

In memory of Viktor Nikitovich Mikhailov

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On June 25, 2011, at 77 years of age, ended the life of Viktor Nikitovich Mikhailov, outstanding scientist and manager of the atomic industry, Full Member of the Russian Academy of Sciences, Director of Federal State Enterprise (FGUP) ‘The Institute of Strategic Stability’, Honorary Scientific Supervisor of FGUP ‘Russian Federal Nuclear Center—All-Russian Research Institute of Experimental Physics’ (RFNC–VNIIEF), Minister of the Russian Federation for Atomic Energy in 1992–1998.

Viktor Nikitovich Mikhailov was born on February 12, 1934 in the village of Sopronovo in the Moscow region. His childhood was during the years of WWII, with their enormous hardships. He felt that the safety of his motherland was his most important and very personal task. Having graduated from the Moscow Engineering Physics Institute (MEPhI) in 1958, he was accepted to work at the Division of Theory of the Design Bureau No. 11 (KB-11 currently known as RFNC–VNIIEF in Sarov near Nizhny Novgorod). During this period, V N Mikhailov conducted research into calculating how the energy release of a nuclear explosion depends on a number of parameters; this work led to an important revision of the results obtained earlier by L D Landau.

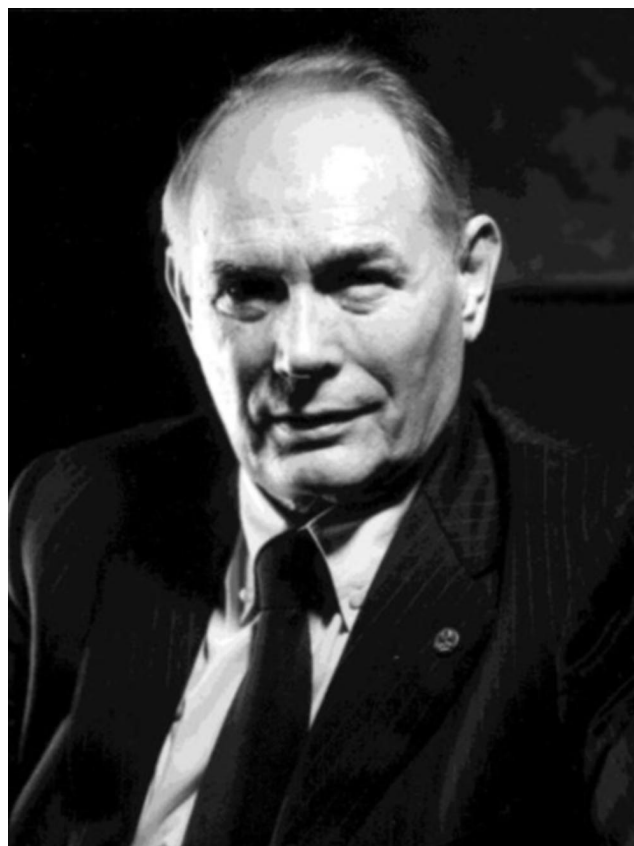
Another avenue of V N Mikhailov’s research was connected with approaches to increasing supercriticality under conditions of implosion by utilizing special materials that control neutron fluxes.

The task of developing new diagnostic facilities for physics experiments became very important under the conditions of underground nuclear testing. V N Mikhailov was able to greatly contribute to achieving this goal.

Among V N Mikhailov’s principal achievements, we find the control of X-ray fluxes in systems of radiation implosion and the attainment of a special regime of neutron–nucleus interaction in thermonuclear charges. In 1967, his achievements in creating thermonuclear weapons were rewarded with a Lenin Prize.

In 1969–1988, V N Mikhailov worked at the Research Institute of Pulse Technologies, in which he guided the development of novel facilities for diagnosing pulse processes as Chief Designer and Director. In 1982, his work earned him the State Prize. Viktor Nikitovich was an outstanding tester of nuclear charges. He organized—and directed—more than a hundred nuclear tests, and on the whole spent nearly nine years of his life at the Semipalatinsk and Novaya Zemlya testing grounds.

In 1988, V N Mikhailov supervised the scientific and technical preparation and conduction of the Joint Soviet–American Experiment (SAE), which constituted an important contribution to progress in controlling the weapons



Viktor Nikitovich Mikhailov
(12.02.1934–25.06.2011)

situation and demonstrated to American specialists the high level of Soviet scientific and technical solutions.

In 1992, the Ministry for Atomic Energy (Minatom) of the Russian Federation was established, and Viktor Nikitovich headed it until 1998. During this period, he guided the atomic-energy industry to solving the most important problems of preserving the key areas of activities and the survival of the plants of the atomic industry, of safeguarding the nuclear deterrent, and of preserving nuclear safety and nuclear nonproliferation in the context of large-scale reductions in nuclear weapons in accordance with Russia’s international commitments.

For V N Mikhailov, the future of the nuclear energy industry in Russia was inseparable from achieving the safe and efficient functioning of the existing atomic power stations and maintaining the infrastructure of the nuclear fuel cycle (NFC), organizing regular replacement of power units at atomic power stations by new types of units with greater safety of operations, and strengthening the export potential of nuclear energy technologies.

V N Mikhailov contributed in important ways to the progress in international cooperation in the nuclear energy

field. He took an active part in the preparation of the 1996 Moscow Summit on Nuclear Safety, which offered a demonstration of Russia's mature and responsible attitude regarding nuclear weapons and all aspects of nuclear security. V N Mikhailov's practical achievements in this period of his life were emphasized when he was awarded the State Prize.

In 1992–2007, V N Mikhailov acted as Chair of the Scientific and Technical Council (NTS) No. 2 of Minatom (later renamed as Rosatom) and scientific supervisor of RFNC–VNIIEF, and in 1999 became the Director of the Institute of Strategic Stability. In 1997, V N Mikhailov was elected Full Member of the Russian Academy of Sciences. He always focused his interests on large-scale problems connected with ensuring national security, implementing the nuclear deterrent, and searching for new strategic scientific discoveries. He had every reason to write: “I have done all I could to make a repetition of the tragedy of war in our land impossible.”

Viktor Nikitovich as scientific supervisor of RFNC–VNIIEF concentrated his attention on the most important aspects of science, technology, and practical tasks involving the reasoning behind the efficiency, reliability, and security of nuclear charges and munitions, on studying new nuclear physical processes and creating new physical and mathematical models, and on exploring processes of gas-dynamical implosion and hydrodynamical thermonuclear fusion.

V N Mikhailov headed NTS No. 2 of Minatom (Rosatom) for many years, having succeeded Academician Yu B Khariton at this post. He chaired dozens of sittings which gathered to discuss and make decisions on key issues in the design and manufacture of nuclear weapons, on expansion of the efforts of various organizations of the nuclear weapons industry in research and technology, and on their collaboration with the research institutes of the Academy of Sciences.

In his field, V N Mikhailov completed an enormous number of classified projects. At the same time, he was widely known as an outstanding spokesperson for the achievements of the atomic industry, and as a profound analyst of those factors that tie together politics, society, and nuclear issues.

The warm memory of Viktor Nikitovich Mikhailov and of his brilliant life story will stay with us forever, while his awesome achievements as a scientist and manager will be indelible in the history of how the security of the fatherland was kept inviolate.

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