



Three-photon electromagnetically induced transparency using Rydberg states

Christopher Carr, Monsit Tanasittikosol, Armen Sargsyan, David Sarkisyan, Charles S. Adams, Kevin J. Weatherill

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We demonstrate electromagnetically induced transparency (EIT) in a four-level cascade system where the upper level is a Rydberg state. The observed spectral features are sub-Doppler and can be enhanced due to the compensation of Doppler shifts with AC Stark shifts. A theoretical description of the system is developed which agrees well with the experimental results and an expression for the optimum parameters is derived.

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