

# Theory of everything - The Coriolis force explains quantum theory

Helmut Schmidt

## Abstract

TOE can be set up purely mathematically, without constants, with only one type of particle, one dimension and the simplest possible energy law  $E=2^n i^t$ . The world is fractal. In contrast, our idea of the world is more complicated, with a 3-dimensional, apparently isotropic space. For an observer and 2 objects, the torques  $N_B/r_B=N_1/r_1=N_2/r_2$  are set up with a corresponding formula for time or for frequencies

$N_B/\omega_B=N_1/\omega_1=N_2/\omega_2$  and result in all natural forces. The c, h and G-factor of the electron were calculated solely from the rotation of the earth, the equatorial and polar earth radius. Masses from elementary particles result as polynomials with a base of 2pi. E.g. from the proton mass

$mp=(2\pi)^4+(2\pi)^3+(2\pi)^2-(2\pi)^1-3-2/pi-2/pi^6(1-2/pi^2-2/pi^4-2/pi^6(1+1/pi^2(2\pi-1/4)))$   
The entanglement results from the retention of the torques.

In the article "Theory of everything - The geometric mean as an alternative to Newton's law of gravitation" it was described how a TOE can be set up purely mathematically, without constants [1].

Newton's law of gravity  $F=Gm_1m_2/r^2$  gives very precise results for the radii r and velocities v of an orbit, but they do not give any indication of the masses of celestial bodies, as well as elementary particles. All physical laws relating to natural forces are based on the same principle  $F=e_1e_2/r^a$ . The TOE, on the other hand, uses ratios. Nature is simple, with a single kind of particle, one dimension, the simplest possible law of energy  $E=2^n i^t$  with natural numbers n, t and, the world is a fractal. In contrast, our conception of the world is one with 3 isotropic dimensions x, y and z. A comparison of x, y and z is physically very problematic. Each ruler is turned over for comparison and is subject to the Coriolis force. If one denotes r as the large radius, xy as the small radius and z as the deviation, there are only ratios such as  $r/xy=n/l$ ,  $r/z=n/m$  and  $xy/z=l/m$ .  $n>l>m>0$ . Thus, r, xy and z cannot be the same, just as every variable in a Turing machine has a defined memory location. n, l and m refer to the ratio of the round trip times. 2pi is the appropriate conversion factor from the radius r to the circumference and the cycle time UZ. The polynomial  $r_{Objekt}=(r+(2\pi)xy+(2\pi)^2z)$  is the summary of the 3 dimensions of an object. With the number of particles N and the frequency w the energy results in:

$$E/c=N(r+2\pi xy+(2\pi)^2z)w=N r_{Objekt} w$$

Our idea of the world makes a **1 to 1 transformation from base 2 to base 2pi**. Combined, the **masses result from elementary particles as polynomials**, appropriately relative to the mass of the electron.

$w=2\pi UZ$  corresponds to a spin 1/2. A spin cannot be assigned to a single particle alone. Only when  $n>2$  particles interact can the center of gravity of this entire system be recognized and compared with the environment  $r=2^2 i^t$ .

The energy is not required for calculations with the TOE. The number of particles N and torques r, xy, z and w are sufficient. These relationships apply to 2 objects and one observer:

$$N_B/r_B=N_1/r_1=N_2/r_2 \quad \text{and} \quad N_B/w_B=N_1/w_1=N_2/w_2$$

## c and h are a consequence of the Coriolis force

Every object, whether macroscopic or an elementary particle, is subject to the Coriolis force. The torque

$$M=M_{Objekt}+M_{erth}=0 \quad \text{corresponds to the lever law.}$$

$$N_1/r_{1,d}=N_{erth}/r_{erth,d}=N_{observer}/r_{observer,d} \quad d=\{\omega, x, y, z\}.$$

If experiments are to be made on the earth's surface, the period of revolution is  $\omega=1/(2\pi Tag)$ , the equatorial radius of the earth  $R_{xy}=6378135m$  and the polar radius of the earth  $R_z=6356750m$ .

If you just compare the earth to an object on the surface, the result is:

$$\text{For r and xy: } N_1/r_{1,x}=N_{erth}/R_{xy} \quad N_1/r_{1,y}=N_{erth}/R_{xy} \quad N_1/w_{1,x}=N_1/w_{1,y}=N_{erth}/w_{erth}$$

$$\text{For z: } N_1/r_{1,z}=N_{erth}/R_z \quad N_1/w_{1,z}=N_{erth}/w_{erth}$$

If one sets  $N_1=1$  for the electron applies  $1/r_{1,d}/\omega_{1,d}=N_{erth}^2/R_d/\omega_{erth,d}$ .

$N_{erth}$  is not known. It can and must therefore be the same for the surface of a body  $N_{erth}$  for all 3 dimensions. R is only dependent on  $\omega$ .  $N^2$  can be excluded.

$$1/r_{1,x}/\omega_{1,x}/R_{xy}/\omega_{erth} = 1/r_{1,y}/\omega_{1,y}/R_{xy}/\omega_{erth} = 1/r_{1,z}/\omega_{1,z}/R_z/\omega_{erth,p}$$

$$1/2 = r_{1,xy} \omega_1 R_{xy} \omega_{erth} \quad 1/2 = r_{1,z} \omega_{1,z} R_z \omega_{erth,p} \quad r, R_{xy}, R_z, \omega \text{ are orthograde vectors}$$

For the **surface of a body**, the energy can also be expressed in the units N = r, w as  $E c = r \omega$ . This is also expressed in  $p = h / \lambda$   $w = h / E$   $c$  is a conversion from m to s. In the TOE everything is related to particle numbers N instead of mass.

$$E_{xy} c = R_{xy} \omega = 6378135 m \text{ day} = 5.51070864 e^{11} m s \quad 1/E_{xy} s / c = 1.8146487 e^{-12} / m$$

$$E_z c = R_z \omega = 6356750 m \text{ day} = 5.49223200 e^{11} m s \quad 1/E_z s / c = 1.8207534 e^{-12} / m$$

The mass of the electron can only be determined relative to other objects. To the measurement results

include the Compton effect with the Compton wave  $\lambda = h / c / m = 2.426310238 e^{-12} m$

Thus the Compton wave is in the order of magnitude  $1/E_{xy} s / c = 1.8146487 e^{-12} / m$  and

$1/E_z s / c = 1.8207534 e^{-12} / m$ . This already means that the earth's rotation has a significant effect on the electron and the G\_factor. The ratios  $V = \lambda / (E c / s)$  are calculated below:

$$E_{xy} c / s \lambda = 5.51070864 e^{11} m \cdot 2.426310238 e^{-12} m = 1.33706887 m^2 = V_{xy}$$

$$E_z c / s \lambda = 5.49223200 e^{11} m \cdot 2.426310238 e^{-12} m = 1.3325858 m^2 = V_z$$

The Compton wave  $\lambda$  is the angle between exiting photon and electron 90 degrees. The photon consists of an electron and an anti-electron. They have the same properties and thus also the Compton wave. In each dimension, the sum of the wavelengths remains the same. The difference between electron and anti-electron can only be seen in the direction of rotation  $w_{-e} < 0$ ,  $w_{+e} > 0$

The ratios can be added for each dimension  $V_d = V_{e,d} + V_{e-Photon,d} + V_{e+Photon,d}$  are orthograde.

Depending on the polarization of the photon, the interaction can take place under different energies

$$E_{xy} c / s \lambda \text{ and } E_z c / s \lambda$$

This results in the ratios for the energies for 2 objects in 3 dimensions each.

$$Faktor = 1/2 V_{ges} = 1/2 (V_1 + V_2 + V_3) = 1/4 (1 * 1.33706887 + 5 * 1.3325858) = 1.99999946$$

$$Faktor = 1/2 V_{ges} = 1/2 (V_1 + V_2 + V_3) = 1/4 (2 * 1.33706887 + 4 * 1.3325858) = 2.001120235$$

$$G_{Faktor} = 1/2 V_{ges} = 1/2 (V_1 + V_2 + V_3) = 1/4 (3 * 1.33706887 + 3 * 1.3325858) = 2.00224100$$

Measurement: G-factor 2.00231930436 Error: **2.00224100 / G-factor = 0.9999611578**

$c$ ,  $h$  and G-factor were calculated solely from the rotation of the earth  $\omega = 1 / (2\pi \text{Tag})$ , the equatorial earth radius  $R_{xy} = 6378135 m$  and the polar earth radius  $R_z = 6356750 m$ . The errors for  $c$  and  $h$  come from the information on the radii of the earth.  $c$  results from the formula

$4 / (2\pi) / c \cdot 6378,626^2 km^2 = 1 \text{ day}$ . The equatorial radius is 6,378,137 m (GSM 80) with a difference of 489. (If one takes into account the orbital period of the moon of  $1 / 27.322$  days, the G-factor has an inaccuracy of  $2.00231930 / (2 + (0.00224100 * (1 + 1 / 27.322))) = 0.999998$ )

## Transfer of the equations to elementary particles

The **masses through elementary particles result as polynomials on the basis 2pi**, appropriately relative to the mass of the electron. 3 factors belong together, according to the 3 dimensions. The negative numbers are each antiparticle.

### Electron

The energy consists of the rotation (2pi) and the particle +1. An electron is 2-dimensional. The 3rd dimension corresponds to the magnetic field.

$$E_e = (2\pi)^1 + (2\pi)^0$$

## Photon

Photon is a particle made up of an electron and an anti-electron with rest mass = 0 and spin = 1.

$$E_{\text{photon}} = (2\pi i - 1)(2\pi i + 1) = 2\pi i^2 - 1$$

## Calculating the mass of the proton

The calculation of the proton mass is based on the hydrogen atom. The energy of the unbound particles results from the following polynomials:

$$E_e = (2\pi i)^1 + (2\pi i)^0 \quad \text{An electron.}$$

$$E_p = (2\pi i)^4 + (2\pi i)^3 + (2\pi i)^2 + E_w \quad \text{The proton is 3-dimensional } E_w \text{ is the interaction between.}$$

$$E_A = (2\pi i)^4 + (2\pi i)^3 + (2\pi i)^2 + (2\pi i)^1 + (2\pi i)^0 + E_w \quad \text{the uncharged hydrogen atom.}$$

$$\text{Binding energy, initially with the same amount of a free electron: } E_B = E_e = (2\pi i)^1 + (2\pi i)^0$$

$$\text{first estimate: } E_p = (2\pi i)^4 + (2\pi i)^3 + (2\pi i)^2 - (2\pi i)^1 - (2\pi i)^0 + E_w = 1838.79090228$$

### Exact calculation of the interactions:

The exact boundary between the atomic nucleus and the atomic shell is obtained by equating the polynomials at the same times t.

$$E_p = (2\pi i)^4 + (2\pi i)^3 + (2\pi i)^2 + E_w$$

$$E_e = -E_w + (2\pi i)^1 + (2\pi i)^0$$

$$(2\pi i)^4 + (2\pi i)^3 + (2\pi i)^2 + E_w = -E_w + (2\pi i)^1 + (2\pi i)^0$$

$$E_p = (2\pi i)^4 + (2\pi i)^3 + (2\pi i)^2 - (2\pi i)^1 - (2\pi i)^0 - 2E_w$$

The geometric mean of 1 and  $1/\pi i$  is to be assumed as the limit:  $E_w = 1 - 1/\pi i$

$$\text{this leads to } m_p = 1838.79090228 - 3 - 2/\pi i + 2E_{\text{core}} = 1836.15428251 m_e$$

### Calculation of the interactions in the atomic nucleus:

There are 3 particles in the atomic nucleus, which leads to further interactions:

$$\text{Dimensions: } d = 3 \quad E_{\text{core}} = (1/\pi i^d)^2 = 1/\pi i^6$$

$$\text{This leads to } m_p = 1836.15428251 - 3 - 2/\pi i + 2/\pi i^6 + 2E_{\text{intercore}} = 1836.15324235 m_e$$

According to the same scheme, further factors for the interaction within the proton are added:

$$E_{\text{intercore}} = (1 - 2/\pi i^2 - 2/\pi i^4 - 2/\pi i^6 (1 + 1/\pi i^2 (2\pi i - 1/4)))$$

The last factor  $1/\pi i^2 (2\pi i - 1/4)$  differs from the rule. It describes the particle that is closest to the total center of gravity of the atom. It revolves around the center of gravity of the universe. Nothing comes after the factor and corresponds to a quantum. The 1 stands for a single particle  $1/4 = (1/2 \text{ Spin des Elektrons})^2$ . At least that is a reasonable assumption. This leads to:

Mass of the proton  $m_p =$

$$(2\pi i)^4 + (2\pi i)^3 + (2\pi i)^2 - (2\pi i)^1 - 2 - 1 - 2/\pi i - 2/\pi i^6 (1 - 2/\pi i^2 - 2/\pi i^4 - 2/\pi i^6 (1 + 1/\pi i^2 (2\pi i - 1/4)))$$

**Theory: 1836.15267343  $m_e$**       Measurement 1836,15267343(11)  $m_e$

## Neutron

$$m_{\text{neutron}} = (2\pi i)^4 + (2\pi i)^3 + (2\pi i)^2 - E_w$$

$$m_{\text{neutron}} = E_w + (2\pi i)^1 + (2\pi i)^0 \quad 1/\pi i^2 : 1/\pi i^4 \quad E_w = 1/2/\pi i^2 (1 + 1/\pi i^2)$$

$$m_{neutron} \approx (2\pi)^4 + (2\pi)^3 + (2\pi)^2 - (2\pi)^1 - (2\pi)^0 - 1/\pi^2 - 1/\pi^4 = 1838.68$$

Spekulation:

$m_{Neutron} =$

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

= **1838.6836617 m<sub>e</sub>**

Measurement: 1838,68366173(89) m<sub>e</sub>

## Muon

The calculation is analogous to the proton.

$$m_{muon} = (2\pi)^3 + E_W \quad m_{muon} = -E_W + (2\pi)^2 \quad E_W \approx 1 - 1/\pi$$

$$m_{muon} = (2\pi)^3 - (2\pi)^2 - 2 E_W = (2\pi)^3 - (2\pi)^2 - 2 - 2/\pi = 205.93 m_e$$

The muon is an unstable pond. The comparison with the calculation of the proton mass is only an estimate.

Due to the instability is more likely to be  $E_W \approx 1 - 1/\pi^2$ .

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

**Theory muon mass: 206.77 m<sub>e</sub>**      measurement: 206,7682830(46) m<sub>e</sub>

## Tauon

The tauon is composed of many particles, as can be seen from the numerous decay channels. The first particle with the factor  $(2\pi)^4$  is the proton. The tauon should therefore have the factor  $2(2\pi)^4$ .

First estimate for the mass of the tauon:

$$m_{Tauon} = 2(2\pi)^4 = 3117.0 m_e$$

Without a factor  $(2\pi)^3$  and  $(2\pi)^2$  the tauon, like the proton, cannot exist.

$$m_{Tauon} = 2(2\pi)^4 + (2\pi)^3 + (2\pi)^2 = 3404.61 m_e$$

Speculation:  $2(2\pi)^4 + (2\pi)^3 + 3(2\pi)^2 - (2\pi)^1 = 3477.29$  with 2 x 3 particles

$$m_{Tauon} = 2(2\pi)^4 + (2\pi)^3 + 3(2\pi)^2 + E_W$$

$$m_{Tauon} = -E_W + 2\pi \quad \text{Interaction: } E_W = 1/\pi^3 (1 - 1/\pi^2)$$

**Theory of tauon mass: 3477.23 m<sub>e</sub>**, measurement 3477.23 m<sub>e</sub>

## Neutrinos

The muon  $(2\pi)^3 - (2\pi)^2$  breaks down  $(2\pi)^2((2\pi)^1 - (2\pi)^0)$  into

Electron  $(2\pi)^1 - (2\pi)^0$  and  $(2\pi)(2\pi)$ , unstable.

Possible decay of  $(2\pi)(2\pi)$  into a photon and 2 neutrinos:  $(2\pi)(2\pi) = (2\pi - 1)(2\pi + 1) + 1$

Photon  $(2\pi - 1)(2\pi + 1) =$  electron  $(2\pi + 1)$  and anti-electron  $(2\pi - 1)$ .

**Neutrinos correspond to 1 = 2 - 1.** Thus a fermion with the easiest possible mass.

Antielektronneutrino = -1 plus muon neutrino = 2. Neutrino oscillations result from the Coriolis force, as also described for the G-factor.

## Entanglement

The entanglement of two photons has the same cause as the cohesion between the center and satellite, i.e. the preservation of the angular momentum. In this respect, a photon can be understood as an entangled pair of an electron and an anti-electron. The time  $t_1$  is given by the inertial system I and the localization for an observer and 2 objects by  $r_1$  and  $r_2$ . The following applies to the binding energy:

$$E_B^2 = (2\pi c)^2 (t_1^2) - dr^2 = (2\pi c)^2 (t_1^2) - r_1(r_I - r_1) \quad r_s = r_I + r_1$$

With entanglement:  $r_1 < r_I$  Object 1 is with the center of gravity  $r_s$  within the inertial system I.

Without entanglement:  $r_1 > r_I$  Object 1 is outside of the inertial system I with the center of gravity  $r_s$

For a photon the binding energy is:

$$\begin{aligned} E_{BI} &= 2\pi c t_I - dr = hf && \text{Object 1 with quantized energy} \\ E_{BI} &= 2\pi c t_I + dr && \text{Energy of the reference system I} \\ E_B^2 &= (2\pi c)^2 (t_1^2) - dr^2 \end{aligned}$$

Almost all of the energy  $E_B$  is in the photon. The focus of photon and observer is almost completely in the observer  $p_{\text{photon}} = -p_{\text{Beobachter}} \gg$  No entanglement

If 2 photons are entangled, the following applies:

$$\begin{aligned} E_{BI} &= 2\pi c t_I + dr = hf && \text{Object 1 with quantized energy} \\ E_{BI} &= 4\pi c t_I && \text{Energy of the reference system I} \\ E_{B2} &= 2\pi c t_I - dr = hf && \text{Object 2} \\ E_{2B}^2 &= 2(2\pi c)^2 (t_1^2) - 2dr^2 \\ E_{2B} &= 2E_B && p_{\text{focus}} = p_{\text{observer}} = 0 \gg \text{entanglement} \end{aligned}$$

Only when the photon and the observer are no longer in the same reference system does the following apply:  $E_{2B} = 2E_B \quad E_{\text{photon}} = 2\pi c t > E_B^2 = (2\pi c)^2 (t_1^2) - dr^2$

The article describes TOE on the basis of quantum theory and leads to a unification of elementary particles and the interactions of electromagnetic, weak and strong forces, including gravity. It is understandable that the calculations for the elementary particles still have to be expanded. Some things still seem speculative. In sum, the results presented here are conclusive. But it is certainly not pure number acrobatics.

[1] Theory of everything - The geometric mean as an alternative to Newton's law of gravitation  
<http://vixra.org/abs/2112.0007>

You can find more articles on the TOE and results on the QT, the planetary system and the cosmos on my homepage [www.toe-photon.de](http://www.toe-photon.de)

Dr. Helmut Schmidt  
 Grasbrunn  
 Helmut.Schmidt@campus.lmu.de