Closest Earth-like planet 'stroll across park'

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CAPE CANAVERAL, Fla. (AP) -- Earth-like worlds may be closer and more plentiful than anyone imagined.

Astronomers reported Wednesday that the nearest Earth-like planet may be just 13 light-years away - or some 77 trillion miles. That planet hasn't been found yet, but should be there based on the team's study of red dwarf stars.

Galactically speaking, that's right next door.

If our Milky Way galaxy were shrunk to the size of the United States, the distance between Earth and its closest Earth-like neighbor would be the span of New York's Central Park, said Harvard University graduate student Courtney Dressing, the study's lead author.

"The nearest Earth-like planet is simply a stroll across the park away," she said at a news conference in Cambridge, Mass.

Small, cool red dwarfs are the most common stars in our galaxy, numbering at least 75 billion.

The Harvard-Smithsonian Center for Astrophysics team estimates 6 percent of red dwarf stars have Earth-like planets. To qualify, the planet must be roughly the size of Earth and get as much light from its star, as Earth does from the sun.

This high rate of occurrence should simplify the search for extraterrestrial life.

As the report's co-author, David Charbonneau, noted, he's an astronomer, but hopes to become a biologist if that search succeeds.

These planetary candidates are quite different than Earth because of the differences between their red dwarf stars and the sun, Charbonneau told reporters.

Because the red dwarfs are so much smaller, potentially habitable planets would need to orbit much closer than the Earth does to the sun. They likely would be rocky, the astronomers said, but different types of atmospheres could lead to different types of life.

Red dwarf stars also can be old - far older than our sun - which means their planets could be much older than Earth and their potential life forms much more evolved.

Our solar system is 4.5 billion years old, for instance, while some red dwarf stars are 12 billion years old. One of these target planets could be 12 billion years old as well, the scientists said.

Future spacecraft should be able to locate these planets and provide environmental clues.

California Institute of Technology astronomer John Johnson, who was not involved in the study, called the proximity of the nearest Earth-like planet "extraordinarily exciting."

"It's right within reach," Johnson said, and future efforts will put scientists "hot on the trail of finding life elsewhere in the galaxy."

These newest findings are based on data from NASA's Kepler space telescope, launched in 2009. They will be published in "The Astrophysical Journal."

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