

Spatial resolution of microwave tomography for detection of myocardial ischemia and infarction-experimental study on two-dimensional models

S.Y. Semenov, R.H. Svenson, A.E. Bulyshev, A.E. Souvorov, A.G. Nazarov, Y.E. Sizov, V.G. Posukh, A.V. Pavlovsky, P.N. Repin and G.P. Tatsis. "Spatial resolution of microwave tomography for detection of myocardial ischemia and infarction-experimental study on two-dimensional models." 2000 *Transactions on Microwave Theory and Techniques* 48.4 (Apr. 2000, Part I [T-MTT]): 538-544.

An experimental study of spatial resolution of microwave tomography was performed. Our microwave tomographic system with operational frequencies of 0.9 and 2.36 GHz and with signal-to-noise ratio of 30 dB allowed us to achieve a spatial resolution between 7.3-9.5 mm and 6.3-7.8 mm at the former and latter frequencies, respectively. It was shown in experiments, with structurally complicated objects, that spatial resolutions of about the same distances can be expected in a practical application of microwave tomography to detect areas of myocardial ischemia and infarction.

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