Onuchin celebrate 70th birthday

Alexei Onuchin's whole scientific career has related to the BINP, where he has worked since 1959. His PhD thesis in 1965 on the luminosity measurement by small-angle scattering was one of the first experiments at the colliding-beam facility, and in 1966 he was author of a pioneering work on a test of quantum electrodynamics in large-angle electron–electron elastic scattering. He then became one of the leaders of the experiment performed at the VEPP-2 e⁺e⁻ collider in the 1.18–1.34 GeV energy range that had two important results in 1970. The discovery of multihadron production, simultaneously with Frascati, was one of the first indications of the existence of light quarks, while a detected excess in the pion and kaon form factors over theoretical predictions became a step to a later observation of p', αω and ρω mesons.

From 1980 to 1985 Onuchin led the MD-1 experiment at the VEPP-4 e⁺e⁻ collider operating in the Y resonance energy range. One of its well-known results is the measurement of the cutoff of large impact parameters in bremsstrahlung (the "MD effect"). The results on the leptonic width of the U(1S), R and the total cross-section for γγ → hadrons are still the most precise. In 1989 he shared the USSR State Prize with a group from the BINP for high-precision measurements of particle masses.

Onuchin is one of the founding fathers of the KEDR detector for experiments at the upgraded VEPP-4M collider. He suggested and, together with colleagues, successfully realized the 30 tonne liquid-krypton calorimeter project. His group also constructed a drift chamber using "cold" DME (dimethyl ether) gas providing 100 μm resolution. He is now one of the leaders of the Novosibirsk group in the BaBar experiment at the SLAC B-factory.

His long-standing love for Cherenkov counters started with the pioneering water-threshold counters in the experiment at VEPP-2. He later developed the MD-1 Cherenkov counters filled with ethylene pressurized to 25 bars, and finally suggested the aerogel counters with wavelength shifters (ASHPH) now operating in KEDR. All this clearly shows his talent and creativity.

For many years Onuchin has taught and supervised students at the Novosibirsk state and technical universities. Previous students include many highly qualified physicists, among whom are professors, group leaders, a deputy-director and a corresponding member of the Russian Academy.

Onuchin continues to remain fit and well and is still a good skier. His friends and colleagues wish him good health and many years of creative research.