# Introducing Light Force

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## Abstract

Why Earth momentum keeps same angle to the orbit, but moment of momentum changes its angle to the orbit (and to the momentum)? Both momentums behave like vectors (if no reflections) in an inertial coordinate system.

Opponent on scientific forum: - Thank you for your research, I laughed at this.

Me: - Why to laugh? Are we in circus?! No. Thus, I ask for huge amount of respect. Moreover: you are human, I am human. Why am I defected human, but you are not?!

Opponent: - One does not ask for respect. One earns it. Imho you are not a defect human being. You are just a human being, nothing more, nothing less.

- If I am not defected human, then I am respected one. Correct? German: "Ich bin nicht der Untermensh!" The Presumption of Innocence: everybody is like the God (and, thus, must be treated as like you would treat the God right from beginning), until opposite is proven. Not "respect must be earned", but the disrespect "must be" earned.

- No. The default position is neutral; neither respect nor disrespect. I would treat no one like a god, no one deserves to be treated like that fictitious evil piece of shit.

- You are not neutral. Being neutral with stranger means to be respectful with 100 percent (otherwise the stranger will sue you). You have said word "shit" in relation to my Religion. It is not being neutral. It is part of WW3 war, and you are on the evil side.

I am neither enemy nor logic nor facts. I'm looking for the Theory of Everything. Many existing theories need to be considered in a complex. So we could dock both General Relativity and Quantum Physics. The axis of the rotating bullet is constantly directed along the flight of the bullet. Therefore, a bullet in a circular orbit around the Sun is not pointed at a single point on the Celestial Sphere. Therefore, the Earth's axis in orbit around the Sun should make a full circle (with an angular radius of about 23 degrees) for one year. Why does the Earth's axis look at the Pole Star, and does not draw this huge annual circle across the sky?

*Make believe I'm everywhere, Given in the light, Written on the pages Is the answer to a never ending story.*

*Rhymes that keep their secrets Will unfold behind the clouds, And there upon a rainbow Is the answer to a never ending story.*

*Show no fear, For it may fade away! In God's hand The birth of a new day!*

What? No mistakes in General Relativity, because it is tested (like by the project "Gravity Probe B")?! Have you heard of Nihilism? The Nihilism is philosophy of deliberate lie. For example, a nihilist knows, that $2 + 2 = 4$, but says: $2 + 2 = 7$. Some one of Conspiracy Theories is right. The atheism is expression of Nihilism. Hasn't it Mister Donald Trump explained what "fake news" are? Therefore, even reading a Physical Review paper, use your

own brain.

## I. LET US TRY WITHOUT FORMULAS

According to the well-known theory of precession, the angular rate of change in the direction of the axis of rotation (for example - the Moon) should tend to zero, as the angular velocity of rotation decreases ($\Omega \sim \omega \to 0$). The Moon almost does not rotate, but its axis makes (in one lunar month) a huge circular change in direction relative to the stars, because the Moon faces the Earth with one side, but itself moves around the Earth. This means that we have come to a contradiction with the well-known theory of textbooks. Therefore, textbooks do sin against the Truth. They do not like to put into the formulas the Church Grace!

You are a free astronaut in open space, and you rush around the Sun. What do you notice? Your feet are all the time facing the Sun, during all the turns around the star. Your wedding ring is weightless floating at your chest. It is round and quickly rotates around the rim so that you do not notice its rotation: its rotational symmetric. Due to the law of conservation of the rotation axis (conservation of the angular momentum, which is consequence of the "strong equivalence principle" – inner observations can not determine the spacetime position of a closed small and free laboratory), the view of the ring does not change during the entire fall time. You think about your wife and son! They are saved from that deadly asteroid, even though you yourself will not return to them. You're floating in weightlessness, there's a ring in front of you. Is latter going to change?! No, it is eternal. It goes with you into eternity. If it changes, it is the action of the Otherworld, violating the law of conservation of the axis of rotation. Force, which forces the axis of rotation of the Earth to rotate after the North Star. The almighty "Light Force"!

## II. SOME FORMULAS

Humankind can perfectly live (at least an year or two) without any Dark Matter, or Dark Energy. But latter are proven to exist: [1]. Obviously, the Nature pays absolutely no respect to Occam's Raizor! So, let there be Light Force $K^\mu$ in the Covariant Derivative of
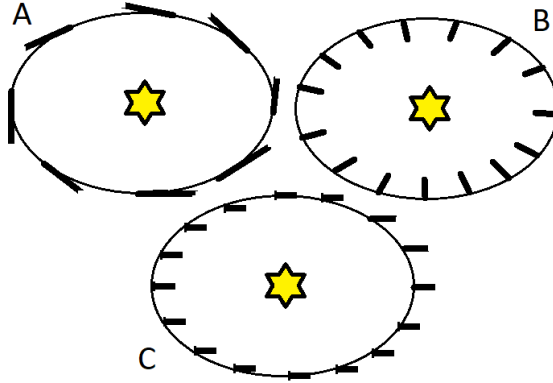
FIG. 1: The look from above on the ecliptic plane, and the projections of the axis of rotation (taken at different time of the year). The A and B show how the vector (axis of rotation) can be parallel transported along the ring-orbit, whereby the $K^\mu = 0$. The C shows the actual axis of the Earth, the Light Force $K^\mu \neq 0$.

the 4dim-momentum

$$\frac{D\,p^\mu}{d\tau} = F^\mu + K^\mu$$

with no principle conditions on $K^\mu = K^\mu(t, x, y, z)$. The Light Force is conditioned by any particular situation. The Minkowski Force $F^\mu$ describes the known matter interactions. Please note, that this holds also for photons, hereby the lightspeed of a photon remains in tact. The $\tau$ is proper time for bodies, or the geodesic parameter for photons. This simple equation is my generalization of the known Bohmian Mechanics, latter has many fatal problems [2], e.g., it has no theory for photons yet.

Let us prove now, that there are situations, where $K^\mu \neq 0$ must be.

## III.   WHY THE EARTH'S AXIS IS AIMED AT THE POLE STAR?

Distances on so-called "Celestial Sphere" are measured in degrees, not in meters. The axis of rotation of the Earth crosses the Celestial Sphere in the so-called "Celestial Pole". Its position (purely in fact) changes over several thousand years, thus making a complete circle (it is known "precession"). My theoretical circle (angular radius of 23 degrees) lasts only one year.

I came to the conclusion that the axis of Earth's rotation for the year should make a full circle around the ecliptic pole (it is on a perpendicular to the ecliptic plane) with an angular

deviation from the ecliptic pole of 23 degrees. Latter value is the inclination of the Earth's axis to the ecliptic plane. If the Earth was a bullet in orbit around the Sun, then the circle around ecliptic pole in the sky would have the radius of 90 degrees.

USED THEOREM:

**The axis of the revolving bullet is constantly directed along the flight of the bullet.**

PROOF, WHICH BOTH HOLDS FOR NEWTON AND FOR EINSTEIN:

*We let out a cloud of bullets from the super-machine gun, they are not rotating, only one bullet in the cloud rotates and the axis of its rotation is initially directed along the flight of the cloud of bullets. As thought experiment let us surround the cloud of bullets with a flying spaceship. In order for non-rotating bullets to be stationary relative to the ship's hull, the hull is directed along the bullet's flight. And since free bullets soar in the weightlessness of the ship, the ship is an inertial frame of reference. And in such a system the law of rotation-momentum conservation of the bullet is fulfilled: the bullet will always be aimed along the ship's hull. The hull flies along the flight of a cloud of bullets.*

The direction (as a "line segment") in the cabin of our ship is $L^{\hat{\nu}} = (0, \Delta x, \Delta y, \Delta z) =$ const (but here we can take a constant vector or pseudo-vector with any physical sense). In curvature coordinates $L^\mu = e^\mu_{\hat{\nu}} L^{\hat{\nu}}$. Then, can we tell, that holds direction conservation

$$\frac{D\,L^\mu}{d\tau} = 0\,?$$

If Yes, then indeed holds $L^{\hat{\nu}} = (0, \Delta x, \Delta y, \Delta z) =$ const along the ship's flight. Yes, it holds, because the thetrad vectors $e^\nu_{\hat{\mu}}$ are all geodesics:

$$\frac{D\,e^\nu_{\hat{0}}}{d\tau} = \frac{D\,e^\nu_{\hat{1}}}{d\tau} = \frac{D\,e^\nu_{\hat{2}}}{d\tau} = \frac{D\,e^\nu_{\hat{3}}}{d\tau} = 0\,.$$

Here, e.g.,

$$\frac{D\,e^\nu_{\hat{3}}}{d\tau} = \frac{d\,e^\nu_{\hat{3}}}{d\tau} + \Gamma^\nu_{\mu\,\alpha}\,e^\mu_{\hat{3}}\,u^\alpha\,.$$

In Newton Mechanics one knows the angular momentum 3-vector $\vec{L} = \vec{p} \times \vec{r}$, hereby the time has cirtain value, so $dt = 0$, and so in four dimensional formalism 4-vector is $L^\nu = (0, \vec{L})$. However, for high angular velocities the tensor $L^{\nu\,\mu}$. is used.

In spherical coordinates $(r, \phi, \theta)$ the rotation-momentum of Earth is $\vec{L} = (a(\tau), b(\tau), d(\tau))$. Since the coordinates are not Cartesian, we do not have the right to take the ordinary derivative $dL/d\tau = 0$ with the solution $a(\tau) =$ const, $b(\tau) =$ const, $d(\tau) =$ const,
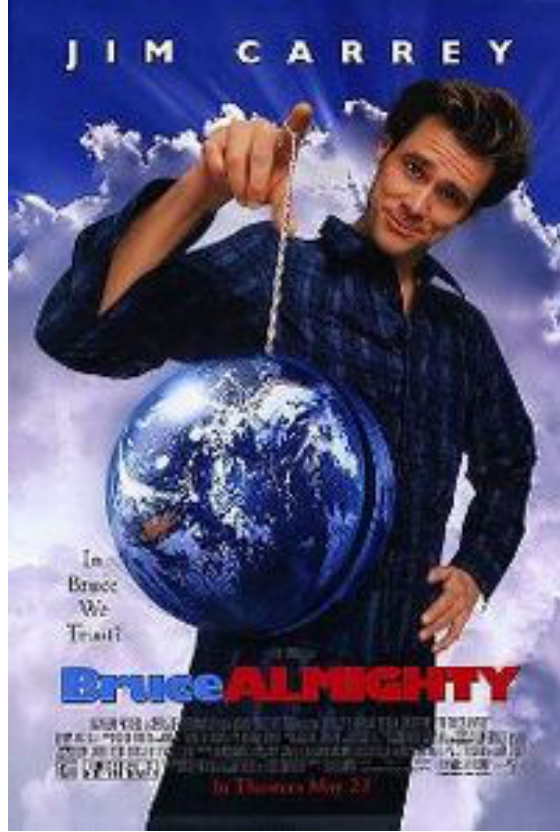
FIG. 2: The poster of the movie "Bruce Allmighty" as illustration to the Light Force, which is holding the axis of the Earth directed at Pole Star.

which does not indicate one direction in the Celestial Sphere, since we are dealing with spherical coordinates. So even in this erroneous equation there is no "looking at the North Pole" effect. The covariant derivative of the actual (one which is pointed at the North Star) $\vec{L}$ is the "Light Force Moment":

$$\frac{D\vec{L}}{d\tau} = \vec{M}\,.$$

However, one shall use the 4dim vectors with $L^\nu = (0, \vec{L})$. Thus, $M^\nu = (\Theta, \vec{M})$. Turns out, that $\vec{M} \neq 0$.

## IV.  FOR FORUM QA

Question: How looks the rotation momentum in General Relativity?

In Newton's theory the Earth rotation has

$$\frac{D\vec{L}(\tau)}{d\tau} = 0\,.$$

In Cartesian coordinates with flat metric

$$ds^2 = dx^2 + dy^2 + dz^2$$

the solution is directed at the North Star

$$\vec{L} = (0, L_y, L_z) = \text{const}.$$

But in General Relativity we have the curved metric

$$ds^2 = -A(r)\, dt^2 + B(r)\, (dx^2 + dy^2 + dz^2)$$

and if we assume

$$L^\mu = (0,\ \vec{L})$$

with

$$\frac{D\, L^\mu}{d\tau} = 0.$$

Then the solution is not directed at North Star

$$\vec{L} \neq (0, L_y, L_z) = \text{const}.$$

Thus, there Light Force-field $K^\mu$ appears in

$$\frac{D\, L^\mu}{d\tau} = K^\mu.$$

## V.  FOUR DIMENSIONAL TENSOR

In Wikipedia "Relativistic angular momentum" is written

$$L^{\hat{\alpha}\hat{\beta}} = x^{\hat{\alpha}}\, p^{\hat{\beta}} - x^{\hat{\beta}}\, p^{\hat{\alpha}}\,.$$

The total angular momentum is a constant tensor:

$$Q^{\hat{\alpha}\hat{\beta}} = \sum L^{\hat{\alpha}\hat{\beta}} = \text{const}.$$

Thus, it remains constant (due to Eqs.(1)), and so the axis of rotation has the same angle to orbit, if the Light Force is zero. But it has not the same angle to the orbit (due to looking at North Star during one year), then the Light Force does exist.

## VI.  IN ADDITION TO LIGHT FORCE: FIELDS OF DESTRUCTION AND CREATION

The two substances A and B. The joint energy-momentum tensor is

$$T_\nu^\mu = a^- \ T_\nu^{A\,\mu} + a^+ \ T_\nu^{B\,\mu},$$

The creation field $a^+ = 1 - a^-$ takes descrete values: 0, 1 as function of time and space.

*Through these fields of destruction*
*Baptisms of fire*
*I've witnessed your suffering*
*As the battles raged higher*
*And though we were hurt so bad*
*In the fear and alarm*
*You did not desert me*
*My brothers in arms.*


## VII.  THE PROOF OF FLAT EARTH MODEL WITHIN THE LEGAL SCIENCE METHODS

The legal Science is the sincere science: the author is not writing the fake news.

There is obvious fact: axis of Earth rotation must not be pointed at the area of North Star during one year cycle. But it is pointed. Thus, the official Science either lies or is incompetent. Correct? Yes. And the Flat Earth model is consistent with Nature here.

Opponent: "Ok, but I can punch a giant whole in your theory using a football (American). When football is thrown in a spiral, the ball spirals on its axis while at the same time the ball follows an arced (ballistic) path. The axis of the football will remain relative to it's release point. The axis does not follow the arc. You can see this very clearly on very long passes, where the ball is thrown with a high arc. The axis does not change when the ball has reached it's peak and begins to come back to the ground."

1. Air resistance.

2. I should watch it myself.

3. The "Light Force", which is introduced in the file. This new force-field makes the spacecrafts and airplanes travel ring-way in the Flat Earth model.

A. The Faith (e.g., in Flat Earth model) is the faithfulness to Knowledge, so please be not mad at me for proving within the Legal Science the Flat Earth Model. How one can argue against Legal Science mathematics?! In the file is the solid indestructible formulas!

B. In addition, following facts strongly support my calculation in the file (I am sorry, viXra is still considering it for publication; however one can register in researchgate academic forum to read it right now) and the Flat Earth model:

1. Enthusiasts from Hungary who went to the lake to prove Flat Earth went missing. Maybe they were killed? Think for yourself, if the supporters of the Flat Earth are right (that the elite protects the secret of the Flat Earth), then no one will allow you to publish the experimental proof. You will be "removed" within half an hour: the rates are too high! The video in Russian: "The team from Hungary Promises Prove that the Earth is Flat!" (YouTube). And I was not removed, because I publish everything very quickly (less than half an hour).

2. The user "On the armor" writes 2.03.2018 there, in comments under the video: "One can conduct an easy and simple experiment while we will fly on vacation. Before the flight at the airport, we'll switch on the built-in gyroscope in the smartphone and put the phone on the floor in airport "A", then it records the direction of gyroscope axis. On arrival at the the city of "B", (and this is about 5000 km from city A) at the airport we will lay the smartphone on the floor and compare new data with the saved parameters of the city "A" (departure point). There are people who conducted this experiment, and there was no difference between point "A" and point "B".

## VIII.   AJAKIRJA "IMELINE TEADUS" JAOKS

1.     Moodsad   nutitelefoonid   omavad   güroskoopid.     Nende   tööprintsiip: mobcompany.info/interesting/chto-takoe-giroskop-v-smartfone-i-kak-on-rabotaet.html

2. Kui reisida teise riiki, siis güroskoopi näit lennujaamade põrandal ei muutu. Kuna muutus pole märgatav (pole "gyroscopic wander" youtu.be/UQFqs7R1hlw), siis seletada selle güroskoopi primitiivsusega ei saa. Kui güroskoop on vigane, siis ta näitaks meelevaldne näit. The problem of low angular velocity of Earth is solved by the strong angular momentum of home-made gyroscopes (moreover, if you try to rotate the frame of the gyroscope, whereby in result the axis of gyroscope has not changed noticeably the direction,

then you must be sure: it is the perfect and professional gyroscope. No need for expensive friciton-free gyroscope then. "Try rotating the frame of the gyro at a very slow rate and see what happens." By rotating the frame of gyroscope one applies the friction force on the axis of rotation. Therefore, there is no difference at all: the slow rotation or fast rotation. This friction force is overcomed by gyroscope inertial forces. Moreover: if the work of this friction force would be non-zero, then direction of gyroscope axis will be changed over 6 hours of exposer (in relation to the test-area). But on the YouTube video it is perfectly constant.).

3. Maa pöörlemise telg muudab oma asendit Maa orbiidi suhtes (kuna on suunatud polaartähele, kuid Maa pöörleb ümber Päikese).

4. On pakkutud järgmised seletused:

A. Lisaks Tume Materiale on olemas Tume Jõud kui meelevaldne jõu-väli. Noh, ikka, Tume Mateeriat hoiab kokku Tume Jõudki (youtu.be/NA7Jr2n6j2Q).

B. Maa on lapik.

Allikas täpsete arvutustega asub preprintude arhiivis: vixra.org/abs/1805.0048

iphonedevsdk.com/forum/iphone-sdk-development/53301-gyro-drift.html

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[1] Pieter van Dokkum, et al., A galaxy lacking dark matter, Nature 555, 629–632 (29 March 2018).

[2] There are different articles which show that Bohms formula for velocity leads to predictions that contradict the experiment. To these articles there are objections, and replies to objections, and so on  a whole debate. I would like to indicate an article to which the supporters of Bohms formalism were unable to bring objections.

L. Hardy, "Quantum Mechanics, Local Realistic Theories, and Lorenz-Invariant Realistic Theories", Phys. Rev. Lett. 68, no. 20, page 2981, (18 May 1992).

This article is very general, it shows that QM does not admit a substructure of particles which follow continuous trajectories. No assumptions are made about those trajectories, except that they are continuous from source to the detector. Thus, that article rules out the broadest class of trajectories, the continuous ones. That, of course, includes the Bohmian trajectories which are defined as continuous.