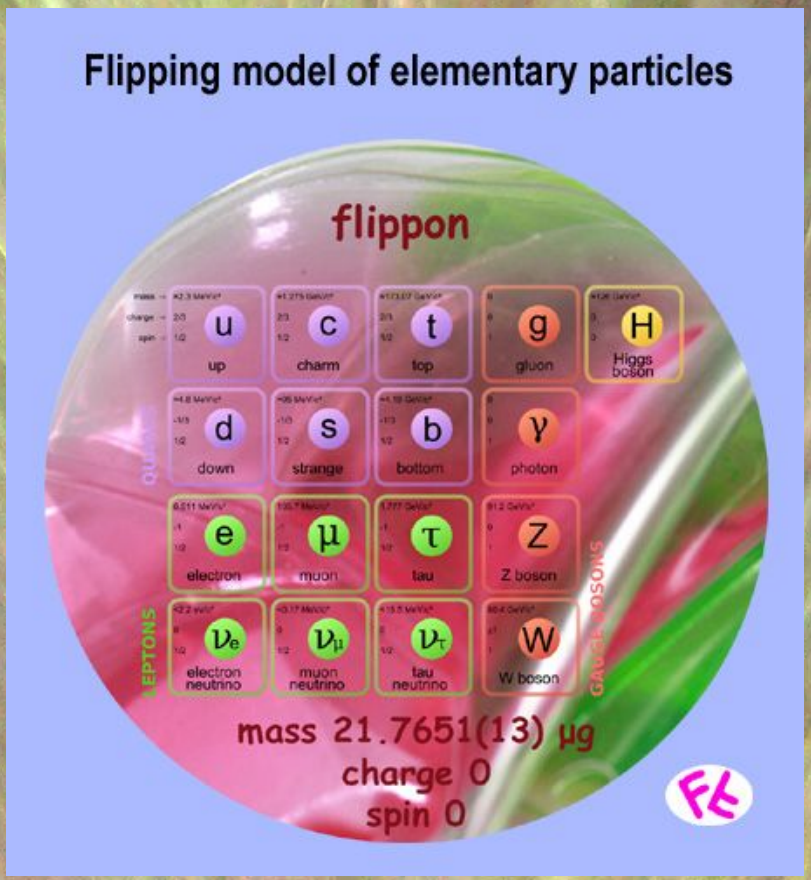
A brief overview of the new order in the Universe

It's great that you think
about this stuff

99 years after General Relativity

Flipping model of elementary particles

by Krunomir Dvorski



- 2015 -

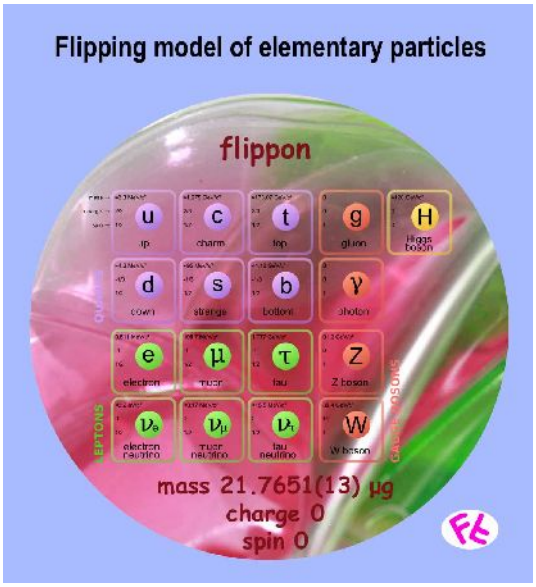
Flipping model of elementary particles

By Krunomir Dvorski

As you know, the *Standard model of particle physics is a theory concerning the electromagnetic, weak, and strong nuclear interactions, which mediate the dynamics of the known subatomic particles...* [*Wikipedia] Standard model is limited to the microcosm. Macrocosm and physics of large scale is not covered. Fortunately Flipping theory opens up new possibilities. To obtain *Flipping model of elementary particles,* should add one more particle into *Standard model of elementary particles* (see the picture below); it is *flippon*. You must agree that this is a simple but significant changes.

Flippon is a huge massive particle generated by flipping transformation from space of property (SofP) to our space, space of realiti (SofR). The transformation is caused by "goo-collision" between fluctuating length-time and mass-length goos. The process of a forming flippons is accompanied by generating mass and space, and can be described by *Incipient Law of Creatio*. Flippon carries the mass $m_F = 21.7651(13)\ \mu g$, brings the volume $V_F = 2.198 \times 10^{18}\ m^3$ (approximate diameter $\approx 1613\ km$) and generates a minimum quant of time $t_F = 5.39106(32) \times 10^{-44}\ s$. Flippons do not carry any electrical charge, weak nuclear force, and strong nuclear force. Flippons are mutually transparent, do not collide, and do not bounce with each other and with ordinary matter. Furthermore, they are utterly transparent without any friction or viscosity, and behave almost as an empty space. Flippons interact through gravity only. It is assumed that the flippons do not spin.

At the moment of creation, flippons use a three basic processes: *summation of mass*, *summation of volume*, and *time flow*. After formation, under the influence of gravity, flippons are being accumulated into the dark matter clouds. There are two types of clouds, *flipptant* and *flippmint*. *Flipptants* are clouds with large presence of flippons which can trigger a new process called *Massaggregation*; generating elementary particles. *Flippmints* are small clumps of dark matter from which can not arise ordinary particles.



Flipping model of elementary particles. Flippon is the elementary particle and basic building block of the universe from which was produced all other particles by own breakage.

Artistic comparison of Moon and flippon. Flippon diameter is 1613 km, the radius of Moon is 1737 km.

As discussed, *flippon mass* is 21.7651 μg or 12.2×10^{15} TeV/c^2 which is equal to Planck mass:

$$m_F = m_P = \sqrt{\frac{\hbar c}{G}} \approx 21.7651(13)\,\mu g$$

Let's look at the comparison table of mass:

Item	Value
US RDA for vitamin D for adults	15 μg
Uncertainty in the mass of the International Prototype Kilogram	~20 μg
Flippon mass (Planck mass)	21.7651(13) μg
One eyebrow hair	~70 μg
Fruit fly (dry weight)	200-300 μg

Comparing with other particles flippon is really really huge particle, and owns a complete energy through its own mass. Other types of energy can be produced by *massaggregation* (*crushing flippons* into a large number of elementary particles).

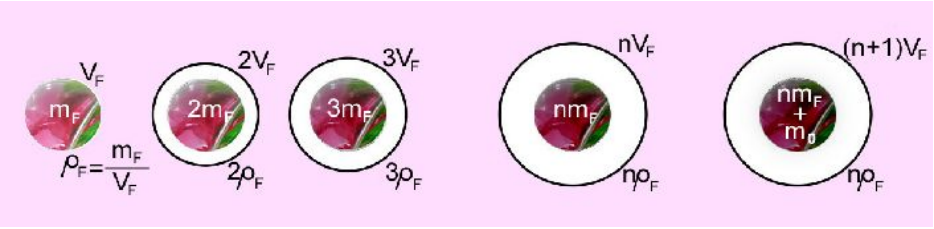
Since the flippon is the only generator of volume, we can easily calculate their volume from mass and critical density of flat universe:

$$V_F = m_F / \rho_c = 21.7651 \times 10^{-9}\, kg / 9.9 \times 10^{-27}\, kg/m^3 = 2.198 \times 10^{18} m^3$$

The ball of so volume has a diameter approximately 1613 *km*. It is really a huge particle. Can you imagine a particle diameter of 1613 *km*? For comparison, the radius of Moon is 1737 *km*. Interestingli, flippons pass through the Moon (through ordinary matter) freely and interact by gravity only. Also, elementary particles, atoms, molecules and small objects pass through flippons freely. They share space and interact by gravity.

Overlapping flippons, Massaggregation and Tuva Diagram

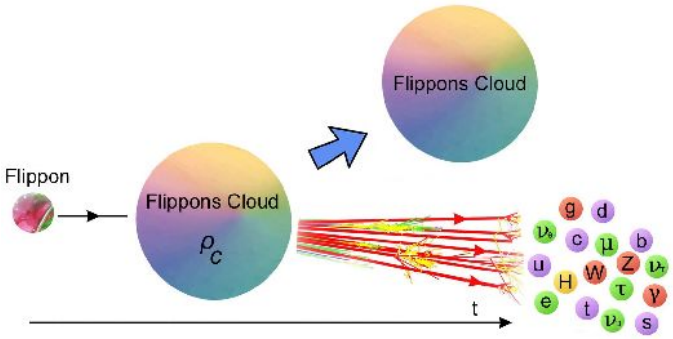
During *Incipient creation* each flippon brings the mass and volume. They are added to the total mass (energy) and total volume of universe. Two or more flippons may overlap each other. The overlaping is a very special property. In doing so, the masses of flippons are overlapped in a higher density, volumes are added.



The overlapping flippons up to Massaggregation (crushing flippons into a large number of elementary particles. m_F-mass of flippon; V_F-volume of flippon; ρ_F-mass density of flippon; m_o- mass of generated elementary particles

Flippons do not wear the volume, they occupy and use volume, they travel through created volume. Volumes cannot be moved, overlapped, stretched or shrunk. *Winds of volume* (moving, overlapping, stretching or shrinking) are amiable but not acceptable. Only objects in space (energy) can be moved, overlapped, stretched or shrunk. Volume in space does not change. Only the total volume of the universe grows through the *Incipient creation* of flippons. This statement makes a tremendous change in the approach to physics and deserves serious attention. At first glance it looks like a threatened theory of relativity, but relativiti refers to objects in space. Many physicists would dismiss it without grounded arguments. *Please, think about it and make the necessary changes in the existing theories.*

Let us see just a little setback. Wherever you go into the center of the galaxy or into deep space you will hit the insurmountable barrier of sense for volume. This is supported by the fact that if we wrap one or more galaxies, and we wonder what is the volume, we will use a simple, nonrelativistic calculation with which we will be satisfied. What happens to the volume of black holes? At this point the volume depends on which physics theory you follow. Is it science or a person's choice of theory? Relativity sees the black hole as a severe curvature of space-time. The black hole's volume is between zero and something that can be infinite. Our intuitive sense of volume breaks down. This is a forbidden territory for traditional interpretation. The same thing happens when we look at accelerating deep space. Volume tends to infinity. Whatever we wrap, local space with black holes or the whole universe, we will get something that tends to infinite volume.



Tuva Diagram -showing the process of Massggregation in a symbolic way. Flippon is being transformed into elementary particles when hits the critical dense flippon cloud. The name of this diagram is given in honor of Richard Feynman and his stories of Tuva.

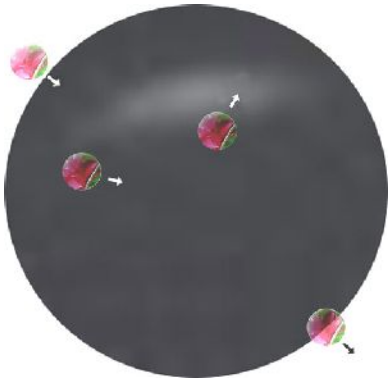
Overlapping flippons creates greater mass density. At some 'critical point', the physical state of flippon's mass changed to a large number of elementary particles that fly apart into less dense space. Created particles carry mass, charge, spin, and their associated forces. This process of generating elementary particles is called the *Massaggregation*. Broadband diagram is shown in the Tuva Diagram. The name is given in honor of Richard Feynman and his stories of Tuva. Critical point of *Massaggregation* is unexplored and unknown. Acceptable value is around the density of elementary particles, such as electrons and quarks. There are opportunities for observations of this phenomenon.

We are witnessing incredible progress and development of new technologies that open up new ways to confirming discoveries. Interesting places are around the *Galactic center* in zones of high energy density, where flippons can reach the 'critical density' overlaps. A long standing goal is to directly observe the immediate environment of a black hole and associated processes around.

The place of interest is colliding galaxies also. Data collection should be sought in a wide range of electromagnetic radiation. It is important to separate a part of the spectrum for which we know how it came about.The remaining information speak about the unknown effects and phenomena. An interesting part of the spectrum are gamma and X-rays. For example, Dr. Esra Bulbul (Harvard Center for Astrophysics) recently detected an unidentified emission line at 3.56 keV in the stacked X-ray spectrum observations of the Perseus Cluster (Chandra data). Maybe it's a matter of flippons and Massaggregation. My knowledge is not enough for further suggestions.

In addition, there is a possibility that the general and special relativity are not applicable to flippons in a well

known manner. Imagine the statement: *The speed of movement and gravity do not deform flippons; The flippon can go through a black hole without any interference; Small black holes can be wrapped with a flippon.* Artistic interpretation is shown on the pictures below.

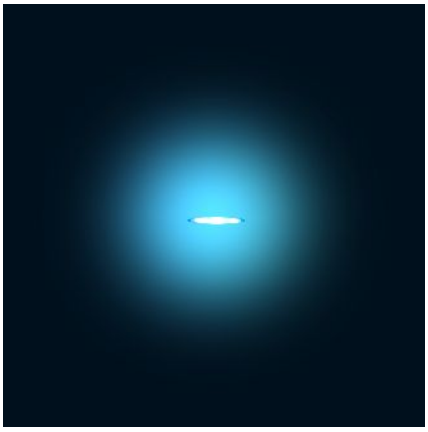


Artistic interpretation of non relativistic flippons passage through a black hole

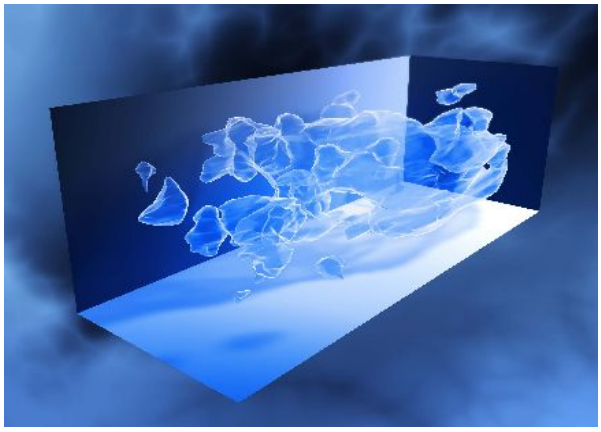
Small black hole wrapped with a flippon

Dark matter is made of flippons - proposal of the century

Dark matter is hypothesized for a large part of the mass that appears to be missing from the universe. It is widely known that dark matter halo is a component of a galaxy that enwraps the galactic disk and extends beyond the edge of the visible galaxy. The halos cannot be observed directly, but their existence is assumed through effects on the motions of stars in galaxies. Dark matter clouds, also can be seen from measurements of weak gravitational lensing, and observing gamma and X-rays in some cases. *I wonder, what is dark matter made of ?*



Artistic interpretation of the dark matter halo with disk galaxy in the center



Credit: NASA/ESA/Richard Massey

3D map of the large-scale distribution of dark matter, reconstructed from measurements of weak gravitational lensing with the Hubble Space Telescope

Let us repeat sections of text about flippons:

Flippon is a huge massive particle generated by flipping transformation from space of property (SofP) to our space, space of realiti (SofR). The transformation is caused by "goo-collision" between fluctuating length-time goos and mass-length goos. The process of a forming flippons is accompanied by generating mass and space, and can be described by Incipient Law of Creatio. Flippon carries the mass, brings the volume and generates a minimum quant of time. Flippons do not carry any electrical charge, weak nuclear force, and strong nuclear

force. Flippons are mutually transparent, do not collide, and do not bounce with each other and with ordinary matter. Furthermore, they are utterly transparent without any friction or viscosity, and behave almost as an empty space. Flippons interact through gravity only. It is assumed that the flippons do not spin.

Properties of dark matter fully agrees with the properties of described flippons. It seems that the dark matter is made of flippons. This approach is acceptable. Introducing flippon, as elementary particle of dark matter, and basic building block of the universe, opens wide door for new discoveries in the field of cosmology and particle physics also. The extended process of Massaggregation completes the entire story of creating our reality.

Comparison size of flippon with Great Lakes on the Google Maps

The solitary flippon - artwork by Krunomir

Direct detection of flippon particles will be very difficult, perhaps impossible. Their production in the terrestrial environment is even more difficult. The reason is the enormous energy and size. No accelerator experiments have yet probed energies of sufficient magnitude to provide any experimental insight into the behavior of matter at the energy levels of flippon. All existing instruments, laboratories like the Large Hadron Collider (LHC), even cities, and small states are smaller than flippon. What kind of instrument can detect the passage of flippons whose diameter is 1637 km and density small as density of flat universe. Where in the universe should look for creation flippons and elementary particles? We are lucky to have the physical appearance accompanied by all sorts of side effects and phenomena. Indirect occurrences may talk about flippons and dark matter also.

Galactic density of dark matter

The presence of galactic dark matter is hypothesized and shown from rotation curve of a typical spiral galaxies. The picture below shows the predicted (A), and observed (B) orbital speed of stars and dust around the galactic center. Without large amounts of mass throughout the halo, the orbital speed would decrease at large distances from the galactic center (A). That does not happen. The flat appearance of the speed curve (B) is caused by radial density profile $\rho(r)$ of dark matter which is not constant and dependent on the chosen galaxy. This profile can be measured and calculated from the equality of gravitational force and the centripetal force of rotating mass m around the galactic center whose total mass is $M(r)$:

$$\frac{m\,v(r)^2}{r} = G\,\frac{M(r)\,m}{r^2}$$

$$\frac{M(r)}{r}=\frac{v(r)^2}{G}=const \qquad (1)$$

Mass *M (r)* can be determined by integration of mass shell *dM* with density *ρ (r) and* thickness *dr,* from r_o to *r*:

$$dM=4\pi r^2\rho(r)dr$$

$$M(r)=4\pi\int_{r_o}^{r} r^2\rho(r)dr$$

Constant speed (B) can be achieved with a density distribution:

$$\rho(r)=k/r^2 \qquad (2)$$

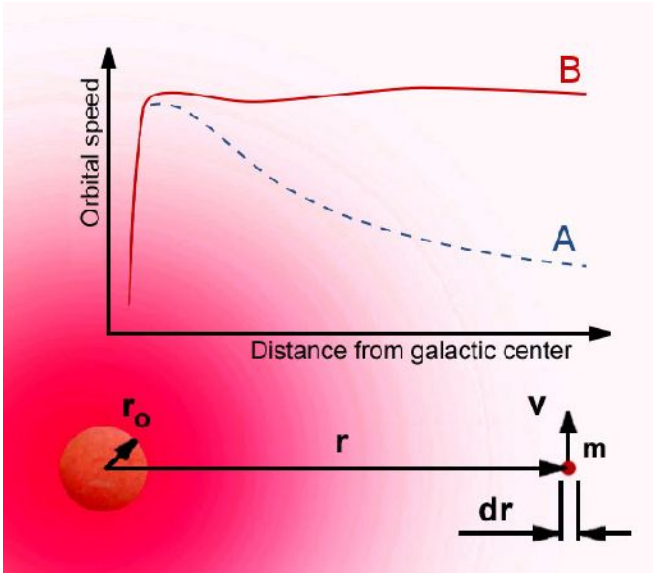
k is a constant. After a substitution follows:

$$M(r)=4\pi k\int_{r_o}^{r} dr=4\pi k(r-r_o)$$

$$\frac{M(r)}{r}=4\pi k\left(1-\frac{r_o}{r}\right)$$

Let $r >> r_o$:

$$\frac{M(r)}{r}=4\pi k=const \qquad (3)$$



Credit: http://en.wikipedia.org/wiki/File:GalacticRotation2.svg

Predicted A and observed B rotation curve of a typical spiral galaxy - The flat appearance of the velocity curve can be explained by dark matter.

Solving equations (1), (2) and (3) above gives us a galactic density distribution of dark matter, as a function of the orbital speed and distance from the center of the galaxy:

$$\rho(r)=\frac{v(r)^2}{4\pi G\, r^2}$$

Let us get a sense of the density of dark matter in the Sun's orbit (Sun rotates with speed $v \approx 220$ *km/s* at a distance $r = 2.57\times10^{20}$ *m* from center of Milky Way):

$$\rho_{\odot}=\frac{(220\times10^3 m/s)^2}{4\pi 6.674\times10^{20} Nm^2/kg^2\,(2.57\times10^{17} m)^2}=8.737\times10^{-22} kg/m^3=78.5\ \mu J/m^3$$

As we see, the density of dark matter ($\rho_{\odot}$ = 78.5 $\mu J/ m^3$) in the path of the Sun roughly corresponds to the half a million protons per cubic meter:

$$\rho_{\odot}/m_p=8.737\times10^{-22} kg/m^3/1.673\times10^{-27} kg=522000\ protons/m^3$$

or ninety thousand overlapping flippons:

$$\rho_{\odot}/\rho_o=8.737\times10^{-22} kg/m^3/9.9\times10^{-27} kg/m^3=88253\ \ overlapping\ flippons$$

m_p is mass of proton, ρ_o is critical density of the flat universe. In other words, we swim inside ninety thousand

overlapping flippons. We are so small, much much smaller than flippons. We can not see and feel them. They are huge. Just to remind, the diameter of flippons is almost equal to the moon radius.

For next comparison, let us see how much is a dark matter in planet Earth? We can determine by simply multiplying density of dark matter ($\rho_E = \rho_{\odot} = 78.5\ \mu J/\ m^3$) with the volume of the Earth:

$$E_E = \rho_E V_E = 78.5\ \mu J/m^3 \cdot 1.08 \times 10^{21}\ m^3 = 8.478 \times 10^{16} J = 23.55\ TWh$$

Calculated amount of energy meets the needs of Croatian population of ~4.2 millions in one year. It is negligible in the Earth scale, but plays an important role in galactic vastness. This amount of energy in free space can speed up the Earth up to 0.119 *m/s*.

References

1. [1]Krunomir Dvorski, The Incipient Law of Creation, The Official Flipping theory Web Site, http://www.science.uwaterloo.ca/~kdvorski/TheFlippingTheoryWebSite/FeedYourMind.html
2. [2]Krunomir Dvorski, Law of Last Evidence, The Official Flipping theory Web Site, http://www.science.uwaterloo.ca/~kdvorski/TheFlippingTheoryWebSite/FeedYourMind.html
3. [3]Krunomir Dvorski, A brief overview of the new order in the Universe, The Official Flipping theory Web Site, http://www.science.uwaterloo.ca/~kdvorski/TheFlippingTheoryWebSite/FeedYourMind.html
4. [4]Krunomir Dvorski, Ohm's Law and mass of the Universe, The Official Flipping theory Web Site, http://www.science.uwaterloo.ca/~kdvorski/TheFlippingTheoryWebSite/FeedYourMind.html
5. [5]Krunomir Dvorski, Our Universe, The Official Flipping theory Web Site, http://www.science.uwaterloo.ca/~kdvorski/TheFlippingTheoryWebSite/FeedYourMind.html
6. [6]Krunomir Dvorski, Prime Spark and origin of the mass, space and time, The Official Flipping theory Web Site, http://www.science.uwaterloo.ca/~kdvorski/TheFlippingTheoryWebSite/FeedYourMind.html