

Noether's Theorem and Principles of Conservation

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ABSTRACT: It has been stated that the assumptions of the Noether theorem - which implicates the most important principles of conservation - aren't fulfilled. The new ideas have been presented, which can implicate these principles of conservation. So, the procedure has been shown, which saves the bases of physics.

Noether's theorem states that a certain principle of conservation is connected with every symmetry. And it is true without doubts. So:

- with the symmetry considering the translation in the space – the principle of conservation of momentum
- with the symmetry considering the translation in the time – the principle of conservation of energy
- with the symmetry considering the turns – the principle of conservation of angular momentum.

But already it isn't true, because there aren't these symmetries.

The Nether theorem is true, but its assumptions aren't fulfilled. Let's consider the momentum. The matter isn't distributed symmetrically in the space and time. The masses curve the space-time and they are placed irregularly. There are such solutions of the Einstein equation...

Even if the Universe is homogeneous and isotropic in the scale "macro", it isn't so in the scale "micro", because every galaxy has different shape and in the case of the translation they will not overlap on one another. (For example, a spiral galaxy will not overlap on a spherical one.) And they aren't scales at which the quantum effects with the Heisenberg principle of uncertainty play any role (at least in our Universe).

Next, there is a conjugation between universes.

What's more, it isn't sure that the universes are distributed symmetrically and even if they create the crystal lattice with the lattice constant a , then the translation with (for instance) $\frac{a}{2}$ doesn't fulfill the condition of symmetry concerning translations.

Besides, there isn't the homogeneity and isotropy in the scale of universes which continually bud, bubble, pass the mitosis [1] or are connected mutually by the wormholes [2] etc.

Let's consider the principle of the conservation of energy, because the momentum and the angular momentum are connected with energy. The Noether theorem is correct, but its assumptions aren't fulfilled. So there are two possibilities: either the energy conservation principle (so and the principles of conservation of momentum and angular momentum) are executed independently on the Noether theorem, or, let's hope, in the whole SUPERMEGaverse there is an infinite amount of energy and this way the principle of conservation of energy is fulfilled.

The principles of conservation can be implicated by something other, for example by the equation of the objects [3] which states that any combination of the sums of the products of the integrals and the derivatives acting on the free objects gives the same object.

$$\left[\sum \prod \underbrace{\int \dots \int}_n \underbrace{\frac{\partial \dots \partial}{m}}_m \right] Object = Object$$

If the amount of the energy is infinite, it doesn't disturb that both positive and negative energy exist (particles and antiparticles) because

$$\infty - \infty$$

is an indefinite symbol and it can achieve an infinite value, too.

The same situation occurs in the case of complex, quaternion, 2^n -nion mass.

The principle of an infinite total mass is valid for each component of mass.

If the amount of energy is infinite, it is possible to create a new its portion without the breaking of the principle of conservation of energy, because:

$$\infty + something = \infty$$

Problems:

- Is there an amount of energy really infinite?
- Is the energy of the Megaverse the total energy or are there yet bigger sets of energy?

References:

[1] S. Coleman, Nuclear Physics B, 310, 1989, p. 643-668

[2] S. W. Hawking, Physical Review D, vol. 37, no. 4; 15 February 1988, p. 904

[3] Z. Morawski, "Equation of Objects and Equation of Field", this website