

Abstract Submitted
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Magneto-optical control of the speed of light ANIL PATNAIK,
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To control the group velocity of separate polarization components of light, we envision the use of a homogeneous magnetic field in conjunction with a single resonant laser of relatively high intensity. We show that this method is effective in controlling dispersion in an atomic system having a V-configuration with Zeeman sublevels as the excited states. We demonstrate such control via the interaction of monochromatic linearly polarized light and a moderately strong magnetic field with ^{87}Rb atoms. Our system can function as a delay-splitter device that splits the signal into two polarization components with their delays controlled magneto-optically.

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