Resonances of vacuum structure

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The fact of expenditure of quant energy 1,022 МэВ on formation electron and a positron [1] is well known. This fact is used for detection of structure of vacuum [2]. It is possible to assume, that the quant of radiation gets on one of the main resonances of structure. It follows from comparison of frequency of radiation which is in the table of radiations in « the Physical Encyclopedia » [3]:
Table 1.

2.48935e+020 *Hz* **Frequency of radiation**	1.2043e-012 m. **Length of a wave of radiation**	Soft radiation	The raised kernels, nuclear reactions	$c = \sqrt{\dfrac{b_{cros}}{p}}$

In the book [2] the role of product of number «pi» on a constant of thin structure of radiation 137, 0359998 in the different physical phenomena, and also in the structure of vacuum was repeatedly marked. For example, if we have taken length of a wave from the table and we shall divide on product $2\pi\alpha^{-1}$ of we shall receive the basic length of structure of vacuum **r_e=1.39876288e-15** *meter*. This concurrence allows finding a way of research of resonances of structure, believing in frequency of radiation by the first resonance in structure. A primary factor in the given research we accept size of $2\pi\alpha^{-1}$. Let's act formally, believing, that the divider is defined by a degree «n» as $(2\pi\alpha^{-1})^n$. The result is placed in the table:
Table 2.

| **n**	Divider	The size, *м*	Frequency, *Hz*	
0	$(2\pi\alpha^{-1})^0 = 1$	**1.39868573e-15**	**2.143386560e+023**	c/r_e =2.1433868e+23
1	$(2\pi\alpha^{-1})$	**1.2043e-012**	**2.48935e+020**	Soft radiation
2	$(2\pi\alpha^{-1})^2$	**1.036929623e-009**	**2.89115530390e+017**	Visible light
3	$(2\pi\alpha^{-1})^3$	**8.928198195483e-007**	**3.357815892549e+014**	
4	$(2\pi\alpha^{-1})^4$	**7.68738024751e-004**	**3.899800039465e+011**	
5	$(2\pi\alpha^{-1})^5$	**0.66190079762898**	**4.529265699635e+008**	Radio emission
6	$(2\pi\alpha^{-1})^6$	**5.69912e+002**	**5.260033240241e+005**	
7	$(2\pi\alpha^{-1})^7$	**4.907066982e+005**	**6.1094021931e+002**	The phenomena on the Earth
8	$(2\pi\alpha^{-1})^8$	**4.22509547602e+008**	**0.70955191338946**	Wave of gravitation?
9	$(2\pi\alpha^{-1})^9$	**3.63790261e+011**	**8.2408049410e-004**	Wave of gravitation?
10	$(2\pi\alpha^{-1})^{10}$	**3.132316291e+014**	**9.570951017764e-007**	The phenomena in Solar system
11	$(2\pi\alpha^{-1})^{11}$	**2.6969951e+017**	**1.111579561e-009**	The phenomena in Solar system системе

The table of resonances in Solar system:

Table 3.

Planets	Frequency of rotation, *Hz*	The attitude of frequency of rotation of planets to frequency of a rhythm of space in Solar system **9.5709510e-7** and **1.111579561e-009** *Hz*.
Mercury	**1.31568422e-007**	**0.13747**
Venus	**5.083036484e-008**	**0.05311**
The Earth	**3.1683751e-008**	**0.03310**
Mars	**1.68477599e-008**	**0.01760**
Upiter	**1.488435452e-008**	**13.390333**
Saturn	**8.116461e-009**	**7.30174**
Uranium	**4.0351686e-009**	**3.63012**
The neptune	**2.5752785e-009**	**2.31677**

The comment to table 3. The terrestrial group on frequency of rotation around of the Sun gravitates to a resonance of structure of vacuum with frequency **9.5709510e-7** *Hz* and settles down on a low-frequency slope of a resonance. The group of gas giants gravitates to a resonance with frequency **1.111579561e-009** *Hz,* but settles down on it more high frequency slope.

Below is a formal conclusion of illustrations for definition of lines of a resonance.

Amplitude of resonant frequencies

Амплитуда резонансов структуры

n, - степень при 2pi*137,036
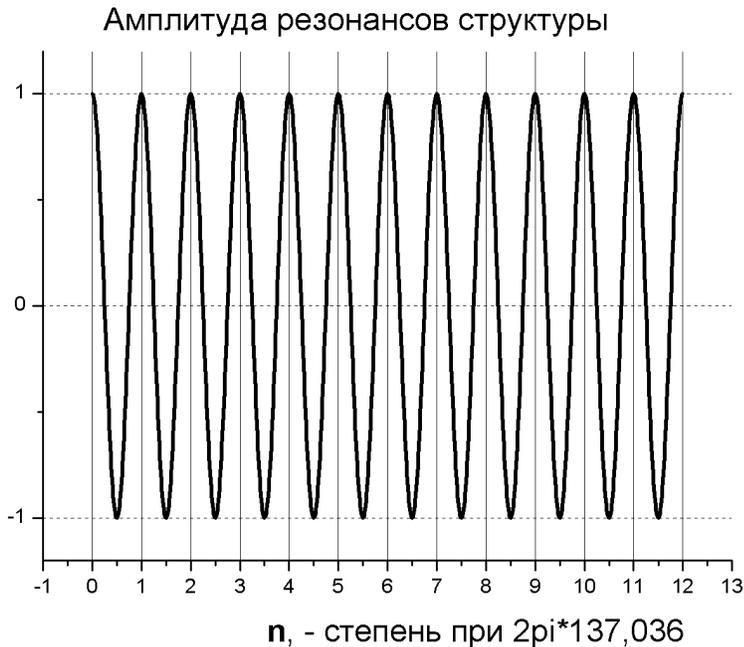
The problem of essence of resonances is not simple. Unfortunately, in the physicist there are no data for its decision. There are experiences which can be used as indirect acknowledgement of presence of resonances. Already more than 15 years are spent works by S.M. Godin and V.V. Roschin [4] under the scheme « John Serla's disks ». In Roschin- Godin installation by smooth increase in speed

of rotation of a rotor and rollers of stator the moment when rotation does not demand an expense of the electric power is reached and rotation automatically proceeds with insignificant acceleration. Process reminds the resonant phenomenon. Authors consider as its display of the unknown magnetic phenomena. What is the frequency 6.10940219e+2 Hz for the phenomena on the Earth? In one of variants of the reason of Roschin- Godin on the Internet the phrase that diameter of rollers in initial experience was multiple 4 has got. If we shall divide frequency 6.10940219e+2 Hz on 4^3 we shall receive frequency of turns of a rotor as 9.1667 Hz, equal to the accepted calculation of turns a minute 550, divided on 60. Now the difference of diameter of a rotor and a roller makes 15, instead of, for example, 16. New installation is not started yet in work.

Cited data as though testify in favor of existence of resonant frequencies of structure of vacuum, but without "mechanism" of these resonances remain only as a fruit of imagination or intuition.

Speed of light is $c = \sqrt{\dfrac{b_{cros}}{p}} = 299792458[m.s^{-1}]$. The module of shift of structure of vacuum is $b_{cros} = 8,79591 \cdot 10^{29}$. Analogue of density of structure of vacuum is equal $p = 9,786796 \cdot 10^{12}$. By means of these characteristics of structure of vacuum it is found out the main frequency shown in table 2, the first line where speed of light shares on the main linear element of structure. Possibly, all "mechanism" of a spectrum of the main frequencies of structure of vacuum is connected with analogue of density and the module of shift and speed of light. The structure has received one more unexpected argument in its validity.

The literature

1. Karjakin N.I., etc. the Brief directory on the physicist, M.: Super School, 1964, 550 pp.
2. Rykov A.V. Vacuum and substance of the Universe, M.: Изд. "Restart", 2007, 160 pp.
3. The Physical encyclopedia, Ред. Prohorov A.M., БРЭ, 98, 750 pp.
4. Godin S.M. , Roschin V.V. Experimental research of physical effects in dynamic magnetic system, Letters in ЖТФ, Т.26, №24, 2000, 70-75 p.