

## Lev Abramovich Sliv (Obituary)

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On July 19, 1983 Professor Lev Abramovich Sliv, Doctor of Physical and Mathematical Sciences, died suddenly. Sliv was a theoretical physicist well known in our country and abroad who made important contributions to the development of nuclear and atomic physics.

Professor Sliv was born in 1911 in Vitebsk. His working life began at 16 as a worker in one of the Leningrad factories. The thirst for knowledge led him in 1931 to become a student in the Physics Faculty of Leningrad State University. There he studied and worked until 1941 and wrote his first scientific papers. During World War II he was an artillery officer and commander of an anti-aircraft battery protecting Leningrad. Immediately after the war he returned to science and teaching, and held at first the Chair of Physics at the Leningrad Agricultural Institute. In 1949 he began an extended and productive period of activity at the Leningrad Physico-technical Institute and the Leningrad Institute of Nuclear Physics which separated from it in 1971. There he organized the section of nuclear theory and headed it to the end of his life.

The activity of Lev Abramovich (he published more than one hundred scientific papers) encompassed practically all the main areas of nuclear physics and a number of related subjects in atomic physics. His remarkable scientific intuition enabled him during his entire life to choose his research problems in such a way that the value of his work, as a rule, increased with time. He began his scientific activity with study of the  $\beta$  decay of nuclei and was the first to point out the importance of the finite size of the nucleus in  $\beta$  transitions (especially in the case of forbidden transitions). His prediction of the production monochromatic positrons in the conversion of nuclear  $\gamma$  rays, which was subsequently confirmed experimentally, became a classic. An activity of great practical significance which gained wide international recognition was his work on the internal conversion of  $\gamma$  rays. Under his leadership the most accurate tables of conversion coefficients were compiled. His work stimulated to a high degree the transformation of conversion experiments into one of the most widely used methods of obtaining information on the nuclei.

The contribution of Sliv to the study of nuclear structure was significant. It is especially appropriate to mention the extensive studies of near-magic nuclei and nuclei with a large number of nucleons above filled shells which were carried out by him and his colleagues. These studies made an important contribution to the contemporary understanding of the interaction of nucleons inside a nucleus and made possible prediction of the existence of a number of isomeric nuclear levels. Also of importance was his work on the conser-

vation of isotopic spin in nuclei, which to a large degree made possible the development of the theory of isotopic analog states. In the latter years of his life Sliv was actively occupied in the physics of giant resonances, in the study of nuclei far from the stability line, and in study of the influence of the quark structure of nucleons on the properties of nuclei.

The scientific teaching activities of Professor Sliv were also impressive. Many well-known specialists in the fields of nuclear and atomic physics are his pupils. He was one of the founders and the constant scientific director of the annual Winter School at the Physico-technical Institute and the Leningrad Institute of Nuclear Physics on the physics of nuclei and elementary particles, which has been carried on already for 18 years. As a result of Sliv's enthusiasm the school grew from a modest beginning to a scientific undertaking of national importance in which leading Soviet scientists have continued to take part.

L. A. Sliv was a persuasive advocate of close international scientific cooperation. He was one of those who in the years after the war took the lead in establishing contacts with foreign physicists. It was no accident that, noting his merits, Nobel laureates Aage Bohr and Ben Mottelson wrote "The first to establish . . . a collaboration [with the Niels Bohr Institute] was Professor Sliv, and for our group at Copenhagen he has remained a very valuable colleague and critic."

A member of the Communist Party of the Soviet Union since 1930, Sliv found time also for work of social importance. One remembers, for example, the interesting philosophical seminars which he organized over a period of many years. Young students learned from him not only physics, but also an understanding of events occurring in the Soviet Union and abroad, and simply an understanding of life.

Sliv was an extraordinarily kind and tactful man. There were few who had his gift to inspire others to sincerity and to gain their confidence and who could understand so well the point of view of his partners in conversation. The style of his scientific leadership was mild and unobtrusive. With an extensive understanding of theoretical physics and science as a whole, Sliv was able to encourage the development by a student of a subject only indirectly related to nuclear physics if he saw that the student was enthusiastic and had the ability to obtain new results.

The image of L. A. Sliv will always remain in our memory.

Translated by Clark S. Robinson