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New unitary quantum theory: A review**Leo Georgy Sapogin***Technical University, Russia*

This article presents a model of Unitary Quantum Field Theory in which particles are represented as wave packets. The chosen frequency dispersion equation allows the packet to periodically appear and disappear without changing its form. The envelope of this process is associated with the conventional wave function. The field equation is nonlinear and relativistically invariant. With appropriate adjustments, it reduces to the Dirac, Schrödinger, and Hamilton-Jacobi equations. The model predicts several new experimental effects for both high and low energies. The fine structure constant ($1/137$) was determined in 1988, and by 2007, the masses of numerous elementary particles, including the electron, were measured with less than 1% accuracy. Subsequent discoveries include two pentaquarks, the θ^{*+} baryon, the Higgs boson, and a 28 GeV particle, all of which were accurately evaluated within 11 years.

Biography

Sapogin Leo Georgy (1936). Full Professor Sapogin now lives in Moscow, Russia. He began in 1954 to study in Taganrog Radio-technical University and graduated (Dept. of solid state physics) in 1959. He served during his military service from 1959 to 1972 at Ministry of Defence as the scientific adviser. Candidate of science (1966). He maintained (1971) the doctor degree in Leningrad State University. In 1972 to 1985, he was the Head of Theoretical Department in Russian Academy of Science. Since 1985 till present he is the Head of Physical Department of Technical University – MADI. He is the author (or coauthor) of numerous (over 200) published scientific articles, 4 books, school supplies. He obtained (with V.Boichenko), first, very important scientific result: calculating (with accuracy more 0.3%) of the electrical electron charge and of the fine structure constant $-1/137$. He published (2005) in USA and Russia (together with Prof. Yu.Ryabov and V.Boichenko) the book named "Unitary Quantum Theory and New Source of Energy". Together with Ryabov he calculated mass spectrum of elementary particles and mass bozon Higgs - 131.7 GeV. Full Professor L.Sapogin - academic of Russian Academy of Natural Science and World Academy of Complex Safety. His biography is included in collection books of Who's Who in the World (2006), of International Biographic Centre, Cambridge (2009) and of American Biographical Inst. (2009).