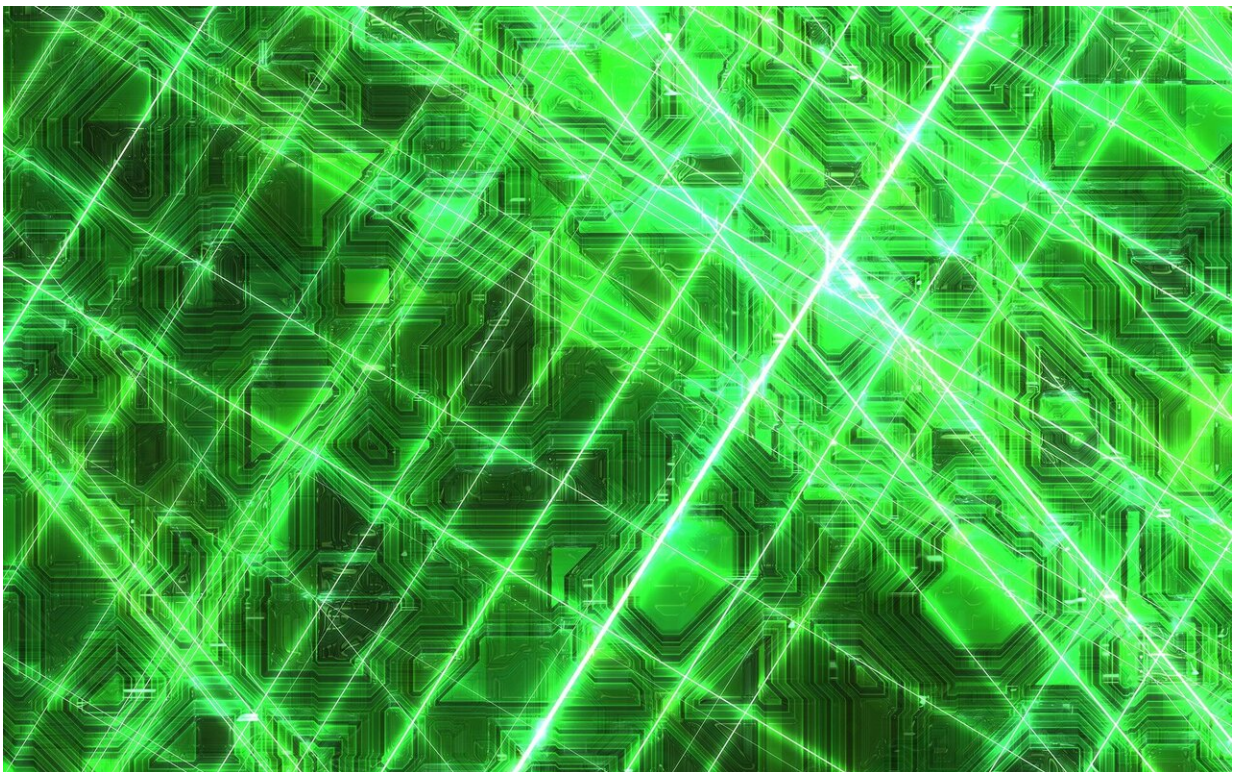


# Best of Last Week: The surface of Betelgeuse, what women want, and a new electronic state of matter

February 17 2020, by Bob Yirka

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It was a good week for space research, as a team working at the European Southern Observatory's Very Large Telescope captured images revealing [the surface of a dim Betelgeuse](#)—historically one of the

brightest stars in the night sky, it has been dimming of late. Also, a large team of astronomers working in Canada observed [a fast radio burst with a steady 16-day cycle](#)—the first of its kind.

In technology news, a team at King Abdullah University of Science and Technology fabricated inverted [perovskite solar cells with a power conversion efficiency of 22.3 percent](#). And a team at Huazhong University of Science and Technology [unveiled security vulnerabilities in EEG-based brain-computer interfaces](#) that make them highly susceptible to adversarial attacks. Also, a team with members from the University of Washington and Carnegie Mellon University developed [a private messaging system that hides message contents and user communication patterns](#)—called Talek, it was also designed to hide user identities. And a team with members from the U.S., Singapore and Canada discovered that [a longstanding flaw in sensor readings could lead to heating and cooling design errors](#) in buildings that use globe thermometers to measure the temperature effects of radiant heating and cooling.

And in other news, an international team of medical researchers found that [people who have 10 or more sexual partners have a higher likelihood of being diagnosed with cancer](#). Also, another international team showed that [solar system processes have controlled the carbon cycle throughout Earth's history](#), and were responsible for sparking two of the most devastating extinction events. And a team with members affiliated with several institutions in the U.S. announced the discovery of [a new electronic state of matter](#) in which electrons travel without scattering in groups of two or more at a time, rather than individually in one-dimensional conducting systems.

And finally, if you are a single male interested in finding a female mate, you might be interested in the findings of a team of psychologists at Brunel University London—they found that [women don't fancy easy-to-seduce men](#).

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