

Abstract Submitted  
for the MAR08 Meeting of  
The American Physical Society

**A 100 MHz antenna based on magnetoelectric composite materials**<sup>1</sup> A.S. TATARENKO, R. PETROV, G. SRINIVASAN, Oakland University, M.I. BICHURIN, Novgorod State University — Results on miniaturization of a 100 MHz-antenna based on magnetoelectric composites are presented. A composite with large and equal permittivity and permeability is sought for the task. In such composites both miniaturization and impedance match to free-space are possible. A sample of nickel zinc ferrite and bismuth strontium titanate prepared by the conventional ceramic processing is used. The dipole antenna operating at 100 MHz consists of a composite substrate 220 mm in diameter and 8.5 mm in width and a Cu-strip 6.5 mm in diameter. Antenna characteristics are measured with a vector network analyzer. Scattering parameter data indicates resonance at 98 MHz and an antenna miniaturization factor of 7-10, in agreement with theoretical estimates.

<sup>1</sup>Supported by a grant from DARPA.

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Date submitted: 19 Nov 2007

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