

# Observation of atomic localization using Electromagnetically Induced Transparency

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We present a proof-of-principle experiment in which the population of an atomic level is spatially localized using the technique of electromagnetically-induced transparency (EIT). The key idea is to utilize the sensitive dependence of the dark state of EIT on the intensity of the coupling laser beam. By using a sinusoidal intensity variation (standing-wave), we demonstrate that the population of a specific hyperfine level can be localized much tighter than the spatial period.

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