News from Field Physics:

Microcosm to Macrocosm Calculated with One Equation,

(from the variable size of elementary particles to the observation of our galaxy)

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Abstract:

It is always speculated about the expanding of the universe because of the observable red shift. On the other hand no paper deals with the missing blue shift as a consequence of the contracting Milky Way. What is explained with the law of the inverse square of the distance, that also applies to the charge radius of atomic nuclei in the microcosm.

The shrinking proton has already been reported, in 2014 for the first time in Germany (1). The scientific community was at a loss, because until then elementary particles, such as the proton in size, were handled as a constant in nature. Such a thing must not change, even if it is scanned with more than 200 times as heavy particles, the muons, but it does!

Prologue:

In the same year, the author in the Swiss NET Journal announced a method that could explain this deficiency (2). However, no major news-papers responsible for these measurements responded. They wanted more time and that would take four more years. After all, the measurements are very time-consuming.

Data is now available for the core of deuterium, which also shows a deviation from the standard value and an astonishingly good agreement with the prediction. This brings the author back into the conversation. At the 4th International Conference on "High Energy & Particle Physics" Prof. Meyl presents the topic (3) and refers to the Jesuit priest "Prof. R. J. Boscovich ", the founder of field theory.

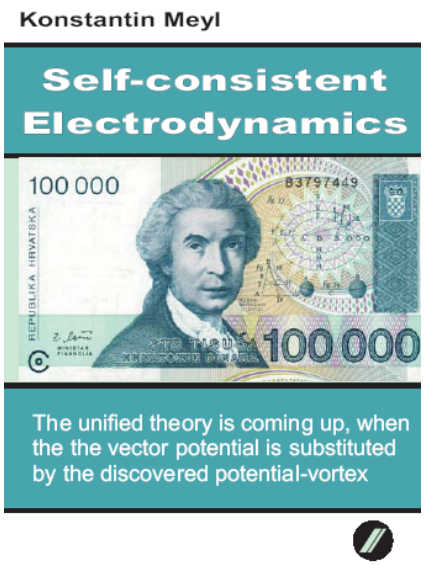

Fig .1: Old Croatian banknote shows Rudjer Boscovich (4)

R. J. Boscovich (4)

Boscovich was born more than 300 years ago in Ragusa, today's Dubrovnik, Croatia. He was fifteen years old when Isaac Newton died, influencing a whole epoch with his gravitational theory. Boscovich was trapped by the ideas until his death, only able to free himself insofar as he could work out an alternative to the forces of gravitation and propose them in a book. He wrote it in Latin: "De

spatio et tempore, ut a nobis cognoscuntur" (4), about space and time, and how we are observing it. The Boscovich University honors him today with his name, as the most important scientist of the country.

His text contains a focus that lets the earth breathe unobserved. After his imagination, we are constantly changing our size, together with our environment and we are not aware of these changes. He writes: ... the whole universe should daily contract or expand ... so we should have no feeling that such a change was taking place [5].

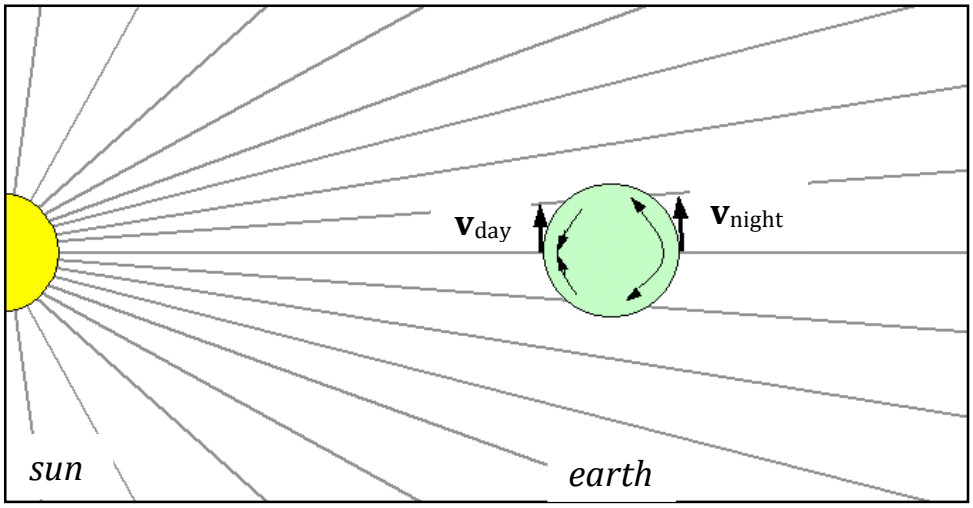

Fig. 2: The earth in the field of the sun.

Let us try to illustrate his thoughts. The earth moves in the field of the sun, in the so-called solar wind. It consists of electrically charged particles radiating perpendicularly from the sun and becoming less with distance. During the day, the radiation is greater than at night and we are accordingly smaller, without that, we can observe the effect. If we want to go to bed accordingly growing, then our bed has grown to the same way, since we, in order to confer with Boscovich, are made of the same material as our surroundings.

Today we would say that we look with our eyes at what is happening. We are looking at the speed of light, which is measured in meters per second. As the meter changes, c will also change in m/s unobserved. Subjectively, everything stays the same for us. What applies to the speed of light, that also applies to the movement, which is also measured in m/s. This means a lower speed on the day side and a greater speed on the night side, and as a result, the well known circular motion around the sun.

A force effect, as demanded by Issac Newton, does not take place. Also missing is the centrifugal force, which should be opposite to the gravitational force, but equal in size. The concept of a force degenerates into a purely auxiliary description. The field, on the other hand, can do without this term and does the same thing in the same way, as a celestial body bends towards the heavy mass. Boscovich sees no contradiction here to the gravitation, but only an alternative description.

From today's point of view, we have to strictly differentiate between the viewpoints. The difference in the microcosm thanks to modern microscopes and macrocosm because of the exact telescopes suddenly comes clear.

A nameless law

In 1755, when Boscovich created his epochal, albeit less respected, physics had few equations to apply as a physical law. An ancient law was that of the inverse square of a distance:

$$m \sim 1/r^2.$$

Assuming a point-like mass, the gravitational effect decreases with $1/r^2$, referring to a sphere of radius r. Easier to understand is the experiment, in which a field source, eg. a point light source is scanned with radius r. The same applies to the electric field as to the magnetic field strength:

$$E \sim 1/r^2 \qquad \text{and} \qquad H \sim 1/r^2$$

The earth is influenced by the solar wind, following the electric field strength of the sun. Conversely, for the radius is:

$$r \sim 1/\sqrt{E} \qquad \text{and} \qquad r \sim 1/\sqrt{H}$$

The field determines the measured length, how big 1 m is.

The field determines the extent in v, measured in meters per second.

The field determines the speed of the light $c \sim r$ and thus takes the measurement with itself. The 300,000 km / s are therefore no more than a measurement constant.

The biggest mistake of modern quantum physics is to consider the speed of light as a natural constant. It is a violation of the law of inverse square of a distance. Are we lawbreakers if we use the gravitational force instead of the field in our environment, which is doing the same?

Charge radius of the proton

Clarity should create an experiment. The radius of the proton has long been known and examined in different ways. In 2012 it was again found in e-bombardment at 0.886 fm (6). In 2013, the light electron was replaced by the 207-fold heavier muon. Now, inexplicably, the radius was 5 percent less (7). The researchers measured for the radius of the proton only 0.84087 fm:

$$\frac{\text{Pohl 2013: } R_p\{\mu\text{-}\}}{\text{Sick 2012: } R_p\{\text{e-}\}} = \frac{0{,}84087 \pm 0{,}00039 \text{ fm}}{0{,}886 \pm 0{,}008 \text{ fm}} = 0{,}949 \text{ ; measured}$$

Since, according to field theory, the sum of the particles involved in the sampling plays a role with $R_p\{\text{e-}\} \sim 1/\sqrt{(m_p+m_e)}$ and with $R_p\{\mu\text{-}\} \sim 1/\sqrt{(m_p+m_\mu)}$

$$\frac{R_p\{\mu\text{-}\}}{R_p\{\text{e-}\}} = \sqrt{\frac{(m_p+m_e)}{(m_p+m_\mu)}} = 0{,}9483 \text{ ; calculated}$$

The good agreement between the measurement and the calculation is convincing. Field physics proves to be superior. While quantum physics, in which the quanta occur as natural constants, have no explanation for the difference. And it gets even worse.

The last secret of ß-decay

The classical electron radius is $R_{e\ classical} = 2.82$ fm,

however, the radius of the proton $R_{p\ codata} = 0.8775$ fm

and that of the neutron is only slightly larger. For the fact that the electron comes out of the neutron during the ß-decay, it is three times as large. Even according to the rules of quantum physics the proportions are a mystery.

The field theory has a clear answer for that.

$$\frac{R_e\{p\}}{R_e\{e\}} = \sqrt{\frac{2\,m_e}{m_e + m_p}} = \frac{1}{30}$$

If the electron is scanned by a proton, then it is smaller by a factor of 30 and fits easily into the neutron. In my book there are more elementary insights (8).

Invisible blue shift

The Andromeda galaxy is very similar to the Milky Way. We can see it contracting. It can be concluded that our galaxy in the same way is slowly contracting. If we first look at stars of the Milky Way, we can expect to see blue shift, while we would not observe this phenomenon in other systems outside of our galaxy. That prescribes quantum physics.

In fact, we do not see a blue shift and we see the stars of our galaxy as “fixed stars”. There is a shrinking of the Milky Way, which we can not see after Boscovich because we are looking at the speed of light, which is shrinking in the same way [5].

Our observation is that other stars and galaxies are showing a red shift, as if the universe would expand. In reality, the light needs more and more to reach us, the expansion of the universe is just as much a mistake as the supposed big bang, which also did not exist.

In fact, the measuring lab shrinks every day together with its measuring technicians. At the same time, the speed of light also drops, which is why we see no blue shift. The Milky Way maintains the distances purely optically, although we know that it is contracting.

The light of celestial bodies that are outside of our galaxy, however, takes longer and longer to arrive in the terrestrial laboratory, which causes the red shift. If all the stars outside of our galaxy change in the same way, that should make us think.

Suppose our sun was a pulsar and we were pulsing, then the starry sky would be flashing, except for the pulsar and its planets. Medieval "physicists" who see the sun as the center of their universe even claim that the stars flashing simultaneously communicate with each other!

The time in which the measuring technician was able to position himself in the middle of the universe is long gone. He must learn that he and his entire laboratory are subject to the cosmic laws and factors of influence.

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