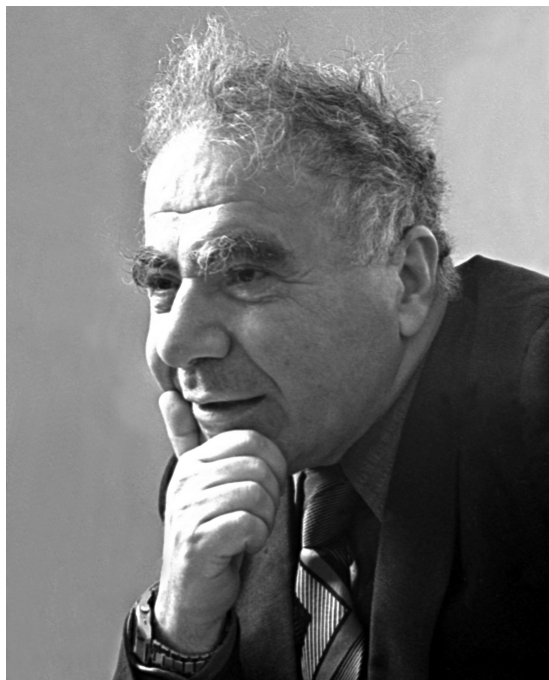


Introduction

Editorial board *

NAS RA V. Ambartsumian Byurakan Astrophysical Observatory (BAO)



Viktor Ambartsumian (1908-1996)

Viktor A. Ambartsumian was one of the greatest astronomers and scientists of the 20th century, he revolutionized our views on the evolution and dynamics of the Universe. Our perception and further investigation of the non-stable phenomena in the Universe is due to Ambartsumian's efforts and contribution in science that is why the anniversary meeting is entitled "Non-Stable Phenomena in the Universe". Ambartsumian carried out basic research in Astronomy and Cosmogony. It covered Astrophysics, Theoretical Physics and Mathematical Physics, and mostly focused on the physics of nebulae, star systems, and extragalactic astronomy. He particularly developed the theory of the Planetary Nebulae. He is best known for having discovered the Stellar Associations and predicted Activity of Galactic Nuclei, which became the most important topic of the extragalactic astronomy. Ambartsumian introduced important Statistical Methods to predict the total number of eruptive stars in stellar aggregates. In his later career, Ambartsumian held views in contradiction to the consequences of the general relativity, such as rejecting the existence of black holes and suggesting Superdense Matter that conditions the activity of stars and galaxies.

The scientific heritage of *V. A. Ambartsumyan* still largely determines the directions of scientific research not only by the staff of the Byurakan Astrophysical Observatory (BAO), but by scientists from other countries. On September 18-21, 2023, the International conference "*Non-Stable Phenomena in the Universe*" was organized in BAO. It was dedicated to V. A. Ambartsumyan's 110th anniversary. About 50 astrophysicists from various countries took part in the conference. Works covering a wide range of astrophysical issues were presented at the colloquium:

- Active Sun and the Solar System;
- Instability phenomena in the world of stars and nebulae;
- Active Galactic Nuclei and Starburst galaxies;
- Groups and clusters of galaxies;
- Observational and Theoretical Cosmology;
- Astrochemistry, Astrobiology and Exoplanets;
- Theoretical interpretation of non-stable phenomena in the Universe.

Active scientific discussion of the presented tasks will undoubtedly serve as a guarantee for further fruitful cooperation.

This issue of "Communications of BAO" includes the proceedings presented on the the International conference "*Non-Stable Phenomena in the Universe*". All the papers passed relevant peer-review.

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