

Abstracts

3D scalar microwave image reconstruction algorithm

P.M. Meaney, Qianqian Fang, S.D. Geimer, A.V. Streltsov and K.D. Paulsen. "3D scalar microwave image reconstruction algorithm." 2002 MTT-S International Microwave Symposium Digest 02.3 (2002 Vol. III [MWSYM]): 2269-2272 vol.3.

We have recently implemented a microwave imaging algorithm which incorporates scalar 3D wave propagation while reconstructing a 2D dielectric property profile. This is a preliminary step in reaching a full 3D image reconstruction approach but allows us to investigate important issues associated with speed of reconstruction and problem size. Key concepts developed during our 2D system evaluations have also proved to be translatable to the 3D approach and have accelerated the overall implementation.

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