DEVYATKOV NIKOLAY DMITRIEVICH

(TO 110 ANNIVERSARY OF BIRTH)

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110 years ago, on 11 April (29 March, old style), 1907, in Vologda, in an old house on quay of the Zolotukha river, in the big family of the artisan merchant of Dmitry Kirillovich Semenov-Devyatkov and a native of Yaroslavl Poshehonie Lidia Ivanovna was born last-born Kolya, Nikolay Dmitrievich Devyatkov - the future physicist, who fate has chosen to be a Patriarch of Soviet Electronics. The childhood and youth of Nicholay were held in Vologda, with 8 years he studied at the real school, loved to paint with watercolors and pastels, painted scenery for school performances. But most of all he liked electrical engineering - transformers, generators, electrical distribution systems, power transmission problems. A year after school graduation, in 1925, the family moved to Leningrad, where Nicholay entered the Leningrad Polytechnic Institute, while working as a lab technician in X-ray Institute. Its Director, A. F. Ioffe suggested to the inquisitive young man a place in the laboratory known electrical engineer of the 20-30-ies, one of the pioneers of radar, the future academician A. A. Chernyshev, which became its first scientific Head. Here the student N. Devyatkov published in 1930 his first article in the journal "Electricity" called "Powerful gas arrestors for protection of lines of communication."

After institute graduation, from 1931 to 1942, Nikolai Dmitrievich worked in LFTI and in its branch NII-9 on defence thematics. During this time he performed important research in various fields of technology, published 12 publications and has received 6 patents for inventions. Beginning in 1935 Devyatkov carries out pioneering research in the field of generation of ultra-high frequencies. To him belongs the priority in the creation of the microwave triode with plane – parallel electrodes- low-power generator lamps with almost the inertialess output of grid. Original ideas embodied in the design of microwave triodes, served as the basis for creating many types of such lamps, as well as amplifiers and generators on their basis not only in the USSR but also in England, USA and Germany. Continuing work in this direction, in 1940, he with employes comes to outstanding invention – reflective klystron, which later became the main industrial type of vacuum devices used so far in various electronic systems.

Since 1942 N. D. Devyatkov has been worked in Moscow the development of the domestic (instead of english existing) radars - stations weapon aiming. By now November 1942 it had completed the development and manufactured two pilot specimen of the radar which have been successfully tested under Moscow in battle front. In 1943 he was transferred to research Institute-160, that was created on the basis radio plant in Fryazino near Moscow (now NPP Istok), where he led work on the development and production of electronic devices for radar equipment until the end of his life. The first award order of the Red Star he received in 1944 for participation in the development and production of radars for gun aiming. Air defense troops equipped with these stations have greatly increased its effectiveness in the protection of Moscow and other large cities, victims of Nazi air raids.

Since 1954 N. D. Devyatkov – the scientific header of the Department of microwave electronics, Institute of radio engineering and electronics, USSR Academy of Sciences, the formation of which is associated with his name. Since 1960 – head of the Department of emission and quantum electronics of the Moscow Institute of Physics and Technology. In the postwar

years under his guidance were created lamps of the backward wave in millimeter and submillimeter wavelength ranges and based on them, first in a world, had begun works on the development of MM-range of wavelengths.

To impressive achievements of the last decades are pertain his works in the field of application of microwave electron devices and quantum generators in the economy and medicine.

Nikolay Dmitrievich creates a unique creative teams for joint work of experts in such diverse fields as electronics, medicine, biology, etc. The main works carried out under his leadership in this direction: the use of lasers in surgery and therapy, the use of hyperthermic heating of tumors for their destruction, the establishment of a number of devices for gastroenterology, diagnostic thermal imaging equipment, setups for the irradiation of seeds with the aim of increasing crop yields.

Particularly striking are obtained by N.D. Devyatkov with employees the results of the study the specific impact of electromagnetic waves of millimeter range on biological structures and organisms for the effective therapeutic treatment of diseases by improving the immunological ability of the body.

In April 1997, was held the 11th Russian Symposium "Millimeter waves in medicine and biology" with international participation, dedicated to the 90th anniversary of the founder of MM-therapy, academician N.D. Devyatkov.

Nikolay Dmitrievich worked at the state scientific production enterprise Istok 54 years, including 39 years was Deputy Director for scientific work. Herewith never was the member of communist party. He is the author (coauthor) of more than 250 scientific works and inventions.

In 1952 he was awarded the academic title of associate Professor, while he read a course of lectures in the Moscow Power Engineering Institute. In 1953 he was elected corresponding member in the Department of technical Sciences of the USSR, while still a Professor. In 1957 he was awarded the degree of doctor of technical Sciences, and in 1958 – the title of Professor. Nikolay Dmitrievich Devyatkov - academician of the USSR (1968), Hero of Socialist Labor (1969), winner of the Stalin (State) prize of the USSR (1949) and Lenin prize (1965), two government awards (1984, 1996), cavalier of two orders of Lenin, order of October Revolution, two orders of Labor red banner and order of the red Star. Awarded a gold medal. A. S. Popov (1986).

N.D. Devyatkov was spending the big scientific-community work. The decision of the Presidium of the USSR in 1975 he was appointed Chairman of the Council on the issue of physical electronics. Since 1950-ies he worked in Higher Certification Commission, for two terms (5 years each) was a member of the Bureau of the Department of General physics and astronomy of the USSR, was a member of the editorial Board of the "Great Soviet encyclopedia". He was the chief editor of the journal "Radioengineering and electronics", headed the editorial Board of the collection "Elektronnaya Tekhnika. Series 1. SVCH-Tekhnika".

Nikolay Dmitrievich Devyatkov possessed a rare combination of the qualities of an outstanding original academic, that paving new paths in science, and an excellent organizer. A scholar with world forename, he is one of the founders of many scientific fields: modern electronic engineering, physical electronics, electronics of ultrahigh frequencies, vacuum technology, medical electrical engineering. The scope and importance of his scientific work are so great that it is impossible to briefly reflect them accordingly. Estimation outstanding multi-faceted activities of N. D.Devyatkova is inseparable from the answer to the eternal questions of the relation between imagination and rigor, intuition, and mathematics, "algebra" and "harmony" in physics and microwave technology and other natural Sciences.

Nikolay Dmitrievich Devyatkov lived a long and productive life, which he described in his book "Memories" (Moscow, Nauka Publ., 1998). He married in August 1933 on the Zoya Vasilievna Sterlyadkina, also vologzhanka, and lived with her in love and harmony for almost 70 years. Son Michael, doctor of physical and mathematical Sciences, untimely died in 1984 Nikolay Dmitrievich died on 1 February 2001 on 94-m to year of life, buried at Vostryakovskoye cemetery.

Nikolai Dmitrievich was a sampling of the Russian intelligent, ready to come to the aid of anyone who needed it, a man of great intelligence and high internal culture.

The memory of this amazing man will forever remain in our hearts. His dealing lives on in the collectives, by which he directed, his principles and style are remain as leading for his former employees and for the next generations of scientists.

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