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Introduce the {0 to 1} analysis of group combination-circle logarithm in vortex space-time

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Abstract Introduce a new discovery in mathematics: the concept of group combination-circle logarithm. Each element of the group combination is not repetitively combined. The set has integer, reciprocal asymmetry, including probability-topology-central zero, the logarithm of the base of the quadratic circular function, and the boundary and central zero can be synchronized, movable, Superimposable and deformable five-dimensional vortex spiral dynamic time and space. Feature: The group combination converts asymmetry into a characteristic mode, and then into an irrelevant mathematical model circle logarithm, which is accurately analyzed in {0 to 1} arithmetic with zero error, and becomes a high-order calculus equation that can be repeatedly verified and calculated. Called circle logarithm algorithm. It can explain many physical phenomena, mathematical viewpoints, and new computer algorithms. Examples include simple digital simulation of gravitation, electromagnetic force, and cosmic equation discussion and calculation, which are consistent with the results of astronomical observations and engineering experiments.
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1 Introduction

What is the world? Countless scientists and mathematicians have said that "human beings are reluctant to track the unknown." Among them are the mathematicians Qin Jiushao and Wang Wensu of the Han Dynasty for more than 2000 years, and the modern Western mathematicians Gauss, Euler, Newton, etc., who established the "mathematical statistics and analysis" method to form the "mathematics world". After decades of hard work, the author discovered a new mathematical rule through numerous mathematical proofs and verifications: the circle logarithm algorithm, and successfully proved that "the world is a five-dimensional spiral space-time of'mass-space-time'. Belonging to low-dimensional three-dimensional space-time", which is consistent with the astronomical observations of physics, high-energy particle experiments, classical mechanics (including Einstein-Newton gravity), Maxwell's electromagnetic force, thermodynamics, optical mechanics formulas, and even nuclear mechanics in modern physics. Compatible mathematical models can be uniformly converted into logarithms of irrelevant mathematical models, "from 0 to 1" arithmetic and accurate analysis with zero error".

This new discovery of mathematics, the core idea: "On the basis of the concept of'group combination', the elements are combined without repetition to obtain an integer expansion, which is resolved into two asymmetry functions through the central zero point, and the asymmetry function is transformed by the logarithm of the circle. Convert it into a relative symmetry function, and perform an arithmetic accurate analysis of {0 to 1} with zero error".

Why "arithmetic" analysis? Due to the different viewpoints of various schools of mathematics, multiple symbols, complex models, and inconvenient application. Mathematicians expect the unification of mathematics. There is an internationally recognized unspoken rule: the analysis method must return to the most primitive, uncontroversial, and easily accepted arithmetic symbol-"addition, subtraction, multiplication, division, and exponentiation", a rigorous mathematical logic analysis method.

In this way, the calculus sign is not counted, the logical algebra sign is not counted, and the computer method proves the four-color theorem. A representative one is a series of conjectures put forward by the American mathematician Langlands in 1967, "the algebra-geometry-number theory (arithmetic)-group theory is unified and described by a simple formula", which is called the "Langlands Program." This is an internationally recognized mathematical problem with great influence. It is said to be "the last and most difficult rule of nature that has not yet been discovered by mankind." Many countries and research institutions have invested a lot of manpower, material resources, and financial resources, but have not yet achieved satisfactory results.

The core idea of "group combination-circle logarithm": expand from the traditional "single variable" to the concept of "group combination variable": "convert asymmetry into relative symmetry, and then into an irrelevant mathematical model circle logarithm, in {0 To 1} arithmetically accurate analysis with zero error".

The {0 to 1} circle logarithm concept is not a "single (complex) variable", but a "group combination". The {0 to 1} concept uses "probability circle logarithm, topological circle logarithm, The logarithm of the circle of the center zero point", the uncertainty group is combined with each element to accurately solve each root element one by one with zero error. Obtain the advantages of verifiable, calculable, and widely applicable.

History has brought together the outstanding achievements of many mathematicians from ancient and modern times. It has expanded from "single (complex) variables" to "group combination variables and circle logarithm algorithms", reflecting the substantial progress made in contemporary mathematics.

The circle logarithm is not only a summary of an algorithm, but also a new discovery and application of a new mathematical foundation. In order to cooperate with readers' understanding and exploration, here are some popular science explanations and some simple and important proofs. (The proof is explained in another monograph).

2. What is the group combination-circle logarithm?

2.1.1, expand from single variable to group combination variable

(1) The concept of "single (complex) variable" in traditional mathematics is expressed as "a known variable corresponds to a known variable", which is called "single (complex) variable", which has symmetry. The typical one is "Calculus Univariate Table", which is recorded in the "Manual of Mathematics". There are "univariate-discrete calculations (such as big data statistics) in engineering applications. However, univariate calculations are not suitable for multivariate calculations (such as neural networks, gravitational equations, artificial intelligence, high-order calculus equations, etc.). At present, this aspect There are no good algorithms. Most of them use complex mathematical modeling, rely on the powerful computing power of computers, and apply the "error approximation" method. The mathematical logic of this algorithm is not strong and its application is limited.

(2) The mathematical expression of the concept of circle logarithm "group combination" is "a known group combination variable corresponds to a known group combination variable", multiple elements within the group combination such as $\{x\}=\Sigma_{(i=S\pm q)}\prod_{(i=q)}(x_1,x_2,\ldots,x_q)$, $(x_1\neq x_2\neq\ldots\neq x_q)$, the non-repetitive combination set is called "group combination". Among them, the elements have mutual entanglement, and they can also be combined discretely. The change of one element within the group combination entangled element not only involves the change of other elements in the group, but also has the overall change of the group combination, which is asymmetry. In physics, Heisenberg called "uncertainty". Here, the logarithm of the circle converts the asymmetry to the relative symmetry and ensures the integer expansion of the power function.

The so-called "group combination" is connected with the combination coefficient and becomes the average value of the positive, medium and inverse power functions, which is called the characteristic mode. Similar and inclusive of Fulier series, Euler product formula, Riemann function, L function, as well as many functions such as "gauge field", "NS equation", "thermodynamics", etc., form high-order calculus equations. The principle of sex transforms the logarithm of the base of the isomorphic circular function to obtain the power function of the integer (time series), which is arithmetically analyzed between {0 to 1}. Called "Circle Logarithm Algorithm".

Said {0 to 1} is the average value of group combination elements for the algorithm expansion, the establishment of discrete and entangled combination sets, through probability-topology-center zero point circle logarithm, respectively, the accurate analysis of the zero error of each element of the group combination is solved. Called circle logarithm algorithm. It can explain many physical phenomena, mathematical viewpoints, and new computer algorithms. It can also be a repeated verification, calculation, and engineering application example of any high-order calculus equation. For example, the gravitational equation, electromagnetic force equation, and simple digital simulation of the universe equation are discussed and calculated, which are consistent with the results of astronomical observations and engineering experiments.

2.1.2. What is the circle logarithm and the circle logarithm algorithm?

Circle logarithm: Expand the set of logarithms at the base of the "quadratic circle function" with invariable "group combination" elements without repeated combination, and become. For example, the average value of the negative power function and the average value of the positive power function are a pair of reciprocal asymmetry combinations. The central zero point becomes the logarithm of the quadratic circular function as the base. The circular logarithm reflects the two reciprocal functions. The degree of symmetry has the characteristic mode of speed and the logarithmic equation of the circle, and it has the advantages of the fastest, the shortest distance, and the highest efficiency.

Circle logarithm algorithm: It starts from "one yuan 1^{st} /2nd/3rd equation", and "2 yuan 1st/2nd, 3 yuan 1st/2nd/3rd equation", all the way to "one yuan S-order The same simple formula can be used to solve each root element with zero error one-to-one correspondence.

Every calculus equation has an isomorphic "circle logarithm formula combined with characteristic mode", and three calculation results are obtained:

(1) The coordinate system of the center point of the rotation (subtraction) function is two-dimensional(**uv**) space-time;

(2) The coordinate system of the center point of the precession (addition) function is three-dimensional(**xyz**) space-time;

(3) The coordinate system of the center point of the vortex spiral (rotation plus precession) function is five-dimensional $\{(\mathbf{xyz}+\mathbf{uv})\in(\mathbf{jik})\}$ time and space.

(4) The zero point of the center point of any function is a five-dimensional $\{(\mathbf{xyz}+\mathbf{uv})\in(\mathbf{jik})\}$ space-time transformation, or space-time equilibrium point.

The circle logarithm algorithm formula is concise, clarifies the concept of "group combination-circle logarithm", easy to grasp, convenient to apply, and rich in connotation.

In particular, the concept of "group combination" is directly related to various series represented by Fuliier series, Newton's "binomial", Euler product formula, Riemann function, etc., and constitutes the calculation result of the balance equation , Can become a five-dimensional vortex space of various elements, which is also called a "physical field". In other words, the group combination-circle logarithm is a collection of the average form of various functions converted into a circle logarithm analysis.

2.1.3. Can a quintic equation of one variable be decoded by finding integer roots?

The traditional "one-variable 2/3/4 degree equation" has radical solutions, which are complex and difficult to master. For "one-variable 5th order (more than 5th order, including higher-order calculus equations) equations," Western countries use "Abel Impossibility Theorem" to prove "no solution." this is not right.

The circle logarithm algorithm changes from "one-variable 1, 2, 3, 4, and 5th degree equations" to "one-variable (multiple) s-degree equations" and then to "higher-order calculus", using the principle of relativity to transform into "characteristic models". (Average value of positive, middle and inverse functions)" and irrelevant mathematical model, complete infinite analysis between {0 to 1}, and get integer root solutions. Abel's theorem is challenged by the circle logarithm.

2.1.4 What is the difference between logarithm of circle and logarithm?

(1) Differences:

The traditional logarithm is the logarithm of "a fixed value as the base", the base has Napier logarithm (a=10), Euler) logarithm (e=2.718281828654...), the so-called single (complex) variable The integer expansion of the power function in the function is unreal and depends on "error analysis to approximate". The logarithm of a circle is the logarithm based on "a fixed group combination. The unit body has $dx=({}^{KS}\sqrt{x_1x_2\ldots x_S})=({}^{KS}\sqrt{x_1x_2\ldots x_S})^{K(Z\pm S\pm(N=1)\pm(q=1)}$. Its "group combination" elements are set without repetitive combination and converted into the isomorphic circle logarithm of the group combination. The power function integer expansion of the circle logarithm is true and has "zero error analysis superiority".

(2) Similarities:

Traditional logarithms and circular logarithms both turn the multiplication of functions into linear addition (time series) calculations.

2.1.5. What is the characteristic mode?

Characteristic modulus (average value of positive, medium and inverse functions), retaining multivariables of function characteristics, physics, chemistry, biology, and other elements (including constants, function properties), in a non-repetitive combination form, and closely related to polynomial combination coefficients , Compose the average value of the positive, medium and inverse functions, called the characteristic mode. The basis is

(1) According to the "Eulerian product formula": polynomials and calculus equations composed of all functions, polynomial coefficients (A, B, C, ... P) all include "regularized combination coefficient Cnm", the traditional $C^n{}_m$ is not enough Use, rewrite the combination coefficient:

$$(1/C_{(Z\pm S\pm Q\pm M\pm N\pm P\pm q)})^k=(P+1)(P+0)\ldots3\cdot2\cdot1!/(S+0)(S+1)\ldots(S+P)!,$$

Give the combination coefficient more and broader connotations.

(2) According to the "Brouwer Center Theorem": all the characteristic modes {X} of unknown functions are the central zero point (movable) {X}and the boundary conditions **D** of the characteristic modes of known functions have synchronous change.

Feature mode features:

(1) "A fixed "group combination" $\{x\}^{K(S)}=(^{KS}\sqrt{(x_1x_2\ldots x_S)}^{K(S)}$ multi-element non-repetitive combination becomes a truly infinite "group sub-item".

(2) The "group sub-item" is connected with the combination coefficient to become a set of characteristic modes (average values of positive, medium and inverse functions),

$\{x_0\}^{K(S)}=\boldsymbol{\Sigma}_{(S\pm q)}(1/C_{(S\pm M\pm N\pm q)})^k\prod_{(S\pm q)}(^{KS}\sqrt{(x_1x_2\ldots x_q)}^{K(S\pm q)}$, It is called the average value of positive, medium and inverse power functions.

2.1.6. How to establish the relationship between the characteristic mode and the logarithm of the circle?

In the balance equation, the known boundary condition **D**, and the corresponding unknown variable $\{\mathbf{D}_0\}$, and the polynomial coefficients (**A, B, C,...P**) are often established in the form of eigenmodes (average values of positive, medium, and inverse mode functions). Close the relationship and establish the logarithm $(1-\eta^2)^{K(Z)/t}=\{x/D_0\}^{K(S)}$ of the irrelevant mathematical model. Called the circle logarithm equation.

Features of the logarithmic equation of a circle:

(1) Extract the commonality of the real infinite characteristic mode, ensure the expansion of the integer "zero error", and convert it to the circle logarithmic equation for latent infinite arithmetic expansion.

(2) The circle logarithm uses the "quadratic circle function" to describe the "center zero (discrete) distance" and "boundary (entangled) continuous deformable" forms of the group combination, which are discrete and continuous as a whole, in { 0 to 1} Arithmetic analysis.

2.1.7. How to implement power function (time series, exponential function, path integral) integer expansion?

The traditional calculus equation power function is established as: divide a certain fixed value for the uncertain multi-variable element (a=10,e=2.718281828...)

(2.1.1) $\{x\}^{K(Z)/t}=(x_1x_2\ldots x_S)/(a$ 或 $e)\approx K(Z)/t(?)$,

Unable to get integer expansion. The power function of traditional logarithm is written as an integer function exp, which is not true. It must be approximated by "error analysis". That is to say, the various entangled algorithms in the current mathematics field are all approximate, and fundamentally realize the variable "zero error". Discreteness is excepted because of the emphasis on symmetry calculations and the establishment of discrete statistical computer algorithms. At present, it is difficult for computers to handle entangled calculations.

The logarithm of the circle adopts the constant "group combination" condition to establish the power function of the calculus equation. For the uncertain multivariable element, divide the group combination unit body $ddx=\{x\}^{K(1)/t}=(^{KS}\sqrt{(x_1x_2\ldots x_S)}\}$

(2.1.2) $\{x\}^{K(Z)/t}/\{x\}^{K(1)/t}=\{(x_1x_2\ldots x_S)/(^{KS}\sqrt{(x_1x_2\ldots x_S)}\}=K(Z)/t$, Make sure to get the integer power function $K(Z)/t=K(Z\pm S\pm Q\pm M\pm N\pm P\pm qjik)/t$. The characteristic mode and circle logarithm formed by the sub-items of each group have a shared power function (time series), which achieves "zero error" with high computing power.

2.1.8, the circle logarithm formula?

The concept of group combination has become the core concept of any high-order calculus equation. It can be solved by integers in the range of '0 to 1'". It also has discrete (probability, distance) and continuous (topology, deformation) as one, Realize the arithmetic analysis of the relative symmetry of the central zero point {1/2} as the central superposition.

Circle logarithm formula

(2.1.1) $W=(1-\eta^2)^{K(Z)/t}W_0$;

(2.1.2) $(1-\eta^2)^{K(Z)/t}=\{0 \text{ to } 1/2 \text{ to } 1\}^{K(Z)/t}$;

(2.1.2) (1-η2)K(Z)/t={0 to 1/2 to 1}K(Z)/t;

Where: W and W_0 are respectively unknown and known functions (characteristic mode), $(1-\eta^2)^{K(Z)/t}$ is the logarithm of the circle of the irrelevant mathematical model (measurement, distance, deformation);K(Z)/t: Power function (time series).

2.2. What is "approximation and superposition"?

2.2.1 The difference between approximation and superposition: Traditional computers successfully solve symmetric discrete calculations, such as big data, called "mathematical statistics". Characteristics, there is no interaction between the statistical values. Discrete statistics means that in the group combination element, the change of one value does not affect the change of other individual values. For entangled calculations that solve asymmetry and uncertainty, such as neural networks and high-order calculus equations, it is called "mathematical analysis". Characteristics and statistical values are affected by interactions. Entanglement analysis means that in the group combination elements, a change in a value not only affects the overall group combination value, but also affects other individual values. And the influence of this other value cannot be successfully analyzed, and "error approximation" is used. The threshold of "zero error" cannot be achieved. Traditional iterative method is error "approximation", including difference method, functional analysis, finite element, least square method, etc.; circle logarithmic measure is (satisfying zero error) through the movable "center zero relative symmetry" to achieve zero error "Overlay".

2.2.2 Where is the basis for approximation and superposition?

(1) The root of the traditional "approximation" is: multi-element $(x_1x_2\ldots x_S)$uncertainty is multiplied and divided by a fixed value (a=10, e=2.718281828...), and the power function expansion of integers cannot be obtained. Adopting an approximation of an integer power function; geometric representation is an infinite reduction (differentiation) of a straight line to approximate the curve. The concept of "infinitesimal-limit-approximation" emerges from this.

(2) The root of the "superposition" of logarithms of circles lies in: the "central zero point {1/2} as the central superposition" means the central zero point of the high parallel polynomial group combination, which can be superimposed into a central point, the central zero point Both sides have factor values with the same relative symmetry to ensure that each element of the high parallel group combination expands simultaneously.

The "superposition" of logarithms of circles is based on the expansion of power functions of integers and has high stability. The geometric representation is that the central zero point of the group combination performs "central zero point movement or boundary deformation" according to the logarithmic rule of the circle, so as to realize the superposition of the central zero point and the superposition of the curve and the curve of the boundary. The concept of "infinity-zero error-superposition" emerges from this.

In particular, the mathematical basis for their "superposition" is "Brouwer's central theorem: the boundary and the center have the same value synchronously". "Realize the power function integer expansion", called "Hodge's conjecture, path integral", here or smoothly processed, canceled the calculation of "error analysis".

2.3. What is the "five-dimensional vortex spiral space"?

Arbitrary function is proved by logarithm of circle: "Five-dimensional vortex spiral space" is a phenomenon in nature, which has no inevitable relationship with the number of elements in the group. Any element has {**x,y,z**} three-dimensional precession plus {**u,v**} A combination of two-dimensional rotation, in which the normal direction of rotation coincides with the precession direction, collectively called the "five-dimensional vortex spiral space". If the normal direction does not coincide with the precession direction, it becomes the "Yau Chengtong-Karabi six-dimensional space" .

According to the balance equation, the "group combination" of the logarithm of the circle is represented by the vortex spiral motion at the center zero point, showing the duality of motion, vibration, oscillation, and microwave radiation of "particles and waves" and "continuous and discrete". Represents each level " The shortest and fastest-changing metric between particle and wave, continuous and discrete; especially successfully dealing with the difference metric between asymmetry (space, distance, function) and the center of symmetry; this is the current mathematics A new rule that the family did not discover.

2.4. The application of logarithm of circle in the new generation of quantum computing?

The traditional computer successfully solves the symmetrical discrete calculation. Because it is based on the symmetry calculation, it satisfies the circle logarithm discriminant $(1\text{-}\eta^2)^{K(Z)/t}$={0 or 1}; the existing computer’s discrete calculation The function of the calculation program "0 to 1" is completeness probability-topology control; "0 or 1" is completeness probability control and circuit switch symbol control, etc. For basic calculations of "asymmetry" and "entanglement", no good algorithms have emerged. Many countries are exploring artificial intelligence and other types of entangled computing. The goal is to use the powerful computing power of computers to "approach the 99.99% threshold of zero error" with complex calculations as the goal of a new generation of quantum computers.

There are two methods for specific applications:

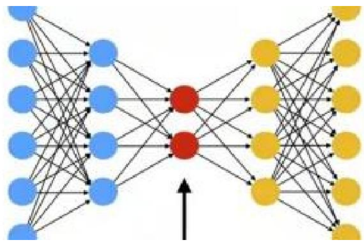
(1) The application of traditional computer "discrete calculation program" plus simple "circle logarithm formula" program, and the original "time series" composition can be applied to improve the method.

(2) Use the assembly method to establish a new program, which is a combination of four modules:

The feature model is one piece; the circle logarithm is one piece (respectively the two red dots at the center) as shown in (Figure 1). The logarithm of the red dot circle connects the logarithms of the three circles, and cross-connects each other. The blue color is the (input) unknown variable, the yellow color (output) the known variable, and the three colors of red, yellow and blue have mutual unlabeled supervision: the circle The logarithms are:

(a),"Discrete calculation program of logarithm of circle $(1\text{-}\eta^2)^{K(Z)/t}$={0or1}, belonging to (Figure 1) Probability-center zero calculation".

(b),"The entangled calculation program of circle logarithm $(1-\eta^2)^{K(Z)/t}$={0 to 1}, which belongs to topological-center zero calculation". **(Figure 1)**



(c), the "time series of circle logarithms" becomes $(1-\eta^2)^{K(Z)/t}$={0 (close) or 1 (close)} "circuit control program".

This new "assembled" chip architecture theoretically has a computing power of more than 1000 qubits, and the software and hardware structure is greatly simplified and miniaturized, or it may become a new generation of quantum computer model.

2.5. What is the difference between the superposition of circle logarithmic measures and the traditional iterative method?

The superposition of logarithmic measures of the circle, that is, the approximation of the central zero-point movement repetition method and the traditional iterative method, can reflect the probability-topological problem of the isomorphism consistency of continuous and discrete systems.

The differences are as follows:

(1) Iteration: The traditional approach is "limit", which is expressed as "error analysis, difference method". The logarithm of a circle is expressed as "(arithmetic integer unit body) moving and superimposing", which are different concepts of the two methods.

(2) Position: The infinitesimal limit is traditionally approached by a straight line on the "boundary" to a curve. The circle logarithm moves and overlaps between "0 to 1" of the closed circle with the zero point of the group combination center.

(3) Method: Traditionally, finite dimensions (straight lines) are used to approximate infinite dimensions (curves), which is incomplete. The circle logarithm uses the infinite program asymmetric real infinite dimensional curve (continuous type) and finite dimensional straight line (discrete type) to uniformly transform the superposition and expansion of latent infinite relative symmetry for arithmetic analysis.

(4) Integerness: the traditional unit body with "fixed value e logarithm as the base" cannot solve the problem of "integerness" and is "approximated by error". The circle logarithm is based on the "variable group combination as the base" unit body, which realizes an integer with zero error. The completeness and normalized arithmetic expansion are realized by the "circle logarithm" of distance plus deformation. Including calculus order symbols and logical algebra symbols, they can all be transformed into an infinite sequence of time (Z) dynamic expansion of an integer unit body with a power function.

3. Proof of the important theorem of circle logarithm

The key highlights of the circle logarithm,

(1), any function can convert asymmetry into relative symmetry,

(2), realize the power function integer expansion.

Through the relativity principle of the concept of "group combination": the establishment of the central zero-probability-topological transformation into the five-dimensional space motion of the vortex spiral, the arithmetic analysis of {0 to 1}".

In order to understand the convenience and popularity, the two natural numbers "2 and 3" (algebra called "a, b", geometry called "ellipse (major axis a, minor axis b)", group theory called "a, b set" ", here collectively referred to as "group combination {a, b}K(Z)"), (representing the "2-2 combination" of infinite elements) for explanation (with simple derivation and verification).

3.1. The properties of numbers (elements) and power functions (time series)

Elements (numerical value, function, space, group combination) and "power function (time series)" all have three properties (K=+1,±1±0,-1) (positive, middle, and negative).

Example: Asymmetry "2 and 3" combination:

3.1.1. The nature of the number (element),

Number theory discusses integers, fractions, and zeros

Example: integer (K=+1),

(3.1.1) $(2=2^{(+1)},\ 3=3^{(+1)})$; $(2\cdot3)^{(+)}=6^{(+1)})$, $(1/2)^{(+1)}\cdot(2^{(+1)}+3^{(+1)})^{(+1)}=2.5^{(+1)})$,

Example: score (K=-1),

(3.1.2) $(1/2=2^{(-1)},1/3=3^{(-1)})$, $(2\cdot3)^{(-1)}=6^{(-1)})$, $(1/2)^{(-1)}\cdot(2^{(-1)}+3^{(-1)})^{(-1)}=2.4^{(-1)})$,

Example: the number of zero points (K=±0,±1), called the number of zero points, the number of center zero points, (±1) balance point/number, (±0 conversion point/number;

(3.1.3) $(2=2^{(\pm0)}$与 $3=3^{(\pm0)})=(1/2^{(\pm0)}\cdot1/3^{(\pm0)})=1^{(\pm0)}$, $(1/2)^{(\pm0)}\cdot(2^{(\pm0)}+3^{(\pm0)})^{(-1)}=1^{(\pm0)})$,

The two elements in the example are written as a group combination or a 2-2 combination sub-item of an infinite group combination:

(3.1.4) $\{2^K,3^K\}^K$group combination, or

$\prod_{(S\pm(q=2))}(ab)^K$; or $\Sigma_{(S\pm(q=2))}(1/2)^K\cdot(a^K+b^K)^K$ (positive, middle, negative average),

Properties: (K=+1,±0,±1,-1). +1: positive direction; ±1: neutral, balance between positive and negative, left and right balance of center zero; -1: reverse (negative) direction; ±0: positive and negative conversion, left-right conversion, sudden change of center zero, Catastrophic transformation creates a pair of reciprocal two asymmetric functions, states, and properties.

3.1.2. Combination form of group combination:

Example: 2-2 addition combination: $(2^K+3^K)=\{5\}^K$ or $(a^K+b^K)=\{a+b\}^K$;

Example: 2-2 addition combined average:

$R_0{}^K=(1/2)^K(2^K+3^K)$; 或 $D_0=(1/2)^K(a^K+b^K)^K$;

(K=+1): $(2^K\cdot 3^K)=\{6\}^K$; 或 $(a^K\cdot b^K)=\{ab\}^K$; notation $\{2.5\}^{(+1)}$ is the average value of the positive power function;

(K=-1): $R_0{}^{(-1)}=(1/2)^{(-1)}(2^{(-1)}+3^{(-1)})^{(-1)}=(10/6)^{(+1)}=(6/10)^{(-1)}$;; Notation $\{2.5\}^{(-1)}$; It is called the average value of the negative power function;

Example: 2-2 multiplication combination: $(2^K\cdot 3^K)=\{6\}^K$; or $(a^K\cdot b^K)=\{ab\}^K$; $(a^K\cdot b^K)=\{ab\}^K$;

Example: 2-2 multiplication combination unit value:

$D_0{}^K={}^{K(2)}\sqrt{(2\cdot 3)}^K=({}^{K(2)}\sqrt{6})^K$ 或 $D_0={}^{K(2)}\sqrt{(a\cdot b)}^K=({}^{K(2)}\sqrt{ab})^K$;(S = 2 elements multiplied by the number);

Example: 2-2 Calculus performance

(First order) $dx=\{{}^{K(2)}\sqrt{(2\cdot 3)}\}^{K[(S=2)\pm(N=-1)]}$; differential (N=-1);

$\int dx=\{{}^{K(2)}\sqrt{(2\cdot 3)}\}^{K[(S=2)\pm(N=+1)]}$; integral(N=+1);

(Second order) $d^2x={}^{K(2)}\sqrt{(2\cdot 3)}^{K[(S=2)\pm(N=-2)]}$differential(N=-2);

$\iint dx^2=\{{}^{K(2)}\sqrt{(2\cdot 3)}\}^{K[(S=2)\pm(N=+2)]}$; integral (N=+2);

(K=+1): $R_0{}^{(+1)}=(1/2)^{(+1)}(2^{(+1)}+3^{(+1)})^{(+1)}=(2.5)^{(+1)}$;; mark $\{K(2)\sqrt{6}\}^{(+2)}$

(K=-1): $R_0{}^{(-1)}=(1/2)^{(-1)}(2^{(-1)}+3^{(-1)})^{(-1)}=(10/6)^{(+1)}=(6/10)^{(-1)}$; notation $\{6\}^{(-2)}$;

If the group combination has multiple (S) elements such as $\{X\}=\{x_1,x_2\ldots x_S\}$combination, the above two elements are transformed into (S) set into a sequence of sub-items, and the logarithm of the circle of conversion isomorphism is equal to { 0 to 1} as the base logarithm, get the power function of the integer (time series). Also adapt.

(K=+1): $D_0{}^{K(S\pm(N=+0,1,2)+(q=P)}=\prod_{(S\pm(q=P))}{}^{K(S)}\sqrt{x_1,x_2\ldots x_S})^{K[(S=2)\pm(N=+0,1,2)\pm P]}$;

Notation: $\{{}^{K(2)}\sqrt{S}\}^{K[(S=2)\pm(N=+0,1,2)+P]}$,, the integral of the P combination of the positive power function (zero-order, first-order, second-order) .

(K=-1): $D_0{}^{(-2)}={}^{K(2)}\sqrt{(2^{(-1)}\cdot 3^{(-1)})}^{K[(S=2)\pm(N=-2)]}=({}^{K(2)}\sqrt{6^{(-1)}})^{(-2)}$; [(S=2)±(N=-0,1,2)±P];

Notation: $\{{}^{K(2)}\sqrt{S}\}^{K[(S=2)\pm(N=0,1,2)-P]}$,, the differential of the P combination of the negative power function (zero-order, first-order, second-order) .

(K=±1 , ±0): $D_0{}^{K(S\pm(N=0,1,2)+(q=P)}=\prod_{(S\pm(q=P))}({}^{K(S)}\sqrt{x_1,x_2\ldots x_S}))^{K[(S=2)\pm(N=0,1,2)\pm P]}$;

Notation: $\{{}^{K(2)}\sqrt{S}\}^{K[(S=2)\pm(N=-0,1,2)\pm P]}$, the P combined zero function of the zero-power function, or the transfer function, or the balance function (zero Order, first order, second order) calculus equations.

3.1.3. The basic concept of "group combination".

Said $\{x\}^{KS}=(x_1,x_2,\ldots,x_S)$ non-repetitive combination is shown as (S) unchanged, q combination form changes, and it is closely related to the polynomial coefficients (A,B,C,...,P) contact. The symbol of power function (exponential function) calculation under the condition of isomorphic circle logarithm indicates logarithmic calculation and conforms to the logarithmic calculation rule.

Group combination sub-item: reflected as a combination of {q}

"1-1 Combination" $\{x\}^{K(S\pm(q=1))}=\Sigma_{(S\pm(q=1))}(x_1+x_2+\ldots)^{K(S\pm(q=1))}$;

"2-2 combination" $\{x\}^{K(S\pm(q=2))}=\prod_{(S\pm(q=2))}(x_1x_2+x_2x_3+\ldots)^{K(S\pm(q=2))}$;

"3-3 combination" $\{x\}^{K(S\pm(q=3))}=\prod_{(S\pm(q=3))}(x_1x_2x_3+x_2x_1x_4+\ldots)^{K(S\pm(q=3))}$;

"……"

Characteristic modulus: function average

"1-1 Combination" $\{x_0\}^{K(S\pm(P=1))}=\{(1/S)^K\Sigma_{(S\pm(P=1))}(x_1{}^K+x_2{}^K+\ldots)\}^{K(S\pm(q=1))}$;

"2-2 combination" $\{x_0\}^{K(S\pm(p=2))}=\{(1/C_{(S\pm(p=2))})^K\prod_{(S\pm(q=2))}(x_1x_2)^K+x_2x_3)^K+\ldots\}^{K(S\pm(q=2))}$;

"3-3 combination" $\{x_0\}^{K(S\pm(p=3))}=\{(1/C_{(S\pm(p=3))})^K\prod_{(S\pm(q=3))}(x_1x_2x_3)^K+(x_2x_1x_4)^K+\ldots\}^{K(S\pm(q=3))}$;

"……"

The collection becomes the characteristic model series:

$\{x_0\}^{K(Z\pm S\pm N\pm(P))\pm(q))}=\Sigma_{(Z\pm S\pm q)}\{x_0\}^{K(Z\pm S\pm N\pm(P))\pm(q))}$
$=\{x_0\}^{K(Z\pm S\pm N\pm(P=0))\pm(q=0))}+\{x_0\}^{K(Z\pm S\pm N\pm(P=1))\pm(q=1))}$
$+\{x_0\}^{K(Z\pm S\pm N\pm(P=2))\pm(q=2))}+\ldots+\{x_0\}^{K(Z\pm S\pm N\pm(P=P))\pm(q=q))}$;

Combination coefficient: The order of polynomial terms (P) has a close relationship with the combination coefficient $(1/C_{(S\pm p\pm q)})^K$ and the combination form (s±q) (s invariant group combination number). Coefficient expansion coefficient (the order of the unknown variable {x} items increases from left to right in the order of P items; conversely, the order of the known variables {D0} items decreases from right to left in the order of P items; it indicates that under equilibrium conditions, {x} The combination coefficient with $\{\mathbf{D}_0\}$ has reciprocal symmetry and is called "regularization coefficient distribution, same as Yang Hui-Pascal's triangle distribution".

$(1/C_{(S\pm(P))})^K= (P+1)(P+2)\ldots! /(S+0)(S-1)\ldots(S-P)!$ (Adapt to the increasing order of {x} items)

Such as: P=0 (representing the first term of the polynomial, combination coefficient(s±q),q=0; combination coefficient: $(1/C_{(S\pm(p=1))})^K=1$;

P=1 (representing the second term of the polynomial, the combination coefficient(s±q),q=1 namely 1-1 combination; first-order calculus.

The first term of the equation (polynomial P=1, the second term order) $(1/C_{(S\pm(p=1))})^K=((P=1) / (S+0))^K=(1/S)^K$

Example: one-variable quintic equation (S=5) (q=2); combination coefficient: (1/C(S±(p=2))K=(1/10)K;

Sequential analogy: quintic equation of one variable (S=5) (P=0,1,2,3,4,5); combination coefficient: 1:5:10:10:5:1,

Total combination factor: $\{2\}^5=32$;

Among them: S: the number of group combinations, P: the order of polynomial terms, which is closely related to the polynomial coefficients (A, B, C...P).

Relationship between combination coefficients and polynomials: polynomial coefficients (ABC...P)

$A=1$; $B=SD_0$; $C=S(S-1)D_0$; …; $P=S(S-1)\ldots(S-P)D_0$;

Group combination collection:

$\{x_0\}^{K(S\pm(q))}=\{x_0\}^{K(S\pm(q=1))}+\{x_0\}^{K(S\pm(q=2))}+\{x_0\}^{K(S\pm(q=3))}+\ldots$;

Logarithmic equation of circle: (it can be described by matrix, the effect is the same)

$(1-\eta^2)^{K(S\pm(q))}=(1-\eta^2)^{K(S\pm(q=1))}+(1-\eta^2)^{K(S\pm(q=2))}+(1-\eta^2)^{K(S\pm(q=3))}+\ldots$;

It is easy to prove isomorphism (Theorem 2):

$(1-\eta^2)^{K(S\pm(q))}=(1-\eta^2)^{K(S\pm(q=1))}=(1-\eta^2)^{K(S\pm(q=2))}=(1-\eta^2)^{K(S\pm(q=3))}=\ldots$;

With the logarithm of the isomorphic circle function as the base, you can convert the continuous multiplication of the function into the "four arithmetic" of the power function according to the logarithmic calculation rules, and use the logarithm of the probability circle-the logarithm of the topological circle-the center zero point circle The addition, subtraction, multiplication, and division of logarithms of a circle is called a true "arithmetic" analysis.

When: S=Z (infinity), the circle logarithmic power function: $K(Z\pm[S\pm Q\pm M]\pm N\pm P\pm qj_{ik})/t=K(Z)/t$ (time series) integer expansion , To ensure control of "zero error" calculations.

Among them: $[S\pm Q\pm M]\cdot(2\pi)$ represents the number of periodic elements and the form of tree distribution; (±N) calculus; (P) term order (corresponding to polynomial regularization combination coefficient); (K=+1) Is the mean value of the positive function; (K=-1) is the mean value of the negative function; (K=±1) is the balance of the central function mean; (K=±0) is the mean value of the positive and negative functions Conversion, or mutation;

Put forward the axiomatic hypothesis: "self divided by oneself is not necessarily 1, the denominator can be 0 (with mathematical proof)"; in contrast to the axiomatic hypothesis of set theory, "self divided by one must be 1 and the denominator cannot be 0";

Logarithm of circle = average value of negative function/average value of positive function

$$(1-\eta^2)^{K(S\pm N\pm(qjik))}=\{\mathbf{\Sigma}_{(S\pm(qjik)}(1/C_{(S\pm(qjik))})^K \prod_{(S\pm(qjik)}(x_{jik})^K)^{K(S\pm(qjik))} / \{\mathbf{\Sigma}_{(S\pm(qjik)}(1/C_{(S\pm(qjik))})^K\prod_{(S\pm(qjik)}(x_{jik})^K)^{K(S\pm(qjik))}=\{0 \text{ to } 1\};$$

{q}∈{qjik} element combination form; {qjik} circle logarithm basic unit body, called the generator of triples, establishes calculus (zero-order, first-order, second-order calculus equations). among them:

(1). Power function performance addition: (k-1)+(k-1)=-1 means the same property merge; multiplication: (k-1)+(k+1)=0 means heterogeneous property calculation, positive power Functions generally do not represent the (+1) symbol.

(2), {} represents a set, which corresponds to a set of different group combinations.

(3) The concept of "group combination" can convert calculus symbols, logical algebra symbols, etc. into power functions.

The group combination is expressed by the power function equation (path integral, exp): K: function, element properties; Z: (infinity); S (total elements, dimension, first level) Q (area, second level); M: (Region, third level); (±N) is calculus: (first-order) momentum, (second-order) energy, force, spherical tensor, two-element combination, (third-order) thermodynamics, three-element "three Combination generators" and so on. P: (item order, corresponding polynomial coefficient); q: element combination form {q}∈{qjik}; t: (time, dynamic).

3.2. [Proof 1] A brief introduction to the reciprocity theorem to prove

The reciprocity theorem is called the yeast of the theorem, and many theorems are related to it.

3.2.1 Simple proof of the reciprocity theorem

Suppose: $D/D_0=ab$; $D_0=(1/2)(a\pm b)$; (For positive power functions, there is generally no (+1) remark, only when compared with negative power functions).

Proof: $D=[D/D_0]\cdot D_0=ab/(1/2)(a+b)\cdot D_0$
$=[(1/2)(a+b)/ab]^{(-1)}\cdot D_0$
$=(1/2)^{(-1)}(a]^{(-1)}+b]^{(-1)})\cdot D_0$
$=[(1/2)^{(-1)}(a]^{(-1)}+b]^{(-1)})]^{(-1)}\cdot[(1/2)^{(+1)}(a]^{(+1)}+b]^{(+1)})]^{(+1)}$;

Reciprocity of two elements (functions) of group combination

(3.2.1) $D=D^{(\pm1)}=\{D_0\}^{(-1)}\cdot\{D_0\}^{(+1)}$;

Its reciprocity lies in the fact that both functions can become two asymmetry functions with a "resolution" of "2".

3.2.2 Feature mode (general formula):

(3.2.2) $\{D_0\}^{K(+S)}=[(1/S)^{(K)}(a^K+b^K+c^K+\ldots)]^{(+1)}$;

It is called the average value of the positive power function, and the positive characteristic mode.

(3.2.3) $\{x_0\}^{K(-S)}=[(1/S)^{(K)}(x_1^{(-S)}+x_2^{(-S)}+x_3^{(-S)}+\ldots)]^{(-1)}$;

It is called the average value of the negative power function and the negative characteristic mode. Same as the Riemann zeta function "the sum of the reciprocal and then the reciprocal $\{x_0\}^{K(-S)}$", without loss of generality, this transformation can smoothly prove the "Riemann conjecture" and become the logarithm theorem of the symmetric circle at the center zero.

3.2.3, the axiomatic theorem of circle logarithm

Set theory proposes an axiomatic theorem: "self divided by oneself equals 1. The denominator is not 0"; it is equivalent to $(1-П^2)=1$ symmetrical discrete calculation.

The circle logarithm proposes another axiomized theorem based on the quadratic circle function: "self divided by itself is not necessarily equal to 1. The denominator can be 0"; perform the symmetry and asymmetry of $(1-П^2)=\{0\text{ to}1\}$ The calculation of sex, discreteness and continuity.

The proof is as follows:

Suppose: $D^{(\pm1)}=\{D_1D_2\ldots D_3\}^{(\pm1)}$; $x^{(\pm1)}=\{x_1x_2\ldots x_3\}^{(\pm1)}$; these are two asymmetry functions, and the logarithm of the circle describes them not The difference between the symmetry and the average function becomes the relative symmetry. Choose a group combination of two elements:

$\{x_0\}^{(-1)}=(1/2)^{(-1)}(a^{(-1)}+b^{(-1)})^{(-1)}$; $\{D_0\}^{(+1)}=(1/2)^{(+1)}(a^{(+1)}+b^{(+1)})^{(+1)}$;

Introducing the logarithm of the circle

$(1-П^2)=\{x_0/D_0\}$, $\{x_0\}^{(-1)}=\{D_0\}^{(+1)}$, $\{x\}^{(-1)}=\{\sqrt{D_0}\}^{(+1)}$,

Discriminant: $(1-П^2)=\{x/D_0\}$; or $(1-П^2)=\{x^2/D_0{}^2\}=\{x/D_0\}^2$; or $(1-П^2)=\{x^S/D_0{}^S\}=\{x/D_0\}^S$;

$D=D^{(\pm1)}=\{D_0\}^{(-1)}/\{D_0\}^{(+1)}\cdot\{D_0\}^{(+1)}$
$=[(1/2)^{(-1)}(a^{(-1)}+b^{(-1)})^{(-1)}/$
$[(1/2)^{(+1)}(a^{(+1)}+b^{(+1)})^{(+1)}\cdot\{D_0\}^{(+1)}\cdot\{D_0\}^{(+1)}$;

Move one {D0}(+1) to the left of the equal sign;

Left: $D^{(\pm1)}/\{D_0\}^{(+1)}=\{D_0\}^{(-1)}$;

Right:

$(1-П^2)\cdot\{D_0\}^{(+2)}/\{D_0\}^{(+1)}=(1-П^2)\cdot\{D_0\}^{(+1)}$;

(3.2.4) $\{D_0\}^{(-1)}=(1-П^2)\cdot\{D_0\}^{(+1)}$;

(3.2.5) $\{x_0\}^{K(Z\pm[S\pm Q\pm M]\pm N\pm P\pm qjik)/t}=[(1-П^2)\cdot\{D_0\}]^{K(Z\pm[S\pm Q\pm M]\pm N\pm P\pm qjik)/t}$;

(3.2.6) $(1-П^2)^{K(Z\pm[S\pm Q\pm M]\pm N\pm P\pm qjik)/t}=\{0\text{ to}1\}^{K(Z\pm[S\pm Q\pm M]\pm N\pm P\pm qjik)/t}$;

In particular, it is proposed that two elements are easy to express the reciprocity of group combination, and mathematically satisfy that "any function can adopt two (even) functions of reciprocity and asymmetry with a resolution of 2".

It is also possible to use the three (odd) functions of reciprocity and asymmetry with a resolution of 3. "The three elements are prone to group combination reciprocity, and have a compound (recessive function ab=c) relative symmetry function.

Such as: $\{x_0\}^{(-1)}=(1/3)^{(-1)}(a^{(-1)}+b^{(-1)}+c^{(-1)})^{(-1)}$; $\{D_0\}^{(+1)}=(1/3)^{(+1)}(a^{(+1)}+b^{(+1)}+c^{(+1)})^{(+1)}$; Introduce the circle logarithm:

$(1-П_{(ab+c)}{}^2)=\{x_{0(ab+c)}/D_{0(ab+c)}\}$, $\{x_{0(ab+c)}\}^{(-1)}=\{D_{0(ab+c)}\}^{(+1)}$, $\{x_{(ab+c)}\}^{(-1)}=\{\sqrt{D_{0(ab+c)}}\}^{(+1)}$,

$(П_{(ab+c)})=(+П_{(ab)})+(-П_{(c)})=\{0$ (balance, symmetry) or 1 (probability)$\}$;

3.3. Logarithm of isomorphic circles

Here is an answer, why is the group combination expansion converted to a circle logarithm with isomorphism (called "P=NP complete problem": that is, simple polynomials and complex polynomials have isomorphic and consistent calculation times), that is, the same calculation is used Formulas and methods to solve the mathematical problems of one-dimensional S-order high-order calculus equations.

[Proof 2] Simple proof of logarithm of isomorphism circle

Suppose: the average value of the sub-items of the group combination {P}, called the characteristic modulus (the average value of the positive, middle, and inverse power functions) (P=NP complete problem):

(3.3.1) $\{x_0\}^{K(Z\pm N\pm P)/t}=\boldsymbol{\Sigma}_{(S\pm q)}(1/C_{(S\pm M\pm N\pm(q=P))})^k\prod_{(S\pm(q=P))}({}^{KS}\sqrt{(x_1x_2x_3\ldots x_P)})^{K(Z\pm N\pm P)/t}$;

Group composition unit

(3.3.2)

$\{x_0\}^{K(Z\pm(S=1)/t}=\boldsymbol{\Sigma}_{(S\pm q)}(1/S)^k{}_)((x_1+x_2+x_3+\ldots)^{K(Z\pm(S=1)/t}$;

Proof: Adopting infinite group combination to divide the group combination unit body (called iterative method) to reflect the change of combination form as the total elements of the group combination remain unchanged, and the number of combination elements (including calculus order) $\{q\in qjik\}$ (order $N=\pm0,1,2$) the change of the number. The set $\{x_0\}^{K(Z\pm N\pm P)/t}$ is not equal to the multiplication $(x_0)^{K(Z\pm N\pm P)/t}$.

3.3.1. Proof of necessity: (Proof by linear iteration method)

According to the reciprocity theorem

$\{x_1x_2x_3\ldots\}^{(\pm1)}=\{x_1x_2x_3\ldots\}^{(+1)}\cdot\{x_1x_2x_3\ldots\}^{(-1)}$; $(x_0)^{(\pm1)}=(x_0)^{(+1)}\cdot(x_0)^{(-1)}$;

(3.3.3)

$(x_1x_2x_3\ldots)^{(\pm1)}=[(x_1x_2x_3\ldots)^{(\pm1)}/\{x_0\}^{(\pm1)}]\cdot\{x_0\}^{(\pm1)}$

$=[\{\{x_0\}^{(+1)}/(x_1x_2x_3\ldots)^{(+1)}\}^{-1}\cdot\{\{x_0\}^{(-1)}/(x_1x_2x_3\ldots)^{(-1)}\}^{-1}]\cdot\{x_0\}^{(\pm1)}$

$=[\{\{x_0\}^{(\pm1)}/(x_1^{(\pm1)}/(x_1x_2x_3\ldots)^{(\pm1)}+x_2^{(\pm1)}/(x_1x_2x_3\ldots)^{(\pm1)}+\ldots\}]^{(-1)}$

$\cdot\{x_1x_2x_3\ldots\}^{(\pm1)}\{x_0\}^{(\pm1)}$

$=\{(x_1^{(-1)}+x_2^{(-1)})+\ldots\}^{(-1)}\cdot\{x_0\}^{(\pm1)}\cdot\{x_1x_2x_3\ldots\}^{(\pm1)}$;

Move $\{x_1x_2x_3\ldots\}^{(\pm1)}$ to the left of the equal sign,

Left: $\{x_1x_2x_3\ldots\}^{(\pm1)}/\{x_1x_2x_3\ldots\}^{(\pm1)}$

Right side: $\{(x_1^{(-1)}+x_2^{(-1)})+\ldots\}^{(-1)}\cdot\{(x_1^{(+1)}+x_2^{(+1)})+\ldots\}^{(+1)}$

$=\{x_0\}^{(-1)}\cdot\{x_0\}^{(+1)}$

Introduce the logarithm of the circle:

$(1-\eta)^{K(S\pm N\pm(qjik=+2))}=\{x_0\}^{(-1)}/\{x_0\}^{(+1)}$

$=(1-\eta)^{K(S\pm N\pm(qjik=+1))}\cdot(1-\eta)^{K(S\pm N\pm(qjik=-1))}$

$=(1-\eta)^{K(S\pm N\pm(qjik=1))}$

$=\{0\text{ to }1\}$;

Get the logarithm of the linear circle:

(3.3.4)

$(1-\eta)^{K(S\pm N\pm(qjik=1))}=\{\boldsymbol{\Sigma}_{(S\pm(qjik)}(1/C_{(S\pm(qjik))})^K\prod_{(S\pm(qjik)}(x_{jik})^K)^K{}_{(S\pm(qjik=1))}$

$/$

$\{\boldsymbol{\Sigma}_{(S\pm(qjik=1)}(1/C_{(S\pm(qjik=1))})^K\prod_{(S\pm(qjik)}(x_{jik})^K)^{K(S\pm(qjik=1))}$

$=\{0\text{ To }1\}$;

3.3.2. Proof of sufficiency: (Proof by nonlinear iterative method)

According to the reciprocity theorem

$\{x_1x_2x_3\ldots\}^{(\pm1)}=\{x_1x_2x_3\ldots\}^{(+1)}\cdot\{x_1x_2x_3\ldots\}^{(-1)}$;

$\{x_0\}^{(\pm2)}=\{\boldsymbol{\Sigma}_{(S\pm(qjik)}(1/C_{(S\pm(qjik=2)})^K\prod_{(S\pm(qjik=2)}(x_{jik})^K)^{K(S\pm(qjik=2))}$; $\{x_0\}^{(\pm2)}=\{x_0\}^{(+2)}\cdot\{x_0\}^{(-2)}$;

Here $\{x_0\}^{(\pm2)}$ represents the group combination 2-2 combination element, which is different from the square multiplication of $\{x_0\}^{(\pm2)}$.

(3.3.5)

$\{x_1x_2x_3\ldots\}^{(\pm1)}=[\{x_1x_2x_3\ldots\}^{(\pm1)}/\{x_0\}^{(\pm2)}]\cdot\{x_0\}^{(\pm2)}$

$=[\{(x_1x_2)^{(\pm1)}/(x_1x_2x_3\ldots)^{(\pm1)}]+[(x_2x_3)^{(\pm1)}/(x_1x_2x_3\ldots)^{(\pm1)}]+\ldots)\}^{(-1)}\cdot\{x_0\}^{(\pm2)}$

$\cdot[(x_1x_2x_3\ldots)]^{(\pm1)}/[(x_1x_2x_3\ldots)]^{(\pm1)}$

$=\{(x_1^{(-2)}+x_2^{(-2)})+\ldots\}^{(-1)}\cdot\{x_0\}^{(\pm2)}/[(x_1x_2x_3\ldots)]^{(\pm1)}$

Move $\{x_1x_2x_3\ldots\}^{(\pm1)}$ to the left of the equal sign,

Left: $\{x_1x_2x_3\ldots\}^{(\pm1)}\cdot\{x_1x_2x_3\ldots\}^{(\pm1)}$

Right side: $\{(x_1^{(-2)}+x_2^{(-2)})+\ldots\}^{(-1)}\cdot\{(x_1^{(+2)}+x_2^{(+2)})+\ldots\}^{(+1)}=\{x_0\}^{(-2)}\cdot\{x_0\}^{(+2)}$

Introducing the logarithm of the circle:

$(1-\eta^2)^{K(S\pm N\pm(qjik=+2))}=\{x_0\}^{(-2)}\cdot\{x_0\}^{(+2)}$

$=(1-\eta^2)^{K(S\pm N\pm(qjik=+2))}\cdot(1-\eta^2)^{K(S\pm N\pm(qjik=-2))}$; ……

$=(1-\eta^2)^{K(S\pm N\pm(qjik=2))}$

$=\{0\text{ to }1\}$;

In the same way, the nonlinear logarithm of the circle is obtained: $\{q\}\in\{qjik\}$;

(3.3.4)

$(1-\eta)^{K(S\pm N\pm(qjik))}=\{\boldsymbol{\Sigma}_{(S\pm(qjik)}(1/C_{(S\pm(qjik))})^K\prod_{(S\pm(qjik)}(x_{jik})^K)^{K(S\pm(qjik))}$

$/$

$\{\boldsymbol{\Sigma}_{(S\pm(qjik)}(1/C_{(S\pm(qjik))})^K\prod_{(S\pm(qjik)}(x_{jik})^K)^{K(S\pm(qjik))}=\{0\text{ to }1\}$;

3.3.3. Logarithm of isomorphism circle:

(3.3.5) $(1-\eta^2)^{K(S\pm N\pm(q))}=(1-\eta^2)\{x_0\}^{K(S\pm N\pm(q=1))}=(1-\eta^2)\{x_0\}^{K(S\pm N\pm(q=2))}$

$=(1-\eta^2)\{x_0\}^{K(S\pm N\pm(q=3))}=\ldots=(1-\eta^2)\{x_0\}^{K(S\pm N\pm(qj=qjik))}=\{0\text{ to }1\}$.

3.3.4. The logarithm of the isomorphism circle is normalized and becomes the linear superposition of the logarithmic factor of the circle:

(3.3.6) $(\eta)^{K(S\pm N\pm(qj))}=(\eta_1)+(\eta_2)+(\eta_3)+\ldots+(1-\eta_q)=\{0\text{ to }1\}$.

3.3.5. Symmetry of the center zero point:

(3.3.7)

$(\eta)^{K(S\pm N\pm(q))}=\Sigma_{(S+q)}[\ (+\eta_1)+(+\eta_2)]+\Sigma_{(S+q)}[(-\eta_3)+(-\eta_q)]=\{0\}$;

3.4 The theorem of "three unitary gauge invariance" of logarithm of circle

Logarithm of probability circle:

(3.4.1) $(1-\eta_H{}^2)=\{0\text{ or }1\}$;

Topological circle logarithm:

(3.4.2) $(1-\eta_T{}^2)=\{0\text{ to }1\}$;

The logarithm of the center zero point circle:

(3.4.3) $(1-\eta_\omega{}^2)=\{0,(1/2),1\}$;

Among them: (1/2) In the field of number theory, it is called the "abnormal zero point" of the "Riemann conjecture", here it is called "the center zero point relative symmetry circle logarithm", which means that the two side factors of the circle logarithm have reciprocal symmetry. The algebraic formula proves that "the element of asymmetry is transformed into a logarithm of relative symmetry circle with stable symmetry". In particular, the traditional limit method, except for discrete equations, traditional mathematics cannot prove the stability and symmetry of the center zero of the entangled type. (Another special proof).

3.5. The establishment and conversion of calculus equation to the linear calculation of logarithm of circle

The core problem of the equation is that the discriminant judges whether the calculus equation is valid? Establishing conditions: $0 \le (1-Џ^2)=\{x/D_0\}\le 1$; in particular, the regularized distribution of combination coefficients is the core of calculus.

According to known conditions: the number of elements (power dimension) (S=2); the second coefficient B; the average value of the elements D_0; ($B=SD_0$), the boundary condition D; (unit body $dx=(KS\sqrt{D})$), as long as the above three known conditions are available, polynomials and calculus equations can be established. Back to the asymmetry group combination of "2 and 3":

Definition 3.3.1 Equation: Known conditions: two elements (S=2); average value D0=2.5; boundary conditions D=6; $dx=\sqrt{6}$;

Discriminant; $(1-Џ^2)=\{x/D_0\}\le 1$; establish a balanced equation.

$(1-Џ^2)=\{x/D_0\}=\sqrt{6}/2.5=24/25$; or $\{x/D_0\}^2=6.0/6.25$; $Џ^2=1/25$; $Џ=1/5$;

Equation:

(3.5.1) $$x^2\pm Bx+D=\{x\pm\sqrt{\mathbf{6}}\}^2 =x^2\pm 2D_0x+6 =(1-Џ^2)\cdot\{x^2\pm 2D_0x+2.5^2\} =(1-Џ^2)\{x\pm 2.5\} =[(1-Џ^2)\cdot(0,2)\ \{2.5\}]^2;$$

Symmetry center zero point:

(3.5.2) $\mathbf{\Sigma}_{(Z+S)}(+Џ)+\mathbf{\Sigma}_{(Z-S)}(-Џ)=0$; $Џ=1/5$;

Two element root solutions:

(3.5.3) $x_1=(1-Џ)\cdot 2.5=(1-1/5)\cdot 2.5=2$;

$x_2=(1+Џ)\cdot 2.5=(1+1/5)\cdot 2.5=3$;

Reflects the two asymmetry values of 2 and 3, and shows relative symmetry through ($Џ=1/5$) or ($Џ^2=1/25$) and $(1-Џ^2)=(24/25)$.

The logarithm of the center zero point symmetry circle describes the asymmetry value and state of distance, deformation, area (perfect circle). In other words, the logarithm of a circle converts "asymmetry into relative symmetry, and the analysis of {0 to 1} through the principle of relativity".

Definition 3.3.2 Equation calculation result

The balance equation and calculus equation satisfying the discriminant conditions such as (3.3.1) have three calculation results:

(1), The two elements of the infinite 2-2 group combined unit body rotate with the plane of the center zero point (vector subtraction)

(3.5.4) $\{x-\sqrt{\mathbf{6}}\}^{K(Z\pm S\pm q=2)/t}=[(1-Џuv^2)\cdot(0)\ \{2.5\}]^{K(Z\pm S\pm q=2)/t}$;

(2), The two elements of the infinite 2-2 group combined unit body precess in three dimensions (vector addition) with the center zero point.

(3.5.5) $\{x+\sqrt{\mathbf{6}}\}^{K(Z\pm S\pm q=2)/t}=[(1-Џ_{(xyz)}{}^2)\cdot(2)\ \{2.5\}]^{K(Z\pm S\pm q=2)/t}$;

(3), The infinite 2-2 group combination unit body, with the center zero point of symmetry and anti-symmetric rotation plus precession, forms a five-dimensional vortex spiral space, in three dimensions (**j, i, k**). {q}∈{qjik}.

The {qjik} is called the "three-tuple generator", which means that the combination of all elements is expanded in the coordinate system {**(xyz), (uv)**}, and all belong to the basic three-dimensional {**j,i,k**} expansion. It reflects that the coordinate system and the basic system have different concepts.

(3.5.6) $\{x\pm\sqrt{\mathbf{6}}\}^{K(Z\pm S\pm q=2)/t}=[(1-Џ_{(jik)}{}^2)\cdot($0 与 2$)\ \{2.5\}]^{K(Z\pm S\pm q=2)/t}$;

(3.5.7) $0\le[(1-Џ^2)^{K(Z\pm S\pm q=\pm 2)/t}=(1-Џ^2)^{K(Z\pm S\pm q=+2)/t}+(1-Џ^2)^{K(Z\pm S\pm q=-2)/t}]\le 1$;

(3.5.8) $(1-Џ^2)^{0(Z\pm S\pm q=\pm 2)/t}=(1-Џ^2)^{K(Z\pm S\pm q=\pm 2)/}$; (K=0);

The formula (3.5.8) also indicates that any function can be analyzed for two asymmetric functions with "resolution of 2", which explains the "positive, middle, and inverse properties" of the function. The conversion point is the "center zero point".

Among them:

(1), $(1-Џ^2)^{K(Z\pm S\pm q=+2)/t}+(1-Џ^2)^{K(Z\pm S\pm q=-2)/t}=\{\pm 0\}$; ; means balance ,Zero point conversion conversion;

(2), $(1-Џ^2)^{K(Z\pm S\pm q=+2)/t}\le\{\pm 0\}$; (K=+1); indicates the convergence of the function and the forward movement of compression;

(3), $(1-Џ^2)^{K(Z\pm S\pm q=-2)/t}\ge\{\pm 0\}$; (K= -1); indicates the expansion and expansion of the function in the opposite direction;

(4), $(1-Џ^2)^{K(Z\pm S\pm q=+2)/t}=(1-Џ^2)^{K(Z\pm S\pm q=-2)/t}=\{0$ means biological gene or physical The two-particle double pitch "equal pitch, constant cross section" unfolds.

(5), $(1-Џ^2)^{K(Z\pm S\pm q=+2)/t}+(1-Џ^2)^{K(Z\pm S\pm q=-2)/t}=\{0\}$ indicates the double pitch of biological genes" The two-way (growth and weaken) of unequal pitch and unequal surface.

(6), $(1-Џ^2)^{K(Z\pm S\pm q=+2)/t}+(1-Џ^2)^{K(Z\pm S\pm q=-2)/t}=\{0\}$represents the two-particle physics Two-way (radiation, attenuation) expansion of "unequal pitch, no cross-section constant".

(7), $(1-\eta^2)^{K(Z\pm S\pm q=+2)/t}+(1-\eta^2)^{K(Z\pm S\pm q=-2)/t}=\{0\}$ means that the computer program is expanded and returned One, carry out the unsupervised control procedure of forward and reverse.

3.6. Addition and subtraction of group combination and logarithm of the center zero point circle

[Proof 3] Simple proof of the zero point of the circle logarithm center:

In Newton's binomial, the group combination of unknown variables {X} and known variables {D} form a calculus polynomial equation {X}±{D}: the center zero reflects the group combination polynomial unknown variables {X} and known variables {D }'S asymmetry gap:

3.6.1, polynomial and isomorphic circle logarithm

(3.6.1)
$$\{X\}\pm\{D\}=\{X\pm(^{KS}\sqrt{D})\}^{K(S\pm N\pm(qj)}$$
$$=\{\Sigma_{(S\pm(qjik)}(1/C_{(S\pm(qjik))})^K\prod_{(S\pm(qjik)}(x)^K)^{K(S\pm N\pm(qj)}$$
$$\cdot\{\Sigma_{(S\pm(qjik)}(1/C_{(S\pm(qjik))})^K\prod_{(S\pm(qjik)}(^{KS}\sqrt{D}))^{K(S\pm N\pm(qj)}$$
$$=\Sigma_{(S\pm(qjik)}\{x_0\pm\{D_0\}^{K(S\pm N\pm(qj)}$$
$$=(1-\eta^2)^{K(S\pm N\pm(qj)}\cdot\{x_0\pm D_0\}^{K(S\pm N\pm(qj)}$$
$$=[(1-\eta^2)\cdot(0,2)\cdot\{D_0\}]^{K(S\pm N\pm(qj)};$$

Introduce the logarithm of the circle:

(3.6.2)
$$(1-\eta^2)^{K(S\pm N\pm(qj)}=\{x_0\}^{K(S\pm N-(qj)}\cdot\{D_0\}^{K(S\pm N+(qj)}$$
$$=(1-\eta^2)^{K(S\pm N+(q))}+(1-\eta)^{K(S\pm N-(qj))}$$
$$=(1-\eta^2)^{K(S\pm N\pm(q))}$$
$$=\{0\text{ to }1\};$$

Obtain the isomorphic circle logarithm of each sub-item of the group combination:

(3.6.3)
$$(1-\eta^2)^{K(S\pm N\pm(qj)}=(1-\eta^2)^{K(S\pm N\pm(q=1)}=(1-\eta^2)^{K(S\pm N\pm(q=2)}=\ldots=(1-\eta^2)^{K(S\pm N\pm(q=p)};$$

3.6.2. The relationship of addition and multiplication of logarithms of isomorphic circles:

(3.6.4) $$(1-\eta^2)^{K(S\pm N+(q))}\cdot(1-\eta^2)^{K(S\pm N-(qj))}=\{0\text{ to }1\};$$

(3.6.5) $$(1-\eta^2)^{K(S\pm N+(q))}+(1-\eta^2)^{K(S\pm N-(qj))}=\{0\text{ to }1\};$$

Solve the (3.6.4)(3.6.5) simultaneous equations, and solve the critical line and critical point of the group combination:

(3.6.7) $$(1-\eta^2)^{K(S\pm N\pm(q))}=\{0,(1/2),1\}^{K(S\pm N\pm(q))}$$

(3.6.8) $$\Sigma_{(S+(qjik)}(+\eta)=\Sigma_{(S-(qjik)}(-\eta);\quad \Sigma_{(S+(qjik)}(+\eta^2)=\Sigma_{(S-(qjik)}(-\eta^2);$$

The formulas (3.6.7) and (3.6.8) indicate that (1/2)K(S±N±(q)) is everywhere on the critical line of each level of the function, which is called the central zero point, and the two side factors of the central zero point Has stable symmetry.

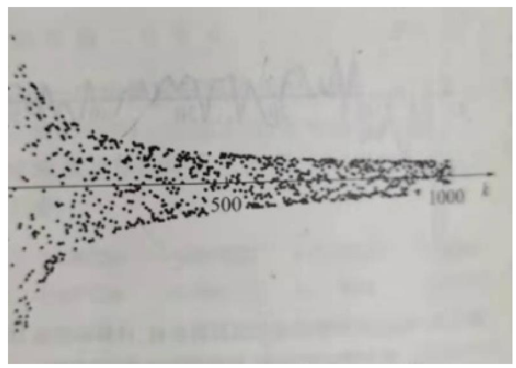
3.6.3 The relationship between the zero point of the logarithmic center of the isomorphic circle and the abnormal zero point of the Riemann function

Here, the characteristic modulus (average value of the negative power function) (K=-1) is the Riemann zeta function "the sum of the reciprocal and then the reciprocal", without loss of generality.

(3.6.9)
$$\{\Sigma_{(S\pm(qjik)}(1/C_{(S\pm(qjik))})^K\prod_{(S\pm(qjik)}(x)^{(K)})^{K(S\pm N-(q)}=[\Sigma_{(S\pm(qjik)}(x^{-S})]^{K(S\pm N-(q)};$$

(3.6.10) $$(1-\eta^2)^{K(S\pm N\pm(q))}=(1/2)^{K(S\pm N\pm(q))}$$

The proof of formula (3.6.10) involves the "Riemann conjecture". Call the abnormal zero point (1-Ƞ2)K(S±N±(q))=(1/2)K(S±N±(q))", and call the center zero point in the characteristic mode. {0±S or 1 ±S}K(S±N-(q), represents the end point (boundary-center point) of the Riemann zeta function (characteristic mode). (Figure 2) **(Figure 2).**



Symmetry of the symmetry line from each element of the group combination point to the central zero point (quoted from "The Love of Prime Numbers" p340).

3.6.4. How does the logarithm of a circle deal with the problem of high parallelism?

Synchronous deployment under high parallel conditions is inseparable from the simple central zero point proof. Such as "multi-media natural language, audio, video, text and other data processing", to achieve synchronous expansion, currently using multiple computers and a certain amount of manual operation. In other words, parallel computing has not yet achieved satisfactory results. The logarithm of the circle and the calculation time have isomorphic consistency and invariance, and the change lies in the boundary conditions and "the central zero point can be moved and zero error superimposed".

The formula (3.6.1) -(3.6.2) , (1/2) is the symmetry of the central zero point, and it is said that the Riemann zeta function "has an abnormal zero point (1/2) everywhere on the critical line", and the central zero point two The relative symmetry of the sides expands synchronously; the smooth processing of each level of the multi-media state is like a "string gourd" with precise "central zero and boundary superimposition". The central zero points of the plane circle form a sequence of "concentric circles", which is a unified perfect circle. Each circle on the radius of each multi-media state has the same logarithmic factor of the relative symmetric circle, which realizes the synchronous expansion of the multi-media state.

3.7. Physical constants and anisotropy issues

Physical constants and conversion factors (Table f1-1) See "Modern Physics" P504 for the physical "constant table": such as: Planck's constant (h=6.626075×10-34·s); gravitational constant G=6.6726×10- 12N·m2/kg2; Boltzmann constant k=1.380658×10-23 and more than 20 kinds, introducing characteristic modes; such as: D0=(ζ·D0); x0=(ζ·x0);

The expression of "anisotropy problem" is regional and hierarchical, which can reflect that the combined circle logarithm is carried out "in the corresponding interval". Physics is expressed as "different physical element particles have different decay periods", gravitation, electromagnetics, thermodynamics, etc. have different physical constants, "Modern Physics" textbook P504 table f1-1 physical constant table lists 22 types, and P505 table f1 -2 20 kinds of physical unit comparison and conversion factors, etc.

(3.7.1) $\zeta(1-\eta^2)=\{\zeta_1(1-\eta_1^2)+\zeta_2(1-\eta_2^2)+\ldots\}$;

(3.7.2) $\{(1-\eta^2)D_0\}^{K(Z)/t}=\{(1-\eta_1^2)(\zeta_1 D_{01})+(1-\eta_2^2)(\zeta_2 D_{02})+\ldots\}$;

Formula (3.7.1)-(3.7.2) The general constant $\zeta=\zeta_1\zeta_2\ldots\zeta_S$ is combined in the element, and can also exist alone in combination with the circle logarithm of the group sub-item, and does not affect the calculation of the characteristic modulus and the circle logarithm.

In particular, when time introduces a time series function, and mass-space-time forms a group combination, mass-space has covariance. In other words, changes in space and changes in quality have reciprocal synchronization changes. Therefore, the description of the change of space represents the change of any quality element, which is called "equivalent replacement, covariance". Among them, the space (wave) has visibility and measurable distance-deformation, which is easy to understand or observe.

4. Arithmetic analysis of "0 to 1" in the cubic equation of one variable

In order to meet the needs of professionals, the one-variable cubic calculus equation adopts normal calculation. Only some of them are introduced here. Such as "complex variable function theory", "(asymmetry) eccentric ellipse", "Pebonacci sequence", "calculation of electromagnetic force", "Chen Jingrun's '1+2' mathematical proof" can also be summarized as one yuan three times Equations, as well as many problems in physics, chemistry, biology, computer algorithms, and so on, also belong to one-dimensional cubic equations. There are many potentials in the one-variable three-dimensional calculus equation.

One-variable quadratic equations are "even functions" and one-variable cubic equations are "odd functions", both of which are the indispensable mathematical foundations of the logarithm of the circle. (Note: For the issues mentioned in this article, some papers have been published in well-known journals at home and abroad).

The one-dimensional cubic equation expresses three elements to form a five-dimensional vortex spiral. The plane rotation forms include "the central ellipse with symmetrical center zero point (major axis (A), short axis (B))" and "the asymmetrical center at center zero point (eccentric ellipse) , Oval) ellipse (major axis $A=(A_1+A_2)$, minor axis (B)) form".

Central ellipse performance: $(1-\eta^2)=(A-B)/(A+B)$

Eccentric ellipse performance: $(1-\eta_{(1+2)}^2)=(1-\eta_1^2)\cdot(1-\eta_2^2)$;

$(1-\eta_1^2)=(A_0-B)/(A_0+B)$; $(1-\eta_2^2)=(A_0-A_1)/(A_0)=(A_2-A_0)/(A_0)$;

The calculus equation (order 0, order 1, and order 2) is expressed as $\{q\}\in\{q_{jik}\}$, which is called a three-combination generator.

4.1. [Example 1] Discrete one-dimensional cubic equation

Known: Power dimension element: (S=+3); average value: $D_0=x_0=14$; boundary condition: $D=D_0^3=143=2744$;

Analysis: $D_0^2=x_0^2=14^2=196$; $\mathbf{D}_0^3=x_0^3=14^3=2744$; $\mathbf{D}=(\sqrt[3]{2744})^3$;

Discriminant: $(1-\eta^2)^3=(\sqrt[3]{2744})/14)^3=2744/2744=1$;

Discrimination result: (K=±0), it belongs to the discrete calculus equation.

(4.1.1) $(x\pm\sqrt[3]{2744})^3=x^3\pm42x^2+42x\pm(\sqrt[3]{2744})^3$
$=x^3\pm3\cdot14x^2+3\cdot14x\pm2744$
$=[x_0^3\pm3\cdot14x_0^2+3\cdot196x_0\pm2744]$
$=(x_0\pm14)^3$
$=\{0,2\}^3 14^3$;

(4.1.2) $\{x-\sqrt{\mathbf{D}}\}^3=\{0\}\cdot14]^3=0$;

(4.1.3) $\{x+\sqrt{\mathbf{D}}\}^3=[\{2\}\cdot14]^3=8\cdot2744=21952$;

(4.1.4) $\{x\pm\sqrt{\mathbf{D}}\}^3=[\{2\leftrightarrow0\}\cdot14]^3=(8\cdot2744\leftrightarrow0)=(21952\leftrightarrow0)$;

represents the five-dimensional-six-dimensional vortex space from 21952 and Balance and conversion between the center zero point of 0.

Symmetry: check the circle logarithmic factor, because $(1-\eta^2)^3=1$; the symmetry obtains

$\eta^2\{D_0\}=14$ Choose the average value $\eta^2 D_0=14$; $(-7/14)+(+7/14)=0$;

Find the root solution: symmetry makes the roots of the three elements the same,

(**4.1**.5) $x_1=x_2=x_3=14$;

4.2. [Example 2] Entangled one-dimensional cubic equation

Known: Power dimension element: (S=+3); average value: $D_0=x_0=14$; boundary condition: D=2024 (multiplying three elements);

Discriminant:

$(1-\eta^2)^3=(\sqrt[3]{2024}/14)^3=2024/2744=0.737609\leq 1$; it belongs to the convergent calculus equation.

$\eta^2=(2744-2024)/2744=0.262390\leq 1$;

(**4.2**.1)

$$(x\pm\sqrt[3]{2074})^3=x^3\pm 42x^2+42x\pm(\sqrt[3]{2024})^3$$
$$=x^3\pm 3\cdot 14x^2+3\cdot 14x\pm 2024$$
$$=(1-\eta^2)^3[x_0^3\pm 3\cdot 14x_0^2+3\cdot 196x_0\pm 2744]$$
$$=(1-\eta^2)^3(x_0\pm 14)^3$$
$$=(1-\eta^2)^3\{0,2\}^3 14^3;$$

(**4.2**.2) $\{x-\sqrt{\mathbf{D}}\}^3=[(1-\eta^2)\cdot\{0\}\cdot 14]^3=0$;

(**4.2**.3)

$\{x+\sqrt{\mathbf{D}}\}^3=[(1-\eta^2)\cdot\{2\}\cdot 14]^3=8\cdot 2024=16192$;

(**4.2**.4)

$\{x\pm\sqrt{\mathbf{D}}\}^3=[(1-\eta^2)\cdot\{2\to 0\}\cdot 14]^3=(8\cdot 2024\to 0)=(16192\to 0)$;

represents five-dimensional-six-dimensional The vortex space converges from 16192→0 to the central zero point.

Find the root solution:

According to: three elements and B=42; three-element product D=2024:

Satisfy the symmetry of the symmetry center zero point:

(4.2.5)

$\mathbf{\Sigma}_{(Z+S)}(+\eta_1+\eta_2)+\mathbf{\Sigma}_{(Z-S)}(-\eta_3)=0$;

The center zero point is between x1x2 and x3,

Preselection (1): $\eta=(1/2)^2\cdot 31=8$ (the numerator is an integer); $\eta^2=8/14$ is not satisfied with the trial,

Pre-selection (2): $\eta^2=9/14$ and try again (satisfying balance and symmetry).

(**4.2**.6)

$$(1-\eta^2)\mathbf{D_0}=[(1-\eta_1)+(1-\eta_2)]-(1+\eta_3)]\mathbf{D_0}$$
$$=[(1-6/14)+(1-3/14)-(1+9/14)]$$
$$=(9/14)-(9/14)=0;$$
((satisfies the symmetrical balance condition).)。

Root element:

(**4.2**.7)

$$x_1=(1-\eta_1^2)\mathbf{D_0}=(1-6/14)14=8;$$
$$x_2=(1-\eta_2^2)\mathbf{D_0}=(1-3/14)14=11;$$
$$x_3=(1+\eta_3^2)\mathbf{D_0}=(1+9/14)14=23;$$

Verification (1): $\mathbf{D}=8\cdot 11\cdot 23=2024$;

Verification (2): $(1-\eta^2)\cdot[14^3-3\cdot 14^3+3\cdot 14^3-14^3=0$;

4.3. [Example 3] Creeping and rotating one-dimensional cubic equation

On entangled calculus equations, creep changes between root elements

Known: Power dimension element: (S=-3); average value: $D_0=x_0=14$;

$\mathbf{D}=(8\cdot 11\cdot 23=2024$ (see example question 8)

Boundary conditions: $\mathbf{D_{uv}}=(\mathbf{D_u}\leftrightarrow\mathbf{D}\leftrightarrow\mathbf{D_v})$ represents the boundary conditions (creep, rotation). Including $\mathbf{D_u}$=83=512 (small peristalsis); passing through the center of D=2024 (peristaltic, rotating) to $\mathbf{D_v}$=233=12167 (large peristaltic);

Among them: (discrete type) $\mathbf{D_0^3}=14^3=2744$; belongs to discrete calculation; (see example question 1) (Entangled type) **D=8·11·23**）=2024 is a convergent calculation; (see example question 2)

Discriminant: $(1-\eta_u^2)^{(+1)}=[8/14]^{(+1)}\leq 1$; $(1-\eta_v^2)^{(-1)}=[23/14]^{(-1)}=(14/23)^{(-1)}\geq 1$;

Analysis: Based on the [example 2] entangled one-dimensional cubic equation of (creep center), calculate (creep, rotation).

(**4.3**.1)

$$(x\pm\sqrt[3]{\mathbf{D_{uv}}})^{(3)}=x_{\mathbf{uv}}^{(3)}\pm 42x_{\mathbf{uv}}^{(2)}+42x_{\mathbf{uv}}^{(1)}\pm(\sqrt[3]{2024_{\mathbf{uv}}})^{(3)}$$
$$=x_{\mathbf{uv}}^{(3)}\pm 3\cdot 14x_{\mathbf{uv}}^{(2)}+3\cdot 14x_{\mathbf{uv}}^{(1)}\pm(\sqrt[3]{2024_{\mathbf{uv}}})^{(3)}$$
$$=(1-\eta_{\mathbf{uv}}^2)\cdot[x_{0\mathbf{uv}}^{(3)}\pm 3\cdot 14x_{0\mathbf{uv}}^{(3)}+3\cdot 196x_{0\mathbf{uv}}^{(3)}\pm(\sqrt[3]{2024_{\mathbf{uv}}})]^{(3)}$$
$$=[(1-\eta_{\mathbf{uv}}^2)\cdot(x_0\pm 14_{\mathbf{uv}})]^{(3)}$$
$$=[(1-\eta_{\mathbf{uv}}^2)\cdot(0,2)\cdot 14_{\mathbf{uv}}]^{(3)};$$

(**4.3**.2) $\{x-\sqrt{\mathbf{D_{uv}}}\}^{(3)}=[(1-\eta_{\mathbf{uv}}^2)\cdot\{0\}\cdot 14_{\mathbf{uv}}]^{(3)}=0_{\mathbf{uv}}$;

the rotation center of peristalsis and the conversion point between peristalsis.

(**4.3**.3)

$\{x+\sqrt{\mathbf{D_{uv}}}\}^{(3)}=[(1-\eta_{\mathbf{uv}}^2)\cdot\{2\}\cdot 14_{\mathbf{uv}}]^{(3)}=8\cdot 2024_{\mathbf{uv}}=16192_{\mathbf{uv}}$; ;

the value of the large and small peristaltic center

(**4.3**.4) $\{x\pm\sqrt{\mathbf{D_{uv}}}\}^{(3)}=[(1-\eta^2)\cdot\{2\to 0\}\cdot 14_{\mathbf{uv}}]^{(3)}$

$$=(1-\eta_{\mathbf{uv}}^2)\cdot(0\to 8\cdot 2024_{\mathbf{uv}})=(0\to 16192_{\mathbf{uv}})$$
$$=(1-\eta_{\mathbf{uv}}^2)\cdot(0\to 8)\cdot[(512_{\mathrm{u}})\leftrightarrow(2024_{\mathbf{uv}})\leftrightarrow(12167_{\mathrm{v}})]$$
$$=(1-\eta_{\mathbf{uv}}^2)\cdot[(4096_{\mathrm{u}})\leftrightarrow(16192_{\mathbf{uv}})\leftrightarrow(97336_{\mathrm{v}})];$$

the five-dimensional-six-dimensional vortex space creeps through the central zero point$0_{\mathbf{uv}}$ 在 $512_{\mathbf{u}}$between and12167_{v} .

Verification:

$(\sqrt[3]{2024_{\mathbf{uv}}})^3-3\cdot(\sqrt[3]{2024_{\mathbf{uv}}})^3+3(\sqrt[3]{2024_{\mathbf{uv}}})^3-2024_{\mathbf{uv}}=0$;

Special: the numerical values of peristalsis (convergence and diffusion) and rotation (inner and outer antisymmetric center) are expressed respectively

(1)， Convergent, inner antisymmetric central type boundary:

$(1-\eta_{\mathbf{u}}^2)=(1-\eta_{\mathrm{u}}^2)^{(+1)}=\{x_{\mathbf{u}}/\mathbf{D_0}\}$; or$=\{x_{\mathbf{u}}^{\mathbf{2}}/\mathbf{D_0}^2\}$; or$=\{x_{\mathbf{u}}^{\mathbf{3}}/\mathbf{D_0}^3\}$;

(2)。 The boundary of diffusion and external anti-symmetric centrality:

$(1-\eta_{\mathrm{v}}^2)=(1-\eta_{\mathrm{v}}^2)^{(-1)}=\{x_{\mathrm{v}}/\mathbf{D_0}\}$; or$=\{x_{\mathrm{v}}^{\mathbf{2}}/\mathbf{D_0}^2\}$;

or=$\{x_v^3/\mathbf{D}_0^3\}$;

4.4. Periodic one-dimensional cubic equation

[Example 4] Periodic one-dimensional cubic equation (periodic diffusion-convergence or rotation) Periodic calculation can be embodied in the power function [S,Q,M]·(2π), or in the characteristic mode of the element, reflecting the different periodic combinations of different elements.

Known: Power dimension element: (S=-3); average value: $D_0=x_0=14$. boundary condition: $\mathbf{D_T}=\pm16192$ (representing periodic diffusion (+) or convergence (-)); power function T= K([S+Q+M]±3)·(2π)

Discriminant:

$(1-\eta_T^2)^{K(3\pm T)}=[14/(^3\sqrt{16192})]^{(-3)}=16192/2024=8.00\geq1$; ;

Analysis: $D_0^2=x_0^2=14^2=196$; $D_0^3=x_0^3=14^3=2744$; $\mathbf{D}=(^3\sqrt{16192})^3==T\cdot2744$; "T= 8"belongs to abnormal diffusion: because of the average value $D_{0T}^3=14_T^3=2744_T=T\cdot2744=8\cdot2744$; there is an entangled boundary condition that is a multiple of 8, which may be a parameter (G), or a periodic parameter （**T**=K[Z±S±Q±M]·2π）, or external force Factors, interference, etc. Automatically eliminate "parameters", which belong to the convergent calculus equation.

(**4.4**.1)

$$(x\pm^3\sqrt{2024_T})^{K(3\pm T)}=x^{K(3)}\pm42x^{K(2)}+42x^{K(1)}\pm(^3\sqrt{16192})^{K(3\pm T)}$$
$$=x^{K(3\pm T)}\pm3\cdot14x^{K(2)}+3\cdot14x^{K(1)}\pm(^3\sqrt{16192})^{K(3\pm T)}$$
$$=(1-\eta_T^2)^{K(3\pm T)}[x_0^{K(3)}\pm3\cdot14x_0^{K(2)}+3\cdot196x_0^{K(1)}\pm16192]^{K(3\pm T)}$$
$$=(1-\eta_T^2)^{K(3\pm T)}(x_0\pm14)^{K(3\pm T)}$$
$$=(1-\eta_T^2)^{K(3\pm T)}\{0,2\}^{K(3\pm T)}14^{K(3\pm T))};$$

(**4.4**.2) $\{x-\sqrt{\mathbf{D_T}}\}^{K(3\pm T)}=[(1-\eta_T^2)\cdot\{0\}\cdot14]^{K(3))}=0$;

(**4.4**.3)

$$\{x+\sqrt{\mathbf{D_T}}\}^{K(3\pm T)}=[(1-\eta_T^2)\cdot\{2\}\cdot14]^{K(3)}=\pm8\cdot2024_T$$
$$=\mathbf{KT}\cdot2024$$
$$=K([S+Q+M])\cdot\pm16192;$$

(**4.4**.4)

$$\{x\pm\sqrt{\mathbf{D_T}}\}^{K(3\pm T)}=[(1-\eta_T^2)\cdot\{2\leftrightarrow0\}\cdot14]^{K(3\pm T)}$$
$$=(0\leftrightarrow K([S+Q+M]\cdot2\pi)\cdot8\cdot2024)$$
$$=(0\leftrightarrow K([S+Q+M]\cdot2\pi)\cdot16192);$$

Each element has a different periodicity （$T=T_1+T_2=T_3$） Using the relative symmetry of the zero point of the circle logarithm center, it is solved separately in the root solution element.

The five-dimensional-six-dimensional vortex space diffuses or converges periodically from the central zero point (0) and (0↔K([S+Q+M]·2π)·16192. Among them: (T represents the periodic value, listed as Power functions or time series become general polynomials).

Verification:

$(^3\sqrt{2024_T})^3-3\cdot(^3\sqrt{2024_T})^3+3(^3\sqrt{2024_T})^3-2024_T=0$;

In particular, the closed group combination has a strong anti-interference ability, that is to say, if the boundary conditions appear unbalanced, and accidental or non-accidental interference phenomenon, the equation will be automatically displayed, the program will be eliminated (or the cause of the interference) will be eliminated, and continue Calculate according to the closed balance equation. In the computer, it is called robustness, taking into account the advantages of security, privacy, and openness.

5. The logarithm of the circle explains physical and mathematical phenomena

5.1, distance and deformation

(1) 、Is the smallest and fastest distance between two points a straight line? Answer: It is a "circle logarithm". The experiment proves that the distance between two points (with high and low) has a straight line, an upward convex curve, and a concave curve. The experimental result: the same sphere, the result is the concave curve first, and the straight line second. mathematics. It was first discovered and put forward by mathematicians such as Gauss, Euler, and Schwartz, called "least squares method, geodesic, measurement" and so on. Due to the influence of "the central zero point of traditional calculus does not move" in Western countries, it did not go deep. Going forward, this opportunity nature leaves room for expansion of the group combination-circle logarithm.

Definition 5.1.1 Group combination: the combination of multiple (complex) variable elements that are not repeated, and the combination coefficient is established (the average value of the positive, middle, and inverse functions).

Definition 5.1.2 Linear equation, characteristic module: (called the 1-1 combination sub-item of the group combination)

(5.1.1) $\{x\}=(1-\eta^2)x_0$; $x_0=\mathbf{\Sigma}_{(i=S)}(1/S)\{x_i\}$;

Definition 5.1.3 Non-linear equations and characteristic modules: (called the q-q combination sub-item of the group combination)

(5.1.2) $\{x\}^{K(S)/t}=\{(1-\eta^2)x_0\}^{K(S)/t}$; $x_0=\mathbf{\Sigma}_{(i=S)}(1/C_{(S\pm q)})\mathbf{\Pi}_{(i=S\pm q)}\{x_i\}$;

The (x_0) of formulas (5.1.1) and (5.1.2) all satisfy the relative symmetry of the central zero point.

(2), The current "quantum computing" does not solve the continuity problem. Traditional quantum computing emphasizes the independence of quantum to solve the distance problem, so how can the gap between quanta be filled into continuity? The logarithm of the circle solves the distance-deformation problem, for example: the area of the ellipse $\{\mathbf{D}\}=\pi ab$, R=(1/2)(a+b)changes: such as

(5.1.3) $\{D\}=\pi ab$ (area of ellipse);

$=(1-\eta^2)\pi R^2$ (the difference between the area of an ellipse and the area of a perfect circle);

$=(1-\eta^2)\pi ab/\pi R^2$(change in the distance between the center point of the ellipse and the center point of the perfect circle)

$=(1/2)\pi(1-\eta^2)\cdot(a+b)$(synchronous change of the long axis and the short axis of the ellipse)

$=(1/2)\pi(1-\eta)(a)\cdot(1+\eta)(b)$ (the reciprocity of the long axis and the short axis of the ellipse changes simultaneously)

$=(1-\eta^2)\cdot 2\pi R\cdot(1/2)R$ (the change of the circumference of the ellipse and the change of the area of the perfect circle)

$=(1-\eta^2)\cdot\pi R^2$(the difference between the area of an ellipse and the area of a perfect circle,

In this way, the logarithm of the circle not only maintains the granular (discrete) distance of the quantum, but also maintains the quantum deformation to fill the space (continuity).In this way, the logarithm of the circle not only maintains the granular (discrete) distance of the quantum, but also maintains the quantum deformation to fill the space (continuity).

5.2. Electrodynamic equation

According to Einstein's electrodynamics equation, describe Maxwell space-Hertz square

For the transformation of Cheng, see "Einstein's Miracle Year-Five Papers That Changed the Face of Physics" [P113-116], for the static system K,

Suppose: power vector **(X, Y, Z)**, magnetic force vector **(L, M, N)**; corresponding coordinates **(i,j,k)**,

$(X^2+Y^2+Z^2)=1$; $(L^2+M^2+N^2)=1$; $R^2=1$;

$ß^2=(1-(u/V)^2)^{(-1)}\approx(1-\eta^2)^{K(Z\pm S\pm N\pm q)/t}=\{^{KS}\sqrt{x}\}^{K(Z\pm S\pm N\pm q)/t}$ (K=-1 is the average of the positive, middle, and inverse power functions of the subject); the logarithm of the circle has been verified by extensive experiments and calculations. In other words, the theory of relativity is a special case of the logarithm of the circle.

Both have the same form. Einstein uses the "constant speed of light" as the base circle function, and the circle logarithm uses the "invariant group combination" as the base circle function.

Electrodynamic equation K=(-1), N=(-1) (first-order differential, dynamic vector) N=(-1) (second-order differential, energy, force)

Among them:

[X] and **[NM]**; **[L]** and **[ZY]** correspond to (**i**);

[Y] and **[L N]**; **[M]** and **[ZX]** correspond to (**J**);

[Z] corresponds to **[M L]; [N]** corresponds to **[XY]** (**K**);

Electrodynamics rewritten as a circle logarithmic electric-magnetic conversion

(1), $(1/v)(\partial X/\partial t)=(\partial N/\partial y)-(\partial M/\partial z)$;

Written as (x-axis power vector) = (NM rotating axis magnetic force vector)

(5.3.1) $(1-\eta_{[x]}^2)^{-(Z\pm S\pm(N=-1)\pm qjik)}\mathbf{I}=(1-\eta_{[NM]}^2)^{-(Z\pm S\pm(N=-1)\pm qjik)}\mathbf{I}$

(2), $(1/v)(\partial L/\partial t)=(\partial Y/\partial z)-(\partial Z/\partial y)$;

Written as (L axis magnetic force vector) = (YZ rotation axis power vector)

(5.3.2) $(1-\eta_{[L]}^2)^{-(Z\pm S\pm(N=-1)\pm qjik)}\mathbf{I}=(1-\eta_{[YZ]}^2)^{-(Z\pm S\pm(N=-1)\pm qjik)}\mathbf{I}$

(3), merge (5.3.1)-(5.3.2) into the electro-magnetic conversion equation of (I) axis

(5.3.3) $(1-\eta_{[X-L]}^2)^{-(Z\pm S\pm(N=-1)\pm qjik)}\mathbf{I}=(1-\eta_{[MN-YZ]}^2)^{-(Z\pm S\pm(N=-1)\pm qjik)}\mathbf{I}$

Similarly:

(4), $(1/v)(\partial Y/\partial t)=(\partial L/\partial y)-(\partial N/\partial z)$;

Written as (Y axis power vector) = (LN rotation axis magnetic force vector)

(5.3.4) $(1-\eta_{[Y]}^2)^{-(Z\pm S\pm(N=-1)\pm qjik)}\mathbf{J}=(1-\eta_{[LN]}^2)^{-(Z\pm S\pm(N=-1)\pm qjik)}\mathbf{J}$

(5), $(1/v)(\partial M/\partial t)=(\partial Z/\partial z)-(\partial X/\partial y)$;

Written as (M-axis magnetic force vector)=(ZX rotation axis power vector)

(5.3.5) $(1-\eta_{[M]}^2)^{-(Z\pm S\pm(N=-1)\pm qjik)}\mathbf{J}=(1-\eta_{[ZX]}^2)^{-(Z\pm S\pm(N=-1)\pm qjik)}\mathbf{J}$

(6), merge (5.3.4)-(5.3.5) into the electro-magnetic conversion equation of the (J) axis

(5.3.6) $(1-\eta_{[Y-M]}^2)^{-(Z\pm S\pm(N=-1)\pm qjik)}\mathbf{J}=(1-\eta_{[LN-ZX]}^2)^{-(Z\pm S\pm(N=-1)\pm qjik)}\mathbf{J}$

When the direction of rotation coincides, the rotation equation of the electromagnetic equation "(Z) and (ML)" and the precession K of "(N) and (XY)"

The axis is not displayed. The transformed electrodynamic equation of the Einstein-Maxwell-Hertz equation is written as:

(5.3.7) $(1-\eta^2)^{-(Z\pm S\pm(N=-1,0,2)\pm qjik)}=(1-\eta uv^2)^{-(Z\pm S\pm(N=-1,2)\pm qjik)}$

$=(1-\eta_{[YZ]}^2)^{-(Z\pm S\pm(N=-1,2)\pm qjik)}\mathbf{I}+(1-\eta_{[ZX]}^2)^{-(Z\pm S\pm(N=-1,2)\pm qjik)}\mathbf{J}$;

In formula (5.3.7), the spiral equation of the five-dimensional scroll structure has the same form as the circle logarithm equation of the electromagnetic equation.

Calculus ±N=0,1,2 means zero order (original function), first order (velocity, momentum), second order (acceleration, kinetic energy, surface tensor, force).

5.3. Gravitational equation

Planetary series of motion, public rotation plus self-rotation

The five-dimensional space motion of the combination of the common spin and the spin, the nominal spin is called precession **(x, y, z)**, and the spin is called rotation **(u, v)**

The positive gravitational equation appears as a convergent motion $(1-\eta^2)$

Quantum gravity is the gravitation-energy composed of various interacting particle masses and quantized geometric space-time, including random "symmetry and asymmetry, uniformity and inhomogeneity, continuity and discontinuity, mass and massless" and other factors to form a polynomial equation.

There are group combinations of gravitational elements:

Let: $G\{m_1m_2/r^2\}^{K(Z)/t}=\{(m_gr)^{+(Z\pm S\pm N+qjik])/t},(m_gr)^{0(Z\pm S\pm N+qjik])/t},(m_gr)^{-(Z\pm S\pm N+qjik])/t}\}^Z = \{L[\psi(x), A_\mu(x)]\}^{Z}=\{m_g^2 r^2\}^{K(Z\pm S\pm N+qjik])/t}$;

Properties: k=+1, positive gravitation; k=±1 gravitational space, k=±0 gravitational conversion zero space; k=-1, anti-gravitation;

Spatial attributes: three-dimensional space r**(xyz)**; two-dimensional rotating space $r_{(uv)}$; five-dimensional vortex space $(mr_{(jik)})$; $mr_{[(XYZ)+(uv)]}\in mr_{\{jik\}}$;

Known boundary conditions: $\mathbf{D}^2=G\{D_m^2,D_r^2\}^{K(Z\pm S\pm N+qjik])/t}$;

Group combination gravitational mass average

$$\{M_0^2,r_0^2\}^{(Z\pm S\pm N+qjik])/t}=\Sigma\{1/C_{(Z\pm S\pm N+qjik])}{}^{K}\prod(m_gr)\}^{(Z\pm S\pm N+qjik])/t}=\{m^2 r_{(jik)}^2\};$$

$$(1-\eta^2)^{K(Z\pm S\pm(N=0,1,2)\pm qjik)/t}=G[\{m_1m_2/r^2\}/\{M^2/r^2\}]^{K(Z\pm S\pm(N=0,1,2)\pm qjik)/t}$$
$$=G[\{m_gr_{jik}\}/\{M_0r_{0jik}\}]^{K(Z\pm S\pm(N=0,1,2)\pm qjik)/t}$$
$$=G\{X_{(jik)}/\mathbf{D}_{(jik)}\}=\{X_{(jik)}^2/\mathbf{D}_{(jik)}^{\mathbf{2}}\};'$$

Gravitational equation:

(5.3.1) $\{(m_{g(jik)},r_{(jik)})\pm({}^{KS}\sqrt{\mathbf{D}}_{(jik)})\}^{K(Z\pm S\pm(N=0,1,2)\pm qjik)/t}$
$=Ax^{K(Z\pm S\pm(N=0,1,2)\pm qjik)/t}+Bx^{K(Z\pm S\pm(N=0,1,2)\pm qjik)/t}+\ldots+Px^{K(Z\pm S\pm(N=0,1,2)\pm qjik)/t}+\ldots+\mathbf{D}_{(jik)}^{K(Z\pm S\pm(N=0,1,2)\pm qjik)/t}$
$=\{(1-\eta^2)\cdot(m_{0g(jik)},r_{0(jik)})\pm({}^{KS}\sqrt{\mathbf{D}_{\mathbf{0}(jik)}})\}^{K(Z\pm S\pm(N=0,1,2)\pm qjik)/t}$
$=\{(1-\eta^2)\cdot(0,2)\cdot({}^{KS}\sqrt{\mathbf{D}_{\mathbf{0}(jik)}})\}^{K(Z\pm S\pm(N=0,1,2)\pm qjik)/t}$;

Three calculation results of gravity formula

(1), The gravitational rotation equation (r(uv)), the characteristic mode (KS√D0(uv));

(5.3.2) $\{(1-\eta^2)\cdot(0,2)\cdot({}^{KS}\sqrt{\mathbf{D}_{\mathbf{0}(uv)}})\}^{K(Z\pm S\pm(N=0,1,2)\pm qjik)/t}$;

(2), Gravitational precession equation (r(xyz)), characteristic mode (KS√D0(xyz));

(5.3.3) $\{(1-\eta^2)\cdot(0,2)\cdot({}^{KS}\sqrt{\mathbf{D}_{\mathbf{0}(xyz)}})\}^{K(Z\pm S\pm(N=0,1,2)\pm qjik)/t}$;

(3), Gravitational vortex equation (r(jik)), characteristic mode (KS√D0(jik));

(5.3.4) $\{(1-\eta^2)\cdot(0$ 与 $2)\cdot({}^{KS}\sqrt{\mathbf{D}_{\mathbf{0}(jik)}})\}^{K(Z\pm S\pm(N=0,1,2)\pm qjik)/t}$;

(4) ,Logarithmic equation of gravitation circle (r(jik)), characteristic mode (KS√D0(jik));

(5.3.5) $(1-\eta^2)^{K(Z\pm S\pm(N=0,1,2)\pm qjik)/t}=(1-\eta^2)^{+(Z\pm S\pm(N=0,1,2)\pm qjik)/t}$(positive gravity)
$+(1-\eta^2)^{\pm(Z\pm S\pm(N=0,1,2)\pm qjik)/t}$(gravitational space)
$+(1-\eta^2)^{K(Z\pm S\pm(N=0,1,2)\pm qjik)/t}$(anti-gravitation);

(5), Logarithmic equation of gravitational balance conversion circle $(r_{(jik)})$, characteristic mode $({}^{KS}\sqrt{D_{0(jik)}})$

(5.3.6) $(1-\eta^2)^{\pm0(Z\pm S\pm(N=0,1,2)\pm qjik)/t}=(1-\eta^2)^{+0(Z\pm S\pm(N=0,1,2)\pm qjik)/t}$ (positive gravity)
$+(1-\eta^2)^{-0(Z\pm S\pm(N=0,1,2)\pm qjik)/t}$(antigravity);

In the formula: Yang Zhenning-Mills gauge field $L[\psi(x), A_\mu(x)]$ introduces Newtonian classical mechanics: m_g=GM (gravitational constant is included in the mass element. According to the rule of the gauge field: "There is no calculation of specific mass elements "The logarithm of the circle fulfills this requirement. Based on the gravitational equation, the equation of electromagnetic mechanics, and other mechanical equations, the analysis of the logarithm of the circle can be used. It is expected to realize unified calculation.

5.4. Discussion of cosmic mechanics:

The five-dimensional vortex spiral space is the duality of the "discrete particle and continuous wave function" described by the circle logarithm.

Sexual motion is a combined motion of three-dimensional **{x,y,z}** precession and two-dimensional **{u,v}** rotation. If you add the expansion-balance conversion-work **{P,V,T}**" of the "property" of thermodynamics, a five-dimensional vortex spiral motion equation of one-dimensional to eight-dimensional space is formed. It becomes "cosmic mechanics". However, the total energy of the universe Invariance is conserved. It is called the "cosmic constant". Under the condition of total energy (or total elements unchanged) $\{\mathbf{D}_\Omega\}$, the calculation of cosmic mechanics can be calculated by the logarithm of the circle, such as the description of the logarithm of the evolution of the universe :

(5.4.1) ↔$(1-\eta^2)^{K(Z)/t}$(K=+1)convergence↔$(1-\eta^2)^{K(Z)/t}$(K=+0)positive black hole
↔ $(1-\eta^2)^{K(Z)/t}$(K=±0) the first wormhole↔$(1-\eta^2)^{K(Z)/t}$(K=-0)positive white hole
↔ $(1-\eta^2)^{K(Z)/t}$(K=-1) expansion ↔ $(1-\eta^2)^{K(Z)/t}$(K=-0) reverse white hole
↔$(1-\eta^2)^{K(Z)/t}$(K=±0)second wormhole↔$(1-\eta^2)^{K(Z)/t}$(K=+0)reverse black hole↔

Among them:$(1-\eta^2)^{K(Z)/t}$(K=±0)Wormhole is the conversion point between positive and negative energy.

5.5. Discuss the mechanics of the digital simulation universe:

Attempt to discuss the relationship between the circle logarithm algorithm and physical mathematical calculations, explain the evolution of the universe and high-energy physics and the phenomenon of non-conservation of parity caused by vacuum zero point excitation.

Suppose: 6 prime numbers: (1,3,5,7,11,13) are entangled particles; 5 natural numbers: (1,2,3,4,5) are discrete particles, respectively forming discrete five-dimensional Calculus equations and entangled six-dimensional calculus equations, two parallel polynomials form the 11-dimensional energy particles of the universe $\{x\}^{[Z-11]}=\{x\}^{[Z-6]}+\{x\}^{[Z-5]}$,

5.5.1 [Discussion 1] Calculation of the digital simulation of the mass of the universe

Digital simulation: the digital distinction of the mass of the universe

(1), 5 natural numbers {1,2,(3),4,5}, average value (D_{0A}=3), $\mathbf{D_A}$=243 has discrete neutral state inactive properties, indicating that the nature of the element remains unchanged, and the composition Discrete quintic equation;

(2), 6 prime numbers {3,3,5,(7),11,13}, the average value (D_{0B}=7), $\mathbf{D_B}$=45045 has entangled ionic state activity properties, which means that the properties of the elements will change (called Ionic state), composing the entangled six-order calculus equation; it has the function of convergence and expansion.

The above known conditions can be written as three calculus equations;

(1),One-variable 5-th order calculus equation: (N=0,1,2); $\mathbf{D}_{0A}=3$; $\mathbf{D_{0A}}=3^5=243$;

(5.5.1)

$$\{x\pm(^{K5}\sqrt{243})\}^{K(Z\pm Q\pm(S=5)\pm(N=0,1,2)+(qjik)/t}=ax^{K(Z\pm Q\pm(S=5)\pm(N=0,1,2)\pm(0)/t}$$
$$\pm bx^{K(Z\pm Q\pm(S=5)\pm(N=0,1,2)-(4)/t}+cx^{K(Z\pm Q\pm(S=5)\pm(N=0,1,2)\pm(3)/t}$$
$$\pm ex^{K(Z\pm Q\pm(S=56)\pm(N=0,1,2)\pm(2)/t}+fx^{K(Z\pm Q\pm(S=5)\pm(N=0,1,2)\pm(1)/t}+\mathbf{D_A}$$
$$=\{(1-\eta_5^2)\cdot\{x_0\pm(3)\}^{K(Z\pm Q\pm(S=5)\pm(N=0,1,2)+(q))/t}$$
$$=\{(1-\eta_5^2)\cdot(0,2)\cdot(3)\}^{K(Z\pm Q\pm(S=5)\pm(N=0,1,2)+(q))/t};$$

Discriminant: $(1-\eta_5^2)^{\pm1}=\{x_0/(3)\}=1$; (discrete calculation example)

(2),One-variable 6th order calculus equation: (N=0,1,2); $\mathbf{D}_{0B}=7$; $\mathbf{D_{0B}}=7^6=117649$; $\mathbf{D_B}=45045$;

(5.5.2)

$$\{x\pm(^{K6}\sqrt{45045})\}^{K(Z\pm Q\pm(S=6)\pm(N=0,1,2)+(qjik)/t}=ax^{K(Z\pm Q\pm(S=6)\pm(N=0,1,2)-(0)/t}$$
$$\pm bx^{K(Z\pm Q\pm(S=6)\pm(N=0,1,2)\pm(5)/t}+cx^{K(Z\pm Q\pm(S=6)\pm(N=0,1,2)\pm(4)/t}$$
$$\pm ex^{K(Z\pm Q\pm(S=6)\pm(N=0,1,2)\pm(3)/t}+fx^{K(Z\pm Q\pm(S=6)\pm(N=0,1,2)\pm(2)/t}$$
$$\pm gx^{K(Z\pm Q\pm(S=6)\pm(N=0,1,2)\pm(1)/t}+\mathbf{D_B}$$
$$=\{(1-\eta_6^2)\cdot\{x_0\pm(7)\}^{K(Z\pm Q\pm(S=6)\pm(N=0)+(q))/t}$$
$$=\{(1-\eta_6^2)\cdot(0,2)\cdot(7)\}^{K(Z\pm Q\pm(S=6)\pm(N=0)+(q))/t};$$

Discriminant: $(1-\eta_6^2)^{-1}=\{x_0/(7)\}\geq1$; (Example of diffusive entanglement calculation) (K=-1);

$(1-\eta_6^2)^{+1}=\{x_0/(7)\}\leq1$; (Convergent entangled calculation example)(K=+1);

(3), One-variable 11th order calculus equation: (N=0,1,2); $\mathbf{D}_{0(A+B)}=\mathbf{D}_{0A}+\mathbf{D}_{0B}$; $\mathbf{D}=\mathbf{D}_A+\mathbf{D}_B$; (example of parallel calculation in mixed mode)

(5.5.3)

$$\{x\pm(^{K5}\sqrt{\mathbf{D}})\}^{K(Z\pm Q\pm(S=11)\pm(N=0)+(qjik)/t}=\{x\pm(^{K5}\sqrt{243})\}^{K(Z\pm Q\pm(S=5)\pm(N=0)+(qjik)/t}$$
$$+\{x\pm(^{K6}\sqrt{45045})\}^{K(Z\pm Q\pm(S=6)\pm(N=0)+(qjik)/t}$$
$$=\{(1-\eta_A^2)\cdot\{x_0\pm(3)\}^{K(Z\pm Q\pm(S=6)\pm(N=0)+(q)/t}+\{(1-\eta_B^2)\cdot\{x_0\pm(7)\}^{K(Z\pm Q\pm(S=6)\pm(N=0)+(q)/t}=\{(1-\eta_{(A+B)}^2)\cdot\{x_{0(A+B)}\pm[(3)+(7)]\}^{K(Z\pm Q\pm(S=11)\pm(N=0)+(qA+qB)/t}$$
$$=\{(1-\eta_{(A+B)}^2)\cdot(0,2)\cdot[(3)+(7)]\}^{K(Z\pm Q\pm(S=11)\pm(N=0)+(qA+qB)/t};$$

Special: 11 values (S=11) form a highly parallel space {q}, which is crimped in a three-dimensional generator space $\{q_{jik}\}$: zero-order has balance, conversion, and rotation; first-order dynamic speed, momentum, and rotation; Second-order dynamic acceleration, energy, precession, and radiation. The zero-order, first-order, and second-order calculus equations comprehensively describe the vortex precession (radiation) of the universe and quantum particles, which has been confirmed in the light experiment by the United States-Spain joint team in 2018.

5.5.2 [Discussion 2] Calculation of the universe or high-energy physical matter

The maximum energy of the universe or high energy physics is simulated by numbers {1,2,(3),4,5}+{3,3,5,(7),11,13}

(1) The average value of 5 natural numbers {1,2,(3),4,5}{3}, which constitutes the largest inactive unchanging bright mass;

$[(1-\eta_5^2)\cdot\{\mathbf{D}_{05}\}]^{\pm(Z\pm(S=5)\pm(N=0,1,2)\pm(5)/t}=(1-\eta_5^2)\cdot3^5=(1-\eta_5^2)\cdot243$;

The logarithm of the circle$(1-\eta^2)^{\pm1}=1$ represents the maximum value:

$$(1-\eta^2)^{\pm1}=\{3/3\}^{\pm(Z\pm(S=5)\pm(N)-(qjik=5)/t}=1。$$

(2) The average value of 6 prime numbers {3,3,5,(7),11,13} average value{7} logarithm represents the conversion value:

Logarithmic characteristics of circle:$(1-\eta_6^2)^{\pm0}\to(1-\eta_6^2)^{-1}$;

Characteristic mode: $\{7^6\}\to\{\mathbf{13^6}\}$ represents the expansion of vacuum excitation energy;

The logarithm of the circle$(1-\eta_6^2)^{\pm0}=(0)$ indicates the vacuum energy excitation conversion point of the active element (ion state):

$$(1-\eta^2)^{\pm0}=\{7/7\}^{\pm(Z\pm(S=5)\pm(N)-(qjik=6)/t}=(0);$$
$$[(1-\eta_6^2)^{\pm0}\cdot\{\mathbf{D}_{06}\}]^{\pm(Z\pm(S=5)\pm(N)\pm(6)/t}=(1-\eta_6^2)\cdot7^6=(1-\eta_6^2)\cdot117649;$$
$$[(1-\eta_6^2)^{-1}\cdot\{\mathbf{13}\}]^{-(Z\pm(S=6)\pm(N)-(qjik=6)/t}=(1-\eta_6^2$$

$)^{-1}\cdot 13^6=(1-\eta_6^2)^{-1}\cdot 4526809$;

Among them: The example of the one-variable six-order calculus equation describes the three states corresponding to the composition properties, and "there is no specific mass element calculation, and the arithmetic calculation is carried out in the closed [0 to 1] interval".

5.5.3. [Discussion 3] Vacuum excites the largest asymmetric matter

According to the maximum energy of the 6 prime active variable entangled states $(1-\eta^2)^{-1}=\{13\}$ and the invariant neutral inactive invariant discrete state maximum energy, they together form the maximum energy. Among them, the second-order (N=-2) value of calculus represents the characteristics of energy, force, acceleration and so on.

(5.5.4)

$\{D_{05}+D_{06}\}^{\pm 2}\in[(1-\eta_6^2)^{-1}\cdot\{\mathbf{13}\}]^{-(Z\pm Q\pm(S=6)\pm(N=-2)-(6)/t}+[(1-\eta_5^2)^{\pm 1}\cdot\{3\}^5]^{0(Z\pm Q\pm(S=5)\pm(N=-2)-(5)/t}$

$=4826809$;

Clear quality (mass and energy) : $\{2\cdot[D_{05}+D_{06}]\}=2\cdot(117649+243)=235784$;

Dark energy (mass energy): : $\{[13^6-\{\{2\cdot[D_{05}+D_{06}]\}=4826809-235784=4591012$

5.6. [Discussion 5] Digital simulation calculation of parallel/serial universe boundary

Digital simulation of parallel/serial universe {1,2,3,4,5} and {3,3,5,7,11,13} unary five and six calculus equations.

Known condition (A): Five natural numbers {1,2,3,4,5};

$(1-\eta^2)=\{3/(^{K5}\sqrt{243})\}^{K(Z\pm Q\pm M\pm(S=5)\pm(N=0,1,2)\pm(qjik)/t}$,

the average value is {3}, the characteristic modulus value and the circle logarithm of the fifth order calculus equation in one variable.

Known condition(B): six prime numbers {3,3,5,7,11,13};

$(1-\eta^2)=\{7/(^{K5}\sqrt{45045})\}^{K(Z\pm Q\pm M\pm(S=6)\pm(N=0,1,2)\pm(6jik)/t}$

average value {7}, the characteristic modulus value and circle logarithm of the one-variable six-order calculus equation.

Known condition(C): Parallel/serial universe 11-dimensional space characteristic mode and circle logarithm

$(1-\eta^2)^{K(Z\pm Q\pm M\pm(S=11)\pm(N=0,1,2)\pm(qjik)/t}$。

According to three known conditions, an 11-dimensional feature model is formed, and a shared time series of parallel/serial three-layer tree $\{q\}\in\{q_{jik}\}=\{2\}^{(S\pm Q\pm M)/t}$is formed The elliptical orbit (wave function), radiation, etc., carry out the orderly expansion of speed, acceleration, kinetic energy, energy, and force.

Among them, the circle logarithm of parallel/serial itself has isomorphic consistency and invariance with the calculation time. What changes is the composition of boundary conditions D=D5+D6 or D0=D05+D06, which belongs to (parallel) continuous addition or (serial) Multiply. And through the topological movement of the central zero point, a "concentric circle" of the homeomorphism of the superimposed central zero point or a "parallel circle" connecting the central zero point in series is formed. With a consistent central zero point, it can be expanded symmetrically according to a common time series.

Such as the "S=5+6=11" dimensional carry system and place value-bit energy system of the universe. The dynamic three-level tree group combination constitutes {2}'s [(11*11*11)+(11*11)+(11)]=[1331+121+11]=1463 powers (1463 qubits)). Total combination coefficient: {2}1331/t to {2}1463/t. Equivalent to (boundary) 10-266 to (all) 10-292 greater than 10-229 cosmic boundary level "fine tuning." "Fine-tuning." The value represents the smallest physical constant of the universe (central cosmic particle).

"Fine-tuning." This number can satisfy the physicist Lee Smalling has calculated that the probability that a number compatible with life appears by chance is 10^{-229}. Physicists call it the "fine-tuning" of life physics.

Famous scientists such as Martin Rees, Alan Gus, Max Tegmark-believe that this proves that we live in a parallel universe. The digital simulation shows that the calculus equation is described by the logarithm of the circle and becomes the proof of any finite time series. The parallel universe world is finally contained in a huge, infinite time series three-dimensional world.

When the "concentric circles" are the infinite boundaries of the universe (large enough prime numbers), it will be infinitely small, mutually balanced, transformed, neutral round bubbles of "cosmic porridge soup", collectively referred to as "dark matter, dark energy" (for now, human beings are temporarily Not all can be measured).

(5.6.1)

$(1-\eta_\Omega^2)\cdot\{\mathbf{D_\Omega}\}]^{K(Z\pm Q\pm M\pm(S=11)\pm(N=0,1,2)\pm(q)/t}\in[(1-\eta^2)^K\{\mathbf{D_\Omega}\}]$;

(5.6.2)

$(1-\eta_\Omega^2)^{K(Z\pm Q\pm M\pm(S=11)\pm(N=0,1,2)\pm(q)/t}\in(1-\eta^2)^{K(Z\pm Q\pm M\pm(S=11)\pm(N=0,1,2)\pm(qjik)/t}=\{0\text{ to }1\}$;

Where: $\{D_\Omega\}$ represents the total mass of the universe. K=+1: infinite convergence of the universe; K=-1: infinite expansion of the universe; K=(±0 or ±1): infinite balance or zero-point transition.

5.7. Energy ratio of digital simulation universe

5.7.1、 [Discussion 6], the ratio of non-conserved energy of digital analog parity

The universe {1,2,3,4,5} and {3,3,5,7,11,13} digital simulation energy. In the eigenmode $\{D_0=7\}$ unchanged, there is {3+3+5+7+11+13=42} composing "entangled active material ions", vacuum excited $(1-\eta^2)^{K(+0)}$ and $(1-\eta^2)^{K(-0)}$ produces positive and negative local asymmetry (including vortex, vortex ring) mass-space, energy, expansion force, contraction force, which is called "parity non-conservation". Satisfy the quality of the universe-space, energy, symmetry (vortex, vortex ring).

5.7.2. Vacuum excitation produces asymmetric sexual energy

Dark energy: $(1-\eta^2)^{K(Z\pm Q\pm(S=-6)\pm(N)-(6)/t}=\{\mathbf{13/7}\}^{K(Z\pm Q\pm(S=-6)\pm(N)-(6)/t}$

(5.7.1) $\{\mathbf{D}_{06}\}^{\pm1}\in[(1-\eta^2)^{-1}\cdot\{7\}]^{-(Z\pm Q\pm(S=-6)\pm(N)-(6)/t}=13^6=4826809$;

5.7.3. The ratio of light energy to dark energy;

Bright energy: $\{\mathbf{D}_{05}+\mathbf{D}_{06}\}^{\pm0(Z\pm Q\pm(S=11)\pm(N)-(qjik)/t}=(117649+243)=117892$;

(5.7.2) $\{\mathbf{D}_{05}+\mathbf{D}_{06}\}^{\pm0:}:\{\mathbf{13^6}\}=117892:4826809$;

$=1\mathbf{:}40.937889$

In particular, the radiant energy of this high-energy particle collision test data is increased (unexplained) 40 times or explained in the logarithm of the circle.

5.7.4. **[Discussion 7].** Conservation of cosmic digital simulation energy

Conservation of energy in the universe {1,2,3,4,5} and {3,3,5,7,11,13}

(5.7.3) $(1-\eta_\Omega^2)^{\pm1(Z\pm(S=11)\pm(N=0,1,2)\pm(qjik)/t}=[(1-\eta_\Omega^2)^{+1}\cdot(1-\eta_\Omega^2)^{-1}]^{(Z\pm(S=11)\pm(N=0,1,2)\pm(qjik)/t}=1$;

(5.7.4) $(1-\eta_\Omega^2)^{\pm1}\mathbf{D}_\Omega=\mathbf{D}_\Omega$,

5.8. [Discussion 8] The interaction of the digital analog forces of the universe:

The interaction between the universe {1,2,3,4,5} and {3,3,5,7,11,13} digital analog force: Formula (5.3.6) reflects that in the evolution of the universe, force and energy belong to " The second-order calculus equation" is based on the arithmetic calculation of the logarithm of the circle:

5.8.1. The convergence of the gravitational equation: $\{(1-\eta_\Omega^2)^{+1}\}^{K(Z\pm(S=11)\pm(N=0,1,2)\pm(qjik)/t}\leq1$;

(Forward) gravity + (reverse) gravity + (neutral) gravity space composition:

(5.8.1) $(1-\eta_\Omega^2)^{+1}=\{(1-\eta_\Omega^2)^{+1}\}=(1-\eta_\Omega^2)^{+1}+(1-\eta_\Omega^2)^{\pm0}+(1-\eta_\Omega^2)^{-1}=(0\text{ to }1)$;

5.8.2. The expansion of quantum theory electromagnetic force equation:

$\{(1-\eta_\Omega^2)^{-1}\}^{K(Z\pm(S=11)\pm(N=0,1,2)\pm(qjik)/t}\geq1$;

(Forward) electromagnetic force + (reverse) electromagnetic force + (neutral) electromagnetic force space composition:

Quantum theory Maxwell's equation of electromagnetic force is written in logarithmic form:

(5.8.2) $(1-\eta_\Omega^2)^{-1}=(1-\eta_{\Omega[yz]}^2)^{+1}\mathbf{i}+(1-\eta_{\Omega[zx]}^2)^{\pm0}\mathbf{j}+(1-\eta_{\Omega[xy]}^2)^{-1}\mathbf{k}=\{0\text{ 到 }1\}$;

5.8.3. Neutral light quantum: $\{(1-\eta_\Omega^2)^{\pm1}\}^{K(Z\pm(S=11)\pm(N=0,1,2)\pm(qjik)/t}=1$;

(Forward) photon power + (reverse) photon power + (neutral) photon power space composition:

Quantum theory Maxwell's equation of electromagnetic force is written in logarithmic form:

(5.8.3) $(1-\eta_\Omega^2)^{\pm1}=(1-\eta_{\Omega[yz]}^2)^{+1}\mathbf{i}+(1-\eta_{\Omega[zx]}^2)^{\pm0}\mathbf{j}+(1-\eta_{\Omega[xy]}^2)^{-1}\mathbf{k}=\{0\text{ 到 }1\}$;

5.8.4. Force balance and conversion: {(1-ηΩ2)±0}K(Z±(S=11)±(N=0,1,2)±(qjik)/t=1;

The space composition of forward force + (reverse) light quantum force + (neutral) light quantum force:

(5.8.4) $\{(1-\eta_\Omega^2)^{\pm0}\}^{K(Z\pm(S=11)\pm(N=0,1,2)\pm(qjik)/t}=\{(1-\eta_\Omega^2)^{+0}\}\cdot\{(1-\eta_\Omega^2)^{-0}\}^{K(Z\pm(S=11)\pm(N=0,1,2)\pm(qjik)/t}$

Finally, the mathematical simulation of the evolution of the universe is highly consistent with the results of astronomical observations and physical experiments. It is easy to doubt "is it a coincidence or is there really such an event?", waiting for experimental confirmation by physical scientists. However, this reflects the computing power of the universally applicable energy of the group combination-circle logarithm.

6. What is the difference between the zero-point superposition of the circle logarithm center and the traditional iterative method?

The superposition of logarithmic measures of the circle, that is, the approximation of the central zero-point movement repetition method and the traditional iterative method, can reflect the probability-topological problem of the isomorphism consistency of continuous and discrete systems.

The differences are as follows:

(1), Iteration: The traditional approach is "limit", which is expressed as "error analysis, difference method". Round pair

Numbers are expressed as "(arithmetic integer unit body) moving and superimposing", which are different concepts of the two methods.

(2), Position: The infinitesimal limit is traditionally approached by a straight line on the "boundary" to a curve. Logarithm of circle

Use the group combination center zero point to move and overlap between "0 to 1" of the closed circle.

(3), Method: Traditionally, finite dimensions (straight lines) are used to approximate infinite dimensions (curves), which is incomplete. The circle logarithm uses asymmetric real infinite-dimensional curve (continuous type) and finite-dimensional straight line (discrete type) to uniformly transform the superposition and expansion of latent infinite relative symmetry (that is, arithmetic analysis).

(4)， Integerness: the traditional unit body with "fixed value e logarithm as the base" cannot solve the problem of "integerness" and is "approximated by error". The circle logarithm is based on the "variable group combination as the base" unit body, which realizes an integer with zero error. The completeness and normalized arithmetic expansion are realized by the "circle logarithm" of distance plus deformation. Including calculus order symbols and logical algebra symbols, they can all be transformed into an infinite sequence of time (Z) dynamic expansion of an integer unit body with a power function.

7. Logarithm of circle and five-dimensional vortex spiral phenomenon

Since 2009, domestic and foreign journals and conferences have published more than 20 papers such as the round logarithm article "Analysis of the Arithmetic Analysis of the Calculus Based on the Round Logarithm Rearrangement from 0 to 1". More than 800 articles have been published on the Sina "Explore Free Sky" blog. Obtained 8 invention patents including "Vortex Internal Cooling Negative Pressure Engine".

What is said: "arithmetic analysis" refers to an internationally recognized unspoken rule: mathematical analysis is limited to the six symbols of "addition, subtraction, multiplication, division, and power" (Picture 3) (Picture 4)

(Picture 3) **(Picture 4)**

Number calculation. Logical symbols, calculus symbols, computer proofs such as the four-color theorem are not counted. The recognized development direction of mathematics: "Logicalization of Arithmetic Analysis, Arithmeticization of Logical Analysis". Called "Langlands Program".

(1) Linear equations are no longer linear motions

Measurement experiments have shown that Schwarzschild called the "zero geodesic line", and the Eddington-Finkelstein diagram photons fall inward and curve outward along the v = constant line. It is recorded in the "Modern Physics" textbook.

In other words, the concept of "straight line" is only limited to "short distance",

Under normal conditions, it is "measure". The author of this article calls it "circle logarithm". The circle logarithm has the advantage of "distance and deformation", and the calculation rule for circle logarithm is established Then and the circle logarithm analysis.

(Figure 5)

(2) Quadratic equation of one element and double helix motion

Quadratic equation expression in one variable

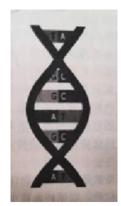
(7.1.2) $\{x\pm\sqrt{D}\}^2=x^2\pm Bx+D$

$=(1-\eta^2)\cdot\{x_0\pm D_0\}^2$

$=\{(1-\eta^2)\cdot(0,2)\cdot D_0\}^2$

The formula (7.1.2) expresses the movement of the double helix (Figure 6), the biomechanical double vortex structure

(quoted from the Internet article)



(Figure 5) **(Figure 6)**

(3) One-dimensional S-order equation and double helix motion Unary S-order equation expression

(7.1.3) $\{x\pm\sqrt{D}\}^{K(Z\pm S\pm q)/t}=x^{K(Z\pm S\pm 0)/t}$

$\pm Bx^{K(Z\pm S\pm 1)/t}+Cx^{K(Z\pm S\pm 2)/t}\pm\ldots+D$

$=(1-\eta^2)\cdot\{x_0\pm D_0\}\}^{K(Z\pm S\pm q)/t}$

$=\{(1-\eta^2)\cdot(0,2)\cdot D_0\}\}^{K(Z\pm S\pm q)/t}$

(7.1.4)

$\{x\pm\sqrt{D}\}^{K(Z\pm S\pm q)/t}=\{(1-\eta_{(uv)}{}^2)\cdot(0)\cdot D_0\}\}^{K(Z\pm S\pm q)/t}$

(Two-dimensional rotation)

(7.1.5)

$\{x\pm\sqrt{D}\}^{K(Z\pm S\pm q)/t}=\{(1-\eta_{(xyz)}{}^2)\cdot(2)\cdot D_0\}\}^{K(Z\pm S\pm q)/t}$(Three-dimensional precession)

(7.1.6)

$\{x\pm\sqrt{D}\}^{K(Z\pm S\pm q)/t}=\{(1-\eta_{(jik)}{}^2)\cdot(0\leftrightarrow 2)\cdot D_0\}\}^{K(Z\pm S\pm q)/t}$

(Five-dimensional vortex)

Formula (7.1.3)-(7.1.6) means (S=5) five-dimensional spiral motion and circle logarithm to make a five-dimensional vortex structure model (Figure 6) five parallel simple spiral motions (five-dimensional vortex structure) Model)

(Picture 7)-(Picture 8) The central zero points of five parallel simple spiral motions are superimposed and merged into a one-element five-order calculus equation

(Picture 7) (Picture 8)

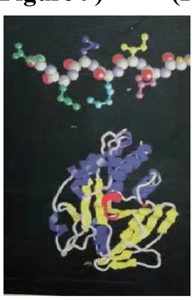
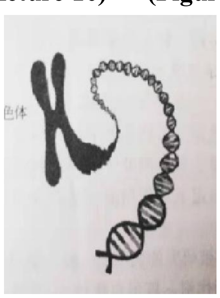
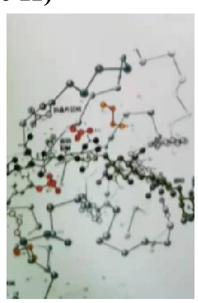

(five-dimensional vortex structure model)

(Figure 9) Biomechanics (S=2±Q) Parallel double helix motion (quoted from the network article)

(Picture 10) Biomechanics (S=S±Q) The central zero points of two parallel simple spiral motions are superimposed and merged into a binary quintic calculus equation

(Figure 11) The spiral structure of biomechanics (S=S±Q) in series becomes a binary quintic

(Figure 9) (Picture 10) (Figure 11)

calculus equation (Figures 8, 9, 10 are quoted from "Biochemistry", editors such as Li Wei).

8. How to solve the circle logarithm (breaking ideas) What mathematical problems constitute the circle logarithm theorem?

(1) Reciprocity theorem: the uncertainty of $\{D_0\}^{K(Z+S)/t}=\sum_{(Z+S)}\prod_{(S=q))}\{^{KS}\sqrt{(D_1D_2\ldots D_S)}\}^{K(Z+S)/t}$(known function) and $\{X_0\}^{K(Z-S)/t}=\sum_{(Z-S)}\prod_{(S=q)}\{^{KS}\sqrt{(x_1x_2\ldots x_S)}\}^{K(Z-S)/t}$ (unknown function) has asymmetric reciprocity, and the logarithm of the circle reflects their relative symmetry relationship. (The so-called "relative symmetry": after canceling the logarithm of the circle, the asymmetry is restored). The logarithm reciprocity of the circle is controlled by the power function (K=+1,0,-1).

(2) The principle of relativity: obtain $(1-\eta^2)^{K(Z)/t}=[\{X_0\}/\{D_0\}]^{K(Z)/t.}$ and deal with the relationship between infinity and infinitesimal. For the same number field function (group combination) through the infinite program comparison of the principle of relativity, there are complete and definite values, and there is no problem of "limit and error analysis".

(3) Hodge's conjecture: solve the integral expansion of the completeness of the power function, and ensure the zero error, reciprocity, and accuracy of the integer solution of any function. Closeness to meet the "zero error threshold" problem.

(4) P=NP problem: Solve the uniformity of integer isomorphism of any function, and deal with the completeness and uniformity of time calculation of converting arbitrary high-dimensional equations into low-dimensional linear equations.

(5) Riemann's conjecture: the symmetry problem of the abnormal center zero (1/2). The circle logarithm satisfies the symmetry, balance, conservation, conversion, and rotation of any function-group combination-equation. Ensure the stability of the relative symmetry of the center zero point. And through the "three unitary norm invariance" of probability-topology-center zero point, it solves the synchronization problem of high parallelism and multi-media state.

Other mathematical problems such as "elliptic function and eccentric elliptic function and perfect circle relationship", "discrete and continuous", "fractal and "Chaos", "Rule and Random", "Macro and Micro Mechanics", etc., can all form a variety of mathematical models, unified integration and conversion into logarithms, analysis and cognition from "0 to 1". It is expected to promote classical analysis and depth Self-consistent integration model of learning.

9. Summary

The difference in mathematics between the East and the West is manifested in the difference between two different mathematical concepts, "the center zero point is not moving" and "the center zero point is movable". This article vividly compares the mathematical concept of "balance scale" (in Western countries) and the mathematical concept of "new scale" (in China). Different concepts and different methods have different effects. They are represented by (Western countries calculus algorithm) "error approximation" analysis, which can be approached and unreachable, (Chinese circle logarithm algorithm) directly "distance and deformation" with "zero error"

"Expanded analysis. The main point lies in the analysis of "moving through the central zero point to convert asymmetry to symmetry". Self-consistent satisfies "0 to 1" arithmetic analysis.

9.1. Differences in mathematics between East and West:

(1) The mathematics represented by calculus in Western countries emphasizes: "infinitesimal-limit-central zero point immovable-symmetry", and the image representative is "balance scale". In order to maintain balance, a weight (known variable) corresponds to a mass (unknown variable), indicating that there is no connection between the masses (variables). Most of the nature is multivariate analysis (such as neural network, biomechanics, gravitational equations, etc.), and there is no good way to multivariate. The calculation formula is becoming more and more complex, and the requirement of “zero error threshold” cannot be achieved by using the powerful computing power of the computer to "immediate error". In terms of mathematical rigor and logic, computer-proven (such as the four-color theorem) is not a mathematical proof, but a mathematically rigorous (zero error) proof is needed.

(2) The mathematics represented by the Oriental "Circle Logarithm Algorithm" emphasizes "infinite group combination-movable central zero point-relative symmetry", and the representative image is "New Scale". In order to maintain balance in the "New Scale", the change in mass is represented by the movement of the "weighing mound", and there are "four to two pressures", where the movement of the "weighing mound" represents the "distance sum" of the mass (the mass point of the weighing scale and the mass point Geometry space) deformation" difference. "Weighing mound" is a movable "anti-symmetric center of rotation", "weighing button" is asymmetrical and relatively symmetrical balance center, both are called "center zero point". The concept of "New Scale" includes "the discrete characteristics of balance scales, which are calculated together with the entangled characteristics of constant mass".

9.2. The unity of relativity and quantum theory:

Einstein's theory of relativity is a macroscopic entangled calculation, and quantum mechanics is a microscopic discrete calculation. The logarithm of a circle is similar in form to the special theory of relativity, and they belong to two different concepts. among them:

(1) The theory of relativity simply uses the "constant speed of light (u2/c2)" as the comparison reference point, where the "constant speed of light" becomes the "arithmetic mean". Macroscopic relativity has the characteristics of entangled calculation; microscopic quantum mechanics has the characteristics of discrete calculation.

(2) The mathematical expression of circle logarithm is (a variable group is known to correspond to a known variable group. The internal elements of the group are not repeatedly combined to form group sub-items, and each element has a mutual entanglement effect, and there are discrete and unrelated elements. Function, the principle of circle logarithm is based on "invariant group combination (x/D0)K(S)" (S=0,1,2...S natural number) as the comparison reference point. Under the comparison of the principle of relativity, any infinity and The ratio of infinity; the ratio of infinitesimal to infinitesimal has a certain value, there is no "limit", and the concept of "zero error". Through the logarithm of the circle, the function of processing "distance and deformation" is taken into account, and the entangled relativity and the discrete Quantum mechanics is unified into a whole and widely used.

(3) Mathematical proof of circle logarithm: any calculus equation composed of natural rules, the calculation result has "three results" (1), (two-dimensional uv) rotation; (2) (three-dimensional xyz) precession; (3)), "rotation + precession" form a five-dimensional (uv+xyz∈jik basic three-dimensional) vortex spiral structure.

9.3. Circle Logarithm and Mathematical Foundation

China proposed the "14th Five-Year" national key research and development plan "Mathematics and Applied Research Key Special Project 2021 Project Application Guidelines", which lists: 5. Major frontier issues of basic mathematics*; 5.1 Riemann hypothesis and prime number distribution; 5.2 multiple complex variable transcendence methods And its application in complex geometry; 5.3 mathematical theory of incompressible fluid mechanics equations; 5.4 topological and statistical properties of low-dimensional dynamic systems; 5.5 probability models and analysis in statistical physics. China's Wang Yiping's circle logarithm theory has advantages in major frontier topics of basic theory. More than 20 articles have been published in internationally renowned journals and important conferences at home and abroad. The content (including written and planned unpublished articles) can basically include the above and more frontier mathematics problems.

This article introduces "group combination-circle logarithm" here, which reflects the mathematical progress from "single variable" to "group combination (variable)". "Group combination (multiple complex variables) random and regular, continuous and discrete, uniform and inhomogeneous, symmetric and asymmetric are integrated into a whole, converted into an irrelevant mathematical model and added to the rotation of the five-dimensional vortex (two-dimensional **uv**) Motion (three-dimensional **xyz**) belongs to low-dimensional three-combination generator (three-dimensional **jik**) time and space". It has the advantages of forward-looking, concise, self-consistent, magical, zero error, and universal.

Li Zhengdao said in "100 Scientific Problems in the 21st Century"[8]: The conflict between the macro and the micro is already very acute. If one cannot solve the other, there will be some breakthroughs in linking them. This breakthrough will affect the future of science. Obviously, the logarithm of the circle is a newly discovered mathematical rule with profound practical and historical significance. It is expected to become the mathematical foundation of a new generation of mathematics and computers.

Based on the logarithm of the circle, it is a newly established calculation system that is forward-looking and innovative. It involves a wide range of scientific fields and has huge application potential, which is worth looking forward to. Interested experts, teachers, and scholars are welcome to give us advice. Welcome to guide cooperation and win-win cooperation. Work together to make substantial contributions to the advancement of human mathematics. (Finish)

About the author:

Wang Yiping, Senior Researcher and Senior Engineer, Quzhou Older Technological Workers Association, Zhejiang Province. He has long been engaged in the research of mathematical foundation and power engineering. More than 20 papers published in famous domestic and foreign journal conferences include "Analysis of calculus equations based on circle logarithm in {0 to 1}", "Pattern recognition based on circle logarithm map algorithm", "Exploration of NS equation based on circle logarithm", etc. Articles. There are 8 invention patents including "Two-way Vane Inner Cooled Negative Pressure Hydrogen Power Engine".

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