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Gennadii G. Matvienko
Yurii N. Ponomarev
Editors

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Introduction

In accordance with the schedule of meeting and conferences approved by the Presidium of the Siberian Branch of the Russian Academy of Sciences (SB RAS) for 2008, the Institute of Atmospheric Optics SB RAS, Institute of Solar-Terrestrial Physics SB RAS organized the Fifteenth International Symposium titled "Atmospheric and Ocean Optics/Atmospheric Physics," in Krasnoyarsk, Russia, 22–28 June 2008.

We wish to thank our sponsors for their contribution to the success of the symposium: Siberian Branch of the Russian Academy of Sciences, Russian Foundation for Basic Research, and the Optical Society of America.

English and Russian were the working languages of the symposium. All poster presentations were in English and oral presentations were made in English and Russian (using synchronous translation via personal audio-equipment).

We conducted four conferences titled:
A. Molecular Spectroscopy and Atmospheric Radiative Processes
B. Optical Radiation Propagation in the Atmosphere and Ocean
C. Optical Investigation of Atmosphere and Ocean
D. Atmospheric Physics

The main topics of the Fifteenth International Symposium on Atmospheric and Ocean Optics/Atmospheric Physics included:

- Molecular spectroscopy of atmospheric gases
- Absorption of radiation in atmosphere and ocean
- Radiative regime and climate problems
- Models and data bases for atmospheric optics and physics
- Wave propagation in random inhomogeneous media
- Adaptive optics
- Nonlinear effects at radiation propagation in atmosphere and water media
- Multiple scattering in optical remote sensing
- Image transfer and processing
- Optical and microphysical properties of atmospheric aerosol and suspension in water media
- Transport and transformation of aerosol and gas components in the atmosphere
- Laser and acoustic sounding of atmosphere and ocean
- Diagnostics of state and functioning of plants' bio systems
- Structure and dynamics of the lower and middle atmosphere
- Dynamics of the atmosphere and climate of the Asian region
- Physical processes and phenomena in the atmosphere
- Optic techniques for probing the atmosphere

The program of the symposium included 22 invited and plenary papers, 120 oral presentations, and more than 123 poster presentations during four poster sessions.

History: The symposium is a traditional meeting of atmospheric and ocean optics and atmospheric physics community, which has a long history as a successor of the symposiums on Laser Propagation in Atmosphere and Laser Remote Sensing of Atmosphere beginning with the early seventies and organizing by academician Vladimir Zuev.

A symposium on Atmospheric and Ocean Optics has been held annually since 1994 by the Institute of Atmospheric Optics SB RAS. From 1971 to 2007 the institute organized more than 40 conferences on different scientific topics. Currently the symposium is the only one in Russia where fundamental problems of radiation propagation in inhomogeneous media and the scattering and absorbing of radiation are considered. Very few conferences in the world have such a broad spectrum of interest. It is very attractive for participants from former Soviet countries that the official languages of symposium are Russian and English.

In the field listed here, the Siberian scientific schools are leaders in our country and well known in the world. This fact can be attributed to the interest in this symposium from the scientists of Russia and other countries of the former USSR. The organization experience and the high level of the conference allowed us in 2000–2007 to invite leading scientists working in the field of optics.

Present: The Fifteenth International Symposium "Atmospheric and Ocean Optics/Atmospheric Physics" was successfully held 22–28 June 2008, in Krasnoyarsk, on board the ship "Aleksandr Matrosov" cruising on the River Yenisei.

In total, 126 participants presented 265 papers and 41 attendees under the age of 33 attended the Symposium. The Symposium included presentations from Russia (Biysk, Bratsk, Chita, Dolgoprudny, Fryazino, Irkutsk, Kazan, Kemerovo, Krasnoyarsk, Khabarovsk, Magadan, Moscow, Murmansk, Nizhny Novgorod, Novosibirsk, Obninsk, Paratunka, Petropavlovsk-Kamchatskii, St. Petersburg, Sarov, Stecolny, Surgut, Tomsk, Troitsk, Tymen, Ulan-Ude, Vladivostok, Volgograd, Voronezh, Yakutsk, Yekaterinburg), Azerbaijan, Belarus, Belgium, Bulgaria, Canada, China, Czech Republic, France, Germany, Hungary, Israel, Japan, Kazakhstan, Korea, Kyrgyz Republic, Norway, Poland, Romania, Spain, UK, Ukraine, USA, and Uzbekistan.

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For more information, please, look at our web-site: www.iao.ru

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