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Discrimination of coherence effect in electromagnetically induced transparency in V-type systems of Rb atoms HYUN-JONG KANG, SEUNG CHUL YANG, HEUNG-RYOUL NOH, Chonnam Natl Univ — An experimental and theoretical study of electromagnetically induced transparency (EIT) in V-type systems of Rb atoms is presented. The frequency of the probe beam is locked to one of the resonance lines in the D1 line, whereas that of the coupling beam is scanned around the D2 line. We study the dependence of polarizations of the coupling and probe beams by varying the laser intensities. The experimental results are compared with the results calculated from the accurate density matrix equations. We also discriminate the portion of coherence effect in the calculated EIT spectra.

Hyun-Jong Kang
Chonnam Natl Univ

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