

Abstract Submitted  
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**Electromagnetically-induced transparency in Cs and Rb in the same vapor cell** MATT SIMONS, JOSHUA GORDON, CHRISTOPHER HOLLOWAY, National Institute of Standards and Technology — We demonstrate simultaneous electromagnetically-induced transparency (EIT) in both cesium and rubidium in the same vapor cell with coincident optical fields. Each atomic system can detect radio frequency (RF) field strengths through modification of the EIT signal. We show that these two systems can detect the same RF field strength simultaneously. This allows us to perform the same measurement in two effective “laboratories,” providing an immediate independent reference, which will lead to an SI-traceable RF E-field measurement. We examine the impact of coincident, simultaneous EIT on RF field metrology and the EIT signal.

Matt Simons  
National Institute of Standards and Technology

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