

TIME-UNIVERSE RELATIONSHIP

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ABSTRACT: *AS WE KNOW FROM THE THEORY OF RELATIVITY BY ALBERT EINSTEIN, TIME DEPENDS ON ONE'S FRAME OF REFERENCE, THAT IS, FOR AN OBJECT IN A LOW GRAVITATIONAL FIELD, TIME WILL MOVE FASTER IN COMPARISON TO AN OBJECT IN A HIGH GRAVITATIONAL FIELD WHERE TIME WILL MOVE SLOWER RELATION LETS US TO CONCLUDE THAT TIME IS RELATIVE.*

FOUNDATION

Due to this relativity, we need to synchronize our clocks in order for the time to match. Time plays an important role in our daily lives as well as international affairs. In this scenario it is at utmost necessity that we understand time's influence.

If one was to completely forget about time, that is losing the understanding of any kind of temporal quantities. Like days hours seconds etc. Then it is obvious that the ability to function is hampered and that psychologically it is built in human instincts to always consider time, that is, time has an indirect effect on psychological state of a human.

Speaking about physical state, Theory of Relativity explains well how matter has an impact on spacetime and vice versa. It seems

we have a relation, yet an undefined one. Time has always been undefined. We haven't found a compelling definition for time, and that helps into increasing the ambiguity of this topic. Yet according to thermodynamics, there seems to be a connection between entropy and time.

A lateral forward flow of time ensures an ever increase in entropy, according to the current laws of physics. If it was for entropy to reduce, that would mean the flow of time inverting and hence breaking spacetime continuum. But if there was no work at all in this universe, the increase in entropy will stagnate hence stagnating the flow of time. Therefore, we can derive time by its relation with entropy and thus matter. After all this universe is a machine with various components working in sync.

TIME AND GRAVITY

The cosmos holds one of the most

beautiful objects which are deeply bonded with time and gravity. All the matter in this universe has deep relations with time and gravity time and gravity are one of the most important factors which lead the universe. Blackholes, wormholes etc. are all affected by the time gravity phenomena.

Time and gravity have a well-established relation by theory of relativity we know the matter has the ability to bend space-time and the bending of spacetime is also a phenomenon of gravity thus time and gravity are proportional to each other. As we know that the space time is curved and it can be

warped by time, energy and gravity so therefore all these factors have their effects on the matter present around the universe.

So, what if there is infinite gravity? A blackhole is an example. Because of so much amount of gravity the space time continuum will break entirely at the center of a black hole which will slowdown time so much that will stop entirely.

So, what about a time tunnel? The wormholes are Einstein's predictions of theory of relativity. The worm-holes are created due to large amount of concentrated matter supported by influence of gravity there is a large amount of energy in a certain manner which will bend spacetime to create a tunnel around. The Cosmos will never stop until this phenomenon is alive.

TIME AND THERMODYNAMICS

According to the Laws of Thermodynamics, an ever increase in entropy would ensure a lateral forward flow of time. A decrease in entropy will lead to the inversing of the flow of time, and hence breakage in the spacetime

continuum. Though decrease in entropy could be one method to travel to the past, yet not a possible one. But if there would be no mechanical work, the increase in entropy will become stagnate hence stagnating the flow of time

entropy changes are estimated through this

For finite variant at constant T.

$$\Delta G = \Delta H - T\Delta S$$

CONCLUSION:

THE MOTHER UNIVERSE IS DEEPLY BONDED WITH TIME, GRAVITY, ENERGY, MATTER ETC. WE'LL NEVER BE ABLE TO COMPLETELY KNOW THIS UNIVERSE. THIS COSMOS WILL NEVER STOP UNTIL THE SPACETIME CONTINUUM BREAKS IT.
