Answer the question of “Where did the UFO come from?”

The Achievements of TAIWAN UFOLOGY SOCIETY

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“Where are they?” — is a question of most scientists and has not been answered till now; therefore, the existence of UFO is denied by some peoples. This question can be partly answered by the achievements of CHINESE UFOLOGY ASSOCIATION.

There are two topics for the answer which we concern the question: One is the evidences of the Chinese ancient official records, which are more than 1,000 UFO cases from Shiah dynasty (1914 B.C.) to Ching dynasty (A.D. 2183) about four thousand years. The other is “Where they come from”, which bases on the article of “Reconstruction the Earth Model and Discovery of the Interior Dark Matter”, which describes the triple spaces of the universe from a different view of the deep interior of the earth.

The evidences of UFO′s existence included the statement of a variety of shapes, abductions, star war records, etc. The ancient official records are the Annals of Astronomy from The Chinese Central Government and The Local Government, excluding any gossips, legends, fables, rumors and stories. Take 12 cases for examples as follows:

1. 1914 B.C., ten shining objects as the sun appeared together.
   夏帝厪八年「十日並出。」《古今圖書集成卷十九》。
2. 1790 B.C., two shining objects as the sun appeared together.
   商帝辛四十八年「二日並出。」《古今圖書集成卷十九》。
3. 74 B.C., a falling star was found so large as the moon, and many stars also flied with it toward west.
   漢昭帝元平元年，「有流星大如月，眾星皆隨西行。」《漢書·昭帝本紀》。
4. January (lunar calendar) 2, A.D. 314, in the morning, a UFO lighting up as the sun fell down below the horizon, and the other three UFO with the same condition also appeared in west and flied toward east one by one.

晉愍帝建興二年正月辛未，「辰時，日隕于地。又有三日，相承出於西方而東行。」《晉書・愍帝紀》。

5. January (lunar calendar) A.D. 814, a big star, looked like a semi desk, rose up in the sky, and sprayed the light on the ground, and a group of small stars followed it.
唐憲宗元和九年正月，「有大星如半席，自下而升，有光燭地，群小星隨之。」《新唐書・天文志》。

6. Intercalary May (lunar calendar) 12, 988, around two o´clock, a star as large as the semi lunar appeared at Pisces and flied toward north and then disappeared.
宋太宗端拱元年閏五月辛亥，「丑時，有星出奎，如半月，北行而沒。」《宋史・天文十》。

7. March (lunar calendar) 13, 1226, a little yellow nebulosity was Tran current from northeast to southwest as the rainbow, and there were more than ten white objects flied back and forth init, and two shining stars suddenly appeared then after a while disappeared.
金哀宗正大三年三月庚午，「有氣微黃，自東北一亙西南，其狀如虹，中有白物十餘，往來飛翔，又有光倏見如二星，移時方滅。」《金史・天文志》。

8. February (lunar calendar) 1275, there are two stars fought in the sky each other, and one of it fell down after a while.
宋恭宗德祐元年二月丁亥，「有星二，鬥於中天，頃之，一星墜。」《宋史・天文十三》。

9. November (lunar calendar) 1560, on one night, a star, looked like a glaive, was Tran current in the northwest, and its color was like blood, and it sounded as the burning fire and jetted out the gas like smoke.
明世宗嘉靖三十九年十一月，「有星如劍，橫亙西北，赤如血，聲如火，氣如煙。」《清乾隆・廣東潮州府志》。

10. In the autumn of 1602, on one night, a star as large as an egg shone the light on the ground and was followed by two small stars, and the other two stars, a big and a small, flied and shuttled with each other.

明神宗萬曆三十年秋，「夜有星如卵，光散照地，後隨小星二，復有大小二星飛行梭織。」《清乾隆・安徽銅陵縣志》。

11. October (lunar calendar) 1780, about 10 p.m., a objects appeared in the south as large as a cow and gradually became bigger as a mountain, and shone red light on the ground brightly as the daytime, and went out after two hours.
清高宗乾隆四十五年十月中，「二更，見天南方有物大如牛，漸如山，色紅燭地若晝，逾時滅。」《清朝・貴州遵義府志》。

12. July (lunar calendar) 1908, on one night, a burning star flied from north to south in the sky, and its shape was like as a disc, which shone as the electric light, and the light went out for a moment, and then it disappeared.
清德宗光緒三十四年七月，「夜，有火星飛行半空，來自北而南，其形如盤，光如電燈，一時光斂而沒。」《民國・河北棗強縣志》。

"UFO Cases in Chinese Official Record", written by Kai-chi Chang, has been published in 1991, but it has not been translated into foreign language yet. It includes 741 UFO cases (from 139 B.C. to A.D.1918). We now search the cases up to 1914 B.C. and get more than 1,000 UFO cases of Chinese official record. Each case has the definite time, location, object and statement in the records which all are confirmed. The word "star" in the records obviously must be taken for UFO. "*Reconstruction the Earth Model and Discovery of the Interior Dark Matter*", written in English by Hsien-Jung Ho, chairman of CHINESE UFOLOGY ASSOCIATION, has been published on an academic colloquium of UFOLOGY at Peking in December 1993 and are awarded a superior prize. Based on the recommendations of several geophysicists for density jump from 5.57 g/cm^3 to 9.90 g/cm^3 and a confirmed topography in excess of10 km height at the core-mantle boundary, a reconstructed new earth model has been developed. According to this model, between the lower mantle and the outer core the chemical compositions is similar, and the density distributions are continuous. The result of the study has been inferred that between the lowermost mantle and the upper core, the chemical compositions are similar, and the density distributions are continuous, and the solid rock and the liquid molten

rock or magma change states interactively at the core-mantle boundary. Some elements and the components undergo oxidation-reduction reactions each other and separate due to the effects of gravity in the F transition zone of the outer core. The great amount of heat, produced from the chemical reaction in the F zone and the solidification at the inner-outer core boundary, causes the main power sources for the geodynamo of a large convection cell, circulating up to the crust and down to the F zone. Under these conditions, many inexplicable problems of the earth´s deep interior, such as the density jump at the CMB, the core-mantle chemical equilibrium, the thermodynamic equilibrium of the inner and outer core and the geomagnetic secular variation, may roughly be solved. After the calculation of the new earth model, the mass of the earth is found to be 5121.82×10^{24} g and the moment of inertia is 76126.841×10^{40} g.cm^2, only 85.73 % and 94.82 % of the current data respectively.

The insufficiencies of the earth´s mass and the moment of inertia, called the missing mass and moment of inertia, which are relative to the gravity and belongs to the dark matter, can only be obtained by comparing the observation data, but cannot be detected directly. To solve the problems, the new conceptions of dark matter and Superstring theory are introduced.

When a star at the outside edge of a galaxy orbiting at high speed, the mass of the whole galaxy, whose gravity keeps the star from escaping, can be estimated from the mass of the star and its speed of rotation. But the mass of the galaxy also can be estimated by observing the whole galaxy with the astronomical telescope. The former is only less than 10 % of the latter. The phenomenon appears through out the universe. Therefore, the unobservable matter, amounted to more than 90 % mass of all the universe, is called the dark matter, which can only be detected by its gravitational influence on visible matter. Almost all astronomers agree with the existence of dark matter; however, after more than twenty years search, they have not found any evidence of it. So, the dark matter, the densest matter in the universe, is the major problem, which still has no answer.

In order to search for the location of the dark planet in the universe, the most advanced physical theory —— “Superstring theory”, is introduced to solve the problem. Superstring theory is deduced from the characteristics of String theory and Supersymmetry. Crudely speaking, it can unify the four basic interacting forces of nature and various elementary particles of the universe. This theory, a candidate for “theory of everything”, is based on the universe constitution of nine-dimensional space and one-dimensional time, called ten-dimensional theory, and has Supersymmetry of $E_8 \otimes E_8$. However, Superstring theory is now not established as well as the Relativity theory. Although many mathematicians and physicists have attempted to break the constitution of ten-dimensional space-time model down to a four-dimensional one as our known world, no proposed method meets perfection.

The physicists of CERN announced the first experimental evidence for Supersymmetry in 1991. Supersymmetry is one of the most elegant of all symmetries. According to Supersymmetry, every dimension of nine-dimensional space must have the property of all symmetry with equivalent mathematical weight, so every dimension is symmetric. Since the universe was formed from the “Big Bang”,ten-dimensional space-time of the universe is unnecessarily broken down into a four-dimensional one.

Without breaking down the ten-dimensional model, the universe may be considered be universally existing in all space-time. According to the “causality”, time cannot be divided into some different parts, so one-dimensional time is taken as a common standard in order of event in the universe. According to the “anthropic principle”, three-dimensional space and one-dimensional time are taken as one cosmos as our living world; therefore, the nine-dimensional space can be divided in-to three portions, and each portion has a common standard time, which are considered as three cosmoses in the universe. In other words, the framework of the universe, containing nine-dimensional space and one-dimensional time, will be established as “the three-cosmic structure”, or called “triple spaces”. The dark planet can be situated in the other spaces than ours. The three-cosmic structure of the universe cannot be observed directly,

but that can be recognized from the “missing neutrinos of the sun” and some astrophysical phenomenon.

According to Superstring theory, the $E_8 \otimes E_8$ Supersymmetrical structure has characteristics in which each E_8 represents a single symmetrical group. One E_8 describes a world of general matter and the other E_8 describes a world of shadow matter, which also belongs to the dark matter. Between the both world of E_8, there is no basic interactive forces except gravity. In other words, between any two different cosmoses in the three-cosmic structure of the universe no basic interactive forces affect each other except gravity. So, the theoretic graviton in the field of gravity can penetrate all the triple spaces; however, photon cannot penetrate through the other spaces than ours.

The graviton has the physical characteristics: rest mass 0, charge0, spin 2, light speed and carrying a very small amount of energy. The neutrino, a kind of lepton, has the physical characteristics: rest mass 0, charge 0, spin 1/2, light speed and also carrying a very small amount of energy but a little more than the graviton, so it have been captured. The neutrino has the same characteristics of high penetrability that can penetrate lead through a span of 3500 light years. The neutrino belongs to fermion, and the graviton is a gauge boson. Supersymmetric theory can unite bosons and fermions into a single multiplet and describes both as the same kind of particle. So, the physical characteristics of neutrino and graviton are similar to each other.

Less than 2 % of the sun´s energy is emitted in the form of neutrinos. In a South Dakota gold mine, an enormous tank of cleaning fluid placed deep underground has captured about a dozen of solar neutrinos a month, which only about one-third the amount of it as the astrophysical theory predicts and about two-thirds of it disappears. This “solar-neutrino problem” has been a big mystery at the astro-particle frontier for the past three decades. Since the graviton can penetrate all the triple spaces as the physical theory describes, the neutrino may be compared to the graviton, and the neutrinos of the sun may uniformly emit into all the triple spaces. The neutrinos reach the space of our world only about

one-third of its original amount and the other two-thirds of it may emit into the other spaces than ours; therefore, the solar-neutrino problem may be solved.

The dark matter, more than 90 % of the universe´s mass, may be located in the other spaces than ours. According to the phenomena of a three-cosmic structure of the universe, the insufficiencies of the earth´s mass and the moment of inertia are taken for that of a dark planet inside the earth. Finally a dark planet has been figured out, which has a radius of 3700.375 km and a mass of 852.38×10^{24}g.

From the new conception, some great problems in geophysics also have been roughly solved, such as: the density jump and the chemical equilibrium at the core-mantle boundary, the convection cell, the composition of outer core and the Chandler wobble.

The hypothesis of the triple spaces of the universe may be confirmed by some phenomena of the universe. There are three cases maybe to confirm it in astrophysics as follows:

１. Cygnus X-１ is a hot super giant star orbited by an invisible compact object in a period of 5.6 days. The mass of the compact object can be estimated to be about 9 times of the sun. This is considerably more than the maximum mass of a neutron star. So, the compact object is not a neutron star or a white dwarf star. Since it has problems of optical confirmation, it is believed that the compact object may not be a black hole (Nowadays it is considered a black hole candidate, but that is not conclusive). So, the compact object of Cygnus X-１ may be a dark matter in the other spaces than ours and its gravity affects Cygnus X-１.

２. When Halley´s Comet reaches the sun, the true day always precedes or lags behind the estimated day for four days. Using a computer to treat the data of it in a numerical model of the solar system, a tenth planet X was found about three times the size of Saturn in 1972. Another search for a planet X, which has about three times the mass of the earth and a highly inclined eccentric orbit, that accounted for all of the perturbations on the motions of Neptune in 1981. A American astronomer presented the deviation of Neptune and Uranus in the regular orbit and proposed “The Theory of the X Planet” from observed astronomical data

of the nineteen century in 1987. The mass of the X planet is about five times of the earth and its period is about 700～1000 years. The orbit is elliptical and the inclination from the orbit to ecliptic is very large and almost perpendicular. Now the planet X has been searched for, but it still remains to be found. So, the dark planet X may orbit a-round the sun in other spaces than ours, and sometimes its gravity will affect the motion of Halley´s Comet, Neptune and Uranus.

３. According to the data from the satellite of Japan Hichougo, there are many sources of γ ray burst nearly all over the universe. But at the direction of each and every γ ray burst, the telescope does not find any object of star. The γ ray burst which has very high energy (more than 100,000 EV) may penetrate into any spaces of the three-cosmic universe, so the sources of γ ray burst maybe burst from dark matter in the other spaces than ours.

UFO sometimes appears or disappears in the sky as a suddenly happening event. Now the scientists cannot propose an acceptable reliable theory of UFO in the field of science, which can confirm its existence. If we separated the limit of the known science of cosmos to consider the new conception of the three-cosmic structure of the universe, the mass of dark matter in the other cosmoses is about ten times of ours. Some dark planets in the other spaces than ours may be near or within the solar system such as the tenth planet X. The Extraterrestrials live on some of the dark planets. Sometimes they can fly UFO to penetrate into our space and arrive on the earth. If we explain E.T. and UFO in this way, “Where they come from” may be opened, and the question of “Where did the UFO come from?” may be solved.