On October 19, 2022, the prominent theoretical physicist, Academician of the Russian Academy of Sciences, chief researcher of the Department of Theoretical Physics of the Institute for Nuclear Research of the Russian Academy of Sciences, passed away at the age of 68.

**Rubakov Valery Anatolievich**

The death of Valery Anatolievich Rubakov is a grave irreparable loss for the staff of the Institute, for his students, for those who worked and communicated with him for many years. Valery Anatolievich was certainly one of the most outstanding physicists of our time, an unrivalled teacher, a wonderful and bright person. His sincere passion and devotion to science were an inspiring example for several generations of scientists in Russia and abroad. He was a guiding light for them.

V.A. Rubakov changed modern scientific ideas about the origin of the Universe, in which he combined elementary particle physics and nonperturbative quantum field theory. He laid the foundations for a revolutionary approach, in which the study of the Universe and the history of its development provides new knowledge about the physics of high-energy particles, and the modern concepts of the field theory lift the veil over the origin of the Universe. This connection is illustrated by his work on the generation of gravitational waves in an exponentially expanding Universe and his works on electroweak nonconservation of fermion numbers, the most famous of which established that anomalous processes with changes in baryon and lepton numbers occur extremely quickly in the early Universe.

This discovery is the basis of electroweak baryogenesis and leptogenesis, which make it possible to explain the baryon asymmetry of the Universe. The Rubakov effect, discovered by him at the age of 26, is one of the most beautiful and important in modern theoretical physics. V.A. Rubakov proposed the concept of a multidimensional world, which includes additional infinite spatial dimensions, the observation of which is possible at high energies. He proposed the concept of the origin of time and fundamentally new models for the birth of the Universe and its evolution before the Big Bang.

Valery Anatolievich was the greatest teacher, the author of the textbooks "Classical Gauge Fields", "Introduction to the Theory of the Early Universe", "Theory of Groups and Symmetries", which have become classics. All his life he taught at the Physics Department of Moscow State University, became its honored professor and the head of the department of particle physics and cosmology. V.A. Rubakov brought up a galaxy of students, created his own scientific school of theoretical physics, which is recognized worldwide.

V.A. Rubakov was a great organizer of science. From 1987 to 1994 he was Deputy Director for Research at INR RAS and was responsible for the astrophysical part of the Institute, including the construction and operation of the Baksan Neutrino Observatory of INR RAS, the Baikal deep-water neutrino and muon detector. This period was marked by significant progress in the scientific life of the Institute, in particular, the construction of the Gallium-Germanium Neutrino Telescope was completed at the Baksan Neutrino Observatory, which made it possible to obtain fundamental results in measuring the fluxes of solar neutrinos. V.A. Rubakov was deeply involved in the activities of Russian and international scientific organizations. A lot depended on him both in the Academy and in Russian science in general.

V.A. Rubakov's achievements were recognized all over the world. He was awarded the International Hamburg Prize in Theoretical Physics (2020), the Demidov Prize (2016), the title of Person of the Year in the nominations "Science" and "City and Society", Troitsk (2013), the M.V. Lomonosov Prize (2012), the Julius Wess Prize (2010), the Academician M.A. Markov Prize (2005), the I.Ya. Pomeranchuk Prize (ITEP) (2003), the A.A. Fridman Prize (1999).

 His passing away is an irreparable loss. We lost the most significant scientist of our time, the man who determined the development of national and world science.

The fond memory of Valery Anatolievich will forever remain in our hearts.

We offer our sincere condolences to the family and relatives in connection with the grave untimely loss.