Russian Meteorology and Hydrology 2005 N2, pages 55-60

Wavelet structure of surface fields of atmospheric total protein concentration in the vicinity of Novosibirsk

Borodulin A., Safatov A., Khutorova O., Kutsenogii K., Makarov V.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

Analysis of the results of wavelet and harmonic analysis of the experimental data on the mass concentration of atmospheric aerosol and the total protein concentration in the surface air near Novosibirsk in 2001-2002 has been made. The wavelet analysis of the data has shown that the surface air concentration variations are mainly determined by characteristic synoptic processes with periods of 4, 7, 10, and 15 days. The results of the harmonic analysis have shown that the synoptic variations generally range from 40 to 70% of the total variance of the concentration variations, and they reach 90% in spring.