



## VI International Conference "Atmosphere, Ionosphere, Safety" (AIS-2018)

Kaliningrad, Russia, June 03-09, 2018

Semenov Institute of Chemical Physics, RAS  
Pushkov Institute of Terrestrial Magnetism, Ionosphere and Radio Wave Propagation, RAS  
Immanuel Kant Baltic Federal University  
Lomonosov Moscow State University

Dear colleagues! Welcome to AIS-2018 conference!

The VI International conference «Atmosphere, ionosphere, safety» is the sixth event of the organized sequel. And again we are meeting at the same place, where previous five conferences AIS (2008-2016) took place. It is not an accident. The place that we have chosen for this conference, have admired the participants of AIS. Frankly speaking, this is not the only reason, but the convenience for the organizers is evident. We are pretty sure that even those who visited us once would wish to update their good impressions on these absolutely wonderful places. But still we are here are not (only) for our amusement. Simply, as shown our not yet rich experience, these peaceful landscapes and the sand of the Baltic sea shore promote hot discussions on the central problems of atmospheric physics and chemistry. We believe that the problems that will be considered here will be of central interests in the very near future, especially in view of forthcoming (2018) anomalous Sun and meteoritic activities (this will be the Safety part of this Conference).

The present meeting is devoted to:

(I) analysis of the atmosphere-ionosphere response on natural and man-made processes, the reasons of occurrence of the various accompanying geophysical phenomena, and an estimation of possible consequences of their influence on the person and technological systems;

(II) study of the monitoring possibility and search of the ways for the risk level decrease. Discussion of the physical and chemical processes accompanying the observable geophysical phenomena is supposed.

The physical and chemical phenomena proceeding in the upper atmosphere and the ionosphere occur in the conditions and the scales which are not available in usual laboratories. Moreover, it is possible to create such non-equilibrium conditions under studying the response of an environment on the external perturbations which are difficult for realizing on the Earth generally. Problems existing here are of interest for a wide range of the investigators working in various areas of a science and techniques. At the same time it is necessary to carry out the additional researches which are connected with the high human activity in the atmosphere — ionosphere system, leading to occurrence of new risks. They concern with an active development of the manned and uninhabited orbital systems, aircraft (including the using height of an average atmosphere), new kinds of communication, long-distance transmission circuit, etc. Non-stationary atmosphere-ionosphere system is the subject of powerful natural affects. Its bottom level is disturbed by earthquakes, volcanic eruptions, typhoons, thunder-storms. From above it is influenced by the geomagnetic storm. As a result of these processes such disturbing factors, as powerful atmospheric

perturbations, electric currents, electromagnetic radiations in the various spectrum ranges, the plasma and optical disturbances, an accelerated particles, the increased level of a radioactivity, and changing of ionic and molecular components. Besides, the microwave radiation of highly excited particles of the ionosphere accompanying the processes of increase of solar activity and appearance of the magnetic storms exerts negative influence on the mankind. Its spectrum, apparently, is completely defined by the neutral ionosphere components. The knowledge of the influencing factor origin allows to use them for disaster monitoring and to create the corresponding techniques on this base. All problems discussed cannot be solved without application of modern physical-chemical methods in the area of environmental research and control, and monitoring in atmosphere, water, solid materials, soils, wastes, animal and human bodies. Among these methods we assume EPR, NMR, tomography, optical and IR- spectroscopy, chromatography, laser technique, thermography, etc. Great attention should also be given to the issues interrelated with modern nanotechnology, and environmental protection.

## **INTERNATIONAL ADVISORY COMMITTEE**

### **CHAIR**

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F. Reberntrost	Max-Planck Inst. Quantenopt., Munich (Germany)
W. Trommer	TU Kaiserslautern (Deuchland)

## CONFERENCE TOPICS

- Elementary processes in the upper atmosphere and ionosphere (section E)
- Electromagnetic and optical phenomena in the atmosphere including long-lived and plasma objects (section P)
- Atmospheric–ionospheric relations (section D)
- Ionospheric-magnetospheric relations (section F)
- Environmental information systems for monitoring and prevention of accidents (section S)
- Combustion and pollution: environmental impact (section C)
- Novel Methods for Environmental Control and Monitoring (section M)
- Methods and techniques for remote sensing of hazardous chemicals in the atmosphere and different surfaces (section T)

The Conference Scientific Program will include:

- invited plenary and keynote lectures
- oral presentations
- poster presentations

All scientists who are interested in understanding and exploring chemical and physical processes in the atmosphere and the ionosphere are invited to Kaliningrad for this exciting 7-day scientific summer event.

## SCHEDULE

### SCIENTIFIC PROGRAMME

The Conference will include morning sessions with invited plenary and keynote lectures (40 min), afternoon sessions with accepted oral presentations (20 min) and three evening poster sessions with short oral presentations (2–3 min). All the participants, who intend to take part in the poster sessions, are requested to prepare posters with the size not more than 80×120 cm (width × height).

### SOCIAL PROGRAMME

Welcome Party, Conference Dinner, and one half-day excursion will be organized. AIS-2018 will be opened by Sunday Welcome Party and closed on Saturday at noon.

## CONFERENCE VENUE

The Conference will be held in the hotel “Sambia” which is located on the Baltic Sea amber beach in a small town Zelenogradsk.



Zelenogradsk is situated close to Kaliningrad (40 km). The international airport Khrabrovo is located between Kaliningrad and Zelenogradsk (20 km to each). The famous national nature reserve park Curonian spit (100 km long) which is included to UNESCO World Heritage Site list. It starts from Zelenogradsk and goes up to the Lithuanian frontier.

### **VISA APPLICATION**

We urge our foreign guests (including accompanying persons) in due time to check whether the entry Russian visa is necessary. If so, do not hesitate to contact the organizers to receive an invitation letter and apply for visa. All the participants in this case are requested to send a fax or scan copy of their passport (the main page with photo and name) to Organizing Committee.

### **CALL FOR PROCEEDINGS**

All the participants are requested to submit their proceedings (articles) before:

**December 1, 2017**

The contribution paper should not exceed 5 pages. The Book of AIS-2018 Proceedings will be published before the conference. Please, use the **template file** (<http://www.ais2018.ru>) for preparing your paper.

### **CONFERENCE FEE**

The registration fee covers editorial expenditures, Welcome Party, coffee breaks, and transfer from/to airport Khrabrovo. The conference fee for foreign participants will also cover lunches, visa support, and official invitation express delivery costs. The information about conference fee can be found at our web-site <http://www.ais2018.ru>.

To take part in AIS-2018, all the participants should:

- fill the Registration Form
- send the proceedings of their presentation to Organizing Committee
- pay the conference fee

**before December 1, 2017**

## KEY DATES

Deadline abstract submission and registration	01.12.2017
Tentative program	01.04.2018
Arrival of the participants, hotel check-in, Welcome Party	03.06.2018
Opening of the Conference	04.06.2018
Closing of the Conference, hotel check-out, departure	09.06.2018

## CONTACT INFORMATION

WEB SITE <http://www.ais2018.ru>

### Conference Secretary

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