# Abstracts

## Human Body Impedance for Electromagnetic Hazard Analysis in the VLF to MF Band

*H. Kanai, I. Chatterjee and O.P. Gandhi. "Human Body Impedance for Electromagnetic Hazard Analysis in the VLF to MF Band." 1984 Transactions on Microwave Theory and Techniques 32.8 (Aug. 1984 [T-MTT] (Special Issue on Electromagnetic-Wave Interactions with Biological Systems)): 763-772.*

A knowledge of the average electrical impedance of the human body is essential for the analysis of electromagnetic hazards in the VLF to MF band. The purpose of our measurements was to determine the average body impedance of several human subjects as a function of frequency. Measurements were carried out with the subjects standing barefoot on a ground plane and touching various metal electrodes with the hand or index finger. The measured impedance includes the electrode polarization and skin impedances, spread impedance near the electrode, body impedance, stray capacitance between the body surface and ground, and inductance due to the body and grounding strap. These components are separated and simplifed equivalent circuits are presented for body impedance of humans exposed to free-space electromagnetic waves as well as in contact with large ungrounded metaltic objects therein.

❑ Return to main document.