# IS THERE LIFE ON OTHER PLANETS?

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**Annotation.** This article learns the scientific researches about the exsistence of life on other planets,one of the most discussed topic in our Austronomy.The main objectives of this research to explore weather conditions and signs of life from other planets, This article explores the main necessities for life such as the presence of liquid water, energy sources, and essential chemical elements.Furthmore this analysis study both sides supporting and opposite side of extraterrestrial life and how this evidence is researched,while any kind of clear proof has not been confirmed yet.Scientists recommend to find a possibility of life from somewhere else in the universe is important.The article conclude that current operations and with the help of new technologies may give a direct answer to this question.

**Keywords:** Austronomy, Telescope, Universe, Solar System, NASA, SITE, microbial, Euopa, Methane.

**Annotatsiya.** Ushbu maqola boshqa sayyoralarda hayot mavjudligi haqidagi ilmiy tadqiqotlarni o'rganadi, bu bizning avstronomiyamizdagi eng ko'p muhokama qilinadigan mavzulardan biridir. Ushbu tadqiqotning asosiy maqsadlari ob-havo sharoiti va boshqa sayyoralardan hayot belgilarini o'rganish. Ushbu maqolada suyuq suv, energiya manbalari va muhim kimyoviy elementlarning mavjudligi kabi hayot uchun asosiy ehtiyojlar o'rganiladi. Bundan tashqari, ushbu tahlil har ikki tomonning hayotini qanday qo'llab-quvvatlayotganini va qo'shimcha dalillarni o'rganadi. Olimlar koinotning boshqa joyidan hayot bo'lish imkoniyatini topishni maslahat berishadi. Maqolada hozirgi operatsiyalar va yangi texnologiyalar yordamida bu savolga to'g'ridan-to'g'ri javob berishi mumkin, degan xulosaga keldi.

**Kalit so`zlar:** Astranomiya, Teleskop, Koinot, Quyosh tizimi, NASA, SETI, mikroorganizmlar, Euopa, Metan.

**Аннотация.** В этой статье рассматриваются научные исследования существования жизни на других планетах, одна из наиболее обсуждаемых тем в астрономии. Основные цели исследования — изучение погодных условий и признаков жизни на других планетах. В статье рассматриваются основные условия для жизни, такие как наличие жидкой воды, источников энергии и необходимых химических элементов. Кроме того, в этом анализе изучаются как аргументы в пользу существования жизни на других планетах, так и аргументы против, а также методы исследования этих доказательств, хотя никаких четких подтверждений пока не получено. Ученые считают важным найти доказательства существования жизни где-либо еще во Вселенной. В заключение статьи говорится, что текущие исследования и использование новых технологий могут дать прямой ответ на этот вопрос.

**Ключевые слова:** Австрономия, телескоп, Вселенная, Солнечная система, НАСА, SITE, микроорганизмы, Европа, метан.

## Introduction

Life is a complex biological phenomenon characterized by the ability of an organism to grow, reproduce, respond to stimuli, maintain homeostasis, and adapt to its environment over



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time. In scientific terms, according to NASA, life can be defined as “a self-sustaining chemical system capable of Darwinian evolution The detection of possible biosignatures, including liquid water, energy sources, atmospheric gases, organic molecules, and habitable environmental conditions, is essential in assessing the potential existence of life on other planets.Within the several decedec austronaunts searching for a extraterrestrial life from other planets which are located in the Solar System(the solar system is a gravitationally bound system comprising the Sun—a star—and all the objects that orbit it, including eight planets, over 300 moons, dwarf planets, and millions of asteroids, comets, and meteoroids. Formed 4.568 billion years ago, it is located in the Milky Way's Orion Spur.) such as Mars, Europa, Enceladus.

Recent studies indicate that scientists managed to learn the life exsistense on other planets which called “K2”, with the kelp of James Webb Space Telescope they found out about the habitable zones, but this mission has not concluded. In addition,another studies are going on Mars and it revealed that there was a microbial life might have existed in the planet`s ancient past.Discoveries shows that once there was a liquid water and habitable weather conditions. Overall, while these discoveries do not provide definitive proof, they significantly strengthen the argument that life beyond Earth is scientifically plausible. Many of these planets are located in the so-called habitable zone, where conditions may allow the existence of liquid water. Additionally, life on Earth appeared relatively quickly after the planet became habitable, which suggests that the emergence of life may not be an extremely rare event.

On the other hand, there are also strong arguments against the existence of life beyond Earth. Despite decades of research and technological advancements, no direct evidence of extraterrestrial life has been found so far. This lack of confirmation raises doubts about how common life actually is in the universe. Furthermore, the conditions required for life are highly complex and specific. Even slight changes in temperature, atmospheric composition, or radiation levels can make a planet uninhabitable. Therefore, some scientists argue that while life may be possible, it could be extremely rare.

The debate surrounding the existence of life on other planets remains one of the most intriguing topics in modern science. While there is currently no direct proof of extraterrestrial life, the growing body of scientific evidence suggests that the possibility cannot be ignored. The discovery of habitable exoplanets, the presence of organic molecules in space, and the evidence of past water on Mars all contribute to a more optimistic perspective.From a critical point of view, it is important to recognize that scientific conclusions must be based on verifiable evidence rather than assumptions. However, the rapid development of space exploration technologies and the increasing number of discoveries indicate that humanity is moving closer to answering this fundamental question. In this context, the argument supporting the existence of life appears more convincing, as it is supported by both statistical probability and empirical observations.

In conclusion, the question of whether life exists on other planets remains unanswered, yet it continues to inspire scientific research and exploration. Although no direct evidence has been confirmed, recent discoveries and ongoing studies strongly suggest that the conditions necessary for life may exist elsewhere in the universe.

Taking into account the vastness of space and the increasing number of potentially habitable planets, it is reasonable to assume that life beyond Earth is possible. Future advancements in technology and further space missions may eventually provide clear and

definitive answers to this question.then, the search for extraterrestrial life remains one of the most exciting and important endeavors in modern science.

**References:**

1. https://science.nasa.gov/exoplanets/search-for-life/
2. https://astrobiology.nasa.gov/about/
3. https://exoplanets.nasa.gov/
4. https://science.nasa.gov/exoplanets/
5. https://mars.nasa.gov/
6. https://astrobiology.nasa.gov/