“Fermi Bubbles explained by the intentions of the M 2–9 (Butterfly Wings – Planetary Nebulae) and spin–orbital interaction and Interaction of Milky Way Galaxy and M31 Galaxy Andromedae.”

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Abstract: Fermi Bubbles or Galactic Bubbles are streams of High–Energy particles – electron, photon (γ burst radioactivity), high energy neutrinos and gravitational and radio–waves below and above galactic Equator of Milky Way and probably in the Galaxy M31 Andromedae. This Galactic Bubble’s born like the evaporation of Central Massive Black Hole, which also caused rotation of Galaxy Milky Way and Galaxy Andromedae M31. This fact is connected with so called Fermi Surfaces and Fermi’s edge, also with accretion of a disc (cannibal galaxies), galactic core, galactic halo. The Bubbles are sources of ultraradio, γ, electron and neutrino particle waves from the North and South Galactic Lobes (25 000 ly) of Fermi’s Bubbles. Spatial conformations of bubbles are like spin–orbital (particle electron clouds) interaction between electrons and core of atom, according The Periodical System (Table) of chemical elements (Mendelejev). The results of measurements of these events will be in the future have fundamental significance for knowledge of function of our and foreign galaxies, black holes, and stars and whole our Cosmos, which is built on 400 – 600 mld of these galaxies.

Keywords: Fermi Bubble, Fermi Surface, Fermi Edge, Galaxies M31, Milky Way, radiowaves, wave–particles, Super Massive Black Hole, M 2–9 Butterfly Wings, galactic core, galactic disc and hole, galactic equator, Kartezius (R. Descartes), E. Fermi, singularity, accretion, evaporation.
1. Introduction
Astrophysics of galaxies is modern part of Physics of celestial objects, like stars, planets, black holes, quasars, blazars, singularity, Nebulae, are in dynamical development of Mankind (Recent Civilization) more and more significant. This text strive to understand a new relative phenomenon of our Mysterious Cosmic Space, this recognition will be lead to discovery of function of our Galaxy Milky Way and whole Cosmos (MULTIVERSUM AND PARAVERSUM).

2. Highlights

![Fig. 1. Fermi Bubbles in Milky Way. The Author Sketch.](image1)

![Photo 1. Fermi Bubbles. NASA Goddard Space, NASA’s Fermi Telescope. November 9, 2010.](image2)

Fig. 2. Rotation of Fermi Bubbles in Milky Way.
According Author: Mgr. Imrich KRIŠTOF.
Fig. 3. Expanding of Galaxy Milky Way.
According the Author: Mgr. Imrich KRIŠTOF.

Fig. 4. Spiral Galaxy Milky Way.
Photo 3. M 31 Galaxy Andromedae Photo. 
Amazing pictures of M 31.

Fig. 5. Spin–orbital interaction in Periodical System (Table) Mendelev. 
(Shapes of orbitals).

3. M 31 Galaxy + MILKY WAY GALAXY
4.5 × 10^9 years in Future 
Creation of Superelliptic METAGALAXY 
AXIAL ROTATING GALAXY
Andromedae Galaxy M 31 + MILKY WAY GALAXY — SuperGalaxy Cannibal,
(High Civilization)
↓ Galaxy Milky Way
↓ SUPERGALAXY (SUPERCIVILIZATION)
↓ METAGALAXY (METACIVILIZATION)

Spiral Galaxy (Andromedae) distanced 2,5 millions light years (2,54 M ± 0,06 Mly)
known like Messier 31, M 31 and NGS 224 in older astronomical
literature, have name Great Nebulae in Andromedae.

Satellites of M 31 → M 32 (NGC 221) and M 110 (NGC 205)
   NGC 185, NGC 147, Andromedae I, Andromedae II,
   Andromedae III, Andromedae IV, Andromedae V,
   Andromedae VI, Andromedae VII, Andromedae VIII,
   Andromedae IX, Andromedae X, maybe Galaxy in Triangular.

Comment no. 1.
René Descartes (lat. Renatus Cartesius)
*31.3.1596 La Haye (Indre-et-Loire) – 11.2.1650 Stockholm (Sweden)
was French philosopher, mathematician and physicist.
Racionalism resp. Kartezianism, metaphysic,
Founder of ANALYTICAL GEOMETRY “CARTESIAN SYSTEM OF COORDINATES”
Work: Optics
   Law of Snellius
   Microscope
Alma Mater: University of Poitiers
Influence: Skeptic Montsaigne – Platon, Aristoteles, Saint Augustinus
“Ego Cogito ergo sum”

Comment no. 2.
Enrico Fermi
*19.9.1901 Roma (Italy) – 28.11.1954 Chicago (U.S.A.)
was an Italian physicist known for his research of nuclear reaction, quantum theory, particle
physics, and statistical mechanics.
Exclusive scientist – experimental and theoretical.
Participated on First NUCLEAR REACTOR CHICAGO PILE 1.
β and γ Radiation
NOBEL PRIZE WINNER IN 1938
Confirmed of existence of new radioactive elements created by radioactive induction
(neutron radiation).
Discovery of NUCLEAR REACTION CAUSED BY SLOWLY NEUTRONS
WORLD FIRST CHAIN REACTION
Superknown is also “Fermi’s Paradox about EXTRATERRESTRIAL
CIVILIZATION”.

4. Fermi’s edge and Fermi’s surface
E. Fermi’s surface $\phi_0$ is called like critical surface or Fermi’s edge. Fermi’s Bubble could be released from galactic
core not only by reaction of light, but also warming (the thermionic emission) by temperature higher than about zero
(absolute 0) in part of stars deposited on upper free surfaces, it’s on surfaces lying up the Fermi’s surface.
5. Conclusions

The known part of our Cosmos is still small then the recognition of whole Universe, MAYBE MULTIVERSUM. UNIVERSE IS ALSO IN ETERNAL DYNAMICAL DEVELOPMENT. IT IS NECESSARY CALCULATED WITH EXISTENCE OF FOREIGN HIGH CIVILIZATION OR HIGHER ENTITIES OR THE GOD.

THESE INFORMATION MUST LED TO BETTER RECOGNITION OF COSMOS AND OUR SIGNIFICANCE IN COSMOS.
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