The Sun is not Shine as We Thought It to
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Abstract
According to modern cosmolcogic evolution theory and our current unified field theory, the vast hydrogen component and the shining mechanism of the Sun is questioned. A new neutron formation (by gravitational collapse) mechanism is proposed for explaining the energy source of the sunshine. Regard the Sun to be as normal as the Earth however a massive, and the nuclear fusion to be the secondary reaction in the photosphere that makes the Sun brighter. The abundant hydrogen in photosphere is because of the lack of oxygen by gravitational collapse in the core.

Keywords
Gravitational collapse; Nuclear reaction; Stephen Hawking; The Sun.

INTRODUCTION
The Sun is the most dependent surrounding celestial body to us. Its correct recognition is no doubt necessary. In ancient culture, the Sun was regarded as the Solar Deity. By formulated in 1513, Poland astronomer Copernicus bravely denied the long ruled geocentrism raised by Ptolemy (second Century A. D.) and insisted on and verified the early Aristarchus’ (in third century B. C.) heliocentrism. However, the correct recognition was not identified worldwide until 1609 Galileo’s evidence through astronomical telescope and Kepler’s further evidence of natural elliptical orbital motion. Entering the Newton’s Era (round 1680s), some of the solar mass, radius and distance were roughly known. Based on the development of thermodynamics during mid-eighteenth to mid-nineteenth Century, Slovenian physicist Josef Stefan in 1879 and later Austrian physicist Ludwig Boltzmann in 1884 independently discovered their thermal radiation law and accordingly calculated the temperature of solar photosphere as 5772 K, and corona as 5 × 10⁷ K. Component is always the most key problem in solar characters. It was Swedish physicist Ångström who prior in 1861 discovered the solar hydrogen spectrum, and then 1868 English physicist Joseph Norman Lockyer the helium spectrum. The vastly abundant hydrogen and helium component of the sun was first confirmed by British-American astronomer Cecilia Payne-Gaposchkin by her careful photosphere spectral analysis and the application of ionization theory in 1925, and she guessed that the hydrogen is the most overwhelming constituent of all stars in the Universe; the accurate solar component was determined by NASA in 1979, as hydrogen 73.46%, helium 24.85%, nitrogen 0.09%, oxygen 0.77%, carbon 0.29%, iron 0.16%, neon 0.12%, silicon 0.07%, magnesium 0.05% and sulfur 0.04%.

Since the two main components, English astronomer Arthur Eddington got an opinion, and did his greatest work in 1920. He (and follower Subrahmanyan Chandrasekhar and Hans Bethe gave the details 5 years later) proposed that it is the nuclear fusion reaction in the core that merges hydrogen into helium, and results in a production of energy release, causing the sunshine in the photosphere. And also in 1926, Eddington modelled the temperature of the core to be as high as 1.57 × 10⁹ K. In this way, it was regarded that the source of sunshine was a process that hydrogen burning into helium ash in the core, and hence accordingly was predicted the solar age and life while hydrogen fuel is exhausted, and also the Sun is now roughly in its halfway. These conclusions were confirmed by scientific community and were written in almost all related textbooks worldwide as a truth.

Since Eddington’s opinion (1920), nearly a Century of time has passed. The cosmic evolution theories (according to Einstein’s General Relativity) such as Black Holes; Big Bang and singularity have improved nearly perfect by 1970s owing to the contributors (after the astronomical pioneer John Michell’s in 1784) named as Karl Schwarzschild, David Finkelstein, Robert Oppenheimer, Ann Ewing and contemporary outstanding cosmologist Stephen Hawking. On the other hand, new progresses have been made in close related basic theories such as unified field theory and elementary particle theory. Judging from the circumstances now, it’s time to re-examine our the most dependent Sun. Now it seems that the Sun is not shine as we thought it to.

QUESTION THE TRADITIONAL THOUGHT
First of all, the recognition of hydrogen to be the main component of the Sun is lack of evidence. The spectrum from the photosphere only shows the component of solar atmosphere. Prolonging the component to the whole Sun was the theoretical needs of energy source, as it was said that be the hydrogen burning into helium ash, the nuclear fusion reaction processes in its core that causing the sunshine. However in fact that, the energy release mechanism has its deeper reason. Second, according to present theory of cosmic evolution, every celestial body is formed by the accumulation or absorption of its surrounding matter pieces, dusts or particles in the universe which come from the big bang. So, to the cosmoses in the same or nearby stellar system, their component would be approximately the same with the Earth. So, where the vast hydrogen component comes from in the Sun? We can’t say that the Sun only accumulates hydrogen molecules in universe, and also can’t arbitrarily that the hydrogen come originally from the big bang. Third, it has long been misunderstood that every four hydrogen atom can form a helium atom in nuclear fusion reactions without additional neutrons taking part in, because the number of elementary particles is unchangeable in type of nuclear reaction
process. Fourth, how to connect the celestial bodies such as planet, shining star, pulsar and black hole from perspective of cosmic evolution, we can’t arbitrarily say they are lonely.

REASONING
As is well known that in physical change process, the amount and type of molecules are unchangeable; in chemical reaction process, the amount and type of atoms are unchangeable; so in nuclear reaction process, the amount and type of elementary particles ought to be in law unchangeable. Now, the authors propose a new type of reaction, the elementary particle reaction; in this type of reaction process, the amount and type of elementary particles is changeable, however the charge is conserved only.

According to present cosmological view and our unified field theory [1-3] and other related literatures [4, 5], we think the Sun may be as follows:
Like the Earth and other planets, the Sun is a normal celestial body. It is formed by accumulating its surrounding normal matter sources, and has the same composition with the Earth from the beginning. Its big mass is owing to the rich matter sources in its surrounding space, and it has more opportunities to grow bigger. With the continually growth, the pressure of solar centre increased accordingly. When the pressure exceeds a critical value, the gravitational collapse process takes place. The gravitational collapse process is just a new type of elementary particle reaction process as stated above.
Where, an electron is compressed to contain a proton, creating an additional neutron in an atom [3]. In other words, as an electron is forced to combine with a proton, a new neutron is created in atomic nuclear.
The gravitational collapse or electron and proton combination is the reverse process of β decay [4]. The difference is the form and size of gravitational energy. As the existence of energy barrier (the distortion force [3]), the gravitational energy needed is 0.4906 MeV (0.2453 × 2; if it was a thermal radiated black body, the corresponding temperature would be as high as 3.795 × 10^9 K); adding the present charge separated potential energy of 0.5339 MeV [4], the total entering energy is 1.0245 MeV. Therein energy of 0.7792 MeV will be fixed into partial mass of neutron [3, 4]; left behind the energy of 0.2453 MeV [4] being released in form of radiation, this becomes the energy source of sunshine and changes the solar elementary component.

CONCLUSION
As the energy (0.2453 MeV) of the radiated particle (like neutrinos) is so high, it can’t be absorbed in the core until it achieved the melt lithosphere and photosphere. So, to the Sun, its core is cold and solid, its lithosphere is hot and melt and its outer photosphere is bright and gaseous.
Because the heavy atom is more easily compressed (gravitational collapse) than the light [5], so the heavy atoms would be first compressed and converted into next light one. As the Sun is shining in its middle age, the heavy atoms today have been exhausted, till nitrogen condition, causing the lack of oxygen in lithosphere and the reduction of water (by chemical reaction), leaving the hydrogen atoms behind in photosphere. In the core zone, the light element’s isotopes are rich; even heavy super isotopes atoms are existed. The excess neutrons can be transported to photosphere through both melted lithosphere and the decay products of hydrogen. The introduction of neutron in photosphere can easily produce tritium atom. Then the tritium reacts with abundant protium, resulted in quite some of energy release and the helium ash in the photosphere under the condition of high energy particle radiation from the core. Otherwise, the nuclear reaction wouldn’t take place in low temperature of 5772 K. This secondary nuclear reactions cause the photosphere brighter.

INFERENCES
The gravitational collapse and other related reactions in the Sun are near their equilibrium state. The sustained sunshine needs to swallow the surrounding matter fuels continuously. The corona is just the case taking place on the surface of the photosphere when big space debris is swallowed by the Sun like the shooting star on the Earth. The solar brightness depends on the degree of supersaturation of gravitational pressure. The faster the weight increases, the brighter it will be. Generally, the heavy star would be brighter than the light one. As for the sunspots (with dark appearance), it may be the accumulated hydrogen by neutron decay from unsubstantial fracture zones of the solid core that erupting into sky with cool temperature than surrounding photosphere. As usual, the triboelectrification is sure to be produced when two different materials are in contact or friction, and as a result the erupting movement with static charge will produce the radiation of electromagnetic wave. Furthermore, sunspots play an important part in transporting hydrogen into photosphere for holding the hydrogen polynucleation.
The life of sunshine depends on the supply of matter fuels from surroundings (such as comets). If it was in hunger for a long time, the sunlight would go out. In this way, the mass of the Sun can only increase and will never decrease. The age of the sun can be deduced from the number of helium. And also, according to above mass mechanism, every planet including our Earth will be illuminated one day if it has sufficient time and sufficient matter surroundings.

REFERENCES