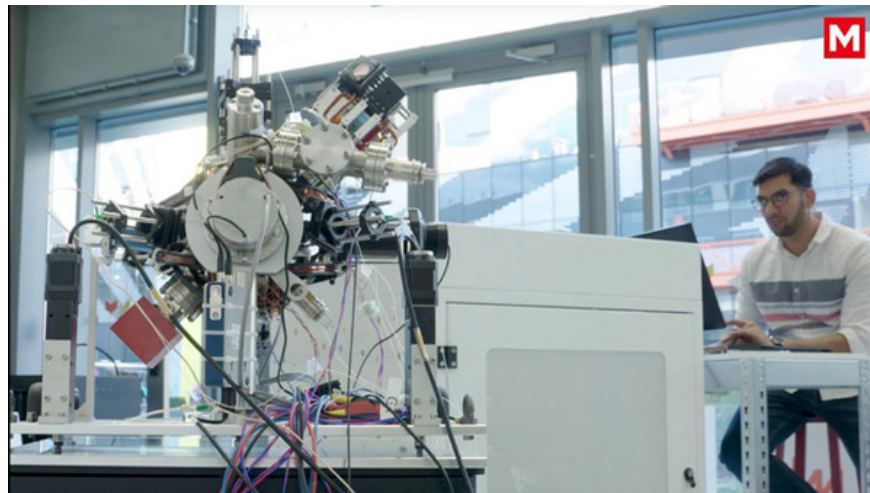


Successful fabrication of quantum compass to atomic level, replacing GPS in the future

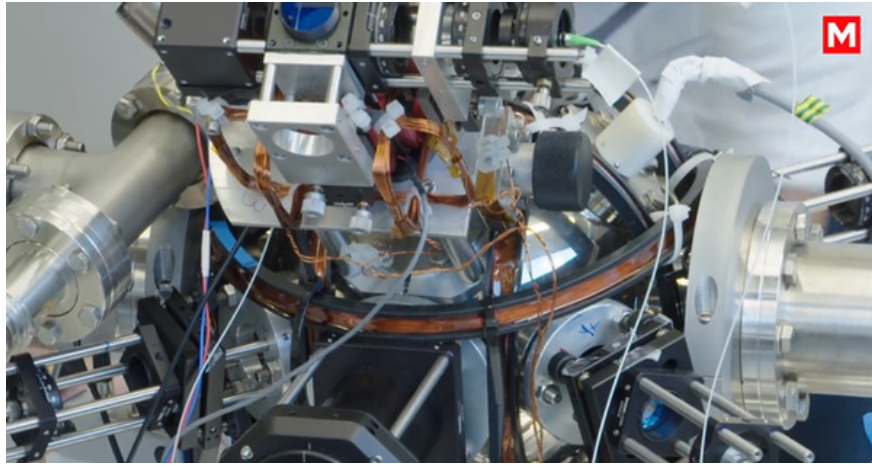
Scientists at the Royal University of London have created a new navigation device that does not need a satellite, a quantum compass scientifically named independent quantum accelerometer - standalone quantum accelerometer.

Global positioning system GPS - Global positioning system is one of the important factors that appear in many modern technologies. Users around the world can use positioning on GPS receivers to determine their position accurately and for free. But GPS can be blocked or interrupted by tall buildings, deep tunnels. To overcome this, scientists at the Royal University of London have created a new navigation device that does not need a satellite, one. The quantum compass is scientifically known as "independent quantum accelerometer - standalone quantum accelerometer". This new device is quite small in size so it is easy to move.

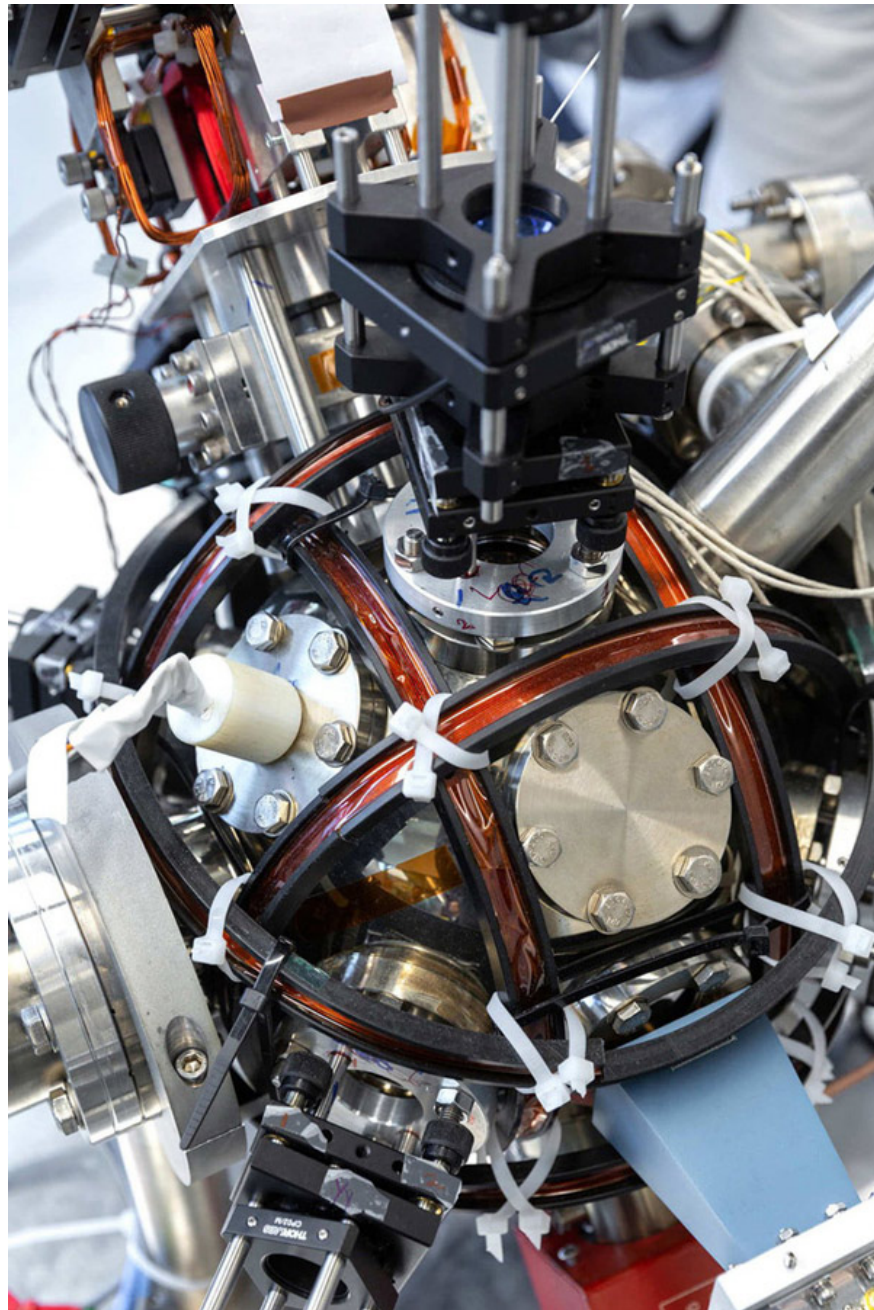


The researchers introduced the 'independent quantum accelerometer' to the public at the International Quantum Technology Exhibition.

Accelerometer is a device that can measure the speed of an object over time, which appears in your smartphone. This system is based on information obtained from position and speed to calculate the position of an object. With normal accelerometers, if not connected to a standard object, its accuracy will decrease over time.



Meanwhile, the new quantum accelerometer measures the movement of super-cold atoms - the state that causes a particle to show quantum properties, both at the particle and wave states at the same time, to help the accuracy of the device. reached a very high level. The waves of atoms are affected by the acceleration, so to calculate the atomic motion just measure the deviation of the wave. Therefore, it is said that quantum compass is accurate to atomic level.



Although this quantum compass does not fit into a pocket like a conventional compass, it can be installed on large-size vehicles such as boats, trains, airplanes . to help people with things. Vehicle control identifies your exact location without GPS.

In the future, if scientists can build a powerful laser system (enough to keep atoms cold enough to represent quantum properties for measurement) and compact, then we will have The pocket of the quantum compass is just right.

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