Annotation

This dissertation is devoted to the study of the Mandelstam-Brillouin effect in an optical fiber at different wavelengths.

In this work, we studied two single-mode fiber optic sources of different wavelengths in a single-mode fiber-optic communication network under the influence of MBSS. Since the intensity and energy of the input signals in all the main fiber-optic networks are influenced by MBSS, a search is currently under way for reducing the effect of this phenomenon. The purpose of this work is to collect additional information about the conditions under which these phenomena change under the influence of external factors, and draw appropriate conclusions from the results of the study.