NASA confirms CFT

Introduction

Name constructive field theory (http://vixra.org/pdf/1602.0190v1.pdf) suggests that it has a feature that entitles it to name constructive theory. This physical theory has indeed such a feature. It is a far-reaching extension of the law of free-fall of bodies in gravitational field, discovered by Galileo. It was created on the basis of this law, and thus is based on solid experimental facts. It provides a good basis on which could develop constructiveness of the theory. But that the theory is constructive, just show its opportunities that are revealed in the interpretation of physical phenomena and its constructive impact on the formation of new areas of theoretical physics, the impact on the development of physics.

Constructiveness of CFT can be seen, when presented by it origin and course of physical phenomena and their properties. Constructiveness of CFT can be seen in its ability to model phenomena. The most important thing in constructive field theory is its basic principle - the fundamental principle of matter, which concerns nature of the components of matter and their mutual acceleration. Basing on this principle, you can model the physical structures and their properties.

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The most basic and important property of matter is the stability of its structure. But with this concept are associated such characteristics as hardness, elasticity, resilience. These characteristics of matter are modelled on the basis of CFT in a very simple way: the particles interact with each other, accelerate each other, and thus arise both stable structures of matter, and their various properties. Of course, this happens when accelerations change in an appropriate way in relation to changes in the distance, i.e. when acceleration functions have appropriate course.

Models of structures and phenomena can be seen in videos in the format. avi.*) But there are some limitations and drawbacks. Because videos are relatively short, and video files have a large capacity in kilobytes. It's much more convenient to run the appropriate modelling program .exe, **) which was elaborated basing on the principles of CFT, to open by means of this program, the appropriate file of encoded parameters of components of matter and watch the same video with running physical process, but without time limit. Using computer modelling program .exe has the advantage that you can get to know the parameters of particles, which are involved in the process, you can modify these parameters and you can create your own model situations with particles of matter.

1. Instead of videos: DrganieStruny.avi (http://pinopa.narod.ru/DrganieStruny.avi; 873KB, 0:02:47) and http://pinopa.narod.ru/Sprezystosc.avi (1060KB, 0:04:16), you can run VibratonStand.exe .***) It is located in the file http://pinopa.narod.ru/VibrationStand_exe.rar (315KB) along with the encoded physical processes: VibraString1_3.var, VibraString1_1.var, VibrationXZ.d.var, VibrationRotX3.var, which are grouped in the file File_var. Using the program VibrationStand.exe you can see vibration "schematically reflected" strings and the rod, one end of which is fixed rigidly.

2. Instead of the video http://pinopa.narod.ru/Precesja.avi (2744KB, 0:05:03), you can run Precesja.exe. It is located in the file http://pinopa.narod.ru/Precesja_exe.rar (308KB) with the encoded physical process: Ko?o2.gwo, which is in the file File_gwo. Using the program Precesja.exe you can watch "schematic" spinning gyroscope, which is suspended by one end of the axis. In this case, acting "downwards" gravitational field attempts to turn the spinning gyroscope "downwards" around the point of suspension. But turning of axis does not occur. Because while the gyroscope spins, its axis of rotation, while maintaining approximately the horizontal position, also performs precession rotations around the suspended end of the axis.

3. Instead of videos http://pinopa.narod.ru/OrbitationTwoType.avi (699KB, 0:02:23), http://pinopa.narod.ru/DrifGiroPlaneOrbit1.avi (651KB, 0:02:27), http://pinopa.narod.ru/DrifGiroPlaneOrbit2.avi (1487KB, 0:05:36), you can run GyroDrift.exe. It is located in the file http://pinopa.narod.ru/GyroDrift_exe.rar (274KB), along with the encoded physical processes: Dysk_WirBrak.gyro, Dysk_WirJest.gyro, Dysk0S1.gyro, which are in the file File_gyro. In the

encoded processes: Dysk_WirBrak.gyro, Dysk_WirJest.gyro, you can see two situations in which the disk moves in orbit around a heavenly body. In the first situation, shown in Dysk_WirBrak.gyro, orbital motion around a heavenly body "schematic" disk, which consists of only four particles, takes place in such a way that the disk is constantly facing the same side toward heavenly body. So, this orbital motion is similar to the motion of the Moon around the Earth.

In the second situation, shown in Dysk_WirJest.gyro, orbital motion around a heavenly body performs the same disk, but there is performed also rotary motion of the disk around its axis. It is therefore a gyroscope orbiting around a heavenly body. Comparison of these two situations allows to penetrate the mechanism that determines the behaviour of the gyroscope in orbit in appropriate situations.

In the case of both situations, axis of the disc (non-spinning and spinning around its axis) is located (approximately) in the plane of the orbit, in which is performed motion of the disk. The motion of the disk at any point in time is affected by the current - existing at the moment! - speed of each of its component particle, and acting on the particle at a time resultant acceleration. When the disk moves around the orbit of a heavenly body and doesn't rotate around its axis, then it performs, for example, one rotation around the heavenly body. But at the same time, as a result of the interaction with this heavenly body, it performs one rotation in such a way that its axis (about which it so far does not rotate), lying in the plane of the orbit, performs in this plane one revolution. It is with this axis of rotation of the disk in the plane of the orbit (and thus that the disk does not rotate around its axis) the disc is constantly facing the same its side toward heavenly body. In this situation, various points of the disk have different velocities of motion in the plane of the orbit. Speed differences are small - they are related to the dimensions of the disk and the radius of the orbit.

In the second situation, shown in the encoded process: Dysk_WirJest.gyro when the disc spins around its axis, there incessantly occurs equalization of the orbital velocity of individual particles of the disk. Because during each rotation of the disc around its axis as a gyroscope the constituent particles of the disc at all times and constantly change their distance from the heavenly body. Consequently, the rotational motion of the gyroscope helps to determine the average orbital velocity of the gyroscope as a whole object, while the gyroscope spin axis maintains an unchanging direction in space.

Viewed from a certain perspective, one can say that the process of spinning of the disk constantly opposes the influence of a heavenly body, due to which the "non-spinning" disc at any time would be facing the heavenly body to the same its side. You could say that spinning of the disk does not allow for one axis rotation of the disk in the plane of the orbit, while it performs one lap in the orbit.

It turns out that this interaction of orbiting gyro (with the axis of rotation lying in the plane of the orbit), which sets the unchanging direction of its axis in space, is carried out with a surplus. Because we can really talk about the fixed axis of the orbiting gyroscope, but it should be understood as an approximation. Because in fact the position of the axis of the gyro drifts in space, and this drift is in the plane of the orbit. Drift towards the position of the axis of the orbiting gyroscope consists in revolution of this axis in the plane of the orbit in the opposite direction to the direction of motion of gyroscope in orbit. And this drift can be observed in the processes of: Dysk_WirJest.gyro and Dysk0S1.gyro.

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Constructive field theory uses basic knowledge of the components of matter and on this basis, describes and interprets the properties of matter and physical phenomena. The similarity of the description of nature, which CFT proposes, to facts that actually exist in nature and are happening, testifies to the correctness of the theoretical foundations of CFT. In this sense, nature confirms almost every step of the correctness of the principles of CFT. But it is not always the case. CFT foresees the existence of a drift of the direction of the axis gyro, when the axis lies in the plane of the orbit, after which the gyro is moving around a heavenly body. There is no possibility that in a cheap and easy way to carry out an experiment that would confirm the validity of this assumption. But, whatever the difficulties, the experiment has been conducted and the existence in nature of the described here axis gyro drift has been confirmed.

U.S. agency NASA in 2004-2005, collaborating with researchers from Stanford University, sent a probe into orbit Gravity Probe B.

On the http://www.wprost.pl/ar/1925/Megaeksperyment/?I=917 is an article from 2000 by Agnieszka Przychodzen on megaexperiment which NASA then planned to carry out to verify some of the assumptions of general relativity and conducted calculations on their basis. (There should not be inferred that the author of relativity theory and its later interpreters predicted the existence of this axis gyro drift, because certainly it was not.) Article titled "Megaexperiment" and the subtitle - Scientists plan to check the validity of general relativity. The article is "old", but informs about the planned NASA's experiment.

Agnieszka Przychodze? writes: "85 years after the publication by Albert Einstein's general theory of relativity, scientists still did not manage to perform all necessary tests confirming its correctness. Important details to verify the theory of genius in 2002 is Gravity Probe B in one of the few missions associated with the fundamental laws of physics that NASA has ever conducted. If the mission succeeds, will become one of the classical experiments of physics. If the results were contrary to the general theory of relativity, the implications would be equally revolutionary." (Read more...>> http://pinopa.narod.ru/Megaeksperyment_ru.pdf)

Those interested in closer details of the experiment and the results obtained can found them on the website, which is dedicated to the experiment - http://einstein.stanford.edu/index.html .
Below are charts for each of the four gyroscopes that were on board of the probe Gravity Probe B.
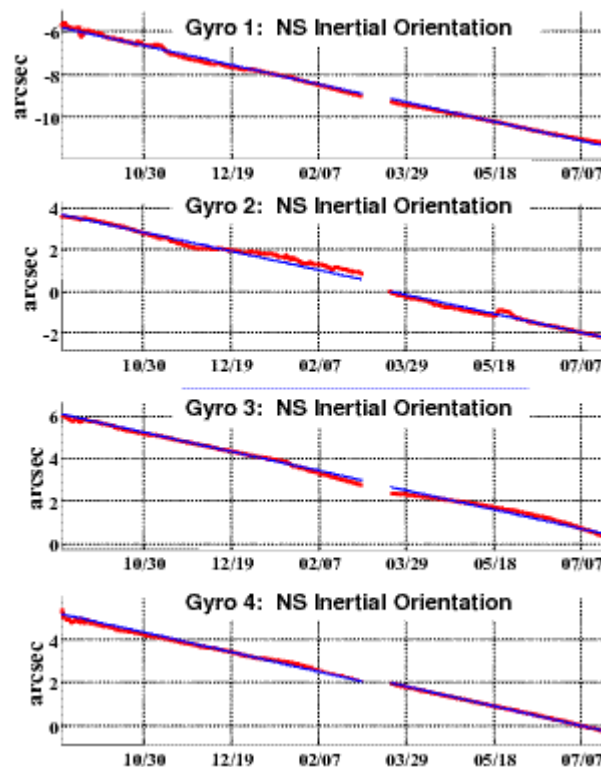
Graphs illustrate the changes in the size of the angle at which the axis of the gyroscope was located in the plane of the orbit of the probe, as time passes. So they show the direction of the axis gyro drift.

End
The results that were obtained using the probe Gravity Probe B, are much more rich and complex than just a phenomenon in the form described herein axis gyro direction drift. They contain data that describe the behaviour of four gyroscopes, orbiting around the Earth in the probe. These results were so affected by such circumstances as the presence of the Moon and the Sun, and the location of the orbit plane of the probe relative to the planes of the system the Sun-Earth and the Earth-Moon system, as well as the diurnal rotation of the Earth. There could be modelled this complex situation, in which were gyros located in the

Gravity Probe B, using the CFT. And perhaps, one day someone will do this.
The interpretation of other results that were obtained in this experiment by NASA, is a different story. It is possible that soon they will be interpreted based on the principles of CFT.

Posted by: Pinopa, 24.08.2009 r.

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*) All these files .avi can be copied as a single file http://pinopa.narod.ru/File_avi.rar (832kB).
Hint: videos in the format. avi can be viewed, e.g. using program GOM Player, or using Total Commander. In the latter case, in the TC to select a line of stored video. avi and push "Podgl?d" (Preview)
**) All listed here .exe files you can copy as a single file http://pinopa.narod.ru/File_exe.rar; (897KB).
***) Note: Computer modeling programs work correctly on computers running Windows ME and Windows XP.