Best of Last Week – Extra dimensions in gravitational waves, no limit to life span and smartphones weakening our brains

July 3 2017, by Bob Yirka

Merging black holes generate gravitational waves. These ripples in space-time might be used to unveil hidden dimensions. Credit: © Simulating eXtreme Spacetimes (SXS)

(ScienceX)—It was a good week for physics as a team at Stockholm University discovered that <u>liquid water exists in two different phases</u>

—and each has a different structure and density. Also, a team at the University of Nebraska-Lincoln built <u>the world's brightest laser, which</u> <u>sparked a new behavior in light</u>—at a billion times brighter than the sun, the laser emitted the brightest light ever produced on Earth. And a team at the Max Planck Institute for Gravitational Physics reported that they had found <u>hints of extra dimensions in gravitational waves</u>—something which has been predicted by string theory.

In space news, a team at the University of New Mexico reported on a discovery they made that <u>confirms the existence of orbiting</u> <u>supermassive black holes</u>—they were able to measure the orbital motion between two black holes that were hundreds of millions of light years apart. Also, officials with the European Space Operations Centre asked whether<u>asteroids are humanity's 'greatest challenge.'</u>

In other news, a team with the German Archaeological Institute announced that they found <u>skull fragments with carved long, deliberate</u> <u>lines at Gobekli Tepe</u>—a dig site in southern Turkey. Also, a team with members from China and the U.S. reported that they developed an <u>electrocaloric refrigerator that offers an alternative way to cool</u> <u>everything from food to computers</u>—all in a device the size of a beverage coaster. And a pair of researchers at McGill University conducted a study of the longest-living people from several countries and found that there was <u>no detectable limit to how long people can live</u>. They also suggest that if there is a limit, it has not yet been reached. Also, a team at the University of Alabama found results from a study that suggested <u>hackers could use brainwaves to steal passwords</u> with devices that use EEG headsets.

And finally, if you are one of many who have suspected that the easy availability of information from your smartphone is causing your brain to weaken, you might be interested in a study (involving 800 volunteers) conducted by a team at the University of Texas—they found that <u>the</u>

mere presence of your smartphone reduces brain power.

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