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Diffraction of the field of vertical electric dipole on the spiral conductive sphere in the presence of a cone. (English) [Zbl 1424.78004](#)

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Summary: The problem of diffraction of a vertical electric dipole field on a spiral conductive sphere and a cone is solved. By the method of regularization of the matrix operator of the problem, an infinite system of linear algebraic equations of the second kind with a compact matrix operator in Hilbert space ℓ_2 is obtained. Some variants of the problem statement are considered.

MSC:

78A40 Waves and radiation in optics and electromagnetic theory

78A45 Diffraction, scattering

35A22 Transform methods (e.g., integral transforms) applied to PDEs

Keywords:

spiral conductive sphere; cone; vertical electric dipole; regularization method; system of equations of second kind

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