Proceedings of the International Symposium

THE 50TH ANNIVERSARY OF THE DISCOVERY OF PHASE STABILITY PRINCIPLE

The investigations carried out by means of charged particle accelerators, based on the phase stability principle discovered by **V.I.Veksler** and **E.M.McMillan**, have resulted in radical changes in our picture of the microcosm: new laws of nature and physical principles have been discovered.

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THE GODFATHER OF THE ELECTRON ACCELERATOR "PAKHRA"

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The first large electron synchrotron for an energy of 230 MeV (C-25) was put into operation at the V.I.Veksler Laboratory of FIAN (code name "Pitomnik") between the 40s and the 50s. A systematic investigation of electromagnetic interactions of particles and nuclei began on a bremsstrahlung beam of this accelerator at the same time. Primary attention was given to photomeson processes and, first of all, to the process of photoproduction of neutral and charged pions on nucleons and nuclei. In addition, the photofission of nuclei, Compton scattering and a number of other processes were then investigated. This "Golden Age" of pion physics is well-known from the literature.

Soon V.I.Veksler switched over, in the main to the problem of constructing the famous Dubna synchrophasotron. He still remained, however, to be a scientific leader of the FIAN "Standard Laboratory" for some time. Little by little, Dubna completely dripped Veksler's attention. Nevertheless, he took part in the discussion of the question on the construction of a more powerful electron synchrotron for an energy of the order of 1 GeV (C-25P) at FIAN. It was clear that one would fail to construct such an accelerator in Moscow.In connection with this, it was proposed (I do not remeber who put forward this suggestion) to use the FIAN territory at Krasnaya Pakhra: now it is the Scientific Centre of the Russian Academy of Sciences in Troitsk.

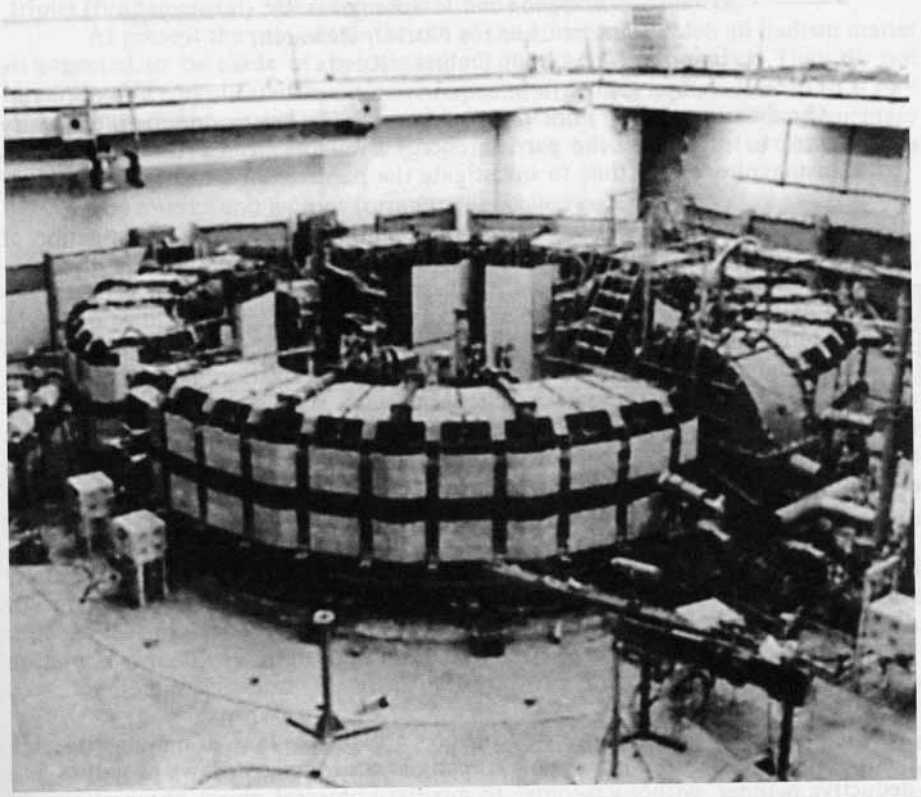
As an Academician-Secretary, Vladimir Iosifovich visited Krasnaya Pakhra for "reconnaissance". He was the first to suggest the idea of using the cascade of natural ponds in the environs for the circulating (return) water supply of the accelerator.

In 1964, P.A.Cherenkov (by then, he was at the head of the "Standard Laboratory") charged me to work on the problems of building the new synchrotron. The site for the new accelerator was not yet approved finally by that time, and Veksler's recommendations were of decisive importance. The first building work at Krasnaya Pakhra began in 1964.

In connection with this building and designing the accelerator magnet, I quite often happened to meet with Vladimir Iosifovich, and he always discussed our problems with a big interest and attention. For the last time we met in Dubna in May or June, 1966. Vladimir Iosifovich asked me to come and to "report on" the situation with the construction of C-25P.

We were sitting on a bench in the park situated near his house. It was noticeable that he was already seriously ill. None the less, he showed interest in all the details. He emphasized that all the objects of C-25P (a cooling system, an electric sub-station and halls) would have to be built taking the future into consideration. The possibility of building a more powerful accelerator here was

kept in mind. We also discussed the scientific subjects for performing research on the Pakhra accelerator.



Saying good-bye to me, he said with sadness roughly the following words: "It is already hard for me to work here. With great pleasure, I'll return to the new accelerator at FIAN a little bit later. We'll have a site also for a future machine there, at Pakhra."

Leaving Dubna that time, I could not imagine that Vladimir Iosifovich would pass away in a few months and he would never see the synchrotron "Pakhra", in the construction of which he expressed such great interest.