Sergei M. Polikanov 1926-94

Sergei M. Polikanov died on September 2 at the age of 67. He was a member of the scientific staff of the GSI Darmstadt heavy ion Laboratory.

Born in Moscow in 1926, Polikanov studied physics with prominent teachers like L. D. Landau and I. E. Tamm and worked with G. N. Flerov on the synthesis of transuranic elements. In these experiments, carried out at the Joint Institute for Nuclear Research (JINR), Dubna, element 103 (Nobelium) was first synthesized. In 1962 he discovered a spontaneous fission activity of 14 ms in uranium-238 reactions with heavy ions. This initially confusing phenomenon was soon recognized to be the spontaneous fission of an excited nuclear state of americium-242 and subsequently observed to be a phenomenon that occurred in many other transuranics. Few accomplishments in nuclear physics in recent years have had such a wide impact. The discovery soon received appropriate recognition: the Lenin Prize in 1967; election to corresponding membership in the Soviet Academy of Sciences in 1974; and in 1977 the Tom Bonner Prize of the American Physical Society.

In the early 70s Polikanov was the first to propose using muons to probe nuclear fission and nuclear dynamics. This early work in Dubna soon brought him into contact with CERN which offered the best possibilities for experiments with muons. His desire to depart with his family for a prolonged research abroad and his subsequent affiliation with Sakharov's Helsinki Group led to a complete break with the Soviet establishment. In 1978 Polikanov and his family were expelled from the Soviet Union, and he formally returned all his Soviet prizes and honours. After working at the Niels Bohr Institute in Copenhagen from 1978 - 1980 and at CERN from 1980 - 1982, in 1982 he received a permanent position as a staff scientist at GSI, Darmstadt. He was appointed Honorary Professor at Heidelberg and in 1988 was awarded an honorary doctorate by the University of Uppsala in Sweden.

We have all learned much from Sergei Polikanov. With his death we have lost a man of great integrity, an outstanding physicist, and a highly regarded colleague.

From P. Armbruster and H.J. Specht

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