Best of Last Week: Free-floating planets, 256 qubit quantum simulator, vaccine resistance to variant

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It was a good week for space science as an international team of researchers analyzing data from the Kepler Space Telescope glimpsed a population of free-floating planets, including four that were not bound to

any star and were also roughly the size of Earth. Also, another international effort led to solving a 40-year mystery involving bursts of X-rays from Jupiter that occur every few minutes—the team found that they were part of the planet's aurora. And a combined team from the University of Arizona and Paris Sciences & Lettres University, found evidence indicating that an unknown methane-producing process is likely supporting a hidden ocean under the icy shell of Saturn's moon Enceladus.

In technology news, Microsoft warned Windows users of a Print Spooler vulnerability called PrintNightmare that allowed hackers to gain remote code execution abilities. And security researcher Carl Schou found a serious bug on iOS devices—users connecting to public networks with a certain name could lose Wi-Fi connectivity that cannot be recovered. Also, a team at the National Institute of Advanced Industrial Science and Technology introduced a high-energy density and long-life initial-anode-free lithium battery. And a team at Peking University announced that they had developed radiofrequency transistors based on high-purity carbon nanotube arrays.

In other news, a team of researchers at Johns Hopkins University School of Medicine found that a "fortunate accident" may have yielded a new immunity weapon against antibiotic-resistant bacteria. They gave mice a pancaspase inhibitor expecting it to lower resistance to MRSA and found it boosted protection instead. And a team working at the Harvard-MIT Center for Ultracold Atoms developed a quantum simulator with 256 qubits, the largest of its kind ever created.

And finally, Ran Balicer, chairman of Israel's national expert panel on COVID-19, announced that experts in that country have found that the Pfizer/BioNTech vaccine may be less effective in preventing mild illness against the Delta variant than has been thought.