

Best of Last Week—Confirmed Earth-sized planet, testing twin paradox w/o a spaceship and news we all peak at 24

April 21 2014, by Bob Yirka



The artistic concept of Kepler-186f is the result of scientists and artists collaborating to help imagine the appearance of these distant worlds. Credit: Credit: NASA Ames/SETI Institute/JPL-CalTech.

(Phys.org) —Reader response to [last week's roundup](#) of the most important stories we covered during the prior week was overwhelmingly positive. Thus, we will be continue posting them, at least for now. So without further ado, here is the Best of Last Week:

It's been a good week for astronomy—not only did researchers at the Kepler Space Telescope [confirm the first potentially habitable Earth-sized planet](#) (one that might also have water) within the Goldilocks zone, proving that such planets exist, but another team of [astronomers found the first instance of a self-lensing binary star system](#)—where one star magnifies the light from a star behind it, rather than causing it to dim, proving, as we've all suspected, that Einstein was a spectacularly bright fellow. In somewhat related news, a team of researchers from several universities has come up with an idea on [how to test the twin paradox without using a spaceship](#)—hint, they use mirrors (but not smoke.)

On the opposite end of the mental spectrum, perhaps, are young people who smoke marijuana. Researchers at Northwestern Medicine and Massachusetts General Hospital/Harvard Medical School found during a study that [casual marijuana use can be linked to brain abnormalities in students](#).

Less sad was news that a combined team of researchers from Central Florida's College of Optics & Photonics and colleagues from the University of Arizona has found that shooting a ['dressed' laser aimed at clouds may be the key to inducing rain and lightning](#)—the dressing was actually a second laser wrapped around the first. Very intriguing.

Also, in case you missed it, scientists at the U.S. Department of Energy's (DOE) Argonne National Laboratory, [gained new insight into a mysterious electronic phenomenon](#). They have identified and solved at least one inconsistency in the behavior of high-temperature superconductors—the puzzle involves an occurrence called a "pseudogap" in which few electrons are allowed to exist.

Impressive also was work done by a team at Monash University—there, [researchers modeled the world's first carbon-based 'spaser'](#)—a nanoscale laser that emits a beam of light through the vibration of free electrons,

rather than via electromagnetic wave emissions. It might mean smaller, more efficient mobile phones.

And finally, depending on your age, you might be happy or sad to learn that a [new study says we're over the hill at 24](#)—that's the peak age for cognitive motor performance—which might explain why most of the songs on the radio are by the latest kids on the block rather than mature artists who have mastered the concept of nuance.

At any rate, that's it for this week, though that doesn't mean other interesting things haven't happened as well. You can read other articles you might have missed by clicking on the "Find more news articles via [sort by date page](#)" link on the bottom of the main page.

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