

Causes for the Precession of the Perihelion in the Planetary Orbits

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Abstract : It is Leverrier that discovered the precession of the perihelion in the planetary orbits for the first time in the world, while it is Einstein that explained the astronomical phenomenon for the first time in the world. The amount of the precession of the perihelion for Einstein's theory of gravitation has been explained by means of the inverse fourth power force (inverse third power potential) introduced to the theory of gravitation through Schwarzschild metric. However, the methodology has a serious shortcoming that it is impossible to explain the cause for the precession of the perihelion in the planetary orbits. According to our study, without taking the cause for the precession of the perihelion, 6 methods can explain the amount of the precession of the perihelion discovered by Leverrier. Therefore, the problem of what caused the perihelion to precess in the planetary orbits must be solved for physics because it is a profound scientific and technological problem for a basic experiment in construction of relativistic theory of gravitation. The scientific solution to the problem proved that Einstein's explanation for the planetary orbits is a magic made by the numerical expressions obtained from fictitious gravitation introduced to theory of gravitation and wrong definition of proper time. The problem of the precession of the perihelion seems solved already by means of general theory of relativity, but, in essence, the cause for the astronomical phenomenon has not been successfully explained for astronomy yet. The right solution to the problem comes from generalized theory of gravitation. Therefore, in this paper, it has been shown that by means of Schwarzschild field and the physical quantities of relativistic Lagrangian reflected in it, fictitious gravitation is not the main factor which can cause the perihelion to precess in the planetary orbits. In addition to it, it has been shown that the main factor which can cause the perihelion to precess in the planetary orbits is the inverse third power force existing really in the relativistic region in the Solar system.

Keywords : inverse third power force, precession of the perihelion, fictitious gravitation, planetary orbits

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