Abstracts

Analysis of Spherical Radar Cross-Section Enhancers (Short Papers)

J.R. Sanford. "Analysis of Spherical Radar Cross-Section Enhancers (Short Papers)." 1995 Transactions on Microwave Theory and Techniques 43.6 (Jun. 1995 [T-MTT]): 1400-1403.

A method for determining the plane wave scattering by a spherical radar cross section enhancer is described. In the two-step process, the desired field representation is expressed as a superposition of vector spherical wave functions. This allows the plane wave scattering from a spherically stratified object to be determined. Love's equivalence principle is then employed to account for the metallic portions of the spherical reflector. The analysis utilizes the expansions of a plane wave, an electric current element, and a magnetic current element in terms of spherical wave functions. Measured results show fairly good agreement with predicted results.

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