

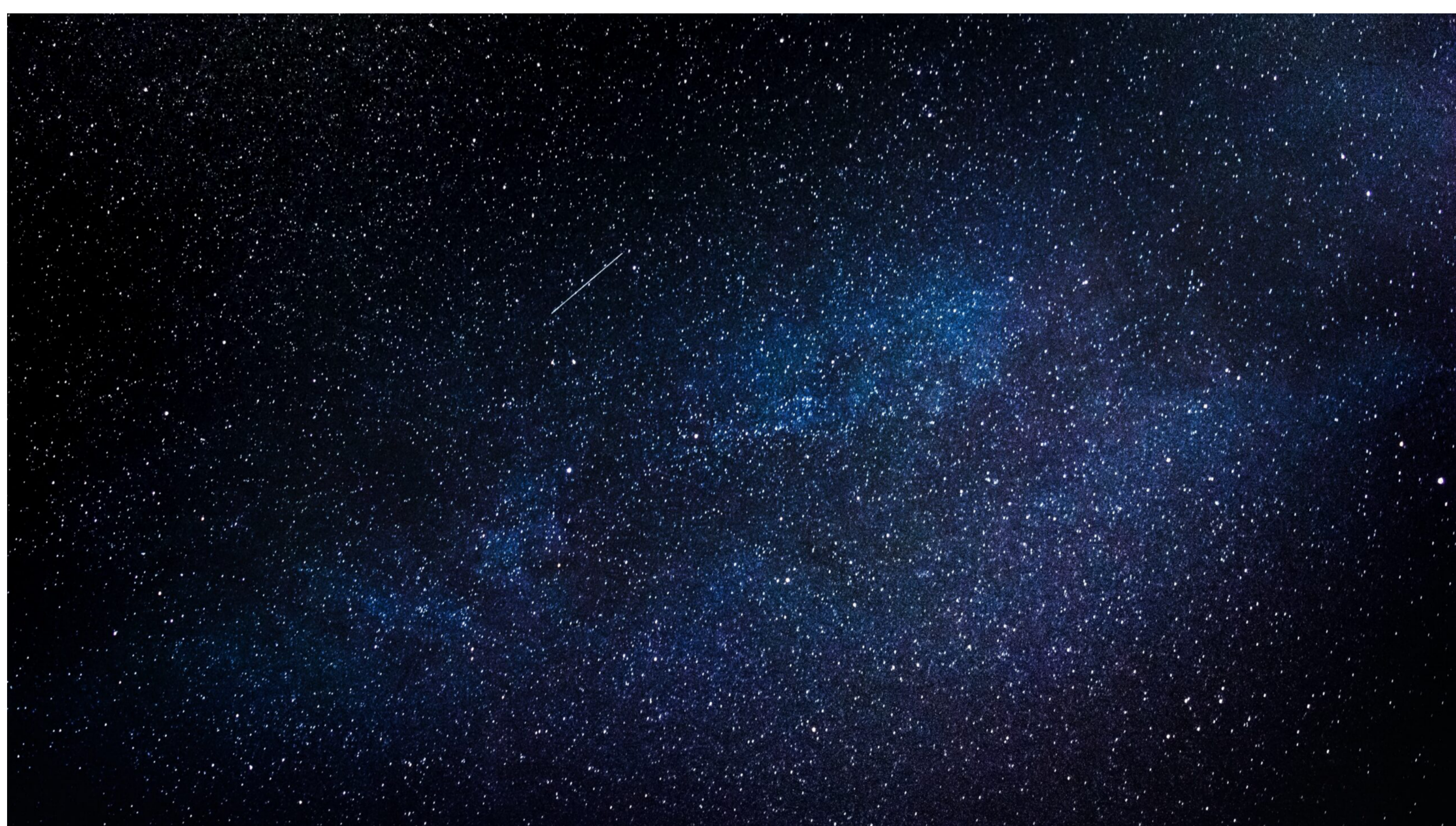
SPACE, TIME AND BIG BANG: AN ALTERNATIVE INTERPRETATION

Following the presentation of a simple objection to the concept of time and space of the special theory of relativity, a model of a five dimensional universe is introduced here. In this model, space and time are absolute, the speed of light is constant and properties following from the special theory of relativity are easily derived from it. Considering elementary particles as harmonic oscillators, some of their properties, like for example the uncertainty relations, can easily be obtained from the previous considerations. The last section, independent from the previous considerations, introduces a few models of elementary particles. The properties of one of these models give the possibility of a general interpretation of the redshift of galaxies, the cosmic background radiation, as well as the existence of dark matter.

Introduction

The theory of relativity has modified our view of space and time and the theory of quantum mechanics has shaken our notions of determinism and causality.

Accepted first with some reticence and sometimes with strong opposition, these new theories are now considered to be definitely established and then form an essential part of modern physics. There are still however a few dissident voices presenting valid objections to the above theories which are not as sound as they may appear. From time to time, new problems arise and modifications have to be brought on to fix them, making the whole structure a little more complex and also questionable. This is not necessarily the best way to resolve the difficulties, but it is apparently more palatable to the majority of physicists than a complete and painful revolution.



Our [essay writing services](#) experts consider here some new points of view that could possibly lead to alternative solutions of some actual difficulties. To start with, we present in section II, a simple but incisive objection to the special theory of relativity. It has been first mentioned in a very interesting book by Ja^rrnaker (see [JJ]) and it is given here in a slightly modified form. Not accepting the theory of relativity implies in some way finding an alternative to it or at least to some parts of it and this is done in Section III where a model of a five-dimensional universe is considered. This model has already been introduced in a previous paper (See [MFDIM]). Its main aspects are reconsidered here with some new points of views, in particular with more emphasis on the interpretation of the new dimension in relation to the dimension of time. Results following from the special theory can easily be obtained from this model. Length contraction and time dilation are not real, but apparent phenomena that depend on the system from which the observations are made. Time is absolute, but its dynamism, creating the feeling of perpetual movement, follows from its closed connection with the dimension introduced in this model. Finally the formula giving the equivalence of matter and energy is a direct consequence of our assumptions.

As a consequence of the section III, we consider in section IV a new formulation of some physical laws, especially those related to quantum mechanics. The last section does not depend on the previous ones and makes no assumption about the structure of space and time. It presents some models of new particles whose definitions are closely related to the fine structure constant. One of these models is of a special interest, because it gives in a simple and direct way an explanation or interpretation of the redshift of galaxies, the cosmic background radiation and the existence of dark matter. In case you have any difficulties in academic writing, [write my essays](#) companies will help you.

Time Dilation in Relativity

One of the most controversial consequence of the special theory of relativity has been the necessity to revise our concept of time, a revision motivated in particular by the phenomenon of the variability of the measure of time in different systems of reference. If you need an article on this topic, you can [order essay](#) on EssayHub easily. Having two systems in motion with respect to each other, the time measured in the first system is not the same as the one measured in the second system. In fact, time is dilated and that implies in particular that a person traveling at a very high speed relatively to a given system will not age in the same way as a person who is motionless with respect to this same system.

This dilation of time, that follows logically from the postulates of the special theory of relativity, is rather surprising. It has, in the years following the introduction of the theory, sparked strong reactions and antagonisms as well as a lot of disarray in the circle of scientists and philosophers. This has certainly been one of the main reasons for the original opposition to this theory of relativity. Presently, this opposition is rather reduced and episodic, though some revival of activity has occurred in recent years. It is evident that it cannot have much repercussion, given the fact that the special theory of relativity is considered by the great majority of physicists as definitively established. Any contestation will face either a deadly silence or the scorn of the establishment.

The purpose of this section is to draw attention to a specific objection made to the theory of relativity, objection which does not seem to be well known, but appears to have a considerable weight. This objection is expressed in a book by Julius J^rrnaker (see [JJ]). In this book, the author exposes his objections against relativity and develops his own theory. Just search [write my essay](#) service and you will get all your tasks done as soon as possible. The following consideration at the beginning of the book gives a simple, clear, but decisive objection to the theory:

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It is extremely odd how people have failed to observe that the theory of relativity contains a trivial self-contradiction in respect of time. A clock in a rapidly moving train does not show the same time as it does for a person standing near the track. However the actual train, with its movement relative to the track is itself a clock that shows the same time for both the passengers on the train and the person standing stationary alongside it.

Our purpose here is to illustrate briefly this objection and we refer the reader to the book mentioned above for more details. We consider the following thought experiment where we have a system consisting of a train T (denoted by * in the following diagram 1) that is moving on a rectilinear railroad at a constant velocity as measured from the railroad. The space work industry includes all private companies, military groups, and government initiatives to launch aircraft and satellites. Government agencies sponsor space operations to gather scientific and defense information, and private companies can send satellite communications or facilitate private travel. These integrated high-altitude flights involve complex procedures involving a wide range of experts. If you want to craft your perfect resume for getting a job in the space work industry then you need just use the help of resume writing services at <https://skillhub.com/resume-writing-service>. No mistakes, no worries, only professional resume writers.

On the railroad itself, sign-posts (denoted by +) have been laid at constant intervals. Next to each sign-post + stands a fixed observer. The time is measured in the following way by the observers along the railroad as well as by the conductor of the train who is located at the front of it: The unit of time is the time taken by the train to travel from one signpost to the next. The passage of the train at each sign-post is transmitted by light signals to all the observers located along the railroad.

The experiment starts when the train passes sign-post A in the direction of B and stops when the train arrives at B. Let us suppose that the number of sign-posts is n. The conductor of the train and the observer located at B compare their respective measures of time when the front of the train goes through B. It is immediate that, with the agreed definition of the measure of time, the length of this experiment will consist of n – 1 units of time for the observers as well as for the conductor, even if he were moving with uniform velocity with respect to the observers and the railroad. It follows then, contrary to the theory of special relativity, that the measure of time is the same for all observers, whether they are at rest or are moving at a constant velocity with respect to each other. There is no dilation of time as predicted by the theory of relativity. Knowing all this, you can write a great essay on the subject. It will not be easy, but you can always ask [write my paper for me](#) a professional writer. This will allow you to enjoy the process and be more efficient than if you were to do all the work yourself.

The preceding considerations can easily be applied to the thorny question of the differential aging of the twins when one of them is moving rapidly relative to the other. We can assume here that one of the twins is the conductor of the train and the other is any one of the observers along the railroad, in particular the observer located at B. It is evident that neither is older or younger than the other at the end of the experiment and there is no paradox. In order to avoid the transmission by light signals of the passages of the train to the observers, the above experiment can be refined in the following 4 way. The railroad is divided in two sections OA and AB with similar conditions

The only difference to this experiment is that it consists of two parts. First, the displacement of the train from O to A is used to allow the observers along the railroad to adjust and regulate their clocks from the movement of the train. The second part from A to B is the same as in the first experiment. During the two parts, the velocity of the train is constant. Here again it is clear that, contrary to the theory of relativity, no dilation of time is detectable in this experiment.