

Best of Last Week—Quantum bounds maybe not so quantum, alcohol causing cancer and butter found safer to eat than thought

July 4 2016, by Bob Yirka

Components of the classical experiment that produces the same bounds that quantum experiments do. Credit: Frustaglia et al. ©2016 American Physical Society

(ScienceX)—It was another good week for physics as a team with the University of Sevilla in Spain, found that ['quantum' bounds are not so](#)

[quantum after all](#)—the team has shown they also show up in classical experiments suggesting they should not be used as a measure of quantumness. Also another team with Penn State University claimed to have found [a new, better way to build circuits for the world's first useful quantum computers](#)—they used lasers and microwaves to better control switching of qubits between states.

In news about the planet, a team of researchers at Stanford found [a 'water windfall' beneath California's Central Valley](#)—they claim there is three times as much water below the surface there as has been previously thought. Also another team of researchers from Oxford and Durham universities announced [a huge helium discovery described as 'a life-saving find'](#)—the discovery was made using a new approach they developed for gas exploration. And a team made up of researchers from several institutions in the U.S. and the U.K. reported that they had observed [the first signs of healing in the Antarctic ozone layer](#), which they described as "the first fingerprints of healing."

In other news, a team of researchers with the Dana-Farber Cancer Institute collaborating with a group at the University of California announced that they had identified [a calorie-burning pathway in fat cells](#) which allows cells to burn calories as heat instead of storing them as fat—a possible way to combat obesity. Also [a new artificial intelligence system beat tactical experts in a combat simulation](#)—the simulation system, developed by Psibernetix, Inc., reportedly beat a retired Air Force flying ace. And a team of [researchers](#) at the University of Otago, working with the Global Burden of Disease Alcohol Group reported on a study where they found that [alcohol consumption contributes to cancer, even in moderate drinkers](#)—they claim alcohol was responsible for 236 cancer deaths in New Zealand in 2012. Also, a team at the University of Stuttgart released details of [a micro-camera that can be injected with a syringe](#)—the whole camera is about the size of a single grain of salt and is likely to have many applications beyond healthcare.

And finally, if you are one of the millions of people who were warned against putting butter on your foods because it would give you heart trouble, your worries may be over—a team at Tufts University found [little to no association between butter consumption and chronic disease or total mortality.](#)

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