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PSYCHE IS. SUBSTANCE. PHYSICAL FIELD. THEORY OF ASSOCIATION. Part 2. GRAVITATION

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Annotation

The second part of the theory of association, I decided to dedicate one of the most serious clarification of the present, which including one of the biggest mysteries of our time - gravity.

The theme is written in accessible language to be understandable even entry on the reader.

On such important thing in her questions, such as: length of gravitational waves, gravitational frequency vibrations - not found clear answers. Empirically (experimentally) or gravitational wave or graviton not found. In this work, the wavelengths are found which have the property of gravity are given oscillation frequency waves part specified underlying phenomenon of gravity.

For a better understanding of the disclosed matter the reader must first become familiar with the first part of the "Psychic. Matter. Field. Theories of the union", and then begin reading the second part.

Start

Let us first briefly group together the knowledge that we know about gravity at the moment, that is, in 2013godu.

"Gravity (attraction, universal gravitation, gravitation) (Latin gravitas -." Severity ") - is a universal fundamental interaction between all material bodies. In the approximation of low velocities and weak gravitational interaction is described by Newton's theory of gravitation, in the general case described by Einstein's general theory of relativity. Gravity is the weakest of the four types of fundamental interactions. In the quantum limit of the gravitational interaction must be described by quantum theory of gravity, which is not yet fully developed.

In classical mechanics the gravitational interaction is described by Newton's law of gravitation, which states that the force of gravitational attraction between two masses of material points and

separated by a distance proportional to both masses and inversely proportional to the square of the distance.

The law of gravity - an application of the inverse square law, are also found in the study of radiation (eg, pressure of light), and a direct consequence of the quadratic increase in area of a sphere with radius increases, which leads to a quadratic as a decrease in the contribution of any single area in the area of the whole sphere.

It is believed that the gravitational field, as well as the gravity field potential. This means that we can introduce the potential energy of the gravitational pull of a pair of bodies, and this energy will not change after moving the body in a closed circuit. Gravitational potential field entails the law of conservation of kinetic and potential energy, and the amount in the study of motion of bodies in a gravitational field is often greatly simplifies the solution. Within the framework of Newtonian mechanics the gravitational interaction is long-range. This means that no matter how massive body or moved at any point in space, the gravitational potential depends only on the position of the body at any given time.

Large space objects - planets, stars and galaxies have huge mass, and therefore create significant gravitational fields.

It is believed that gravity - the weak interaction. However, since it operates at all distances, and all masses are positive, it is, nevertheless, very important force in the universe. In particular, the electromagnetic interaction between the bodies on a cosmic scale is small, because the total electric charge of these bodies is zero (the whole matter is electrically neutral).

Also gravity, unlike other interactions versatile in operation on all matter and energy. Not found objects that would be absent the gravitational interaction.

Due to the global nature of gravity and is responsible for such a large-scale effects as galaxies, structure, black holes and the expansion of the universe, and of the elementary astronomical phenomena - orbits of the planets, and the simple attraction to the surface of the Earth and falling bodies". http://ru.wikipedia.org/wiki/ gravitation.

Since the gravitational fields of stars much larger gravitational fields of the planets, and the closest star to us is the sun, the focus on the examination of the solar system.

I decided first of all to compare between a perihelion and aphelion of the planets of the solar system.

Data on the perihelion and aphelion of the planets of the solar system are grouped in Table 1 below. Perihelion and aphelion of the planets of the solar system.

Table 1

Perihelion and aphelion of the planets of the solar system *

The name of the heavenly bodies	Perihelion, m	Aphelion, m
Mercury	$4{,}6(\approx 5)\cdot 10^{10}$	$6{,}98\cdot 10^{10}$
Venus	$1{,}07(\approx 1)\cdot 10^{11}$	$1{,}089\cdot 10^{11}$
Earth	$1{,}47(\approx 1{,}5)\cdot 10^{11}$	$1{,}52\cdot 10^{11}$
Mars	$2\cdot 10^{11}$	$2{,}49\cdot 10^{11}$
The asteroid belt **	$3{,}5\ (4\text{- zone core})\cdot 10^{11}$	$4{,}95\cdot 10^{11}$
Jupiter	$7{,}4(\approx 7)\cdot 10^{11}$	$8{,}165\cdot 10^{11}$
Saturn	$1{,}35(\approx 1{,}4)\cdot 10^{12}$	$1{,}513\cdot 10^{12}$
Uranus	$2{,}75(\approx 2{,}8)\cdot 10^{12}$	$3{,}004\cdot 10^{12}$
Neptune	$4{,}45(\approx 4{,}5)\cdot 10^{12}$	$4{,}55\cdot 10^{12}$

* In the table the most interesting figures in the calculations involved in bold blue.

** Asteroid belt is presented as a kind of celestial body.

Thus, in perihelion –
Mercury is located $\approx 5\cdot 10^{10}$ m from the sun.
1. Multiply this distance by 2.
$\approx 5\cdot 10^{10} \times 2 = \approx 1\cdot 10^{11}$ m.
Received a distance equal to the distance between the Sun and Venus!
2. Multiply the last value again at 2.
$\approx 1 \cdot 10^{11} \times 2 = 2 \cdot 10^{11}$ m.

Received a distance equal to the distance from the Sun to Mars!

3. Then multiply this value by 2.

$2 \cdot 10^{11} \times 2 = 4 \cdot 10^{11}$ m.

Received a distance equal to the distance from the Sun to the core of the belt!

4. Now multiply the closest distance from the Sun to the asteroid belt by a factor of 2.

$\approx 3{,}5 \cdot 10^{11} \times 2 \approx 7 \cdot 10^{11}$ m.

Received a distance equal to the distance from the Sun to Jupiter!

5. After this, multiply the resulting number by 2.

$\approx 7 \cdot 10^{11} \times 2 \approx 1{,}4 \cdot 10^{12}$ m.

Received a distance equal to the distance from the Sun to Saturn!

6. Multiply again received the same 2.

$\approx 1{,}4 \cdot 10^{12} \times 2 \approx 2{,}8 \cdot 10^{12}$ m.

Received a distance equal to the distance between the Sun and Uranus!

7. The last value multiply by 1.5.

$\approx 2{,}8 \cdot 10^{12}$ m $\times 2 \approx 4{,}5 \cdot 10^{12}$ m.

We get the distance from the Sun to Neptune.

Calculations related to the Earth, I'm going to miss, but now I will establish justice.

Mentally divide the distance between Venus and Mars exactly in half and put the Earth. The distance from the Sun to the Earth in rounding exactly one and a half times greater than the distance between the Sun and Venus, and the distance from the Sun to Mars and a half times greater than the distance from the Sun to the Earth.

It should be noted that the multiplier of 1.5 is also accompanied and Neptune.

At aphelion, examining table. 1, we see almost the same as a regular change in the distances that at perihelion, with that, so to speak, a small difference, which is caused by the action of waves.

A more convenient size of the perihelion distances are shown in Figure 1

The distances from the planets of the solar system to the Sun at perihelion ($\times 10^{10}$ m).

```
0_5
0__10
0___15
0____20
0_____35–40
0_____70
0_____140
0_____280(≈300)
0_____...450
```
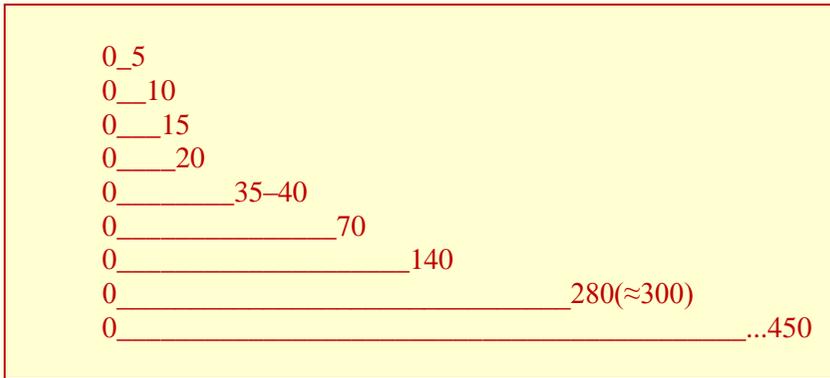
Fig. 1. The distances from the planets of the solar system to the Sun at perihelion ($\times 10^{10}$ m)

Let us analyze. Found previously unknown pattern of building planets of the solar system in the perihelion and aphelion is the fact that each of the subsequent planet after Mercury is from the Sun at a distance equal to the distance from the previous one planet to the Sun, multiplied by a factor 2. The exception is the Earth and Neptune, to which multiplier of 1.5 applied.

This alignment of the planets in the solar system can not be called anything other than as a wave phenomenon.

Imagine that the gravitational field (space) the sun and outer space are identical in their properties and characteristics. We will see mentally Sol-course system in a spherical form (with the Sun at its core). Celestial sphere pla, no solar system can be represented as the wave crests (the beginning of the crest of the planet is equal to perihelion; end - aphelion). The distance from one crest to the next - the wavelength (h).

Let:
the distance from the Sun to Mercury's mid-ridge = h_1,
the distance from the Sun to the beginning of the crest of Mercury = h_{11},
distance from the Sun to the end of the ridge Mercury = h_{12},
the distance from the Sun to the center of Mercury at perihelion = l_{11}
the distance from the Sun to Mercury Center at aphelion = l_{12}

the distance from the middle of Mercury ridge crest until mid-Venus = h_2,
Mercury's distance from the crest of the ridge before the Venus = h_{21},

Mercury's distance from the end of the ridge crest until the end of Venus = h_{22}
the distance from the Sun to the center of Venus at perihelion = l_{21}
the distance from the Sun to the center of Venus at aphelion = l_{22}

distance from the center of Venus ridge crest until mid Earth = h_3,
the distance from the crest of Venus before the crest of the Earth = h_{31},
distance from the end of Venus until the end of the ridge crest of the Earth = h_{32}
distance from the Sun to the center of the Earth at perihelion = l_{31}
distance from the Sun to the center of the Earth at aphelion = l_{32}

distance from the center of the Earth to the middle of the ridge crest Mars = h_4,
the distance from the crest of the Earth before the crest Mars = h_{41},
the distance from the end of the crest of the earth to the end of the crest Mars = h_{42}
the distance from the Sun to the center of Mars at perihelion = l_{41}
the distance from the Sun to the center of Mars at aphelion = l_{42}

the distance from the middle of the crest Mars until the middle of the crest = h5 asteroid belt,
the distance from the crest Mars to the Asteroid Belt beginning ridge = h_{51},
the distance from the end of the crest Mars before the end of the comb belt asteroids = h_{52}
the distance from the Sun to the asteroid belt center at perihelion = l_{51}
the distance from the Sun to the asteroid belt center at aphelion = l_{52}

the distance from the middle of the asteroid belt to the middle of the crest of the ridge of Jupiter = h_6,
the distance from the crest of the asteroid belt before the crest of Jupiter = h_{61},
distance from the end of the asteroid belt to the end of the ridge crest Jupiter = h_{62}
the distance from the Sun to the center of Jupiter at perihelion = l_{61}
the distance from the Sun to the center of Jupiter in aphelion = l_{62}

distance from the center of Jupiter ridge crest until mid-Saturn = h_7,

Jupiter's distance from the crest of the ridge before the start of Saturn = h_{71},

Jupiter's distance from the end of the ridge crest until the end of Saturn = h_{72}

the distance from the Sun to the center of Saturn at perihelion = l_{71}

the distance from the Sun to the center of Saturn at aphelion = l_{72}

distance from the center of Saturn ridge crest until mid Uranus = h_8,

the distance from the crest of Saturn before the crest of Uranus = h_{81},

Saturn's distance from the end of the ridge crest until the end of Uranus = h_{82}

the distance from the Sun to the center of Uranus at perihelion = l_{81}

the distance from the Sun to the center of Uranus at aphelion = l_{82}

the distance from the middle of the ridge crest until mid Uranus Neptune = h_9,

the distance from the crest of Uranus prior to the crest of Neptune = h_{91},

the distance from the end of the crest of the ridge to the end of Uranus Neptune = h_{92},

the distance from the Sun to Neptune Centre at perihelion = l_{91}

the distance from the Sun to Neptune Centre at aphelion = l_{92}

then (in meters):

$l_{21} = 2l_{11} = 1,07(\approx 1)\cdot 10^{11}$; $l_{22} = 2l_{12} = 1,089\cdot 10^{11}$;

$h_{21} = l_{21} - l_{11} = 5\cdot 10^{10}$; $h_{22} = l_{22} - l_{12} = 4(3)\cdot 10^{10}$.

$l_{31} = 1,5l_{21} \approx 1,47\cdot 10^{11}$м ; $l_{32} = 1,5l_{22} = 1,52\cdot 10^{11}$.

$h_{31} = l_{31} - l_{21} = 5\cdot 10^{10}$; $h_{32} = l_{32} - l_{22} = 4(5)\cdot 10^{10}$.

$l_{41} = 1,5l_{31} = 2l_{21} = 2\cdot 10^{11}$; $l_{42} = 1,5l_{32} = 2l_{22} = 2,49\cdot 10^{11}$.

$h_{41} = l_{41} - l_{31} = 5\cdot 10^{10}$; $h_{42} = l_{42} - l_{32} = 10(5)\cdot 10^{10}$;

$l_{51} = 2l_{41} = 3,5\cdot 10^{11}$; $l_{52} = 2l_{42} = 4,95\cdot 10^{11}$;

$h_{51} = l_{51} - l_{41} = 15\cdot 10^{10}$; $h_{52} = l_{52} - l_{42} = 25(20)\cdot 10^{10}$.

$l_{61} = 2l_{51} = 7,4(\approx 7)\cdot 10^{11}$; $l_{62} = 2l_{52} = 8,165\cdot 10^{11}$;

$h_{61} = l_{61} - l_{51} = 35\cdot 10^{10}$; $h_{62} = l_{62} - l_{52} = 32(40)\cdot 10^{10}$.

$l_{71} = 2l_{61} = 1,35(\approx 1,4)\cdot 10^{12}$; $l_{72} = 2l_{62} = 1,513\cdot 10^{12}$;

$h_{71} = l_{71} - l_{61} = 70\cdot 10^{10}$; $h_{72} = l_{72} - l_{62} = 68(70)\cdot 10^{10}$.

$l_{81} = 2l_{71} = 2{,}75(\approx 2{,}8){\cdot}10^{12}$; $l_{82} = 2l_{72} = 3{,}004{\cdot}10^{12}$;
$h_{81} = l_{81} - l_{71} = 140{\cdot}10^{10}$; $h_{82} = l_{82} - l_{72} = 150(150){\cdot}10^{10}$.

$l_{91} = 2l_{81} = 4{,}45(\approx 4{,}5){\cdot}10^{12}$; $l_{92} = 2l_{82} = 4{,}55{\cdot}10^{12}$;
$h_{91} = l_{91} - l_{81} = 170{\cdot}10^{10}$; $h_{82} = l_{82} - l_{72} = 155(150){\cdot}10^{10}$.
The data are grouped in Table. 2, 3.

Table. 2

Gravitational length from the Sun to the planets of the solar system

Radius	The meters	$\times 10^{10}$m	Radius	The meters	$\times 10^{10}$m
l_{11}	$4{,}6(\approx 5){\cdot}10^{10}$	5	l_{12}	$6{,}98{\cdot}10^{10}$	7
l_{21}	$1{,}07(\approx 1){\cdot}10^{11}$	10	l_{22}	$1{,}089{\cdot}10^{11}$	11(10)
l_{31}	$1{,}47(\approx 1{,}5){\cdot}10^{11}$	15	l_{32}	$1{,}52{\cdot}10^{11}$	15(15)
l_{41}	$2{\cdot}10^{11}$	20	l_{42}	$2{,}49{\cdot}10^{11}$	25(20)
l_{51}	$3{,}5{\cdot}10^{11}$	35	l_{52}	$4{,}95{\cdot}10^{11}$	50(40)
l_{61}	$7{,}4(\approx 7){\cdot}10^{11}$	70	l_{62}	$8{,}165{\cdot}10^{11}$	82(80)
l_{71}	$1{,}35(\approx 1{,}4){\cdot}10^{12}$	140	l_{72}	$1{,}513{\cdot}10^{12}$	150(150)
l_{81}	$2{,}75(\approx 2{,}8){\cdot}10^{12}$	280	l_{82}	$3{,}004{\cdot}10^{12}$	300(300)
l_{91}	$4{,}45(\approx 4{,}5){\cdot}10^{12}$	450	l_{92}	$4{,}55{\cdot}10^{12}$	455(450)

Table 3.

The lengths of the ridges of the gravitational field of the sun (the lengths of gravity waves) [meters]

h_{11}	$5{\cdot}10^{10}$	h_{12}	$7{\cdot}10^{10}$
h_{21}	$5{\cdot}10^{10}$	h_{22}	$4(3){\cdot}10^{10}$
h_{31}	$5{\cdot}10^{10}$	h_{32}	$4(5){\cdot}10^{10}$
h_{41}	$5{\cdot}10^{10}$	h_{42}	$10(5){\cdot}10^{10}$
h_{51}	$15{\cdot}10^{10}$	h_{52}	$25(20){\cdot}10^{10}$
h_{61}	$35{\cdot}10^{10}$	h_{62}	$32(40){\cdot}10^{10}$
h_{71}	$70{\cdot}10^{10}$	h_{72}	$68(70){\cdot}10^{10}$
h_{81}	$140{\cdot}10^{10}$	h_{82}	$150(150){\cdot}10^{10}$
h_{91}	$170{\cdot}10^{10}$	h_{92}	$155(150){\cdot}10^{10}$

Conclusion. The length of the gravity waves for terrestrial planets are the same and equal to rounding $5 \cdot 10^{10}$ m to the giant planets of each subsequent remote from the Sun gravity wavelength is the sum of the previous two.. The reason for this phenomenon is that the waves of gravity that holds the terrestrial planets, is not enough space for the spreading of the Kuiper belt, will serve as a tightening hoop, a dam, and the waves, holding the giant planets, have a wider field of action, while Neptune has significantly pushed up the Kuiper belt.

In nature, one of the characteristics of the waves is to change some of its properties, depending on the increase (decrease) in wavelength.

For example, by increasing the oscillation frequency of the sound wave or twice, respectively, by reducing the wavelength of sound in half - pitch is increased by the same amount (in the second case - reduced) called octave.

The wavelengths of the sun's gravitational field also doubled. Naturally, with increasing lengths of the investigated waves decreases their oscillation frequency.

What is striking is that their length is clearly not fit at all well-known ideas about gravity. Scientists are looking for gravitational waves in great lengths trying to quantize them.

But the fact remains: and the waves themselves are not found, and the quantum is not defined.

How can the waves move and hold such a massive body like the planets of the solar system? The explanation lies in the fact that, as has already been said in the first part of the Theory of combining all of the body to a greater or lesser extent, consist of the same field matter - electromagnetically elastic and all space basically consists of waves electromagnetically elastic spectrum.

A similar interacts with similar, with a strong three-dimensional and similar holds less weak and displacement.

The inability to quantization of gravitational waves despite the fact that, as is well known, the properties of gravitational waves similar to those of the electromagnetic, in my opinion, is the following: gravitational waves - this is not a single wave view as such, like optical waves, acoustic bands, etc. Gravitational waves. - a mixture of the known science of waves, the main feature of which is the attraction.

Consider the example of the gravity of the Earth.
29 282.407 km / s around the Sun - Earth's rotation speed.

$$l_{31} = 1,5 \cdot l_{21} \approx 1,47 \, (\approx 1,5) \cdot 10^{11} \text{ m}; \; l_{32} = 1,5 \cdot l_{22} = 1,52 \cdot 10^{11} \text{ m};$$
$$h_{31} = l_{31} - l_{21} = 5 \cdot 10^{10}; \; h_{32} = l_{32} - l_{22} = 4 \, (5) \cdot 10^{10}.$$

Since the properties of the gravitational and electromagnetic waves similar, then by substituting into the formula $\lambda = \upsilon / \nu$ (where: λ - wavelength, ν - the frequency of oscillation, u - velocity) value of the wavelength equal to $5 \cdot 10^{10}$ m, and the speed equal to the speed Earth's rotation around the sun, we get the oscillation frequency equal to $5,964 \cdot 10^{-8}$ Gts.

Since the studied gravity waves generated by the gravitational field of the sun, then multiplying the value of the Earth's rotation rate of the same (we raise it in the square) and substituting the resulting number is equal to 857 459 359.713 649 m in the above formula to determine the wavelength, we obtain the desired value of the oscillation frequency equal to 0.017149187 Hz.

We next consider the range of mental waves, referred to in Part 1 of "Psyche. Matter. Field. The theory of association "(Table 4).

Table 4.

The spectrum of gravitational waves psyche

Wavelength (m)	Oscillation	Frequency ($\times 10^8$ Hz)
$3 \cdot 10^{11} - 3 \cdot 10^9$	Infrasonic oscillations	$10^{-11} - 10^{-9}$
$3 \cdot 10^9 - 3 \cdot 10^7$	Vibrations perceived tactilely	$10^{-9} - 8 \cdot 10^{-7}$
$7.6 \cdot 10^7 - 3.8 \cdot 10^7$	Theta rhythm brain	$8 \cdot 10^{-7} - 4 \cdot 10^{-7}$
$7.6 \cdot 10^7 - 10^4$	Acoustic range	$4 \cdot 10^{-7} - 3 \cdot 10^{-4}$
$10^4 - 10^3$	Kilometer radio	$3 \cdot 10^{-4} - 3 \cdot 10^{-3}$
$10^3 - 10^2$	Medium wave	$3 \cdot 10^{-3} - 3 \cdot 10^{-2}$
$10^2 - 10$	Short wave	$3 \cdot 10^{-2} - 3 \cdot 10^{-1}$
$10 - 1$	Meter waves	$3 \cdot 10^{-1} - 3$
$1 - 10^{-1}$	Microwaves	$3 - 3 \cdot 10$
$10^{-1} - 10^{-2}$	Cm (UHF) waves	$3 \cdot 10 - 3 \cdot 10^2$

$10^{-2} - 10^{-3}$	Millimeter waves	$3\cdot10^2 - 3\cdot10^3$
$10^{-3} - 10^{-4}$	Deci millimeter wave	$3\cdot10^3 - 3\cdot10^4$
$1\cdot10^{-4} - 7.6\cdot10^{-7}$	Infrared radiation	$3\cdot10^4 - 4\cdot10^7$
$7.6\cdot10^{-7} - 3.8\cdot10^{-7}$	Visible light radiation	$4\cdot10^7 - 8\cdot10^7$
$3.8\cdot10^{-7} - 3\cdot10^{-9}$	Ultraviolet radiation	$8\cdot10^7 - 1\cdot10^9$
$3\cdot10^{-9} - 3\cdot10^{-11}$	X-radiatione	$10^9 - 10^{11}$

Wave to the characteristics – wavelength = $5\cdot10^{10}$ m, the oscillation frequency of 0.017149187 Hz – located in the upper part of the spectrum in the spectrum of the psyche "infrasonic vibrations." Immediately I want to clarify that this range may include all known types of science waves with said oscillation frequency. Let me remind you that the energy of the wave, respectively, decreases with decreasing frequency. Therefore, energy-tional gravity waves so hard to find empirically.

Let me remind you that the waves formed by the upper part of the spectrum because of the interaction with electromagnetic-tion, through which the first wavelength increases in proportion to the decrease in their oscillation frequency.

Thus, a gravitational wave – this wave is created by the interaction of electromagnetic and elastic (originally neutral) wave spectrum psyche. Because at the heart of this creation is the principle of attraction and repulsion of opposite-as well as in the compound of a neutron and a proton, the main feature of the new wave is the attraction, which can be called gravity.

In view of the above, as well as due to the fact that the cause of the disturbance of gravitational waves psyche is the universal gravitational mental field of the Sun, the mental gravitational waves have different lengths, are extended on the Wave Principle, within the range of the mind and act as part of the electromagnetic and partly mechanical.

Vorobieva Irina Vladimirovna – an engineer-physicist, member of the Russian Physical Society, International, Fellow at the Center planetary geostructures Russian Physical Society, the author of the theory of ***"Matter of the psyche (the matter of the soul) as a fundamental condition of substance (world ether)"***, the main provisions of which were published in the article "Mind. Matter. Field. The theory of association" in the book "Reports Russian Physical Society, 2012, Part 3" (ERM. Volume 16)