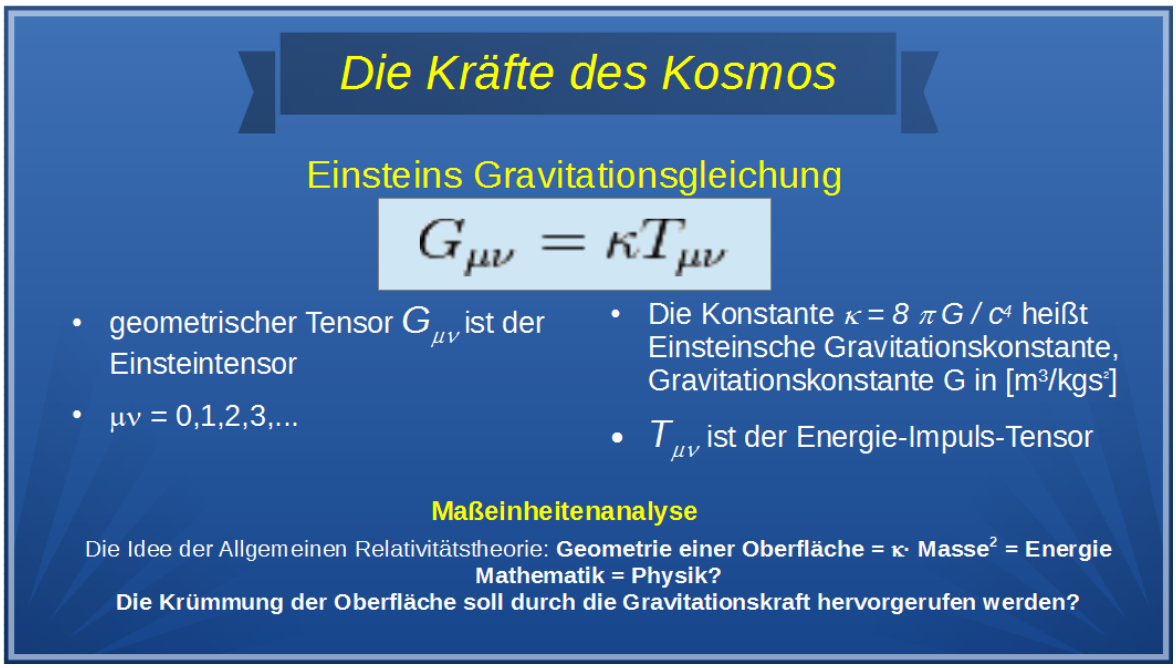
100 years General Theory of Relativity - a balance

by Mathias Hüfner

One Hundred Years of General Relativity are a cause for celebration for the German Physical Society. Does the theory brought us a new perspective to space and time. A new view already, but brought it new insights and what does this theory of relativity?

Whoever takes over already worrying when it comes from a genius. Genius one must not question, or do you? Einstein's fundamental equation of general relativity means if one makes an analysis of the units:

Geometry of a surface = energy.



That has to happen absurd to a rationally thinking person anyway. Mathematics is a mental power. The will generate a physical effect? This is only possible in the realm of magic. Einstein wrote respect of the release of the general theory of relativity to his friend Ehrenfels: *"I have again committed a crime in the theory of gravity, which makes me a little in danger of being interned in a madhouse."*
Is the world now become a madhouse, where we all sit with him? One might think, given the fact, how embittered struggle for the right to enforce dogma in science.

After Immanuel Kant postulated the "thing in itself" as the objective reality that we can grasp only imperfectly with our senses, there were plenty of critics who criticized the meaning of his philosophy and twisted it beyond recognition. Einstein's favorite philosopher Arthur Schopenhauer has especially excelled there. He replaced in his major work "The World as Will and Imagination" the "thing in itself" by the subjective will and explained relativity as interchangeability of observer and observed object. (Of course, he defined a metaphysical objective will, so his idea was better received.)
It is precisely this subjective philosophy we find again in Einstein's theory of relativity, by the image of reality for reality itself is kept. This applies to both theories. There can be nothing to sell

better than a bit of magic. Things that you do not understand, are either rejected or canonized. In fact, the AR brought us a lot of dark magic with the black holes, dark matter and dark energy, wormholes and other fantasies that elude any falsification, as well as gods, elves and the world of Hogwarts.

> *It is for a figure "Prophet with mountain in the background" relatively unimportant whether the Prophet went to the mountain, or the mountain to the prophet. However, for the energy balance of the process, it does matter. This is an essential difference between mathematics and physics.*

Back to the real world of science. Postulating 4 based forces in physics. These are the two nuclear forces, gravity and the electromagnetic force. While the nuclear forces act only on very short distances and no longer play a role outside the nucleus, both the electric field and the gravitational field have virtually infinite range. Because of their force field they can be compared and the comparison of Coulomb's law and Newton's law of gravitation gives a greater than 39 orders of magnitude Coulomb force. This many people do not realize.

I am grew up in an electric power transformation substation where 380kV were transformed to 120 kV. My grandpa so inculcated to me the immense power that instilled in an electric field around the current carrying conductor and the associated risk for life, that I have enough respect for the electric force field for all my life. I have the smell of arising ozone in this field always in my memory and in the ears the 50 Hz hum. The effect of the gravitational force caused only a few scrapes on my knees if I had stumbled again over a stone, but the images of the fatalities that were charred in the arc beyond recognition, meant that no authority in the world can convince me, that gravity could produce stronger effects than the electricity.

Einstein in 1905 with his work *On Electrodynamics of Moving Bodies,* created the illusion that the electricity in the cosmos did not matter. The trick was that he looked at the world from the perspective of a fast electron and not from the perspective of an ordinary observer, which can be viewed on Earth as stationary. His motive here was not to make new discoveries, but to bring symmetry in Maxwell's equations, they practically only be regarded from a different perspective, because symmetry for him meant beauty.

The pursuit of symmetry later became one of the main concerns of theoretical physics. Another major concern was the **Grand Unified Theory** (GUT), a theory that combines three of the four known fundamental physical forces and which is failed before in the form of String Theory. Only gravity could not be accommodated because of Einstein's relativity theories. But is the gravitational now so different from the electric power? The so different size of atom and electron lead us to suppose that the forces are not completely neutralized, and that a small residual force remains. Peter Kohl has made to the there acting forces a few model calculations. After that, gravitation results as a residual force that remains in the charge compensation in the atom due to its geometry. As the electrons move, they create a magnetic field and there is a Lorentz force. These effects were not considered in the model. Nevertheless, the model shows an interesting behavior. In particular, the distance between the electron shell of the atomic nucleus and the distance of the center of gravity of the atom are the variables that determine the strength of the gravitational force in Kohl's model. The result is that the conditions in the universe are much more complicated than that applies to our world of experience Newton's law makes us think. At least in this point you have to aggree Immanuel Velikowsky and Wal Thornhill, that gravity is an electromagnetic phenomenon which we unfortunately only begin to understand because much time and energy were wasted institutionally promoted for meaningless concepts and this lasts on ...