

Heterodoxy on Geophysics and Celestial Movement

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Abstract: Guo Xuannian, born in December 1948, in Liling, Hunan, China. He published 7 papers on domestic magazines and 3 technical papers on international magazines about water conservancy and hydropower, and has won two city-level and provincial awards for scientific and technological achievements on water conservancy and hydropower. He proposed different opinions on part of the geophysics and celestial movements in 1967. After retirement, he wrote the book *Heterodoxy on Geophysics and Celestial Movement*, publicly throwing down his challenge to Copernicus's heliocentric theory, the first law of Kepler and Newton's three laws on mechanics. [Guo Xuannian. *Heterodoxy on Geophysics and Celestial Movement*. *Academ Arena* 2013;5(1s):101-177] (ISSN 1553-992X). <http://www.sciencepub.net/academia>. 4

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Picture of the author taken in Beijing in 1991

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Preface: Challenge Against Authority through Unusual but Excellent Thinking

Wei Lun

In a world of great sun, moon and stars, high mountains and deep water, and the vast space, there’re always some people thinking about the exploring the mystery of the universe. Each discovery, including proton, neutron,

atom, molecule, material, earth and the universe, represents the progress of human beings and advancement of science and technology. With a long history of 5000 years, the Chinese nation was once famous all over the world due to its four great inventions, yet was bullied due to backward science and technology. After reading the Heterodoxy, I was deeply impressed and felt great patriotism in my heart.

First, I'm impressed by his superior scientific thought. Since Newton found gravitation on earth, he deduced the universally recognized law of universal gravitation so as to find the reason for planets to revolve around the sun, and then created mathematical theories like calculus due to research demand, thus making great contribution to human civilization and progress. Not limited by the authority of Newton, Guo proposed his unique theory on astronomy and physics. First, he analyzed the movement of electrons from the perspective of microphysics. Since electric current is generated due to movement of electrons around the nucleus, thus generating electromagnetic field and force. He believes that the electromagnetic field formed by the movement of electrons is the root cause for generating geomagnetic field. Such magnetic field force combines molecules, thus further generating gravitation on earth. In addition, the author raised his doubts on Newton's laws on movement and the universal gravitation based on this theory, and analyzed the reason for rotation and revolution of celestial bodies. He mentioned that the movement of any celestial bodies is determined by internal factors and are independent without any master-slave relation, and the earth (celestial body) performs circular movement outside the movement trajectory of the sun. There're many opinions in this book which I'd like to share with readers. His scientific thinking is indeed admirable.

In addition, I'm impressed by his spirit to pursue truth and take challenges without fear of authority. The author was a student out of school due to Cultural Revolution before 1968, and then he proposed a new opinion on celestial movement. Later he became an engineering technician in water conservancy and hydropower, instead of a professional worker in astrophysics. It's due to his diligence and courage for his achievements now. In this book, the author dares to challenge scientists like Copernicus, Kepler, Newton and Cavendish, who are the authorities in the field of astronomy and physics. I don't assert if his proposal is right or wrong. However, I believe new breakthrough is only possible when one dares to doubt and could think freely. The development of science is boundless. I hope his book could generate a big influence in the field of science and technology, and generate new theories. If so, this would be the progress of natural science and human beings, as well as the pride of China nation.

"The gentleman aims at harmony, and not at uniformity. The mean man aims at uniformity, and not at harmony." I dare to express my own opinions. The author has proposed that geomagnetic field and gravitation on earth are generated due to movement of electrons inside the atom, thus we'd explore atomic theories and find valid evidence to deduce the relation between celestial mass and scope of gravitation, thus further concluding the relation of celestial mass and its rotation and revolution with reasonable drawing of its movement trajectory. In this way, truth on Newton's movement law and universal gravitation, and earth's revolution around the sun will come out itself. I can see further than others because I'm standing on the shoulders of predecessors." Galileo could doubt if two steel balls fall on the ground at the same time on the shoulder of Aristotle and thus laid a solid foundation for Newton, who enjoyed the title of finding a "new universe". Guo is like Galileo who dares to look beyond others based on predecessors and set an example for others interested in natural science. It's a pity that we only have such few people like him, while there're so many scientific researchers compromised to authorities. The birth of Heterodoxy gives me a light of hope on the future of natural science in China. I hope courageous people could out like him.

Chapter 1. A Long, Different and Endless Road to Science and Technology

The secret of the universe and marvel of life appeared far before human beings. As is well known, the world consists of materials, which further include 103 elements (totaling 108 plus synthetic elements). The celestial body made of materials has such characteristics as attraction, magnetic field, rotation and revolution (displacement), which are not yet well understood till now. More surprisingly, materials can shape life and generate vitality, mind and soul. Since it's well known that water, air and sunshine are three crucial elements of life, yet what's unknown to many is that the electron motion in atoms is the origin of material and life. According to Darwinian evolutionism, life on earth evolved from the inferior fungus and microorganism to plants. It's still unknown

how plants were evolved into animals. A reasonable explanation is that human beings evolved from apes in a long an extremely process. As plants and animals evolve from inferior level to superior level, soon human beings can have this "magical" power to break the mystery of the universe and life.

There's not much difference between human beings and animals, since the former just got separate from the latter. The pursuit of survival generated fight with other animals and nature and inspired the mind and labor work. Since communication is necessary in collective survival, language was created, and also characters as well for purpose of record. People became dominant in the world after the creation of language and characters. If primitive commune is a preliminary stage, then the primary stage would be from slave society to feudal society, in which human

being is not fully civilized in an advanced way since autocracy is the inherent feature of animals. Only after the transition to capitalist society and democratic society, namely socialist society would human beings embrace and dual civilization of spirit and material. People can conquer the universe after boasting advanced science and technology.

Section 1. The Development of Chinese Science and Technology Was Constrained by Autocracy

With a lack of scientific knowledge, primitive people knew nothing about natural phenomena and the miraculous life, and were bound to feel fear in the face of disaster and death. People were in a period of unexplainable natural phenomena and miraculous life, when western people made up a God that dominated everything and eastern people took spirits as the ruler of everything. Therefore, superstition came into being, which simplifies everything without exploring the root cause and hinders the development of science and technology and social advancement.

In a time of low science and technical and productivity, people still faced difficulty in survival. Autocracy failed to address people's demands, yet it established political, economic and cultural restrictions to limit the ruled class. Also superstition was spread to consolidate autocracy. Rulers who were good at keeping people fool and slave, failed to make all people fool. In history, there're people dare to rebel and research the natural and physical phenomena, which promoted social and scientific development.

Research on horoscope was started since the end of 22nd century BC (slave society), which was mainly used to demonstrate change of government, natural disaster and deterioration of important person, and was quite superstitious. Although different in naming, Chinese and foreign horoscope learners have the same opinion. In the 20th century BC, some horoscope learners started to depict horoscope by naked eyes. In the year 580 BC, Pythagoras conjectured about the movement of the earth and other planets. In the year 280 BC, Aristarchus proposed that the earth moves around the sun. About ten years later, Eratosthenes tested the size of the earth. In the year 130 BC, Hipparchus established a table of stars. Above people all observed horoscope through naked. Although they could only see the surface of the phenomena, all of them have an advanced scientific consciousness and dare to break superstitious and conservative mind.

Zhang Heng (78-139AD), the great Chinese astronomer, mathematician, inventor, geographer, draftsman, poet and official in the Eastern Han Dynasty, had made significant contributions to the development of astronomy, mechanical technology and seismology. Being representative in the theory of sphere-heavens, he pointed that light from the moon

comes from reflection of sunlight; he also gave a correct explanation to formation of lunar eclipse, and realized the relation between the infinity of the universe, planetary motion and distance to the earth.

Zhang Heng observed and recorded 2500 stars, and created the first leakage armillary sphere that could correctly demonstrate astronomical phenomena in the world, the first apparatus to test earthquake – Houfeng seismograph, as well as southward pointing cart, automatic mileage-counting drum-cart, and the wooden bird that could fly several miles, etc. He completed 32 works on science, philosophy and astronomy, including Lingxian and Lingxian Drawing, etc.

In memory of his achievements, people named a crater at the back of the moon as “Zhangheng Crater”, and No.1802 asteroid as “Zhangheng Asteroid”. The famous Chinese literati and historian Guo Moruo in the 20th century praised him as “a man of such comprehensive development who is rare and admired in the history of the of universe”.

In the year 140 AD, Ptolemy wrote Almagest. In 813, Marmon created Baghdad astronomy, translating Almagest into Arabic. In 903, Sophie compiled a star catalog. In 1054, Chinese astronomers recorded Taurus supernova. In 1270, the king of Castile Alfons X announced Alfons Astronomical Table.

Before the 13th century, Chinese astronomy, science and technology and national strength were all among the top in the world. Since then, capitalism started in western countries and China gradually lagged behind, which proves social system determines the progress of science and technology and the development of productivity. Although gunpowder was invented in China during 221-206BC, Chinese people failed to make guns in a long period of time. However, western countries introduced Chinese this technology and created guns before 1330. In 1840 during the Opium War, since the cold arms couldn't compete with guns, cannons and warships of western countries, Chinese people had no choice but to be invaded. Chinese people also invented compass during the Warring States Time, which made its navigation career superior in the world. Navigation was feasible in Qin Dynasty. At the beginning of Ming Dynasty, Zheng He (1371-1435) navigated to the west for trading on July 11, 1405. Till 1433, there were 7 times of navigation to the west. Since Chinese people didn't believe the earth is round and lack the courage for exploration and adventure, they failed to find the New World. Later the compass was introduced to Europe, thus promoting its shipbuilding industry and navigation technology and providing conditions for opening a new shipping route in oceangoing voyage. In 1486, navigator Columbus (1451-1506) made a bold proposal to the Spanish king. Believing in the

theory of spherical earth, he thought that they could arrive at China and India by sailing westward from the Atlantic Ocean, which was closer than sailing eastward. Therefore, he found the New World, was remembered by history and generated mass immigration there.

Besides the ancient four great inventions, China was also leading the world in other aspects. However, Chinese people failed to summarize their achievements and announce to the world in time. In 17th – 11th century BC (Shang Dynasty), Shang Gao found the Pythagorean theorem, which was 600-1000 years earlier than Pythagoras, who found this theorem around 550 BC. However, the world only remembers the latter. Chinese people could make a palace with a huge roof of stone and wood structure around Xia Dynasty, proving that they grasp the knowledge of plane geometry and solid geometry by 2000 BC. However, this was not recorded and was only spread among the civil society, therefore the book *Geometry from Euclid* in 300BC was famous in the world. For the Chinese book *Nine Chapters on Mathematical Procedures* (preliminary mathematics), we only know that it was written in Han and Tang period over 1000 years ago, but we don't know its author and his/her life story. Thus science and technology was neglected by Chinese feudal autocracy governors. If Chemistry came from the alchemy of Chinese Taoism, which was quite popular during the Warring State period, then chemistry should be generated by Chinese people. Pitifully, Chinese feudal governors only sought for the immortal elixir of life without encouraging research of various chemical reactions, thus Chinese people have no standing in world chemistry.

After reflection, the root cause for Chinese science and technology to be lagged behind from leading the world is its political system. First, governors only considered how to maintain their governance and fool the public and make them as servants. Military and civilian talents would serve autocratic dynasties by being awarded with titles, positions and recorded in history with their drawings and biographies. New methods of autocracy kept rising to fool the public, thus producing a vicious circle. Governors imposed cruel suppressions on those not obeying autocracy and deprived the country and people of their interests. Science and technology only existed in civil society. If Zhang Heng was not an official in Eastern Han Dynasty, there would probably be no such record.

Different from China, imperial families in western countries focused on science and technology and the development of productivity, and had set up research institutions for astronomy, physics, mathematics and chemistry long ago. Whoever found nova or the law, theorem or definition of mathematics,

physics and chemistry would name such invention by his/her own name, received official post, be awarded technical title, patent, bonus and payment, and be recorded in history. When China was in a time of encouraging the rich helping the poor, while there were already rich people in western countries donating money to scientific personnel and supporting scientific projects. This is the difference in culture and mindset between eastern and western countries. And science and technology in western countries were bound to surpass those in China. Second, Chinese feudal autocratic governors rejected the capitalist social system, which was first started in 13th century in western countries. During Ming and Qing Dynasties, in order to maintain autocracy, they refused the introduction of capitalism, yet arrogantly believed that they were the superior country, thus failing to find that capitalism could replace the outdated feudal autocracy and promote the development of science, technology and productivity. After the failure of two opium wars, China was turned into a semi-colonial and semi-feudal society. It was until then that the late Qing government started to realize the necessity of learning from western countries. They started to learn from capitalist countries and introduce advanced weapons and production equipments from them. However, since Qing government held on to autocracy and didn't set up a political reform system of constitutional monarchy, both westernization movement and Hundred Day's Reform failed, and Qing government came to demise due to its inability for political restructuring.

Section 2 Capitalist Society Is An Important State in Social Development of Human Beings

In the outdated autocratic society, it's unavoidable for astronomers to make mistakes due to observation by naked eyes. Geocentric theory is the product of observation of natural phenomenon. Since Greece period, the opinion that the earth may revolve around the sun was already proposed. However, after being disapproved by scientists like Ptolemy, astronomy had been at a standstill. Then the Polish monk Copernicus (1473-1543) changed people's outlook of the universe due to his doubt of the extremely complex system proposed by Ptolemy. Lots of small circles (wooden wheels) were necessary to explain the planetary movements in the sky, which made the whole system clumsy and impractical. Many unnecessary complexities would not exist by supposing that the earth moves around the sun just like other planets.

Copernicus knew his bold exploration. He said that the astronomy in all schools and universities was wrong. What was even worse was that he faced objection from Roman Catholic Church, which would definitely restrict such concept that their world was

not supreme. Being a priest himself, Copernicus concluded his theory in the year of 1533 and wrote it in his book *Revolutions of the Heavenly Bodies*. However, he didn't plan to publish it due to objection from the Catholic Church. In 1543, although Osiander published this book, he added a notice in it in order to avoid risk. This notice was that this sun-centered theory is only a "mathematical fabrication", which was convenient to predict the position of planets. Copernicus didn't agree with such conduct, however he was already a sick old man at that time. Actually, it's said that (possible true) he only got the first edition of this monumental work before hours of his death.

Possibly the catholic church would inflict on him if he stayed alive. He had always worried about it and his fear was well grounded. At the beginning, only Rheticus and his friend Reinhold (mathematical professor in Wittenberg University) dared to support this new theory, which was objected to a great extent by catholic church. Strictly speaking, Bruno was not an astronomer. However, with profound scientific knowledge and the spirit of exploration, he had been teaching the Copernican theory in Europe, which offended the catholic church. When he came to Rome, he was arrested by the ferocious inquisition. After 7 years in prison, he was finally burned to death on the pillar on Feb.17, 1600. The Roman catholic church had killed numerous people to stabilize its position. However, the death of Bruno made a huge influence in the western scientific field. At last, the Copernican theory won success and scientific truth finally defeated the evil.

However, the heliocentric theory was also proposed by conjecture and deduction based on superficial phenomenon. Copernicus realized the geocentric theory was wrong, yet he failed to prove the heliocentric theory was right by facts. With underdeveloped science and technology at that time, and without the law of universal gravitation proposed by Newton, who was not born yet, why would the earth (planet) rotate and revolve around the earth? Therefore heliocentric theory was just a supposition and conjecture by Copernicus without scientific evidence. Nowadays, modern science and technology have enjoyed high level development, advanced countries have launched many man-made earth satellites, spacecrafts have entered into the space and high-tech telescopes can observe the stars far away. However, this doesn't prove the validity of heliocentric theory, the first law of Kepler, and the law of universal gravitation by Newton. On the contrary, these could be tested through high technologies. Maybe Copernicus, if still alive, would explore heliocentric theory till the end.

A model of celestial bodies motion by astrophysicists is not necessary. However, a simulation model for the celestial bodies motion in the solar system is hard to make, since the sun has a displacement speed of 250km/s (around the galaxy) besides its own rotation. Its surrounding planets and satellites shall have the same displacement speed as the sun besides their own rotation and revolution. The motion of the satellite is more complex, which is compound motion. To explain this self-made and complex compound motion, scientists supposed the existence of a mysterious material that made planets revolve around it, and further supposed the existence of the same mysterious material around planets. Without such mysterious material, any authorities in astrophysics would fail to explain the movement in the solar system, let alone make simulation models. However, this mysterious material would bring superstition in the explanation of movements, which is against science. According to materialism, any subsistent material could be simulated. Authorities in astrophysics need to make a simulation model to demonstrate celestial bodies motion in the solar system, otherwise heliocentric theory would be a conjecture and supposition. Although Copernicus denied geocentric theory by his heliocentric theory and advanced astronomy (denial of the wrong brings progress), it didn't mean the heliocentric theory was correct. This shows that scientific results in early capitalist society still need further examination.

The great contribution from Copernicus is that he declared the death of geocentric theory and established heliocentric theory. It's necessary to realize that any subject is not completely improved by just one man; it requires exploration and development through generation after generation, so as to realize the depth and profoundness of things. The peak theory of scientific technology and political theory is the reflection of idealism. It should be noticed that, after any new theory is recognized and established to meet the demands of the ruling class, the accompanying thing would be conservative and superstitious concept. Restrictions set by powerful and authoritative men are bound to influence the development of social system and science. Given that Copernicus was in a time of outdated science and technology (till now people still have not fully understood the universe), it's unreasonable and impractical for him to solve all problems in celestial bodies motion. It's necessary for us to open their mind without being limited to just these two theories. Before understanding the reason for rotation and revolution, it's necessary to realize that the sun is also a normal star, similar to planets and not necessarily dominating their motions. People can suppose that planets perform circling motion or other forms of motion outside the displacement orbit of the

sun. However, heliocentric theory is only correct after proving that other motions don't exist.

In 1608, Pelius successfully developed the telescope. In 1609, Galileo was the first to observe astronomy through telescope. Then, the first and second laws of planetary motion were published by Kepler. The occurrence and use of telescope opened a new era in astronomical observation, whose progress further promoted the development of mathematics, physics, measuring, and manufacturing, etc. Astronomers broadened people's understanding of the sky.

From the 16th to 17th century, lots of astronomers, physicists and mathematicians came into being in western countries, such as Copernicus, Tycho, Kepler, Calileo, Descartes, Snell, Huygens, Newton, Frams Tide, Leibnitz, Hooker and Gause. After the brutal death of Bruno, Copernicus and other were worried about being afflicted as well. The occurrence of capitalism in the 13th century doesn't mean western countries had entered capitalist society, which still included some remaining force of feudal autocracy. If the exercise of constitutional monarchy in 1688 in Britain marks the capitalism era in western countries, then the spiritual civilization would be revoked by material civilization in capitalist society. All countries have set up institutions for scientific research and established awarding policies like reputation and materials. Under national support and material awards, numerous astronomers, physicists and mathematicians appeared from 17th to 20th century, such as Cavendish, Coulomb, Ohm, Ampere, Oersted, Faraday, Henry, Madame Curie, Weber, Lentz, Maxwell, Hertz, Poincare, and Einstein, etc. However, only few occurred in China, thus unable to compare with western countries.

With theoretic foundation and experimental proof of science and technology, lots of inventors came into being at this period of time. In 1774, Scotland people introduced their steam engine into production and thus generated the industrial revolution in Europe and greatly improved productivity. In 1821, Faraday invented the motor. From 1860 to 1876, through efforts and gradual improvements by people like Lenoir, Barnett, Rochas and Otto, the four-stroke free piston engine was designed and produced. In 1885, the German Carl Flicht Benz built the car. In 1903, the British Wright brothers invented the airplane.

Among these inventors, a most representative one is the American Edison (1847-1931). Being the world-renowned electrician, scientist and inventor and praised as the "king of invention in the world", he had lots of inventions and deep insight in mining industry, architecture and chemical industry, besides his contributions in phonograph, electric lamp, telephone, telegram and film. With over 2000 inventions in his

life, he had made great contributions to the advancement of human civilization. His name will coexist with the world and will always be remembered by us.

Therefore, it was capitalist social policy that created modern civilization. China failed to perform its due obligations due to the conservative and feudal autocracy. Now we have come to an era of atoms and electrons, and no capitalist country dares to claim that they've completed the transition from capitalist society stage and is qualified for entering socialist society. Although quite superior to feudal society, leaders would rarely boast about their achievements and more often criticize feudal autocratic society. Since feudal autocratic society is the foundation of capitalist society, now is better than the past, and this is also an inevitable result of social progress that meets the rule of social development. Therefore, they should base on their own development to keep the leading role.

It's an important stage for the development of capitalism from the 18th century to 1950s. China made little contribution to the development of world civilization due to its most decadent and darkest era, and also descended to a semi-feudal, semi-colonial society subject to the aggression and plunder by capitalist power. Every ambitious Chinese felt ashamed of the hundred years of national humiliation. It's proved that China's backwardness was not because Chinese were ignorant, but came from the autocracy system behind the development of the times. In the late 19th century and the early 20th century, out of resistance of humiliation, some patriots waged a revolution through studying abroad to learn advanced technology, and even buying foreign machines to develop industry. China's modern science and technology thus started.

Section 3 From Phenomena Study through Feeling towards Logical Thinking Science

As human beings observed nature, astronomy and physical phenomena and chemical reactions, and solved the problems in productivity and life, science and technology were thus started and developed. But the study still mainly depended on observation, imagination, assumptions, reasoning and experiments etc. The limited human activities restrained their perspective and thinking. The preliminary stage of science and technology is phenomena study through feeling, and its development was a long process from misconception to the correct direction, and from failure to success. The physical and material forces are limited, but thinking and imagination are infinite to emancipate human beings from the limited mind and gain the power of wisdom. Therefore, it's a historical progress from phenomena study through feeling towards logical thinking science.

Although having a shorter history than astronomy, mathematics and physics, chemistry is the most promising and beneficial subject, which even can break the mystery of the universe and life, once human beings grasp the decomposing and synthesizing technologies of all materials. Chemistry owns another significant feature - the basic unit of its research has come down to element. The celestial material almost shares the same elements with the earth, although maybe a few new elements would be found in the universe or synthesized by human. By studying and testing the elements, human beings are able to apply chemical reactions on the earth to the solar system, and newly discovered elements can avoid fundamental mistakes. Astronomy and physics do not have the advantages of chemistry. The astronomy fails to resolve all issues of the solar system and the universe is still a mystery; the physics is affected by global factors and some physical experiments should be applied to space for inspection.

At first, astronomy was based on naked-eye observation, which meant people could only see the celestial bodies (most couldn't be seen) without touching them. Telescopes broadened the astronomers' horizons. As celestial bodies keep rotating and moving in the boundless universe, it's difficult for astronomers to establish a fixed universal space coordinate system while observing the respective movement of all celestial bodies in the solar system and the galaxy at the same time. Even the satellites and spacecrafts can only observe celestial bodies to a limited extent if they are too far away from the earth. According to modern research, the sun, the planets and the earth are all doing extremely complicated compound movements, i.e. the galaxy is drifting, the solar system runs around the galaxy, planets around the sun, and satellites around planets. The satellites' compound movements are so complicated that nobody has drawn the movement trajectory of celestial bodies. So astronomers' study of astronomy is still in the stage of observation, imagination and speculation, which is still a phenomena study through feeling and difficult to get the right answer. Even some explanations still use the law of gravitation as a shield to cover those unexplainable issues. The traditional concepts and the law of gravitation limited astronomers' thoughts and they still considered the sun runs around the earth only by seeing the sun rises from the east and sets to the west. Copernicus's heliocentric theory was a kind of agreed natural mode, which was created due to the complexity of planetary mapping. It is necessary to do a variety of program researches and observations to study how the celestial bodies actually move. At that time, whoever had different opinions about the movements of the sun, planets and satellites would be opposed definitely by the heliocentric theory

believers.

Physics seems more rigorous than astronomy, because some research objects of physics are visible and tangible. With the aid of experiments, physics can prove some unprovable definitions, theorems and incomprehensible physical phenomena. Especially modern physics has divided atom into indivisible protons, neutrons and electrons by means of microscopes and electronic technology. Optics has studied fine particles and solved lots of mysteries in optics. Physics was from developed from elementary to profound level. People believe the current high-tech and do not doubt the results derived from present physics. But the elementary physics study was doubtful because it was one-sided in observation, hypothesis and experiments, applied the earth phenomena into the universe and even confounded the movement of celestial bodies with the object motion on earth.

For example, before clarifying the attraction and rotation of the earth, people already concluded that the circular motion of objects on earth needed centripetal force and inferred that planets ran around the sun out of its attraction, without further research. For another example, Cavendish did experiments with a torsion balance device and tested out the attractive constant $G=6.67 \times 10^{-11} \text{N} \cdot \text{m}^2/\text{kg}^2$. People know that the earth has geomagnetic field, but between two celestial bodies far away from each other no carrier base surface (cosmic magnetic field) like geomagnetic field exist. Besides, the celestial bodies have mass instead of weight in the universe. There's no enough evidence that Cavendish should promote the use of experimental results on the earth to calculate gravitation and mass of the celestial bodies in the universe. What's more, the physicists always utilize experiments when they are not able to explain some physical phenomena. Instead of studying further, physicists only do experiments to prove their own proposal, similar to the bounded and beguiling magic shows. It is convincing to distinguish between ground and space and prove some possible new phenomena only through experiments. Now, human beings can get into space, which makes it necessary to do physics experiments about the universe in space.

Elementary Mathematics stems from the needs of human life and production and is quite intuitive, with a sense of objectivity and rational thinking. Mathematics can provide strong logical thinking and reasoning and can be verified by its result, although it doesn't involve experiments. The development of astronomy and physics put forward higher requirements on mathematics, which promoted its development. The astronomy and physics research started with phenomena and feelings, which belongs to sensory thinking. After 1664, Newton and Leibniz

published Calculus "Higher Mathematics" successively, which not only solved mathematical problems in various scientific researches, but also opened up a new era in the field of mathematics and gradually shifted mathematics from feeling discipline to thinking discipline.

Einstein (1879 - 1955) was one of the greatest physicists, thinkers, and philosophers of the 20th century. The end of the 19th century was a period of great change for physics, when Einstein re-examined the basic concepts of physics upon the experimental facts and made a fundamental breakthrough in theory. Some of his achievements greatly promoted the development of astronomy and his General Relativity had a great influence on astrophysics, especially on theoretical astrophysics. The Special Relativity successfully revealed the relationship between energy and mass and solved the long-standing problems about stellar energy (to be proved) With more and more high-energy physics phenomena being discovered in recent years, the Special Relativity has become one of the basic theoretical tools to explain these phenomena. The General Relativity also settled a long-standing mystery of astronomy--- the movement of Mercury perihelion, which Newton's theory of gravitation couldn't explain, and inferred the light bending phenomenon verified later. So the General Relativity became the theoretical foundation of many astronomical concepts. Another great contribution of Einstein is leading the astronomy and physics of sensory thinking to the disciplines of rational thinking.

Facts prove that all disciplines are inter-connected and could promote and develop each other. If astronomy, physics, mathematics, chemistry, biology and medicine develop at the same time, then human beings will be able to break the mystery of the universe and life. With the rapid development of science and technology, more mysteries are gradually solved, meanwhile human beings are coming closer to breaking the mysteries of universe and life. We believe that human beings can control their own destiny completely in the near future.

Chapter 2 Review of "Heterodoxy" about Geophysics and Movement of Celestial Bodies 40 Years ago

The rulers gradually carried out Confucianism to administer the country after China entered into the feudal autocratic society. The rulers in every dynasty regarded education in the first place because Confucianism focused on the enlightenment to people. At the end of Qing Dynasty, with the rising Taiping Rebellion in Jiangnan Area, Qing government lost its sovereignty to Jiangnan so that imperial examinations were suspended there. Taiping Rebellion militaries were repressed by Zeng Guofan, and then Qing government held imperial examinations to select

talents, which were delayed for more than 10 years in Jiangnan. Japanese launched the "September 18th Incident" and the three northeastern provinces were occupied. Comprehensive Sino-Japanese War broke out in 1937 and almost half of China was lost. But people still adhere to running schools through moving the schools inland. Although many students were out of school due to war, the education wasn't suspended completely, which proved that Kuomintang government was still struggling to support the education.

I was born in rural areas, which were like slums in Mao's era, and due to poverty, I started doing some light work like picking pigweed since I was 5 years old. I went to primary school in 1956, but I had to do labour work such as cutting firewood, looking after cows and carrying water before going to school or after school. In 1958, the Great Leap Forward movement began and people had to participate in collective labor like rice transplanting and rice cutting and so on. I could only study in school, but time for learning was less than half, except for two work classes per week and helping agricultural production as required by the production team. I would be reprimanded by my parents if I studied at night, because it's hard to get kerosene and we must save our expenses. I just spent my four years' primary school life like this. A national famine broke out when I started my primary school life. I missed almost half of time for learning in order to survive by digging up wild plants like fern root and smilax glabra etc. In 1962, I went to middle school and learned what I should learn without interfering labour work in these undernourished days. In 1965, I started learning in senior school of Liling No.1 Middle School and realized the importance of study. I tried my best to study in order to enter a college. Unfortunately, less than a year later, I was out school and went home to do farm work because of Cultural Revolution. So far, my ideal and pursuit vanished like soap bubbles.

All my ancestors made living on farming and there's no collection of books. At that time, people could only study Selected Works of Mao, so my collection of four sets of classic novels and comic books were also destroyed due to being too conservative. Under the fallacy that more knowledge one person got, more reactionary he/she was, I had no idea about borrowing books from my alumni. I couldn't afford to buy books and also got no time to go to the library. I worked so hard for the low work value every day from dawn to dusk and wasted my golden years on the bitter life. During the poor days, I also wanted to read books after working, but my only choice was Selected Works of Mao and textbooks. As Mao's thought was totally different with real life, I chose read the latter over and over again. Soon I got

some different view on astronomy and physics but couldn't find some experts to discuss about it. Thus I understood that it's too bad to lose the opportunity to learn.

Section 1 Put forward Attractive Resistance and different views on Newton's Three Laws of Motion

Human's thought and imagination is always beyond their capability, so someone would put forward questions, do researches, pursue answers to questions to promote social progress. In 1967, I reviewed Newton's first law of motion: Every object persists in its state of rest or uniform motion in a straight line unless it is compelled to change that state by forces impressed on it.

The book explains why a car slows down after shutting down the engine. That's because it is impressed by friction and air resistance, otherwise, the car could keep a uniform linear motion on a horizontal road. If analyze it deeply, you will find that it's unconvincing that friction and air resistance stop the car after shutting down its engine. Assuming a car runs at a full speed on the horizontal road without friction and air resistance, it would gain acceleration, but it isn't true. If the road is as smooth as ice (small friction), the car may slip and fail to move forward. Assuming set up a pole on the road and hang a calabash to pull the car with engine off, the more smooth the road is, the smaller the tension is. This proves that the earth is attractive and thus attractive resistance comes into being, which keeps all the objects on the ground stay relatively stationary. To break this stationary balance relationship, it is necessary to work on it and overcome the resistance. The car slips because the friction between tiers and ground is not big enough to overcome the resistance. The pole is supporting when pulling the car. It can move forward as long as the tension is bigger than attractive resistance, friction and air resistance. The attraction of earth (including other celestial bodies) keeps the objects on ground stay relatively stationary and the objects' motion energy must be bigger than attractive resistance, friction and air resistance. The direction of attractive resistance is opposed with that of objects' motion, and its magnitude is proportional to the mass and speed of moving objects. The objects' modes of motion include pull, push, friction and recoil etc. The physicists didn't find the existence of attractive resistance and separate it from frictional resistance and air resistance. The friction is just cutting force from the rocky friction surface and not proportional to weight. It is the attractive resistance that is proportional to weight of objects. Galileo obtained attractive acceleration g through studying attractive free-fall motion affected by gravitation but ignored attractive resistance without studying flat

parabolic motion in a vacuum. With attractive resistance mixed in frictional resistance and air resistance, it's not wrong when calculating the motion of ground objects, but there will be concept and calculation error when it's used to the motion of celestial bodies. This made me question. The attractive resistance should be proportional to the mass of objects. There's a attractive resistance constant f_g , whose value, 1% of mass or 0.2%, should be gained from special experiments. It ought to be a national subject because it's too hard for individuals to conduct this experiment. The attractive resistance is related to motion speed (proportional to) and the influence value of frictional resistance and air resistance should be deducted when calculating attractive resistance according to the formula (2-1-1).

If there's no attractive resistance, objects on the ground can't stay relatively stationary. Even human beings can't survive, because all objects on the ground would be thrown out due to its rotation and revolution. People know that the whole globe couldn't got shined at the same time, so the convection of hot air and cold air gives rise to wind. Wind causes waves (also influenced by human factors, earthquakes and rotation of the earth etc) and air and water would never stop moving without attractive resistance.

In the fourth chapter, I will point out that attraction of the earth is geomagnetic field force. For convenience, we can draw an attraction line--magnetic field line and prove the existence of attractive resistance from two aspects. First: a freefall object must fall vertically along the attraction line without being impressed by an external force and the direction of gravitation must point to the center of the earth. You must impress an external force i.e. the attractive resistance on the freefall object before its landing, if you want to change its landing site. Second: the principle of the generator is that the rotor cutting magnetic field line generates current and the more magnetic field lines the rotor cuts in unit time, the bigger the external force is which drives the rotor. We can know that the higher the motion speed is, the more magnetic field lines the rotor cuts and the bigger the external force would be. It can be concluded: the attractive resistance is proportional to mass and speed of an object but it's in inverse proportion to the distance between ground and the object.

The objects (materials) which can withstand pull (pressure) all have shearing resistance and it's the resistance when cutting materials. Planets have magnetic field lines and attraction force. People can not see the magnetic field line, so it's delayed for a long time and the only result was that Newton discovered the attraction force. In fact, the attraction force is pull force and the objects would cut magnetic field lines, as long as they are in the range of attraction

force. And the shearing resistance is the attractive resistance (Has been prove by experiments). People mixed the attractive resistance in friction and air resistance so that Copernicus and Newton made mistakes of principle. From sensory feeling to logical thinking, people realized that some unseen do exist. For example, people can't see soul, but can you say that soul doesn't exist? But people refused to admit the existence of something invisible and they wouldn't accept the attraction force if they didn't see objects falls down in the air. If Newton also discovered the attractive resistance after the attraction force discovery, he could deny heliocentric theory and avoided proposing the wrong laws of mechanics.

People can apply simple experiments to prove the existence of attractive resistance after learning about its concept. You will find that both attractive resistance and attraction force if you want to distinct the relationship between two objects in relative motion as active movement and passive movement, i.e. the motion of the object with bigger attraction is active movement and the motion of the object with smaller attraction is passive movement. The two experiments as following can prove:

1. Experiment One (Picture 2-1-1)

In the picture: A--- axis; B --- steel plate, It can rotate around the axis A; C - magnets, Place them equidistantly, as shown in the picture;

Experimental procedure:

(1) With no bar magnets, impress an instantaneous force F on B to make B rotate clockwise around A and record the time of B from rotary to stationary.

(2) Place bar magnets for B as shown in picture, then impress an instantaneous force F on B to make B rotate clockwise around A and record the time of B from rotary to stationary.

(3) Increase the distance between magnets and B and then repeat the steps above.

From experiment one, we can know that: with the same force F, both increasing the quantity of magnets and shortening the distance between magnets and steel plate can reduce the steel plate A's rotating speed and time. This proves that attraction and attractive resistance coexist and attractive resistance is proportional to attraction and in inverse proportion to distance.

2. Experiment two (Picture 2-1-2)

In the picture: A — axis, B—A diamond iron sheet that can rotate around the axis A, and its mass is much smaller than that of the magnet; the C— a bar magnet, whose mass is several times the mass of B. Experimental procedure:

(1)When the diamond iron sheet B and the magnet held in hand C stay on the same straight line (the distance is 1 cm), B won't rotate.

(2)When the magnet C is translated slightly, B will rotate and point to the magnet.

Experiment two shows that both attractive resistance and attraction force exist. It also proves that every object has attraction and the attraction of a big object is big, otherwise, it's small. The movement of a small object is active movement relative to that of a big object. The big object has attractive resistance on the small object and the small object has attraction on the big object. The experiment proves that moving objects cut magnetic field lines and the speed gets lower affected by attraction resistance. The movements of all objects on the ground are active objects relative to earth and the earth has attraction resistance on objects. If the earth rotates around the sun, the earth is the active object and the sun has attraction resistance on the earth. Astronomers and physicists never mentioned this, so we can know infer that the earth (planets) doesn't rotate around the sun.

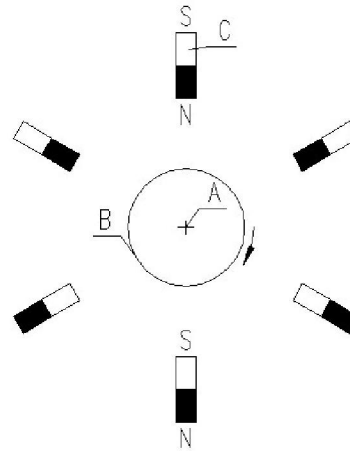


Figure 2-1-1

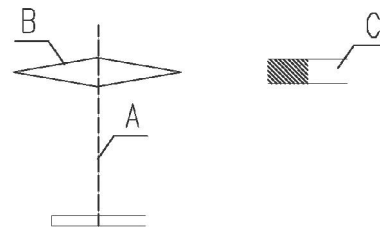


Figure 2-1-2

Thus, people must realize that the direction of attraction is not restricted to be straight, because there will be attraction resistance (shearing resistance), as long as the moving objects cut magnetic field lines of the earth or sun. In the era when people thought planets were stationary or they were not sure that

about the sun's rotation and displacement (revolution), it's lack of factual basis that Copernicus proposed the heliocentric theory and Kepler raised that planets run around the sun on elliptical orbits and the sun is at the focus of all elliptical orbits. These theories need more discussions.

Now, it has been estimated that the volume of the sun is 1.3 million times that of the earth, and its mass is 332958 times that of the earth. We can say that the earth is a tiny planet relative to the sun with weak attraction. If planets rotate around the sun without rotation and displacement and the sun has huge attraction resistance on the moving planets, the planets will run out of their motion energy in order to overcome the sun's attraction resistance and they will gradually stop rotating and revolving. Assuming Kepler thought that planets rotate around the sun on an elliptical orbit which forms due to the sun's displacement, it's false that the sun is at the focus of all elliptical orbits. Sun's rotation and displacement (revolution) give planets attracting motivation to drive them to rotate and revolve. Let's suppose that the relationship between sun and planets is as shown in picture 2-1-3, which can explain why planets rotate and revolve, but the sun and planets' motions are mutual and reversed. However, not all the planets and their satellites move reversely and this also proves that planets don't rotate reversely around the sun and the attraction of all celestial bodies have effective distance instead of being infinite. We only discuss attraction resistance and Newton's three laws of motion, so the modes of planets' movement will be talked about in later chapters.

As long as people accept that attraction and attraction resistance or attracting motivation always coexist, they can realize that objects' movements on the surface of planets or within the gravitational area and in the space are totally different. Newton's three laws of motion don't set the effective range and I think they are only suitable for celestial bodies without influenced by any gravitation. But this is inconsistent with his law of gravitation. In that era, human beings weren't able to go to space and Newton's three laws of motion only can be applied on motions of objects on the ground. Considering attraction of the earth giving rise attraction resistance on the moving objects, the three laws should be changed.

Newton's first law of motion should be rewritten as following: attraction of the earth keeps all objects on the ground stay relatively stationary (stationary inertia). The motion energy of moving objects will be consumed by the earth's attraction resistance till objects stop moving.

Newton's uniform linear motion doesn't exist at

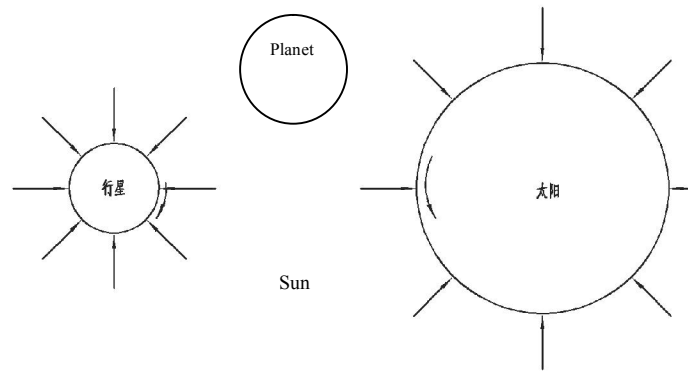


Figure 2-1-3

all on the Earth (celestial bodies). First: the earth and other celestial are all approximate spheres, which mean that all movements on surface of the earth are curvilinear movements only with different curvatures. All the celestial bodies are approximate spheres and they would be huge sphere if their gravitational lines are prolonged. Light is composed of particles which are affected by attraction and reflect curvature of light. There's no real square and rectangle, because they are all approximate. Second: the earth is attractive and has attraction resistance on moving objects and the moving objects have to be ceaselessly impressed by force in order to maintain uniform motion, otherwise, they will stop moving. All moving objects on the earth are in accordance with this rule, but physics covered this substantive issue with friction and attraction resistance, so that people have not realized the existence of attraction resistance till now.

Newton's second law of motion: the acceleration of an object is proportional to the force and in inverse proportion to the mass of the object. Formula:

$$F = ma$$

This law means that: an object gets acceleration only when it's affected by an acting force. The acceleration maintains constant when the force maintains constant; the force changes with time and so does the acceleration. At some point, the force stops and the acceleration also disappears, but the object will remain the motion state of that point due to inertia and won't change.

Newton's second law of motion ($F = ma$) is useless to the earth and celestial bodies with gravitation and it's only suitable for the objects' motion in space without interfered by any gravitation. Objects on the ground are all influenced by the earth's gravitation. According to $F=ma$, the acceleration will be produced as long as you impress a force on the object, but actually it depends on the magnitude of the force. If the force is too small to drive the object move,

how could it produce acceleration? Even maintaining uniform motion, the object still needs a constant acting force. This indicates that the object will gain acceleration only after being impressed on by an acting force (increased force). After gaining acceleration, the object's moving speed will be higher meanwhile it will need bigger force. So the force F has to be bigger and bigger to keep acceleration constant. Therefore, Newton's second law of motion should be rewritten as following: only when the acting force on the object is bigger than the resultant force of uniform motion and uniform accelerated movement, the object will gain uniform accelerated movement. Because acceleration enhances the object's moving speed, F has to be getting bigger and bigger to keep acceleration constant. When the acting force stops, the acceleration will disappear and the object will gain uniform decelerated motion till it stops moving.

$$\text{Formula: } F = m\left(a + \frac{V_t^2}{2\Delta s}\right) \quad (2-1-1)$$

In the formula: F —the acting force at some point, a variable;

m —the mass of the moving object (kg), a constant;

a —the acceleration (m/s^2), a constant;

V_t ...the speed at some point (m/s), a variable;

Δs ---the distance at some point (m);

Newton's third law of motion: the acting force and counter-acting of two objects are always the same in magnitude and opposite in direction, acting on the same straight line.

Newton's third law of motion is limited and doesn't conform to the real situation. First, the object with circular motion still has the force in tangential direction and gravity which are not on the same line, although its centrifugal force and centripetal force are the same in magnitude and opposite in direction. The shot bullet makes parabolic movement and it enters the object along an arc. Although the acting force and counter-acting force maybe not the same in magnitude, they are on the same arc instead of a straight line. Second, we call the objects applying force active force object, which has to overcome the earth's attraction, friction and air resistance, but the stressed object has support of static attraction, static friction and air resistance. So active force is bigger than passive force and this has been proved in production. For example, a motor with work load stops working and restarting it will need much bigger power comparing with the normal one. Thus, Newton's third law of motion should be rewritten as following: the active acting force is always bigger than the passive counter-acting force and they may not be on the same straight line (There are only arcs on the earth.) The experiment

also proves that the acting force and the counter-acting force are not the same in magnitude, but the acting force is bigger than the counter-acting force.

For three centuries, astronomers and physicists did not question Newton's three laws of motion at all. The first reason: they mixed up the motions of objects on the earth and the celestial bodies and Newton put forward the same wrong view, which made that the attraction was covered in friction resistance and air resistance. The second reason: the experiments of Newton's laws were carried on the earth and it's applicable for the objects on the earth. If the Newton's laws are applied on movements of celestial bodies, we will find that it's very different from them on movement of objects on the earth. The author is not negative or overthrow Newton's I'm not denying or overthrowing Newton's laws, but questioning and proposing some different views for the experts to identify right and wrong, and correct and improve them.

Section 2 Can the law of gravity explain why planets move around the sun

At the end of 16th century, people denied geocentric theory and started to accept Copernicus' heliocentric theory. At first, German astronomer Kepler (1571 - 1630) also thought planets do uniform circular motion around , when he studied his mentor--Danish astronomer Tycho's (1546~1601) 20-year record on planetary position data, but got a different result which had an angle error of 8 ' at least with Tycho's. At that time, people all believed that Tycho's measurement error was unlikely to be more than 2 ', and maybe they felt that this significant 8 ' was caused by planets' uniform circular motion around the sun. So far Kepler was the first person to question the theory—celestial bodies do uniform circular motion, which had been taken as a truth by people for a long time. Later, Kepler carefully studied Tycho's observational data again, successively denied 19 assumptions during 4-year of painstaking calculation, and finally he discovered that: all the planets move around along elliptical trajectories and the sun is at one focus of all the elliptical trajectories. This is Kepler's first law.

Then people considered that Kepler's exact description about planetary motion provided a foundation for studying planetary motion, clarified people's mysterious and vague understanding on celestial movement over the years, and also promoted the celestial science research. But I think there's also something wrong with Kepler's first law. First, Kepler assumed that planetary orbits were elliptical in order to match the calculating result with Tycho's observational data, so this was only a number game lack of evidence and couldn't be taken as true. Second, It's also an assumption that the sun is at one focus of

all the elliptical trajectories and not convincing. Third, Kepler didn't have basis on why planets move around the sun and how planets' revolution (displacement) speed comes into being. The law of gravity didn't exist at that time because Newton hadn't been born, and even the law of gravity solved the problem of planets moving around the sun, but it can't explain planets' rotations and their revolution (displacement) speed which is tens of times higher than equatorial line speed. Even the law of gravity can sort of explain planets moving around stars, but no one has proved that planets and the sun are attractive to each other. So we can see that Kepler's first law is not so trustable. Celestial bodies doing uniform circular motion is correct, but elliptical orbits are wrong, thus, Copernicus and Kepler made huge mistakes. The following was scientists' guess on planets moving around stars, before Newton issued the law of gravity.

Many scientists had considered why planets move around the sun. Galileo thought that all objects tended to merge which led to an object's circular motion; Kepler deemed that planets moving around the sun must be influenced by similar magnetic force from the sun; French physicist Descartes considered there's rotating substance (ether) acting on planets, which caused planets moving around the sun. Some Newton's contemporary scientists like Hooke, Halley and so on had further realization on this problem. Hooker and some people thought that the sun's gravitation drove planets move around it and even proved that if the planet's orbit is circular, the magnitude of its acting gravitation was inversely proportional to the square of the distance between it and the sun. But they can not prove if the orbit was elliptical, the gravitation still follow the same rules, and also failed to prove the general law of gravity, both with superstitious conjecture. So these guess was all superstitious.

From the above examples, we can know that there are lots of assumed conclusions. The modern astronomers' thoughts have been constrained by traditional theories and they dare not question predecessors' conclusions i.e. the law of gravity; the planets move around the sun; the planets' orbits are elliptical; the sun is at one focus of all the elliptical trajectories. Scientists understand that their predecessors dared to propose conclusions and were far-fetched to justify themselves. Why do we have to protect our predecessors' assumptions to lead the research work into a dead end, and can't we put forward our own assumptions? I think modern people also can assume that planets have other moving modes and then use modern technology to prove them. The assumption that the sun can rotate (has been proved), which means there's a displacement, can deny both that the sun is at one focus of all the elliptical

trajectories and that a planet's perihelion and aphelion (two segments) are not necessarily on a straight line, or even a polygonal line, which can not constitute the major axis of the elliptical orbit. Human understanding of celestial movement is progressive, which means that previous research work is the basis of future research and we have to repeat the previous work without predecessors' research. So the improvement and development of each discipline is completed by people of generation after generation. But we shouldn't be superstitious to the descendants' work, and let Copernicus, Kepler and Newton mess up celestial movement. We should utilize modern technology to test and examine, and this is a scientific attitude.

Newton followed the theory that planets move around the sun along elliptical orbits, and with his extraordinary mathematical ability and based on previous studies, in 1687 published the law of gravity: any two objects in nature are attracted to each other, and the magnitude of the gravitation is proportional to the product of the two objects' masses, but inversely proportional to the square of distance between them. If m_1 and m_2 demonstrate the masses of two objects, r means their distance, then the law of gravity can be expressed by the following:

$$F = G \frac{m_1 m_2}{r^2} \quad (2-2-1)$$

In the formula: the unit of mass is kg, the unit of distance is m, the force's unit is N, and G is a constant, suitable for any two objects, which is numerically equal to the mutual acting force of two objects with individual mass of 1kg and the distance of 1m between them.

People all identified the law of gravity, but I have a different view i.e. since any two objects in nature are attracted to each other, the gravitational formula couldn't be right, because in the formula, m_1 and m_2 are attracted by countless m , and the existence of outside attraction would impact the mutual attraction between m_1 and m_2 . I believe that any object in nature is attractive and the attraction between any two objects subject to their distance, and when the distance exceeds the allowable value, two objects can't be attracted to each other. So the gravitational formula only applies exceptional circumstances, otherwise, the existence of countless m will make the formula an endless system combination, and who is able to calculate the mutual attraction between two objects?

Although Newton discovered the law of gravity, and on the surface solved the scientists' query about the planets moving around the sun, but did not give a gravitational constant. This is because the general attraction between objects too small to be displayed through experimental methods. It had been more than

one hundred years since Newton discovered the law of gravity, and the British physicist Cavendish worked out the gravitational constant $G=6.67 \times 10^{-11} \text{N} \cdot \text{m}^2/\text{kg}^2$ through experimental methods. Although scientists all directly use this number, I think that the gravitational constant is too large by 20% to 30%, because Cavendish's experiment is affected by the earth's magnetic field, and not suitable for calculating celestial masses and the mutual attraction between two celestial bodies (Later, there's seminar on questioning Cavendish's experiment.). Especially celestial rotation and revolution problems haven't been resolved and we should not deify the law of gravity.

I suspect the gravitational constant G 's value is too large and I can easily cite two cases to prove that. Case 1, scientists figured out the mass of the earth is $5.9742 \times 10^{24} \text{kg}$ and the average density is $5.5153 \text{t}/\text{m}^3$, according to the law of gravity and Cavendish's gravitational constant G . People on the earth know that the density of metal ores does not exceed $3 \text{t}/\text{m}^3$ and the density of rocks formed by volcanic magma is also less than $3 \text{t}/\text{m}^3$. Scientists explained that the earth's high density is caused by its interior high pressure, the mantle's density reaches up to $3.9 \sim 5.9 \text{t}/\text{m}^3$, and the core's density even reaches $9.4 \sim 11.5 \text{t}/\text{m}^3$. We know that high pressure can increase the density of material, but the core turns to liquid state due to high temperature and pressure. According to thermal expansion and contraction and incompressibility of liquid, expansion and compression may cancel each other out. The relationship of crust, mantle and core is wrapping and expansion, so the gravity of the crust and mantle of gravity may not act on the nuclear bulge. It's not convincing that the core's density even reaches $9.4 \sim 11.5 \text{t}/\text{m}^3$. I believe that this high density theory stems from the large value of gravitational constant G , and estimate the average density of the earth is around $3.5 \sim 4.2 \text{t}/\text{m}^3$. Case two, a vessel (100t including its own weight) moors in the lake with the assumption that there's no wind and the lake is calm, and now the vessel's gravity is equal to the buoyancy. If a person pulls the vessel with a force of 50kg which is only one in two thousand of the vessel's weight, and the tension has to overcome the attraction resistance from the vessel cutting the earth's magnetic field lines to, adhesive force between water and the vessel, and the air resistance. Page 107 of high school textbook "Physics" says that the attraction between the sun and the earth is about $3.56 \times 10^{22} \text{N}$, which can pull off a steel column with the diameter of 9000km (I checked the calculated results and it's right). The known Earth's mass is $5.9742 \times 10^{24} \text{kg}$, and the attraction of the sun on the earth is 1/1700 of the earth's mass. Comparing the vessel mooring in the lake, the sun and the earth in space have mass but no weight, and also lack of the adhesive force of water and air resistance.

Comparing tension with mass, the sun's attraction on the earth is bigger than the person's tension on the vessel, and the attraction between the sun and the earth is about $3.56 \times 10^{22} \text{N}$, which means the earth's projection plane owns 2840kg tension per square centimeter. According to $F=ma$, not only the earth will gain acceleration and fly towards the sun (get closer to each other) and merge together with the sun, but also and all the objects on the ground will fly to the sun, and can't not stay on the earth. Newton explained that the earth did not fly to the sun due to its revolution speed of $29.8 \text{km}/\text{s}$, but we know that the earth's revolution speed is based on Kepler's assumption of elliptical orbits, which also has not been proved and not credible.

I think there are two reasons why these unreasonable phenomena appear. First is: the large gravitational constant leads to a large value of the attraction between the sun and the earth. Second is: the gravitation has a distance limit, which means that two infinitely distant objects can not attract each other, and even the sun has no attraction on the earth. Facts have proved that, in July 17th, 1975 American "Apollo" spacecraft connected with the Soviet Union's "Soyuz", and Colonel Leonov and General Stafford shook hands in the high space which is 140 miles (225.31km) the ground away from the ground. They had lost weight, walking out of the spacecrafts without gaining forward speed, and the earth's gravitation did not suck them back to the earth. A person's mass is much bigger than that of an apple and people can not be sucked back to the earth. Not to mention that the earth has lost its attraction when people are 140 miles away from the ground, at least it proves that the earth's attraction weakens with distance. People know that the internal force of each cross-section of a rope is 10kg when it hangs an object with 10kg weight. We have known that the sun's attraction on half of the earth's sphere is $3.56 \times 10^{22} \text{N}$ and the attraction of each within 150 million km, the distance from the earth to the sun, should also be $3.56 \times 10^{22} \text{N}$. The satellite moves around the earth. When it passes by the earth facing to the sun, it will be affected by the sun's attraction (cutting gravitation lines), but when it passes by the earth not facing to the sun, then it won't be interfered by the attraction. This inevitably affects the satellite's moving trajectory. However, the relative material never introduced such differences and whether it confirmed the sun's gravitation on the earth does not exist? The speed of launching satellites is higher than $11.2 \text{km}/\text{s}$, and the height may exceed twenty thousand km from the ground. In that situation, the satellites can fly out of the earth, which indicates that the earth's gravitational distance is less than thirty thousand km, and the gravitation gets weaken with distance. The sun's mass is thirty times bigger than

that of the earth, from which we can guess the sun's gravitational distance is less than one million km. The sun is 150 million km away from the earth, which means that it is not able to attract the earth, and even not attractive to the nearest Mercury is also unattractive. Thus, human beings should rediscover and study celestial movements.

Section 3 The Earth Does Circular Motion outside the Sun's Trajectory

I drew conclusions that there is resistance as long as two objects attract each other, and attracting motivation and mutual attraction have distance limitations. I also think Kepler's first law was inferred to be in accordance with and based on Tycho's observational data and he assumed that planets move around the sun along elliptical orbits and the sun is at one focus of the ellipse orbits, which is lack of factual basis. First, the law of gravity had not appeared yet and planets moving around the sun is entirely a kind of guess; second, the assumption that the sun is at one focus of all elliptical orbits, denied the possibility of the sun's rotation and displacement; third, only God knows whether it's right that the earth's average revolution speed is 29.8km / s (possibly wrong). Astronomers and physicists confirmed the planet's revolution speed before clarifying the sun's rotation and revolution and without precise measurements and calculations, which seemed not rigorous. The sun is the most important celestial body in the solar system, and it is really unbelievable determine the celestial movement based on observations on a moving point (the earth) before learning about it exactly.

I believe that the sun does not rotate, because its attraction will prevent the planet's rotation and revolution. If only the sun rotates, its attraction will drive planet to rotate and revolute reversely, and its moving speed will be inversely proportional to the planet's mass and its distance from the sun. The distance between the earth and the sun is sometimes long and sometimes short, but the earth's rotation is uniform and constant, which can prove that the earth is too far away from the sun and there's no mutual attraction, so the earth's rotation and displacement (revolution) is formed due to itself. We also know that there are three different points between carrying the experiment of the object's circular motion in the laboratory and celestial circular (oval) motion. (1)The circular motion in the laboratory has a draw cord which balances the centrifugal force, so that the object will fly out in the tangential direction; While the celestial elliptical motion has no cord and they don't get close to each other due to gravitation. Newton explained that celestial revolution speed had played a balancing role, but it's unconvincing without simulation experiment to prove it. (2) The objects in the laboratory have both mass and weight, but the

celestial bodies only have mass, without weight, friction and air resistance. (3) The object in the laboratory doesn't rotate, but the celestial body has rotation. These are the three clear different points between them, which can not be integrated and unified.

Scientists applied the centripetal force formula ($F = m \frac{v^2}{r}$) through experiments to celestial motion without studying these differences, and this is lack of theoretical and factual basis. The fact that people go into space when they are more than 200 km away from the ground, proves that the mutual attraction has distance limitation, so we should correct the gravitational constant G , and figure out the object's gravitational attenuation constant e . Therefore, the formula of the law of gravitation should be amended as following:

$$F = (G - re) \frac{m_1 m_2}{r^2} \quad (2-3-1)$$

When re equals G , the mutual gravitational force between two objects is zero.

Since the sun has no mutual attraction on distant planets, and planets don't move around the sun, so will the earth (planet) have other modes of motion? I believe that all celestial bodies rotate, which cause their own displacements, i.e. the celestial bodies themselves do circular motions. Therefore, I think the earth (planet) can be do circular motion the sun's rotation trajectory, and there are seven kinds of natural phenomena can prove that.

1. According to what Kepler said, the earth does elliptical motion around the sun, and its revolution speed reaches 29.8km / s. From launching satellites we can know that, the cosmic speed, $V_1 = 7.9\text{km} / \text{s}$, $V_2 = 11.2\text{km} / \text{s}$, $V_3 = 16.7\text{km} / \text{s}$. If the speed of a satellite is higher than V_3 , it will fly out of the solar system. Now the earth's revolution speed, 29.8km / s, much higher than V_3 , why the earth is still moving around the sun and not flying out of the solar system? This proves that the earth's revolution speed is fictional, which does not fit the actual situation, mainly because the assuming elliptical orbit is too large. If the earth does circular motion outside the sun's orbit, the diameter will be greatly reduced and the displacement (revolution) speed will be much smaller than the equatorial line speed of its rotation, so it's impossible to be questioned that the earth flies out of solar system.

2. The earth moves around the sun along an elliptical orbit. The gravitation which acts on objects during the day is the difference between the earth's gravitation and the sun's gravitation,

and at night it's the sum of the earth's gravitation and the sun's gravitation. The object's weight is different at noon and midnight, with a difference of at least 1/1000. For thousands of years, no one mentioned this difference of the object's weight, which proves both that the earth doesn't move around the sun and there is no mutual attraction between the earth and the sun.

3. If the earth moves around the sun, it's surprising that, in December i.e. the northern hemisphere is in winter, the earth is closest to the sun. As for this anomalous situation, scientists explained that, in December, the earth's North Pole tilts towards the direction away from the sun, so the sun shines on the northern hemisphere at a certain angle; while in June, the northern hemisphere tilts towards the direction facing the sun, the sun shines on the earth more directly. The four seasons are mainly caused by tilt of the earth's axis instead of the change of distance from the sun. But I do not agree with this interpretation, and I think that it is the change of distance between the earth and the sun. The average distance between Venus and the sun is about 100000821km and the average temperature of the surface of Venus is about 270 °C. The average distance between the earth and the sun is approximately 149,600,000 km, the average temperature of surface is about 25 °C. It can be inferred that the temperature decreases by about 0.0592 °C when it gets every 10000 km away from the sun. The distance between the earth's aphelion and perihelion is 5 million km, and the temperature difference is 29.6 °C, which is in accordance with the average temperature difference between summer and winter. We don't rule out impact of the earth's axis tilt, but its impact is weaker than distance. This proves only the theory that the earth does circular motion outside the sun's orbit can explain the formation of four seasons more reasonably, i.e. it's summer when the earth is at perihelion, and it's winter when at aphelion, and it's spring or autumn when at both sides. Thus also proves that the earth does not move around the sun.

4. If all the planets move around the sun, people on the earth shouldn't only see one moon throughout a year. For example, when Mercury, Venus and Mars are close to the earth, in the evening, people are supposed to see the reflected sunlight and sometimes there should be two even more moons in the sky. In fact, people on the earth never see this kind of phenomenon, which also proves that planets do not move around the sun.

5. When launching spacecraft, astronauts have gone into space at the height of 225.31km, and this indicates that the earth's attraction on astronauts is very weak and celestial attraction is fading from with increasing distance. Therefore, gravitation can not explain planets moving around the sun. People should not be confined to the sun moving around the earth or the earth moving around the sun, and can imagine a variety of possibilities, of which maybe the earth (planet) doing circular motion outside the sun's orbit is realistic.

6. I agree that each object has attraction (will be described later) and the attraction distance is limited, which means the mutual attraction between two objects are also restricted by distance. The energized highline can generate electromagnetic.

People will be shot dead by current within the electromagnetic field, but people and livestock are all safe out of the electromagnetic field. Electromagnets can suck up the iron, but when the distance between them exceeds a certain value, it won't happen. This proves that gravitation has distance limitation. There's neither magnetic force nor air resistance in space. If any two celestial bodies attract each other no matter how far they are away from, according the theory that any celestial body is affected by gravitation from all sides, the movement of celestial bodies can only be a Brownian motion, which has no rule at all. The reality is that any celestial body's motion is a regular and circular, so it's right that planets do circular motions outside the sun's orbit.

7. In earthmen's eyes, the night scene in the sly in four seasons is almost the same, i.e.

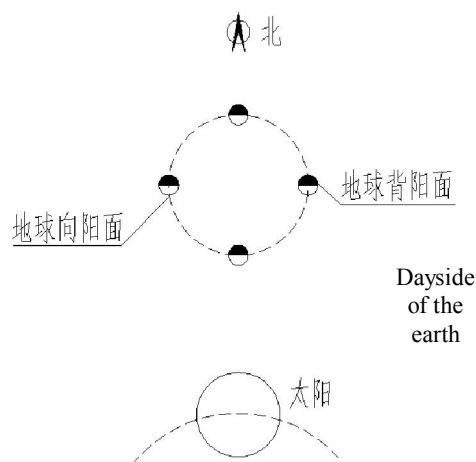


Figure 2-3-1

Polaris and many constellations basically don't move at all. This also proves that which also proved that the earth does circular motion outside the sun's orbit (Picture 2-3 - 1), so people can only see a half of the sky and half of planets of the solar system haven't been discovered. If the earth moves around the sun, people should see different astronomical phenomena in different seasons, especially in winter and summer. Now people only know that we only see one side of the moon, but still do not know we only see half of the sky.

Some experts do not agree with my view and they think that the earthmen can see Polaris and several constellations at any night, because they are very far away from the earth, and it seems like that they don't move at all. I consider that this explanation is fallacious. Due to the displacement of the earth, people are able to see the significant position changes of the near stars and tiny position changes of the distant stars, but they must be in the same direction. If people face to the opposite directions, they can not see them. In spring and autumn, summer and winter, people are back to back looking at Polaris and constellations, how could see them substantially in the same orientation in the evening at the same time?

Let's accordingly contract the distance between people and the sun, and the distance between people and Polaris. So the distance between people and the sun, 150 million km is contracted to 3m, and the distance between the earth and Polaris, about 400 light years, should be equivalent with 7562 km. Physicists didn't figured out irradiation distance of sunlight. Assuming that the sun can irradiate to Pluto (even beyond it), a huge light ball with the sun as the center, and a radius of 5.9 billion km, will block people's sight during the day. According to Copernicus' theory of the earth moving around the sun, when the earth moves to the north of the sun, people can see Polaris and related constellations, but when the earth is in the south of the sun, people can not see Polaris because of both the opposite direction and the sun light blocking outside the earth's shadow. Even during the day, people's eyes can not see through the sunlight ball with a radius of 5.9 billion, so they can not see Polaris.

The distance between people and the sun is contracted to 3m, and then the radius of the sunlight ball should be 118m. There is a big light ball with the radius of 118m in front of people, only 3m away. The bright light blocks people's sight, so how could people see distant objects in front of them through the light ball? If the earth moves around the sun, during a year there should be at least more than 180 nights when people can not see Polaris and related constellations. Therefore the theory is not right. According to the above analysis, only the theory that earth does circular

motion at one side of the sun, can explain that people can see Polaris and other constellations at any clear night. This is a very easy way to prove that the earth does not move around the sun, but it's unacceptable for some experts who claim that Polaris is too far away from the earth and the celestial bodies have spatial structures. This shows it's very hard to get out after a person falls into superstition.

There are still lots of examples proving that the earth doesn't move around the sun, as long as people can break the convention to get to know the solar system. In order to save space, here I will leave those examples for people to think about. To accept a new concept, first people have to break the old concept; otherwise, they will repel new things. Since planets don't move around the sun, how could the trajectories of planets be round? I believe that a planet doing circular motion is mainly caused by its uniform rotation motion. At that time, I did not find reasons of planets' rotations and also did not believe what Newton said that god pushes the earth forward, so I have to look for reasons in the celestial bodies themselves. Now I have found it which will be described in chapters 4 and 5. The planets and the sun all have rotational displacement and circular tracks, so each planet has its longest and shortest distance from the sun. People mistakenly think that the longest distance is the major semi-axis of the elliptical trajectory long and the shortest is the minor semi-axis. Thus the fallacy generated.

In daily life, people can see the athletes serve a high-speed rotating table tennis, and the ball's trajectory is not a pure parabola, but a spiral parabola. An athlete rotates his body to throw the discus, and the discus' rotation trajectory is also not a pure parabola. If we project its trajectory on the plane, it will be presented curved. Like children playing gyroscope, as long as the ground is smooth without obvious irregularities, the gyroscope will produce the arc trajectory of displacement when it rotates fast. Because the existence of gravity, attraction, friction and air resistance on the earth, the object can not sustain its uniform rotation movement for a long time, so people can not see the continuous circular trajectory of the rotating object. Now there is a kind of toy gyroscope, it can automatically rotate without whipping after winding up like an alarm clock. We called it mechanical gyroscope. The mechanical gyroscope can keep rotating for about one minute on a smooth surface. Although the gyroscope's rotation on the ground is different with the motion of celestial bodies, we can grasp the principal contradiction to solve problems. The experiment shows that when the gyroscope rotates fast and the axis tilts, the diameter of the gyroscope's rotation displacement is big (about 15 ~ 25cm); When the gyroscope rotates at the same

speed and the axis does not tilt, the diameter of circular displacement is small (about 5 ~ 10cm). This proves that it will generate bigger circular displacement motion when the axis of the rotating celestial body tilts and the rotating celestial body also can do circular motion without axis tilting and having gravitation as centripetal force. This also indicates that centripetal force is from the celestial body's rotation and axis' tilting. Facts prove that the gyroscope's displacement speed is always smaller than the equatorial linear speed of its rotation, no matter how the gyroscope moves. Copernicus said that the earth (planets) moves around the sun, and Kepler assumed that planets move around the sun along and the sun is at one focus of all elliptical orbits. These are all nonsense and not correct. Because the planet's revolution (displacement) speed based on the elliptical orbit, is far higher than equatorial linear speed of the celestial rotation, which is opposite to the gyroscope case. We can personally see the real situation of the gyroscope's rotation, but no one ever saw the whole circular motion of planets moving around the sun. We must not deny the fact but believe the assumptions, entering spiritualism from materialist. Since the revolution speed of the planet is wrong, and then the heliocentric theory and Kepler's first law are unbelievable, and the law of gravity also needs to be amended. Celestial rotation does not have any weight and resistance (excluding the gravity), and it can maintain uniform rotation, so the trajectory is circular. But where is the centripetal force of celestial circular motion from? Celestial axis tilting or its own rotation all gain centripetal force, because celestial rotation can produce centripetal force, which has been proved by the gyroscope's rotation. Thus the centripetal force is not from the mutual attraction between two celestial bodies.

Since we can find the relationship between equatorial linear speed and displacement speed of the celestial uniform rotation, and know its displacement (revolution) time, so we are able to figure out the diameter of the celestial circular trajectory. It's unnecessary to assume the celestial revolution trajectory like Kepler did. Kepler groundlessly took the distance sum of planetary perihelion and aphelion as the sum of the major axis of the elliptical trajectory, and used the elliptical perimeter to divide by the cycle time to get the revolution speed of earth-like planets, which is much greater than the third cosmic speed, and the revolution speed of Jovian planets, which is far less than the third cosmic speed. This is really confusing. In fact, the planets and the sun have different displacement cycle time, and the semi-major axis and the semi-minor axis are not on the same straight line at all, which can't constitute the major axis of the elliptical trajectory. I believe that the

reasons why there is such a contradiction are as following: first, planets moving around the sun and the elliptical orbits are all assumptions; second it's not realistic to assume that the sun is on a focus and does not move. Assuming that the sun can rotate (has been proved), this must be able to generate a large trajectory, and there are three cases about the celestial motion in the solar system:

1. Assuming the sun's circular trajectory due to its rotation is so large that it can surround the displacement trajectories of planetary motions, the sun will move around the planets, i.e. the sun moves around the earth. Because the distance between all planets and the sun are longer than the diameter of the sun's circular displacement, this case is impossible.

2. If the equatorial linear speed of the sun's rotation is small, so is the circular trajectory of its displacement, and the planets' trajectories will surround the sun's, which means the planets move around the sun. This is in consistence with Copernican theory, and also accepted by the astronomer and physicists after Copernicus. But I doubt that. Kepler just assumed that the sun is statistic, which is actually not true, and it's only a speculation from the planets moving around the sun to take the distance sum of planetary perihelion and aphelion as the sum of the major axis of the elliptical trajectory. As the sun itself has a circular motion, this assumption is wrong. The semi-major axis and the semi-minor axis are hardly on the same straight line (sometimes it's only a coincidence), and in many cases, they form a broken line, or even intersect. It also can not explain why the revolution speed of earth-like planets is much greater than the third cosmic speed, and the revolution speed of Jovian planets is far less than the third cosmic speed. In a word, this kind of movement mode is false.

3. Assuming that the planets do circular motions outside the sun's movement trajectory, we can know why the perihelion and the aphelion are not on the same straight line, the rationality of the satellite's cosmic speed and why the astronauts have gone when they are hundreds of km away from the earth. It can explain the celestial movements and geophysical phenomena more reasonably. So the third movement mode is reasonable.

All the planets' equatorial sections and the sun's equatorial section are not on the same plane (ecliptic pane), and they are all different in angles, rotations and locations. It is difficult to obtain accurate data for stargazing staff to observe celestial bodies on a moving point (on the earth) without fixed coordinates in the universe. When observing a star, two points make a straight line and we can see the line segment change; when simultaneously observing two stars, thee points constitute a surface; while observing many stars at the same, they will make a spatial structure,

which is changing at every moment. To make planets moving model of the solar system, first, we need a reliable cosmic entity coordinates; second, we have to know the exact date of the sun's rotation and displacement. Otherwise, the established model based on observational data is only an approximate analog model, has no meaning at all.

Galileo thought that the sun rotates around its axis once every one month before humans mastering the sun's rotation speed and displacement trajectory. But he did not know that the sun's rotation is not like the as solid ball's, and the gas on its surface can flow, so the surface of the gas can flow, the sun's rotation period is completely a kind of imagination and speculation. Now people consider that the sun's rotation period is 24.6 days at the equator, 27.5 days at latitude 40°, and in the polar region it increases to 34 (35) days, which is calculated based on the sunspots of the sun's surface and not so accurate. It will be more uncertain if the gas of the sun's surface flows due to burning and nuclear fusion. Therefore, it's like a fairy tale to confirm the sun's rotation period.

Section 4 Estimate the Earth's (planets) Displacement Speed and Put Forward that the Moon doesn't Move around the Earth

Many people believe that modern science and technology is quite developed, such as astronomers can predict astronomical phenomena, and the spacecraft has landed on the moon, what issues are still doubtful? I think the accurate astronomical prediction, is mainly because we have mastered the laws of celestial movement, after several thousands of years observations and records. Thousands of years ago, we did not know the earth is round and the celestial movement, but we were able to create lunar calendar and predict eclipse and lunar eclipse. Two hundred years ago, there's no math, physics and chemistry courses in China's education courses, and no one can explain mechanics and optics, but the acrobats could take advantage of mechanics, and magicians could do magic using optics. The spacecraft launching and landing on the moon, mainly utilize use measurement and geometric knowledge. Scientists calculated the time required according to the spacecraft's speed and the distance to the moon, and then they calculated the distance of the moon's displacement (considering the earth's rotation). They launched the spacecraft towards the direction of chord line, so the spacecraft can land on the moon. Facts prove that in the age of lagging science and technology, experience and theories always come after assumptions, explorations and practice.

When human can firstly get theories and then use theories to guide practice, that will be is the big leap of science and technology. Before breaking all mysteries of Humans the universe and life, People

should look back and study the previous hypothesis, but not worship them blindly, which is the real scientific attitude.

I have already described several reasons why the earth (planet) does not move around the sun. The fact that astronauts lose weight when they are hundreds of km away from the ground indicates that the sun can't make the planets move around it which are tens of millions, ten thousands of million, even five billion km away from it through attraction. We can deny the planets moving around the sun and its elliptical orbit, but we can not deny the distance between the planet's perihelion and aphelion, which is gained through measurement and trustable. No matter where a planet is, the sun and it always constitute a straight line. As the planets and the sun are always displacing (revolution), it will be only a coincidence that the semi-major axis and the semi-minor axis are on the same straight line and usually they make a polygonal line. People live on the earth and do not doubt the equatorial linear speed of the earth rotation. The earth's equatorial radius is 6378.137km and its rotation period is 23 hours, 56 minutes and 4 seconds, we can get the earth's equatorial linear speed is 0.46511km / s.

Comparing with the earth, we know even less and only can believe the distance between their perihelion and aphelion (there are three planets and even this is also unknown). Their rotation speed is from earthmen's remote observing, and there must be errors in it. We have not only the equatorial linear speed of the earth rotation, but also the moon as evidence (there are some known data of the moon), so first we can try calculating the displacement speed of the earth, and then calculate the other planets' rotation speeds and displacement (revolution) speeds.

1. Calculate the displacement speed of the earth (V_d) according to Kepler's theory that the sun is statistic.

Assuming that the sun does not move and the earth does a circular motion outside the sun, and then

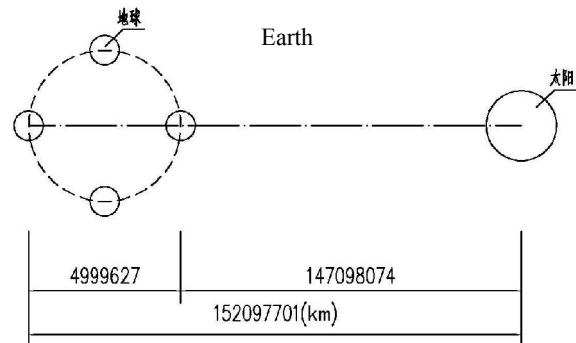


Figure 2-4-1

the diameter of the circular trajectory should be the difference of the aphelion distance and the perihelion distance. We know the earth's aphelion distance is 152097701 km, perihelion distance is 147098074 km, and the diameter of the circular trajectory is 4999627km. We also known its circular motion period is 365.2564 days, and need to find out the earth's displacement speed with the figure 2-4-1. According to the known conditions to calculate:

$$V_d = 4999627\pi / 365.2564 \times 24 \times 3600$$

$$= 0.49771 \text{ (km/s)} > V_1 = 0.46511 \text{ km/s}$$

i.e. $V_d > V_1$.

Based on the relationship between the displacement speed and linear speed of the mechanical gyroscope rotation, we can know that it's unreasonable that the earth's displacement speed is higher than its linear speed. This proves that it's too big to take the difference of the aphelion distance and the perihelion distance as the diameter of the circular trajectory, so the sun is not statistic, and it also has displacement and rotation just like the earth. If the semi-major axis and the semi-minor axis are on the same straight line, the sum of the earth's circular motion diameter and the sun's circular motion diameter is 4999627km. But the probability is too small to be considered.

2. Calculate the earth's displacement speed with the known data of the moon

It is estimated that the effective distance of its attraction is about thirty thousand km, and we can see that its attraction is not big enough to make the moon move around it, so the fact is that the earth's displacement (circumference) surrounds the lunar displacement trajectory (circumference). They move dependently and freely, and don't interfere with each other. As for the traditional concept of the moon moving around the earth, there are three suspicious aspects.

① The moon moves around the earth, and the moon's displacement trajectory is larger than the earth's, i.e. when the earth finishes one circle displacement, the moon has moves around the earth for more than 13 circles, which means the moon's unit function is bigger than the earth's. The fact is that the moon's rotation is slow and it's impossible to generate a displacement (revolution) speed higher than the earth's.

② We never saw introduction of the moon in the known material and also don't know the appearing frequency of the moon's near-earth distance and far-earth distance. If it does not move around the earth, the frequency is once or several times a year but if it moves around the earth, the frequency is once a month. I didn't see any related data and report.

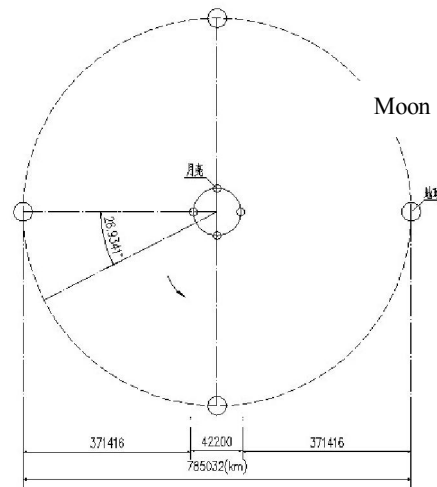


Figure 2-4-2

In the figure

$$42200\text{km} = (405500 - 363300)\text{km}$$

$$371416 = (405500 - 42200 + 6378 + 1738)\text{km}$$

$$\text{Or} = (363300 + 6378 + 1738) \text{ km}$$

③ The moon moves around the earth, there should one solar eclipse and one eclipse in every month, but the fact is not like that. This proves that the moon does not move around the earth. The known information of the moon: near-earth distance is 363300km, far-earth distance is 405500km, and rotation period is 27.32 days. As it did not explain the Earth-Moon distance is the distance between axes or between the spherical surfaces, so we take it as the spherical distance, which means we have to add the earth's equatorial radius of 6378km and the lunar equatorial radius of 1738km to the near-earth distance and the far-earth distance. The diameter of the moon's circular motion trajectory is about 42200km and we can work out the figure 2-4-2 of the moon-earth relationship based on the known conditions. We also know the period of the earth's displacement is 365.2564 days and the moon's is 27.32 days, which means the moon will moves 13.36596 circles around the earth during one earth year, i.e. there should be 13.4 lunar months, while the actual number is 12.3, and there is a leap month every three years. This proves that the moon does not move around the earth and the earth's displacement trajectory

surrounds the moon's displacement trajectory, so their displacements are towards the same direction, which deducts a month. In lunar calendar it's not 27 days or 28 days in one month, but 29 days or 30 days a month, which is also due to their homodromous displacements. Therefore, we can know that when the moon moves a circle, the earth only moves 26.9341 degrees ($360^\circ / 13.36596$).

From the figure, we know that in an earth year, due to the earth and the moon have different circular motion period, so the moon maybe only has one far-earth point and one near-earth point. Such is the fact. It's unquestionable that the earth's displacement trajectory surrounds the moon's displacement trajectory.

The diameter of the earth's displacement is 785032km (Figure 2-4-2). The displacement period is 365.2564 days. So we can calculate the displacement (revolution) speed V_d of the earth by the following formula:

$$V_d = 785032\pi / (365.2564 \times 24 \times 3600) = 0.07815 \text{ (km / s)}$$

Previously we have calculated $V_d = 0.49771 \text{ km / s}$ with the difference of the aphelion distance and the perihelion distance as the diameter of the circular trajectory. So $V_d / V'_d = 0.49771 / 0.07815 \approx 6.37$ (times).

According to Kepler's elliptical displacement orbit the earth to calculate the revolution speed $V_r = 29.8 \text{ km / s}$, then

$$V_r / V'_d = 29.8 / 0.07815 \approx 381.318 \text{ (times)}$$

Thus, different ways of thinking will lead to quite different results. Only facts can tell which one is right and which one is wrong.

The sun's displacement speed is hard to calculate.

If the earth and the sun's aphelion distance and perihelion distance are on the same straight line, and they have the same period of the circular motion, and we know the difference between them is 4999627km, the diameter of the earth's circular displacement is about 785032km, so the difference between them is the diameter of the sun's circular displacement, 4214595km. But this hypothesis is false, there are three reasons: (1) It's even impossible that the earth's aphelion distance and perihelion distance are on the same straight line; (2) The sun's and the earth's the circular motion periods are different, so the diameter of the sun's circular motion maybe smaller or larger than 4214595km; (3) Without knowing the sun's rotation period and the circular motion period, it is difficult to obtain similar results.

Assuming that the earth's and the sun's circular motion periods are the same, the displacement speed

of the sun V_{ds} :

$$V_{ds} = 4214595\pi / (365.2564 \times 24 \times 3600) \approx 0.41956 \text{ (km/s)}$$

This situation almost doesn't exist and the above calculating result is only a game.

Some people would propose that: now we already know the sun's revolution speed around the galaxy center is 250km / s, and the period is about 250 million years. These two results came from the speculation of centric theory, which is contrary to the new idea of celestial movement. No one will believe or accept it. As the planets of the solar system planets move around the sun, and the sun's revolution speed reaches up to 250km / s. But among these planets, Mercury has the highest revolution speed, which is only 46.8km / s, so all the planets will be abandoned by the sun, how could they move around sun? Unless god or spirits can explain that there is a kind of mysterious and invisible substance as planets and the moon's carrier in the solar system, and they have the same speed with the sun and move around the Milky Way along with the sun. Besides, they have rotation and motion around the sun, and the satellite's unit function is the greatest, also its complex motion trajectory is the longest and the most complicated. If it's really like this, then the astronomers and physicists who are favor of Copernican theory please conduct a simulation experiment to explain to people. Otherwise, it is only a science fiction more illusory than myth, and it also indicates that astronomy hasn't got out of the superstitious pseudo-science.

Nowadays, the sun's rotation period, at the equator: 27 days 6 hours 36 minutes, at latitude 30° : 28 days and 4 hours and 48 minutes, at latitude 60° : 30 days 15 hours 12 minutes, at latitude 75° : 31 days 15 hours 12 minutes, in the bipolar region: about 35 days. These data are even more unconvincing. If this is true, the sun is just like a magic cue any layer of which can rotate separately, is this possible? I think the error comes from that the sun is a gas ball and its rotation angular speed is the same (only can believe that the rotation period is about 35 days). Because the linear speeds are different at different speeds, gas on the surface will flow relative the sun under the action of the linear speed (centrifugal force), which caused the illusion to scientists. This also proves that we mustn't take an authoritative statement as a golden rule, and everyone should think by himself and to express different opinions. As I'm not aware of some data of the sun, here I won't estimate its displacement speed and the corresponding circular motion diameter. The sun's displacement definitely exists, because first it has rotation, second we see its different positions in the sky in each season.

3. Test the earth's displacement V'_d with the achievement of its artificial satellite

On April 23th, 1970, our country successfully launched the first artificial satellite "Red East". It moved around the earth along a elliptical orbit which is 439km away from near-earth place and 2384 km away from the far-earth place and with an inclination of $68^{\circ} 55'$, and its period was 114 minutes. So we can estimate the reliability of V'_d easily. The earth's diameter is 12756km; near-earth distance is 439km; far-earth distance is 2384km. With these data, we can make a figure (Figure 2-4-3). The satellite's revolution period is 114 minutes. Because the satellite does not do a circular motion, so the displacement around the earth must be out of the elliptical orbit. With $\pi = 3.1$, the time of the satellite through the major axis L is:

$$t=114/3.1=36.77 \text{ (minute)}$$

With the earth's displacement speed $V'_d=0.07815$ km/s, we can calculate the major axis using the following formula (minimum value):

$$L=439+12756+2384+36.77 \times 60 \times 0.07815=15751.41 \text{ (km)}$$

Calculate the similar linear line distance S that the artificial satellite goes through during 36.77 minutes. The satellite's first cosmic speed is 7.9 km/s , i.e. the speed out of the earth. Because the satellite will be influenced by gravitation and air resistance when entering into its orbit, so we make the average speed when entering into space as 7.2 km/s , then S is:

$$S = 36.77 \times 60 \times 7.2 = 15884.64 \text{ (km)} \approx L = 15751.41 \text{ km}$$

Since S is actually a large curve, this definitely different with the assumption of straight line.

Adopt Kepler's theory that the earth moves around the sun along an elliptical orbit, its revolution speed $V_r = 29.8 \text{ km/s}$, then the distance that the earth goes through during 36.77 minutes the Earth in 36.77 minutes $S' = 36.77 \times 60 \times 29.8 = 65744.76 \text{ (km)}$.

We can know that: as long as after 9 minutes, the earth can get rid of the satellite within 9 minutes, and makes the satellites can't move around it. Therefore the earth's revolution speed 29.8 km/s , and the theory of the earth moving around the sun along an elliptical orbit are all unfounded and unconvincing. Actually the artificial satellite's orbit around the earth is not elliptical at all.

I do not know the initial speed of launching the artificial satellite, its total movement time and energy supplement on the satellite, but only know $V_1 = 7.9 \text{ km/s}$ is large which is calculated with the Earth's radius as the distance (minimum value) calculated. If people launch the satellite at the speed of $V_1 = 7.9 \text{ km/s}$, the satellite can be 2384km away from the ground. This can reduce the earth's attraction on the satellite, and the satellite can run for a longer time. This proves that the gravitational constant G is large by 20 to 30% so that V_1 is also too large.

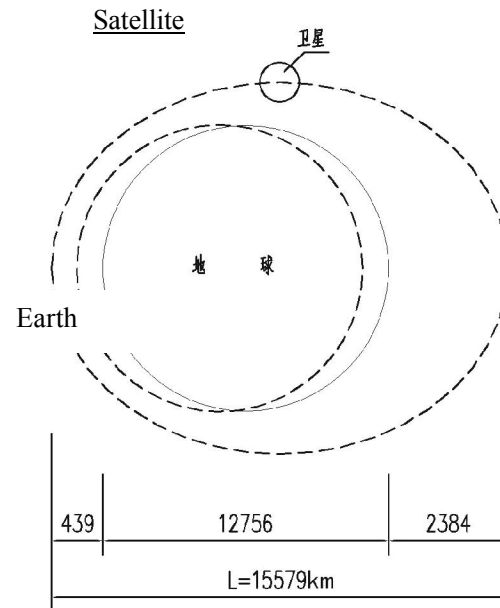


Figure 2-4-3

Section 5 An Object's Weight on the Earth Is Inversely Proportional to Its Velocity

From the physics learned in Junior high school, we know that if the liquid's speed of flow accelerates, its pressure will correspondently decrease. (Later we learned *Hydraulics* and knew that's Bernoulli equation). The question that whether a solid owns the same property has always been in my mind. Our study was discontinued during the Cultural Revolution. We went back to the countryside to do farm work. Certainly we need to take up all kinds of heavy manual work. In those times even without a hand tractor, driving wheelbarrows and shouldering heavy loads were just part of everyday life. Driving a wheelbarrow made me understand that the correct way to go through a muddy track with the same heavy load is to speed up which can leave a shallow indentation. If you slow down, not only a deep indentation will be left but also you may get trapped in the mud. Hence it proves that a moving object with faster speed will produce less pressure, vice versa. And the pressure produced by a stationary object is equal to its weight. So when facing an insecure bridge, we rush through it for safety concern, otherwise we will be in danger. The object's weight is equal to the pressure it brings to the ground or other objects. The laboring people know the principle but can't give reasonable explanation theoretically due to a lack of knowledge. And it is hard for intellectuals who seldom partake in manual work to experience heavy work that needs speedup.

That's why no one studies the relations between the weight and speed of objects for such a long time.

From of old, Chinese people have a tradition of performing Lion Dance and acrobatics in Lunar January. The acrobat puts two bowls both holding half full of water in separate net bags and ties them to the end of a rope, of which he/she clutches the midpoint (or near the midpoint) and spins the bowls by increasing speed gradually. When the speed comes to a certain point, the bowls will be in circular motion. And the rim of the bowls forms a plane which is approximately vertical to the ground but the water won't get spill. If the acrobat statically puts one finger against the central point of a square hanker-chief, the hanker-chief will sag by gravity. But when he/she spins it faster and faster, the hanker-chief will gradually spread out, approaching horizontal. Acrobats are unknown of the reason. They can only explain this as the centrifugal force generated by rotational motion. From a shallow analysis, it is due to the strong centrifugal force that water doesn't flow down and the square hanker-chief does not droop, neither. As the gravity and centrifugal force are perpendicular to each other, this explanation actually challenges the principle of composition and decomposition of force and velocity in physics. The principle of composition and decomposition of force thinks that two forces (or more forces) on one object can be composed as a resultant force. And one inclined force can be decomposed as a horizontal force and a vertical force. The above two examples show difficulties in explaining the vertical relation between gravity and centrifugal force with the principle of force composition and decomposition. Because the water in the bowls will spill out along the direction of resultant force and the hanker-chief will point to that direction as well. But the main reason is that infinity and infinitesimal situation has never been discussed in physics teaching. To explain the two questions, we have to introduce the mathematic concept of infinity and infinitesimal. When the centrifugal force is approaching to infinity, the gravity will come to infinitesimal. In other words, gravity is approximate to zero, but not equal to zero. We see the moving bowls and hanker-chief are almost horizontal to the ground after stretching out. The fact is that they are not. There will always be an angularity which is not easy for human eyes to perceive. Of course, we can't ignore the buoyancy effects of the flowing air on the object.

People can turn substance into idea, and vice versa. Just widen your mind and imagination, then you will accept that, if the earth attracts objects (vertically), there should be attractive drag for objects in horizontal motion as well, which means the two forces with vertical relation can also affect each other. With this

brand-new conception, you may understand that even though the attractive drag might be only one-thousandth or two-thousandth of the gravity, it truly exists, not merely in vertical relations.

Many people do not understand that two forces in vertical relation can also affect one another. They think the object's gravity is vertically downward, while its speed is horizontal rotational motion. Therefore, they do not accept the idea that horizontal rotational motion affects the object's weight. People admit that the speed of downward movement will increase the object's weight. This principle is included in Impulse of Physics, but they turn a blind eye to the idea that horizontal rotational motion affects the object's weight. It is partially because this idea is not mentioned in physics. Object's moving velocity not only affects its weight but is also inversely proportional to weight. I insist on this because it is well-founded. Now let me illustrate it with examples.

Ex 1: Gravitational acceleration (g) acts upon free fall bodies under gravity. At the equator, $g=9.78\text{m/s}^2$. While in the arctic, $g=9.83\text{m/s}^2$. We take the average of both as standard value which means $g=9.80665\text{m/s}^2$. If there is no gravity, gravitational acceleration won't exist. Why gravitational acceleration differs as the terrestrial latitude changes? I think gravitational acceleration is related to the linear velocity of earth rotation. The linear velocity is fast and gravitational acceleration is slow at the equator. But in the arctic, linear velocity is slower and gravitational acceleration is correspondently faster. From the view of differential, gravity line is vertical to linear velocity, which proves that force and speed with vertical relation are mutually influenced.

Ex 2: In launching a man-made satellite, when the speed comes up to 7.9km/s , the satellite will lift off without falling down. This proves that if the satellite's speed is approaching to infinity, its weight will be approximate to infinitesimal (but not equal to zero). The alteration of gravitational acceleration determines the weight of the object. For the same object which has been weighed at the equator, if we weigh it in the arctic, the weight will increase about five-thousandth. From this case we can learn that when the satellite's speed is up to nearly 11.2km/s , the time it takes to revolve around the earth will be long.

As the earth is the carrier of all objects, we can take the earth rotation as passive movement so that there is no need to consider objects' linear velocity. If an object's relative motion to the earth is called active movement, the speed in active movement will determine its weight. The relation between the weight and horizontal speed of objects can be illustrated by equation:

$$G' = m\left(g - \frac{Ev^2}{\Delta s}\right) \quad (2-5-1)$$

Where

G' is the weight of a moving object (kg)

m is the mass of the object, $m=G/g$, G is weight of a static object (kg)

g is the acceleration of gravity, $g=9.80665 \text{ m/s}^2$

v is the velocity of object in horizontal motion(m/s)

Δs is the distance of the moving object in every second (m)

E is constant ($1/s$), s is second

$$\text{Let } g - \frac{Ev^2}{\Delta s} = 0 \quad (2-5-1')$$

According to the first cosmic velocity which is $7900m/s$, the weight of the satellite is approaching to zero. Therefore, we can put $g=9.80665 \text{ m/s}^2$, $v=7900m/s$, $\Delta s=7900m$ in equation (2-5-1') and get a result that $E=1.2413 \times 10^{-3} (1/s)$. Then we put E in equation (2-5-1), which is

$$G' = m\left(g - 1.2413 \times 10^{-3} \frac{v}{s}\right) \quad (2-5-2)$$

I believe the universal gravitational constant G is larger than about 30%, accordingly the first cosmic velocity would also increase to a certain percentage. If we reduce 30% of G , we get $V=6.62km/s$, from which we work out a different constant E . So equation (2-5-2) can be changed as:

$$G' = m\left(g - 1.4814 \times 10^{-3} \frac{v}{s}\right) \quad (2-5-3)$$

With equation (2-5-2) & (2-5-3), we can calculate the weight of a moving object as long as we know its mass and velocity.

What needs to be noticed is that the constant E in equation (2-5-2) is taken from the first cosmic velocity and equation (2-5-2) is used by reducing universal gravitational constant G to 30%. The results are different. If we can redo Cavendish experiment in outer space and measure the accurate universal gravitational constant G , we will be able revise equation (2-5-2) correspondently. Using equation (2-5-2) and (2-5-3), we should pay attention to the produce conditions and the range of application. They can never be used to calculate the weight of moving object on other planets.

Section 6 The Unconfirmed Heterodoxy of 40 Years Ago Still Needs to Be Verified

I spent more than two years thinking and doing research. Here I boldly put forward three queries: (1) the force of gravity has inertia which keeps every object on the ground in relative static status. The kinetic energy of a moving object can be consumed by attractive drag, which ultimately keeps the object in

static. (2) The force of attraction for any object will be limited by distance. Not any two objects from any distance can attract each other. Thus we can infer that the earth (planet) is doing circular motion along the outboard movement locus of the sun instead of revolving around it. (3) On the Earth, the weight of the moving object is directly proportional to its mass but inversely proportional to its velocity. In 1969, I wrote down the three queries and went to visit the teachers of Physics Teaching and Research Group in Li Ling NO.1 Middle School, hoping to get my doubts explained. However, Li Ling NO.1 Middle School was suspended and the teachers all went away.

Junior colleges were also discontinued at that time. Not able to consult them, I could only write to Hunan Science & Technology Department and Chinese Academy of Science Institution. Though I had reply from them, the content did not involve substantive information. Neither did they mention which institution I should go for further research. In the winter of 1969, I visited Hunan Science & Technology Department, only to find out that they merely worked on science and technology management. The receptionist Zhou could not introduce me to the already suspended Junior colleges for discussion. It made me upset as I found no place to discuss the queries. But I never give up. Later Shuai Bao Li expressed his support on the queries which we explored together for years.

In the spring of 1970, part of the junior colleges began to recruit students. Workers, farmers and soldiers could be recommended to colleges by poor and lower-middle peasants. The colleges were no longer a place with only teachers but no students after recruitment, which kindled the fire of my hope. Knowing that Zhu Pei Xu, an alumnus of Liling NO.1 Middle school, was pursuing advanced studies at Arts Department of Hunan Normal University, Shuai Bao Li and I went to Changsha in the winter of the year and got in touch with him. Zhu arranged accommodation for us. The next day, with Zhu's guidance, we came to the Department of Physics. The symposium was arranged in the afternoon by Professor Ge Xu Chu from the department. He led us to a classroom where over 30 Physics teachers were sitting there. They asked me to introduce my heterodoxy which cost more than 1 hour. Maybe it challenged Copernican system, Kepler's First Law and Newton's law of gravity so that none of them agreed with my point of view that the earth does not revolve around the sun, which is reached by that attractive force also has drag and the sun's attraction to the earth affects the earth's rotation and its revolution around the sun. I know there are some doubts in Physics and astronomy which can't be explained for a short while. Also the laboratory apparatus are served for teaching

purpose, so as not able to prove my heterodoxy. We argued for the whole afternoon but neither could convince the other. (Maybe I am poor at speech). The symposium ended up with nothing.

The next morning, we came to the Physics department of Hunan University. Professor Xiong Zhu Hua, the responsible person of the department, organized the symposium in the afternoon as well. Professor Xiong arranged seven physics teachers with us in the staffroom for discussion. As was expected, no one supported my challenges on authoritative theories such as Copernican system and so on. As the laws of astronomy and physics were written down as textbook and also acknowledged by the world, we can only get support if we carry forward those theories and improve them. For my doubting view, it's hard to be accepted. We got nothing during three-day trip in Changsha. But Professor Ge Xu Chu and Xiong Zhu Hua said, "Your inference would be correct as long as you can prove the existence of attractive drag." However, we did not have the conditions to do modeling test at that time. So I temporarily gave up the experiment. The fact will prove that Newton discovered the gravity force on the Earth (celestial body) and it's me who discovered attractive drag, which would initiate a revolution in astrophysics. But we were not discouraged. The fault is that we were deprived of the right to go to college, making my dream unrealized without further study.

In 1973, Junior colleges started on summer enrollment and the conditions were changed. On the premise of recommendation from poor and lower-middle peasants, applicants should also take part in cultural examination. I contrived to get the right to participate in the college entrance examination. Shuai Bao Li and I took the exam together. As we both felt good about the result, we applied for admission to Physics Department of Tongji University in Shanghai as our first choice, hoping to devote ourselves to scientific research. However, when I was dreaming about university, a joy turned into sorrow. One of the applicants Zhang Tie Sheng handed in a piece of blank examination paper. A teacher called Li Qing Lin told on him by writing to Chairman Mao, which triggered a resurgent movement on criticizing bourgeois education policy, making admission to university by scores an impossible thing. Admission Office of Liling County should be appreciated then. They took pity on students with high scores so as to enroll them with some of the admission criteria of senior high school entrance examination. Shuai and I got admission to a junior college, which was a road of retrogression for me. I was dissatisfied. But it was an optimal choice to get away from countryside and slum.

We did not forget to explore the queries in astrophysics. On February 13th 1975, each of us

collected 15 *yuan* and took train to Beijing, trying to get answers from Chinese Academy of Sciences. But when we arrived, the receptionist told that the national leaders, authoritative scientists and well-known people had already left Beijing as there would be a big earthquake in Beijing, Tangshan & Tianjing and that it was meaningless to stay in Beijing, we should go back as soon as possible for safety concern. He said due to the *Cultural Revolution*, a large number of reactionary academic authorities were uncovered and devolved to the grass-root communities or sent to the countryside to reform through labor, making Chinese Academy of Sciences a empty place. Thought the new policy was being implemented, no one came back yet. Therefore, nobody could discuss the queries with us. The trip to Beijing disappointed us. We could only get two return train tickets. In those days if you arrived at Beijing without an introduction letter from the Provincial Revolutionary Committee, you would not be able to register in any hotels. So we spent three sleepless nights at Yongding Gate Train station, suffering cold and hunger. That was the most unforgettable thing of our trip to Beijing.

In 1976, I graduated and began to work. My farther passed away unfortunately as soon as I got my half-month payment (14.5 *yuan*). His death put me in debt to the extent of over 100 *yuan*. In 1978, the university entrance examination extended the age limit. Applicants should have five-year working experience to study with payment. I was deeply in debts and need to support my mother in the mean time. As a result, I had no money to pay for my study. At that time, the notion that worker-peasant-soldier students were useless was sweeping over the society. Worker-peasant-soldier students from Junior college were despised worse. In order to open up a working situation, I buried myself in work. Furthermore, I completed two scientific researches which both won the provincial and municipal award for Hydraulic & Hydropower Science and Technology Achievement. To get 10000 *yuan* research funding from provincial hydraulic department, I beat up and down for many times. This experience taught me that nothing could be done without economic basis.

My unfortunate life finally embraced the reform and opening-up policy. In 1996, I gave up my position as the Dean of Zhuzhou Hydraulic & Hydropower Design Institute and the third echelon of municipal water conservancy bureau. The institute retained the job for me for three years but suspended my salary. I went all over China, promoting my research achievements. I suffered a lot and finally popularized my research results to more than 100 projects across over ten provinces and cities, which created economic benefits for the country and society and laid economic foundation for myself. Unfortunately, decades of hard

work destroyed my health. I suffered from multiple diseases like hyperglycemia, hypertension and hyperlipemia. In 2004, I had a sudden heart infraction which nearly killed me.

In the year of 2004, I got a second chance of my life. This year I reached the age of 55 and could enjoy early retirement. I went through the early retirement procedure and could finally do what I want to do. This kind of freedom is very precious for me. I came to know that we study at a young age for being able to settle down; we learn from work to have our job done well; we pursue knowledge at an old age to summarize our life so as to leave something for our descendants. From the year of 2005 to 2010, I had written more than 4-million words of works such as poems, political essays, autobiography and technical monograph.

I have been through decades of ups and downs, recognizing the political, technological, economic and cultural fields will inevitably have wrong cognitions. Coupled with conservative and superstitious concepts, sometimes it happens that sophistry prevails over truth, great evil criticizes imp, greedy high official taking humble one as scapegoat, superstition misleading science, etc. I won't improperly deny Copernican, Kepler, Newton and other scientists' theories. They were the founders of science and they had made tremendous contributions for the development of science, which were recognized by human beings and history. It is them who piled up the steps one by one to enable us to climb up. But I have the right to express my different views, for the experts to examine and distinguish.

My *heterodoxy* on geophysics and celestial body's motion might be a fallacy out of my ignorance. But it also could be a correct view, making it difficult for people to accept. I am sixty three years old now with poor health. For the sake of not taking my *heterodoxy* into the coffin and realizing my dream of over 40 years ago, I mustered up courage and bestirred myself to have my *heterodoxy* written down for scientists and decadents to examine and distinguish. I have not forgotten history could make a joke, taking truth as a fallacy. It was a pity that though Chinese people's invention preceded foreigners, foreigners took the lead. Having my *heterodoxy* written down in a book is to make a record as well. From the third chapter to the fifth of the book is mainly about my new discoveries in recent years. So I did not put them in a development order of things but in chronological order of my discoveries.

Chapter 3 Different Views and Suggestions on the Experiments and Laws of Astronomy and Physics

Among the three objects of mathematics, physics and chemistry, only mathematics owns the strongest logical reasoning. It has a whole set of digital calculus

and geometry proof. We don't need to do experiments to get the results but it is convincing. However, Physics and chemistry are not fully rational. They have many unclear issues which can only be proved by the results of experiments. Some definitions and laws of astronomy and physics and experiments can prove the queries, but can't prove its universality. The main reason is that among the known planets and satellites in solar system, only the earth is suitable for the growth of plants and survival of animals. People can understand most of the Earth's queries but it's hard for them to understand the other celestial bodies. This is the particularity that man is able to know the earth.

Secondly, we are not able to know about the sun and its surrounding celestial bodies' movement. Neither do we know the attractive force appeared in limited distance or other relevant information. We apply the concept and the experimental results of the earth to the universe. Then we introduce the concept of the universe again into the earth, which will inevitably cause conceptual confusion and erroneous conclusions. Thirdly, we do not use mathematical concepts to guide astronomic and physical experiments. That is to say, the limit value is not used to expand our analysis. Through the experimental results restricted by conditions and with part of the phenomenon, we come to conclusions. Undoubtedly, the query being studied is limited.

Of the time when Copernicus, Tycho, Kepler, Newton and other scientists lived, science and technology were still lagging behind and in gradual development stage. Human beings were not able to enter outer space to explore the universe. They would inevitably have speculation, assumptions and inference on astronomy, physics. We should not blame them on this. It was their speculation and assumptions that propelled the germination and development of science and technology. The later generations enjoyed more advanced technology and experimental conditions. We should not treat their assumed definitions and laws as truth. Otherwise, we will be the one who is blind obedient and superstitious. We must have the courage to examine the predecessors' conclusions with modern high-tech. That is the proper scientific attitude. Here I would like to take Kepler's first law and Newton's law of gravitation as examples to illustrate relative queries:

1. Kepler's first law

Kepler's first law has two assumptions. One assumes that the sun does not move and is located at one of the two foci of the elliptical orbit of every planet; the other assumption is that the orbit of every planet revolving around the sun is an ellipse so as to coincide with Tycho's observations. The second one assumes that the planet's revolution speed is much faster than its rotational linear speed of the equator,

which is obviously unreasonable. Everyone will be marked with the stigma of the times. Whether Kepler was affected by the authoritarian social system so as to compare the solar system as authoritarian social system, the sun as the monarch, planets and satellites as subjects and subjects must be around the monarch. We do not care whether Kepler studied the solar system with a view of authoritarian society. But his first law indeed has an interesting flavor of authoritarian rule. The high school's physics textbook of 1965 version still says that the sun doesn't move and is the center of the solar system.

In 1967, I raised an objection on Kepler's first law. I think all the spherical celestial bodies can do rotation movement (the cause of rotation was not found then). It is because of the rotation of the celestial bodies or the inclination of the axis that generates the centripetal force, not because of the sun's attraction to the planets. So it's the celestial body's rotation that makes its displacement (revolution) in a circular motion. The celestial body's displacement speed must be slower than its linear speed of the equator.

Modern astronomers, physicians, scientists finally admitted the sun's rotation and revolution, which proved Kepler's assumption that the sun does not move was wrong. They measured the solar rotation period (the concept needs to be discussed) at different latitudes. The sun revolves around the center of Galactic System with a speed of 250km/s . As I expected, the sun does rotation and revolution (displacement) movement, which is consistent with my query that any spherical celestial bodies can do rotation and displacement movement. Restricted by Kepler's first law and misled by Newton's gravity law, we calculated the sun's displacement (revolution) speed as 250km/s . we assume Galactic System is the center and the solar system revolves around it from a distance. The revolution period is calculated as about 250 million years. Such a large elliptical orbit and the amazing revolution speed are incredible.

It does not comply with Kepler's first law, neither. Kepler thinks the solar system has only one center. But there are countless stars and planets in the Galactic System which are combined as a center. If the sun is the monarch of autocratic society, it will become a member of a democratic society, relative to the Galactic System. What kind of logic and law it is?

It is reported that the sun's equatorial diameter is $1,392,000\text{km}$ and its rotation period is 35 days subject to the Polar Regions. Its equatorial linear speed is about 1.446km/s , which is 3.11 times of the linear velocity (0.46511km/s) of the Earth's equator. According to my heterodoxy, the earth's circle diameter including the displacement path of the moon is about 785032km , displacement speed of about

0.07815km/s , which is 1/5.95 times of linear speed. Therefore the sun complies with the law of circular motion. It does not revolve around the Galactic System. We also know that the earth and the sun's mass density ratio is $5515.3/1411 = 3.9$ (times). The mass factor has already been concerned for the linear velocity of the sun. So regardless of the difference of specific gravity, we assume that the celestial body with smaller specific gravity has faster displacement speed (not reliable), then circle diameter of the sun's displacement is about 2441450km ; its displacement (revolution) speed is 0.243km/s .

The values above are calculated based on the following:

With the circle diameter of the Earth's circular motion which is about 785032km , we calculate the displacement velocity of the earth which is 0.07815km/s , only 1/5.95 times of the linear velocity of the earth rotation. And we get the linear velocity of the sun's equator as 1.446km/s , which is about 3.11 times of the linear velocity of the earth's rotation. According to the ratio method:

The circle diameter of the circular motion of the sun $\phi_s = 785032 \times 3.11 = 2441450$ (km)

The sun's displacement speed $V_s = 1.446/5.95$ (or $0.07815 \times 3.11 = 0.243$ (km/s))

Such calculation is not rigorous. In the design of hydraulic and hydropower project, we divide the big drainage area with hydrological data by the small drainage area in the same basin perimeter or nearby to get hydrological data of the small drainage basin.

As astronomical data is rougher than hydrological data, ascertaining the date of the sun with the Earth's data is not completely unreasonable. But it just has the order reversed, applying the date of our small earth to the huge sun.

My astronomical data are not informative. But I have no other choice. I do not believe that the sun's revolution speed is 250km/s or the revolution period is about 250 million years. Readers are not strict on astronomers; neither will they be strict on an amateur like me.

Regarding the calculated results, I am not satisfied, either. One thing is that the displacement cycle of the earth and the sun are the same, which is certainly inconsistent with the fact. Another thing is that the summation of the circle diameter of the displacement for the Earth and the sun is about 3226482km ($785032 + 2441450$). It is smaller than the difference of the Earth aphelion and perihelion which is 4999627km . The last thing is that astronomers consider the sun as a Rubik's Cube that can be twisted from each layer. They take the rotation period of the sun's equator as 27 days 6 hours 36 minutes, and then the linear velocity of the sun's equator should be

1.85571km/s, displacement speed of 0.312km/s. With those values, they calculate that the diameter of the sun's displacement is 3146147km and the circle diameter of the displacement of the earth and the sun is about 3934655km. It is still smaller than the difference of the Earth aphelion and perihelion that is 4999627km.

From above analysis we can get two conclusions. One is that the sun's specific gravity is smaller than the Earth's. The ratio between linear speed and the displacement speed is about 3.45, but not 5.95. Secondly it proves that the earth's aphelion and perihelion are not located on the circle diameter of the sun. This not only shows Kepler's first law is not correct, but also proves that the earth's displacement period is different from that of the sun. My view won't be nonsense that the segment between the Earth and its aphelion and the one between the Earth and its perihelion are not on the same straight line. On the contrary, they may intersect (if extend the two segments).

Compared with the 250km/s speed of the sun's revolution, its displacement speed is simply too slow. As the fact that the data I used are from books and the Internet and the tilt axis of the earth and the sun were not considered, my conclusions can only be a reference, but I think it's right. If my *heterodoxy* is correct, Kepler's second assumption in his first law will also be wrong. To negate Kepler's first law needs more than just one overnight effort. It must be based on facts and wait for people to accept gradually.

2. Newton's law of universal gravitation

Law of universal gravitation: Every point mass attracts every single other point mass. The attractive force is in direct proportion to the product of the two masses and inversely proportional to the square of the distance between them. The formula is

$$F = G \frac{m_1 m_2}{r^2} \quad (3-0-1)$$

I think the law of gravity has no precise practical value but estimated sense only. Its error is directly proportional to the square of the distance. Mainly because of the fact that Newton didn't confirm the practical scope of the law and the way to handle countless implicated relationship. As the practical scope of the law is undetermined, the gravitational constant G measured by Cavendish through experiments is questionable to me. Newton was certain about two celestial bodies' mass, while on the Earth objects have mass and weight. The object is affected by the force of magnetic field, gravity, friction and air resistance. Regarding Cavendish's gravitational constant G , the error exists by using it to calculate the mutual attraction force between two objects on the Earth. If using it to calculate the mutual

attractive force between two celestial bodies, we will get a larger error. They mixed up the universe concept with that of the earth. As celestial mechanics can't be integrated and unified with physical mechanics on the Earth, it is difficult to get the correct answers. I think the gravitational constant should be larger, which is not untenable.

Secondly, Newton believed any two objects are attracted to each other regardless of the distance between them. Then in the formula, m_1 and m_2 can be attracted by countless m . It is a principle that the associated objects have an influence. Newton did not explain how to deal with the influence that countless amounts of attraction had on the mutual attraction between m_1 and m_2 . I admit that any objects have attraction force, but attractive distance is limited, not two objects with infinite distance can be attracted to each other. As a result, the law of gravity merely deals with proportional relationships, not able to reflect the fact. So if I calculate that the attractive force of the Sun on the Earth is equivalent to the pulling force of a steel column with its diameter 9km, can that be true? If it is true, the attractive force between the earth and any section of the sun will be the same (3.56×10^{22} N) when half the Earth is facing the sun. It is like a rope hanging with heavy load, the internal forces of any section of rope are equal to the load. When the man-made satellite is orbiting the earth along latitudes, the attraction force of the sun on the sunny side of the satellite is totally different from that of the shady side. I have never read relative reports on this aspect. It is obvious that the sun's attraction value to the earth is calculated totally with reference to the law of gravity and the formula of centripetal force. With no experimental confirmation, it is hard for me to believe this. To make the law of gravity practical, it is necessary to measure the gravitational constant G in space. Besides, we need to measure the attractive distance. Otherwise the law of gravity can only serve for Copernican system and Kepler's first law, which keeps people from seeking for the truth of scientific knowledge. Experiments show that with 393g bar magnets attracting a steel ball of 53g, if the straight line spacing $S \leq 30$ mm, the ball will roll around the magnetic poles. Once widening the spacing, the ball won't roll. The theory that mutual attraction exist in infinite distance goes against the situation that extreme is zero.

Section 1 Introducing Infinity and Infinitesimal Concept to Discuss Force (Velocity) Composition and Decomposition

Seen from the mechanics, a resultant force can replace two different forces acting on the same object. A force from inclined direction can be decomposed into two forces of horizontal and vertical direction. This applies to velocity of the object as well. When

doing physics experiments, the vectors of force (velocity) composition and decomposition do not have much difference so that calculations and mapping method can be used to get the right answer, which is directly perceived and convincing. If we introduce the infinite and infinitesimal concept in mathematics, the result will be very different from the experimental demonstration and even difficult for us to understand. For example, let $F_1(1000\text{kg})$ and $F_2(10\text{g})$ be at the right angle to pull object m (Figure 3-1-1). According to the theoretical analysis, the object m will move towards the direction of the resultant force. But that is not actually the case. The object will move towards the direction of F_1 . Though F_2 is not equal to zero, its effect equals zero. Comparing with F_2 , F_1 can be considered as infinity and F_2 as infinitesimal. So it can't test the direction of the composition of the force.

It is similar to a running train and car with loads. A gentle wind is blowing from the sides, but cannot change the driving direction of train and car. Compared with force of a gentle breeze from vertical direction, the drafting force of the train and car is infinite. The effect of the breeze is relatively infinitesimal, approaching zero. Only when the train or car is attacked by heavy storm wind, the infinity and infinitesimal concept won't be involved. In this case, the train and car might be in the danger of turnover.

When launching a man-made satellite (Figure 3-1-2), the initial velocity of satellite $V_0=V_1=7900\text{m/s}$. The acceleration of gravity g is approaching zero. They are in a relation of infinity and infinitesimal within a few seconds in the beginning. According to calculations, 40 seconds later, the satellite's falling speed will be equal to its initial velocity. If the satellite is 439km high to the ground, it will take about 5 minutes to fall down to the ground. Even if it is 2384km high, it takes only 11.6 minutes to come down. While the fact is that the satellite can be running a long time without falling. Why?

Through analysis, we can find the following three reasons for satellites not to fall on the earth due to gravitational acceleration:

(1) There is an included angle α between the initial speed V_0 and elliptical orbit. The satellite goes with the initial velocity V_0 for some distance which is ΔS . The satellite falls down under gravity Δh . And it will fall onto the elliptical orbit with the effect of composition velocity. As long as it keeps a certain speed ΔV , the satellite will not fall to the ground.

(2) Satellite is high from the ground, making the acceleration of gravity slower than 9.80665m/s^2 , which can also extend the running time of the satellite.

(3) The earth is close to spherical in shape with a curvature. When the satellite is crossing over the radius of the earth (which takes about 19 minutes), the

difference of the height reaches about 6900km due to the effect of the curvature, which can extend the working time of the satellite as well.

All in all, the satellite goes along the elliptical orbit under the gravity of the Earth (The ellipse is formed by the Earth's displacement. Actually it is non-elliptical orbits), which means it is affected by the attractive resistance of the gravity so as to slow down inevitably. So the satellite orbiting the earth has time limitation, but the duration is different. It finally will come back to the ground. To prolong the operating time of the man-made satellite, the first thing is to increase the initial velocity, which has been limited because with the initial velocity faster than 11.2km/s , the satellites will be out of the earth. Secondly is to supplement energy. This is the best way. To maintain a long-term operation, we must supplement energy to the satellite. It proves that the earth's gravity acts on the satellite and the attractive drag causes it to slow down.

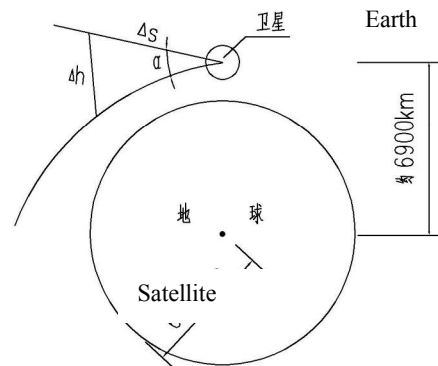


Figure 3-1-2

The physics experiment on flat parabolic motion of projectiles mainly proves that this motion can be divided into the horizontal direction and vertical direction of two branch movements. Its trajectory is a parabola. The projectile is only affected by the instant force in horizontal direction and will travel in uniform rectilinear motion (kinetic energy storage) due to inertia. The initial vertical velocity is zero, completely a free-fall motion. As long as the projectile and free-fall object come to the ground at the same time, it can prove that flat parabolic motion is a composite movement of free-fall motion and uniform rectilinear motion. So the trajectory of the object must be a parabola. Without testing the attractive drag of the earth, the experiment can explain some of the superficial problems. But to test if the projectile is affected by the earth's attractive resistance, we can get nothing from this experiment as it cannot explain the substantive issue. The reasons are the following three points:

(1) The projectile is too close to the ground (of about 1m from the ground). It takes about 0.45 seconds for the object to fall down. Human beings' visual acuity is only 0.1 seconds so as not able to perceive the object's instantaneous change;

(2) The projectile's initial velocity is slow (less than 1m/s). As the height is not enough, it can only travel for a short distance. Assuming that the earth's attractive resistance is two-thousandth of gravity and the projectile's deceleration is within micrometers, even if we measure motion deceleration, we would say it's because of the air resistance;

(3) The projectile is too close to the ground (of about 1m from the ground). It takes about 0.45 seconds for the object to fall down. Human beings' visual acuity is only 0.1 seconds so as not able to perceive the object's instantaneous change;

Currently it is impossible for school authorities to build up a vacuum laboratory. We can only do schematic experiments which is difficult to reveal the essence of flat parabolic motion. Although the existing laboratory is not helpful, we should set up the concept that attractive resistance exists with gravity. It is a matter of principle, should not be ignored, and let the surface phenomena cover substantive issues. Once we have the concept, we will try our best to design an experiment which can test the attractive resistance. Gravity and attractive resistance are basically in vertical relation (in most cases). There exists mutual influence. The conductor cutting magnetic lines is such a relation. If we don't have the concept of attractive resistance, we will permanently put attractive resistance in the friction and air resistance which not only affect people's understanding of things, but also misled the study of celestial bodies motion.

Section 2 Revising and promoting the Application of Newton's Second Law

The formula of Newton's second law is $F=ma$ which has been discussed in Chapter II but without comprehensive narration. In Newton's time (1643 - 1727), people's understanding of celestial bodies and the universe was very vague. They did not have enough conditions to enter outer space or other celestial bodies. So Newton's research in physics and astronomy should firstly solve the problems on the Earth, then extend to the space and the universe. However, the formula $F=ma$ can only be applied to celestial movements with mass but no weight.

Every object on the Earth is affected by gravity, attraction, friction and air resistance. If the applied force cannot make the object moving at uniform motion, how come it can make the object move at accelerated motion? If the force is too light, the object can only be maintained in stationary state.

Therefore, this law doesn't have practical value at all as the existence of gravity on the Earth makes $F = ma$ untenable.

From the above analysis, we know that with a light force on the object, the object will remain at rest. It won't have accelerated speed unless the applied force is acted upon the object moving at a constant speed. To keep an accelerated uniform motion, the applied force should be increased continually. Due to the accelerated speed, the object's velocity is also speeding up, so is the kinetic energy. It won't work if the applied force is not increasing.

So the description of Newton's Second Law should be revised as that the object which is moving at a constant speed will have accelerated speed only when acted upon by applied force. If the force keeps unchanging, the accelerated speed will vanish. This can merely increase the object's uniform motion speed. Only correspondingly increased force acting upon the object can keep its accelerated speed unchanging. If we stop the increased force, the moving object will travel in uniformly retarded motion and go back to initial velocity. Once the initial velocity vanishes, the object will come back to stationary state.

The fact that Newton's Second Law is not applicable to moving objects on the Earth easily makes the students confused. We should explain to students that the formula $F=ma$ only applies to the celestial bodies and the man-made satellites moving in the space, but not to the moving objects which can be effected by gravitation. So Newton's Second Law should be revised as:

$$F = m\left(a + \frac{v^2}{2s}\right) \quad (3-2-1)$$

In formula 3-2-1, m and a are constants, v and F are variables. V is continuously accelerating because the object is moving constantly in uniformly accelerated motion. V is the speed (Instant Speed) of the moving object at a certain moment. And s is the distance the object moves in 1 second. We can learn from the formula 3-2-1 that F is a variable, not a constant which can only have uniform motion but no accelerating speed. To calculate F , we need to make sure whether F is to make a static object in uniform motion or make an object with uniform motion at accelerating speed. Thus we can get the calculating method of variable F at a certain moment (Let 1 second be the calculating unit).

3-2-1 is a formula expressing objects' uniformly accelerated rectilinear motion in a straight line. How about vertically upward movement at a uniform acceleration? (Such as a

man-made satellite launched by a multi-stage rocket). Due to the law of gravity, everything on the earth has weight. The applied force F must be larger than the gravity of object so as to generate acceleration. Here is the formula:

$$F = m(g + a) \quad (3-2-2)$$

Where:
 a is acceleration of the object doing upward movement.

If the object is traveling at an accelerating speed on the slope (figure 3-2-1), Newton's Second Law should be amended to formula as below:

$$F = m(g \sin \alpha + \frac{v^2}{2s} \cos \alpha) \quad (3-2-3)$$

Where:
 V is velocity of the moving object at a certain moment (m/s)

α is the included angle between the slope and the horizon(Degree)

S is the distance that object moves on the slope by 1 second (m)

On the contrary, when the object is sliding down along the slope with accelerating speed, the formula should be:

$$F = -m(g \sin \alpha + \frac{v^2}{2s} \cos \alpha) \quad (3-2-4)$$

To divide Newton's Second Law which can only be applied to celestial bodies motion into four formulas, they will be applicable to all kinds of movements of objects on the surface of celestial bodies (including the earth). Physics textbooks used in high school should clarify the applicable conditions of Newton's Second Law so that students can deeply understand the calculating significance of the formula used on the earth and won't confound right and wrong. What puzzles me is that Newton's Second Law which should have explained all kinds of moving objects' problems on the earth but actually it has no connections to the movements of objects on the earth.

Section 3 Difference of Circular Movement between Objects on Earth and Celestial Bodies

Physicists have concluded through experiments that if a mass point performs circular movement and passes the same length within the same period of time, such movement is called circular movement at constant speed. The deduced centripetal force is

$$F = m \frac{v^2}{r}$$

, namely the centripetal force is related to the mass m , radius r and angular velocity w . The speed formula for the centripetal force is also deduced from

$$F = ma \quad \text{and} \quad F = m \frac{v^2}{r}$$

The expression is:

$$a = \frac{v^2}{r} \quad (3-3-1)$$

In this formula: a — centripetal acceleration (m/s²)

v —Linear velocity (m/s)

r —Radius of the circle

The 2nd law of Newton neglects the gravity mg of object moving on the earth. Also, physicists ignored it in the experiments of circular movement on earth, as well as the resistance from friction between the moving object and bearing fulcrum and air. Even if the resistance could be ignored, the gravity shall not. Otherwise objects on earth would be regarded as celestial bodies. Is this caused by Newton's misguidance, negligence from physicists or confusion of concepts? Even if objects on earth are regarded as

celestial bodies, the formula $F = m \frac{v^2}{r}$ may not be suitable for the circular movement of celestial bodies

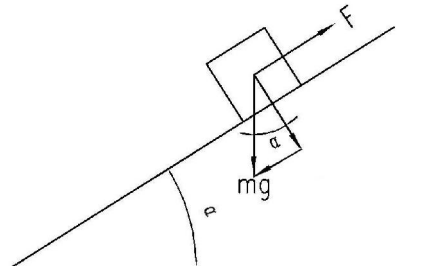


Figure 3-2-1

(which would rotate and revolve).

As we know, the external rail for the railroad of trains is higher than the internal rail, thus its inclination would generate centripetal force. So is the same for buses. The most obvious difference is that objects on the earth are supported by the ground while the celestial bodies are not. We shall not apply to the celestial movement and ignore their difference as previous astrophysicists did. Given such essential difference, we should study and perform space experiments to prove if such difference could generate centripetal force and displacement (revolution). It's not a good attitude towards science to conclude that planets are attracted by the sun without any research or proof.

I suggest design a model with a machine inside to incline the axis as well as make the model rotate at constant speed. Let it rotate at a smooth plane and

observe if it starts revolution. It could be better proven by conducting this experiment in the space. Despite so many experiments we've done, why don't we build a space lab and do experiments there? Experiments conducted on earth would leave many doubts and may even cover up the truth. In today's world, experiments influenced by gravity shall be conducted in the space lab, so as to keep up with the time.

Since astronomers and physicists failed to consider the difference between objects on earth and celestial bodies, is it due to superstition of Copernicus's theory, Kepler's first law and Newton's laws or negligence in feeling and recognition? Now although we haven't proved if the planets revolve around the sun or perform circular movement outside the sun's displacement trajectory, we've proven the suppositions and speculation of Kepler's first law. From the launch of manmade satellite we can see that its elliptical trajectory is formed by the earth's displacement, and the sun is not at the focus of all ellipses. If we can prove the inclination of planet's axis and rotation could generate displacement, then Kepler's first law wouldn't stand, Copernicus's theory would be denied and Newton's laws would be corrected.

It's understandable that friction and air resistance are ignored in the demonstrator of centripetal force, yet it's wrong to neglect the gravity of moving object (round ball), which is like taking objects on earth as celestial bodies. All objects on earth have a supporting plane with gravity due to earth's gravitation, and the centripetal force is not $F = m \frac{v^2}{r}$, thus only suitable

for celestial bodies with only mass instead of weight. When the initial speed of a manmade satellite reaches 7.9km/s, the gravitational acceleration may be close to zero, but would not become zero. It'll finally fall on the ground. To let the gravitational acceleration become zero, it's necessary to increase the initial speed so that it could break out the scope of earth's gravitation and compensate for the energy loss absorbed by the earth. Then it could also revolve around the earth for a long period of time.

For objects performing circular movement on earth, when the linear speed v reaches some extent, mg would be close but not equal to zero. This could be explained by the fact that when a force (speed) turns infinite, and constant force (speed) would become infinitesimal. Human beings only have limited physical strength and could only work according to individual capacity. Suppose a 200g object is bound by a rope, its one end is held by people who swing the rope to form a circular movement (Fig.3-3-1). When the linear speed reaches a certain extent, it's as if the trajectories of the object and center of the circle are in

the same plane and $mg=0$. In fact this is an illusion. The center O is always slightly higher than the circular trajectory, which couldn't be observed by naked eyes.

Bind a 5kg object with a rope and make it perform circular movement by swinging it through machine, thus mg would be close to zero. The rope shall be inclined to some extent (Fig.3-3-2). If we ignore the force (speed) along the tangent of the circular trajectory and only consider object's gravity, then the centripetal force of the object is the combination of the centripetal force of celestial bodies and object's gravity. The expression is:

$$F = \sqrt{\left(m \frac{v^2}{r}\right)^2 + (mg)^2} \tag{3-3-2}$$

Set $m=1$, then formula 3-3-2 is changed as:

$$F = \sqrt{\left(\frac{v^2}{r}\right)^2 + g^2} \tag{3-3-3}$$

Formula 3-3-3 demonstrates that for objects performing circular movement on earth, the gravitational acceleration g would be close but never equal to zero only when the linear speed V is infinite.

The centripetal force is always bigger than $m \frac{v^2}{r}$.

Only if celestial bodies performing circular movement have no gravity or gravitational acceleration g would

$F = m \frac{v^2}{r}$ stand. These two concepts shall not be mixed.

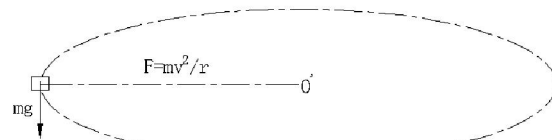


Figure3-3-1

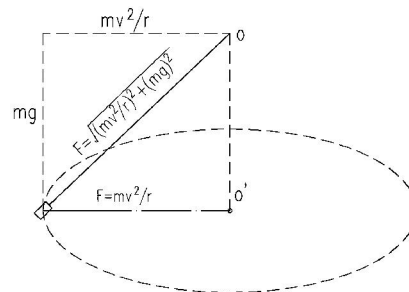


Figure3-3-2

Astronomers and physicists should look for the internal reason for celestial movement. By believing

in Copernicus's theory, Kepler's first law and Newton's laws and ignoring the internal structure and rotation of celestial bodies, then we'd be on the wrong road in our study of celestial bodies. For example, the moon revolves around the earth, together they revolve around the sun, and the three revolve around the galaxy. If so, the galaxy would revolve around the golden system, and so on. Isn't it ridiculous to solve the problem by superstition?

Section 4 Doubt on the Universal Gravitational Constant G from Cavendish's Experiment

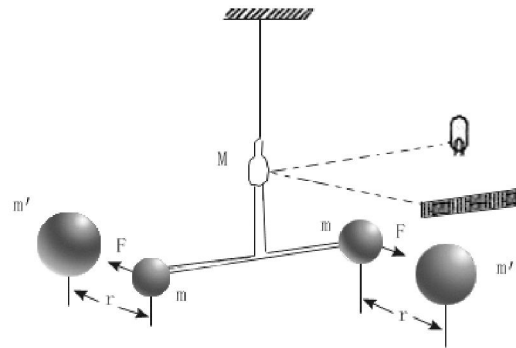
Since an unknown number is included in the universal gravitational constant G whose value is not given, it should not be used to calculate the mass of celestial bodies and speed in the universe. Two unknown numbers in one equation would only lead to indefinite solution. So the law of universal gravitation could only maintain Copernicus's theory and Kepler's first law and wrongly expresses that the sun has attraction to planets. The fact is that no one has raised any doubt on these theories.

In 1798, the British physicist Cavendish tested the gravitational constant through torsion balance (Fig.3-4-1), which is believed to be relatively accurate. However, I don't think so, since his experiment was conducted on earth and influenced by gravitation, thus the result would be different if conducted on other planets. Gravitation calculated on earth could not be used to calculate the mass of other celestial bodies.

By analyzing the torsion balance, we could know that the two big balls and small balls all have gravity due to earth's attraction. The two small balls m suspended could form moment and revolve. The two big balls m' , as supported by objects, have gravity as well as friction (including attracting resistance) due to earth's gravitation, thus unable to displace. Suppose the four balls have no gravity, then m and m' would attract each other. Suppose the displacement for m is s and for m' it's s' , then $ms=m's'$, namely $ms=m's'$. In the experiment, only m could get close of m' and m' couldn't get close to m . In this way, the torsion angle of the metal wire and G would reduce. I think G is bigger than its actual value and only suitable for objects on earth.

Some people think that since G is used to calculate the first universal speed $v_1 = 7.9\text{km/s}$, and launch the manmade satellite to revolve around the earth, it could prove that G is correct. I think this is too general, because this speed is calculated with the earth's radius $r=6370\text{km}$, thus $v_1=7.9\text{km/s}$ is bigger, because the earth's mass is bigger and the satellite is 439~2384km away from the ground, v_1 becomes bigger. Also, the further distance between the satellite and ground, the less attraction it'd be. Thus we can

confirm that v_1 is bigger and it's not surprising that the satellite revolves around the earth for a long period of time. The result would be quite different if it revolves at a height of 10~100km.



卡文迪许实验示意图

Schematic diagram of Cavendish

Figure 3—4—1

I think G is bigger by 20%-30% and this could be tested by three methods. First, also the best method, conduct Cavendish's experiment in space. Second, reduce G by 20%-30% and recalculate v_1 , thus $v_1=7.083\text{km/s}$ or $v_1=6.62\text{km/s}$. If manmade satellite is launched at this speed, and it could revolve around the earth over 1 circle at a height of 439~2384km, then it proves that G is bigger. The third method is that, given the big attraction from earth, air resistance and high cost to launch the satellite, we can launch a manmade lunar satellite on the moon for verification. Put the moon's mass $m=7.349\times 10^{22}\text{kg}$ and equatorial

radius $m=7.349\times 10^{22}\text{kg}$ in the formula $v = \sqrt{\frac{Gm}{r}}$,

thus calculating the first universal speed v_1 as 1.68km/s. Reduce G by 30% to get $v_1'=1.405\text{km/s}$. Launch manmade lunar satellite at this speed, and it could revolve around the moon by one circle at a distance of 10~20km from the moon (it could revolve around the moon permanently if without attracting resistance), thus proving that G is too big by 30%. The reason to choose the moon for experiment is its small gravitation, lack of air resistance and high sensitivity.

Physicists could do Cavendish's experiment on the moon to test if G is the same on the earth and the moon. If it is, then G is correct, otherwise it proves that G is related to the gravitation of the celestial body. It's incorrect to put $G=6.67\times 10^{-11}\text{N}\cdot\text{m}^2/\text{kg}^2$ in the formula to calculate the mass of any celestial body or gravitation between two celestial bodies. To test G ,

Cavendish's experiment should be conducted in the space, where there's no influence from the attraction of celestial bodies.

Physicists can also test if the attracting resistance exists on the moon. Previous physicists all included the attracting resistance in friction and air resistance, yet no one has proposed that the attraction from objects (celestial bodies) is coupled with attracting resistance. Since many manmade satellites have been launched that would fall on the earth if without energy supply, this proves the existence of attracting resistance. Some physicists may contend that the thin air and basic particles in the atmosphere of 2000~16000km high would pose friction and air resistance to the satellite, thus causing the satellite of 439~2384km high to fall on the ground. Without any experiment on these complicated problems, it's understandable that no one has raised any concern about it.

Fortunately, we have a very beautiful planet called moon, which has no atmosphere. If we launch a manmade lunar satellite that fails to revolve around the moon permanently, then it'd prove the existence of attracting resistance, thus revealing the truth that the attracting resistance is contained in the friction and air resistance. If so, we shall re-study the movements of objects and celestial bodies in physics and astronomy. Since the No.1 and No.2 lunar satellites both fail to revolve around the moon permanently, it already proves the existence of attracting resistance. Why isn't it accepted in the field of astrophysics?

Section 5 Perpetual Motion Machine Shall Not Be Denied by the Law of Energy Conservation

The universally recognized law of energy conservation is: energy is neither created nor destroyed, it can only be converted from one form to another form, or to transfer from one object to other objects, in the process of conversion or transfer of its total amount of unchanged.

Movement is relative, and any celestial body has its lifespan. I, however, believe that the perpetual motion machine could be made. First, we shall realize that a machine able to work for a long period of time could be called a perpetual motion machine. Second, the earth has attraction as well as attracting resistance, which make all objects (including mechanics) relatively still with the earth. Mechanical energy would be reduced by gravitation, friction, air and other resistances and objects will finally keep still. Thus it's impossible to make a perpetual motion machine on earth. However, we could broaden our horizon by studying the inside of objects, celestial bodies in the universe and plants, through which we'd find lots of perpetual motion machines that could be produced by us. A satellite launched by us should be a perpetual motion machine to fly out of the solar system. So we

should not make conclusions based on superficial phenomena.

1、The internal structure, electrons and particles are perpetual motion machines

Efficacy is the product of force and distance, as well as the product of weight (or mass) and distance. Object (particle) able for acting could be called a perpetual motion machine. Any objects consist of molecules, which are further composed of same and different atoms. An atom could be divided into nucleus (including proton and neutron) and electrons. Since electron has mass and constantly revolves around nucleus, electrons are constantly acting, so they could be considered as tiny perpetual motion machine. A new subject worth our research is how the electron's revolution breaks the law of energy conservation.

In 1827, British botanist Brown (1773~1858) observed pollen suspended in water through microscope and found that their movements are irregular and continuous, thus called Brownian movement. At first it was believe this movement was caused by external factors such as vibration and liquid convection. However, experiments show that Brownian movement still exists when influences from external factors are reduced to the minimum. If the particles are small enough, Brownian movement could be observed for many days or months. So this movement is caused by internal factors. Since pollens are acting and have mass, are they the perpetual motion machine? The long-term movement of pollen particles in the water also breaks the law of energy conservation, thus posing a new subject for research. It also proves that any conclusion or truth is only relative. Since thermal movement is related to rise in temperature and results in thermal energy in materials, we'll not discuss it here.

2、Celestial Bodies Are All Perpetual Motion Machines

Since efficacy is the product of force and distance, it's also the product of weight (mass) and movement distance. Now we'll discuss the giant perpetual motion machine. Looking into the universe, all celestial bodies are moving constantly (rotation or revolution). With a history of 5 billion years in the solar system, the sun could rotate and displace (not called revolve) and acts constantly, and gives out heat and light, so the sun (star) could serve as the most special perpetual motion machine. Planets and satellites in the solar system (and those outside the solar system, excluding dusts not spherical) are constantly rotating and displacing (namely called revolving), thus they're acting and can be called perpetual motion machine. I'll mention in chapter 4 that celestial movement comes from the movement of electric current under high temperature, instead of a

result due to external factors. Since the law of energy conservation is broken by electrons moving around the nucleus, the natural movement of celestial bodies also breaks the law. Although people can't use the perpetual motion machine on earth (due to attracting resistance), it could be produced on earth and used in the space.

3. The Vivid Perpetual Motion Machine

Animals and people can act for dozens, hundreds or thousands of years. However, I don't think animals are perpetual motion machine since animals need to feed for constant supply of energy. However, different from animals, plants act completely on their own. They are vivid perpetual motion machines.

For example, a seed of a tree could fly or be taken by flying animals anywhere. By absorbing nutrition and growing in the soil, it acts totally by its life. Its root system could absorb water and nutrition, leaves could perform photosynthesis and thus grow rapidly. The internal efficacy is to elevate water and external is to grow higher and stronger, increase gravity and its center. Its potential energy is the product of its gravity and height of gravity center, which is the result of constant acting. Trees can live for thousands of years if not cut off by people. This is the vivid perpetual motion machine, as well as the life mystery to be revealed.

We should not assert that the perpetual motion machine could not be produced due to attraction on earth that keeps everything in a relative still state. Aforesaid fact shows many kinds of perpetual motion machine such as natural, physical and vivid. The perpetual motion machine could be produced by us if we could get rid of the attracting resistance on earth. We should recognize the relative still state of the earth and objects on it, the moving parts inside materials and the special celestial movement. A world with lives in it would exist only with constantly moving materials.

Chapter 4 Discussion on Gravitation on Earth (Celestial Bodies), Rotation and Revolution (Displacement)

Newton found attraction on earth upon the sight of an apple falling on the ground, and thus deduced law of universal gravitation. However, he didn't study the reason for the existence of gravitation on earth and if it's restricted by distance. Out of fear for his authority, later generations don't dare to study these two subjects. I think all objects have attraction, which is decided by material structure and mass. Any object can attract within an effective distance. An apple 50000km away from the ground will not fall on the ground. Since Newton didn't study these two subjects, we can see why people viewed rotation and revolution as the result of God. Without the gravitational

constant G in his law of universal gravitation, how can we study the effective distance of gravitation?

People can't blame Newton, since modern scientists have avoided research and discussion of above two subjects. Everybody has only limited period of life and amount of energy. It was Newton's outstanding work to greatly advance astronomy, physics and mathematics in a time of backward science and technology, whose improvement requires the efforts of generation after generation, as well as inspiration and promotion from other disciplines. People shall realize that two obstacles hindering social development are superstition and autocracy. Superstition comes from lack of understanding of nature and things, as well as admiration to authority. Also, autocratic rulers would make superstition to fool the public in order to maintain their own benefits. The so-called autocracy is in fact the exercise of political, economic, cultural and scientific autocracy to people, elimination of pursuit of facts and diversity, and deprivation of democracy and freedom. The reason for Chinese nation to go down from a leading place to a backward situation is that western countries have developed capitalism to replace feudal autocratic policy, while China still adhered to its feudal autocratic policy. Although capitalist market features democracy and a diversified market, and promotes the development of productivity and science and technology, it's not a long distance away from socialist society and owns remnants of feudalism and superstition, thus influencing social development and progress.

1. Copernicus's heliocentric theory was proposed in a time when geocentric theory failed to give a reasonable explanation that the sun and other planets move around the earth. However, it was still in a stage of academic controversy due to lack of evidence and scientific proof. Roman Catholic Church strongly objected the heliocentric theory, persecuted and suppressed supporters of this theory. Heliocentric theory could only explain things that geocentric theory failed to explain, yet the people believed it was right without proving its reliability. It can be said that the first law of Kepler and Newton's law of universal gravitation both covered up problems in the heliocentric theory and made science more superstitious.

2. The first law of Kepler was established based on hypothesis and couldn't stand deliberation and analysis. First, suppose planets revolve around the sun in an elliptical orbit, thus the displacement (revolution) speed of planet is much higher than its speed along the equatorial line, while the linear speed of mechanical gyro is much higher than its displacement speed. Why is the revolution speed of planet much higher than its linear speed? Maybe no

one has studied this problem and doubted about Kepler's supposition. Second, as Kepler supposed that the sun is located at a focus of the elliptical orbit of all planets, this is proved invalid in fact, since the sun would move out of the circular path due to its rotation. Also, the supposition that the solar system revolves around the galaxy is also ridiculous and superstitious.

3. Unable to find the reason for the rotation of spheroidal celestial bodies, people believed the law of universal gravitation and considered it as the scientific evidence for planets to revolve around the sun. Without effective distance in this theory, all celestial bodies would mutually attract and celestial movement would demonstrate no law at all. And it'd be difficult to calculate the mass of celestial bodies using the law of universal gravitation, since no scientist could identify the relation of attraction among all celestial bodies.

In conclusion, the heliocentric theory, first law of Kepler and the law of universal gravitation are to be doubted. Modern scientists shall not take the universally recognized theories as truth and avoid challenges from new opinions. On the contrary, deep research is required to resolve people's doubts and meet their challenges. Otherwise the fundamental theories of astronomy and physics would be superstitious. I dare to doubt heliocentric theory, first law of Kepler, the law of universal gravitation and gravitational constant G. First, these theories lack proof by facts and are imperfect, thus boundless men dare to challenge and doubt the law of universal gravitation and gravitational constant G. Second, I'm not afraid of exposing my limited amount of knowledge and dare to exhibit my understanding, so as to throw out a minnow to catch a whale. Third, I can rely on previous achievements such as electromagnetism, atoms and nuclear physics, and particle physics, otherwise I won't have the guts to do it.

Section 1 Understanding Atomic Composition and Molecular Structure

Scientists have found that material consists of molecules, and later further found that molecules are comprised of atoms, which are the most fundamental unit and can't be further divided. Until the end of 19th century, scientists found electrons and thus realized that atoms can be further divided and are comprised of smaller particles. At first, it was believed that atom consisted of nucleuses (protons) and electrons; nucleus is positive, and electron is negative and revolves around the nucleus. It was believed that the ratio between nucleus mass and quantity of electric charge shall be equal to the ratio between proton mass and quantity of electric charge. However, it's not the same in fact, since in most cases the previous ratio is bigger than the latter. Physicist Rutherford thought

that nucleus may include another kind of particle besides nucleon; the mass of such particle would be the same as that of proton, and it would be electrically neutral. Later he called such particle as neutron. In 1932, Rutherford's student Chadwick proved that his supposition was right through experiments. Therefore, it's considered that atom consists of nucleuses and electrons, and nucleus consists of protons and neutrons; proton is positive, neutron is electrically neutral and electrons (negative) revolve around the nucleus. Now let's review the electric and magnetic fields.

French physicist Coulomb (1736-1806) studied the interactive electric force between charges and established the Coulomb's law in 1785: the magnitude of the electrostatics force of interaction between two point charges is directly proportional to the scalar multiplication of the magnitudes of charges and inversely proportional to the square of the distances between them, and the direction of the acting force is along the line between two charges. The formula is:

$$F = k \frac{Q_1 Q_2}{r^2} \quad (4-1-1)$$

In this formula, k is the gravitational constant, and $k=6.0 \times 10^{-9} \text{ N} \cdot \text{m}^2 / \text{C}^2$

Please note that proton and electron in the atom are two point charges. Experiment for many point charges can be conducted not in vacuum. Electric force is also called acting force.

How does interaction between charges happen? Through long-term study, scientists have realized that such interaction is generated through electric field, which exists around electric charges. The basic property of electric field is its force to any electric charge within. Such force is called electric field force. Therefore, electric field force also exists in atoms. Since molecule consists of atoms, thus it also has electric field force, which is very weak and difficult to detect. Such electric field force can combine two close molecules. Such electric field force, although very weak, still exists, and would display a strong magnetic field by combining numerous molecules into a huge material.

In 1820, Denmark physicist Oersted (1777-1851) proved through experiments that current could also produce magnetic field, which generates force to pole as well as current. For example, electric current can generate magnetic current, which can be produced by cutting the magnetic line of force using conductor, thus proving that current and magnetic field can inter-change and interact. Both of them are based on the revolution of electrons (current). Physicists have conducted experiments using two parallel direct conductors. When the current were in the same direction, they'd attract each other, and repel each

other in case of inverse current. This each current is in the magnetic field of another current, thus under the influence of magnetic field force. In other words, current of the same direction can overlap or combine different magnetic field force. Therefore, current between current is like magnetic field between magnetic field and would influence each other through magnetic field.

The reason for atoms combining into molecules is found through current experiment of the same direction. One molecule is formed by over 2 same atoms and different atoms. Since electrons surrounding the atom are all negative charges, thus the current of different atoms are all of the same direction. Since current is generated by electrons revolving around the nucleus, more protons in the nucleus would mean more electrons and higher current. Therefore, the current of several nucleuses can only generate magnetic field through other current. Since magnetic field is overlapped and combined, molecule is formed by combining atoms. Due to stronger magnetic field from molecules, they're also combined by magnetic field force. For materials formed due to mutual abstraction by magnetic field generated by electrons, magnetic field force is the expression of electric field force, and both of which come from the movement of electrons. As is often said, air, water and sunshine are three essential elements for life. Actually, electrons and their movement are the most essential element in life. Without electron movement, atoms can't form molecules, and molecules can't form material. All materials would be just atoms without a material world or life.

Attraction among materials comes from the magnetic field force generated by electron movement (attraction on earth is the reflection of magnetic field force), while the movement of current (electron) is related to electromagnetic field. Since Coulomb's law and the law of universal gravitation both are inversely proportional to the square of distance. This further proves that the attraction from electric charges and materials stem from electrons and their streams of different patterns of expression. It's just like an actor who can act in multiple roles. The electrostatic attraction F_1 of electrons and protons is 2.3×10^{30} times bigger than universal gravitation F_2 , because the electrostatic attraction constant is 1.35×10^{20} times bigger than universal gravitation constant, and F_1 is calculated by the quantity of electric charge in protons and electrons. However, F_2 is calculated by the mass of electrons and protons with different unit.

Section2 Three Methods for Material Combination

As is well known, current is generated by electrons revolving around the atoms, thus combining atoms into molecules. Since electrons in molecules are still revolving, it still has magnetic field, which

produces force to bind molecules together and form materials. Therefore, all materials are bonded by numerous molecules instead of single molecule. Different molecules can combine and form mixed material. If atoms share the common magnetic field in molecules, then it has a firm structure and is quite difficult to break up its molecular structure, which can only be achieved through chemical method. If molecules and bonded together through magnetic field force, such force is weak and can only firmly bond molecules together at a close distance. In other words, a shorter distance between molecules means a more solid material. Therefore, it's easier to break the bond between molecules than molecular structure.

The firmness of bond between molecules is decided not only by their interval (the closer, the tighter), but also the strength of magnetic field, which is directly proportional to quantity of electric charges. In other words, more electrons in the molecule would form stronger magnetic field, and vice versa. This explains why some materials are more resistant to pulling and shearing. Since strength of magnetic field is decided by distance, molecules would not be combined together if too far away. They can only combine by sticking firmly to each other. Molecules in the steel bar molten under high-temperature are tightly combined and it is quite resistant to pulling and shearing. Scrap iron from steel bar would only become loose powders due to its inability for combination with a long distance between particles. Physical, chemical and life methods are commonly adopted to firmly combine one material with other materials, which are introduced in the following.

1. Physical Method

Physical method can be divided into compression, high temperature and bonding. (1) Compression method: improve the bearing capacity of soil through multiple times of compaction. Distance among air, water and molecules inside the soil is shortened through grinding, thus making the molecules adhered to each other in the soil and improving its resistance to pulling and shearing. Roll loose soil by water under high temperature, make soil into cob brick and then dry it. The strength of cob brick is over 10 times higher than that of soil. This is because molecules inside the soil are closely combined through rolling by water, water is evaporated through drying, and the brick is contracted, thus increasing the binding force between molecules. (2) High-temperature method: ceramic workers smash and perform pulp washing to petuntse, and make ceramics using the mud condensed and dried to certain extent, which would not contain water or other things even after drying them. However, after burning under high temperature, they can contain water and other materials. It's proven that burning under high temperature strengthens the speed of

revolution of electrons in molecules, and increases the magnetic field force, thus combining molecules tightly (proved by a small volume) and improving its resistance to pulling and shearing by dozens of times. Porcelain can be remade after being smashed, proving that burning under high temperature brings only physical change, instead of chemical change. The binding force between molecules in iron is quite strong, and it's quite difficult for human beings to combine scrap iron together. The only way is to melt it at high temperature, which eliminates air and impurities in the scrap iron and also recombines iron molecules. The molten iron, after cooling down, has strong overall structure and can melt with other metal to form alloy under high temperature without any chemical reaction. (3) Bonding method: Aibaba is a traditional Chinese snack. It alone couldn't bond together; instead, it requires glutinous rice flour and polished round-grained rice. Now the bond is produced by human being to bond together metal and wood. The three methods above all belong to physical method to enhance material bond and strength.

2. Chemical Method

Chemical method can decompose molecules as well as firmly combine different materials (molecules). For example, if a steel wire gauze is exposed outside without any stain proofing treatment, it'll perform chemical reaction with oxygen in the air and produce ferric oxide, which is loose particle and can't be combined. Chinese people knew how to combine different materials through chemical methods thousands of years ago. Calcium carbonate could produce calcium oxide (quick lime) through high-temperature calcination, which can be made into bond by combining with river sand, yellow mud and water. In this process, only water and calcium oxide have chemical reaction to produce calcium hydroxide, which further reacts with carbon dioxide in the air to produce calcium bicarbonate. It can firmly combine river sand and yellow mud, proving that chemical reaction only changes molecular structure instead of atomic structure.

As science and technology develop, the structure of nucleus can also be changed. We can view nuclear fission and nuclear fusion as advanced chemical reaction, or the integration of chemistry and atomic physics. The element barium with an atomic number of 56 can be produced by bombing uranium nucleus using neutrons. Such reaction is defined by physicists as nuclear fission. Take uranium-235 for example. It'd produce 2 or 3 neutrons during fission, which would continue nuclear fission. Such process is called chain reaction, which can produce large amount of energy called nuclear energy.

Two light nucleuses could be combined to a heavy nucleus with bigger mass and such reaction is

called fusion. Specific binding energy is increased after fusion, thus releasing energy during reaction. Fusion happens under high temperature, thus it's also called thermonuclear reaction. Now thermonuclear reaction is mainly used in nuclear weapons, namely hydrogen bomb, a weapon that could destroy human beings after atomic bomb. Before the explosion of hydrogen bomb, normal explosive would detonate atomic bomb, which would produce high temperature and pressure to generate thermonuclear explosion. The earth itself would not produce nuclear fission or fusion, and nuclear reaction has nothing to do with the gravitation or rotation of the earth. However, the sun is a huge thermonuclear reactor, as demonstrated in chapter 5.

3. Life can make special molecular and material structure

Life is wonderful and also stems from electron motions in atom. Life can mix various kinds of materials together and make the most characteristic new material, which is incomparable to physical and chemical methods. For example, the root system in plants can absorb water and nutrients, blade can perform photosynthesis and produce new molecules and plant fiber, which may not be copied even by a chemical factory. A plant is like numerous chemical plants with admirable functions. Plant molecules have strong bonding force. The property of resistance to pressure, pulling or shearing only belongs to metal material. However, plant can conduct electricity, and electrons also play an important role in its molecular structure. Plant can be burned, and its seed can also produce oil.

A common point in animals and plants is that their species is determined by genes. Cells in animals are vigorous, and some special cells have the ability for thinking and memorization. Human beings can even have mind and soul. Now such cells couldn't be copied through scientific methods. With advanced structure in various kinds of cells, the inorganic chemistry is pushed forward to organic chemistry. Molecules in animals also have electron, belong to conductors and have strong structural capacity which could bear a load dozens of times heavier than its body weight, just as ant. Animals can also be burnt and produce oil. Scientists believe that coal is formed by plants deeply buried in the ground under high pressure, and petroleum is the outlier of rotten bodies of animals. Therefore, materials through life manufacturing are not only characteristic but also mysterious, which requires human efforts to break up the mystery.

Section 3 Attraction on Earth (Celestial Bodies) Is the Magnetic Field Force from Electron Motion

With molecular structure, it's well known that material consists of molecules and any molecule has magnetic field force due to electron motion. Attraction

in the magnetic field of molecules is quite weak due to the small size of molecule. Molecules can only attract each other to form into a material under pretty close distance. The earth consists of materials as well as numerous molecules. The magnetic field force of molecules accumulates to form geomagnetic field. Thus the attraction on earth is the combination of the magnetic field force of numerous molecules, namely geomagnetic field force. The earth and objects (materials) on it is like the infinite and the infinitesimal. When comparing these two, people can only detect the geomagnetic field force instead of the magnetic field force of materials, which is quite weak and hard to detect. Since any material has gravitation due to the existence of geomagnetic field force, combination of molecules would definitely be influenced if gravitation is bigger than the magnetic field force of materials. Molecules can only combine each other with an infinitesimal distance. For some iron powders, although we consider their interval is quite small, actually it's infinite compared with the molecular volume. A solution is to melt scrap iron, since molten iron can eliminate the infinite interval, and high temperature can accelerate electron motion, enhance the magnetic field force and combined iron molecules, thus forming an overall material.

Therefore, it can be deduced that the magnetic field force of materials is directly proportional to mass and electric quantity, and inversely proportional to the square of interval. Without discriminating the electric quantity, it'd be believed that 10kg soil and 10kg iron have the same magnetic field. Since the earth (celestial bodies) is formed by mixed materials, people would only mention mass instead of electric quantity, which is only hard to calculate. Iron and copper of the same mass are also quite different. It's commonly believed that celestial body of bigger mass has stronger magnetic field force. As for the earth, the attraction of any object is insignificant compared with the geomagnetic force, but such attraction still exists. For the smooth walls and window glasses, dusts in the house would fall on the ground due to gravitation. When the distance between dust and the wall and glass is infinitesimal, they'll attract together, and the distance between dust and ground is infinite. As other materials, human beings also have attraction, and would also attract dust on the face when walking outside. Therefore, attraction between two objects is decided by the magnitude of attraction as well as their distance. For example, as dust is attracted by gravitation on earth, when the attraction of an object nearby is bigger than the gravitation, the dust will be attracted to such object.

In the computational formula of universal gravitation, it only considers the square of distance without the effective distance of gravitation. Thus the

result is just a proportional relation instead of a true reflection. As we all know, attraction on earth is the geomagnetic field force, which is limited by distance. Obscure concept shall be avoided in the instruction of physics. For example, the gravitational acceleration magnitude in the textbook shall be the magnitude close to the ground, not the magnitude of different heights. Gravitational acceleration experiments shall be conducted at different heights to determine the effective distance for gravitation on earth. Suppose the gravitational acceleration 20000km away from the ground is infinitesimal, and the gravitational acceleration at 25000km high may be zero, thus proving that the effective distance of gravitation on earth is 25000km. The closest point of the moon to earth is over 300,000km away, so it's impossible for them to attract each other, and the saying that moons revolves around the earth due to attraction would be negated. Thus, new research subject is necessary.

Although Newton found attraction on earth and published the law of universal gravitation and computational formula, he didn't study the reason for attraction. He has passed for 268 years and no one has studied this problem. So is this a restricted area for research? It'd be disappointing not to study these obvious problems. Out of my limited understanding of physics and courageous attitude, I proposed that molecules have magnetic field generated by electron motions. Since molecules form material, materials form the earth, and the magnetic fields in molecules form geomagnetic field, the attraction on earth is the geomagnetic field force. This is personal opinion, yet it's better to raise it than not.

Section 4 Reason for Rotation of Earth (Celestial Bodies)

The earth can rotate at a constant speed and complete one period by 23 hours 56 minutes and 4 second, and would take 365.2564 days to complete the displacement (revolution) route. According to the first law of Kepler, the revolution speed could be calculated by the theory that earth revolves around the

$$v = \sqrt{\frac{Gm}{r}}$$

sun in an elliptical orbit, also could be deduced by Newton's universal gravitation and centripetal force formula so as to calculate the revolution speed of the earth. Both methods produce the same result, namely 29.8km/s. Although gravitational constant G is big, it's impossible for gravitation to attract anywhere. Plus the revolution speed of planets is not proved by facts and is just a computational game, it's not reliable. Strictly speaking, I believe that objects performing cyclical movement shall be performing circular movement. The elliptical orbit of artificial satellite surrounding the earth is caused by displacement of the earth. All planets

revolving around the sun in an elliptical orbit, which is caused by the displacement of sun, not because the sun lies in a focus of all ellipse as Kepler said. If the revolution speed of the sun is 250km/s, thus all planets would be unable to revolve around the earth. So the first law of Kepler doesn't stand. According to the law of universal gravitation proposed by Newton, planets revolve around the sun due to its attraction. Suppose attraction is accompanied by resistance, then the theory that all planets revolve around the sun regularly would not stand. Since I believe that objects have attraction within an effective distance, and two objects with an infinitesimal distance couldn't attract each other, I proposed that earth (all planets) perform circular movement outside the movement trail of the sun. The displacement (revolution) of a planet is caused by its own rotation. The linear speed of earth at equator is 0.46511 km/s, thus deducing its displacement speed as 0.07815 km/s, which is logical. This is not deduced by Kepler's law or Newton's law, and there's no superstitious theory saying that all planets are carried by a mysterious material.

To prove that the earth performs circular motion around the motion trail of the sun, two problems shall be solved. First, why does the earth rotate? Second, would the earth produce centripetal force by inclination? Since I don't believe that God enabled the movement of the earth, I can only look for reasons from the earth (celestial bodies). As we know that material consists of molecules, and a molecule consists of over two electric atoms. Electrons move around the nucleus perpetually, thus generating electromagnetic field around molecules and further forming geomagnetic field.

Frictional electricity is the reason for thermal motion. Inside the earth, thermal motion happens due to squeezing, thus its central temperature is as high as 4000~6000°C. The centrosphere with a diameter of 6800km is melted (including rock and metal materials), thus centrosphere is a liquid ball (magma). Molecular motion is enhanced by high temperature and pressure. The intense movement of molecules accelerates the revolution of electrons, thus forming electric current. The mantle is as thick as 2900km, but electric current still exists under high temperature and pressure in the mantle. For the crust as thick as 10-40km, there still exists a slow electric current. Due to the big volume of earth, it's hard to detect the current on the surface. However, it doesn't mean such electric current does not exist. This is like the undetectable magnetic field of molecules. The strong geomagnetic field is formed due to the existence of magnetic field. According to the right-hand rule, point the thumb to the north (given that the anode of geomagnetic field is northward), and the direction of current is along the four fingers. We can take the

radius of the earth as the arm of force. Moment is formed under the current force, and since the earth is a sphere, force couple is formed to revolve the earth. Since current flows from west to east, the earth will definitely revolve from west to east, which meets practical conditions. Thus such deduction shall be correct. It's estimated that the liquid nuclear bulge is also revolving and is faster than the mantle and crust, thus increasing the kinetic energy of the earth. Earth can rotate at constant speed since such current is constant.

Therefore, any celestial body that could turn into a sphere by its own gravitation could rotate (at constant speed), and the speed of rotation is directly proportional to its mass and volume. For example, the volume of moon is $\frac{1}{49.256}$ than that of the earth, and

the mass is $\frac{1}{81.29}$ than that of the earth, thus the linear speed of lunar rotation along the equator is much smaller, which is about $\frac{1}{28}$ than that of the

earth. These are estimated and not quite accurate, because I also doubt the universal gravitational constant G. The celestial body fails to turn to a sphere would not rotate at constant speed or move regularly. Individual investigation and analysis are required to conclude the pattern of movement.

The earth is only a similar sphere and heterogeneous. Low-lying places are filled by water, whose mass is smaller than that of solid materials. Land is above the level of the sea, and some mountains are hundreds or thousands meters high. Different radiuses on earth would make the moment unbalanced, which would further make the earth's axis incline to maintain self balance. So the inclined rotation of earth is caused by unbalanced moment. Even if the axis is not inclined, the earth would still displace since its rotary force would produce centripetal force, making displacement trail similar to a circular trail. The inclination of earth's axis could further help determine that displacement is in a circular movement. If such understanding is recognized by the physics field, it's not difficult to prove by experiments. We shall not take it for granted that the positive pole is northward based on the fact that the positive pole of geomagnetic field on earth is northward. They have various directions, thus having various forms of rotation. If the positive magnetic pole is southward, the celestial body would rotate inversely, as demonstrated in chapter 5. I think that the slow drift of continental plate is caused by the rotation of earth. Plus, even the whole crust (including mantle) is also moving slowly. The main reason is that the earth is not a solid ball; it has liquid and solid materials divided by

an inconspicuous boundary, thus difficult to rotate at the same time. The external part of the earth has larger linear speed as well as bigger centrifugal force, so the displacement of higher continental plate is more obvious. The reason for the rotation of the earth (celestial body) is the revolution of electric current. It's necessary to realize that electrons are not only the source of material and life, but also the motivation for rotation of celestial bodies. The operating principle of motor could also explain this. People could understand that the electric current per unit area in the nuclear bulge (liquid) is the biggest and strongest, electric current around the mantle is less, and for crust it's the weakest. Current of different speed come together to make the earth rotate at constant speed. Undoubtedly, the earth rotates at an absolute constant speed, and may have little change under the influence of internal or external factors. Although electric current of the nuclear bulge and mantle is strong, it's difficult for test, while the electric current of the crust is weak and has a big section for conduction, thus difficult to find out.

Although Newton had studied earth's rotation, it was impossible to find the reason without the use of electronics and electricity. He could only assume it was the work of God and thus made science superstitious. Although he had passed away for over 280 years, no one has found the reason for the rotation of celestial bodies till now. One missing link is required to determine the heliocentric theory, first law of Kepler and the law of universal gravitation. It's hard to imagine that someone had said "these three laws are universally recognized and thus undeniable truth." Why was geocentric theory overthrown although it was once universally recognized? Actually there're assumptions and suppositions in all these three theories. It'd be blasphemy to make science and technology superstitious through universal recognition and authority without proving them by facts. Without knowing the reason for rotation, how could people believe that the revolution speed of planets (stars) is faster than the linear speed? Is it made by God?

Anything is decided by the internal reason. External reason is only secondary, and superstition shall be wiped out. Therefore I proposed that the rotation of spherical celestial bodies is caused by internal electric current under high temperature. Since such problem has not been studied in astrophysics, experts shall not deny it as it's not universally recognized. To deny it, one has to prove that – first, electric current doesn't exist, or it can't enable rotation of celestial bodies; second, give solid proof about such rotation or other reason for it. Although I can't do simulation test in the space, given that previous people explained problems about celestial bodies through physical experiments, I will also design and conduct

experiments on earth to prove the rotation of celestial bodies. I hope my proposal could raise the attention of national science research institutions and experts. Everything would be clear by doing simulation tests in the space.

Section 5 The Primary Responsibility of Human Beings Is to Love and Protect the Earth

Earth is the living place for human beings and other lives, and may be the only planet in the solar system suitable for living (we can't make conclusion since we only see half of the solar system). Plants are the clothes of earth. Human beings have realized the importance of clothes, yet some people still don't realize that the earth also needs clothes (plants) to protect its surface. Only protected surface could benefit the survival of human beings and animals. Although land animals would damage the surface, the depth and coverage of such damage is quite limited, and can even be ignored. Human beings are intellectual higher animal. With industrialization and the development of science and technology, the earth would suffer destructive damage if we fail to realize the importance of loving and protecting the earth. I have proposed a dialectical opinion that to eliminate enemies is also to eliminate ourselves. So we can't eliminate all animals that are dangerous to human beings. To eliminate enemies is only one-sided victory, yet it's an overall failure. So we should transform enemies instead of eliminating them. To change enemies to our friends bring a comprehensive and through victory. Human beings are the culprit for damaging the earth and its only protector (although animals and human beings share the same earth, the former can't protect it). People would be destroying themselves by damaging the earth. In modern times, although people have realized the importance of protecting the earth, their protective measures are incomplete and improper without realizing the reason for its rotation and the necessity to maintain its original balance. Three matters are worth our attention to love and protect the earth.

1. Protect plantation and maintain ecological balance on earth

Besides realizing that the earth has the weather conditions suitable for survival of human beings, it's also necessary to realize that human beings are not the forerunner of life on earth; instead, we are the pirate. The origin of life on earth is fungus, alga and plants, then fungus and plants produced animals, which is a long process. It's still unknown how long it took from apes to evolve into human beings. So we shall realize that fungus, alga and plants are also the origin of life, and animals are the companies of human beings. Since it's proposed not to forget the origin (previous people), should we not treasure the origin of life and animals? They gave birth to and maintained the life of people,

thus being the foundation of human beings. Many people don't know the process of life, the foundation of human beings and the importance of plantation to the climate. Many plants and animals are extinguished and many more are at the edge of being extinct due to our unscrupulous acts. Climate has been deteriorating and putting our lives in danger. We shall start from the following four aspects to protect plantation on earth and maintain ecological balance. First, avoid excessive deforestation or land reclamation by destroying forests; instead, plant more trees and improve the desert to keep climate stable and the amount of fresh water from the sky constant. Second, do not hunt and kill animals at will. Focus on protecting the species of wild animals near extinction, and maintain the ratio between human beings and animals. Third, control the growth of population and live space for wild animals, so as to coexist. Fourth, make a scientific planning to ensure the proportion of forestry area (green area), population and wild animals, make people knowledgeable and civilized through publicity and education, and realize that they can't live alone without forests and wild animals.

2. Eliminate pollution to environment and air from industrialization and nuclear weapon tests

The land had been divided for governance since the occurrence of tribes and countries. In a time of backward productivity, national benefits would not be impaired except war of aggression. With industrialization and the development of science and technology, people are no longer able to keep individual land, sea and sky, since water and air are distributed everywhere and become the common resources of all human beings. Exhaust gas and nuclear radiation from industrial exhaust gas and nuclear weapon tests, although such tests are conducted in one country, would cause global pollution due to the boundless distribution of air. So it's a global issue to protect the environment from pollution and is worth attention and support from people all over the world.

In conclusion, a global environmental protective institution should be established to make universal statues, monitor, control and renovate industries with pollutions or even stop their production and exercise penalty; control the manufacturing of nuclear weapons, which could destroy human beings and are against humanitarianism and human civilization. If they can't be eliminated, they should be prohibited from being tested on earth, so as to avoid polluting the air and endangering people on earth. Even nuclear tests of economic value shall be performed at moon. This should be set as a convention. Countries unable to control nuclear leakage shall not develop nuclear energy, so as to avoid global danger and panic. Therefore, it's a global issue to prevent pollution in

the sea and air.

3. Protect the stability and original appearance of the crust

As we know, the earth rotates at constant speed due to electric current, and thus enabling displacement (revolution). The earth is not a standard sphere or a homogeneous body; it's because of the inclination of earth's axis to maintain its balanced and stable state, which may be so since the birth of earth. To keep stability on earth is to ensure its appearance stay the same. Maybe human beings have not realized this point and usually try to change such appearance. The automatic adjustment of balance on earth would bring disasters to human beings. There're several factors destroying the balance and stability on earth:

(1) Natural damage: precipitation cause mudstone move downward or even cause flash flood, landslide or volcanic eruption. These have changed the appearance on earth and influenced its balance;

(2) Manmade damage. Exploitation of mine and underground oil, perforation in mountains to build road, centralized high buildings, filling the sea by removing mountains, and the establishment of large reservoirs all pose damage to the earth and influence its balance;

(3) After knowing that there's no attraction from the sun, we've launched rockets and manmade satellites. This influences its balance due to asymmetric launch and may cause irregular slight displacement according to $F=ma$. Some may think such change is insignificant since earth has such huge amount of mass. However, it's no longer a small issue by combining them together. A slight influence on earth would cause disaster to human beings. The nuclear bulge of earth is in a liquid state. Then mantle, although being thick, is a soft crust due to transfer of centrosphere under high temperature and squeezing. People can only see the solidity of the crust without realizing its soft inside. For a large reservoir of dozens of billions of square meters, it'll increase partial pressure to earth. Liquid and soft internal part would automatically adjust such pressure, and since it could be transferred, earthquake or volcanic eruption may occur at surrounding or distance area. Too many changes of the appearance would cause automatic adjustment of the inclination of axis and result in more and bigger disasters. People could only understand the coexistence of advantages and disadvantages after knowing the earth. Therefore, people should maintain the appearance of the crust.

In conclusion, it's not related to one country or a small group of people to love and protect our earth. All human beings shall pay attention to and act upon it, and establish a civilized social system and a global convention to protect the earth. Such hidden danger can only be eliminated by truly protecting our

environment, preventing pollution and eliminating destruction of its appearance.

Chapter 5 A Fantastic Imagination of the Birth of Solar System

In the pursuit of democracy and a society with the rule of law among modern people, capitalist countries have taken the first step. However, they're still far away from becoming such a society. There still remains autocracy and it needs to be improved and developed. This also proves that it takes time, and development of productivity and advancement of science and technology for a society to become mature. Now it's still a time of primary democratic and legal system society combined with autocratic society, and the latter is weakening, which shows the advancement of human society. The characteristic of autocratic society is the lack of democracy in politics. Everything is decided by power, and autocratic and conservative power exists in economy, culture and science and technology. A common people is not qualified to discuss science and technology and the solar system. However, given our freedom of speech since reform and opening up, it's ok to express our imagination to the birth of solar system. Plus, there's no boundary to the mind and imagination of human beings, so I express my own thoughts to amuse myself and serve as reference to authorities in astronomy and physics. As a retired old man, I bear no objective in mind; nor do I care about gain or loss. I dare to express my opinions since it's not a bad thing and doesn't impair others' benefits.

Section 1 Cases of Scientists Guessing the Birth of Solar System

As the universe is still a mystery not completely solved, conjectures and guesses about it would be unavoidable. Astronomy and physics are closely inter-related and can promote or even mislead each other. To understand solar system would be the first thing to understand the universe. When and how did the solar system occur? This has been a nerve-racking problem since ancient times. To solve the mystery of the solar system, there's no way but to observe and guess its current appearance. People haven't been able to understand all secrets of the earth in which they live. It's pretty difficult to get over the earth and understand the comprehensive solar system. Since everything has its start and end, including the solar system, it's commonly believed that its current ideal appearance is quite different from the one upon its birth. For example, the size and temperature of the sun are quite different from those upon its birth, let alone for the solar system. Thus it's extremely difficult to explore the origin of solar system based on unsure clues. Previous opinions all failed to demonstrate this problem. In my opinion, since astronomy rose from observation, guessing and supposition, it's better to

see more opinions expressed, and finally there would be one theory close to the truth. The followings are two examples on the origin of solar system.

1. Theory on the origin of tide

At the beginning of 20th century, British astronomer and physicist Kings (1877-1946) expressed his theory on the origin of tide. Such theory proposes that there was another sun (star) passing by the sun, a hot blast of gas was pulled out due to the strong attraction and was revolving around the sun. Then such gas was divided into several segments and formed into many planets like as earth after cooling down. This is quite rare, even in the 5000 trillion years. However, it has only been 10 billion or 20 billion years since the birth of solar system. So this situation is impossible.

Actually the biggest mistake in such theory is that, even if the sun erupted the hot gas, it could only be released in the universe and would not conglomerate. Although such theory was quite popular at that time, it's no longer mentioned nowadays. Besides, there's three points to be analyzed. First, since a passing star could rip out certain part of the sun, why wouldn't they integrate? Second, why wasn't the gas absorbed on the star or followed it, instead of revolving around the sun? Third, since the sun is about 27000 light years away from galactic center and the sun was born about 5 billion years ago, where is the passing star? If the sun consists of hydrogen atoms, why aren't the materials from it totally composed of hydrogen atoms?

2. Cosmic Dust Theory

The comic dust theory is proposed by modern people. During 1940s, Weizsacker from Germany and Schmidt from Soviet Union expressed a new theory, believing that the sun and planets are formed by the gas or dust cooled down in the universe. So why are there such a huge sun and so many small planets? Their explanation is that planet is the transformed double star, which consists of two suns revolving around each other.

At first, suppose there is a huge comic cloud divided in half, thus forming a double star. If one is quite huge and the other is scattered, so the former would become a sun and the other would become planets like the earth and Venus. More specifically, there were some discoid swirls of different sizes around the sun at first and then conglomerated into planets.

According to the calculation of Weizsacker, such swirls still exist on the track of Neptune and are ten times heavier than all planets. Also, he believed that after tens of millions of years or 100 million years later, the gas cloud around the sun would disperse. Materials between the swirls would revolve around the sun, and the bigger material would attract

surrounding smaller materials and become larger. Then it'll contract due to gravitation, thus forming the planet. The star is also formed by the gas cloud surrounding the planet as the above process.

According to Schmidt, the sun first appeared and then attracted planets. In conclusion, it's commonly believed nowadays that planets are formed by interstellar matters cooled down. However, I do not think so. First, if they're all interstellar materials, would there be such a huge difference between the sun and planet? Second, with pretty low temperature in the universe, why does the gas cloud only exist around the sun? Does a planet only have cosmic dust or a small amount of gas cloud around it?

Section 2 Research on Physical Phenomenon of the Earth and Speculation on the Birth of the Solar System

Human beings are most familiar with the earth, which is the carrier for our lives. Physicists and chemists have found that material consists of molecules, which further consist of atoms of strong stability. There are numerous kinds of molecules in materials, yet only over 100 kinds of elements forming molecules. These elements would constitute different molecules through different mathematical combinations. Since stars, planets and satellites and dusts are composed of materials in the solar system, and there are only over 100 kinds of elements (maybe a new element will be found), this is the general characteristic in celestial bodies in the solar system. Also, from the phenomenon on earth, only the object performing circular movement would have a periodic recurrence interval. Kepler said there are some speculations and suppositions in the saying that all planets perform elliptical movement, and thus require further study and investigation.

With electron movement, atoms could generate magnetic field force around molecules (attraction) to attract them and form materials. Therefore, bigger mass means stronger attraction. Material with certain mass could attract surrounding dusts, just like the snow ball becoming bigger, thus forming stars. A star with a mass to some extent would contract as attraction increases, exposing the nuclear bulge to high pressure and turning nuclear bulge into magma or gas. Since the sun and planet are formed by gas cosmic dust, their common point is that they both heat, and the difference is that the sun is tens of millions of times heavier than surrounding planets. Only by analyzing their difference can we deduce the birth of the sun.

Physicists only found the circularity of materials and lives after finding the inextinguishable materials on earth. This should be a common characteristic, thus it's wrong to believe that all stars came into being and disappeared at the same time. People would be born

and then die (there's a special case in the universal rule), and stars are like people, those first born would disappear first. New stars are born and old stars are dissolved in the universe. In the vast universe, it's impossible for human beings to know the exact number of galaxies, and even those perceivable are quite far away, making it difficult to understand them. We can consider that stars and cosmic cloud (gas and dust) coexist (cosmic cloud conglomerates into star and star dissolves into cosmic cloud). People would not be able to see the birth and death of stars in their limited amount of life on earth.

The life on planets would become extinct with the demise of the sun, yet planets will not disappear with the sun. This is because a planet gradually increases as the surrounding dust, and will become a sun (star) when large enough. When the mass of a planet is over 3 times that of the sun, it'll change into a star (as demonstrated in the next section). Thus current planet has much longer lifespan than the sun. However, the sun has a large volume, a surface temperature of 6000 degrees, is 15000 degrees at the center of nuclear bulge, which the planet can't compare. Physicists believe that the high temperature in the sun would not generate nuclear fission. This is because the sun is nearly composed of hydrogen atoms (still a speculation), whose nucleus would change into heavy nucleus under high temperature and pressure. Such reaction is called nuclear fusion, which generates much more energy than the nuclear fission of uranium – heat and light.

Physicists estimate that four hydrogen atoms in the sun could turn into a helium atom which is the most natural reaction within the sun. The weight of a helium atom is 99.3% that of the hydrogen atom. In other words, 0.7% of the weight is lost and turned into heat and light. In the central part of the sun, nearly 564 million tons of hydrogen atoms are conducting thermonuclear reaction per section. These hydrogen atoms would turn into nearly 560 tons of helium atoms in one second, and nearly 4 million tons would radiate outside in the form of light and heat. So would the heat and light of the sun be exhausted one day?

Physicists think that the sun is totally composed of hydrogen atoms (which is groundless). Even after totally turning into helium atoms, the sun would only lose weight by 7%, which is quite small. However, this is only deduction made by scientists. Since no one had detected on earth, why is the sun totally composed of hydrogen atoms? Any material on earth has impurities. Isn't there any material in the great sun? If four hydrogen atoms turn into a helium atom, as helium is a kind of inert gas, when all hydrogen atoms turn into helium atom, the sun would no longer give light. After it cools down, would the sun dissolve into

cosmic cloud? I think the sun consists of many kinds of materials, most of which are hydrogen atoms. We can't totally believe that the sun is completely composed of hydrogen atoms.

Also, we shall realize that celestial bodies in the universe only have mass instead of weight, while materials on earth have both mass and weight due to gravitation, which is the particularity of materials on earth. We shall not apply such particularity in celestial bodies. Explosion is caused by the expansion of gas, just like when some water is pulled out of an old vacuum bottle, it may explode due to the expansion of steam. If the remaining water in the bottle has gravity without being attracted by the earth, even if the glass liner is smashed due to explosion, the remaining water would gather together due to the inner force within the water molecule instead of flowing away. This shows that only when the cohesion inside material is bigger than the gravity caused by gravitation on earth would the material remain the same. For example, the bullet is pushed out by the gas through explosion, yet the bullet would not dissolve. Understanding of such phenomenon would help us study the birth of the solar system.

Section 3 Gas Cloud and Dust Could Conglomerating into Giant Star which Turns into Solar (star) System by Exploding Its Shell

Scientists have made many suppositions and speculations as for the origin of solar system (including various stellar system), which are still unacceptable. After studying physical geography and the movement of celestial bodies, I was inspired and hereby propose a new speculation on the birth of solar system for your reference. I have no objection to receive examination by future generations.

As gas cloud and cosmic dust float in the universe under very low temperature (possible close to absolute zero -273.15°C), the gas cloud is condensed. The gas cloud of bigger mass has bigger attraction and can absorb adjacent scattered gas cloud. According to the second law of Newton ($F = ma$), the gas clot has bigger acceleration as well as faster speed than dust materials. Thus the condensed gas ball would increase its mass and gravitation. It'd absorb the gas clot with impurities as well as small clot of dust. When such condensate is big enough, it'll contract into a sphere due to attraction by materials and start rotation and circular movement, which definitely extends the scope for searching the absorbed gas cloud and cosmic dust.

As the spheroid mass constantly increases, its attraction also increases and the effective distance becomes longer. Second, as its volume increases, its speed of rotation will increase and the circle for displacement will also increase. These two factors combined would absorb more and more materials.

After tens or hundreds of billions of years, the nova will become a giant star whose mass is three or four times than that of the sun.

The giant star almost absorbs all gas clouds and dust clots within its scope of gravitation (cosmic materials further away may be absorbed by other giant stars), and its mass would increase slowly or even stay the same. The giant nova has very strong gravitation. The nuclear bulge, which consists of gas cloud, is infinitely compressed and its temperature constantly increases till even over 20000 degrees, thus generating nuclear fusion. Since the spherical shell nearly stops absorbing and start getting thick, until one day the expansion of the spherical bulge is in balance with the parcel force of mantle and spherical shell. The expansion of spherical bulge causes the explosion of mantle (including spherical crust), and its peripheral materials fall apart or become scattered and fly away.

After exploding away the parcel shell, the spherical bulge would expand due to decreased pressure and gravitation and reach a new balance. With less mass and volume, its rotational speed would decrease and the diameter of the circular movement would also decrease greatly. It would become a naked spherical bulge without being able to attract back the flying fragments. Since the nuclear fusion has happened, it'll definitely give out heat and light. And such spherical bulge is the sun. If all stars are born like this, then they'll have planets and satellites. Thus it's not reliable to say that star is totally composed of hydrogen atoms.

In 1611, Galileo first observed by telescope and found sunspot generated on the surface of the sun. Due to its rotation, it occurs at the east side of the sun and disappears at the west. With different sizes, the smallest sunspot has a diameter of several hundreds of meters to 1000 meters. Many have longer diameters (over 100,000km) than the earth.

In 1947, huge sunspot cluster occurred with a width of 300,000km, 15 times of earth's diameter. Astronomers and physicists still speculate on the sunspot without a scientific explanation. I think that it's the remnant of nuclear fusion. If the sun is totally composed of hydrogen atoms and four hydrogen atoms could turn into a helium atom, many helium atoms would conglomerate into a sunspot without any more nuclear reaction or giving out heat or light. These remnants shall sink down the sun. However, as its surface gas is quite dense and convection happens, the sinking speed is quite slow. Those haven't sunken would float at the surface. And new spherical shell would be formed by those not sunken. Without a new spherical shell formed in billions of years, it proves that these remnants sink in the sun. As I don't believe the sun is totally composed of hydrogen atoms, these remnants may contain other materials unable to

participate in nuclear fusion. Before reaching a full understanding of the sun's structure, we shall not believe that the sun is totally composed of hydrogen atoms. Maybe other materials exist deep down tens of thousands of kilometers. Hydrogen atoms only occupy certain extent of the mass of the sun. Under the high temperature of about 15000 degrees, no one knows if other materials have participated in nuclear fusion. Anyway, new opportunity may occur in the repeated birth and death of human beings and celestial bodies.

After introducing the reason for the birth of solar system, now I'll introduce its child – planet. After exploding away the external shell, since the attraction of celestial bodies is directly proportional to the mass, the attraction of spherical bulge (sun) would rapidly decrease, and fragments and particles flying apart also bring away its attraction. This is called the dispersion of gravitation. At the moment of explosion of the giant star, fragment shall fly away along the tangent due to its rotation. Since the speed of explosion is much faster than the linear speed of its rotation, and the linear speed is close to zero, fragments and particles would fly away in a nearly rectilinear direction. The fragments and particles, unable to conglomerate into sphere, would fly far away (maybe planets 6 billion kilometers away has not been found) and never come back. When large fragments fly away and conglomerate into sphere due to self gravitation, they'll start rotation and periodic displacement (circular movement), settle down around the sun and perform cycling movement. Since they're away from the sun and outside its scope of attraction, they've become free individuals, receiving the light and heat from the sun without being limited.

Since planets come from fragments exploded from the giant star, some would remain the same and some would turn around, flying away at all directions. Since contracting into sphere (when being part of the giant star, it's easy for them to contract under high temperature and with flexible body). If the positive magnetic pole of the new sphere is northward and would rotate from west to east; if the positive magnetic pole is southward, it'll rotate from east to west (inverse); if the positive magnetic pole is eastward, it'll rotate from south to north; if the positive magnetic pole is westward, it'll rotate from north to south. In a word, whatever the process of explosion is, we can know its rotary pattern by finding its direction of the positive magnetic pole and using the right-hand rule. Conversely, given the rotary pattern, we could also find its positive magnetic pole. Therefore, we can know that not all planets and satellites are on the same plane (strictly speaking); they have different rotary patterns.

According to the law of universal gravitation, scientists have estimated that the mass of the sun is

about 1.989×10^{30} kg, and the mass of giant star is at least 7×10^{30} kg. By accumulating the mass of all planets and satellites, it's only 1.5% of the sun's mass, and about 0.05% of the mass of giant star. According to the calculation of Weizsacker, all dusts filled on the track of Neptune are ten times heavier than all planets, and it's estimated that the dusts on the track of other planets are the same. So the mass of spherical shell away from the giant star is only about 3% of the sun's mass (the sun's mass may only occupy 32% of the mass of giant star). Since people on earth couldn't see the planets at the back of the sun, it's estimated that these unperceivable planets, satellites and dusts occupying nearly 5% of the sun's mass. Therefore, the giant star has 60% of its mass lost during explosion (may be scattered by 6 billion kilometers from the sun). If the sun has attraction to the fragments, they'll not be able to fly away. Dusts (particles after the explosion of the giant star) which are ten times heavier than all planets on the track of Neptune prove that the attraction of planets also has effective distance. Planets in the solar system constantly attract dusts to form giant star, which further turns into a star through a long period of time.

It's estimated that planets like the earth exist at the back of the sun. The so-called UFO and aliens could only come from the solar system. Because except for the solar system, it takes a road of 27000 light years for people in other galaxies, and it's impossible to come to the earth without an aircraft that's faster than the light speed by tens of thousands of times. Cetus τ is the star closest to the earth except for the sun. It's about 12 light years away from the earth and its brightness is about 3.5. Without human beings or aircraft faster than the speed of the light, it's impossible to come to the earth. If UFO and aliens exist, it can only prove that the earth (planet) doesn't revolve around the sun, and they're all performing circular movement outside the moving trajectory of the sun.

In recent years, some people intentionally raised the issue on UFO and USO and made it difficult to tell if they were true or not. Many countries have established research institutions regarding the unidentified aircrafts. Back to thousands of years ago, people on earth have found unidentified flying object without any evidence. Although I have proposed my opinion on the movement of celestial bodies in the solar system, it's still possible that aliens may come to visit the earth who live in a planet at the south of the sun. It only takes over 300 million kilometers for them to come to the earth. If the aircraft can fly 10000m per second, it only takes 8 or 9 hours get here. This proves that the science and technology of aliens are advanced than those on earth by over one thousand years.

Given that some people may fear and prevent

aliens, I hereby express some different opinions: first, the aircraft of aliens is somewhat different to that of the people on earth. Maybe aliens have known the reason for rotation and revolution a long time ago and designed the aircraft by referring to the movement pattern of stars. The drum part of the UFO doesn't revolve; it's the ring-shaped blade that revolves at high speed. Motivation for such revolution is high intensity current, which could produce high speed. From lightning we can see that the current is strong and also give our brilliant light, which explains why UFO gives out light; second, we don't need to worry about their invasion; if so, they'd have done it already, since their science and technology are far beyond us. They can observe the earth and move to other planets as the place of residence, which costs far less than migration; third, we should welcome them to visit us and perform technological exchange. Therefore, we should actively exchange with them and believe that they're also highly civilized besides their advanced science and technology.

Section 4 Analysis of Terrestrial Planets

The giant star exploded is not a homogeneous celestial body. Its surface is also filled with high mountains, rivers, lakes, oceans, glaciers or even deserts. The external shell of the spherical bulge can only be randomly divided through explosion. Just as people explode a mountain, there're different sizes of stones as well as gravels and dusts. Although they can't get rid of the gravitation on earth, there's still a law in it, namely the clot with bigger mass would fall closer and smaller particle would fly further away. The exploded external shell would get rid of the attraction from nuclear bulge (sun) and only have mass without weight in the universe. According to $F = ma$, the flying speed of fragment is decided by the bursting force and mass. The surrounding unit stress shall be the same (stress per unit area is the same), and the flying distance is totally related to the mass and time of conglomeration. The distance between the planet and the sun is decided by this. Fragments unable to conglomerate could only fly far away. After conglomeration, the big fragment would perform circular movement due to rotation, and its moving trajectory and that of the sun are basically constant, so they observe repeated periodic law.

By comparing the terrestrial planets and Jovian planets, basically the planet of greater mass is closer to the sun, and vice versa. If the explosion stress is equal, this would fit the second law of Newton (limited to material movements in the space). There's also abnormal phenomenon, as explained below. First, the spherical shells are irregularly divided through explosion, thus lacking the parting line directed at the nuclear bulge. The fragment has larger area in the nuclear bulge and the spherical shell has a smaller

area, thus flying further away. Second, it's related to the contraction of fragment into spherical shell. The spherical shell more tightly contracted would be smaller and have larger mass. Therefore, individual abnormal phenomenon can still be explained.

1. Suspicious Mercury

As Mercury is the closest planet to the sun, it is one of the first planets to settle down. It's size is 2.77 times bigger than that of the moon, and its mass is about 4.5 times heavier than that of the moon. Among all planets, it's only bigger than the Pluto. Scientists think that its orbit is a little different from other planets. The orbits of earth and Venus are similar to a circle, while the Mercury's is like an ellipse. Its perihelion distance is 45.97 million kilometers and aphelion distance is 69.77 million kilometers, with a difference of 23.8 million kilometers. So it's believed that Mercury has an elliptical orbit.

However, I do not think so. Since planets don't revolve around the sun and perform circular movement outside the sun's orbit, the perihelion and aphelion distances would not be on the same line (all planets should be the same). The perihelion and aphelion should be decided by Mercury, the diameter of displacement circle of the sun, and the time for one period of displacement. Since Mercury is the closest to the sun, this is the most obvious phenomenon. Mercury has slow linear speed in rotation and small displacement circle, while the diameter of displacement circle of the sun is ignored by people, thus highlighting the irrational distance between perihelion and aphelion.

What's to be doubted is that, Mercury has bigger size and mass than the moon. The moon takes 43 minutes and 11.56 seconds to finish one period of rotation, while the rotation period of the moon is 58.6462 days. This doesn't match the movement law of planets. I guess the rotation period of Mercury is wrong, that its rotary linear speed shall be faster than that of the moon. The gravitational acceleration of the moon at the equator is 1.62 m/s^2 , thus it can't hold air; while the gravitational acceleration of Mercury is 3.701 m/s^2 , so why isn't there atmosphere on its surface? If the Mercury has high temperature in the day and its atmosphere is thin enough to noun, then its anti-solar side should have atmosphere. Mars has similar gravitational acceleration with the Mercury, yet it still has thin atmosphere. Scientists should point out the gravitational acceleration required to hold atmosphere. In a word, there're many places to be doubted about the Mercury.

2. The Tumbled Venus

The inverse rotation of Venus shows that it was contracted by fragments. It's a planet a little smaller than the earth. The perihelion distance is about 107.78 million kilometers, and aphelion distance is about

108.539 million kilometers, with a difference of 759,000km, which is probably related to its inverse rotation. When close to the earth, it's only 40 million kilometers away, thus it can be our most intimate companion. Its gravitational acceleration 8.78m/s^2 is, smaller than that of the earth. This can be roughly explained by carbon dioxide. What's to be doubted is that, since Venus is a little smaller than the earth, and the rotation period of earth is 23 hours 56 minutes and 4 seconds, the rotation period for Venus is 243.01 days and revolution period is 243.02, nearly the same as the earth. This is unbelievable. Is it because the atmosphere of carbon dioxide is too thick that it covers up the truth?

3. The Earth with Lives on It

Among the planets in the solar system, the earth is lucky (since over half of the planets in the solar system have not been found, we can't say it's the only planet with lives). It carries various kinds of materials and is endowed with enough water and oxygen. With an appropriate distance to the sun, its temperature is also suitable for the growth of plants and survival of animals and human beings, thus enabling human beings to create civilization. People are most familiar with the earth, however we haven't fully known it. I have three doubts about it. First, according to the law of universal gravitation and its constant, the earth's mass calculated is bigger, thus making the mass of all stars bigger; second, since the moon is the only satellite of the earth and is closest to it (average distance is only 384,400km), it still lacks strong proof whether the moon revolves around the earth or the movement trajectory of the earth surrounds that of the moon; third, it remains to be studied whether the earth revolves around the sun or performs circular movement outside the movement trajectory of the sun.

4. The Ever Imaginary Mars

The diameter of Mars is about 6794km. It's bigger than the Mercury, yet only 1/7 or 1/8 of Venus. Since its distance to the sun is longer than the earth to the sun (about 227.94 million kilometers), it's undoubtedly lighter than the earth. With a rotation period of 24 hours and 37 minutes, and a displacement (revolution) period of 687 days, people have lots of beautiful imaginations for Mars. People imagined life on Mars, the existence of artificial canal, or even migration to it. Actually we could tell no lives exist on Mars and it's not suitable for living just by analyzing two conditions. First, it's 7 million or 8 million kilometers further away compared with the distance between the earth and the sun, and its average temperature is below zero; second, its gravitational acceleration at the equator is only 3.72m/s^2 , similar to Mercury. Since there's no atmosphere on the surface of Mercury, how would Mars be suitable for the survival of human beings? Thus we can conclude that

no life exists on the Mars. It has two satellites. The first satellite has a diameter of 12km, and the second is 6km. actually they're not satellites, and may possibly be two fragments of big size (or even sphere mainly composed of gas). They can't be attracted together by Mars. Given their distances to the Mars, we can deduce its scope of gravitation.

Section 5 Jovian Planet of Less Specific Gravity

Jovian planets are further away to the sun than terrestrial planets, and have less specific gravity. However, the Uranus (specific gravity is 1.7) and Neptune (specific gravity is 2.3) disrupted the sequence due to their large stress area at the bottom or full contraction upon breaking away from the giant star. It has been found that the Mercury and Venus close to the sun are not suitable for survival due to high surface temperature and lack of water and oxygen; for Mars which is far from the sun, no lives exist on it due to thin area and low temperature, let alone the jovian planet that's further away. Those planets without lives could only be explored regarding their mineral resources after our science and technology are fully developed; otherwise it's not of much significance.

1. The boss among planets – Jupiter

Among nine planets, Jupiter has the biggest size and mass. Its diameter is 142800km, the size is 1320 times than that of the earth, and mass is 318 times than that of the earth. Its average distance to the sun is 778.38 million kilometers. Since human beings haven't landed on Jupiter, related documents came from observation by telescope, thus not accurate enough. It has a linear speed of 12.678km/s at the equator, which is 6.83 times faster than that of the sun and quite unbelievable. The gravitational acceleration of Jupiter is 23.12m/s^2 , so manual workers would not be able to work on Jupiter. Also, its atmospheric pressure is ten times stronger than that of the earth, thus it's impossible for us to live on it.

Jupiter has 14 satellites. No.3 Jupiter satellite is the biggest with a diameter of 5100km, which is 260km longer than that of the Mercury. If the planet performs circular movement outside the sun's trajectory, then these 14 planets would just be a small planet group around the Jupiter.

2. The light Saturn

Saturn is a big planet second to the Jupiter, has a diameter is 120700km, a size 770 times bigger than that of the earth, and a mass only around 95 times bigger than that of the earth. Its specific gravity is only 0.68, less than that of water. If the universal gravitational constant is increased by 30%, then the specific gravity would be less than 0.5. Such light Saturn is mainly formed by contraction of gas, including other materials. Why is it so light? Scientists explain that it has a very thick atmospheric circle

around it, just like a heavy nuclear bulge in the center as Jupiter. It's supposed that its inner structure is as follows:

(1) There's a sphere interpretation eh center with a specific gravity of 6 and a diameter of about 12000km, a little smaller than that of the earth. This sphere is mainly composed of smashed rocks and iron.

(2) There's a contracted ice layer around with a specific gravity of 1.5 and a thickness of 34000km.

(3) The surrounding part of the ice layer is the atmosphere of Saturn, which is mainly composed of hydrogen and helium. The atmosphere of Saturn is thicker than that of the Jupiter, and the specific gravity from the surface ice layer to over 19000km high is 0.25.

Above to the above model, the specific gravity of the sphere is 0.68. This is only speculation by scientists and thus can only serve as a reference. The Saturn has a rotation period of 10 hours and 39 minutes, and its linear speed at the equator is only less than the Jupiter. The time for one period of displacement (revolution) is about 29.5 earth years. It has 11 satellites, so it should also be a gas ball with impurities. If it performs circular movement outside the sun, they should be small planet groups around the Saturn. Also, its halo should be the gas and dusts away from it due to large centrifugal force at the equator during rotation, revolving around the Saturn due to its attraction.

3. The horizontally revolving Uranus

Since Uranus revolves horizontally and would not revolve around the sun, its displacement trajectory and displacement trajectory of the sun are nearly vertical to each other, forming a included angle of $82^{\circ}1'$. Its average distance with the sun is about 2.777 billion kilometers, diameter at the equator is about 51000km, size is about 63 times bigger than that of the earth, mass is about 14.536 times bigger than that of the earth, and specific gravity is 1.29, which is a littler bigger than that of the water. Due to the long distance, these dates are not accurate enough. The Uranus has 27 satellites (used to be five as reported). The No.3 satellite is the biggest with a diameter of 1000km, and for others it's several hundreds or dozens of kilometers. It's estimated that the so-called satellites are small planets not revolving around Uranus or the sun.

4. Neptune found through calculation

Since the elliptical orbit of planet is supposed by Kepler and supported by some data. While for other data which don't support it, it's explained by the influence from nearby planets. When the movement trajectory of Uranus doesn't match the calculation result, we'd guess there would be another nova, thus finding the Neptune. Since the solar system is 27000 light years away from the center of the Milk Way,

more novas may be found out if we keep searching. So is there any evidence for such explanation?

With a distance of 4.504 billion kilometers to the sun, the Neptune was only found till 1846. Its diameter is 49.532 million kilometers, which is 3.889 times longer than that of the earth. Its mass is 17.22 times bigger than that of the earth, and the rotation period is 16.11 hours, and revolution period is 164.8 earth years. Its average temperature is over 200 degrees minus, so it's impossible for the existence of lives. The main components of the atmosphere are hydrogen, helium and methane. The atmospheric pressure is very big, which is about 100 times bigger than that of the earth. And its gravitational acceleration at the equator is 11 m/s^2 , which is about 10% of that of the earth.

It has 13 satellites (only two as reported before). The No.1 satellite has a diameter of 4000km and is a big inversely moving satellite, which shows that it was contracted by turning over. After knowing the existence of planet group, we could know that small planets are not satellites of large planets and thus correctly understand the solar system.

5. Pluto found until 20th century

In January 1930, Clyde Tombaugh found Pluto according to the calculation of American astronomer Lowell. It has an average distance of 5.9 billion kilometers to the sun, a diameter of 2300 kilometers (shorter than that of 7 satellites), an average density of 0.8, and a mass of nearly $1.29 \times 10^{22} \text{ kg}$. Its rotation period is 6378 days, revolution period is 248 years, and surface temperature is around 220 degrees minus, which may contain a layer of solid methane ice. For now three satellites have been found. As we know the stars which give out heat and light exist in the universe, and there're numerous planets and dusts among the vast space of stars. New planet may be found by continual search, so we can't say Pluto is the farthest planet to the sun.

In conclusion, astronomers observe two laws to divide galaxies. First, planets drawn to the stars shall revolve around the star in an elliptical trajectory. Second, due to division by region (just like division by city for jurisdiction), a planets belongs to the adjacent stellar system. Old concepts would be wrong if we prove stars have no attraction to planets, and it's also impossible to tell which governs the other since we don't now which one came into being first.

Since Pluto is smaller than the 7 satellites and 5.9 billion kilometers away from the sun, it can only revolve around the sun due to its gravitation. The moon has bigger volume and mass than Pluto and is 150 million kilometers away from the sun, so why doesn't the moon revolve around the sun? Even if the moon is close to the earth and its gravitation from earth is bigger than that from the sun, it's still under

inference from the sun, since the earth is limited by the sun. According to the law of universal gravitation, the earth is not only attracted by the sun, but also by 8 planets, dozens of satellites and numerous dusts in the universe, as well as many galaxies. Maybe no astrophysicist could tell the form of movement of the earth. Therefore, the form of movement in the solar system (other stellar systems) still fails to be fully explained.

To believe science and technology, we need to object to superstition and never believe the existence of mysterious material as the carrier for solar system or other galaxies. Otherwise, astrophysicists should build a simulation model of solar system, which I believe is impossible. So people are deceived by superstition from further exploration of the universe. People should realize that a moving object influenced by attraction is also subject to attracting resistance or motivation. The movement of celestial bodies is caused by internal force; even if universal gravitation exists, it still has an effective distance. Thus people can get rid of such misunderstanding and realize that celestial bodies revolve due to internal force, and such rotary force could generate centripetal force for circular movement. Also, we can realize that the solar system doesn't revolve around the galaxy system, planets in the solar system don't revolve around the sun, the satellites don't revolve around the planet. All of them have their own movement region. Only in this way could people break out the superstition of heliocentric theory correct the first law of Kepler and the law of universal gravitation, realize the correct movement of celestial bodies and change the universe.

Chapter 6 Doubts, Suppositions and Regrets

Difficult

People evolved from ignorance and backwardness to advanced civilization. Social system and science and technology developed based on superstition through a long period of hard efforts, yet the remaining autocracy, conservatism and superstition still exist today. It's believed that to advance social system, one may get killed since it relates to group benefits, so it's safer to study science and technology. Actually science and technology are closely connected to policy system. At the beginning of 20th century, the progress on the research of nuclear energy was quite rapid since atomic bomb and hydrogen bomb could be used in wars, which further served the benefits of the ruling class and could win their support and attention. The atomic bomb was soon tested successfully and used in the World War II. The heliocentric theory violated the belief that earth was the center of all things and catholic church was the most important. Copernicus was afraid of persecution, since many scientists had been persecuted. The poorest people is Bruno, who was arrested and burnt to death by the

inquisition in Rome. During the Cultural Revolution, people worshiped Mao Zedong as the Red Sun as fooled by political terrorism, and Chinese scientists dared not to point out the sunspot; otherwise they'd suffer a lot.

A theory, a thought and an authority figure, once becoming superstitious and sanctified, would be greatly admired by society and thus forget the fact and truth. Things will develop in the opposite direction when they become extreme. It's necessary to realize that suppositions and speculations in astronomy and physics are not the fault of previous people. However, later generations shall not believe in superstition; instead, they should seek truth from facts so as to advance science and technology. In a time of backward science and technology, Copernicus, Kepler and Newton dared to raise out their suppositions, thus laying foundation for astronomy and physics. Even if their suppositions are wrong to some extent, later generations should also complete their unfulfilled work instead of denial. As with the Chinese saying, failure is the mother of success, correct conclusion comes from summarization of errors. Autocratic rulers always denied previous people and achievements, and only advocated their own achievements, thus worth being criticized. Chinese people promote respecting the old generations, which is a good virtue and tradition.

My heterodoxy on geophysics and the movement of celestial bodies is to further prove the work of previous people, instead of denying their work. I hope to improve their achievements. Or maybe I don't have deep understanding of the advanced theories proposed by Copernicus, Kepler and Newton and thus propose my own ridiculous opinion. I'm not confident since I didn't study astronomy or physics; nor do I have access to new study materials. So I could only propose different opinions based on my basic knowledge as "heterodoxy" to society and hope to be reviewed by related experts.

Section 1 Doubts on Related Documents

As we know, geocentric theory is a rough explanation to natural phenomena by ancient people. Based on the rise and fall of the sun and moon, they assumed that they were both revolving around the earth. Without new theories and proof, people recognized such theory. Based on the limited knowledge, I assume it'd be different to set a 3D coordinate. Did ancient people assume that the sun and other stars have a fixed position to describe the solar system and astronomical map? Was there a universally recognized rule for astronomers to observe and draw out the astronomical phenomena?

Copernicus doubted about Ptolemy's system since he thought the map to describe the sun and planets was too complex and thus proposed the

heliocentric theory. Are there only two movement patterns for the solar system? Did Copernicus study other patterns and if he did, how were they denied. These are not introduced in astronomical documents. Without enough evidence, it's not surprising that such theory was objected by the church and other people. During 1960s, it was still believed that the sun (star) was fixed, and people could understand the first law of Kepler. After Newton released the law of universal gravitation, astronomers and physicists further believed that planets revolve around the sun. Through my own calculation, the revolution speed of planets could be calculated by adding the perihelion and aphelion distances as the long axis of the elliptical orbit, and then dividing the perimeter of the ellipse by the period of revolution around the sun. If the planet doesn't revolve around the sun, or the perihelion and aphelion distances are not on the same line, is such revolution speed reliable?

Facts show that the sun is not at a focus of the elliptical trajectories of all planets. It has its own rotation and revolution, so the assumed conditions of the first law of Kepler are denied. Even if planets revolve around the sun, the elliptical trajectory is composed by the sun's displacement (proved by manmade satellite). According to the launched manmade satellite, it can revolve around the earth if $v_1=7.9\text{km/s}$. At v_2 which is bigger than 11.2km/s , the manmade earth satellite could break away from the earth and enter the solar system; at v_3 which is bigger than 16.7km/s , it can break away from the solar system and be gone for good. This proves that the attraction of earth and sun to objects is limited by the speed of moving objects. The distance between and speed of two moving objects shall be considered in the law of universal gravitation. These have challenged Copernicus's theory the first law of Kepler and the law of universal gravitation. Modern astronomers and physicists fail to pay enough attention to these problems and even give insufficient evidence for explanation, instead of studying further possible laws in the movement of celestial bodies.

The difficulty in establishing a 3D coordinate for the universe lies in the fact that the sections of the sun, planets, satellites and large dusts in the universe at the equator are not on the same level. How could they be described in a fixed space with their own laws of motion? Astronomers and physicists have designed a celestial sphere to describe the shape of the solar system, and the plane passing through the center of the celestial sphere is called ecliptic plane, as shown in Fig.6-1-1.

From theoretical astronomy, the shape of the solar system is decided by the orbital elements of its planets and satellites, whose number is demonstrated below.

The two elements at the head determine the position of orbital plane, which is:

1. Inclination i . it's a dihedral angle formed by the orbital plane and ecliptic plane of the planet. The orbital plane has a large circle after being projected to the celestial sphere. Such circle would intersect with the ecliptic circle at two points, called the node of intersection. The node from which the planet enters from southern hemisphere to northern hemisphere is called ascending node with a symbol Ω ; and the other node is called descending node with a symbol Ψ . The diameter between these two nodes is parallel to the line of intersection between orbital plane and ecliptic plane. Obviously, the inclination i equals the spherical angle between the orbital projection and the ecliptic at the node.

Take such an angle as the value of i . Its two sides are ecliptic arc and orbital arc respectively along the moving direction of the sun and planet. Thus, suppose the planet moves along the same direction as the earth, then inclination i is within the first quadrant; when moving inversely, it'll be within 90° and 180° .

2. The celestial longitude Ω of ascending node. This is the name of an arc between spring equinox and ascending node along the ecliptic.

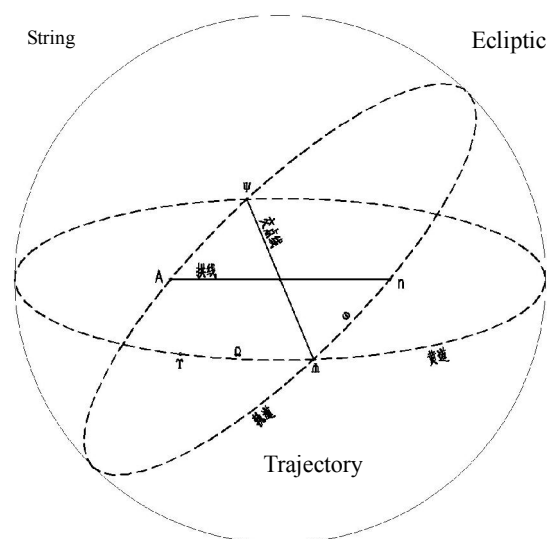


Figure 6-1-1

Line of nodes

The i and Ω determine the position of the orbital plane in the space and its projection on the celestial sphere. Such position can also be marked by the ecliptic or equatorial coordinate of orbital pole, from which point the celestial body moves inversely.

The following two elements can determine the size and shape of planetary trajectory.

3. Semi-major axis of the ellipse, or the average

distance between the planet and the sun. This is expressed by astronomical unit (short as a.e.), namely the unit is the semi-major axis of the earth's orbit.

Since $8''.80$ is still used as the equatorial horizontal parallax of the sun, thus we set the length of astronomical unit as $1.495 \times 10^8 \text{ km}$.

4. The eccentricity ratio of the ellipse is

$e = \sqrt{a^2 - b^2}$. Sometimes the eccentric angle φ is used instead of e according to the following formula:

$$\sin \varphi = e$$

Also, there's the semi-minor axis b . As we know, the vertex II closest to the sun on planetary trajectory is called perihelion, and the farthest point A is called aphelion. The line segment connecting the sun and the planet is called radius vector, which reaches its minimum and maximum at the perihelion and aphelion respectively as below:

$$r_{\max} = a(1 + e), \quad r_{\min} = a(1 - e),$$

Thus the ratio of longest and shortest distance between the planet and the sun is:

$$\frac{r_{\max}}{r_{\min}} = \frac{1 + e}{1 - e}$$

The vertex on ellipse of satellite's trajectory is named according to its distance to the planet. For example, these two points on the moon's trajectory are called apogee and perigee.

The fifth element determines the direction of elliptical major axis at the orbital plane of the planet, which is:

5. The angular distance ω between perihelion and the point of intersection. This is formed by intersection of the orbit's major axis and ecliptic plane of the orbital plane, or the arc length of the projection of ascending node and the perihelion on the larger circle of the planet's trajectory. Sometimes $\Omega + \omega$ is used instead of ω and is called the celestial longitude of perihelion. The diameter of a celestial sphere parallel to the major axis of a planet's or satellite's trajectory is called the line of apsides.

The 6th and last element determines the position of planet on the trajectory, which is:

6. The epoch T_0 for a planet to pass the perihelion. By knowing any such moment, we would be able to calculate the time T to pass other perihelion so as long we define the revolution period P ,

$$T = T_0 + NP$$

In this formula, N is the number of times of passing the perihelion since the initial moment. The revolution period P is called the sidereal period of the planet to revolve around the sun. However, such

period is not an orbital element, since it's determined by the single-valued semi-major axis a according to the 3rd law of Kepler; at least it's so in two-body problem when the mass of the planet is much smaller than that of the sun.

However, the orbital elements for planets and satellites according to above calculation method are difficult to believe. I have several doubts as demonstrated below:

(1) For the sun's equatorial plane to overlap with the ecliptic plane of the celestial sphere, maybe it's assumed that the sun keeps still. If the sun rotates and displaces (revolve) and its axis is a little inclined, its revolution trajectory would be a griddle plane instead of a plane, and the ecliptic plane couldn't replace the sun's equatorial plane. Is such error considered? How will it be corrected?

(2) Since the diameter of sun's displacement (revolution) circle is unknown, it's difficult to believe that the sun revolves around the galaxy at 250km/s and the celestial body includes the whole galaxy. What's the relation between sun's displacement and the recognized revolution of the planet? Could it be included by an assumed celestial body?

(3) If the theory that the planet and satellite perform circular movement outside the sun's movement trajectory, then it'll be a different kind of theory compared with Copernicus's theory and Kepler's laws. So the astronomical documents observed and calculated only represent a law and don't match practical conditions.

I think that the observation documents and description of stars in the solar system are based on supposition. Without breaking away from the original methods, they can only serve Copernicus's theory and the first law of Kepler, thus to some extent concealing. The result may be quite different with another observation method.

Section 2 Little Access to Study Materials of Practical Value

In 1967, I started to think that the attraction on earth may prevent the movement of materials on earth. In other words, attraction on earth keeps all materials in a relatively still inertia. Thus I proposed that the planet performs circular movement outside the sun's movement trajectory. Personally, I wanted to conduct research in this area to fulfill my dream. However, since Mao Zedong launched the unprecedented Great Cultural Revolution and numerous students were forced out of school. I could only accept the reality and lose the opportunity to go to school. This gave me a deep understanding that social system decides the progress of science and technology and productivity, as well as individual fate. Individual could only give up to fate and seek for survival. As time flies, forty years have passed. When I'm retired and have time, I

suffer from diseases and lack vitality, with my spirit being willing yet flesh being weak.

The books I borrowed from library are all mainly about introducing the development history of astronomy (not detailed enough), and examples inside are used to uphold Copernicus's theory, the first law of Kepler and the law of universal gravitation. Only a few words are given to the geocentric theory denied long ago. Copernicus's theory has been over 400 years without any valid evidence. Isn't there any different opinion or conflict in the field of astronomy? I have no access to materials about this. Due to my limited professional background, and without access to the Purple Hills Observatory in Nanjing and the latest materials, I could only study the old materials which still contain suppositions, assumptions and deductions. My work would be of some value if no discoveries occur in the field of astronomy.

New materials from the internet are also disappointing to me. The sun's rotation makes it a magic cube, and its revolution speed around the galaxy reaches 250km/s, which is quite surprising to me. Documents on planets are also insufficient, and there's no information on the farthest and closest distances of Jupiter, Saturn and Neptune to the sun. If we have access to some properties of each planet, especially the law of change in the distance between each planet and the sun, we can also make some deductions. What's most unaccountable is that the revolution speed of the sun is as high as 250km/s. Wouldn't these planets be abandoned by the sun during their inverse movement?

Earth is the carrier for human beings, who have the speed of rotation and displacement (revolution) on the earth. When taking train or flight, the train and plane are the carrier for human beings who have the same speed as the train and plane. However, they're no longer the carrier once people leave the train or plane, and their speed would become irrelevant. Since planets and satellites are outside the scope of sun's gravitation, why would it become their carrier? The Pluto is 5.9 billion kilometers away from the sun, how could the sun become a carrier for it? Also, the sun is about 27000 light years away from the center of the galaxy, how could it become the carrier for the solar system? Without finding the answer to these problems, astronomy is like imagination and magic, being the most superstitious and ridiculous discipline in history! Suppose there's no any mysterious material as carrier for planets? How could they revolve around the sun? If it's due to the attraction, then how couldn't the manmade satellite escape the solar system with a speed of 29.8 km/s? Such myth is hard to stand and make people believe when it comes to these questions.

So many theories of revolving around the center are much more complex than the geocentric theory,

and why is it believed in the field of astronomy and physics? This proves that people could break out small superstition but not big superstition. To break out this superstition, one has to disprove Copernicus's theory and the first law of Kepler by facts and start from the solar system. Current materials on astronomy all serve Copernicus's theory and the first law of Kepler, thus of no practical value. I have proposed the following three methods:

(1) I think all celestial bodies that could contract into spheres could rotate (at different speed) and displace (revolve), which is not hard to prove. We can conduct experiments by making a model of celestial bodies, and once we could prove that rotation could lead to displacement, the theory of planets, satellites and the sun performing circular movement could stand. Given influences from gravity, attracting resistance, friction and air drag on the earth, the rotation and Cavendis's experiments could be conducted in space. The mechanical spinning top mentioned above could prove that rotating materials could generate centripetal force.

(2) After identifying that the satellites perform circular movement inside and outside planetary trajectory, the planets perform circular movement outside the sun's movement trajectory, and the sun doesn't revolve around the galaxy, then the distances between the moon and the earth, the earth and the sun would concern two moving points on respective circles, and the perihelion and aphelion distances would not be on the same line. With the distance between two points, since it relates to the diameter of two circles and the movement period of celestial bodies, other unknown factors are different to be identified. Given the rotation and displacement period of the earth, and since it's closest to the moon, we can start from such relation and change our observation methods towards celestial bodies, thus calculating the diameter of displacement circles. The method is to observe the distance, direction and time of the earth and the moon for 365 consecutive nights, mark the distance and direction in one plane, set the nights without moon as the missing item. Since the displacement period of the moon is 27 days 7 hours 43 minutes and 11.559 second, so it can be considered that 27 points form such a circle and the other side of each point shall be on the great circle (a segment of the earth's trajectory). Since the earth takes 365.2564 in one period of rotation, it can be considered that 365 points form such a great circle and the other side of each circle falls on the displacement circle of the moon (over 13 overlaps in one year). Such method should be conducted repeatedly. Although the result is not 100% accurate, we can still get the relatively accurate diameters of displacement circles of the moon and the earth.

(3) Given the displacement circle of the earth, we can calculate the diameter and period of the displacement of other planets and the sun. For example, when calculating the displacement diameter and period of the sun, we can observe its distance and direction to the earth at fixed time and place everyday, and mark them on a paper for 365 consecutive days or even longer, until drawing a full circle. Through such an approach method, we can calculate the diameter of the sun's displacement circle. The number of days needed to draw a full displacement circle is the displacement period of the sun.

Above are my methods to observe the solar system, the sun and planets, which can help can draw the movement map of the solar system. Different from traditional measuring method, it shows that innovation is needed. As some countries have successfully launched manmade satellites, no country is willing to publish detailed documents due to the necessity for confidentiality, such as the initial velocity of manmade satellite entering the trajectory, data of the trajectory, moving time, law of constant deceleration, the speed to start landing, and gravitational acceleration at different heights. I could make some deductions if with such data, and without which people could only use original methods like supposition, assumption and deduction. My questions could be easily addressed if the country pays attention to them, yet it's extremely difficult for a normal people to do it.

Section 3 Benefiting Mankind by Moving Terrestrial Planets

Social system and science and technology derive from supposition and superstition, coupled with conservative mind and force of habit. The only way to break out superstition and conservative mind is to develop science and technology and productivity, make social system more democratic and law-based, and people's mind more civilized and science-based. It's a difficult road ahead to fulfill it, yet the human beings always develop towards democracy and civilization.

Truth is the true principle, which is difficult to be accepted under the misguidance of superstition and autocracy. The truth found by normal people is difficult to be accepted and recognized by society, and is usually buried. For a long time, superstition has been a powerful tool. Not only the ruling class used it for domination and consolidating their status, but also factions, churches and other small groups used it for deification. They knew that in a time of backwardness and ignorance, only those deified had influence and charisma. Actually no matter how a person is deified, he/she is still a normal people and needs the assistance of senior people. So in China a talent scout is widely praised. Domination by autocratic people would bring disaster to the country and suffering to its people.

Han Xin onced proposed lots of excellent suggestions to Xiang Yu. Since Xiang Yu was pretty proud and wouldn't even trust Fan Zheng, he didn't have the thought or courage of selecting talents. Han Xin turned to Liu Bang out of disappointment, yet Liu Bang failed to realize his talent. However, he was willing to accept suggestions from other seniors and decided to pay attention to Han Xin after receiving recommendation from them. Han Xin laid a solid foundation for Liu Bang's dynasty, and his military talents would always inspire later generations in spite of his unfortunate encounters. China's backwardness is definitely related to the few number of good judges of talents to some extent.

Even unborn scientists need to be recommended and supported by the good judge of talents. The great success of Newton is closely related to his uncle and teacher Barlo. The authoritative figure of scientist has an intangible influence and could play a positive or negative role. The geocentric theory of Tomler lasted for over 1 thousand years due to his authority in the field of astronomy. The tidal origin theory of the solar system and the universe dust theory proposed by astronomers and physicists Kins, Wazak and Smit, although not quite mature, were published and discussed in scientific field due to their prestige. If such thought is proposed by normal people or fresh scientists, they'd not receive attention and even seek humiliation because of this.

The reason for Chinese science from taking the lead to being backward is not due to lack of creativity or low IQ. Instead, Chinese people have rich imagination and creativity. However, limited by autocratic policies to fool the mass, it led to backward science and technology and productivity. If Newton found the existence of attraction on earth from 1665 to 1666, then Chinese people would have proposed this concept much earlier than he did. Like the classic Chinese novels like Journey to West, the magic weapon could absorb all things within an effective distance. Also, the clairvoyance and clairaudience are achieved through modern science and technology, can we say Chinese people don't have superior consciousness? Western people only imagined a God and some priests, while Chinese people imagined a celestial palace with fair and reasonable policies. This proves that Chinese people have higher wisdom and imagination than others. Since autocratic rulers in China only focused on maintaining their autocracy, they neglected the development of science and technology, and those scholars with rich imagination yet not willing to be limited to the exams used their talents in novels or art. Isn't this the responsibility of the ruling class?

My questions on geophysics and the movement of celestial bodies are bound to conflict with the

theories and laws from authoritative astronomers and physicists like Copernicus, Kepler and Newton, who have several hundred years of authority. My theory, if even correct, is quite difficult to change traditional concepts in physics. Fortunately, as social system is becoming democratic and law-based, and science and technology and productivity are going modernized, people are gradually breaking away from superstition. I will not give up any opportunity in a world featuring diversified science and technology. I've prepared documents on model experiments, and I believe truth will eventually be recognized by society.

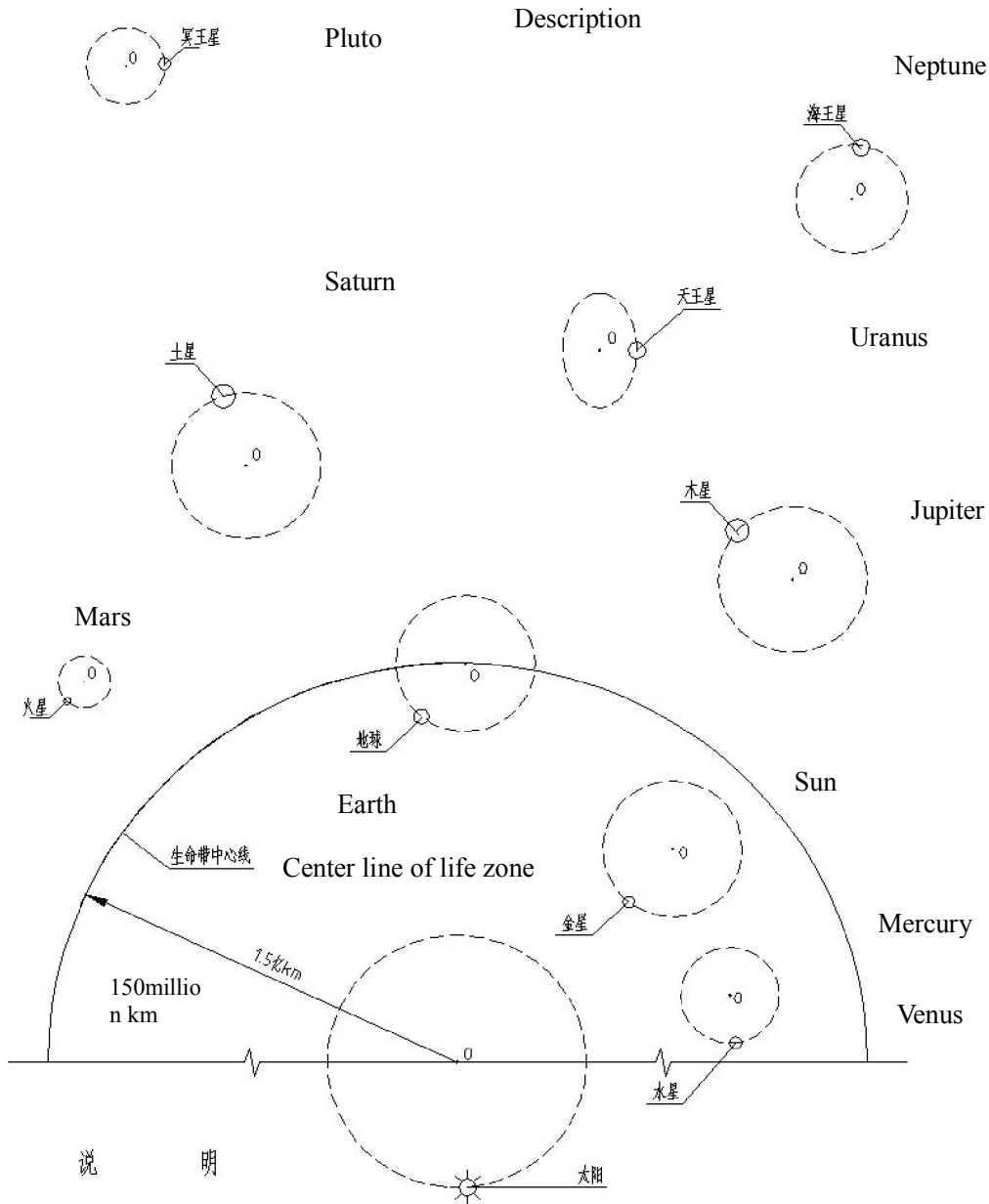
If celestial body rotates due to internal force and thus displaces (revolves), then theory that planet doesn't revolve around the sun would stand. Thus it also proves that the law of universal gravitation also needs to be adjusted, that two objects can only attract each other within the effective distance. It also proves that if the sun has no attraction to the planet, there would not be an attraction between the sun and the earth of $3.56 \times 10^{22} \text{N}$ that could break out a steel column of 9000km. If attraction disappears due to long distance, then it's impossible for human beings to seek for similar planets for migration. Such chance is very slim, and the travel expense is very high. We can consider the terrestrial planets whose specific gravity is similar to that of the earth and also with the materials necessary for human being. Jovian planets can be out of our option due to its long distance to the earth and low specific gravity. For terrestrial planets, the Venus and Mars should our first option.

Given the planets don't revolve around the sun and only perform circular movement around the sun, draw a circle around the center of the sun's displacement trajectory and with a radius of 150 million kilometers (average distance between the sun and the earth), and such a circular trajectory is called life circle. Some planets can be set on this circle without influencing each other. For example, by moving the centers of Venus and Mars to the life circle, due to their similar average distance to the sun, they also have similar climate as the earth and are suitable for the survival of planets, animals and human beings. Venus increased the average distance with the sun by 40 million kilometers, thus gathering the lost air and water vapor back to its surface. Mars reduced its average distance with the sun by 70 million kilometers,

and the solidified ice cubes and air parcels would turn into water and air to cover around its surface due to rise in temperature. If the water and oxygen on Venus and Mars are still not enough to meet the demand for survival, we could also develop resources like Jovian planets, since they have less specific gravity and are mainly composed of water and gas. Or we could move a small satellite (planet) here to add water and gas to Mars and Venus, thus solving the problem.

As long as the sun has no attraction to distance planets, it's not hard to move planets by adding motivation F and braking force F' through nuclear energy. Since $F=ma$ also fits celestial movement, we could generate acceleration through F and movement at constant speed by removing F (adding F' when it's in place, and F could be used longer to achieve the same effect). When moving at a constant speed, the Venus only needs 1.27 years to enter the preset position and Mars needs 2.22 years. By increasing their movement periods by ten times, their constant speed would be only 0.1m per second. We should give priority to Mars because of its little mass, despite of its long distance for movement. If science and technology are developed in this way, I guess people could move to Venus and Mars within 200 or 300 years. Chinese people should seize the opportunity to take the lead in moving Mars.

As I've proposed that planets and satellites perform circular movement outside the sun's displacement trajectory, people on earth could only see half of them in the solar system, and at least another half (or more) planets are covered by the sun's light. Thus the original planetary movement drawing in the solar system doesn't match practical situation. Since previous astronomers and physicists all believed that planets revolve around the sun, no one has considered the position and scope of movement. As I could investigate from nowhere and have unconquerable problems, I could only draw a schematic model diagram for the other half planets in the solar system (Fig.1). Given the effective attracting distance of the sun is about 1 million kilometers, the sun has no attraction to all these planets. When the science and technology are fully developed, people could move terrestrial and Jovian Mars and Venus to serve the people (Fig.2).

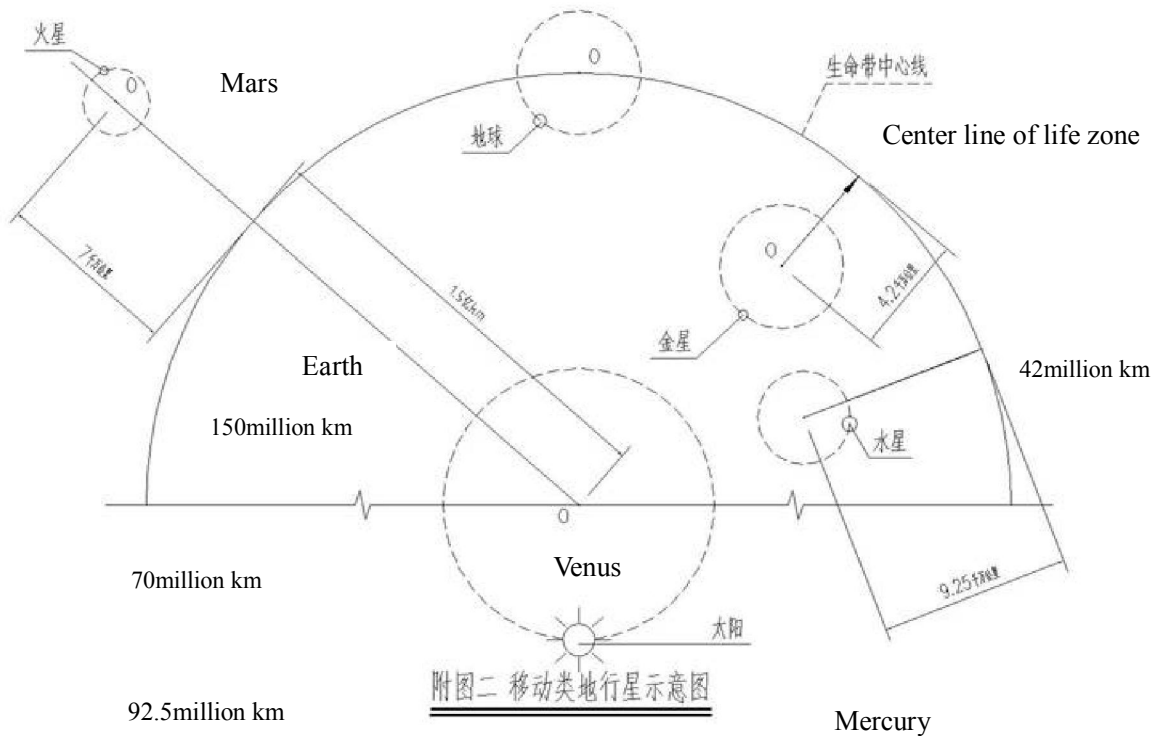


附图一 半个太阳系天体运行图

- 1、图中实线小圆表示太阳和行星，虚线圆表示它的位移圆周轨迹。
- 2、因位移圆心和方位都不知，只能画示意图。
- 3、行星不绕太阳转，还有半边天的行星未知，因图幅限制，既未按比例，也未按扇形布置。

Fig.1 Celestial movement of half a solar system

1. In this figure, the solid line represents the sun and planets and circle of dotted line represents its circular trajectory for displacement.
2. Intelligent schematic diagram since displacement circle center and position are unknown
3. Since stars don't revolve around the sun and another half of planets are unknown, this figure is drawn not proportionally or according to a section shape due to limited sheet.



说 明

- 1、要使类地行星都如地球一样适合生命生存，只需挪移类地行星，使行星位移圆周的圆心处在生命带的中心线上。
- 2、火星内移七千万公里，水星和金星分别外移九点二五千万公里和四点二千万公里。

Sun

Fig.2 Schematic drawing of moving terrestrial planet

1. To turn terrestrial planet into a suitable place for survival like the earth, just move its center of circular displacement trajectory on the center line of life zone
2. Move Mars inwardly by 70 million kilometers, Mercury outwardly by 92.5 million kilometers and Venus outwardly by 42 million kilometers

Section 4 Truth Has No Limit

I proposed different opinions on heliocentric theory, the first law of Kepler, the laws proposed by Newton and the universal gravitational constant after over 40 years of exploration. Since they have been recognized by modern scientists, it's quite difficult to either deny or improve them. Facts prove that to propose advanced political opinions and discoveries on science and technology, one has to take great risks or even wait for dozens or hundreds of years to be recognized by the public. People had realized that one may get killed to break out of the limit of autocratic

politics, yet many people die in the pursuit of democracy. Many people have sacrificed so that that countries could become a democratic and legal society. Science and technology relate to politics and military affairs, as well as bleeding and dying. The Roman catholic church also killed a lot of people to maintain its autocratic governance. Thus, we should recognize and adhere to a most fundamental truth, that is the truth has no limit. Those failing to be tested by other opinions can not serve as truth.

As it's proposed in China to improve a democratic and legal society, I doubt about the theory

from western capitalist countries. Although without any danger of losing life, we should realize that most people won't admit to being fooled, so the conflict between superstition, admiration and force of habit still exists. It takes a long time to clarify these problems, or even over a hundred years after my generation. This is the contest between new things and conservative power. Given that, I've summarized my opinions into ten points with my own explanation and discussion, and also as a reference for future generation.

1. If an actively moving object is attracted by a passively moving object, the latter would generate attracting resistance to the former, which shall finally be in a stationary state if with low kinetic energy. The generator is a good proof of the existence of attracting resistance. Pitifully, astrophysicists won't admit it. Based on the fact that manmade satellite would fall on the ground if without energy, we can prove the existence of attracting resistance. However, scientists would deny it by the existence of atmosphere around the earth. Since the moon doesn't have atmosphere and the manmade satellite Chang'e 1 and Chang'e 2 couldn't permanently revolve around it, this proves the existence of attracting resistance. In model experiment, when the steel ball cuts magnetic line of force during its movement, its speed and distance of travel would reduce, thus proving the existence of attracting resistance. As planets revolve around the sun whose gravitation is much bigger and has gas, space dusts and particles influencing the movement of planets, they don't fall on the sun even if without power supply. This proves that the sun has no attraction to planets of long distance, and these planets don't revolve around the sun.

2. People won't object that attraction is accompanied by attracting motivation. According to dialectics, attracting resistance shall also exist. If it's recognized, then planets will eventually fall on the sun by revolving around it, or fall on another planet by revolving around it. Therefore, the heliocentric theory doesn't stand. Since the mechanical gyroscopic could perform circular displacement by generating centripetal force, there's no such problem such revolution. Celestial bodies rotate due to internal force and thus perform circular movement, forming regular movement system as well as proving the theory that planets and satellites all perform circular movement outside the sun's displacement trajectory.

3. Since molecule is composed of atoms and the revolution of electrons around the nucleus generates electromagnetic field, same and different atoms combined into molecules due to force in electromagnetic field. Molecules can be bound together due to magnetic field force, thus forming materials. The magnetic field force is expressed by

gravitation of any material. Although the universal gravitation exists, it still has an effective distance, beyond which two objects won't attract each other. To prove this, we can set apart the two balls of different sizes by some distance in Cavendish's experiment. The effective distance of the earth (celestial body) is a place where the gravitational acceleration is close to zero. According to speculation, the effective distance of earth's gravitation is less than 30000km, and less than 1 million kilometers for the sun.

4. When a moving object on earth reaches 7.9km/s, its gravitational acceleration is close to zero. So its weight is inversely proportional to its moving speed, which means that a faster speed means less weight. The weight of moving object on other celestial bodies is determined by its moving speed as well as the gravitational acceleration of the celestial body. Thus the weight of an object is relative.

5. The three laws proposed by Newton are only suitable for the movement of celestial bodies in the space, instead of objects on the earth or any celestial body. Even if people want to solve problems related to movement of objects using these three laws, they shall be adjusted according to the inherent features of the earth. There're essential differences between the circular movement of objects on earth and the celestial bodies. Without rotation, objects on earth are influenced by resistance like weight, attraction, friction and air; while such influence doesn't exist for celestial bodies due to their rotation. Also their centripetal forces are different. Rotary celestial body doesn't need centripetal force. Such they shall be discriminated.

6. I estimate the universal gravitational constant G from Cavendish's experiment is bigger by 20%-30%. It can only calculate the attraction of two objects on earth by putting it in the calculation formula, but can't calculate the mass of celestial body. Otherwise, the G (which should be a variable) shall be recalculated in a space lab without any influence from gravitation. In Cavendish's experiment, the distance between the ball m and m' shall be gradually increased to find out the relation between gravitational constant and distance, and thus calculating the effective distance. In this way, there won't much any error in calculating the mass of celestial bodies.

7. The law of conservation of energy is relative. The constant revolution of electrons around the nucleus, Brownian movement of pollen in liquid, and plants' acting all break such law. The perpetual motion machine fails to act for a long time on earth (celestial body) due to attracting resistance. Any moving object on earth's surface shall eventually be in a relative rest state. Looking at the space, we could know that the movement of celestial bodies is like a perpetual motion machine, which exists widely and could be

made by men.

8. The attraction between any object and celestial body is the reflection of magnetic field force, which derives from the revolution of electrons around the nucleus. Without such revolution, there would be no material no life on earth. We should start from electron's movement to break the mystery of life.

9. Celestial body contracts in a sphere due to gravitation, its high pressure inside leads to high temperature, which further generates thermal motion – stream of electrons. The electron stream would generate couple to make the celestial body rotate at a constant speed, which would further lead to displacement (revolution) due to centripetal force. The displacement trajectory is a circle instead of an ellipse as Kepler had imagined, thus breaking the law of rotation and revolution (displacement) of celestial bodies.

10. I have speculated on the birth of solar system (including other galaxies) based on previous studies. I think the sun's mass is not totally composed of hydrogen atoms. It must contain various impurities. I also speculated on the reason for the formation and disappearance of sunspot. Since this is only my speculation, it shall not serve as evidence of fact.

It's difficult for the experts and world to recognize the above ten points on astronomy and physics, since it takes time to realize and accept new things. I dare to propose and adhere to my personal opinions because human society has not reached advanced science and technology and civilization. Without a full understanding of social and natural science, people still admire authority and would sometimes mistake truth as fallacy. The development of human society shows that misunderstanding existed in politics, economy, culture and science and technology. I'm studying natural science today to resolve these misunderstandings. These different opinions on astronomy and physics are based on fundamental knowledge and natural phenomena. I want to talk about the following three problems for your reference and I warmly welcome different opinions.

I. Doubts on the Heliocentric Theory and First Law of Kepler

There're suppositions and speculations in both heliocentric theory and the first law of Kepler. More importantly, during their time, people didn't know the sun's rotation and revolution (displacement) and treated the celestial body which gives out light and heat as star that stood still, since only in this way would the theory that planets revolve round stars stand. After the heliocentric theory was proposed by Copernicus, scientists like Galileo, Hooker, Halley still doubted why planets revolved around the sun. Due to the misguidance of Newton's law of universal gravitation,

many scientists didn't study this reason, thus believing that the sun is at the focus of the elliptical trajectories of all planets. So the heliocentric theory has lasted for over 400 years. If Copernicus and Kepler could observe the sun's rotation and its displacement (revolution) speed is much faster than that of planets, then planets would not be able to revolve around the sun, Copernicus would not propose the heliocentric theory and Kepler would not propose his first law. Since no scientist knew the star also moves at that time, it's understandable that Copernicus and Kepler proposed their suppositions. Pitifully, although modern astronomers and physicists know the sun's rotation and revolution, they're still upholding the heliocentric theory and first law of Kepler. To make astronomy superstitious is not a realistic attitude towards science. To uphold the theories of Copernicus and Kepler, modern astronomers and physicists need to explain the problems if the suppositions are wrong and build a model to simulate the movement of solar system.

Modern astronomers and physicists have found the heliocentric theory and the first law of Kepler don't stand, and the revolution speed of the sun is faster than that of the planet, yet they still don't explore the reason and even cover it cover by superstition. What does this mean? This reminds me of the autocratic society in which those object the reform of social system and establishment of democratic system were the one who benefited. This is also the same in the field of science and technology, since they're afraid that these fundamental theories are denied and updated. Most people became doctors, professors, experts and scientists by starting from these fundamental theories, and if these theories were proven to be wrong to some extent, they wouldn't like to accept it. Each scientist understands the world and universe from shallow to deep, and the improvement of science and technology is a necessary result of the advancement of time. Astronomers and physicists, if with such awareness, would dare to accept the challenge of new opinions and start exploration for truth.

II. Would the universal gravitation attract infinitely?

Since the law of universal gravitation can explain the reason for the revolution of planets around the sun (no one has doubted this till now), it's universally recognized in the field of astronomy and physics. If anyone doubts it and proves that it can't attract infinitely, then this theory would not stand. When it's believed that this theory resolves the major problem in the field of astronomy and physics, yet on one has considered it would only be a Brownian movement if any two objects attract each other, no matter how far away. Also, scientists could not calculate the attraction

and mass of any two objects, since it's impossible to eliminate influence from other celestial bodies. For example, when calculating the attraction between the earth and the sun, the moon and Mercury would definitely pose influence, although their distances to the earth are much bigger than that between the earth and the sun. What's more ridiculous is that the calculated attraction between the sun and the earth could break a 9000km steel column. If the universal gravitation could attract objects infinitely, then the basic science would become superstitious.

If scientists are to apply experiment data (such as centripetal force and universal gravitational constant) on earth to the movement of celestial bodies, then we could prove that attraction has an effective distance since the magnet could only attract scrap iron in a limited scope and high voltage has a safety distance. If there's no effective distance for attraction, then the manmade earth satellite would not need to revolve around the earth by 439-2384km away from the earth and bear the resistance from atmosphere. For the manmade satellite to leave the atmosphere of the earth, it could fly by 20000-30000km away from earth surface without energy supply, since it could revolve around the earth perpetually outside the atmosphere, otherwise it would prove that the earth has attracting resistance to the manmade satellite. If it fails to fly by 20000-30000km away from earth surface at a speed of 7.9km/s, it would prove that the earth's attraction has an effective distance. Object further away from the earth would be limited to less attraction. People could give examples that the universal gravitation could not attract object infinitely, and any attraction has an effective distance. Even the planets may not revolve around other planets or the sun, since a small planet would eventually fall on the big one due to its attraction. Is there a planet revolving around the sun within 1 million km and 30000km from the earth together with its satellite (this could be proved by experiment)?

III. We can see the universal gravitational constant G is too big after analyzing the earth's specific gravity

Cavendish tested out the universal gravitational constant $G=6.67 \times 10^{-11} \text{N} \cdot \text{m}^2/\text{kg}^2$ by torsion balance equipment, which I think is bigger by 20%-30%, or even G doesn't exist and it was due to influence from the earth's magnetic field force. If the test is done in space lab, G would be smaller. It's wrong to calculate the mass of celestial bodies using the G calculated by Cavendish, which could be used to calculate the attracting gravitation of two objects on earth at most. Besides, there's also variability in his experiment, such as the distance between two small balls m and two large balls m' . By increasing the distance between m and m' from 5cm to 10cm, 15cm or longer, their

attraction would disappear at a certain distance. Change in the material of balls may lead to change in G . Therefore, the value G from Cavendish's experiment is variable and could prove the existence of effective distance of attraction. My opinion that the value G from Cavendish's experiment is bigger by 20%-30% could be proved by the launch of manmade satellite and the super specific gravity of the earth.

Astronomers and physicists determine the earth's specific gravity as 5.5 by taking water's specific gravity as 1. We know the average specific gravity of the earth. As scientists have estimated that the earth's crust is about 10-40km thick with a specific gravity of 3.3-3.6, and actually water occupies a large proportion in it with an average thickness of 2.6km. The specific gravity of seawater is a little above 1, for the rock excavated it's no more than 2.8, and for the magma erupted, cooled and frozen it's no more than 2.8. The specific gravity of deep rock is not necessarily bigger than that of the surface rock, so it's unrealistic to say the specific gravity for the crust is 3.3-3.6. For the mantle with a thickness of 2900km after contraction, scientists have estimated its specific gravity as 3.9-5.9, which is out to be doubted since its temperature at the center is over 2000 degrees and compression and thermal expansion may offset. The core with a diameter of 6800km and a temperature of 4000~6000°C, it's also a liquid ball. The volume of solid material would increase after being melted, and the core is hard to be compressed after being melted to liquid. Also, the crust and core are of ellipse structured, and their weight will not be passed to the core. Scientists say that the specific gravity of the core is 9.4-11.5, which is about 1/3.5 or 4/1 of its volume. Could they compress the volume of water to its 1/3 or 1/4? Such contradiction is totally caused by the universal gravitational constant G .

Despite these existing problems, some experts still believe that these theories are correct due to the successful launch of manmade satellite and spacecraft. This is unacceptable for me, since there're laws for the movement of celestial bodies based on our observation materials in thousands of years. Chinese people predicted eclipse by deducing from the calendar without knowing the laws of celestial bodies and the earth is spherical, so why wouldn't we still believe in the orbicular sky and rectangular earth? If we still believe the geocentric theory, it'll not influence the launch of manmade satellite and spacecraft. If the science field could accept the theory that planets and satellites all perform circular movement outside the displacement trajectory of the sun and attraction has an effective distance, it'll benefit the launch of manmade satellite and spacecraft and also help human beings to move to terrestrial planets. Astronomers and physicists should resolve the

doubts of questioners and prove by experiments or simulation models, instead of suppressing by universally recognized truth. As we know the feudal autocratic society and the geocentric theory were recognized and accepted by the world, could we say they're still truth?

Any new theory or thing is not born smoothly and is vulnerable to the resistance of old theory and the force of habit, and could only be recognized by the test of time. I think it's necessary to reveal the truth in natural science. With the development of science and technology and the need to change the universe, my "heterodoxy" will eventually be recognized. If Newton found that attraction is coupled by attracting resistance, he would deny the heliocentric theory and Kepler's law, and would not propose any wrong law.

Section 5 Regrets and Hope in Life

It has been 44 years since I first proposed these opinions till my current research. Although I've never forgotten them, I had no time due to my job. It brings inenarrable pain not to pursue one's dream and do the thing he wants. It's unlucky for me to have lots of time after retire yet not a good body. Now through my study of the subject left over years ago, I also added some new understandings to the cause of attraction from the earth (celestial bodies) and rotation. I also proposed my supposition on the formation of solar system. Maybe one could find more problems as he gets older, but this also makes me feel a sense of urgency for time and life.

I usually think that although so many problems are to be doubted in the field of astronomy and physics, why wouldn't astronomers and physicists raise them out in the past 300 years, instead of me proposing as a nonprofessional? Despite numerous self doubts, I still believe in my own judgment and think the reason is that Copernicus's theory, the first law of Kepler and Newton's law of universal gravitation have all been considered as authority. People would only try to justify themselves even if any problem arises. This is the superstition under authority. I have the following three opinions to these theories and laws:

(1) Copernicus's heliocentric theory and Ptolemy's geocentric theory only reflect two movement relations in the solar system, which fails to consider other patterns. So we should study the depth and profoundness of this problem.

(2) In the first law of Kepler, the movement trajectory of all planets is ellipse and the sun is at their focus, which are actually supposition to meet the calculation requirement. Although the sun's rotation and revolution (displacement) are found now, no one has proposed different opinions on the first law of Kepler, even if there's any problem in planetary trajectory. As we know, the sun is 27000-30000 light

years away from the galaxy center and many planets are yet to be found outside the Pluto's trajectory and are not included in the solar system, which could be used to cover up the problem in this law.

(3) As we know, electric shock from high-tension busbar and transformer can make people dead within a safety distance, so the attraction of any two objects on earth is limited to a certain distance. Two electric charges in vacuum could not attract each other infinitely, and this proves some similarity to the universal gravitation in Coulomb's law.

Considering these three problems, I feel calm and courageous. I also know that this various society consists of different types of people. Some people serve for the country and its people, some are to enjoy the privileges and exercise bribery by being an official, some are to enjoy life and get filthy lucre, yet some live by their own efforts. Some pursue the success in career and some just want a normal life, so different people have different pursuits. I think the most important things for people are personality and dignity. The only reason for living is to do something meaningful. Without pursuit in life, one would only live meaninglessly. My pursuit for life stimulated me to study these problems again. I'm also regretful for my old age. Also, after my myocardial infarction in 2004, although I made it luckily, I have many diseases now. Anyone would like to find the answer to his research. However, I didn't increase any knowledge in astronomy or physics due to my work in past 40 years. I could not study this major again or work with experts and scientific research institutes. Unable to prove the data I expected, I feel my spirit is willing yet flesh is weak. Isn't this my regret in life?

Since I've proposed that the earth and all planets all perform circular movement outside the sun's movement trajectory, people only see half of the planets in the solar system, and the other half still remains to be found. Therefore, the movement drawing of celestial bodies and migration to terrestrial planets could on be considered as for these half planets (refer to the attached drawing). If so, people should be happy and start to look for the other half planets. Also, there may be lives there. This is more meaningful than finding the new continent by Columbus.

I hope to raise the attention of the country and scientific research institutes by showing my work to society, expecting they'd put more manpower and material resources for research, so as to reach a final conclusion. I won't take it as my personal business or give up my efforts to discuss with related units and professionals. I'd also publish the whole paper on the internet to get support from related people. I hope to improve my "heterodoxy" through discussion and broaden my horizon through materials I have no

access now. I'm ready to accept doubts and criticism from others since it's related to the authority of people like Copernicus, Kepler and Newton. As I'm just a normal people, I would lose nothing even if I'm criticized to a great extent. Yet I could deal with it peacefully with great harvest.

What I worry most is that Chinese people would shelf these problems till they're noticed and published by foreign people. As we have such precedent, we shall learn from it. I believe that there would a fierce debate as for the existence of gravitational resistance and the planets don't revolve around the sun, which would become a protracted war. These problems should be concluded in the field of physics.

Some people think that my book is a huge overturn in astronomy and physics, is a big denial and change in academics and no famous physicist and astronomer would support it rashly. So such new proposals in history are mostly suppressed by authorities. It's possible that the deserted work would be studied again after the authorities or even the researchers had passed by for many years. Thus, Chinese people usually sigh for the few good judges of talents.

These historical facts demonstrate two problems. First, people would only accept normal theories instead of new opinions due to their superstitious belief to authorities. Second, out of the mindset for conservation and admiration, many scientists become extremely careful after being famous, out of the fear that that their reputation may diminish. So many people have difficulty in making innovations or even suppress new things after becoming famous. So it needs people with courage and not bound to reputation to push forward the development of society and science and technology.

It's necessary not to opposed foreign things for the country to develop, the society to advance and people's lives to improve. We shall make the past serve the present, make foreign things server China and encourage diverse thinking. In Spring and Autumn Period there were only over 20 million people, most of whom had no access to school. However, many talents appeared due to the culture that promoted diverse thinking. Now with over 1.3 billion people in China and universal education has reached junior high school, several millions of people enter higher institutions for study and many choose to study abroad. China doesn't lack talents; it just needs a competitive mechanism that highlights people with talents. The Paerty and people around the country should realize that the cultural knowledge and science and technologies are no longer the patent of a small group of people. It has become a mass culture. As various talents are emerging, China's rejuvenation is unavoidable.

Given my book can't be published by official publishing house, I should thank the freedom from reform and opening up policy, because my work could be published online or through civilized publishing house. Truth will not he suppressed for a long period of time. I chose to publish it through civilized publishing house since I thought it didn't offend the Party. I printed 500 copies and sent to governments and libraries in middle school and institutions for higher learning, as well as those interested in geophysics and movement of celestial bodies. I only expect to be verified by later generations. Numerous fasts have shown that people at the frontier of society or awareness shall pay more efforts and suffer more pains.

I'm in my 60s now and have no loss or gain to express my new opinions on astronomy and physics. I think the heliocentric theory and Kepler's law don't stand, and there's problem in the law of universal gravity. And I believe this would be clarified sooner or later. Since the aerospace industry has yet to cover the whole solar system and universe and now it's only a challenge to celestial bodies, the heliocentric theory and Kepler's law may still stand for sometime. Due to these problems in the celestial mechanics, experts in aerospace would meet constantly meet such problems. Despite observation and adjustment to correct the theories, the existing problems would still occur. Repeated experiments could be unnecessary if they're under correct theoretical guidance. Without system theory and conditions for experiments in space, I can only prove my opinions through common sense, deduction and simple model experiment. The successful launch of manmade satellite and spacecraft is because $F=ma$ is only suitable for the movement of celestial bodies, instead of objects on earthl. Due to such error in the law of universal gravitation, aerospace design experts must have met lots of troubles and need correction and solution. If they think the heliocentric theory and Kepler's law don't stand and the law of universal gravitation is not perfect, then many problems would be resolved. I think it's difficult for the opinions in this book to attract attention from scientific research institutes or be recognized by the contemporary people. I many even receive debate or criticism from experts. However, I'd accept them with peace, since I'm only a amateur researcher without using any money from the country. I believe in my one judgment, since I've spent dozens of years in this. Even if I may not be recognized by dozens or hundreds of years, I would eventually be recognized by people as long as I could reveal the truth of science. If astronomers and physicists could recognized the pros and cons in philosophy, and attraction could produce attracting motivation as well as attracting resistance, the

heliocentric theory and Kepler's law would eventually be denied.

I could still remember the debate organized by professor Ge Xu from Hunan Normal Academy and professor Xiong Zhuhua from Hunan University. I feel grateful for it, and they still live in good conditions over 95 years old.

From 1970 to 1975, I was support and assisted by comrade Shuai Baoli; this year I got materials from teacher Zhuzhou from No.8 Middle School and engineer Hu Yaping from the urban library, as well as the great support from teacher Chen Weilun from Liling Banshan Middle school. Also, comrade Went Qing helped to search for documents online. Here, I'd like to express my heartfelt thanks to them!

Postscript – Advertisement

Respectful readers and authorities in astronomy and physics:

Till now there's no objection to the overturn of Ptolemy's geocentric theory by Copernicus, and the first law of Kepler and three laws for the movement of object by Newton and the law of universal gravitation are widely recognized. Also the latter was initiated by the heliocentric theory. In 1600AD, Copernicus raised the heliocentric theory, and many supporters were persecuted by the Roman Catholic Church. Bruno even paid with his life for this. Thus superstition, admiration and autocratic force are the major enemy for truth and science.

The heliocentric theory has been recognized for over 400 years. Today I propose that this theory is wrong, so as long the geocentric theory is wrong, thus misleading astronomers and physicists like Kepler, Newton and Cavendish, as well as those with middle and higher education. However, truth and fact are ruthless. It's far more difficult to correct such a mistake. Fortunately, the history has proved that truth is not equal to recognition by the majority; instead, it's the truth of fact.

Although out of a humble birth, I should fight for truth and science courageously since I've found the problems in Copernicus's theory, the first law of Kepler, Newton's laws on physics and Cavendish's experiment. I will never waste my forty years of efforts, since this is not just about clarifying the fact the revealing the truth; it's more about winning honor for my country and let my compatriots recognize the universe, conquer nature and change the world.

People on earth have not been able to prove the existence of attraction from the sun to planets far away. The saying that planet revolves around the sun and other planets is merely superstition from the heliocentric theory and universal gravitation. As the moon is closest to the earth, how could we demonstrate that the planet revolves around the sun without knowing the relation between the earth and

the moon? With all due respect, the earth has no attraction to the moon far away, and the moon doesn't revolve around the earth at all. It's the earth's displacement trajectory that surrounds the moon's movement trajectory, thus forming today's astronomical phenomena.

If we don't believe the heliocentric theory and infinite attraction from universal gravitation, we could find the fallacy from the launch of manmade satellite. For example, the manmade satellite could revolve around the earth due to its gravitation when hundreds or thousands of kilometers away from the earth. IF the satellite is away from the earth's atmosphere and it slows down without energy supply, then it could prove that the it's under the attracting resistance from the earth (the launch of lunar satellite could demonstrate this problem). If the manmade satellite is dozens of hundreds or thousands away from the earth and it could not revolve around the earth, then it could prove that the attraction from the earth is decreased due to increase in distance. Since I've found no related report, is it because scientists have neglected this work?

In the time of Mao Zedong, political struggle is quite fierce, many scientists are forced out of their work of science due to politics. This is caused by the abnormal social system, and scientists also tried to avoid political risk and failed to fulfill their complete responsibility for loving their country. I think politics leads science, culture, science and technology and productivity and relates to national economy and people's livelihood. It's the responsibility of each people to care about politics in all fields of work. So in my discussion of astronomy, physics and social development, it's unnecessary for me to express some political opinions. I hope readers could understand some of my inappropriate opinions, since it's no fault to be concerned about my country and its people.

I think it's necessary to accept diverse opinions for our recognition of truth. Only those theories that could not be overthrown are truth. Also, truth could be tested by practice and history. I've completed and published my book, and also sent to some libraries. I'll also upload it online to win support from experts and amateurs and find the truth. In August 2012, I designed a model test and recorded it to prove its validity. This test includes two points. One is to prove that object has attraction together with attracting resistance. And the attraction of any object has an effective distance. The second point is to prove that the rotation of celestial bodies is caused by internal force, since rotation could generate centripetal force and thus produce circular displacement. So the theory that planets revolve around the sun doesn't stand. Other problems could be resolved by proving these two points. Although individual experiment has many difficulties and couldn't reach absolute accuracy,

there's nothing impossible to a willing heart and strong will. Now I propose my book and part of the experiment results to China, and I dare to accept different opinions and criticism from experts, or even the test from facts and history. I'd accept criticism and correction with humility as for wrong and incomplete place.

Extract, Model Experiment Abstract and Views on Issues of "Geophysics and Celestial motion Heterodoxy"

For more than forty years, I questioned about Celestial motion, movement of objects, Newton's classical mechanics as well as relevant questions and have sent researching results to Chinese academy of sciences institute of physics. In the winter of 1970, I've been to Hunan university to exchange ideas with Physics Department of Normal college. I got no answer there for they did not believe the existence of attractive resistance and I had nothing to improve either. In the spring of 1975, I went to China Institute of Physics at my own expense to study and research, only be rejected for the Cultural Revolution (1966-1976). Since then I had to work and stopped searching for my dear dream. In 2009, after retirement, in view of the astrophysics community still adhere to the heliocentric theory and the law of gravitation, the secondary school physics textbooks are immutable and frozen, so I had the research come back to me. During March and April, 2011, I wrote "The Geophysics and Planetary Motion Hypothesis" (Hereinafter referred to as the "Heterodoxy") In addition to sending the print version to the relevant units, I also sought to a publisher. Because the domestic press refused to publish science and technology books has not admitted by the country, I had to entrust the prospect of Hong Kong Publishing House. In February 25, 2012, I received the book, and sent to more than 20 relevant unites by express mail.

After more than one year, I only got three replies, and all explained nothing about my question. I called and most of them explained that they did not receive my letter. Few think the heliocentric theory and the law of gravitation has been recognized by the world and is the truth that can not be changed. Some may have "heterodoxy" as heretical beliefs and turned to a deaf ear. People should not forget that the thousands of years of feudal autocratic rule which has been recognized by the world has also be overthrown. Geocentric was also recognized for thousands of years, and finally be replaced by the heliocentric theory. It is inevitable that people's gaining knowledge on orbs, movement of objects changes with the development of science and technology. So, the truth is not the most people's identity, but after the contention of a hundred schools of thought. Only the undeniable theory is the

truth. Heliocentric theory and the law of universal gravitation cannot be true for they originated from the conjecture and hypothesis, neither has not proved by perfect theory and model experiment. Superstition and worship of the heliocentric theory and the law of universal gravitation celestial physics, have put forward to the superstition of the abyss. To maintain the authoritarian rule, kingdom of ancient China has over four thousand years of killing. China has hundreds of violence to change Dynasties in history. Science and technology not only contributes to the maintenance of autocratic rule, they can also promote social progress. When science and technology get rid of the feudal superstition and shaken despotic rule, pioneer innovator and supporters will have life risk. Compared with geocentric theory, heliocentric is undoubtedly a big step forward. As a result of a breach of the Rome Catholic Church that the human world is the supreme idea, Copernicus was with profound respect and humility, Bruno was burned at the stake in 1600. A nation's science and technology without contention of a hundred schools of thought and seeking truth from facts, the scientific research institutions governed by superstition as well as Conservatives, though there is no sorrow of life today, will also kill the latest scientific and technological achievements. There are many examples to prove that researching results of small figures are difficult to be published and cause resonance. Until the death of inventor decades or hundreds of years, it was later discovered as truth. This is not just a personal tragedy, but the entire humanity's. I recognize that the struggle between the new and the old is long-term fighting. One who dares to be the first should have a unswerving fighting spirit, even to the end of life is also difficult to obtain the world's approval.

I. Questions on Celestial Motion and Geophysical Issues.

Copernicus proposed the heliocentric theory was because the making of geocentric celestial map by Geocentric was too complex. At that time people still didn't know celestial bodies are with gravity. Newton's law of universal gravitation was not available. Copernicus also did not carry out simulation experiment of the solar system planets. Thus we can say heliocentric has neither theoretical basis nor simulation experiment. Just like the geocentric theory which derived from the conjecture and hypothesis. In fact, the day and night and four seasons on earth, if not limited to the geocentric and heliocentric system, elliptical orbit planets of solar system, and the stars, planets and satellites respectively do circular motion, can obtain more reasonable explanation. Unfortunately, with the development of aerospace industry, people don't go to study why stars rotation and revolution, not

trying to verify the heliocentric theory. By contraries they obsessed with the worship of Heliocentric theory and the law of gravitation, satisfied with aerospace but does not seek to innovation. I think the basic knowledge of celestial movement and physical still exist many problems, misleading the human understanding of the earth and the universe. In my research on heliocentric theory and the universal gravitation law neglected by human, the resistance I encountered is word wide. Even so, I still insist on the question and the research, causes the attention from astrophysics community, until the truth emerges.

1. Found the attract resistance

Force is the interaction between objects, it could not be exist without objects. Interaction of two objects also determines the direction of the force. To change the direction of a force, additional force shall be imposed. This change in the direction of the force is the force generated by the suction resistance. For example, the earth's gravity determines the free fall direction is vertical downwards. To change the free fall's landing points, we should apply a force on the free falling body in different directions. The objects on the ground and the earth are still. To change the position of the object, there must be a force given on cutting line of the object and earth namely gravitational field lines. This external force includes the attracting resistance. The attracting resistance are classified in friction and air resistance by astrophysics community and thus be ignored. So people were blindly worship heliocentric theory and the law of universal gravitation.

2. Questioned on Copernicus' heliocentric theory

When Copernicus proposed the heliocentric, he doesn't know reasons for body rotation and revolution (displacement) nor does he know where the planets revolve around the sun's centripetal force and tangential force come from. Heliocentric and geocentric theories are both derived from the conjecture and hypothesis and groundless. Future generations do not question and verify the heliocentric theory, but treating law of gravity as a magic weapon to explain the planets revolve around the sun. "Satellite" travel around the planets, the planets with the sun and Solar System with galaxy, such inexhaustible proceed, finally it will come to and end up with the God system, thus turning the celestial body movement to superstitious abyss. In fact, if people know the suction resistance exists, heliocentric would become groundless.

3. Kepler's laws are Incorrect

Because the heliocentric theory is wrong, Kepler's three laws itself is a sheer fiction. The first law is that the sun is the focus of all the planets orbit.

It is a fact that the earth's rotation to circular trajectory displacements due to a diameter of about 800,000 km (can be proved by simulation experiments). The mass of the sun is about 317000 times that of the earth. The speed of equatorial line is more than 3 times that of the earth. Because of rotation and displacement, diameter of circular trajectory generated by the displacement is more than two million km. Is that would only be a focus? Since the first law is not correct, let alone the rest two.

4. Any attractive force is subject to effective distance constraints

In addition to elements, any atomic, molecular, substances, objects and objects are attractive, for an electron moving around the nucleus. Attractive intensity is directly proportional to the masses, and inversely proportional to the distance. When more than the attract distance, attraction between two objects down to zero. All substances, objects and celestial attraction has effective distance, not infinite attraction. How far it is that the effective distance of the gravity of the earth? When an object from the ground is not free to fall back, that is effective attracting distance. The acceleration of gravity is zero. Celestial bodies attract each other. Without considering the effective attractive distance of celestial bodies in the universe, we cannot calculate the attraction and the quality of any two planets. Because of countless celestial attraction will influent the calculation results. Object does not exist in regular exercise but only a kind of no rules movement like Brown movement. The law of universal gravitation is infinite attraction is wrong, which can be proved by experiment.

5. Question of celestial mechanics and mechanics of ground objects unified, realizing the first major comprehensive in physics history.

If objects on the ground are not out of effective attractive distance, they will be affected by the earth's magnetic field. Objects have mass and weight. Object motion, which is affected by gravity, has something to do with attracting force, friction force and air resistance. Hence it is essentially different with celestial motion. Celestial bodies are far away from each other and there are no gravitational interactions and cosmic magnetic fields between them. So celestial bodies only have quality, no weight and no fulcrum. Celestial bodies naturally have nothing to do with attracting force, friction force and air residence without considering the traction in tangential direction resistance. The essence of celestial mechanics and mechanics of objects on the ground are completely different and cannot be integrated. Newton made a mistake on the confusion of concepts.

6. Question on Gravitation Constant $G=6.67 \times 10^{-11} \text{N} \cdot \text{m}^2/\text{kg}^2$.

The lack of scientific basis for the design of the Cavendish experiment device, only adjusting the data will have different results. Secondly, the Cavendish experiment is affected by the earth's magnetic field, using the gravitational constant value obtained by mutual attraction and quality into the universal gravitation formula of celestial bodies is not correct. As with the formula of universal gravitation and gravitational constants to calculate the mass of the earth is 5.98×10^{24} kg, the average density of 5.515g/cm^3 , I think the quality is at least partial thirty percent larger than it is. There are two reasons, one is the egg can withstand the weight or greater than gravity pressure, force and will not transfer to the interior, this is because it's shell ellipsoid type structure. Earth is ellipsoid type, external force as well as earth's crust, mantle pressure cannot reach to the core. What's more, the liquid outer core is difficult to estimate the compression, The density of the core is $9.4\sim 11.5\text{g/cm}^3$ lacking of scientific basis. So the mass of the earth cannot be trusted. Secondly, according to the law of universal gravitation and physicist between gravitational constant G, scientists worked out the attraction between sun and the earth is about $3.56 \times 10^{22}\text{N}$. This force can pull a steel column with diameter of 9000km apart. It is because the sun has such a big attraction to the earth, the earth was able to move round the sun and not leave. If you believe this astronomical figure, we can draw a conclusion that there is a 2840kg projection sun's gravity on the surface of earth per square centimeter. Any object on the ground would fly to the sun, people cannot stand on the face of the earth. But that is not the case, it is proved that there is no attractive force between the sun and the earth.

7. Correct on Newton's Three law of Motion

When Newton proposed three laws of motion, the human cannot make aerospace activity, so this can only apply to study the earth motion. The first law (the law of inertia) All objects without any external force, always keep uniform linear state or static state, until external force to change their state. Because objects on earth are all subject to the earth's gravitational force. Earth's attraction to all objects on the ground makes them remained relatively static. So the ground all the objects only relatively static inertia, there is no movement inertia and uniform motion in a straight line. All the objects on the ground are relatively static. There is no movement inertia and uniform motion in a straight line. Turn off the engine of the vehicle it can be slow running for a short distance, this is not the motion inertia, but the storage and consumption of energy. Because the speed of the car is greater than zero, it also can achieve 40m/s. Turn off the car engine (not to step on the brake), as long as the instantaneous speed of the car is greater than zero, the

car can move forward finite distance. Treating the energy storage as motion inertia is mixing the two concepts.

Second law: $F=ma$. Objects on the ground all have weight. So they are subject to attractive force, friction force and air resistance, there is no $F=ma$. Only objects in space which only have m and no weight mg, there is $F=ma$. So, the second law is only applicable to the objects or objects in space motion.

The third law: Acting force and counterforce between two objects are in the same line with equal power and opposite direction. This law is not applicable to the ground motion. Because if treating the force giving objects as active objects, it must overcome the attraction force, friction and air resistance. If regarding the reaction force objects as passive objects, then passive objects are supported by static suction, friction, air resistance, acting force is not equal but larger than reacting force, which can be proved by experiment. Due to the rotation of the celestial bodies are ellipsoidal. There does not exist linear motion but curvilinear motion on the surface of the celestial (earth) or gravitational range of motion object. So, Newton's three laws of motion is only applicable to objects or objects in space, not suitable for surface motion. Otherwise, it should be corrected.

8. Correct the centripetal force originating from earth makes objects in circular motion. $F=mv^2/r$. The differences between the ground objects and objects in circular motion are that objects on earth have mass and weight, and cannot rotate without traction force from tangent direction. Celestial bodies only have quality but no weight. Because of its uniform rotation and displacement of circular trajectory, don't need the force from tangent direction. To build a circular orbit, let a locomotive (as a particle) move in a circular motion orbit. Traction locomotive is tangential force. Rail balanced the front head gravity. The track height produces centripetal force, so the locomotive can make circumferential motion. The objects on earth do circular motion(without considering the traction in tangential direction), the centripetal force $F \neq mv^2/r$. Because the formula ignores the gravity of the object. The expression formula of the centripetal force F is:

$$F = \sqrt{\left(\frac{mv^2}{r}\right)^2 + (mg)^2}$$

quality $m=1$, then the
formula can be rewritten as:

$$F = \sqrt{\left(\frac{v^2}{r}\right)^2 + g^2}$$

(Symbol Meaning the same with $F=mv^2/r$).

It is questionable, celestial for elliptical motion, with the centripetal force of gravity force available, but where come of the force in tangent direction, still no answer.

9. The earth's axial tilt is not lunar impact results.

Astrophysicists think the tilt of the earth's axis is the moon impact, this has no scientific basis. Newton explained the planets and the sun are attracted to each other, the planet will not fall to the sun, because the planet revolution speed, so as to "satellite" does not fall to the planet. Therefore the moon never hits the earth, even the moon hit the earth, the two cannot be separated. Meteorites fall to earth would never fly through, which can be the proof. The moon hit the earth that is tilted, is completely groundless statement.

10. Artificial earth satellite orbit can't be elliptical.

In April 23, 1970, China launched its first man-made earth satellite "Dongfanghong". It flies along the perigee 439km, 2384km apogee elliptical orbit around the Earth. Orbital inclination is $68^{\circ} 55'$ and flight cycle is 114 minutes. As everyone knows the earth revolution speed is 29.8km/s, the satellite into orbit speed is 7.2km/s. Satellites orbiting the earth in a circle needs 114 minutes, then along the long axis of ellipse curve about 57 minutes, about 36.8 minutes along the straight flight. The evaluation of the artificial earth satellite orbit of the major axis is about 81324km, short axis is about 15579km, short and long axis ratio is 0.1916. It is con pattern ends with circular arc, rather than an elliptic orbit. Strictly speaking it is not. It is closed at one end, the other end of odd shape is not closed. It is actually a composite motion trajectory. If elliptical orbit, it proved that the earth is not travelling around the sun for the earth's velocity is 0.07815km/s.

11. Question on slow celestial objects flying around faster celestial objects

Electronic travel around the nucleus, the nucleus is larger than the electron mass and has no rotation and displacement. In real life, only the speed of the object can be rotated around the object in slow motion, but celestial bodies are completely different. Astrophysicists who obsessed to heliocentric theory, got a conclusion that the sun's orbital speed reaches 250km/s, and the fastest mercury is only 46.8km/s, Neptune is slow to 5.4km/s. How can they fly around the sun? Scientists should do the simulated experiment, do away with all fetishes and superstitions, obtains the correct understanding of celestial bodies movement. The artificial earth satellite into orbit speed of 7.2km/s, it can fly around the planet. It is proved that the earth's orbital speed of 29.8km/s is not true. Launching CE-1 and CE-2 two lunar satellite, did not report the circumlunar flight speed, we only know the Chang'e-1 lunar height 100km, flight speed of 15km/s. This proved that the satellite is faster than that of the moon's so-called revolution speed, revealing the heliocentric theory does not hold.

12. Tiangong-1 and Shenzhou eight spacecraft

successfully docked, also proved the heliocentric theory does not hold. General human first practice, and then accumulated experience. In China's modern history, before the establishment of the subject of material mechanics and structure mechanics people had created the brilliant construction and advanced smelting technology thousands of years ago, proved that scientific theory also can succeed without practical experience. Tiangong-1 and Shenzhou eight spacecraft docked to pass more than 1000 times test before successful. This may due to China's space technology is not mature, or is affected by the heliocentric theory of misleading, and probably for the latter. Subject to errors of Heliocentric theory, the calculated celestial (displacement) is dozens even hundreds of times faster than the actual. So, after thousands of trials correct theoretical error. If scientists can calculate the actual track and velocity of displacement of the earth at first, certainly does not need more than 1000 times test.

13. Chang'e I and II satellites both circling the moon, proved the existence of attraction resistance. Astrophysicists superstition to Newton's three laws, does not believe the existence of attraction resistance. They think that the artificial earth satellite cannot permanently orbits around the earth without energy, is affected by the air resistance. The moon has no atmosphere, therefore there is no air resistance, Chang'e I and II entered lunar orbit around the moon and flying can be permanent (except for artificial control). It is not true in fact. The design life of Chang'e I is one year, the actual life is 494 days (including orbit around the moon 482 days), the error is more than thirty-five percent. This proves that the moon's attractive force to the satellite has attractive resistance. Chang'e-1 and two cannot permanent circling the moon without supplementary energy. Scientists do not believe the truth, still superstitious heliocentric theory and the law of gravitation, which is on the contrary to the scientific principle of seeking truth from facts.

14. Archimedes's law is not rigorous, need to correct and improve. Legend has it that Archimedes found the water buoyancy in the shower. He is so pleased to announce his new discovery by running out naked. As the law has not changed is the textbook: objects immersed in a liquid will receive the upward buoyancy, which is equal to the weight of the liquid discharged. I have found that objects soaked in liquid without buoyancy to its bottom, the buoyancy is zero. Archimedes soak in the tub, if there is any part of his hip next to the pelvic floor, so buoyancy is not equal to the weight of the liquid discharged. So, we must correct and perfect the law of Archimedes, so as not to mislead students. It should be: objects immersed or not fully immersed in the liquid, buoyancy shall be

divided according to surface boundary. The buoyant force is equal to the pressure difference and has nothing to do with the surrounding liquid pressure. As to irregular shape objects, calculating the buoyancy will be more complex.

II. Do away with all fetishes and superstitions worship and conservative thoughts, I put forward heterodoxy on geophysical and astronomical movement"

People in ancient times did not understand breeding superstition of natural phenomena, thus rulers trump up superstitious to control people. China's slave and feudal autocratic rule is up to 4000 years. With the progress of science and technology and the improvement of productivity, human do not eradicate superstitions and conservative ideas, some people still obsessed with superstition. In order to understand the motion of celestial bodies ancestors inevitably use conjecture and hypothesis. Parts of Heliocentric theory and the law of gravitation are conjecture and hypothesis, both lack of theory and experiment proof. We can think that the heliocentric theory and the gravitation mislead the human understanding of the celestial body motion, hindered the development of physical mechanics of the earth and celestial mechanics. It is difficult to correct once a wrong theory is agreed by most people. Not all astrophysicists has no objection to the heliocentric theory and the law of gravitation. For they carry a heavy burden to the status and honor and are afraid to be attacked by not understand the basic knowledge. So they don't have the courage to challenge. I was born in rural areas. Because of the poor family and the "Cultural Revolution", I did not receive higher education. This is the biggest regret in my life. But bad things can be turned into good, ignorance is fearless. When the astrophysics community staged "the emperor's new clothes" story, I can act as ignorant children to reveal the truth. People's imagination and thinking ability are infinite. If can get rid of superstition and conservative ideas, and strive to prove, people would have found something new. I was not satisfied with the heliocentric theory and the law of gravitation of the conjecture and hypothesis, dare to use the basic knowledge of geophysical and astrophysical to observe natural phenomena and conduct logical reasoning. And conduct model experiment in my power. I spent more than forty years put forward a series of questions for the scientific research units to screening, hope to be concerned and do common research in the future. Hope to make China's earth astrophysics study leading the world.

1. The mystery of celestial bodies' the movement.

Rotary motion of electrons around the nucleus of an atom can make electric and then change into magnetic fields, which implies that objects becomes

attractive. Atoms composed into molecules, and molecules into material and then into object as well as celestial bodies. Life is also derived from the electronic movement. Quality of object determines the strength of gravity. Celestial body shrinks into ellipsoid under their own gravity, can produce high temperature and pressure. The ellipsoid is divided into spherical shell, the mantle and the centrosphere (which is liquid) all can make heat. Friction can generate electricity, thermal motion can produce electron flow. The moving of interior electronics of celestial bodies can make power.(In the opposite direction, but not collinear with a pair of parallel forces). This power drives the object rotating uniformly. The changing place displacement forms a circular trajectory. Objects become ellipsoid is caused by the different line speed. Therefore, those who can shrink into aspherical objects all with uniform rotation and displacement function. Therefore, it is neither God, nor the external force, but the internal force that promote the body movement. It is estimated that in the near future, we can conduct artificial ball rotation and displacement experiment in high temperature & pressure surroundings in space.

2. The formation of the solar system. The solar system is originated from the explosion of a giant star, which is composed of asteroids absorbing the surrounding clouds of gas and dust. After the giant absorbed all objects within the scope of gravity, nuclear reaction began. The spherical shell did not grow, the growing centrosphere break the balance and thus the explosion happened. The centrosphere became the sun because of the nuclear reaction. The left spherical shell and mantle became planet and asteroid. They are all traveling around the sun and that it why all planets are in the same plane. Most of other pieces and powders that cannot be a ball fly away and less stayed around the sun. To prove that the star explosion formed the solar system, only need to prove that the sun, planets, "satellite" and a nearby cosmic dust were born at the same period. This may how other planets originated.

Two types of circular motion of objects on the ground.

3. A frustum of a cone rolling on a horizontal plane, it can form a circular trajectory. The smaller the two round face diameters are; the greater the circle diameter is, the vice versa. If processing the cone into a three-dimensional cone, the cone height will be the radius of the circular trajectory. Therefore the height of the object determines the radius of a circle. The turning radius of train and car is from this idea. Another circular motion is the object rotating uniformly can do circular motion. All objects on earth have gravity, and are subjected to appealing fore, friction, air resistance etc. Any rotating movement will slow down until the rest. Give a force to a uniformly

rolling object, it will change its orbit and the changed diameter is directly proportional to the speed.

4. Uniform rotation objects will shift from a circular orbit. If mechanical gyroscope is designed into a persistent uniform rotation, it can shift into a circular trajectory. Commodity gyroscope is clockwork drive, subject to gravity, attraction force, friction and air resistance, can only do decelerated motion. So the first circle path is approximate circular outer, and later more like spiral line. Celestial objects only have quality but no weight, no attraction forces, friction and air resistance, and no supporting point, uniformly rotating by the internal force will inevitably form a circular trajectory. Misleading in heliocentric theory and universal gravitation, people regard the circular motion of celestial bodies as "satellite" traveling around planet, the planets around the sun. Regarding the furthest distance of two celestial bodies as elliptical orbit's semi-major axis, and the nearest distance as short half axis, that is the elliptical orbit. In fact, attractive resistance does not exist. Objects are independent in circular motion and there is no elliptical orbit.

5. Celestial revolution speed should be less than the equatorial line speed of rotation. From the rotating mechanical gyroscope, we know that dynamic circular trajectory don't need the centripetal force and tangential direction, uniform rotation can meet the need of displacement circular trajectory. and the displacement velocity is less than the rotation speed. According to heliocentric theory, the planets travel around the sun, the attractive force from the sun is the centripetal force. Then where is the suction resistance? Where tangential force comes from that makes the revolution speed far greater than the equatorial line speed. Take the earth as an example, the equatorial line speed is 0.46511km/s, the revolution speed is 29.8km/s, almost 64 times of the line speed. Suppose the earth stopped rotation and revolution, a object with quality of 1kg, the kinetic velocity direction 108164 joules and the kinetic energy of ellipse tangent direction 4.44×10^8 Joule, which is 4105 times of the former. Object probably will fly away along the ellipse tangent direction. Copernicus and Newton did not found kinetic energy in the rotation of the earth, let alone a reasonable explanation to the kinetic energy. Only the sun, the planets, "satellite" follow the uniform rotation of gyro, the revolution of the earth (displacement) speed is only 0.07815km/s, all questions can be reasonably explained. Modern astrophysics community obsessed with heliocentric theory and the law of gravitation. It is necessary to make a scientific explanation and experimental proof on the existence of the problem. Otherwise, it will be a laughing material and not good to the growth of new theory.

6. The ground motion object's weight is inversely proportional to velocity. The object weight on the

ground is relative weight. If the earth stopped rotation and displacement, the weight of the object become the largest. From fluid mechanics we can know that the kinetic energy of the fluid increases, the pressure can be reduced. So as to solid object. With the increase of velocity of a body, it also reduces the pressure on the ground (or weight). The weight of the object is inversely proportional to its movement speed. If the satellite launched into earth orbit, its speed remains 7.2km/s, it will be orbiting around the earth and won't fall onto the ground, the ground pressure is zero, and its weight is zero.

7. Find out why the earth axis tilts. The moon cannot hit the earth, and if it really happened, they cannot be separated. And when the moon reaches into earth's gravitational field, it will produce a gravitational acceleration. Both will leave the battered traces. The traces are not found, so that impact never happened. The reason why the earth axis tilts is that the earth is not uniform and regular sphere. Surface elevation is 20~30 km. The earth rotating but the moment is not balance. Secondly, the earth is traveling in space and has not weight and supporting point. Therefore, the tilt angle and direction remains unchanged. If it has weight and supporting point, it will swing without a stop. This can be proved by experiment.

8. Displacement of celestial bodies' trajectory motions will change very slowly. Celestial rotation can fly out of the circular orbit, which is not permanent. The centrosphere became the sun because of the nuclear reaction. The left spherical shell and mantle became planet and asteroid. They are all traveling around the sun. Most of other pieces and powders that cannot be a ball fly away and less stayed around the sun were called space junk. Cosmic dust into gravitational field of a planet or "satellite", will become the stars' quality. So the planet ("satellite") has opportunities to increased quality as well as motion energy. Rotation speed increases quickly and the displacement trajectory also increases. This is the variability of planet displacement trajectory. Trajectory of planet became smaller after the explosion and the space junk became less and less. Even with the dust run into the stars, the star quality still cannot gained. Stellar nuclear fusion desorbing light and heat, during this course, the loss of the quality is far greater than the quality it gained from acceptance of cosmic dust. The rotation velocity and displacement diameter are also reduced. But this progress going slowly and cannot be noticed after thousands even millions of years. So the change can hardly be noticed.

9. The moon is not traveling around the earth. Displacement track of the moon was surrounded by that of the earth. Misguided by the heliocentric theory and the law of gravitation, people hold a view that the traveling of all celestial bodies must have a center. For

example, "Satellite" travels around the planets, the planets travel around the sun, the solar system travels around the galaxy. Then around what that solar system travels? People still got no answer. Visibly, object motion is a heretical belief, which deceived human understanding of the motions of celestial bodies. For instance, the moon revolves around the earth, the earth moves around the sun. Then full sun eclipse and lunar eclipse must appear once each month. The lunar month has only 27 or 28 days and 13.44 months per year. In fact, that is not true. This proved that the revolving around relationship does not exist. Displacement track of the moon was surrounded by that of the earth. The moon and the sun are traveling to the same direction, then full sun eclipse and lunar eclipse cannot appear once each month. The lunar month has 29 or 30 days and 12.3 months per year. The lunar month appears three years a time. This is consistent with the fact. If the moon travels around the earth, not only attracting resistance cannot be explained, also there must be a gravity balance passage because the two balls attracting each other. And gas on earth will run to the moon. Now it has been proved that the moon has no gas, so there is no attracting force between the moon and the earth, neither will the moon travel around the earth.

10. "Satellites" are asteroid that close to the planet (relatively). The rotating of earth formed a circular trajectory with diameter 785,000 km. People think that the elliptical orbit of the axis is about 300,000,000 km, which is 382 times than it is (Other planets' orbit displacement are also expanded). It is wrong for people to treat those external displacing minor planet in the planets orbit as satellite. Neighbor relationship should not be Relationship. If astrophysicists could do away with all fetishes, superstitions and conservative as well as heliocentric theory and gravitation, they will discover that heliocentric theory and the law of gravitation are conjecture and hypothesis. Otherwise, the new theory will be treated as heretical beliefs, which will have a bad effect on development of astrophysics.

11. About half of the planets and "satellite" in the solar system have not been found yet. Heliocentric theory and the law of gravitation are not correct. The planet travel in a circular motion in trajectory of the sun, satellites flying encircle in and out of the planetary orbit. In addition to theory basic, there are two facts as evidence. The earth revolves around the sun. In half a year people in the northern hemisphere cannot see the North Star. Some experts think Polaris is too far away from earth and between the stars is a three-dimensional structure. Mapping can prove that it is wrong. For people watch the sky back to back, of course they only have half year to access the North Star. Experiment is feasible. Secondly, it is said that ET had visited the earth. If that is true, ET must be in the Solar System.

Because the nearest whale galaxy to the earth is still 12 light-years distance. There is no aircraft that can fly 10 time faster than the speed of light, so their visit is impossible. And the so called ET is Solar System citizen. This proved that the earth does not revolving around the sun. About half of the planets and "satellite" in the solar system have not been found yet. We can search for planets and aliens from life zone which is 1.4~1.6 billion km to the sun.

III. Part of the Model Experiment in the Heterodoxy

Although the Copernicus's heliocentric theory is supposition and speculation, it still reveals the sun as the main part of the solar system, thus promoting the advancement of science. When people fail to recognize that celestial bodies rotate at constant speed due to internal force and thus perform circular movement, it's no wonder they turn a blind faith to this theory. I doubt the heliocentric theory and the law of universal gravitation because the former fails to consider the attracting resistance and lacks theories and experiments to convince people, and the latter neglects the effective distance of gravitation and goes against the mathematical principle – the extremum of an infinitesimal number is zero. Kepler's law and Cavendish's experiment are deduced from the heliocentric theory and the law of universal gravitation, thus without any scientific evidence.

I proposed the concept of attracting resistance in 1967, that two mutually attractive celestial bodies wouldn't revolve around each other for a long time. The smaller one would stop revolution and be absorbed to the bigger one, thus deducing the existence of effective distance and two celestial bodies infinitely away from each other could not attract. Newton's law of universal gravitation is not applicable to celestial movement, namely this law doesn't exist. In the winter of 1970, I joined the discussion held by the physics teaching and research group in university, and professor Xiong Zhuhua from Hunan University and professor Ge Xuchu from Hunan Normal University said "these proposals are all correct if you could prove the existence of attracting resistance". But in that year I had problem for survival and thus had no conditions for model experiment. Later I was engaged in water conservancy and could not suspend my research.

After retirement when I have some economic foundation and time, I'd fight for my unfulfilled dream. In the first half year of 2011, I wrote the book Heterodoxy and sent the hard copy to over 20 scientific research institutes and periodicals. However, since it couldn't be published in mainland, I entrusted Hong Kong Prospect Press and sent it to aforesaid units and individuals (through EMS), some of which have received over three copies. After two years, I've only

got simple replies from China Science Association Service Center, the General Editorial Office of People's Education Press, and Hunan Science and Technology Press. It's better to have these replies than not, although they still couldn't meet my demand. This also makes me realize that the magic of superstition is boundless and there lies great obstacles in challenging Copernicus, Kepler, Newton and Cavendish. I realized that although theories may not be accepted by the astrophysics field, the model experiment is more intuitive. Thus I designed the model experiment in August 2012 and performed and recorded in September. I'll briefly introduce the following aspects based on the model experiment.

Experiment 1: Prove the existence of attracting resistance

The stroke S of a freely falling steel ball with a diameter of 23.5mm from 15.38mm high is over 850mm. Then place 9 sets of bar magnets at two sides of the track with the heteropole correspondent to each other and repeat the movement of the steel ball. Since it'd cut the magnetic line of force, the stroke S' is about 740mm, thus proving that the actively moving object is under attracting resistance due to the magnetic line of force from the passive object. Since all moving objects on earth would cut the earth's magnetic line of force, and the attracting resistance exists, it's wrong that scientists include the attracting resistance in friction and air resistance.

Experiment 2: Prove that planet revolves around the sun due to mutual attraction and it cut the sun's magnetic line of force (gravitation) as an actively moving object, and finally it'll stay still and integrate with the sun.

Suppose a circle with a diameter of 570mm as the earth's trajectory, the steel ball represents the earth and falls freely into the track from 34.5mm high with a stroke of about 315 radians. Place 20 bar magnets beside the track of equal distance with the same poles facing the steel ball to simulate the sun's gravitational lines to the earth. Repeat the steel ball's movement and the stroke S is around 295 radians, which is reduced by 99.4mm. This proves that planet revolves around the sun due to gravitation and its rotary and revolutionary speeds both reduce till zero and it'll finally integrate with the sun. Thus the heliocentric theory doesn't stand.

Experiment 3: Prove that the celestial body rotating at constant speed must displace in a circular trajectory through the rotation and displacement of mechanical gyroscope.

Spray a uniform and thin layer of flour on a horizontal glass and let a winded mechanical gyroscope rotate on it, which would form a trajectory similar to a circle or spiral. There's no repeated circular trajectory because of resistance to the

gyroscope, such as its own weight, attraction, friction and air. Without any weight or resistance for the celestial body, it'll definitely perform repeated circular trajectory. We can prove this by placing a rotary sphere at constant speed on a large horizontal plane or in the space.

Experiment 4: Prove that the inclination of earth's axis is caused by imbalanced moment instead of impact from the moon.

Bind the mechanical gyroscope with an object whose weight is a fraction of that of the gyroscope, so that the gyroscope would lose balance. The rotating gyroscope would incline and swing constantly due to its fulcrum. Since the earth has no fulcrum in the space, it'll only incline at one direction without any swing. Thus it could prove that the axle inclination of any celestial body is caused by imbalanced moment, instead of impact from another celestial body.

Experiment 5: Prove that the attraction from any material, object and celestial body has an effective distance and the law of universal gravitation doesn't stand.

Take a 393g bar magnet and 53g steel ball as the experiment tool. When the linear clear distance S between the pole and the steel bar is less than 30mm, the steel ball would move towards the pole and stick together; when the clear distance is more than 30mm, the steel ball would be still. If its weight, attraction, friction and air resistances are reduced, its effective attraction distance will increase but not infinite. This is mainly because the law of universal gravitation goes against the rule that the extremum zero. As the universal gravitational constant G is a variable, when it exceeds the effective attraction distance G would be zero, thus the law of universal gravitation doesn't stand.

Experiment 6: Prove that the acting force and reacting force of objects on earth aren't equal, the former is bigger than the latter and aren't on the same line

Newton's three laws of movement are for objects on earth. An essential error is to consider that celestial movement follows the same mechanics rule as objects on earth, without considering their essential difference, because the latter is subject to magnetic field on earth while the former isn't. It shall overcome resistances like gravity, attraction, friction and air during movement. The object under stress (reacting force) is called passive object, which is in a relative still state and supported by resistances like gravity, attraction, friction and air. These two are the same thing. Experiment 6 proves that the acting force is two times bigger than reacting force. Since the earth is of an elliptical form, objects moving on earth or within its effective scope of gravitation all perform curvilinear movement instead of rectilinear movement.

IV. Meaning and Method to Prove Heterodoxy

It's a huge subject to project to explore the movement of celestial bodies and objects on earth. Since people now take the heliocentric theory and law of universal gravitation as truth, thus preventing the development of physical mechanics and the movement of celestial bodies, as well as prohibiting the birth and recognition of the Heterodoxy. Despite my continuous efforts, I'm only limited myself and may never get recognized by people in the world. In order not to bury my opinion in the long river of history, I'll record and keep it in library, and try to win support from the country and related science research units, so as to find the truth as soon as possible. If it's suppressed due to superstition, admiration and conservative mind, this is not only a suppression of individual achievement, but also loss for the country and its people, as well as tragedy for human beings, since it has an important role in pushing forward physics and aerospace.

It's of great significance to discriminate if the Heterodoxy is true, and it could also improve the heliocentric theory and the law of universal gravitation, as well as promote the development of aerospace. If its theory and model experiment are true, then it'll totally deny the heliocentric theory, Kepler's law, the law of universal gravitation and Cavendish's experiment, and break out the superstition for science and doubts in the movement of celestial bodies. Just one theory is enough to resolve a problem that needs thousands of experiments in the space. Also, it could change people's outlook to the world, universe and science. First, recompile textbooks in middle school on celestial bodies, movement of objects and part of mechanics, thus emancipating students from the superstition of heliocentric theory and the law of universal gravitation and make them dare to think, speak and explore. Second, China can take the lead in the understanding of the earth and universe, eliminate geological disasters and explore and utilize resources in the universe. Third, change observation method to astronomical phenomena, establish a spatial coordinate for the universe, determine the direction and displacement trajectory according to the relations among the sun, the moon and the earth, as well as determine planetary direction and displacement trajectory, so as to get a movement drawing of celestial bodies for half of the solar system. Fourth, establish a new aerospace concept according to the movement drawing of celestial bodies for half of the solar system, and thus China's aerospace would lead the world.

After knowing that the attraction from objects and celestial bodies has an effective distance, and the individual movement of celestial bodies is not influenced by any external force, namely "satellites",

planets and the sun don't attract each other, people could move celestial bodies and change the living environment. Draw a circular map by taking the center of the sun's circular trajectory as the center and with a radius of 140 million to 160 million kilometers, and such circular map could be called the life zone of the sun. People could move the center of the circular trajectory of terrestrial planets to the life zone and place the small planets within the scope of Jovian planets besides the displaced terrestrial planets so as to provide water and atmosphere and create an environment suitable for the residence of human beings, thus enabling migration to foreign planets and solving the problem of overpopulation.

Since planets don't revolve around the sun and people have only found half of the planets in the solar system, we should actively look for the other half and other positions, and break the mystery of the solar system and the universe. The so-called visit to the earth by aliens must come from planets not found in the solar system, since they couldn't come from other galaxies. If so, it proves that their science and technologies are more advanced than ours, and we should actively contact them for cultural and scientific exchange, thus gaining leapfrog advancement. There're two ways to look for the other half planets. First, step over the sun's circular trajectory and observe from the other side of the sun. Second, launch a manmade solar satellite to observe the sun. Both methods have difficulties. For the spacecraft to pass the solar trajectory and planets to revolve around the sun, it shall enter its scope of gravitation, which furthers relates to problems like resistance to high temperature and radiation. In addition, it shall have enough fuel turned into kinetic energy (or turn the sun's thermal energy into kinetic energy) so as not to be absorbed by the sun. I don't know if human beings have this technology.

Once a manmade solar satellite is launched, we could fully observe the solar system and look for planets and "satellites" outside the circular trajectory of the sun. More importantly, we could verify the validity of heliocentric theory and law of universal gravitation. Physicists have calculated that manmade satellite would fly out of the solar system with a third cosmic velocity higher than 16.7km/s. For example, the closest Mercury has a revolution speed of 46.8km/s, and the farthest Mars has a revolution speed of 24.0km/s, yet they're still within the solar system. If a manmade solar satellite is launched whose speed is over 16.7km/s that flies out of the solar system and could not revolve around the sun, then it proves that all planets don't revolve around the sun. Being misled by the heliocentric theory and the law of universal gravitation, scientists mistake the rotary circular trajectory of planet as the elliptical trajectory around

the sun, thus enlarging planetary displacement speed by dozens or hundreds of times.

There's no blame for China to develop aerospace and explore the moon and other planets. However, we should notice a fact that the aerospace technologies in America and Soviet Union are beyond us by over 40 years. It's not necessary for us to follow their steps. We can explore new areas and achieve new scientific and technological results. Despite the essential difference between the movement of celestial bodies and that of objects on earth, they are still connected. Many experiments on the movement of celestial bodies are conducted on earth and influenced by geomagnetic field. If astrophysicists doubt that the celestial mechanics and mechanics of objects on earth observe the same rule, they can conduct the experiments again with current conditions in space, so as to find the difference between them.

First, conduct Cavendish's experiment to test if the universal gravitational constant G is influenced by the geomagnetic field and if it's a variable; second, perform the experiment on gravitational acceleration at different heights to determine the scope of gravitation on earth; third, test the distance where the earth's gravitational acceleration is zero, determine the scope of gravitation on earth and predict if cosmic dusts could enter such scope, so as to prevent and eliminate them; make a sphere that could drive mechanically and rotate constantly, and place it in the space to see if its displacement is a circular trajectory, which could prove that celestial bodies perform circular movement due to rotation at constant speed and test the relation between linear speed and displacement speed. It would create a new outlook on the world and the universe if it could deny the heliocentric theory and the law of universal gravitation.

Chemistry is a discipline that studies the structure and change of elements, atoms and molecules, and physics studies the structure of particles, atom and molecules, and the movement of materials, objects and celestial bodies. When these two are highly advanced and could turn into each other, we'd be able to break the mystery of material. With advanced biology, we could also break the mystery of life. After grasping the mysteries of plants, materials and the mutual generation and restriction, human beings would resolve all problems and cure all diseases, and could live forever and build an ideal society. There's no limit to science and technology, and it requires efforts to explore and break the mystery. The Heterodoxy is just a middle stage of astrophysics. People should constantly face new challenges, clarify and support new things so as not to be bound by superstition, admiration and conservative mind on the road for progress in science and

technology.

V. The great resistance to the propaganda and verification of Heterodoxy is superstition, admiration and conservative mind

Superstition, admiration and conservative mind come from incomprehension of nature and autocracy, which is the nature of animals. People have such property since we're evolved from anthropoid. Thus people have kept a long period of society featuring brutish nature and autocracy from the primitive society to slave society and feudal society. Although the geocentric theory and heliocentric theory generated by idealism don't influence national security and people's lives, they still influence our understanding to nature and the universe. Since the heliocentric theory shook the foundation of autocracy, Roman catholic church persecuted its supporters. Now we're in a democratic and legal society, yet the remaining superstition, admiration and conservative mind are still influencing our political reform and development of science and technology.

There're two sides for everything. Focus on only one side reflects idealism, which is inseparable to materialism and may turn into each other. Human society is like this. People think Mao Zedong had achieved a lot in establishing the country, and it's materialism to praise him and idealism to deify him. With the progress of science and technology and productivity, we've improved our ability to combat natural disasters and people's lives. However, our health is weakened and endangered by industrialization, which is the partial regression of society. So people's objective is to pursue advancement and prevent regression. Heliocentric theory, although more advanced than the geocentric theory, fails to reveal the truth about celestial movement. The law of universal gravitation and Cavendish's experiment only help to explain the supposition and speculation of Copernicus but fail to justify themselves. However, the people who benefit from the science field don't feel like deeply discussing celestial movement and are only content with the heliocentric theory and Cavendish's experiment, thus pushing the celestial mechanics and mechanics of objects on earth to idealism.

The obstacle I meet today in proposing my Heterodoxy is different from Copernicus's. He shook the autocracy of catholic church and was exposed to being killed together with his supporters. My obstacle is the superstition from astrophysicists to heliocentric theory and the law of universal gravitation during past 400 years. By throwing doubts on the universally recognized theories, my heterodoxy may be suppressed. Actually the birth of any irrational problem is related to incomplete social system. In the official circles of China, we only recognize diploma,

age and relationship to select intellectuals as officials, without any fair competition mechanism and thus difficult to select the best candidates. Corruption is unavoidable in official circles, and it's gradually spreading into all fields.

It's unreasonable for intellectuals to be awarded with diploma or qualifications without performance, innovation and achievement. It's like a doctor could be promoted to professor by teaching at university but not at middle school (provincial secretary could be upgraded to a superior department-level cadre but a county-level secretary could only be upgraded to a section-level cadre). Teaching is to inform previous knowledge to later generations, and it's of the same property if without any innovation or achievement. So why is the treatment so different? By only learning previous knowledge without improvement or innovation, one is only a craftsman or actor in all his life, instead of a scientist. A scientist shall have innovation and research results. The academic atmosphere turns bad since one is promoted and awarded with technical titles due to his educational background, qualifications and level. In the past I could write letters to scientific research institutes, verify in universities and colleges, and organize discussions with all related professors. Now it's different. Most scientific research institutes would not return letters, universities and colleges would turn down consultation, and some professor are not interested in new opinions and would only ask for money from the beginning. Isn't this corruption of academic atmosphere?

I've sent my book to over 20 units and people but only got 3 replies in recent two years. I guess there're four situations. First, professions are too specialized, and the receivers would usually be unlikely to look for professionals for identification. Second, some people not professional enough are enrolled in scientific research institutes by relationship, so they would shelve my Heterodoxy since they couldn't answer my questions. Third, some people are too obsessed with the heliocentric theory and the law of universal gravitation and would discard my heterodoxy. Fourth, some people would want to be talented themselves instead of becoming a good judge of talent, unaware of the fact that the former is cultivated by the latter.

Do you still remember that Bianhe was cut off his left foot by contributing uncut jade to King Li as well as his right foot by contributing it to King Wu, in which the uncut jade were both misunderstood as stone? When King Wen took stage, he found that Bianhe was crying under the foot of Mountain Chu for three days and nights consecutively. When asked about the reason, Bianhe said he was crying because the uncut jade was mistaken as stone, and he himself

was mistaken as a cheater. Finally it was found to be a precious stone and was named the jade of He family. Recently there're similar stories around the world in which the forefront scientific theories were mistaken as garbage. This is the general character in human beings.

Scientific research is not the patent of scientific research institutes, experts or professors. Those dare to explore and with abundant experience could still explore, find and make innovations. However, there's no national support for civil scientific research, which is a disadvantage in system. Since no unit would care about my book, I would just have to try my best. I'd send year documents to scientific research institutes and universities at my own expense, hoping to meet a good judge of talent. Also, I'd seek for national support and the right scientific research institute to answer my questions, thus raising national concern for civil scientific research. One doesn't live for himself; he should devote himself to his country and nation. I've spend over 40 years on my heterodoxy, yet now I'm still willing to achieve my pursuit at any cost, even if I'm suffering from high blood sugar, high blood pressure and coronary disease. I would only blame my own bad luck if it's not still clarified.

Some people may consider my diligence and struggle as lack of humility. Actually I think I'm only pursuing the truth of facts. Truth needs to undertake the challenge of different opinions, and science requires rigorous theoretical deduction and proof by experiments. I dare to express my individual theory and model experiment to society, so as to accept debate and criticism, and I believe this is humility. Space experiment is also possible if with national support. Since I'm challenging Copernicus, Kepler, Newton and Cavendish, experts shall not take their suppositions as truth and deny my Heterodoxy. Irrefutable model experiments are necessary to give better explanation of these facts. Their theories are the basic knowledge of astrophysics. Since Einstein was born 406 years later than Copernicus and 236 years later than Newton, contemporary astrophysicists should not explain heliocentric theory and the law of universal gravitation using his general relativity and special relativity. I think we need to explain things based on the theories of Copernicus and Newton, which is more fair and reasonable.

Human being and nature are not perfect. Two extreme are the reflection of idealism. The Chinese nation, although being a great nation, still has its weaknesses. If we only highlight advantages and neglect weaknesses, we'd influence national progress. Some people say the national humiliation was caused by foreign countries, and this is an evasion of major responsibilities. The uniform regime of the Western Jin Dynasty and Northern Song Dynasty was

overthrown by the minorities, and isn't this a shame of the Han nationality? When the soldiers of Qing Dynasty entered the capital and the bureaucrats and nobles gave up and exterminated the armed resistance of Han nationality, isn't this their shame? If the Qing government didn't seclude itself from the outside world and exercise corruption, would the foreign countries dare to invade China? After the Mukden Incident, when the number of the Hans as traitors was more than that of the Japanese troops, isn't this a shame on the Chinese nation? This proves that Chinese people don't have a strong sense of national spirit and patriotism, and many people only care about individual gains instead of the rise or fall of the country. Also, the ruling class compromised to external force exercised tyranny to suppress the people, thus generating hatred among the ruled and further resulting in national shame. If my Heterodoxy is suppressed in the scientific field of China, of foreigners take the first step in denying the heliocentric theory and the law of universal gravitation, it'll result in a national shame in the history of Chinese science, and would we still blame foreigners for that?

I've sent my book, paper and CD of model experiment to the Chinese Academy of Science and its subordinate scientific research institutes, and the astrophysics departments in China Association for Science, Nanjing University, Peking University, and Beijing Normal University, hoping to raise discussions of different opinions. In April, I'll also visit by myself to get support and project approval at my own expense; I can also pay anyone if he/she would like to cooperate with me.

Resume

Guo Xuannian, born in December 1948, in Liling, Hunan; member of the Communist Party of China, majored in irrigation and water conservancy (graduated from middle school), employed in Zhuzhou Water Conservancy Bureau (design institute) and has retired now. Started writing since 2003, and has published Collection of Folk Dancing, Collection of Folk Dancing II, Pimiento Poetry (coauthor), Collection of Poetry and Miscellany, political essays like Comments on Spring and Autumn Period, Comments on Spring and Autumn Period II, Comments on Aphorisms Past and Now, and an autobiography People Against Fate; has completed and newly published Record on the History the Communist Party of China (three volumes, totally 1.2 million characters), Design of New Hydraulic Gate and Implementation of Problems Jobs, and Heterodoxy on Geophysics and Celestial Movement. He also published 7 papers on domestic magazines and 3 technical papers on international magazines about water conservancy and hydropower, and has

won two city-level and provincial awards for scientific and technological achievements on water conservancy and hydropower.

His political essays not only express his patriotism for his country and its people, but also propose suggestions to the Party. He proposed to derate agricultural tax, merge small villages, keep the ticket price stable during Spring Festival, and colleges students go to the countryside to serve as cadres, which all came before the implementation of policies. His unique political opinions provided valuable references for our political reform. He also wrote several thousands of poems, some of which are of high value for academic research and have raised wide concern. This shows his deep observation and grasp of art in life, and also shows his achievements and dedication to society during 20th century, thus providing references to related departments and research areas and contributing to the prosperity and development of Chinese literature.

He was deprived of the right to go to college by the Cultural Revolution and Zhang Tiesheng who turned a white paper. However, he dared to fight against fate despite his exposure to criticism. He had been engaged in water conservancy and hydropower for over 30 years, has 7 scientific research results but only 2 are used in projects and recognized by water conservancy departments and the country. This is all due to the lack of economic foundation. Thus he started economic entity and wrote the unfulfilled scientific research projects into professional works for exercise and utilization by future generations, and also prepared hydraulic models for exhibition, aiming at never bringing his scientific and technological results in the tomb.

He proposed different opinions on part of the geophysics and celestial movements in 1967 but suspended his work due to the necessity to work for his survival. After retirement, he wrote the book Heterodoxy on Geophysics and Celestial Movement, publicly throwing down his challenge to Copernicus's heliocentric theory, the first law of Kepler and Newton's three laws on mechanics. He may meet obstacles from the whole country and the world, yet he'll never give up to authority and will persist until he finds the truth. Since this problem is difficult to be resolved in a short period of time, he published this book at his own expense to leave records for his country and avoid plagiarism by others.

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Note: since USB and CD could not be mailed outside China, those in need of the video of model experiment could tell me the email address.

2011 年 5 月 15 日 于株洲; 2013 年 4 月 15 日修正