



International Academy of Astronautics
Russian Academy of Cosmonautics named after Konstantin E. Tsiolkovsky
International Association ZNANIE
supported by the UNOOSA

FIRST INTERNATIONAL SPECIALIZED SYMPOSIUM
SPACE AND GLOBAL SECURITY OF HUMANITY

PROGRAMME



NOVEMBER 2-7, 2009
LIMASSOL, CYPRUS

FROM THE GREETINGS TO SYMPOSIUM PARTICIPANTS



...On behalf of the UN I would like to thank you very much for your kind invitation to the Symposium "Space and Global Safety of Humanity" in November 2009 in the Republic of Cyprus.

The importance of such Symposium is beyond question. As is known, it is devoted to International Aerospace System for Monitoring of Global Geophysical Phenomena and Forecasting of Natural and Man-made Disasters, which creation is supported by International Academy of Astronautics. This system is intended to provide early forecasting of natural and man-made disasters, allowing timely evacuation of people and wealth from dangerous areas as well as efficient assessing of scope and location for necessary humanitarian assistance.

I am honored to express my support to this Symposium and look forward to continue our fruitful mutual collaboration.

Ban Ki-moon,
U.N. Secretary-General



...On behalf of the Global Alliance for ICT and Development of the United Nations Department of Economic and Social Affairs (UNDESA-GAID) I would like to thank you very much for your kind invitation to the Symposium "Space and Global Safety of Humanity" in November 2009 in the Republic of Cyprus.

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Dr. Sarbuland Khan,
Executive Coordinator,
Global Alliance for ICT and Development of the United Nations
Department of Economic and Social Affairs (UNDESA-GAID)



On behalf of ISRO and all Indian Space Industry I'm greeting the participants and guests of the Symposium "Space and Global Safety of Humanity" in November 2009 in the Republic of Cyprus.

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Dr. Shri G Madhavan Nair,
Chairman, Indian Space Research Organization,
Newly elected IAA President



The evolution in Humanity has changed the face of our planet. Global security is defined by the scale of problems facing our civilization. It is through the development of alternative power sources that will ensure our survival and protection against natural disasters and technogenic catastrophes.

Solutions to these global issues are closely connected to the efficient development and co-operation of leading world countries and their use of aerospace for reducing dangers and mitigation of dangerous events in the Earth's life. Only through joint efforts of all the countries concerned, we can provide effective and short-term global forecasts of both natural and artificial destruction events.

The International symposium «Space & Global Security of Humanity» is a further step in the development of intergovernmental cooperation for the creation of the world's first really international wide-scale aerospace system for solving global and so important issues of our future.

Prof. Anatoliy N. Perminov,
Head of ROSCOSMOS - the Federal Space Agency of Russia



Outer space remains the horizon, the movement to which is associated with scientific discoveries, with progress, with the use of unexplored opportunities. Large-scale changes over the past decade in international relations before everything else have encouraged fast development of the world market of space goods and services. International cooperation in various fields of research and use of space has become more active, commercialization of the whole lines of space activity is developing. Space exploration takes global information value. It has significant political, diplomatic, military and economic results.

I am confident that this forum will become a platform for constructive dialogue, the results of which can contribute to solving serious problems in the field of use of space resources and technology, environment protection for global security of Humanity and prosperity of the nations.

Dr. Talgat A. Musabaev
Chairman, National Space Agency of the Republic of Kazakhstan Pilot-Cosmonaut, Aviation Lieutenant General



Large-scale technological reforms of recent decades gave rise to new opportunities for progressive changes in all fields of human activity, provided world community with powerful means of control and transformation in environment, multiplied scientific and technological potential.

In conditions of global peace the only right decision is to join efforts of the countries: using accumulated intellectual and technological potential of the world community to established integrated security system. In my opinion in the forefront of this process should be space power states. It is the use of space technique that makes it possible to create effective and integral monitoring system of global natural and technological disasters.

I believe that International Symposium «Space and Global Security of Humanity» will become a forum for fruitful discussions of scientists and experts, the results of which will serve as the basis for consistent understanding of the global security system concept.

Dr. Alexey A. Zinchenko
Director General, National Space Agency of Ukraine





...As world leaders discuss a future in space that includes ambitious multinational projects such as a lunar base and the eventual colonization of Mars, the Academy has embarked upon a series of studies to provide decision-makers an unbiased scientific and technological basis for their commitment to these programs. In the first phase of an IAA ambitious study on a major project for establishing an International Global Aerospace System (IGMASS), the initiative is to host an IAA Symposium «Space & Global Safety of Humanity» on November 2-4, 2009 in Cyprus.

The Academy will help to bring international experts together to encourage fruitful discussions, and is going to engage the United Nations in this project as they have the same goals and plans.

Dr. Jean Michel Contant

Organizing Committee Co-Chair

Secretary General of the International Academy of Astronautics (IAA)



...Humankind can prevent natural and technogenic disasters only if it is well educated, powered by the necessary knowledge and maintain a high level of intelligence. Knowledge is part and parcel of global security and in this age of constant information updates, security is only obtainable if we use a new educational approach in the foundation of common educational and scientific space. **It can be** achieved by using up-to-date information and making use of modern telecommunication, as well as space technologies.

Prof. Efim M. Malitkov

Committee Co-Chair, President of International Association ZNANIE,

Chairman of Interstate Committee of CIS on Knowledge Promotion and Adult Education



... The purpose of this symposium is to study variety of aspects of the creation of IGMASS for the monitoring of global Earth phenomena. Effective development and joint use of potential capabilities of aerospace systems, advanced Earth monitoring and data processing technologies can be developed by joining efforts of all world countries.

We hope that our symposium will draw the attention of the world's society, notably scientific and industrial institutions and companies to promote international cooperation in the development of common educational and scientific sphere.

Prof. Valery A. Menshikov

Organizing Committee Co-Chair, Vice President, Russian Academy of Cosmonautics named after K. E.

Tsiolkovsky, Head of IGMASS Project from IAA





.....Protecting the environment and strengthening public safety are top priorities and immense tasks, far beyond the scope of a single country. Obviously, the key for a global response to these challenges is cooperation - and multilateral cooperation is a field where the European Space Agency with its 18 Member States has profound experience. Already today spacecraft orbiting the Earth offer an unprecedented chance to better understand our planet and thus to contribute to preserving our environment. They help to reveal the Earth's origins and history, to observe natural and manmade global change, and to assess external influences - including the ever-changing Sun and the threat of asteroid impacts. Space-based observation of our Earth provides accurate and timely information, allows to improve management of the environment, to study and mitigate the effects of climate change and ensure civil security.

Rene Pischel

Head, ESA Permanent Mission in the Russian Federation



Andrey F. Andreev

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Prof. Andrey F. Andreev

Chairman, RAC Space Council, Vice-President, Russian Academy of Science



As one of the initiators of the First International Specialized Symposium «Space & Global Safety of Humanity», I sincerely believe that speaking of its participants, the results of the work and information of the leading scientific organizations and industrial enterprises along with the main native and foreign specialists of aerospace industry will attract the world public attention and promote the development of international integration processes in solving problems of global security of Humanity, in creation of common space of science and educational systems. I wish all the guests and participants of the international symposium fruitful work, interesting and useful meetings, and success in their future work.

Prof. Anatoliy S. Koroteev

President of Russian Academy of Cosmonautics named after K. E. Tsiolkovskiy





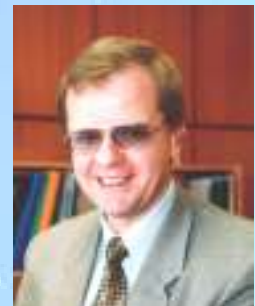
...Problems of human security, intertwining with economy, politics, culture, law and other areas of social life, determine the necessity of development and implementation of appropriate measurement on a global basis. Space technologies help to monitor separate elements of biosphere, where realization of some other methods of control are difficult or impossible and estimate factual state of the environment and to predict its changes in the foreseeable future. That is why creation and using of IGMASS as an integrated aerospace monitoring system of large areas is a prospective line of our joint work with the leading organizations of the space industry especially within the framework of such an important event as the First International Specialized Symposium «Space and Global Security of Humanity».

Mr. Vladimir V. Kirillov

Head, Federal Service for Supervision of Nature Resources of Ministry of Natural Resources of Russia



Globalization of economic processes in the present-day world requires not only new principles of economic relations and their development using modern global technologies, but also brand new systems of global monitoring of natural and technological changes, which today are supranational and can become a source of irreversible processes for all the Humanity. The International Symposium «Space and Global Security of Humanity» is another step to understanding the importance of solving the problem of creation the united area of the environment security with the help of modern scientific achievements and aerospace technologies. Global problems require global partnership for their solving. This Symposium gives us a unique opportunity for informal communication to make direct contacts for cooperation in solving this vital problem of our Planet.



Prof. Igor V. Kabashkin

President, Transport and Telecommunication Institute (Riga, Latvia),
Member of the Technical Committee on Transport of European Commission for Co-operation in the field of Science and Technical Research



...Nowadays the most effective tool for independent environmental control, seismic and geophysical security, prevention of emergency situations is aerospace monitoring of the regions. Development of aerospace monitoring will expand scientific and technical cooperation between Russia and other leading aviation and space states, will contribute to the innovate development of the industry, creation of new perspective models of aviation and space technology through extensive international cooperation.

The First International Specialized Symposium «Space and Global Security of Humanity» is a huge step forward in the creation of super national system of environmental security of Humanity using modern high-performance aerospace technologies.

Mr. Vladimir I. Babkin

Head, Department of Aviation Industry, Ministry of Industry and Trade of Russia



...A long lasting conception of International Global Monitoring Aerospace System creation which was proposed by Russian scientists and supported by their foreign colleagues, and would be used for complex of short-term and on-the-spot forecasting natural and man-caused emergencies could become the backbone idea, which in case of its practical realization would indicate the beginning of new strategy of space exploration – strategy directed on maintaining ecologically secure and socially sustainable development of the world community with the basis of common and imperishable values of lifesaving mode of our planet.

I sincere wish all participants of the First International Specialized Symposium “Space and Global Security of Humanity” all creative successes on their so hard way of constructing “the world without tragedies and catastrophes” on the basis of space technologies and up-to-date achievements modern science and engineering.

Dr. Sergey K. Shoigu

Minister of Civil Defence, Emergencies and Disaster Relief of the Russian Federation,
Army General



On behalf of the Government of Russia's capital, Moscow, and from my part I heartily greet participants and guests of the International Symposium «Space and Global Security of Humanity», gathered at the hospitable land of Limassol.

Globalization, technological progress has made the Humanity preserve environment, protect it from natural and technological disasters. Therefore the idea of creation the International Global Monitoring Aerospace System, suggested by Russian scientists, is to play a fundamental role in safe development of Humanity.

I am strongly convinced that interstate aerospace cooperation has to provide the international community happy life on our beautiful Planet.

Prof. Yuri M. Luzhkov

Mayor of Moscow



...Space information technology development throughout the world has already become a powerful tool for economic and social reforms aimed at improving life quality. Nowadays they largely evaluate prospects for economic growth and directly affect global security of Humanity. The First International Specialized Symposium of such a high level and large scale as «Space & Global Safety of Humanity» contributes to work out new approaches and identify prospective lines of development scientific research and creation innovative technical solutions, which integrate resources of different countries to achieve so high common goal.

Prof. Yuri. M. Urlichich

General Director- General Constructor of the Federal State Unitary Enterprise «Russian Institute of Space Device Engineering»,
General Designer of GLONASS the system



Symposium Organizing & Programming Committee



Dr. Jean-Michel Contant, Secretary General, International Academy of Astronautics (IAA), France.

CO-CHAIRMEN



Prof. Efim M. Malitkov, President, International Association "Znanie", Chairman, Interstate Committee of CIS on Knowledge Promotion and Adult Education, CIS – **Symposium's Moderator**



Prof. Valery A. Menshikov, Director, A.A. Maksimov Space Systems Research Institute, IGMASS Project Manager from IAA, Russia – **Programming Committee Chairman**

MEMBERS



Prof. Orhan Altan, President, ISPRS, Istanbul Technical University, Turkey



Dr. Mohamed Laoucet Ayari, Consultant, Staff Member Ball Aerospace & Technologies Corp., Adjunct Professor, University of Colorado, Boulder, Tunisia



Dr. Alexander V. Degtyarev, First Deputy Director General-Designer General, Yangel Yuzhnoye State Design Office, Ukraine



Prof. Petr Getsov, Director, Space Research Institute, Bulgarian Academy of Science, Bulgaria



Ms. Jeanne Holm, Programme Manager, Jet Propulsion Laboratory, USA



Dr. Yasushi Horikawa, Managing Director, Japanese Aerospace Exploration Agency (JAXA), Directorate Office, Japan



Acad. Mamadsho I. Ilolov, President, Academy of Science of Tajikistan, Tajikistan



Prof. Igor V. Kabashkin, President, Institute of Transport & Communication, member of Technical Committee on Transport, European Commission on Cooperation in Science and Technical Researches, Latvia



Dr. Vladimir V. Kirillov, Head, Federal Service for Supervision of Nature Resources of the Russian Ministry of Natural Resources, Russia



Prof. Stanislav N. Konyukhov, Director General-Designer General, Yangel Yuzhnoye State Design Office, Ukraine



Dr. Sergey K. Krikalev, Head, State Organization "Gagarin Research-and-Test Cosmonaut Training Centre", USSR and Russia pilot-astronaut, Russia



Dr. Nikolay G. Kut'in, Head, the Federal Service for Ecological, Technological and Nuclear Supervision (ROSTEHNADZOR), Russia



Prof. Wu Meirong, leading Expert, Asia-Pacific Multilateral Cooperation in Space Technology and Applications (APMCSTA), China



Dr. Takashi Moriyama, Chief scientific consultant, Japanese Aerospace Exploration Agency (JAXA), Earth Observation Research Center, Space Applications Mission Directorate, Japan



Dr. K. R. Shridhara Murthi, Head, Antrix Corporation Ltd., India



Prof. Talgat A. Musabaev, Chairman, National Space Agency of Kazakhstan, Kazakhstan



Dr. Milind Pimprikar, Founder and Chairman, CANEUS Int. and Centre for Large Space Structures & Systems, Canada



Mr Antonis Paschalides, Minister of Industry, Culture, Commerce and Tourism of Cyprus



Prof. Ammitzia Peled, 2nd Vice-President, ISPRS, University of Haifa, Israel



Prof. Garry A. Popov, Director, Research Institute of Applied Mechanics and Electrodynamics, Member of the Russian Academy of Sciences, Russia



Dr. Rainer Sandau, Chief Scientist, German Aerospace Centre, Germany



Prof. Nikolay A. Testoedov, Director General-Designer General, JSC "Informational Satellite Systems" named after acad. M. V. Reshetnev, Russia



Prof. Carlo Ulivieri, Head, Department of Aerospace and Astronautics Engineering, Sapienza University of Rome, Italy



Prof. Yuri M. Urlichich, Director General – Designer General, Russian Institute of Space Device Engineering, Russia



Mr. Roman V. Vavilov, Head, Russian Centre of Science and Culture in Nicosia, the Federal Agency «ROSSOTRUDNICHESTVO», Russia



Dr. Oleksandr A. Zinchenko, Director General, National Space Agency of Ukraine, Ukraine



Dr. Sergey A. Zolotoy, Director, Scientific-Engineering Enterprise «Geoinformationnyye systemy», Belarus



Symposium's Schedule

November 2, Monday

09.00-10.00	Registration of Symposium's delegates
10.00-11.00	Symposium's Inauguration Ceremony with the participation of Honorable Guests
11.00-13.00	First Plenary Session
14.00-16.00	Second Plenary Session
16.00-16.15	Coffee Break
16.15-18.00	Third Plenary Session
19.00-21.00	Welcome Reception



November 3, Tuesday

09.00-10.45	First Technical Session (categories 1, 2, 3)
10.45-11.00	Coffee Break
11.00-12.30	Second Technical Session (categories 4, 5)
13.00-20.00	Guided tour on Cyprus with Dinner



November 4, Wednesday

09.00-10.45	Third Technical Session (categories 1, 2, 3)
10.45-11.00	Coffee Break
11.00-13.00	Fourth Technical Session (categories 2, 3, 4)
14.00-15.45	Fifths Technical Session (categories 1 - 5)
15.45-16.00	Coffee Break
16.00-18.00	Conclusion Plenary Session (adoption of main Symposium's documents) Spreading of Honorable Awards of IAA and RAC. Introducing of new-elected members and Corresponding members of IAA
19.00-21.00	Farewell Buffet-cocktail



November 5-7, Thursday-Saturday

In framework of separate programmes	Visiting of Cyprus profile enterprises, meetings, excursions, scientific and cultural events, open discussions etc.
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Important Note: The Symposium Programme mentioned below is changeable. Follow Organizing Committee guidance, please.



Symposium Plenary Sessions November 2, 2009 Demetra Hall

First Plenary Session 11:00 – 13:00

IAA-RACT-C1-PS-01

■ Human Welfare and Space Exploration

Dr. J. M. Contant, Secretary General, IAA, Co-Chairman of Symposium's Organizing and Programming Committee, Paris, France



IAA-RACT-C1-PS-02

■ IGMASS Conception and Security of Humanity

Prof. Anatoliy N. Perminov, Head, Russian Federal Space Agency («ROSCOSMOS»), Prof. Valery A. Menshikov, Director, A. A. Maksimov Space Systems Research Institute, Head of IGMASS Project from IAA, Yubileinyy, Moscow Region, Russia



IAA-RACT-C1-PS-03

■ Ukrainian Space Activities: Approaches to Acquisition of Some Tasks of National Security

Dr. Oleksandr A. Zinchenko, Director General, National Space Agency of Ukraine, Kiev, Ukraine.



IAA-RACT-C1-PS-04

■ Training of Experts for International Aerospace System for Monitoring of Global Geophysical Phenomena and Forecasting of Natural and Man-Made Disasters

Prof. Efim M. Malitkov, Chairman, Interstate Committee of CIS on Knowledge Promotion and Adult Education, President, International Association "Znanie", Co-Chairman of Symposium's Organizing Committee, Minsk, CIS.



IAA-RACT-C1-PS-05

■ CANEUS Activities and Future of Space Monitoring Cooperation

Dr. Milind Pimprikar, Founder and Chairman, CANEUS Int. and Centre for Large Space Structures & Systems, Toronto, Canada.



Second Plenary Session 14:00 – 16:00

IAA-RACT-C1-PS-06

■ Advanced Directions of International Cooperation of Russian Academy of Cosmonautics named after K. E. Tsiolkovskiy in the framework of the Project of the International Global Monitoring Aerospace System (IGMASS) Realization

Prof. Anatoliy S. Koroteev, President, Russian Academy of Cosmonautics named after K.E. Tsiolkovsky, Director General, Keldysh Research Centre, Member of the Russian Academy of Science, Moscow, Russia



IAA-RACT-C1-PS-07

■ Space Monitoring and Natural Disasters (Tsunami) Predictions

Dr. Carlo Olivieri, Head, Department of Aerospace and Astronautics Engineering, Sapienza University of Rome, Rome, Italy



IAA-RACT-C1-PS-08

■ Contemporary Space Activity and Reducing Risks and Threats of Technogenic and Natural Disasters

Prof. Yuri M. Urlichich, Director General - Designer General, Russian Institute of Space Device, Moscow, Russia



IAA-RACT-C1-PS-09

■ The Aims and Tasks of Space Activity within the Framework of Belorussian National Space Program

Prof. Alexander V. Tuzikov, Director General, «Joint Institute of Informatics Problem», Belorussian National Academy of Science, Minsk, Belorussia (Co-authors M. V. Myasnikovich, G. A. Butkin, S. A. Korneyak)



IAA-RACT-C1-PS-10

■ Possibilities of Russian Rocket-and-Space Industry in the Project of the International Global Monitoring Aerospace System (IGMASS)

Prof. Gennady G. Raykunov, Director General, FSUE TSNIIMASH, Korolyev, Moscow Region, Russia



Third Plenary Session 16:30 – 18:00

IAA-RACT-C1-PS-11

■ Russian-Belarusian System of Remote Sensing of the Earth as a Prototype of the International Global Aerospace Monitoring System (IGMASS)

Prof. Leonid A. Makridenko, Director General-Designer General, All-Russia Research Institute of Electro mechanics with the Plant named after A.G. Iosifian – VNIEM - Moscow, Russia



IAA-RACT-C1-PS-12

■ Small Satellite Earth Monitoring Missions - Potential and Trends

Dr. Rainer Sandau, Chief Scientist, German Aerospace Centre, Bonn, Germany.



IAA-RACT-C1-PS-13

■ Development of Adaptation principles of Space-rocket Complexes to be Used for Missions of Mitigation of Asteroids and Comets Threat

Dr. Vladimir G. Degtyar', Director General, Constructor General, Open JSC «Academician V.P. Makeev State Rocket Centre», Moscow, Russia (co-author Dr. Kalashnikov S.T.)



Symposium's Categories

I. Space Exploration and Global Problems of Humanity and Modern Age

Space activities and sustainable development, role of advanced space technologies, in reducing the risks and threats as well as disaster management and dramatic consequences of natural phenomena and technogenic events of the Modern Age. Philosophical aspects of cosmonautics: development of the ideas of «cosmism» and cosmic consciousness issues

Co-Chairmen

- **Dr. Anatoliy S. Koroteev**, President, Russian Academy of Cosmonautics named after K. E. Tsiolkovsky, Director General, Keldysh Research Centre, Russia
- **Dr. Rainer Sandau**, Chief Scientist, German Aerospace Center, Germany

II. Foreseeable profile of International Global Monitoring Aerospace System – IGMASS

Purposes of creation, main tasks, variants of deployment and functioning of the system; principles of IGMASS creation, system management, aerospace monitoring data acquisition, compilation and acceptance; economical aspects of the IGMASS's creation, development and utilization, role of IAA activities in field of IGMASS creation

Co-Chairmen

- **Mr. Sridhara Murthi**, Managing Director, Antrix Corporation Ltd, India.
- **Dr. Sergey V. Pushkarskiy**, Deputy Director, A. A. Maksimov Space Systems Research Institute – Branch of Khronichev Space Centre, Russia

III. Global aerospace monitoring methods and techniques (engineering) of natural phenomena, emergency technogenetic disasters and catastrophes

Opportunities for using existing and future orbital, airborne and ground technical facilities, appropriate engineering aerospace monitoring for both forecasting of natural phenomena (earthquakes, tsunamis, volcano eruptions, flooding, billows etc.) and predicting of emergency situations and technogenic casualties; environmental, ecological monitoring of the Earth's surface and circum-terrestrial space by using RSC technologies

Co-Chairmen

- **Dr. Carlo Uliviery**, Head, Department of Aerospace and Astronautics Engineering, Sapienza University of Rome, Italy
- **Dr. Sergey R. Lysyy**, Head, Technical & Research Centre, A.A. Maksimov Space Systems Research Institute – Branch of Khronichev Space Centre, Russia

IV. Up-to-date technologies of aerospace monitoring data acquisition and compilation and acceptance

Technologies of aerospace monitoring data collecting, computer handling, multi-dimensional interpretation and processing

Co-Chairmen

- **Dr. Alexander G. Milovanov**, Chief Academic Secretary, Scientific and Technical Council, Russian Federal Space Agency, Russia.
- **Dr. Sergey A. Zolotoy**, «Geoinformation systems», Director, Belarus

V. Using IGMASS' informational resources for solving global humanitarian issues

Literacy spreading, rescue medicine and healthcare, freedom of informational exchanges, development of distant education international institutions, expert's training in the fields of global aerospace monitoring, tele-medicine etc.

Co-Chairmen

- **Prof. Efim M. Malitikov**, President of International Association "Znanie", Chairman of Interstate Committee of CIS on Knowledge Promotion and Adult Education, CIS
- **Prof. Yuri Yu. Loginov**, Vice-Rector on Researches and Innovations, Siberian State Aerospace University, Russia

Symposium Technical Sessions

Category 1

Space Exploration and Global Problems of Humanity and Modern Age

Space activities and sustainable development; role of advanced space technologies in reducing the risks and threats as well as disaster management and dramatic consequences of natural phenomena and technogenic events of the Modern Age. Philosophical aspects of cosmonautics: development of the ideas of «cosmism» and cosmic consciousness issues.

Co-Chairmen

- Dr. **Anatoliy S. Koroteev**, President, Russian Academy of Cosmonautics named after K. E. Tsiolkovsky, Director General, Keldysh Research Centre, Russia.
- Dr. **Rainer Sandau**, Chief Scientist, German Aerospace Center, Germany

November 3, 2009. 09:00 - 10:45 Demetra Hall

IAA-RACT-C1-S1-01

■ Cosmonaut and Global Security of Humanity

Dr. Sergey K. Krikalyev, Head, State Organization «Gagarin Research-and-Test Cosmonaut Training Centre», USSR and Russia pilot-astronaut, Zvezdny Gorodok, Moscow Region, Russia

AA-RACT-C1-S1-02

■ Science in Latvia: Current Situation and Proposals for Space and Global Security

Pf. Leonids Ribickis, Vice-Rector for Science, Riga Technical University, Riga, Latvia.

AA-RACT-C1-S1-03

■ Space Systems for Global Security: Principles of Creation

Dr. Igor V. Minaev, Director General Adviser, All-Russia Research Institute of Electro-mechanics with the Plant named after A.G. Iosifian – VNIIEM, Moscow, Russia (co-authors: Makridenko L.A., Voilkov S.N.)

IAA-RACT-C1-S1-04

■ Structural Framework and Spectral-wave Analysis of the Space. Spectral Map of the Earth

Prof. Olga V. Pavlovskaya-Khohlova, Rector, JSC - Institute of Spectrum-Harmonic Analytics, Moscow region, Russia.

November 4, 2009 09:00 - 10:45 Demetra Hall

IAA-RACT-C1-S1-05

■ Space Tools in Dealing with Drug Abuse

Dr. Grigoriy M. Chernyavskiy, Director, Scientific Technological Centre of Earth's Space Monitoring – Branch of Russian Institute of Space Device Engineering, Moscow, Russia

IAA-RACT-C1-S1-06

■ Acquiring the Second World' Space and Defense Technology towards a Third World' Alliance for Security and Development

Mr. Tamer Zaki Fouhad Mohamed, student, Helwan University, Cairo, Egypt

IAA-RACT-C1-S1-07

■ Earth Outer space: Space Junk Natural and Artificial

Dr. Lidiya V. Rykhlova, Department Head, Institute of Astronomy Russian Academy of Science, Moscow, Russia.

IAA-RACT-C1-S1-08

■ About Establishing Scientific Centre «Locked Space Systems» for Solving Biology-Technical Problems of Artificial life-support Systems Creation of with high Degree of mass-transfer Processes Isolation with reference to Lunar and-or Martian Stationary Planetary Stations

Prof. Yuri Yu. Loginov, Vice-Rector on Researches and Innovations, Siberian State Aerospace University named after M.V.Reshetnev (Krasnoyarsk, Russia); co-authors prof. Belyakov G.P. and Tichomirov A.A.

November 4, 2009 14:00 – 15:45 Demetra Hall

IAA-RACT-C1-S1-09

■ Regular Pattern of an Arrangement of Planets around the Sun and Natural Satellites Surrounding «Parent» Planets

Prof. Igor V. Ananyin, Senior Researcher, Institute of Earth's Physics, Russian Academy of Science, Moscow, Russia

IAA-RACT-C1-S1-10

■ Space Environmental Issues in Space Security Studies

Dr. Yunlong Lin, Director, Space Systems Lab., York University, Toronto, Canada.

IAA-RACT-C1-S1-11

■ Secular variations of solar activity as a reason of global climate changes

Dr. Sergey V. Avakyan, Chief-constructor of space instrumentation, Head of Aerospace physical optics laboratory, All-Russian Scientific Center «S. I. Vavilov State Optical Institute», St. Peterburg, Russia.

IAA-RACT-C1-S1-12

■ About Cosmic Consciousness Codex

Prof. Grigoriy G. Vokin, Head, Branch of preparation of scientific personnel, A. A. Maksimov Space Systems Research Institute – Branch of Khronichev Space Centre, Yubileiny, Moscow Region, Russia



Category 2

Foreseeable profile of International Global Monitoring Aerospace System – IGMASS

Purposes of creation, main tasks, variants of deployment and functioning of the system; principles of IGMASS creation, system management, aerospace monitoring data acquisition, compilation and acceptance; economical aspects of the IGMASS's creation, development and utilization, role of IAA activities in field of IGMASS creation.

Co-Chairmen

- Mr. Sridhara Murthi, Managing Director, Antrix Corporation Ltd, India.
- Dr. Sergey V. Pushkarskiy, Deputy Director, A. A. Maksimov Space Systems Research Institute – Branch of Khronichev Space Centre, Russia

November 3, 2009 09:00 – 10:45 Ares Room

IAA-RACT-C1-S2-01

■ IGMASS Conception and Implementation of Human Security Issues

Prof. Valery A. Menshikov, Head of IGMASS Project from IAA, Yubileiny, Moscow Region, Russia

IAA-RACT-C1-S2-02

■ Belarusian Space Remote Sensing Control System

Dr. Sergey A. Zolotoy, Director, Scientific-Engineering Enterprise «Geoinformationnye systemy», Belarus

IAA-RACT-C1-S2-03

■ Economical Aspects of Conceptual Foresight of RSC Satellites' Profile

Prof. Kirill A. Boyarchuk, Deputy Director General-Designer General, All-Russia Research Institute of Electro-mechanics with the Plant named after A.G. Iosifian – VNIIEM, Moscow, Russia

IAA-RACT-C1-S2-04

■ Space-based Juxtaposition Earth and Circumterrestrial Radar Monitoring System Based on Micro-satellites Technologies

Prof. Oleg V. Goryachkin, Chair Head, Povolzhskiy State University of Telecommunications and Informatics – PGUTI, Samara, Russia.

November 4, 2009 09:00 – 10:45 Ares Room

IAA-RACT-C1-S2-05

■ Space Segment of International Global Aerospace Monitoring System (IGMASS)

Dr. Sergey R. Lysyy, Head, Technical & Research Centre, A.A. Maksimov Space Systems Research Institute – Branch of Khronichev Space Centre; (co-authors: Dr. Sergey V. Pushkarskiy, Dr. Aleksander V. Rad'kov - A.A. Maksimov Space Systems Research Institute – Branch of Khronichev Space Centre) - Yubileiny, Moscow Region, Russia

IAA-RACT-C1-S2-06

■ IGMASS as Effective Tool for Forecasting and Prevention Natural and Industrial Disasters

Dr. Sergey V. Pushkarskiy, Deputy Director, A.A. Maksimov Space Systems Research Institute – Branch of Khronichev Space Centre, Yubileiny, Moscow Region, Russia

IAA-RACT-C1-S2-07

■ UAS as a component of the IGMASS

Dr. Alexander A. Medvedev, Senior Vice-President, JSC Irkut Corporation, Russia; co-author: Dr. Koldaev A.V., Un Directorate, JSC Irkut Corporation.

IAA-RACT-C1-S2-08

■ vacant

November 4, 2009 11:00 - 13:00 Ares Room

IAA-RACT-C1-S2-09

■ Pilot projects developed by the JSC «Academician M. F. Reshetnev «Information Satellite Systems» for the IGMASS Purposes

Prof. Nikolay A. Testoyedov, Director General - Designer General, JSC "Academician M.F. Reshetnev "Information Satellite Systems", Krasnoyarsk, Russia

IAA-RACT-C1-S2-10

■ Space Monitoring Systems as a Segment of Multimodal Transport Corridors

Prof. Igor V. Kabashkin, president, Institute of Transport & Communication, Riga, Latvia.

IAA-RACT-C1-S2-11

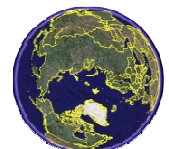
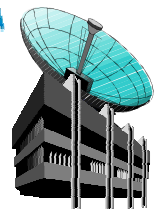
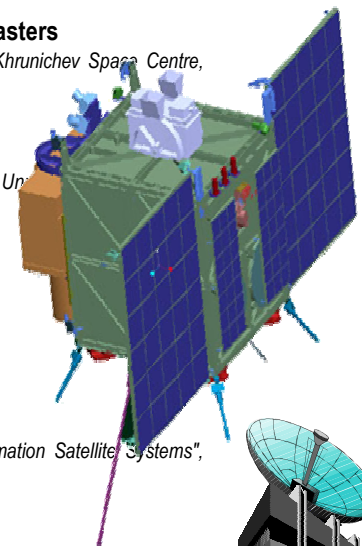
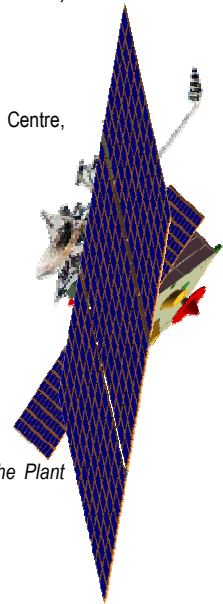
■ Space Technologies to Prevent Desertification and other Health Hazards and Disasters in the Sahel Region of Africa: IAA Study on the Lake Chad Basin and on Small Satellite Application in Cameroon

Dr. Tomukum Chia, Director, Global Centre for Compliance, Hazards and Disaster Management, Yaoundé, Cameroon. Co-authors Tchakoute Gilles Tomi, Ngassam Nganpet Faskel William, Dongmo Tchambou Marc Patrick Dongmo, Gam Gha-Abe Jesse

IAA-RACT-C1-S2-12

■ ERSSS Creation and Forecasting of Natural and Technogeneous Events in the Republic of Kazakhstan

Dr. Gavlylatyp T. Murzakulov, «President, JSC NC Kazakhstan Gharysh Sapary», Astana, Kazakhstan



Category 3

Global aerospace monitoring methods and techniques (engineering) of natural phenomena, emergency technogenetic disasters and catastrophes

Opportunities for using existing and future orbital, airborne and ground technical facilities, appropriate engineering aerospace monitoring for both forecasting of natural phenomena (earthquakes, tsunamis, volcano eruptions, flooding, billows etc.) and predicting of emergency situations and technogenic casualties; environmental, ecological monitoring of the Earth's surface and circum-terrestrial space by using Remote Sensing Control technologies; monitoring of local war zones, terror threats and risks, narcotic trafficking and pirates routes.

Co-Chairmen

- Dr. **Carlo Ulivieri**, Head, Department of Aerospace and Astronautics Engineering, Sapienza University of Rome, Italy
- Dr. **Sergey R. Lysy**, Head, Technical & Research Centre, A.A. Maksimov Space Systems Research Institute – Branch of Khronichev Space Centre, Russia

November 3, 2009 09:00 - 10:45 Hermes Room

IAA-RACT-C1-S3-01

■ **Space Solar Patrol in the System of Monitoring of Global Phenomena**

Dr. Sergey V. Avakyan, Chief Designer of space instrumentation, Head of Aerospace physical optics laboratory, All-Russian Scientific Center «S.I. Vavilov State Optical Institute», St. Peterburg, Russia. co-authors E. V. Kuvaldin, N. B. Leonov, A. V. Savuyshkin, N. A. Voronin, pilot-cosmonaut V. V. Kovalenok, pilot-cosmonaut V. P. Savinykh

IAA-RACT-C1-S3-02

■ **Scientific Equipment for Earthquake Prediction «ARINA» on Board of the Spacecraft «Resurs-DK1» is a Step in the Prediction of Natural Disasters**

Dr. Ravil N. Akhmetov, First Deputy Director General - Designer General, Head of State Research and Production Space-Rocket Center - "TsSKB-Progress" (Samara, Russia)

IAA-RACT-C1-S3-03

■ **Working out of Constructions and Manufacturing Techniques of Flat Small-sized Electromagnetic Components and Sources of Secondary Power Supplies on their Basis for Onboard Space Equipment**

Dr. Andrey V. Luybimov, Dept. Director, JSC "OPTEX", Moscow, Russia

IAA-RACT-C1-S3-04

■ **Russian National System of Monitoring Geophysical Processes and Real Time Variations Thereof**

Dr. Rostislav I. Krivososov, Director General, JSC Science Industrial Enterprise of Geophysical Machinery «GEOFIZIKA», Moscow, Russia

November 4, 2009 09:00 – 10:45 Hermes Room

IAA-RACT-C1-S3-05

■ **vacant**

IAA-RACT-C1-S3-06

■ **Monitoring of the Global Geodynamic Processes by the Use of Satellite Observations**

Dr. Suriya K. Tatevyan, Department Head, Institute of Astronomy, Russian Academy of Science, Moscow, Russia.

IAA-RACT-C1-S3-07

■ **Satellite Constellation Analysis for Detecting and Monitoring Environmental Disasters**

Dr. Carlo Ulivieri, Head, Department of Aerospace and Astronautics Engineering, Sapienza University of Rome, Italy

IAA-RACT-C1-S3-08

■ **vacant**

November 4, 2009 11:00 – 13:00 Hermes Room

IAA-RACT-C1-S3-09

■ **The Conception of the Russian System of a Satellite Ionosphere's Tomography**

Prof. Aleksey A. Romanov, Deputy Director General-Designer General, "Russian Institute of Space Device Engineering" (Moscow, Russia); co-authors Ulrichich U.M., Avdyushin S.I., Alpatov V.V., Selin V.A.

IAA-RACT-C1-S3-10

■ **Application of Space borne Synthetic Aperture Radar (SAR) to Disaster Studies**

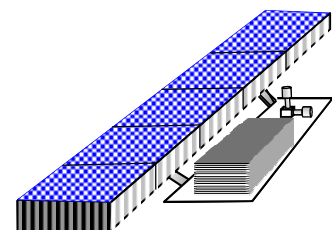
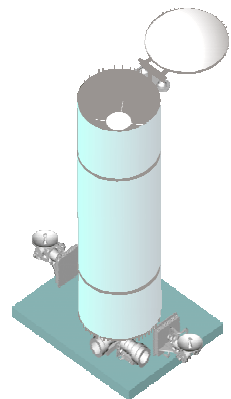
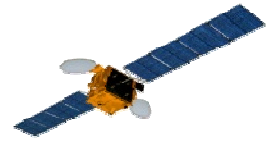
Prof. Marco D'Errico, Engineering Dept., Space Systems Research, Second University, Naples, Italy.

IAA-RACT-C1-S3-11

■ **vacant**

IAA-RACT-C1-S3-12

■ **vacant**



Category 4

Up-to-date technologies of aerospace monitoring data acquisition and compilation and acceptance

Technologies of aerospace monitoring data collecting, computer handling, multi-dimensional interpretation and processing

Co-Chairmen

➤ Dr. **Alexander G. Milovanov**, Chief Academic Secretary, Scientific and Technical Council, Russian Federal Space Agency, Russia

➤ Dr. **Sergey A. Zolotoy**, «Geoinformation systems», Director, Belarus

November 3, 2009 11:00 – 13:00 Demetra Hall

IAA-RACT-C1-S4-01

■ Aerospace and Informational Technologies in Monitoring Tasks of Gas and Oil Accumulations

Prof. Victor G. Akovetskiy, Director General, JSC «Geo-informatics & Risks Agency», Moscow, Russia

IAA-RACT-C1-S4-02

■ Aerosol and Gas Precursors to Earthquakes and the Prospects of their Space Lidar Monitoring in the Lower Atmosphere within the International Global Monitoring Aerospace System – IGMASS

Dr. Gennady G. Matvienko, Director, Institute of Atmosphere Optic, Siberian Branch, Russian Academy of Science, Tomsk, Russia; co-authors V. A. Alekseev, A. I. Grishin, G. M. Krekov

IAA-RACT-C1-S4-03

■ Advanced Aerospace Systems of Horizontal Start and Landing Intended for Performing Different Missions in the Interests of National Economy, Science, Security of Humanity and International Cooperation

Prof. Vladimir P. Plokhikh, General Scientist, Federal State Unitary Enterprise - The Central Aero-hydrodynamic Institute – TsAGI, Zhukovskiy, Moscow Region, Russia

IAA-RACT-C1-S4-04

■ Earthquakes Prediction Based on Analysis of their Precursors

Dr. Sergey V. Pushkarskiy, Deputy Director, A.A. Maksimov Space Systems Research Institute – Branch of Khrunichev Space Centre (Yubileynyy, Moscow Region, Russia); co-author Dr. Alexander V. Rad'kov

November 4, 2009 11:00 – 13:00 Demetra Hall

IAA-RACT-C1-S4-05

■ Nano-technological Centres as the Basis of Formation of Innovative Russian Economy and Development of Intellectual (Civilized) Stage of the Society on an Example of Engendering Superiority in the Space-Rocket Sphere

Dr. Anatoly P. Manin, Director General, Scientific-Production and Testing Center «Armint», Moscow, Russia; co authors: Dr. Gavrilov S.D. Scientific-Production and Testing Center «Armint», Moscow, Russia, Dr. Dubovoy A.N., Centre of Nanotechnologies, A.A.Maksimov Space Systems Research Institute, Yubileynyy, Moscow Region, Russia

IAA-RACT-C1-S4-06

■ Distributed Wireless Sensor Systems for Monitoring Ecologically Hazardous Zones, Mineral Prospecting, Buildings and Structures Conditions Monitoring and Dangerous Cargo Transportation

Dr. Eugeny A. Mokrov, Director, JSC «Research Institute for Physical Measurements», Penza, Russia.

IAA-RACT-C1-S4-07

■ Institutional Aspect of the System «Nano-equipment - Nano-materials and nano-devices» in Rocket-Space Industry

Dr. Anatoly P. Manin, Director General, Scientific-Production and Testing Center «Armint», Moscow, Russia; co-author Dr. Gavrilov S. D. Scientific-Production and Testing Center «Armint», Moscow, Russia

IAA-RACT-C1-S4-08

■ GIMS-technology for the Problems of the Forest Ecosystems Remote Monitoring

Dr. Alexander G. Milovanov, Chief Academic Secretary, Scientific and Technical Council, Russian Federal Space Agency, Moscow, Russia; co-authors: V. D. Burkov, V. F. Krapivin,

IAA-RACT-C1-S4-09

■ Microsystems For Space Applications

Dr. Evgeniy N. Pyatyshev, Head, R&D Lab., "Nano and Microsystems Technologies, St. Petersburg State Polytechnic University, St. Petersburg, Russia



Category 5

Using IGMASS' informational resources for solving global humanitarian issues

Literacy spreading, rescue medicine and healthcare, freedom of informational exchanges, development of distant education international institutions, expert's training in the fields of global aerospace monitoring, tele-medicine etc.

Co-Chairmen

- Prof. Efim M. Malitkov, President, International Association "Zhanie", Chairman of Interstate Committee of CIS on Knowledge Promotion and Adult Education, CIS.
- Prof. Yuri Yu. Loginov, Vice-Rector on Researches and Innovations, Siberian State Aerospace University, Russia

November 3, 2009 11:00 – 13:00 Ares Room

IAA-RACT-C1-S5-01

■ Distance Learning System Implementation for National Space Systems Experts Training

Dr. Sergey R. Lysyy, Head, Technical & Research Centre, A.A. Maksimov Space Systems Research Institute – Branch of Khrunichев Space Centre, Yubileinyy, Moscow Region, Russia

IAA-RACT-C1-S5-02

■ Space Education Development in the Siberian State Aerospace University, named after academician Mikhail Reshetnev

Prof. Gennadiy P. Belyakov, Chancellor, Siberian State Aerospace University, Krasnoyarsk, Russia

IAA-RACT-C1-S5-03

■ Space Technologies in Education

Dr. Boris A. Naumov, Deputy Head, State Organization «Gagarin Research-and-Test Cosmonaut Training Centre» Zvezdny Gorodok, Moscow Region, Russia

IAA-RACT-C1-S5-04

■ Creation Prospects of Student Space Vehicles and their Use for Distance Learning within the Project of International Global Aerospace System (IGMASS)

Dr. Yuri N. Makarov, Directorate Head, Federal Space Agency ROSCOSMOS, Moscow, Russia

November 4, 2009 14:00 – 15:45 Ares Room

IAA-RACT-C1-S5-05

■ Using IGMASS Facilities for Extreme Medicine

Dr. Vyacheslav M. Klyuzhev, All Russia Center of Catastrophes' Medicine «Zachsita», Moscow, Russia Co-authors Prof. Valery A. Menshikov, IGMASS Project Manager from IAA, Yubileinyy, Moscow Region, Russia

IAA-RACT-C1-S5-06

■ About the Prospects of Design Culture Spreading All-over the World by Using IGMASS Informational Facilities

Dr. Lyudmila A. Merkulova, Director, National Institute of Modern Design, Moscow region, Russia.

IAA-RACT-C1-S5-07

vacant

IAA-RACT-C1-S5-08

vacant

IAA-RACT-C1-S5-09

Vacant



SYMPOSIUM POSTERS

- IAA-RACT-C1-S1-P1** **To the Problem of Counteraction Asteroid Danger by Space Facilities**
Co-authors: Burkov V.D., Milovanov A. G., Perminov S.V., Sorokin I.V. – ROSCOSMOS, Moscow, Russia
- IAA-RACT-C1-S1-P2** **Control of Long Range Interaction Between Biological Objects as Mean of Increase of Biological Firmness of Organisms in The Conditions Of Space Flight**
Co-authors: Burkov V.D., Milovanov A. G., Perminov S.V., Sorokin I.V. – ROSCOSMOS, Moscow, Russia
- IAA-RACT-C1-S1-P3** **Preliminary Experimental Studies of Water-Energy-Cycle Space Propulsion System**
Co-authors: Yasunari Hashimoto, Japan Aerospace Exploration Agency, and Kyoichiro Toki, Institute of Space and Astronautical Science - Tokio, Japan
- IAA-RACT-C1-S1-P4** **International Programs and Projects of Space Systems Creation**
Co-authors: Dr. Sergey V. Pushkarskiy, Dr. Aleksander V. Rad'kov – A.A.Maksimov Space Systems Research Institute, Branch of Khrunichev Space Centre -Yubileinyy, Moscow Region, Russia
- IAA-RACT-C1-S1-P5** **Cosmism as a Basis of Contemporary **Consciousness** at XXI Century**
Co-authors: Dr. Sergey V.Cherkas and Evgeniy I. Tsadikovskiy – A.A.Maksimov Space Systems Research Institute, Branch of Khrunichev Space Centre -Yubileinyy, Moscow Region, Russia

Second Category

- IAA-RACT-C1-S2-P1** **The Federal Monitoring System of Critical and Potentially Hazardous Objects of Russian Federation and Dangerous Cargos Tracking System**
Dr. Valentina I. Afonina, Assistant of Head of Scientific Centre, Federal State Unitary Enterprise "Russian Institute of Space Device Engineering, Moscow, Russia
- IAA-RACT-C1-S2-P3** **Ground Control Complex of International Global Monitoring Aerospace System (IGMASS): Main Structural Elements of Systems and Spacecraft Control Complex**
Co-authors: Dr. Makarov M.I., Prof. Koshcheev N.A, Dr. Makatov A.S. - A.A. Maksimov Space Systems Research Institute, Branch of Khrunichev Space Centre, -Yubileinyy, Moscow Region, Russia
- IAA-RACT-C1-S2-P4** **Worldwide Network of Providing Consumer with Monitoring Information**
Co-authors: Dr. Pavlov S.V., Dr. Pichurin Yu.G., Makarov S.M., - A.A. Maksimov Space Systems Research Institute, Branch of Khrunichev Space Centre, -Yubileinyy, Moscow Region, Russia
- IAA-RACT-C1-S2-P5** **International Aerospace System for Monitoring Global Phenomena (IGMASS) is a Tool for Prediction of Natural and Industrial Disasters**
Co-authors: Prof. Valery A.Menshikov - IGMASS Project Manager from IAA, (Yubileinyy, Moscow Region, Russia), Dr. Vladimir E. Nesterov - Director General-Designer General, Khrunichev Space Centre, (Moscow, Russia)
- IAA-RACT-C1-S2-P6** **Structure, Technical Configuration and Principles of International Aerospace System of Monitoring Global Phenomena (IGMASS)**
Co-authors: Dr. Sergey V. Pushkarskiy – Deputy Director of A.A. Maksimov Space Systems Research Institute – Branch of Khrunichev Space Centre, - Yubileinyy, Moscow Region, Russia



Third Category

- IAA-RACT-C1-S3-P1 Earthquakes Forecasting on the Basis of their Indications Analyses**
Co-authors: Dr..Alexeev V.A, Prof. Rembeza A.I. - A.A. Maksimov Space Systems Research Institute – Branch of Khrunichev Space Centre - Yubileinyy, Moscow Region, Russia
- IAA-RACT-C1-S3-P2 Technology of Flexible Information-Modeling Systems Based on fiber-optics Techniques for the Environmental Monitoring Problems**
Co-authors: Burkov V.D., Milovanov A. G., Perminov S.V., Sorokin I.V., Krapivin V.F. - ROSCOSMOS, Moscow, Russia
- IAA-RACT-C1-S3-P3 Microwave Monitoring of Soil Moisture as an Element of Regional Water Balance**
Co-authors: Burkov V.D., Milovanov A.G., Perminov S.V., Sorokin I.V., Krapivin V.F.- ROSCOSMOS, Moscow, Russia
- IAA-RACT-C1-S3-P4 Microwave Diagnostics of the Forest and Peat Fires**
Co-authors: Burkov V.D., Milovanov A.G., Perminov S.V., Sorokin I.V., Krapivin V.F.- ROSCOSMOS, Moscow, Russia

Fourth Category

- IAA-RACT-C1-S4-P1 Diagnostics of the «Ocean-Atmosphere» System Using a Percolation Model**
Co-authors: Burkov V.D., Milovanov A.G., Perminov S.V., Sorokin I.V., Krapivin V.F.- ROSCOSMOS, Moscow, Russia
- IAA-RACT-C1-S4-P2 Modern Optics Fiber Application for Construction of fiber-optics Networks at the Perspective Space Vehicles**
Co-authors: Burkov V.D., Milovanov A.G., Perminov S.V., Sorokin I.V., Krapivin V.F.- ROSCOSMOS, Moscow, Russia
- IAA-RACT-C1-S4-P3 GIMS-Technology in the Tasks of the Forest Ecosystems Remote Monitoring**
Co-authors: Burkov V.D., Milovanov A.G., Perminov S.V., Sorokin I.V., Krapivin V.F.- ROSCOSMOS, Moscow, Russia
- IAA-RACT-C1-S4-P4 Program Neural Network System of Telemetric Information Control, Spacecraft Subsystems Diagnostic and Space Images Processing**
Co-authors: Khachumov V.M., Talalaev A.A., Tishenko I.P., Fralenko V.P., Emelyanova J.G., Konstantinov K.A., Pogodin S.V., Institute of Programming Systems named after A.K.Ailomazyan, Russian Academy of Science
- IAA-RACT-C1-S4-P5 Optimal Hierarchic Control of Satellite Reliability on the Processes Its Testing and Producing**
Co-authors: Prof. Valery A.Menshikov - IGMASS Project Manager from IAA, Prof. Rudakov V.B., Dr. Sychev V.N. - Yubileinyy, Moscow Region, Russia

Fifth Category

- IAA-RACT-C1-S5-P1 Prospects of Training the IGMASS Specialists**
Co-authors: Prof. Valery A.Menshikov - IGMASS Project Manager from IAA, Dr.Sergey R.Lysyy, Dr .Sergey V. Pushkarskiy - Yubileinyy, Moscow Region, Russia Branch of Khrunichev Space Center, Jubileinyy, Moscow Region, Russia
- IAA-RACT-C1-S5-P2 Formation of the Educational Segment of the Belarusian Space System of Remote Sensing**
Co-authors: Strazhev V.I., Ponaryadov V.V., - Minsk, Belarus and Saechnikov V.A. - Moscow, Russia
- IAA-RACT-C1-S5-P3 Improvement of Aerospace and Cartographic Education in Russia**
Co-authors: Dr. BROVKO Ye.A. (State Center "Priroda", Moscow, Russia), Dr. YEFIMOV S.A., LAZUTKIN A.I. (All-Russian Youth Aerospace Society "Soyuz", Moscow, Russia), Dr. MIRTOVA I.A. (Moscow State University of Geodezy and Cartography, Moscow, Russia)
- IAA-RACT-C1-S5-P4 Teaching Modern Management Theories when Training the Staff for Aerospace Industry**
Dr. Nesterenko A.V. , The "Klimov" Joint Stock Company, Saint-Petersburg, Russia



FULL LIST OF THE SYMPOSIUM PAPERS

Name, Position, Country	Code, Paper Topic	Category
<i>Akhmetov Ravil N. (Dr.)</i> - First Deputy Director General - Designer General, Head of State Research and Production Space-Rocket Center - "TsSKB-Progress" (Samara, Russia)	IAA-RACT-C1-S3-02 Scientific Equipment for Earthquake Prediction «ARINA» on Board of the Spacecraft «Resurs-DK1» is a Step in the Prediction of Natural Disasters	3
<i>Akovetskiy Victor G. (Prof.)</i> - Director General, JSC "Geo-informatics & Risks Agency" (Moscow, Russia)	IAA-RACT-C1-S4-01 Aerospace and Informational Technologies in Monitoring Tasks of Gas and Oil Accumulations	4
<i>Ananyin Igor V., (Prof.)</i> - Senior Researcher, Institute of Earth's Physics, Russian Academy of Science (Moscow, Russia)	IAA-RACT-C1-S1-09 Regular Pattern of an Arrangement of Planets Around the Sun and Natural Satellites Surrounding "Parent" Planets	1
<i>Avakyan Sergey V., (Dr.)</i> - Chief-Designer of space instrumentation, Head of Aerospace Physical Optics Laboratory, All-Russian Scientific Center "S.I. Vavilov State Optical Institute" (St. Petersburg, Russia)	IAA-RACT-C1-S1-11 Secular variations of solar activity as a reason of global climate changes	1
<i>Avakyan Sergey V., (Dr.)</i> - Chief-Designer of space instrumentation, Head of Aerospace physical optics laboratory, All-Russian Scientific Center "S.I. Vavilov State Optical Institute" (St. Petersburg, Russia); co-authors: Kuvaldin E.V., Leonov N.B., Savuyshkin A.V., Voronin N.A., Kovalenok V.V. - pilot-cosmonaut, Savinykh V.P. - pilot-cosmonaut	IAA-RACT-C1-S3-01 Space Solar Patrol in the System of Monitoring of Global Phenomena	3
<i>Belyakov Gennadiy P., (Prof.)</i> - Chancellor, Siberian State Aerospace University (Krasnoyarsk, Russia)	IAA-RACT-C1-S5-02 Space Education Development in the Siberian State Aerospace University, named after academician Mikhail Reshetnev	5
<i>Boyarchuk Kirill A., (Prof.)</i> - Deputy Director General - Designer General, All-Russia Research Institute of Electro-mechanics with Plant named after A.G. Iosifian" – VNIEM (Moscow, Russia)	IAA-RACT-C1-S2-03 Economical Aspects of Conceptual Foresight of RSC Satellites' Profile	2
<i>Chernyavskiy Grigoriy M., (Prof.)</i> – Chief, Scientific and Research Center of Earth Monitoring from Space – Branch of Russian Institute of Space Device Engineering (Moscow, Russia)	IAA-RACT-C1-S1-05 Space Tools in Dealing with Drug Abuse	1
<i>Chia Tomukum, (Dr.)</i> - Director, Global Centre for Compliance, Hazards and Disaster Management (Yaoundé, Cameroon); co-authors Tchakoute Gilles Tomi, Ngassam Nganpet Faskel William, Dongmo Tchambou Marc Patrick Dongmo, Gam Gha-Abe Jesse	IAA-RACT-C1-S2-11 Space Technologies to Prevent Desertification and other Health Hazards and Disasters in the Sahel Region of Africa: IAA Study on the Lake Chad Basin and on Small Satellite Application in Cameroon	2

FULL LIST OF THE SYMPOSIUM PAPERS (continuation)

<i>Contant J.- M. (Dr.) - Secretary General, IAA, Co-Chairman of Symposium's Organizing Committee (Paris, France)</i>	IAA-RACT-C1-PS-01 Human Welfare and Space Exploration	Plenary
<i>Degtyar' Vladimir G. (Dr.) - Director General - Designer General, JSC "Academician V.P. Makeev State Rocket Centre" (Moscow, Russia); co-author Dr.Kalashnikov S.T.</i>	IAA-RACT-C1-PS-13 Development of Adaptation Principles of Space-Rocket Complexes to be Used for Missions of Mitigation of Asteroids and Comets Threat	Plenary
<i>D'Errico Marco, (Prof.) – Head, Engineering Dept.of Space Systems Research, Second University (Naples, Italy)</i>	IAA-RACT-C1-S3-10 Application of Space Borne Synthetic Aperture Radar (SAR) to Disaster Studies	3
<i>Goryachkin Oleg V., (Prof.) - Chair Head, Povolzhskiy State University of Telecommunications and Informatics – PGUTI (Samara, Russia)</i>	IAA-RACT-C1-S2-04 Space-based Juxtaposition Earth and Circumterrestrial Radar Monitoring System Based on Micro-satellites Technologies	2
<i>Kabashkin Igor V., (Prof.) - President, Institute of Transport & Communication (Riga, Latvia)</i>	IAA-RACT-C1-S2-10 Space Monitoring Systems as a Segment of Multimodal Transport Corridors	2
<i>Koldaev Alexander V. (Dr.) Unmanned Systems Dev. Directorate, JSC Irkut Corporation</i>	IAA-RACT-C1-S2-07 UAS as a component of the IGMASS	2
<i>Koroteev Anatoliy S., (Prof.) - President, Russian Academy of Cosmonautics named after K.E. Tsiolkovsky, Director General, Keldysh Research Centre, Member of the Russian Academy of Science (Moscow, Russia)</i>	IAA-RACT-C1-PS-07 Advanced Directions of International Cooperation of Russian Academy of Cosmonautics named after K.E.Tsiolkovskiy in the Framework of the Project of the International Global Monitoring Aerospace System (IGMASS) Realization	Plenary
<i>Krikalyev Sergey K., (Dr.) - Head, State Organization “Gagarin Research-and-Test Cosmonaut Training Centre” (Zvezdny Gorodok, Moscow Region, Russia)</i>	IAA-RACT-C1-PS-06 Cosmonaut and Global Security of Humanity	1
<i>Krivososov Rostislav I. (Dr.) - Director General, JSC Science Industrial Enterprise of Geophysical Machinery “GEOFIZIKA” (Moscow, Russia)</i>	IAA-RACT-C1-S3-04 Russian National System of Monitoring Geophysical Processes and Real Time Variations Thereof	3
<i>Lin Yunlong, (Dr.) - Director, Space Systems Lab., York University (Toronto, Canada)</i>	IAA-RACT-C1-S1-10 Space Environmental Issues in Space Security Studies	1
<i>Loginov Yuri Yu.,(Prof.) - Vice-Rector on Researches and Innovations, Siberian State Aerospace University (Krasnoyarsk, Russia); co-authors Tichomirov A.A., Belyakov G.P.</i>	IAA-RACT-C1-S1-08 About Establishing Scientific Centre “Locked Space Systems” for Solving Biology-Technical Problems of Artificial life-support Systems Creation of with high Degree of mass-transfer Processes Isolation with reference to Lunar and-or Martian Stationary Planetary Stations	1

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