

# Geospatial expert on newly discovered planet Proxima b

August 30 2016, by Jason Kornwitz

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An artist's impression of the planet orbiting Proxima Centauri. Credit: ESO/M. Kornmesser

Last week, an international team of astronomers [announced](#) the discovery of a planet orbiting Proxima Centauri, our solar system's

closest neighbor. Called Proxima b, the planet is 4.2 light years away from Earth—the closest any extrasolar planet is ever likely to be—and lies within the potentially habitable zone of its star, raising the possibility for life.

Here, Cordula Robinson, associate teaching professor in the Geographic Information Technology program, who has worked at the German Aerospace Center and studied the crustal dichotomy of Mars, explains why we should all take note of our nearest interstellar neighbor—even if it might forever remain out of human reach.

**So far, astronomers have discovered more than 3,000 planets orbiting stars beyond our sun. What, then, makes the discovery of Proxima b so intriguing to astronomers, and why should all of us take note?**

It is Earth-like, rocky, perhaps with an atmosphere, and orbits our sun's nearest star. Most exciting of all is that it may be warm enough for [liquid water](#) to be stable. Liquid water means the planet may be habitable and that life outside of our solar system is a possibility. It says we really might not be alone. When we think about the cosmos—and the expansiveness of the universe—it almost defies intuition that the Earth is home to its only life form. Yet direct, tangible, and predictable evidence to support such speculation has evaded us until now. Proxima B has the potential to change that and open inquiry into extraterrestrial existence all with a scientific premise. It's quite thrilling. I suspect it will jump-start the search for other similar, new planets around stars close to us, with the idea of exploring the potential for life beyond Earth.

**As of now, a journey from Earth to Proxima b would take more than 80,000 years. And it wouldn't even be**

**there by the time we arrived. As a New Yorker story explained, "in the next eighty thousand years, Proxima Centauri and its planet will have moved two light-years farther from Earth, adding another forty thousand years to the trip." Do you see a future for our species out there in the cosmos, a time when humans will live not on Earth but on another planet, out among the stars?**

Yes, it's a long way off but still quite close to us in astronomical terms. It is 4.2 light-years away, meaning when astronomers look at it they are seeing it as it was 4.2 years ago and not as it is today. That is how long it takes the light to reach us. By comparison, it takes eight minutes from the light of the sun to reach the Earth. Astronomy is so fascinating in that respect. It offers a way for us to look back in time. I think the idea of humans inhabiting other planets, and finding new neighbors, is what motivates and inspires laymen, scientists, and revolutionaries alike, from you and me to Stephen Hawking and Elon Musk. It engages and excites the imagination. It can be humbling to realize that we are less than wee dots in the grander scheme of things and wonderful too. We shouldn't forget the critics, however, who recognize that such ideas should not come without reservation—for instance, that we recognize our footprint on the Earth before we venture forth with boundless enthusiasm and proliferation.

**In April, Russian entrepreneur Yuri Milner and theoretical physicist Stephen Hawking unveiled a \$100 million initiative, called Breakthrough Starshot, to design a tiny, light-propelled spacecraft that could reach the Alpha Centauri system in 20 to 30 years.**

**And The New York Times noted that Proxima b's discovery could provide the impetus for planet-finding telescopes. Even if humans never find out what it's like to live on another planet, isn't there value in harnessing scientists' cosmic curiosity to create new technology aimed at enhancing our understanding of the world around us?**

If Proxima b is a real planet, a trip there is not out of the question. It would certainly require technological advances to get there faster than what we're used to—it took a decade to reach Pluto and this is 8,000 times farther away. Let us see what the future holds. Scientific giants like Steve Hawking, with financial backing by Yuri Milner, who are pushing the envelope and pressing ahead may be sufficient impetus to leap forward and inspire a new space race into the "infinite universe." It may help to reinvigorate the energy of Apollo days that so inspired the world during the tumultuous times of the 20th century. The Apollo missions made staggering contributions to current-day technology, and with them brought huge added value, from Teflon and solar panels, to electronics and computing systems, to the development of liquid-cooled garments that firefighters use. Even Intel was founded. It was definitely one of the greatest engineering and scientific episodes of all time, when things never thought of before became realized. Our natural curiosity, alongside the implications that Proxima brings with respect to extraterrestrial life, may unleash such potential again and reinvigorate and inspire new "breakthroughs."

Provided by Northeastern University

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