

Abstract Submitted
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Observation of Refractive Index Enhancement with Vanishing Absorption. NICHOLAS PROITE, BRETT UNKS, DENIZ YAVUZ, University of Wisconsin at Madison — We experimentally demonstrate a scheme where a laser beam which is very far detuned from an atomic resonance experiences a large index of refraction with vanishing absorption. The essential idea is to excite two Raman resonances with appropriately chosen strong control lasers. We observe this effect by utilizing the hyperfine ground states of ^{85}Rb and ^{87}Rb simultaneously.

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