

Abstracts

Exposure of Man in the Near-Field of a Resonant Dipole: Comparison Between Theory and Measurements

M.A. Stuchly, R.J. Spiegel, S.S. Stuchly and A. Kraszewski. "Exposure of Man in the Near-Field of a Resonant Dipole: Comparison Between Theory and Measurements." 1986 Transactions on Microwave Theory and Techniques 34.1 (Jan. 1986 [T-MTT]): 26-31.

The rate of the radio frequency energy deposition in a block model of the human body exposed in the near-field of a resonant dipole at 350 MHz was calculated using the moment method. Detailed maps of the electric field strength in a homogeneous model of a realistic shape under the same exposure conditions were obtained using a computer-controlled scanning system and an implantable electric field probe. A comparison of the measurement data with the calculations shows a relatively good agreement when average values over relatively large volumes are concerned; however, the calculations do not show large spatial gradients and tend to underestimate the magnitude of "hot spots" observed experimentally.

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