

INTRODUCTORY TALK

W. K. H. PANOFSKY

On April 25, 1978 a Memorial Session was held at Washington meeting of the American Physical Society in memory of Gersh Itskovich (André) Budker who died July 4, 1977. Papers were given at that session by four American physicists whose work closely touched on and benefitted from Budker's work. A telegram was sent the previous day by Professor A. N. Skrinsky, Chairman of the Organizing Committee of a seminar held in Novosibirsk as follows: Please telephone to Professor Panofsky in Washington the following on behalf of colleagues and friends of Professor Budker gathering here in Novosibirsk at the seminar devoted to the sixtieth anniversary of his birthday. We warmly greet our colleagues and friends in America participating in the Budker Memorial Session.

Brilliant physicist, remarkable and attractive personality — he also made great contributions to international collaboration of physicists. We believe that the ideas of Professor Budker will inspire and stimulate our mutual activity for many years.

Sincerely,
Skrinsky
Chairman Organizing Committee

Professor Norman Ramsey, President of the American Physical Society, and I as Chairman of the Memorial Session, replied as follows:

We deeply appreciate your greetings to Budker Memorial Session of American Physical Society. We reciprocate greetings to your birthday and memorial gathering. We share your admiration for Professor Budker's scientific contributions and expect them to provide the basis for major future advances in physics.

May this dual recognition of Budker be a symbol of our continuing close relations.

Norman Ramsey
President American Physical
Society
Wolfgang Panofsky
Chairman Memorial Session

It is indeed a fact that Professor Budker's work has been an important element in the commonality of interest between physicists in the United States and the Soviet Union. When in 1956 it was first possible for American physicists to visit particle accelerator institutions in the Soviet Union, the work of Budker, then at the Kur-

chatov Institute, drew immediate attention. Many of the ideas originating from that visit led to extensive studies in the West and this cross-fertilization of ideas continued after Budker transferred his work to the Institute of Nuclear Physics of the Siberian Branch of the Soviet Academy of Sciences. The papers contributed by the speakers at the Budker Memorial Session dealt with the main lines of Budker's work at Novosibirsk. He developed novel accelerator ideas with particular emphasis on storage rings. He innovated in theory and practice of controlled thermonuclear reactions and he developed high-powered pulse devices of many kinds. He continued to explore the basic limitations of accelerating and storage ring devices and his many inventions were aimed at pushing back those frontiers. In particular, his concept of electron cooling opens new opportunities for the construction of storage rings for protons and anti-protons whose large mass prevents shrinking of the radial phase space through radiation, as is the case for electrons.

Many of Budker's contributions were ahead of their time in the sense that he did not live to see their full impact on science and technology. It is therefore left to the next generation of physicists in all countries to pursue these ideas. I hope that the papers presented at the Budker Memorial Symposium give an indication how Budker's influence has been felt in development in the United States and how this work might evolve in the future.