

Best of Last Week—Using quantum physics to factor numbers, the Earth's technosphere and brain activation by spiritualism

December 5 2016, by Bob Yirka



Earth and cling film. Credit: University of Leicester

(ScienceX)—It was a good week for physics as a team at the University of California reported that they [made a discovery combining quantum physics and photosynthesis that could lead to highly efficient solar cells](#). A team at MIT announced that they had [discovered an astonishing behavior of water confined in carbon nanotubes](#)—its freezing point changed dramatically. And a team at the Technical University of Madrid found that [quantum physics offered a new way to factor numbers](#) by mimicking the math rather than doing actual calculations. Also, a team of European researchers working with the ESO's Very Large Telescope found what they believe may be [the first signs of a weird quantum property of empty space](#)—vacuum birefringence.

In planetary news, a team of geologists with the University of Cincinnati reported that they had [uncovered 2.5 billion-year-old fossils of bacteria that predate the formation of oxygen](#) from a site in a Northern Cape Province of South Africa. Also, a team with Ohio State University offered evidence of the [West Antarctic ice shelf breaking up from the inside out](#), which, they suggest, indicates that the ocean is causing ice at the edge of continents to become weaker. And an international team of researchers found that [the Earth's 'technosphere' now weighs 30 trillion tons](#)—it includes every single human-made thing on the planet.

In other news, a team of biologists in the U.S. reported that they observed [speciation in a laboratory flask](#)—the evolution of a new virus species occurred so quickly they found they could observe it in action. A team working at Johns Hopkins made headlines with their discovery that [the hallucinogenic drug psilocybin eases existential anxiety in people with life-threatening cancer](#)—the active ingredient in mushrooms, they found, could help people better cope with very stressful situations.

And finally, if you are the religious sort, it might interest you to know that a team of researchers with the University of Utah School of Medicine found that [spiritual experiences activate brain reward circuits](#)

—similar, they claimed, to the way the brain behaves when people are falling in love, having sex, engaging in gambling or drugs or listening to music.

© 2016 ScienceX

Citation: Best of Last Week—Using quantum physics to factor numbers, the Earth's technosphere and brain activation by spiritualism (2016, December 5) retrieved 13 July 2025 from <https://sciencex.com/news/2016-12-weekusing-quantum-physics-factor-earth.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--