The force is also increases with the approaching to the walls of the cylinder (Fig. 2). We can always find a point of minimum gravity force inside the cylinder.
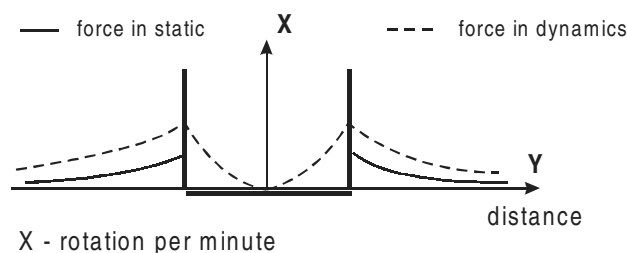

Fig.2.

During the experiment it was established that the increasing of gravity forces takes place around the rotating centrifuge. When the centrifuge is on, the mass begins to be attracted to the side of rotating centrifuge.

CONCLUSIONS

With the horizontal location of axis of the centrifuge there is a tendency towards acceleration to both walls of the centrifuge. We can notice a small shift in the center of gravitational equilibrium depending on the direction of rotation of the centrifuge (Fig. 2). Probably this happens due to the slow emission of ether by the Earth.

With the vertical location of axis of the centrifuge the direction of attraction of the mass depends on the direction of rotation of the centrifuge as well as on the position of the arm of rotating scales in regard to the force field of the Earth. With this the mass also is attracted to the both walls (Fig. 3).

The centrifuge was made for this experiment (Fig. 1). For the clear experiment we should avoid the electromagnetic radiation possible with rotation. We could do it by using appropriate materials for the centrifuge like paper and wood. There were no movements of the compass during the experiments. The paper was twisted into a cylinder with internal and external diameters of 20/30 cm accordingly and height of 21 cm. The entire unit was put on a metal disk with diameter of 40 cm and aligned by a stainless steel rope with diameter of 3 mm. The centrifuge is situated on the axis of a 3 kW electrical motor rotating at 2860 rpm.
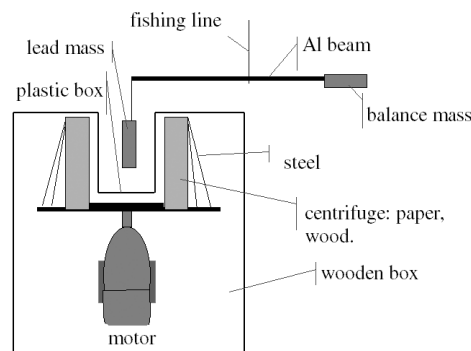

Fig.3.

Disturbances of the air appear with rotation of the centrifuge. To prevent them from affecting the experiment we should make a wooden box. The polyethylene reservoir with diameter of 16 cm was placed inside the cylinder of the centrifuge to isolate the mass from disturbed air.

A pendulum in the form of beam with the weights on its ends is suspended on the rope. The upper end of the rope made with 4-thread fishing-line with diameter of 0,15 mm. It is attached to the ceiling of the second floor and it has a length of 5 meters. To achieve a stable equilibrium of the pendulum we should split the upper end of the rope on 1 sm. The beam, on which the mass was attached, was made with a hollow aluminium tube of 8 mm diameter and 1,20 m length. The mass placed in the centrifuge was made of lead and has a weight of 3 kg.

Editor's note: The theory is well known but this simple experiment is a good illustration.

Design of an Engine for Free Space Based on the Pondemotor Effect

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This engine is based on the pondemotor effect, which is the principle of the creation of propulsive force by means of the interaction between electric and magnetic fields. The interaction between electric and magnetic fields produces energy-flux, determined by the Poynting vector [1,2]:

$$P = ExH, F = P/c, P = mc^2$$

Peculiarities of Poynting's vector are:
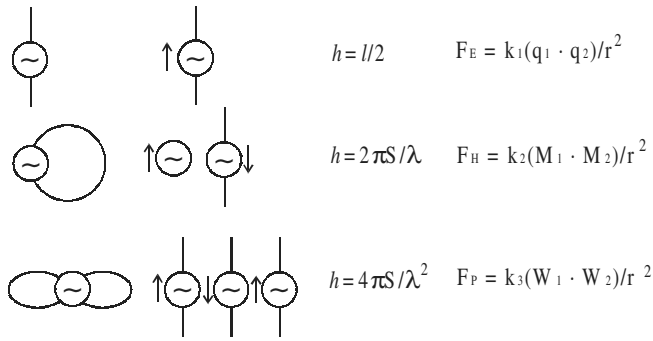
1.Violation of the principle of composition of fields:

$$P = \sum P_i(f_i)$$

2. Poynting's vector changes with double-frequency for flat polarized electromagnetic field:

$$/E_0 \sin \omega t/, /H_0 \sin \omega t/ P_0 \sin^2 \omega t$$

3. Poynting's vector is constant for circular polarized electromagnetic field: /P/=const

Let's consider three types of interaction - electric, magnetic and gravitational - from one point of view. It allows us to draw an analogy between gravitational field and Poynting's vector.

$$h = l/2 \qquad F_E = k_1(q_1 \cdot q_2)/r^2$$

$$h = 2\pi S/\lambda \qquad F_H = k_2(M_1 \cdot M_2)/r^2$$

$$h = 4\pi S/\lambda^2 \qquad F_P = k_3(W_1 \cdot W_2)/r^2$$

where h is the operating length, V is volume, l is length, S is square, M is magnetic charge, λ is wave-length, q is electric charge, W is bulk of energy.

Electric exciting of the space is initial (primary) interaction. It has flat polarization and maximum interaction with free space. A magnetic exciter is produced by closing of the electric exciter or from a couple of parallel electric exciters with an opposite feed. A composition of three electric exciters or two magnetic exciters with opposite feed can be used as gravitational exciters. In the last case, the exciter is polarized in volume and in some case it can be rotating to form the toroid. In the first case space is excited by electric and magnetic fields. In the second case, only magnetic field excites the space. In the third case both electric and magnetic fields are "closed with themselves" and electromagnetic energy is concentrated in the volume of space. Only Poynting's vector exists and it defines the energetic condition of the volume.

The main interesting aspect is the circular polarization of the magnetic field. There are two methods: two equal components of the field are 90 degrees phase shifted in wave zone, or electromagnetic dipole gives us the circular polarization [3]. The electromagnetic dipole at the first half of the period creates an electric field, at the next half of the period it creates the magnetic field, that corresponds to 90 degrees phase shift.

We are interested in the zone nearby the exciter because the force of pondemotor action lies here. In the opposite wave zone, the electric component has no magnetic component in the same phase (sinphase) and the magnetic component has no sinphase electric component here. The sinphase components have not formed here yet. Then we offer to make these components artificially, by the excitation of space with two crossed electromagnetic dipoles which are fed by currents with 90 degrees phase shift.

There are a lot of versions for disposition and feed of exciters, and in one particular case it is radial and circular disposition, which correspond to feed and step $h=2\pi/N$ (the analogy of feed to form the triangle and star electric circuit).

We can draw an analogy with the movement of liquid or gas with absolutely resilient properties and deal with moving ether under the action of electromagnetic field. Then we can say that the electric and magnetic fields act on the ether with force $F=P/c$, forcing ether to move. But the energy-flux, which is produced by one fragment of the exciter, compensates the incoming and outgoing quantity of ether. We should make some asymmetrical construction for discompensation of these fluxes.

The second fragment of the exciter will provide the second pair of forces with different geometry, different operational frequency and different direction of rotation. For example, if we take two fragments with different diameters which are superposed at a distance h from
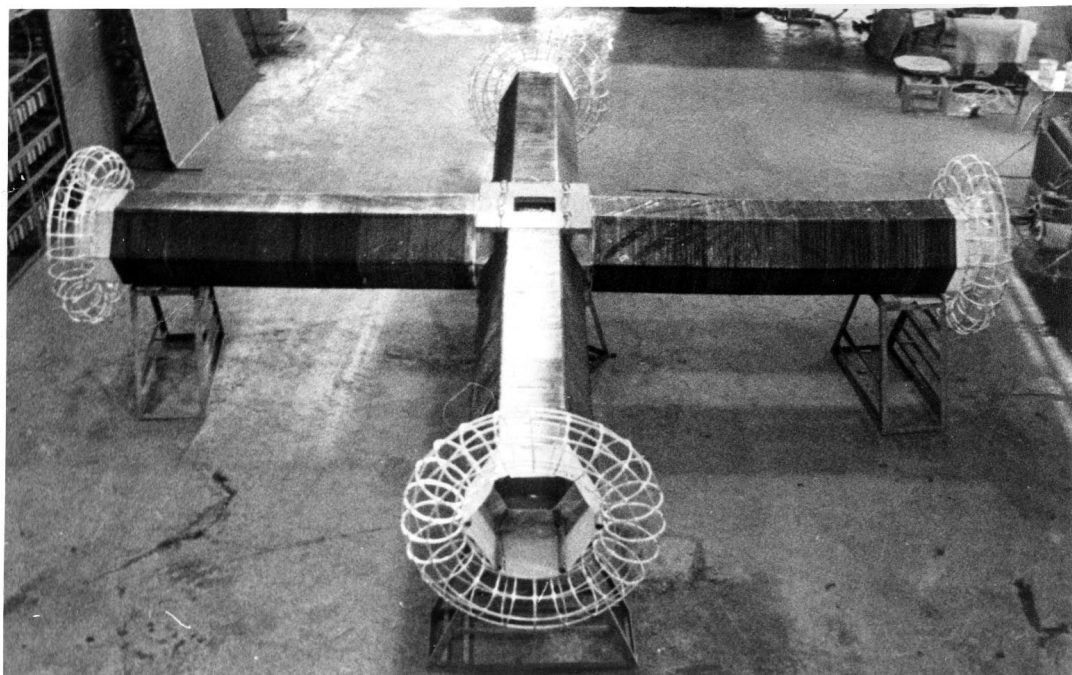

Fig. 1
Photo of Ignatyev's experimental setup. Maximum size is about 4 m.

each other, but they have equal Poynting vector P, and place them coaxially then ether will move asymmetrically according to law of conservation of the quantity of the motion, and the result for it is the propulsion force Ft.

At the present time the third model of the fragment of the engine was built and its main technical parameters were measured. So, on the frequency of 80 kHz we measured that the electric intensity is $E = 10^5$ V/m, the total electric intensity is $E = 10^6$ V/m, the magnetic intensity is $H = 2 \times 10^4$ A/m, the Poynting's vector is $P = 10^{10}$ Joule/(m² x s), the propulsion force is $F = 60$ N (about 6 kg-force) if the input power to one LC circuit of the system is about 10 kW. The system is shown on the photo.

In the near future will start experiments on engines based on the "pondemotor effect": measurement of rotation moment, interaction between the exciter and its mirror reflection from the Earth surface and so on. We started to design a fragment of the engine with radius R=40 m, which will create $P = 10^{14}$ Joule/(m² x s) and $F_t = 3 \times 10^4$ N (about 3 tons).

References

1. Acad. Tamm, The principles of the electric theory, Moscow, Leningrad, 1949.

2. N. Kalashnikov, G. Phrantov, V. Gordienko. The foundations of the theory of electromagnetic dipole and possibility of its application in electro prospecting, Lvov, 1977.

3. The pondemotor action of electromagnetic field, edited by Dr. R.V. Alitov, Moscow, 1975.

Propulsion From Relativity Effect of Inertial Force

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Many scientists challenged to get propulsion from inertial force. No one succeeded. Here we show the possibility of propulsion system by the effect of relativity of inertial force. Activity matter may be a gravitational wave or "space-time". We named it "space-time propeller". If we success to show that the system will work, then we will get a propulsion from electric power.

The system consists of a turntable and 2 wheels. Wheels were set on the edge of this turntable. We call it "space time propeller ". Proper time at point P in wheels will be delayed by rotation of turntable and wheels. This delay depends on the position in the wheels. Delay describes as follows, if we neglect the effect of own mass of wheels. We do not need to think about mass of the turntable. The "τ" is proper time on P. The "t" is the time at the inertia system fixed on the center of a turntable.

$$d\tau = \gamma dt \qquad (1)$$

$$\gamma = \frac{1}{\sqrt{1 - \dfrac{r^2\omega^2}{c^2} - \dfrac{R^2\Omega^2}{c^2} - \dfrac{r^2\Omega^2\cos\varphi^2}{c^2} + \dfrac{2rR\omega\Omega\sin\varphi^2}{c^2}}}$$

$$(2)$$

In general the "inertial force field in the accelerated coordinate system" is in inverse proportion to proper time of each point.

$$\text{inertial force field} = -\frac{dx_\mu}{d\tau} \qquad (3)$$

In the case of the space-time propeller, the sum of inertial forces on each point of wheels is not equal to zero.

It means that all the sum of inertial forces in wheels is never canceled. It is a "relativity effect". We call this phenomenon the "inertial force deviation".

Non-compensated inertial force =

$$= \int_{Volume\,of\,all\,Wheel} -\frac{dx_\mu}{d\tau}dm \neq 0 \qquad (4)$$

The new propulsion force is just a non-compensated inertial force. If we put plus spin on the turntable and minus spin on wheels, we can get directed propulsion.

How many propulsion we can get? We can get 70,000 N propulsion under the following condition. The radius of the turntable and wheels is 1m; linear density of wheels is 10Kg/m, frequency of rotation of turntable and wheels is 16,000 Hz.

The idea of the space-time propeller includes 2 problems. The first one is that we used a rigid body in above discussion. But any terms will not be divergent under the condition that λ in (2) is real. Therefore we can avoid the physical failure in above discussion. The second one is that active matter is unknown. According to above discussion, we can't explain energy-momentum conservation.

We should find an active matter to explain the energy-momentum exchange mechanism. It is natural to think that the active matter is the gravitational wave. It means that the space-time propeller "kicks" the space time like the propeller kicks the air.

To explain that active matter is a gravitational wave, we need to know the structure of space-time inside of