New generation of climate models. Pavlova T. V., Kattsov V. M., Meleshko V. P.,Shkolnik I. M.,Govorkova V. A.,Nadyozhina E. D.Proceedings of MGO. 2014. V. 575. P. 5—63.

The quality of global climate models CMIP5 was estimated. Emphasis is placed on the calculations of climate in the Russian Federation. Comparative analysis of models CMIP5 carried out not only with observations and reanalyses, but also with data of the previous phase of the project CMIP - CMIP3, which created the basis for the IPCC Fourth Assessment Report (IPCC, 2007) and the first assessment report of Roshydromet.

*Keywords:*climate models, estimate of quality, observations, reanalyses.

Tab. 3.Fig. 17.Ref. 72.

Expected climate change on the territory of the Russian Federation in the XXI century. ShkolnikI. M.,Meleshko V. P.,Karol I. L.,KiselevA. A.,Nadyozhina E. D., Govorkova V. A., Pavlova T. V.Proceedings of MGO. 2014. V. 575. P. 64—117.

Scenarios of anthropogenic impacts on the global climate system were analyzed. Estimates of expected global climate change in the XXI century were obtained. Changes in the characteristics of climate in Russia received over the ensemble of the most advanced climate modelsare in qualitative agreement with the estimates of the previous generation models. Impact of global warming on the climate in Russia will be mainly expressed in the formation softer and more humid climate in comparison to the last decade in most federal districts.

Keywords: climate models, estimate of quality, regional climate change.

Tab. 6.Fig. 16.Ref. 23.

Regularities of wind speed variation with altitude at the downwind slope of mountain range (the case of northern slope of Aibga range). Pigoltsina G. B., ZinovyevaN. A. Proceedings of MGO. 2014. V. 575. P. 118—129.

Quantitative estimation of wind speed variation with altitude at the mountain range in winter season according to the data from automatic meteorological stations at the variable heights was fulfilled. Estimating method for wind speed vertical profile at the mountain slope in the absence of meteorological information was provided.

Keywords: wind speed, mountain relief,variation with altitude.

Tab. 2.Fig. 4.Ref. 9.

Accuracy characteristics of difference time of arrial system of lightning location. KononovI. I., SnegurovA. V., SnegurovV. S., YusupovI. E. Proceedings of MGO. 2014. V. 575. P. 130—140.

Accuracy characteristics of the multi-station lightning location system based on the difference time of arrival techniques, installed now in Russia and covered its European area (part) and Ural are considered. The main sources of lightning location mistakes caused by the errors of signal time of arrival determination in the separate sites of location system are analyzed. Results of model and experimental estimates of these errors are given and the possible ways of their reduction are discussed.

*Keywords:*accuracy characteristics, multi-station lightning location system.

Fig.2. Ref.7.

Error analysis of determining of small-scale atmospheric electrical discharges coordinates. DivinskyL. I., MajborodaL.A.Proceedings of MGO. 2014. V. 575. P. 141—169.

The error of determining the coordinates of broadband pulses of radio-emission arising in the small-scale atmospheric discharges estimated. Four-point range-difference direction-finding system allowing determining three coordinates of radiation source is considered. Version of the system consisting of central receiving point, which is located in the center of equilateral triangle with the radius of circumscribed circle of 30 km, and three peripheral points located at vertices of the triangle, is studied. At that the errors of estimation of coordinates of antenna phase centers at receiving points and errors of measurements of signal arrival moments to different points taken into account. The errors arising in estimation of radio sources coordinates are calculated. It is found out that the errors of estimation x and y coordinates is substantially less than the errors of estimation of the radio source height. The error of estimations of arrival moments of the emitted signal to the receiving points should not exceed 40 ns. This can be achieved by using signals of space satellite navigation systems.

Keywords: thunderstorms, radio-emission, discharge coordinates, errors of coordinates estimations, defeat of aircrafts by thunderbolt.

Tab. 2.Fig. 6.Ref. 14.

Indicators of ambient air quality. BezuglayaE. Yu., IvlevaT. P., Smirnova I. V. Proceedings of MGO. 2014. V.575. P. 170—182.

The paper considers the relations of maximum to mean values real pollutants concentrations and their maximum permissible concentrations (MPC). It is shown that criteria are necessary for the correct estimation of the degree of air pollution for a year.

Keywords: Maximum permissible concentrations , criteria for the correct, air pollution, indicators of ambient air quality.

Tabl. 2. Fig. 3. Ref. 11.

Riskmanagement of weather andclimate phenomena. SallM. A. Proceedings of MGO. 2014. V. 575. P. 183—202.

The main objective of this work is the identification of the "substrate of risk-management" for which meets the science of climate. Different statistical mechanisms that describe climate phenomena are discussed. These statistical mechanisms perform a role of a natural basis of risk management.

Keywords: weather andclimate phenomena, risk management, the science of climate

Tab. 2.Fig. 4.Ref. 17.

The development of technology of data management in an automated archival system. DolgihS. G., ShaymardanovV. M. Proceedings of MGO. 2014. V. 575. P. 203—213.

A data control system has been created to manage hydrometeorological data files based on the Roshydromet's automated archival system in order to provide for a search. It is built in the form of web-technology divided into the following three levels: hardware/firmware, processing and presentation levels. A certain functional that is responsible for implementing relevant tasks is applied at each level.

Keyword: Technology, data management, hydrometeorology.

Fig. 5.Ref. 3.