Gravitational waves can be the key to revealing the existence of another dimension in the universe

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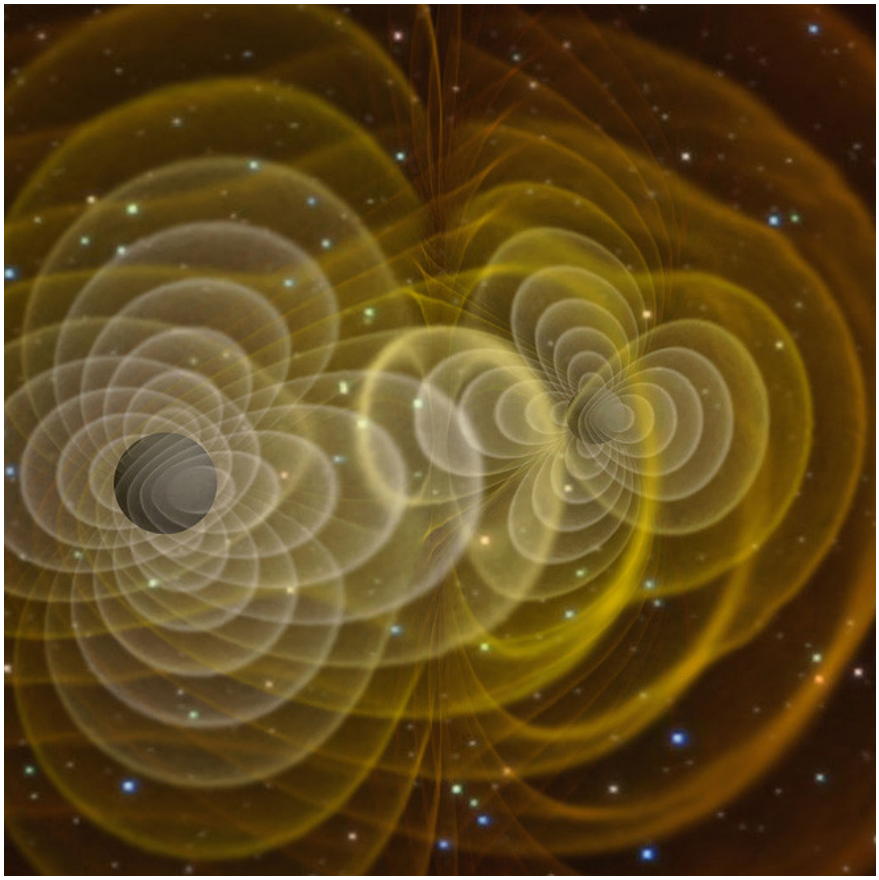
Another dimension of space coexisting in parallel with our three-dimensional universe is always a mystery that makes scientists crazy.According to physicists, gravitational waves can be the key to helping us find those mysterious dimensions.

1. Startled with the hypotheses about the number of universes co-existed by scientists
2. Scientists confirm: People can go through, travel time

According to the hypothesis that physicists have proposed, gravity has been "leaked" to other dimensions that humans have not yet discovered. This may explain the gravitational force that seems weaker than the other fundamental forces in our universe.



Attractive wave image published by LIGO.

Currently, many scientists believe that the universe consists of 4 dimensions, including 3 dimensions and a time of 4. But we still do not understand how matter works on the smallest scale that has can have 6 extra dimensions. In fact, according to string theory, if the universe is made up of 10 different dimensions, it will create more dimensions.

String theory is one of the most promising ways for physicists to bridge the gap between classical physics and quantum physics.

As we know the smallest thing that makes up the material we have discovered is subatomic particles (quarks). But in string theory, a space energy fiber looks like vibrating fibers, smaller than quarks is the smallest thing that makes matter.

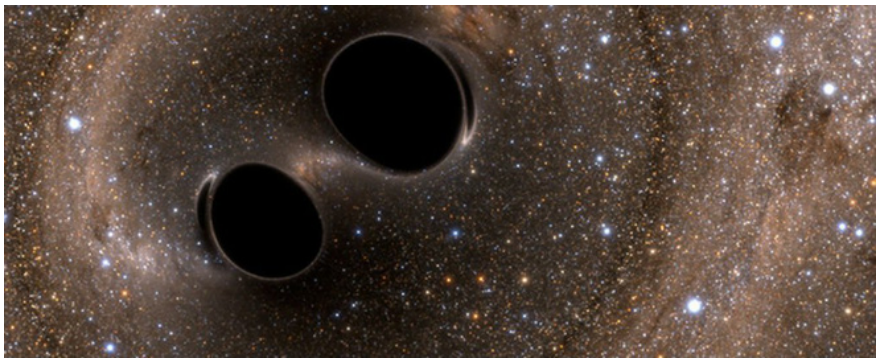
These "strands" can describe all the forces of nature at the same time: gravity, electromagnetism and nuclear force, even helping to rationalize the reality of the expansion of the universe, which Current physics cannot be performed.

To be mathematically feasible, these fibers require at least 10 dimensions of physical space but now, scientists have not even found a dimension.

But Gustavo Lucena Gómez and David Andriot, two physicists from the Max Planck Gravity Physics Institute in Germany, argue that Einstein's famous gravitational waves can help find spatial dimensions.

Last year, researchers at LIGO announced that they found direct evidence of ripples in space-time that Einstein predicted 100 years ago.

Gravitational waves are like sound waves, they travel through space at the speed of light, can even run through all dimensions of space in the universe driven by a number of events in their universe. we, like merging black holes or stars explode.



Gómez believes that if there are different dimensions in the universe, gravitational waves can pass through them. He and his colleagues introduced a mathematical model to describe the effects of hidden dimensions on gravitational waves. They discovered two factors, the maximum wave will exist at high frequencies, and gravitational waves will stretch the surface of the universe in different directions across the spatial dimensions.

Maximum waves at high frequencies as a "giant tower" of super-high-frequency gravitational waves, make our current detector impossible to find them. They said that it could be a clear sign of new physics.

The second element called "breathing mode" will require physicists to look at the different signs that can be detected in gravitational waves that stretch or retract space-time.

According to them, gravity is being "leaked" to six other dimensions but we only know about a small part of its impact on the universe through four dimensions.

This is just this hypothesis and it still needs to be studied thoroughly about its authenticity.