

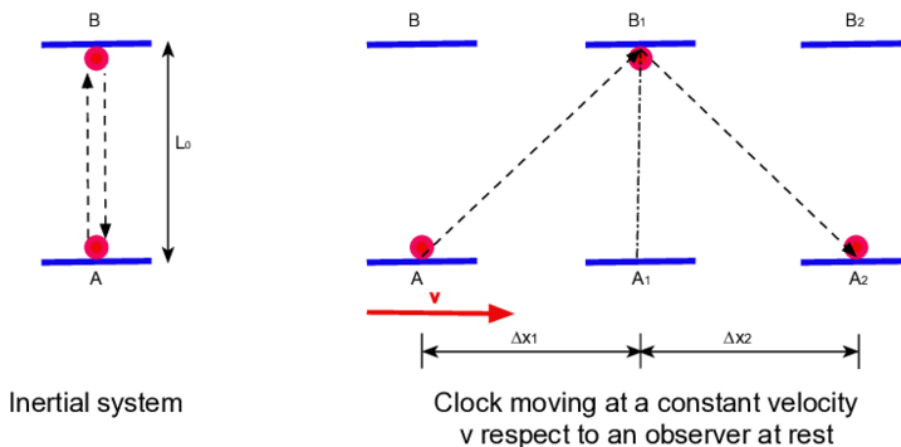


## Spacetime: Geometry of Universe

Spacetime is a **mathematical model that combines the three dimensions of space** and the dimension of time into a single entity.

- The **universe at the largest scale** looked different from the scale of human experience due to the universe's geometry.
  - At the human scale, spacetime appears to be flat: a beam of light from a laser will travel in a straight line.
  - But at the largest scale, **our spacetime may actually occupy a spherical space.**
  - If you shine a powerful laser in front of you and wait for an incredibly long time, light from the laser could technically circle back to you.
- **Albert Einstein's special theory of relativity** posited that if there are two observers A and B, each with a clock, such that A is moving (but not accelerating) faster than B, A's clock will measure less time as having passed than B's clock.

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**Read more:** [Einstein Was Right: Astronomers Confirm Key Theory of Relativity](#), [Time Dilation in Early Universe](#)