

Abstract Submitted
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EIT-like effect due to hetero-phase oscillations near the phase transition of relaxor ferroelectrics JEAN TOULOUSE, RADHA K. PATTNAIK¹, Lehigh University, LYNN A. BOATNER, Oak Ridge National Laboratory — We report the observation of a remarkable “transparency window” in the dielectric resonant absorption spectrum of the relaxor ferroelectric $K_{1-x}Li_xTaO_3$ (KLT) in the vicinity of its weakly first order transition. This phenomenon is shown to be conceptually similar to the electro-magnetically induced transparency (EIT) phenomenon observed in certain atomic vapors. In KLT however, it reveals the presence of hetero-phase (cubic-tetragonal) fluctuations and provides unique information on the nature and mechanism of the phase transition in relaxors.

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