The ATOMIC CLOCK

Keeping the time with atoms

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Innovation is the key to make World a better place

Have you ever heard of a magic clock? A clock that not only indicates the time, but how time itself changes with height? Sounds out-of-this-world, right? But it's real. The scientists who created it are bringing us on an amazing voyage through time, space, and gravity, so it must be real.

A group of extremely brilliant scientists created an extremely unique clock. However, this was not your typical "tick-tock" clock. Are you wondering, « Why do we need this special clock ?» Well, this is where it gets more interesting. Atomic clock resembles a super-efficient timekeeper that is error-free and never gets tired. Hence, they are used by scientists for doing experiments and testing theories.

Atomic clocks are very accurate clocks that use the vibrations of atoms to keep time. Atoms are tiny building blocks that make up things. They can't be seen by eyes, but they are the reason why things have weight and take space.

Time is a measure of change, and it is always changing.

Did you know that atomic clocks are so accurate that they can detect changes in time caused by the Earth's gravity?

Gravity is a force that pulls things together.It's what keeps you on ground and makes things fall.

Now, wait...does gravity change time???? 😯

Scientists tested the Atomic clock in the top of the mountain where the air was thinner and gravity was weaker.Later they tested it in the depths of ocean where the pressure was incredibly high and the water was freezing cold.Guess what ? It didn't even flinch under extreme conditions.

The scientists were thrilled. They could use Atomic clock to study earth's gravity and the way it affected the time.They could even use it to study the Universe and how time worked in different galaxies.

The scientists discovered that time operated slightly differently at different heights They discovered that time could be pulled and stretched, much like a piece of fabric. And they found that the force responsible for stretching time was gravity. The more gravity there was, the more time was stretched.

Consider using a large rubber band for your game. It gets bigger and bigger as you stretch it more and more. Similar as what gravity does to time. It stretches it out, making it slightly longer at the ocean's bottom than it is at a mountain's peak.

The Invention of Atomic clock was a big breakthrough in science. It can defy gravity and give accurate time.

GPS systems are like special maps that help people find their way. They use Atomic clocks to know exactly where they are and what time it is.

They are used to keep time in factories, hospitals, and schools So everything operates smoothly in these places.

We now live in a time when science and technology are enabling us to gaze into the depths of the cosmos and reveal long-buried mysteries. Isn't that incredible ?

Who knows, maybe one day you'll create your own Atomic clock, discover a new planet, or perhaps be able to travel via wormholes just like in the above image. 😊