

## Glossary

**-pre-quantum particle model:** particle' model of  $T \rightarrow 0\text{K}$  quantum state, based on the classic mechanics applied to quanta and to quantum/sub-quantum fluids;

**-quantum wind:** flux of quanta of quantum medium with the mass  $m_c \geq h \cdot 1/c^2 \text{ kg}$ .

**-sub-quantum wind:** flux of etherons of sub-quantum medium with  $m_c < h \cdot 1/c^2 \text{ kg}$ .

**-chiral pre-quantum model of elementary particle:** vortexial model of particle supposing a composite vortex of quantum volume and of magnetic moment.

**-intrinsic chirality:** absolute size which characterizes the particle' core and the sense of the formed vortex around the fermion' centroid in a homogenous quantum or subquantum wind, by a hypothetical spiral shape of its centroid;

**-gravitons:** g-etherons, with  $m_g = (10^{-68} \div 10^{-72}) \text{ kg}$ , acting as gravitic field quanta and contributing to the gravitomagnetic quantum-vortices forming;

**-sinergons:** s-etherons, with  $m_s = (10^{-59} \div 10^{-61}) \text{ kg}$ , acting mainly as sinergonic quanta of gravitomagnetic vortices but also as quanta of a gravitostatic field;

**-quantons:** quanta with  $m_h = h/c^2 = 7.37 \times 10^{-51} \text{ Kg}$ ;  $S_h^* \ll \frac{1}{2}h$ , acting as quanta of the **B**-magnetic field and forming the  $\mu_p$ -magnetic moment of fermion;

**-vectons:** vectorial photons with  $m_v = 3 \times 10^{10} m_h = 2.2 \times 10^{-40} \text{ kg}$ ;  $S_v = S_v^* = \frac{1}{2}h$ , acting as electrostatic field quanta, resulted as hard-core semiphotons of the cosmic 3K – background radiation;

- centrol**: super-dense centroid (kernel) of a quanton, photon, electron, etc.;
- vexons**; vectorial photons with  $m_w \geq 10m_v$ ;  $S_w = S_w^* = \frac{1}{2}\hbar$ ; structured as composite chiral soliton of vectons, acting as constituents of elementary particles quantum volume and of luxons;
- electrogravitic charge**: the correspondent electrostatic charge of a mass  $M$  generating the same force over an electron as the gravitational  $M$ -mass;
- CF-soliton electron**: vortexial model of electron with multi-vortex sub-structure of the quantum volume;
- scalar radiation quanta**: scalar quanta composed as pairs of two anti-phase pseudo-scalar photons;
- proto “dark energy”**: fluxonic or vortexial energy of a mixture of etherons and quantons;
- “dark energy”**: fluxonic or vortexial energy of  $g$  – and  $s$  – etherons, which determines also the Universe’s expansion;
- “dark” photons, “dark” particles**: photons /particles formed ‘at cold’, with negligible kinetic energy;
- atonium**: pseudo-atom having a nucleus and non-quantified electronic orbitals, formed in conditions of metastable dynamic equilibrium;
- quasielectrons**: bounded degenerate electrons of an  $N^p$ -cluster, with fractional charge:  $e^* = \frac{2}{3}e$ ;
- proto-electron**: electron of  $T \rightarrow 0K$ , in form of pseudo-cylinder (barrel-like), characterized by the relation:  $2\pi a^3 \cdot \rho_a^0 = m_e$ , ( $l_e = 2a = 2.82\text{fm}$ ;  $\rho_a^0 = 5.17 \text{ kg/m}^3$ );

**-hydrino:** hydrogen atom with the electron on a sub-fundamental level ( $n=1/2$ );

**-dynamideneutron model:** model of neutron composed by a proton centre and a negatron revolving around it with the speed  $v_e < c$  at a distance  $r_e^* \leq a = 1.41 \text{ fm}$ ;

**-σ-gluol:** binding gammon, formed as pair of degenerate negatron-positron, maintaining the neutronic electron, having degenerate spin and magnetic moment, around the protonic center;

**-zeron:** basic neutral constituent with null spin and the mass:  $m_0 = 68 m_e$ , formed as pair of **quarcin**  $c_0^\pm = z^*/2 \cong 34m_e$ , with the charge  $q^* = \pm^2/3e$ ;

**-quarkons:** cluster with odd number of  $c_0^\pm$  – quarcins and zeron  $z^*$  with even number of paired c-quarcins.

**-gravistar:** gravitic star formed as a dark energy ball with hard-core, similar to the hypothetical “gravastar”, proposed by E. Mottola and P. O. Mazur but formed “at cold” by primordial “dark energy”;







## Dr. Eng. Marius Arghirescu

Through a phenomenological approach using the concept of quantum/sub-quantum fluid, the theory argues the possibility of a cold genesis of elementary particles and of fields, explained with ideal unitary pre-quantum particle' models of simple or composite chiral soliton type, formed at  $T \rightarrow 0K$  from confined “dark energy” in a cascade vortex process, according to the ideal fluids mechanics applied to the particle' charge field and quantum/sub-quantum soliton-vortex.

The book is a returning to the classic ideal of physics, because that – according also to Einstein's opinion, a theory in physics is closer to the truth if it has a greater “internal perfection” based on a smaller number of postulates and fundamental concepts. In this sense, the Bohm-Vigier models of quantum mechanics, also the fractalic physical models of matter-space-time are in accordance with the models elaborated by the author M. Arghirescu.

Prof. Univ. Dr. Phys. Marcel Agop, (RO)

To order additional copies of this book, please contact:  
Science Publishing Group  
[book@sciencepublishinggroup.com](mailto:book@sciencepublishinggroup.com)  
[www.sciencepublishinggroup.com](http://www.sciencepublishinggroup.com)

ISBN: 978-1-940366-27-2



9 781940 366272 >

Price: US \$99