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"FDTD simulations of the SAR in the head of children and adults using mobile phones"

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Abstract - The Specific Absorption Rate - SAR in the head of children and adults is simulated using the Finite Difference Time Domain Method- FDTD. A new model for the head of children was developed based on tomographic images from a healthy ten years old child. Comparisons are made between the SAR results obtained for adults and children when conventional monopole antenas and when planar antenas are used in the mobile phones. Also, comparisons with results obtained by other authors and with the SAR limits specified on available standards are described. Statistical results showing the mortality rate due to brain tumours in Brazil in the last decade will presented and discussed, and compared to the results available for other countries. Comments and suggestions to reduce the SAR in the head of children and adults will be discussed.