

An Effective Refutation of General Relativity and Quantum Theories

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Abstract

It is briefly shown that all physical theories that rely on a mathematical application of the circle number as an irrational dimensionless number are irrational and flawed in their explanatory content, since they place the physical dimensions of space (L) [length] and time (T) in an inaccurate and irrational relationship. Albert Einstein's most important postulate (speed of light in a vacuum = constant) is thus refuted and shown that there π are no natural constants in nature – apart from the circle number π .

1. The Circle Number π in Mathematics and Physics

In mathematics, it is common to understand the circle number π as an irrational number (without a physical dimension) that represents an approximation of an "ideal" circle as a static object

$$\pi = \frac{\text{Circumference}}{\text{Diameter}} = 3.14 \dots \dots [\text{dimensionless}] \tag{1}$$

However, "infinity" must not be used as a postulate or as a premise in physics, since "infinitely" large or small units cannot be measured and thus cannot be confirmed experimentally. The introduction of the circle number π as a representation of the "concept of infinity" into the natural science of physics makes the science of physics de facto a science that deals with "God" (as a symbol of the concept of infinity) and tries to describe the nature of God (Big Bang, dark matter, black holes).

Moreover, if the concept of general relativity is applied consistently, there must be no natural constants at all, since all measures must always be relative to each other. A constant speed of light in a vacuum, a Planck's constant, a gravitational constant, etc... shouldn't actually exist in physics.

The use of the circle number π as an irrational dimensionless number represents irrational thinking, and the general theory of relativity as well as quantum theory, both of which are based on the dimensionless irrational circle number, are to be characterized against this background as inadmissible and irrational views and

or shape. An "ideal" circle is understood as a regular n-gon with an infinite number of corners. The irrational circle number thus represents the concept of "infinity" or the concept of infinity (n-corner with n = infinite).

interpretations of reality.

2. Reinterpretation of the Circle Number π as a Mathematical-Physical Representation of "Motion" And General Relativity of Motions

While the static interpretation of a circle is irrational because a static ideal circle would have an infinite number of vertices (and thus cannot be measured), the concept of an "ideal" circle can (must) be physically interpreted as the relationship between time and space and thus as a definition of the hitherto unexplained properties of fundamental spacetime.

If a circle is understood as a 1-dimensional line of length L1 (the radius of the circle) that is rotated once around one end, i.e. goes through a full rotation in a certain time, then a circle is created by performing a rotational movement. This circle then represents an area in the dimension L2, while the "circle number" then no longer represents an irrational dimensionless number, but the ratio of time to space.

$$\pi = \frac{\text{Time (Rotation)}}{2 \cdot \text{Length (Radius)}} = \frac{1}{2} \left[\frac{\text{Second}}{\text{Meter}} \right] \tag{2}$$

This definition has already been worked out and emphasized in previous publications [1-3]. This gives a fundamental definition of space and time that is rational, that reflects rational thinking and represents a rotational motion in the Dimension Time / Length.

3. Comparison to Einstein's Theories of Relativity and Discussion

Looking at Einstein's work, the postulate of the constant speed of light in a vacuum essentially stands out. How is this under the universally valid postulate of a single natural constant in the sense of

$$\pi = \text{Time} / (2 \cdot \text{Length})$$

To understand? If we start from the beginning, i.e. before Einstein, Newton and Galileo, we have to start with the question of how we measure space and time in the first place. A measurement is always a comparison, i.e. a relation and thus a "relative" ratio. For example, we can measure the universe by the diameter of the Earth and define that 1 meter of length = 1 diameter of the earth should be long.

$$\text{Length Earth Diameter} / \text{Length Meter} = \text{constant}$$

Whereby we know that the diameter of the earth is not a constant of nature, because the earth could also shrink. However, we can only measure the length relatively on one scale. If we now want to define a "speed" in the sense of a relation of a length to a time, as we know "speeds" from train travel and car travel (kilometers / hour or meters / second), i.e. in the dimension L/T, we run into the problem that in addition to the reference length (for example the diameter of the earth), we also have to determine a reference time, i.e. an "object" on which we measure "time". However, unlike length (the diameter of the earth), which can be defined statically, time must be measured by a "motion". So we need a reference motion (a reference velocity of the dimension L/T) to be able to define time relative to length. We can define time by means of a freely chosen object, to which we ascribe a constant velocity (L/T) and then define time in the sense of $T = T_{\text{reference}} / L_{\text{reference}}$, so we can already see here that time must always be defined relative to space (length), since time can only be measured by motion. (While the length of a physical body still exists even when nothing is moving, time does not exist when nothing is moving).

$$\text{Time} = \text{Time}' / \text{Length}' \text{ of a selected object}$$

and thus

$$\text{Movement} = \text{Length} / \text{Time} = \text{Length} \cdot \text{Length}' / \text{Time}'$$

$$\pi^3 = \frac{\text{Earth}_{\text{Circumference}}^2}{2 \cdot \text{speed of light}} \cdot \frac{1}{\text{Earth}_{\text{Day}}} \quad (3)$$

$$\text{speed of light} = \frac{\text{Earth}_{\text{Circumference}}^2}{2 \cdot \text{Earth}_{\text{Day}}} \cdot \frac{1}{\pi^3} \quad (4)$$

However, this makes it clear that "velocities", i.e. the characterization of motion, cannot be specified in the dimension L/T at all, but that velocities always represent "relative velocities" that must be specified in the dimension L²/T.

Einstein proposed the relation of time and space T/L as a natural constant (1/c) in the sense of the speed of light in a vacuum. The only thing that is correct about this is that this relation is a natural constant, which, however, has nothing to do with "light" or with a movement.

While Einstein postulated

$$L/T = \text{constant} = \text{speed of light in a vacuum},$$

As it has been worked out here, it must be correct

$$L/T = \text{constant} = 1/\pi$$

Albert Einstein – unwittingly – defined only a "clock" with a constant speed of light, which should be valid at every place in the universe, but without pointing out that this constant is merely an expression of the circle Number π with which the orthogonality of the spatial axes to each other is defined.

If one takes into account – and Einstein simply did not take this into account – that the length or the meter was defined in Paris in 1793 on the basis of the circumference of the earth and the time in the sense of one second on the basis of the rotation of the earth around the earth's axis, then it becomes apparent that the "speed of light" is not a natural constant or property of light or electromagnetic waves, but describes the earth's rotation in relation to the earth's diameter and is to be given in the unit "meter²/second".

For the theories of relativity, this means that the relativistic addition theorem for velocities and the Lorentz transformation are omitted if the definition of time and velocity in the sense of

$$\text{Time} = \text{Time}_{\text{clock}} / \text{Length}$$

and

$$\text{Speed} = \text{Length}^2 / \text{Time}_{\text{clock}}$$

4. Experimental Evidence for the Postulate $\pi = \text{time} / (2 \cdot \text{length})$

If one takes into account that in dynamics not L³ but (T/L)³ with T/L = π is to be used (three orthogonal spatial axes of the dimension L/T), it follows that the meter was originally (1793) defined as 1/400000000 of the Earth's circumference and the second as 1/86400 of the Earth's day

$$\text{Speed of Ligth} = \frac{40078091,23^2 \text{ m}^2}{2 \cdot 86400 \text{ s}} \cdot \frac{1}{\pi^3} = 299792458 \frac{\text{m}^2}{\text{s}} \quad (5)$$

The relative deviation between the circumference of the Earth, calculated here from the speed of light, and the mean circumference of the Earth at the equator of 40075017m (WGS 84) given in the literature, is $7.6706 \cdot 10^{-5}$. The deviation is thus in the range of the relative uncertainty of the gravitational constant in the third power and thus in the expected value range.

5. Summary

It has been shown that the use of a dimensionless circle number π is irrational, i.e. not accessible to the mind. It was shown that the concept of "circle" must be thought of as rotational motion in the sense of a clock (time / length) and must represent a physical dimension T/L. In principle, the use of dimensionless constants (such as the irrational circle number = 3.14...) in physics must be

rejected as inadmissible. It has been shown that motion can only ever be expressed in the dimension L²/T as a relative reference of a distance to a "clock" of the dimension T/L. In this respect, quantum theories are not indeterministic, but flawed in the sense that they are based on an inadmissible definition of time (T/1 instead of T/L).

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