

# How much money does it take to get to Earth 2 and how long does it take?

After calculating, these numbers will surprise you.

**The planet Proxima b** - "*The Second Earth*" has been approved by the European Space Research Organization in the Southern ESO hemisphere. According to scientists, it is possible that on this planet there is liquid water, a condition for survival.

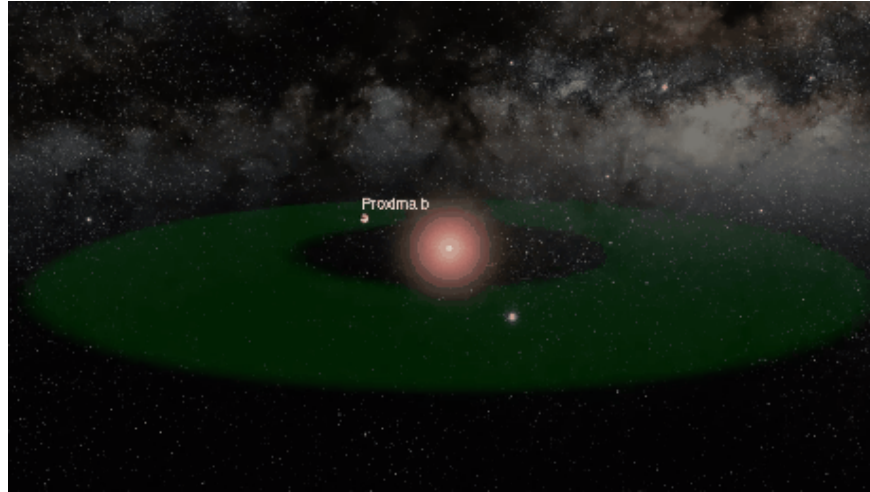
Proxima b is located in the life-sustaining region of the **Finite - Proxima Centauri**, the closest Earth star (4.2 light) and has a mass of only 1.3 times more than Earth. This may be the planet most capable of sustaining life near the Earth today.



However, the figure of 4.2 light years is still quite vague for many people. To better visualize this distance, how long will it take to calculate the process from Earth to this new "neighbor"? And how much does it cost?

## The distance you need to go to the 2nd Earth

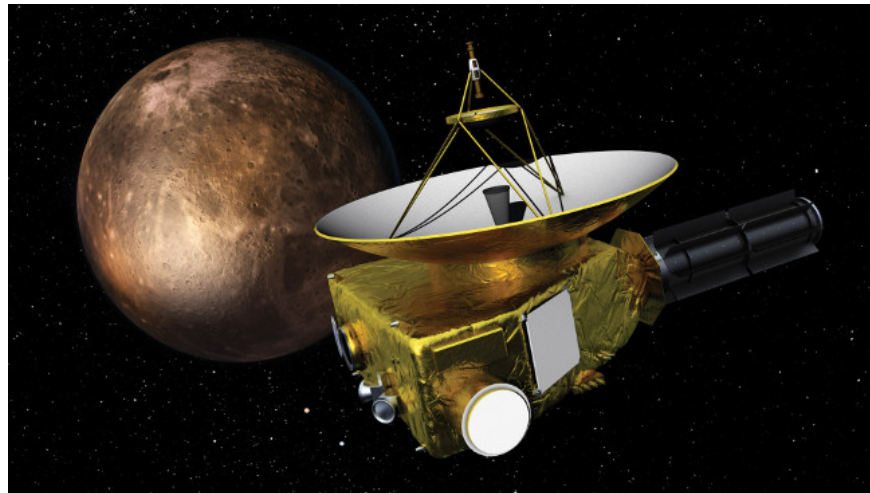
A light-year is the distance that light can reach within a year. And the speed of light is 300,000 km / s. That is, in a year, the light is about 9.5 trillion km, and after 4.2 years will be . **39.9 trillion km**, a figure so terrible, about 100 million times the distance from the Left Land to the Moon.



**39.9 trillion km** is the distance from the Earth to the planet. The distance from Proxima b to Venus is about 7 million km. That means to get to Proxima b we may have to move more, or it may shorten 7 million km. However, with the distance of 4.2 light-years away, this 7 million km is just like salt.

**So, how long does it take us to go all the way?**

New Horizon, the fastest spaceship currently has a speed of about 58,000 km / h. At this speed, we need about 688 million hours, or **78 thousand years** , to reach the planet.



With New Horizon, the fastest spacecraft today, Proxima Centauri access is also up to 83,000 years

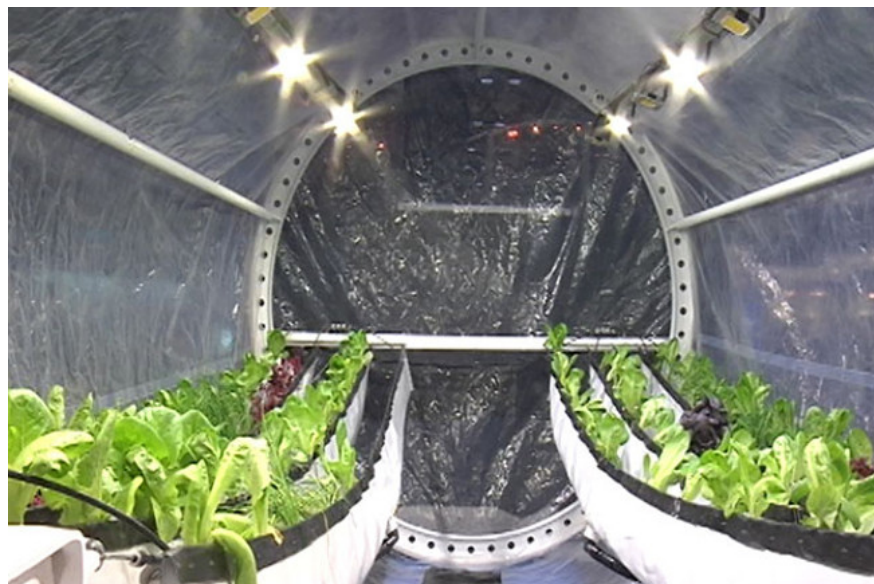
If we can build a **spacecraft with a speed of about 20% of the speed of light** , that is, the process of moving to finite is only 22.5 years.

**So what is the cost for a trip to "Second Earth"?**

In fact, the amount spent on spacecraft and materials will not be much different from the other trips we have done before, because at the most costly material is the time to bring the spacecraft into space. . According to information from NASA, the cost for spacecraft with materials fell to about **\$ 2.5 billion** .



During a journey of more than 20 years, spacecraft need a certain amount **of oxygen and food** to sustain life. Of course, with long trips, the ship is required to equip the area to allow the crew to self-supply food. However, transportation and maintenance costs are also not a small number. According to NASA estimates, the number will fall to about **\$ 5.9 billion per person for food, and \$ 1.3 billion per person for oxygen.**



These self-catering cages are mandatory for long trips

Next is **drinking water** , an extremely important issue. According to calculations, each adult needs about 10.6 tons of water per year. In addition, the self-rearing area looking for food also needs about 3.6 tons of water. Although the crew has a system to purify urine for reuse, **the cost of transporting and maintaining drinking water will be around \$ 43 billion per person.**

Not yet! When it comes to proxima b, people need **a security cabin** , at a cost of about \$ 267 million per person.

One consolation, however, is that when we set foot on the " *Second Earth* ", we can take advantage of the self-sufficient food available in the spacecraft. But in the long run, mankind still has to expand production, and to do so requires machines. The cost of transporting machinery by ship falls to about 15.4 million USD.



Each cabin like this costs about 267 million USD

In particular, those who submit Proxima b need to maintain communication with the Earth. This cost depends on many factors, so it is difficult to give an exact number. Only know that the cost of communicating to Mars falls to about **100 USD / Mb** .

In short, our second migration to Earth will cost about **US \$ 54 billion per person - about VND 1.1 million** . If you take into account the cost of communication, the total amount will probably be about . 3 times that number, or even more.

\* Costs are calculated based on NASA estimates.

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