

## PROGRAM

### *5 NOVEMBER 2007, MONDAY*

16.00 – 19.00 **Registration**

19.00 – 20.00 **Dinner**

20.30 **RECEPTION**

### *6 NOVEMBER 2007, TUESDAY*

#### CONFERENCE HALL

10.00 – 10.10 **G.A. Zherebtsov**, Opening remarks

#### PLENARY REPORTS

Chair **V.D. Kuznetsov**

10.10 – 10.45 **G. A. Zherebtsov**, From the program of IGY – 1957 to IHY projects.

10.45 – 11.20 Joseph Davila, B. Thompson, and **N. Gopalswamy**, The International Heliophysical Year

11.20 – 11.55 **I. Nurgaliev**, International Heliophysical Year – 2007 for Education

11.55 – 12.20 Coffee break

Chair **L.M. Zelenyi**

12.20 – 12.45 **V.N. Obridko**, G.A. Zherebtsov, A.V. Stepanov, International Heliophysical Year in Russia

12.45 – 13.20 L.M. Zelenyi, **V.D. Kuznetsov**, Space Projects on Solar-Terrestrial Physics

13.20 – 13.55 **N. Gopalswamy**, Coronal mass ejections in the heliosphere

14.00 – 15.00 Lunch

#### CONFERENCE HALL

#### I. SOLAR PHYSICS

Chair **V.V. Fomichev**

15.00 – 15.20 **V. M. Grigor'ev**, L. V. Ermakova, and A. I. Khlystova, Dynamics of line-of-sight velocity and magnetic field in solar photosphere during appearance of great active region NOAA 10488

15.20 – 15.40 **W.Q. Gan**, SMESE: Small explorer for solar eruptions.

15.40 – 16.00 **A.V. Stepanov**, V.V. Zaitsev, Physical processes in solar coronal loops

16.00 – 16.15 **A.T. Altyntsev**, On fluxes of high energy electrons in flare loops

16.15 – 16.30 **G.B. Gelfreikh**, V.E. Abramov-Maximov, N.I.Kobanov, K.Shibasaki, A comparison of parameters of 3-minute and 5-minute oscillations in sunspot umbra from synchronous microwave and optical observations

16.30 – 16.55 Coffee break

Chair **A.V. Stepanov**

16.55 – 17.10 **V.G. Fainshtein**, Expansion of coronal mass ejections within LASCO field of view: some regularities

- 17.10 – 17.25 **A.A. Soloviev**, Dynamics of magnetic flux ropes and coronal mass ejections.  
 17.25 – 17.40 **I.P. Shestopalov**, E. P. Kharin, Situation of preflare during two solar rotations before a flare on December 13, 2006.  
 17.40 – 17.55 **I. M. Podgorny**, A. I. Podgorny, and E. V. Vashenyuk, Solar flare model: comparison of MHD numerical simulation and observation.  
 17.55 – 18.10 **A. I. Podgorny**, I. M. Podgorny, N. S. Meshalkina, MHD Simulation of current sheet appearing above the Active Region AR 0365  
 18.10 – 18.25 **A.M. Uralov**, Microwave Neutral Line associated Source and its relation to a current sheet.

## MEETING ROOM, GROUND FLOOR

### IV. PHYSICS OF THE IONOSPHERE

#### Chair **M.G. Deminov**

- 15.00 – 15.15 **A.V. Mikhailov**, V.H. Depuev, A.I. Osin, V.N. Shubin, and A.H. Depueva, Ionosphere Monitoring and Prediction System of IZMIRAN: Basic Principles, Current state and Prospects  
 15.15 – 15.30 **A.P. Potekhin**, G. A. Zherebtsov, V.I. Kurkin, A.V. Medvedev, K.G.Ratovsky, and B.G. Shpynev, Ionospheric mid-latitude responses to the extreme geomagnetic storms for solar cycle-23  
 15.30 – 15.45 **V.I. Kurkin**, N.M. Polekh, O.M. Pirog, V.A. Moshkova, I.N. Poddelsky, The ionospheric disturbances during low solar activity years and influence of them on HF radio waves propagation  
 15.45 – 16.00 **V. Kunitsyn**, E. Tereshchenko, E. Andreeva, I. Nesterov, A. Padokhin, Radiotomographic studies of ionospheric response to solar activity  
 16.00 – 16.15 **B.G. Gavrillov**, D.V. Egorov, J.I. Zetzer, Investigations of mechanisms of transfer of the ionosphere perturbations during magnetic storms on basis of the data of ground observatory measurements  
 16.15 -16.30 **N. F. Blagoveshchenskaya**, T. D. Borisova, V. A. Kornienko, T. R. Robinson, T. K. Yeoman, M T. Rietveld, Phenomena initiated by the HF ionospheric modification at different latitudes  
 16.30 – 16.55 Coffee break

#### Chair **A.P. Potekhin**

- 16.55 – 17.10 **A.T. Karpachev**, Global response of the upper ionosphere to the solar wind impact.  
 17.10 – 17.25 **E.L. Afraimovich**, E.I. Astafyeva, A.V. Oinats, Yu.V. Yasukevich, I. V. Zhivetiev, Global Electron Content: a new conception to track solar activity  
 17.25 – 17.40 **E. B. Romanova**, G. A. Zherebtsov, A.V. Tashchilin, O. M. Pirog, N. M. Polekh, A study of response of the ionosphere to large geomagnetic storms  
 17.40 – 17.55 **L.B.Vanina-Dart**, Simultaneous reaction of lower high-latitude D-region of both poles to proton flashes  
 17.55 – 18.10 **V.L. Khalipov**, A.E. Stepanov, E.D. Bondar', M.S. Zabolotsky, Ionospheric features of large-scale convection of plasma in the magnetosphere  
 18.10 – 18.25 **L. Biktash**, The Solar Wind Control of the Ionosphere Dynamics during Geomagnetic Storms  
 18.25 – 18.40 **M.G. Deminov**, The role of ionospheric conductivity in formation of the polarization jet

## MEETING ROOM, THE FIRST FLOOR

### III. PHYSICS OF THE MAGNETOSPHERE

## Poster presentation

Chair **A.S. Leonovich**

15.00 – 16.30 **P45 – P61**

16.30 – 16.55 Coffee break

Chair **A.S. Leonovich**

16.30 – 18.10 **P62 – P79**

19.00 – 20.00 Dinner

## **7 NOVEMBER 2007, WEDNESDAY**

### CONFERENCE HALL

#### PLENARY REPORTS

Chair **N. Gopalswamy**

10.00 – 10.35 **Yu.D. Kotov**, Scientific objectives and observational capabilities of solar satellite project “CORONAS-PHOTON”

10.35 – 11.10 **V. Bothmer** and A. Zhukov, STEREO - Answering Space Weather Science Challenges

11.10 – 11.45 **K. Scherer**, H. Fichtner, B. Heber, Heliophysical-terrestrial relations

11.45 – 12.10 Coffee break

Chair **V. M. Grigor'ev**

12.10 – 12.45 **B.V. Somov**, New observational and theoretical problems in physics of eruptive solar flares and coronal mass ejections

12.45 – 13.20 **I.S. Veselovsky**, Solar wind origins: modern status of the problem

13.20 – 13.55 **V.V. Benghin**, V.M. Petrov, M.I. Panasyuk, M.V. Tel'tsov, V.G. Mitrikas, Radiation environment in manned flight orbits and solar activity

14.00 – 15.00 Lunch

### CONFERENCE HALL

#### I. SOLAR PHYSICS

Chair **M.A.Livshits**

15.00 – 15.15 **V.N. Ishkov**, I.G. Shibaev, Observed cycles of solar activity: characteristics, model, the forecast

15.15 – 15.30 **T.P. Borisevich**, G. N. Ilyin, A. N. Korzhavin, N. G. Peterova, N. A. Topchilo, The diagnostics of flaring active regions using the cm-wavelength range

15.30 – 15.45 G.Ya.Smolkov, A.M.Uralov, **I.A.Bakunina**, Radioheliographical diagnostics of potential flare productivity of active regions.

15.45 – 16.00 **G.P. Chernov**, Uncommon zebra patterns in solar radio burst

16.00 – 16.15 **E.V. Ivanov**, V.G. Fainstein, Relationship between the origin and propagation of CME and large-scale structure of solar magnetic fields

16.15 – 16.30 **B.P. Filippov**, L. Golub, S. Koutchmy, Jet-like events above null points of coronal magnetic field

16.30 – 16.55 Coffee break

Chair **A.T. Altyntsev**

- 16.55 – 17.10 **V.M. Bogod**, Spectral features of microwave polarization emission of active regions with geoefficiency flare events.
- 17.10 – 17.25 **M.A. Livshits**, Large non-stationary processes on the Sun: space-temporal structure and effective acceleration of particles
- 17.25 – 17.40 S.A. Yazev and **V.I. Sidorov**, Powerful solar flares and coronal mass ejections: chromospheric phenomena.
- 17.40 – 17.55 **Alexei Struminsky** and Ivan Zimovets, Characteristic times of non thermal electromagnetic emissions of large proton flares
- 17.55 – 18.10 E.A. Isaeva, **V.F. Melnikov**, Solar Proton Events and Flare Microwave Emission
- 18.10 – 18.25 V. Bychkov, **V. Nizovtsev**, Vortex aspects of Solar magnetic field and magnetic cycle

## MEETING ROOM, GROUND FLOOR

### IV. PHYSICS OF THE IONOSPHERE

Chair **N. F. Blagoveshchenskaya**

- 15.00 – 15.15 **V. Guineva**, E. Trondsen, S. Marple, C.M. Hall, P. Cannon, T.L. Hansen, Study of the auroral emissions and electron precipitation depending on the solar activity
- 15.15 - 15.30 **O.I. Berngardt**, A.P. Potekhin, Investigations of fine structure of coherent echo spectra using Irkutsk incoherent scatter radar data
- 15.30 – 15.45 **T.V. Kuznetsova**, A.I. Laptukhov, Response of high latitude polar ionosphere to changes of pointing vector in near-Earth space relative orientation of geomagnetic moment.
- 15.45 – 16.00 **I.B. Ievenko**, Manifestations of abrupt increases of the southward IMF and solar wind density in the aurora dynamics at subauroral latitudes
- 16.00 – 16.15 **S.A. Pulinets**, D. Ouzounov, L. Doda, A. Dmitriev, M., Kafatos, G. Cervone, Solar and geomagnetic activity as a possible trigger of the destructive earthquakes using as example the Sumatra earthquake on 26 of December 2004.
- 16.15 – 16.30 **L. Ishkova**, Space-time low-latitude ionosphere variations during risen seismic activity periods
- 16.30 – 16.55 Coffee break

Chair **B.G. Gavrilov**

- 16.55 – 17.10 A.G. Kolesnik, S.A. Kolesnik, A.A. Kolmakov, A.A. Kovalev, Ionosphere effects of solar eclipses 29 March 2006 and 19 March 2007
- 17.10 – 17.25 **E. Fedorov**, A. Schekotov, O. Molchanov, M. Hayakawa, S. Andreevski, and L.N. Baransky, Impulse Response of Ionospheric Alfvén Resonator. A role of Nearby Thunderstorms
- 17.25 – 17.40 **N.I. Izhovkina**, A.T. Karpachev, I.S. Prutensky, S.A. Pulinets, A. Kiraga, Z. Klos, H. Rothkael Electrostatic Emission In Inhomogeneous Geomagnetic Field In The Topside Ionosphere.
- 17.40 – 17.55 **A.Yu. Schekotov**, O.A. Molchanov, M. Hayakawa, N. Yagova, Polarization parameters of natural ULF-ELF emissions and seismicity
- 17.55 – 18.10 **V.I. Larkina**, Low frequency emissions at an external ionosphere altitudes and solar activity.
- 18.10 – 18.25 **V.N. Ivchenko**, V.E. Korepanov, G.V. Lizunov, Yu.M. Yampolsky, IONOSATS – ionospheric satellite cluster
- 18.25 – 18.40 **P.A. Klimov**, G.K. Garipov, B.A. Khrenov, Study From Satellites of Transient Luminous Events in the Upper Atmosphere.

## MEETING ROOM, THE FIRST FLOOR

### III. PHYSICS OF THE MAGNETOSPHERE, V. PHYSICS OF THE ATMOSPHERE, VI. HELIOBIOLOGY

#### Poster presentation

Chair TBD

15.00 – 16.30 **P80 – P88, P109-P116**

16.30 – 16.55 Coffee break

Chair TBD

16.30 – 18.00 **P117 – P123, P124-132**

19.00 – 20.00 Dinner

### **8 NOVEMBER 2007, THURSDAY**

## CONFERENCE HALL

### PLENARY REPORTS

Chair TBD

10.00 – 10.35 **A.A. Petrukovich**, V.A.Sergeev, New vision of magnetotail with Cluster project

10.35 – 11.10 **G.A. Kotova**, V.V. Bezrukikh, M.I. Verigin, The history and to date studies of the Earth's plasmasphere

11.10 – 11.45 **Ju.I. Zetzer**, Geophysical problems in the intergeospheres interactions

11.45 – 12.10 Coffee break

### I. SOLAR PHYSICS

Chair **Yu.A. Nagovitsyn**

12.10 – 12.25 P. B. Dmitriyev, **I. V. Koudriavtsev**, V. P. Lazutkov, G. A. Matveev, M.I. Savchenko and D. V. Skorodumov, Time structure and energy spectra evolution of the solar flare X-rays measured by the “IRIS” spectrometer on board the “CORONAS-F” spacecraft.

12.25 – 12.40 **B. Joshi**, P. K. Manoharan, Astrid Veronig, K.-S. Cho, S. -C. Bong and Y. -J. Moon, Multi-wavelength signatures of magnetic reconnection in solar flares

12.40 – 12.55 **B. V. Somov**, N. S. Dzhililov, and J. Staude, On the thermal instability in optically thin coronal plasma

12.55 – 13.10 **K. Georgieva**, Long-term variations in solar meridional circulation from geomagnetic data

13.10 – 13.25 **V. Pipin**, On the sources of the global poloidal magnetic fields of the Sun

13.25 – 13.40 **I.S. Kim**, A.I. Stepanov, On feasibility of future space K-corona projects.

## MEETING ROOM, GROUND FLOOR

### IV. PHYSICS OF THE IONOSPHERE

Chair **V. Kunitsyn**

12.10 – 12.25 **S.I. Klimov**, Methods of ionosphere monitoring of Sun-Earth connections with the use of micro-satellite platform

- 12.25 – 12.40 **B. Kirov**, Langmuir probe for the International Space Station
- 12.40 – 12.55 **A.V. Pavlov**, N.M. Pavlova, and A.D. Shevnin, The conjugate-hemisphere differences in the mid-latitude winter-summer anomalous variations of NmF2 at solar minimum and maximum
- 12.55 – 13.10 **M. S. Quassim**, Jean-Jacques Berthelier, Ionospheric Disturbances During the Geomagnetic Storms in Nov 2004 at DEMETER Altitude
- 13.10 – 13.25 **A. A. Pavelyev**, J. Wickert, A. G. Pavelyev, Effects of the ionosphere and solar activity on radio occultation signals: Application to CHALLENGING Minisatellite Payload satellite observations
- 13.25 – 13.40 **S. Filippov**, Application of balloon missions in scientific researches
- 14.00 – 15.00 Lunch

## CONFERENCE HALL

### II. PHYSICS OF THE INTERPLANETARY MEDIUM AND SOLAR COSMIC RAYS

Chair **K. Scherer**

- 15.00 – 15.15 **V.G. Eselevich**, The new phenomena in solar-terrestrial physics
- 15.15 - 15.30 **A.V. Mordvinov**, Magnetic Flux Imbalance of the Sun and Heliosphere as a Diagnostic Tool of Their Long-Term Changes
- 15.30 – 15.45 **A.I. Laptukhov**, T.E. Val'chuk, Heliomagnetic moment dynamics manifestation in near-Earth solar wind
- 15.45 – 16.00 **N.R. Minkova**, Multipartical statistical model of the solar wind
- 16.00 – 16.15 **N.A. Lotova**, K.V. Vladimirsky, V.N. Obridko, Evolution of the solar wind jet structure in 2000-2006.
- 16.15 – 16.30 **I.V. Chashei**, A.I. Efimov, M.K. Bird, Solar wind turbulence from radio occultation data.

16.30 – 16.55 Coffee break

Chair **V. Bothmer**

- 16.55 – 17.10 M.V. Eselevich, **V.G. Eselevich**, Disturbed region and shock wave caused by a coronal mass ejection
- 17.10 – 17.25 **S.A.Grib**, The Solar MHD Discontinuities as the Drivers of Space Perturbations
- 17.25 – 17.40 **V. A. Dergachev**, P. B. Dmitriyev Soft X-ray Solar activity and its correlation with cosmic ray and Earth's magnetic field variations during 22<sup>nd</sup> and 23<sup>d</sup> Solar cycles
- 17.40 – 17.55 **O.A.Sheiner**, V.M.Fridman, Spectral-temporal features of microwave emission preceded CMEs.
- 17.55 – 18.10 **V.M.Fridman**, O.A.Sheiner, Features of microwave emissions preceded geoeffective CMEs'.
- 18.10 – 18.25 **J.S.Shugai**, I.S.Veselovsky, S.A. Dolenko, I.G.Persiantsev, Investigation of the relation between large-scale and global processes in the Sun and the dynamics of coronal mass ejections and of solar flares

## MEETING ROOM, GROUND FLOOR

### VI. HELIOBIOLOGY

Chair **N.G. Ptitsyna**

- 15.00 – 15.15 **T.A. Zenchenko**, T.K. Breus, I. Stoilova, S. Dmitrova, T. Yanev, Analysis of meteo- and magneto- sensitivity of healthy people based on Bulgarian data base
- 15.15 - 15.30 E. Stoupel, **E.S. Babayev**, F.R. Mustafa, E. Abramson, P. Israelevich, J. Sulkes, , Two groups of acute cardiac events and environmental physical activity.

- 15.30 – 15.45 **V.S. Martynyuk**, N.A. Temuryants, B.M. Vladimirsky, Natural electromagnetic background as the synchronizing factor for biological rhythms
- 15.45 – 16.00 **K.L. Kravchenko**, S.A. Yazev and A.V. Korotkikh, The dynamics of mental diseases in Irkutsk, and solar activity.
- 16.00 – 16.15 O.V.Zhukova, E.V.Shevchenko, G.I.Shcherbakov, **S.A.Yazev**, The Irkutsk heliomedical experiment.
- 16.15 – 16.30 **N.G. Ptitsyna**, Fresh approach to geomagnetic activity bioeffectiveness: Plausible biophysical agents of natural ULF/ELF magnetic field environment.
- 16.30 – 16.55 Coffee break

Chair **V.S. Martynyuk**

- 16.55 – 17.10 **M.V. Ragulskaya**, V.V. Vishnevskiy, A.M. Tugayenko, Potentialities of distributed monitoring of functional person's state in environmental biotropic changes of solar activity. Automatic forecasting.
- 17.10 – 17.25 V.V.Tsetlin, **A.A.Artamonov**, I.V.Fedotova, Detection of daily variations electric - physical properties of water
- 17.25 – 17.40 **S. Dimitrova**, F.R. Mustafa, I. Stoilova, E.S. Babayev, V.N. Obridko, K. Georgieva, T. Taseva, S.S. Aliyeva, Heliogeophysical activity and mortality from acute myocardial infarctions: results of collaborative Bulgarian-Azerbaijani studies
- 17.40 – 17.55 **P.Ye. Grigoryev** and B.M. Vladimirskiy, The Cosmic Weather Effects in the Terror Activity.
- 17.55 – 18.10 **A.N. Lyakhov**, S.I. Kozlov, Whether aviation accidents can be dependent on the solar activity?

## MEETING ROOM, THE FIRST FLOOR

### I. SOLAR PHYSICS

#### Poster presentation

Chair **A.A. Soloviev**

15.00 – 16.30 **P1 – P16**

16.30 – 16.55 Coffee break

Chair **A.A. Soloviev**

16.30 – 18.10 **P17 – P33**

19.00 – 20.00 Dinner

### **9 NOVEMBER 2007, FRIDAY**

## CONFERENCE HALL

### III. PHYSICS OF THE MAGNETOSPHERE

Chair **A.A. Petrukovich**

- 10.00 – 10.20 **D. Delcourt**, On the non-linear dynamics of charged particles : Earth and Mercury compared
- 10.20 – 10.40 **L.M. Zelenyi**, M.S. Dolgonosov, E.E. Grigorenko, J.-A. Sauvaud, Non-adiabatic resonant acceleration of plasma in the Earth's magnetotail
- 10.40 – 10.55 **E.E. Grigorenko**, T.M. Burinskaya, J.-A.Sauvaud, L.M. Zelenyi, Plasma processes at the Plasma Sheet – Lobe Interface. Cluster Observations.

- 10.55 – 11.10 **V.A. Sergeev**, I.G. Shevchenko, N.A. Tsyganenko, M. Kuznetsova, A.V. Runov, V. Angelopoulos, Magnetotail response to varying solar wind direction : Results of global MHD simulations
- 11.10 – 11.30 **O. Troshichev**, A. Janzhura, P. Stauning, Polar cap magnetic activity: Relation to substorms and sudden changes in the solar wind dynamic pressure

11.30 – 11.55 Coffee break

Chair **A.G. Yahnin**

- 11.55 – 12.10 **I.V. Despirak**, A.A. Lubchich, B.V. Kozelov, A.G. Yahnin, H.K. Biernat, Stormtime and nonstorm substorms
- 12.10 -12.30 **B.V. Kozelov**, Multi-scale features and complexity in aurora region of the magnetosphere-ionosphere system
- 12.30 – 12.45 **L.V. Kozak**, A.T.Y. Lui, Investigations of magnetic field fluctuations in the Earth's magnetotail from the measurements of GEOTAIL spacecraft
- 12.45 – 13.00 V. Mishin, Zuyin Pu, L. Saprionova, and **Yu.V. Kuz'minykh**, Active phase of a substorm is the chain of two independent types of a reconnection – in the closed plasma sheet, and open lobes of the tail.
- 13.00 - 13.15 **S. Apatenkov**, V. Sergeev, O. Amm, R. Nakamura, W. Baumjohann, A. Runov, F. Rich, I. Alexeev, A. Fazakerley, P. Daly, H. Reme, Sharp dynamical boundaries in the inner magnetosphere. Conjugate Cluster, DMSP and MIRACLE observations.
- 13.15 – 13.30 **T.M. Burinskaya** and J.L. Rauch, Generation of Auroral Kilometric radiation
- 13.30 – 13.45 **V.V. Kalegaev**, Asymmetry of Magnetospheric Ring Current during 6-14.11.2004 Magnetic Storm

## MEETING ROOM, GROUND FLOOR

### II. PHYSICS OF THE INTERPLANETARY MEDIUM AND SOLAR COSMIC RAYS

Chair **V. A. Dergachev**

- 10.00 – 10.15 **A.I. Efimov**, N.A. Armand, L.A. Lukanina, L.N. Samoznaev, M.K. Bird, I.V. Chashei, Detection of coronal mass ejection by radio sounding method using the GALILEO and CASSINI spacecraft
- 10.15 – 10.30 **Valery I. Kozlov**, Invariant image of heliospheric storms
- 10.30 – 10.45 **R.A. Nymmik**, Regularities inherent in the fluxes of high-energy particles of the Sun: the experimental data and the probabilistic model
- 10.45 – 11.00 **L.I. Miroshnichenko**, Solar Cosmic Rays in the System of Solar-Terrestrial Relations
- 11.00 – 11.15 **L.I. Miroshnichenko**, E.V. Vashenyuk, Jorge Perez-Peraza, Yu.V. Balabin, and A. Gallegos-Cruz, Two-Component Concept for Ground Level Enhancements of Solar Cosmic Rays: Solar and Interplanetary Aspects.

11.30 – 11.55 Coffee break

### II. PHYSICS OF THE INTERPLANETARY MEDIUM AND SOLAR COSMIC RAYS

**Poster presentation**

Chair **I.V. Chashei**

11.55 – 13.00 **P34 – P44**

14.00 – 15.00 Lunch



## CONFERENCE HALL

### III. PHYSICS OF THE MAGNETOSPHERE

Chair **A.S. Potapov**

- 15.00 – 15.15 **V.M.Gubchenko**, Chapman-Ferraro problem in kinetics: 3D magnetotail/solar coronal streamer and new plasma scales and dimensionless parameters
- 15.15 - 15.35 **E.E. Antonova**, Topology of field-aligned currents in the high latitude magnetosphere and magnetospheric reply on the changes of solar wind parameters.
- 15.35 – 15.55 **I.I. Alexeev**, E.S. Belenkaya, S.Yu. Bobrovnikov, V.V. Kalegaev, J.A. Cumnock, and L.G. Blomberg, Open magnetospheric field line bundles for northward IMF
- 15.55 – 16.15 **A.S. Leonovich** and D.A. Kozlov, Alfvén resonance in a dipole magnetosphere with moving plasma.
- 16.15 – 16.30 A.O. Soldatkin, **Yu.V. Chugunov**, The model of Plasmasphere as expanding plasma flow.
- 16.30 – 16.55 Coffee break

Chair **I.I. Alexeev**

- 16.55 – 17.10 **V. Afonin**, A. Skoutnev, Ja. Smilauer, G. Stanev, and L. Todorieva, Of what consists plasma in inner magnetosphere – Interball-2 results.
- 17.10 – 17.25 **J.-G. Trotignon**, P. M. E. Décréau, J. L. Rauch, X. Vallières, P. Canu, 2Fpe Emissions Observed in the Earth's Foreshock Regions by the WHISPER Experiment Onboard CLUSTER: Event Studies
- 17.25 – 17.40 **J.L. Rauch**, P. M. E. Décréau, J. G. Trotignon, F. Lemdani-Mazouz, A. Rochel, T.M. Burinskaya, M. M. Mogilevsky, P. Canu and F.Darrouzet, Plasma Response Close To Electron Gyroharmonics Resonance Inside The Plasmaspheric Region : The WHISPER/CLUSTER Active Mode.
- 17.40 – 17.55 **S. Savin**, E. Amata, L. Zelenyi, E.A. Kuznetsov, J. Safrankova, Z. Nemecek, J. Buechner, J. Blecki, J.L. Rauch, A. Skalsky, Plasma jets and magnetic barriers: impacts on the Sun – Earth connections
- 17.55 – 18.10 **M. Verigin**, G. Kotova, V.Bezrukikh, G. Zastenker, N. Nikolaeva, Analytical modeling of joint dynamics of the terrestrial magnetopause and bow shock boundaries observed by Prognoz and Interball orbiters.
- 18.10 – 18.25 **P. Dobrev**, N.Shevyrev, A. Koval, G. Zastenker, M. Kartalev, Comparison of the magnetosheath flow parameters by Interball-1 plasma measurements and by self-consistent magnetosheath-magnetosphere model
- 18.25 – 18.40 **O.L. Vaisberg**, V.N. Smirnov, G.V. Koinash and L.A.Avanov, Observations of high-latitude reconnection on Interball Tail

### MEETING ROOM, GROUND FLOOR

### V. PHYSICS OF THE ATMOSPHERE, CLIMATE AND ECOLOGY

#### 5.1. Global processes in the Earth's atmosphere caused by solar activity

Chair **V.A. Kovalenko**

- 15.00 – 15.15 **O.M. Raspopov**, V.A. Dergachev, O.V. Kozyreva, T. Kolström, E.V. Lopatin, Interpretation physical factors responsible for global and regional climatic responses to long-term solar activity variations
- 15.15 - 15.30 **V.A. Dergachev**, O.M. Raspopov, Long-term solar activity as the controlling factor in 20<sup>th</sup> century global warming
- 15.30 – 15.45 V. Ermakov and **Yu. Stozhkov**, Causes of climate changes

- 15.45 – 16.00 **S.I. Boldyrev**, O.P. Kolomiitsev, G.S. Ivanov-Kholodny, A.P. Ignat'ev, The new approach to construction of the Earth upper atmosphere model with use of satellite local data about the absorption of solar radiation by atmosphere.
- 16.00 – 16.15 S. Ershov, **O. Novik**, Yu. Ruzhin, Elements of physics of the combined sea-based and satellite-born complexes for monitoring of geodynamics.
- 16.15 – 16.30 **M.G. Ogurtsov**, Global warming of the last 100 years – only questions, not answers.
- 16.30 – 16.55 Coffee break

## **5.2. Chemical processes in the atmosphere caused by solar activity**

Chair **O.M. Raspopov**

- 16.55 – 17.10 **A. Krivolutsky**, G. Zakharov, T. Vyushkova, A. Kuminov, Atmospheric chemical composition, temperature and dynamical response during solar proton events: 3D model simulations.
- 17.10 – 17.25 **B.M. Shevtsov**, V.V. Bychkov, V. N. Marichev, A. S. Perezhugin, A.V. Shumeiko, Dynamics of stratospheric aerosol over Kamchatka and it's coupling with geophysical processes.
- 17.25 – 17.40 **I.A. Mironova**, Variations of solar activity and optical properties of the aerosol
- 17.40 – 17.55 **A.I. Khlystov**, B.V. Somov, Results of 35-years researches of CO<sub>2</sub> contents in the atmosphere of Moscow by astrophysical method.
- 17.55 – 18.10 **V. Guineva**, G. Witt, J. Gumbel, M. Khaplanov, R. Werner, J. Hedin, S. Neichev, B. Kirov, L. Bankov, P. Gramatikov, V. Tashev, M. Popov, K. Hauglund, G. Hansen, J. Ilstad, H. Wold, O<sub>2</sub> density and temperature profiles retrieving from direct solar Lyman-alpha radiation measurements.
- 18.10 – 18.25 **V.S. Solovyev**, V.I. Kozlov, E.V. Varlamova, Research of impact of solar-terrestrial connections on dynamics of forest fires and cloudiness in Northern Asia on remote sensing data.

## **MEETING ROOM, THE FIRST FLOOR**

### **IV. PHYSICS OF THE IONOSPHERE**

#### **Poster presentation**

Chair **A.V. Mikhailov**

15.00 – 16.30 **P89 – P103**

16.30 – 16.55 Coffee break

Chair **V.I. Kurkin**

16.55 - 17.20 **P104 – P108**

20.00 **GALA DINNER**

**10 NOVEMBER 2007, SATURDAY**

## **CONFERENCE HALL**

### **III. PHYSICS OF THE MAGNETOSPHERE. Space Weather.**

Chair **N.G. Kleimenova**

- 10.00 – 10.15 **E.L. Afraimovich**, G.Ya. Smolkov, N.S. Gavriilyuk, GPS performance quality during strong solar flares on 6 December 6, 2006, and on 28 October, 2003

- 10.15 – 10.35 **Yu.I. Yermolaev**, M. Yu. Yermolaev, I. G. Lodkina, N. S. Nikolaeva, A.A. Petrukovich and L.M. Zelenyi, Large-scale interplanetary phenomena resulting in geomagnetic storms: A statistic study
- 10.35 – 10.55 **A.E. Levitin**, L.I. Gromova, L.A. Dremukhina, T.I. Zvereva, A.Y. Burtsev, Impact of solar and geomagnetic activity on secular variation of the Earth's main magnetic field
- 10.55 – 11.15 **Yu.A. Nagovitsyn**, "Space Climate" as long-term tendencies of Space Weather: data and conclusions.
- 11.15 – 11.30 **A.A. Nusinov**, Study of long-term trends of gelio-geophysical factors using methods of macroeconomic.
- 11.30 – 11.55 Coffee break

Chair **A.E. Levitin**

- 11.55 -12.10 **V.A. Parkhomov**, M.O. Ryazantseva, G.N. Zastenker, B. Tsegmed, Bursts of geomagnetic pulsations in range of 0.2 - 3 Hz excited by sharp and large solar wind density pulses.
- 12.10 – 12.30 **A.S. Potapov**, B. Tsegmed, and T.N. Polyushkina, Contribution of global Pc5 oscillations to the magnetic disturbance during geomagnetic storms.
- 12.30 – 12.50 **N.G. Kleimenova**, O.V. Kozyreva, Deep latitude penetration of the Pc5 geomagnetic pulsations in the recovery phase of super strong magnetic storms
- 12.50 – 13.10 **A.G. Yahnin**, T.A. Yahnina, H.U. Frey, Subauroral proton auroras visualize the source of geomagnetic pulsations Pc1.
- 13.10 – 13.25 **V.V. Mishin**, V.A. Parkhomov, B. Tsegmed, On relationship of the periods of low-frequency fluctuations of solar wind dynamic pressure and geomagnetic field

## MEETING ROOM, GROUND FLOOR

### V. PHYSICS OF THE ATMOSPHERE, CLIMATE AND ECOLOGY

#### 5.3 Dynamics of the air mass and cloudiness caused by solar activity

Chair **A.A. Krivolutsky**

- 10.00 – 10.15 G.A. Zherebtsov, **V.A. Kovalenko**, S.I. Molodykh, Solar activity and dynamic of atmosphere processes and world ocean heat content
- 10.15 – 10.30 **G.S. Ivanov-Kholodny**, V.E. Chertoprud, Quasi-biennial variations in solar total irradiance: their manifestation in the variations of stratosphere wind and of Earth rotation
- 10.30 – 10.45 **I.V. Koudriavtsev**, To the link between anomalies of the Earth's cloud cover on various (low, medium and high) altitudes and variations of the cosmic ray intensity
- 10.45 – 11.00 I.V. Mingalev, **V.S. Mingalev**, and A.A. Kulikov, A computational study of seasonal variations of the global neutral wind system of the Earth's middle atmosphere.
- 11.00 – 11.15 **V.S. Skomarovsky**, V.M. Kostin, Relationship between solar activity and anomalous hydrometeorological events in Russian territory.
- 11.15 – 11.30 **N.S. Erokhin**, N.N. Zolnikova, L.A. Mikhailovskaya, Small-parametric nonlinear model of typhoons to analyze the solar-terrestrial relationships role in the large-scale regional cyclogenesis dynamics.
- 11.30 – 11.55 Coffee break

#### 5.3 Dynamics of the air mass and cloudiness caused by solar activity

Chair **G.S. Ivanov-Kholodny**

- 11.55 -12.10 **L.B. Vanina-Dart**, E.A. Sharkov, I.V. Pokrovskaya, Tropical cyclone as the new possible source of gravity waves through Atmosphere-Ionosphere system.

12.10 – 12.25 **V.A. Alekseev**, N.G. Alekseeva, M.G. Daniyalov, R.A. Levkovich, A.S. Mal'gin, M.A. Musaev, O.G. Riazhskaya, O. Saavedra, V.F. Yakushev, Influence of the solar flare activity in September 2005 on tectonic activity increasing of Caucasus from Black to Caspian seas and in the central Italy.

#### **5.4. Electric discharges, fields and electromagnetic radiation connected to solar activity.**

Chair **S.A. Pulinets**

12.25 – 12.40 **Vladimir I. Kozlov**, V.A. Mullayarov, R.R. Karimov, The response of thunderstorm VLF-radionoise on solar activity by observation in Yakutsk.

12.40 – 12.55 **V.A. Mullayarov**, V.I. Kozlov, R.R. Karimov, Impact of the variations of solar wind parameters on the thunderstorm activity.

12.55 – 13.10 **G.I. Druzhin**, Yu.M. Mikhailov, G.A. Mikhailova, O.V. Kapustina, Thunderstorm activity during hurricanes.

13.10 – 13.25 **V.V. Denisenko**, V.V. Bychkov, E.V. Pomezov, Calculation of the atmospheric electric field that penetrates from the ionosphere.

13.25 – 13.40 **A.N. Lyakhov**, E.S. Khlybov, Determination of wave processes in the upper atmosphere using complex empirical orthogonal functions.

14.00 – 15.00 Lunch

19.00 – 20.00 Dinner

### **CONFERENCE HALL**

**15.00 – 16.00 CLOSING OF THE SYMPOSIUM**

**Awarding the Chizhevskiy medals**

19.00 – 20.00 Dinner

## POSTERS

### I. SOLAR PHYSICS

1. **V.E. Abramov-Maximov**, G.B. Gelfreikh, K. Shibasaki Observations of Sympathetic Flares on Nobeyama Radio Heliograph.
2. **I.A. Bakunina**, A.A. Solovjev, Yu. A. Nagovitsyn, Yu.V. Tikhomirov, V.L. Bakunin, D.V. Prosovetskiy, S.M. Kuznetsova, Long-period eigen oscillations of sunspots and radio-response of magnetosphere of an active region.
3. **V.N. Borovik**, M.A. Livshits, I.Yu. Grigorieva, V.E. Abramov-Maximov, L.V. Opeikina, A.N. Korzhavin, The post-eruptive phase of the active event on January 25, 2007 from microwave solar observations with RATAN-600 radio telescope.
4. **V.N. Borovik**, V.E. Abramov-Maximov, I.Yu. Grigorieva, L.V. Opeikina, V.M. Bogod, A.N. Korzhavin, Microwave radio emission of the active region AR 0930 before and after the geoeffective flare X3.4/4B as based on RATAN-600 observations.
5. G.P. Chernov, **V.V. Fomichev**, R.V. Gorgutsa, Peculiarities of solar radio bursts at decametric and hectometric waves.
6. **I.M. Chertok** and V.V. Grechnev, CME-associated EUV dimmings caused by filament eruptions outside of active regions.
7. **V.A. Dergachev**, D.V. Skorodumov, V.P. Lazutkov, G.A. Matveev, M.I. Savchenko, E.M. Kruglov, I.I. Shishov, G.A. Pyatigorsky, Yu.A. Chichikaluk, V.V. Khmylko, G.I. Vasiliev, V.A. Dranevich, S.Yu. Krut'kov, Hard X-ray polarimetry by Compton scattering device "PENGUIN-M" in "CORONAS-PHOTON" mission.
8. **M.I. Divlekeev**, Mass ejection and downfall in the solar atmosphere.
9. **V.G. Fainshtein**, Some properties of distributions on the latitude of K - and F-corona brightness according to LASCO data.
10. **V.G. Fainshtein**, V.A. Leonovich, On feasibility of "local" measurements of electron density in the solar corona according to SOHO/LASCO data
11. **A.A. Golovko**, I.I. Salakhutdinova, Variations of fractal parameters of active regions and solar flares occurrence.
12. **V.N. Ishkov**, Results and lessons of the last "physical" solar cycle.
13. V.V. Kaplenko, S.I. Raschetin, **S.A. Yazev**, and D.V. Yerofeyev, Photospheric observations at the solar telescope of the Irkutsk state university's astronomical observatory.
14. **N.I. Kobanov**, Wave and oscillations in solar structures of different magnetic field topology.
15. **V.I. Kozlov**, 'Abnormal' solar activity in the minimum of "weak" cycles 20 and 23 as manifestation of invariant properties of 11-year cycle.
16. **S.V. Lesovoi**, A.T. Altyntsev, V.G. Zandanov, E.F. Ivanov, A.V. Gubin, A.I. Maslov. 12-antenna prototype of the Siberian Radioheliograph
17. **V.P. Lukin**, V.M. Grigor'ev, L.V. Antoshkin, N.N. Botygina, O.N. Emaleev, P.A. Konyaev, V.V. Lavrinov, P.G. Kovadlo, and V.I. Skomorovsky, Possibility of adaptive optics application for solar telescope.
18. **E.V. Miletsky**, V.G. Ivanov, Relations between amplitudes of 11-year solar cycles and parameters of solar sunspot latitudes.
19. **K.I. Nikolskaya**, Coronal holes and magnetic fields of the Sun.
20. V.N. Obridko and **B.D. Shelting**, On Prediction of the strength of the 11-year solar cycle No. 24.
21. **I.V. Oreshina** and B.V. Somov, An Interpretation of Rapid Changes in the Magnetic Field Associated with Solar Flares.
22. **V.M. Pankov**, V.L. Prokhin, N.G. Khavenson, A.I. Stepanov, Solar flashes in the soft x-ray range, registered in experiment "CORONAS-F".
23. **T. Podladchikova**, B. Lefebvre, R. Van der Linden, Integral activity of the declining phase of sunspot cycles as precursor of the next cycle.

24. G.A. Porfir'eva, G.V. Yakunina, and **A.B. Delone**, Flares and activization of filaments in active region on the Sun.
25. G.A. Porfir'eva, **G.V. Yakunina**, and A.B. Delone, Characteristics of solar active regions with strong geomagnetic efficiency.
26. **Yu.R. Rivin**, Hypothesis of two regions of activity inside the solar convection zone. State of the art.
27. **A.V. Stepanov**, Yu.T. Tsap, Yu.G. Kopylova, Peculiarities of Alfvén wave propagation in magnetic flux tubes of solar atmosphere
28. **I.P. Shestopalov**, E. P. Kharin, Some features of the variations of charged particles and neutrons in a flare of December 13, 2006.
29. **I.G. Shibaev**, Empirical rating of duration of cycles under their peak characteristics.
30. **V.I. Sidorov**, M.Yu. Savinkin, and S.A. Yazev, A unique complex of activity as observed in late 2006 / early 2007: evolution, and energy release dynamics.
31. **V.E. Troshenkov**, Flares and coronal holes on the Sun – the auroral events on the Earth: august 2006 – 2007.
32. **E.S. Vernova**, M.I. Tyasto, D.G. Baranov, Magnetic cycle of the Sun: peculiarities of the photospheric field distribution.
33. **I. V. Zimovets**, Observations and modeling of the December 2006 solar proton events.

## II. PHYSICS OF THE INTERPLANETARY MEDIUM AND SOLAR COSMIC RAYS

34. **R. A. Gulyaev**, To search of sublimation regions in the interplanetary medium
35. **V. Koryukin**, The research of the dark matter in the Earth-Sun system.
36. Valery I. Kozlov, V.V. Kozlov, New Index of Solar Activity – Flickers Index of Cosmic Ray
37. **L.I. Miroschnichenko**, J. Perez-Peraza, Astrophysical Aspects in the Studies of Solar Cosmic Rays.
38. **L.I. Miroschnichenko**, E.V. Troitskaia, and W.Q. Gan, Effect of Density Enhancement During Some Solar Flares: New Model Calculations.
39. **K.I. Nikolskaya** and E.I. Mogilevsky, On the possible mechanism of the high velocity solar wind generation
40. **Yu.R Rivin**, Quasi-stationary magnetic field in the solar interior.
41. N.G. Skryabin, V.E. Timofeev, **L.I. Miroschnichenko**, S.N. Samsonov, Manifestation of the 399-day Variations in Solar Wind Parameters.
42. V.E. Timofeev, **L.I. Miroschnichenko**, S.N. Samsonov, N.G. Skryabin, Variations of the Interplanetary Magnetic Field and the Electron and Cosmic-Ray Intensities under the Influence of Jupiter.
43. **T.E. Val'chuk**, Solar wind fractal dimension.
44. E.V. Vashenyuk, **L.I. Miroschnichenko**, Yu.V. Balabin, J. Pérez-Peraza, and A. Gallegos-Cruz, Two-Components Features of the Two Largest GLEs: 23 February 1956 and 20 January 2005.

## III. PHYSICS OF THE MAGNETOSPHERE

45. **A.V. Artemyev**, L.M. Zelenyi, V.U. Popov, H.V. Malova The influence of the asymmetry on the development of instabilities in current sheets
46. **V.B. Belakhovsky**, V.G. Vorobjev, O.I. Yagodkina, V.C. Roldugin, Magnetospheric and ground-based response on passing of the magnetic cloud for SC of 13 January 1988.
47. **E. Belenkaya**, Magnetospheric response to the solar wind pressure pulse dependent on the direction of IMF rotation.
48. **V.V. Bezrukikh**, G.A. Kotova, M.I. Verigin, Cold ion temperature in the night time plasmasphere and geomagnetic activity (no preference)
49. **O. Chugunova**, V. Pilipenko, M. Engebretson, K-H Glassmeier, and A. Rodger, Pc3-4 pulsations at very high latitudes.

50. **O. Chugunova**, V. Pilipenko, N. Shevyrev, and G. Zastenker, Upstream ULF waves and turbulence in the magnetosheath.
51. **N.V. Erkaev**, V. S. Semenov, H. K. Biernat, Current sheet instability and flapping waves related to two magnetic field gradients
52. **A.A. Gusev**, J. Bickford, W.N. Spjeldvik, The Inner and Outer Antiproton Radiation Belts and Antimatter Mass Content in the Earth Magnetosphere.
53. A.A. Derevyannykh, **A.G. Kolesnik**, S.A. Kolesnik, A.A. Kolmakov, The solar activity in the near-Earth global resonators.
54. Yu.A. Karavaev, and **Yu.V. Kuz'minykh**, Estimation of time of disintegration of a magnetospheric ring current during a superstorm 20 Nov. 2003.
55. **I.P. Kirpichev**, Distribution of plasma pressure in the Earth's magnetosphere and transverse currents.
56. **G.V. Koinash**, O.L. Vaisberg, V.N. Smirnov, L.A. Avakov, and P.P. Moiseev, Panoramic ion energy-mass-spectrometer and electron spectrometer for Rezonans project
57. **R.A. Kovrazhkin** and J.-A. Sauvaud, Dynamics of ion structures in the plasmashet.
58. **T. Kozelova**, L. Lazutin, B. V. Kozelov, N. P. Meredith, Plasma pressure in the disturbed inner magnetosphere from CRRES measurements.
59. **O.V. Kozyreva**, N.G. Kleimenova, ULF waves in the different phases of the strong magnetic storm on May 15, 2005.
60. **G.I. Korotova**, D.G. Sibeck, Geotail Observations of Flux Transfer Events.
61. **Yu.V. Kuz'minykh** and V.M. Mishin, Electromagnetic energy flux from the solar wind into the Earth's magnetosphere
62. **L.L. Lazutin**, Impact of the magnetic storm sudden commencement (SC) impulse on the magnetospheric processes.
63. **V. Martines-Bedenko**, V.A. Pilipenko, M.J. Engebretson, Time-spatial correspondence between Pi2 wave power and UVI aurora bursts.
64. V. Mishin, **Yu.V. Kuz'minykh**, Zuyin Pu, L. Saprionova, and M. Tolochko, Periodical appearance along the magnetospheric tail of the disruptions and amplifications of the cross-tail dawn-dusk current
65. **V. Mishin** and L. Saprionova, ISTP SO RAN, Irkutsk, Russia, Origination of the westward auroral electrojet without Cowling current and polarization effect
66. V.V. Mishin, B. Tsegmed, **Yu.Yu. Malozemova**, Short – period geomagnetic pulsations and optical emissions of mid-latitude atmosphere during superstorms.
67. **V.A. Parkhomov**, A.V. Dmitriev, and A.V. Moldavanov, On global occurrence of solar flare effects.
68. **S.A. Romanov**, S.P. Savin, J.L. Pincon, M. Dunlop, Wave properties in the Earth cusp region by the multi-point magnetic field measurements.
69. **A. Sadovski**, Electromagnetic waves generated by nongyrotropic ion distribution.
70. **N. Smirnova**, Ja. Smilauer, and G. Stanev, Photoelectron current density determination derived from INTERBALL-2 spacecraft potential measurements of IESP-2 and KM-7 probe experiments.
71. **L. Tverskaya**, B.V. Marjin, M.V. Teltsov, T.A. Ivanova, V.M. Feigin, Extreme low - latitude auroral oval position in 2003 - 2005 years as inferred from Meteor-3M auroral electron precipitation data.
72. **M.I. Tyasto**, Study of cosmic ray cutoff rigidities during geomagnetic disturbances for the magnetospheric magnetic field testing.
73. **Yu.R. Rivin**, A new approach to the notion of geomagnetic activity and its identification.
74. **C.C. Rossolenko**, E.E. Antonova, Yu.I. Yermolaev, M.I. Verigin, I.P. Kirpichev, N.L. Borodkova, E.Yu. Budnik, Formation of Low Latitude Boundary Layer (LLBL) due to high level of turbulence in the magnetosheath: Case study.
75. **T.E. Val'chuk**, The semiannual variation of geomagnetic activity as inferred from aa-index data.
76. I.S. Veselovsky, Yu.S. Shugai, **O.S. Yakovchouk**, The relation between Dst and Bz for the geomagnetic storms in the 23<sup>rd</sup> solar cycle.

77. **N. Yagova** and V. Pilipenko, ULF wave power in Pc5/Pi3 frequency range and electron flux at geostationary orbit: Results of statistical analysis for two years of Solar minimum
78. **Yehia A. Abdel-Aziz**, Quantitative study of Spacecraft –Plasma Interaction Using SPIS Code.
79. L. Zelenyi, **H. Malova**, V. Popov, D. Delcourt, A. Petrukovich, A. Runov, Multiscale asymmetric current sheets in collisionless magnetospheric plasma.

### IIIa. Physics of the magnetosphere. Space Weather.

80. **E.S. Babayev**, V.N. Obridko, V.V. Asadov, F.R. Mustafa, P.N. Shustarev, A.R. Allahverdiyev, Possible influence of space weather changes on dynamics of traffic accidents in middle latitudes.
81. N. A. Barkhatov, A.E. Levitin, L.I., Gromova, L.A. Dremukhina, A.Y. Burtsev, Intensity and duration of magnetic storms as result of different Earth's passes through a magnetic cloud.
82. **I. Bilenko**, Geoeffectiveness of solar eruptive events.
83. **T.V. Kuznetsova**, A.I. Laptukhov, Contribution of geometric parameters into geomagnetic activity in different models of the solar wind - magnetosphere interaction.
84. **N.G. Makarenko**, Markovian prediction of extreme geomagnetic events.
85. **D.I. Ponyavin**, Causality in solar-geomagnetic relationships.
86. **N.G. Ptitsyna**, M.I. Tyasto, V.V. Kasinsky, N.N. Lyakhov, Cosmic weather effects in technical systems: railway telemetry failures during geomagnetic storms.
87. **J. Semkova**, R. Koleva, St. Maltchev, N. Kanchev, V. Petrov, V. Shurshakov, V. Benghin, I. Chernykh, E. Yarmanova, Two – steps experimental investigation of radiation dose distributions onboard ISS for estimation of the radiation risk in long duration space flights
88. **B.M. Vladimirskiy** and A.V. Bruns, Uncontrolled influence of cosmic weather upon precise laboratory measurements.

### IV. PHYSICS OF THE IONOSPHERE

89. **V.I. Badin**, Spectrum analysis of auroral currents.
90. **L. Biktash**, Ring current activity during two-step development of geomagnetic storms.
91. **A.L. Gavrik**, A.G. Pavelyev, Yu.A. Gavrik, Detection of ionospheric layers in the daytime Venus ionosphere at heights of 80-120 km using the results of the VENERA-15,16 dual-frequency occultation experiment.
92. **V.F. Gubsky**, Earth magnetic field influence on the electron density and temperature measurements by the cylindrical probes in the Earth ionosphere.
93. **T.L. Gulyaeva**, Indexing the ionospheric disturbance using GPS-TEC observations of total electron content.
94. **D. Danov**, P.Nenovski, Empirical Models in Numerical Comparison with FAC Onboard of Intercosmos Bulgaria-1300 Satellite.
95. **M.G. Deminov**, Yu. S. Sitnov, The electric field of magnetospheric convection at low latitudes.
96. Yu.K. Kalinin, **N.P. Sergeenko**, Seismic-ionospheric effects in F2-layer of an ionosphere in time of heliogeophysical disturbances.
97. **A.L. Kharitonov**, Yu. V. Maslennikov, Truong Quang Hao, G.P. Kharitonova, Results of the Schumann resonance effect registration from squid magnetometer on IZMIRAN territory.
98. V.V. Khagai, V.P. Kim, **A.D. Legenka**, On possible disturbances of large-scale electrostatic field in the mid and low-latitude ionosphere during the magnetic superstorm of 31 March 2001 stipulated by an intense solar flare.
99. **A.V. Medvedev**, K.G. Ratovsky, M.V. Tolstikov, D.S. Kushnarev, Method of the study spatial-temporary structure of the ionospheric wave-like disturbances using data of the East-Syberian ground-based radio instrument network



100. **A.V. Mikhailov**, A.H. Depueva, V. H. Depuev, Quiet-time F2-layer disturbances: Morphology and some Formation Mechanisms.
101. **A.V. Mikhalev**, Extreme disturbances in mid-latitude airglow of the upper atmosphere.
102. **R. Pektaş**, A. Ozguc, and T. Atac, Ionospheric foF2 data and its response to solar activity cycles 21, 22, and 23.
103. **K.G. Ratovsky**, A.V. Oinats, A.V., Medvedev Climatic features of the ionosphere over Irkutsk. Observations and comparisons with the IRI-2001 model.
104. **L.N. Sidorova**, Plasma bubbles in the topside ionosphere: high solar activity period.
105. **V. M. Silbergleit** and A. G. Elias, Long-term variation of strong geomagnetic storms and its effect on ionospheric and telluric currents.
106. **K. Singh**, R. P. Patel, K. Patel, S. Prasad, and R. P. Singh, Observation and modelling of ionospheric scintillations at low latitudes.
107. **V.M. Smirnov**, E.V. Smirnova, Solar flares and their influence on the Earth ionosphere according to GPS observation.
108. **P. Tonev**, Conditions for electric breakdown in lower ionosphere due to a lightning discharge

## V. PHYSICS OF THE ATMOSPHERE, CLIMATE AND ECOLOGY

109. **T. Gogosheva**, B. Mendeva, B. Petkov, D.Krastev, Solar UV radiation and ozone dynamics over Bulgaria.
110. **M. Kazmierczak**, Jacek Krelowski, Mirosław Schmidt, Molecular line carriers in the translucent clouds.
111. **A. Kilcik**, Turkey temperature trends and relationship with solar activity.
112. **A.A. Lazarev**, V.M. Pankov, V.L. Prokhin, Relation between Solar-Magnetospheric Activity, El-Nino phenomenon and Tropical Cyclones evolution.
113. **I.V. Medvedeva**, A.V. Mikhalev, A.B. Beletsky, Regular and irregular variations of the 557.7 nm atmospheric emission in the 23-d solar cycle.
114. **M.G. Ogurtsov**, On the possible connection between long-term variations of the Sun's activity and global terrestrial temperature arises from solar modulation of the atmospheric aerosol transparency.
115. **M.G. Ogurtsov**, Paleoclimatic evidences of increase of sulfate aerosol in stratosphere after strong solar flares
116. **V.M. Pankov**, V.L. Prokhin, N.G. Khavenson, A.A. Gusev, A.A. Lazarev, X-rays of the night terrestrial atmosphere(experiment "CORONAS-F").
117. **V.M. Pankov**, M.I. Voitzkovsky, A.A. Gusev, V.L. Prokhin, G.I. Pugacheva, Influence of solar-magnetospheric activity on tropical cyclogenesis of the North-West Pacific.
118. **V.I. Perminov** and N.N. Pertsev, Response of the mesopause airglow and temperature to solar activity.
119. **N.N. Pertsev**, Solar activity influence and long-term trends in zonal wind of the mid-latitude middle atmosphere by radiosounding and rocket data.
120. **O.V. Ponomareva**, Influence of Solar System's planets on movement pole of the Earth.
121. **O.A. Rubtsova**, V.A. Kovalenko, S.I. Molodykh, Manifestation of heliogeophysical disturbances in troposphere characteristics
122. **P. Stoeva**, Localized climatic responses during the 29 March 2006 eclipse at Manavgat, Turkey.
123. **L.A. Vasilyeva**, G.A. Zherebtsov, V.A. Kovalenko, S.I. Molodykh, Peculiarities of long-term changes of temperature and troposphere heat content and their connection with solar activity.

## VI. HELIOBIOLOGY

124. R.N. Ahmetshin, A.S. Borodin, A.G. Kolesnik, S.A. Kolesnik, S.V. Pobachenko, Electromagnetic background of an environment and its role in solar-terrestrial connections.
125. **Yu.I. Gurfinkel**, L.M. Kukuy, T.A. Mitrofanova, Kh.D. Kanonidi, M.A. Trubina, A.Yu. Perov, R.V. Tedoradze, Zhou Yuequn, Effect of solar activity upon patients suffering with cardiovascular diseases.
126. O.V. Khabarova, **M.V. Ragoulskaya**, E.S. Babayev, V.N. Obridko, S.N. Samsonov, E.A. Kazimov, A.B. Asgarov, F.R. Mustafa, E.E. Kazimova, Collaborative experimental studies of influence of space weather changes on human health state in different latitude and longitudes
127. I. B .Mihaylovskaya, O.B. Novick, **F.A. Smirnov**, The magnetic storm is decreasing the coherence of electric potentials in the brain when it functioning.
128. **F.R. Mustafa**, E.S. Babayev, S. Dimitrova, I. Stoilova, V.N. Obridko, K. Georgieva, S.S. Aliyeva, Geomagnetic disturbances of various strengths and dynamics of sudden cardiac death in the middle latitudes.
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