MAY, 27 – JUNE, 6

MOSCOW / RUSSIA

INTERNATIONAL YOUNG SCIENTISTS SCHOOL AND CONFERENCE

on Computational Information Technologies for Environmental Sciences

CONFERENCE PROGRAM

PROGRAM OF INTERNATIONAL YOUNG SCIENTISTS SCHOOL AND CONFERENCE ON COMPUTATIONAL INFORMATION TECHNOLOGIES FOR ENVIRONMENTAL SCIENCES

CITES 2019

(May, 27 – June, 6, Moscow, Russia)

JUNE 3, MONDAY

9:00 **Registration**

9:30–16:45 **SESSION 1.**
SUBSEASONAL AND LONG-TERM METEOROLOGICAL AND CLIMATIC PREDICTIONS

INVITED LECTURES

William Merryfield
(Canadian Centre for Climate Modelling and Analysis, Canada)

Seasonal prediction of the cryosphere

Laura Ferranti
(European Center for Mid-range Weather Forecasting, UK)

Early warning of cold spells and heat waves

11:30–12:00 COFFEE BREAK

Yvan Orsolini, Fei Li
(NILU, Norwey)

Impact of snow initialization on subseasonal-to-seasonal forecasts

12:30–14:00 LUNCH

Adrian Tompkins
(Abdus Salam International Center for Theoretical Physics, Italy)

How do S2S subseasonal systems beat seasonal forecasts?

INVITED PAPER

[1,2] Krupchatnikov V., [1,3] Martynova Yu., [1,4] Borovko I., [4,2] Platov G.
([1]SibRHI, [2]NSU, [3]IMCES SB RAS, [4]ICM&MG SB RAS, Russia)

On the relationship between the variability of the mean flow and eddies with systematic errors in the models

15:30–16:00 COFFEE BREAK

ORAL PAPERS

Martynova Yu.V.
(IMCES SB RAS, Russia)

Assessment of interseasonal relationship between snow cover and atmospheric conditions in Siberia from different datasets

[1,2,3]Fadeev R.Yu., [4,1]Ushakov K.V., [1,2,3]Tolstykh M.A., [1,3,4]Ibrayev R.A., [1,2,3]Shashkin V.V.
([1]INM RAS, [2]Hydrometcenter RF, [3]MIPT, [4]IO RAS, Russia)

Long-range weather prediction using coupled model

SHORT ORAL PAPERS

Savelieva E.S., Zuev V.V.
(IMCES SB RAS, Russia)

Possible ways of the evolution of the Arctic polar vortex in the spring

[1]Mizyak V., [1]Rogutov V., [1,2]Tolstykh M.
([1]Hydrometcenter RF, [2]INM RAS, Russia)

Development of the Medium-Range Ensemble prediction system in the Hydrometcenter of Russia. The observations used and their assimilation

[1]Rogutov V.S., [2,1]Tolstykh M.A., [1]Mizyak V.G.
([1]Hydrometcenter RF, [2]INM RAS, Russia)

Development of ensemble forecast system of Russian Hydrometcenter. Start data ensemble preparations

14:00–18:00 **THE SIXTEENTH SESSION**
OF THE CIS CLIMATE FORUM ON SEASONAL FORECASTS (NEACOF-16)

INVITED PAPERS

Khan V.M.
(Hydrometcenter RF, Russia)

Current Development Questions for SEACOF

Kulikova I.A., Kruglova E.N., Kryzhov V.N.
(Hydrometcenter RF, Russia)

Large-scale atmospheric variability modes affecting the formation of climatic conditions during the summer period in the territory of Northern Eurasia

Tishchenko V.A., Kruglova E.N., Kulikova I.A., Ganieva E.S., Khan V.M.
(Hydrometcenter RF, Russia)

Assessment of the climate system for the upcoming season according to the monitoring and forecasts of the world's leading forecasting centers. A preliminary version of the consensus forecast for the summer of 2019.

Khan V.M., Tishchenko V.A., Kulikova I.A.
(Hydrometcenter RF, Russia)

The results of a comparative analysis of actual and forecast data (SEACOF-15 consensus forecast) of surface air temperature and precipitation for the territory of the CIS

15:45–16:00 COFFEE BREAK

SHORT ORAL PAPERS

Gevorgyan A., Khalatyan E.
(Weather Service of Armenia)

Discussion of the success of the winter 2018/2019 forecast for Armenia

Beldibaev E.
(Kazhydromet, Kazakhstan)

Discussion of the success of the winter 2018/2019 forecast for Kazakhstan

Kurmanova M., Monkaeva G.
(Kazhydromet, Kazakhstan)

Specialized climate services to support decision making in Kazakhstan

Isaev Erkin
(Weather Service of Kyrgyzstan)

Discussion of the success of the winter 2018/2019 forecast for Kyrgyzstan

Roska G.
(Weather Service of Moldova)

Discussion of the success of the winter 2018/2019 forecast for Moldova

Sattor Saidov
(Weather Service of Tajikistan)

Discussion of the success of the winter 2018/2019 forecast for Tajikistan

Shermuhamedov Ulugbek
(Weather Service of Uzhydromet)

Accuracy of monthly forecasts Uzhydromet

GROUP DISCUSSIONS

Generalization of prognostic information and final wording of the consensus forecast for the summer of 2019.
Questions and Discussions

JUNE 4, TUESDAY

9:00–17:30 SESSION 2.
MODELING AND ANALYSIS OF GLOBAL AND REGIONAL CLIMATE AND RELATED ATMOSPHERIC PROCESSES

INVITED PAPERS

[1]Perevedentsev Yu.P., [2]Sherstyukov B.G., [1]Shantalinskii K.M., [1]Guryanov V.V.
([1]Kazan State University, [2]RIHMI-WDC, Russia)

Modern climate change in tropo-stratosphere and the interaction between the layers

Platov G., Golubeva E.
(ICM&MG SB RAS, Russia)

Study of the role of atmospheric forcing in the formation of the Arctic ice

Volodin E. (INM RAS, Russia)

The mechanism of natural climate oscillations in Arctic and North Atlantic in climate model of INM RAS

[1,2]Tolstykh M.A., [1]Fadeev R.Yu., [2]Shashkin V.V., [1]Goyman G.S., [2]Khan V.M.
([1]INM RAS, [2]Hydrometcenter RF, Russia)

Simulation of North Eurasia winter atmosphere circulation with the SLAV 972L96 model

11:00–11:30 COFFEE BREAK

ORAL PAPERS

[1]Kononova N.K., [2]Morozova S.V.
([1]IG RAS, [2]Saratov State University, Russia)

Differences in the formation of blocking processes in the Northern and Southern Hemispheres

Yudin M.S.
(ICM&MG SB RAS, Russia)

Calculation of parameters of gravity flows with a finite-element model of atmospheric dynamics

Serykh I.V., Sonechkin D.M. (IO RAS, Russia)

El Nino forecast based on Global atmospheric oscillation

[1]Vargin P.N., [2]Martynova Y.V., [3]Volodin E.M., [3]Kostrykin S.V.
([1]Central aerological observatory, [2]IMCES SB RAS, [3]INM RAS, Russia)

Analysis of NH winter storm track realization in simulations of INM CM5

12:30–14:00 LUNCH

[1]Platov G.A., [2]Krupchatnikov V.N., [1]Botovko I.V.
([1]ICM&MG SB RAS, [2]SibRHI, Russia)

Reverse research relations of the climate system in the formation of climate trends

[1]Ryazanova A.A., [1,2]Voropay N.N.
([1]IMCES SB RAS, [2]IG SB RAS, Russia)

Comparative analysis of the assessment of hydrothermal conditions of the Tomsk region, using different droughts coefficients

[1]Volkova M.A., [2]Cheredko N.N., [1]Titovskaya A.A.
([1]TSU, [2]IMCES SB RAS, Russia)

Spatio-temporal distribution of periods with low and high temperatures in Western Siberia for 1961-2016

Cheredko N.N., Tartakovsky V.A., Volkov Y.V.
(IMCES SB RAS, Russia)

Regional climate clusters on the territory of Eurasia against the background of global climate change

[1,2]Vazaeva N., [1]Chkhetiani O., [1]Kurgansky M.
([1]IAPH RAS, [2]MSTU, Russia)

Statistics of thermal convection structures in atmospheric boundary layer based upon acoustic sounding data

Goyman G.S., Shashkin V.V.
(INM RAS, Russia)

Semi-implicit semi-Lagrangian shallow-water model on the staggered reduced lat-lon grid

15:30–16:00 COFFEE BREAK

SHORT ORAL PAPERS

[1]Yagovkina E.A., [1,2]Khaimina O.V., [2]Kubyshkin N.V.
([1]RSHU, St. Petersburg, [2]LLC 1Arctic Shelf Consulting", St. Petersburg, Russia)

Results wavelet analysis non-periodic sea level fluctuations Cape Kamenyy (Ob Bay of the Kara sea)

Savelieva E.S., Zuev V.V.
(IMCES SB RAS, Russia)

The dynamics of the Arctic polar vortex during the 1984/1985 sudden stratospheric warming

Morozova S.V.
(Saratov State University, Russia)

The study of the mutual influence of global circulation objects of method of dispersive analysis

[1]Tarasevich M.A., [2]Volodin E.M.
([1]MIPT, [2]INM RAS, Russia)

Influence of various parameters INM RAS climate model on the extreme precipitation simulation

Kraevskaya N.Yu., Shokurov M.V.
(Marine Hydrophysical Institute RAS, Sevastopol, Russia)

Numerical simulation of the breeze circulation using the WRF-ARW model

Shokurova I.G.
(Marine Hydrophysical Institute RAS, Sevastopol, Russia)

Interannual variability of the wind stress curl in the Black Sea

Kozlova L.F., Sterin A.M.
(RIHMI-WDC, Russia)

Analysis of tropopause characteristics in the Arctic region

Durneva E.
(IAPH RAS, Arctic and Antarctic Research Institute, Russia)

Characteristics of high-altitude jet streams during anomalous weather conditions in the Northern Hemisphere, using the example of July 2018

Nechepurenko O.E., Volkova M.A., Gorbatenko V.P., Kuzhevskaia I.V., Chursin V.V.
(TSU, Russia)

Characteristics of clouds with vertical development on days with hail over the south-east of Western Siberia

[1]Usova E.I., [1]Loginov S.V., [1]Kharyutkina E.V., [1,2]Martynova Yu.V.
([1]IMCES SB RAS, [2]SibRHI, Russia)

Investigation in the changes of eddy and advective heat fluxes over the southeastern part of Western Siberia

Vorotilova P.G., Konstantinov P.I. (MSU, Russia)

Climatology of the surface-based inversions in the cities of the Arctic zone of the Russian Federation and its impact on air quality

Didenko K.A., Pogoreltsev A.I.
(St Petersburg State University, Russian State Hydrometeorological University, Russia)

Analysis of nonlinear interactions of stationary planetary waves

Semenova A.A., Konstantinov P.I., Samsonov T.E.
(MSU, Russia)

Modeling the dynamics of thermal comfort conditions in Arctic cities on the background of regional climate change

Samyltyrova M.S., Konstantinov P.I.
(MSU, Russia)

Thermal comfort differences in Russian cities (Moscow case-study)

[1,2]Martynova Yu.V., [2,3]Krupchatnikov V.N.
([1]IMCES SB RAS, [2]SibRHI, [3]NSU, Russia)

Assessment of CO_2 flux variation for Russian forest ecosystems under climate change with JSBACH model

[1]Arzhanov M.M., [2]Malakhova V.V., [1]Mokhov I.I., [1]Parfenova M.R.
([1]IAPH RAS, [2]ICM&MG SB RAS, Russia)

Stability of relic methane hydrates at climatic changes in the Holocene

Cherepova M., Smyshlyaev S.
(Russian State Hydrometeorological University, Russia)

Numerical simulation of the Arctic methanehydrates influence on the climate variability and gas composition of the atmosphere

Jakovlev A.R., Smyshlyaev S.P.
(Russian State Hydrometeorology University, Russia)

Research of influence of ocean and the phenomena the El-Nino and Southern oscillation on structure and structure of an atmosphere

JUNE 5, WEDNESDAY

9:00–13:20 SESSION 3.
DEVELOPMENT OF EARTH SYSTEM MODEL COMPONENTS

INVITED PAPERS

Golubeva E., Iakshina D.
(ICM&MG SB RAS, NSU, Russia)

A study of the Atlantic and Pacific waters impact on reduction of the Arctic sea ice

[1]Malakhova V.V., [2]Golubeva E.N.
([1]ICM&MG SB RAS, [2]NSU, Russia)

The response of Arctic Ocean methane hydrate to the climate change

ORAL PAPERS

[1]Platov G., [1]Golubeva E., [2]Karachakova A.
([1]ICM&MG SB RAS, [2]NSU, Russia)

Study of cascading processes on the Kara Sea shelf

[1]Verezemskaya P., [2]Barnier B., [1]Gavrikov A., [1]Gulev S., [2]Molines J.-M.
([1]IO RAS, Russia, [2]Equipe MEOM (Mesoscale Ocean Modelling), Institute de geosciences de l'Environment, University Grenoble-Alpes, Grenoble, France)

Impact of fine atmospheric scales on ocean eddies and deep convection in the Subpolar Northern Atlantic

[1,2,3]Shashkin V. , [1,2,3]Tolstykh M.V
([1]INM RAS, [2]Hydrometcenter RF, [3]MIPT, Russia)

Reproduction of stratosphere dynamics with multiscale version of SLAV atmospheric model

[1]Chernov I.A., [2]Iakovlev N.G.
([1]IAMI KarRC RAS, [2]ICM RAS, Russia)

Joint numerical modeling of geophysical and biochemical processes in the oceans and seas with ice

11:00–11:30 COFFEE BREAK

Puzina O.S., Mizyuk A.I.
(Marine Hydrophysical Institute of RAS, Sevastopol, Russia)

Study of ice conditions of the Azov Sea using satellite data and numerical simulation results

Senderov M.V., Mizyuk A.I.
(Marine Hydrophysical Institute of RAS, Sevastopol, Russia)

The influence of differents open boundary conditions on the results of numerical simulation in the north-eastern part of the Black Sea

Perezhogin P.A.
(INM RAS, Russia)

Negative viscosity parameterization in NEMO ocean model

[1,2,3]Ushakov K.V., [1,2,3,4]Ibrayev R.A.
([1]IO RAS, [2]INM RAS, [3]MHI RAS, [4]MIPT, Russia)

Modelling of the Eastern Pacific tropical water dynamics in a global eddy-resolving numerical experiment

SHORT ORAL PAPERS

Demyshev S.G., Dymova O.A.
(Marine Hydrophysical Institute RAS, Sevastopol, Russia)

Sensitivity of modeling results of the Black Sea circulation to the choice of boundary conditions on the free surface

Naumov L.M., Gordeeva S.M., Belonenko T.V.
(Institute of Earth sciences SPBU, Russia)

Heat, mass and salt fluxes in the Lofoten basin (Norwegian sea) estimating using reanalysis data

[1,2]Golubeva E.N., [1,2]Platov G.A., [1,2]Yakshina D.F., [1]Krayneva M.V.
([1]ICM&MG SB RAS, [2]NGU , Russia)

Modeling the distribution of waters of arctic rivers in the Arctic Ocean

12:45–14:15 LUNCH

14:15–17:35 SESSION 4.

LAND SURFACE PROCESSES: OBSERVATIONS, MODELS, DATA ASSIMILATION

INVITED PAPER

[1]Lykosov V.N., [1]Glazunov A.V., [2]Repina I.A., [3]Stepanenko V.M., [4]Varentsov M.I.
([1]INM RAS, [2]IPHA RAS, [3]SRTI of Moscow State University, [4]Moscow State University, Russia)

Interaction of the atmospheric boundary layer with the active land layer and water bodies: observations and modeling

ORAL PAPERS

[1]Martynova Yu.V., [1,2]Dyukarev E.A., [1]Golovatskaya E.A.
([1]IMCES SB RAS, [2]Yugra State University, Russia)

Assessment of treed bogs carbon balance disturbances under climate change from observation and modelling data

[1]Kiselev M.V., [1,2]Voropay N.N., [1,3]Dyukarev E.A., [1]Preis Yu.I.
([1]IMCES SB RAS, [2]IG SB RAS, [3]Yugra State University, Russia)

Temperature regime of drained and natural peatlands in arid and water-logged years

Malinovskaya E.A.
(IPHA RAS, Russia)

Simulation of the flow around 3D surfaces in the study of changes in aeolian relief forms

15:30–16:00 COFFEE BREAK

[1,2]Makhnorylova S.V., [3,1]Tolstykh M.A.
([1]Hydrometcenter RF, [2]SibRHI, [3]INM RAS, Russia)

Soil moisture initialization for use in multilayer soil model of the global weather prediction system SL-AV

[1]Konstantinov P.I., [2,3]Varentsov M.I., [3]Repina I.A., [3]Artamonov A.Yu., [1]Shuvalov S.V., [1]Samsonov T.E., [1]Griscenko M.Yu., [1]Semenova A.A., [1]Vorotilova P.G., [4]Esau I.N., [5]Baklanov A.A.
([1]MSU, [2]MSU Research Computing Center, [3]IAPH RAS, [4]Nansen Environmental and Remote Sensing Center/Bjerknes Center for Climate Research, Norway [5]WMO, Switzerland)

Investigation of microclimate, ground-level inversions and human thermal comfort conditions in Arctic cities of Russian federation (based on UHIARC observations)

Shtabkin Y.A., Moiseenko K.B., Skorokhod A.I., Berezina E.V.
(IAPH RAS, Russia)

Regional photochemical sources of tropospheric ozone in Siberia and ETR

[1,2]Bogomolov V., [1,3]Dyukarev E., [2,4]Stepanenko V., [5]Volodin E.
([1]IMCES SB RAS, [2]MSU Research Computing Center, [3]Yugra State University, [4]MSU, 5INM RAS, Russia)

Verification of temperature and humidity conditions of mineral soils in the active layer model

SHORT ORAL PAPERS

[1]Antokhina O.Yu., [1]Antokhin P.N., [2,3]Martynova Yu.V.
([1]IAO SB RAS, [2]IMCES SB RAS, [3]SibRHI, Russia)

Ratio of methane emissions from wetlands and the most extreme fires in Western Siberia based on MACC / CAMS and GFED data

Frolov D.M.
(MSU, Russia)

Calculating scheme of ground freezing depth on basis of data on peculiarities of seasonal snowfalls deposition, snow cower accumulation and temperature variation

Antokhin P.N., Antokhina O.Yu., Arshinov M.Yu., Belan B.D., Belan S.B., Davydov D.K., Kozlov A.V., Fofonov A.V.
(IAO SB RAS, Russia)

A numerical study of the effect of summer atmospheric blocking on the methane concentration in Western Siberia

Semenova A.V., Bukovskiy M.E.
(Tambov State University, Russia)

Assessment of the contribution of climatic factors to the formation of flood wave

Konstantinov P.I. et al.
(MSU, Russia)

Investigation of microclimate and spatio-temporal structure of surface inversions in the winter conditions of the Arctic

[1]Medvedev A., [2,1]Stepanenko V., [3,2]Bogomolov V.
([1]MSU, [2]RCC MSU, [3]IMCES SB RAS, Russia)

River runoff simulation in the INM RAS-MSU land surface scheme

[1,2]Pashkin A., [3,2]Bogomolov V., [4]Stepanenko V., [1,2]Repina I., [3]Smirnov S.
([1]IAPH RAS, [2]MSU, [3]IMCES SB RAS, [4]RCC MSU, Russia)

Experimental studies of atmospheric turbulence characteristics in the urban canyon

17:35–18:15 SESSION 5.
COMPUTATIONAL AND INFORMATIONAL TECHNOLOGIES FOR EARTH SCIENCES

SHORT ORAL PAPERS

Luferov V.S., Fedotova E.V.
(Moscow Power Engineering Institute, Russia)

Development of a program complex for atmospheric circulation classification

Penenko A., Mukatova Z., Salimova A.
(ICM&MG SB RAS, NSU, Russia)

Numerical solution of inverse problems for transformation models

[1]Kablukova E.G., [1,2]Ogorodnikov V.A., [1,2]Prigarin S.M.
([1]ICM&MG SB RAS, [2]NSU, Russia)

Stochastic quasi-Gaussian models of the atmospheric clouds

Zuev S.V., Krasnenko N.P.
(IMCES SB RAS, Russia)

A simplified method for monitoring cumulus clouds using total irradiance

Varentsov A.I., Stepanenko V.M., Konstantinov P.I.
(MSU, Russia)

Simulation of particle transport in urban environments with high spatial resolution

Kuksova N.E., Toropov P.A.
(MSU, Russia)

Mechanisms of squall formation in the Moscow region on May 29, 2017

Perkhurova A.A., Konstantinov P.I., Varentsov M.I., Shartova N.V., Krainov V.N.
(MSU, Russia)

Online modelling of thermal comfort conditions for the population of Moscow region on microscale

18:15–19:00 POSTER SESSIONS

JUNE 6, THURSDAY

9:00–13:15 SESSION 5.
COMPUTATIONAL AND INFORMATIONAL TECHNOLOGIES FOR EARTH SCIENCES

INVITED REPORTS

Vyazilov E.
(RIHMI-WDC, Russia)

Development of hydrometeorological support for consumers using modern IT

Penenko V., Tsvetova E.
(ICM&MG SB RAS, Rissia)

Inverse problems for the study of climate-ecological processes under anthropogenic influences

[1,2]Okladnikov I.G., [1,2]Gordov E.P., [1]Ryazanova A.A., [1,2]Titov A.G.
([1]IMCES SB RAS, [2]ICT SB RAS, Russia)

Software package for «cloud» analysis of climate change and the environment: methods and approaches

Klimova E.G.
(ICT SB RAS, Russia)

Bayesian approach to the data assimilation problem based on the use of ensembles of forecasts and observations

11:00–11:30 COFFEE BREAK

Platonov V., Varentsov M.
(MSU RCC, Russia)

Creation of the long-term high-resolution hydrometeorological archive for Russian Arctic: methodology and first results

Lubkov A.S., Voskresenskaya E.N.,Marchukova O.V.
(Institute of Natural and Technical Systems, Sevastopol, Russia)

Development of a model for the forecast of El Nino and La Nina using neural networks

Solomatin D.P.
(IHE Delft Institute for Water Education, Delft, The Netherlands)

Machine learning techniques in predicting uncertainty of environmental models

Penenko A.
(ICM&MG SB RAS, NSU, Russia)

Algorithms based on adjoint function ensembles for inverse modeling of transport and transformation of atmospheric pollutants

12:30–14:00 LUNCH

14:00–17:35 SESSION 6.

FUTURE EARTH PROGRAM AND NORTHERN EURASIA FUTURE INITIATIVE

INVITED PAPERS

Pavel Groisman
(NC State University Research Scholar at NOAA National Centers for Environmental Information, Asheville, North Carolina, USA)

Northern Eurasia Future Initiative (NEFI) Focus on Human-Associated Extreme Events

Solomina O.N.
(IG RAS, Russia)

International program Future Earth and participation of Russia in it

Georgiadi A.G., Kashutina E.A. (IG RAS, Russia)
Long decreased/increased water flow periods in large rivers of Russia

Ginzburg A.S.
(IAPH RAS, MTI, Russia)

The anthropogenic heat flux impact on mesoscale atmospheric processes

Gordov E.P.
(IMCES SB RAS, Russia)

Thematic virtual research environment for analyzing climate change and its regional effects

15:40–16:00 COFFEE BREAK

Jianlong LI, Yangyang LIU
(School of Life Sciences, Nanjing University, P. R. of China)

Quantitative assessment of spatiotemporal effects of climate variation and human activities on global grassland degradation in long time

[1]Shiklomanov N.I., [1]Streletskiy D.A., [2]Kelsey E. Nyland
([1]Department of Geography, The George Washington University, Washington, DC, USA, [2]Department of Geography, Michigan State University, Lansing, MI, USA)

Impacts of Permafrost Warming and Degradation on Rural and Urban Communities: Examples from Alaskan and Russian Arctic

[1]Chernokulsky A., [2]Kozlov F., [1]Kurgansky M., [1,2]Mokhov I., [3]Shikhov A., [2]Yarinich Yu.
([1]IAPH RAS, [2]MSU, [3]Perm State University, Russia)

Severe convective weather events in Russia: statistics, interannual variability, formation risks in the 21st century

ORAL PAPERS

Platonov V., Kislov A.
(MSU, Russia)

Spatial distribution of extreme wind speeds statistics over the Sakhalin Island based on observations and high-resolution modelling data

Gordova Yu.E., Ryazanova A.A., Titov A.G., Gordov E.P.
(IMCES SB RAS)

Using «Climate» Information and Computing System to raise awareness among the population and decision makers about the implications of climate change for the region

Fedotova E.V., Luferova E.A.
(Moscow Power Engineering Institute, Russia)

Wind projections for the territory of Russia considering development of the wind power

SHORT ORAL PAPERS AND POSTER SESSIONS

[1]Mirsaeva N.A., 1[,2,3]Eliseev A.V.
([2]KFU, [1]MSU, [3]IAPH RAS, Russia)

Analysis of aridity characteristics in Europe in the last millennium according to calculations with climatic models