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Philosophy International Journal
ISSN: 2641-9130

Super Science

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Conceptual Article

Volume 9 Issue 1

Received Date: February 11, 2026

Published Date: February 23, 2026

DOI: 10.23880/phij-16000359

Abstract

Natural scattering is visible by light with positive frequency. No natural scattering is invisible by light with positive frequency. Visible natural sciences and invisible social and ideological sciences are called ordinary sciences. Invisible natural sciences and visible social and ideological sciences are novel super sciences. Ordinary natural science is visible and scattering natural science, and it is a science with nature scattering experiments. Difference from ordinary natural science, the super natural science is invisible and is a natural science without natural scattering. All physical experiments today are natural scattering experiments, so all natural scattering physics experiments cannot be applied to super natural science. No nature scattering forward and inversion algorithm theory and calculation are methods for studying super natural science. Ordinary social ideological science is invisible, and nature scattering experimental methods cannot be used to study ordinary social ideological science. Social thought humanities by social scattering are research historical and realistic methods of general social thought science. The natural scattering experimental method can be applied to the study of super social ideological science. Real lie detection is about studying the science of super social ideological using practical methods of nature scattering. Social scattering is invisible. Social ideological science without social scattering will be studied in next paper. After more than 20 years of creation and hard work, first in the world, Li Jianhua and Xie Ganquan's team first discovered and invented GLLH and GLHUA electromagnetic invisible cloak with light relative refractive index > 1 and without exceeding light speed propagation violation and without time delay that can achieve complete invisibility cloaks. First in the world, Li and Xie'team discovered and proposed Positive Space and Negative Space and Invisible Science. These are invisible super natural science. The mind robot hand invented by EASTON LaChappelle and AI by Ellon Musk are visible ideological science. Both mark super science borning. We have read and Agree the Copyright Transfer Agreement for preprint publication. The full patent and copyright belong to the author of this paper, people who using this paper have to cite this paper.

Keywords: Super science; Natural scattering; Invisible natural science; Invisible science; Social ideological science

Introduction

On the evening of March 6, 2016, the School of Earth Sciences of Central South University held a lecture titled "Demon Professor Speaking on Inverse Calculation, Super Science and the Invisible World", https://news.csu.edu.cn/info/1004/126458.htm, Lectured by Professor Xie Ganquan. Professors Li Jianhua and Ganquan Xie proposed "super science" first in the world. Natural scattering is visible by light with positive frequency; no natural scattering is invisible by light with positive frequency. Visible natural sciences and invisible social and ideological sciences are called ordinary

sciences. Invisible natural sciences and visible social and ideological sciences are novel super sciences. Ordinary natural science is visible and scattering natural science, and it is a science with scattering experiments. Difference from ordinary natural science, the super natural science is invisible and is a natural science without natural scattering. All physical experiments today are scattering experiments, so all natural scattering physics experiments cannot be applied to super natural science. Scattering free forward and inversion algorithm theory and calculation are methods for studying super natural science. Ordinary social ideological science is invisible, and natural scattering experimental methods cannot be used to study ordinary social ideological science. Social thought humanities by social scattering are research historical and realistic methods of general social thought science. The scattering experimental method can be applied to the study of super social ideological science. Real lie detection is about studying the science of super social ideological using practical methods of scattering. After more than 25 years of creation and hard work, first in the world, Li Jianhua and Xie Ganquan's team first discovered and invented GLLH and GLHUA electromagnetic invisible cloak with light refractive index > 1 and without exceeding light speed propagation violation and without time delay that can achieve complete invisibility cloaks [1-3] (Figure 1-2). Pendry cloak [4,5] has infinite speed violation and has superluminal fundamental problems which were criticized by ULF in Loenhardt U [6] and Perzel J [7]. Ulf admitted his cloak [6] has time delay. First in the world Li and Xie'team discovered and proposed Positive Space and Negative Space and Invisible Science. These are invisible super natural science. The mind robot hand invented by EASTON LaChappelle is a visible ideological science. Both mark super science borning. On January 15, 2017, the Hunan Provincial Super Science Computational Society was founded by Li Jianhua and Xie Ganquan. This is the first-level society in Hunan Province.

https://news.csu.edu.cn/info/1004/126458.htm.

The arrangement of this paper is as follows: The introduction is described in section 1. The combining natural science and social and ideological scientific research has always been in super sciences that is presented in section 2. In section 3, we describe that double layer cloak phenomenon has been discovered by GILD in 2001. In section 4, we propose Goldbach conjecture is non scattering inversion. In section 5, We describe Novel GLLH and GLHUA EM Cloak with Front Branching and without Exceed Light Speed Violation and without time delay. In section 6, we presented that the novel Positive Space and Negative Space is proposed and discovered. Magnetic Plane Wave Propagation Through GLHUA Sphere and FLHUA Sphere is described in section 7. Conclusion is described in section 8.

Combining Natural Science and Social and Ideological Scientific Research in Super Sciences

Combining natural science and social and ideological scientific research has always been in our research which is the main origin of super science. In 1972, we were the first to develop the three-dimensional finite element method and application software in China. In 1973, we were the first to discover super-convergence of three-dimensional finite elements in the world [8], winning the China Science Congress Award and being highly praised by Professor Feng Kang. In 1985, we discovered "Bad thing of the forward problem becomes too good thing for inverse problem" and created novel successful inversions of the coefficient of wave equation [9]. The inversion theory and calculation method have been praised as the demon method by the world's authoritative scientist P. LAX, praising us as proficient in physics, mathematics and numerical methods, as a demon and a fanatical scientist in solving difficulties. Our natural scientific researches are related and studied from Chairman Mao's forward and inverse social ideological sciences.

In 1986, on June 5 the front page of Hunan Daily published the article "Returning to motherland that is for great develop". It was reported that Xie Ganquan obtained a doctorate and completed postdoctoral research in the United States, resigned from his job in the United States, and returned to China after completing his studies to conduct research on forward and inversion algorithms. At that time, the central government proposed "Reform and opening up", but how to reform and open up is still being explored. Guangdong opened up first, and Hunan followed. We proposed "the policy boundaries" and one country two systems,

"Global socialism and Local part capitalism ", supplely, "Global (integral) socialism and Local capitalism." Regarding the policy boundaries, Mr. Chen Bangzhu, Secretary and Governor of Hunan Province, expressed great interest. He specifically approved the Hunan Computational Mathematics Applied Software Society, which was launched by Jianhua Li and Ganquan Xie in 1987. Xie Ganquan was the first chairman. This is the only first-level provincial society in China that includes computational mathematics and Applied software. Computing mathematical societies in other provinces are second-level branches on that province. In 1987 in the world there was no Applied software concept except our "APPLIED SOFTWARE". In 1987 time, only system software for computer. First in the world, we proposed the applied software for customers. Our "APPLIED SOFTWARE" is origin of the APP of all cloud media device now. This social idea of policy boundaries was transformed to the magnetic field integra-differential equations published the

1995 International Conference on Three-Dimensional Electromagnetics in Schlumberger and book "three-dimensional electromagnetics". The book author Professor Michael Oristaglio praised it as a breakthrough in three-dimensional electromagnetic inversion in two decades.

Secretary Xi Zhongxun, the central leader in charge of Guangdong Province, and Minister Tong Ying, Minister of United of Hunan Province, support our reform idea of "one country, two systems for global (integral) socialism and local capitalism". Secretary Xi suggested us to chang to "a global (integral) socialist local market capital economy." In 1993, Chairman Deng Xiaoping visited Shenzhen and delivered his famous southern tour speech on "socialist market economy." Deng removed the "global" and "local" from "global (integral) socialism and local market capital economy". From 1993 to 1995, Xie and Li used the "topological correspondence principle" to transform the "global (integral) socialist local market capital economy" and developed the "global integral and local differential electromagnetic forward modelling and nonlinear inversion algorithm method", that is, the EM seismic, acoustic GILD forward modelling and nonlinear inversion method [10-15]. We emphasize that the "global" and the "local" are indispensable in GILD. PIERS founder Chairman Kong Jinau interesting agrees and support to combine natural science with social and ideological science for research. GILD global integral and local differential electromagnetic mechanics algorithm is a very effective forward and nonlinear inversion method. GILD and its developments AGILD is widely and effectively used.

OUR GLOBLE and LOCAL GL applied software is origin of the cloud algorithm Up to now, the Green Artificial Intelligence AI data transform machine in the GL applied software isPatented by authors.

Double Layer Cloak Phenomenon has been Discovered by GILD In 2001

Double layer cloak phenomenon has been discovered by GILD in 2001. In November of 2001, Under Professor Ernest L. Major leading, we running GILD modelling and nonlinear inversion [11,14] to prevent another 9/11 terrorist attack. We discovered a novel double Layer cloak phenomenon see Figure 3 and Figure 4 in Xie G, et al. [3] that can be used to develop invisible cloak and anti-atomic bombs nuclear weapon. DOE and LBNL ESD director Professor Ernest L. Major very seriously value and support this discovery and develop research of the anti-atomic bombs nuclear weapon. The figure 3 and figure 4 in Xie G, et al. [3] show the double layer cloak. The report paper of the double layer cloak phenomenon "2.5-dimensional GILD electromagnetic modelling and application," by Jianhua Li et al. [10].

Goldbach Conjecture and GLLH and GLHUA Invisible Cloak are Non-Scattering Inversion

The sum of two prime numbers being even is the direct problem, a problem that even a middle school student could prove. The inverse problem, expressing an even number as the sum of two prime numbers, is an extremely difficult inverse problem—Goldbach's Conjecture, which has remained unsolved for 283 years. Goldbach's Conjecture is an extremely difficult inverse problem.

In 1640, Newton and his predecessors created modern natural science; Goldbach was not yet born, nor did he formulate Goldbach's conjecture. Newton's successful introduction of modern science predates Goldbach's conjecture by a century. Goldbach proposed his conjecture in 1742, but it did not hinder subsequent scientific discoveries and developments. In the 1860s, the discovery and establishment of acoustics, elasticity, electromagnetism, Maxwell's equations, and statistical mechanics were unaffected by Goldbach's conjecture. Furthermore, in 1905 and later, Einstein's formulation of relativity and Heisenberg and Schrödinger's establishment of quantum mechanics were also unaffected by Goldbach's conjecture.

Goldbach's conjecture has no scattering to affect modern and contemporary science. Goldbach conjecture is non scattering inversion. Discover GLLH and GLHUA invisible cloak are non-scattering inversion.

Goldbach conjecture and GLLH and GLHUA invisible cloak are non-scattering inversion.

We found that seeking a proof of the Goldbach conjecture and finding a completely invisible cloak with a refractive index greater than 1 are both scattering-free inverse problems. In 2008, we translated the idea form of Chen Jingrun's paper [16,17] into the electromagnetic material model of the inverse calculation of the invisible cloak, and used our integral geometry inverse calculation [9,18,19] and the scattering-free G1LD [11] and GL direct and inverse algorithms [12,13,20] to find the GLLH completely invisible cloak that can be realized without exceeding the speed of light and without time delay [3,21]. We obtained the discontinuous propagation of two waves of electromagnetic light in the GLLH and the novel wavefront bifurcation shown the wavefront hawk beak in Figure 2 of Xie G, et al. [3] is very match with Figure 3 in the hawk beak [3] of the invisible cloak phenomenon we discovered in 2001 [10]. Breakthrough, we further discovered positive space and negative space. We found that the first option in Chen Jingrun's expression is valid in both positive space and negative space, but when the expression of the second option in the negative space is returned to the positive space, an

obvious contradiction occurs: the large even number is equal to a prime number. Actually, the primer number less than the larger even number. From the theory of positive and negative space, the second option in Chen Jingrun's expression should be eliminated. The Goldbach conjecture is proved. Inspired by the theory of negative space, it is directly proved that when the second option appears in Chen Jingrun's expression, the first option must appear. According to Chen Jingrun's expression theorem, using mathematical induction, we can prove Goldbach conjecture. This is a new clue and way to prove the Goldbach conjecture based on Chen Jingrun's theorem and negative space in this paper. This is the first direct application of positive and negative space. The GLHUA Spere body studied in new paper is the second direct and Concrete application of positive space and negative space [22].

Novel GLLH and GLHUA EM Cloak with Front Branching and Without Exceed Light Speed Violation and Without Time Delay

Novel GLLH and GLHUA EM Cloak with Front Branching and without Exceed Light Speed Violation have been published in arXiv from 2010 to 2022 [1,2,3,23], and published in PERIS proceeding 2010, 260 PIERS Proceedings, Cambridge, USA, July 5-8, 2010 [24]. A New Practicable GLLH EM Invisible Cloak without Exceeding Light Speed Wave propagation has been published in PIERS proceeding 2011, 18 PIERS Proceedings, Suzhou, China, September 12-16, 2011[25]; A New GL Anisotropic and Isotropic Invisible Cloak without Exceeding Light Speed Violation has been published in PIERS proceeding 2011, 870 PIERS Proceedings, Suzhou, China, September 12-16, 2011[26]; A New Novel GL Isotropic Invisible Cloak without Exceeding Light Speed Wave in Outer Layer of the Double Layer Cloak has been published in PIERS 2012, Progress In Electromagnetics Research Symposium Proceedings, KL, MALAYSIA, March 27-30, 2012 181 [27]; GLLH Invisible EM Cloak and GL No Scattering Modelling and Inversion has published in PIERS proceeding IEEE 2016, 2016 Progress In Electromagnetic Research Symposium (PIERS), Shanghai, China, 8–11 August [28]. In above GLLH and GLHUA invisible cloak 5 papers published in PIERS proceedings in 2010-2016, The complete invisible cloak without exceeding light speed and without time delay and their strange novel wave front branching propagation are interesting and fragrant for another peer. In arXiv:1612.02587 [1] and arXiv:1706.10147 [2], and in PIERS 2018 (Figure 5-14),

Positive Space and Negative Space

2018 Progress in Electromagnetics Research Symposium (PIERS | Toyama), Japan, 1-4 August, we proposed "Negative Space". The negative space theory is theoretical base for the GLLH and GLHUA invisible and cloak.

Just as before, without imaginary numbers, we cannot solve the equation $x^2 + 1 = 0$ in the real number domain. Let's ask: In polar coordinates on a two-dimensional plane, where (ρ, θ), $\rho \geq 0$, is a point on the plane, where is $(-\rho, \theta)$ for the same value θ? This question can intrigue students from elementary middle school to university, and has also attracted the attention of professors and scientists at all levels. In this article, we introduce the concepts of positive and negative space. In the three-dimensional spherical coordinate system, the set of points with positive radial coordinates (r, θ, φ), $r \geq 0$, $0 \leq r \leq +\infty$, is called three-dimensional positive space. This is the three-dimensional space we live in. In the three-dimensional spherical coordinate system, a point with negative radial coordinates, $(-r, \theta, \varphi)$, $-\infty \leq -r \leq -0$, is defined as three-dimensional negative space, as described in our paper [1,2]. The origin of the positive space can be anywhere. The point in the positive space, (r, θ, φ), and the point in the negative space, $(-r, \theta, \varphi)$, are corresponding points with the same longitude and latitude. The origin of the positive space, +0, and the origin of the negative space, -0, are corresponding points, but different points. The three-dimensional negative space is the corresponding space of the three-dimensional positive space. According to three-dimensional geometry, every spherical surface is a two-dimensional BI curved surface. Positive space is located on the outside of the spherical surface, with normals pointing outward and radial coordinates being positive, meaning the radius from the positive origin to a point is positive. Negative space is located on the inside of the spherical surface, with normals pointing inward and radial coordinates being negative, meaning the radius from the negative origin to a point is negative. Three-dimensional positive and negative space are corresponding, not connected, Euclidean spaces. Negative and positive space do not intersect. Positive space is visible as a whole but can also be locally invisible. For example, GLLH and GLHUA can be made completely invisible cloaks. Negative space is invisible as a whole but can also be partially local visible, such as in a mirage. We have proved that Maxwell's electromagnetic wave equations, acoustic wave equations, elastic wave equations, heat conduction equations, Boltzmann equations, quantum mechanics Schrödinger equations, fluid mechanics equations, etc., which are valid in three-dimensional positive space, are valid in negative space. All sciences that are valid in positive space are valid in negative space. The Goldbach conjecture is an equivalent conjecture in positive space and negative space. In Chen Jingrun's representation, the first option is valid in both positive space and negative space. However, if the representation of option 2 in negative space is returned to positive space, an obvious contradiction will appear: a large even number is equal to a prime number (smaller than it). We have proposed a new clue and approach to prove the Goldbach conjecture based on Chen Jingrun's theorem and negative space. From positive space and negative space, we discovered the three-dimensional electromagnetic invisible

GLHUA sphere. Using the negative space theory, EM wave propagation through GLLH cloak and GLHUA cloak have been recalculated, the wave propagation and their front branching are very match with above our papers in arXiv and in PIERS proceedings. Our GLLH and GLHUA Electromagnetic Invisible Cloak without exceeding light speed violation that can be practicable complete invisibility cloak the shuttle or spacecraft for ensure safety.

Magnetic Plane Wave Propagation Through GLHUA Sphere and FLHUA Sphere

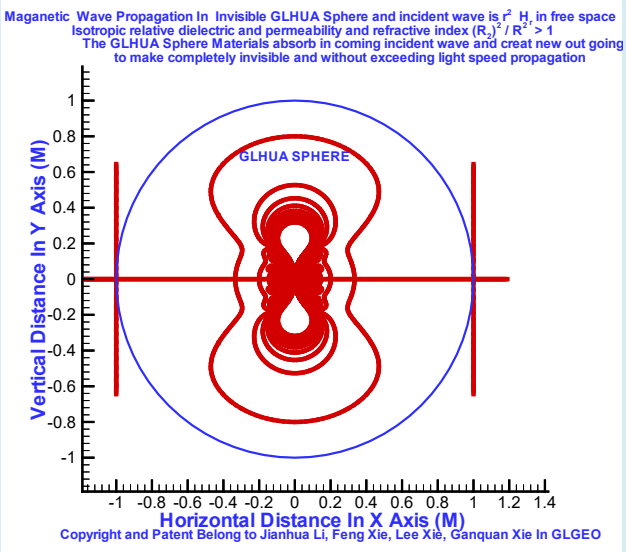

Figure 1: It shows the first-time step of the GLHUA sphere's half-cycle. The first wavefront reaches the right boundary, while the second wavefront of the previous half-cycle reaches the left boundary. In the centre there is the second wavefront of this half-cycle, representing the upward and downward pulsations caused by the material absorbing the first wavefront of the previous half-cycle.

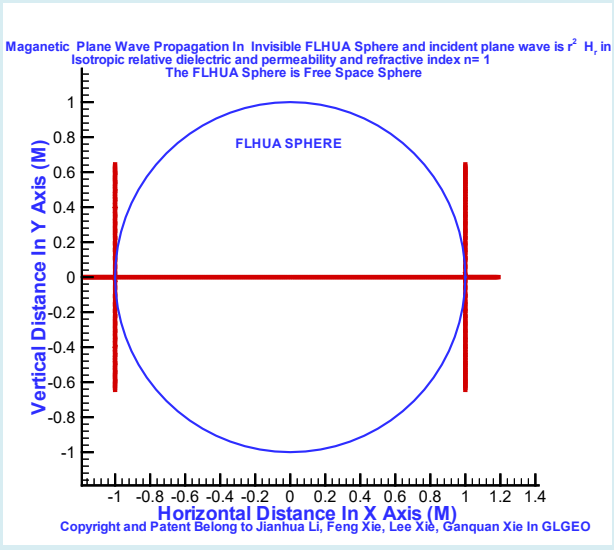

Figure 2: It shows that at the first-time step of this half cycle, the propagation wavefront of the magnetic wave in the free space FLHUA sphere is at the right boundary of the sphere. The plane wavefront of this wavefront outside the F sphere is exactly the same as the plane wavefront outside the GLHUA sphere of the first wavefront of the GLHUA sphere.

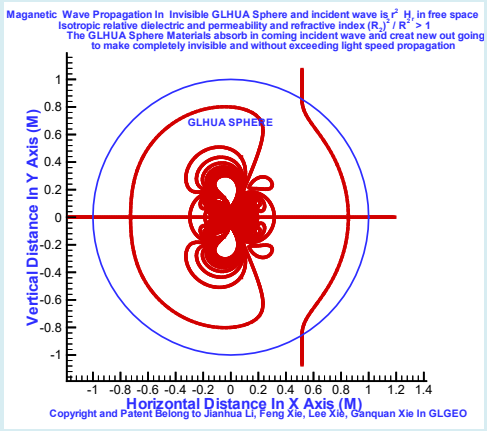

Figure 3: At the 87th time step of this half-cycle of the GLHUA sphere, the first magnetic wavefront has moved leftward into the right side of the GLHUA sphere and connected with the external incident wave. The second mushroom dark particle wavefront propagates to the left, generating a quantum entangled beak and left elliptic. This confirms the entangled beak on the left side of the GLLH's complete invisibility cloak in 2010 [3] and the entangled beak on the left side of the invisibility cloak discovered in 2001 [11].

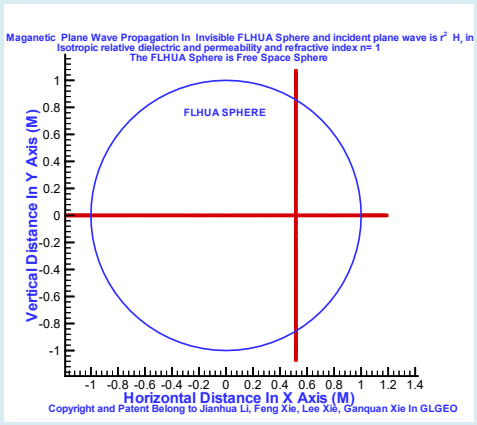

Figure 4: At the 87th time step of this half-cycle, the propagation wavefront of the magnetic wave in free space, FLHUA sphere, has moved leftward and entered the right side of FLHUA sphere. This wavefront is a straight plane wave both inside and outside F sphere. This plane wavefront outside FLHUA sphere is identical to the plane wavefront outside GLHUA sphere, the first wavefront of GLHUA sphere.

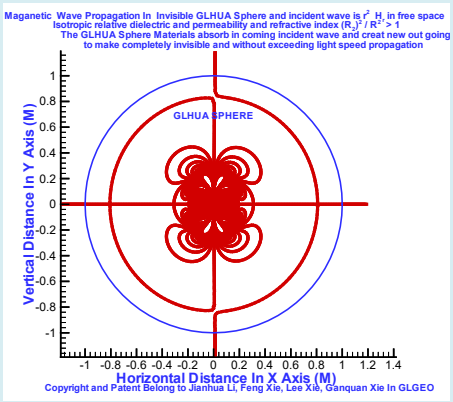

Figure 5: At the 178th time step of this half-cycle, the propagation wavefront of the magnetic wave of the GLHUA sphere. External incident plane wave connects first wave front right half elliptic.

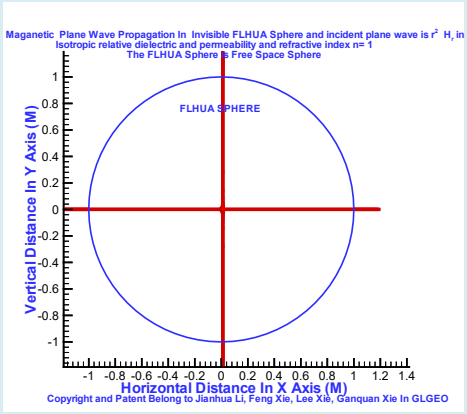

Figure 6: At the 178th time step of this half-cycle, the propagation wavefront of the magnetic wave in free space, FLHUA sphere.

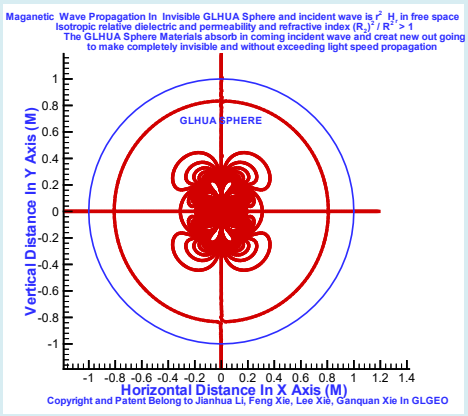

Figure 7: At the 180th time step of this half cycle. the propagation wavefront of the magnetic wave in the GLHUA sphere, the first wavefront propagates to the left to the centre of the GLHUA sphere, forming a rightward hemi-ellipsoidal surface on the right side of the centre and connecting with the incident wave outside the sphere. The second wavefront is released from the dark particle, forming a leftward hemi-ellipsoidal surface on the left side of the GLHUA sphere and connecting with the external incident wave. At this time step, the external incident wave is connected with the first wavefront on the right and the second wavefront on the left. There is dark particle wave around origin in the centre.

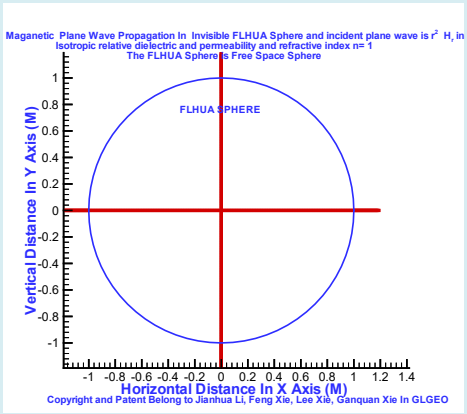

Figure 8: It shows that during this half-cycle, at the 180-time step, the propagation front of the magnetic wave on sphere FLHUA in free space is a midline plane wave. At the 180-time step, the external incident waves on spheres GLHUA and FLHUA are identical.

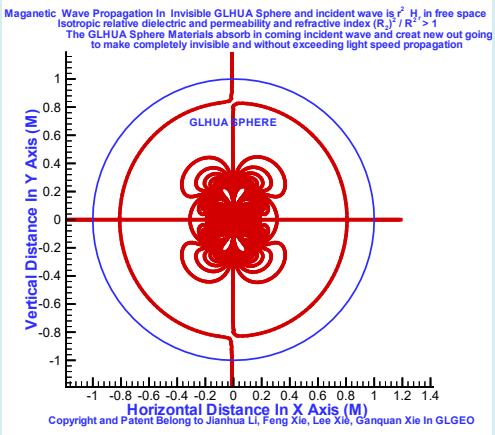

Figure 9: At the 182rd time step of this half-cycle, the propagation wavefront of the magnetic wave of the GLHUA sphere. External incident plane wave connects second wave front right half elliptic. There is dark particle wave around origin in the centre.

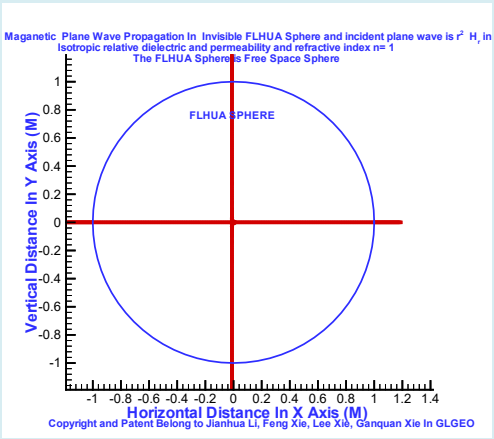

Figure 10: At the 182rd time step of this half-cycle, the propagation wavefront of the magnetic wave in free space, FLHUA sphere.

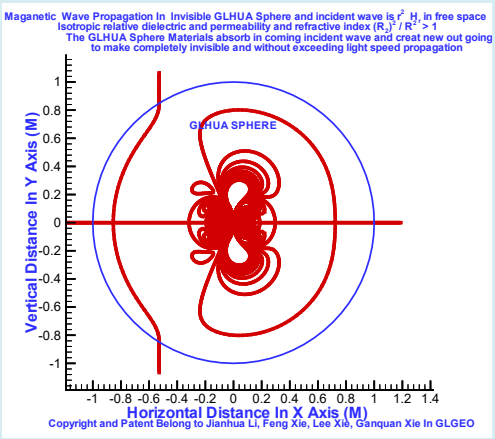

Figure 11: It shows that at time step 272 of this half-cycle, the wavefront of the magnetic wave propagating through GLHUA sphere, the first wavefront disconnects from the external incident wave, forming a rightward-pointing dark particle entanglement beak and half elliptic on the right side of the GLHUA sphere. The second wavefront connects with the external incident wave and propagates leftward on the left side of the GLHUA sphere.

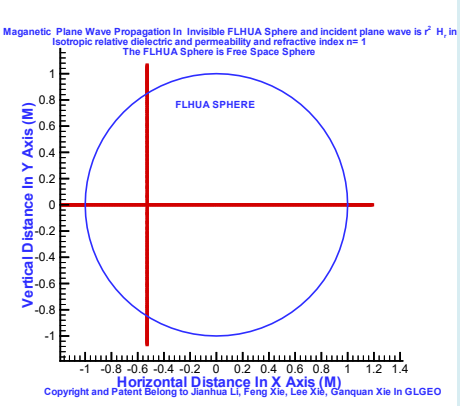

Figure 12: It shows that at time step 272 of this half-cycle, the wavefront of the magnetic wave propagating through free-space sphere F is located to the left of FLHUA sphere. The external incident wave on the second wavefront to the left of sphere GLHUA is identical to the external incident wave on the left of FLHUA sphere.

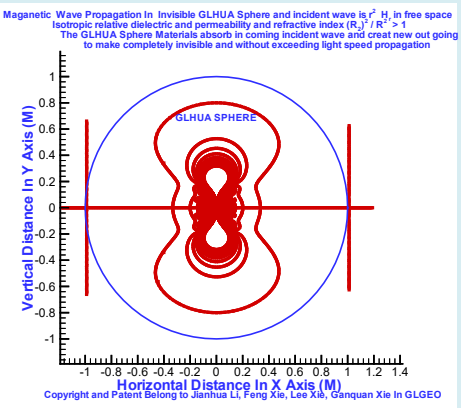

Figure 13: At time step 360 of this half-cycle, the wavefront of the magnetic wave propagating through GLHUA sphere, the first wavefront of the magnetic wave is in the middle of the GLHUA sphere, disconnected from the external incident wave and absorbed by the GLHUA sphere material, producing upward and downward mushroom dark particles. The second wavefront connects with the external incident wave and propagates leftward to the left edge of the GLHUA sphere.

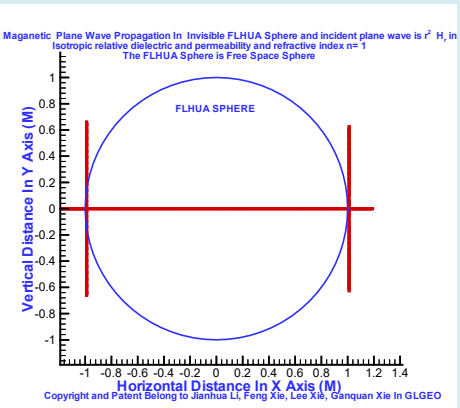

Figure 14: It shows that at the 360th time step of this half-cycle, the propagating wavefront of the magnetic wave in free space reaches the left boundary of the FLHUA sphere. The external incident wave on the left side of the second wavefront of the GLHUA sphere is exactly the same as the external incident wave on the left side of the FLHUA sphere.

Conclusion

We discovered positive space and negative space. It is a breakthrough development in super science, AI Artificial Intelligent, Anti atomic bomb, immigrate to Mars, Marige, super invisible economic and maker are important applications of the super sciences. Atomic bomb nuclear weapons are disasters in the Human beings in the positive space; Anti atomic bomb nuclear weapons are Human's Gospel due great help from super sciences and positive space and negative space. On January 15, 2017, the Hunan Provincial Super Science Computational Society was founded by Xie Ganquan and Li Jianhua. This is the first-level society in Hunan Province. https://news.csu.edu.cn/info/1004/126458.htm. We have read and Agree the Copyright Transfer Agreement for preprint publication. The full patent and copyright belong to the author of this paper, people who using this paper have to cite this paper. We call on "the country wishes another country good; the people wish for other person peace and security"

References

1. Li J, Xie F, Xie L, Xie G (2017) Practicable GLHUA Invisible Cloaks Absorb the Incident Wave and create Outgoing Wave Without Exceeding Light Speed Propagation and New N Dimensional Maxwell Equations. arXiv:1706.10147.
2. Li J, Xie F, Xie L, Xie G (2016) Novel GLHUA Electromagnetic Invisible Double Layer Cloak with Relative Parameters Not Less Than 1 and GL No Scattering Inversion, radial R in the sphere coordinate can be negative in a negative space world. arXiv:1612.02857.
3. Xie G, Li J, Xie L, Xie F (2010) GLLH EM Invisible Cloak with Novel Front Branching and Without Exceed Light Speed Violation. arXiv:1005.3999.
4. Pendry JB, Shuring D, Smith DR (2006) Controlling Electromagnetic Fields. Science 312(5781): 1780-1782.
5. Schuuring D (2006) Science. Vol 314: 5802.
6. Loenhardt U, Tyc T (2009) Broadband Invisibility by Non-Euclidean Cloaking. Science 323(5910): 110-112.
7. Perzel J, Tyc T, Leonhardt U (2011) Invisibility cloaking without superluminal propagation. arXiv:1105.0164v3.
8. Xie G (1975) The 3-D finite element method in the elastic structure. J mathematical practice and recognition.
9. Ganquan Xie (1986) A new iterative method for solving the coefficient inverse problem of the wave equation. Communication on Pure and Applied Mathematics 39(3): 307-322.
10. Jianhua Li, Xie G, Liu J, Lin CC (2002) SEG. pp: 1-4.
11. Xie G, Li J, Zou D, Majer E, Oristaglio M (2000) 3-D electromagnetic modelling and nonlinear inversion. Geophysics 65(3): 804-822.
12. Xie G, Xie L, Xie F, Li J (2006) New GL method and its advantages for resolving historical difficulties. Progress In Electromagnetics Research 63: 141-152.
13. Xie GQ, Li J, Xie L, Xie F (2006) JEMA. 20(14): 1991-2000.
14. Xie G, Li J (1999) New parallel stochastic global integral and local differential equation modelling and inversion, Physica D: Nonlinear Phenomena 133(1-4): 477-487.
15. Xie G, Li J, Xie F (2005) Advanced GILD EM modelling and inversion. PIERS Online 1(1): 105-109.
16. Chen Jingrun (1966) On the representation of a large even integer as the sum of a prime and a product of at most two primes. Chinese Science Bulletin17(9): 385-386.
17. Chen Jingrun (1973) Science in China. Sci Sinica 16: 111-128.
18. Gan Xie, Jian Li (1988) Science in China. 4: 359-365.
19. Gan Xie, Jian Li (1989) Science in China 32(3): 513-523.
20. Xie G, Li J, Xie F, Xie L (2007) 3D GL EM and quantum mechanical coupled modeling for the nanometer materials. PIERS Online 3(4): 418-422.
21. Guo YZ (2011) Progress in several fields of mathematics and science and technology. Science Press, China.
22. Li J, Xie F, Xie L, Xie G (2025) Isotropic Electromagnetic GLHUA. Sphere. SSRN, pp: 11.
23. Li J, Xie F, Xie L, Xie G (2017) Electromagnetic Wave Propagation in GLHUA Invisible Sphere by GL No Scattering Full Wave Modelling and Inversion. arXiv:1701.02583.
24. Xie G, Li J (2010) 260 PIERS Proceedings, Cambridge, USA.
25. Li J, Xie G, Xie L, Xie F (2011) A New Practicable GLLH EM Invisible Cloak without Exceeding Light Speed Wave propagation. PIERS proceeding, Suzhou, China.
26. Li G, Li J, Xie F, Xie L (2011) A New GL Anisotropic and Isotropic Invisible Cloak without Exceeding Light Speed Violation PIERS proceeding, Suzhou, China.

27. (2012) A New Novel GL Isotropic Invisible Cloak without Exceeding Light Speed Wave in Outer Layer of the Double Layer Cloak. Progress In Electromagnetics Research Symposium Proceedings, Malaysia.

28. Li J, Xie F, Xie L, Xie G (2016) GLLH Invisible EM Cloak and GL No Scattering Modelling and Inversion. PIERS proceeding IEEE, Shanghai, China.