

Research and Challenge: Relativity in China

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Abstract: This paper mainly introduces the present domestic status about non-mainstream factions for researching and challenging relativity. As discussing for researching and challenging the principle of general covariance which starts purely from mathematical perfection, we point out that in 1974 Mao Zedong indicated, as conversation with Tsung-Dao Lee, he completely cannot understand that symmetry can hold in both hands to the so high status in physics. In fact, the symmetrical theory in the aspect of mathematical perfection relies on the extremely profound mathematical tool, purely for the purpose of popularization that the asymmetrical theory in the aspect of mathematical perfection must be developed (but it conforms to the symmetry in the physical aspect, such as the principle of conservation of energy and so on); Namely starting from the physical significance instead of mathematical perfection, develops and applies this kind of asymmetrical theory to substitute for the general theory of relativity and other symmetrical theory. This is possibly a correct direction, also possibly is Chinese's superiority and special skill. Some scholars of our country already stride out the important and solid steps to establish this kind of asymmetrical theory to substitute for the theory of relativity. Moreover, in views of the principle of equivalence, the space-time theory, the principle of relativity, the principle of invariance of light speed and the ultra speed of light, the Lorentz transformation, the certain results of relativity (such as ruler shrinking and clock slowing and so on) as well as question of unified theory, elaborates the main achievements for researching and challenging the relativity. There are three main routes for surmounting the relativity. First: Completely abandons the Newton theory and the Einstein theory, establishes the brand-new theory. Part of new theory may derive or cover the related formulas of the Newton theory and the theory of relativity. Second: Keeping down the reasonable part of relativity, revises and innovates the Einstein theory. Third: Returns to Newton's starting point, revises and innovates the Newton theory. Finally, including surmounting the relativity, a more widespread and more important question is that how the Chinese scientific and technical circles reappears the magnificence of the times of the four big inventions, regarding this question, many people realize: The Chinese scientific and technical circles absolutely cannot follow in others' behind to crawl, must exert own superiority as far as possible, including absorb the nutrition from several millenniums bright cultures and the scientific and technical achievements, to realize surmounting advance. What is the biggest superiority for the Chinese scientific and technical circles? It is that in the area of understanding and holding the materialist dialectics and the dialectics of nature, the scientific and technical workers of China surpass the workers of any Country, moreover they already yielded the preliminary harvest in the application of the materialist dialectics and the dialectics of nature.

Key words: Theory of relativity; Research; Challenge; Surmount

Introduction

In June, 2004, the General Assembly of the United Nations at its 58th conference has adopted resolution declaring the year 2005 the International Year Of Physics.

The Chinese Society of Physics said in its new year sending words of year 2005, accompanying the new year ding, the International Year Of Physics — each physics worker's holiday finally arrives our side. In this exciting time, let us recall the past and forecast the future, to make the "physics", a foundation discipline, newly radiate the enchanting brilliance. The new year sending words added, Einstein completed these unrivalled works in 1905 when he was only 26 years old, he made all the physical scientists to praise without cease for his extraordinary insight to the nature movement rule. But, hundred years crossed, Einstein was surmounted by no means. Einstein really is unable to surmount? L. M. Lederman, winner of the 1988 Nobel Prize in physical, believed that in the global 6 billion people, certainly has a young sapiential heart like Einstein is waiting for excavating. Let us search, joint effort to create the glary future of physics!

As mentioning the International Year Of Physics, inevitably needs to mention Einstein, inevitably needs to mention the theory of relativity. However the different people, is dissimilar regarding the appraisal of Einstein and the theory of relativity. As for that how to surmount Einstein and how to surmount the theory of relativity, yet different people have different views. On the age-old and vast Chinese fertile soil, large quantities of men of insight, including the mainstream factions and the non-mainstream factions, are carrying on the hard struggle for surmounting Einstein and surmounting theory of relativity. Specially, in the few fund and difficult condition, has had many inspiring facts and the multitudinous substantial achievements in the non-mainstream factions for researching and challenging the theory of relativity. Because these achievements only have few can publicly publish, in order to quite comprehensively reflect the main achievements of domestic non-mainstream factions for researching and challenging the theory of relativity, according to the Beijing Relativity Theory Research Federation and president Wu Shuiqing's work arrangement, with the vigorous supports of many colleagues and grand old men, in our power scope, according to the collects far from the comprehensive materials to write this article. We hope that it will be able to have a benefit to the next work for researching and challenging the theory of relativity, also hope that it will be able to play the role which will offer a few ordinary introductory remarks so that others may offer their valuable ideas.

This article mainly includes the overall appraisal and the partial appraisal to the theory of relativity, as well as the researching and challenging to the main viewpoints, main theoretical foundations of special theory of relativity and general theory of relativity. In which the achievements of non-mainstream factions are mainly included.

President Wu Shuiqing of the Beijing Relativity Theory Research Federation presented the manuscript's accepted standard for the magazine <Matter Regularity> is as follows: "innovation", "justify oneself" and "author's responsibility", does not make the judgment with correct or not. This also is the criterion for this article to include the related research results.

1 The overall appraisal and the partial appraisal to the theory of relativity

About the overall appraisal to the theory of relativity, the website of Beijing Relativity Theory Research Federation (<http://www.xdlbj.com>) once has carried on the voting to the following five viewpoints, from 12 o'clock, September 23, 2003 to 10 o'clock, May 2, 2005, altogether 1,425 people participated in the voting, its result as follows:

- (1) The relativity is absolutely wrong, 736 people, account for 51.65%;
- (2) It is entirely accurate, 188 people, account for 13.19%;
- (3) It needs to revise, 406 people, account for 28.49%;
- (4) It has not mattered, 40 people, account for 2.81%;
- (5) It is not unnecessary, 55 people, account for 3.86%.

From the above result we can see that, considering the theory of relativity is entirely accurate only

occupies few, but considering the theory of relativity is absolutely wrong has unexpectedly surpassed the half.

Considering some people have not made the overall appraisal to the theory of relativity, moreover the viewpoint of "needs to revise" also may further subdivide. Therefore in order to be advantageous for the discussion, this paper mainly includes the following viewpoints of the overall appraisal and the partial appraisals to the theory of relativity:

- (1) The theory of relativity is entirely accurate, may further develop and enhance in its frame;
- (2) The theory of relativity is absolutely wrong, needs to open the new road to displace it;
- (3) The theory of relativity's achievements outweigh its errors, needs to correct its part of mistakes and to amend the theory of relativity;
- (4) The theory of relativity's errors outweigh its achievements (or the achievements correspond with the errors), needs to open the new road to displace it based on absorbing its reasonable parts;
- (5) It does not involve the overall appraisal to the theory of relativity, only discusses the concrete questions related directly or indirectly to the theory of relativity.

In the non-mainstream factions, the people which hold the first viewpoint are extremely few; the people which hold the second viewpoint are much more than the people hold the first one. Also many people hold the third to fifth viewpoint. Specially the fifth viewpoint needs to be emphasized. Because the people hold the fifth viewpoint involve the most widespread. They not only include the natural science workers, moreover include the social science workers, specially include some great philosophers. In fact, this article will use the certain length to discuss some questions according to the fifth viewpoint.

Now we enumerate some main and influential viewpoints concerned with the overall appraisal and the partial appraisal to the theory of relativity, as well as some related historical fact.

Academician Song Jian boldly questions Einstein, to summon young scientist dares to innovate. He read the science report titled "Spaceflight, Astronavigation And Light Barrier" at the 242nd Xiangshan conference. Pointed out that, fully 100 years ago, Einstein, in his paper about the special theory of relativity which shocked the world scientific circles, ever proposed a famous saying: "It is impossible to exist any movement which is faster than light." The today's scientific circles call this the "light barrier". However, until now this "extrapolation" is certainly not proved by any direct experiment. In recent years with the development of spaceflight technology, it already urged the scientists to examine minutely and reconsider: Why the airship can't surpass the speed of light? At present the airship's maximum speed is 16 kilometers per second, even if to enhance two magnitudes again, reached 3,000 kilometers per second, to trip to the neighbour star in the Semi-Centaurus in another similar solar system, which is the nearest one away from the solar system, at least need 400 years! Song Jian and other spaceflight scientists clearly know that, the rocket engine jet velocity must approach or surpass the speed of light 300,000 kilometers per second, the humanity only then has the possibility to realize this universe round-trip journey of 4.2 light years within 3 to 5 years, otherwise we only can revolve in the extension nearby the sun.

Guo Hanying recently published two papers on the Chinese bimonthly "Science", titled "The basic principle of the special theory of relativity and its cosmography significance" in the issue 2005.4., titled "Transformation of the general theory of relativity and the gravitational theory " in the issue 2005.4 respectively; Also published the paper titled "Einstein and the system of the theory of relativity" in the issue 2005.5., "Modern Physics Knowledge". Pointed out: The special theory of relativity and the general theory of relativity contain the "essential factor of supposition", "until now does not have the experiment to confirm the hypothesis to be correct or not", "the one-way speed of light survey falls into

the circulation", "the relativity principle and the cosmology are uncoordinated", "the system faces the incisive challenge from the observation", "the system of the theory of relativity faces the transformation". (Above content token from Zhang Chongan's article titled "Introducing recent three articles of Prof. Guo Hanying")

Zhang Yuanzhong's book titled "Experiment Foundation for Special theory of relativity", to the domestic people related to the research about the theory of relativity, nearly is the referenced book of everyone. This book was published in 1979 by the Science Press, and has the strict foundational skill of physics, it may be the really summarized authority reference in the experiment area about the relativity research. This book introduced more than one hundred domestic and foreign experiments related to the special theory of relativity, and made the penetrating analysis, simultaneously carried on the classification based on the arguments of the theory of relativity such as "constant speed of light", "length contraction and time dilation", "mass-velocity relation" and so on. (Above content token from Zhang Chongan's article titled "Mr. Zhang Yuanzhong's book titled "Experiment Foundation of Special theory of relativity" and the recollection of my learning activity")

Lu Yongliang, Superintendent of Hoff Lu Research Institute of Matter Regularity and President of Canadian Ford Trading Company, on June 11, 2004 at the first annual meeting of the Beijing Relativity Theory Research Federation pointed out in his speech titled "The ins and outs of Challenging the Einstein's theory of relativity" that, academician Lu Hefu in his research discovered the Einstein's theory of relativity will have many deficiency, therefore he started to study the field structure of universe vacuum from 1976. In 1991 he wrote with his assistant Mr. Wang Shiming the paper "A Direct Examination to Mach Principle", published on the last November-December issue, 1995 of US "Galileo Electrodynamics Magazine". The magazine's Chief Editor Haydn reviewed in this paper's foreword that, this paper opened the new method to challenge the Einstein theory. After the paper published, LeeShimmin and Hangefu, Director of physics department, Hueston university, they performed deeds for this paper, immediately wrote the commentary to congratulate this astonishing important achievement, said it leads the science for 30 years. The American main Chinese publications separately reported this newest progress in physics according to the news release outline of my eldest brother (the author's note: namely Mr. Lu Yongqiang). My eldest brother's news release outline as follows: It is the transverse Doppler effect caused according to the photon inertial movement, comparing American physicist Ives and the Stilwell's experiment datum, with the thorough computation, draws 2 important conclusions: 1st, the transverse Doppler effect is aeolotropic in the universal space. 2nd, the photon inertia attribute is decided by the entire universe structure, it conforms to the Mach principle, but examined the validity of Mach principle by one direct method, this kind of examination is a serious challenge to Einstein's theory. Considering that Einstein's theory of relativity is related the pure gravitational, but the universe is not the pure gravitational, how could use the Einstein's theory of relativity which is the pure gravitational theory to summarize the evolved rule of universe, Einstein also said in 1920 in Amsterdam that the present physics is incomplete, or dualism —dualism of electromagnetic force and gravity, dualism of space and star, the Lu Hefu theory has run to the ultimate theory expected by Hawking, Hawking's thought has not gotten rid of Einstein, but the Lu Hefu theory has surpassed the Einstein's theory. As my father accepts all the congratulations from American through the transoceanic telephone, he resumptively said, this paper "just poked a hole in the sky", in other words poked a hole in the Einstein's theory. My father thought that his paper agrees with Mach theory, Mach theory is not one-sided, does not separately look at the question, to analyze the entire universe continually together, but the Einstein's theory can be used on the Earth and its neighborhood, but cannot be used far away, my father thought: Einstein's theory and the present mainstream physics partially look at the question, separately research the universe, he expressed that he did not approve it very much. This paper is my father's first one to challenge

Einstein, is the prologue, he has also prepared many papers, prepares to publish them by stages in turn, unfortunately he passed away, the second paper sketched out by him, we read out at the meeting convened in St. Petersburg, Russian in July, 2000, proposed the universal quantum gravitational equation, unified 4 kind of forces, the electromagnetic, the gravitational, the strong and the weak interaction, but because does not have my father's final text and embellishment, its publication has not caused the stir like the first paper.

Prof. Zheng Zhipeng, honorary vice-chairman of Beijing Relativity Theory Research Federation, former superintendent of High Energy Physics Institute, Chinese Academy of Science, honorary editor-in-chief of US "Matter Regularity" magazine, editor-in-chief of "High Energy Physics And Nuclear Physics" magazine, explicitly pointed out that, Regarding the research about theory of relativity, should allow to have the different opinion, let the different person expresses the view. We advocated the policy that 'let a hundred flowers bloom, let a hundred schools of thought contend', present the facts and reason things out, do not seize on sb's mistake, do not put a label on sb., do not come down with the big stick, do not assault and battery, that is the correct manner. Any matter should be asked for the innovation, cannot be irvariable. For researching theory of relativity, also should like this. So long as put out the fact, with experiment to prove, and show the scientific thereunder, we should acknowledge them. Regarding the theory of relativity cannot say 'No', that is not correct.

On the Einstein's theory of relativity academic conference (July 29-30, 2000, Beijing), Xu Shaozhi, Hao Jianyu and Li Yinghua and the like 10 scholars persisted that, At the meeting promulgated arguments sufficiently proved that, the theory of relativity is a theory system established on the wrong mathematical foundation and the fabricated theory premise, it has not the scientific value, said it "has attained the validate by experiment" is not in accordance with the facts.

Zheng Quan (1924-2004), researcher of Hoff Lu Research Institute of Matter Regularity, consultant of Beijing work department, Hoff Lu Research Institute of Matter Regularity, honorary vice-chairman of Beijing Relativity Theory Research Federation, editorial board member of US "Matter Regularity" magazine, in 1961 pointed out the viewpoint that " Michelson and Morley experiment denies the speed of light has nothing to do with photosource", also proposed for the first time in the world that the photon has the rest mass and other viewpoints. In January, 1990, officially published the first monograph written by the non-physical scholar in our country to comment the theory of relativity, "Modern Physics Question —— To Oppugn the Theory of Relativity". And published on the website of himself ([Http://quanzheng.yeah.net](http://quanzheng.yeah.net)) from 2000. His papers titled "My Opinion to Current Research about Theory of Relativity" and "My Experience for Researching Theory of Relativity" separately published on page 542-543, 180th issue, and page 544-546, 181st issue, "Academic Tendency" sponsored by the Beijing work department, Hoff Lu Research Institute of Matter Regularity. Delivered the lengthy report titled "Space-time Viewpoint Is the Physical Foundation" on the 12th session of Lu Hefu forum, published his major viewpoints since researching the theory of relativity. In the appendix "Part scholars who oppugn and deny the theory of relativity and the brief introduction to their works" of Lei Yuanxing's book "Space-Time Is Greatly Chaotic —— Critique Einstein's Theory of Relativity " published by the Sichuan science and technology press in 2001, the first one is Zheng Quan and his monograph "Modern Physics Question —— To Oppugn the Theory of Relativity", wrote: "Zheng Quan is the scientific press's copy editor, in October, 1982 he already completed the book "Modern Physics Question —— To Oppugn the Theory of Relativity", because of the well known reason, delayed to January, 1990 then it can be published by the academic books and periodicals press. His main viewpoints in "Modern Physics Question —— To Oppugn the Theory of Relativity" include: (1) Copernicus's heliocentric theory underwent the massive facts to examine. Einstein did not reply the question which should be replied, only mention lightly put the Copernicus system and the Ptolemaeus system on the equate position according to the reason that movement merely is relative,

that is cannot be compellent. (2) The formulas of the theory of relativity are not different in a number of ways from Newton, in the point that inertia mass equals gravitational mass also no different, but looked like it had discovered any new thing that Newtonian mechanics had not discovered, unavoidably made one have one kind of feeling to be deliberately mystifying. (3) The theory of relativity has related the mass addition effect and the space-time variation effect, thus considers the photon's rest mass is equal to zero. Admits this kind of theory, its result inevitably causes to deny the two laws of conservation of mass and conservation of energy in classical physics, but these two laws denial also is an important reason to cause each kind of divergent opinion. (4) If the experimental result is that the flying atomic clock walks equally quickly with the ground atomic clock, again the theory of relativity can say this is because that the relative speed of the atomic clocks flying to the east and to the west are the same as the observer's relative speed. In other words no matter any situation happen, may say the theory of relativity obtained the confirmation. How could makes one believe? (5) Some people consider the black hole as the confirmation of general theory of relativity, actually black hole only is one kind of celestial body with huge density. It is still difficult to affirm that whether this kind of celestial body exist, even if it exist, certainly could not say it is the confirmation to the general theory of relativity. Because of according to Newtonian mechanics viewpoint, also may obtain the same viewpoint".

Zheng Quan pointed out in "Key of Theory of Relativity" that, "The theory of relativity has following several key questions: 1st, relative space-time viewpoint is the core viewpoint of the theory of relativity, also is the most argumentative viewpoint. It is based on the two basic principles about light speed obtained from the Michaelson experiment, whether or not these two basic principles can come into existence at the same time, is the most main key. 2nd, Einstein thought on rotating disc the observer is authorized to say the disc is not rotated, the men believed in the theory of relativity probably are not the aliens, whether or not they are authorized to say the Earth is not rotated. 3rd, the theory of relativity thought the photon's rest mass is equal to zero, the mass may turn into the energy, but tests proved the photon does have the rest mass, how do the men believed in theory of relativity explain. They except use the reason that the one-way speed of light cannot be observed to carry on the argument for the speed of light question, other questions are avoided to answer. Just use the people's awe psychology to mathematics to give the men the sacred inviolable impression with the abstract mathematics formula, we should acknowledge that mathematics indeed plays the important role in physics, but also frequently creates the disorder".

Zhang Junhao, from 1980, according to the overseas related science observation, the experimental result and the newest change, started to the gravitational theory exploration, he took "the space-time is flat" as the foundation, presented a new gravitational theory ——gravitational theory of special relativity. (Zhang Junhao believes, the special relativity is correct.) Zhang Junhao tells reporter, Newton's gravitational theory mainly includes two formulas, namely, "the formula for energy change" and "the angular momentum is invariable". Einstein agreed with Newton on the point that "the angular momentum is invariable", but on the point that "the formula for energy change", Einstein's value is two times as large as Newton's value. Until about 1980, the people made one experiment called "light red shift", in this experiment, the people discovered, the experimental energy change value is the Newton's value, but is not the Einstein's value. These experimental synthesis tells the people, Newton's "the formula for energy change" is not wrong, "the angular momentum is invariable" is wrong. This then may infer the conclusion, all the two basic formulas derived by Einstein's general theory of relativity are wrong, to infer the body's movement track according to these two formulas is completely no significative. Zhang Junhao says that, "My theory's first conclusion, is that Einstein's general theory of relativity is not agree with the experiment, this extremely simple inference is indisputable. All the done experiments are to detect the gravitational field created by the static body, all the experimental results

indicated, the space-time is not curved, but is flat." From 1990 to 1995, Zhang Junhao has published 5 papers one after another on the famous "International Journal of Theoretical Physics", more systematically and perfectly elaborated his achievements in the gravitational aspect. (Above content sees: On June 22, 2004, ocean net of Guangzhou Daily)

Song Wenmiao, in reference [1], has discussed the relationship between the theory of relativity, the quantum theory and the macroscopic physics from the angle of engineering science development, the contradiction and the common ground between them, as well as how to seek the possible way to establish the more profound physical theory in their common development.

Li Yinghua, in reference [2] , proposed systematically revises the Newtonian mechanics, pointed out the Einstein's theory of relativity is the error system.

Zhou Jianghua pointed out in "Synthesis Review to Einstein's Theory of Relativity" that, "Einstein's theory of relativity is the versatile theory that can explain any scientific difficult problem, which cannot explain from the scientific angle, from the relative unscientific angle, it is not the serious science incarnation! He told us that may not pursue to solve the scientific difficult problem, "All the problems can be solved with the good means that is relatively not to solve". What is the denial of several dark clouds in science! For the scientific difficult problems that could not be explained, he will solve all of them with the eliminating method. Down to present that if anybody submits a paper about ether (He already called ether as a dark cloud and eliminated it with eliminating method), for any magazine in the world nobody dares to publish the paper, thus has seriously hindered the development of physics research! Theory of relativity is a kind of " relative solutions that does not solve any scientific difficult problem", is meaningless to the science development! This kind of omnipotent sophistry is useless to the science! The science development of human in 20th century is not caused by the theory of relativity, but is developed through the practice path."

Qi Xin pointed out in the website book "Taking Einstein by Strategy" that, "Facing the objective existence of things such as time, space, interaction, physical reference system and the like, because Einstein's theory of relativity had also pointed out some facts, therefore, the theory of relativity had the certain understanding progressive significance. But, as a result of Einstein's cognitive ability had some history limitation, so that Einstein's theory of relativity had also produced many wrong understanding. Therefore comprehensively looked, the theory of relativity only can be limited image of objective things in which the true and false are coexisted."

Qi Xin pointed out in a book "Using Scientific Wisdom" (to be published) that, "From the beginning until now all the people that extremely esteem the theory of relativity, as well as criticize the theory of relativity, are the minority, also these people, they declare themselves master the theory of relativity. As for the overwhelming majority person, they although have the interest to master the theory of relativity, but they are always difficult to achieve wishes. The related investigation indicated, from the beginning until now overwhelming majority person therefore could not master the theory of relativity but to accept the theory of relativity, completely was because they unceasingly accepted and believed in the related propaganda given by the minority experts of relativity. Using the synthesis practice method, conducts the circuitous comparison research to the theory of relativity, specifically said that first goes round the theory of relativity, first obtains the widespread thorough understanding to the understanding object of relativity —— the objective existence of things such as time, space, movement, interaction, reference system and the like, then turns head again to carry on the comparison between theory of relativity and the related understanding, thus may give the fair answer to the question that after all what is the theory of relativity. Vividly speaking, if the objective existence of things such as time, space, movement, interaction, reference system and the like are compared to the forest, then all the humanity's existing understanding about the related things also only to be equal to several trees' sketch, moreover the theory of relativity is only several piece of leaves on the trees' sketch. But in the past, decided by all

sorts of reasons that, the minority person has regarded the leaf as the forest, and ushered the overwhelming majority person in the "leaf labyrinth" covered people's both eyes, let the people blind the "big forest". Therefore, runs out the "leaf labyrinth", looks over the "big forest", this is an extremely significant matter....."

Yang Benluo, in the book "Natural Philosophy Foundation Analysis ——Philosophy And Mathematics Reconsidering to Relativity", following the natural science basic principle that matter is primary and the basic principle of the logic justify oneself for science statement, paid attention to the overall analysis and the historical analysis of the theoretical research, to the theory of relativity, as well as the natural sciences which started from the Newtonian mechanics, carried on the comparatively extensive research from the two aspects of philosophy and mathematics, proposed the series creative viewpoints belonged to himself.

Zhou Jianghua pointed out in "Synthesis Review to Einstein's Theory of Relativity" that, "The general theory of relativity carries on the explanation with the speculation way to the gravitation from the different angle of space-time view, radically is unable to answer the question of the most realistic gravitational essence. For example: How the Earth (star) forms its own material agglomeration gravitation, until now the gravitational essence still is the physical difficult problem that needs the people to open out. Try to ask the theory of relativity, according to the "theory of infinity mass as body near light speed", whether means that the humanity only needs to produce a steamed bun, so long as enhances this steamed bun speed to be able to turn its mass infinity, then satisfies the demand of the whole world? When we read Einstein's theory of relativity, whether you do have such feeling, first he made the confusion of the noun concepts, then led you to this confusion of the noun concepts, caused you to advance freely and quickly in the confusion of noun concepts, brought you the infinite courage to be engaged in the special research with the confusion of noun concepts, if you understood then you become the talent, and you can open out all scientific difficult problems."

Certainly, also there are some scholars who give the very high appraisal to the theory of relativity.

Xiong Chengkun, Liu Liangjun pointed out in reference [28] that, "We are throughout cherishing the deep respect and the heartfelt admire sentiment to the great scientist Einstein who established the special theory of relativity and general theory of relativity! In the past, present and future all are thus. Although the special theory of relativity and the general theory of relativity also have some flaw or deficiency in this way and that way, but for the special theory of relativity and the general theory of relativity, the achievement still is primary, they advanced the humanity understanding to the objective world rule on a new stair (from Newtonian mechanics to theory of relativity mechanics), also may say, the naissance of Einstein's theory of relativity, symbolizes a new times start in the physics history! For the position in the physics history, the theory of relativity throughout is a magnificent page."

Zeng Kangyi, it should be noted that, in reference [3] , not only proposed the challenge to the Newtonian mechanics, the theory of relativity, the quantum mechanics, demonstrated the matter motion's widespread unification in many aspects such as space-time, matter, energy, field of force and the like, established one kind of universal law system for the matter motion, proved existence of the superluminal movement, predicted the elementary particle's in-depth structure and so on; Moreover proposed the new mathematics theory — functional changed calculus theory.

The partial researchers thought that, at present, one of the most powerful challenges to the theory of relativity, possibly comes from Mao Zedong as a philosopher. This point nearly not yet obtained enough recognition. Perhaps the reason for this is that because this challenge is indirectly carried on. As everybody knows, the general theory of relativity is the most successful symmetrical theory started from he mathematical perfection. Moreover so far the symmetrical theory nearly has ruled the physical circles. About symmetrical question, the understanding level of many west natural scientists is much lower than the Chinese modern philosopher. In 1974 Mao Zedong indicated, as

conversation with Tsung-Dao Lee, he completely cannot understand that symmetry can hold in both hands to the so high status in physics [4]. If according to this viewpoint, the "symmetry" should be pulled from the physical altar, this fundamentally constituted the challenge and the vacillation to the theory of relativity. About this point, we will take the detailed elaboration later. The symmetrical theory started from the mathematical perfection relies on the extremely profound mathematical tool, this is the ultimate reason that the general theory of relativity cannot be gained ground, purely for the purpose of popularization that the asymmetrical theory in the aspect of mathematical perfection must be developed.

In fact, some Chinese scholars already walked out the important and solid step for establishing the asymmetrical theory.

Cui Junda, in "Explanation about Quantum Mechanics", in view of some people proposed his "Compound time-space theory does not satisfy the covariance request", said that, yes! It is in this way! But certainly cannot say the Compound time-space theory is wrong for this say! In fact, each "great master of quantum mechanics" should have the most elementary knowledge about the quantum mechanics that the Schrödinger equation originally doesn't satisfy the covariance request of the theory of relativity! Why they don't propose the accusation to the Schrödinger equation? ! In fact, for the Compound time-space theory at the 1979 mathematics and physics symposium, many people already asked the covariance question to me. I thought also is developing. But finally I may explicitly say, we cannot but give up the principle of the special theory of relativity, also give up the covariance condition. Only in this way, the quantum mechanics can find the space-time structure that assorts with it, that is the Compound time-space theory, to develop the quantum theory in this foundation is quite appropriate.

Xuan He, in "Go On Break Through —— The hidden Parameter's Function And Status in Modern Physics", demonstrates the space-time view derived by dynamics parameter that is not perceived by the physicists when they research the system. Because this hidden parameter can be determined directly, and regarding the mass, time and space has the influence, thus the new space-time view has its corresponding position in the physics. Indeed, the introduction of this parameter, will destroy the inherent symmetry of the basic general transformation group of the relativity's mathematical expression, it will be not welcome. But not welcome always is the case of the new discovery, because it frequently vacillates the old belief.

Now we will discuss some concrete questions.

2 Researching and Challenging the General Theory of Relativity

The general theory of relativity is studying the matter's gravitational interaction in space-time. Einstein completed its foundation in 1915. Also had some new progress since the 1960s. The basic principles of the general theory of relativity are the principle of equivalence and the principle of general covariance.

Now we will discuss researching and challenging the basic principles and the main conclusions of the general theory of relativity.

2.1 On the Principle of General Covariance

The principle of general covariance is as follows: The physical law must have the same form in arbitrary system of coordinates, namely the physical law must be covariant under arbitrary coordinate transformation.

An important reason for Einstein adopted the principle of general covariance was that as he established the physics theory, first inspected its mathematical perfection, then closed the door on the mathematical faulty theory.

The partial researchers thought that, Because of using the principle of general covariance, enables

the general theory of relativity to become the so-called most successful symmetrical theory, and also possible it wrongly guided the symmetrical theory to occupy the dominant status in physics.

Holding the principle of general covariance in both hands to the so high status, holding the symmetry in both hands to the so high status and holding the mathematical perfection in both hands to the so high status, will be extremely wrong. Many researchers of non-mainstream factions already mentioned this question.

Cui Junda, presented the new theory "Compound time-space theory" from 1981. It gave up the identical transformation supposition in the theory of relativity, thereupon naturally obtained 16 Lorentz transformation groups with complete equal weight (in them each characteristic determinant is equal to ± 1 , that will guarantee each of them to form the group). If one of them is taken as the Einstein space-time, then should have 16 Einstein-like space-times altogether. All of them are asymmetrical space-time, as $v \ll c$, all of their three-dimensional spaces will have the chirality, between various space-times (universes) will have the new type interaction and the transition movement between the universes. These asymmetrical structures may be assembled to the complicated asymmetrical structures, also may be assembled to the symmetrical structures, such as the leaf and the like thing. When this kind of multiple compound space-time structure fully appears, namely presents the biological phenomena. But in the lifeless world, the space-time will degenerate for single, symmetrical, only then could have the covariance of the rigid body motion rule. Here also should join in a basic principle in the information theory: If two systems can run the intercommunication, their time axis directions have to be the same. Therefore, between the universes the things that cannot be "seen" by us with the electromagnetism signal, (but may feel their existence according to the gravitation), then may say that its time axis is possible opposite to ours, such as the black hole, core of the quasi-stellar object, as well as some "dark matter". In addition, in the quantum mechanics the "time reversal condition" may not be able to take the intercommunication or the control with the normal condition, if regarding the medical treatment as the "control", then in the cancer time axis obviously is in reverse! Moreover the time axis in the AIDS virus possibly is the disorder (see author's publications between 1980 to 1988). This is one kind of brand-new multi-universes theory. In which the three parameters $\alpha_1, \alpha_2, \alpha_3$, happen to be substitute for replacing the three quarks in the SU(3) symmetrical theory for particle classification, this brand-new theory recently published on 《Fundamental Open Problems in Science at the End of the Millennium》

(Chief Editor: T.Gill et al, Hadronic Press,1999), and has been received in the public database of the United States Library of Congress. Hopes with everybody exchange. This kind of theory originally is the root in author's own profession knowledge frame, namely the crystal structure knowledge and the computer chip structural design knowledge, they are directly related to the semiconductor, the computer technology and the biological chip technology. In other words, just take the close correlation to today's three big high-tech domains, namely the development of the information technology and biological technology, as well as the materials science technology. This article is composed of eight parts.

Ye Bo pointed out in "The Up to Date Weapon of Dialectical Materialism" that, Physics is not equal to mathematics, the physics development not merely depends on mathematics. Mathematics is one kind of formal logic, merely depends on the logical inference, the physics is cannot go forward. The physics development mainly relies on the newly discovered natural phenomenon. In mathematics there exists many things that do not exist objectively, these certainly are not suitable for the physics. In mathematics there are many man-made logical inferences, certainly do not exist in the physical world. For example many mathematical equation's solutions do not conform to the reality, must be deleted. Many mathematical formulas certainly not conform to and suitable for the objective reality, some do not exist in the objective reality. Einstein's equation of the general theory of relativity, making the equations absolute, radically do not pay attention to what is the gravitational essence, ever the gravitational wave and the singular point are existed or not.

Wang Dekui pointed out in "Discussing Zeno Paradox with Professor Xue Xiaozhou" that, the success of Einstein established the general theory of relativity with the Riemann geometry, caused the fantasy to establish the various unified field theories from mathematics, but the physical interpretation of the mathematics construction is continuously neglected.

Ma Guoliang pointed out in "Classical Theory of Relativity" that, the general theory of relativity thought: All reference systems are equivalent in describing the order of nature. In other words, namely all the orders of nature will have the same mathematical formalism in all reference systems. Regarding this we think otherwise. It is not the generally following basic rule that the physical rule is the invariability in the different reference systems, therefore it is not suitable for continued citation. But it may be revised as the "principle of general inertia system". Namely "all reference systems may be taken as the inertia system, only in the cases that the inertia system is in the gravitational field or runs the variable motion, in which the advance field force must be added to the body."

Li Xuesheng pointed out in "Modern Physical Philosophy Pondering" that, "Each symmetrical principle itself once is promoted for general and absolutely reliable truth, then at the same time also becomes the barrier for physics development."

So far, there mainly are two kinds of methods for establishing physics theory: Newton method and Einstein method. The Newton method may be called absolutely free or unlimited method. The Einstein method may be called relatively free or symmetrical limited method (mainly is limited by mathematical perfection). The law of the negation of negation is one of the basic laws of dialectics. The Einstein method negated the Newton method, if the law of the negation of negation continues to be suitable, then should again negate the Einstein method with the Newton method.

The establishment of the general theory of relativity, actually is the victory of symmetry or the victory of asymmetry? Some people thought this is only the victory of symmetry. Actually otherwise, because as establishing the field equation of the general theory of relativity, passed through a series of mathematics reasoning, finally depended upon Newton's law of universal gravitation. But the law of universal gravitation does not conform to the principle of general covariance, is an asymmetrical theory in this aspect. Therefore the final winners also should include the asymmetrical theory. If anyone does not agree this viewpoint, please do not use the law of universal gravitation, only depends upon the symmetrical theory to establish the field equation of the general theory of relativity.

It should be noted that, it is impossible to establish the complete and absolute symmetrical theory system. There are two reasons for this. The first reason is: According to the viewpoint of the materialist dialectics, the mutual transformation of the symmetry and asymmetry is extremely universal. Because the symmetry is related to the quantity of conservation, therefore seeing about the transformation between the quantity of conservation and the quantity of non-conservation is needed only, but this is extremely easy. For example in law of universal gravitation $F=GMm/r^2$, the gravitation F is not a quantity of conservation; But if defining another quantity $F'=F- GMm/r^2$, then the value of F' is a quantity of conservation (identically vanishing).

The second reason is: Two kinds of symmetries or more possibly cannot come into existence at the same time. For example, the time translation symmetry is related to the law of conservation of energy, the space translation symmetry is related to the law of conservation of momentum, the spatial rotation symmetry is related to the law of conservation of angular momentum. In the reference [5], taking the law of conservation of energy as the only correct truth, and the example is given that the law of conservation of momentum and the law of conservation of angular momentum are not correct (their results are contradictory with the law of conservation of energy). Namely for this example, if thought the time translation symmetry is coming into existence, then all the space translation symmetry and the spatial rotation symmetry cannot come into existence. This example may be summarized as follows.

Supposing that on the level smooth railway rail to stand a dolly (the figure is omitted), the length is L , a person (or robot) stands on the one end of the dolly, at beginning the person and the dolly are all hold still, then the person walks from the end to another end, try to decide the movement of the person and the dolly. For common literature, solving this problem with the law of conservation of momentum. While solving this problem with the law of conservation of energy, different result will be reached. Supposing that m_1 is the person's mass, m_2 is the dolly's mass, the serial number for the other variable will be the similar. The reason for the movements of the person and the dolly is the losing power of the person, the losing power reads: $W = K_1t + K_2t^2 + K_3t^3$. Where: K_i is the arbitrary constant. Supposing that the person and the dolly run variable accelerated motion related to the ground, which means: $v_1 = a_1t + a_2t^2$; $v_2 = b_1t + b_2t^2$. According to the law of conservation of

energy, for any time we have: $\frac{1}{2}m_1^2v_1^2 + \frac{1}{2}m_2^2v_2^2 - \int_0^t W = 0$. Substituting the related quantities into this

equation, comparing the coefficients of t^2, t^3 and t^4 , then we have the following three equations:

$$\frac{1}{2}m_1a_1^2 + \frac{1}{2}m_2b_1^2 = \frac{K_1}{2}; \quad m_1a_1a_2 + m_2b_1b_2 = \frac{K_2}{3}; \quad \frac{1}{2}m_1a_2^2 + \frac{1}{2}m_2b_2^2 = \frac{K_3}{4}.$$

Now, for deciding the velocities, i.e., deciding the coefficients of a_1, a_2, b_1, b_2 , another equation should be supplemented, If using the law of conservation of momentum, comparing the coefficients of t and t^2 , then we have the following two equations: $m_1a_1 = -m_2b_1$; $m_1a_2 = -m_2b_2$. With the above mentioned five equations to

decide the four coefficients a_1, a_2, b_1, b_2 , the incompatible result must be reached. For simplicity, let:

$m_2 = 2m_1$. It may be proved that, for the case that the five equations are satisfied at the same time,

we can obtain: $K_2 = \frac{5}{4}\sqrt{2K_1K_3}$. While according to the above-mentioned hypothesis, K_i is the

arbitrary constant. Therefore, we already proved that, for this example, the law of conservation of energy is contradiction with the law of conservation of momentum. Similarly, it may be proved that, for this example the law of conservation of angular momentum is contradiction with the law of conservation of energy.

Moreover, if considering to use one kind of symmetry as the tool to establish the final asymmetrical theory (because many principles and equations are symmetrical), then firstly the symmetry provided with the physics significance must be considered, such as the law of conservation of energy and so on. In this aspect some scholars sometimes have the clear viewpoint, sometimes have the muddled viewpoint. The clear viewpoint is: People cannot consider the symmetry in biology and so on which has nothing to do with the physics; The muddled viewpoint is: The symmetry in mathematics is held very high, for example using the pure and profound mathematical principle, such as the principle of general covariance and so on, to establish all the physical theories, is the wrong procedure; Because in this way, at most only a few problems can be solved approximately and partially (the general theory of relativity and the so-called unified electro-weak theory are in this way).

Also there are some researchers to think that, although in the universe does not have the natural phenomenon with the full symmetry, however the symmetrical theory may be used to describe the

natural phenomenon with the arbitrary precision.

In summary, the correct processing for handling the contradictory between symmetrical theory and the asymmetrical theory, appear must contain the following several meanings. First, to have the symmetrical theory, inevitably to have the asymmetrical theory; Similar to certain other disciplines (in which Newton theory and other asymmetrical theory occupy the dominant status), in physics occupying the dominant status should be the asymmetrical theories in the aspect of mathematical perfection (their characteristic is that does not conform to the pure and principle profound mathematical perfection such as the principle of general covariance and so on, but conforms to another symmetries, such as the principle of conservation of energy and so on); Because simply does not have the full symmetrical phenomenon in nature; Moreover at present nearly all physical symmetries encounters to be broken. Second, the symmetry also cannot be neglected, the symmetrical theory may be used to describe the natural phenomenon with the arbitrary precision; as establishing the physical law in many cases, the symmetry is the method and the tool, while the asymmetry is the goal. Third, as processing the physical question, firstly must consider the symmetry with the physical significance, such as the principle of conservation of energy and so on, but does not consider the symmetry in biology and so on, also should not consider the principle of general covariance and other mathematical principles. Fourth, as coming forth the irreconcilable antagonistic contradiction between the symmetry manifested the physical significance and the symmetry purely emphasized the mathematical perfection (this kind of situation must occur sooner or later), it must persist the symmetry manifested the physical significance and give up the symmetry purely emphasized the mathematical perfection.

It is worth specially emphasizing, at present in the achievements of domestic researching and challenging the theory of relativity, the majority or bulk do not use the principle manifested the mathematical perfection such as the principle of general covariance and so on, therefore we may say these achievements all are the asymmetrical theories in the aspect of mathematical perfection. In fact, developing and applying this kind of asymmetrical theory to replace the symmetrical theories such as the general theory of relativity and so on may be a correct direction, also possibly may be the Chinese's superiority and special skill.

2.2 On the principle of equivalence

The principle of equivalence is the most important basic principle of the general theory of relativity. Its experimental bases merely are the Eotvos experiment and so on.

Wang Dashui pointed out in "To anatomy the Error of the Theory of Relativity —— Exposing the Error of the Theory of Relativity (Part 7)" that, "A supposition condition of the general theory of relativity is the principle of equivalence, it is established on the foundation of Newton's law of inertia, but actually violates the basic condition of Newton's law of inertia, one is taking the Earth as an inertial system, then making the physical rules summarized on the Earth equate the physical rules summarized on the inertial system. Two is forcefully taking the characteristics of the Earth's gravitational field as the basic characteristics of the inertial system, then forcefully taking the physical rules on the Earth provided with the characteristics of rotation and revolution equate the physical rules on the linear acceleration system. Three is that the acceleration of the principle of equivalence does not have the time limitation, then permits the body's speed may surpass the speed of light, obviously is contradictory with the principle of invariance of light speed. Four is forcefully taking the mathematical characteristics of the Riemann geometry equate the spatial physical property. Obviously, the principle of equivalence is full of errors."

Ma Yingzhuo pointed out in "Right and Wrong of the Principle of Equivalence" that, "The principle of equivalence is the basic starting point of Einstein's general theory of relativity, but also has its mistake. The theoretical structure of Newtonian mechanics needs to readjust, also needs to rebuild the "axiomization" system. My "three laws of inertial mechanics" is the attempt for this new axiomization

system.”

Situ Changqing pointed out in "The Gravitation Dynamical Process Explanation" that, "This writing describes the process of the gravitation dynamics. The gravitational mass is an embodiment of the inertial ones. Why does the field force is in inverse proportion to the square of the distance between the two masses, but not to three or four power of ones and to prefigure that the constant G of the gravitation isn't invariant.”

2.3 Some Results about the General Theory of Relativity

Liu Qixin pointed out in "Einstein's Mistake" that, "Einstein is elated for happening by chance to reach the perihelion precession of Mercury equals the value of 43.03 seconds per hundred years with the general theory of relativity, because the value calculated by American astronomer Niukang equals 43.37 seconds per hundred years, both are agreed very well, but the value calculated by French astronomer Le Verrier equals the value of 38.3 seconds per hundred years, instead of 43.03 seconds per hundred years, Le Verrier carries on the computation using the 1661~1848 years observed data, his data was extremely reliable, because Neptune was "calculated" out by him.”

Ma Shouxuan pointed out in "Mercury Movement Particular Essence Reason" that, "1, the particularity of Mercury movement; 2, concept and its connotation; 3, related mathematical knowledge; 4, celestial body's rotation motion; 5, celestial bodies self mass distribution and the gravitation between them; 6, change of Mercury orbit; 7, mass and gravitation; 8, research direction.”

He Ming pointed out in "Judgement of Our Country's Scholars to the Possibility of GP-B Gravity Probe" that, "Afternoon, April 20, 2004, the satellite named GP-B (gravity probe B) successfully run the blastoff from the air force base, Vandenberg, California, American. Its mission is to test that whether or not Einstein's important forecasts in the general theory of relativity are correct, this extraordinary experiment related to the entire theoretical foundation of cosmology, or even that whether or not the mankind space-time idea must be experienced a fundamentality change. Our country's scholars also extremely care the blastoff of the GP-B gravity probe.”

The first one expresses the opinion to the result of gravity probe is Professor Chen Shaoguang, on June 29, "Science and Technology Daily" publishes the article "Third prediction of our country's scientist Chen Shaoguang: The result of GP-B is negative", in the article our country's famous experiment and theoretical physicist Chen Shaoguang proposes the prediction: "The four gyroscopes in GP-B moving around the Earth will run the integer advance, but the state that the rotation axes of four gyroscopes are mutually parallel cannot be changed... .. The relative position change of rotation axes of four gyroscopes cannot be detected." Einstein's prediction that "space-time will be curved by earth rotation" the space-time will be denied by the experiment of GP-B. Chen Shaoguang presents this conclusion of "negative result" according to his "quantum gravitational theory" (in 2004 his monograph of quantum gravitational theory "Gravitational Origin And Gravitational Red shift — Who Ignite the Universe" published by Sichuan Science and Technology Press, it announced for the first time on March 12, as he made academic report at Shenzhen University). At the same time Chen Shaoguang specially emphasized: if the "negative result" can be confirmed, certainly does not mean Einstein's general theory of relativity is denied, but should be newly unscramble. Therefore, to be in sharp opposition with present domestic and foreign multitudinously trends that oppose Einstein and deny the general theory of relativity: The quantum gravitational theory exactly is to support the general theory of relativity powerfully. Moreover, this theory not only explains the massive experiments and the observation results, but also causes many most basic questions of theoretical physics, such as the origin of the gravitation and the inertia, the origin of the earth magnetism and terrestrial electricity and the origin of universe and so on, all obtain the perfect solution; A more significant significance is: The solution of the origin of the gravitation, will already reach the grand unification for the four kind of force, the

gravitational interaction, the electromagnetic interaction, the strong interaction, the weak interaction with the standard U (1) × SU (2) × SU (3) model, the unification for the four kind of interaction was considered as the scientific crown. Chen Shaoguang also proposed another two predictions that, "The gravitation has the speed effect" and "the gravitational wave is the dipole radiation", all are going to be validated by experiment.

The second one expresses the opinion to the result of GP-B is Professor Zhang Junhao. It is reported, the experimental results of GP-B mainly will be manifested by two values: one is called "the precession rate of gyroscope of the short distance line effect" (Zhang calls it "The precession rate of orbital effect"), another is "the gyroscope advance rate of the coordinates towing effect" (Zhang calls it "The precession rate of earth's rotation effect"). Under the condition that the satellite orbit is equal to 400 miles, the two values calculated by US Stanford University's expert and professor according to Einstein's theoretical formula are equal to 6.6144 radian seconds/year and 0.0409 radian seconds/year, Zhang Junhao's two values obtained according to his own theory are equal to $(2/3) \times 6.6144$ 弧度秒 / 年 = 4.4096 radian seconds/year and $1.5 \times \cos^2 \varphi \times 0.0409$ radian seconds/year, respectively are $2/3$

and $1.5 \times \cos^2 \varphi$ times of Einstein's values. After knowing that the actual experiment orbit is equal to 635 kilometers, Zhang Junhao also makes his corresponding adjustment for the first value is equal to 4.55 radian seconds/year. (NASA afterwards supplemented the announcement: $\varphi = \pi / 2$, (Namely

$\cos^2 \varphi = 0$). Therefore the precession rate of earth's rotation effect = 0 radian second/year. More importantly, if Einstein anticipated success, then space-time is curving. If Zhang Junhao anticipated success, then the space-time is flat.)

Another will be able to express the opinion to the results of GP-B is a teacher in Jiangxi named Zhu Yonghuan, because he researched the gravitational essence. From 1982 he began to do the experiment of "universal gravitation" with the Cavendish balance made by East China normal university's instrument plant. After repeatedly tests and the innumerable computations, he determines that the gravitation around the rotation ball not only includes the normal component F_n , but also the tangent component F_t , and the tangent component is related with the angle α between the position of the small ball and the big ball equatorial plane. Concrete formulas as follows: (1) $F = F_n + F_t$; (2) $F_n = GMm/r^2$; (3) $F_t = KGmw \cos \alpha / r^2$. Where K is a coefficient, to compare the experiment results obtains $k = 0.44$, w is the angular speed of the rotation ball, the unit is circle/second, α is the angle between the join line of the centers of mass of two balls and its projection on the located maximum rotation angle of the rotation ball's center of mass (similar to earth equatorial plane). Other letters are the same as Newton's law. If two balls are at the static condition or have not mutually cut the gravitational line, then $F = F_n$, $F_t = 0$, namely obtains the existing law of universal gravitation, but in the boundless universe, does not have the no-rotation star after all, therefore F_n is the conservative force, F_t is the vortex force.

(He Ming's) "together revolving" hypothesis of the gravitational wave, according to the essence understanding to the gravitation, makes the prediction to the GP-B results are: Zero results. Specifically have the following three results: "First, the relative orientation change of the four gyroscopes' rotation axes cannot be detected. Einstein's prediction that "the space-time will be curved by Earth rotation" will be denied by the experimental results of GP-B. Second, according to the "together revolving" hypothesis of the gravitational wave, in the GP-B moving around the earth, the four gyroscopes' advances will be the zero results. Because the GP-B moves on the polar orbit, the average value of the sum of the "together revolving" gradient moment is equal to zero; Therefore, according to the "together revolving" theory of the gravitational wave, in the GP-B the four gyroscopes' advances caused by the

"together revolving" gradient moment, will be the zero results. Third, according to the "together revolving" theory, in the GP-B moving around the earth, the four gyroscopes will be changed beyond all recognition."

Zhi Xie pointed out in " Spatial Medium Question (2) —— Field's Functions" that, "In the traditional physics, the gravitational field's function is realized through the graviton. Such function pattern is the one to explain the gravitational interaction through launching and receiving the gravitons of the two gravitational fields. Then according to on the traditional physics, the relationship between mass and energy, if gravitons participate the gravitational interaction, then the graviton itself must have the determinate mass or energy, otherwise, it cannot participate in the function between the gravitational fields. If gravitons launch along the various directions of body's around space, then, if does not have the matter in the space, we may imagine, these gravitons can continuously move down, unless like the universe supposition given by the theory of relativity, the universe is a sphere, having extent but no boundary, these gravitons finally can return to the projectile body itself, and received by the projectile body. Thus ensures the universe energy (or mass) is invariable. As a physical interpretation pattern it is not difficult to think that such supposition simply cannot be established. We cannot imagine that the gravitons can fill the entire universe. They continually launch out and return to itself side and absorbed by it. According to the body's distribution in space, we may obtain, for one body, the launched gravitons always are more than its absorbed gravitons. Such conclusion will happen one day, Earth or Moon's mass will be lost because the launch and the absorption of gravitons, moreover the mass finally will be equal to or close to zero. I thought everybody will not satisfy such explanation result."

Ye Bo pointed out in "Dark Matter And Dark Energy" that, "From the property that matter may be infinitely divided also to be able to foresee the existence of the dark matter. Because the dark matter certainly is the divided part that is smaller than the photon. Therefore, the existence of the dark matter has also supported the material infinite divisibility. The existence of the dark matter can seriously threaten the general theory of relativity, when Einstein established the general theory of relativity, obviously these dark matters are not considered, as a precise theory, it does not have the reason that cannot foresee so many dark matters. To explain the universal gravitation with the dark matter's collision with the matter, needs the existence of dark matter. Part of dark matters' collisions with the matter, will destroy the dark matter isotropism and create the universal gravitation. Therefore, in some kind of significance, the origin of the universal gravitation, should already forecast the existence of the dark matter."

3 Researching and Challenging the Special Theory of Relativity

The special theory of relativity is one kind of new space-time theory known from Newton's space-time view. It was established by Einstein in 1905. It is only suitable for the inertia reference system. Moreover only as the case of high speed movement, its result then has the obvious difference with the classical physics result.

Lei Yuanxing in the book "Space-time Greatly Chaotic", criticized the two basic axioms in the work to quarry a mountain for the theory of relativity — "On Electrodynamics of Moving Body", subsequently has carried on strict and brief examination to Einstein's inferential reasoning process and the promoted method, pointed out its a series of mathematics mistakes and the incredible conclusion. Directly pierced Einstein's paradox method, the related prediction and the so-called observation evidence, has exposed the metaphysics nature of the space-time view of theory of relativity, has guarded humanity's normal space-time reason and the scientific dignity.

Li Zifeng in "Special Relativity is not Correct", simply introduced the basic hypotheses and basic viewpoint of space-time in special relativity, amply analyzed the derivation processes of Lorentz transformation and the main questions. To make derivation of transformation between two coordinate

systems which moving uniformly along beeline one to another. Find that special relativity based upon Lorentz transformation is not correct, and relative speed between two objects may be faster than speed of light.

Zhu Yongqiang pointed out in **"The Experiments Which is Contradictory of the Special Theory of Relativity"** That, The paper introduces the successful two experiments, which is contradictory of the special theory of relativity, in noearch's inertia system: one is the experiment of used the smashed electro magnetic wave to determine the self-velocity in any train on the earth, another is the experiment of the reference somebody following up the motion of charged body can determine the weak magnetic by the motion of charged body.

Huang Xinwei, in "Doubt Special theory of relativity And Five-Dimensional Space-time And Kinetics", reviewed the development course of the special theory of relativity, proposed 3 questions related to mass-velocity relation to expose the existent contradiction of the special theory of relativity, proposed the question to the relativity principle, and advanced the new theory. The new theory did not need and accept the relativity principle, thought the time also was the one-dimensional space, adding the existing three-dimensional space, to compose the four-dimensional space. And using the absolute time outside the four-dimensional space to scale and compare the velocity of movement in the four-dimensional space, to compose the five- dimensional space-time together. The practicality particle and the photon all may move in the four-dimensional space with the constant speed c , in the three-dimensional space the speed of static practicality particle equals 0 therefore in the time of this one-dimensional space the speed equals c , but in the three-dimensional space the speed of photon equals c therefore in the time of this one-dimensional space the speed equals 0. Supposing that the law of conservation of momentum is also suitable for the four-dimensional space, it may succinctly infer the phenomena that mass is increased and the time is slow and so on as the practicality particle is acted by external force to do work and to move from rest, and infer mass-energy relation $E=mc^2$ with the succinct method, and make the new explanation to these phenomena, put an end to all sorts of contradictions which caused by the special theory of relativity.

Ji Hao pointed out in "Considering Special Relativity Experiment" that, "Einstein is a great scientist, but theoretically he has the mistakes. 1, the principle of invariance of light speed has not passed through the complete confirmation; 2, the relativity principle also has not passed through the complete confirmation; 3, for the conclusion that at movement and rest the life of μ , Λ are different, is inaccurate, does not have the static nucleon; 4, the ruler look shorter also does not have the experiment to prove; 5, the relativistic mass increases along with the movement, supposes $2e$ to be invariable; The force acted in the electric field is invariable. These two suppositions is inaccurate, therefore does not have the proof. The speed of electromagnetic field also is c , the particle achieves c in the electric field, it was increased in the electric field, not necessarily related to movement, was allowed to obtain from the electric field. There is no experiment to prove that the theory of relativity is correct, we cannot worship it blindly. The special theory of relativity is wrong, but not including $E=MC^2$."

Qi Xin pointed out in " Development and Perfection to Three Important Viewpoints of Special theory of relativity " (published in the book "New Exploration to Space-time Theory") that, "The relative character of simultaneity of special relativity is produced depended on the concrete phenomenon, but in this phenomenon not only has two physical events, but has four physical events, in fact the relative character of simultaneity is the result that mixes four events as two events. The hypothesis of invariance of light speed of special relativity either exists the difficulty of the contradictory with spheral mathematics definition, or exists the difficulty that requests a spherical surface light wave baseless to split into two spherical surfaces light waves. In the atomic clock experiment so-called that supports the special theory of relativity in which the moving clock slows down, not only exists moving clock to slow down, but also exists "moving clock becomes rapidness", this means that the experiment of

"moving clock becomes rapidness" challenges the moving clock slows down clock proposed by the theory of relativity. Through compares the special theory of relativity and the related fact we can see that, the special theory of relativity is limited to understand the related fact, simultaneously it already has the correct understanding, also has the wrong understanding. Therefore, through carries on the widespread thorough understanding activity to fact itself, through compares the special theory of relativity and the related fact, then carries on the development and the consummation to the special theory of relativity, this is extremely significant."

Now we discuss researching and challenging the basic suppositions and main conclusions of the special theory of relativity.

3.1 On the Space-time Theory

Is the space-time relative or absolute? Is the space-time flat or curving? What is the dimension of space-time? The similar questions have caused the extremely widespread dispute.

Chen Qixiang pointed out in " Unified Theory of Gravitational field And ψ Wave " that, "To derive a theory about the matter field and wave in the flat space-time structure, namely matter field theory. The matter field equation and the equation of electromagnetic field have the unified expression form. Matter field exists standing wave and gravity potential wave. The matter field standing wave and the elementary particle ψ wave have the close relation, may make one kind of new explanation to the ψ wave. This theory presents the extremely explicit physical image to the material wave-particle duality."

Zeng Kangyi pointed out in reference [3] that, "The real appearance of universe space-time, not only is not Newton's absolute space-time excluded the relative space-time, but also is not Einstein's relative space-time denied the absolute space-time, but is the organic and dialectical unification of the absolute space-time and the relative space-time."

Ye Bo in "The Newest Weapon of Dialectical Materialism" and so on discussed the practical significance of absolute space-time view. Pointed out that although the absolute space-time certainly does not exist, along with the unceasing development of science and technology, the star which the people discovered can be more and more far away, the time precision can be more and more high, in other words, the people are precisely infinitely approach to the absolute space-time from the relative space-time. This is the practical significance of absolute space-time.

Jiao Kefang in "The View about Xi'an Theory of relativity Conference ", proposed a time definition, the space is the matter's relative static condition, the time is the matter's absolute motion condition, the two is the existence form of moving matter which cannot be separated, this point is consistent with Einstein's theory of relativity. Because the motion of matter is absolute, therefore the time only then displays absolute; If matter is absolute motionless, then the time stagnates, the space is also irrelevant.

Xuan He in "Mechanics Experiment to Examine Absolute Space", discussed through the experiment to confirm that whether or not the kinetic energy theorem is correct in inertia system, in order to distinguish the absolute motion in inertia system. Main equipments: airplane, radar and receiver with Mossbauer resonance installation and so on.

Meng Qingyong pointed out in "**On Unity about Nucleus and Field**" that, "In the course to think about natural essence, the most important scientific discovery is finding one kind of thoughtway to understand natural essence, this is the thoughtway of nucleus and field about the construction of substance and action function. To combine this thoughtway with materialist dialectics, dialectics of nature and strict logical thinking and so on, to utilize ingeniously, will make the understanding to the construction of substance and action function turning into a brand-new domain. Also precisely utilizes the nucleus and field thoughtway, then interaction equation between the electric fields can be derived as follows: $F_{1, 2}=2\epsilon_0 \eta E_1 E_2 S$ and interaction equation of nucleus and field: $F_{\text{nucleus and field}}=$, only then causes the understanding to the essence of force to go forward a stride.

I thought that there exists the absolute space in our universe, in other words has an absolute reference system, we may take the instantaneous space-time system, which is composed by the universal space and each kind of object for any flash, as the absolute reference system. But the ether field (or gravitational field) is this kind of matter in space such as electric field, the ether field's basic material unit is the electric-field-ion, the ether field is not the absolute reference system, also is not the composition matter of absolute space, the ether field and the absolute space are two kinds of completely different material forms. The absolute space is the invisible void matter, has the irreversibility, the ether field is the visible entity matter, has the fluid.

The theory and the practice indicated that, Einstein's thought of unified field theory is correct, but for the main thought of theory of relativity such as the understandings to the space-time and the mass-velocity relation, I thought they already deviated the natural real appearance. In Einstein's reasoning process of theory of relativity, the most fundamental mistakes lies in the understanding mistakes to the experiments, these mainly display for the following three aspects: Firstly, in the Lorentz transformation he used the invariable speed of light relative to arbitrary reference system, denied the composition of velocity principle, thus also abandoned absolute character of simultaneity; (Talking about the composition of velocity principle, one arguer said, Einstein namely gave up Newton's idea, that was not abandoned the composition of velocity law, but was namely abandoned the composition of velocity principle, abandoned the composition of velocity was not the reason for the mistake of theory of relativity, but was a inevitable result of theory of relativity. The fact really is so? In view of the logical beginning of the theory of relativity — to the problems of understanding the invariable speed of light and the physics significance of speed concept, I already made the thorough discussion in the article "Talking about the variable and invariable speed of light".) Secondly, as establishing relativistic equation he did not make clear the different meaning times and their correlation, neither clear the meanings of optical image event and the primary event in the aspect of time and their correlation, nor clear the meanings of the subjective psychological sensuous time and the impersonality existent absolute time and their correlation, confused the different meaning times, produced one kind of idealist thought that the feeling is the existence, similarly also caused him to abandon the absolute character of simultaneity. The actual situation is that, the primary event is simultaneity in any reference system, the entire universe material system has a unified, even absolute time, moreover the time reflected by the optical image event is related to the selection of reference system, has the relativity. Even if for the relativity time, also must take the absolute time as the foundation and standard. Thirdly, in the particle acceleration experiment, the understanding mistake to the specific charge, he thought that the specific charge reduces along with the speed increases as a result of the mass increases along with the speed increases, but is not the electric charge reduces along with the speed increases, this kind of understanding mistake further made him the understanding mistake that the mass and the energy are inevitably, completely and absolutely associated, caused the concept that the mass and the energy turn in equate essentially with none difference. Just about these three understanding mistakes to the basic facts, then caused the logic chaos of the entire system of theory of relativity in the physics significance, and brought the chaotic results."

Ke Qiaorong pointed out in reference [6] that, "Time absolutely has the basic unit which cannot be divided again, namely "time element"! Space absolutely has the basic unit which cannot be reduced again, namely "spatial element"!

Zhang Shurun pointed out in "Meaning of Four-dimensional Time" that, "Four-dimensional time is composed by the following: ix_1, ix_2, ix_3, ict_0 . Time is the left-hand coordinate system, space is the right-hand coordinate system. For the time coordinate system, the origin of coordinates 0 denotes the present flash, $-ict_0$ is the run out time, the direction of $+ict_0$ will be the future, for time coordinate ix_μ from $-\infty$ to $+\infty$, each spot is the present, on time coordinate ix_μ , it has not the distinction of pass and

future. In the direction of +ict, the monkey may evolve to man. On the time coordinate ix_μ , the elementary particle, its past, present and future will be all the same. The unit of ix_μ is as follows:

$$i \ 3 \times 10^5 \text{kilometer} = 1 \ \text{second} \quad i^2 = (-i)^2 = -1."$$

Fu Yuhua pointed out in Reference [5] that, "Corresponding to the three-dimensional space, the time also should be three-dimensional. With the Lorentz transformation of Relativity, the concrete form of three-dimensional time for a special case can be derived, which also may be written as the form of variable dimension fractals. Based on this result, multi-dimensional time, fractal dimensional time, complex number dimensional time and variable dimensional time are also discussed."

Guo Chongwu pointed out in "Restudying the Time of Relativity" that, "For the dynamics process occurred in a isolated system, this article testifies that the under the condition of Lorentz transformation the dynamics result caused by the time of relativity and the law of conservation of momentum are not consistent. The research indicates that the time concept of relativity is facing the difficulty that is difficult to surpass. To compare with the Galileo transformation, this article also discusses the time meaning of theory of relativity. The conclusion is that the time of relativity cannot be regarded as the clock time."

Jiang Zhengjie pointed out in "**The Foundational Principles of Neo-natural Philosophy**" that, "The absolute space (Tao) creates the basic quantum principle that can be taken as the basic principle of the new natural philosophy, and may be expressed as the basic physical theory."

Ma Guoliang in the book "Classical Theory of Relativity", passed through the strict reasoning based on synthesizing a lot of experimental facts, once again independly proposed Lorentz's early transformation, and widely utilized to the domains such as optics, kinematics, mechanics, electromagnetics, cosmology and so on. Established a brand-new space-time theory system. Also discussed the simultaneity and the law of causality, the space-time question in moving reference system, the measuring technique for one-way speed of light, light Doppler effect and its application, the problem of light propagation in the moving medium.

Zhang Jianjun pointed out in "Absoluteness of Electromagnetical Movement and Conservation of energy" that, Faraday—Kennade—Miaole system experiment confirmed the absoluteness of electromagnetical movement, promoted to the absoluteness experiment of general movement, discovered the relativity and absoluteness of electromagnetical movement was a unified integer, indicated the Newton's space-time was the physical basic space-time ideal foundation, the theory of relativity must adapt the absolutism. The in-depth rule of experimental facts promulgated that the conservation of energy will cause the energy blocking out in vacuum, thus prompted the research mentality for perpetual motion machine.

Many researchers do not agree with Einstein's formulation about the space-time curving.

Zhang Junhao and Chen Xiang in "Explaining Three Classical Gravitational Experiments of Theory of Relativity with Gravitational Theory of Special Theory of Relativity", introduced the explanation of three classical gravitational experiments of theory of relativity with gravitational theory of special theory of relativity. From this may obtain the conclusion: These three experiments cannot prove the space-time is not flat.

Yang Benluo on the 242nd Xiangshan Conference, introduced the "observation" significance of special theory of relativity and the mainly inquiring to the "physical foundation" of electromagnetic wave. Finally, according to the reconstructed "appropriate" fundamental equation of electromagnetic field, for the similarly real "curving" trace of light propagation in the real "flat" space, proposed the related physical foundation as well as the essential way that how to calculate.

Wang Guohua in "Persist in Scientific Truth and Show the Fact", reexamined the universe space-time, reasoned that the space-time was unable curved ——the scientific real observation caused the wrong conclusion, presently this can be proved by experiment and explained with the graphical manner,

pointed out that there was only one kind of situation to be possible to explain the space was curving, but until now in the science this phenomenon was not observed, therefore does not exist curving. According to the universe principle, Wang Guohua promoted the new mass-energy formula, accurately was the mass-energy-velocity formula. Based on this new formula the answers of the reasons of slower than light and faster than light can be reached. With the new formula appearance, the theory of singular point, the big bang theory, the inflationary theory, the black hole theory all will be collapsed of itself. The new formula perfectly unified the relation of mass, energy and velocity, that three were supplement each other and mutually restricting. The article also pointed out that the relative character of simultaneity perpetrated a fraud, changed secretly the concept of simultaneity. Made the brief explanation to time and the space, this was possible to match the space-time evolution chart; in this article the reasoning, the argument and the new formula can mutually verify. The article presented the new method, opened the new mentality for researching theory of relativity.

3.2 On Principle of Relativity

Einstein's principle of special relativity pointed out: All forms of physical law are invariable in all inertia systems.

Lei Yuanxing discussed two kinds of "principle of relativity" in "Greatly Chaotic in Space-time". Briefly introduced the "Galileo principle of relativity", this kind of principle requested: Two relatively moving reference systems cannot be the "equal weight" unconditionally. This also is the reason that people abandoned the Ptolemaeus geocentric system and chose the Copernicus heliocentric system. However, The "principle of relativity" in Einstein's "two supposes" actually is other one kind, it discussed two reference systems are unconditionally equal weight. Einstein also repeatedly used the "same qualifications", "equivalency", "equipollence", "equal weight" and so on in many articles to indicate the unconditionally equal weight for different reference systems, but used "makeup", "special permission", "superiority" and so on to criticize the "conditionally equal weight". Just about the emerging of Mach principle of relativity, bred confusion the physical space level and tagmeme, so that had the space-time greatly chaotic aspect. If unconditionally equal weight "principle of relativity" is established, then the large intestine bacilli may survey the personal walking speed, Copernicus certainly did not defeat Ptolemaeus, Bruno also certainly did not guard any truth, and the Earth moved around the moon, the electronic track might be the equal weight with the comet orbit. Such "principle of relativity" is absurd at the beginning, with this the suspected "theory of relativity" is inevitably not so correct.

Ma Guoliang pointed out in "Classical Theory of Relativity" and so on that, the relativity principle is one hypothesis that has not passed through the full proof. For example for the light spreaded in the certain direction, as measuring in various inertia systems, whether or not the one-way speeds of light all are the same, is very suspectable. For some phenomena, the descriptions of various inertia systems may be different. The reason for this is that the existence of matter world has the objective independence. Some phenomena's observed results are related to the observer's position and the state of motion. For different observers the observed results may be different for the identical phenomenon, also may say this is covariance. Therefore the covariance should not only mean the invariability of mathematical form, this kind of invariability is not the universal law with leading role. In the real world, some invariability is impossible. The matter world absolutely cannot let all observers' observed results all are the same, its appearance may be the toys that wilfully change along with person's observation position, even if overlaps and self-contradictorily, also does not refuse under any circumstances.

3.3 On Principle of Invariance of Light Speed, Ultra Speed of Light and the like

Cao Shenglin in "Special Theory of Relativity And Question of Ultra Speed of Light", not only

talked about the ultra speed of light phenomenon in the astronomy and the astrophysics domain reported by the international scientific circles since the 1970s, moreover did quite fresh theoretical analysis, thought the application scope for special theory of relativity was the sub-speed-of-light region, if the time sequence is not absolutization, then the ultra speed of light movement may be existence. The causality will have new indication under the ultra speed of light condition, the law of causality should not be destructed. Wang Lijun's experiment is precisely to deny Einstein's denial opinion. In fact, if substituting the Minkovski space-time with the Finsler space-time, the obtained space-time transformation not only can retain the main points of special theory of relativity, but also can contain the ultra speed of light movement.

Ni Guangjiong pointed out in Reference [7] that, "For seeking the essence of special theory of relativity, we gradually accumulate 10 arguments, concentrates in a basic supposition based on the quantum mechanics: A particle always is impure, it always contains two oppositions fields, $\varphi(-x,-t) \rightarrow \chi(x,t)$, $\chi(-x,-t) \rightarrow \varphi(x,t)$. In a particle state $|\varphi\rangle > |\chi\rangle$, φ occupies the dominant position, but along with the increase of the particle speed, the hidden χ field is increasing along with it, causes each kind of strange effect of special theory of relativity. Under the newly defined space-time inversion ($x \rightarrow -x, t \rightarrow -t$), because of $\varphi(x,t) \rightarrow \varphi(-x,-t) = \chi_c(x,t)$, $\chi(x,t) \rightarrow \chi(-x,-t) = \varphi_c(x,t)$ moreover $|\chi_c\rangle > |\varphi_c\rangle$, thereupon the particle then turns for its antiparticle, has the same momentum and (positive) energy. The above symmetry should taken as the starting point for constructing the special theory of relativity, the relativistic quantum mechanics, the quantum field theory and the particle physics, in which about the ultra speed of light theory for neutrino also is very interesting.

Huang Zhixun pointed out in "Does the Singular Point of Faster-than-Light Moving Exist?" that, "In the thesis about Special Relativity written in 1905, A. Einstein brought forward the confidence that "velocity greater than that of light have no possibility of existence." We call it "light barrier." The space technology inspires deep consideration ——why a spacecraft can not exceed the speed of light? According to the Lorentz's mass-velocity formula, the point $\beta=v/c=1$ was a singular point. But, that problem of difficulty perhaps no longer exists."

He Shouwei in reference [8], Using the theory of relativity and the soliton theory to conduct the analysis research to the nature and the characteristic of the tachyonic, inferred the tachyonic mass-velocity relation. The research discovered the tachyonic nature is completely different with the particle lower than speed of light, also tachyonic is very important to humanity.

Yang Xintie et al. pointed out in "Super Light" that; "In 1960s, in overseas raised the first upsurge of faster than light research. In 1967, American physicist G. Feinberg published the paper "Possibility of Tachyon", later in our country Prof. Qin Yuanxun, Zhang Cao, Ni Guangjiong, Cao Shenglin, Huang Zhixun, Yang Wenxiong and so on separately presented the different mathematical descriptions. The quantum mechanics also proposed the new idea, after the Aspect experiment Bohm also proposed that the theory of relativity could be regarded as the approximate of some more widespread theory, in order to discover the ultra speed of light in a deeper level. These views all emphasized that the experiment demonstrated the materiality and the non-linearity in mathematical method, the author felt, in the early time of aerodynamics development also met the similar question, the disciplines' overlapping and use for reference had the necessity very much. An approximate small disturbance method of conservative equation of fluid mechanics can be written in the form of extensional invariability. And can be written as the linear element of general relativity. The magnitude of error is not great than the error of accuracy of existing experiment of verification of relativity effect. Therefore the aerodynamics method may be used for carrying on the higher order modification to the theory of relativity, and the result can be used to make the experiment of super light."

Huang Demin in " Experiment Plan to Test Whether Speed of Light is Variable ", presented three experiment plans to test whether speed of light is variable: experiment plan of asymmetric motion loop

light interference; experiment plan of light drift time difference method; experiment plan of asymmetrical seal loop light interference.

Ding Yining pointed out in "Testifying the Mistake of Theory of Relativity with " that, "Many guarders definitude the establishment of principle of invariance of light speed with Michelson and Morley experiment. Actually, they make a lower mistake. If according to Einstein's tentative plan, speeds of light should have not any difference, but Michelson and Morley experiments have the difference, although this kind of difference is not certainly big, sufficiently to prove its defeat, but Einstein himself wanted to neglect this difference, as if the existence of this difference equally passed through the examination. (Here Einstein did not certainly carry on the strict proof and confirmation, but presented several formulas and "our customarily space and time concepts and our experiential characteristics" to touch them.)"

Yang Xintie pointed out in "**Theory of Foundation of superlight speed wave transformation**" that, "The superlight speed research could be developed from the aspect of continual medium, and a mathematics description of medium is deduced. This description allows the existence of superlight speed phenomena, but it is also compatible with relativity theory. From the similarity between Navier-Stokes equation and Maxwell equation, which lake one corresponds equation from whole 4 equations, an analysis is deduced, depend using the concept of relax effect of non-Newtonian viscose Fluid, the last missing equation is constructed. Through deduce give a concept to consider the Maxwell equation and NS equation as similar object but in different viewpoint. On this background discussed the equivalence between compressible wave equation and incompressible wave equation with Lorentz transformation. The relation of medium and energy of relativity theory is given by the new theory, and the rule element of general relativity in compressible flow is also given."

Zeng Kangyi pointed out in reference [3] that, "When the object velocity of movement approaches infinity, its moving mass will maintain constant, and will be equal to its rest mass. Theoretically, the object moving speed does not have any upper limit." This book presented the faster than light as computing the star light deflection around the Sun, the maximum speed was equal to $C + \Delta C = 3.6426 \times 10^8 \text{ m/s}$.

Ji Aimin pointed out in "Phenomenon of Invariance of Light Speed Should be Retested " that, "Light is a kind of electromagnetic wave , and there are sufficient evidences to indicate that the electromagnetic field is more likely to move together with charged particles and magnets. Speaking of the earth magnetic field, result in the zero outcome in such experiments of invariance of light speed as Michelson Morley experiment performed by early people, thus destabilize the theoretical basis of relativity theory—principle of invariance of light speed. To our further surprise, through detailed analysis we find that those experiments that were ever used to verify the relativistic effect, in fact, can be explained very naturally within the framework of classical theory. Therefore it is necessary for us to turn back to review the advantages and disadvantages of relativity theory and previous ether theory with rigorous attitude, and make a judgment for that by designing more reasonable experiments."

Shi Zhengjin pointed out in " What's Wrong the Hypothesis of Speed of Light Invariable" that, "the ray radiation Doppler shift fact may decisively attest the falsity of the hypothesis of speed of light invariable, the hypothesis of speed of light invariable violates the principle of composition of vectors (composition of velocities), which did not always let the person believe, The results of Michelson and Morley experiment radically are far from offering the validate to the speed of light invariable and the difficulty involved this experiment until now still to be worth discussing, abandoning Einstein's hypothesis of speed of light invariable and overthrowing the special theory of relativity are the physical urgent matter."

Han Feng pointed out in "Neutrino's Nonvanishing Rest Mass And Existence Possibility of

Tachyon" that, "Explaining parity nonconservation in weak interaction needs the two-component neutrino theory. If neutrino in existence of nonvanishing rest mass were confirmed, it only can appear with the status of tachyon, only then has the possibility to follow binary components theory, but this should not violate the theory of relativity.

Liu Zhibo pointed out in "Whole World Corresponding Experiment And Speed of Light Question" that, "Through the optical cable to carry on the whole world corresponding experiment, may prove that the speed of light is not a constant relative to the optical cable or the star reference system of the earth's core. The signal surrounds the Earth one circle along the reverse direction, the difference of utilized times may be 400ns, it cannot be surveyed with the precision instrument. Also unifying the space-time reference system and the clock to carry on the thorough analyses, will discover that in the reference system in space-time continuous section, the speed of light invariability and the space-time continuity are mutually contradictory. Thus the speed of light invariability is untenable may be proved from the two aspects of experiment and theory."

Gao Shan in "Quantum Ultra Speed of Light Correspondence" , thoroughly analyzed the theory and the experiment related to the quantum ultra speed of light correspondence, proposed the realized principle and the technical plan for quantum ultra speed of light correspondence, and formulated the further research plan.

Zhang Haidong pointed out in " Exploration to the Possible for Calculating the Virtual Mass after Ultra Speed of Light" that, "After ultra speed of light the material mass is not infinite raised, entering the mass moving condition the virtual mass world may be calculated."

Feng Qingliang pointed out in " One Kind of Speed of Light Invariability Experimental Method to Eliminate the Earth Factor Influence" that, "Einstein's principle of invariance of light speed refers the invariance of light speed under the vacuum condition. But so far all experiments supported the invariance of light speed are carried on the earth's surface. If the earth's surface does not equate to the vacuum condition, then these experimental results cannot fully support the invariance of light speed. This article presents that the experiments about the invariance of light speed must be carried on the carrier moving relative to Earth, thus may effectively eliminate the possible influence of Earth factor."

Shu Hengqi pointed out in "Beam of Light Is Not Suitable for Length Benchmark" that, "As selecting the "length benchmark", now takes speed of light C as a constant to determine the length benchmark. The author believes that, whether or not the speed of light is a constant, still do not have the conclusion. Therefore the viewpoint to regard the speed of light as a constant and taking it as the length benchmark are wrong."

Ding Yining in "Discussing the Mistake of Light Magnetism", comprehensively, thoroughly, and completely analyzed the Faraday and Zeeman effect of light, proved that Maxwell's explanation about light magnetism phenomenon is an one-sidedness mistake.

Yin Yixian, in "About Light's Particle and Wave Characters And Photon's Rest Mass", elaborated the photon's rest mass question. Hereon quoted the elaboration and viewpoint in reference [28]: Using the famous mass formula (also called "mass-velocity relation") in special theory of relativity can obtain the conclusion that photon's rest mass is equal to 0, again let the light through the water or the glass, then similarly using the mass formula in special theory of relativity, also can obtain the wrong result that the photon's energy is equal to 0. This clearly demonstrated the special theory of relativity encountered the difficulty that was unable to avoid as using the mass formula in special theory of relativity to handle the problem of photon's rest mass. Similarly, as handling the problem of rest mass of neutrino moving with the speed of light, the special theory of relativity also encountered the difficulty. According to the reasoning of mass formula in the special theory of relativity, neutrino's rest mass should be equal to 0, but according to the union experiments taken by multi-countries scientists in 1997 ~ 1998 in Japan,

already affirmed that the neutrino has the rest mass, its value approximately equals $10^{-33} g$. At the same time that this article pointed out the special theory of relativity encountered the difficulty as handling the problems of photon's rest mass and so on, specially remind everybody should not forget, in the development history of physics, in particular the atomic physics and particle physics, there existed many successful instances as used the special theory of relativity to handle the physical questions. For example, it successfully explained the fine structure of hydrogen atom's light spectral line; the great significance and function of mass-energy relation $E = mc^2$ in the atomic energy research and so on. Thus, we will have the quite correct, comprehensive and the objective understanding to the success and the deficiency of the special theory of relativity. This article also showed the question what kind of manner should we treat and commemorate Einstein. This article believed that, we should forever respect, forever commemorate Einstein, the greatest scientist in 20th century, but cannot deify him. Einstein is the person instead of the "god". We should forever remember Einstein's great scientific achievement and his great personality. For the difficulty encountered by the special theory of relativity as handling some physical questions (if really existed some "difficulty"), also must like Professor Xiong Chengkun and Liu Liangjun, the authors of "Elementary Theory Of Taiji-ion (Taijizi) Physics", frankly pointed out the difficulty that met, in order to bring the academic circle's attention and discussion, then promoted the consummation and development of the special theory of relativity. Only then, was the correct manner to treat and commemorate Einstein.

Jin Hui in "Light Phenomenon Essence", promulgated the true moving essence of light phenomenon, with this theory all the observed light phenomena so far may be explained, for the light phenomena analyses this theory completely conformed to the classical mechanics.

Shi Jiaomin in "New Exploration to Speed of light Theory", proved the speed of light cannot be invariable, the speed of light impossibility was the speed limit, the photon rest mass impossibility was equal to 0. Proposed the principle of photon beam speed and the principle of practicality speed limit. Carried on the new exploration to photon speed, energy and mass.

Wang Dashui pointed out in "Originally Light Speed Is Changed — Affronting Special Theory of Relativity Directly" that, the special theory of relativity took the "principle of invariance of light speed" as the reasoning premise, but in the reasoning simultaneously appeared the four kinds of different situations, V , $V - v$, $V + v$, $\sqrt{V^2 - v^2}$, for the description of the maximum speed — speed of light, when this kind of barefaced theoretical falsehood finally exposed today, the so many mistakes of the theory of relativity will expose without doubt, therefore the following collapse of the theory of relativity will be the historical necessity.

Wang Jianhua pointed out in "A New Experimental Technique for Testing the Mistake of "principle of invariance of light speed" And Result Forecast" (ISSN 1531-085x Copyright 2,005 USA, Matter Regularity № 7, 78-91) that, for more than 100 years, the theory of relativity's principle of invariance of light speed continuously has been unable to obtain the proof in the physical experiment. However, according to the optics interference theory and the laser's working principle, may design and invent one kind of new laser interferometer with two holes of output laser. As two one-way laser beams, which optical paths all are equal to d , vertically intersecting, and produce the interference stripes. Here turns the new interferometer to various spatial directions, may observe the interference stripes' moving

change, for the interference stripes' moving quantity, the maximum value N is:
$$N = \frac{2Ud}{\lambda \sqrt{C^2 - U^2}}.$$

According to this new experiment results to be allowed to determine that, the theory of relativity's

"principle of invariance of light speed" is wrong.

Ma Guoliang, in "Classical Theory of relativity" and so on thought that, "The principle of invariance of light speed had not the experiment basis. Until now all experiments cannot prove this point. The Michelson and Morley experiment and the majority speed of light surveying experiments all used the round-trip closed light paths. The total average speed of light is constant on the closed light paths certainly does not mean in each direction the one-way speed of light is also constant; But Roemer's astronomical measurement principle obviously indicated that "light's one-way speed is related to the object moving state". The actual observation situation is: In the course of Earth revolution, as the moving directions faces and deviates the Jupiter, the interval times of the eclipses of Jupiter's satellite will be shorter and longer respectively. This indicated that relative to the earth the light speeds sent to earth from the satellite would be faster and slower respectively. What a pity that we never acknowledged and paid special attention to this important experimental conclusion. About the ultra speed of light, absolutely the ultra speed of light has the possibility to happen, but absolutely is not happened in the usual space for the usual solid particle, should be the bare particle or can occur in the strange space. As for observing the ultra speed of light, as a result of the relative space-time change, naturally has the possibility to happen."

Zhang Jianjun pointed out in "Speed of light c and c^* and Wave-particle-information Triplicity" that, "With the aid of the aberration phenomenon observation, discusses the related aberration angle logical experiment, introduces speed of light c and c^* , as well as with the corresponding reference system, perpetual motion system and absolute space-time coordinate system. The phenomena of speed of light c and c^* indicate that the movements related to perpetual motion system and absolute space-time will be different. Affirming the existence of electromagnetic ether, this may be validated further through the related electromagnetic induction experiment such as Roland metal disk experiment and so on, thus solves the basic space-time problem. The quantum wave-particle-information triplicity shows that the quantum has the natures of wave, particle and information, further indicates that the speed of light is c or c^* , is codetermined by the instantaneous information of the photosource and the receive object as the photosource shining, indicates that the quantum information will be found everywhere of the entire universe, this is precisely the performance of superdistant action, thus causes the absolute space-time, the theory of relativity and the quantum theory truly unifying together."

3.4 On Lorentz Transformation

Xu Shaozhi at the Einstein theory of relativity academic conference (July 29-30, 2000, Beijing), gave a talk in which oppugned the validity of Lorentz transformation. Discussed that Lorentz transformation was not justifying oneself, and further presented the springhead for that.

Tong Zhengrong pointed out in "Hypothesis of Basic Space-time Point in Deriving the Lorentz Transformation of Relativity" that, "First, in deriving the Lorentz transformation of relativity the "method of hypothesis of basic space-time point" ("basic point method" for short) is used, its principle precisely is the essential Galileo space-time principle. Second, the "Lorentz mathematical space-time reflection" under light feeling and sound feeling — the value of relativity in approximate calculation. The author finally pointed out that, We knew that, the light and the sound wave are same, under the different media condition, under different temperature condition and so on, the spreading speeds are different. If we send out the high speed molecular beam into air, one kind of standing wave state like the light wave-particle duality can be produced."

Gu Xinmiao pointed out in "Retaliating Einstein with Another Theory of Relativity — Second Theory of Relativity" that, "If it is possible to have the movement faster than light, then it has to eliminate the "principle of invariance of light speed" from the theory of relativity. Establishing another theory of relativity which does not have the "principle of invariance of light speed" — the "second theory of

relativity". The goal for establishing the "second theory of relativity" only is used for reference, looking at the essence of Einstein's theory of relativity through somewhat. To establish the "second theory of relativity", the "space-time coordinate transformation" equivalent to Lorentz transformation must be found. This is not difficult to achieve. The author already found it as the following "space-time coordinate transformation":

$$\begin{pmatrix} t' \\ x' \\ y' \\ z' \end{pmatrix} = \begin{pmatrix} \alpha_0 & -\frac{v_1}{c^2}\alpha_0 & -\frac{v_2}{c^2}\alpha_0 & -\frac{v_3}{c^2}\alpha_0 \\ v_1\alpha_0 & 1 + \frac{\alpha_0 - 1}{v^2}v_1^2 & \frac{\alpha_0 - 1}{v^2}v_1v_2 & \frac{\alpha_0 - 1}{v^2}v_1v_3 \\ v_2\alpha_0 & \frac{\alpha_0 - 1}{v^2}v_2v_1 & 1 + \frac{\alpha_0 - 1}{v^2}v_2^2 & \frac{\alpha_0 - 1}{v^2}v_2v_3 \\ v_3\alpha_0 & \frac{\alpha_0 - 1}{v^2}v_3v_1 & \frac{\alpha_0 - 1}{v^2}v_3v_2 & 1 + \frac{\alpha_0 - 1}{v^2}v_3^2 \end{pmatrix} \begin{pmatrix} t \\ x \\ y \\ z \end{pmatrix}$$

where

$$\alpha_0 = \frac{1}{\sqrt{1 + v^2/c^2}}$$

This space-time coordinate transformation may be called the "GXM transformation", (for further information about the GXM transformation, see author's paper titled "Space-time Coordinate Transformation in Four-dimensional Euclidean Space")."

Xu Shaozhi pointed out in "where is Science Going? — The Basic Question about Theory of Relativity" that, "The Lorentz transformation is not justifying oneself; Is a group undetermined equations with 0/0 type; the reasoning is wrong. The conclusion is: The theory of relativity not only "has the slight defect for the explanation", its mathematical foundation is wrong from the start, said it "already attained the experiment confirmation" is the word of dishonesty."

Wu Jiarong pointed out in " Classical Lorentz Transformation Formula Is Wrong —Two Kinds of Symmetry of Space Inversion" that, "The mistake's fatal root of Einstein's special theory of relativity, is the mistake of classical Lorentz transformation. The mirror symmetry is divided into two parts, the Lorentz transformation has two kinds of forms, that two groups of transformation formulas are mutual conjugated. One group is suitable for aparting movement, another group is suitable for the opposite movement. Regarding the physical rule, the conjugated Lorentz transformations all are general. But for the phenomenon actually can produce the rational explanation according with experience. The first part of this collection contains mutually related 10 papers. To prove the classical Lorentz transformation formula is wrong, deny Einstein's theory of relativity; to derive the new conjugated Lorentz transform formula, to found the brand-new theory of relativity. Among which: The first paper proposes the conjugate Lorentz transformation with the hypothesis form. The second paper denies the old theory of relativity. The third paper and fourth paper provide for deriving the new Lorentz transformation formula. The fifth paper derives the conjugated new Lorentz transformation formula. The sixth, seventh and eighth papers are strengthening the "conjugate" concept. The ninth and tenth papers are founding the new theory of relativity."

Ma Guoliang pointed out in the book titled "Classical Theory of relativity" that, in the past, the thought that "the Lorentz transformation has the covariance in the high speed movement and the low speed movement, when the velocity of movement is far smaller than the speed of light the Lorentz transformation will become Galileo transformation" is not certainly rigorous. Because when $u \ll c$, cannot guarantee $x \ll ct$ and $v \ll c$, thus $t - ux/cc \approx t$ and $1 - uv/cc \approx 1$, not always come into existence.

3.5 On mass-velocity relation and mass-energy relation

Xiao Jun pointed out in "Mass-velocity Relation isn't Effect of Theory of Relativity" that, "In theory of relativity, because there is the mistake to think that mass-velocity relation $m = m_0 / \sqrt{1 - u^2 / c^2}$ (1) conflicts with the classical absolute space and time theory, causes the people to consider that the multitudinous experimental results supported mass-velocity relation are the important evidences to support the special theory of relativity, thus causes the majority scholars also therefore deeply believe to the theory of relativity without doubt. Actually, the mass-velocity relation reflects that the mass of moving body is increased, that isn't the effect of theory of relativity, in the frame of classical absolute space and time theory, similarly mass-velocity relation Eq.(1) may be derived."

Ma Honghai, Pan Ruixuan pointed out in the section "Two Expression Ways of Theory of Relativity" in reference [19] that, "According to the two expression ways of theory of relativity, for the object A with rest mass m_0 , we may carry on the following description: (1) Its mass will change along with the change of object state of motion. (2) Its mass will change along with the viewer's difference. (3) For the object A with mass $m=m_0$, no matter it is static or moving, its mass always is $m=m_0$; No matter is this viewer or that viewer, the observed mass is $m=m_0$. For above mentioned three kinds of conclusions, obviously the third one, namely the mass is the object inherent attribute, does not change along with the change of object state of motion, not change along with viewer's difference, can be easily accepted and understood."

Li Anbao in "Experiment to Subvert Einstein's $E=C^2$ ", boldly proposed the oppugning Einstein's mass energy equation $E=MC^2$, thought that the mass energy equation lacks the indisputable fact basis and the scientific continuity, only has the science approximate coupling under certain physical definitions. The article held the denial manner to the last word that mass may completely transform to energy and energy may transform to mass, and presented the new annotations for the mass defect phenomenon and the phenomenon that for the charged particle the accelerated straight speed could not surpass the speed of light. At the same time, the author pointed out the possible that through the experiments of mutually collision between positive electrons or between negative electrons to carry on the subversion to Einstein's mass energy equation.

Ma Guoliang pointed out in the book titled "Classical Theory of relativity" that, "The mass", according to its original meaning, should be referred to the number of quantity contained by the various material systems of the objective existence. But any method for determining mass must be carried on according to some kind of property displayed by the matter. Various objects under the identical condition, the measurement results may be different, this has reflected their masses; but the identical object under the different conditions the measurement results also may be different, this is the measurement of some kind of property to the object. Because of the survey according to the different material properties, therefore also create the different significance masses. Object property (such as inertia) frequently is related to the mass, but certainly does not equate, yet may not mutually confuse. The mass-velocity relation should refer: When the object makes the high speed movement the inertia quantity possibly increases, but certainly does not mean that the matter's number of quantity also increases. The mass-energy relation should refer: The solid matter and the field matter both have the corresponding relations as mutually transforming, but is in no way said the matter and the energy may mutually transform.

Fu Yuhua pointed out in "Verifying, Improving and Partially Replacing Relativity with Law of Conservation of Energy" that, "The law of conservation of energy can be used for verifying, improving and partially replacing relativity. For example, for an Einstein imaginary experiment (launching energy at the left end of an isolation box, then the energy is absorbed by the right end of the box), carry on the precise solutions, thus discovery the contradiction between mass-energy relation of special relativity (

$E = mc^2$) and law of conservation of energy. According to the law of conservation of energy, two new

mass-energy relations suitable for this example are derived, one of them is as follows $E = \frac{mc^2}{1 - \frac{m}{2M - m}}$

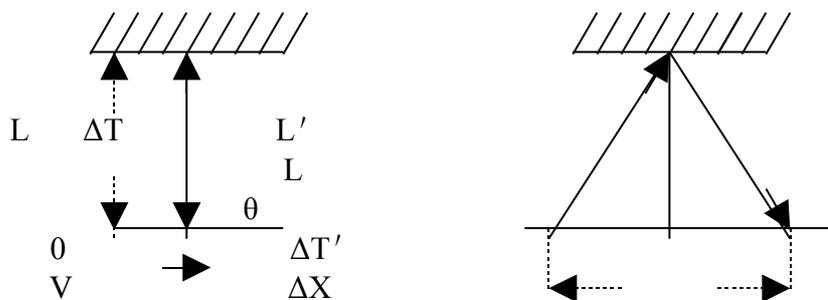
. Further discussion shows that the relativity may be surmounted finally by the science of conservation of energy (including the theorem of energy derivative identically vanishing, and so on) that is established based on the law of conservation of energy.”

3.6 On Rods Look Shorter and Clocks Look Slower

According to the special theory of relativity, the effects in the two aspects of time and length that the rods look shorter and clocks look slower can be derived. However many researchers propose the question regarding these.

Liang Jianzhong pointed out in "**Shrink Ruler Effect**" that, "In the paper titled "Talking about Twin Paradox", I already have made the analysis to the time dilation effect of special theory of relativity, obtains that for the relatively moving object, also has the time contraction effect besides the time dilation. Now I will carry on the discussion for another effect of theory of relativity, namely shrinking ruler effect. Similar with the time effect, besides the shrinking ruler effect in the theory of relativity, but also has the opposite effect namely ruler long effect, this is decided that the distance between the moving body and viewer is increased or decreased along with the time."

Liang Jianzhong pointed out in "Talking about Equation $\Delta T' = \Delta T \sqrt{1 - V^2 / C^2}$ " that, "The man who has contacted the special theory of relativity, certainly knows this formula. But the reasoning process of this formula is worth discussing.



At present the majority textbooks, as introducing the theory of relativity, basically use the above example to quantitatively prove the time relations in two relatively moving reference systems. I think that in this example, two questions are worth discussing. The first question is: such description that "The light which sends out from the photosource" is not precise. We should change "the light which sends out from the photosource" into "a photon which sends out from the photosource", we only inspect the situation of this photon. The second question is: When the train in the moving process, whether or not this photon vertical to train moving direction and launched out from photosource can be received by the viewer on the train, the viewer on the roadbed whether or not really could observe this photon to walk the zigzag path? I believe, in spite of the viewer on the train or the viewer on the roadbed, all of them cannot observe the phenomenon which is described in this example, therefore in this example the prerequisite itself is wrong. From Michelson and Morley experiment, we knew that the speed of light has nothing to do with the photosource movement. Therefore when the vertically launched photon leaves

the photosource, the photon still maintains the movement vertical to the train moving direction, because the photon is launched with the manner vertical to the mirror surface, therefore when the photon meets the mirror surface, it will return to its started off space position along with the original route, for this time the train or the photosource already move to another place, the viewer moving along with the train cannot receive the photon which vertically sent from the photosource. If the photosource only can launch the photon with vertical direction, then the viewer in the direction moving along with the train also forever does not receive the returned photon, the viewer on the roadbed cannot see the zigzag light. The reason for the textbook mistake, is considered the behaviors of two photons launched from the photosource (with vertical manner and other angle manner) as one photon behavior.”

Bai Tongyun made the report titled "On ultra speed of light space-time system" at the 242nd Xiangshan conference, pointed out that, “In the ultra speed of light space-time system, the "simultaneity" believes, in different reference systems, when v is greater than the speed of light but smaller than the ultra speed of light, the " simultaneity" still may establish, still is allowed out-of-sight "the time dilation" and "the length contraction””.

Chen Jianguo, Dong Jingfeng and Lu Jiahong pointed out in ""Rulers look shorter and clocks look slower" are Survey Effects" that, “In the movement, rulers may be shorter, clocks may be slower, these are the results that we use the light as the tool, carry on the survey to the moving body, the length contraction and time dilation of special theory of relativity completely come from the supposition of principle of invariance of light speed and taking the light signal to record time, based on this kind of analysis, we think that the special theory of relativity is one kind of survey method to record time with light signal.”

Ma Guoliang thought that, the object makes the absolute motion in the space, in the moving direction the length contraction and the slowing down of clock's operating speed, all are really occurred, but not only observed result. The reason is the action of vacuum field to the matter, thus causes the changes of the mechanical properties in the object. All sorts of signs indicated that, the space-time change equals zero for the first order term related to u/c , probably has the relation of second power.

4 Other Achievements for Researching and Challenging Relativity

Feng Baosheng pointed out in ""Feng Baosheng Constant" — To Publish for International Physical Year" that, “The universe existence and evolution indeed are following a profound “theory of relativity”. But it absolutely is not the special theory of relativity or the space-time geometry curving gravitational theory established by Einstein with these two suppositions ((1) the speed of light has nothing to do with the photosource and the acceptor movement; (2) the space is isotropic and even), even more could not be the multi-dimensional space superstring theory created with following the route of this geometry gravitational theory (moreover Hawking, the "highly respected person" of theoretical physics, already automatically gave up this theory in 2004), but is the “forced speed changing relativity” and its deduction — “gravitational theory of forced speed changing relativity”, naturally derived by me based on the solid Newton's laws of motion. This kind of theory of relativity expresses a series of real physical

effects related to body's forced speed changing (acceleration) — Change of gravity: $F = \frac{m'a}{2}$; Change of mass: $m' = m_0(1 + \frac{a}{2\omega})^t$; Change of volume: $D' = \frac{m_0 D_0}{m'}$; Change of clock time on this object: $t' = \frac{m_0 t}{m'}$; As well as the relatively invariable speed of light: $c' = \frac{ct'}{t}$ and so on. If the same year

Newton further deepened his reacting force law, inevitably also could derive this subtle theory of relativity. Then the result directly acted by the riddle of gravity — the theory of universal gravitation, the special and general theory of relativity, the multi-dimensional space superstring theory also not to be able to appear in turn. But this physics development condition also manifested the "screw type"

development philosophy. Some experts stated that, "The matter limiting density constant established by Feng — $J= 1.81 \times 10^{30} \text{ kg} / \text{m}^3$ might be called Feng Baosheng constant in the future"

Hu Changwei pointed out in reference [29] and the like that, "1. The relativity theory is the formal logic that describes the surface of things and quantitative relation, while the ether theory of gravitational field can reveal the material logic which the relativistic relation can be established. 2. About the ether. The ether just is physical vacuum. To say microscopically, the ether is the basic state of quantum field, it is the assembly of the virtual bosons (the ether particles) which are made up of the pair of positive and negative particles, they are the universal Bose-Einstein condensation. To say macroscopically, in the absolute time-space theory, the ether is a compressible superfluid, the gravitational field is the density field of ether, the mass corresponds with the changed quantity of ether density, the light is the second sound in ether; in the relativistic time-space theory, ether is the 4-time-space continuum. Of course, it does not describes such continuum himself with relativistic time-space theory, so Einstein can only evades ether. 3. About the Lorentz transformation. Using the way of fluid mechanics, if we transform the ether from compressible to incompressible, we can derive Lorentz transformation from Galileo transformation. So the absolute time-space theory and the compressibility of ether are the first and the material logic; the relativistic time-space theory and the incompressibility of ether are the second and only the formal logic. 4. The essence of relativistic phenomena. The relativity theory is the quantitative effect that is created by ether. Its essence is which actual standards of length and time, are defined by ether: the unit length is positively proportional to the interval of the ether particle; the unit time is positively proportional to the time interval that the light runs through the interval of ether particle. To using such standards measure the ether, the ether becomes the homogeneous and isotropic 4-time-space continuum, the light velocity is constant of course. Einstein regards this result as hypothesis, thus he has covered up the essence of relativity theory. The gravitational effect of time-space is caused by the non-homogeneous distribution of ether density in the gravitational field; the kinematic effect of time-space is caused by the compressibility of ether. 5. The types of motion and the limitations of relativity theory. The ether is not the absolute reference system, but the moved object must regard the outside total ether as the reference system. It is the essential motion that relative to such reference system, and the formulae of special theory of relativity are effective; otherwise, it is only formal motion, and the formulae of special theory of relativity are no effective. For example, on the ground, the gravitational field ether of the earth is absolute superior in numbers, so we should regard the gravitational field ether of the earth as the reference system. In the relative motion between the high energy particle and the earth, the particle's motion is the essential motion, the particle increase mass; the earth's motion is the formal motion, the earth does not increase mass. The Minkowski space and Riemann space both are mathematical models, while are not real space. The gravitational field is only macroscopic field, it is not cosmic field, and the formula of gravitational field is not cosmic formula yet."

Jiang Chunxuan pointed out in "The New Gravitational Theory And The Expansion Theory of The Universe" that, "Using the tachyonic theory we find the new gravitational formula and establish the expansion theory of the Universe. We show that gravitons can be converted into the rest mass. We point out that Newtonian gravitational theory is approximate and the general theory of relativity is

wrong. The new gravitational formula is as follows: $\bar{F} = - \frac{mc^2}{R}$. Where m is the mass created by the

centripetal force as the tachyonic mass \bar{m} effecting on the object, also calls the centripetal force mass, the gravitational mass; R is the orbital radius.

Ji Hao in "Infinite Universe", approved infinite universe theory, namely universe is infinite elongation in space, does not have the boundary, does not have the shape, does not have the center

(everywhere is center). In the time, has not started through the ages, also has not ended. The matter fills the space, inexhaustible. Greatly to the galaxy, the star, all kinds of heavenly bodies, slightly to the meteorolite, the particle dust, molecular, photon as well as the continual form radiation field, none space has not been occupied by the matter. Explained the two classical paradoxes questioned the infinite universe theory in the cosmology: Olbers paradox (night black question) and Silig paradox (gravitational question), thus proved the accuracy of the infinite universe theory. Among them, Olbers paradox may be explained with the light absorbing and scattering due to the massive dark matters in the universe. While specifically analyzes the natures of gravitational interaction and gravitational potential between the celestial bodies, may prove even if the universe is infinite that does not have the gravitational problem.”

Zhang Jingping pointed out in “The Physical property of virtual materiality and The Dynamics of Complex-mass Bodies” that, “Based on the two scientific presumes that there exist virtual materiality in nature and the complex-inertial system has the same physical laws as in the real-inertial system, the concepts of complex mass and complex-mass body are introduced. Four basic laws of complex-mass body are derived, which contain the Newtonian law of universal gravitation and the three Newtonian laws of motion. The virtual mass has the property of repelling force and virtual inertia. The repelling force of virtual mass is symmetric to the universal gravitation force of real mass. The formula of free falling complex-mass body is also provided. It is proved that the Newtonian mechanics is only a special case of the complex-mass mechanics when the virtual mass and force in zero limitation state. The present research has expanded the physics of real-mass into the wider realm of complex-mass, which should be considered as the foundation of complex-physics.”

Zhang Jingping pointed out in “Transition of real virtual matter and equation of virtual matter motion” that, “As virtual-transition, different matter will have different cut-off frequency of virtual-transition corresponding to the matter wave radiation, the virtual-transition process must absorb enough virtual-transition work. In the motion process of virtual matter, for the virtual matter particle, the obtained virtual dynamic energy is directly proportional to the difference between the virtual frequency radiated by matter wave and that matter’s cut-off frequency of virtual-transition. For that matter, the obtained virtual dynamic energy is directly proportional to the difference between the total energy radiated by matter wave and the absorbed virtual-transition work during its virtual-transition. After all, in the physical essence the virtual matter is the wave matter, accurately said the virtual matter is the matter of matter wave. Finally discussing the non-acceleration reason to cause the possibility of the faster than light movement. The coherent matter wave **outputted by atomic laser device, after prompting and enlarging, may virtual-transit the particle matter to the wave matter with virtual mass.**”

Zhang Jingping pointed out in "Significance of Researching Complex-mass Bodies Mechanics for Physics, Astronomy and Cosmology " that, “In mathematics, formerly thought that the introduction of imaginary number concept only was for the requirement of pure mathematics and the simplification computation, now we understand that the nature also really needs to use the imaginary number to express the basic physical quantity (for example the virtual mass), that causes us to know the correspondence between number and material phenomenon with a more profound understanding. Now it’s the time for the complex quantity basic physical quantity should be taken as the physical axiom foundation in order to improve the physics research.”

After that, Zhang Jingping emphatically discussed 7 questions: (1) The existence of virtual mass and possible ultra speed of light; (2) Researching the "fifth kind of force" and the basic force between the virtual electric charges; (3) The virtual matter model for "hidden mass"; (4) The question that "DI Hercules double star orbit, the advance does not conform to the computation of general theory of relativity"; (5) The celestial body’s first motion, the constitution of nebula matter and the repulsion factor in nebula theory; (6) Explaining the repulsion effect between virtual matters for observing the cosmic

expansion and asking in retorting the origin theory of "big bang"; (7) The hypothesis of matter wave matter for the virtual matter and virtual energy, virtual quantum. Zhang Jingping said that the complex quantity change of moving body is as follows: (1) In the particle's wave-particle duality the basic physical quantity is the complex quantity. (2) The essence of moving body's relativity effect is the macroscopic quantum effect of moving body particle's wave-particle duality. (3) The essence of moving body's relativity effect also is the moving body's complex state converting, its virtual matter part is the basic reason for the effects of rulers shrink and clock slow. (4) Law of moving body's complex quantity change: Moving body's complex quantity equals moving body's original quantity at rest multiplied by the coefficient of moving body's complex state converting. Zhang Jingping said, the biggest flaw concerned Einstein's mass-velocity relation and electron acceleration experiment surveys is supposing the electronic quantity of electricity is a constant, does not change along with the speed, but this is wrong. (1) Moving body's complex mass is the quantity of conservation, as moving body's speed is increased, its gravitational real mass is reduced, the repulsion virtual mass is increased. (2) The movement is the manner for the body changing its complex mass constitution, creating the virtual matter. The judgement experiment for the law of moving body's complex quantity change may be taken as the experiment of measuring the real mass reduction for the high speed revolving body. Zhang Jingping in his report also involved to the method for the preparing surveying the virtual mass matter, virtual matter surveying technology — design principle of virtual matter detecting instrument, the future application view of the atomic laser (wave) (quantum long distance sending object instead of non-quantum hidden sending state, and its superiority; Astronavigation vehicle between fixed stars — flying saucer technology, and its superiority).

Chen Youheng pointed out in the 1st and 2nd issues of "Thought Science Communication" in 2003 that, did not really understand Einstein's relativity principle, therefore had the suspicion to its accuracy. Because the light is one kind of wave, if the wave source's relative motion in the medium certainly does not affect the wave spread speed in the medium, namely the speed of light C observed by us has invariability, then Einstein in the special theory of relativity explained the light spread speed C in medium as that time and space already occur the contraction in the relatively moving system, is not unnecessary. Chen Youheng believed that, the viewpoint abandoning the ether existence certainly is not the only method for solving the difficulty faced by the ether theory, only needs to correct the viewpoint that old ether is existed in entire astrospace, in absolute rest medium, supposes that the new ether field in the flowing medium is completely moving along with the mobile medium together movement, then, if in the field of force exists own can completely along with the flowing medium, in this way, if in force field there exists the own new ether field medium completely moving along with the center of force field, then the light spread speed phenomenon of the flowing medium in the force field may be explained very well. For example we suppose that within the solar system force field, the earth system force field as well as the molecule and atom system force field, all exist the own medium that can spread light wave, this namely is the new ether field medium, then in each kind of different force field the new ether field medium nature is not same, and in each kind of force field the new ether field medium is completely moving along with the center of own force field. For example, the Earth has the revolution orbital motion around the center of solar system, therefore the Earth has the relative motion related to the new ether field medium in solar system force field, forms that the Earth have the "wind" related to the new ether field medium solar field, therefore on the Earth the observed light entering the remote fixed star in solar system has the optical aberration existence. But on the other hand, because the earth field itself has own new ether field medium that is also moving along with the earth field center, therefore on the earth's surface the earth field's new ether field medium cannot form the "wind" because of the earth field rotation or the orbital motion, in this may agree with the Michelson and Morley experimental zero result of the earth field's new ether field medium drifting observed in earth field. (See:

Wang Dekui's article "Discussing Theory of Relativity with Feng Baosheng and Chen Youheng")

Yang Wenxiong in "On the conservation problems of momentum and energy in relativity", "The stationing principle with the birth of modern mechanics — Second Generation Newtonian Mechanics", "The most general behavior in science and technology fields — law of one dividing into three" and so on, proposed the new explanation to the mass-energy relation and a series of creatively new viewpoints, which obtained the concerned expert's strong approval.

Zhang Jianjun pointed out in "Thought Logic Experiment for Theory of Relativity" that, "From intrinsic in-depth contradictory between the microscopic moving particle life lengthening experiment, the viewpoint of space-time dilation and contraction and the principle of invariance of light speed, may be clear that the relativity idea logic is not justify oneself. With the aid of the Roland metal disk experiment, the reflection optical aberration vanishing phenomenon could know that the relatively and absolutely of electromagnetic phenomenon and light phenomenon take the absolutely as the foundation, Newton's classical space-time view is correct. In order to display the logic of relatively and absolutely from the perfect logic, in this article introduces Dong Jinxi experiment and other dozens experiments, the absolute space-time view has the experimental foundation, the logic also is justify oneself. Simultaneously also expounds that the distant action and the ether are necessary, Einstein only does nothing but survives in the flat world which we coexist, togetherly observe the light which disseminated with the aid of the ether, the relative light speed c of absolute light speed c^* "

Li Anbao in "Gravitational Constitution And Gravitational Coefficient", "Elaborating the gravitation is formed through the thermonuclear fusion condition, certainly is not one kind of special force. It is the property that put up through the accumulation in the finite space after proton and electronic equivalent charge vanishing and forming each kind of ultra nucleus. The gravitation similarly has the quantum characteristic. In the article introduces the proton and neutron as the important norm parameters to form the gravitation, establishes the new gravitational constant model, and gives the related calculation formula."

Xilin pointed out in "Discussing the Unified Principle of Moving Body's Wave — On Relativity (3)" that, "Through the comprehensive and careful analysis to the wave phenomena such as electricity, magnetism, light, heat, sound, water and so on, because finding the roots of the difficulty in optical phenomenon, the zero result of other drift experiment, the light Doppler effect and so on, therefore obtains the three given relativity laws about moving body's wave, thus a unified relativity principle about the wave phenomena such as electricity, magnetism, light, heat, sound, water and so on will be seen, then promulgates the right ways about the effects of clock is slow, ruler is reduced and mass is increased and so on for Einstein's theory of relativity."

Mi Haijiang pointed out in "To correct contradictions in Special Relativity" that, "A contradiction in Special Relativity is as follows: Making the Speeds in two systems public, hyperspace. Should raise like this: From system A to look that, the system B is moving with the speed measured by A itself; While from system B to look that, the system A is moving with the speed measured by A itself. Thus, two systems' geometry relation is clear, the relative velocity has the end-result. Another mistake of special theory of relativity is: For the two systems that the absolute speeds have the difference, as mutually observing, the light frequencies have difference, in the higher speed system the light frequency is higher, otherwise is lower. Using light duality: With the formula uniting the particle (spatial geometry) with the wave (frequency energy), the correct Lorentz transformation formula can be derived, it avoids the awkwardness of "pure relatively"."

Li Shaoming pointed out in "Reference System And Inertial System" that, "The traditional inertial system is established on the supposition of the absolute space which does not have a thing. This kind of inertial system is hypothesized, does not correspond any concrete physical actuality. Einstein's theory of relativity has not certainly changed the essence of the traditional inertial system. The theory of

relativity changes people's spatial idea and time idea. The method of theory of relativity for processing the contradiction between the traditional inertial system theory and the modern physics experiment is as follows: Preserving the basic concept and view of traditional inertial system, through changing the definitions of space and time to attemper the contradiction between the two aspects. In this article we try to through establishing the new inertial system theory, preserving the basic concept and view of absolute space and absolute time in traditional inertial system. To attemper the contradiction between the two aspects”

Tan Qiang in "Ultra Speed of Light Theory of Relativity", established the "ultra speed of light special theory of relativity" and "space-time curving theory". Using the "space-time curving theory" to strictly test the practices to discover that, the computed results of this theory such as the sunlight spectral line "red shift"; sunlight angle of deflection; star light angle of deflection; the “additional advance” of Mercury’s perihelion; the “additional advance” of Venus’s perihelion; the “additional advance” of earth’s perihelion are consistent with the actual observed results. Specially, with "space-time curving theory" to calculate, "DI Hercules double star" 84 years "additional advance angle" is 0.66 degree, the theoretical value of general theory of relativity is 2.34 degree, but the actual observed result is 0.64 degree, the theoretical value of "space-time curving theory" is agree with the actual observation. The "unified transformation" presented in this paper is as follows:

$$\text{Unified coordinate transformation: } X = (X' + ut')/\{n[1 - (u/c)^2]\}^{1/2} \quad (u \neq c) \dots (A)$$

$$\text{Unified time transform: } t = [t' + X'u/c^2]/\{n[1 - (u/c)^2]\}^{1/2} \quad (u \neq c) \dots (B)$$

And, for the "unified transformation" making the following stipulates:

1st, as the moving velocity (u) of inertial coordinate system S' is smaller than speed of light c (u < c), taking n=1;

2nd, as the moving velocity (u) of inertial coordinate system S' is greater than speed of light c (u > c), taking n=-1;

3rd, as the moving velocity (u) of inertial coordinate system S' is equal to speed of light c (u=c), taking n=1 or n=-1, but, in this kind of situation, the physical event expressed by the “unified transformation” means to describe two different "mutual physical events".

Jin Ruimin, in reference [9], presented the unified gravitational field theory. To introduce the new concepts such as variable gravitational field, moving gravitational field, absolute speed, relative speed, describing speed and so on, carried on the explanation to the gravitational phenomenon from the new angle, and rediscussed the concepts of space and time which close unites with the gravitation, finally proposed the prediction of new gravitational theory. Made the extrapolation that the graviton speed will be much bigger than the speed of light.

Ye Bo pointed out in "The Up to Date Weapon of Dialectical Materialism" and so on that, “The special theory of relativity violates the two principles which are proposed by itself: Relativity principle and principle of invariance of light speed. The special theory of relativity also violates Mach’s economical thought principle. The special theory of relativity is spiritualism. The special theory of relativity is the typical case to lose the physical direction. The special theory of relativity may be replaced by the ether vortex theory.”

Liu Wuqing pointed out in “Rotational effect of Light Source – Confirming the Output Power Change of Photocell with Oscilloscope Survey” that, “For the identical beam of light, in the case that the frequency and intensity of the original light source, the distance between light source and photocell and the incident light time are invariable, the movement of light source object, in the unit time the change of photocell’s lighted area, will affect the change of the photocell’s output power. To survey the photocell’s output power with the digital oscilloscope, and show the visual results with the different images of thick and thin, sparse and dense lines. This phenomenon has not involved in Mr. Einstein’s energy formula of photons and equation of photoelectricity, therefore these Einstein’s formula and equation do not have

the universality, and they are suitable only in the case that the light source object is static. The Planck constant in Einstein's formula and equation is also not the universal constant."

Feng Jinsong pointed out in "Quantum Mechanics in Universe Theory of Relativity" that, "Guided by the principle of General Universe Theory of Relativity, based on Coulomb Law of Universe Theory of Relativity, integrated with Newton Three Essential Law of Mechanics and Law of Lidebo Constant in Universe Theory of Relativity, the present paper presents a new theory of mechanics--- Quantum Mechanics in Universe Theory of Relativity which, through accurate quantitative research and analysis, studies the photons, electrons, atoms and molecules in substances concerning their interaction, integration, separation and law of relative movement.

This theory gives special concern about the movement of the electrons outside the atomic nucleus. Analysis of the instantaneous velocity of electrons whirling inside Hydrogen atoms, Helium ions and Helium atoms, the field surveying of orbit radius, and the computing results of the equations of Hydrogen molecules' force dynamic balance shows all physical and chemical changes have accurate quantitative corresponding relation to the instantaneous velocity of electrons' movement and the changes in orbit radius. When substance (or an object) absorbs electromagnetic waves (note: electromagnetic waves are just photons, and the essence of heat is nothing but electromagnetic waves), the gap between atomic nucleus increases, the objects will expand, while the movement radius of electrons' whirling around the atomic nucleus diminishes (namely the real radius of atoms diminishes), electrons move in an accelerated way. On the contrary, when substance (or an object) discharges electromagnetic waves (namely releases heat), the gap between atomic nucleus shrinks, the objects will contract, while the movement radius of electrons' whirling around the atomic nucleus increases (namely the real radius of atoms increases), electrons move in a decelerated way. **To put it in a simpler way, when a molecule contracts, atoms expand; while a molecule expands, atoms contract. This theory provides a successful interpretation of the relationship between the law of relative movement and the law of Quantum function. It brings the electricity, magnetism, light and heat together and integrates the scientific branches of Electric Kinetics, Thermodynamics, Chemistry, Biology (including Botany , Zoology and Medicine), Superconducting theory, Thermonuclear fusion and so on. Thus we have a fresh consistent theory of mechanics which is as well easy in understanding and application.** This theory successfully interprets the various phenomena of the superconducting state, solid state, liquid state, gas state, dineutron (thermonuclear fusion) of substances composed of photons, electrons, atoms and molecules. It can also successfully interpret the ionization and living state of substances and some essential particles such as isomers, together with various experimental and natural phenomena of substances including the phenomena of life. According to the theory, conversion of the states of all the substances has accurate quantitative corresponding relation to the changes in the instantaneous velocity of electrons' movement and the changes in orbit radius. Superconducting state and dineutron (namely the thermonuclear fusion) are the two extreme states of substances. When the movement velocity of the electrons outside the atomic nucleus of substances is reduced to zero, electrons break away from atomic nucleus and are changed into the superconducting state. When the movement velocity of the electrons outside the atomic nucleus of substances is increased to the velocity of light, electrons fall into atomic nucleus and are changed into the state of dineutron (namely the thermonuclear fusion). In other states of substances, the movement velocity of electrons outside the atomic nucleus always ranges between zero and the velocity of light. Ionization is the state where life starts. Organic polymerization of various states of substances marks the evolution of life as well as the results of evolution. The number of the varieties of organically polymerized substance' states of living things can tell us whether the life is in the high level; the more the varieties there are, the higher level the life is in. The law of changes in living things i.e. law of life is the pogo effect of changes from the polymerization of various substance states. The law of life also reflects the pogo effect when the law of substances' common physical and chemical changes brings about organic, synergistic interaction. In the nature, there is no law of biophysical or biochemical changes independent from physics or chemistry. After research and analysis, we believe that the law of the beginning, development and vanishing of life strictly follows the Quantum Mechanics in Universe Theory of Relativity."

Guo Fengjun pointed out in "Discussing Special Theory of Relativity And Doppler Effect" that, "The special theory of relativity is completely constructed on the foundation of two difficulty suppositions which nearly are unable to confirm. The principle of invariance of light speed belongs to

the experimental difficulty supposition, is unable to confirm it with the experiment. The objective existence ultra speed of light phenomenon possibly can deny the assertion that speed of light is the speed limit of matter movement, but it has not the direct influence to the principle of invariance of light speed. Einstein's mathematical method to derive the Lorentz transformation looks appear simple and bright, actually completely has violated the general principle of logical deduction. Virtually, he jumbles together the conclusion and premise, to obtain the Lorentz transformation with the manner perpetrated a fraud for the different variables, moreover because the general scientific workers including the first-class physicists all believe the Lorentz transformation is correct, therefore as discussing special theory of relativity it is easy to turn a blind eye to the logic contradictory existed in Einstein's reasoning process to derive the Lorentz transformation, the special theory of relativity also was precisely has constructed depended on the primitive mathematical form of Lorentz transformation and the relative space-time view with subjective conjecture. The theory of relativity truly got up some certain positive roles to the modern physics development, but simultaneously produced the negative influence that was more serious. The ether is the lower form of physical existence, in universe all spaces are filling the ether. Recent year in the astronomical observation also discovered the possibly existing the dark matter, theoretically speaking, that should be the ether."

Guo Chuanhua, in "Old ailment of Theory of relativity", believed that the mathematics inferential reasoning for theory of relativity is justify oneself, its old ailment is the speed of light invariable supposition. First, the Lorentz transformation only is really justify oneself as existing one spot in the space, but as existing two spots in the space, it is difficult to be justify oneself. Second, the theory of relativity violates the relativity principle. Third, the speed of light invariable supposition radically is a wrong supposition.

Liu Gong and Liu Wei pointed out in "Discussing the Non-Completeness of Theory of Relativity" that, the special theory of relativity and the general theory of relativity all are incomplete. The special theory of relativity merely embarked from the principle of invariance of light speed and the relativity principle, launched her space-time transformation, relativistic mechanics (the core are mass-velocity relation and mass-energy relation), relativistic electrodynamics, its most important invariability is the invariability under the Lorentz transformation. However, the mathematical logic Gödel first non-completeness theorem tells the people, one form system P contained the primary theory of numbers and first order logic, if is consistent, then P certainly is incomplete, certainly at least has one proposition A which cannot be proven, A with $\neg A$ in P all may not be proven. Because the special theory of relativity persisted the invariability under the Lorentz transformation from beginning to end, according to the Gödel theorem, she must be incomplete, thereinto at least has one proposition A, A and $\neg A$ all may not be proven. In fact, may prove that, for the special theory of relativity under the condition $C > V > V'$, there

exists the negative velocity $v'' = (v' - v) / (1 - v'v/c^2) < 0$ spreaded along with the positive direction,

there also exists the negative distance $L_{AB} = x_B - x_A = (x'_B - x'_A)(1 - v/v') / \sqrt{1 - v^2/c^2} < 0$

simultaneously, In the special theory of relativity, they may not be proven that they are true or false, they are the two big ironclad proofs for the non-completeness of the special theory of relativity. The origin lies in, as the beginning of special theory of relativity, for solving the square of transformation

coefficients $a_{11}^2 = a_{44}^2 = c^2 / (c^2 - v^2)$, only the positive root $a_{11} = a_{44} = 1 / \sqrt{1 - v^2/c^2}$ is retained, put

away the negative root $a_{11} = a_{44} = -1 / \sqrt{1 - v^2/c^2}$; If accepting this negative root, above two big

difficulties may be readily solved because of accepting space-time simultaneity inversion, but, here the space-time inversion must destroy the Lorentz invariability: To appear the acceleration field, appear the

negative arrival time, appear the negative mass, appear the negative energy, thus appear significant destruction for the space-time inversion invariance, this kind of invariance destroying not only thoroughly shakes the special theory of relativity, but also must seriously affect the general theory of relativity. Therefore, we believe, the general theory of relativity also is incomplete, this means that, the general theory of relativity, as the accelerated motion theory and merely is the gravitational theory, also is incomplete. The complete theory of relativity must be the non-harmonious or the dual theory, at the same time that she acknowledges the invariance under the Lorentz transformation and the invariance under the conformal transformation, but also must acknowledge the destruction of the invariance under the Lorentz transformation and the invariance under the conformal transformation. This kind of double destruction's physical consequence is, in the scope of general theory of relativity must appear the second kind (taking the positive and negative mass \sim positive and negative energy as standard to divide) of the brand-new physics picture that the pro and con world are mutually parallel, because the carrier of negative mass, negative energy is similar to the black body, the second kind of counter-world is very possibly paving the way for untie the two big physics riddles of dark matter, dark energy.

Wang Dashui pointed out in "Analyzing the Contradictions of Einstein's Two Theories" that, the most effective method to appraisal whether or not the theory of relativity is correct, is using Einstein's another great theory —quantum theory of photoelectric effect to examine whether or not it is compatible with the theory of relativity. However, through the mass-energy relation can determine the photons do not have the energy, but through the quantum theory of photoelectric effect can determine the photons actually have the energy. Therefore, firstly, the photons without rest mass and the theory of photoelectric effect are contradictory. Secondly, the photons with rest mass and the theory of relativity are contradictory. Thirdly, the photons with different frequencies have the different masses. Fourthly, Eddington's matter conservation view explains the photons have the mass. Therefore, the theory of relativity is the fallacy without doubt.

Liu Yuequan, in "Comprehensively Declaring War to Einstein's Theory of Relativity", started by the question of light speed of special theory of relativity, firstly carried on the comprehensive key critique to Einstein's theory of relativity from the philosophy and the general principle question, then introduced oneself experience to "overthrow" the theory of relativity, finally carried on the key critique to the mathematics question of general theory of relativity, and carried on the brief introduction to the content of other introduced more than 10 outstanding monographs of web friends.

Wang Jianhua pointed out in "Analysis And Discussion to Michelson and Morley experiment result with Classical Physics" (ISSN 1531-085x Copyright 2003 USA, Matter Regularity № 3, 258-269) that: The modern physics that, the classical physics cannot be used to carry on the theoretical analysis and illustration to the Michelson and Morley experiment result. However in fact, that is not true. If considering the photon as one kind of moving particle, then in the classical physics frame, according to the optical path chart and the result of Michelson and Morley experiment, through the prudent and meticulous theoretical analysis and the logical inference can discover that, the physicist's analysis and illustration to the Michelson and Morley experiment result are wrong. More than 100 years, the physicists never made clear theoretically, Michelson and Morley experiment result actually opened out a very important objective fact to the people, namely: The universal vacuum system is absolute rest system in the Newtonian mechanics.

Wang Jianhua pointed out in "Analyzing and Discussing Coordinate Transformation Formula with Classical Physics" (ISSN 1531-085x Copyright 2003 USA, Matter Regularity № 3, 269-279) that, supposing S system is the universal vacuum system, S' system is the ground system, S' system and one object exist in S system, respectively moving with speed U and speed V ($V \geq U$) along with X axis direction. According to the composition of velocity principle in classical theory, in the ground system the moving object's speed $V' = V - U$. For the time T', observing from S' system, the moving object has

coordinates (X', Y', Z', T'), but observing from S system, the moving object has coordinates (X, Y, Z, T). Thereupon from S' system to S system the Coordinate Transformation Formulas are:

$$\begin{cases} X = (X' + UT') \left[1 - \frac{V-U}{C-U} \left(1 - \sqrt{1 - \frac{U^2}{C^2}} \right) \right] & Y = Y' \quad Z = Z' \\ T = T' \left[1 - \frac{V-U}{C-U} \left(1 - \sqrt{1 - \frac{U^2}{C^2}} \right) \right] & V \geq U \end{cases}$$

Which formulas may enable the Newtonian mechanics to get rid the difficult position in the coordinate transformation since long ago. Obviously, in the formulas as speed U is far small than the speed of light C, then these formulas become Galileo transformation. But in the formulas as speed V = C, namely moving object is the photon, then these formulas become the photon's coordinate transformation formulas. Here the photon's coordinate transformation formulas may be used to make the reasonable explanation to the Michelson and Morley experiment.

Wang Jianhua pointed out in "Analyzing and Discussing Acceleration Transformation Formula with Classical Physics" (ISSN 1531-085x Copyright 2003 USA, Matter Regularity № 3, 279-291) that, when S system and S' system all are the inertia systems, using the new acceleration transformation formula to amend the law of Newtonian mechanics, the new Newton second law is as follows

$$\begin{cases} F = am & (\text{Newton second law in universal vacuum system}) \\ F' = a'm & (\text{Newton second law in ground system}) \\ a = a' \frac{1}{1 - \frac{a' \cdot T' + V - U}{C - U} \left(1 - \sqrt{1 - \frac{U^2}{C^2}} \right)} \end{cases}$$

Which shows the acceleration a in universal system, has the different values in the different inertia systems, but Newtonian mechanics actually wrong thinking that, acceleration a is equal to the same value for all inertia systems. In addition, because the photon's limit speed in the universal vacuum system is speed of light C, therefore for the above formula, $a'T' + V - U \leq C - U$. Thus it may be known, when object's moving speed $V = C$, acceleration $a' = 0$.

Shen Weiguo, in "One Kind of Axiom-system May Eliminate Difficulty of Theory of Relativity", aiming at the serious difficulty caused by the theory of relativity — Gödel paradox, proposed one kind of new axiom-system, it both may enable the Gödel paradox to eliminate, and can retain the basic achievement of the theory of relativity, and enable it to obtain a deeper level annotation. At the same time, in this article produced one kind of simple proof on above viewpoint.

Lin Jin pointed in the central report of 242nd Xiangshan conference "Time definition and Survey Mechanism in Astronavigation and Ultra Speed of Light Movement" that: "Among more than half century after Second World War, the strategic weapon and astronautics technology development have derived the technology base and the theory ponder for completely independent pure-inertial guidance system; For the reason that Einstein's dynamic equation is based on the special theory of relativity for uniform motion, therefore it is only suitable for describing the instantaneous dynamics behavior after the given speed, cannot describe the continual great acceleration process."

Cao Shenglin, in the 242nd Xiangshan conference speech "Physics and Finsler Space-time", discussed the relationship between physics and the space-time, he believed, the quantum mechanics and the theory of relativity are same, all indicated some kind of local characteristics of space-time, but

these local characteristics force may be unified under the Finsler space-time structure.

Wang Weimin, in "Universe Wind Hypothesis for Function Mechanism of Law of universal gravitation", firstly creatively explained the origin of wave-particle duality for the material particle in quantum mechanics, then pointed out that at the same time of material particle forming the wave-particle duality with the frequent collision of neutrino current and so on, also forming the essence of universal gravitation because of oneself shield to the neutrino current and so on. Moreover deriving the formula of universal gravitation under the isotropy action of neutrino current and other cosmic rays in universe. Explained the reason that object inertial mass equals gravitational mass, simultaneously explained the phenomena such as universal accelerated inflation, the gravitational constant is reduced along with the increase of the universe age, the gravitational constant out of the way and the advance of Mercury's perihelion, star light deflection around the sun and so on, pointed out that in fact the atomic nucleus is the "Magdeburg hemispheres" of atomic nucleus under the action of universe wind, finally presented the origin question of gravitation.

Luo Zhengda pointed out in reference [23] that, the microcosm and the macrocosm are the dialectical unification, any matter is composed by the visible matter and the invisible matter (halo). The material existence scope or the scope that matter can affect must be much bigger than the scope that people can observe. In the astrospace various shape's matters are filled, they constitute the richly colorful universe world. All matters' hidden halos are superimposed infinitely, and mutually affected in the universe, form the isotropic entire circumferential inertia outside force (greater than force). In the universe various shape's matters form the different level repulsive force antagonize (less than force) which take own core as the center based on the mutually affecting. That exhibitions are: The apple falls to the ground is the inertia outside force enter, the sunlight launch is the sun's repulsive force out. The exchanges between matters carry on through the halos, the halo interaction principle is the roller principle, the material shift and transformation carry on with the manner of latitude enter and pole out.

Luo Zhengda pointed out in reference [24] that, in the book 《The Quantum Outside Force — **The First Cause of Universe**》, the key point is to discuss the universe materiality starting off from the viewpoint of quantum theory. Through the combing of the universe research history of humanity, specially the comprehension of the profound connotation for the cosmism of Chinese ancient times, I obtained that the cradle of the universe matter quantum theory should be in China, the "vitality" theory should be the primitive and classical existence field theory. Another key point for the sequel (《The Quantum Outside Force — **The First Cause of Universe**》), is reasoning the vacuum essence with the philosophy viewpoint. The so-called vacuum, only is the space filled various kind of micro-particle that people cannot detect by the existing technology. In the book titled 《**Unified Universe — The Principle of Inertia Outside force**》, According to matter's gather scale, I divide the universal celestial body into several representative levels, arranging the quark level celestial body as the smallest matter's gather shape (the quark is the smallest visible celestial body formed through the transfer from energy to mass under the arbitrary shrinking action of quantum outside force field, in other words, the smallest visible celestial bodies are produced never ceasing on arbitrary point in the astrospace. The mutual gathers between the smallest visible celestial body matters is the origin of celestial body, also is the material supply source for the existing celestial body. Therefore, the "singular point" is not the origin of universe). But it may explicitly point out that the quark is not the smallest shape of universe matter. Just like Gongsunlong's famous judgment: "For one foot long pestle, cutting its half day by day, always does not use up". In the universe, the matters are existed with the two shapes of visible matter (mass) and the invisible matter (energy). The hidden halos (epicycle) and the infinite superimposition of the hidden halos (epicycle) will produce the matter's mass-energy radiation, mass-energy exchange and mass-energy superimposition with disturbing and from strong to weak, that constitute the universal background radiation, in other words, in universe, except visible matter (mass), also filled the invisible

matter (energy). As the companion volume of 《 **Unified Universe — The Principle of Inertia Outside force** 》, 《The Quantum Outside Force — The First Cause of Universe》 also is the fined work of the preceding book, I try hard with a more popular language to the detailed description for the mechanics characteristics of inertia outside force (quantum outside force), perform the explanation to the universe phenomenon with the quantum theory viewpoint, let the interested reader friends will be in fully understanding author's thought and the viewpoint.

Luo Zhengda pointed out in reference [25] that, this book's goal is to establish one kind of new material view, survey the material world around us with the new angle of view. In this book, we embark from the discussion of universe matter, further expound the importance to divide the universe matter into the visible matter and the invisible matter in the macroscopic significance, propose generalized material view, explicitly point out: The visible matter is the one that people can see, it has the shape, structure, mass and movement track; The invisible matter is the one that people cannot see, or its material shape, structure, mass and movement track also cannot be detected and observed by using instrument, it is the matter fully exists in universe space with the form of "energy". The quantum outside force (inertia outside force) and the quantum repulsion (inertia repulsion) are the manifestation forms of "force" of invisible matter. The superimposition of quantum repulsion forms the full state quantum outside force, the quantum outside force carries on the "imprisons", "surrounding", "contraction" and "drive" to the visible matter (celestial body), and focuses in its geometry center, forms the focus confront, makes the shooting of visible matter quantum repulsion, forms the quantum repulsion field (halo, epicycle) taking the visible matter (celestial body) as the center. The correlation between the quantum outside force and the quantum repulsion, is not the simple circulation of "force", but is an inevitable result. In this book, from beginning to end the author always takes the mutually relation in together for the visible matter (celestial body) movement and the invisible matter (dark energy) action, in order to indicate the integrity, the materiality and the general relation of universe. At the same time, the author melts in the time concept for the invisible matter and the visible matter, namely the absolute time and the relative time; Points out the invisible matter is the carrier of the absolute time, it does not have the beginning, does not have the end point; The visible matter is the carrier of the relative time, this has opened up our understanding to this time concept, taken rich for the time concept which merely is a measurement parameter to record the "course" of thing or matter, or the length of "life" and so on. In the past we described universe as follows: The universe is composed by the matter, the space and the time, but now our description is as follows: The universe is composed by the visual matter and the invisible matter. The space is the matter, is the invisible matter, and is the full state dark energy. This is the generalized material view to the understanding for universe.

The universe is the one of matter, the universe unifies to the matter (visible matter and invisible matter). The dark energy is the invisible matter, the quantum outside force and the quantum repulsion are the manifestation of "force" of invisible matter (energy). The mutual function and mutual resistance of the quantum outside force and the quantum repulsion, the quantum repulsion and the quantum repulsion, constitute the universal mechanics frame and movement rule. The mutual function and mutual resistance of the quantum outside force and the quantum repulsion, the quantum repulsion and the quantum repulsion, form the movement track of celestial body, also have each kind of celestial phenomenon in universe, such as the interconversion of the universal matters, universal inflation and contraction, universal "black hole", supernova eruption, earth axis advance, four seasons formation and so on. These are the prevalent affiliation and the logical relations between them.

Qi Ji established the brand new physical theory New Physics in the year of 1991, which had been published by Northeast Forestry University Press in the year of 2003^[26]. New Physics probes into the most basic laws in physics from a completely new angle of view. There is a definite description and strict deduction on many aspects, such as the propagation of light, the base of kinematics, Newton's

Second Law, Kinetic Energy Theorem, Mass-Energy Equation, Momentum. There is also some natural illustration and expatiation on Virtual Mass, Big Bang, Wave-Particle Duality and the like. New Physics involves an interpretation on a great amount of physical experiment, which has strong influence on physics; as well as a profound discussion on the basic concepts in physics. New Physics exposes the most basic laws in physics and builds a very objective, logical and hard frame. New Physics has a profound anatomy of the essential falsehood in Theory of Relativity, besides, the wonderful controversy on network will help you form a deeper understanding of Theory of Relativity. Dear friends. It will be suddenly enlightened to observe physics from a brand new point of view.

Qi Ji pointed out in "A NO-SHAPE-SUBSTANCE IS THE PROPAGATING MEDIUM OF LIGHT — The First Part of New Physics" that, Through analyzing a variety of physical phenomena, the author proposes that there exists a special kind of substance — No-Shape-Substance. The author believes that this matter is the medium through which light propagates and the foundation on which all laws of motion can be built. On the same foundation we can explain a great many physical experiments as well. The No-Shape-Substance is an actual substance with mass in another state. The No-Shape-Substance is a more profound element in the nature, which can make people know the nature more thoroughly, as well as make the physics more objective, more natural and more logical.

Qi Ji pointed out in "A NO-SHAPE-SUBSTANCE IS THE FOUNDATION ALL PHYSICS LAWS DEPEND ON — The Second Part of New Physics" that, People used to establish physical laws on the mathematical frame directly, without considering the existence of the No-Shape-Substance. Such physical laws are separated from nature. By analyzing the interaction between the body and the No-Shape-Substance, we will have a newer and better understanding of physical laws or concepts as inertial mass, Newton's Second Law, kinetic energy equation, mass-energy equation and momentum. And now we are going to uncover the essence of the physical laws.

Qi Ji pointed out in "The Review on the Basic Physical Laws — The Third Part of New Physics" that, People used to establish physical laws on the mathematical frame directly, without considering the existence of the No-Shape-Substance. We believe such physical laws are separated from their nature. Since we have known something about the No-Shape-Substance, we must review physical laws on the ground of objectivity and reality, as well as recognize that the time and space are two essential elements of the universe.

Qu Renyu and Qu Beina pointed out in "Different Theory to Galileo Falling Body" that, "For same height if letting the bodies fall separately, then the bodies with different mass will arrive the ground with different time really. In this kind of situation the Aristotle's judgement "the heavy body falls faster than the light one" is correct, but Galileo's viewpoint is overruled. This article re-explores the motion of free-falling body, completes the theoretically justify oneself of Galileo's falling body experiment."

Zhang Yifang, in "Principle of Equivalence of Electromagnetic Field And Electromagnetic General Theory of Relativity", introduced the principle of equivalence of electromagnetic field: For the same specific charge e/m , the non-inertial system with acceleration a is equivalent to the electromagnetic field. Next based on this principle the formally completely similar Electromagnetic General Theory of Relativity may be obtained; Thereinto the electromagnetic field is one kind of curving space-time that is only come into existence for the electrically charged body. This time the space-time divides into the multilayer, for the different specific charge the bending is different. In the ordinary circumstances the electromagnetic theory may be obtained. But for the high-order approximate it has some deviation with the electromagnetic theory. From this discussed the possible four aspects for examining this theory. Finally we proposed the most general extensive principle of equivalence and extensive general theory of relativity.

Tu Runsheng pointed out in "Compatibility of Uncertainty Principle and Classical Movement Rule Has Greatest Advantage" that, "The uncertainty relation has the determinism and the indeterminism

double meaning, may improve the quantum mechanics explanation system, beautify the logical system of quantum mechanics (reducing premise and as establishing relativistic quantum mechanics the intuition imagination is not needed). Because of changing the repulse of uncertainty principle and the classical movement rule into the compatibility, therefore, may simultaneously use the track concept and the wave function (or Statistical rule) in the quantum-mechanical calculation. It is the iron fact without different meaning that the uncertainty relation may be obtained with the strict transfiguration of the orbit equation. The strict theoretical analysis indicates, all the existing experiment and the theory cannot strongly prove that in the quantized system the particle is the spirit determined its actuality face only as being observed. If the above thought has the contradiction with the newest experimental result of Aspect and so on, then the question root may be the explanation to the Aspect experiment with great possibility.

Lu Yongzhong pointed out in "Theory of Retardation — Overthrowing Special Theory of Relativity" that, ""Theory of Retardation" has exposed the error analysis of special theory of relativity to its related experiments. In order to correctly explain these experiments, first must explain the mechanical vibration performance of ether is the longitudinal wave, simultaneously display the transversal wave nature of the light wave and electromagnetic wave. According to the experiment that ether spreading light wave, denied the principle of invariance of light speed. According to the retarded potential theory, Faraday's law, Ampere's law, Maxwell equations and other electromagnetic theories, deriving three parts of basic principles that the retarded factors are reflected by the theory of retardation:: Electromagnetic field quantity transformation, electromagnetic field vector transformation and electromagnetism space-time transformation. Using these principles, may explain the related experiments of special theory of relativity and the important conclusions related to modern high tech."

Li Yongsen, in "New Theory about Movement Source of Gravitational Essence and Natural View that Matter is Thin and Vacuum is Dense", introduced one kind of new natural view: The natural view that matter is thin and vacuum is dense — From the angle of deep level matter existence, the "vacuum" not only is not empty, but also on the contrary its matter content is more and denser than the matter in the object. From this viewpoint, we obtained the new theory about movement source of gravitational essence — the gravitation is originated from the rotary motion of gravitational field space (medium space) relative to the matter field background space of "vacuum". This work is based on the theory of relativity, however many viewpoints also are different with Einstein.

Zhu Lin and Yang Jie, in "Universal Gravitation and Universe Acceleration Inflation — Inherent Affiliation Between Theory of relativity, Quantum mechanics And Gravitational Theory", proposed that the matter particle itself mass (energy) will be attenuated because the matter particle radiated the background graviton and to produce the attenuation relation, from this established the correspondence relation between the gravitational field intensity and the energy density of background graviton, obtained the relation expressions for the gravitational constant G , speed of light c and the attenuation constant of matter particle mass (energy), and determined the mass (energy) attenuation constant, then derived the famous Hubble law and gave the calculated value of Hubble constant, elaborated the universe inflation and its acceleration inflation mechanism, presented some extrapolations and they agreed with the actual measured results.

Zhang Chongan, in "Synopsis of Space and Real Matter Two Sources View And Particle Group Wave", analyzed in the physics history four kinds of spatial ideas and two kinds of speed of light is invariable, Using the logic and the experimental analysis separately to affirm each one kind of them and refuted others, introduced the space and real matter two sources view and particle group wave idea.

Cao Junfeng and Cao Rui pointed out in "The Theory of Cold Quantum (Counter Gravitation Theory)" that, We discovered most important force in the nature, that is cold quantum, under the pressure of cold to hot, the material is formed, it has the gravity under the cold quantum pressure, then

the celestial body begins to move, cold quantum pressure exists in the space, exists in the material, it's the cold quantum pressure that makes the formation of four seasons in the earth, the whirlpool produced from the cold quantum pressure pushes moving of celestial body, push produces turn and change, cold freezes the water to ice, there is no other force can do this .People knew the strong strength of cold quantum, therefore, We said the cold quantum pressure is the biggest force ever exist in the nature , but there are some people don't recognize the exist of strong cold quantum.

Dong Jingfeng, in " New Understanding to Relativity Space-time View ", through the analysis of relative character of simultaneity and special relativity's time dilation and length contraction, pointed out that for special relativity's space-time view the static clock has the lesser slightly recording unit, the moving clock has the bigger recording unit, the static ruler has the smaller unit of length, the moving ruler has the greater unit of length. The special relativity's time dilation and length contraction completely come from the supposition for principle of invariance of light speed and the time record of light signal, based on this kind of analysis, we thought the special theory of relativity is one kind of measuring method with time record of light signal, " rulers look shorter and clocks look slower " is one kind of measuring effect; Through the new analysis to "Euclidean geometry is inactivation in rotating disc", pointed out the general theory of relativity is one kind of mathematics-physics analytical space-time method.

Yuan Yugang pointed out in "Discussing Whirlpool" that, "The universe and all objects in universe are located in the whirlpool, all of them are revolving. The whirlpool force creates and controls the universe and all objects in universe. The whirlpool force size is related with the whirlpool spin angular speed, all objects' mass in the whirlpool and the distance affected by the whirlpool. The whirlpool force is huge, ultra distance, limited. From this may give the reasonable explanation for many universal phenomena."

Zhu Jidong, in "Does Special Theory of Relativity Have Experimental Foundation?", through the analysis of some experiments, to discuss whether or not the special theory of relativity has the basic of the experiment.

Huang Penghui, in " New solution for Wu Youxun's Experimental Result", made the careful analysis to Youxun's experimental result, discovered that in the Wu Youxun's experimental result, had the wave length shorten peak which was obvious and did not allow to neglect, but the formula given by Compton radically was unable to explain this phenomenon. Therefore this article theoretically gave a further illustration to the Compton effect, from this obtained the more generalized X beam scattering formula to compare with the Compton formula, using this formula to be allowed to explain Wu Youxun's experimental result better. I also hoped that Wu Youxun's historical status to be able for the common people to know again.

Wang Fei pointed out in "Discussing Absolute Rest Reference System Again" that, "The condition for electric charge creates the magnetic field is as follows: the electric charge is moving relative to its located gravitational field. The gravitational field is the media for light wave spreading. The movement is absolute, the absolute rest reference system exists in each gravitational field, and maintains relatively rest with this gravitational field. Because in the universal space each place has the different gravitational field movement situation, thus does not have the general absolute rest reference system, in one region whose gravitational field occupies the superiority, who dominates the matter movement over there."

Huang Zongpei, in "Double Galaxy's Black Hole Coefficient H_3 Is the Procreant Root of Universal Black Hole", thought that, under any condition, the universal three elements' measurement benchmark are invariable forever; According to the calculation with the theoretically reasoning formula, the speed of the body or the matter may be infinity. This article promulgated three universal rules: the creation of body's marginal magnetic field through the theoretical formula reasoning, the double galaxy's

disintegration and the formation of the mystic and powerful electromagnetic wave in universe. Simultaneously corrected the universe form that was twisted up by Einstein, caused the common people to clearly recognize the black hole.

Gou Wenjian pointed out in reference [27] that, researching vacuum is the development direction of new century's physics; Its core content is to build the modern physics theory's object stating platform with taking the vacuum object existence as the basis, regarding this the author also call it as IV model for short. Its special important significance, is changing the modern physics theory's description foundation, from the contemporary most fashion conceptual model to the concrete object existence, to realize the objectize of modern physics theory's description foundation.

Gou Wenjian pointed out in "Examining theory of relativity with Researching Vacuum" that, with the theory and the observation experience it is easy to determine that, the vacuum V has the following existence content and the object component:

1st, has the existence content that may excite the energy, moreover has received the strict restriction, enables it only to exist in the specific space position, namely a spot; From this recognizes the vacuum V has the object ingredient that can be measured with energy, denoted as a ;

2nd, because the values ε_0 of and μ_0 have the spatial characteristic quantity, have their own extended existence content; From this recognizes the vacuum V has the extended object ingredient that can be measured with the space scale, denoted as s ;

3rd, between the quantization objects of the excited vacuum point, has the mutual relation which may be organized, therefore has the existence content that can produce the relation behavior, moreover this kind of existence content is isotropism; From this recognizes in the composition of the vacuum V has the object ingredient that can produce the behavior of mutual relation, denoted as b , moreover has some b with the isotropy distribution.

Using the particle IV model to calculate the particle mass, only used four experimental values, through the simple computation obtained extremely accurate 77 kinds of positive particles' masses, including all stable particles, also including partial common resonated particles. In "Particle And its Mass Computation", the main formula for calculating the particle mass is as follows:

$$\delta m_x = \sum_{j=1}^n f_j(c) \delta m_k \quad (j, k=1, 2, 3, \dots, j \neq k)$$

Examining the special theory of relativity with particle IV model. Here we obtain all useful results of special theory of relativity, certainly does not need the relativity principle and the principle of invariance of light speed in vacuum, therefore avoiding all disputes from this.

The special theory of relativity produced the space and time to have the relativity of motion of matter, and from this produced the paradoxes such as the twin paradox. These problems and paradoxes of special theory of relativity, are automatically solved and eliminated in the particle IV model

Examining the general theory of relativity with particle IV model. The obtained main two aspects related to the general theory of relativity are as follows:

1st, through the analysis and computation: For the ordinary density heavenly bodies which radius not smaller than $10^6 m$, the gravitational mass could be smaller than the inertia mass; The ordinary density object which radius not greater than $10^6 m$, the gravitational mass and the inertia mass are strictly equal;

2nd, according to the calculation, under the ideal condition, after the distance of 1.8×10^{10} light years, the photon's momentum will lose to the greatest extent, here we cannot observe the universe with light.

To have the following understanding and illustration to the general theory of relatively and the cosmology:

1st, photon's track will be curving as passing through the neighborhood of large mass heavenly body, this certainly is not the space has occurred, but because this kind of track curving is the gravitation result, explaining it may be effective to consider the photon's moving track and the space curving are equivalent, but only in the case that the gravitational mass and the inertia mass are strictly equal, this mathematics description of equivalent is effective;

2nd, the gravitational masses of galaxy core and a great lot fixed stars all are smaller than the inertia mass. The general theory of relativity may accurately indicate the planet movement rule acted by gravitation in fixed stars system, but to the fixed star movement acted by gravitation in galaxy, as well as the movement acted by gravitation between galaxies, the generalized relativity principle no longer comes into existence, the general theory of relativity will be no longer suitable. Namely the general theory of relativity only can be effective in the very limited spatial scope.

3rd, the general theory of relativity did not certainly reflect the essences of gravitational field and gravitation, no longer is suitable in the cosmology scope, modern times using the cosmology equation of general theory of relativity to research the universe, is the biggest erroneous zone of modern cosmology; We extremely have the necessity to re-examine all the modern elaborates to the universe according to the cosmology principle, using the general theory of relativity.

Wang Deyun point out in "Establishment And Development of the Quantum Theory" that, "The quantum theory, the theory of relativity and the gene double spiral structure are the most important three big science discoveries in 20th century, but the quantum theory is holding the special position among them, regardless of human exploring the microcosm, or promulgating the universal mystery and even society's progress and development, it always is playing the vital role. Reviewing the establishment and development history of the quantum theory, commemorating the scientists who made the brilliant contributions for the establishment and development of the quantum theory, will have the vital significance for impelling our country's physics development in the 21st century."

Ma Long, in "Mathematical Reasoning Proof for Clock Slows Down Effect Should Have Directivity", according to the principle of invariance of light speed as well as in the direction vertical to the movement does not have the Lorentz contraction, this article proposed the clock slows down effect, namely Einstein delaying, will have the directivity, and using the principle of invariance of light speed and Lorentz transformation to prove that Einstein delaying will have the directivity; This article also proposed that if the different places' two things' properties are: $x_2 = x_1$, but $y_2 \neq y_1$ or $z_2 \neq z_1$, simultaneously $t_2 = t_1$, for another inertial system, these two things in different places also may be simultaneity.

Yang Shijia pointed out in "Renewing Ether Hypothesis, Establishing Magnetic Field Model" that, "Based on various long-term, repeated and earnest thinking and researching, it is sure that the ether must exist in the universe. This article based on renewing the ether theory, further supposes that the ether is existed in universe and the crystal shape elastic matter made up of the positive and negative electron, and initially establishes the magnetic field model which completely tallies with the existing electromagnetics, enables the theoretically thorough explanation for certain phenomena, facts and rules in electromagnetics."

Yu Benli pointed out in "Negation of the theory of expanding cosmography and a reexamination the theory of relativity" that, "The author gives out the correct extension of the phenomenon of the red shift

of cosmic spectral line, points out that the light velocity is not invariant but gradually increases along with the extension of the propagating distance. In addition, the author also gives out a straight demonstration of the existence of the blackhole and points out that the blackhole possesses a property that it can emit the visible light along the extended line of its own axis of rotation thereby to infer that it can also automatically spurt matter along the foregoing directions. On these ground, the author thoroughly negates the current system of theories concerning the cosmography and cosmogony."

Zhang Ziran, in "Derivative Understanding Change As Revising Third Law", thought: the questions in the basic physics theory, sums up to tie the peduncle, all came from the kinetic theory, from wrongly considering the gravitation between the object and the earth to be the object mass when the predecessor summarized kinetic rule! The article is composed by nine parts: 1st, revision of Newton third law; 2nd, relationship between time and distance; 3rd, systematization of measurement system; 4th, unification of momentum and kinetic energy; 5th, essence of interaction; 6th, inertial constant and spinning model; 7th, gravitational principle and speed of light; 8th, conservation of kinetic energy and law of system function; 9th, Lorentz transformation and movement effect.

Liu Yuansheng, in "Milky Way's Age Must Be bigger than "Universe" Age", according to the galaxy evolution theory, summarized the following conclusion: The universal dark matter evolved the galaxy, the normal galaxy mutually affected, when the nucleus grew to the certain mass will become the active galaxy, after the active galaxy ejected the hydrogen helium matter to be able to become the normal galaxy. This evolutionary process needed the long time, the universe age of big bang cosmology obviously not to be able to satisfy this time request. Moreover, the galaxy evolution theory may explain the mostly astronomies phenomena on the galaxy lay in universe, while the big bang cosmology will be helpless to these observation phenomena.

Ruan Wenliang, in "Development of Special Theory of Relativity", explained the special theory of relativity with the new concept: After "plighting" the speed of light permanently will be equal to C in any coordinate system with relative uniform motion, may derive that their measurement and the coordinates reading transformation is the Lorentz transformation. And with the strict steps it may derive the principle that the formation of matter wave is the result of the Lorentz transformation for photons.

Lu Zidong, in reference [15], elaborated the physical characteristics of tachyon, recommended several groups of experiments to examine the effect of tachyon, elaborated the physical significance for the neutrino's tachyon (structure) hypothesis, and replied the 11 questions that puzzled the contemporary theoretical physics with the identical hypothesis. Ruan Wenliang, in "Development of Special Theory of Relativity", explained the special theory of relativity with the new concept: After "plighting" the speed of light permanently will be equal to C in any coordinate system with relative uniform motion, may derive that their measurement and the coordinates reading transformation is the Lorentz transformation. And with the strict steps it may derive the principle that the formation of matter wave is the result of the Lorentz transformation for photons.

Kou Changjiang, in " Unscrambling Theory of Relativity and Consummating Theory of Relativity ", thought: In the 21st century the theoretical problems are unscrambling theory of relativity and consummating theory of relativity, the prove of the unifying for science reality and experiment reality, the prove of the unifying for existence, logic and thought, the logic prove for the universal space-time pattern's maturity, the nature's real scientific system, the theoretical physics, the theoretical science system's foundation construction — identity theoretical problem.

Xu Jianmin pointed out in "On the Quantum Structure of Field and the Dynamical Interpretation of

Thermodynamics Second Law" that, "Through the hypothesis of quantum structure for gravitational field, this article has derived the conclusion that there is no essential difference between gravitational and electromagnetic fields, and the strength of field is irrelevant with the material which generates the field. The gravitational field equation and the electromagnetic field equation derived in this article both are consistent with the general theory of relativity, also these equations can return to the classics under the extreme condition. It has solved the long existing contradiction between the dynamics and the thermodynamics second law by using the quantum red-shift theory, has given the dynamical interpretation to the thermodynamics second law, has further revealed the origin of irreversibility." In this article the movement equation of the gravitational field is given as follows:

$$ge^{-\frac{at}{c}} = \frac{d^2r}{dt^2}$$

where: a is the acceleration at the previous moment. This equation indicates that the acceleration is a result of radiating energy by the field source, and that the acceleration of an object in the field is independent of its mass.

Wang Baoxin in "Hypothesis for Unified Theory of Interaction", proposed two point of basic suppositions that, 1. All the substances (including various elementary particles and fields) are composed with the electrons. Electrons include positive electron and negative electron. 2. Interaction rule between electrons; to carry on some deduction work; to explore the question that "What is light?"

Huang Xinbo pointed out in "Discussion on Anti-Weighing Matter" that, "As discussing the anti-weighing matter to carry on the analysis and thinking to the traditional ether viewpoint, initially divides the spatial matters into the ether medium and the anti-weighing matter, revises the concept of weighing matter (namely possible weighing matter), proposes three suppositions and five anti-weighing matter properties, establishes matter mass opposition view. The matter mass is created as the weighing matter is oppositely repelled with the anti-weighing matter particle, the mass is one kind of spatial symmetrical force. The gravitational mass and the inertial mass are the created reaction as this kind of by symmetrical force is being broken with two kinds of different situations, are the matter mass's two kinds of different manifestations, but the gravitational mass and the inertia mass are not equal (referring the Fechbach experiment). Anti-weighing matter's properties are as follows: 1st, the anti-weighing matter and the weighing matter opposition repels. 2nd, the anti-weighing matter particle colony has the tendency to take the greatest density. 3rd, the rest mass of anti-weighing matter particle is equal to zero, it only has the movement mass. 4th, the anti-weighing matter particle can store or release energy. 5th, the anti-weighing matter's "mass excitation potential" has the property of repeated addition. Proposes the author's opinions about the inertial system and the non-inertial system. Finally discusses the relationship between strong interaction, weak interaction and the gravitational phenomenon: The opposition repelling force is the strong interaction force, the concave-convex action is one kind of weak interaction force. The gravitation between matters is the macroscopic effect of these two kinds of microscopic actions, namely the gravitation itself does not exist, the gravitation is not a basic force, or said the gravitation and other three kinds of basic actions are not the identical level force."

Zhuang Yilong pointed out in "Hypothesis on Repulsion Particle" that, "The theory of Repulsion Particle is a new theory of the substance motion put forward by a Chinese scholar, associate Professor Zhuang Yilong. The main idea of this theory is that energy quantum by Planck serves as repulsion particle, a kind of substance particle with which to resist gravitational attraction, and the state alternation of matter motion arises from absorbing or releasing repulsion particle, by way of which we can infer there exist four kinds of physical mass, namely, attraction mass, inertia mass, energy mass, and total substance mass which are respectively equivalent to the four physical laws, i.e., law of

gravitational attraction, second law of Newton, relationship of mass and energy, and relationship of mass and speed. In the past, physics failed to precisely distinguish four sorts of mass and affected physics development. Different from the theory of relativity, the theory of repulsion particle maintains that when the matter mass of objects increases with speed, its attraction should decrease with speed. Therefore the substance particles with the high-speed motion are all the substances of micro-weight power, and these particles, with photon and repulsion, compose non-weight power dark matter accounting for 90% of total matter quantity. Moreover, the theory of repulsion particle has drawn the conclusions of electron electric charge, charge-speed relation of wave-motion frequency alternation following motion speed alternation, frequency-speed relation, and so forth. This theory plays an important role in the physics development in that it has broken through attraction frame on which physics nowadays is based.”

Liu Kai pointed in "New Research about Least Action in Nature and Electromagnetic Theory" that, “(1) material field elaboration; (2) discussion on element electromagnetism quantum; (3) improvement to basic supposition of theory of relativity; (4) promotion to electromagnetic wave theory; (5) promotion to Newton’s "law of universal gravitation"; (6) discussion on the energy exchange between matters and their interactions; (7) from the angle of least action to discuss the inhesion affiliation between the attractive forces in nature according to the square inverse ratio rule.”

Chen Shouyuan, in "Universal Resistance And Observation Confirmation", synthesized the universal resistance from the main structure characteristics of solar system and the phenomenon that the resistance will act on all the moving bodies on the ground. “It can explain the following main questions: (1) the cause of formation for solar system main structure characteristics’ evolution, secular variation of planet and satellite orbits. (2) the Newton’s first law is not the natural law, we synthesize that the moving body gives birth to a force field (to be called the U — field)", the field intensity has the direct ratio with the moving celestial body’s momentum, has the inverse ratio with the distance square. (3) the big bang theory receives the challenge: The theory of relativity thought the universe red shift is caused by the Doppler effect produced by the photosource migration, to extrapolate that the universe was created by a big bang. While the universal resistance theory gives another kind of explanation that, since light is a particle, also must receive the universal resistance action, loses the energy to have the red shift. (4) the worldview of theory of relativity is threaten: the universal resistance theory produces that the infinite universe model does not exist from the Olbers paradox to be contradictory, causes people have not any reason to give up the infinite universe model, to accept Einstein's limited boundless universe model. We already infer that the satellite orbit’s inclination angle has a long-term slowly reducing, the revolution cycle of No.1 satellite of Neptune has the millisecond magnitude reducing each week, these are waiting for the observation confirmation.”

Zhang Junhao proposed in "Gravitational Experiment And Theory" that, “In the gravitational field due to a static sphere M_0 , the force exerted on the body m is

$$\mathbf{F} = m(\mathbf{E} + \frac{1}{c^2} \mathbf{u} \times \mathfrak{K} \cdot \mathbf{u}) = - \frac{GM_0 m}{r^3} [\mathbf{r} + \frac{1}{c^2} \mathbf{u} \times (\mathbf{r} \times \mathbf{u})]$$

The first term is Newton’s gravity and the second term is additional gravity. If the velocity \mathbf{u} of the exerted body is small than the velocity of light c , then the additional gravity may be neglected; and the total gravity tend to Newton’s gravity. The additional force is perpendicular to 3-dimensional velocity. Therefore, it does not change the energy; only Newton’s gravity changes the energy.”

Zhang Dengke pointed out in “Momentum Field and Momentum Force” that, “Under the theoretical frame of theory of relativity, and based on the Newton’s gravitational field, this article proposes the new theory of momentum field and momentum force, this theory explicitly pointed out:

1. Supposing a moving mass point, its mass is m , velocity is v , in its periphery space besides the gravitational field, also has the momentum field, the mathematical expression for the field strength of momentum field is as follows:

$$\eta = -\frac{G}{c^2} \frac{mv \times r}{r^3}$$

2. The mass point moving in the momentum field (momentum is $m_0 v_0$), must be acted by the momentum field, this action is called the momentum force, the mathematical expression for the momentum force is as follows:

$$f = m_0 v_0 \times \eta$$

The momentum force is related to the movement of mass point, is one kind of dynamic force, using the dynamic instrument may examine the existence of momentum force, the momentum force generally exists in the nature, and is playing the extremely vital role. The formation of atmospheric eddy, sea eddy as well as vortex galaxy and so on may be related to and the momentum force.

3. The momentum fields and the gravitational field are an indiscerptible unifying body, unifies to the gravitational dynamic field, the momentum field and the gravitational field only are the different components of gravitational dynamic field, also the changing gravitational field produces the vortex momentum field, the changing momentum field produces the vortex gravitational field, the two are interdependence, mutually excited, to form the gravitational dynamic wave, the gravitational dynamic wave will spread with the speed of light in vacuum.

The mathematical expressions for the differential and integral equations read:

The integral form:

The differential form:

$$\oint\oint g \cdot dS = \frac{1}{\alpha_0} \iiint \rho_m dV$$

$$\nabla \cdot g = \rho_m / \alpha_0$$

$$\oint g \cdot dL = -\frac{\partial}{\partial t} \oint\oint \eta \cdot dS$$

$$\nabla \times g = -\frac{\partial \eta}{\partial t}$$

$$\oint\oint \eta \cdot dS = 0$$

$$\nabla \cdot \eta = 0$$

$$\oint\oint \eta \cdot dL = \beta_0 \oint\oint j_m \cdot dS + \beta_0 \alpha_0 \frac{\partial}{\partial t} \oint\oint g \cdot dS$$

$$\nabla \times \eta = \beta_0 j_m + \alpha_0 \beta_0 \frac{\partial g}{\partial t}$$

where: g is the gravitational field strength; η is the momentum field strength; ρ_m is mass density; j_m is

mass current density; $j_m = \rho_m v$; α_0 is vacuum mass containing rate, $\alpha_0 = -\frac{1}{4\pi G}$; β_0 is vacuum

mass conductance, $\beta_0 = \frac{-4\pi G}{c^2}$.

From the differential equations of the gravitational dynamic field may clearly see, the gravitational field and the momentum field are an unifying body, also the changing momentum field can produce the vortex gravitational field, the changing gravitational field can produce the vortex momentum field."

Wu Yueming, in "Gravitational Wave's Four Big Physical Confirmation", proposed cor-revolving

gravitational wave hypothesis, can be used to carry on the quantitative calculation to the gravitational essence, to the three big predictions in Einstein's theory of relativity, the predicted values and the observation values have better agreement. The cor-revolving gravitational wave hypothesis can be used to explore the "gravitational abnormality" phenomenon in solar total eclipse period. Therefore the cor-revolving gravitational wave hypothesis is a domain that is worth exploring. In the article produced the gravitation of rotation star to the periphery is related to the distance, the rotation angular speed, the speed of light and so on

$$F = -\nabla E_p = \frac{F_a \cos\left[-\frac{r}{c_1} + t\right]\omega_0}{r^2} - \frac{F_a \omega_0 \sin\left[-\frac{r}{c_1} + t\right]\omega_0}{c_1 \cdot r}$$

where: r is the distance from this place to the rotation axis center O ; ω_0 is system rotation angular speed; c_1 is gravitational wave spreading speed, namely speed of light; t is time; F_a is the spherical surface gravitational wave's wave amplitude, it is not difficult to see that the spherical surface with distance r to axis center is the equipotential surface of gravitational field. Namely:

$E_p = (F_a \cdot \cos[\omega_0 \cdot (t - r/c_1)])/r$; The gravitational amplitude is.

$$F_a = \int_0^R \int_0^\pi \int_0^{2\pi} \rho \cdot \left(\frac{r_i \omega_0 \sin[\theta]}{2\beta}\right) \cdot r_i^2 \cdot \sin[\theta] d\varphi d\theta dr_i = \frac{\pi^2 R^4 \rho \omega_0}{8\beta}$$

Wang Jianhua pointed out in "Using "Solar System's Center of Mass" Movement Model Can Derive New Formula of Universal Gravitation" (ISSN 1531-085x Copyright 2005 USA, Matter Regularity № 5, 225-240) that, "Because the "heliocentric" movement model and the "solar system's center of mass" movement model, are two essentially different planetary motion model, therefore using the "solar system's center of mass" movement model, the new formula of universal gravitation is analyzed and

derived as follows: $F = K^2 \cdot \frac{(m_1 + m_2)^3}{m_1 \cdot m_2} \cdot \frac{1}{r^3}$, (K is the new gravitational constant). Using the new

formula of universal gravitation may derive an important conclusion: Namely in the reference system of "solar system's center of mass", the two of the planet and the sun are moving around the "solar system's center of mass" with the path of "orbits kinetic energy summation to be equal to gravitational potential energy summation". In addition, using the "solar system's center of mass" movement model may determine that, the analyses and explanations to the planetary motion rule with Newton's law of universal gravitation and Kepler's first law and third law are wrong."

Fu Yuhua, in reference [10], derived the following improved formula of universal gravitation:

$$F = -\frac{GMm}{r^2} - \frac{3G^2 M^2 mp}{c^2 r^4}$$

where: M – mass of sun or a big body; m – mass of planet or a small body; c – velocity of light; p – half normal focal chord; for the problem of gravitational deflection of photon orbit around the sun, the value of p needed to be calculated with iteration method; for the problem of advance of planet perihelion, the value of p equals the half normal focal chord of ellipse orbit given by Newton's theory, namely: $p = a(1-e^2)$ (for ellipse); $p = a(e^2-1)$ (for hyperbola); $p = y^2/2x$ (for parabola). By using this formula, the accurate solutions for the problem of gravitational deflection of photon orbit around the sun and the problem of advance of Mercury's perihelion can be given as the solutions of general

relativity. In the interest of discussing the possible to theoretically derive the law of universal gravitation and Newton's second law for common cases, according to law of conservation of energy, presented the variable dimension fractal method to derive the improved law of universal gravitation and the improved Newton's second law at the same time for an example of restricted movement (a small ball moves down along a long incline), which cannot be solved by general relativity. In reference [5], the results suitable for this example with the form of constant dimension fractal were given as follows: improved improved law of gravity: $F = -GMm/r^{1.99989}$, improved Newton's second law:

$F = ma^{1.01458}$. Considering that as the small ball located at the initial rest position, the original law of universal gravitation and Newton's second law come into existence exactly, the more accurate results

with the form of variable dimension fractal are as follows, improved Newton's second law: $F = ma^{1+\varepsilon}$, $\varepsilon = 8.779 \times 10^{-8} x$; improved law of gravity: $F = -GMm/r^{2-\delta}$, $\delta = 1.206 \times 10^{-12} x$; where x equals the horizontal distance of the small ball movement (for the initial rest position, $x=0$).

Many scholars also proposed the gravitational formula, because the reason that material lacks and so on, they cannot be enumerated. The reader interested in these may search the related data or make the on-line search.

Rao Gang, in "Universal Red Shift and "Universal Gravitation"", proposed that to understand the "attraction" between the objects from the external factor angle, namely the "gravitation" certainly was not originated inside the matter, but was originated from exterior of correlation system (for example, atomic exterior, all external environments); Thought object itself had not the mechanism to create the "gravitation". Therefore the viewpoint in this article was not advocated the "universal gravitation", but advocated the "universal no gravitation". In recent years really had many such mentalities and viewpoints, its understanding way was: The cosmic ray is similar to the "bullet" with the inertia to hit the outside of correlation system to produce the entangled constraining force to this system, thus created the mutual "gravitation" for the objects in the system; Such as the possible neutrino ray or other high energy rays. In these viewpoints, the most unreadable problem is that the "bullet" appears with quantum form either to block by the object, or pass through the object losslessly; On the Earth from the examination results to the neutrino in the sun and the universe, the found particle encounter rate is extremely low; The photon obviously does not have the enough momentum and the penetrating power (should not remove the possibility of undiscovered electromagnetic wave). If only based on the analysis to neutrino, the force created by collision, is insufficient to support "universal no gravitation". Therefore the "collision" model has a bigger insufficiency. This article's viewpoint based on "collision" model, but attempts to finish the understanding for the exterior mechanism of the "universal no gravitation" with the "collision" decay by the particle. Should say the above theory forms the challenge to the quantum mechanics theory. Its key of argument is such particle like the "photon" whether or not does exist and it can naturally decay. The author proposes the "Non-Doppler universal red shift model" to carry on the analyses with the principle of field superposition and the fraction order differential equation to the light wave, thus obtains the change of the light wave frequency; With this thought to be allowed to understand the "non complete collision" mutual function between the particles, this gives the basis to understand the exterior mechanism of the "universal no gravitation".

Li Xuesheng pointed out in "New Search on Relationship Between Gravitational mass And Electromagnetic Mass —Concurrently Discussing the Ponder to Modern Physics Foundation" that, (1) the classical electrodynamics thought the accelerated moving electric charge can radiate the electromagnetic wave, but the quantum mechanics pointed out the electron makes the accelerated motion in the identical energy level cannot radiate the electromagnetic wave, whether or not they can be unified? (2) the author thought the photon should have the electric quantity, it is only too small, in the experiment is possible out-of-sight, like this then may completely explain the singular point question in the Lorentz transformation. (3) in the special theory of relativity, according to the Lorentz transformation,

the length of moving body will shrink in the moving direction, this is the observed effect, or essential rule, whether has the cumulative effect? The author reanalyzed the Lorentz transformation, explained its real meaning, causes the clock pinch effect of special relativity and the clock pinch effect of general relativity unifying together, completely explained the twins paradox and the submarine paradox, showed the reason that the relativity principle is correct. (4) according to that the space and time of relativity are inseparable, the author thought the space and time are equal in value, and supposed $1s=3.0\times 10^8m$, thus may reduce one international basic physical quantity, and obtained the mass energy equation in this foundation according to the dimension. (5) the author thought the essence of field is the space-time, is the relative space-time. (6) the author according to the relative absolutism and the modern science and technology theory proposed the symmetrical relativity and absolute principle. (7) electronic electromagnetic mass question.

Zhang Chongan, in "Widely Exist A Kind of Non-Medium Transmission Wave in Nature", proposed the major point of the particle group wave. Explained the three big important experiments in the physics history (specially is Yang interferes experiment, I thought at present the explanations of quantum mechanics, electromagnetics all are not successful, but particle group wave's explanation is the most complete one), the calculated photon mass equals $3.68625163\times 10^{-51}$ kilogram.

Zhang Yapeng, in reference [30] and [31], discussed some gravitational questions and their reasoning.

Zhang Yapeng pointed out in reference [32] that, "The gravitation is produced with pushing down all the matters on the Earth to the direction of Earth core due to the 3K universal background microwave radiation which is omnipresent and isotropy, and will radiate to the direction of Earth core from Earth circumference; This 3K universal background microwave radiation is called the "gravitational radiation" or "gravitational wave", this photon of "gravitational radiation", namely is the "graviton" of producing the gravitation which the scientists want to find."

5 How to surmount the theory of relativity

Analyzing each kind of literature to challenge and surmount the theory of relativity, we may see that there mainly are three ways to surmount theory of relativity. First: Completely abandons the Newton theory and the Einstein theory, establishes the brand-new theory. Part of new theory may derive or cover the related formulas of the Newton theory and the theory of relativity. Second: Holds the reasonable parts of relativity, revises and innovates the Einstein theory. Third: Returns to Newton's starting point, revises and innovates the Newton theory. The above content already mentioned in front. Now we supplement the partial literature content.

Zhang Cao pointed out in "My Experience to "Opposes" Theory of Relativity" that, my research content has the following several aspects: (1) The ether (or vacuum). Einstein's spatial concept characteristic is: denying the existence of ether, at least does not advocate the introduction of ether. But, the modern physics had proven "the vacuum is not empty". Only has changed a noun, called the ether as the vacuum. Since the ether (or vacuum) is one kind of objective matter as the background field, the mutual function between ether and moving body should be a research topic. The relativity's foundation should be reviewed again. (2) The time definition in physics. In App Physics, many kinds of time definitions has already adopted, for example, local solar time, Greenwich time, chronometer time and so on, in the special theory of relativity, Einstein supposed the one-way speed of light to be invariable, from this has only defined the physics time, this was not incomplete. In physics should allow other time definitions, for example, one kind of time that extends Galileo transformation is worth further studying. (3) The possible ultra speed of light movement. Recent research indicated that, the mutually affect between gravitational fields has the possibility to be much quicker than the speed of light, the neutrino also possibly is one kind of tachyon. Neutrino certainly is not produced through the

acceleration, it possibly is the tachyon once produced as mutually being affected. (4) Lorentz transformation. Lorentz transformation is not suitable for the gravitational field, even if the local inertia system, Lorentz transformation also has the very big limitation. (5) Whether or not the big-bang cosmology is correct. This theory simply does not consider the ether (vacuum) this kind of objective matter. If the photon and the ether have one kind of ultra weak mutual function and wasted power, the cosmology red shift may obtain the explanation.

Yang Gele pointed out in "Visual World — Dialog with World and Universe" that, I always thought that based on the classical physics the planet movement question also could be studied. Based on the classical physics thought and the development of classical physics method also is the persistent scientific style of the author of this book. But this aspect work is a difficult question in some way. This article further discusses the question in this aspect, our thought basic point is found the sign mentality to solve the question with returning to the visualized space-time as well as the classical physical method, regarding the phenomenon's deviation to classical mechanics method put down to our neglect to the rotation inertia of gravitational field. Indeed we have solved many problems, but the work in this aspect at present also very difficult to succeed thoroughly, while this is an achievement which obtains in the classical physics method, even if is not the thorough success, I thought it can cause the scholar with visualized thinking feels excited. Because the advantage of this style work is the complete fusion with the classical physical thoughtway.

Cheng Wenping and Cheng Shiping, in "Newtonian mechanics of 21st century", firstly through the discussion to the theoretical flaw which existed at the beginning of established the classical Newtonian mechanics, clarified people's wrong understanding to the speed of light before the 21st century, then further explained the newest edition Newtonian mechanics — system kinetics to the reader. As the comparison, at the same time this book explained to the people that how Einstein in 20th century established the special theory of relativity and the general theory of relativity. The reader does not need to have the very profound mathematics foundation, can understand the professional studied theory of relativity and its existent problem.

Yan Kun pointed out in reference [11] that, "By using phenomenological method for the medium shell curve, an energy-curvature equation on three dimensions regular space and the energy-gravitation form about gravitational interaction between bodies are given. Further more, two condition solutions of the gravitational expression is close by with the results of Newton's gravitational theory and Einstein's general relativity respectively. The localizations in the functions of the fractal dimension calculus at present are discussed, and the similar expanded equation is given. Subsequently, by discussing the expanded baseline property on the celestial motion orbit, the discrete orbital equation of the celestial bodies motion are given. And referring to the related orbital data of planets and some satellites in the solar system, the concrete expression on the discrete orbit of the celestial bodies motion are given."

Yang Xintie et al, in "Breakthrough Light Barrier", discussed what high order correction allowed to the theory of relativity from the experimental foundation. The classical physical theory may infer the approximate result for the aerodynamics, why isn't allowed to turn outside in this question? Developing a set complex system theory from the aerodynamics to replace retarded potential, add the theory of relativity. The author and Northwest industrial university's Luo Shijun, Zhang Zhongyin, Qiao Zhide, Xu Mingchu and a set aerodynamics operator, as well as Chen Guorui, Hu Zheng, Huang Zhixun, Song Wenmiao and other electromagnetics researcher thought this counter-question also certainly does not without the significance.

Jiang Zhengjie pointed out in "Deriving the formulas of Special Relativity with Absolutism" that, "All of the formulas of the Special Relativity may be derived from the basic quantum postulate, and should be amended, thence the relativity should be amended into the absolutism. The special relativity's

sequelae may be solved with this amendment.”

Xilin and other researchers pointed out that, it is not difficult to deny the theory of relativity! It is difficult to correct the prejudice to the Newton theory!

Yin Baohua, in "Kinetic Absolutism Principle, Field theory And New Optics Manifesto — Concurrently to take the Last War to Special theory of relativity", bases on absolute space-time view, proved the reference system irrelevant for the kinematics quantity and dynamics quantity of relative motion between objects, obtained the kinematics absolute principle and dynamics absolute principle; Proposed the new field and the field effect theory, pointed out the essence of magnetic effect, showed why the Maxwell equations are not suitable for Galileo transformation and Lorentz transformation; The author proved that Lorentz transformation is not justify itself, in the reasoning process includes the paradox for using the principle of invariance of light speed, pointed out the electromagnetic phenomenon does not conform to the principle special relativity; Analyzed the essence of principle of invariance of light speed and Michelson and Morley experiment; The success to analyze the microscopic mechanism of Fizeau running water experiment, to provide the experimental basis for establishing the new field effect theory and ultimately denying the theory of relativity and its space-time view; Through the Maxwell equations, Fizeau running water experiment and so on the so-called relativity evidences ultimately denying the special theory of relativity. According to the light phenomenon essence, carried on the summary for wave-particle duality, photoelectric effect, quantum theory and so on.

Zhang Zhenli pointed out in "Reconstructing Space-time Theory" that, the space-time assumes the inverse ratio with the density of graviton. The light is the wave taken graviton as the medium, the density of graviton does not affect the speed of light. The inertial movement and the gravitational movement all are the function of density difference. The matter mass is the matter inherent, does not increased along with the increase of moving velocity. The direct result of total graviton increase is the cosmic expansion.

Tong Zhengrong pointed out in "Gravitational Dark Matter WG Theory — Exploration to the Physical Essences of Theory of relativity And Quantum mechanics" that, 1, the dark matter is composed by gravitational corpuscle WG; 2, the elementary particle is composed by gravitational corpuscle WG; 3, strong interaction — the universal dark matter's macroscopic pressure function and under its effect the "liquid drop" effect; 4, under dark matter theory the wave-particle standing wave state of light spread; 5. mathematical and physical model for elementary particle stable state — stable state particle substrate (B body); 6, theoretical calculation for WG mass; 7, equation of motion for WG gravitational elementary particle.

Wu Yiguang, in "Hidden Parameter's Function And Status in Modern Physics", demonstrated the space-time view derived by the dynamics parameter that had not perceived as physicist researched system. Because this hidden parameter can be determined directly, and had the influence to mass, time and space, thus the new space-time view has its corresponding position in the physics. In addition, the new space-time view also has other two characteristics, one is that it has nothing to do with the light speed is variable or invariable, thus indicated that the question of theory of relativity unnecessarily is the principle of invariance of light speed; Two is that as accurate as the order of $1/C^2$, it returns to original Newton's absolute space-time view, namely this hidden parameter also to be allowed to coexist with the Newton's law of motion.

Qu Renyu and Qu Beina pointed out in "Argument On The Effect Of Correlation Gravitational Force-Tunnel" that, "This essay summarizes Newton's discovery of gravitational force in nature, based on this facts, the theory of correlation gravitational force-tunnel (the tunnel here is not tunnel in concept but a gravitational force that is acting similar to a tunnel) is proposed, this essay established a two-dimensional tunnel gravitation force model. The discovery of this model has an important effect, that is,

the gravitational tunnel force effect, also named The Qu Effect, is an invisible tunnel effect, can't be detected by eyes, so it's hard to define. But it vastly and spontaneously exists in every aspect of the nature, this essay demonstrated some of the phenomena related to this effect. The demonstration also proved that in a correlational gravitational field, any celestial body's gravitational field contain symmetrical and unsymmetrical property. The symmetry line of the correlation gravitational tunnel is the symmetry line of correlation gravitational field. The gravitational field that surrounded this symmetry line is the symmetrical field, the field that's perpendicular with this symmetry line is the unsymmetrical field, the effect of the unsymmetrical field changes the gravitational field from spherical shape to elliptical shape, thus changes the gravitational force of two objects, that's the side which faces with each other is the negative, the side opposite with each other is the positive. The spherical gravitational field can only make the particles which circle the field going in a circular orbit movement, but it can't make the particles moved in an elliptical movement; the elliptical gravitational symmetrical field is the one that make the particles going in both forms of movements, spherical and elliptical. These phenomena not only exist among celestial bodies in nature, but also exist in the particles, electromagnetic forces, strong and weak force effects. Based on these effects this essay explains the solar total eclipse gravity anomaly, also planets that move in an elliptical shape encircling the sun in the solar system. The correlation tunnel gravitational force effect is another nature phenomenon, an important discovery of certain aspect of the nature, it also makes a great development of the Newton's gravitational force theory and modern particle physics theory, it's an milestone of intellectual advancement in human history."

Xia Xingguang, in reference [20], "Using the space-time idea of dialectical materialism, systematically expounds by own viewpoint that, under the premise of the limitation for speed of light spread, the definition of relative velocity is certainly inaccurate; Embarks from here, not only the principle of invariance of light speed has the problem, moreover the inertial coordinate system and the relativity principle have all lost the original physical significance, thus must introduce the concept of absolute speed. Based on this, the interval is equal — Lorentz condition, is not the mathematical proof with formal logic; The principle of least action is not the absolutely necessarily basic principle as establishing certain physical theories; The principle of equivalence is not the basic principle of general theory of relativity; Specially in the modern physics, the space-time idea thought "the space has the geometry nature", seeing from the logic angle, is one kind of understanding mistake that degenerating "general" into "special"; While systematically denies the above physical principle, according to the epistemology of dialectical materialism the author proposes an objective principle — object has the objective content does not rely on the main body. Establishes the generalized space-time theory of relativity on the foundation of objective principle. This is a brand-new space-time theory. Embarks from this theory, under the specific condition certain theoretical results of Einstein's two theories of relativity may be derived."

Ren Zhengqiu, in reference [21], proposed that in the universe possibly has one kind of the biggest, the most widespread conservation, namely the continued multiplication of time, space, mass and energy approximately equals constant. This supposition may be expressed as follows

$$\alpha T \times \beta S \times \gamma M \times \varepsilon E = a$$

where: T, S, M, E and $\alpha, \beta, \gamma, \varepsilon$ are time, space, mass, energy respectively and their coefficients.

This formula might be suitable for many kinds of conservative systems such as universal view, macroscopic, microscopic. The constant term (a) is decided by the natural system's original state and its property. Under the condition of theory of relativity, the above formula's various coefficients obey the related equations of theory of relativity.

Lei Mingqi pointed out in "Photons Bring Up Universe" that, "The photons are the universal dynamic matter. The photons divides into the two kinds of laevorotary and dextrorotary particles which are the pro and con, enables them under the specific condition, fetters for the photon pair, then collapses and shrinks for the stator pair, and composes the atomic embryo with pure static state. The fixed star embryo (namely neutron star, therefore the atomic embryo also may be called embrionic neutron) is composed by the atomic embryos. The atomic embryo transforms into the fixed star hydrogen after the first β^+ decay, the fixed star hydrogen core transforms again into the nuclear neutron passes through the second β^+ decay, the nuclear neutron transforms into the nuclear proton passes through another β^+ decay. Again all elements are polymerized by the nuclear neutron and nuclear proton, make up of all heavenly bodies. Therefore, fixed star system's all planets and satellites all are the sub-stars thrown out as the fixed star evolvment. The 100 billion counts fixed star embryos (neutron stars) composes the galaxy embryo (galaxy black hole); The 100 billion counts galaxy embryos composes the black hole universe (metagalaxy embryo). The metagalaxy (galaxy universe) and metagalaxy embryo (black hole universe) are alternately existed in a seal universal heaven shaft, constitutes a universal chain body, in which the galaxy and galaxy embryo are evolvment with repeatedly moving from one pole of heaven shaft to another pole (N or S pole), endlessly interactive evolution with breathing in fresh air and getting rid the stale. The most elementary particle in universe is the photon. 32 laevorotary photons and 32 dextrorotary photons collapse and shrink into 32 stators to be composed a pure static state atomic embryo. From the dynamic photon to the pure static atomic embryo, then outcome pure dynamic photon. Like this will be able to explain all questions proposed by the cosmology, thus the heavenly body, the space and the elementary particle will unify in a complete physical theory.

Qian Dapeng pointed out in "Suggestion to validate Particle's "High Speed, Low Energy" Effect on Electron Accelerator" that, "The mass-velocity equation of theory of relativity is the most possible max form of a even more general equation. The new equation is the one of series results derived after the special theory of relativity is further maturity for fitting the universality limit due to the uncertainty principle, it will promulgate the mass (energy) concept should have a richer connotation, will be helpful to thoroughly knew the common essence of certain physical phenomena and find the answer for some unsettled questions. For example: (1) May solve the problem of ultra high energy cosmic ray GZK threshold paradox and so on more naturally and more easily compared to the "double special theory of relativity (DSR)"; (2) May directly explain the neutrino loss and damage question and may calculate the mass of neutrino with measured loss and damage data; (3) May solve the question of theoretically precisely calculating the Hubble constant. Using the present electronic storage ring, may design an experiment, to accurately validate the new equation forecasted "High Speed, Low Energy" effect existed in the particle's movement."

Fu Yuhua in reference [5], proposed the question that partly replacing relativity and solving the problems which cannot be solved by relativity. New Newtonian mechanics mainly includes five laws: source law, improved law of gravity and three improved movement laws. The law of conservation of energy is the source law of New Newtonian mechanics, according to the source law, the improved law of gravity and improved Newton's second law and so on can be derived. New Newtonian mechanics can be used for solving the problem of advance of Mercury's perihelion and the problem of light deflection around the Sun, therefore it can be used for partly replacing relativity; As for problem of light deflection around the Sun, to the little warp between experiment result and the result given by general relativity, the three order gravitational formula derived by new Newtonian mechanics can be used for giving the same result as given by experiment.

Ma Qingping in reference [22], reviewed the development history of special theory of relativity, made the detailed analysis to the important concept and the structure of special theory of relativity;

from a great lot original papers that have important relation with the appearance and development of relativity, made the unscramble to the true meaning of special theory of relativity. Embarked from the law of identify of basic logical principle, the author analyzed the concrete reasoning processes of special relativity's several important conclusions, for example from the principle of invariance of light speed to infer the Lorentz transformation and from the Lorentz transformation to infer the length contraction and the time dilation, discovered in which existed certain mistakes violated the logical law of identify. Based on this, the author proposed that the special theory of relativity system actually is not justify itself logically, and made the new explanation to the historical physical experiments caused the appearance of theory of relativity. This book made heretofore the most downright and the most comprehensive unscramble to the special theory of relativity's main concepts with the language easy to understand.

Si Dejie, in "Heaven and Earth — Explain Dark Matter", directly obtained from the dark matter, proposed the dark matter mainly is the two spaces of the space of aerosphere and the space of universe, namely the dark matter which we now study also is the "ether" that the predecessor already studied, also is the continued research based on the research of "ether". Obtained by the research, the dark material field wave is existed everywhere, did not have the dark matter, and also did not have this beautiful world of us. Proposed that I observed the first dark material field wave structure pattern likes the S shape which is supported on both sides by the masculine and feminine fish in the Chinese ancient Taiji picture. I named it the Taiji wave. From the macroexamination of the dark matter to lead the explanation of light wave-particle duality, from the light wave-particle duality, summarized and created the new wave-particle triplicity, the light has the characters of particle, field wave and radial. Only as the humanity unceasingly hold the permutation and combination of dark matter field wave, then could create more and better new materials. While to explain the dark matter, also can enable the humanity to have the enough wisdom to create the space-time airship, also may travel to the past or the future.

Ma Guoliang thought that, "We should persist the standpoint and the viewpoint of the dialectical materialism, believe the spatial materiality and unity, persist the unification of the relativity and the absolute of the space-time, persist the unification of the relative motion and the absolute motion, persist the variability of the relative space-time, persist the mass conservation and the variability of the force. Thoroughly overthrow Einstein's theory system, reestablish the modern physical building on the foundation of Newtonian mechanics."

6 On Unified Theory

Now we discuss the so-called "unified theory" question in natural science.

Partial researchers thought the "unified field theory", "unified theory", "universal theory" and "ultimate theory" are existed, while certainly the small change also can be existed. And already yielded some results in this aspect.

Ye Bo pointed out in "The Up to Date Weapon of Dialectical Materialism" that, in the past more than 100 years, in the world including Einstein the most outstanding scientists, have wanted to establish a grand unified theory from the geometry, in despite of Einstein spend the afterlife time also defeated to the end. Why is this? This is because that they hold the spatial structure as mathematics question, and hold physical question as geometry question. How can use one group of fixed geometry equations to describe the myriad changed physical world? This is not one kind of idealist thing? May think their general orientation was wrong. The natural grand unification only can seek from the material world, cannot only seek from mathematics and geometry. This lesson is extremely profound.

Wang Xijia pointed out in "Three Bourns of Unified Theory" that, the science has the unified theory? From Einstein's unified field theory to Hawking's ultimate theory, all are pondering this question,

but also all are defeated to the end. The unified theory is one kind of scientific unified theory presented by the author in 1990s, made own exploration to the unified field theory and even the scientific ultimate theory, and aroused academic circle's widespread interest. This article is the author's sense pondering to the unified theory, the article makes the concrete analysis to the academic bourns of the unified theory from three stratification planes.

Geng Qi in reference [12], unified the Coulomb's law and the fundamental formula of special theory of relativity, used in the anew analysis to many experiments achievements of nuclear physics, caused Rutherford's primitive suspicion about the atomic structure, through the supplement enhancement work to sublime as a intact physical new model. At the same time, also in the thorough careful analysis inference, comprehensively and thoroughly pointed out the mistake place of Heisenberg's judgment that electron is not existed in nuclear. Thus obtained a set of brand-new idea about atomic nucleus structures. Taken this as the basis, caused the three interactions of strong, weak and gravitation, logically unified as the electromagnetic force under the normal temperature and pressure. May call it as Structural unified field theory.

Xiao Jun pointed out in "Unified Theory for Four Kinds of Field Forces" that, through the field there are four kinds of forces acted on the object, they are the gravitational, electric, nuclear and weak interaction, about these four kinds of forces whether or not has the inner link, the physicists once advanced many theories regarding this, like grand unified theory, ultra unified theory and so on, but all cannot be accepted because of being variety problems. This article through discussing the static electricity function between pair of static point charge, proven that in these four kinds of fields the electric field is the basic field, the gravitational field, nuclear force field and weak force field all are the different manifestation of electric field, they all may be derived by using the Maxwell field equation.

Zhao Fengjun pointed out in "Unification of Field Forces" that, one of the goals of establishing the "Rotation Theory" is using the quantum mechanics, to complete the grand unified theory of forces, but "Rotation" is not the elementary particle, at best may regard as the moving route of elementary particle, its existence is impossible to find the unified theory of forces, only found the material elementary particle, then could further consummate the unification of field forces. We may think the photon without rest mass, is the material elementary particle, cannot be substituted by the particle with smaller mass than it.

Luo Maoquan, in reference [14] and other literatures, in the human scientific history firstly proposed the following propositions (in which including the thought collision with Professor Su Chengzhang, Beijing Aeronautical Institute): 1, law of grand unified field theory: Denying inertia is all nature forces' origin with the pressure difference induced by the flow velocity difference of the elementary particle's two sides fields. From this denying the universal gravitation theory in which the force and the material object are separated and denying the theory of relativity in which the field has not the material object. 2, indicated the carrier of positive charge and negative charge only is the helix with the difference of laevorotatory and dextrorotary, has tallied the experiment fact that in bubble chamber the tracks of positive charge and negative charge are laevorotatory helix and dextrorotary helix. Explaining a series of electromagnetisms experiment law with this model. 3, from the Kepler's third law to derive nine celestial mechanics equations again, may contend with the law of universal gravitation and the general theory of relativity in the computation aspect, but actually found the physical mechanism. 4, discovered Luo Maoquan's tenth law: A wirelike non-linear elastomer that one section is fixed and another end is acted by variable force, then in three-dimensional space the moving tracks of all the on-line mass points all are the position-like shapes. This law already passed through the appraisal. 5, discovered Einstein's absurd mathematical logic in the reasoning process of relativity effect. 6, treating ether as the absolute rest system, the universal gravitation theory in which the force and the material object are separated and the theory of relativity in which the field has not the material object, all are the distortion stating of

theology, has caused the human soul (namely spirit) disaster. 7, the monograph "Manifesto of Grand Unified Field Theory" published in 2002 by Northwest Industrial University Press, it is the representative work. 8, in the human scientific history firstly explained the celestial body's movement force, the electromagnetic force, the nuclear force and the weak force are only the different categories of an essential. 9, for the first time comprehensively explained: Ampere's law, Faraday's law, Maxwell equations, Coulomb's law, Lorentz force, the phenomenon that for two poles of magnet, two like poles repel each other and two unlike poles attract each other, and so on. 10, to challenge a series of theories: such as black hole theory, universal big bang theory, light's particle theory and so on.

Liu Qiwen and Liu Qiwu, in reference [18], proposed the material world's unified model, namely the astron (universe-ion) model, for the purpose of promulgating the real appearance of the generalized material world. The astron (universe-ion) theory is a new theory that unified the natural sciences and philosophy, it is the inevitable product of the development of natural science and philosophy.

Lu Ziyi, in "Basic Physical Constants And Physical Unified theory", based on the basic physical constants, from two kinds of natural scales, the unique change rules of physical quantities and the judgment that the physical quantity cannot go up in smoke, derived the basic concepts of each local theories, discussed the physical unified theory and the universal theory of unified theory. The content included: Natural scale and the unified question of physical theory; Natural scale and universal theory; The unified description for four big interactions; Time's direction and pro and con matters; Symmetry and physical rule; Physical theories are unified to "physical beauty". At the end of the article attached to the discussion to some puzzled questions: (1) If the time is limited, can the universe also be perpetuity? (2) What is the outside of sealed and limited universe? (3) How to explain the black hole puzzle of general theory of relativity? (4) For the proton and quark who is the elementary particle? (5) How to understand the relationship between physics and mathematics?

For the unified and antipathic questions and so on about quantum mechanics and theory of relativity, also aroused the partial researchers' interest.

Xu Jianmin pointed out in "Equivalence of Light Refraction And Light Curving in Gravitational Field" that, if considering the wave-particle duality of light has enough theoretical and experimental foundations, then in light refraction theories Newton's particle theory and Huygens' wave theory all should come into existence. But the only possible evidence making two of them are not contrary is that the light not only does not have the acceleration in the medium but also not to decelerate while the speed is invariable. Because only in this way that the general relativity's curving in gravitational field can keep the identifying with Newton's particle theory. Moreover it must achieve this point to have to acknowledge the time is relative, namely for the clock in vacuum and the clock in medium, their speeds are different. And that kind of different itself comes from that for the photon in vacuum and in medium its frequencies are difference. Simultaneously the above theory obtains the completely same result as given by quantum mechanics, also further indicates the red shift field can become the conjunction spot for the affiliation of quantum mechanics and general relativity.

Shi Yixiang, Li YouSong carried through semantic analysis to the first universe concept, pointed out its problem in existence, and deduced out conclusion that the first universe is original of the universe, namely vacuum in "Thinking about original of the universe--Discuss with Mr. Han MinQing", The groundwork of this paper was to prove this conclusion from real and imaginary sides: according to the antithesis of the real number and pure imaginary number, put forward the antithesis of real matter --pure imaginary matter; discussed the existence of pure imaginary matter; derived out vacuum is original of the universe. There is a noticeable view while deducing: "All celestial body among space, grow in the sky growing, die in the sky dying, so vacuum is birthplace and home place of all celestial body. Finally, they succeeded in explaining the question of Theory of Relativity incompatible with quantum theory with an original vacuum of the universe, have put forward one's own supposition.

Wang Xijia and Wu Jianxun pointed out in reference [13] that, the unified theory discussed the existence way and the function for the arbitrary two universal systems. The result discovered, between earth and sun, the directions of "unified field force" certainly are not on the tie line of both, but is slightly deviated this direction, and the magnitude is changed along with the changes of the distance and the speeds of both. We carefully discussed the concrete situations of these changes, and produced the concrete steps for solving the "unified field equation". Our research indicated that, using $F_{\text{space}} = dE/dS$ then the basic theory of classical mechanics can be derived, using $F_{\text{space}} = dE/ds$ and $F_{\text{time}} = dE/dt$ then the mechanical system of theory of relativity can be derived.

Chen Shuqiao proposed in "Atlas for Super Grand Unified Field Theory" that, whether or not the four kinds of gravitational field, electromagnetic field, strong field and weak field exist the common physical essence? Actually what is the mass? What is the vacuum? What really are the matters constituted our world? Get going from the four basic suppositions to establish the self-contained theoretical system "Super Grand Unified Field Manifold Theory" by which the common physical mechanism for the four kinds of fields of force can be given. For many basic problems this theory can give one kind of unified, compact and transparent physical theory and image that can explain the theory of relativity and the quantum theory.

Xiong Yudan, in "Science Times of Universal Basic Source Certainly Will Arrive", criticized the theory of relativity with simple and compendious style of writing; Introduced the great thought of Chinese philosophy — "Concurrence of Spirit and Matter"; testified the existence and the nature of universal basic source. Through testifying that the electric field and the magnetic field are the inseparable identical electromagnetic field, in the wire does not have the electric field, directly denied the existence of the sort of Maxwell electromagnetic wave that is alternately put forth by electric field and magnetic field, and like the link wrap. Simultaneously introduced the opened out arcanums by the Yudan matter physics, such as the arcanum that the polarization of magnetic force line due to the magnet sent by positive electron; The arcanum that electron makes the spiral advancement in the wire; The arcanum that the power of wire surface negative electron roots from the attraction of generator's N pole; The arcanum that In the wire the free positive electron obtains the power from the surface negative electron; The arcanum that radio wave is the thin and dense plane "wave" composed by the magnetic force line and the arcanum of the principle of radio receiving and dispatching; The arcanum that the nucleon is composed by the positive electron and the negative electron; The arcanum of the procreant mechanism of the universal gravitation; The arcanum of the physical significance that in the gravitational formula F and r^2 have the inverse ratio; The arcanum of the quantity relationship between the "four kinds of forces"; The arcanum of Yudan matter's mass and particle size; and so on. And told the audience and the reader, "Science Grand Unification" through opened out more than 170 arcanums, truly unified various disciplines.

It should be noted that, the partial researchers thought the formulations of "unified field theory", "unified theory" "universal theory", "ultimate theory" and so on are wrong and does not have the significance, simultaneously also is one kind of wrong guidance.

Lu Ren pointed out in "Oppugning the Unification of Forces" that, the movement is the inherent attribute of matter, the force is the manifestation of the interaction between moving bodies, the movement is the existence premise of force. Seeking the "unified field" of forces is in disguised form seeking "the First Cause", it inverts the causality of the movement and the force, is the metaphysics viewpoint. The multiplicity matter's motion forms decide the forms of forces also are multiplicity, it does not have the significance to unify the formal things, also is impossible. The energy is the essential attribute of the field, the law of conservation of energy also is the universal and the basic law in the field theories.

Some renowned scientists already made a 180-degree turn in this question. For example Hawking

in public gave up the "theory of everything". In 1980, Hawking once declared, the physicists already saw the outline of one kind of "ultimate theory", this theory may express all natural laws with a single and exquisite mathematical model, perhaps it will be able to succinctly print on a T shirt. Afterwards, in the book "A Brief History of Time ", Hawking also declared that the scientists are locating at the edge of finding the ultimate "theory of everything". But in March, 2004, Hawking announced that he already gave up to pursue the "theory of everything", in the past he thought that the people can soon find the ultimate "theory of everything" that at least to be able in principle to describe, to forecast all things in universe, but now he believed, the people forever could not obtain such theory; Because according to the Gödel imperfection theorem in mathematics, such theory is impossible to exist at all.

For the question of unified theory, should rename "the unified theory" as "the partial unified theory". Because not only the "unified theory" that completely unified handling the four kinds of interactions is not impossible to establish, but also the "unified theory" that completely unified handling one kind of interaction is not impossible to establish. But only can establish "the partial unified theory" for handling the partial questions of one kind of interaction or the partial questions of several kinds of interactions. The reason for this is that, for concrete conditions should make a concrete analysis. According to this viewpoint, just like that the medicine guarantees to cure all diseases does not exist, the "unified theory" generally suitable for unified handling four kinds of interactions also does not exist. Moreover, just like that the medicine guarantees to cure all stomach diseases does not exist, the "unified theory" generally suitable for unified handling one kind of interaction also does not exist. For example, the so-called unified electromagnetics theory (the Maxwell equations) cannot deal with all electromagnetics problems, because it does not include Kirchhoff's law, Poisson's equation and Laplace equation and so on. Moreover, for the different gravitational questions will have the different gravitational formulas, for the different movement questions will have the different Newton's second laws; The generally suitable law for gravity and the generally suitable law for motion all are not impossible to establish. This conclusion is completely dissimilar to the physical traditional procedure. The traditional procedure is: So long as the gravitational question, at once using the law of universal gravitation or the general theory of relativity; So long as the movement question, at once using the Newton's second law or the special theory of relativity. But according to the viewpoint of making a concrete analysis for concrete conditions, for the concrete gravitational question and the movement question, specially the newly appeared question, needs to pass through the theoretical reasoning, then can judge whether or not the original law is suitable as well as whether or not needs to derive the new law. Needs to point out, here said being suitable, the meaning is that it can precisely solve the problem. If only requests to solve the problem approximately, then regards as another matter. Another philosophy support for impossible to establish the unified theory and the grand unified theory is, the humanity never can terminate to understand the truth. So mentions, whether or not the application scope of natural sciences theory will get smaller and smaller? No! "The partial unified theory" may unified handling the partial questions in physics, chemistry, medicine and so on, thus its application scope will be able to be more widespread.

7 About the Materialist Dialectics and the Dialectics of Nature

Including surmounting the relativity, a more widespread and more important question is that how the Chinese scientific and technical circles reappears the magnificence of the times of the four big inventions, regarding this question, many people realize: The Chinese scientific and technical circles absolutely cannot follow in others' behind to crawl, must exert own superiority as far as possible, including absorb the nutrition from several millenniums bright cultures and the scientific and technical achievements, to realize surmounting advance. Whether exerts Chinese's superiority, this question is extremely important. Here cites the example that Chinese pingpong team's prosperous for several dozens years to perform the explanation. Because the Chinese is accustomed to use the chopsticks,

the Chinese pingpong athletes used the playing manner of vertical racket and quick attack which are the most suitable and the most preponderant manner for the Chinese, after the founding of the People's Republic of China, only passed through ten years, then obtained the world champion. At present the obtained world champions surpass any country, this is the how great success! Otherwise, if the Chinese pingpong athletes also follow behind foreigner's buttocks to crawl, used the horizontal racket fighting method, perhaps also could not take several world champions to the present. Similarly, to exert the biggest superiority of Chinese scientific and technical circles as far as possible, China's science and technology will realize the surmounting advance.

What is the biggest superiority for the Chinese scientific and technical circles? It is that in the area of understanding and holding the materialist dialectics and the dialectics of nature, the scientific and technical workers of China surpass the workers of any Country, moreover they already yielded the preliminary harvest in the application of the materialist dialectics and the dialectics of nature. Certainly, at present this superiority not fully exerts, this is an extremely regrettable matter. But the situation is changing, because this question already brought to the attention of many Chinese scholars.

Chen Shuxuan and Chen Baojun pointed out in "Why the Thought Method of Contradictory Unity Is Need in Scientific Research?" that, the scientific research needs the thought method of contradictory unity. In fact the scientific research is developed in unceasingly meeting the contradiction, discovering the contradictory, promulgating the contradictory and unifying the contradiction, solving the contradictory and overcoming the contradiction, the creation of a new theory often is the appearance of new phenomenon, but it is contradictory with the old theory, and will create the new theory in solving the contradiction.

Shi Yixiang pointed out in the paper "Letting the theory of relativity sprout out new branch in China", some gains of me were to use the method of the unity of opposites to understand special relativity from begin to end. The law of unity of opposites is a fundamental law of the universe, with the fundamental law people can understand the thing that cannot be understood by non- fundamental law. I did it just as I think like it, because the author has formed the Cosmo-basic theories of unity of opposites naturally, the thesis, "Rebuilding of Lorentz Transformation Based on New Postulate ---First big break through the base of special relativity", published in *Matter Regularity* in 2004, formed naturally under the guidance of the Cosmo-basic theories of unity of opposites, it is glittering glory of the dialectical thought of the unity of opposites everywhere. For example, there are real-state matter, there are pure-imaginary-state matter; The real-state matter moves at the speed less than the speed of light, pure-imaginary-state matter moves with the speed fast than light; real-state matter can be seen, but pure-imaginary-state matter can not be seen; space-time coordinate can be confirmed in the motion of real-state matter, but can not in the motion of pure-imaginary-state matter, etc. Finally, this article provides the new outline of new branch of Theory of Relativity: "Existing Theory of Relativity is set up on the basis of real-state matter. If we extend matter from real-state to pure-imaginary-state, Theory of Relativity can grow out other ones - -imaginary branch; the opposites of real and imaginary, they unified in the root of the universe - -On the vacuum. In this way, Theory of Relativity may become a complete theory"

Ye Bo pointed out in "The Up to Date Weapon of Dialectical Materialism" that, humanity's history is a struggle history of the materialism and the idealism. The idealism also can carefully camouflage, then is flaunting the materialism banner, carries on mooches. The theory of relativity is precisely such idealism. At present, the idealist theory of relativity has run rampant. Our school is teaching the theory of relativity, our student is studying the theory of relativity. The theory of relativity not only floods the physical domain, even our textbooks of dialectical materialism and philosophy, unexpectedly also has the idealist viewpoint of the theory of relativity, It is truly making one bitter! Actually, after reading this book to know that, the special theory of relativity is happened to violate the relativity principle and the

principle of invariance of light speed that are proposed by itself! The theory of relativity therefore is like this wild, besides it has the ingenious camouflage, another reason is in the dialectical materialism arsenal, but also does not have one weapon to be able to send it to the deathtrap. Myself always persist and guard the dialectical materialism, through the explorations of 40 years, using the viewpoints of matter and movement, making the breakthrough in the research of force, electricity, magnetism, light's physical essence, organically unifying the dialectical materialism, the Newtonian mechanics and the electromagnetics, defining the physical essence of the law of the unity of opposites and the dialectics, having the new understanding to the natural structure of matter and unified principle. Specially having the extremely thorough research to the collision process, establishing the status of collision in the nature, creating the new collision theory, finally thoroughly clearly recognizing the idealist essence of the theory of relativity, and theoretically denying the theory of relativity. Therefore, the collision theory is another new style weapon that the dialectical materialism defeats the idealism and the metaphysics. This was the reason I named this book as "The Up to Date Weapon of Dialectical Materialism". May say like this that, collision theory is the difficult adversary of the theory of relativity! In this book, already answered the following question with the new viewpoint: What is the material base of the law of the unity of opposites and the dialectics? What is the matter? What is the space-time? What is the force? What are the electricity, magnetism and light also? The Newton's three laws may be proved? Where the theory of relativity is wrong? How does the celestial body evolve? From mainland drifting whether can derive and prove that the mainland inevitably to be able to wither away? After reading this book, I believe that you can have a new understanding to the above questions. You certainly will feel that: A new peak of dialectical materialism penetrates the sky, throws the idealism under the foot out and away, simultaneously also enhances the understanding to the world physics essence to a new altitude.

Li Zhichao, in "Physics And Dialectics of Nature", elaborated the relationship between the physics and the dialectics of nature from following five aspects: First, the similarities and differences of the physics histories of China and West; Second, modern cosmology's confusion; Third, physics front; Fourth, the dialectics of nature is the highest philosophy; Fifth, Chinaization.

Shi Yixiang explored the foundation of special relativity newly with the method of the unity of opposites. The result explored is as follows: 1. Give out the sufficient condition which the same clock runs in step; 2. Give out the accurate definition of Flat space, and prove that Flat space is the original ultimate state of the universe; 3. Abolish the original fundamental postulates: constant speed of light and relativity principle, introduce new fundamental postulate: time is dependent of space; 4. Clarify the scope of application of special relativity; 5. Prove the existence of maximum speed of real matter in motion, and derive out Lorentz transformation; 6. Prove speed of light is maximum; 7. Uncover the profound mystery of length contraction and time dilation. The rebuilt special relativity has the character of supposing at all, concept clear, ranging definitude and tight logic. Thus advanced special relativity forwards a great step, and established theoretical foundation for further breakthrough.

Shi Yixiang' paper, "On the Profound Mysteries of Mass ---Second big break through the base of special relativity", By introducing a concept of distribution density of geometry point, set up a basic theory of space evolution in mathematics; and change the mathematics space into the physical space, the theory turns into the one of the universe evolution; apply the theory of the universe evolution to Lorentz transformation, then deduces simply out the conversion formula of moving and unmoving mass deduces out the conversion formula of moving and unmoving mass thus reveal the secret of the quality concept.

In a word, said as Shi Yixiang, his the Cosmo-basic theories of unity of opposites, longitudinal, connect Chinese traditional culture with modern science, across it, the thought of China's traditional culture can enter modern science continually; horizontal, merge philosophy, physics, cosmology and

mathematics together naturally. This is really the Cosmo-basic theory of unity of opposites.

For the achievements obtained by these scholars, we should express the congratulation and the respect to them.

8 Concluding Remark

With the guidance, support and help of the leaders of Beijing Relativity Theory Research Federation, as well as many seniors and colleagues, overcame some difficulties and passed through the endeavor about one year, this article finally completed. The author would like to express his heartfelt gratitude to all the related leaders, as well as many seniors and colleagues.

Needs to emphasize, many significant achievements for researching and challenging relativity have not been able to introduce and elaborate in this article. The reasons for that mainly have the following several points: First, the author had not set eyes on or made a raise of many important literatures. Second, the partial articles were too abstruse to be able to understand for the author, or did not have the abstract but the author also did not have the time and the ability to summarize them, therefore cannot but give up reluctantly. Third, for the papers with the similar research results or conclusions, only one or two can be included. Fourth, to the identical question possibly had two or more kinds of different viewpoints, but for the reason that the materials were limited and so on, possibly only one viewpoint was included. Other aspects also have some shortcomings and mistake, we express deeply regret regarding this. No matter any reason, the author also has the responsibility that cannot be shirked. The author of this article would like to express his deeply apology to many other paper authors whose achievements should be included in this article but has not been able to be included.

Needs to explain, in certain situation, as elaborated certain viewpoint we have pointed out its presenter's name; But as synthesize many authors' viewpoints, then we have not pointed out the concrete presenters' names.

On the other hand, because the knowledge and the time of myself are limited, in this article the shortcoming and mistake are unavoidable, we hope that the reader can propose the valued suggestion, in order to revise this article in the further if possible.

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