

## **The solar energy supply sources. New hypothesis.**

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The principal aim of known experiments with gravitation having been started as early as XVIII century by Cavendish have appeared to be demonstration of the absolute truth of the First (Newtonian) law of gravitational equivalence, but based on the presumption that the gravitational intensity is strictly proportional to masses of interacting bodies only, without taking into account any possible effects of Force and Motion. Recent experiments allowed to determine that the gravitational and inertial masses coincide for stationary bodies to the accuracy of  $10^{-12}$ .

But just the first cosmic experiment involving interaction of moving bodies showed immediately the discrepancy between the gravitational and the inertial mass by 1.5%. Because no reasonable explanation of this fact has been found, these results have been declared a gross error and passed into oblivion.

However these results deserve to be analyzed, because obtained experimental data allows to make assumption that some natural relationship exists between the gravitation and not only the value of mass, but also the effect of Force and Motion under changes of stressed-strained state of any body. On this base, an additional gravitational field is assumed to be generated around bodies subjected to continuous acceleration.

It was actually confirmed by an experiment made by the author, which showed that a rotating flywheel with the mass subjected to the continuous centrifugal acceleration emits an additional gravitational radiation. It was established that this artificial gravitational radiation is a centripetal one, that is, it is directed from the periphery to the rotation center.

Taking into consideration that the results of experiments of A. Severny and R. Davis set many astrophysicists to doubt that the energy source of the Sun is thermonuclear reactions in its depths, it becomes reasonable to put forth a new hypothesis that the source of solar energy (heat) is absorption of the centripetal gravitational field generated by planets moving along their orbits. In accordance with this hypothesis, in the Solar system there are existing simultaneously two permanent balanced energy flows having opposite directions – the first one from planets to the Sun, as an intangible flow of centripetal gravitational radiation, and the second one from the Sun to its environment, as a powerful flow of visible electromagnetic radiation.

It was possible to obtain some interesting details of this global process. For instance, the Earth gives 60 000 t/sec of its mass to the Sun and the Jupiter – 3 500 000 t/sec.\*

Scope of application:

If independent researchers would be able to reproduce experiments revealing the centripetal gravitational radiation, potentialities are arising to build up unique power units, which are an alternative of thermonuclear power plants, still on the stage of projects.

These unique power plants will be operating on limitless ecologically clean gravitation energy, on the base of consumption of the ordinary inertial mass to be transformed to the field in compliance with the formula  $E = mc^2$ .

*The extent of novelty*

Nobody has proposed or discussed something of the sort.

*Availability of prototypes*

There are no prototypes. In 1978 there was fabricated an experimental flywheel, which was lost after the experiments were completed. It is necessary to restore this equipment, but on some higher level.