Geophysical Research Abstracts,
Vol. 10, EGU2008-A-00427, 2008
SRef-ID: 1607-7962/gra/EGU2008-A-00427
EGU General Assembly 2008

Statistical analysis of the air temperature dynamics for Northern Eurasia

T. Shulgina (1, 2), E. Gordov (1, 2), K. Nikitchuk (1, 2), A. Titov (1, 2)

(1) Institute of Monitoring of Climatic and Ecological Systems SB RAS, Tomsk, Russia, (2) Siberian Center for Environmental Research and Training, Tomsk, Russia, (office@scert.ru / Phone: +7-3822-49-21-87)

At the current stage of the climate change study statistical methods are widely used. Sometimes they represent the only way for quantitative assessment of the meteorological information. In this report the results of the free atmosphere air temperature dynamics research for Northern Eurasia based on the NCEP/NCAR Reanalysis and Reanalysis NCEP/DOE AMIP II data are presented.

Statistical processing of the air temperature data included analysis of the time series homogeneity using mathematical statistics parametric methods along with the calculation of the basic climatic characteristics (average, standard deviation, skewness, kurtosis, trend) using web-system (http://climate.risks.scert.ru/reanalysis/) developed on the web-portal ATMOS engine base [1]. That allowed conducting comprehensive research of the spatio-temporal features of the meteorological parameter considered. Analysis of the temperature condition dynamics revealed inhomogeneity of the data obtained for large observation intervals. Thus one can state that significant change of mean temperatures takes place in the region during spring and summer. For winter season results obtained reveals more complicated dynamics. Namely, weekly mean temperatures are decreasing, while two weeks and monthly mean temperatures are increasing.

This work is partially supported by SB RAS Integration Project 34, SB RAS Basic Program Project 4.5.2.2, and FP6 Enviro-RISKS project (INCO-CT-2004-013427).

References

1. E.P. Gordov, V.N. Lykosov, and A.Z. Fazliev. Web portal on environmental sciences “ATMOS” // Advances in Geosciences. 2006. Vol. 8. p. 33 - 38.