

Complex Space-Time – An Unified Platform to Explain Dark Matter, Dark Energy,  
Consciousness and Paranormal Phenomena

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Abstract

In the year of 2012 the Nobel physics prize was awarded to three physicists, S. Perlmutter, B. P. Schmidt and A. G. Riess, for their contribution to the discovery of accelerating expansion of universe[1]. This indicates the existence of dark energy which was attributed to the cosmological constant in the general relativity originated from vacuum energy. The dark energy amounts to 73% of the total energy in the universe and has the characteristic of repulsion force. In addition, cosmologists have already discovered the dark matter since 1970's by measuring the rotation speed of the arms of the distant spiral galaxies. The dark matter amounts to 23% of the total energy of the universe. The normal material world only amounts to 4% of the total energy of the universe. This indicates that we are far from the understanding of the large scale real universe.

In the nano-scale quantum world the quantum entanglement phenomenon has already been discovered. Two entangled quanta are in a superposition state, no matter how far they are separated, as long as one quantum is measured by an instrument, the entire system collapses to a definite state. The information communication speed between two quanta exceeds the speed of light which violates the special relativity that light speed is the upper limit of all velocity.

Since 1990 we have repeated the research results of Mainland China [2-8] done from 1979 on the training of children to develop finger reading and psychokinesis capability. After repeated test of tens of youngsters aged from 9 to 17 years old, it was proved that by just touching a piece of folded paper with fingers, they could "see" the color and shape of the characters and figures drawn on the paper. The emerging sequence of the characters and figures in their brain appears to be parts by parts or as a whole on a screen emerging in their brain (the third eye). After mastering the finger reading skill part of the children can be trained to develop psychokinesis, they can bend the iron wire by mind. I believe the emergence of finger reading and psychokinesis ability is a macroscopic mind-matter unification phenomenon. Surprisingly, when certain special keywords related to Buddhism, Taoism, Confucianism and Christianity such as 「佛」(Buddha), 「菩薩」(Bodhisattva), 「唵

嘛呢叭咪吽」(Xon Ma Ni Bei May Hon :six word mantra 「耶穌」(Jesus) 「孔子」「老子」 or symbols as 「☯」, Taichi picture, were tested then these youngsters saw the bright light, bright and smiling human image, temple, monk, bright cross gate, shadow of human or hear the sound of laughing, unknown Tibetan and Hebrew terminology related to sacred persons, etc. These responses are completely different from what we have observed previously in over 1000 tests. According to the experience of those people possessing extraordinary human ability who received information from their inner screen in the brain (the third eye), it is believed that in addition to our four dimensional space-time material world and the known four fundamental force fields there exists an extra space-time 「information field」 which contains high level consciousness without material body and information websites. These discoveries have been confirmed by Yunnan University. These medium sized paranormal human abilities are bewildering.

In order to explain these large, medium and nano-scale bewildering phenomena, I propose in this paper that the real universe consists of an 8 dimensional (8D) space-time, in addition to our well known 4D real space-time (陽 Yang), there exists another 4D imaginary space-time (information field or 陰 Yin) full of consciousness and information websites as shown in Fig. 1. Although the relationship between the real and imaginary space-time is intimate, all belong to the real and imaginary parts of the same complex space-time. However, there exist barriers between the real and imaginary space-time that cannot be overcome at will. They can exchange energy only through enormous special connection points which are the vortex like space-time structure with different size. It is believed that these vortex structures look like the fish eye structure of 3D Taichi picture as shown in Fig. 2. The white and black halves represent the real and imaginary space-time, respectively. They are connected by enormous fish eye tunnels. The tunnels have vortex structure as shown in Fig.3. Unless the size of the material is much smaller than the aperture size of the vortex tunnels or the material enters into a quantum state, the barrier between the real and imaginary space-time cannot be penetrated. The ordinary materials exist in the real space-time, their position and equation of motion are characterized by 4 coordinates (x,y,z,t). When the material such as fundamental particles, photons and objects enter into microscopic or macroscopic quantum states which are described by complex quantum field or material wave, then the material wave or quantum field is able to leak through the vortex tunnel and enter into the imaginary space-time. The material wave propagates with a phase velocity U. The product of U and real space-time group velocity u satisfies  $U u = C^2$ , where C is the light velocity, when the real space-time velocity of the material  $u = C$ , the imaginary space-time phase velocity of the material wave  $U \geq C$ . This leads to a quick spread of the material

wave or quantum field to a vast space-time and reaching to the past and future. This is the basic physical mechanism responsible for paranormal phenomena. The most important event that happens when the material enters into imaginary space-time is the arousal of the consciousness of the material. Everything has a soul. The imaginary  $i$  of complex wavefunction or quantum field bring consciousness into the physical law.

When two strongly correlated quanta are created and fly apart, the complex nature of the system enables them to enter into the imaginary space-time with superposition of all possible states. Once one of the quanta is measured by an instrument in real space, the whole quantum state is collapsed and leak back through the vortex channel to real space-time and showing the quantum entanglement.

I propose that the imaginary part of a material entering into the complex quantum state, pure consciousness and the information websites belongs to dark matter, resulting in concave space-time structure possessing the characteristic of attracting force. The dark energy is believed to originate from vacuum energy described as the cosmological constant in general relativity. I propose that the convex spiral space-time structure (vortex) may possess repulsive force characteristic and is a candidate for dark energy. The real and imaginary space-time are schematically described by the Yin-Yang (陰陽) of the 3D Taichi picture. They exchange energy through their fish eyes (vortex space-time structure). There are enormous amount of vortex tunnels in the complex space-time, the energy they possess belong to the dark energy. The nano-sized vortex space-time structure is proposed to be the elementary particle spin, they have only two states: spin-up and spin-down. One spirals from Yang to Yin and the other spirals from Yin to Yang. This explains why any quantum state can only allow two electrons with opposite spin, because this forms a stable 3D Taichi space-time structure. This also explains the physical mechanism of Pauli exclusion principle that two electrons with same spins cannot occupy the same spatial orbitals because it creates an unstable space-time structure.

I propose that the astronomical fish eye tunnel is revealed by the cosmic microwave background recently announced in the official website of European space agency. The picture shows the energy distribution in the early universe (380,000years) after Big Bang. Two Cosmic Microwave Background anomalous features are confirmed as shown in Fig.4. One is an asymmetry in the average temperatures on opposite hemispheres of the sky with slightly higher average temperatures in the southern ecliptic hemisphere. There is also a cold spot that extends over a patch of sky. I propose that this cold spot is the remaining fish eye structure of Big Bang birth of the real space-time from imaginary space-time. It is

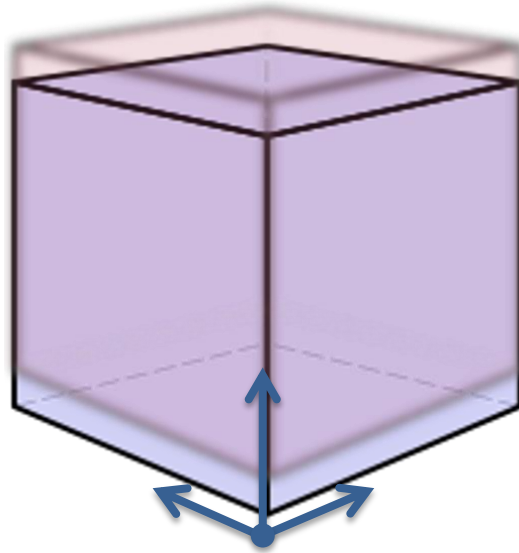
colder than the neighboring region after Big Bang. The southern hemisphere is closer to the ejection opening (cold spot) from imaginary space-time and the temperature is slightly higher than that of the northern hemisphere.

In conclusion, the real universe consists of 8D complex space-time, the existence of 4D imaginary space-time provide an unified platform to explain the nano-scale quantum entanglement ,large-scale dark matter, dark energy, and medium-scale paranormal phenomena. The most important consequence is that the imaginary i brings the consciousness into the physical law and illustrate the true nature of the mind and consciousness.

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Imaginary (Information)



Real

Fig.1 Complex space-time

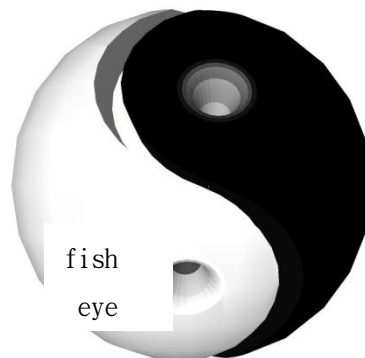


Fig.2 3D Taichi picture showing how the real and imaginary

space-time are connected through fish eye structures.

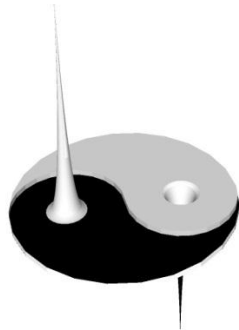


Fig. 3 Vortex space-time structure in the fish-eye.

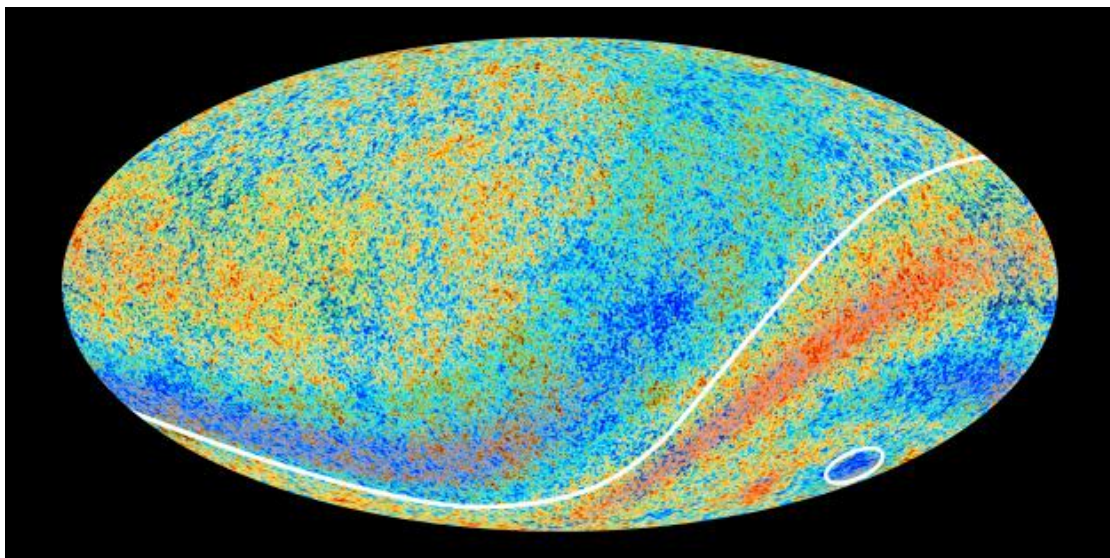


Fig. 4 Cosmic microwave background 380,000 years after Big Bang measured by Planck satellite of European Space Agency.  
download from  
<http://sci.esa.int/planck/51551-simple-but-challenging-the-universe-according-to-planck/>