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The field of vertical electric dipole placed above the spiral conductive unclosed sphere.

(English) [Zbl 1363.78018](#)

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Summary: The problem of the electromagnetic field an open spiral conductive sphere is analysed. The method of regularization of operator tasks is applied. The integral equations with weak singularity in the kernel are used. The infinite system of algebraic equations of type II with a compact operator in ℓ_2 is received. Some properties of electromagnetic fields are studied.

MSC:

[78A55](#) Technical applications of optics and electromagnetic theory

[65N12](#) Stability and convergence of numerical methods for boundary value problems involving PDEs

[35A25](#) Other special methods applied to PDEs

[78A45](#) Diffraction, scattering

Keywords:

spiral conductive sphere; vertical dipole; compact operator