

Best of Last Week – A way to measure variations in the speed of light, a slower universe and plucking hair

April 13 2015, by Bob Yirka

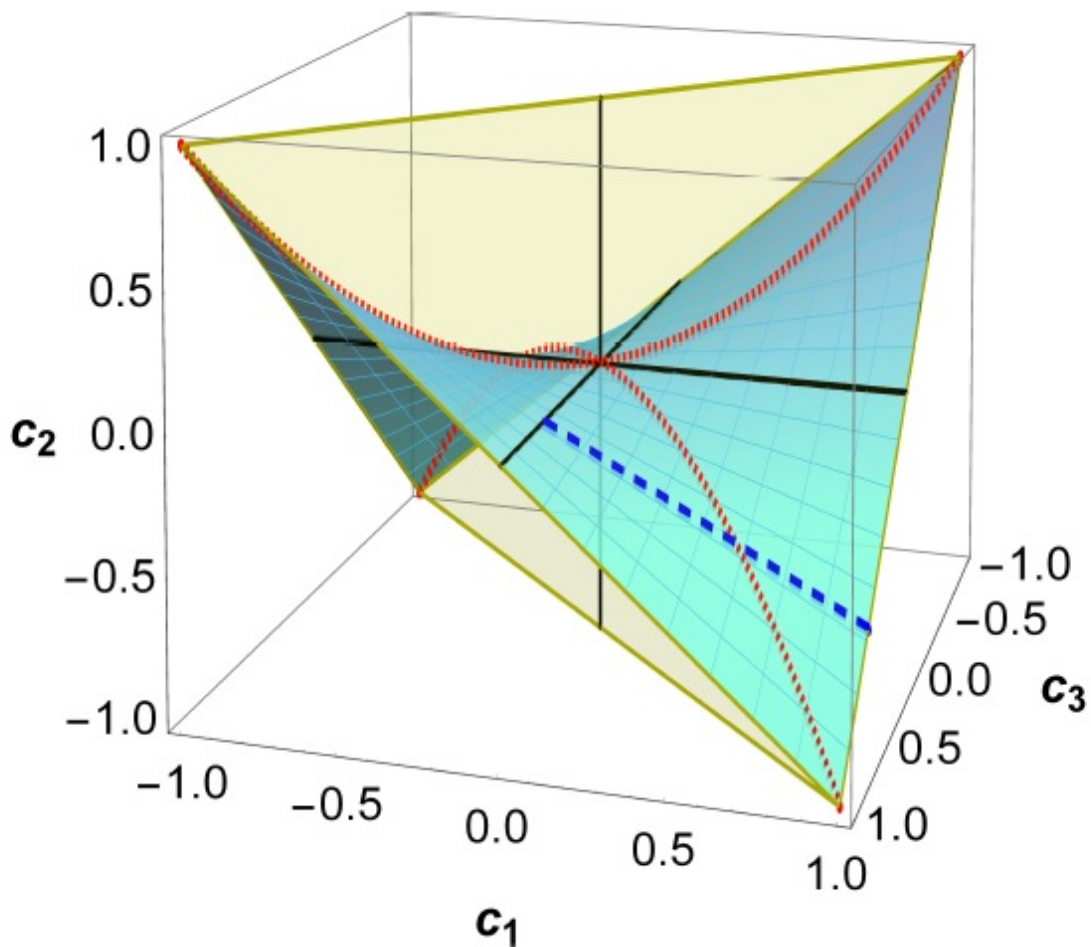


Figure of the “freezing surface” of quantum discord-type correlations. Credit: Marco Cianciaruso, et al.

(Phys.org)—It was a big week for physics. First, a trio of researchers proposed [a method to measure variations in the speed of light](#)—in alternative theories of cosmology where it has been theorized that time and space can vary. Also, another team showed that [the "quantum freezing phenomenon" is universal](#)—this describes conditions in which quantum correlations can be "frozen" in a constant state and remain that way in the presence of noise. Meanwhile another team suggested that ["unparticles" may provide a new path to superconductivity](#)—the hypothetical form of matter, the researchers suggest, could play a key role in mediating superconductivity.

Also, a team of astrophysicists working at the DOE's Fermilab suggested that [the absence of a gravitational-wave signal extends the limit on the knowable universe](#)—they are working with equipment capable of sensing [gravitational waves](#) at frequencies in the range of a million cycles per second. Also, work by two different teams suggested that [the acceleration of the expansion of the universe might not be quite as fast as theorists have thought](#)—new data has come to light indicating that supernovae used to measure distances in the universe are more diverse than thought.

In other news, researchers at Stanford University have developed [an ultra-fast charging aluminum battery that offers a safe alternative to conventional batteries](#)—they say it is less expensive, too. Meanwhile another team at Virginia Tech announced a new discovery that may be [a breakthrough for hydrogen cars](#)—a new way to create fuel cells using a biological method.

A team of bio-researchers discovered a master protein that enhances learning and memory—similar, they say, to other proteins that allow for enhanced physical abilities. And another team has [built a fully functional computer that is about the size of a grain of rice](#), which portends a time in the near future when computers may be embedded in virtually

everything around us.

And finally, for those people worried about losing their hair as they age, [a team of researchers is plucking hair to grow hair](#)—they found that plucking hair in a certain pattern on mice induced new growth in the surrounding area—evidence of environmental circumstances causing the body to react in unpredictable ways.

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