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Abstracts and the descriptions of works in
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Abstracts and the descriptions of works in Art and Science submitted to www.IntellectualArchive.com in November 2012

ID #: 964   **Literature / Internet articles / Analysis of literature**

Submitted on: Nov 01, 2012

Author: **Yuri N. Klimov**

Title: **Length of words and frequency of words in the text "Heroij nachego vremeni" Ðœ.Yu. Lermontovs: "Fatalist"**

Abstract: The total of words in product is made 1445, and with their frequency - 2682, calculated on work [1]. The increase of quantity of words in dynamics goes since length of a word from 16 up to 6 letters, then one letter falls till length of a word. Frequency of words grows from 16 till 15 lengths of words, and then from 14 letters up to 6 letters, then falls till length of a word three letters, grows till length of a word two letters and one letter falls till length of a word. Dependence of quantity of words on frequency is submitted by a parabola with relative speed of quantity of words from frequency 1,5475. Dependence of frequency of words on their length also is described by a parabola with relative speed of frequency of words from length of words 2,1693. Dependence of cumulative quantity of words on cumulative frequency is submitted to a S-shaped curve with relative speed of cumulative quantity of words from cumulative frequency 2,7549 which can serve as the characteristic of the text. Dependence of the logarithm of lengths of words on the logarithm of cumulative frequency is approximated by polynoms of the second and third degree with high factors of plural correlation. Dependence of the logarithm of cumulative quantity of words and cumulative frequency of words on the logarithm of length of words is described by polynoms of the second and third degrees. Dependence of the logarithm cumulative frequencies of words from the logarithm of length of words is described by linear model, a polynoms of the second and third degrees and logarithmic model. Dependence of the logarithm of length of words on the logarithm of cumulative frequency is described by polynoms of the second and third degrees. Thus the average logarithmic length of a word depending on a kind of the equation changes from 2,5945 up to 3,4443. Dependence of the logarithm of lengths of words on the logarithm of cumulative quantity of words has the same values. As well as in previous our researches with reduction of length of words the increase of their frequency up to the certain limit is observed. At reduction of the cumulative data the logarithm imposing curve logarithms of frequency and logarithms of quantity of words up to the certain limit is observed, and then there is a prevalence of a curve of logarithms of frequency over a curve of logarithms of quantity of words. As well as in previous our researches with reduction of length of words the increase of their frequency up to the certain limit is observed. At reduction of the cumulative data the logarithm imposing curve logarithms of frequency and logarithms of quantity of words up to the certain limit is observed, and then there is a prevalence of a curve of logarithms of frequency over a curve of logarithms of quantity of words [2-3].

Keywords: quantity of words, frequency of words, length of words, dynamics of quantity of words, dynamics of length of words, average length of words, cumulative quantity of words, cumulative frequency of words, modeling, linear dependence, sedate dependence, logarithmic dependence, polynoms of the second degree, polynoms of the third degree

Web link: *www.IntellectualArchive.com/getfile.php?file=hf4v7EKabUs&orig_file=Length of words and frequency of words in the text _FATALIST_IA_.docx*

ID #: 965   **Natural Sciences / Physics / Particle physics**

Submitted on: Nov 01, 2012

Author: **Ervin Goldfain**

Title:

Abstract: The Standard Model for particle physics (SM) is a nonlinear field theory in which both Yang-Mills and Higgs bosons are self-interacting objects. Their classical or quantum evolution is inevitably sensitive to the transition from order to chaos. With some noteworthy exceptions, the mainstream of theoretical particle physics has ignored the dynamical contribution of chaos in Quantum Field Theory. Here we point out that quantum corrections to the classical interaction of the Higgs with gauge bosons may lower the threshold for the onset of chaos and destabilize the vacuum in the low or intermediate TeV scale. The inability of the vacuum to survive in this energy region hints to a straightforward solution for the fine-tuning problem. It also implies that perturbative estimates on vacuum stability well above the LHC scale are likely to be invalid.

ID #: 966   Literature / Internet articles / Analysis of literature

Submitted on: Nov 05, 2012

Author: Yuri N. Klimov

Title: **Length of words and frequency of words in the text Ðœ.Yu. Lermontovs: "Mzyri"**

Abstract: The total of words in product is made 1854, and with their frequency - 3433, calculated on a technique [1]. The increase of quantity of words in dynamics goes since length of a word 15 and up to 5 letters, and then falls till length of one letter. Frequency of words grows since length of a word of 15 letters up to 5 letters, then falls till length of four letters, grows till length of three letters and falls till length of two letters and grows till length of one letter. Dependence of quantity of words on frequency is submitted by a parabola with relative speed of quantity of words 1,8460. Dependence of frequency of words and their quantities from length of words is submitted by a parabola with relative speed of frequency of words 2,507 and with relative speed of quantity of words 1,8460. Therefore all experimental data are given to cumulate and submitted as logarithms. Dependence of cumulative quantity of words on their cumulative frequency is described by a S-shaped curve with relative speed of cumulative number of words 2,9807 which differs from dependence of quantity of words on frequency in 1,62 times and described by sedate model, polynoms of the third and second degrees. Dependences of logarithms cumulative quantities of words from the logarithm of cumulative frequency have relative speed of cumulative quantity of words 0,8963. Dependences of logarithms of cumulative frequencies on the logarithm cumulative quantities of words are described by relative speed of cumulative frequencies 0,9186. In dependence of the logarithm of length of words on the logarithm of cumulative frequency the average logarithmic length of a word from a kind of the equation changes from 2,5366 up to 3,3509, that is this size not a constant.
Keywords: quantity of words, frequency of words, length of words, dynamics of quantity of words, dynamics of length of words, average length of words, cumulative quantity of words, cumulative frequency of words, modeling, linear dependence, sedate dependence, logarithmic dependence, polynoms of the second degree, polynoms of the third degree

ID #: 967   Natural Sciences / Chemistry / Pharmacy

Submitted on: Nov 05, 2012

Author: Parchenko V.V., Panasenko O.I., Knish E.G.

Title: **SYNTHESIS, PHYSICAL and chemical PROPERTIES of SOME Derivatives 1,2,4-triazolo-(3,4-b)-1,3,4-THIODIAZINE WITH RESIDUE OF FRAGMENTS OF FURAN**

Abstract: The row of new derivatives of 1,2,4-triazolo-(3,4-b)-1,3,4-thiodiazine is synthesized with residues of fragments of furan nucleus. The structure of new potential bioactive compounds is confirmed by modern physical and chemical methods.

ID #: 969   Literature / Internet articles / Analysis of literature

Submitted on: Nov 12, 2012

Author: Yuri N. Klimov

Title: **Length of words and frequency of words in the text "Velesova kniga"**

Abstract: The total of words in " Velesova kniga " is made 4559, and with their frequency - 17356 by a technique [1]. Dependence of length of words on frequency, quantity of words on frequency, frequencies of words from length of words, cumulative quantity of words from their cumulative frequency, logarithms of lengths of words from the logarithm of frequency, the logarithm of length of words from the logarithm of cumulative quantity of words and dependence of the logarithm of cumulative quantity of words on the logarithm of length of words are investigated. For reception of adequate mathematical dependences experimental data resulted to cumulate and represented as logarithms. It is shown, that the length of a word is inversely proportional to its frequency, cumulative frequency, cumulative quantity of words and logarithms: frequencies of words, cumulative quantity of words and cumulative frequency of words. Specified to dependence corresponded to the linear, logarithmic equations and polynoms of the second and third degrees. Relative speed on sedate

dependence for the given dependences can be positive or negative and serves for an estimation of the concrete text.

Keywords: quantity of words, frequency of words, length of words, dynamics of quantity of words, dynamics of length of words, average length of words, cumulative quantity of words, cumulative frequency of words, modeling, linear dependence, sedate dependence, logarithmic dependence, polynoms of the second degree, polynoms of the third degree

Web link: *www.IntellectualArchive.com/getfile.php?file=jh5iPwf39ml&orig_file=Length of words and frequency of words in the text. VK_1_IAdocx.docx*

ID #: 970   **Natural Sciences / Astronomy / Astrodynamics**

Submitted on: Nov 12, 2012

Author: **Sedelnikov A.V.**

Title: **MICROACCELERATIONS AS A FACTOR OF COSMIC SPACE**

Abstract: This paper considers microaccelerations as an inalienable factor of circumterrestrial cosmic space; it represents the author's classification of microaccelerations and peculiarities of microaccelerations as an object of research.

Web link: *www.IntellectualArchive.com/getfile.php?file=YJLl2vMpoDr&orig_file=МикроускорениÑ ÐºÐ¾Ñ€ÐµÐ½Ð Ñ 1пер.doc*

ID #: 971   **Natural Sciences / Physics / Quantum field theory**

Submitted on: Nov 14, 2012

Author: **Gary Heen**

Title: **Space-time as an Expanded State of Matter with a Physical Structure Interpreted as Simultaneously Exhibiting 10, 11, or 26 Dimensions**

Abstract: The model of this paper presupposes that space-time is not a mathematical abstraction, but that space-time is an expanded state of matter. The fundamental quantum of matter is designated the S-brane, (for String/D-brane complex). The S-brane quanta of particle matter and space-time differ from one another only in the volumetric state of the S-brane. It is demonstrated how the S-brane is be mathematically interpreted as 10-dimensional, 11-dimensional, or 26-dimensional. The relationship of the S-brane quanta to Planck's natural constants is shown, and a mathematical argument is presented demonstrating the conversion of space-time into particle matter.

Web link: *www.IntellectualArchive.com/getfile.php?file=kLoR8j634it&orig_file=Space-time as an Expanded State of Matter with a Physical Structure Interpreted as Simultaneously Exhibiting 10, 11, or 26 Dimensions.doc*

ID #: 973   **Literature / Internet articles / Analysis of literature**

Submitted on: Nov 15, 2012

Author: **Yuri N. Klimov**

Title: **Length of words and frequency of words in verses of the poet of the beginning of XX century of M. A. Kuzmins**

Abstract: The total number of words in M.A.Kuzmin`s poems [1] is made 698, and with their frequency - 982 by a technique [2]. Dependence of length of words on frequency, quantity of words on frequency, frequencies of words from length of words, cumulative quantity of words from their cumulative frequency, logarithms of lengths of words from the logarithm of frequency, the logarithm of length of words from the logarithm of cumulative quantity of words and the logarithm of cumulative quantity of words from the logarithm of length of words are investigated. For reception of adequate mathematical dependences experimental data resulted to cumulate and represented as logarithms. It is shown, that the length of a word is inversely proportional to its frequency, cumulative frequency, cumulative quantity of words and logarithms: frequencies of words, cumulative quantity of words and cumulative frequency of words. The specified dependences investigated on the linear, sedate, logarithmic equations and polynoms of the second and third degrees. Relative speed in the sedate equation for the given dependences can be positive or negative and serves for an estimation of the concrete text. Logarithms of lengths of words are various and logarithms of frequency of words - from 1,0986 up to 4,4308, logarithms of quantity of words - from 1,0986 up to 2,6391, cumulative frequency - from 1,0986 up to 6,8895 and cumulative quantity of words - from 1,0986 up to 6,5482 change from 2,5649 up to 0. That is curve dependences of cumulative frequency and cumulative quantity of words on their length will be imposed against each other till length of a word equal 7, and

then the plug is formed: the curve of cumulative frequency will lay above a curve of cumulative quantity of words.

Keywords: quantity of words, frequency of words, length of words, dynamics of quantity of words, dynamics of length of words, average length of words, cumulative quantity of words, cumulative frequency of words, modeling, linear dependence, sedate dependence, logarithmic dependence, polynoms of the second degree, polynoms of the third degree.

Web link: *www.IntellectualArchive.com/getfile.php?file=ZnOmtAwDLgP&orig_file=Length of words and frequency of M. A. KUZMIN _IA_docx.docx*

ID #: 974   **Natural Sciences / Mathematics / Calculus / Analysis**

Submitted on: Nov 16, 2012

Author: **Yilun Shang**

Title: **A note on the length of maximal arithmetic progressions in random subsets**

Abstract: Let $U^{(n)}$ denote the maximal length arithmetic progression in a non-uniform random subset of $\{0,1\}^n$, where 1 appears with probability p_n. By using dependency graph and Stein-Chen method, we show that $U^{(n)}-c_n\ln n$ converges in law to an extreme type distribution with $\ln p_n=-2/c_n$. Similar result holds for $W^{(n)}$, the maximal length aperiodic arithmetic progression (mod n).

Web link: *www.IntellectualArchive.com/getfile.php?file=6baiENCOKeA&orig_file=a note on the length of maximal arithmetic progressions in random subsets.pdf*

ID #: 975   **Literature / Internet articles / Analysis of literature**

Submitted on: Nov 20, 2012

Author: **Yuri N. Klimov**

Title: **Ranking distribution of lengths of words, frequencies and quantities of words in poems of the poet of the beginning of XX century of M.A. Kuzmin**

Abstract: The total of words in M.A.Kuzmin`s poems [1] is made 698, and with their frequency - 982 by a technique [2] with the general number of ranks 3905. The cumulative length of a word has made 3905, and cumulative frequency - 982. Are investigated ranking distributions: the logarithm of lengths of words from the logarithm of a rank of the logarithm of length of a word from the logarithm of cumulative frequency, the logarithm of length of a word from the logarithm of cumulative length of a word, the logarithm of cumulative length of a word from the logarithm of a rank, and also distribution of the logarithm of cumulative frequency of a word from the logarithm of a rank, the logarithm of cumulative length of a word from the logarithm of length of words and dependence of the logarithm of cumulative length of a word on frequency. For reception of adequate mathematical dependences experimental data resulted to ДºÑƒÐ¼ÑƒÐ»Ñ Ñ‚Ðµ and represented as logarithms. It is shown, that the length of a word is inversely proportional to its frequency, cumulative frequency, cumulative quantity of words and logarithms: Frequencies of words, cumulative quantity of words and cumulative frequency of words. The specified dependences investigated on the linear, sedate, logarithmic equations and polynoms of the second and third degrees. Dependences of the logarithm of lengths of words on the logarithm of a rank and dependence of the logarithm of length of a word on the logarithm of cumulative length of a word are described by the identical equations. Dependence of the logarithm of length of a word on the logarithm of cumulative frequency is described by polynoms of the second and third degrees with average length of a word on the linear equation 2.3516. Dependence of the logarithm of cumulative length of a word on the logarithm of a rank is submitted by the sedate equation, polynoms of the third degree and the logarithmic equation with average cumulative length of a word on the linear equation 6,4043 and relative speed of cumulative length of a word on the sedate equation 0,1243. Dependence of the logarithm of cumulative frequency of a word on the logarithm of a rank polynoms of the third degree and the logarithmic equation with average cumulative length of a word on the linear equation 4,0658. Dependence of the logarithm of cumulative length of a word on the logarithm of length of words and dependence of the logarithm of cumulative length of a word on frequency are approximated by the identical equations: a polynom of the second degree, the sedate equation and a polynom of the third degree with average cumulative frequency on the linear equation 6,4043 and relative speed of cumulative length of words 0,1243. Relative speed in sedate dependence for the given dependences can be positive or negative and serves for an estimation of the concrete text. Logarithms of lengths of words change from 2,5649 up to 0, logarithms of frequency of words - from 1,0986 up to 4,4308, logarithms of quantity of words - 1,0986 up to 2,6391, cumulative frequency-1,0986 up to 6,8895 and cumulative quantity(amount) of words - from 1,0986 up to 6,5482. At ranking distribution curves of logarithms of cumulative frequency and logarithms of cumulative quantity of words from logarithms of length will not be

imposed against each other and the curve of logarithms of cumulative quantity of words will be is above a curve of cumulative frequency

Web link: *www.IntellectualArchive.com/getfile.php?file=9JFw6LLIPLI&orig_file=Ranking distribution of lengths of words.MAK_IA_docx.docx*

ID #: 976   **Natural Sciences / Mathematics / Topology**

Submitted on: Nov 23, 2012

Author: **Alexander A. Ermolitski**

Title: **On the generalized Poincare conjecture**

Abstract: Using our proof of the Poincare conjecture in dimension three and the method of mathematical induction a short and transparent proof of the generalized Poincare conjecture (the main theorem below) has been obtained.

Web link: *www.IntellectualArchive.com/getfile.php?file=ImMhM7f2Zww&orig_file=Ermolitski_GPC.pdf*

ID #: 977   **Literature / Internet articles / Analysis of literature**

Submitted on: Nov 25, 2012

Author: **Yuri N. Klimov**

Title: **Dependence of lengths of words on frequency and quantity of words in Psaltir**

Abstract: The total of words in Psaltir [1] is made 9718, and with their frequency - 55748 by a technique [2]. Quantities of words, logarithms of lengths of words from the logarithm of frequency, the logarithm of length of words from the logarithm cumulative frequencies, the logarithm of length of words from the logarithm of quantity of words and the logarithm of length of words from the logarithm of cumulative quantity of words are investigated dependence of length of words, since the greatest size, from frequency. For reception of adequate mathematical dependences experimental data resulted to cumulate and represented as logarithms. It is shown, that the length of a word is inversely proportional to its frequency, cumulative frequency, cumulative quantity of words and logarithms: frequencies of words, cumulative quantity of words and cumulative frequency of words. The specified dependences investigated on the linear, sedate, logarithmic equations and polynoms of the second and third degrees. Relative speed in sedate dependence in the given equations can be positive or negative and serves for an estimation of the concrete text. Logarithms of frequency are increased with reduction of length of words from 1,0986 up to 6,9275, the logarithm of quantity of words - from 1,0986 up to 3,5835, the logarithm of cumulative frequency - from 1,0986 up to 10,9290 and the logarithm of cumulative quantity of words - 1,0986 up to 9,1817. Thus the logarithm of length of words falls from 2,7726 up to 0. That is curves of logarithms of cumulative frequency and logarithms of cumulative quantity of words from the logarithm of length of words will be imposed against each other up to the logarithm of length of a word equal 2,7081, and then the plug is formed: the curve of the logarithm of cumulative frequency will lay above a curve of the logarithm of cumulative quantity of words.

Web link: *www.IntellectualArchive.com/getfile.php?file=gRJOj5wXXHc&orig_file=Dependence of lengths of words on frequency and quantity of words in Psaltir_IA_.docx*

ID #: 978   **Natural Sciences / Physics / Particle physics**

Submitted on: Nov 26, 2012

Author: **Miroslav Pardy**

Title: **Electron spin motion in the delta-function pulse**

Abstract: We formulate the Bargman-Michel-Telegdi (BMT) equation for electron spin motion in a plane wave and in the Dirac delta-function pulse. We compare the BMT

solution with the Wolkow solution of the Dirac equation. The Wolkow solution for the spin is not identical with the solution following from the BMT .

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ID #: 980   **Literature / Internet articles / Analysis of literature**

Submitted on: Nov 27, 2012

Author: **Yuri N. Klimov**

Title: **Dependence of frequency on lengths of words and their quantities in Psaltir**

Abstract: The total of words in Psaltir [1] is made 9718, and with their frequency - 55748 by a technique [2]. Dependences of frequency of words on their quantity, on their length, since the greatest size, the logarithm of frequency of words from the logarithm of lengths of words, since the greatest size and the logarithm of cumulative frequency of words from the logarithm of their cumulative quantity are investigated. For reception of adequate mathematical dependences experimental data resulted to cumulate and represented as logarithms. It is shown, that frequency of a word is inversely proportional to its length, the logarithm of lengths of words and proportional to cumulative frequency, cumulative quantity of words, logarithms: frequencies of words, quantities of words, cumulative quantity of words and cumulative frequency of words. The specified dependences investigated on the linear, sedate, logarithmic equations and polynoms of the second and third degrees. Relative speed in sedate dependence for the given dependences can be positive or negative and serves for an estimation of the concrete text. Logarithms of frequency are increased with reduction of length of words from 1,0986 up to 6,92756, the logarithm of quantity of words - from 1,0986 up to 3,5835, the logarithm of cumulative frequency - from 1,0986 up to 10,929 and the logarithm of cumulative quantity of words - 1,0986 up to 9,1817. Thus the logarithm of length of words falls 2,7726 from up to 0. That is curves of logarithms of cumulative frequency and logarithms of cumulative quantity of words from the logarithm of length of words will be imposed against each other up to the logarithm of length of a word equal 2,7081, and then the plug is formed: the curve of the logarithm of cumulative frequency will lay above a curve of the logarithm of cumulative quantity(amount) of words. Keywords: quantity of words, frequency of words, length of words, dynamics of quantity of words, average length of words, cumulative quan

Web link: *www.IntellectualArchive.com/getfile.php?file=bnwuNcbQKhO&orig_file=Dependence of frequency on lengths of words and their quantities in Psaltir_IA.docx*

ID #: 981   **Natural Sciences / Mathematics / Geometry**

Submitted on: Nov 29, 2012

Author: **Alexander Krasulin**

Title: **Five-Dimensional Tangent Vectors in Space-Time: VI. Bivector Derivative and Its Application**

Abstract: In this concluding part of the series I first consider the bivector derivative for four-vector and four-tensor fields in the case of arbitrary Riemannian geometry. I then define this derivative for five-vector and five-tensor fields, examine the bivector analogs of the Riemann tensor, and introduce the notion of the commutator for the fields of five-vector bivectors. After that I examine a more general case of five-vector affine connection, introduce the five-vector analog of the curvature tensor, discuss the canonical stress-energy and angular momentum tensors corresponding to the five-vector covariant derivative, and consider a possible five-vector generalization of the Einstein and Kibble-Sciama equations. In conclusion, I introduce the notion of the bivector derivative for the fields of nonspacetime vectors and tensors, consider the corresponding gauge fields and their properties, and derive a possible generalization of Maxwell`s equation.

Web link: *www.IntellectualArchive.com/getfile.php?file=GLt2UiLG8SQ&orig_file=5D_tangent_vectors_Part_6.pdf*

End of November 2012 bulletin