

Searching for ET: Hawking to look for extraterrestrial life

July 20 2015, by Gregory Katz



Renowned physicist Stephen Hawking sits in front of a presentation image during a press conference in London, Monday, July 20, 2015. Renowned physicist Stephen Hawking and Russian tech entrepreneur Yuri Milner are pushing the search for extraterrestrial life into higher gear. The pair said Monday the \$100 million "Breakthrough Initiatives" program funded by Milner will harness computer power as never before in a search of the heavens. (AP Photo/Matt Dunham)

Renowned physicist Stephen Hawking and Russian-born billionaire Yuri

Milner on Monday announced an ambitious bid to combine vast computing capacity with the world's most powerful telescopes to intensify the so far fruitless search for extraterrestrial life.

Hawking, who speaks using a computer-generated voice due to the effects of motor neuron disease, explained the reason for the \$100 million project: "We are alive. We are intelligent. We must know."

Milner, who made a fortune through investments in companies like Facebook, said the power of Silicon Valley technology and innovation would be used.

"The scope of our search will be unprecedented: a million nearby stars, the galactic center, the entire plane of the Milky Way and 100 nearby galaxies," Milner told a packed press conference at the Royal Society in London.

Organizers say the "Breakthrough Initiatives" project, also endorsed by other prominent British scientists, is the biggest ever scientific search for alien life. It includes a "listening" program—the effort to analyze vast amounts of radio signals in search of signs of life—and a "messaging" program that will include \$1 million in prizes for digital messages that best represent the planet Earth.

The messages will not be sent, however, in part because some scientists—including Hawking—fear messages sent into space could possibly spur aggressive actions by alien races.

It will be supported by the 100-meter Robert C. Byrd Green Bank Telescope in West Virginia in the United States and the 64-meter Parkes Telescope in New South Wales, Australia.

In addition, the Lick Observatory in California will conduct a deeper-

than-ever search for optical laser transmissions.

The project will be 50 times more sensitive than earlier searches, and will cover 10 times more of the sky, organizers say.

It will also make use of SETI@home, a University of California, Berkeley project that uses some 9 million volunteers throughout the world who donate computer power to search astronomical data for signs of life.

Milner said the search will be entirely transparent and will rely on open-source software so findings can be shared throughout the world.

"Our approach to data will be open and taking advantage of the problem-solving power of social networks," he said.

The researchers say the focused computing power and the use of some of the world's most powerful telescopes will allow them to collect in one day the same amount of data that would have taken one year to collect before the program began.

Milner plans to back the program for at least 10 years although scientists agree it may take longer to find proof that alien life exists.

Hawking said the new program should succeed because it has ample resources: access to time on major telescopes, a huge data capacity, and a long-term financial commitment that will not be withdrawn.

"If a search of this sophistication finds no proof, that is an interesting result," he said. "It will not prove that we are alone but it will narrow the possibilities and it is likely to produce data that is fascinating in its own right."

Based on new information about the number of other worlds where life could have taken hold it is "quite likely" humans are not alone, he said.

"There is no bigger question," Hawking said. "It is time to commit to finding the answer to search for life beyond Earth."

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