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RELATIVISTIC REVOLUTION AND ONTOLOGY OF PHYSICS

Summary

In the course of the development of physics until the beginning of the twentieth century there was an evolutionary progress within its ontological frameworks. Its continuity was violated by A. Einstein's works of 1905 and his so-called „quantum and relativistic revolution.” In its course people gave up a series of results they had achieved, and replaced them by some radical solutions that differed from common sense intuitions. In particular, in the context of the theory of relativity

the concept of electromagnetic ether was rejected. Then the concept of absolute time and absolute geometry of space were removed, facts that eliminated the „flow” of time and change of the ontology of physics from the substantialist one into the eventist one. The changes turned out unnecessary, they resulted not from the very theory of relativity, but from some arbitrary solutions within the frameworks of its philosophical interpretation. On the other hand, they clash with clear ontological intuitions and make an explanation of the „flow” of time impossible. What is more, they are also not beneficial for a further progress in the development of physics, especially in the context of seeking a quantum theory of gravitation. It seems right to return to pre-relativistic concepts, starting from ether. For it is the elimination of the latter that had started the „revolution.”

Translated by Jan Klos

Słowa kluczowe: względność, eter, dynamika, upływ czasu, geometria czasoprzestrzeni.

Key words: relativity, ether, dynamics, time flow, space-time geometry.

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