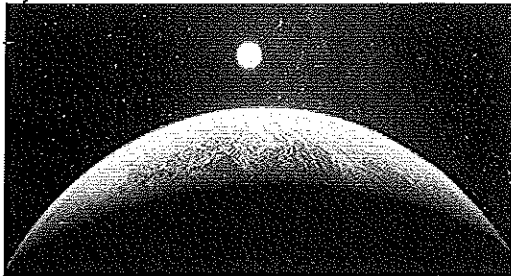


Another Earth?

Scientists may have discovered the most earthlike planet yet

September 14, 2011

By Michael D. Lemonick for TIME



M. KORNMESSE—ESO

This illustration shows the newly discovered planet 85512 b orbiting its sun.

Since the start of the modern planet-hunting era more than 15 years ago, scientists have said their search wasn't about astronomy; it was about biology. These planet hunters are looking for earthlike life on distant worlds. That means the planets would have to be like ours too. They'd have to be about the same size. They'd have to have the same rocky core. They'd also have to orbit their parent stars at just the right distance to have liquid water, the main ingredient for life. Scientists call this the habitable zone.

But while the big discovery hasn't been made yet, researchers might be getting close. On Tuesday, at a conference in Jackson Hole, Wyoming, a team of European scientists revealed the discovery of at least 50 new worlds. One of them, known as HD 85512 b, circles a star about 36 light-years away in the constellation Vela. The planet sits just inside its sun's habitable zone. Though, it is four times closer to its star than Earth is to the sun.

"It's a beautiful detection," says Geoff Marcy, who leads a different team of planet hunters at the University of California, Berkeley. "And it's [possible] that it could be habitable."

Eyes to the Skies

Possible is the best anyone can say for now. A clearer answer will have to wait for more powerful telescopes to be built. If the answer turns out to be yes, the question of whether 85512 b actually *is* home to life will depend on many factors. Does 85512 b have any water to start with? Does it have a solid, rocky surface on which life can live? Does it have a cooling cloud layer to avoid overheating from its sun?

Nobody knows. It would be an unlikely bit of luck if the newly discovered world did have all the right stuff for life. After all, so many conditions must fall in line. The new world is still a big deal, though. It proves that astronomers now have the technology to find these kinds of planets.

Most of the big planet announcements over the past two years have come from the Kepler space mission. The high-powered, orbiting telescope is searching a section of the Milky Way galaxy for earthlike planets by studying regular dips in the brightness of stars. These tiny dips in brightness are created by planets passing in front of their stars as they orbit.

The 50 new planets announced in Wyoming were discovered from the ground with a device called the High Accuracy Radial velocity Planet Searcher, or HARPS. HARPS uses a telescope at the European Southern Observatory in Chile to look for a star's slight wobble. The wobbles occur when the gravity of an orbiting planet tugs the star one way, then the other. The very first exoplanets were found this way. An exoplanet is a planet that orbits a distant star other than our sun.

The Start of Something Great

With so many unanswered questions, it's still a long shot that 85512 b will turn out to be the first known exoplanet to support life. Even so, its discovery shows how far planet hunting has come. With all of the searches going on worldwide, and with increasingly powerful technologies, it's just the beginning in what could be a series of extraordinary finds.

Complete the guided summary below using the article, "Another Earth?" and the diagram you completed today.

In "Another Earth?" by _____, he writes about _____

_____. One of the main ideas of the piece is

_____.

Lemonick points out _____

_____. He also says _____

_____.

_____.

_____.

_____.

The author...			
argues	emphasizes	mentions	suggests
asserts	examines	notes	
concludes	explores	points out	
considers	focuses on	says	
discusses	implies	states	