

Isaï Veniaminovich Estulin (Obituary)

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Isaï Veniaminovich Éstulin, a well-known Soviet experimental physicist and doctor of physicomathematical sciences, died on November 15, 1982, at 65 after a grave illness.

He was born in 1917 in Moscow. In 1935 he entered the physics department of Moscow University. He completed his work there in 1941, one of the first students in the subdepartment on the nucleus and radioactivity which had been organized by Academician D. V. Skobel'tsyn in 1940. During the war he worked at a defense plant in the Urals, and in 1945 he was transferred to Moscow State University.

Beginning systematic research in 1945, he first worked in the nuclear laboratory of the Scientific Institute of Nuclear Physics at Moscow State University and then in the laboratory of the Scientific-Research Institute of Nuclear Physics at Moscow State University. He soon discovered several important results, which won the recognition of specialists in the field. His scientific work in this period was devoted primarily to developing methods for detecting γ radiation and for γ -ray spectroscopy. He and his colleagues developed a novel method for measuring the absolute intensity of γ radiation, using a parallel-plate ionization chamber with a slit. He was one of the first to take up the difficult problem of measuring the polarization of nuclear γ radiation (in particular, the problem of measuring the correlation in the polarization of cascade γ rays from a nucleus). He carried out extensive work, which became the basis of his doctoral dissertation, in a field which was new at the time (in the 1950s): spectroscopy of the γ radiation emitted during the capture of slow neutrons by nuclei. Also carried out during his university years was a study which subsequently brought him extensive recognition: the first direct measurement of an upper limit on the electric charge of the neutron.

At Moscow University he devoted much time and effort to the important activity, especially in the postwar years, of training key scientists for the development of Soviet nuclear physics. He was one of a small group who developed a laboratory course in nuclear physics, a unique course at the time. He wrote a laboratory manual which was published. A number of physicists who have achieved prominence carried out their undergraduate work and their work toward candidate's degrees under his guidance.

Since 1968 Éstulin worked at the Institute of Space Research, Academy of Sciences of the USSR. He devoted his extensive experience as an experimental nuclear



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physicist to developing research frontiers in astrophysics involving the detection of hard electromagnetic radiation from astrophysical objects by detectors carried on earth satellites. He pioneered in the research on the high-precision spectroscopy of cosmic γ radiation. In 1974 he took active part in a study of an effect which had just been discovered: cosmic γ bursts. In collaboration with French scientists he developed in a short space of time special apparatus for determining the coordinates of the sources of these bursts with an accuracy better than an arc minute and for studying the temporal and energy characteristics of the sources. The results which he obtained in this field won widespread recognition.

In all his activities he exhibited an exceptional love of science, adherence to principles, a critical approach to his own work and that of others, and an ability to organize different and sometimes "mismatched" people into teams pursuing a common goal.

It is this rare combination of qualities that won Isaï Veniaminovich Éstulin the esteem of his friends and of his Soviet and foreign colleagues.

Translated by Dave Parsons