

Best of Last Week: New state of matter, universe's biggest explosion, and milk versus breast cancer

March 2 2020, by Bob Yirka



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It was another good week for physics as a team at Northeastern University [might have accidentally discovered a new state of matter](#) in which electrons distribute themselves evenly into a stationary, crystalline pattern. A team at the Institute for Quantum Computing at the University of Waterloo developed [a way to split one photon into three](#) using the spontaneous parametric down-conversion method in quantum

optics. And a team at the Harvard John A. Paulson School of Engineering and Applied Sciences gained [new insights into how fluids transform from order to disorder](#) by smashing vortices together.

In technology news, a team at Syracuse University developed [a deep-learning system that can detect a human's presence by harvesting RF signals](#)—based on a convolutional neural network, the system measures subtle changes in ambient radio signals. Also, a team at security firm ESET reported that [a chip flaw had exposed billions of WiFi devices to potential hackers](#). A wide range of chips made by Cypress Semiconductor and Broadcom were found vulnerable to data exposure when users moved from one WiFi access point to another. And a team with members from the University of Colorado and Drury University developed [an AI-based language-generation system that could compose creative poetry](#). Also, Raspberry Pi put its [Raspberry Pi 4 computer module on sale for just \\$35](#).

In other news, a team at Trinity College Dublin made [an asthma breakthrough](#). They uncovered a critical role played by the protein Caspase-11 in provoking inflammatory reactions in the lungs. Also, an international team of space scientists detected [the biggest explosion in the history of the universe](#). The team used data from NASA's Chandra X-ray Observatory, ESA's XMM-Newton, the Murchison Widefield Array in Western Australia and the Giant Metrewave Radio Telescope in India.

And finally, if you are one of the millions of women around the world worried about developing breast cancer, you might want to take note of the results of a study conducted by a team at Loma Linda University Health—they found [an association between the intake of dairy milk and breast cancer in women](#).

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