Life could survive longer on a super-Earth

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IT SEEMS super-Earths would be a pretty super place to live compared with our puny planet. These big rocky planets in other solar systems could stay warm enough for life up to 35 per cent longer than Earth.

Christine Bounama and colleagues at the Potsdam Institute for Climate Impact Research in Germany modelled various factors that make a planet habitable, including volcanism, the atmosphere and the size of the star it orbits. They found that super-Earths could host life for up to 11.9 billion years, beating the estimated 8.8 billion years for Earth.

Super-Earths, which are up to 10 times the mass of Earth, stay hot for longer than planets like ours, meaning volcanism keeps the atmosphere topped up with carbon dioxide, says Bounama. This helps warm the planet and supports photosynthetic life.

Bounama says a hotter sun than ours would cut short a super-Earth's habitability by baking any life as it brightens with age. The ideal would be a dim red star 0.9 times the mass of our sun. The team presented the work at the 7th European Workshop on Astrobiology in Turku, Finland, last month.

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From issue 2629 of New Scientist magazine, 10 November 2007, page 21

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