

Mars Colonization Project

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In recent years, we hear more and more about Mars colonization project. For nearly two decades, Elon Musk has passionately appealed to fans of the U.S. space company SpaceX with the goal of colonizing Mars (“Kasei”, 2020). However, few people seem to have a proper understanding of the benefits and risks of moving to Mars. Also, I feel that the feasibility of colonizing Mars is not clear. Therefore, I investigated the benefits, risks, and feasibility of Mars colonization.

First, the benefits of Mars colonization will be mentioned. A major advantage of Mars colonization is that it increases the chances of human survival, even if resources on Earth run out. The Mars colonization project also has the potential to greatly advance science. Mars colonization is a very challenging mission that will require new and innovative advances in technology and science. The potential for further advances in science and technology can be considered a benefit of the Mars colonization project.

Second, the risks of Mars colonization will be referred to. The risks associated with colonization itself are in the Martian environment (Lee & Johansen, 2019). In Mars, the average temperature is minus sixty-three degrees Celsius and can drop to minus one hundred twenty-six degrees Celsius on some days. In addition, Mars has low gravity and very high radiation levels. Radiation in space is one hundred times higher than on the ground. Cosmic radiation damages DNA and causes problems with blood circulation. Low gravity and cosmic radiation affect the visual system in particular. NASA considers that the top health risk in space missions and Mars colonization is vision. In fact, serious ophthalmologic abnormalities have been documented among astronauts (Aleci, 2020). Another risk-generating factor is the human factor. Many engineers and scientists try to build fault-tolerant equipment, but small mistakes can lead to major disasters. For example, on January 28, 1986, NASA’s space shuttle Challenger was involved in an accident that killed all its crew member during launch due to a faulty O-ring sealing the booster. This was mainly due to the lack of experience in launching space shuttles in special environments and inadequate testing. Thus, any defect in a system designed for Mars exploration could lead to disaster.

Finally, I suggest the feasibility of a Mars colonization project. To sum up, it would be very difficult to colonize Mars at this time. In addition to the enormous cost of going to Mars, the chances of getting there safely and without accidents are not high. Even if they were able to reach Mars, it would be difficult for them to lead a stable life

on the planet. It is not known whether the adverse effects on the human body caused by living in the Martian environment can be treated with modern medical technology. If we build domes or underground dwellings on Mars and live in them all the time, we may be able to avoid exposure to cosmic rays and the negative effects of low gravity. However, living in such an enclosed environment may cause problems such as depression and high blood pressure. In light of the above, further development of science and medical technology will be necessary to realize Mars colonization. Although the feasibility of Mars colonization is considered low at this stage, if realized, it would bring many benefits to mankind.

References

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