

Preface

This issue presents the papers summarizing the research work that has been done within the framework of the "Optical Spectroscopy of Molecules and Radiative Processes in the Atmosphere" School (Grant No. NSh.S-373-2003.5). All the studies presented in the papers were supported by the School, including the financial support in some cases. Spectrographic papers, which remain beyond the scope of this issue because of its limited space, will be published in the upcoming issues.

The papers from second to fifth include fragments of doctor's theses of their authors.

The first paper and the papers from sixth to eleventh present one of the main research fields of the School, namely, application of spectroscopy to solution of the problems of atmospheric optics. In this context, to be mentioned is the paper by Ptashnik, which concerns the widely debated problem of the causes for anomalous absorption of solar radiation in the atmosphere. Of particular interest is the paper by Zhuravleva and Firsov about the statistical algorithms for calculation of solar irradiance fluxes under different weather conditions.

The tenth and eleventh papers, presented by research teams, describe information systems on molecular spectroscopy in application to solution of radiative problems.

The last four papers concern the problems of pure molecular spectroscopy and those its aspects, which are necessary for reliable consideration in atmospheric spectroscopy.

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