

# The Basic Idea

The basic idea of formulating an alternative model of the universe is to break away from the conventional thinking that the universe can be modelled of a pure mathematical form. That is, the mathematics of numbers being infinitely divisible. By accepting that the universe has a finite size of divisibility, there is a limit of how small a region or pocket of space can be for the physics of the universe to exist within. With such an acceptance, there is also a limit of how small a period of physical process (ie time) can exist for any physical process to be performed.

In brief, space and time as interpreted and defined has a finite lower limit from which the universe is built up from. This is the fundamental basis of an idea of building a model of a universe. From this basis of idea emerges the concept that

- **Processes of the universe are of an iterative nature**
- **The space of the universe is a structure of sub spaces**

To explain further

## **Processes of the universe are of an iterative nature**

The basic idea to model and explain the underlying physical processes that are prevalent and govern the workings of the universe is that all physical processes are of an iterative nature, and are not mathematically continuous or infinitely divisible.

What this means is that any fundamental physical process that is considered as a change of physical state has a definite and discrete single step of change. That is, a change of physical state of an entity from a physical state A to a physical state B that has no intermediary physical state C between these two states. Thus, at a certain level of order of magnitude, there is a measured and mathematical discrete graininess of physical transition of changes of the physical states of entities, and no measured or mathematical treatment of these physical transition of changes of the physical states can be considered as continuous and infinitely divisible.

If a physical process is considered as being able to be divided into smaller transitions of changes of physical states, then the process is not a fundamental process, but is one of an accumulation of fundamental physical processes.

Accepting that a fundamental physical process of transformation is discrete, then that physical process of transformation of physical states can be considered as being performed in a given period of iteration to be completed.

It can then be argued that all fundamental physical processes of transformation of physical states of different entities that are the same and equivalent in every circumstance will then undergo this fundamental physical processes of transformation of physical states in the same period of iteration.

With this one simple idea, a whole model of the functioning of the universe can evolve.

As each change of physical state is considered in the context of multitude of uncountable entities, where these changes of state are a product of and cause of interactions between entities, a complex system of behaviours emerges. A complex system where one progression from one physical state A to another state B is an iterative process of progression in discrete and non continuous steps on the lowest and most fundamental level of physical processes.

A progression from one physical state to the next in a consistent and constant period of duration can be interpreted as a discrete and iterative progression of the state of physical system that is a progression in time of that physical system. One being the entire universe itself.

As each iteration of a physical state of one or more entities is completed, a new set of conditions and initial physical state of that one or more entities is set up to iterate to a new physical state. A repetitive and recursive process that is a form of self interaction of the universe with itself, progressing from one physical state of being to the next that can be modelled as an iterative process of steps from one initial physical state A to an end physical state B in one single step, where the physical state B is a basis of the initial conditions for the next iteration process. This is the basic idea of the functioning of the workings of the universe.

## **The space of the universe is a structure of sub spaces**

The acceptance that the space of the universe is subdivided into small pockets or cells of sub spaces is equivalent to accepting an aether structure of space. The shape and size and nature of these cells along with the interactions between neighbouring cells constitutes the physical interactions and structure of the universe.

Other basic ideas that have as a basis for a model of the universe is that the universe is the space that matter and energy exist within, and that space itself is a field of energy from which matter condenses out of

and in which energy is propagated through .

**The Universe is the Space in which matter and humans observe and exists within.**

The basic idea to model and explain the universe as an existing entity in which all physical matter and interactions of physical entities are part of, is to consider that the space that is considered to be observed in which all matter exists within is a medium, substrate, fabric or whatever one wants to call it of the universe itself. That is, the space humans observe through the human senses is a medium analogous to, but perhaps vastly different from that of a medium of a fluid or solid of matter in which energy is propagated and interactions performed.

Such a concept is to state that the past concept of space being an aether in which it has structure akin to that of a fluid or crystalline solid exists. Accepted convention is that experiments such as the Michelson-Morley experiment proved that such an Aether does not exist. However, this is an idea that will not go away, and as such, an investigation to create an aether model of space needs to be investigated.

**The Space in which matter and humans observe and exists within is a field of energy.**

The basic idea that the universe is the space that is observed, has a concept and idea that the space of the universe is an energy field, and that disturbances of that energy field is what is observed as photons and matter. Photons being waves of propagation of disturbances of this energy field, and matter being some kind of self interaction of the energy field to create pockets or regions of space that have emergent properties that define them as particles of matter. This is not new as quantum physics proposes a similar concept. However here, space itself is the medium on interaction, not force carrying particles.

This is a basic idea without evidence, so it is a concept of speculation and it may be that in future this proposal may be withdrawn.

These are the basic ideas that form the basis of a model of the universe. What remains is to argue for such a model to be considered to be viable and investigated to see it can hold out as a model of the real universe. If such a model can be found to mimic the real universe, then a new understanding of the universe may be at hand to advance knowledge and build better models of observed physical phenomenon of nature.