

Preface

Now you have at hand the ninth issue of *Atmospheric and Oceanic Optics*, which presents the works made according to the scientific program of the School on Optical Spectroscopy of Molecules and Radiative Processes in the Atmosphere (Grant No. 00–15–98589 of the Association in Support of Scientific Schools) and supported financially or in other way within the framework of this School.

The first seven papers are directly connected with solution of various problems of atmospheric spectroscopy. To be noted is the result reported in the paper by V.S. Kozlov, M.V. Panchenko, A.B. Tikhomirov, and B.A. Tikhomirov that contributes significantly to the solution of longstanding problem concerning the excess absorption of solar radiation in the atmosphere.

Interesting new possibilities of calculation of spectrally integral characteristics – invoking of fractal properties of spectra – were mentioned in the paper by Yu.V. Kistenev, Yu.N. Ponomarev, and K.M. Firsov. The paper by B.G. Ageev, V.D. Nesvetailo, Yu.N. Ponomarev, and V.A. Sapozhnikova gives an interesting example of interdisciplinary cooperation. Other papers of this series present more traditional, but, of course, interesting and new data.

The eighth and ninth papers continue analysis of relations between the intramolecular degrees of freedom and intermolecular interaction – the subject stimulated, to some extent, by the permanent seminar held within the School. (This fact likely counts in favor of the School.)

I would like to emphasize the active participation of young scientists, such as T.V. Kruglova, S.S. Voronina, and the already mentioned authors of the second and sixth papers. Traditional problems of spectroscopy of isolated molecules are considered in the tenth–twelfth papers.

The appearance of the thirteenth–sixteenth papers is indicative of the extending “geography” of the School. The authors of these papers work in Tomsk universities and institutes, and their research interests concern the spectroscopy of atmospheric gases. The papers by G.A. Onopenko and V.N. Cherepanov contain significant fragments of their doctor’s theses. The authors of the seventeenth and eighteenth papers work in close cooperation with researchers from the Institute of Atmospheric Optics SB RAS.

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