

Effect of relaxation processes on stark echo intensity in the presence of nonresonant laser pulses with spatial inhomogeneity

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Abstract

We have studied the dependence of the intensity and appearance time of the Stark echo response on the ratio of the field strengths of nonresonant laser pulses with spatial inhomogeneity. We show that with excitation of a narrow frequency region of an inhomogeneously broadened line, it is possible to determine the transverse relaxation coefficient of the system from the decay of the Stark echo intensity. © 2013 Springer Science+Business Media New York.

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Keywords

Information "locking", Inhomogeneous electromagnetic fields, Photon echo, Relaxation processes, Stark echo