Abstracts

RCS Reduction of Dielectric Cylinders Using the Simulated Annealing Approach

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A novel technique is presented for reducing the bistatic scattering of dielectric struts for radomes, modeled herein as infinite dielectric cylinders, that are illuminated by TMz plane waves. The reduction is achieved by loading the cylinders with perfectly-conducting narrow strips oriented parallel to the cylinder axis, and the strip configurations are obtained iteratively by using the technique of simulated annealing. The technique is useful for systematically deriving strip configurations that reduce the RCS simultaneously for different observation angles and/or frequencies.

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