

Temporal variations of the intensity spectra of atmospheric pressure fluctuations in different frequency ranges and their possible connection with climate change

The possibility of using data from the registration of atmospheric pressure fluctuations obtained on a microbarograph network to study the problem of climate change is studied. The study of atmospheric pressure fluctuations in the range of periods of infrasonic and internal gravity waves (periods from 10 seconds to 3 hours) recorded in 2009-2018 at the network of OIAP microbarographs located in the region of Moscow was conducted. The average distance between microbarographs is about 7 km. Additionally, data on the recording of atmospheric pressure and temperature in the city of Moscow, obtained at the regular meteorological station of the Hydrometeorological Center of Russia for 50 years (1966-2015), were analyzed. Long series of data on the temporal variations of the intensity of the spectra of atmospheric pressure fluctuations in different frequency ranges (from 10 seconds to several days) were constructed. The presence of dominant periods in the time variation of the intensity spectra of atmospheric pressure fluctuations was revealed. Additionally, the possibility of the influence of atmospheric pressure fluctuations on human health and some physiological mechanisms in animals is discussed.

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