Abstracts

An Improved Diffraction Tomography for Imaging of High-Contrast Dielectric Objects

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An improved version of diffraction tomography has been developed for microwave imaging of high-contrast dielectric objects. It consists of three steps. First the spatially sliced projection functions are constructed from frequency-diversity measurement data at a fixed angle. Then the domain of those projection functions is adjusted to the same area of the actual object. After angular-diversity measurements, high-contrast dielectric profiles are reconstructed by backprojecting the qualified projection functions. Some numerical simulations are performed and those results are presented here.

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