

Best of Last Week – A new subatomic structure, a deadly fungal infection and gender differences in social settings

November 7 2016, by Bob Yirka

Artist's conception of how the "nearly naked" supermassive black hole originated. Credit: Bill Saxton, NRAO/AUI/NSF.

(ScienceX)—It was another good week for physics, as a team at the University of Houston [induced superconductivity in non-](#)

[superconducting materials](#)—demonstrating that an idea proposed several decades ago was sound. A team at Iowa State University [demonstrated the existence of a new subatomic structure](#)—they used computer simulations to show the quasi-stable existence of a tetra-neutron, a structure with four neutrons once thought not likely to exist. Also, a supercomputer came up with [a profile of dark matter after Standard Model extensions predicted properties of candidate particle](#), creating an outline of the particles of the still unknown form of matter.

In space news, astronomers working at the NSF's Very Long Baseline Array [discovered a close galactic encounter that left a "nearly naked" supermassive black hole](#)—one small galaxy passing through another that caused the smaller one to lose most of its material. Also, a team with members from several institutions in the U.S. [offered a new theory to explain the moon's origin](#)—they believe it happened as a result of a different type of collision with the Earth. And researchers with Indiana University, the University of California and California Institute of Technology confirmed [a structural similarity found in both human cells and neutron stars](#)—structures that resemble high-rise city parking garages.

In other news, a team at the University of Leeds reported that they had found [a protein target to knock out herpesvirus RNA transports](#)—representing a new way to battle herpesvirus infections such as cold sores and even cancer. Also, officials with the CDC confirmed that the first 13 cases of a deadly fungal infection had emerged in the U.S.—called *Candida auris* it is reportedly also drug resistant. And a team at the DOE's Oak Ridge National Laboratory [demonstrated 3-D-printed permanent magnets that outperformed conventional versions](#)—while also conserving rare materials.

And finally, if you have ever suspected that there exist some inherent differences between men and women when socializing, you might have

been onto something as a team of researchers at Georgia State University conducted a study that revealed [that the brain regulates social behavior differently in males and females](#).

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