عنوان مقاله:

Auxiliary Potentials In Chiral Media

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خلاصه مقاله:

In the present paper, the expressions for scalar and vector potentials in lossless isotropic chiral media are analyzed. Propagating eigenvalues of these potentials are then obtained. Furthermore by decomposition of sources and fields in a chiral medium, we introduce the auxiliary right-and left-handed potentials and find the associated fields. These potentials are used to solve the problem of a horizontal electric dipole (HED) above a chiral half space. Auxiliary right and left handed Hertzian vector potentials are introduced and and fields in terms of these potentials are obtained. The Hertzian potentials due to VED and/or VMD sources within a chiral half space are determined in terms of two-dimensional Fourier spectral domain and the expressions for EM fields with respect to these potentials are presented.

کلمات کلیدی:

Scalar Potentials, Vector Potentials, Auxiliary Potentials, Chiral Media, Chirality