DOI: https://doi.org/10.37162/2618-9631-2021-4-134-148

Abnormal aerosol air pollution in Moscow near the local anthropogenic source in July 2021 / Gubanova D.P., Vinogradova A.A., Skorokhod A.I., Iordanskii M.A. // Hydrometeorological Research and Forecasting, 2021, no. 4 (382), pp. 134-148.

The paper analyzes the composition of surface aerosol close to the local intense anthropogenic source of pollution associated with the active phase of demolition of multistorey buildings in the center of Moscow. An abnormal increase in the daytime PM_{10} aerosol particle concentration to 5 MPC for daily values and to 14 MPC for maximum single values was reinforced by unfavorable meteorological conditions in the middle of July 2021. Preliminary estimation of the power of the dust aerosol source and its effect on the aerosol air pollution in nearby areas of the city is performed. The extreme and background values of the aerosol mass concentration, its elemental composition and particle size distribution during this period are determined. It is necessary to take into account such point pollutant sources in estimating and forecasting environmental conditions in a densely populated city.

Keywords: surface aerosol, local anthropogenic source, Moscow, aerosol mass concentration, elemental composition, meteorological conditions

Tab. 1. Fig. 5. Ref. 16.