

PROGRAM

FIRST BALTIC INTERNATIONAL SCHOOL FOR YOUNG SCIENTIST “MAGNITOSPHERE-IONOSPHERE-ATMOSPHERE COUPLING”

(First Baltic School “MIAC”)

Sunday, 19 June 2016

- Meeting of participants
- Registration
- Ice breaker

Monday, 20 June 2016

- 10.00-10.40 **Welcome and Opening**
Yurov Artem Valerianovich, Doctor of Physical and
Mathematical Sciences, professor, Vice-rector for scientific
work Immanuel Kant Baltic Federal University;
Karpov Ivan Viktorovich, Doctor of Physical and
Mathematical Sciences, Leading Researcher WD IZMIRAN,
Chairman of the Program Committee;
Klimenko Maxim Vladimirovich,
Candidate of Physical Mathematical Sciences, Chairman of
the Organizing Committee of the School.

SESSION 1. LITOSPHERE-ATMOSPHERE-IONOSPHERE

20 June

11.00-13.00

Plenary session

Chairmen I.V. Karpov

- 10.40-11.40 **Eugene V. Rozanov**
Influence of Precipitating Energetic Particles on Ozone
Layer and Climate
- 11.40-12.00** **Coffee break**
- 12.00-13.00 **Sergey A. Pulinets**
The Physical Bases for the Short-Term Earthquake
Precursors Generation
- 13.00-14.00** **Lunch**

14.00-18.15

Young Scientist Oral Reports

Chairmen I.V.Karpov

- 14.00-14.15 **Mikhail I. Karpov, Alexandr A. Namgaladze, and Maria A. Knyazeva**
On the Temperature Effects of the Seismogenic Electric Current
- 14.15-14.30 **Olga P. Borchevkina, Ivan V. Karpov, Ruslan Z. Dadashev, and Alexandra V. Ilminskaya**
Influence of Strong Meteorological Processes on the Ionospheric Parameters
- 14.30-14.45 **Nikita O. Shevchuk, Alexander I. Pogoreltsev**
Upper Atmosphere Conductivity Model and Conductivities Effects on Modeling of Atmospheric Tides
- 14.45-15.00 **Sergey P. Kshevetskii, Yuliya A. Kurdyayeva, Nikolay M. Gavrilov, and Ivan V. Karpov**
Simulation of Vertical Propagation of Acoustic Gravity Waves in the Atmosphere Based on Variations of Atmospheric Pressure and Research of Heating of the Upper Atmosphere by Dissipated Waves
- 15.00-15.15 **Anna Y. Kanukhina, E. N. Savenkova, M. A. Motsakov, and A. I. Pogoreltsev**
Troposphere and Stratosphere Interacting at Sudden Stratospheric Warmings
- 15.15-15.30 **Nataliya V. Bakhmetieva, Victor G. Lapin, and Gennady I. Grigoriev**
Stationary Solution for Resonant Interaction of Internal Gravity Waves
- 15.30-15.45 **Nataliya V. Bakhmetieva, Gennady I. Grigoriev, Ariadna V. Tolmacheva, and Elena E. Kalinina**
Linear Temperature Profile in the Mesosphere and Lower Thermosphere and Internal Gravity Waves
- 15.45-16.00 **Igor I. Koltovskoi, Petr P. Ammosov, Galina A. Gavrilieva, Anastasia M. Ammosova**
Comparison of the Rotational Temperature of the Hydroxyl at the Height of the Mesopause Measured at Two Different Stations
- 16.00-16.30 Coffee break**
- 16.30-16.45 **Anna S. Polyakova, Anna A. Mylnikova**
TEC Dynamics during Sudden Stratospheric Warmings in Arctic Region
- 16.45-17.00 **Andrey V. Medvedev, Maxim V. Tolstikov, Konstantin G. Ratovsky, Sergey S. Alsatkin, and Dmitry S.**

- Kushnarev**
Case Studies of IGW-Wind Interaction in Upper Atmosphere
- 17.00-17.15 **Irina Artamonova, Alexey Eliseev**
Impact of Forbush Decreases of Galactic Cosmic Rays on Stratospheric Circulation
- 17.15-17.30 **Denis S. Khabituev, Marina A. Chernigovskaya, Boris G. Shpynev, and Konstantin G. Ratovsky**
The Ionospheric Response on Gravity Waves generated by Stratospheric Jet Stream
- 17.30-17.45 **Alexey V. Germanenko, Yuriy V. Balabin, B.B. Gvozdevsky**
Features of the Annual Gamma-Ray Variation in the Ground Level of the Atmosphere
- 17.45-18.00 **Pavel A. Vasiliev, Ivan V. Karpov, and Sergey P. Kshevetskii**
Modelling of the Influence of Internal Gravity Waves Excited in the Stratosphere during Sudden Stratospheric Warming Periods on the Upper Atmosphere
- 18.00-18.15 **Sergey P. Kshevetskii, Nikolay M. Gavrilov, and Yuliya A. Kurdyayeva**
The Supercomputer Model of Atmospheric Processes of Common Access Shared via the Internet

Tuesday, 21 June 2016

9.30-13.00

Plenary session

Chairmen E. Rozanov

- 9.30-10.30 **Jan Laštovička**
Long-Term Trends in the Ionosphere and Upper Atmosphere — different trend drivers
- 10.30-11.30 **Alexander I. Pogoreltsev**
Generation of Nonmigrating Tides and Ionospheric Disturbances during SSW Events
- 11.30-12.00 Coffee break**
- 12.00-13.00 **Maxim V. Klimenko, Vladimir V. Klimenko, Fedor S. Bessarab, Yury N. Korenkov, Konstantin G. Ratovsky, Nina A. Korenkova, and Irina E. Zakharenkova**
Morphology and Mechanisms of the Ionospheric F Region Electron Density Disturbances during Geomagnetic Storm and Sudden Stratospheric Warming
- 13.00-14.00 Lunch**

14.00-19.00

**SESSION 2. SATELITE OBSERVATION, RADIOLOCATION AND
RADIOCOMMUNICATION**

Plenary session

Chairmen **E. Rozanov**

14.00-14.45 **G.V. Golubkov**
The Problems of Passive Remote Sensing of Earth Surface

Young Scientist Oral Reports

Chairmen **J. Laštovička**

14.45-15.00 **Ilya K. Edemskiy**
Effects of 1997—1998 Global Parameters Leap in Total
Electron Content

15.00-15.15 **Anna A. Mylnikova, Yury V. Yasyukevich**
Validation of the Technique for Estimation of Absolute
Total Electron Content and its Gradients

15.15-15.30 **Alexey V. Oinats, Nozomu Nishitani,
Pavlo Ponomarenko, Oleg I. Berngardt, Konstantin G.
Ratovsky, Maxim V. Tolstikov**
Statistical Study of Medium-Scale Traveling Ionospheric
Disturbances using Hokkaido East and Ekaterinburg HF
Radar Data.

15.30-15.45 **Oleg S. Rubcov, Igor A. Nosikov, Maxim V. Klimenko,
Pavel F. Bessarab, and Gennady A. Zhabankov**
Comparison Calculation Results by the Homing and
Optimization Methods Using IRI Model with Traveling
Ionospheric Disturbances

15.45-16.00 **Vladimir B. Ovodenko**
The Experimental Data on the Effectiveness of
Compensation Atmospheric Effects for UHF Radar through
median NeQuick model

16.00-16.30 Coffee break

16.30-16.45 **Daria S. Kotova, Maxim V. Klimenko, Vladimir V.
Klimenko, Veniamin E. Zakharov, Yuriy N. Korenkov,
and Fedor S. Bessarab**
Investigation of Geomagnetic Storm and Sudden
Stratospheric Warming Impact on HF Radio Wave
Propagation

16.45-17.00 **Igor A. Nosikov, Maxim V. Klimenko, and Pavel F.
Bessarab**
Investigation of Singular Points in Optical Path Functional
for High and Low Rays in Ionospheric Radio Path

17.00-17.15 **Yury V. Yasyukevich, Roman V. Vasilyev, Artem M.**

- Vesnina, Mariia V. Globa, and Konstantin G. Ratovsky**
Generating Ionospheric Irregularities During the 2015 June 22 Magnetic Storm
- 17.15-17.30 **Alexander V. Markov, Alisher R. Abdullaev, Maxim V. Klimenko, Konstantin G. Ratovsky, Nina A. Korenkova, Vladimir S. Leshchenko, and Artem M. Vesnin**
NmF2 Dependence from Solar and Geomagnetic Activity in the Middle Latitudes in January 2012—2015
- 17.30-17.45 **Alexander A. Shcherbakov, Andrey V. Medvedev, Dmitry S. Kushnarev, Maxim V. Tolstikov, and Sergey S. Alsatkin**
Calculation of Meridional Neutral Winds With Irkutsk Incoherent Scatter Radar (IISR)
- 17.45-18.00 **Nicolai V. Chirik, Maxim V. Klimenko**
Statistical Processing of Radio Occultation Data of the Ionospheric F2 Peak Parameters
- 18.00-18.15 **Alexander T. Karpachev, Maxim V. Klimenko, Vladimir V. Klimenko, Lubov V. Pustovalova, and Nikolay V. Chirik**
Subauroral Trough Modeling for the Nighttime Winter Condition
- 18.15-18.30 **Ilya V. Zhivetiev, Yury V. Yasyukevich**
Using Network Technology for Studying the Ionosphere
- 18.30-18.45 **Maxim V. Klimenko, Vladimir V. Klimenko, Irina E. Zakharenkova, Konstantin G. Ratovsky, Yury V. Yasyukevich, Anna S. Polyakova, Nicolai V. Chirik, and Renata Yu. Lukianova**
Longitudinal Variation of Winter Anomaly in the F2 Peak Electron Density and its Manifestations in Topside Ionosphere, Plasmaspheric and Total Electron Content
- 18.45-19.00 **Artem M. Vesnin, Maxim V. Klimenko**
Improving Space Weather Prediction using IRTAM and GSM TIP

Wednesday, 22 June 2016

Excursion to the Observatory in Ladushkin

Lunch

Excursion to the Curonian Spit

Thursday, 23 June 2016

10.00-13.00

Chairmen A. Dmitriev

- 10.00-10.15 **Nikita A. Tereshin, Ivan A. Nesterov** Using GPS Datasets for Monitoring Integrated Water Vapor Content
- 10.15-10.30 **Olga P. Borchevkina, Ivan V. Karpov, Aleksandra V. Ilminskaya, and Aleksey I. Karpov**
Research of Acoustic Gravity Waves Over Kaliningrad Region During the Solar Eclipse of March 20, 2015
- 10.30-10.45 **Andrey A. Kholmogorov, Vsevolod B. Ivanov**
GPS-Monitoring of the Ionospheric Reaction on Solar Eclipse using Single-Frequency Mode on the Example of Event 20 March 2015
- 10.45-11.00 **Alisher R. Abdullaev, Maxim V. Klimenko, Alexander V. Markov, Konstantin G. Ratovsky, Nina A. Korenkova, Vladimir S. Leshchenko, and Valerii A. Panchenko**
Linear and Dual Linear Regression Model of Mid-Latitude Daytime N_mF2 Dependence from Solar and Geomagnetic Activity
- 11.00-11.15 **Ekaterina V. Ol'shanskaya**
On Analysis of N-wave Coseismic Ionospheric Response in Estimation of The Seismic Energy for Submarine Earthquakes
- 11.15-11.30 **Sergey Yu. Belov, Ilya N. Belova**
The Analysis of Methods of Determination the Scattering Parameter of the Inhomogeneous Fluctuating Ionospheric Screen
- 11.30-12.00 **Coffee break**

SESSION 3. MAGNETOSPHERE-IONOSPHERE COUPLING

Plenary session

- 12.00-13.00 **Wojciech J. Miloch, Andres Spicher, YaqiJin, Lasse B. N. Clausen, and Jøran I. Moen**
Ground-Based, Satellite and Rocket Studies of the Polar Cap Patches, Auroral Blobs, and Flow Shears

13.00-14.00 Lunch

14.00-17.30

Young Scientist Oral Reports

Chairmen A. Dmitriev

- 14.00-14.15 **Maxim V. Klimenko, Vladimir V. Klimenko, Alexander**

- T. Karpachev, Irina E. Zakharenkova, Artem M. Vesnin, Iury V. Cherniak, Ivan A. Galkin, Nikolai V. Chirik, and Dmitriy V. Chugunin**
Satellite Observation and Modeling of Longitudinal Variations in the Ionosphere F Region, Topside Ionosphere, and Plasmasphere during December Solstice
- 14.15-14.30 **Konstantin G. Ratovsky, Maxim V. Klimenko, and Vladimir V. Klimenko**
Statistics of Daytime Ionospheric Disturbances in the Recovery Phase of Magnetic Storms from 2003—2016
Irkutsk Ionosonde Data
- 14.30-14.45 **Alexander A. Chernyshov, Boris V. Kozelov, and Michail M. Mogilevsky**
Geometric Description of Ionospheric Conductivity in the Auroral Ionosphere
- 14.45-15.00 **Nataliya S. Nosikova, Nadezda V. Yagova, Vyacheslav A. Pilipenko, Heilig Balazs, and Alexander Yu. Schekotov**
Electromagnetic Disturbances in the Frequency Range 5—20 Hz in the Upper Ionosphere and on the Ground
- 15.00-15.15 **Yurij N. Korenkov, Fedor S. Bessarab, and Pavel A. Vasiliev**
The Mathematical Description of the Ne Profile in the E-region of the Ionosphere
- 15.15-15.30 **Maria A. Sergeeva, Olga A. Maltseva, and J.-A. Gonzalez-Esparza**
TEC Variations over Mexico under Disturbed Conditions
- 15.30-15.45 **Konstantin G. Ratovsky, Maxim V. Klimenko, Vladimir V. Klimenko, Andrey V. Medvedev, Sergey S. Alsatkin, and Alexey V. Oinats**
Comparison of Height-Diurnal Electron Density Variations between Irkutsk Incoherent Scatter Radar and GSM TIP and IRI Models
- 15.45-16.00 **Ilya A. Bolotin, Vladimir L. Frolov, Gennady G. Vertogradov, and Vitaliy G. Vertogradov**
Generation of the Super Small Scale Artificial Ionospheric Irregularities and its dependence on the Magnetic Zenith Effect
- 16.00-16.30 Coffee break**
- 16.30-16.45 **Dmitry V. Chugunin, Maxim V. Klimenko, and Vladimir V. Klimenko**
Polar Wind Outflow Characteristic at ~20000 km Altitude
- 16.45-17.00 **Roman V. Vasilyev, Mariia V. Globa, Dmitry S. Kushnarev, Andrey V. Medvedev, and Konstantin G.**

Ratovsky

- 17.00-17.15 Discrete Radio Source Scintillations as Method for Ionosphere Study at Irkutsk Incoherent Scattering Radar
Sergey A. Chernouss, Irk I. Shagimuratov, Igor B. Ievenko, Mikhail V. Filatov, Ivan I. Efishov, Mikhail V. Shvets, and Nikolay V. Kalitenkov
- 17.15-17.30 Aurora as Indicator of the Ionospheric Impact on Trans-Ionospheric Navigation Signals
Vladimir B. Belakhovsky, Viacheslav A. Pilipenko, D. Murr, Evgeniy N. Fedorov, and Alexander E. Kozlovsky
Ionosphere Response to Intense ULF Waves as observed by GPS/TEC and EISCAT Instruments

Friday, 24 June 2016

9.00-18.00

- 9.00-15.00** Excursion to HTII “ Science Park” Immanuel Kant Baltic Federal University with Lunch
Plenary session
15.00-17.00
- 15.00 - 16.00 **Alexander G. Yahnin**
Particle Precipitation from Magnetosphere to Atmosphere in High-to-Low Latitudes
- 16.00 - 17.00 **Alexei V. Dmitriev, Alla V. Suvorova**
Ionospheric Effects of Forbidden Energetic Electron Enhancements at Low Latitudes
- 17.00 - 18.00 **SCHOOLS SUMMARY, CLOSURE**

Saturday, 25 June 2016

Departure of participants