Abstracts

Accuracy study of FDTD calculations of a dipole antenna irradiating a lossy sphere

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An accuracy study of electromagnetic calculations for the determination of fields inside the human head of the user of mobile telephone has been performed. Because of the simplicity of the set-up, we used a dipole antenna as radiator and a homogeneous lossy sphere as absorber of the fields. Even in this case we found that grid sizes of maximal 2.5 mm are needed for accurate SAR calculations. The effect of the antenna model and of the uncertainty of dielectric properties has also been studied.

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