

# PARAMETERIZATION OF OPTICAL TURBULENCE CHARACTERISTICS OVER THE BAIKAL ASTROPHYSICAL OBSERVATORY

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In this study, we discuss the possibilities of parameterization of vertical profiles of optical turbulence. The approach based on a gradient of meteorological characteristics is used as a basis for determining the intensity of optical turbulence [Shikhovtsev, 2024]. Here, we propose an approach to improve the accuracy of estimating vertical profiles of the structural characteristic by taking into account the measurement data of the characteristics of optical turbulence (motion and scintillation of images). Using the proposed approach, reference vertical profiles of optical turbulence over the Large Solar Vacuum Telescope (LSVT) are determined. These profiles are verified taking into account the measured seeing obtained using the Shack-Hartmann sensor. The issues of application of pattern recognition methods to detect sunspots observed with LSVT are considered separately. The tested method can be adapted for other astronomical observatories. The results were obtained using the Unique Research Facility Large Solar Vacuum Telescope <http://ckp-rf.ru/usu/200615/>.

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## REFERENCES

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