World's Most Accurate and Tiniest Optic Clock Has Been Built

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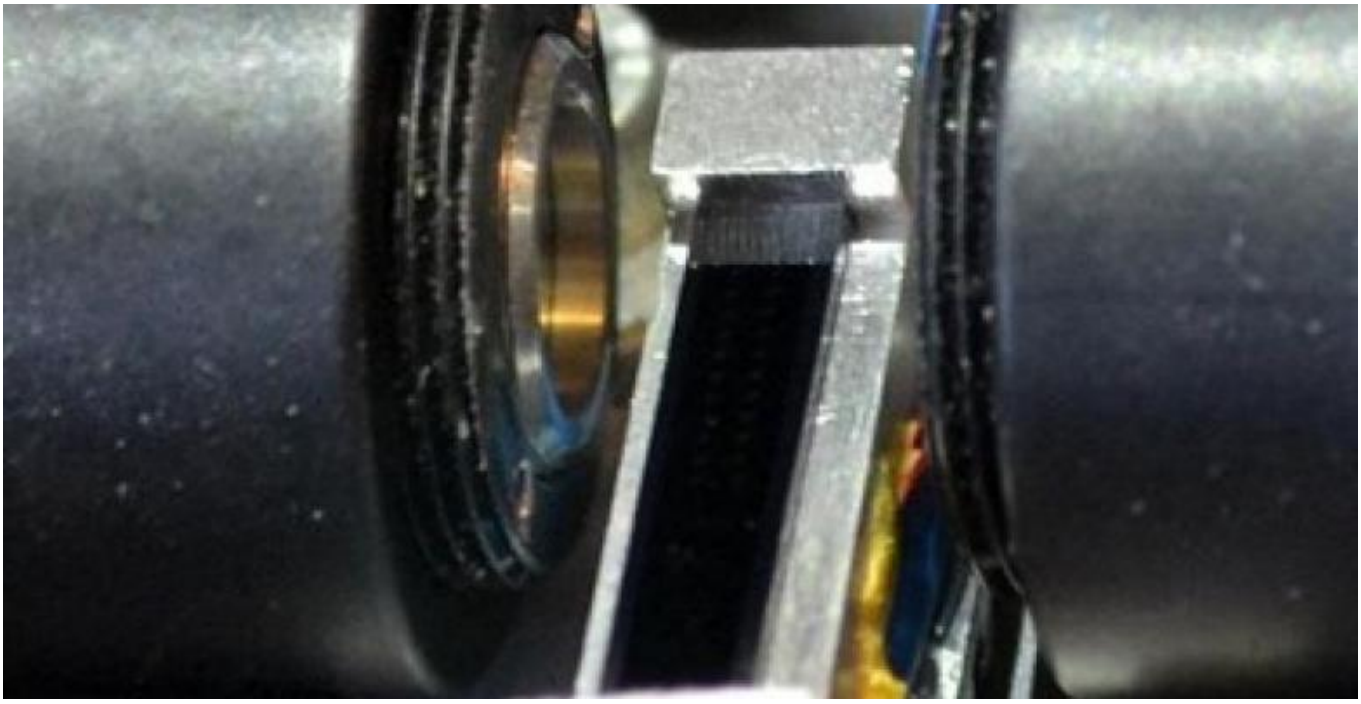

The accuracy of the clock, small enough to fit on a standard silicon chip, is based on the atoms' natural frequencies that respond to radiation, which make time measurement even more precise, according to a study led by the University of California.

By a similar manufacturing process of the chip, US researchers was able to significantly reduce the size of the mechanism, which so far was made with large fiber lasers in equipment about the size of a desktop computer.

The experts said that the clock could have applications in optical, wireless and space-based communications, it could also be used to measure the movement of atoms, or to discern the movement of distant objects far beyond our solar system.

They explained that if incorporated with other technologies into infrared telescope observatories, this device can enable the detection of Earth-like planets and celestial objects 100 times smaller than that.