

Abstract Submitted
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Large and rapidly-responding Kerr nonlinear phase shift using a four-level N-scheme with an active Raman gain core KE LI, LU DENG, NIST — We report rapidly-responding Kerr nonlinear phase shift using a long pencil-shaped cold ^{85}Rb atom samples. Our system is a four-level N-scheme based on both the D1 and D2 transition lines of Rb atom. The nonlinear phase shift and nonlinear optical index of the cold medium are studied using an interferometric method for various pump and phase-inducing laser intensities.

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