



Long-term trend of tropospheric aerosols in the background atmosphere of the southern part of West Siberia

Boris D. Belan, Denis V. Simonenkov, and Gennadii N. Tolmachev

V.E. Zuev Institute of Atmospheric Optics, SB RAS, Tomsk, Russian Federation (bbd@iao.ru, +7 3822 492086)

Aerosol sampling in the troposphere over the coniferous forest of the southern part of West Siberia has been carrying out since 1997. Aerosol samples are collected at 8 levels in the atmospheric layer from 500 to 7000 m. Aerosols were collected onto PVC filters (Petryanov-filters) to analyse the following elements and ions contained in the particulate matter: Al, Ba, Ca, Cu, Fe, Mg, Mn, Mo, Ni, Pb, Sn, Ti, V, Be, Cd, Si, Co, Cr, Sr, Zn, Zr, Na⁺, K⁺, NO₃⁻, Cl⁻, SO₄²⁻, NH₄⁺, Br⁻.

In this paper we present data on the long-term variability of aerosol chemical composition at different altitudes and some specific features of its vertical distribution.

This work was funded by Presidium of RAS (Program No. 4), Branch of Geology, Geophysics and Mining Sciences of RAS (Program No. 5), Interdisciplinary integration projects of Siberian Branch of RAS (No. 35, No. 70, No. 131), Russian Foundation for Basic Research (grants No 1-05-00470, 11-05-00516, 11-05-93116 [U+FFFD]-05-93118), and Ministry of Education and Science of Russia (State Contracts No 11.519.11.5009, 11.518.11.7045 and 8325).