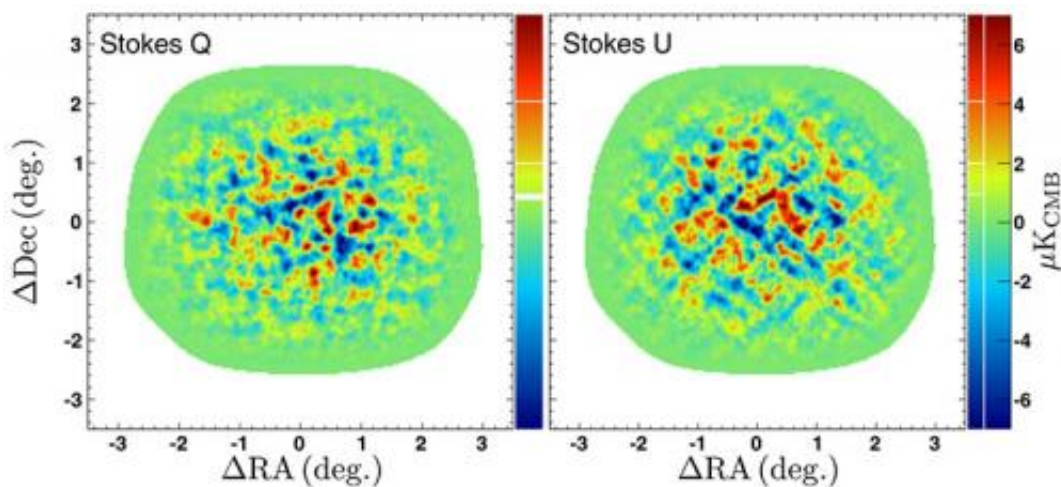


Best of Last Week – POLARBEAR detects oldest light, PhotoMath solves equations and oldest human DNA found

October 27 2014, by Bob Yirka



Measurements of polarization of the cosmic microwave background. Credit: POLARBEAR

It was another big week for physics as a team of researchers led by Brown University's Vesna Mitrovic found [new evidence for an unusual superconducting state](#)—the results of fifty years of research. Also, a team of cosmologists working on [project POLARBEAR detected curls in the oldest light in the universe](#)—it represents the most precise and sensitive measurements of the microwave background to date. And a team of researchers at Shanghai University found a [unique 1-D metasurface that acts as a polarized beam splitter, allowing a novel form](#)

[of holography](#). It's different from 2-D and 3-D methods and offers the possibility of better security when used in anti-counterfeiting holographs.

There was news from Saturn's moon as well; one team found that [organic molecules in Titan's atmosphere are intriguingly skewed](#)—they shift away from the poles and are upending traditional thinking about the moons' windy atmosphere. Meanwhile, a [team from NASA identified an ice cloud at very high altitude on Titan](#). They report that it is very similar to clouds that form above the Earth's poles.

In other news, in a truly unique study, a team of [anthropologists were able to unlock clues about Roman gladiators' eating habits](#)—turns out they were mostly vegetarians when training and took in ashes as a tonic. Also, a new phone app, [PhotoMath](#), allows blink, point and shoot equation solving and is likely to stir up interest—it allows a smartphone to solve math problems, which could be used for helping to learn, or in some cases to help students cheat on exams. And researchers with the Salk Institute have [identified a promising target for HIV/AIDS treatment](#)—good news for the more than 35 million people around the world currently living with the virus. Also of interest, researchers report unearthing [the oldest DNA ever found, shedding light on humans' global trek](#)—from the femur of a man who died beside the banks of a west Siberian river approximately 45,000 years ago.

And finally, if you have been feeling tired lately, it might interest you to know that [a team of researchers has found that mental rest and reflection can boost learning](#)—perhaps goofing off sometimes really does help.

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