

FOREWORD

The present 12 volume of the "Odessa Astronomical Publications" (News of the Astronomical observatory of the Odessa State University) is the collection of papers based on the contributions presented at the Gamow Memorial International Conference (GMIC'99): "The Universe of Gamow: Original Ideas in Astrophysics and Cosmology", devoted to Georgij Antonovich Gamow (1904-1968), one of the most prominent scientistst in physics, astrophysics and cosmology of the finishing XX century.

The present conference has become a second (first was organized in 1994) and traditional one, being organized once per five years by the Astronomical Observatory and Department of Astronomy of the I.I. Mechnikov Odessa State University, together with the Odessa Astronomical Society with a support by the Euro-Asian Astronomical Society (Moscow) and the Ukrainian Astronomical Association (Kiev). The conference was financially supported by the INTAS.

The conference was held on August 16-22, 1999 in the Odessa city, in which G.A. Gamow has grown, has entered the Russian society of the amateurs of "knowledge of the world" (ROLM), has become the student of a high school, worked as the calculator of the Astronomical observatory and began his way in science. Just in Odessa had formed his scientific interests, the understanding of necessity of reception of maximum fundamental education in the field most close to his interests.

At the conference "GMIC'99", the memorial session was carried out, with the talks by the son and nephew of G.A. Gamow - the professor I.R. Gamow (USA) and I.L. Gamow (Moldova), the report of the pupil of G.A. Gamow - professor R.A. Alpher (USA) and a number of contributions by the scientists from various countries. Except for memorial session, also worked 5 problem sections, and also a special section, where the reports on the projects granted by the INTAS have been presented. The extensive cultural program was proposed to the participants of the conference.

Totally at the conference were presented 122 oral contributions, among which 31 plenary, and 63 posters. All plenary reports submitted by their authors, are published in the present volume. Here are published also 33 other contributions which have caused the greatest interest. All submitted contributions are available in the electronic version of the proceedings (<http://oap12.webjump.com>). Some of the works, presented at the conference, are already published in other journals.

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