Theory of everything - The geometric mean as an alternative to Newton's law of gravitation

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Abstract

Newton's law of gravity gives very precise results for the radii r and velocities v of an orbit. But they give no indication of the diameter of celestial bodies. In this respect, it is fundamental to rethink the general formula for distance laws $F \propto e_1 e_2 / r^2$. A system requires at least 2 objects and an observer. With the torques and a corresponding formula for the time or frequencies $N_B / w_B = N_1 / w_1 = N_2 / w_2$, all forces can be summarized. This gives the TOE with only one type of particle. All constants result from the specifications of the earth's radius and the orbital period of one day. $4/(2\mathrm{pi})/c\, 6378{,}626^2\, km^2 = 1\, day$ Examples are calculations of the proton mass, as well as the diameter and orbit of Mercury.

For a law similar to the Titus-Bode series, the approach of all forces $F \propto e_1 e_2 / r^a$ is not effective. It stands to reason that a standardization to a TOE has to be the simplest of the simple, without constants, explained purely by mathematics and everything.

Since Newton, physics has been structured as follows:

since Newton:	3 dimensions	3 families	3 constants c, G, h	Mass m	$F = m_1 m_2 / r^a$
TOE:	one dimension	a kind of particle	no	Particle number N	$N_1 r_1 = N_2 r_2$

The torque is so simple that it has to apply. $N_1 / r_1 = N_2 / r_2 = N_B / r_B$ for two objects 1 and 2 and an observer B. This **law of leverage can also be applied to time** $N_B / w_B = N_1 / w_1 = N_2 / w_2$ Thus, for the 4 dimensions of spacetime d w, x, y, z for 3 objects $O_i\, Beobachter, Objekt\, 1,2$ can be summarized as R (i, d). For the time being, the spatial dimensions are viewed as isotropic coordinates, for each coordinate and each object with independent particle numbers N (i, d)

This results in 12 independent equations for the distance law:

$N((i+1)\,3, d) / R(((i+1)\,3), d) = N(i, d) / R(i, d)$ d = {w, x, y, z} i = {observer, object 1, object 2} (i = 3 i% 3 = 0) They also apply to the orbit inside and outside the body.

The 4 dimensions can be calculated independently. The 4 lines can be inserted into a program.
The first, simplest law for an immobile observer on earth and light results from this:

$N_{B,w} / R_{B,w} = N_{erth,w} / R_{erth,w}$ d = 0 for the time
$N_{B,x} / R_{B,x} = N_{erth,x} / R_{erth,x}$ d = 1 for x
$N_{B,y} / R_{B,y} = N_{erth,y} / R_{erth,y}$ d = 2 for y
$N_{B,z} / R_{B,z} = N_{erth,z} / R_{erth,z}$ d = 2 for y

A photon cannot be represented as a single particle in the TOE, simply because the photon has a wave property with a beginning and an end in the direction of time. A photon has exactly the properties of an electron, paired with an anti-electron. All bosons are composed of even numbers of particles. The particle number of the anti-electron can also be expressed simply as N = -1.

Photon

$spin\,1 = spin\,½ + spin\,½$ $E_{ges} = E_{Elektron} + E_{Antielektron}$ $N_{Elektron} = -N_{Antielektron} = 1$ $E_{Elektron} > 0$ $E_{Antielektron} < 0$. The properties are transferred to the number of particles $N_{Photon} = 2^2 N_{Elektron}$. This applies to all entangled objects.

As an example, light is emitted in the y-direction.

$N_{B,w}/R_{B,w} = N_{Photon}/R_{Photon,w}$ time

$N_{B,x}/R_{B,x} = N_{Elektron}\, e^{(i\varphi)}/R_{Photon,x}$ transverse polarization x

$N_{B,y}/R_{B,y} = N_{Photon}/R_{Photon,y} = spin\,1$ longitudinal expansion

$N_{B,z}/R_{B,z} = -N_{Elektron}\, e^{(i\varphi)}/R_{Photon,z}$ transverse polarization z

If you add the period of revolution for the observer and the earth $w = 1/(2\mathrm{pi}\, day)$ and add the equatorial earth radius R_{xy} to the polar earth radius R_z , the result is:

$N_{B,w}/R_{B,w} = N_{erth,w}\, 2\mathrm{pi}\, day$

$N_{B,x}/R_{B,x} = N_{erth,x}/R_{xy}$

$N_{B,y}/R_{B,y} = N_{erth,y}/R_{xy}$

$N_{B,z}/R_{B,z} = N_{erth,z}/R_z$

For each spatial dimension there is a corresponding cycle time that is conveyed by the observer. The polarization results for the photon with x and z as the transverse dimension.

$N_{erth,x}/R_{xy} = -N_{Elektron}\, e^{(i\varphi)}/R_{Photon,x} = N_{Elektron}\, e^{(-i\varphi)}/R_{Photon,x}$

$N_{erth,z}/R_z = N_{Elektron}\, e^{(i\varphi)}/R_{Photon,z}$ Multiply vector products

$R_{Photon,x} \cdot R_{Photon,z} = R^2_{Photon,x} + R^2_{Photon,z}$. That corresponds to the polarization

Together results with $N_{erth,y}/R_{xy} = N_{Photon}/R_{Photon,y} = 1$

$R_{Photon,x} \cdot R_{Photon,y} \cdot R_{Photon,z} = R^2_{Photon,x} + R^2_{Photon,y} + 1^{2.}$ spin = 1

or a standing wave. $R^2_{Photon,x} + R^2_{Photon,y} + n^2 \lambda^2$.

The number of particles $N_{erth,d}$ is ultimately not known. But you can without restrictions $N_{erth,x} = N_{erth,y} = N_{erth,z}$. The shape of a celestial body is thus transferred to R_r , R_{xy} and deviation R_z . For every body the number N per dimension is proportional to r. The mass depends on the energy and thus w or t and the volume.

$N^{(3/2)}/(R_r^2 + R_{xy}^2 + R_z^2) = E = N_{Photon}/(R^2_{Photon,1} + R^2_{Photon,3} + \lambda^2)$

For 2 entangled electrons in the photon is $N_{Photon} = 2^2 N_{Elektron}$. For non-entangled electrons it would simply be the number = 2. That is, the energies of non-entangled objects are simply added.

This leaves 2 equations at the moment:

$N_{B,w} R_{B,w} = N_{Photon}/R_{Photon,w}$ und $N_{B,w} R_{B,w} = N_{erth}/2\mathrm{pi}\, day$

$N_{erth}\, 2\mathrm{pi}\, day = N_{Photon}/w$

What's in this equation N_{erth} and N_{Photon} ?

For this one can rely on the equations for the electron and the anti-electron. In the direction of time, N = 1 and N = -1 cancel each other out. There are only 2 dimensions left that describe the polarization. Only in the case of a standing wave does the energy also depend on the third spatial dimension. In the example above, the polarization plane is $N_{erth,x} N_{erth,z} = 4 N_{Elektron.}$ for a photon without a safe limit from the beginning and the end. The length of the wave train is reduced with the corresponding part of $R_{xy}/(n\lambda)$

$N_{erth,x}/R_x = N_{erth,z}/R_z = N_{Photon}\, e^{(-i\varphi)}/R_{Photon,z} = N_{Photon}\, e^{(i\varphi)}/R_{Photon,z}$

And that results in total

$1/R_{xy}/R_z\, 2\mathrm{pi}\, day = e^{(-i\varphi)}/R_{Photon,x}\, e^{(i\varphi)}/R_{Photon,z}\, 1/w/\lambda$ $1/R^2\, 2\mathrm{pi}\, day = 4/c\, 1\, wave$

$$4/(2\mathrm{pi})/c\, 6378{,}626^2\, km^2 = 1\, day$$

The equatorial radius is **6,378,137 m** (GSM 80) with a difference of 489 m. The calculation is correct because the wave of the photon matches the rotation of the earth. **Measuring lengths is a very demanding task. As soon as a ruler is turned down, it is subject to the Coriolis force.**

From the assumption that a photon is an entangled pair of an electron and an anti-electron, c can be explained simply by geometry, without constants, only with the number of particles. And that can also be explained briefly. c simply does not have the unit m / s but m ^ 2 / s. Only when 3 objects interact there is a measurable energy with c ^ 2.

Systems made up of several objects

In the universe, the density of particles in a volume $V \propto r^d$ is constant. pi is only conditioned by our view of the world with a 3-dimensional space. Nothing can penetrate into the interior of a particle. Everything is a multiple of pi. Thus the number of particles is independent of the dimensions and the particles are lined up like in a one-dimensional chain with a single force and that is centripetal force. In a 3-dimensional body it is like a double helix. The further a particle is from the center, the dimensions change. At the core of a center is a quantum. The limit from 3-d to 2-d is the surface area of a body. Then there is an increasing vacuum >> 1-d >> quantum >> 1-d >> 2-d and then again a limit to 3-d, i.e. a satellite. Nature is fractal.

All systems can be composed of several objects to a polynomial, either by binary numbers with the base 2 or with the base 2pi. The base 2pi is simpler for our view of the world and gives the masses. [1,2]

Elementary particles

Photon is an entangled particle of electron and antielectron with rest mass = 0.

$$E_{Photon} = (2\mathrm{pi}-1)(2\mathrm{pi}+1) = 2\mathrm{pi}^2 - 1$$ the -1 corresponds to the spin = 1

The masses of the elementary particles are calculated from polynomials with the base 2pi and an interaction with fractions of pi^n. E.g.

$$m_{muon} = (2\mathrm{pi})^3 - (2\mathrm{pi})^2 - 2E_W^2 = (2\mathrm{pi})^3 - (2\mathrm{pi})^2 - 2 - 2/pi^2 = 206.77\, m_e$$

Theory muon mass: 206.77 m_e measured 206.7682830 (46) m_e

The more particles are entangled together, the more complex the polynomial becomes due to interaction terms.

Mass of the proton m_p =

$$(2\mathrm{pi})^4 + (2\mathrm{pi})^3 + (2\mathrm{pi})^2 - (2\mathrm{pi})^1 - 2 - 1 - 2/pi - 2/pi^6(1 - 2/pi^2 - 2/pi^4 - 2/pi^6(1 + 1/pi^2(2\mathrm{pi} - 1/4)))$$

Theorie: 1836.15267343 m_e measured 1836,15267343(11) m_e

Orbites and diameters of planets in the solar system can be calculated in the same way. E.g.

Mercury orbit / sun ratio

$$696342/(\underbrace{(2\mathrm{pi})^3 + (2\mathrm{pi})^2 + (2\mathrm{pi})}_{\text{Sun}})\underbrace{(1 + 1/(2\mathrm{pi})^2 + 1/(2\mathrm{pi})^3)}_{\text{orbit}}\underbrace{(1 + 1/(2\mathrm{pi})^6 + 1/(2\mathrm{pi})^7)}_{\text{Mercury}} = 2439.66$$

Measured: Sun 696342km Mercury 2439.7km

Theory of everything - The Coriolis force results in the quantum theory http://viXra.org/abs/2112.0007?ref=13104262

[1] Theory of everything - reference to relativity and quantum theory http://viXra.org/abs/2112.0133

[2] Further calculations are on my homepage www.toe-photon.de

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