

A \$100 MILLION SETI INITIATIVE

This is the largest ever scientific research program aimed at finding evidence of civilizations beyond Earth. Russian high-tech billionaire **Yuri Milner** and a stellar team of scientists and others just announced a \$100 million new effort in the Search for Extraterrestrial Intelligence (SETI). The Royal Society in London unveiled the Breakthrough Listen initiative Monday morning during a webcast.

The U.S. National Radio Astronomy Observatory Greenbank Telescope, which will join the effort,

called it: "... the most powerful, comprehensive, and intensive scientific search ever for signs of intelligent life in the universe. The international endeavor "... will scan the nearest million stars in our own galaxy and stars in 100 other galaxies for the telltale radio signature of an advanced civilization."

Milner plans to spend the \$100 million over the next 10 years to back a radio search using the Green Bank Telescope in West Virginia and the Parkes

Telescope in Australia – plus a search for laser signals by the Lick Observatory's Automated Planet Finder Telescope in Northern California. The Greenbank Telescope announced on July 20 that it will receive significant funding - approximately \$2 million per year for 10 years – to participate in this project.

The search will be conducted by a team that includes scientists from a long-running program at Berkeley that focuses on the search for extraterrestrial intelligence, or SETI. Milner said **Lord Martin Rees**, Britain's astronomer royal, will head the effort's scientific advisory board. Other advisers include longtime SETI astronomer **Frank Drake** and **Ann Druyan**, the widow of Carl Sagan and a co-creator of the Cosmos TV series. Drake was quoted as saying:

"We will have the most powerful and enduring search that's ever been launched."

The program will include a survey of the one million closest stars to Earth. It will scan the centre of our Milky Way galaxy and the entire galactic plane, the flat part of the galaxy in which our sun and most other Milky Way stars like our sun orbit. The announcement from the Greenbank Telescope said:

If a civilization based around one of the 1,000 nearest stars transmits to us with the power of common aircraft radar, the GBT and the Parkes Telescope could detect it.

In addition, others at Breakthrough Listen will be brainstorming the best way to send a message out into the cosmos. Beyond the Milky Way, Breakthrough Listen will search for messages from the 100 closest galaxies. The data generated in the program will be open to the public. This will constitute the largest amount of scientific data ever made public. All software developed will be open source. As well as using the Breakthrough Listen software, scientists and members of the public will be able to add to it, developing their own applications to analyse the data. Collectively, they will constitute one of the largest supercomputers in the world.

Yuri Milner was an early investor in Facebook and Twitter and has funded other large endeavours, for example, the largest award in the world in the field of Biomedicine and life Sciences, called the Breakthrough Prize. AK, from EarthSky.



Yuri Milner and the panel announcing the program, L-R Stephen Hawking, Martin Rees, Frank Drake, Ann Druyan and Geoff Marcy



Green Bank Telescope and the Parkes Telescope below

