

Abstract Submitted
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Ultrahigh resolution atomic spectroscopy using electromagnetically induced transparency: “Slow light” and ultrasensitive magnetometry¹ RICHARD JACKSON, KALEB CAMPBELL, Miami University — We have experimentally witnessed electromagnetically induced transparency (EIT) in a rubidium vapor cell. The atomic spectral feature natural linewidth of rubidium gas is around 6MHz, but with EIT, we have measured a linewidth as low as 100KHz. We also minimized the effects of spurious signals in our experiment, which could be falsely identified as an EIT signal. EIT can be used to slow down the speed of light, which is useful in applications such as quantum computing, where EIT could be useful in information storage.

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