Abstracts

Reflection of Surface Waves on a Dielectric Image Line with Application to "Guided RADAR"

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The dielectric image line is treated as an example of a line that can support a surface-wave mode, and reflections from metallic obstacles on the line are considered. This problem finds its application in an obstacle detection scheme for guided ground transportation where the metallic obstacle may represent a preceding vehicle. An integral equation for the currents on the obstacle is solved by the moment method and the surface-wave reflection coefficient is obtained.

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