## Abstract Submitted for the MAR06 Meeting of The American Physical Society

Determination of Refractive Indices of Photonic Crystals: Theory and Experiments<sup>1</sup> WENTAO LU, SRINIVAS SRIDHAR, Northeastern University — We develop a method to calculate the refractive indices of photonic crystal based on plane wave expansion. The appearance of surface waves and subwavelength imaging is explained within this frame. Numerical simulations of 1D and 2D crystals are performed to support our theory. Comparisons are presented with experimental results on microwave photonic crystals.

<sup>1</sup>Work supported by NSF and Hanscom Air Force Lab.

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Date submitted: 16 Jan 2006 Electronic form version 1.4