Abstracts

Electric current and electric field induced in a human body when exposed to an incident electric field near the resonant frequency (Comments)

W.B. Bridges. "Electric current and electric field induced in a human body when exposed to an incident electric field near the resonant frequency (Comments)." 2001 Transactions on Microwave Theory and Techniques 49.4 (Apr. 2001, Part I [T-MTT]): 736-738.

For original paper see ibid., vol. 48, no. 9, p. 147-53 (2000). The author makes two observations on the original article. The commentator questions whether a seated person is well modeled as a right circular cylinder. The second observation is that King cites only microwave studies on mice to show that electromagnetic radiation causes malignancies. These studies themselves are widely disputed. He then uses simple dimensional scaling to show that 2.45 GHz for a mouse scales to 100 MHz for a man. Such a scaling law may be useful in calculating the resonant frequency for a human subject versus a mouse when treated as antennas, but such scaling is meaningless when the physics of a hypothetical carcinogenic process are unknown.

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