

Abstract Submitted
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Quantum Optics Models of EIT Noise and Power Broadening

CHAD SNIDER, Dept. of Phys. and Astro, YSU, MICHAEL CRESCIMANNO, Dept. of Phys. and Astro., YSU, SHANNON O'LEARY, Lawrence University — When two coherent beams of light interact with an atom they tend to drive the atom to a non-absorbing state through a process called Electromagnetically Induced Transparency (EIT). If the light's frequency dithers, the atom's state stochastically moves in and out of this non-absorbing state. We describe a simple quantum optics model of this process that captures the essential experimentally observed statistical features of this EIT noise, with a particular emphasis on understanding power broadening.

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