-running laser diode can be described in terms of a stochastic process of a pair of light field amplitudes. Measured EIT noise correlations in varied post-cell polarization bases are understood in terms of a simple atomic quantum optical model. Amplitude noise correlators appear to be of utility for simplifying technology applications such as vector magnetometry with a warm atomic vapor.

<sup>1</sup>National Science Foundation grant 1506499

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Date submitted: 26 Jan 2018

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