

Statistical analysis of data from satellites that operate in the vicinity of the Sun can partly contribute to the elucidation of complex processes around the Sun. This thesis is devoted to a long-term statistical study of particular parameters of the solar wind. We have used data from the Wind satellite, especially its measurements of the velocity, density and temperature of protons and α -particles. By using standard statistical tools, we explored their behaviour during the 23th and 24th solar cycles, including a comparison of both cycles. Our results are in accordance with other known studies.