

US astronomers launch search for alien life on 86 planets

May 14 2011, by Kerry Sheridan



This picture taken on March 2010 shows the Karoo Array Telescope construction site in South Africa. A massive radio telescope in rural West Virginia has begun listening for signs of alien life on 86 possible Earth-like planets, US astronomers said Friday.

A massive radio telescope in rural West Virginia has begun listening for signs of alien life on 86 possible Earth-like planets, US astronomers said Friday.

The giant dish began this week pointing toward each of the 86 planets -- culled from a list of 1,235 possible planets identified by NASA's Kepler [space telescope](#) -- and will gather 24 hours of data on each one.

"It's not absolutely certain that all of these stars have habitable planetary systems, but they're very good places to look for ET," said University of

California at Berkeley graduate student Andrew Siemion.

See also: [SETI survey focuses on Kepler's top Earth-like planets](#)

The mission is part of the SETI project, which stands for Search for Extra Terrestrial Intelligence, launched in the mid 1980s.

Last month the [SETI Institute](#) announced it was shuttering a major part of its efforts -- a 50 million dollar project with 42 telescope dishes known as the [Allen Telescope Array](#) (ATA) -- due to a five million dollar [budget shortfall](#).

ATA began in 2007 and was operated in partnership by the UC Berkeley [Radio Astronomy](#) Lab, which has hosted several generations of such experiments. It was funded by the SETI Institute and the National Science Foundation (NSF).

With ATA's dishes in hibernation for now, astronomers hope the powerful Green Bank Telescope, a previous incarnation of which was felled in a windstorm in 1988, will provide targeted information about potential life-supporting planets.

"Our search employs the largest fully steerable radio telescope on the planet, and the most sensitive radio telescope in the world capable of undertaking a SETI search of this kind," Siemion told AFP.

"We will be looking at a much wider range of frequencies and signal types than has ever been possible before," he added, describing the instrumentation as "at the very cutting edge of radio astronomy technology."

The surface of the telescope is 100 by 110 meters and it can record nearly one gigabyte of data per second, Siemion said.

The 17 million pound (7.7 million kilogram) telescope became operational in 2000 and is a project of the NSF's National Radio Astronomy Observatory.

"We've picked out the planets with nice temperatures -- between zero and 100 degrees Celsius -- because they are a lot more likely to harbor life," said physicist Dan Werthimer.



The National Radio Astronomy Observatory in Green Bank West Virginia.
Image credit: Paul C. Smith, provided

Werthimer heads a three-decade long SETI project in Puerto Rico, home of the world's largest radio telescope, Arecibo. However that project could not observe the same area of the northern sky as the Green Bank telescope, he said.

"With Arecibo, we focus on stars like our Sun, hoping that they have planets around them that emit intelligent signals," Werthimer said in a statement.

"But we've never had a list of [planets](#) like this before."

The Green Bank [Telescope](#) can scan 300 times the range of frequencies that Arecibo could, meaning that it can collect the same amount of data in one day that Arecibo could in one year.

The project will likely take about a year to complete, and will be helped by a team of one million at-home astronomers, known as SETI@home users, who will help process the data on personal computers.

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