

Yuri Dunaev  
Ukraine, Kyiv  
([dunaev.levitski@gmail.com](mailto:dunaev.levitski@gmail.com))

## LIFE OF STARS, AS WELL AS PLANETS AND THEIR SATELLITES

© Yuri Dunaev 2019

All attempts to explain the workings of the universe without recognizing the existence of the ether and the indispensable function it plays in the phenomena are futile and destined to oblivion.

Tesla, N. (1937) Prepared Statement on the 81st Birthday Observance

<http://www.institutotesla.org/tech/TeslaGravity.html>

### **Key words:**

Stars' creation, Kelvin-Helmholtz mechanism, exogenous and endogenous nuclear reactions, volcanic activity, origins of oil and natural gas deposits, aerial bodies rotation, collapse of planets and their satellites, asteroids belt, Kuiper belt, nova, supernova, ether

### **The Summary**

Stars creation begins with thickening of heavier gaseous components and dust of a molecular cloud. Activated by gravitation clots of heavier gaseous components gradually get covered with lighter gaseous components: helium and hydrogen. Clots of heavier gaseous components and dust gradually get stratified, heavier of the layers concentrating in the middle of the clots. The heavier gaseous components concentrated in the middle of clots undergo compression provoking their liquefying. Compression of the gaseous components provokes their heating under the action of the mechanism unveiled by Kelvin and Helmholtz, and just this heating is the source of the solar energy, as well as of the energy radiated by the great planets. In heated liquid drops that have become great and little stars take place endogenous nuclear reactions providing creation more and more complicated radioactive and nonradioactive isotopes that enter chemical reactions, creating more and more complicated chemical compounds. The created isotopes and chemical compounds gradually get stratified depending on their thickness. Lightest of them get solid and pop up to the surface while heaviest concentrate themselves in the middle. The heaviest of the isotopes concentrated in the middle of the drop, e.g. uranium or plutonium may concentrate up to achieve critical masses sufficient to initiate exogenous reactions of nuclear fission. Products of exogenous nuclear reactions can be ejected to the atmosphere or may find their place in pores or caverns of the solidified drop shell, which may explain origins of terrestrial natural gaseous and liquid hydrocarbons deposits. Rotation of astronomic bodies around their proper axes is a product of gradual and slow increasing of their rotational torque, which needs: 1) availability of mutually constricting gravitational forces; 2) action of these forces with a speed different of null, 3) availability of at least minimal initial rotation speed (which needs availability of at least minimal initial impulse). Stars,

planets and planet satellites gradually come to their inevitable death by collapse under the action of eccentric forces generated by increasing of their rotational torque. Planet collapses consequences in the solar system may be recognized in asteroids belt and Kuiper belt. Planets and planet satellites collapses in our and other galactic go unrecognized because of their comparably weak power. In contrast collapses of small and great stars are remarkable as novas and supernovas.

===

As it was established by modern astrophysics creation of stars begins in molecular clouds that as to my mind are mainly composed with products of decomposition of one or more stars that had previously been in the center of their masses. From these same products progressively arises a new or some new stars in many aspects similar to those, which there had been earlier. In conformity with existing data molecular cloud is mainly composed with hydrogen plus 23-28% of helium, some percents of heavier gases and dust. Hereto as to me we need to add a certain amount of ions, free protons, and free electrons. Thickness of this matter is lesser than that existing in a vacuum chamber.

Here as to me we need to point out that while mentioning thickness of matter we bear in mind that of only that part of matter, which modern science considers as such. This includes known particles such as protons, electrons, and structures made up therewith. This does not include ether that as to my mind is fully material and that in form of gas feels all the interstellar space as well as that between subatomic parts of atoms, ions, and molecules.

As to abovementioned heavier gases they may be nitrogen, oxygen, ammonium, phosphine, sulfur, silicon based compounds, and hydrocarbons: methane, ethylene, acetylene.

The process of star creation in a molecular cloud, as I it imagine, begins with progressive thickening of said some percents of dust and heavier gases that remain as in atomic or in molecular forms under the action as of forces of Fatio (electromagnetic) or those of gravitation. Such thickening results with appearance of greater or smaller gaseous clots from the above heavier gases and dust, which gradually attract lighter gases – helium and hydrogen, more massive clots being in power to attract more of lighter gases, whereas lighter attract them weaker, and in the end even that already attracted amount of lighter gases transfers to more massive clots that at this stage can be imagined as clouds of heavier gases and dust wrapped in gaseous shells of lighter gases.

The created gaseous clots progressively thicken and undergo stratification, which nature consists in that in the clot's core concentrate heavier components whereas at the periphery – lighter.

The next stage, if though one can divide the star creation process in stages, because between them there is practically no borders, is characteristic in that in the cores of the gaseous clots of heavier gaseous components under the action of constant gravitational attraction, i. m. as I see at the cost of the gaseous ether energy gradually starts liquefaction of the most massive and thereafter of less massive gaseous components, such liquefaction being helped by the pressure perpetrated by shells of less massive components. The liquefaction is accompanied with heating and rising temperature due to the mechanism of Kelvin-Helmholtz [1] and provokes creation of greater or smaller drop, the greater as it is clear becoming stars and lesser – planets and planet satellites.

High pressure and temperature existing in the interior of the drop promote development of nuclear synthesis reactions, but not of the kind of those hypothetic exogenous thermonuclear reactions that by conviction of modern scientists as if develop in the interior of stars, but of the kind of those that were

for instance firstly obtained by Rutherford in 1919 that transmuted nitrogen<sup>14</sup> to oxygen<sup>17</sup> [2]. Such last mentioned reactions get elements nuclear structure more complicate and heavier and are by their nature endogenous, i. e. they deprive liquid drop of part of its heat and promote condensation of the drop exterior shells gases.

In order there remain no doubts as to such transmuting reactions can really exist, here I refer to information from the same source [2] that such transmutations can happen in installations having enough power to change elements nuclear structure. Such installations can be particle accelerators or tokomak reactors. Detailed description of precious metals synthesis may be found in [3].

As another proof of transmuting nuclear reactions existence may serve research results of Kyiv laboratory Proton-21 [4] that had succeed to accomplish a series of nuclear synthesis reactions obtaining numerous isotopes of new (relatively to initials) elements.

Thanks to said transmuting nuclear reactions in the drop are steadily creating more and more complicated and heavier elements in form of radioactive and non radioactive isotopes. Atoms of these isotopes gradually enter chemical reactions creating new and more complicated compounds. Because the resulting structures have different thicknesses there happens their stratification: heavier of them sit down closer to the center while lighter rise up closer to the surface. Lightest of the obtained structures can even solidify and emerge to the drop's surface while the heaviest, of which may happen uranium and plutonium can concentrate closer to the center right up to the achievement of critical masses, which may provoke reactions of nuclear fission, such as take place in nuclear reactors or in atomic bombs explosions. Gaseous products of nuclear fission are ejected to the atmosphere but for the most part not at once but gradually increasing their amounts inside the drop up to achieving some critical mass, which ejection to the atmosphere would be analogues to a volcanic eruption, while the liquid products would remain inside the drop. To the aforesaid it would be proper to add that the radioactive isotopes resultant from transmuting reactions decompose to simpler and simpler giving up heat and alpha and beta particles.

It would be proper to pay attention that transmuting nuclear reactions as well as chemical reactions of building more complicated compounds need great amounts of heat energy and that such energy at least in part is provided with solidifying of liquid phase. In greater measure this is related to those relatively small drops which are deprived of atmospheres and therefore can't provide a substantial heat inflow at the cost of Kelvin-Helmholtz mechanism.

In the solar system as examples of such less massive drops may serve those that in our times have became small planets and planet satellites such as our Moon.

At the same time the Sun and great planets of the solar system that have saved important atmospheres composed with hydrogen and helium have also saved liquid phases that stay with these atmospheres in phase equilibrium.

According to modern science all bodies of the solar system emerged billions of years ago practically simultaneously from the same molecular cloud that may suggest that at the beginning all of them were stars of greater or smaller sizes and like well known double, triple, etc. stars they presented many-component star system with the Sun as dominant.

Similar to that at the Sun at every of these stars took place processes of condensation of gaseous compounds to liquid drops; and in the created drops along with gravitational stratification of matter

took place endogenous nuclear reactions providing to creation of heavier and heavier radioactive and non radioactive isotopes and further exogenous decay of radioactive isotopes to simpler radioactive and non radioactive gaseous and liquid elements.

Certain though quite minor part of gradual endogenous reactions could conclude with formation of critical uranium or plutonium masses, which could be accompanied with nuclear fission reactions and creation of new amounts of gaseous products, which then could be ejected to the environment similarly to the solar wind. It seems proper to notice that in small stars where the liquid drop might be enveloped with solid shell the said ejection of the gaseous products to the atmosphere not always came to the end, because the created gases blocked by this shell might squeeze into its pores and caverns, which is testified by terrestrial deposits of natural gaseous and non gaseous hydrocarbons.

The described processes may as it seems to me be quite rightly associated with the well known volcanic activity.

As it is known [5] the Earth is not a unique place of volcanic activity in the solar system. In spite of perceivable distinctions in their features it is known that a series of other planets and their satellites also have or had in geologic past volcanic activities. Today it is known that except the Earth volcanically active are Jupiter's satellite Io, Neptune's satellite Triton, and Saturn's satellite Enceladus.

It also seems that Mars, Venus and Jupiter's satellite Europa are also volcanically active, although the eruptions themselves have not been yet noticed by any direct observation. In remote geologic past (3 – 4 billion years ago) when it still was sufficiently hot was volcanically active even our Moon and nearest to the Sun Mercury. Martian mount Olympus is the greatest of the known volcanoes in whole solar system, on Venus there are thousands of features of volcanic origin, and Io is the most volcanically active place in the whole system.

Any literary data about volcanic activity of the great planets are absent. Nevertheless literary sources say that Jupiter as well as the other great planets has no clearly outlined solid surface and that essentially it is composed from gaseous and liquid matter that can't avoid association with the buildup of the Sun. It seems possible that the Jupiter's red spot might be one of particularities of the therein existent volcanic activity.

There is no doubt that the maintenance of the thermal regime of the Sun, Venus and our Earth is supported at the expense of gravitational constriction of their atmospheres. It therefore comes to mind that the same mechanism has to operate on the great planets and on those of their satellites that are not deprived of their own atmospheres, because as testify the scientific data Jupiter radiates 1.67 times and Saturn 2.5 times more energy than they obtain from the Sun [1]. In spite of an analogous phenomenon is proper to two other great planets, modern science sticks to the mind that the source of such radiation has to be in the so called internal heating of once more thermonuclear origin and consequently the temperature of Jupiter's interior must be not less 36000 K and of Saturn not less 12000 K.

It remains to add that the gravitational constriction mechanism was initially proposed by lord Kelvin and Herman von Helmholtz at the end of 19<sup>th</sup> century for explaining the phenomenon of solar energy originating but was criticized by Arthur Eddington and others that affirmed that such mechanism could allow the Sun to bright not billions as it had been found by geological explorations but only millions of years. The true as it is supposed to be source of the solar energy, mainly the thermonuclear synthesis was declared in 30<sup>th</sup>s of the last century by Hans Bethe.

Examining the solar system in light of said ideas one becomes persuaded that all its components (the Sun, planets, planet satellites) that at the very beginning were greater or lesser stars undergo gradual cooling characterized by some consequent stages, the cooling speeds and those of transfer from one stage to the other depending on the components masses. The Sun and the great planets remain now at the stage of liquid drop being in inconsistent equilibrium with their own atmospheres. In drops take place continuous processes of transmuting nuclear reactions and those of nuclear fission with ejections to the environment of its gaseous products. In the small planets at the stage of cooling the drops acquire solid shells but their cores continue to remain in liquid state and are continuing to maintain therein nuclear and radioactive processes. The lasts produce gaseous products that together with liquids continue to be ejected in the environment as products of volcanic activity. A part of these products can be retained in form of atmosphere, which slows down the cooling as on Venus. Finally and this relates to the smallest elements of the solar system, the described nuclear reactions and related volcanic activities abate to the end.

Together with gradual losing of energy essentially by its radiation to the environment, solar system components gradually lose their masses. The mass loss occurs with the solar wind as well as with losses of gaseous products of volcanic activities. Gradual astronomic bodies loss of masses leads to decreasing of their inertial momentums and acceleration of their rotations around their axes of rotation that promotes more intensive pulling away of gaseous components.

In my earlier article [6] there was unveiled the mechanism of retaining rotation around their center of masses of two astronomic bodies being under action of mutually gravitating forces. Here it would be proper to notice that the unveiled mechanism is effective even if the bodies, and not only astronomic ones, are pushed together by other forces, e, g, electron and atomic nuclei pushed together by forces of Fatio (electromagnetic forces).

Here is obvious that the torque retaining rotation of the two bodies can exist only if are satisfied three requirements: 1) existence of mutually pushing forces, 2) action of these forces with speeds different from null, 3) existence of at least minimal speed of rotation (which require existence of at least minimal initial impulse).

It would be easy to understand that the unveiled mechanism is also effective in the case of rotation of physical body around its own ax. For this one need to virtually divide the body to certain number of fragments and imagine that every pair of these fragments behave like two separate bodies. One could also use such virtual operation for calculation of the resultant rotation torque, the more accurate being the obtained result the more being the number of selected fragments.

The bodies of our solar system: the Sun, planets, planet satellites are rotating with their proper speed around their proper axes of rotation, and as to me these speeds were acquired by the bodies during not a one billion of years because it would be proper to estimate that at the time of the solar system creation those protostars that gave birth to the Sun, planets, and planet satellites around their axes did not rotate.

The rotation was initiated later under the action of occasional factors, which might be encounters with meteorites or other bodies. Just by such fortuities one could explain planets and planet satellites rotational axes orientation differences.

Mass and structure solar system bodies differences influence and will influence acceleration of their rotation. The availability of massive atmospheres as at the great planets of the solar system seems to

accelerate their rotation around their axes, although as exception might serve the Sun, and this may be consequence of its gigantic mass.

Although very slowly the process of rotation speeding lasts and will keep lasting, and so with growing intensity. At the beginning this provides weathering of lighter atmospheric components: hydrogen and helium, then of the products of volcanic activity: methane, carbon dioxide and lighter hydrocarbons. Gradually as on Mars the volcanic activity comes to the end and with it the remains of atmosphere. The planet loses its mass, its inertial moment decreases but its rotation speed keeps rising. Finally under the action of eccentric forces the planet crumbles to pieces, and with it happens that, that relatively stars has entered the science under the names “nova” or “supernova”. As proves of such planetary collapse may serve the existence in solar system of the asteroid belt placed between Mars and Jupiter and probably representing debris of one or some former planets and Kuiper belt that may be imagined as debris of one or some extraneptunian planets.

Quite analogue results of rotational collapse one could recognize in great planet belts, e. g. those of Saturn.

Planets and their satellites collapses have to be common not only in our solar system. In our galaxy they have to be quite common cases that though if compared to collapses of stars are much less spectacular. As to the lasts the novas and supernovas are as to me undeniable proofs of rotational nature of small and great stars death.

### **Conclusions.**

- 1) Stars creation begins with thickening of heavier gaseous components and dust of a molecular cloud,
- 2) Activated by gravitation clots of heavier gaseous components gradually get covered with lighter gaseous components: helium and hydrogen,
- 3) Clots of heavier gaseous components and dust gradually get stratified, heavier of the layers concentrating in the middle of the clots.
- 4) The heavier gaseous components concentrated in the middle of clots undergo compression provoking their liquefying,
- 5) Compression of the gaseous components provokes their heating under the action of the mechanism unveiled by Kelvin and Helmholtz, and just this heating is the source of the solar energy, as well as of the energy radiated by the great planets,
- 6) In heated liquid drops that have became great and little stars take place endogenous nuclear reactions providing creation more and more complicated radioactive and nonradioactive isotopes that enter chemical reactions, creating more and more complicated chemical compounds,
- 7) The created isotopes and chemical compounds gradually get stratified depending on their thickness. Lightest of them get solid and pop up to the surface while heaviest concentrate themselves in the middle.
- 8) The heaviest of the isotopes concentrated in the middle of the drop, e.g. uranium or plutonium may concentrate up to achieve critical masses sufficient to initiate exogenous reactions of nuclear fission,
- 9) Products of exogenous nuclear reactions can be ejected to the atmosphere or may find their place in pores or caverns of the solidified drop shell, which may explain origins of terrestrial natural gaseous and liquid hydrocarbons deposits,

- 10) Rotation of astronomic bodies around their proper axes is a product of gradual and slow increasing of their rotational torque, which needs: 1) availability of mutually constricting gravitational forces; 2) action of these forces with a speed different of null, 3) availability of at least minimal initial rotation speed (which needs availability of at least minimal initial impulse).
- 11) Stars, planets and planet satellites gradually come to their inevitable death by collapse under the action of eccentric forces generated by increasing of their rotational torque,
- 12) Planets collapses consequences in the solar system may be recognized in asteroids belt and Kuiper belt,
- 13)** Planets and planet satellites collapses in our and other galactic go unrecognized because of their comparably weak power. In contrast collapses of small and great stars are remarkable as novas and supernovas.

**Bibliography:**

- 1) [https://en.wikipedia.org/wiki/Kelvin%E2%80%93Helmholtz\\_mechanism](https://en.wikipedia.org/wiki/Kelvin%E2%80%93Helmholtz_mechanism)
- 2) [https://en.wikipedia.org/wiki/Nuclear\\_transmutation](https://en.wikipedia.org/wiki/Nuclear_transmutation)
- 3) [https://en.wikipedia.org/wiki/Synthesis\\_of\\_precious\\_metals](https://en.wikipedia.org/wiki/Synthesis_of_precious_metals)
- 4) [http://proton-21.com.ua/science\\_01\\_en.html](http://proton-21.com.ua/science_01_en.html)
- 5) <http://geology.com/articles/active-volcanoes-solar-system.shtm>
- 6) </Research Papers-Cosmology/Download/7625>