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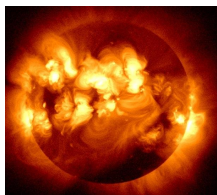


Image of solar flares erupting from the surface of the Sun  
Hinode/JAXA

## **Nothing Special About the Sun**

### *Galaxy probably teeming with life*

If you're still wondering whether or not the 'giant ball of fire' in the sky has special characteristics that enabled the appearance and evolution of life on Earth, you should probably know that the Sun is about as special as several billion other stars in the visible universe. At least that's what ANU astronomers say following a comprehensive comparison of the Sun with other stars, fueling even more the idea that the universe may be filled with life. And what about Earth? Well, as it turns out the answer to this question remains open, since no other Earth-like planets have ever been discovered, says PhD researcher Jose Robles and Dr Charles Lineweaver from the Planetary Science Institute at ANU. "Yet the question 'How special is the Sun?' is easier to address because we do have observations of thousands of other Sun-like stars", Dr Lineweaver said. Instead of trying to find out what kind of stars would be able to sustain planets with life, the researching team decided to compare the Sun with other stars to find out if indeed the Sun is in some way special. "Our research goes further than previous work which only looked at single properties such as mass or iron content. We looked at 11 properties that could plausibly be connected with life and did an analysis of these properties: The upshot is that there doesn't seem to be anything special about the Sun. It seems to be a random star that was blindly pulled out of the bag of all stars", says Robles, leader of the study. The mass of the Sun seems to be somehow anomalous because more than 95 percent of the stars in the Milky Way are less massive than our star. Also, the Sun is one of the 7 percent of stars in the galaxy orbiting the central core on an almost circular trajectory. "But when analyzing the 11 properties together, the Sun shows up as a star selected at random, rather than one selected for some life-enhancing property", Robles says. "Those who are searching for justification for their beliefs that terrestrial life and humanity in particular are special, will probably interpret this result as a humiliating dethronement. Those who believe we are the scum of the universe may find our non-special status uplifting", said Dr Lineweaver.