

## FOREWORD

This issue of the “Odessa Astronomical Publications” (vol. 25 issue 2) gathered articles that were presented at the XII Odessa International Astronomical Gamow’s Conference-School “ASTRONOMY AND BEYOND: ASTROPHYSICS, COSMOLOGY AND GRAVITATION, COSMO-MICROPHYSICS, RADIO-ASTRONOMY AND ASTROBIOLOGY”.

Conference-School has been devoted to:

- the 100th anniversary of the beginning of the directorship period in Odessa Astronomical Observatory of the outstanding astronomer Aleksander Yakovlevich Orlov;
- the 80th anniversary of the first radio-astronomical observations made by K.Jansky;
- 25th anniversary of the operation of the radio-interferometry system "URAN" of the National Academy of Sciences of Ukraine.

A.Ya.Orlov was working in Odessa since 1912 to 1934. During this time he became the doctor of astronomy (1915), the professor (1916), the academician of the Ukrainian Academy of Sciences (1918), and the corresponding member of the Soviet Union Academy of Sciences (1927). A.Ya.Orlov was the outstanding organizer of the scientific work and he was one of the founders of a new science at that time – geodynamics. The progenies of the "Orlov’s School" successfully worked in Russia, Poland, France, Bulgaria and other countries.

The Conference was organized by I.I.Mechnikov Odessa National University on August 20-26, 2012. Together with University, the following organizations took part in the Conference organization: Radio-astronomical Institute of the National Academy of Science of Ukraine and its Odessa Observatory branch “URAN-4”, the Department of Astronomy and Astronomical Observatory of I.I.Mechnikov Odessa National University, the Ukrainian Astronomical Association (Kiev), the Euro-Asian Astronomical Society (Moscow), the Odessa Astronomical Society, the Southern Scientific Center of the National Academy of Science of Ukraine. Co-chairs of the SOC were G.S.Bisnovaty-Kogan (Russia) and V.M.Shulga (Ukraine), vice-chairs – A.I.Zhuk (Ukraine) and M.I.Ryabov (Ukraine).

The scientific program included the following sections: Memorial and Jubilee Meetings; Cosmology, Cosmomicrophysics and Gravitation; Astrophysics; Radioastronomy; Sun, Solar System and Astrobiology; Planetariums and Popularization of Astronomy.

About 100 scientists from Ukraine, Russia, Belorussia, Moldova, Kazakhstan and Armenia participated in the Conference-School. During the Memorial section 7 talks were presented. 44 reports and 34 posters were presented during the regular sections. In addition, the several discussions were organized. Among them:

Dark Matter and dark energy, and their alternatives (chair A.D.Chernin);

The theory, models and observations of active galaxies and quasars (chair G.S.Bisnovaty-Kogan);

The special section “URAN”– 25 years of investigations (chair O.A.Litvinenko).

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