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Concentrations of the main substances polluting the atmosphere over Vladivostok (sulfur dioxide, carbon monoxide, nitrogen dioxide, and $PM_{2.5}$, PM_{10} particles) before, during, and after stormwater solid and liquid precipitation on December 21–23, 2022 and June 8–9, 2023, respectively, are considered. The development of synoptic processes that caused this precipitation, air particle trajectories (using the HYSPLIT model), and the variation pattern of pollutant concentrations recorded using the GMAO satellite monitoring during these periods are analyzed. It is shown that heavy rainfall significantly cleanses the atmosphere from aerosol pollution, and during snowfalls, carbon monoxide is better washed out of the atmosphere, and PM_{10} and $PM_{2.5}$ particles almost completely fall on the underlying surface.

Keywords: heavy snow, heavy rain, atmospheric pollution, Primorsky Krai, reverse atmospheric transport

Fig. 6. Ref. 11.