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STUDIES OF THE IMPACT OF AEROSOL OPTICAL PROPERTIES ON CLIMATE CHANGE PROCESSES

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Abstract

The preliminary studies made over the Baltic Sea indicate that both horizontal and vertical physical properties of aerosols vary seasonally and in short periods of time. The average monthly values of the aerosol optical thickness derived using the lidar confirm suitability of this method to measure the optical parameters of the atmosphere above the seas. The Baltic aerosol composition changes over short periods of time, and aerosol properties depend on many factors, concerned with different particle origins. Additionally, aerosol particle direct and indirect radiative effects have been identified as key uncertainties for the prediction of the future global climate.

Key words: aerosol, climate processes, optical properties, remote sensing

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