

4 June 2012

09.00 – 11.00 Registration

Plenary Session

Chair Lev Zeleny

11.00 – 11.15 **A.I. Grigoriev**, Vice President of RAS, Academician. Space weather and human health.

11.15 – 11.30 **L.M. Zeleny**, Director of IKI RAS, Academician.

11.30 – 11.50 **G.S. Golitsin**, Adviser of RAS, Academician. The influence of weather and climate on population health

11.50 – 12.00 **O.Yu. At'kov**, Vice –President of JSC “Russian Railway”, Professor, Hero of Russia.

12.00 – 12.15 **V.A. Frolov**, Dean of Medical Department of the Russian University of People Friendship Dr. Professor

12.15 – 12.45 Coffee - break

Section [1] Space Weather and its role in defining the Local Environment

Chair Illan Roth

12.45 – 13.15 **V.D. Kuznetsov**. Solar sources of space weather. (*Invited talk*)

13.15 – 13.45 **V.N. Obridko**. Cycles of solar activity: the state of the art of the problem, basic mechanisms, and forecast. (*Invited talk*)

13.45 – 14.15 **A.A. Petrukovich**. Types and reliability of geomagnetic forecasts. (*Invited talk*)

14.15 – 15.15 Lunch

Chair Vladimir Obridko

15.15 – 15.45 **V.N. Ishkov**. Solar active phenomena and their actions to the Earth's environment. (*Invited talk*)

15.45 – 16.15 **N.G. Ptitsyna, M. I. Tyasto**, Widening the catalog of severe geomagnetic storms. (*Invited talk*)

16.15 – 16.35 **G.N. Zastenker**. Characteristics of Solar Wind observed with very high time -resolution measurements.

16.35 – 17.00 **I. Roth**. Heliospheric ion energization due to merging CME shocks.

17.00 – 18.00 Coffee-break and Poster session

18.00 – 18.40 **Public lecture. L.I. Dorman**. On the role of cosmic rays and other space weather factors in the Earth's climate changes.

18.40 – 20.00 Welcome Cocktail

5 June 2012

Section [1] Space Weather and its role in defining the Local Environment (extension)

Chair Michael Panasyk

- 09.00 – 09.30** *Yu.I Ermolaev*. Solar and Interplanetary reasons of geomagnetic disturbances. (*Invited talk*)
- 09.30 – 09.50** *N.M. Astafieva*. The weather (and climate) on Earth and in space. (*Invited talk*)
- 09.50 – 10.20** *N.G. Kleimenova*. Pulsations in geomagnetic field as an important biotropic factor of the Space Weather. (*Invited talk*)
- 10.20 – 10.40** *L.I. Dorman*, Cosmic rays and its role in formation of biotropic effects of space weather. (*Invited talk*)
- 10.40 – 11.00**. *E.A.Ilyin*, The Use of Antarctica for Space Life Sciences Research

11.00 – 11.30 Coffee-break

Chair Yurii Ermolaev

- 11.30 – 11.50** *M.I. Panasyk*. Heavy nuclei in space as sources of radiation hazards near the Earth and in interplanetary space. (*Invited talk*)
- 11.50 – 12.10** *M.V. Ragulskaia., V.N. Obridko, S.M. Chibisov*. Biotropic effect of Space Weather – myths, reality, and new direction of research **TBD**
- 12.10 – 12.30** *L.L. Lazutin*. Shift of the Earth's magnetic pole: how it will influence on technosphere and biosphere.
- 12.30 – 13.00** *A.L. Kharitonov, G.P. Kharitonova*. Influence of cycles of space weather on geochronology of biological, climatic and geological changes.

13.00 – 14.00 Lunch

Section [2] Space weather and human health on the Earth

Chair Tamara Breus

- 14.00 – 14.30** *O.Yu At'kov*. Peculiarities of the reaction of the cardiovascular system to the action of natural and artificial electromagnetic fields at Railways workers. Whether methods are sufficient? (*Invited talk*)
- 14.30 – 15.00** *F.Halberg, G. Cornélissen, L. Beaty, O.Schwartzkopff, Francine Halberg, M.Revilla, J.Siegelova, S. Chibisov, T.Breus*. Aligned physiological-epidemiological-physical environmental monitoring of variability in Vernadsky's noosphere: a chronosphere. (*Invited talk*)
- 15.00 – 15.30** *K.Otsuka, G. Cornelissen, M.Mikulecky, F.Halberg*, Subtraction and addition (remove and replace) for a scrutiny of space weather and human affairs. (*Invited talk*)
- 15.30 – 16.00** *L.Beaty, E. Nolley, G. Cornelissen, F. Halberg*, Monitoring blood pressure (BP) and heart rate (HR) automatically for less than \$100

16.00 – 16.30 Coffee-break

Chair Viktor Martynyuk

- 16.30 – 17.00** *E. Stoupel*, Space Weather and Medical Events: Medical Observations for 45 years. Clinical Cosmobiology. (*Invited talk*)
- 17.00 – 17.30** *Yu.I. Gurfinkel*. Physiological and pathophysiological aspects of the influence of solar activity on human organism. (*Invited talk*)
- 17.30 – 18.00** *S.L. Zaguskin, A.K. Krylov, Y.V. Gurov, S.S. Zaguskina*. Adaptation strategies of the human organism to magnetic storms. (*Invited talk*)

18.15 – 19.00. Public Lecture: V.F.Frolov. The corrected history

6 июня 2012

Section [2] Space weather and human health on the Earth (extension)

Chair Tatyana Zenchenko

09.00 – 09.30 V. M.Binhi. What are the most plausible mechanisms of magnetoreception in terms of physics? (*Invited talk*)

09.30 – 09.45 S.I. Rapoport. Melatonin for prophylaxis of meteo-pathological reactions. (*Invited talk*)

09.45 – 10.15 V.S. Martynyuk, Yu.V. Tseyslyer, N.A. Temuryants. Interference of mechanism of weak external low frequency electromagnetic fields influence on man and animals. (*Invited talk*)

10.05 – 10.30 T.K.Breus. The state of the impact of geomagnetic activity and the Earth's weather on human on Earth. (*Invited talk*)

10.30 – 11.00 Dieter Broers, Vera Brandes, Franz Halberg. Electromagnetism-associated aeolian biospheric-extraterrestrial copperiodisms and their implications. (*Invited talk*)

11.00 – 11.30 Coffee-break

Chair Yurii Gurfinkel

11.30 – 12.00 T.A. Zenchenko. Characteristics of the individual reactions of the cardiovascular system in healthy people to changes of meteorological factors in a wide temperature range (*Invited talk*)

12.00 – 12.20 Ch. Katsavrias, P. Preka – Papadema, X. Moussas, Th. Apostolou, A. Theodoropoulou and Th. Papadima. Helio-geomagnetic activity influence on cardiologic cases.

12.20 – 12.40 A. Gkotsinas, P. Preka-Papadema, N. Dimisianos, P. Papachristou, G. Antonakopoulos, P. Papathanasopoulos, X. Moussas, A. Hilaris. The possible solar and geomagnetic activity effects on the disease of Multiple Sclerosis (MS)

12.40 – 13.00

14.00 – 15.00 Lunch

Chair Andrey Drozdov

15.00 – 15.20 J.A. Belaya, O.F. Belaya, VG Petrukhin. Solar activity as a dominant external factor influence on the persistence of Helicobacter pylori in the body.

15.20 – 15.40 M. Jordanova, D.Maslarov, I. Stoilova, T. Breus, T. Zenchenko. The influence of solar activity and meteorological factors on human cerebral pathology

15.40 – 16.00 L.N. Parfenova, Yu.I.Gurfinkel, T.A. Mitrofanova, A.L.Vasin, Assesment of ventricular disorders of heart rhythm in patients with myocardial infarctions in different geomagnetic conditions

16.00 – 16.20 O.B. Novik, F.A.Smirnov. Geomagnetic storms' influence on electric potentials of a human cerebral cortex.

16.20 – 16.50 Coffee-break

Chair Pavel Grigoriev

- 16.50 – 17.20 S.V Pobachenko, A.G.Kolesnik**, Comparative estimation of dynamics of human brain activity in different helio-geophysics conditions according around the clock monitoring
- 17.20 – 17.40 A.S. Borodin, A.G. Kolesnik, V.V, Kalyuzhin, M.V.Gudina, O. E. Shuba**, Phenomenological features of the dynamics of mortality and morbidity in dependence on parameters of heliogeophysical activity
- 17.40 – 18.00 A.V. Drozdov, T.P Nagorskaya, E.B. Travkina**, On the possible explanation of biorhythms by variations of geophysical factors.

7 June 2012

Section [3] Assessment and paths of risks reduction of diseases caused by the impact of weather and climatic and environmental factors in a changing climate

Chair Alexander Arkadievich Makosko and Boris Alexandrovich Revich

- 09.00 – 09.20 B.A. Revich**, “Morbidity and mortality due to exposure to temperature waves and atmospheric pollution”. (*Invited talk*)
- 09.20 – 09.40 V. N. Anisimov, I.A. Vinogradova, A.V. Bukalev, A.V. Panchenko, I. G. Popovich, A.V. Semenchenko, M. A. Zabezhinski**. Light at night-induced circadian disruption, aging and cancer. (*Invited talk*)
- 09.40 – 10.10 A.A. Makosko, A.V. Matesheva**, Medical-ecological insurance as the social-economic adaptation form to the unfavorable effect of the environment. (*Invited talk*)
- 10.10 – 10.40 A.V. Matesheva, A.A. Makosko**, Long-term prognosis of the risk to health due to pollution of the atmosphere in terms of a changing climate. (*Invited talk*)
- 10.40 – 11.25 L. Pustilnik**, On possible influence of cosmic weather on Earth prices: necessary conditions and possible scenarios.

11.25 – 11.40 Coffee-break

Chair Lev Pustilnik

- 11.40 – 11.55 E.A. Shcherban, R.M. Zaslavskaya., M.M. Tejblum**. Adaptogens in normalization of hemodynamic parameters in meteosensitivity patients with arterial hypertension and ischemic heart disease with taking into account an influence of the earth and cosmic weather
- 11.55 – 12.10 Vladimirsky B.M.** Synchronization of long Kondratiev waves by solar activity variations; Social and Cultural indices.
- 12.10 – 12.25 V.N. Simonov, M.V. Bochkarev, O.N. Ragozin**, The effect of the modified photoperiodicity on temporal organization parameters of the central hemodynamics in people under influence of the aperiodic socio-occupational factors
- 12.25 -12.45 A.A. Lushnikov, V.A. Zagaynov, Yu.S. Lyubovseva, and A.D. Gvishiani**, Cosmic weather and atmospheric nanoaerosols

12.45 – 13.30 Lunch

Section [4] Space weather and human health in Space

Chair Mark Belakovskii

13.30 – 14.00 *B.V. Morukov, Suvorov A.V, M.S. Belakovskii, G.Y. Vasilieva*, Simulation of manned space flight on distant planets (as example, the Mars-500 project). (*Invited talk*)

14.00 – 14.30 *N.D. Novikova*, The problems of ensuring the microbiological safety of the human environment in the long-term space flights. (*Invited talk*)

14.30 – 14.50 *Balbir Singh, Vishnu G Nair, C.G.Nayak*. Study of Effect of Space Weather on Manned Mars Missions and its Possible Solutions

14.50 – 15.10 *A.G. Chernikova, T.A. Zenchenko, R.M. Baevsky*. The influence of geomagnetic and environmental factors on the annual and seasonal dynamics of the autonomic regulation (based on Mars-500 satellite experiment).

15.10 – 15.30 *V.V. Tsetlin, T.S. Gurieva, M.A. Levinskich, S.S. Moisa, N.D. Novikova, I.I. Pelevina*, Biophysical mechanisms of the influence of cosmo-and geophysical factors of environment on living systems

15.30 – 15.50 *A.V. Shafirkin*, Lifetime total radiation risk of cosmonauts for interplanetary and orbital cosmic flights

15.50 – 16.10 Coffee-break

Chair Tsvetan Dachev

16.10 – 16.40 *I.B. Ushakov, V.M. Petrov, A.V. Shafirkin*, .The specificity of the assessment of radiation risk from cosmic radiation in flight.

16.40 – 17.00 *B. Zábóri, A. Hirn, P. Szántó, T. Pázmándi*, CoCoRAD and TECHDOSE experiments in the BEXUS stratospheric balloon program to study the dose contribution of the cosmic radiation in the stratosphere

17.00 – 17.30 *T.P. Dachev*, Analysis of the Space Radiation Doses in the Extra Vehicular Environment of the International Space Station (ISS). (*Invited talk*)

17.30 – 17.50 *K.A. Trukhanov*. Space problems of magnetobiology.

17.50 – 18.15 *R.M. Baevskii, Chernikova A.G., Breus T.K.*, Magnetic storms influence on the cosmonauts in long duration flights.

18 30 – 22.00 Banquet

POSTER SESSION from 5 June till 8 June 2012

SWH -P1 A.L. Kharitonov, G.P. Kharitonova. Communication of regularities of differential rotation of deep physical covers of the Sun, Earth, other planets with regularities of biological, atmospheric, hydrochemical zonality of planets.

SWH -P2 A.L. Kharitonov, G.P. Kharitonova The influence of features of Space weather on physical&tectonic and biological processes on the Earth

SWH-P3 V.S. Martyniuk, O.V. Tsymbalyuk, Yu.V. Tseysler, O.V. Shelyuk Effect of extremely low –frequency magnetic field on rhythmic activity of smooth muscles

- SWH -P4 V.S. Martynyuk, E.N. Gromozova, L.G. Gorb, Yu.V. Tseyslyer, I.V. Lukyanenk** The variability of the optical properties of methylene blue in solutions of inorganic polyphosphate sodium as the cause of metachromasia and its correlation with space weather
- SWH-P5 J.Lominadze, K.Kartvelishvili, M.Lomouri.** Complex investigation of some strong local magnetic anomalies in Georgia.
- SWH –P 6 N.G. Kapanadze,** Periodicities of the Spectral Solar Irradiance and Cosmic Rays Intensity Variations during 21-23 Solar Activity Cycles
- SWH-P7 M.Sh.Gigolashvili.** Investigation of Selected Narrow-bands Intensity Variations of the Solar Spectral Irradiance on the Descending Phase of Solar Cycle 23
- SWH-P8 N.P. Verko, P.E Grygoryev, E.Y Shishko.** Individual features of psycho-emotional states dependence from heliometeofactors
- SWH-P9 Dewayne Hillman, George S. Katinas, Germaine Cornélissen,** Othild Schwartzkopff, Franz Halberg. Transyear vs. calendar-year amplitudes gauge glocal (global and local) aspects of terrorism and the cosmos **TBD**
- SWH-10 Zenchenko T.A., Markov A.L., Solonin Yu.G. , Boiko E.R.** Comparison of the sensitivity to external factors of hemodynamic and heart rate variability parameters on the basis of the analysis of individual volunteers, the Russian North.
- SWH -11 I.A.Stepanuk, N.S. Frolova, A.V. Zimin, N.F. Perevozchikov** A search of the hydrometeorological processes' influence mechanisms on a Stormglass
- SWH -12. S.N.Kotelnikov,** Influence of hot weather smokes from forest fires and ambient ozone on health of the population in Vyatskie Polyany the summer of 2010.
- SWH -13. N.V. Efimov, V.G Zaporozhets.** Assessing the impact of factors of geomagnetic disturbances on workers of locomotive brigades.
- SWH – 14 V.A.Chereshnev , A.G.Gamburtsev , A.V. Sigachev,** Atlas temporal variations. Emergency call dynamics for last five years in Moscow
- SWH – 15 O. Khabarova and V.Obridko,** Magnetosensitivity of live organisms as one of the main mechanisms of the space weather influence on humans and animals
- SWH – 16 L.L. Lazutin,** Shift of the Earth's magnetic pole: how it will influence on technosphere and biosphere
- SWH – 17 Iu.G.Solonin,** The relationship of functional parameters with atmospheric and geomagnetic factors in Northern population of men during the long term observations
- SWH – 18 Yu.S. Lyubovtseva, R.I. Krasnoperov, A.D. Gvishiani, A.A. Makosko, E.V. Voronova, A.A. Lushnikov,** Filling the medical geoinformation system of Russia
- SWH – 19 A.L. Markov,** Assessment of influence of atmospheric geomagnetic factors on vegetative regulation of blood circulation and myocardium condition in male residents of Russian European North
- SWH – 20 N.I.Khorseva, P.E.Grigoryev, L.V.Poskotinova, G.V.Kilessa, A.V.Glivenko** Integrative approach to study the effect of cosmophysical factors on functional state of human health. International Project

SWH – 21 D.A. Tuzhilkin, A.S. Borodin, Evaluation the impact of variations of the set of physical fields of the environment on the functioning of the cardiovascular system of humans

SWH – 22 V.V. Martirosyan, Y. A. Krupskaya, Climatic effect and effect of heliogeophysical factor on development of acute disorders of cerebral circulation

8 June 2012

10.00 – 13.00 Excursion to Kremlin (in English) and Red Square

13.00 – 14.00 Lunch in Café “Okhotny Ryad”

14.00 - Pedestrian excursion in downtown of Moscow

Or

14.00 – 17.00 Excursion over Moscow –River (in Russian)

Departure