

THE ORIGIN OF THE EXISTENCE OF PLASMA ACCORDING TO TWIN PHYSICS

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Using the Heisenberg principle and the definition of complementarity as defined by Max Jammer, formalism is developed, based on the concept that determinate and indeterminate aspects of phenomena are mutually independent and that they occur joined in nature in such a manner that one of both dominates an observation and the other occurs as a small disturbance. Combining this starting point with relativity theory, space may be considered as a finite physical item, having an extremely low energy density and a potential equal to that of mass. Space and time are described separately in a mathematical similar way. The basic item in the theory is the Heisenberg-unit (H-unit), defined as a constant amount of potential energy. By using set theory, this unit can be supplied with complementary attributes of time, space and mark (a precursor of charge and electromagnetism). Only by interaction with another Heisenberg unit, potential energy can be transformed into physical items. The resulting complementary language represents a dualistic way of considering the universe and creates a bridge between large- and small-scale phenomena and so between quantum-mechanics and gravity. The laws of Maxwell emerge in an easy way. A series of elementary particles as well as the four forces of nature, neutron decay and gravitational waves is described. In this lecture a general overview of twin physics will be given with a few examples of described particles. We concentrate on results which are related to electric and magnetic features of protons, neutrons and electrons in nanoscale materials. Two of the four described types of electrons are characteristic for this material providing it with features being unknown in classical physics. Besides that, protons and neutrons are occurring without having a spin and instead of that having a short-distance magnetic field around.

Biography

Anna Backerra has completed her Graduation in Theoretical Physics from the Eindhoven University of Technology, The Netherlands and worked for three years at Philips Research Laboratories. She continued her research independently, in search for complementary physics. To develop a way of complementary thinking, she studied composition at the Conservatory in Enschede and in Saint Petersburg (Russia). After that, she constructed a complementary mathematical language and applied this on physics, obtaining twin physics. The results are published in *Physical Essays* (3 papers), *Applied Physics Research* (3 papers) and combined in a book (Twin physics, "The Complementary Model Of Phenomena", Lambert Academic Publishing).

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