

In memory of Sergeĭ Mikhaĭlovich Rytov

October 22, 1996 saw the last day of Professor Sergeĭ Mikhaĭlovich Rytov, an outstanding radio physicist. The 88-year-old corresponding member of the Russian Academy of Sciences had lived a long, remarkably bright life full of many extraordinary events, achievements, and adversities. His name is inseparably linked to almost all the history of radio physics. Actually, he was among the creators and characters of this history. It was in his time and with his direct participation that radio physics first saw the light of day as a science and later matured into a major division of physics in its own right, which owed him many fundamental results. Some of the techniques he developed to tackle radio physics problems have now become so commonplace that the name of their originator has been forgotten. Quite often, papers in journals cite them as being something of ‘folk’ origin.

Professor Rytov was born in Khar’kov on July 3, 1908. He graduated from Moscow State University (MGU)’s Faculty of Physics and Mathematics in 1930, and continued his studies as a post-graduate at MGU’s Research Institute of Physics, which he completed in 1933. His career as a science educator dates back to 1930 when he began reading lectures in physics and mathematics at MGU. Then followed his work at the Gorkii Research Institute for Engineering Physics (1932–1934), the Lebedev Physics Institute, better known in Russian as FIAN (1934–1958), and, finally, the Mints Institute of Radio Engineering (1958–1996).

Professor Rytov was extremely diverse in his scientific interests. Arbitrarily, his major works may be classed into three large groups: the oscillation theory and acoustics; wave propagation, electrodynamics and optics; and statistical radio physics. He made a fundamental contribution to each of them, as those involved in and concerned with radio physics are well aware. However, a detailed analysis of Professor Rytov’s works is the subject for a separate and substantial presentation.

Work as an educator was an intrinsic part of Professor Rytov’s activity. He was deeply engrossed in it throughout almost all of his life and did it conscientiously, first at MGU (1930–1932 and 1934–1938), then at the Gorkii State University (1932–1934 and 1945–1947), and finally at the Moscow Institute of Physics and Technology (1947–1978). Anyone who happened to listen to Professor Rytov even once admired his performance as a lecturer, his crisp style, and his clear, in-depth and, at the same time, simple presentation. Professor Rytov wrote separate sections in popular handbooks of physics for colleges, edited the works of L I Mandelshtam and N D Papaleksi as a science supervisor



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and translations of classical monographs by Rayleigh, Stratton, and others, and penned a number of popular-science articles. Special mention should be made of his excellent handbook, *Vvedenie v Statisticheskuyu Radiofiziku* (An Introduction to Statistical Radio Physics), well known both in and outside this country, and the monograph *Teoriya Ravnovesnykh Teplovykh Fluktuatsii v Elektrodinamike* (Theory of Equilibrium Thermal Fluctuations in Electrodynamics), coauthored with M L Levin.

For decades, Professor Rytov was the only and invariable head of the All-Moscow Seminar on Radio Physics, which had a strong impact on the progress of radio physics in this country. In fact, that was an All-Union seminar because it was always attended by scientists from many of the country’s scientific centres. The seminar owed its popularity and high

rating above all to Professor Rytov's authority as a scientist and his ability to assess someone's work expertly and clearly state its strong and weak points.

Professor Rytov's outstanding services won him the Popov Gold Medal, the Mandelshtam Prize, State Prizes, three Orders of the Red Banner of Labour, the Sign of Merit Order, and several medals.

Many radio physicists in Russia take pride in calling themselves Professor Rytov's disciples. His authority, and personal charm were so strong that even those who sought his assistance or counsel only from time to time (which was never, it seems, denied) called or call themselves his disciples, not to speak of those who worked with him for a long time and whom he himself recognised as such.

Professor Rytov had an immaculate reputation both as a scientist and as a man. Everybody who was happy to know Professor Rytov personally will remember him as a major scientist, an excellent educator, and a well-wishing, charming, and cheerful person.

*A F Andreev, A S Borovik-Romanov, F V Bunkin,
A V Gaponov-Grekhov, Yu V Gulyaev, N V Karlov,
Yu A Kravtsov, V V Migulin, M A Miller,
V G Polevoĭ, A M Prokhorov, I L Fabelinskĭ,
E L Feĭnberg*