



## Mapping the Nearest Stars for Exotic Habitable Worlds

Exoplanets are planets orbiting stars other than the sun. Hundreds of exoplanets are known and thousands of more planet candidates have been found. Until now, the dominant focus on habitable worlds has been on Earth-like planets, because Earth is the only known planet with life. Yet exoplanets are astonishingly diverse—in terms of their masses, densities, orbits, and host star types—and this diversity motivates a radical extension of what conventionally constitutes a habitable planet. The race to find habitable exoplanets has accelerated with the realization that “big Earths” transiting small stars can be both discovered and characterized with current technology, such that the ambitious goal of inferring signs of life via biosignature gases in an exoplanet atmosphere, once only a futuristic thought, is now within reach.

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