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Stephen Hawking Backs Project To Blast Tiny Ships Into Space

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"If we are to survive as a species we must ultimately spread out to the stars," Hawking told BBC.

"Astronomers believe that there is a reasonable chance of an Earth-like planet orbiting one of the stars (in) the Alpha Centauri system. But we will know more in the next two decades from ground based and space based telescopes.

"Technological developments in the last two decades and the future make it possible in principle within a generation," he said.

The spaceships will be blasted by laser beams from Earth to explore our nearest star system which is 25 trillion miles away under the most ambitious space mission in history announced yesterday.

The 100 million dollar research programme to develop the computer chip-sized "starships" was launched by the billionaire Yuri Milner, supported by Facebook founder Mark Zuckerberg.

"For the first time in human history man can do more than just gaze at the stars. We can actually reach them," Milner said.

Weighing only a few grams, the spacecraft would contain a camera, communications devices and navigation equipment. These craft would be attached to "light sails" a few hundred atoms thick, which would be pushed by the lasers.

Over the course of a few minutes, the craft could be accelerated to 130 million miles per hour, a fifth of the speed of light, and reach Alpha Centauri, the nearest star system, in 20 years.

By using lasers it would not need to carry its own propellant.

Philip Lubin, the University of California physics professor on whose ideas the plan is partly based, said that the approach may well be our best shot at interstellar travel.

"We have smartphones, lasers in DVD players, lasers in medicine, in industry. Their improvements allow us to speak of something which a decade ago was not feasible," he said.

Prof. Hawking, the author of *A Brief History of Time*, is backing the project by Milner's Breakthrough Foundation, a private organisation funding scientific research initiatives that government funders think to be too ambitious.

The nearest star system is 40 trillion km (25 trillion miles) away and using current technology it would take about 30,000 years to get there.

The expert group concluded that with a little more research and development it might be possible to develop spacecraft that could cut that journey time to just 30 years.

"I'd have said that even a few years ago travel to another star at that kind of speed would not be possible. But the expert group figured out that because of developments in technology there appears to be a concept that appears to work," said Dr Pete Worden, who is leading the project.

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