Abstract Submitted
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Time-dependent electromagnetic wave dynamics in ultracold, high-density Rb vapor[1] M. D. HAVEY, S. BALIK, C. I. SUKENIK, Old Dominion University, D. V. KUPRIYANOV, I. M. SOKOLOV, St. Petersburg State Polytechnic University — Recent experiments and theoretical results on light localization in condensed samples show that diffusive transport is strongly suppressed and that a regime of anomalous diffusion develops dynamically. Proximity of the light localization threshold can be detected through time evolution of either forward or diffusely scattered light. We report in this paper experimental and theoretical results on time-dependent light scattering in the spectral vicinity of the F = 2 - F′ = 3, and the F = 1 - F′ = 0 optical transitions in dense, ultracold atomic ^{87}Rb samples formed in an optical dipole trap.

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