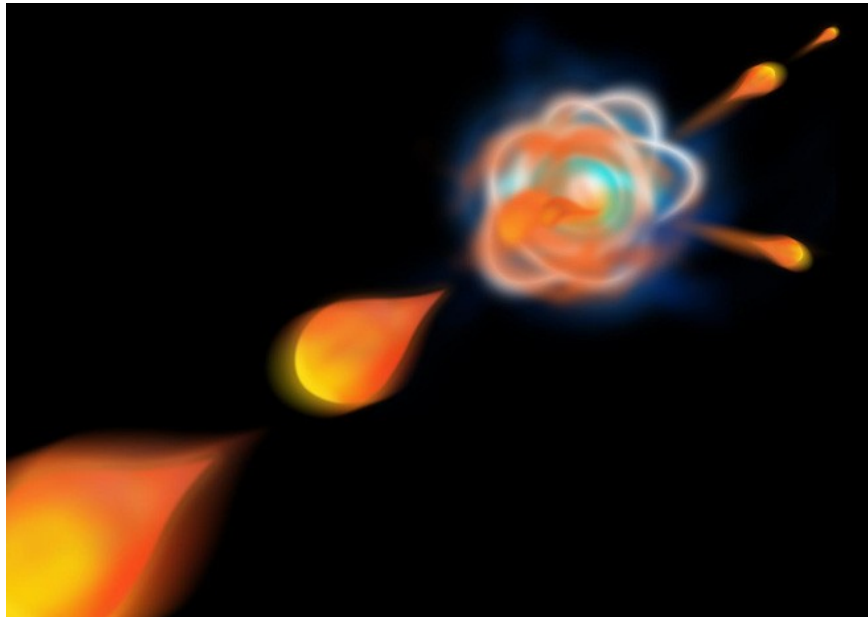


Experimental science proves that gravity is still effective at 50 micrometers

In addition to the three other fundamental forces of the Universe, the electromagnetic and nuclear forces are weak and strong, and the weakest gravitational force can cause impacts at very far distances.

That's why our Earth orbits the Sun, comets have remained in the exact same orbit for millions of years, . Even at the microscopic level, gravity causes an impact, but because it's so weak so it is difficult to detect them.

But that difficulty does not detract from science, and one more thing: if it is discovered that at the microscopic scale, gravity does not work the way we know it, that is the fulcrum for the treatise of treatise. out of New Physics. The journey to find a whole new scientific aspect was not so easy, and so far has not been successful.



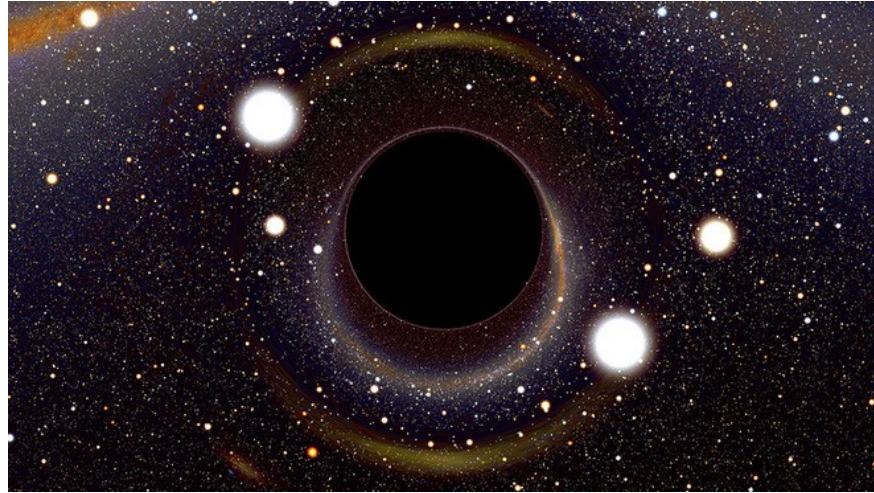
In search of the 'hole' of gravity

In science, the concept of 'inverse square' refers to any law that a specific physical quantity is calculated by 1 divided by the square of the distance of the object from its source (for example, light).

The intensity of gravity depends on the distance. If you double the distance between two things, the gravity between them not only splits in half, but also drops to a quarter of the original value. The basis of the inverse square law is based entirely on geometry: **since we are living in three dimensions, the inverse square law is still true.** However, if space had one or more dimensions, not only was the inverse square law the reality would

be much different.

We know that at a distance, such as the space between two stars, the inverse square law is true. At the galactic scale, the inverse law is still true, the equation only fits reality when dark energy and dark matter are present. There are scholars who identify dark energy, dark matter (concepts that are still mysterious, but must put forward a hypothesis for it so that physics can work) is proof that the extra dimension exists. , but things are not that simple.

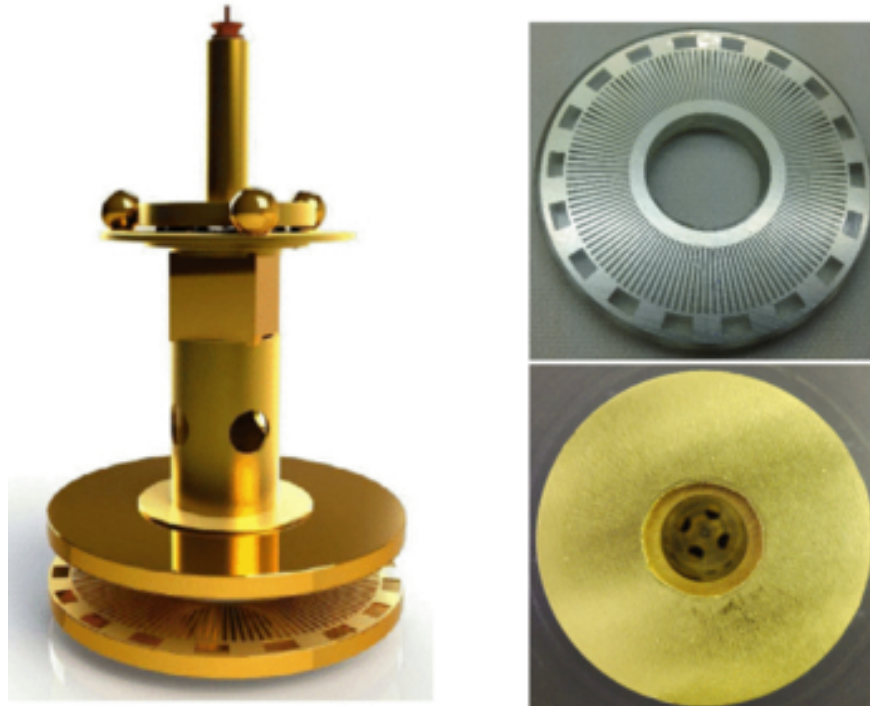


On a large scale, this mysterious dimension is both large and not able to interact with other matter. Adding the existence of another dimension to physics, all formulas will deviate from one another, so we only assume that there is a very small dimension and influence gravitation at the microscopic scale.

In the laboratory, studies show that at the microscopic level, the relationship between gravity and the inverse square law is much more complicated than we thought. Gravity strength is so weak that the electric field emitted from the laboratory electrical appliance outweighs all the signals that gravity can emit.

So how to measure?

To measure gravitation at the microscopic scale, the researchers based on simple tests that were just academic: measuring changes in rotational speed, appearing on a dish placed in a state. oscillation, the disk itself is affected by the circulating gravity.



Test equipment.

The spinning disc creates cyclic force, on the disks are pre-cut holes so that gravity varies when the hole moves as the disk rotates. Two experimental dishes were placed on the bottom: one attached to the thin cable, which began to spin as the scientists twisted the cable; The remaining disk is mounted on the machine, rotating at a constant speed.

When the upper disc changes direction, it is still affected by the torque that causes the lower disc to spin. The changes in the rotation of the lower disc are cyclic, accurate enough for all relevant measurements to be correct. The holes on the disc will produce 3 different rotating frequencies, measured values ??deviated from these 3 frequencies will be considered as errors.

Over the past decade, researchers have done this experiment many times to increase the sensitivity of the meter, in order to find the most accurate results possible. To the extent possible, their experiments eliminated all forces related to magnetic and electric fields; This method of treating gravel for gold has brought about certain results.

The experiment, along with many more of the same kind, allows researchers to find the effect of gravity at a distance of 52 μm (micrometre, a unit of length equal to one millionth of a meter). Based on this result, the researchers are confident that at a scale of 50 μm , the inverse square law is still true, that is, no evidence has been found that New Physics exists.

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