

The Structures of Fields of Standing Axisymmetric Spherical Electromagnetic Waves with High Localization of Intensity of Electrical and Magnetic Fields

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In the present work the mathematical simulation of standing axisymmetric spherical electromagnetic waves in isotropic medium is carried out. It was supposed, that at centre of a coordinate system a certain receiver of converging spherical waves is, and also the device, capable to realise phase shift of this received wave, and element, that emits this delayed wave as a wave, diverging from centre. The analytical expressions for components standing spherical E - and H - of waves, depending on a phase shift of diverging spherical wave concerning converging are obtained. The equations of lines of force taking a phase shift into account, which define electrical lines of force for E -wave and magnetic lines of force for H -wave, are obtained. The pictures of lines of force of fields of standing spherical electromagnetic waves, that define new variety of modes with high localization and strength of intensity of electrical and magnetic fields are calculated and constructed.