Abstracts

Microwave Radiometric Imaging at 3 GHz for the Exploration of Breast Tumors (Short Papers)

B. Bocquet, J.C. van de Velde, A. Mamouni, Y. Leroy, G. Giaux, J. Delannoy and D. Delvalee. "Microwave Radiometric Imaging at 3 GHz for the Exploration of Breast Tumors (Short Papers)." 1990 Transactions on Microwave Theory and Techniques 38.6 (Jun. 1990 [T-MTT]): 791-793.

A process of microwave radiometric imaging working at 3 GHz permits the mapping of radiometric intensities on a square area about half a decimeter on a side. These data, translated in terms of colored image, point out the existence of lateral temperature gradients in the tissues. This system was initially used in order to examine large breast tumors; at present, it is also used for the detection of smaller, impalpable tumors. We try to define the roles for the characterization of benignity or malignancy of small tumors which appear in a mammographic examination (X rays). The definition of an appropriate parameter, deduced from this image processing, seems to make it possible to indicate if the tumor is benign or malignant.

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