

U Plenary

22.04.2024

08:30 - 12:30 Participants registration

12:30 - 13:30 **Lunch break**

Main Conference Hall

Plenaries | Chair Vladimir Semenov

13:30 - 13:45 Conference opening

13:45 - 14:45 **Tatevossian Ruben** Macroseismic studies: Historical earthquakes
Solicited talk

14:45 - 15:45 **Kiselev Andrey** Yesterday, today, and tomorrow of the Earth's climate system
Solicited talk
Online

15:45 - 16:15 **Coffee break**

16:15 - 17:15 **Kubyshkina Daria** Beyond the Solar System: methods of detection, characterisation, and classification of exoplanets
Solicited talk

17:15 - 18:15 Concert by Sergei Pulinets

18:15 - 19:30 Welcome refreshment

OLD Ozone Layer Dynamics

24.04.2024

Atmospheric Physics Dept, Room 314

Chair Smyshlyaev S.P.

09:30 - 09:50	Nerobelov Georgii , Timofeyev Y., Polyakov A., Rozanov E., Virolainen Y.	Analysis of the quality of current forecasts of total ozone behavior in the 21st century
09:50 - 10:10	Popov Andrey , Gavrilov N., Shiokawa K.	Climatology of mesoscale perturbations of OH and O ₂ rotational temperature in Rikubetsu, Shigaraki and Sata
10:10 - 10:30	Imanova Anastasia , Rozanov E., Smyshlyaev S.	Comparative analysis of photolysis rates calculated using Cloud-J and LibRadran tools
10:30 - 10:50	Kriukovskikh Ekaterina , Polyakov A., Virolainen Y., Nerobelov G., Timofeyev Y.	Measurements of the total ozone column by the IKFS-2 instrument for the period of operation from 2015 to 2022 on board the «Meteor-M» №2 satellite
10:50 - 11:10	Efimov Matvey , Gavrilov N.	Parameters of sudden stratospheric warmings from the reanalysis database jra-55
11:10 - 11:30	Akishina Svetlana , Virolainen Y., Polyakov A., Timofeyev Y., Nerobelov G., Zubov V., Rozanov E.	The variability of stratospheric gases in the vicinity of St. Petersburg

11:30 - 12:00

Coffee break

Chair Divin A.V.

12:00 - 12:20	Akishina Svetlana , Polyakov A., Virolainen Y.	Information content of the outgoing thermal radiation spectra with respect to vertical ozone distribution
12:20 - 12:40	Smyshlyaev Sergei , Usacheva M., Rozanov E., Zubov V.	Numerical modeling of simultaneous changes of ozone content in the lower and middle atmosphere in the past, present and future
12:40 - 13:00	Bordovskaia Iuliia , Timofeyev Y., Virolainen Y., Poferovskii A.	Analysis of the synergetic ground-based MW+IR method for determining vertical profiles of ozone content
13:00 - 13:20	Zubov Vladimir , Rozanov E., Mironov A.	The vertical profiles of O ₃ , CH ₄ , and N ₂ O into the polar stratosphere of the SH. Model investigation with CCM SOCOL

13:20 - 13:40	Usacheva Margarita, Rozanov E., Smyshlyaev S., Zubov V.	Sensitivity of the ozone content and temperature to different forcing
13:40 - 14:00	Lukianova Renata	Formation of the extreme Arctic stratospheric polar vortex of winter 2019/2020 and related ozone loss

14:00 - 15:00 **Lunch break**

Sightseeing trip to Kronstadt – from 15:00

PERM Paleomagnetism and Rock Magnetism

23.04.2024

Earth Phys Dept, Room 507

Paleomagnetism I | Chair Alexei Didenko

09:00 - 09:20	Pavlov Vladimir , Lebedev I.	Paleosecular variations indicate the specific mode of geodynamo operation during the Cretaceous Normal Polarity Superchron
09:20 - 09:40	Pasenko Aleksandr , Lebedev I., Dudanova V., Sirotnin K., Zaika G.	Paleomagnetism of rocks of the Okhotsk-Chukotka volcanic-plutonic belt of the Krest Bay (Chukotka): questions and tasks
09:40 - 10:00	Lebedev Ivan , Pasenko A.	Late Cretaceous-Cenozoic tectonic history of Chukotka according to new paleomagnetic data
10:00 - 10:20	Anosova Maiia , Shcherbakova V., Zhidkov G., Shcherbakov V., Lebedev I., Latyshev A.	High-Latitude paleointensities after the end of the Cretaceous Normal Superchron from the Okhotsk-Chukotka Volcanic Belt
10:20 - 10:40	Shcherbakova Valentina , Zhidkov G., Shcherbakov V., Afinogenova N.	Geomagnetic paleointensity at ~1.75 Ga of Paleoproterozoic volcanic rocks from the Ukrainian Shield
10:40 - 11:10	Coffee break	

Loess, paleoclimate, and magnetism | Chair Andrei Kosterov

11:10 - 11:50	Kazansky Alexey	Rock-magnetic indicators of climate in subaerial deposits, how do they work? <i>Solicited talk</i>
11:50 - 12:10	Meshcheriakova Olga , Khormali F., Kurbanov R., Kazansky A.	Rock magnetic characteristics of loess -soil series in Tajikistan (based on materials from the study of the reference section Khonako-II)
12:10 - 12:30	Peskov Aleksey , Didenko A., Klimin M., Karetnikov A., Arkipov M., Tikhomirova A., Tsygankova V.	Paleomagnetic and rock magnetic studies on peats from the Nerpichiy bay coast, Southwestern Priokhotie
12:30 - 12:50	Trubikhin Valeriy , Vardanyan H., Stakhovskaya R.	Record of climatic and paleomagnetic events of the late Holocene in takyr deposits of western Turkmenistan

12:50 - 13:50 **Lunch break**

Rock magnetism I | Chair Alexey Kazansky

13:50 - 14:10	Didenko Alexei , Nosyrev M., Arkhipov M., Gilmanova G., Krutikova V.	Deep structure model of the Taragai area of the Sutarsky ridge (Lesser Khingan) from geophysical field and magnetic petrology data interpretation
14:10 - 14:30	Pozhidaeva Daria	Changes in rock magnetic data in Late Pleistocene-Holocene sediments of the glacial lake Sosednee (Upper Kolyma region)
14:30 - 14:50	Leonova Mariia , Markov G.	Can the traces of the impact events in the sedimentary sequences be recorded by rockmagnetic properties?
14:50 - 15:10	Sergienko Elena , Kharitonskii P., Gareev K., Yanson S., Dubeshko D.	Study of biomineralization of iron oxyhydroxides by magnetometric methods

15:10 - 15:40 **Coffee break**

Rock magnetism II | Chair Vladimir Pavlov

15:40 - 16:00	Shcherbakov V., Sycheva Natalia	Theory of anhysteretic remanent magnetization of randomly oriented single-domain grains
16:00 - 16:20	Shcherbakov Valeriy , Gribov S., Tselmovich V., Afinogenova N.	Experiments on samples carrying a sum of laboratory induced TRM and TCRM imparted perpendicular each other
16:20 - 16:40	Belokon Valery , Dyachenko O., Lapenkov R.	Heat capacity of spin glasses in the model of random interaction fields
16:40 - 17:00	Kosterov Andrei	When magnetite is truly magnetite?

24.04.2024

09:30 - 13:00

Poster viewing

Pilipenko Olga, Tsetlin Y.

Rockmagnetic and archaeomagnetic investigations of ceramics of the multilayer archaeological site Ivanovskoe III

Pilipenko Olga, Markov G.,
Tsetlin Y., Aphinogenova N.

Thellier's experiments on artificial ceramics to determine the magnitude of the magnetic field

Shcherbakova V., **Zhidkov Grigoriy**, Afinogenova N.

Ultralow geomagnetic paleointensity at ~2 Ga of Paleoproterozoic igneous rocks from the Ukrainian Shield

Sirotin Kirill, Aleksandr P.,
Lebedev I., Dudanova V.

Volcanogenic rocks of the Kresta Bay (Chukotka): petrographic studies in the context of substantiating the nature of the paleomagnetic signal

Latyshev Anton, Latanova E.,
Anosova M., Bergal-Kuvikas O.,
Belyaev A.

Paleomagnetism and Anisotropy of Magnetic Susceptibility in the Late Quaternary Lava Flows from the Tolmachev Dol area (the Southern Kamchatka)

Fedyukin Ivan, Zhang R.,
Pavlov V., Pasenko A.

AMS study of the evolution of the Middle-Late Ordovician sea basin in the North of the Siberian platform

Fattakhova Leysan,
Kuzina D., Antonenko V.

Magnetic properties of the soil cover of active arable lands

Meshcheriakova Olga,
Kononov Y., Kurbanov R.,
Ivanov A., Timireva S.

Rock magnetic characteristics of loess-soil series in the Azov region (Beglitsa and Chumbur-Kosa sections)

Minyuk Pavel, Pozhidaeva D.

Iron sulfides in the lacustrine sediments of North-East Russia

Iliushin Iliia, Kharitonov V.,
Afremov L.

Dependence of the magnetic properties of the metal/metal oxide system on the degree of oxidation

Iusupova Anastasiia,
Kuzina D.

Holocene paleoclimate history of the lakes Bolshoe and Maloe Miassovo (Southern Urals) based on magnetic and geochemical investigations

Kosareva Lina, Kosarev V.,
Kuzina D., Yusupova A.,
Nourgalieva N., Antonenko V.

Local, regional and global components of environmental variability of the Southern Urals in the Neopleistocene-Holocene on the basis of petromagnetic parameters of modern lakes sediments

Kuzina Dilyara, Shcherbakov V., Salnaia N., Yusupova A., Nurgaliev D.	Relative paleointensity of geomagnetic field obtained from the sediments of Lake Shira (Khakassia)
Khosnullina Tansylu, Piskarev A., Elkina D., Gusev E.	Paleomagnetic studies of marine sediments collected from the northern Barents Sea during the 2023 expedition
Elkina Daria, Gusev E., Ryabchuk D., Piskarev A., Sergeev A., Gostenina A., Khosnullina T., Yarzhembosky Y., Krylov A.	Paleomagnetic studies of marine sediments of the Russian Arctic seas under the project of state geological mapping of the territory and continental shelf of the Russian Federation at a scale of 1:1,000,000
Iosifidi Alexandr, Salnaia N.	Devonian deposits of the southern Timan: Paleomagnetic data
Pavlov Vladimir, Zhang R., Fedyukin I., Pasenko A.	Current update of the magnetostratigraphic scheme of the key Ordovician section of the Moyero River and the behavior of the geomagnetic field on the eve of the Moyero superchron
Rudko D., Zhang R., Pavlov Vladimir	Cyclostratigraphic study of the Upper Cambrian deposits of the Kulyumbe key section (NW of the Siberian platform) aimed to constrain the duration of magnetic zones and $\delta^{13}\text{C}$ SPICE anomaly
Golovanova I., Salmanova Raushaniya, Danukalov K., Parfiriev N.	A cyclostratigraphic study of the Katav Formation, (Upper Riphean, Southern Urals)
Danukalov Konstantin, Golovanova I., Parfiriev N., Salmanova R.	Study of the morphology of geomagnetic reversals in the Late Riphean Katav Formation. New results

13:00 - 14:00

Lunch break

Sightseeing trip to Kronstadt — from 15:00

25.04.2024

Earth Phys Dept, Room 507

Paleomagnetism II | Chair Dilyara Kuzina

09:00 - 09:20	Kovalenko Dmitry , Buzina M.	Problems of paleomagnetism in the Altai-Sayan region and Mongolia
09:20 - 09:40	Kovalenko Dmitry , Yarmolyuk V., Kozlovsky A., Buzina M.	Paleomagnetism of the Phanerozoic Sequences of the Central Part of the Central Asian Fold Belt
09:40 - 10:00	Golovanova Inessa , Danukalov K., Parfiriev N., Salmanova R.	Current issues of paleomagnetism of the Katav Formation (Upper Riphean, Southern Urals)
10:00 - 10:20	Parfiriev Nikita , Danukalov K., Golovanova I., Salmanova R.	Test of intraformational conglomerates for the Katav Formation of the Upper Riphean (Southern Urals). New data
10:20 - 10:40	Lubnina Nataliya , Bychkov A.	Remagnetization during hydrothermal process: paleomagnetic data and geodynamic consequences

10:40 - 11:10 **Coffee break**

Magnetostratigraphy | Chair Vladimir Vodovozov

11:10 - 11:50	Guzhikov Andrey	Magnetostratigraphic method in geology: current state, problems and the ways to their solutions Solicited talk
11:50 - 12:10	Dudanova Varvara , Konstantinov E., Veselovskiy R., Pasenko A.	The Matuyama-Brunhes reversal in the loess-paleosol series of the Otkaznoe section (Terek-Kuma Lowland)
12:10 - 12:30	Shelepov D., Guzhikov Andrey	Magnetostratigraphy of the Danian stage from the Saratov Volga region
12:30 - 12:50	Gnibidenko Zinaida , Marinov V., Levicheva A., Semakov N.	Cretaceous Magnetostratigraphy of the Severnaya Sosva River (Northern Urals) Online

12:50 - 13:30 **Lunch break**

Paleomagnetism III | Chair Inessa Golovanova

13:30 - 13:50	Luzan Margarita , Metelkin D., Bragin V.	Analysis of the Devonian paleomagnetic direction distribution in the Minusa basin
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13:50 - 14:10	Salnaia Natalia , Alexandr I.	Devonian paleomagnetic data on the East European Platform in the context of the problem of complicated magnetic field record and the presence of atypical Devonian components Online
14:10 - 14:30	Vodovozov Vladimir	Paleomagnetism of Mesoproterozoic intrusive complexes of the Bunge Hills (East Antarctica)
14:30 - 14:50	Fedyukin Ivan , Shatsillo A., Romanyuk T., Latysheva I., Novikova A., Kuznetsov N.	Paleomagnetic data of Jurassic igneous rocks of the Greater Caucasus: comparison with Lesser Caucasus
14:50 - 15:10	Doroshenkov Mikhail	Prospects of studying and possibilities of indication of catastrophic flood deposits by petromagnetic methods
15:10 - 15:30	Ushakov Dmitrii , Lebedev I., Pavlov V.	Influence of orientation errors associated with the use of a magnetic compass on the accuracy of determining the position of the paleomagnetic pole and the amplitude of paleosecular variations

15:30 - 16:00 **Coffee break**

Geomagnetism | Chair Andrei Kosterov

16:00 - 16:20	Sanchez Rodriguez Cesar Julio , Merkurjev S.	Study of the structure and evolution of the axial zone of the Carlsberg Ridge
16:20 - 16:40	Starchenko Sergey	RMS velocities and magnetic fields in the Earth's liquid core
16:40 - 17:00	Starchenko Sergey , Yakovleva S.	Statistics of dipole and non-dipole geomagnetic energy
17:00 - 17:20	Riabova Svetlana	Spectral analysis of geomagnetic field variations at the Eskdalemuir Observatory in the range of 2-41 years Online
17:20 - 17:50	General discussion, PERM section closing	

SG Seismology and Geodynamics

23.04.2024

Data processing and analysis methods | Chair Vladimir Troyan

Blue Hall

09:00 - 09:20	Fedorov Ivan , Fedorov A., Asming V.	Experiments on the use of seismic and infrasound methods for remote recording of snow avalanches
09:20 - 09:40	Isaev Igor , Guskov A., Obornev I., Obornev E., Rodionov E., Shimelevich M., Dolenko S.	Using the transfer learning approach in neural network solution of inverse problems of exploration geophysics
09:40 - 10:00	Polovkov Viacheslav , Terekhina Y., Ponomarenko A., Kudinov A., Bulanova I., Rakhimov E., Tokarev M., Gorbachev S., Solovyova M.	Technology for surface waves processing recorded using seismic streamers to study the upper part of the Pechora Sea shelf section
10:00 - 10:20	Ponassenko Svyatoslav	Automated system for seismological monitoring
10:20 - 10:40	Ponomarenko Andrey , Stanyulis A., Polovkov V., Troyan V.	On the geophone coupling function in marine research
10:40 - 11:05	Coffee break	
11:05 - 11:35	Kitov Ivan , Sanina I.	On the current state and prospective of waveform cross correlation in seismic studies: improvements in signal detection, parameter estimation, relative location, and identification of seismic sources Solicited talk Online
11:35 - 11:55	Sychev Vladimir , Sycheva N.	Nonextensive analysis of earthquakes and man-made impacts
11:55 - 12:15	Baranov Sergey , Shebalin P., Motorin A.	Earthquake Productivity Solicited talk
12:15 - 12:35	Malyshkin Timur , Gordeev N.	Development of a method for identifying surface faults using active and passive sensors in remote sensing data

12:35 - 12:55	Lobodenko Ivan , Fihieva L., Malofeev A., Menschikova V.	Solving direct and inverse geophysics and geodynamics problems in site selection, construction and operation of nuclear power plants in accordance with federal norms and rules for the atomic energy use
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Online

Fiber optics in geophysics. Distributed acoustic sensing (DAS) | Chair Konstantin Kislov

12:55 - 13:20	Kislov Konstantin	Fiber optics in geophysics. Distributed acoustic sensing (DAS) <i>Solicited talk</i>
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Lunch break

14:20 - 14:40	Tezиков Artemii , Chugaev A., Trapeznikova A.	Spectral analysis of passive DAS data for monitoring of an undermined massif at a salt deposit
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Solicited talk

Online

14:40 - 15:00	Nikitin Sergei , Spiridonov E., Bengalskiy D., Kharasov D., Ashkar G., Kostenko M., Kislov K., Nanii O., Starovoyt Y., Treshchikov V.	Applications of fiber optical DAS equipment for teleseismic observations and tomography tasks in seismology
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15:00 - 15:20	Ilinskiy Dmitry , Gorshkov B., Simikin D.	Application of a distributed acoustic measurement system for active and passive seismic studies
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Solicited talk

15:20 - 15:40	Belov Mikhail , Tokarev M., Potemka A.	The Lomonosov Moscow State University experience in fiber optic sensors technology
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Coffee break

Distributed acoustic sensing & Poster viewing

Kislov K., Ashkar G., Bengalskii D., Gravirov V., Kostenko Mikhail , Kharasov D., Vasiliev A., Treshchikov V.	Demonstration of the capabilities of Distributed Acoustic Sensing technology
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Ashkar G., Bengalskii D., Gravirov Valentin , Kislov K., Kostenko M., Kotov A., Presnov D., Spiridonov E., Shurup A.	Full-Scale Testing of the Use of Distributed Acoustic Sensing (DAS) Technology to Determine Ice Cover Parameters
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Gravirov Valentin , Kislov K.	Advantages and Disadvantages of Distributed Acoustic Sensing Technology for Geophysics Tasks
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16:55 - 17:15

Coffee break

Gravirov Valentin, Pershin S.,
Sobisevich A., Grishin M.,
Likhodeev D., Myasnikov A.

The Influence of Earthquakes on the
Temperature Regime of Rocks

Gravirov Valentin,
Likhodeev D.

Precision Rock Temperature Monitoring System

Gravirov Valentin

Digital Data Acquisition Systems for Data
Capturing of Geophysical Information: Methods
for Testing Performance in the Field

Kislov Konstantin,
Marchenkov A.

Designing a side-by-side experiment to compare
low-power impulsive artificial seismic sources

Gravirov V., Sobisevich A.,
Zhostkov R., Presnov D., **Kotov
Andrey**

Ice Geo-Hydroacoustic Buoy

Gravirov V., **Kotov Andrey**,
Presnov D., Nuzhdaev I.,
Toshchov S.

Study of the Internal Structure of Geothermal
Deposits in the Southern Part of the Kamchatka
Peninsula

Kasimova Victoria,
Chebrov D., Kopylova G.

Integrated geophysical observations at the
Petropavlovsk-Kamchatsky test site, Kamchatka
Peninsula

Solovieva M., Kopylova G.,
Korkina G., Bulatova N.,
Kasimova Victoria

Disturbances of the lower ionosphere during
strong seismic activity in 2023-2024 as observed
on the Kamchatka peninsula

24.04.2024

Blue Hall

Processes in earthquake sources | Chairs Alena Filippova & Vladimir Troyan

09:00 - 09:25	Filippova Alena	Seismic moment tensor: a review Solicited talk
09:25 - 09:40	Filippova Alena , Burlakov I., Fomochkina A.	Focal mechanisms of earthquakes occurred in 1927–2022 in the East Arctic region
09:40 - 10:00	Sokolova Inna , Aristova I., Komekbayev D.	Study of the wave pattern of various nature events from the area of the Novaya Zemlya Test Site according to historical seismic and infrasound records by Central Asia stations
10:00 - 10:20	Zotov Oleg , Guglielmi A., Zavyalov A., Klain B.	Energy flows and the spatio-temporal structure in the earthquake source Online
10:20 - 10:40	Petrova Nataliya , Gabsatarova I., Kurova A.	Distance corrections to surface-wave magnitudes of Far East shallow earthquakes Online
10:40 - 11:00	Fomochkina Anastasia , Filippova A.	Source parameters of earthquakes in the Laptev Sea (1996, 1997 and 2023) from surface wave records

11:00 - 11:20 **Coffee break**

Regional Seismicity | Chair Vladimir Troyan

11:20 - 11:35	Sokolova Inna , Gabsatarova I., Berezina A., Kopnischev Y., Aristova I.	Uqturpan earthquake with $M_w=7.0$ on January 22, 2024, in the south of the Tien Shan
11:35 - 11:50	Motorin Alexander , Baranov S., Shebalin P.	Aftershock domain estimation by first aftershocks on the example of the Khibiny deposits Online
11:50 - 12:10	Burmin V., Petrosyan Goharik	Some Features of Earthquakes Distribution in Turkmenistan Online
12:10 - 12:30	Tsiareshchanka Kseniya , Aronov A., Bialiayeva V., Martinovich Y.	Seismic effects of industrial explosions in a granite quarry in Belarus

12:30 - 12:50 **Coffee break**

12:50 - 13:05	Sokolova Inna, Gabsatarova I., Berezina A., Persina E.	The source and consequences of the Kungey earthquake on March 4, 2024 ($M_p=5.8$) in the Northern Tien Shan region
13:05 - 13:20	Zvereva Anastasia, Skorkina A.	The relationship between M_w and other magnitude scales for earthquakes of the North Caucasus
13:20 - 13:35	Zvereva A., Klianchin Andrey	Earthquake on January 24, 2024 in the in the region of Krasnodar city (North-West Caucasus) with $M_w=4.1$, $I_0=4-5$
13:35 - 13:50	Surkov Vadim, Pilipenko V., Sorokin V., Yashchenko A.	Ionospheric perturbations caused by a complex of atmospheric acoustic waves radiated during and after earthquakes
13:50 - 14:05	Surkov Vadim	Theoretical models of atmospheric and ionospheric anomalies that can be interpreted as earthquake precursors

14:05 - 15:00 **Lunch**

Sightseeing trip to Kronstadt — from 15:00

25.04.2024

Rock Mechanics and Mining Sciences | Chair Valerii Khimulia

09:00 - 09:20 **Khimulia Valerii**, Karev V., Barkov S. Comprehensive study of stress effect on filtration-capacitance properties of underground gas storage reservoirs using geomechanical and CT-based approach
Online

Blue Hall

09:20 - 09:40 **Kovalenko Yury**, Barkov S., Khimulia V. Experimental study of mechanical and filtration processes in low-permeability reservoir rocks of Verkhnevilyuchanskoye oil and gas condensate field at implementation the method of directional unloading of the reservoir
Online

09:40 - 10:00 **Ivanov Zakhar**, Panteleeva A., Golosov A. The influence of layer orientation on the mechanical properties of 3D printed models
Online

10:00 - 10:20 **Kozhevnikov Evgenii**, Turbakov M., Riabokon E., Guzev M., Qi C., Li X. Comparative analysis of the reduction in permeability under loading in laboratory and field conditions
Online

10:20 - 10:40 **Coffee break**

10:40 - 11:00 **Panteleeva Arina**, Ivanov Z., Kozhevnikov E. The influence of rock conductivity on the of detached particles size distribution during filtration and cyclic loading
Online

11:00 - 11:20 **Riabokon Evgenii**, Turbakov M., Evgenii K., Guzev M. Modelling the influence of acoustic vibrations on the movement of plastic particles through rocks
Online

11:20 - 11:40 Panteleev I., **Zaitsev Aleksey**, Ustinov K., Shevtsov N., Valeriy K., Mubassarova V., Karev V., Kovalenko Y. A Kaiser Damage-Memory Effect in Sandstone under Cyclic and Rotated Triaxial Stresses
Online

11:40 - 12:00 **Zaitsev Aleksey**, Demus M., Kourov R., Fukalov A. The Equilibrium State of a Hollow Horizontal Orthotropic Thick-walled Cylinder, which is Subject to a Nonuniform Internal Lateral Pressure and Weight Forces
Online

12:00 - 12:20 **Goev Andrey** Upper mantle – classic ideas and new insights
Solicited talk

Earth's Structure | Chairs Andrey Goev & Vladimir Troyan

12:20 - 12:40	Usoltseva Olga, Ovtchinnikov V.	Lateral variations in travel times of reflected from the inner core waves and their connection with thermal and gravitational fields
12:40 - 13:00	Sokolova Inna, Kopnichev Y., Khachikyan G.	Temporal variations of S wave attenuation field structure in the region of Zaili Alatau ridge: possible correlation with solar activity and large earthquakes
13:00 - 14:00	Lunch break	
14:00 - 14:20	Filippov Sergey, Abramova D.	Lithospheric magnetic anomalies over the Anatolian Plate (Turkey) as a reflection of the crust-mantle interaction processes Solicited talk
14:20 - 14:40	Vakarchuk Roman	Typification of the Earth's Crust
14:40 - 15:00	Filippov Sergey, Filippova A., Sokolova T., Pankratov O.	Lithospheric magnetic sources in the East Arctic region
15:00 - 15:20	Koroleva Tatiana, Zarochentsev A.	Experience of determining S-wave velocities beneath the Caucasus from surface waves dispersion curves with the use of high-performance computing
15:20 - 15:40	Coffee break	
15:40 - 16:00	Filippova Alena, Sokolova E., Filippov S., Bolshakov E.	Integrated geophysical modeling of the lower crustal - upper mantle structure in the area of the Yenisei-Khatanga trough
16:00 - 16:20	Egorushkin Igor, Koulakov I., Jakovlev A., Huang H., Gordeev E., Abkadyrov I., Chebrov D.	Insights into the crustal structure beneath Central Kamchatka revealed by ambient noise tomography Online
16:20 - 16:40	Sannikov Konstantin, Lyskova E., Sannikov A.	New data on radial anisotropy in the European region from surface waves

26.04.2024

Blue Hall

Geodynamic Processes | Chair Alena Filippova

09:30 - 09:50	Rodkin Mikhail	Earthquake forecast algorithm based on the set of typical anomalies obtained in the general vicinity of large earthquake
09:50 - 10:10	Mikheeva Anna , Kalinnikov I.	On the possibilities and problems of using creepex as a characteristic of the seismogenic environment stress-strain state Online
10:10 - 10:30	Sycheva Nailia , Rebetsky Y.	Research of the features of seismicity and seismotectonic deformations of some areas of the Altai-Sayan mountain region
10:30 - 10:50	Rodkin Mikhail	The role of geodynamics and the deep fluid regime in seismicity, and oil and ore generation processes

10:50 - 11:20 **Coffee break**

Earth Phys Dept, Room 507

11:20 - 11:40	Kopylova G., Serafimova Y., Kasimova Victoria	Precursors of strong earthquakes in Kamchatka (according to data from 2005-2022)
11:40 - 12:00	Strelnikov Andrei	Paleoseismological studies of the Jungal depression Online
12:00 - 12:20	Sycheva Nailia , Mansurov A.	Comparing estimates of crustal deformation in Altai-Sayan mountain region based on seismic and GNSS data
12:20 - 12:40	Novikov Victor , Kulkov D., Parov S., Gorynin I.	A possible thermal mechanism of electromagnetic earthquake triggering: Insight from laboratory press experiments and field estimations Online
12:40 - 13:00	Bataleva Elena , Nepeina K., Matiukov V.	Manifestation of the earthquake of January 23, 2024 (Northern China) in the components of the electromagnetic field (Northern Tien Shan) Online
13:00 - 13:20	Morozov Alexey , Asming V.	Relocation of Early Instrumental Earthquakes in the Arctic Online

13:20 - 15:00

Lunch break

Interpretation of Geophysical Fields | Chair Vladimir Troyan

Blue Hall

15:00 - 15:20

Daurbayeva Gulbanu,
Lukianova R., Siylkanova A.

Variations of the electron density in the topside ionosphere during the earthquake on January 22, 2024 in Central Asia

Online

15:20 - 15:40

Akbashev Rinat, Makarov E.

Experiment on physical modeling of ash clouds with simultaneous recording of the atmospheric electric potential gradient

Online

15:40 - 16:00

Vishniakov Dmitrii, Lygin I.

On correlation of magnetic field variations with large seismic events

Online

16:00 - 16:20

Riabova Svetlana,
Shalimov S.

Measured by magnetometers patterns of the ionospheric response to seismic events in the Philippines on December, 2023

Online

16:20 - 16:50

Coffee break

16:50 - 17:10

Pashayan Romela

Graphic representation of the parameters of hydrogeochemical composition of mineral water in central Armenia

Online

17:10 - 17:30

Zotov Leonid, Sidorenkov N.,
Bizouard C.

Chandler wobble changes in 2020s

Online

17:30 - 17:50

Riabova Svetlana

Response of the upper ionosphere to the earthquake in the Sea of Japan on January 1, 2024 (preliminary results)

Online

17:50 - 18:10

Petrushov Andrey,
Smirnov V.

Anomalies of RTL function and Gutenberg-Richter parameter preceding earthquakes in California

18:10 - 18:30

Riabova Svetlana,
Shalimov S.

Tsunami driven internal gravity waves after Great Japan Earthquake

Online

STP Solar-Terrestrial Physics

23.04.2024

Main Conference Hall

Magnetospheric dynamics, storms and substorms | Chair: Apatenkov S.V.

09:00 - 09:20	Lavrukhin Alexander, Alexeev I.	Aurora boundaries during magnetic storm
09:20 - 09:40	Manina Alina, Kalegaev V., Nikolaeva V., Sarajev R., Ivanova A., Vlasova N.	Dynamics of the Earth's high-latitude magnetosphere during a magnetic storm on 02.27.2023
09:40 - 10:00	Saladukhin Ihar, Aronov G., Aronov A., Laziuk V., Pustoshilo L.	Analysis of the magnetic storms and variations of the geomagnetic field components at the Pleshchenitsy Observatory, Republic of Belarus
10:00 - 10:20	Bryzhakhina Diana, Apatenkov S.	Observation of stationary current sheet in the magnetosphere

10:20 - 10:35 **Coffee break**

Magnetospheric dynamics, storms and substorms | Chair: Apatenkov S.V.

10:35 - 10:55	Antonova Elizaveta, Ovchinnikov I., Naiko D., Kirpichev I., Vorobjev V., Yagodkina O., Stepanova M.	Plasma sheet turbulence and topology of magnetospheric domains Online
10:55 - 11:15	Petrashchuk Aleksandr, Klimushkin D., Mager P.	Numerical analysis of ballooning modes in Earth's magnetosphere and their connections with MHD oscillation branches
11:15 - 11:35	Leonenko Makar, Grigorenko E., Zelenyi L.	Strong electrostatic fluctuations associated with intense electric currents in the plasma sheet of the Earth magnetotail
11:35 - 11:55	Troshichev Oleg, Dolgacheva S., Sormakov D., Stepanov N.	Different origin of magnetic disturbances evaluated by AL index in course of the growth and expansion substorm phases

11:55 - 12:10 **Coffee break**

Magnetospheric dynamics, storms and substorms | Chair: Kubyshkina M.V.

12:10 - 12:30	Shukhtina Maria, Sergeev V., Nikolaev A., Stepanov N.	Relationship between dipolarizations and Energetic Electron injections at the Geosynchronous orbit
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12:30 - 12:50	Sergeev Viktor , Stepanov N., Ogawa Y., Rozanov E.	Local time distribution and activity dependence of extreme electron densities in the auroral D-region as an image of energy-dependent energetic electron precipitation
12:50 - 13:10	Stepanov Nikita , Sergeev V., Ogawa Y.	On the influence of the long-term history of magnetospheric activity on the precipitation of energetic electron fluxes into the D layer of the auroral ionosphere
13:10 - 13:30	Ievlenko Igor , Parnikov S.	Dynamics of the proton aurora and current sheet in the magnetosphere. Ground-based and satellite observations Online

13:30 - 14:30 **Lunch break**

Magnetospheric dynamics, storms and substorms | Chair: Semenov V.S.

14:30 - 15:10	Kalegaev Vladimir , Basilevskaya G., Vlasova N., Grankin D., Gruzdov D., Demekhov A., Ivanova A., Kaportseva K., Mironova I., Myagkova I., Popova T., Rosanov E., Shugay Y., Yahnina T.	Acceleration and losses of the outer radiation belt energetic electrons during period of long duration auroral activity Solicited talk
15:10 - 15:30	Gruzdov Danil , Kalegaev V., Vlasova N., Ivanova A., Andrey D., Galina B., Yahnina T.	Spatial-energy dependencies of maximum electron fluxes of the outer radiation belt during geomagnetic activity Online
15:30 - 15:50	Ivanova Alexandra , Kalegaev V., Basilevskaya G., Vlasova N., Gruzdov D., Demekhov A., Kaportseva K., Mironova I., Myagkova I., Shugay Y., Yahnina T.	Features of energetic electron precipitation of different mechanisms from the outer radiation belt during geomagnetic disturbances

15:50 - 16:05 **Coffee break**

Magnetospheric dynamics, storms and substorms | Chair Divin A.V.

16:05 - 16:45	Pilipenko Vyacheslav , Kozyreva O., Sakharov Y.	Is the global MHD modeling of the magnetosphere adequate for GIC prediction? Solicited talk
16:45 - 17:05	Kostarev Danila	Impact of space weather on pipelines in high latitude regions
17:05 - 17:25	Belakhovsky Vladimir , Pilipenko V., Sakharov Y., Selivanov V.	Extreme growth of GIC in power lines on the Kola Peninsula and in Karelia during 11 years of observations Online

17:25 - 17:45

Marchuk Roman, Mishin V.,
Klibanova Y., Penskikh Y.,
Mikhalev A.

Features of development of geomagnetic activity
and night sky airglow at mid-latitudes during the
20 Dec 2015 storm

17:45 - 18:00

Coffee break

Brief oral presentation of posters | Chair: Kubyshkina M.V.

Zotov Oleg, Klain B.,
Kurazhkovskaya N.,
Kurazhkovskii A.

Hysteresis cycles and invariance of the *Dst* index
form during geomagnetic storm development

Kozyreva Olga, Pilipenko V.,
Myagkova I., Belakhovsky V.

Correspondence between the dynamics of the
outer radiation belt, auroral oval, and ULF power

Demekhov Andrei,
Yahnina T., Popova T.,
Kalegaev V., Lubchich A.,
Ivanova A., Gruzdov D.

Influence of wave properties on energetic
charged particle precipitation during a magnetic
storm of 10-16 October 2017

Yahnina Tatiana,
Demekhov A., Kalegaev V.,
Bazilevskaya G., Gruzdov D.,
Ivanova A.

Dynamics of energetic electrons and protons
precipitation according to data from low-orbit
satellites of the NOAA/POES and Meteor M2
during a magnetic storm on October 10-16, 2017

Popova Tatyana, Yahnina T.,
Demekhov A.

A study of the influence of geomagnetic field
asymmetry on relativistic electron fluxes at low
Earth orbit altitudes

Despirak Irina,
Kleimenova N., Gromova L.,
Lubchich A.

Global location of the maximum of very intense
substorms

Lubchich Andris, Despirak I.,
Kleimenova N., Setsko P.,
Malysheva L.

Polar substorms and solar activity

Kurazhkovskaya N., **Klain
Boris**, Kurazhkovskii A.

Effect of interplanetary conditions and auroral
activity on intermittency regularities of $Pi3$
irregular geomagnetic pulsations

Kurazhkovskaya N., **Klain
Boris**, Kurazhkovskii A.

The effect of the carrier frequency decreasing of
serpentine emission in the polar cap during weak
geomagnetic activity

24.04.2024

Main Conference Hall

Magnetospheric dynamics, storms and substorms | Chair: Zolotova N.V.

09:30 - 09:50	Myagkova Irina , Shiroky V., Vladimirov R., Gadzhiev I., Dolenko S.	Prediction of the state of the Earth's magnetosphere using machine learning in SINP MSU Space Weather Analysis Center
09:50 - 10:10	Erkaev Nikolai	Dayside magnetosheath properties related to the magnetic reconnection
10:10 - 10:30	Tsyganenko Nikolai , Semenov V., Erkaev N., Gubaidulin N.	Magnetic fields and electric currents around the dayside magnetopause as inferred from large sets of in situ data
10:30 - 10:50	Apatenkov Sergey	Space weather effects on low altitude satellite orbits

10:50 - 11:05 **Coffee break**

Magnetospheric waves | Chair: Zolotova N.V.

11:05 - 11:25	Nikitenko Alexander , Fedorenko Y., Kleimenova N., Gromova L., Malysheva L., Beketova E.	Auroral hiss on Spitsbergen and "polar" substorms Online
11:25 - 11:45	Mikhailova Olga , Mager P.	The first experimental confirmation of the existence of a near-equatorial resonator for ion-ion hybrid modes in the magnetosphere
11:45 - 12:05	Grach Veronika , Demekhov A.	Interaction of Relativistic Electrons with Electromagnetic Ion-Cyclotron Wave Packets of a Finite Length
12:05 - 12:25	Ismagilov Valery , Kopytenko Y.	Investigation of Pc5 geomagnetic pulsations on two-dimensional network of stations

12:25 - 12:40 **Coffee break**

Magnetospheric waves and Sun-Earth connections| Chair: Zolotova N.V.

12:40 - 13:00	Vlasov Aleksandr , Kozlov D.	Determining the transverse structure of Alfvén waves recorded by the Van Allen Probes satellites by means of the "phase portraits" technique
13:00 - 13:20	Semenov Vladimir , Kubyshekin I., Kubyshekina M., Tsyganenko N., Erkaev N.	The role of the ring current in the Dungey cycle from the point of view of Stokes' theorem

13:20 - 13:40	Paramonik Igor , Divin A., Rumenskich M., Chibranov A., Shaikhislamov I., Semenov V.	The ions counterclockwise motion near the diamagnetic cavity edge
13:40 - 14:00	Ragulskaya Maria , Obridko V.	24th and 25th cycles of solar activity: features and predictors Online

14:00 - 15:00 **Lunch break**

Sightseeing trip to Kronstadt – from 15:00

25.04.2024

Main Conference Hall

Ionosphere and atmosphere | Chair: Mironova I.A.

09:30 - 09:50	Savelyeva Natalia, Pilipenko V.	Study of ionospheric variations before the great Tohoku earthquake in search of precursors of catastrophic earthquakes Online
09:50 - 10:10	Denisenko Valery, Bakhmetieva N.	The ionospheric electric field variations caused by the release of radon from the ground
10:10 - 10:30	Liperovskaya Elena, Rodkin M.	Spatiotemporal features of seismoionospheric anomalies in the F-layer, Japan region
10:30 - 10:50	Kirillov Andrey	Electronically excited molecular nitrogen in the upper and middle atmospheres of Titan and Earth

10:50 - 11:05 **Coffee break**

Ionosphere and atmosphere | Chair: Mironova I.A.

11:05 - 11:25	Dashkevich Zhanna, Ivanov V.	Time dependent physicochemical model of ionospheric components excitation during auroral events
11:25 - 11:45	Dashkevich Zhanna, Ivanov V.	Variation of the effective recombination coefficient during auroral electron precipitation
11:45 - 12:05	Klimov Pavel, Nikolaeva V., Shchelkanov K., Saraev R., Sigaeva K., Belov A., Murashov A., Kozelov B., Roldugin A., Sharakin S.	UV-microbursts of atmospheric emission in auroral zone
12:05 - 12:25	Kotikov Andrey, Nikolaeva V., Klimov P., Shchelkanov K.	Geomagnetic conditions during UV-microbursts measurements by PAIPS photometer

12:25 - 12:40 **Coffee break**

Ionosphere and atmosphere | Chair: Divin A.V.

12:40 - 13:00	Mironova Irina, Grankin D., Rozaev E., Kalegaev V., Bazilevskaya G., Ivanova A., Yahnina T., Demekhov A.	Forced atmospheric-ionospheric effects by precipitation of energetic electrons during a magnetic storm on October, 2017
13:00 - 13:20	Grankin Dmitry, Mironova I., Rozaev E.	The response of the ionosphere and upper atmosphere to the energetic particles precipitation.

13:20 - 13:40	Bessarab Fedor, Kurdaeva Y., Borchevkina O., Klimenko M.	Spatial features of the ionospheric disturbance caused by a meteorological squall Online
13:40 - 14:00	Belyuchenko Kupriyan, Klimenko M., Ratovsky K., Vesnin A., Klimenko V.	Identification of spatial area that gives main contribution to positive storm-time response in high-latitude regional electron content

14:00 - 15:00 **Lunch break**

Ionosphere and atmosphere | Chair: Divin A.V.

15:00 - 15:20	Medvedeva Irina, Ratovsky K.	Long-term variations in characteristics of upper neutral atmosphere and ionosphere from spectrometric and radio sounding measurements
15:20 - 15:40	Larchenko Alexey, Nikitenko A., Lebed O., Fedorenko Y.	The influence disturbances in the ionosphere caused by electron precipitation on the propagation of VLF signals
15:40 - 16:00	Pulinets Sergey, Budnikov P., Pulinets M.	Identification and filtration of different sources of the ionosphere variability

16:00 - 16:15 **Coffee break**

Brief oral presentation of posters | Chair: Mironova I.A.

	Potapov Alexander, Guglielmi A., Feygin F.	On ponderomotive acceleration of heavy ions in magnetospheric plasma
	Petrashchuk Aleksandr, Klimushkin D., Mager P.	On the dispersion properties of coupled Alfvén and slow waves in two-dimensionally inhomogeneous model of the magnetosphere
16:21 - 16:24	Veretenenko Svetlana, Dmitriev P.	Long-term effects of solar activity on extratropical cyclone movement in different regions of the North Atlantic
	Titova Mariia	The technique of processing of radiotechnical and geophysical information about conditions of satellite radio signal propagation for studying lithospheric-ionospheric manifestations
	Egorov Ivan, Blagoveshchenskaya N., Borisova T., Kalishin A.	The features of small-scale artificial field-aligned irregularities, induced by the O- and X-mode HF pumping by the EISCAT/Heating facility
	Ljubchich Vladimir, Ivanov N., Shapovalova J.	Distortion of the results of impedance measurements interpretation on the Kola Peninsula due to the proximity of ionospheric sources of the natural electromagnetic field

Denisenko Valery,
Klimenko M., Klimenko V.,
Anisimov S., Frank-
Kamenetsky A., Nagorskiy P.,
Pustovalov K., Pilipenko V.,
Smirnov S.

Mathematical simulation of the atmospheric electric field disturbances caused by a magnetic storm

Mandrikova Oksana,
Fetisova N.

Analysis of the ionospheric parameter dynamics during increased geomagnetic activity and strong earthquakes in Kamchatka

Despirak Irina, Setsko P.,
Lubchich A., Sakharov Y.,
Selivanov V.

Large pulses of solar wind dynamic pressure and the appearance of intense GICs

Ostrovskii Victor,
Kadyshevich E.

PFO-CFO Theory of Solar System Formation and Transformation: Foundation, method, explanations, proofs, and predictions

26.04.2024

Main Conference Hall

New experiments and Methods | Chair: Zolotova N.V.

09:30 - 09:50	Mandrikova O., Mandrikova Bogdana	Method for detecting sporadic manifestations of solar activity in cosmic ray variations Online
09:50 - 10:10	Svertilov Sergey	Multi-satellite constellation of Moscow university "Sozvezdie-270" for monitoring of space weather effects and electromagnetic transients
10:10 - 10:30	Bogomolov Vitalii	Solar gamma-ray spectrometers on MSU cubesats: experimental methodology and first results
10:30 - 10:50	Kholodkov Kirill , Burov V., Kondratov A., Aleshin I.	Efforts of China-Russia Consortium at Global Aviation Space-Weather Service

10:50 - 11:05 **Coffee break**

Space climate and Sun-Earth connections | Chair: Semenov V.S.

11:05 - 11:25	Polukhina Sofia , Kashapova L.	Limb Flare with Failed Eruption Online
11:25 - 11:45	Gorbunova Ksenia	Two-dimensional hydrodynamic outflow from exoplanets
11:45 - 12:05	Vakhrusheva Anna , Shugay Y., Kaportseva K., Ereemeev V., Kalegaev V.	Two-dimensional cone models of geoeffective coronal mass ejections
12:05 - 12:25	Kadyshevich E., Ostrovskii Victor	Determining role of the solar protuberance activity in the Earth's climate current warming

12:25 - 12:40 **Coffee break**

Space climate and Sun-Earth connections | Chair: Semenov V.S.

12:40 - 13:00	Riabova Svetlana	Geophysical effects caused by the flyby and explosive destruction of the fireball on September 02, 2023 Online
13:00 - 13:20	Vladimirov Roman , Shirokiy V., Barinov O., Dolenko S., Myagkova I.	Multistage time series forecasting algorithm based on machine learning methods used to forecast the state of the earth's magnetosphere
13:20 - 13:40	Cherniakov Sergei	Winter effects of a night meteor explosion in high latitudes

13:40 - 14:40

Lunch break

Space climate and Sun-Earth connections | Chair: Semenov V.S.

14:40 - 15:00

Novikov Victor, Sorokin V.

Space weather and seismic activity: Possible triggering of earthquakes by strong solar flares of X-class

Online

15:00 - 15:20

Kropotina Julia, Bykov A.

The impact of rotational discontinuities on ions acceleration at the Earth's bow shock

15:20 - 15:40

Kupriyanova Elena,
Mikhalchuk A.

Quasi-periodic fast propagating wave trains as a seismological tool for plasma structures in the solar corona

15:40 - 16:00

Malkin Evgeniy, Cherneva N.,
Kazakov E., Cherneva V.,
Makhlai D., Akbashev R.,
Sannikov D., Malkina O.,
Lichtenberger J., Koronczay D.,
Andreeva M.

Recording of whistlers during Bezmyanniy and Shiveluch volcano eruptions

16:00 - 16:30

Discussion

16:30 - 16:45

Conference closing