

THE ORIGIN OF LIFE

Can there be life on other planets? Conditions for its existence



Panspermia, a theory for the origin of life

Is there life on other planets? Is it possible? What circumstances would have to be for life as we know it on our planet Earth, which develops exuberantly, it is of other planets? **What are the chances that life on other planets, however distant they are?**

And the most important question, whether there is any possibility, but the distance makes communication impossible, **Could there intelligent life on those planets?**

Since man is set at the stars, these questions have arisen him , pounding his mind, as some of the big questions that should be answered in our modern times. In this informative article will try to find an answer.

One day, a scientist tried to estimate the chances of life on other planets would simply calculating statistically your chances as variables sine-qua-non life exist on earth. And the result, he estimates and assumptions on the variables involved, indicated that 10 civilizations would be detectable. **It was about the Drake equation** , which took into account several variables to calculate this possibility, but that is not considered valid (even you can considered science) because it depends on a highly subjective statistical approaches, can give very different results, plus it did not take into account important elements for life not then know and we will see now. Maybe the variables taken into account were very ambiguous, based on mere conjecture; but if we go to the merits, we are on track, because how **what conditions have to have a planet so that it can develop life** ? That is the million dollar question ... scientists have different opinions, and although I am not one of them, if we follow the logic and my (few, I must say) knowledge of the origin of life and the influence of several factors that make the earth a perfect breeding ground for her culture, can draw some interesting conclusions.

The origin of life

To know what life needs to develop, **first we look at the only example we have; evaluate under what circumstances it could arise in our beloved Earth (Abiogenesis) to extrapolate to other situations.**

On Earth, as we shall see, there have been a series of coincidences which would be as barren and inhospitable as Mars.

We do not know for sure how life came to Earth, some argue that it is of extraterrestrial origin (Panspermia or Transpermia) but wherever it may be, Life had to start somewhere, and given the appropriate conditions on Earth, and often the simple answer is correct, it is logical to think that **life originated on Earth itself.**



One of the most highly regarded theories by the scientific community is that **the high energy from volcanoes, lightning , and ultraviolet radiation could have helped trigger chemical reactions in a primitive giant ocean (Panthalassa) producing more complex molecules** from simple compounds such as methane and ammonia.

Among these simple organic compounds would be the building blocks of life are built.

As more this "organic soup", the different molecules react with each other. Sometimes more complex molecules were obtained. The presence of certain molecules may increase the reaction rate.



Evolution of Life (NASA)

This went on for quite a while (billion years), more or less random reactions until a new molecule by chance was created: the "replicator" (it was created and undid many times until survived). This had the bizarre property of promoting chemical reactions to get a copy of itself, which really started the trend. Other theories have been postulated replicator. In any case, DNA replicator has replaced. All known life (except some viruses and prions) use DNA as their replicator, in an almost identical. (Wikipedia). **Based on the original terms of the Earth where life began** (water, temperature, etc.) **can surmise about the conditions required for the same so that it came to be started on any other planet** , with varying success, reaching complex or staying in the early stages of our evolution beings.

BUSCADO

Características que debería tener un planeta para ser considerado apto para la vida tal como la conocemos.

AGUA

Es imprescindible. Debe mantenerse en estado líquido por largos periodos.

ATMOSFERA

Debe tener algún tipo de "filtro" para los rayos UV, igual que la atmósfera de la Tierra.

SUPERFICIE

Debe ser rocosa, igual que nuestro planeta.

CAMPO MAGNETICO

Debe tener la fuerza como para protegerlo de los rayos cósmicos.

ORBITA

Debe ser lo más circular posible para mantener una distancia estable respecto de su estrella.

Un satélite (como la Luna) puede ayudar a estabilizar el eje de rotación, evitando el bamboleo.

AREA DE HABITABILIDAD

Se calcula en base a la distancia de un planeta con su estrella. Allí es posible tener temperaturas que conserven el agua líquida.



⁽¹⁾ Cifras en relación a la órbita de la Tierra ⁽²⁾ Cifras en relación a la masa del Sol

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